



WDS COMPONENTS

THE HOME OF STANDARD PARTS & MACHINE ACCESSORIES



WELCOME TO WDS COMPONENTS

THE HOME OF STANDARD PARTS AND MACHINE ACCESSORIES

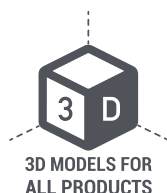


WDS Components are delighted to present our exciting new catalogue, packed with a huge range of components, standard parts and machine accessories.

We have added thousands of new products. Our range of 316 stainless steel components has been extended to meet growing demand from the food and hygiene industries, and we have added lots more sizes in inches to many more ranges. Our Spencer Franklin Hydraulics range is now available in a choice of new colours. New product ranges and new sizes are being introduced constantly – if you can't find what you need please don't hesitate to ask our sales team.

WDS Components was first established in 1952 as the 'Woodside Die Sinking Company' to make Jig and Die parts to speed up production in tool rooms and has grown from humble beginnings to become a leading European manufacturer and global distributor of high quality durable parts at competitive prices. We supply components, standard parts and machine accessories to original equipment manufacturers, maintenance engineers, small businesses and individuals all over the world. Over 98% of our range is available from stock and can be shipped the same day from our global distribution centre in the UK, using best in class worldwide logistics companies.

98%
STOCK AVAILABILITY



3D MODELS FOR
ALL PRODUCTS



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OR QUANTITY

We provide unrivalled choice and unequalled availability.

WDS Components are proud to support some of the most prestigious engineering companies and brands in the world, who all trust WDS Components to service their needs.

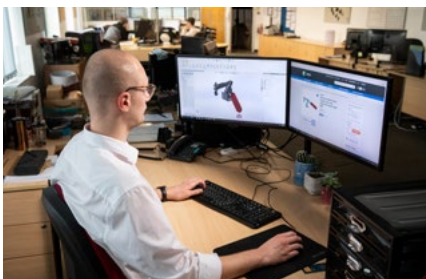
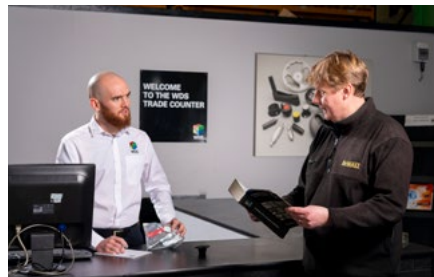
We are committed to engineering excellence and continuous improvement. Our team of in-house engineers has expertise spanning several decades and is a blend of highly experienced and new generation graduate engineers who focus on the latest developments in design and manufacturing technology.

Our entire range of products is available to purchase on our website WDSCOMPONENTS.COM where designers and manufacturers alike can download 3D models of all components in the widest range of formats available.

WDS Components provide solutions for customers who require a wide and growing range of high quality, competitively priced products, coupled with incredible product availability and same day despatch, backed up by easily accessible technical support.

Ordering or enquiring with the WDS Components' team is simple: visit our website WDSCOMPONENTS.COM, email sales@wdscomponents.com or call us on 0345 606 6677. Alternatively you can visit us at our trade counter where you can place orders, collect orders and see our products in person.

Keep up with regular news and follow our new product updates on social media.



OVER
25,000
PRODUCTS TO
CHOOSE FROM





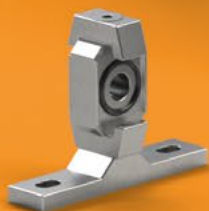
MACHINE & HARDWARE



INDUSTRIAL AUTOMATION



JIG & FIXTURE



HYDRAULICS & PNEUMATICS



PRODUCTION & BROACHING

MACHINE & HARDWARE

Anti Vibration Mounts	4
Castors Wheels & Trolley Wheels	20
Gas Struts & Rod End Fittings	54
Hand Knobs & Thumb Screws	78
Hand Levers	172
Hand Wheels & Grips	213
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Hinges	296
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Screws	446
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INDUSTRIAL AUTOMATION

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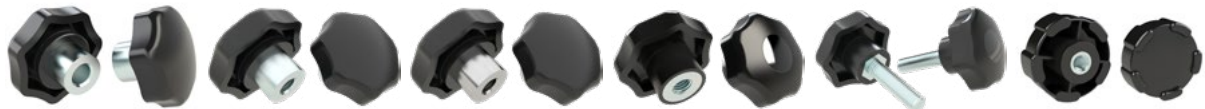
					
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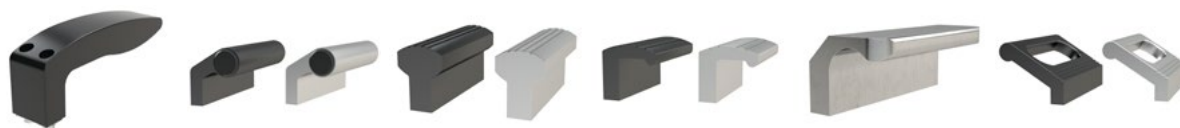
WDS 8511	P 284	WDS 8511	P 284	WDS 8530	P 284	WDS 8548	P 285	WDS 8589	P 285	WDS 8539	P 286
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WDS 8557	P 286	WDS 8557	P 287	WDS 8560	P 287	WDS 8561	P 287	WDS 8588	P 288	WDS 8661	P 288
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WDS 8661	P 288	WDS 8662	P 289	WDS 8663	P 289	WDS 8664	P 290	WDS 8664	P 290	WDS 8664	P 290
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WDS 8605	P 299	WDS 8605	P 299	WDS 8610	P 300	WDS 8625	P 300	WDS 8625	P 301	WDS 8627	P 301
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WDS 8628	P 301	WDS 8629	P 302	WDS 8630	P 302	WDS 8631	P 302	WDS 8632	P 303	WDS 8634	P 303
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WDS 8635	P 303	WDS 8636	P 304	WDS 8637	P 304	WDS 8640	P 304	WDS 8648	P 304	WDS 8648	P 305
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WDS 8648	P 305	WDS 8655	P 305	WDS 8656	P 306	WDS 8657	P 306	WDS 8666	P 306	WDS 8667	P 307
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WDS 8668	P 307	WDS 8669	P 307	WDS 8672	P 308	WDS 8673	P 308	WDS 8674	P 308	WDS 8607	P 309
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WDS 8608	P 309	WDS 8613	P 309	WDS 8641	P 309	WDS 8642	P 310	WDS 8643	P 310	WDS 8644	P 310
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WDS 8676	P 310	WDS 8678	P 311	WDS 8600	P 312	WDS 8602	P 312	WDS 8603	P 312	WDS 8604	P 313
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WDS 8615	P 313	WDS 8620	P 313	WDS 8624	P 314	WDS 8624	P 314	WDS 8665	P 314	WDS 8637	P 315
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WDS 8638	P 315	WDS 8646	P 315	WDS 8647	P 316	WDS 8647	P 316	WDS 8653	P 316	WDS 8654	P 317
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WDS 8670	P 317	WDS 8606	P 318	WDS 8660	P 318	WDS 8619	P 319	WDS 8621	P 319	WDS 8622	P 319
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WDS 8622	P 319	WDS 8623	P 320	WDS 8626	P 320	WDS 8639	P 320	WDS 8651	P 321	WDS 8658	P 321
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WDS 8658	P 321	WDS 8659	P 322	WDS 8671	P 322	WDS 8675	P 322	WDS 8650	P 323	WDS 673	P 328
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WDS 673 P 328

WDS 673 P 328

WDS 673 P 329

WDS 673 P 329

WDS 673 P 330

WDS 673 P 331



WDS 673 P 331

WDS 773 P 332

WDS 778 P 333

WDS 778 P 333

WDS 778 P 334

WDS 778 P 335



WDS 778 P 335

WDS 778 P 336

WDS 778 P 337

WDS 778 P 338

WDS 778 P 338

WDS 778 P 339



WDS 778 P 339

WDS 977 P 341

WDS 977 P 341

WDS 977 P 342

WDS 977 P 342

WDS 977 P 343



WDS 978 P 343

WDS 978 P 344

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WDS 978 P 345

WDS 778 P 346



WDS 778 P 347

WDS 778 P 348

WDS 778 P 349

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WDS 778 P 353



WDS 778 P 354

WDS 778 P 355

WDS 778 P 356

WDS 778 P 356

WDS 778 P 357

WDS 778 P 357



WDS 818 P 358



WDS 818 P 358



WDS 818 P 359



WDS 818 P 359



WDS 818 P 360



WDS 818 P 360



WDS 818 P 360



WDS 873 P 361



WDS 890 P 361



WDS 873 P 362



WDS 890 P 362



WDS 890 P 363



WDS 890 P 363



WDS 890 P 363



WDS 977 P 364



WDS 977 P 365



WDS 977 P 366



WDS 977 P 367



WDS 977 P 368



WDS 978 P 369



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WDS 978 P 375



WDS 873 P 376



WDS 692 P 376



WDS 609 P 377



WDS 674 P 377



WDS 674 P 378



WDS 674 P 378



WDS 8550 P 382



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WDS 8554 P 382



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WDS 8555 P 383



WDS 8556 P 383



WDS 8542 P 384 WDS 8544 P 384 WDS 8558 P 384 WDS 8558 P 384 WDS 8558 P 385 WDS 8645 P 385



WDS 8551 P 386 WDS 8552 P 386 WDS 8543 P 387 WDS 8559 P 388 WDS 8559 P 388 WDS 8562 P 388



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WDS 8567 P 400



WDS 8567 P 400



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WDS 407 P 429



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WDS 806 P 430



WDS 635 P 431



WDS 832 P 431



WDS 617 P 432



WDS 815/8195 P 432



WDS 408 P 433



WDS 413 P 434



WDS 669 P 434



WDS 824/8924 P 435



WDS 651 P 436



WDS 664 P 437



WDS 664 P 437



WDS 664 P 438



WDS 664 P 438



WDS 664 P 438



WDS 664 P 439



WDS 664 P 439



WDS 664 P 440



WDS 664 P 441



WDS 664 P 441



WDS 664 P 442



WDS 813 P 442



WDS 7506 P 442



WDS 627 P 443



WDS 405 P 448



WDS 409 P 452



WDS 801/8901 P 453



WDS 615 P 454



WDS 887 P 455



WDS 615 P 457



WDS 615 P 458



WDS 421 P 459



WDS 422 P 460



WDS 423 P 461



WDS 762 P 462



WDS 762 P 463



WDS 105 P 464



WDS 110 P 465



WDS 416 P 465



WDS 831 P 466



WDS 839/8939 P 466



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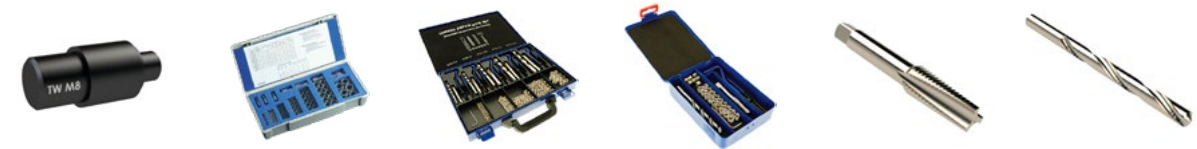
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WDS 412	P 489	WDS 415	P 489	WDS 417	P 491	WDS 830	P 491	WDS 412	P 493	WDS 415	P 493
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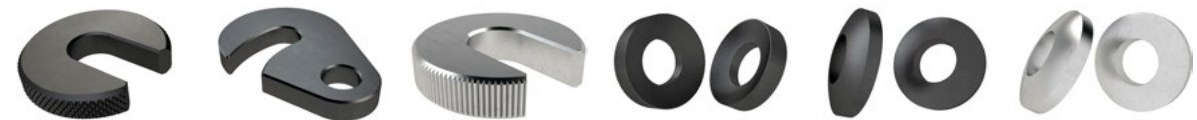
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WDS 688	P 499	WDS 690	P 499	WDS 690	P 500	WDS 12186	P 500	WDS 688	P 501	WDS 689	P 501
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WDS 12186	P 502	WDS 400	P 505	WDS 776/876	P 505	WDS 776	P 506	WDS 802/8902	P 506	WDS 876	P 507
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WDS 402	P 508	WDS 403	P 508	WDS 804	P 509	WDS 401	P 510	WDS 410	P 510	WDS 803/8903	P 511
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WDS 803/8903	P 511	WDS 590	P 512	WDS 590	P 512	WDS 803/8903	P 511	WDS 590	P 512	WDS 590	P 512
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WDS 590	P 513	WDS 590	P 513	WDS 590	P 513	WDS 414	P 514	WDS 566	P 519	WDS 566	P 519
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WDS 567	P 519	WDS 570	P 520	WDS 570	P 520	WDS 570	P 520	WDS 568	P 521	WDS 569	P 521
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WDS 569	P 521	WDS 570	P 522	WDS 570	P 522	WDS 570	P 522	WDS 570	P 523	WDS 570	P 523
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WDS 570	P 523	WDS 570	P 524	WDS 569	P 526	WDS 570	P 526	WDS 570	P 527	WDS 435	P 532
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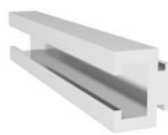
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WDS 435	P 534	WDS 435	P 534	WDS 435	P 535	WDS 436	P 535	WDS 436	P 535	WDS 436	P 536
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WDS 436	P 536	WDS 436	P 536	WDS 436	P 537	WDS 437	P 537	WDS 437	P 537	WDS 438	P 538
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WDS 438	P 538	WDS 439	P 538	WDS 440	P 539	WDS 440	P 539	WDS 440	P 539
									
WDS 440	P 540	WDS 440	P 540	WDS 440	P 541	WDS 441	P 541	WDS 441	P 541
									
WDS 442	P 542	WDS 442	P 542	WDS 442	P 542	WDS 443	P 543	WDS 443	P 543
									
WDS 443	P 543	WDS 443	P 544	WDS 443	P 544	WDS 443	P 545	WDS 443	P 545
									
WDS 450	P 545	WDS 450	P 546	WDS 450	P 546	WDS 450	P 547	WDS 450	P 547
									
WDS 450	P 547	WDS 433	P 548	WDS 433	P 548	WDS 443	P 549	WDS 443	P549
									
WDS 443	P 0549	WDS 432	P 550	WDS 441	P 550	WDS 434	P 551	WDS 444	P 551



WDS 444 P 552



WDS 444 P 552



WDS 444 P 552



WDS 444 P 552



WDS 444 P 553



WDS 444 P 553



WDS 444 P 554



WDS 444 P 554



WDS 444 P 554



WDS 444 P 555



WDS 444 P 555



WDS 444 P 556



WDS 444 P 556



WDS 430 P 557



WDS 430 P 557



WDS 430 P 557



WDS 565 P 558



WDS 565 P 558



WDS 565 P 558



WDS 565 P 559



WDS 565 P 559



WDS 450 P 560



WDS 659 P 565



WDS 661 P 565



WDS 661 P 565



WDS 559 P 569



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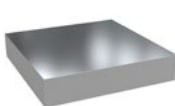
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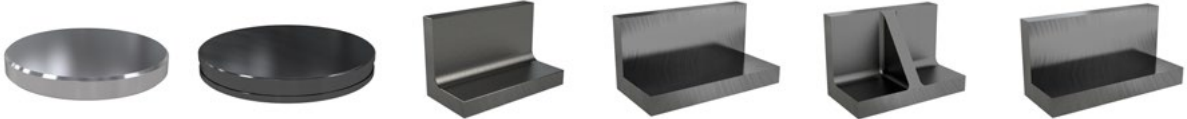
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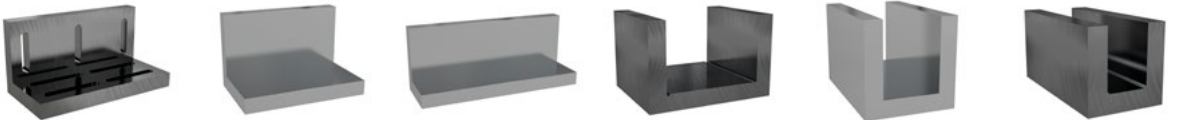
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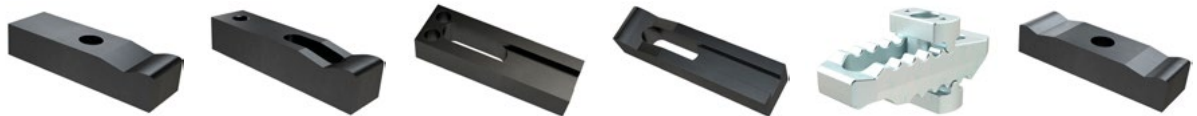
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WDS 936 P 598 WDS 937 P 598 WDS 917 P 599 WDS 919 P 600 WDS 907 P 601 WDS 908 P 602



WDS 909 P 602 WDS 590 P 603 WDS 933 P 603 WDS 922 P 604 WDS 208 P 610 WDS 213 P 610



WDS 223 P 610 WDS 224 P 611 WDS 228 P 611 WDS 230 P 612 WDS 233 P 612 WDS 234 P 613



WDS 236 P 613 WDS 246 P 613 WDS 248 P 614 WDS 260 P 614 WDS 262 P 615 WDS 264 P 615



WDS 359 P 616 WDS 590 P 616 WDS 590 P 616 WDS 642 P 616 WDS 642 P 617 WDS 642 P 617



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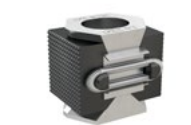
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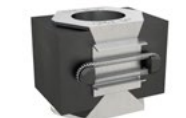
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WDS 220 P 622



WDS 220 P 623



WDS 220 P 623



WDS 220 P 623



WDS 220 P 624



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WDS 220 P 624



WDS 220 P 625



WDS 220 P 625



WDS 220 P 625



WDS 229 P 626



WDS 229 P 626



WDS 229 P 626



WDS 240 P 627



WDS 240 P 627



WDS 240 P 627



WDS 240 P 628



WDS 240 P 628



WDS 240 P 629



WDS 240 P 629



WDS 241 P 629



WDS 241 P 630



WDS 241 P 630



WDS 241 P 630



WDS 241 P 631



WDS 241 P 631



WDS 241 P 631



WDS 241 P 632



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WDS 241 P 635



WDS 241 P 635



WDS 241 P 636



WDS 241 P 636



WDS 241 P 636



WDS 241 P 637



WDS 241 P 637



WDS 241 P 637



WDS 201 P 639



WDS 281 P 639



WDS 280 P 640



WDS 623 P 640



WDS 624 P 640



WDS 630 P 641



WDS 656 P 641



WDS 656 P 641



WDS 680 P 642



WDS 4101 P 642



WDS 4102 P 642



WDS 4105 P 643



WDS 2300 P 644



WDS 4500 P 644



WDS 4501 P 644



WDS 4502 P 645



WDS 4503 P 645



WDS 4504 P 645



WDS 4505 P 646



WDS 4506 P 646



WDS 4507 P 646



WDS 4508 P 647



WDS 4509 P 647



WDS 411 P 648



WDS 411 P 648



WDS 287 P 649



WDS 288 P 649



WDS 971 P 649



WDS 972 P 650



WDS 600 P 651



WDS 628 P 651



WDS 629 P 651



WDS 632 P 652



WDS 643 P 652



WDS 4317 P 653



WDS 4317 P 653



WDS 4317 P 653



WDS 205 P 654



WDS 205 P 654



WDS 205 P 654



WDS 270 P 655



WDS 272 P 655



WDS 282 P 655



WDS 300 P 656



WDS 301 P 656



WDS 302 P 656



WDS 303 P 657



WDS 304 P 657



WDS 309 P 657



WDS 310 P 658



WDS 314 P 658



WDS 317 P 658



WDS 350 P 659



WDS 352 P 659



WDS 360 P 659



WDS 607 P 660



WDS 610 P 661



WDS 626 P 662



WDS 627 P 662



WDS 631 P 662



WDS 633 P 663



WDS 809 P 664



WDS 811 P 664



WDS 660 P 665



WDS 812 P 665



WDS 354 P 666



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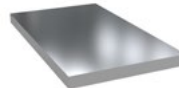
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WDS 779 P 681



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WDS 652 P 689



WDS 652 P 690



WDS 652 P 691



WDS 652 P 691



WDS 652 P 692



WDS 652 P 693



WDS 652 P 693



WDS 653 P 694



WDS 653 P 695



WDS 653 P 695



WDS 697 P 696



WDS 699 P 696



WDS 762 P 697



WDS 762 P 697



WDS 602 P 698



WDS 602 P 698



WDS 653 P 698



WDS 603 P 699



WDS 653 P 699



WDS 653 P 700



WDS 653 P 700



WDS 653 P 700



WDS 653 P 701



WDS 653 P 701



WDS 653 P 701



WDS 653 P 702



WDS 653 P 702



WDS 653	P 703	WDS 653	P 703	WDS 668	P 703	WDS 698	P 704	WDS 698	P 704	WDS 698	P 705
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WDS 698	P 705	WDS 698	P 705	WDS 698	P 706	WDS 698	P 706	WDS 698	P 707	WDS 698	P 707
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WDS 698	P 708	WDS 698	P 708	WDS 698	P 709	WDS 698	P 709	WDS 698	P 710	WDS 696	P 711
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WDS 696	P 711	WDS 696	P 711	WDS 696	P 712	WDS 696	P 712	WDS 696	P 712	WDS 696	P 713
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WDS 695	P 717	WDS 695	P 717	WDS 695	P 717	WDS 695	P 718	WDS 695	P 718	WDS 695	P 719
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WDS 695	P 719	WDS 695	P 719	WDS 695	P 720	WDS 695	P 720	WDS 695	P 720	WDS 695	P 721
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WDS 695	P 721	WDS 526	P 725	WDS 572	P 725	WDS 572	P 725	WDS 572	P 0	WDS 606/823	P 726
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WDS 606/823 P 726	WDS 606/823 P 727	WDS 606/823 P 727	WDS 606/823 P 728	WDS 606/823 P 729	WDS 606 P 730
					
WDS 606 P 730	WDS 606 P 731	WDS 606 P 731	WDS 606 P 733	WDS 606 P 733	WDS 606 P 734
					
WDS 606 P 734	WDS 606 P 735	WDS 606 P 735	WDS 606 P 736	WDS 608 P 736	WDS 608 P 736
					
WDS 608 P 737	WDS 618 P 737	WDS 622/842 P 737	WDS 780 P 738	WDS 823 P 738	WDS 823 P 739
					
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WDS 838 P 742	WDS 838 P 742	WDS 838 P 743	WDS 843 P 743	WDS 645 P 744	WDS 646 P 744
					
WDS 647 P 744	WDS 648 P 745	WDS 654 P 746	WDS 654 P 746	WDS 655/840 P 746	WDS 658/841 P 747



WDS 675 P 747



WDS 675 P 747



WDS 675 P 748



WDS 675 P 748



WDS 675 P 749

WDS 675 P 749



WDS 678 P 749



WDS 678 P 750



WDS 722 P 750



WDS 722 P 750



WDS 730 P 751



WDS 731 P 751



WDS 732 P 751



WDS 826 P 752



WDS 826 P 752



WDS 844 P 752



WDS 844 P 753



WDS 846 P 753



WDS 846 P 754



WDS 8480 P 754



WDS 950 P 759



WDS 950 P 761



WDS 952 P 763



WDS 954 P 764



WDS 953 P 765



WDS 954 P 767



WDS 954 P 769



WDS 955 P 771



WDS 956 P 773



WDS 957 P 773



WDS 957 P 775



WDS 960 P 775



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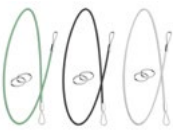
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WDS 510 P 784



WDS 958 P 784



WDS 959 P 784



WDS 507 P 785



WDS 509 P 786



WDS 961 P 787



WDS 961 P 787



WDS 504 P 788



WDS 505 P 788



WDS 511 P 789



WDS 511 P 789



WDS 512 P 790



WDS 513 P 790



WDS 662 P 791



WDS 662 P 793



WDS 662 P 795



WDS 3501 P 796



WDS 3502 P 796



WDS 3505 P 797



WDS 3506 P 797



WDS 7120 P 798



WDS 7120 P 798



WDS 7120 P 799



WDS 7120 P 799



WDS 7120 P 800



WDS 7120 P 800



WDS 7120 P 801



WDS 7120 P 802



WDS7120 P 803



WDS 290 P 804



WDS 290 P 804



WDS 290 P 805



WDS 290 P 805



WDS 290 P 806



WDS 290 P 806



WDS 295 P 806



WDS 657 P 807



WDS 657 P 807



WDS 657 P 807



WDS 165 P 808



WDS 165 P 808



WDS 165 P 809



WDS 165 P 810



WDS 165 P 811



WDS 165 P 812



WDS 165 P 813



WDS 165 P 814



WDS 165 P 814



WDS 165 P 815



WDS 502 P 816



WDS 628 P 816



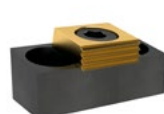
WDS 629 P 816



WDS 632 P 817



WDS 691 P 817



WDS 590 P 825



WDS 590 P 825



WDS 590 P 825



WDS 590 P 826



WDS 590 P 827



WDS 590 P 828



WDS 590 P 828



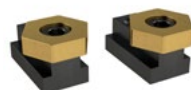
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WDS 590 P 829



WDS 590 P 830



WDS 590 P 830



WDS 590 P 831



WDS 590 P 831



WDS 590 P 832



WDS 590 P 832



WDS 590 P 833



WDS 590 P 833



WDS 590 P 834



WDS 590 P 834



WDS 590 P 835



WDS 590 P 836



WDS 590 P 837



WDS 590 P 838



WDS 590 P 839



WDS 590 P 839



WDS 590 P 839

WDS 590 P 838

WDS 590 P 840

WDS 590 P 840

WDS 590 P 841

WDS 590 P 841



WDS 590 P 841

WDS 590 P 842

WDS 590 P 842

WDS 590 P 842

WDS 590 P 843

WDS 650/827 P 847



WDS 650/827 P 848

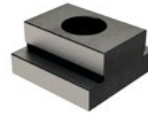
WDS 650/827 P 848

WDS 650/827 P 849

WDS 650/827 P 849

WDS 650 P 850

WDS 650 P 851



WDS 10100 P 855

WDS 410 P 856

WDS 353 P 860

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WDS 4001 P 866



WDS 4003 P 866

WDS 4005 P 867

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WDS 4019 P 869

WDS 4020 P 869

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WDS 4070 P 870



WDS 4071 P 870

WDS 4072 P 871

WDS 4073 P 871

WDS 4074 P 871

WDS 4075 P 872

WDS 4076 P 872



WDS 4077	P 872	WDS 4078	P 873	WDS 4079	P 873	WDS 4080	P 873	WDS 4081	P 874	WDS 4082	P 874
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WDS 4084	P 874	WDS 4151	P 875	WDS 4152	P 875	WDS 4153	P 875	WDS 4154	P 876	WDS 863	P 876
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WDS 863	P 876	WDS 864	P 877	WDS 865	P 877	WDS 866	P 877	WDS 884	P 878	WDS 876	P 878
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WDS 869	P 878	WDS 871	P 879	WDS 874	P 880	WDS 4022	P 880	WDS 4024	P 880	WDS 4024	P 881
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WDS 4024	P 881	WDS 4025	P 881	WDS 4025	P 882	WDS 4025	P 882	WDS 4025	P 882	WDS 4026	P 883
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WDS 4027	P 883	WDS 4029	P 883	WDS 4031	P 884	WDS 4083	P 884	WDS 4083	P 884	WDS 4083	P 885
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WDS 868	P 886	WDS 869	P 886	WDS 889	P 886	WDS 889	P 887	WDS 889	P 887	WDS 4045	P 887
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WDS 4047	P 888	WDS 4048	P 888	WDS 4093	P 888	WDS 4095	P 889	WDS 870	P 889	WDS 4049	P 889
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WDS 4097	P 890	WDS 860	P 891	WDS 861	P 891	WDS 861	P 891	WDS 862	P 891	WDS 862	P 892
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WDS 862	P 892	WDS 862	P 892	WDS 882	P 892	WDS 880	P 893	WDS 883	P 893	WDS 877	P 893
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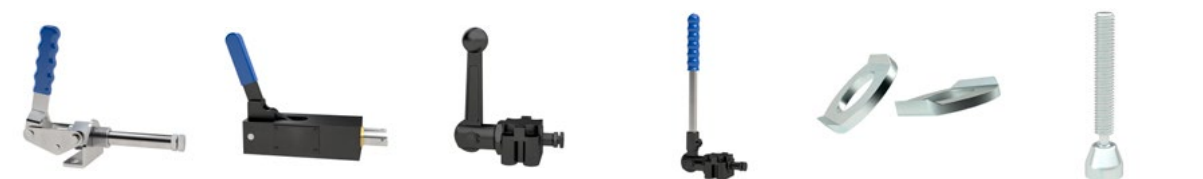
WDS 877	P 893	WDS 878	P 894	WDS 878	P 894	WDS 879	P 894	WDS 879	P 894	WDS 4033	P 895
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WDS 4034	P 895	WDS 4035	P 895	WDS 4036	P 895	WDS 4037	P 896	WDS 4038	P 896	WDS 4039	P 896
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WDS 4041	P 897	WDS 4051	P 897	WDS 4061	P 897	WDS 4085	P 898	WDS 4087	P 898	WDS 4089	P 898
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WDS 4091	P 898	WDS 4092	P 899	WDS 4103	P 899	WDS 4104	P 899	WDS 856	P 900	WDS 857	P 900
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WDS 858

P 900



WDS 859

P 901



WDS 4052

P 901



WDS 4055

P 902



WDS 4057

P 903



WDS 4063

P 903



WDS 4086

P 903



WDS 855

P 904



WDS 4059

P 905



WDS 4088

P 905



WDS 4090

P 905



WDS 4043

P 906



WDS 888

P 907



WDS 4317

P 907



WDS 4317

P 907



WDS 4317

P 908



SF-23

P 915



SF-26

P 916



SF-76

P 917



SF-78

P 918



SF-79

P 919



SEAL KITS

P 920



SF-4053

P 921



SF-4071

P 921



SF-4620

P 921



SF-4957

P 922



SF-OE00411

P 923



SF-OE00510

P 923



SF-OE00690

P 924



SF-OE00691

P 924



SF-1130

P 927



SF-1130A

P 927



SF-1200

P 928



SF-1200M

P 928



SF-1300M

P 928



SF-1310M

P 929



SF-1320M

P 929



SF-1400M

P 929



SF-1401M

P 930



SF-1402M

P 930



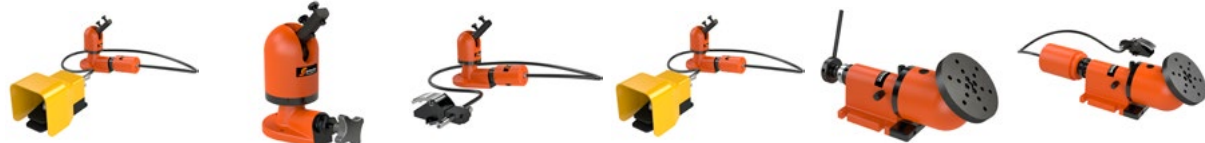
SF-1420M

P 930



SF-1421M

P 931



SF-1422M	P 931	SF-1440M	P 931	SF-1441M	P 932	SF-1442M	P 932	SF-1500M	P 933	SF-1501M	P 933
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SF-1600M	P 933	SF-1208M	P 934	SF-1242	P 934	SF-1276	P 934	SF-1405M	P 935	SF-1279	P 935
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SF-4801	P 935	SEAL KITS	P 936	SF-53	P 939	SF-L	P 939	SF-3850A	P 940	SF-5389	P 940
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SF-58	P 941	SF-59	P 941	SF-3401	P 942	SF-3421	P 942	SF-5000A	P 945	SF-3000MF	P 946
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SF-3100MF	P 946	SF-5500	P 947	SF-5700	P 947	SF-6080A	P 947	SF-6120A	P 948	SF-3520	P 948
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SF-537	P 948	SF-66	P 950	SF-6960A	P 950	SF-15000	P 953	SF-15000	P 953	SF-15000	P 953
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SF-15000	P 954	SF-15000	P 954	SF-15030	P 955	SF-15030	P 955	SF-15040	P 955	SF-15040	P 956
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SF-15040 P 956



SF-15050 P 956



SF-15050 P 957



SF-15050 P 958



SF-15050 P 958



SF-15060 P 958



SF-15060 P 959



SF-15060 P 959



SF-15060 P 959



SF-15060 P 960



SF-15060 P 960



SF-15060 P 960



SF-15060 P 961



SF-15060 P 961



SF-15060 P 961



SF-15060 P 962



SF-15060 P 962



SF-15090 P 963



SF-15100 P 963



SF-15010 P 964



SF-15010 P 964



SF-15020 P 964



SF-15020 P 964



WDS 6001 P 969



WDS 6002 P 969



WDS 6003 P 970



WDS 6004 P 970



WDS 6005 P 971



WDS 6011 P 971



WDS 6012 P 972



WDS 6013 P 972



WDS 6014 P 973



WDS 6015 P 971



WDS 6021-6025 P 975



WDS 6061-6065 P 975



WDS 6031-6035 P 977



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WDS 6111 P 983



WDS 6112 P 983



WDS 6113 P 984



WDS 6121-6125 P 985



WDS 6161-6165 P 985



WDS 6131-6135 P 987



WDS 6171-6175 P 987



WDS 6141-6145 P 989



WDS 6181-6185 P 990



WDS 6481 P 992



WDS 6482 P 992



WDS 6421/6431 P 993



WDS 6441/6451 P 995



WDS 6093-6095 P 996



WDS 6110 P 996



WDS 4043 P 999



WDS 6564 P 999



WDS 6559 P 1000



WDS 6501 P 1001



WDS 6505 P 1001



WDS 6551 P 1002

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MACHINE & HARDWARE

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ANTI VIBRATION MOUNTS

P 5-17

AV Mounts act as a vibration dampener or shock absorber. These isolate and reduce both noise and vibration on applications such as machines, engines & motors, compressors and control panels.

These industrial vibration isolator products consist of male and female threaded mounts, bolt down and end stop designs with a natural rubber finish.



CYLINDRICAL ANTI VIBRATION MOUNTS

Anti vibration mounts act as vibration isolators and are most commonly used on machinery to reduce the effects of vibration. Each rubber buffer mount model is available in male threaded and female threaded variations. Often referred to as machine mounts or engine mounts the anti vibration properties reduce both noise and vibration which could lead to machine or engine damage and help to prolong the life of the machine.

P 5-9



BOBBIN & HOUR GLASS ANTI VIBRATION MOUNTS

Bobbin anti vibration mounts have a 'waisted' hour glass shaped body and are ideal for high vibration dampening applications

P 10



RUBBER BUMPERS & STOPS

Rubber bumpers and rubber stops can be used on many applications from doors to machinery enclosures. These robust pads and stops help prevent solid parts from damaging one another.

P 11-14



BOLT DOWN ANTI VIBRATION MOUNTS

This selection of the bolt down base anti vibration mounts are ideal for machines running at a low or medium level of vibration. These products offer excellent vibration dampening.

P 15-16

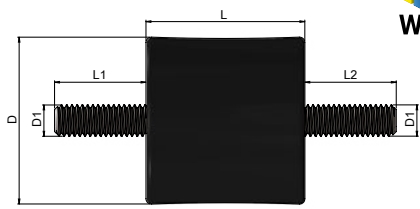


ANTI VIBRATION FEET

Anti vibration feet are ideal for placing under machines where there is a risk of vibration affecting day to day operation. Two versions are available light to medium duty and heavy duty anti vibration feet.

P 17

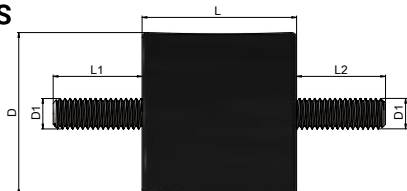




WDS 710 Anti Vibration Mounts - Male to Male Thread

Thread & Plate Material - Zinc Plated Steel
Rubber Hardness - 55 Shore A

WDS No.	D	D1	L	L1	L2	DMCL (mm)	DMSL (mm)	MCL (kg)	MSL (kg)	Weight (kg)
710-080855	8	M3	8	8	8	0.9	1.8	3.8	1.4	0.01
710-101055	10	M4	10	8	8	1	1.9	12	1.4	0.01
710-101555	10	M4	15	8	8	1.4	3.7	13	2.2	0.01
710-131355	13	M4	13	8	8	1.3	3.1	4.5	1.9	0.01
710-150855	15	M4	8	8	8	1.5	3.8	14.9	2.3	0.01
710-151055	15	M4	10	8	8	1.7	3.5	10	4.5	0.01
710-151555	15	M4	15	8	8	1.8	3.6	11	4.9	0.01
710-15200455	15	M4	20	8	10	2.5	5.4	10.6	4.9	0.01
710-15300455	15	M4	30	8	10	4.1	8.1	10.3	4.9	0.01
710-20200455	20	M4	20	8	10	2.4	4.8	20.4	8.2	0.02
710-15150555	15	M5	15	10	10	1.8	3.6	11	4.9	0.08
710-20150555	20	M5	15	15	15	1.7	3.3	22.6	8	0.01
710-20300555	20	M5	30	15	15	2.8	5.3	18.8	8.4	0.01
710-200855	20	M6	8	18	18	1.6	3.7	15.5	4.5	0.02
710-201055	20	M6	10	18	18	1.6	3.5	17.3	5.5	0.02
710-201555	20	M6	15	18	18	1.7	3.3	22.5	7.9	0.02
710-202055	20	M6	20	18	18	2.4	4.8	20.4	8.2	0.02
710-202555	20	M6	25	18	18	2	5.2	24	9.8	0.02
710-251555	25	M6	15	18	18	2.3	4.2	35	13.2	0.03
710-252055	25	M6	20	18	18	2.4	4.8	33.9	13.7	0.03
710-252555	25	M6	25	18	18	3.2	6.3	31	13.5	0.04
710-253055	25	M6	30	18	18	3	4.8	34	13.7	0.03
710-20300655	20	M6	30	18	18	2.8	5.3	18.8	8.4	0.02
710-30200655	30	M6	20	18	18	2.4	4.8	50	19.5	0.04
710-30300655	30	M6	30	18	18	3.9	7.8	42.8	19.5	0.05
710-25200855	25	M8	20	23	23	2.4	4.8	33.9	13.7	0.04
710-25250855	25	M8	25	23	23	3.2	6.3	31	13.5	0.04
710-25300855	25	M8	30	23	23	3.9	7.8	28.4	13.5	0.04
710-301555	30	M8	15	23	23	1.7	3.3	55	19.5	0.04
710-302055	30	M8	20	23	23	2.4	4.8	50	19.5	0.06
710-302555	30	M8	25	23	23	3.2	6.3	44.6	19.5	0.06
710-303055	30	M8	30	23	23	3.9	7.8	42.8	19.5	0.06
710-304055	30	M8	40	23	23	4.2	7.5	41	19.5	0.07
710-402055	40	M8	20	23	23	2.4	4.8	84	35	0.08
710-403055	40	M8	30	23	23	3.9	7.8	76	35	0.1
710-404055	40	M8	40	23	23	5.4	10.8	75.2	35.1	0.11
710-40201055	40	M10	20	28	28	2.4	7.2	74.3	32.5	0.1
710-40301055	40	M10	30	28	28	3.9	7.8	76.4	34.6	0.11
710-40351055	40	M10	35	28	28	3.2	6.7	78.2	46.7	0.11
710-502055	50	M10	20	27	27	3.2	7.8	168	53	0.13
710-50251055	50	M10	25	28	28	3.2	6.3	190.5	54.2	0.15
710-503055	50	M10	30	28	28	3.9	7.8	156	54	0.17
710-50351055	50	M10	35	28	28	3.9	7.8	193.6	58.4	0.17
710-504055	50	M10	40	28	28	5.4	10.8	145	54.2	0.22
710-505055	50	M10	50	28	28	6.9	10.8	124	54.2	0.24
710-604055	60	M10	40	28	28	5.4	10.8	176	54.2	0.21
710-755055	75	M12	50	37	37	6.5	13.2	341	122	0.49



304

RUB

+80°C

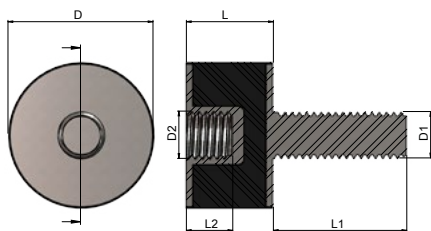
-30°C

Stainless Steel Anti Vibration Mounts - Male to Male Thread WDS 710

Thread & Plate Material - 304 Stainless Steel

Rubber Hardness - 55 Shore A

WDS No.	D	D1	L	L1	L2	DMCL (mm)	DMSL (mm)	MCL (kg)	MSL (kg)	Weight (kg)
710-151555A2	15	M4	15	8	8	1.8	3.6	11	4.9	0.01
710-201555A2	20	M6	15	18	18	1.7	3.3	22.5	7.9	0.02
710-202055A2	20	M6	25	18	18	2	5.2	24	9.8	0.02
710-252055A2	25	M6	20	18	18	2.4	4.8	33.9	13.7	0.03
710-301555A2	30	M8	15	23	23	1.7	3.3	55	19.5	0.04
710-302055A2	30	M8	20	23	23	2.4	4.8	50	19.5	0.06
710-302555A2	30	M8	25	23	23	3.2	6.3	44.6	19.5	0.06
710-303055A2	30	M8	30	23	23	3.9	7.8	42.8	19.5	0.06
710-402055A2	40	M8	20	23	23	2.4	4.8	84	35	0.08
710-403055A2	40	M8	30	23	23	3.9	7.8	76	35	0.1



304

RUB

+80°C

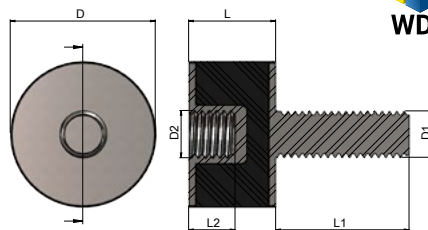
-30°C

Stainless Steel Anti Vibration Mounts - Male to Female Thread WDS 711

Thread & Plate Material - 304 Stainless Steel

Rubber Hardness - 55 Shore A

WDS No.	D	D1	D2	L	L1	L2	DMCL (mm)	DMSL (mm)	MCL (kg)	MSL (kg)	Weight (kg)
711-080855A2	8	M3	M3	8	8	4	0.9	1.8	3.62	1.37	0.01
711-101055A2	10	M4	M4	10	8	4	1	1.9	4	1.4	0.01
711-151055A2	15	M4	M4	10	8	4	1.7	3.5	10	4.5	0.01
711-151555A2	15	M4	M4	15	8	4	1.8	3.6	23.6	8.3	0.01
711-201555A2	20	M6	M6	15	18	6	1.7	3.3	25.9	9	0.02
711-202055A2	20	M6	M6	20	18	6	2.4	4.8	20.4	8.2	0.02
711-252055A2	25	M6	M6	20	18	6	2.4	4.8	35.6	15.8	0.03
711-253055A2	25	M6	M6	30	18	6	3	4.8	34	13.7	0.03
711-302055A2	30	M8	M8	20	23	8	2.4	4.8	57.5	22.4	0.05
711-402055A2	40	M8	M8	20	23	8	2.4	4.8	88.2	36.7	0.08

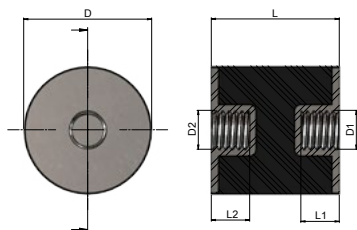


WDS 711 Anti Vibration Mounts - Male to Female Thread

Thread & Plate Material - Zinc Plated Steel

Rubber Hardness - 55 Shore A

WDS No.	D	D1	D2	L	L1	L2	DMCL (mm)	DMSH (mm)	MCL (kg)	MSL (kg)	Weight (kg)
711-080855	8	M3	M3	8	8	4	0.9	1.8	3.62	1.37	0.01
711-101055	10	M4	M4	10	8	4	1	1.9	4	1.4	0.01
711-101555	10	M4	M4	15	8	4	0.9	1.8	4.5	1.42	0.01
711-131355	13	M4	M4	13	8	4	1.3	3.1	4.5	1.9	0.01
711-151055	15	M4	M4	10	8	4	1.7	3.5	10	4.5	0.01
711-151555	15	M4	M4	15	8	4	1.8	3.6	23.6	8.3	0.01
711-15200455	15	M4	M4	20	8	4	3.2	5.5	10.8	4.9	0.09
711-15300455	15	M4	M4	30	8	4	4.1	8.1	10.3	4.9	0.01
711-15150555	15	M5	M5	15	10	5	1.8	3.6	11	4.9	0.01
711-20150555	20	M5	M5	15	15	5	1.7	3.3	22.6	8	0.01
711-20300555	20	M5	M5	30	15	5	3.2	7.8	18.7	9.2	0.12
711-201555	20	M6	M6	15	18	6	1.7	3.3	25.9	9	0.02
711-202055	20	M6	M6	20	18	6	2.4	4.8	20.4	8.2	0.02
711-202555	20	M6	M6	25	18	6	2	5.2	24	9.8	0.02
711-251555	25	M6	M6	15	18	6	2.3	4.2	35	13.2	0.03
711-252055	25	M6	M6	20	18	6	2.4	4.8	35.6	15.8	0.03
711-252555	25	M6	M6	25	18	6	3.2	6.3	32.6	14.2	0.04
711-253055	25	M6	M6	30	18	6	3	4.8	34	13.7	0.03
711-20300655	20	M6	M6	30	18	6	3.2	7.8	18.7	9.2	0.02
711-30200655	30	M6	M6	20	18	6	2.4	4.8	50	19.5	0.04
711-30300655	30	M6	M6	30	18	6	3.9	7.8	42.8	19.5	0.04
711-301555	30	M8	M8	15	23	8	1.7	3.3	82.6	10.6	0.04
711-302055	30	M8	M8	20	23	8	2.4	4.8	57.5	22.4	0.05
711-302555	30	M8	M8	25	23	8	3.2	6.3	43.7	19	0.05
711-303055	30	M8	M8	30	23	8	3.9	7.8	42.8	19.5	0.04
711-304055	30	M8	M8	40	23	8	4.5	8.9	41.5	20	0.06
711-402055	40	M8	M8	20	23	8	2.4	4.8	88.2	36.7	0.08
711-403055	40	M8	M8	30	23	8	3.9	7.8	79.8	36.7	0.09
711-404055	40	M8	M8	40	23	8	5.4	10.8	82.7	38.6	0.11
711-25150855	25	M8	M8	15	23	8	1.7	3.3	21.4	13.6	0.03
711-25200855	25	M8	M8	20	23	8	2.4	4.8	33.9	13.7	0.04
711-25250855	25	M8	M8	25	23	8	3.2	6.3	31	13.5	0.04
711-25300855	25	M8	M8	30	23	8	3.9	7.8	28.4	13.5	0.04
711-502055	50	M10	M10	20	26	11	5.5	8.5	103	42	0.15
711-504055	50	M10	M10	40	26	11	6.2	9.5	115	49	0.17
711-505055	50	M10	M10	50	26	12	6.9	10.8	124	54.2	0.23
711-604055	60	M10	M10	40	28	12	5.4	10.8	194	59.6	0.27
711-40201055	40	M10	M10	20	28	11	2.4	3.4	66.3	28.9	0.08
711-40251055	40	M10	M10	25	28	11	3.2	6.3	72.4	32.4	0.1
711-40301055	40	M10	M10	30	28	11	3.9	7.8	76.4	34.6	0.01
711-50251055	50	M10	M10	25	27	11	3.2	6.3	190.5	54.2	0.15
711-50301055	50	M10	M10	30	27	11	3.9	7.8	157.7	54.1	0.14
711-50351055	50	M10	M10	35	27	11	3.9	7.8	193.6	58.4	0.17
711-755055	75	M12	M12	50	37	15	6.5	13.2	341	122	0.48



ZP

RUB

+80°C

-30°C

Anti Vibration Mounts - Female to Female Thread WDS 712

Thread & Plate Material - Zinc Plated Steel

Rubber Hardness - 55 Shore A

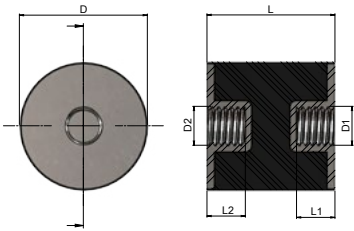
WDS No.	D	D1	D2	L	L1	L2	DMCL (mm)	DMSL (mm)	MCL (kg)	MSL (kg)	Weight (kg)
712-101555	10	M4	M4	15	4	4	1.3	2.8	5.8	2.8	0.02
712-151555	15	M4	M4	15	4	4	1.8	3.6	12.1	5.4	0.01
712-15200455	15	M4	M4	20	4	4	1.8	3.6	11	4.9	0.01
712-15300455	15	M4	M4	30	4	4	4.1	8.1	10.3	4.9	0.01
712-20150555	20	M5	M5	15	5	5	1.7	3.3	22.6	8	0.02
712-202055	20	M6	M6	20	6	6	2.4	4.8	20.4	8.2	0.02
712-202555	20	M6	M6	25	6	6	2.4	6.3	25.5	8.1	0.02
712-252055	25	M6	M6	21	6	6	2.4	4.8	37.3	15.1	0.03
712-252555	25	M6	M6	25	6	6	3.2	6.3	32.6	14.2	0.03
712-253055	25	M6	M6	30	6	6	3.9	7.8	27.8	13.2	0.03
712-20300655	20	M6	M6	30	6	6	2.8	5.3	18.8	8.4	0.02
712-302055	30	M8	M8	20	8	8	2.4	4.8	62.5	24.4	0.06
712-303055	30	M8	M8	30	8	8	3.9	7.8	47.1	21.4	0.06
712-304055	30	M8	M8	40	8	8	3.9	7.8	40.5	19.5	0.05
712-403055	40	M8	M8	30	8	8	3.9	7.8	83.4	38.5	0.09
712-404055	40	M8	M8	40	8	8	5.4	10.8	78.9	36.8	0.11
712-25200855	25	M8	M8	20	8	8	2.4	4.8	33.9	13.7	0.03
712-30250855	30	M8	M8	25	8	8	3.2	6.3	44.6	19.5	0.05
712-40200855	40	M8	M8	20	8	8	2.4	7.2	74.3	32.5	0.06
712-40250855	40	M8	M8	25	8	8	3.2	6.3	72.4	32.4	0.06
712-40201055	40	M10	M10	20	6	6	2.4	7.2	74.3	32.5	0.01
712-40251055	40	M10	M10	25	10	10	3.2	6.3	72.4	32.4	0.08
712-40301055	40	M10	M10	30	10	10	3.9	7.8	76.4	34.6	0.1
712-40351055	40	M10	M10	35	10	10	3.2	6.7	78.2	46.7	0.1
712-50251055	50	M10	M10	25	10	10	3.2	6.3	190.5	54.2	0.13
712-50301055	50	M10	M10	30	10	10	3.9	7.8	157.7	54.1	0.15
712-604055	60	M10	M10	40	12	12	5.4	10.8	176	54.2	0.26
712-504055	50	M10	M10	40	12	12	2.4	4.8	118	51	0.15
712-505055	50	M10	M10	50	12	12	6.9	10.8	124	54.2	0.22
712-755055	75	M12	M12	50	15	15	6.5	13.2	358	128.1	0.45

304

RUB

+80°C

-30°C

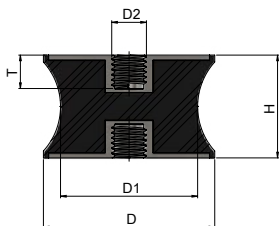


WDS

WDS 712 Stainless Steel Anti Vibration Mounts - Female to Female Thread

Thread & Plate Material - 304 Stainless Steel
Rubber Hardness - 55 Shore A

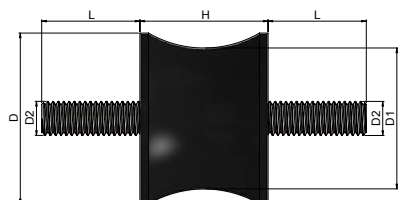
WDS No.	D	D1	D2	L	L1	L2	DMCL (mm)	DMSL (mm)	MCL (kg)	MSL (kg)	Weight (kg)
712-151555A2	15	M4	M4	15	4	4	1.8	3.6	12.1	5.4	0.01
712-202055A2	20	M6	M6	20	6	6	2.4	4.8	20.4	8.2	0.02
712-252055A2	20	M6	M6	25	6	6	2.4	6.3	25.5	8.1	0.03
712-302055A2	30	M8	M8	20	8	8	2.4	4.8	62.5	24.4	0.06
712-303055A2	30	M8	M8	30	8	8	3.9	7.8	47.1	21.4	0.06
712-304055A2	30	M8	M8	40	8	8	3.9	7.8	40.5	19.5	0.05
712-403055A2	40	M8	M8	30	8	8	3.9	7.8	83.4	38.5	0.09
712-404055A2	40	M8	M8	40	8	8	5.4	10.8	78.9	36.8	0.11



Rubber Buffer Bobbin Mounts - Female Thread **WDS 717**

Thread & Plate Material - Zinc Plated Steel
Rubber Hardness - 57 Shore A

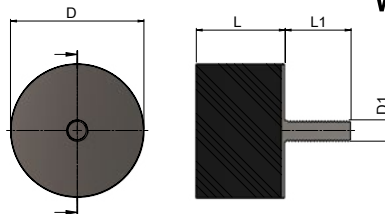
WDS No.	D	D1	D2	H	T	Weight (kg)
717-151557	15	12	M4	15	4	0.01
717-201557	20	14	M6	15	6	0.01
717-302057	30	22	M8	20	8	0.04
717-403057	40	33	M8	30	8	0.07
717-404857	40	20	M8	48	8	0.07
717-503057	50	40	M10	30	10	0.12
717-754057	75	50	M12	40	12	0.3



Anti Vibration Rubber Bobbin Mounts - Male Thread **WDS 716**

Thread & Plate Material - Zinc Plated Steel
Rubber Hardness - 57 Shore A

WDS No.	D	D1	D2	H	L	Weight (kg)
716-101057	10	8	M4	10	13	0.01
716-151557	15	12	M4	15	13	0.01
716-201557	20	14	M6	15	18	0.02
716-302057	30	22	M8	20	23	0.06
716-403057	40	33	M8	30	23	0.08
716-404857	40	20	M8	48	23	0.09
716-503057	50	40	M10	30	33	0.17
716-754057	75	50	M12	40	37	0.35

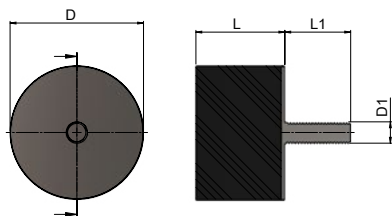


WDS 713 Male Cylindrical Rubber Stop

Thread & Plate Material - Zinc Plated Steel

Rubber Hardness - 55 Shore A

WDS No.	D	D1	L	L1	DMCL (mm)	MCL (kg)	Weight (kg)
713-080855	8	M3	8	8	0.9	3.8	0.01
713-101055	10	M4	10	8	1.1	4.9	0.01
713-101555	10	M4	15	8	1.2	5.1	0.01
713-131355	13	M4	13	8	1.3	4.5	0.01
713-150855	15	M4	8	8	1.5	7.8	0.01
713-151055	15	M4	10	8	1.6	9.2	0.01
713-151555	15	M4	16	8	1.8	11	0.01
713-15300455	15	M4	30	8	4.1	10.3	0.01
713-20150555	20	M5	15	10	1.7	22.6	0.01
713-200855	20	M6	8	18	0.8	14.9	0.01
713-201055	20	M6	10	18	1.4	24.2	0.01
713-201555	20	M6	15	18	1.7	22.5	0.01
713-202055	20	M6	20	18	2.4	20.4	0.01
713-202555	20	M6	25	18	3.2	18.6	0.01
713-251555	25	M6	15	18	1.7	38.1	0.02
713-252055	25	M6	20	18	2.4	33.9	0.02
713-252555	25	M6	25	18	3.2	31	0.03
713-253055	25	M6	30	18	3.9	27.8	0.03
713-20300655	20	M6	30	18	2.8	18.8	0.02
713-301555	30	M8	15	23	1.7	82.6	0.03
713-302055	30	M8	20	23	2.4	50	0.04
713-302555	30	M8	25	23	3.2	43.7	0.04
713-303055	30	M8	30	23	3.9	42.8	0.04
713-304055	30	M8	40	23	3.9	41.2	0.05
713-402055	40	M8	20	23	3.9	77	0.05
713-403055	40	M8	30	23	3.9	76	0.07
713-404055	40	M8	40	23	5.4	75.2	0.09
713-25150855	25	M8	15	23	1.7	38.8	0.01
713-25200855	25	M8	20	23	2.4	33.9	0.02
713-40250855	40	M8	25	23	3.2	72.2	0.06
713-502055	50	M10	20	28	2.3	240	0.09
713-40201055	40	M10	20	28	2.4	69.8	0.07
713-40251055	40	M10	25	28	3.2	72.2	0.08
713-50251055	50	M10	25	28	3.2	190.5	0.1
713-40301055	40	M10	30	28	3.9	76.4	0.08
713-50301055	50	M10	30	28	3.9	157.7	0.11
713-40351055	40	M10	35	28	3.9	78.4	0.11
713-504055	50	M10	40	28	5.4	141	0.13
713-604055	60	M10	40	28	5.4	176	0.21
713-505055	50	M10	50	28	6.9	124	0.18
713-755055Q	75	M12	50	27	6.5	341	0.42
713-755055	75	M12	50	37	6.5	341	0.42



304

RUB

+80°C

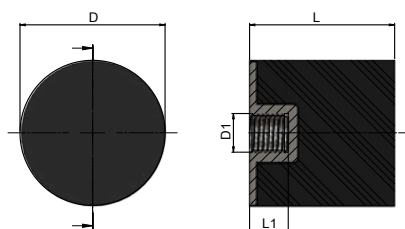
-30°C

Stainless Steel Male Cylindrical Rubber Stop WDS 713

Thread & Plate Material - 304 Stainless Steel

Rubber Hardness - 55 Shore A

WDS No.	D	D1	L	L1	DMCL (mm)	MCL (kg)	Weight (kg)
713-080855A2	8	M3	8	8	0.9	3.8	0.01
713-101055A2	10	M4	10	8	1.1	4.9	0.01
713-151555A2	15	M4	16	8	1.8	11	0.001
713-200855A2	20	M6	8	18	0.8	14.9	0.01
713-201555A2	20	M6	15	18	1.7	22.5	0.01
713-202055A2	20	M6	20	18	2.4	20.4	0.01
713-252055A2	25	M6	20	18	2.4	33.9	0.02
713-302055A2	30	M8	20	23	2.4	50	0.04
713-303055A2	30	M8	30	23	3.9	42.8	0.04
713-304055A2	30	M8	40	23	3.9	41.2	0.05
713-403055A2	40	M8	30	23	3.9	76	0.07
713-404055A2	40	M8	40	23	5.4	75.2	0.09



304

RUB

+80°C

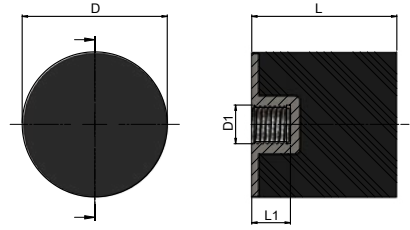
-30°C

Stainless Steel Female Cylindrical Rubber Stop WDS 714

Thread & Plate Material - 304 Stainless Steel

Rubber Hardness - 55 Shore A

WDS No.	D	D1	L	L1	DMCL (mm)	MCL (kg)	Weight (kg)
714-202055A2	20	M6	20	6	2.4	20.4	0.02
714-252555A2	25	M6	25	6	3.2	32.6	0.03

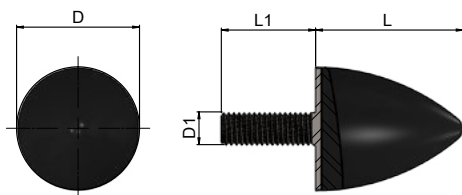


WDS 714 Female Cylindrical Rubber Stop

Thread & Plate Material - Zinc Plated Steel

Rubber Hardness - 55 Shore A

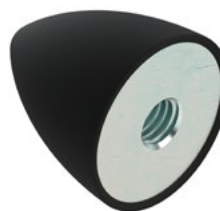
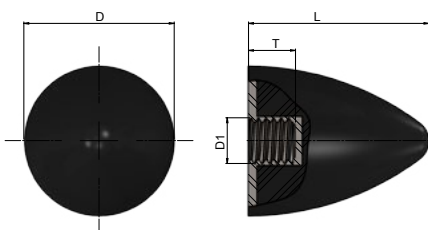
WDS No.	D	D1	L	L1	DMCL (mm)	MCL (kg)	Weight (kg)
714-080855	8	M3	8	4	1.5	3.6	0.01
714-151555	15	M4	15	8	1.8	4.7	0.01
714-152055	15	M4	20	6	1.75	5.5	0.01
714-15300455	15	M4	30	5	4.1	10.3	0.01
714-20150555	20	M5	15	10	1.7	22.6	0.01
714-201555	20	M6	15	6	1.7	22.1	0.01
714-202055	20	M6	20	6	2.4	20.4	0.02
714-202555	20	M6	25	6	3.2	18.6	0.02
714-251555	25	M6	15	6	1.7	38.1	0.02
714-252555	25	M6	25	6	3.2	32.6	0.03
714-20300655	20	M6	30	6	2.8	18.8	0.02
714-25200655	25	M6	20	6	2.4	33.9	0.02
714-30200655	30	M6	20	6	2.4	50	0.03
714-25150855	25	M8	15	8	1.7	38.8	0.03
714-25200855	25	M8	20	8	2.4	33.9	0.02
714-25250855	25	M8	25	6	3.2	32.6	0.03
714-301555	30	M8	15	8	1.7	82.6	0.03
714-302555	30	M8	25	8	2.5	43.7	0.03
714-303055	30	M8	30	8	3.9	42.8	0.05
714-30400855	30	M8	40	8	3.9	42.8	0.05
714-402055	40	M8	20	8	3.2	79	0.05
714-402555	40	M8	25	8	3.5	77	0.06
714-403055	40	M8	30	8	3.9	74.9	0.06
714-404055	40	M8	40	8	5.4	73	0.08
714-40201055	40	M10	20	10	2.4	74.3	0.05
714-40251055	40	M10	25	10	3.9	76.4	0.06
714-40301055	40	M10	30	10	3.9	76.4	0.07
714-502055	50	M10	20	10	2.4	240	0.08
714-505055	50	M10	50	10	6.9	119.5	0.15
714-604055	60	M10	40	10	6.8	128.5	0.21
714-755055	75	M12	50	12	6.6	334	0.34



Cone Rubber Bump Stop - Male Thread WDS 715

Thread & Plate Material - Zinc Plated Steel
Rubber Hardness - 55 Shore A

WDS No.	D	D1	L	L1	DMCL (mm)	MCL (kg)	Weight (kg)
715-202455	20	M6	24	18	9.5	24.2	0.02
715-253055	25	M6	30	18	8	21	0.02
715-303655	30	M8	36	23	15.4	57.1	0.04
715-403055	40	M8	30	23	7.8	45	0.05
715-406055	40	M8	60	23	10.2	48	0.08
715-505055	50	M10	50	28	7.2	54	0.11
715-505855	50	M10	58	28	25	178	0.13
715-506455	50	M10	64	35	14.9	80	0.14
715-606055	60	M12	60	33	17.6	95	0.21
715-758955	75	M12	89	37	37.5	448	0.34



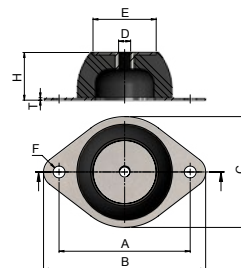
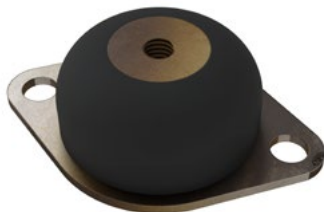
Cone Rubber Bump Stop - Female Thread WDS 715

Thread & Plate Material - Zinc Plated Steel
Rubber Hardness - 55 Shore A

WDS No.	D	D1	L	T	Weight (kg)
715-202455F	20	M6	24	6	0.02
715-253055F	25	M6	30	6	0.02
715-303655F	30	M8	36	8	0.04
715-403055F	40	M8	30	8	0.05
715-505055F	50	M10	50	11	0.1
715-505855F	50	M10	58	11	0.12

ZP

RUB



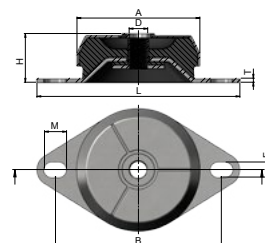
WDS 718 Flanged Bolt Down Anti Vibration Mount

Zinc Plated Mild Steel - Yellow Iridescent
Black Natural Rubber

WDS No.	A	B	C	D	E	F	H	T	Maximum load (kg)	Static deflection (mm)	SHORE	Weight (kg)
718-20540	50	63	43	M6	18	7	20	2	3.5	2.5	40	0.04
718-20560	50	63	43	M6	18	7	20	2	9	2.9	60	0.04
718-21040	66	84	52	M8	33	8	25	2	20	4.6	40	0.08
718-21060	66	84	52	M8	33	8	25	2	50	3.7	60	0.08
718-21540	92	112	75	M10	45	10	35	2	40	6.4	40	0.2

ZP

RUB



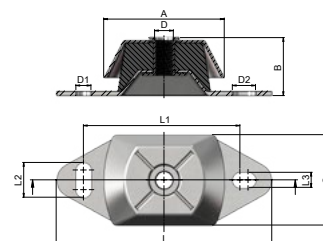
WDS 719 Machine Shear Cap Anti Vibration Mounts

Zinc Plated Steel
Black Natural Rubber

WDS No.	A	B	D	F	H	L	M	T	Average Load (kg/mm)	Max Compression (mm)	Max Load (kg)	SHORE	Weight (kg)
719-20540	63	88	M10	9	35	110	14	2.5	7	4.3	30	40	0.25
719-20560	63	88	M10	9	35	110	14	2.5	24	3.8	90	60	0.25
719-21540	83	110	M12	11.5	35	135	15	3	20	4	80	40	0.39
719-21560	83	110	M12	11.5	35	135	15	3	54	3.7	200	60	0.39
719-22040	106	143	M16	13	42	175	19	3	76	5	380	40	0.86
719-22060	106	143	M16	13	42	175	19	3	96	5	480	60	0.92

ZP

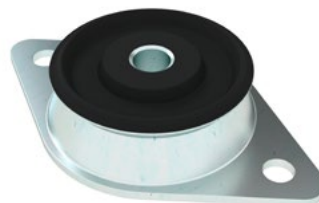
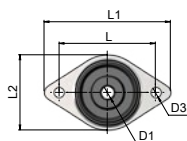
RUB



WDS 719 Anti Vibration Marine Engine Mounts

Zinc Plated Steel

WDS No.	A	B	C	D	D1	D2	L	L1	L2	L3	Average Load (kg/mm)	Max Compression (mm)	Max Load (kg)	SHORE	Weight (kg)
719-40545	80	38	60	M12	11	14	120	100	14	11	13	4	52	45	0.34
719-40565	80	38	60	M12	11	14	120	100	14	11	24	4	96	65	0.34
719-41045	104	50	78	M16	13	20	186	140	30	13	24	5	120	45	0.86
719-41065	104	50	78	M16	13	20	186	140	30	13	60	5	300	65	0.86



ZP

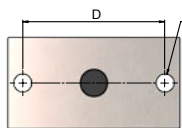
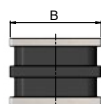
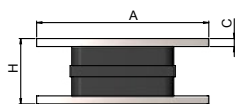
RUB

Cone Cab Anti Vibration Mounts WDS 719

Zinc Plated Steel

2x Washers Supplied to minimise overload

WDS No.	A	B	D1	D3	L	L1	L2	S1	Average Stiffness (kg/mm)	Max Compression (mm)	Max Load (kg)	SHORE	Weight (kg)
719-30545	46	23.5	8	6.5	64	84	50	2	12.5	3	37.5	45	0.13
719-30560	46	23.5	8	6.5	64	84	50	2	22	3	66	60	0.13
719-31045	60	45	12.1	11	80	107	68	2.5	20	5	100	45	0.35
719-31060	60	45	12.1	11	80	107	68	2.5	34	5	170	60	0.35



DEF = Deflection (mm)
P = Pressure (kg)
S = Shear (kg)
SC = Spring Constant



ZP

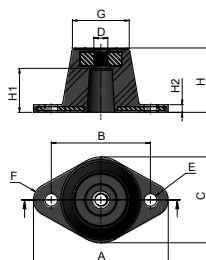
RUB

Sandwich Bolt Down Anti Vibration Mount WDS 720

Zinc Plated Steel

Galvanised plates with Vulcanized Natural Rubber

WDS No.	A	B	C	D	E	H	P	S	DEF	SC	SHORE	Weight (kg)
720-21065	127	57	5	108	11	41	830	175	4.5	12.5	65	0.75
720-21565	168	57	5	146	11	41	1800	290	4.5	20.5	65	1.06



ZP

RUB

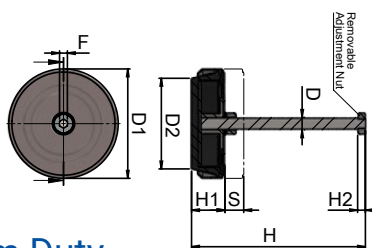
Anti Vibration Turret Mount WDS 721

Zinc Plated Steel

Black Natural Rubber

WDS No.	A	B	C	D	E	F	G	H	H1	H2	SHORE	Weight (kg)
721-20845	81	57	45.8	M8	9	10	29	33.5	20	5.5	45	0.08
721-20855	81	57	45.8	M8	9	10	29	33.5	20	5.5	55	0.08
721-20870	81	57	45.8	M8	9	10	29	33.5	20	5.5	70	0.08
721-21045	96	71	61.5	M10	9	11.5	42.7	46.3	32	5.5	45	0.19
721-21055	96	71	61.5	M10	9	11.5	42.7	46.3	32	5.5	55	0.19
721-21070	96	71	61.5	M10	9	11.5	42.7	46.3	32	5.5	70	0.19

ZP



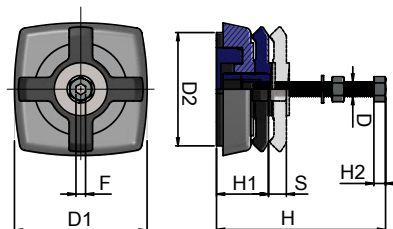
WDS 693 Anti-Vibration Levelling Foot - Medium Duty

Base - Steel, Melamine Coating

Stem - Zinc Plated Steel

WDS No.	D	D1	D2	F	H	H1	H2	S	Max Load (kg)	Weight (kg)
693-12100	M12	100	78	8	207	35	7.5	22	280	0.72
693-16140	M16	140	114	10	221	42	8.5	24	1200	1.7
693-20190	M20	190	158	12	228	54	8.5	27	3000	3.59

ZP



WDS 694 Anti-Vibration Levelling Foot - Heavy Duty

Base - Steel, Melamine Coating

Stem - Zinc Plated Steel

WDS No.	D	D1	D2	F	H	H1	H2	S	Max Load (kg)	Weight (kg)
694-12110	M12	110	97	8	231	47	7.5	15	600	1.74
694-16130	M16	130	117	10	231	51	8.5	20	1500	2.73
694-16160	M16	160	146	10	241	65	8.5	24	1800	4.54
694-20200	M20	200	185	12	267	69	8.5	27	4000	7.71



LEVELLING FEET

For the full range of Levelling Feet please see pages **325-378**



CASTORS WHEELS & TROLLEY WHEELS

P 22-52

The castor & wheels range includes light, medium and heavy duty capacity models with bracket types including fixed, swivel and swivel & braked castors. WDS also offer a comprehensive range of levelling castors, replacement trolley wheels and heavy duty castors.



NYLON CASTORS

Nylon castors offer great resistance to everyday non corrosive agents such as cleaning fluids, petrol and other chemicals making them ideal for medical equipment, trolleys and office furniture. Selecting a stainless steel frame with a white nylon wheel would make these castors ideal for the pharmaceutical and food industry. They would also perform well in outdoor applications. The smaller very light duty black nylon castors are ideal for office furniture and display units.

P 22-26



RUBBER CASTORS

Rubber castors are available with black, grey or blue rubber wheels. The range is available in fixed, swivel and swivel & braked styles with plate fitting and bolt hole fitting options. Stainless steel rubber castors are ideal for noise reduction and clean room applications such as hospital beds and equipment. This type of castor is for light to medium duty loads.

P 27-38



POLYURETHANE CASTORS

Heavy duty polyurethane castors are ideal for medium to heavy duty loads, offering twice the capacity of standard nylon and rubber castors. The polyurethane tyre is non marking and has an operating load of between 300 to 350KG's. These castor wheels are ideal for industrial applications. Models include fixed, swivel and swivel & braked options.

P 39-41



HIGH OR LOW TEMPERATURE CASTORS

Phenolic resin castors are resistant to both high and low temperatures ranging from -40 degrees C up to +280 degrees C. These versatile castors are ideal for the catering and food manufacturing industries where they can be used for walk in ovens, refrigerator trolleys and applications where temperature extremes are an issue.

P 42



LEVELLING CASTORS

Levelling castors are available in several styles. Foot pedal operated levelling castors are ideal for machines and equipment allowing the user to move equipment freely on a castor then lock the position of wheel by applying to foot pedal. Adjustable levelling castors are ideal for applications where there is a requirement for absolute positioning. These die cast aluminium castors come with a rubber pad which is adjustable and raises the castor from a flat surface. Models include: finger operated, ratchet operated and heavy duty spanner operated adjustable castors.

P 43-47





OFFICE FURNITURE & CHAIR CASTORS & WHEELS

Furniture Castors are very light duty castors designed for chairs, cupboards and office furniture. They are made from nylon with either a steel stud or 4 screw hole fitting top plate, with an option of a braked model. These light Weight (kg) twin wheel nylon castors can also be used on desks, cabinets, workstations, point of sale displays plus many more.

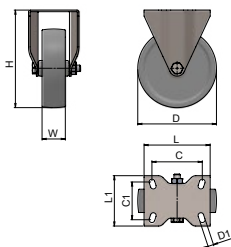
P 48-49



CASTOR WHEELS

WDS offer an extensive range of replacement castor wheels. The range includes: phenolic resin wheels, steel flanged wheels, nylon wheels, polyurethane wheels and various colours of rubber wheels.

P 50-52



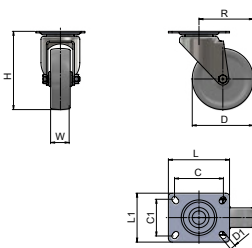
ZP

NYL

Top Plate Fitting Fixed Castors - Nylon Wheel WDS 12300

Wheel - Nylon
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	W	Bearing	Load Capacity (kg)	Weight (kg)
12300-080	80	60	80	9	112	102	84	30	Plain	90	0.43
12300-100	80	60	100	9	128	102	84	32	Plain	110	0.5
12300-125	80	60	125	9	152	102	84	37.5	Plain	150	0.69
12300-150	105	80	152	11	189	146	107	40	Plain	180	1.3



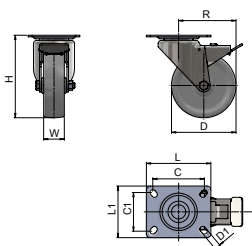
ZP

NYL

Top Plate Fitting Swivel Castors - Nylon Wheel WDS 12302

Wheel - Nylon
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12302-080	80	60	80	9	112	100	80	75	30	Plain	90	0.54
12302-100	80	60	100	9	128	100	80	89	32	Plain	110	0.62
12302-125	80	60	125	9	152	100	80	97.5	37.5	Plain	150	0.77
12302-150	105	80	152	11	189	140	110	133	40	Plain	180	1.63



ZP

NYL

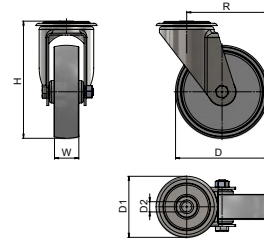
Top Plate Fitting Swivel & Brake Castors - Nylon Wheel WDS 12304

Wheel - Nylon
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12304-080	80	60	80	9	112	100	80	75	30	Plain	90	0.67
12304-100	80	60	100	9	128	100	80	89	32	Plain	110	0.75
12304-125	80	60	125	9	152	100	80	97.5	37.5	Plain	150	0.92
12304-150	105	80	152	11	189	140	110	133	40	Plain	180	1.86

ZP

NYL



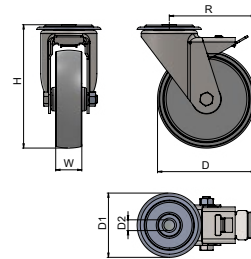
WDS 12306 Bolt Hole Fitting Swivel Castors - Nylon Wheel

Wheel - Nylon
Frame - Zinc Plated Steel

WDS No.	D	D1	D2	H	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12306-080	80	70	12.4	112	75	30	Plain	90	0.46
12306-100	100	70	12.4	128	89	32	Plain	110	0.53
12306-125	125	70	12.4	152	97.5	37.5	Plain	150	0.69
12306-150	152	99	16.5	189	133	40	Plain	180	1.34

ZP

NYL



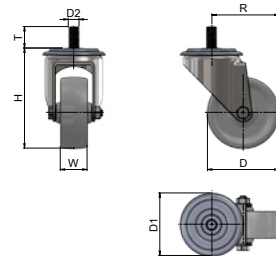
WDS 12308 Bolt Hole Fitting Swivel & Brake Castors - Nylon Wheel

Wheel - Nylon
Frame - Zinc Plated Steel

WDS No.	D	D1	D2	H	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12308-080	80	70	12.4	112	75	30	Plain	90	0.59
12308-100	100	70	12.4	128	89	32	Plain	110	0.65
12308-125	125	70	12.4	152	97.5	37.5	Plain	150	0.84
12308-150	152	99	16.5	189	133	40	Plain	180	1.58

ZP

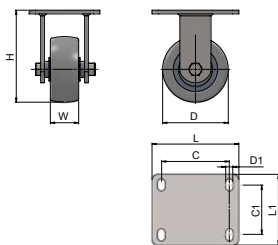
NYL



WDS 12309 Stud Fitting Swivel Castors - Nylon Wheel

Wheel - Nylon
Frame - Zinc Plated Steel

WDS No.	D	D1	D2	H	R	T	W	Bearing	Load Capacity (kg)	Weight (kg)
12309-080	80	70	M12	112	75	35	30	Plain	90	0.5
12309-100	100	70	M12	128	89	35	32	Plain	110	0.59



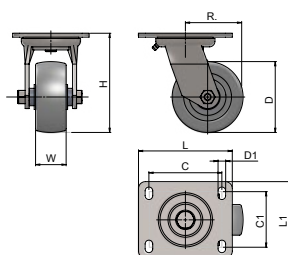
ZP

NYL

Top Plate Fitting Fixed Castors - Nylon Wheel **WDS 12355**

Wheel - Nylon
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	W	Bearing	Load Capacity (kg)	Weight (kg)
12355-100	105	80	100	11	143	135	110	44	Ball Journal	280	1.55
12355-125	105	80	125	11	155	135	110	44	Ball Journal	350	1.72
12355-150	105	80	150	11	190	135	110	44	Ball Journal	400	1.86



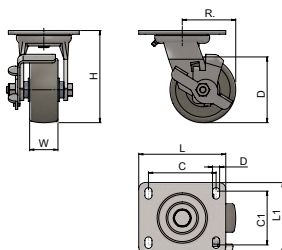
ZP

NYL

Top Plate Fitting Swivel Castors - Nylon Wheel **WDS 12356**

Wheel - Nylon
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12356-100	105	80	100	11	143	135	110	83	44	Ball Journal	280	1.84
12356-125	105	80	125	11	155	135	110	100	44	Ball Journal	350	2.02
12356-150	105	80	150	11	190	135	110	110	44	Ball Journal	400	2.17



ZP

NYL

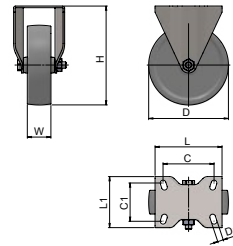
Top Plate Fitting Swivel & Brake Castors - Nylon Wheel **WDS 12357**

Wheel - Nylon
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12357-100	105	80	100	11	143	135	110	83	50	Ball Journal	280	2.03
12357-125	105	80	125	11	155	135	110	100	50	Ball Journal	350	2.26
12357-150	105	80	150	11	190	135	110	110	50	Ball Journal	400	2.43

304

NYL



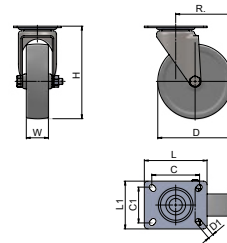
WDS 12375 304 Stainless Steel - Top Plate Fitting Fixed Castors - Nylon Wheel

Wheel - Nylon
Frame - 304 Stainless Steel

WDS No.	C	C1	D	D1	H	L	L1	W	Bearing	Load Capacity (kg)	Weight (kg)
12375-080	80	60	80	9	105	105	90	32	Plain	80	0.36
12375-100	80	60	100	9	128	105	90	36	Plain	100	0.46
12375-125	80	60	125	9	155	105	90	37	Plain	150	0.67

304

NYL



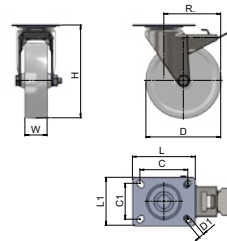
WDS 12376 304 Stainless Steel - Top Plate Fitting Swivel Castors - Nylon Wheel

Wheel - Nylon
Frame - 304 Stainless Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12376-080	80	60	80	9	105	105	80	72	32	Plain	80	0.48
12376-100	80	60	100	9	128	105	80	83	36	Plain	100	0.55
12376-125	80	60	125	9	155	105	80	95	37	Plain	150	0.74

304

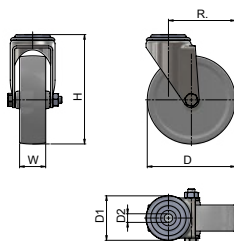
NYL



WDS 12377 304 Stainless Steel - Top Plate Fitting Swivel & Brake Castors - Nylon Wheel

Wheel - Nylon
Frame - 304 Stainless Steel

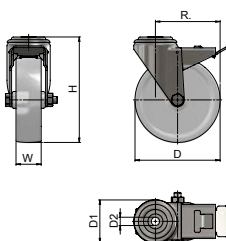
WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12377-080	80	60	80	9	105	105	80	72	32	Plain	80	0.6
12377-100	80	60	100	9	125	105	80	83	36	Plain	100	0.7
12377-125	80	60	125	9	155	105	80	95	37	Plain	150	0.9
12377-160	105	80	160	11	197	135	105	148	40	Plain	350	2.08


304
NYL

304 Stainless Steel - Bolt Hole Fitting Swivel Castors - Nylon Wheel **WDS 12378**

Wheel - Nylon
Frame - 304 Stainless Steel

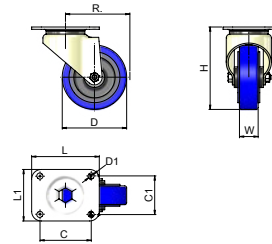
WDS No.	D	D1	D2	H	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12378-080	80	63	12.2	105	72	32	Plain	80	0.4
12378-100	100	63	12.2	128	83	36	Plain	100	0.46
12378-125	125	63	12.2	155	95	37	Plain	150	0.66


304
NYL

304 Stainless Steel - Bolt Hole Fitting Swivel & Brake Castors - Nylon Wheel **WDS 12379**

Wheel - Nylon
Frame - 304 Stainless Steel

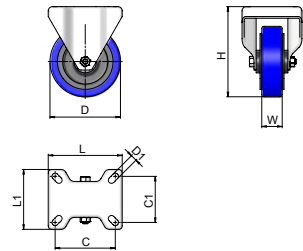
WDS No.	D	D1	D2	H	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12379-080	80	63	12.2	105	72	32	Plain	80	0.53
12379-100	100	63	12.2	128	83	36	Plain	100	0.61
12379-125	125	63	12.2	155	95	37	Plain	150	0.83
12379-160	160	99	16.2	197	148	40	Plain	350	1.9



WDS 12170 Top Plate Fitting Swivel Castors - Blue Rubber Wheel Medium Duty

Wheel - Blue Rubber, with Nylon Centre
Frame - Zinc Plated Steel

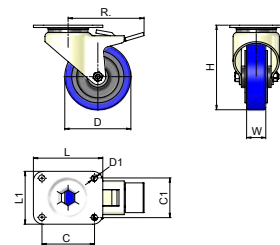
WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12170-351	80	60	100	8.5	128	105	83	95	36	Roller	200	1.08
12170-353	80	60	125	8.5	152	105	83	108	36	Roller	250	1.21
12170-355	105	80	160	10.5	197	134	110	130	50	Ball Journal	300	2.3



WDS 12170 Top Plate Fitting Fixed Castors - Blue Rubber Wheel Medium Duty

Wheel - Blue Rubber, with Nylon Centre
Frame - Zinc Plated Steel

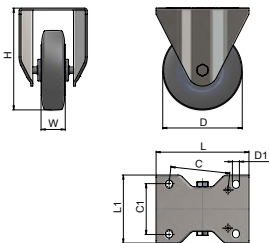
WDS No.	C	C1	D	D1	H	L	L1	W	Bearing	Max Load (kg)	Weight (kg)
12170-301	80	60	100	8.5	128	105	85	36	Roller	200	0.9
12170-303	80	60	125	8.5	152	105	92	36	Roller	250	1.04
12170-305	105	80	160	10.5	197	134	110	50	Ball Journal	300	1.89



WDS 12170 Top Plate Fitting Swivel & Brake Castors - Blue Rubber Wheel Medium Duty

Wheel - Blue Rubber with Nylon Centre
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Max Load (kg)	Weight (kg)
12170-351B	80	60	100	8.5	128	105	83	115	36	Roller	200	1.29
12170-353B	80	60	125	8.5	152	105	83	115	36	Roller	250	1.43
12170-355B	105	80	160	10.5	197	134	110	148	50	Ball Journal	300	2.82



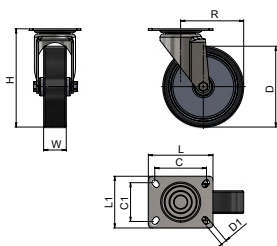
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RUB

Top Plate Fitting Fixed Castors - Thermoplastic Rubber Wheel WDS 12324

Wheel - Thermoplastic Rubber, with Polypropylene Core
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	W	Bearing	Load Capacity (kg)	Weight (kg)
12324-080	80	60	80	9	110	103	84	30	Plain	60	0.43
12324-100	80	60	100	9	128	103	84	30	Plain	70	0.5
12324-125	80	60	125	9	152	103	84	35	Plain	90	0.65
12324-160	105	80	160	11	193	146	107	40	Plain	120	1.36



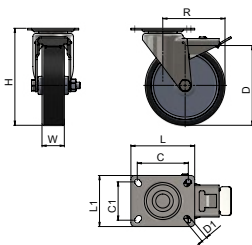
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RUB

Top Plate Fitting Swivel & Brake Castors - Thermoplastic Rubber Wheel WDS 12326

Wheel - Thermoplastic Rubber, with Polypropylene Core
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12326-080	80	60	80	9	110	100	80	75	30	Plain	60	0.55
12326-100	80	60	100	9	128	100	80	89	30	Plain	70	0.62
12326-125	80	60	125	9	152	100	80	97.5	35	Plain	90	0.74
12326-160	105	80	160	11	193	146	107	137	40	Plain	120	1.68



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RUB

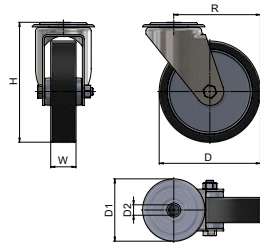
Top Plate Fitting Swivel & Brake Castors - Thermoplastic Rubber Wheel WDS 12328

Wheel - Thermoplastic Rubber, with Polypropylene Core
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	E	E1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12328-080	80	60	80	9	75.8	46	110	103	84	75	30	Plain	60	0.68
12328-100	80	60	100	9	75.8	46	128	103	84	89	30	Plain	70	0.74
12328-125	80	60	125	9	75.8	46	152	103	84	97.5	35	Plain	90	0.89
12328-160	105	80	160	11	101.6	73.6	193	146	107	137	40	Plain	120	1.93

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RUB



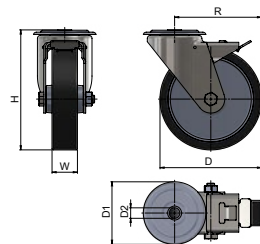
WDS 12330 Bolt Hole Fitting Swivel Castors - Thermoplastic Rubber Wheel

Wheel - Thermoplastic Rubber, with Polypropylene Core
Frame - Zinc Plated Steel

WDS No.	D	D1	D2	H	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12330-080	80	70	12.4	112	75	30	Plain	60	0.47
12330-100	100	70	12.4	128	89	30	Plain	70	0.54
12330-125	125	70	12.4	152	97.5	35	Plain	90	0.64
12330-160	160	99	16.5	189	133	40	Plain	120	1.42

ZP

RUB



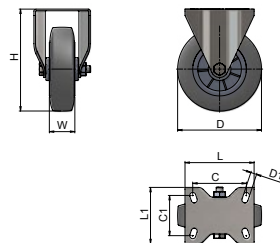
WDS 12332 Bolt Hole Fitting Swivel & Brake Castors - Thermoplastic Rubber Wheel

Wheel - Thermoplastic Rubber, with Polypropylene Core
Frame - Zinc Plated Steel

WDS No.	D	D1	D2	H	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12332-080	80	70	12.4	112	75	30	Plain	90	0.59
12332-100	100	70	12.4	128	89	30	Plain	110	0.66
12332-125	125	70	12.4	152	97.5	35	Plain	150	0.8
12332-160	160	99	16.5	189	133	40	Plain	180	1.65

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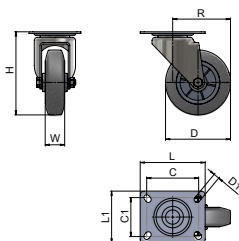
RUB



WDS 12334 Top Plate Fitting Fixed Castors - Thermoplastic Rubber Wheel

Wheel - Grey Rubber, Grey Polypropylene Core
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L1	L	W	Bearing	Load Capacity (kg)	Weight (kg)
12334-080	80	60	80	9	112	84	100	30	Roller	60	0.53
12334-100	80	60	100	9	128	84	100	32	Roller	75	0.65
12334-125	80	60	125	9	152	84	100	37.5	Roller	120	0.98
12334-160	105	80	160	11	193	107	146	40	Roller	140	1.72



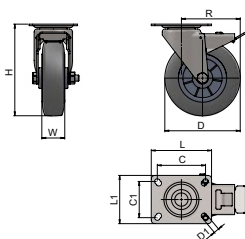
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RUB

Top Plate Fitting Swivel Castors - Grey Rubber Wheel WDS 12336

Wheel - Grey Rubber, Grey Polypropylene Core
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12336-080	80	60	80	9	112	100	84	75	30	Roller	60	0.65
12336-100	80	60	100	9	128	100	84	89	32	Roller	75	0.75
12336-125	80	60	125	9	152	100	84	97.5	38	Roller	120	1.08
12336-160	105	80	160	11	193	146	107	137	40	Roller	140	2.06



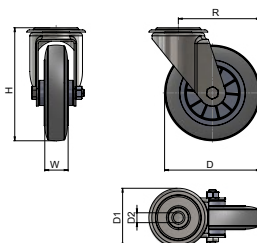
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RUB

Top Plate Fitting Swivel & Brake Castors - Grey Rubber Wheel WDS 12338

Wheel - Grey Rubber, Grey Polypropylene Core
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12338-080	80	60	80	9	112	100	84	75	30	Roller	60	0.77
12338-100	80	60	100	9	128	100	84	89	32	Roller	75	0.89
12338-125	80	60	125	9	152	100	84	97.5	38	Roller	120	1.23
12338-160	105	80	160	11	193	146	107	137	40	Roller	140	2.33



ZP

RUB

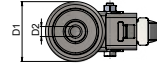
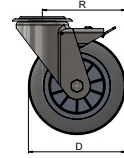
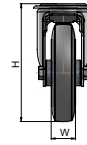
Bolt Hole Fitting Swivel Castors - Grey Rubber Wheel WDS 12340

Wheel - Grey Rubber, Grey Polypropylene Core
Frame - Zinc Plated Steel

WDS No.	D	D1	D2	H	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12340-080	80	70	12.5	110	75	30	Roller	60	0.56
12340-100	100	70	12.5	127	89	30	Roller	75	0.67
12340-125	125	70	12.5	149	97.5	38	Roller	120	0.67
12340-160	160	100	16.5	189	137	40	Roller	140	1.79

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RUB



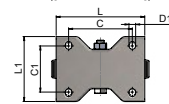
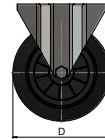
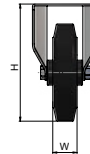
WDS 12342 Bolt Hole Fitting Swivel & Brake Castors - Grey Rubber Wheel

Wheel - Grey Rubber, Grey Polypropylene Core
Frame - Zinc Plated Steel

WDS No.	D	D1	D2	H	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12342-080	80	70	12.5	110	75	30	Roller	60	0.69
12342-100	100	70	12.5	127	89	30	Roller	75	0.8
12342-125	125	70	12.5	149	97.5	38	Roller	120	1.14
12342-160	160	100	16.5	189	137	40	Roller	140	2.04

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RUB



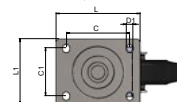
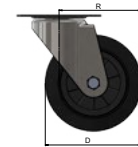
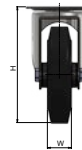
WDS 12344 Top Plate Fitting Fixed Castors - Black Rubber Wheel

Wheel - Black Rubber, with Polypropylene Core
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	W	Bearing	Load Capacity (kg)	Weight (kg)
12344-080	80	60	80	9	112	100	84	34	Roller	60	0.53
12344-100	80	60	100	9	128	100	84	30	Roller	75	0.62
12344-160	105	80	160	11	193	146	107	40	Roller	140	1.78
12344-200	105	80	200	11	232	146	107	50	Roller	200	2.4

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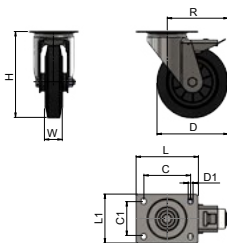
RUB



WDS 12346 Top Plate Fitting Swivel Castors - Black Rubber Wheel

Wheel - Black Rubber with Polypropylene Core
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	L	L1	H	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12346-080	80	60	80	9	100	80	112	75	34	Roller	60	0.65
12346-100	80	60	100	9	100	80	128	89	30	Roller	75	0.74
12346-160	105	80	160	11	140	110	193	137	40	Roller	140	2.13
12346-200	105	80	200	11	140	110	232	162	50	Roller	200	2.72



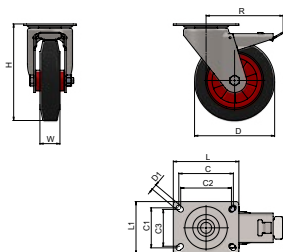
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RUB

Top Plate Fitting Swivel & Brake Castors - Black Rubber Wheel **WDS 12348**

Wheel - Black Rubber with Polypropylene Core
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12348-080	80	60	80	9	112	100	80	75	34	Roller	60	0.76
12348-100	80	60	100	9	128	100	80	89	30	Roller	75	0.84
12348-160	105	80	160	11	193	140	110	137	40	Roller	140	2.33
12348-200	105	80	200	11	232	140	110	162	50	Roller	200	3.03



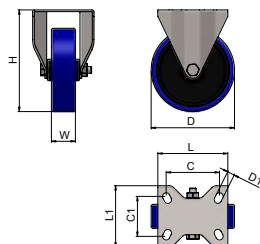
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RUB

Top Plate Fitting Swivel & Brake Castors - Black Rubber Wheel Red Core **WDS 12349**

Wheel - Black Rubber, with Red Polypropylene Core
Frame - Zinc Plated Steel

WDS No.	C	C1	C2	C3	D	D1	H	L	L1	R	W	Load Capacity (kg)	Weight (kg)
12349-160	109	80	101.5	73.6	160	11	193	131	105	154	40	140	2.33



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RUB

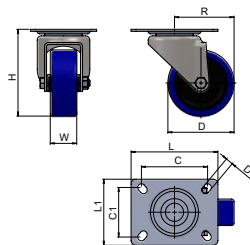
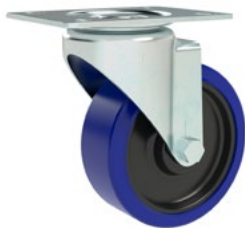
Top Plate Fitting Fixed Castors - Blue Rubber Wheel **WDS 12352**

Wheel - Blue Rubber, with Nylon Centre
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	W	Bearing	Load Capacity (kg)	Weight (kg)
12352-080	80	60	80	9	105	105	80	32	Roller	80	0.5
12352-100	80	60	100	9	128	105	92	36	Roller	100	0.68
12352-125	80	60	125	9	152.5	105	92	36	Roller	150	0.89
12352-160	105	80	160	11	195	135	110	50	Roller	180	1.76

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RUB



WDS 12353 Top Plate Fitting Swivel Castors - Blue Rubber Wheel

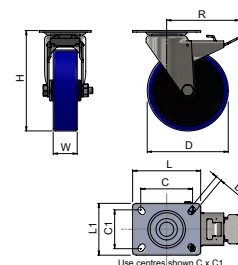
Wheel - Blue Rubber, with Nylon Centre

Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12353-080	80	60	80	9	105	105	80	72	32	Roller	80	0.66
12353-100	80	60	100	9	128	105	82.5	95	36	Roller	100	0.79
12353-125	80	60	125	9	152.5	105	82.5	107.5	36	Roller	150	0.99
12353-160	105	80	160	11	197	134	110	130	50	Roller	180	2.15

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RUB



WDS 12354 Top Plate Fitting Swivel & Brake Castors Zinc Plated Frame - Blue Rubber Wheel

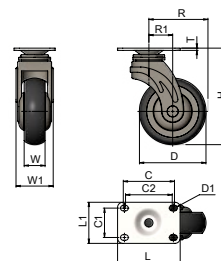
Wheel - Blue Rubber, with Nylon Centre

Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12354-080	80	60	80	9	105	105	80	87	32	Roller	80	0.86
12354-100	80	60	100	9	128	105	82.5	128	36	Roller	100	0.99
12354-125	80	60	125	9	152.5	105	82.5	136	36	Roller	150	1.23
12354-160	105	80	160	11	197	134	110	158	50	Roller	180	2.62

ZP

RUB

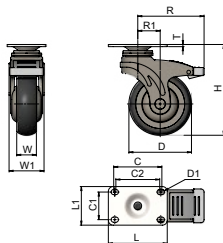


WDS 12360 Rubber Castors with Plastic Body - Plate Fitting

Wheel Hub - Polypropylene/PP

Frame - Glass Fibre Reinforced Nylon/Polyamide

WDS No.	C	C1	C2	D	D1	H	L	L1	R	R1	T	W	W1	Load Capacity (kg)	Weight (kg)
12360-100	78.5	45	71.5	102	8.5	147	96	63	87	36.5	3.5	32	57	136	0.62



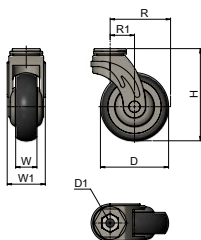
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RUB

Rubber Castors with Plastic Body - Plate Fitting Braked **WDS 12360**

Wheel Hub - Polypropylene/PP
Frame - Glass Fibre Reinforced Nylon/Polyamide

WDS No.	C	C1	C2	D	D1	L	L1	H	R	R1	T	W	W1	Load Capacity (kg)	Weight (kg)
12360-100B	78.5	45	71.5	102	8.5	96	63	147	108	36.5	3.5	32	57	136	0.71

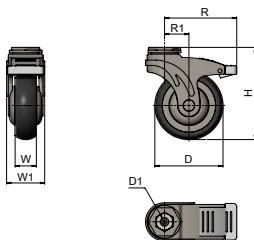


RUB

Rubber Castors with Plastic Body - Bolt Fitting **WDS 12361**

Wheel Hub - Polypropylene/PP
Frame - Glass Fibre Reinforced Nylon/Polyamide

WDS No.	D	D1	H	R	R1	W	W1	Load Capacity (kg)	Weight (kg)
12361-100	102	12.5	138	87	36.5	32	57	136	0.44



RUB

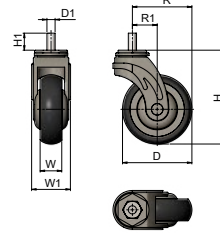
Rubber Castors with Plastic Body - Bolt Fitting Braked **WDS 12361**

Wheel Hub - Polypropylene/PP
Frame - Glass Fibre Reinforced Nylon/Polyamide

WDS No.	D	D1	H	R	R1	W	W1	Load Capacity (kg)	Weight (kg)
12361-100B	102	12.5	138	108	36.5	32	57	136	0.52

ZP

RUB



WDS 12362 Rubber Castors with Plastic Body - Stud Fitting

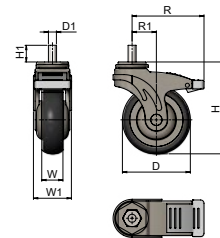
Wheel Hub - Polypropylene/PP

Frame - Glass Fibre Reinforced Nylon/Polyamide

WDS No.	D	D1	H	H1	R	R1	W	W1	Load Capacity (kg)	Weight (kg)
12362-100	102	M12	138	25	87	36.5	32	57	136	0.49

ZP

RUB



WDS 12362 Rubber Castors with Plastic Body - Stud Fitting Braked

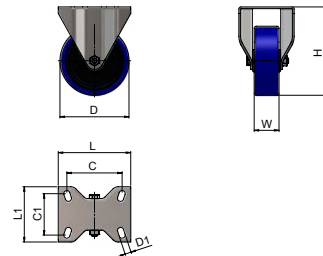
Wheel Hub - Polypropylene/PP

Frame - Glass Fibre Reinforced Nylon/Polyamide

WDS No.	D	D1	H	H1	R	R1	W	W1	Load Capacity (kg)	Weight (kg)
12362-100B	102	M12	138	25	108	36.5	32	57	136	0.57

304

RUB

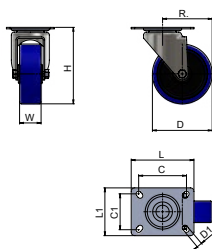


WDS 12370 304 Stainless Steel - Top Plate Fitting Fixed Castors - Blue Rubber Wheel

Wheel - Blue Rubber, with Nylon Centre

Frame - 304 Stainless Steel

WDS No.	C	C1	D	D1	H	L	L1	W	Bearing	Load Capacity (kg)	Weight (kg)
12370-080	80	60	80	9	105	105	80	32	Roller	80	0.44
12370-100	80	60	100	9	128	105	80	36	Roller	100	0.56
12370-125	80	60	125	9	155	105	80	37	Roller	150	0.78



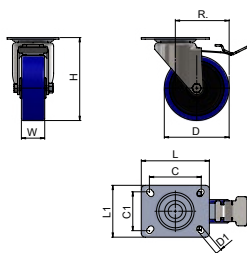
304

RUB

304 Stainless Steel - Top Plate Fitting Swivel Castors - Blue Rubber Wheel **WDS 12371**

Wheel - Blue Rubber, with Nylon Centre
Frame - 304 Stainless Steel

WDS No.	D	D1	L	L1	C	C1	H	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12371-080	80	9	105	80	80	60	105	72	32	Roller	80	0.55
12371-100	100	9	105	80	80	60	128	83	36	Roller	100	0.64
12371-125	125	9	105	80	80	60	155	95	37	Roller	150	0.85



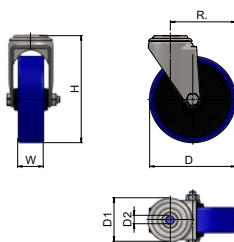
304

RUB

304 Stainless Steel - Top Plate Fitting Swivel & Brake Castors - Blue Rubber Wheel **WDS 12372**

Wheel - Blue Rubber with Nylon Centre
Frame - 304 Stainless Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12372-080	80	60	80	9	105	105	80	72	32	Roller	80	0.68
12372-100	80	60	100	9	128	105	80	83	36	Roller	100	0.81
12372-125	80	60	125	9	155	105	80	95	37	Roller	150	1.01
12372-160	105	80	160	11	197	135	105	148	45	Roller	320	2.46



304

RUB

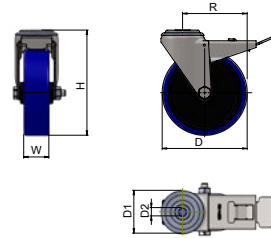
304 Stainless Steel - Bolt Hole Fitting Swivel Castors - Blue Rubber Wheel **WDS 12373**

Wheel - Blue Rubber with Nylon Centre
Frame - 304 Stainless Steel

WDS No.	D	D1	D2	H	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12373-080	80	63	12.2	105	72	32	Roller	80	0.48
12373-100	100	63	12.2	128	83	36	Roller	100	0.57
12373-125	125	63	12.2	155	95	37	Roller	150	0.79

304

RUB



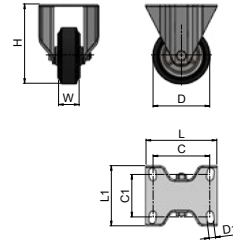
WDS 12374 304 Stainless Steel - Bolt Hole Fitting Swivel & Brake Castors - Blue Rubber Wheel

Wheel - Blue Rubber, with Nylon Centre
Frame - 304 Stainless Steel

WDS No.	D	D1	D2	H	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12374-080	80	63	12.2	105	72	32	Roller	80	0.6
12374-100	100	63	12.2	128	83	36	Roller	100	0.73
12374-125	125	63	12.2	155	95	37	Roller	150	0.94
12374-160	160	99	16.2	197	148	45	Roller	320	2.28

ZP

RUB



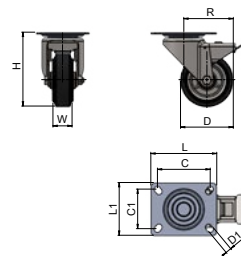
WDS 12380 Top Plate Fitting Fixed Castors - Rubber wheel with Steel Centre

Wheel - Rubber with Steel Zinc Plated Core
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	W	Load Capacity (kg)	Weight (kg)
12380-201	80	60	80	9	112	100	80	30	70	0.61
12380-202	80	60	100	9	128	100	80	30	90	0.71

ZP

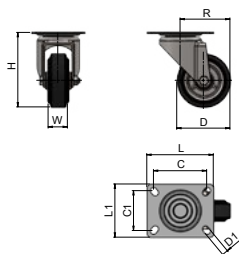
RUB



WDS 12380 Top Plate Fitting Swivel & Brake Castors - Rubber Wheel with Steel Centre

Wheel - Rubber with Steel Zinc Plated Core
Frame - Zinc Plated Steel

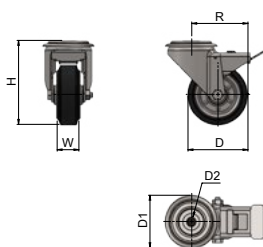
WDS No.	C	C1	D	D1	H	L	L1	R	W	Load Capacity (kg)	Weight (kg)
12380-251B	80	60	80	9	112	100	80	75	32	70	0.82
12380-252B	80	60	100	9	128	100	80	89	32	90	0.93


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RUB

Top Plate Fitting Swivel Castors - Rubber Wheel with Steel Centre **WDS 12380**

Wheel - Rubber with Steel Zinc Plated Core
Frame - Zinc Plated Steel

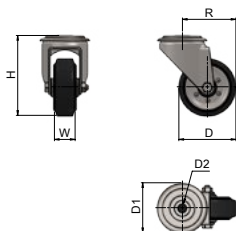
WDS No.	C	C1	D	D1	H	L	L1	R	W	Load Capacity (kg)	Weight (kg)
12380-251	80	60	80	9	112	100	80	75	32	70	0.71
12380-252	80	60	100	9	128	100	80	89	32	90	0.84


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RUB

Bolt Hole Fitting Swivel & Brake Castors - Rubber Wheel with Steel Centre **WDS 12381**

Wheel - Rubber with Steel Zinc Plated Core
Frame - Zinc Plated Steel

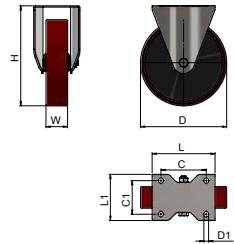
WDS No.	D	D1	D2	H	R	W	Load Capacity (kg)	Weight (kg)
12381-201B	80	70	12.3	112	75	32	70	0.74
12381-202B	100	70	12.3	128	89	32	90	0.85


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RUB

Bolt Hole Fitting Swivel Castors - Rubber Wheel with Steel Centre **WDS 12381**

Wheel - Rubber with Steel Zinc Plated Core
Frame - Zinc Plated Steel

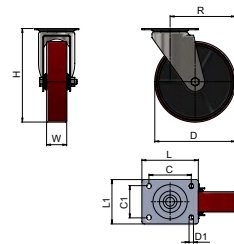
WDS No.	D	D1	D2	H	R	W	Load Capacity (kg)	Weight (kg)
12381-201	80	70	12.3	112	75	32	70	0.63
12381-202	100	70	12.3	128	89	32	90	0.74



WDS 12318 Heavy Duty Fixed Castors - Red Polyurethane Wheel

Wheel - Red Polyurethane Wheel coated with Cast Iron centre
Frame - Zinc Plated Steel

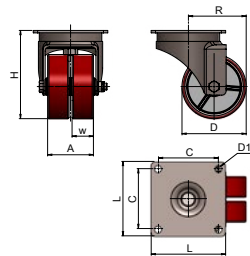
WDS No.	C	C1	D	D1	H	L	L1	W	Bearing	Load Capacity (kg)	Weight (kg)
12318-125	105	80	125	11	160	146	107	50	Roller	300	2
12318-150	105	80	152	11	189	146	107	50	Roller	320	2
12318-200	105	80	200	11	231	146	107	50	Roller	350	2



WDS 12320 Heavy Duty Swivel Castors - Red Polyurethane Wheel

Wheel - Red Polyurethane Wheel Coated with Cast Iron centre
Frame - Zinc Plated Steel

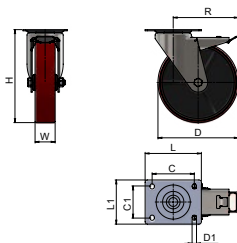
WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12320-125	105	80	125	11	160	140	110	117.5	50	Roller	300	2.98
12320-150	105	80	152	11	189	140	110	133	50	Roller	320	3.02
12320-200	105	80	200	11	232	140	100	162	50	Roller	350	4.02



WDS 12321 Heavy Duty Twin Wheel Castors - Four Ball Bearings

Red Polyurethane Wheel with Cast Iron centre
Frame - Zinc Plated Steel

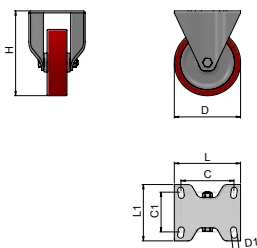
WDS No.	A	C	D	D1	H	L	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12321-150	108	140	152	15	206	174	135	50	Roller	1000	6
12321-200	108	140	200	15	250	174	162	50	Roller	1500	8


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CI

Heavy Duty Swivel & Brake Castors - Red Polyurethane Wheel **WDS 12322**

Wheel - Red Polyurethane Wheel Coated with Cast Iron centre
Frame - Zinc Plated Steel

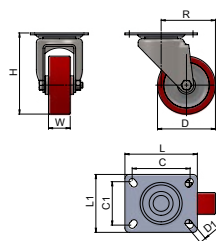
WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12322-125	105	80	125	11	160	140	110	117.5	50	Roller	300	2.99
12322-150	105	80	152	11	189	140	110	133	50	Roller	320	3.24
12322-200	105	80	200	11	232	140	110	162	50	Roller	320	4.36


ZP

Top Plate Fitting Fixed Castors - Red Polyurethane Wheel **WDS 12363**

Wheel - Polyurethane with Nylon core
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	W	Load Capacity (kg)	Weight (kg)
12363-201	80	60	80	9	112	100	80	30	100	0.45
12363-202	80	60	100	9	128	100	80	30	120	0.53

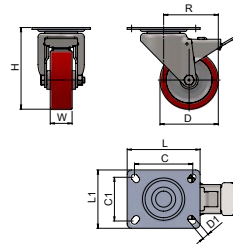

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Top Plate Fitting Swivel Castors - Red Polyurethane Wheel **WDS 12364**

Wheel - Polyurethane with Nylon core
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Load Capacity (kg)	Weight (kg)
12364-251	80	60	80	9	112	100	80	75	30	100	0.57
12364-252	80	60	100	9	128	100	80	89	30	120	0.66

ZP

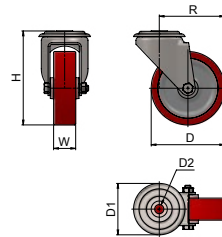


WDS 12364 Top Plate Fitting Swivel & Braked Castors - Red Polyurethane Wheel

Wheel - Polyurethane with Nylon core
Frame - Stainless Steel 304

WDS No.	C	C1	D	D1	H	L	L1	R	W	Load Capacity (kg)	Weight (kg)
12364-251B	80	60	80	9	112	100	80	75	30	100	0.68
12364-252B	80	60	100	9	128	100	80	89	30	120	0.75

ZP

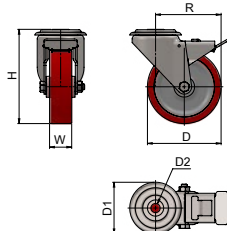


WDS 12365 Bolt Hole Fitting Swivel Castors - Red Polyurethane Wheel

Wheel - Polyurethane with Nylon core
Frame - Zinc Plated Steel

WDS No.	D	D1	D2	H	R	W	Load Capacity (kg)	Weight (kg)
12365-251	80	70	12.3	112	75	30	100	0.49
12365-252	100	70	12.3	128	89	30	120	0.58

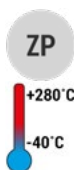
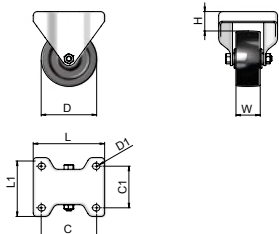
ZP



WDS 12365 Bolt Hole Fitting Swivel & Braked Castors - Red Polyurethane Wheel

Wheel - Polyurethane with Nylon core
Frame - Zinc Plated Steel

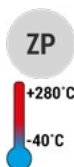
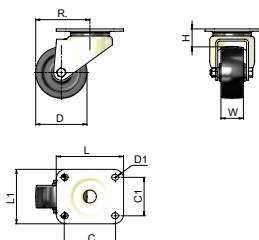
WDS No.	D	D1	D2	H	R	W	Load Capacity (kg)	Weight (kg)
12365-251B	80	70	12.3	112	75	30	100	0.58
12365-252B	100	70	12.3	128	89	30	120	0.68



Top Plate Fitting Fixed Castors - Phenolic Resin Wheel WDS 12187

Wheel - Phenolic Resin
Frame - Zinc Plated Steel

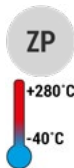
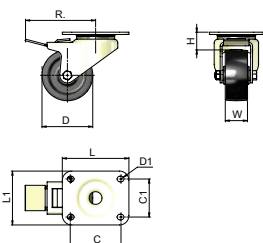
WDS No.	C	C1	D	D1	H	L	L1	W	Bearing	Load Capacity (kg)	Weight (kg)
12187-201	80/77	60	80	9	108	103	85	35	Plain	100	0.46
12187-203	80/77	60	100	9	128	103	85	35	Plain	125	0.58
12187-205	80/77	60	125	9	155	103	85	35	Plain	150	0.91
12187-207	105	80/75	160	11	200	137	105	50	Plain	250	1.89



Top Plate Fitting Swivel Castors - Phenolic Resin Wheel WDS 12187

Wheel - Phenolic Resin
Frame - Zinc Plated Steel

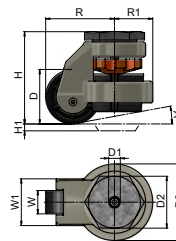
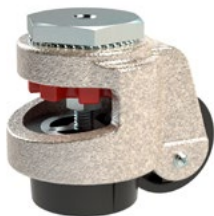
WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12187-251	80/77	60	80	9	108	105	85	85	34	Plain	100	0.75
12187-253	80/77	60	100	9	128	105	85	91	35	Plain	125	0.83
12187-255	80/77	60	125	9	155	105	85	103	35	Plain	150	1.21
12187-257	105	80/75	160	11	200	137	115	135	50	Plain	250	2.33



Top Plate Fitting Swivel & Brake Castors - Phenolic Resin Wheel WDS 12187

Wheel - Phenolic Resin
Frame - Zinc Plated Steel

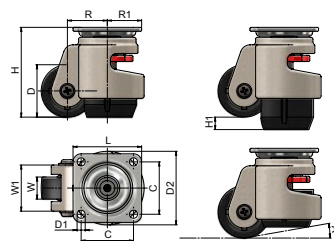
WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12187-251B	80/77	60	80	9	108	105	85	120	35	Plain	100	0.95
12187-253B	80/77	60	100	9	128	105	85	120	35	Plain	125	1.03
12187-255B	80/77	60	125	9	155	105	85	120	35	Plain	150	1.35
12187-257B	105	80/75	160	11	200	137	115	150	50	Plain	250	2.67



WDS 12197 Stem Fitting Adjustable Levelling Castors

Die Cast Aluminium footpad with vibration damping rubber pad
Forged Steel top plate/Flange and swivel head

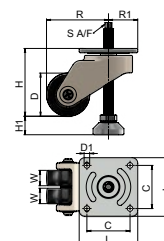
WDS No.	A	D	D1	D2	D3	H	H1	R	R1	W	W1	Load kg Dynamic	Load kg Static	Weight (kg)
12197-201	13	42	M8	40	58	71	10	51	33	20	40	25	50	0.33
12197-202	11	50	M12	46	70	82	10	61	40	25	53	150	300	0.59
12197-203	11	63	M12	65	85	102	15	77.5	47.5	30	64	250	500	1.06
12197-204	18	75	M16	40	58	120	12	52	70	35	57	500	1000	1.8



WDS 12198 Plate Fitting Adjustable Levelling Castors

Die Cast Aluminium footpad with vibration damping rubber pad
Forged Steel top plate/Flange and swivel head

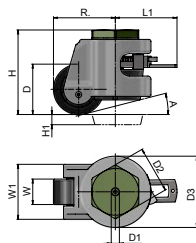
WDS No.	A	C	D	D1	D2	H	H1	L	R	R1	W	W1	Load kg Dynamic	Load kg Static	Weight (kg)
12198-201	8	42	42	6.5	60	72	10	55	53	30	18	37	50	25	0.38
12198-202	11	58	50	7	70	82	10	73	62	36	22	45	125	250	0.68
12198-203	11	70	62	9	85	102	15	90	77	44	29	60	250	500	1.21
12198-204	11	70	75	11	98	120	12	95	91	52	30	67	375	750	1.68
12198-205	11	70	72	11	100	120	18	95	88	51	31	65	500	1000	1.84
12198-206	9	70	97	13	116	132	15	100	117	61	56	104	750	1500	3.21



WDS 12199 Twin Wheel Adjustable Levelling Castors - Plate Fitting Spanner Operated

Zinc Galvanised Top Plate

WDS No.	C	D	D1	H	H1	L	R	R1	W	Load Capacity (kg)	Weight (kg)
12199-204	70	72	9.5	109	60	95	102	47.5	25	670	1.9



Ratchet Stem Fitting Levelling Castors **WDS 12200**

Die Cast Aluminium footpad with vibration damping rubber pad
Forged Steel top plate/Flange and swivel head

WDS No.	A	D	D1	D2	D3	H	H1	L1	R	W	W1	Load kg Dynamic	Load kg Static	Weight (kg)
12200-202	11	63	M12	46	70	82	10	71	61	25	53	250	125	1.33

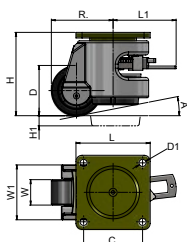
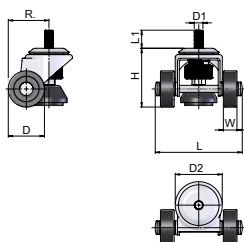


Plate Fitting Levelling Castors - Ratchet Operated **WDS 12201**

Die Cast Aluminium footpad with vibration damping rubber pad
Forged Steel top plate/Flange and swivel head

WDS No.	A	C	D	D1	H	H1	L	L1	R	W	W1	Load kg Dynamic	Load kg Static	Weight (kg)
12201-202	11	58	50	7	82	10	73	71	61	25	53	125	250	0.78
12201-203	11	70	63	9	102	15	90	140	77.5	30	64	250	500	1.33

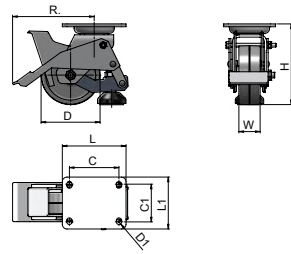

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Levelling Castors with Stopper **WDS 12250**

Wheels - Nylon with plain bore
Rubber Stopper

WDS No.	D	D1	D2	H	L	L1	R	W	Maximum Load	Weight (kg)
12250-101	40	M10	50	65/69	100	20	45	15	100	0.37

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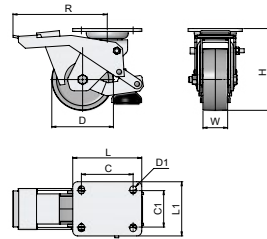


WDS 12252 Heavy Duty Levelling Castors

Frame - Zinc Plated Steel
Bearing - Ball Bearings

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Wheel Material	Weight (kg)
12252-101	80	60	75	9	115-123	105	85	150	40	Ball Bearings	300	Polyurethane	2.19
12252-102	105	80	125	13	171-181	135	110	190	45	Ball Bearings	450	Polyurethane	4.2
12252-103	80	60	75	9	115-123	105	85	150	40	Ball Bearings	300	Polyamide	1.94
12252-104	105	80	125	13	171-181	135	110	190	45	Ball Bearings	450	Polyamide	4.03
12252-105	80	60	80	9	117-123	105	85	150	25	Ball Bearings	150	Polyurethane	1.81
12252-106	80	60	80	9	117-123	105	85	150	30	Ball Bearings	200	Polyamide	1.67

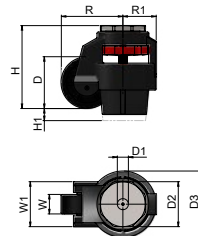
304



WDS 12253 Heavy Duty Levelling Castors - 304 Stainless Steel

304 Stainless Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Max Load Kg	Weight (kg)
12253-101	105	80	125	13	160-176	140	110	190	45	400	3.92



WDS 12350 Screw Fitting Adjustable Levelling Castors

Die cast aluminium footpad with vibration damping rubber pad

WDS No.	D	D1	D2	D3	H	H1	R	R1	W	W1	Load kg Dynamic	Load kg Static	Weight (kg)
12350-201	42	M8 x 12 deep	40	59	71	10	53	30	18	36	25	50	0.5
12350-202	50	M12 x 15 deep	46	71	83	10	61.5	35.5	22	45	150	300	0.68
12350-203	62	M12 x 15 deep	65	88	102	15	77	44	29	60	250	500	1.13
12350-204	72	M16 x 16 deep	70	102	120	18	88	51	31	65	500	1000	1.57

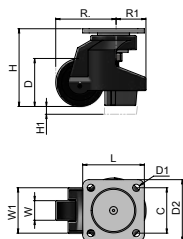


Plate Fitting Adjustable Levelling Castors - Spanner Operated **WDS 12350**

Die Cast Aluminium footpad
Forged Steel top plate, flange and swivel head

WDS No.	C	D	D1	D2	H	H1	L	R	R1	W	W1	Load kg Dynamic	Load kg Static	Wheel Colour	Weight (kg)
12350-255	70	72	11	98	121	18	95	80.5	61.5	34	65	650	1300	Black	2
12350-256	70	92	13	100	130	25	100	115	57	54	90	900	1800	Blue	3.5

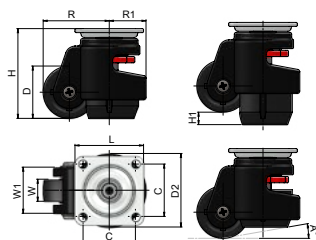
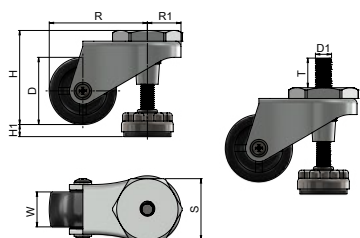


Plate Fitting Adjustable Levelling Castors - Finger Operated **WDS 12350**

Die Cast Aluminium footpad with vibration damping rubber pad
Forged Steel top plate/Flange and swivel head

WDS No.	C	D	D1	D2	L	H	H1	R	R1	W	W1	Load kg Dynamic	Load kg Static	Weight (kg)
12350-251	42	42	6.5	60	55	72	10	53	30	18	37	35	100	0.38
12350-252	58	50	6.5	73	73	83	10	61.5	35.5	22	45	150	300	0.68
12350-253	70	62	9.5	90	90	102	15	77	44	29	60	250	500	0.9
12350-254	70	72	11	95	95	120	18	88	51	31	65	500	1000	1.9



ZP

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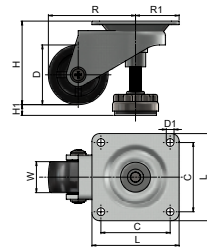
Adjustable Height Levelling Castors - Stem Fitting Finger Operated **WDS 12396**

Zinc Galvanised frame

WDS No.	D	D1	H	H1	R	R1	S	W	Load Capacity (kg)	Weight (kg)
12396-251	50	M12	70	9	73	26	46	26	140	0.56

ZP

NYL



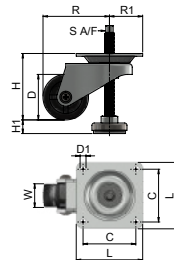
WDS 12396 Adjustable Height Levelling Castors - Plate Fitting Finger Operated

Zinc Galvanised frame
PA6 Nylon Wheel

WDS No.	C	D	D1	H	H1	L	R	R1	W	Load Capacity (kg)	Weight (kg)
12396-201	58	50	6.5	70	9	73	73	36.5	26	140	0.52

ZP

NYL



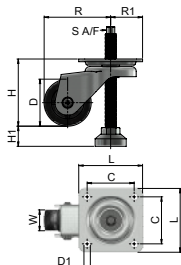
WDS 12396 Adjustable Height Levelling Castors - Plate Fitting Spanner Operated

Zinc Galvanised frame
PA6 Nylon Wheel

WDS No.	C	D	D1	H	H1	L	R	R1	S	W	Load Capacity (kg)	Weight (kg)
12396-301	58	50	6.5	73	40	73	73	36.5	8	26	140	0.56

ZP

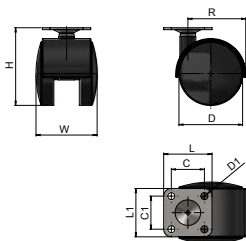
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WDS 12396 Heavy Duty Adjustable Height Levelling Castors - Plate Fitting Spanner Operated

Zinc Galvanised
PA6 Nylon Wheel

WDS No.	C	D	D1	H	H1	L	R	R1	S	W	Load Capacity (kg)	Weight (kg)
12396-304	70	72	9.5	100	60	95	100	47.5	11	31	140	1.52



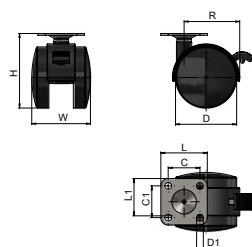
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NYL

Plate Fitting Furniture Castors WDS 12310

Wheel - Black Nylon
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12310-030	21	21	30	4	46	30	30	29	29	Plain	15	0.03
12310-040	26	26	40	5	54	38	38	37	41	Plain	25	0.06
12310-050	26	26	50	5	61	38	38	46	48	Plain	30	0.08



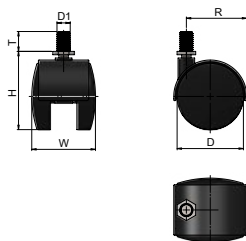
ZP

NYL

Plate Fitting Braked Furniture Castors WDS 12312

Wheel - Black Nylon
Frame - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	L	L1	R	W	Bearing	Load Capacity (kg)	Weight (kg)
12312-040	26	26	40	5	54	38	38	37	41	Plain	25	0.06
12312-050	26	26	50	5	61	38	38	46	48	Plain	30	0.08



ZP

NYL

Screw Fitting Furniture Castors for Chairs, Cupboards and Office Furniture WDS 12314

Wheel - Black Nylon
Frame - Zinc Plated Steel

WDS No.	D	D1	H	R	T	W	Bearing	Load Capacity (kg)	Weight (kg)
12314-030	30	M8	43	29	15	29	Plain	15	0.03
12314-040	40	M10	51	37	15	41	Plain	25	0.06
12314-048	40	M8	51	37	15	41	Plain	25	0.06
12314-050	50	M10	59	46	15	48	Plain	30	0.07

ZP

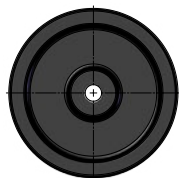
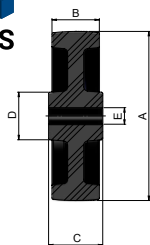
NYL



WDS 12316 Screw Fitting Braked Furniture Castors for Chairs, Cupboards and Office Furniture

Wheel - Black Nylon
Stem - Zinc Plated Steel

WDS No.	D	D1	H	R	T	W	Bearing	Load Capacity (kg)	Weight (kg)
12316-048	40	M8	51	37	15	41	Plain	25	0.05
12316-040	40	M10	51	37	15	41	Plain	25	0.05
12316-050	50	M10	59	46	15	48	Plain	30	0.08

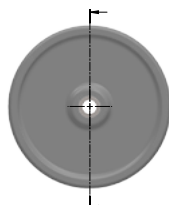
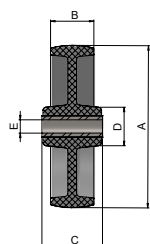


Phenolic Resin Wheels WDS 12188

Wheel - Phenolic Resin

Temperature Range = -40 degrees C to +280 degrees C

WDS No.	A	B	C	D	E	Max Load (kg)	Weight (kg)
12188-201	80	35	40	28	12.2	100	0.18
12188-203	100	35	40	28	12.2	125	0.24
12188-205	125	35	40	35	15	150	0.47
12188-207	160	50	58	35	20.2	250	0.95

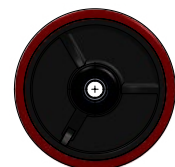
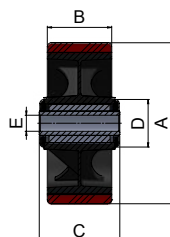


NYL

White Nylon Wheels WDS 12400

Wheel - Nylon
Bearing - Plain

WDS No.	A	B	C	D	E	Bearing	Load Capacity (kg)	Weight (kg)
12400-080	80	30	40	23	8.5	Plain	90	0.1
12400-100	100	32	40	24	8.5	Plain	110	0.15
12400-125	125	38	50	28	11	Plain	150	0.26
12400-150	150	40	56	35	12.3	Plain	180	0.4



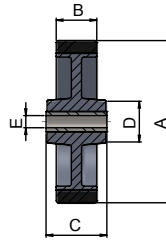
CI

Red Polyurethane Wheels with Cast Iron Core WDS 12402

Wheel - Red Polyurethane, Cast Iron Centre
Bearing - Roller

WDS No.	A	B	C	D	E	Bearing	Load Capacity (kg)	Weight (kg)
12402-125	125	50	62.5	37	13	Roller	300	1.48
12402-150	152	50	62.5	37	13	Roller	400	1.78
12402-200	200	50	62.5	37	13	Roller	500	2.69

TP
RUB

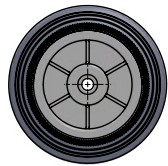
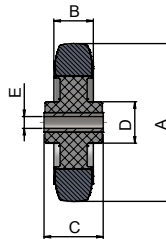


WDS 12404 Thermoplastic Rubber Wheels with Polypropylene Core

Wheel - Thermoplastic Rubber, with Polypropylene Core
Bearing - Plain

WDS No.	A	B	C	D	E	Bearing	Load Capacity (kg)	Weight (kg)
12404-080	80	30	38	24	8.5	Plain	60	0.1
12404-100	100	30	38	28	8.5	Plain	70	0.15
12404-125	125	35	47	29	11	Plain	90	0.22
12404-160	160	40	58	40	12	Plain	120	0.46

RUB

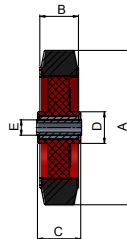


WDS 12406 Grey Rubber Wheels

Wheel - Grey Rubber, with Grey Polypropylene Core
Bearing - Roller

WDS No.	A	B	C	D	E	Bearing	Load Capacity (kg)	Weight (kg)
12406-080	80	30	42	30	9	Roller	60	0.2
12406-100	100	30	40	28	9	Roller	75	0.29
12406-125	125	38	50	34	10.5	Roller	120	0.56
12406-160	160	40	60	42	12.3	Roller	140	0.8

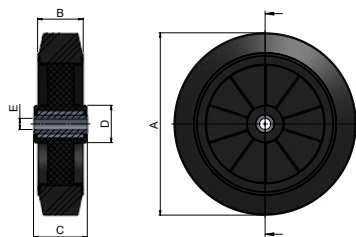
RUB



WDS 12408 Black Rubber Wheels with Red Polypropylene Core

Wheel - Black Rubber, with Red Polypropylene Core
Bearing - Roller

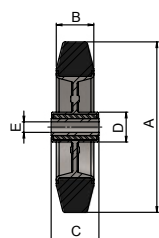
WDS No.	A	B	C	D	E	Bearing	Load Capacity (Kg)	Weight (kg)
12408-160	160	40	58	42	12.2	Roller	150	0.84
12408-200	200	50	58	42	12.2	Roller	180	1.38



Black Rubber Wheels with Black Polypropylene Core WDS 12409

Wheel - Black Rubber, with Polypropylene Core
Bearing - Roller

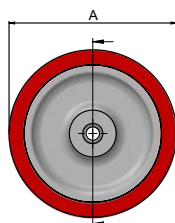
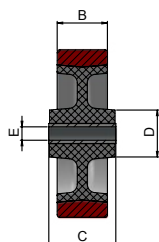
WDS No.	A	B	C	D	E	Bearing	Load Capacity (kg)	Weight (kg)
12409-080	80	34	40	30	8.2	Roller	60	0.2
12409-100	100	30	39	28	8.2	Roller	75	0.25
12409-160	160	40	58	42	12.2	Roller	140	0.86



Black Rubber Wheels with Steel Core WDS 12410

Wheel - Black Rubber, with Steel Core
Bearing - Roller

WDS No.	A	B	C	D	E	Bearing	Load Capacity (Kg)	Weight (kg)
12410-080	80	32	39	26	8.3	Plain	70	0.24
12410-100	100	32	39	26	8.3	Plain	90	0.34
12410-160	160	38	56	34	12.3	Roller	145	1.05
12410-200	200	45	56	34	12.3	Roller	185	1.77



Red Polyurethane Wheels with Nylon Core WDS 12411

Wheel - Polyurethane, with Nylon core
Bearing - Plain

WDS No.	A	B	C	D	E	Bearing	Load Capacity (kg)	Weight (kg)
12411-080	80	30	40	28	8.3	Plain	100	0.11
12411-100	100	30	40	28	8.3	Plain	120	0.2



GAS STRUTS & ROD END FITTINGS

P 55-76

WDS offers a comprehensive selection of gas struts with end fitting accessories. The range includes carbon steel gas struts, stainless steel gas struts, clevis forks, clevis eyes, angle joints and swivel eye joints.

Fixed force gas struts are offered as a cost effective solution for applications requiring large quantities (100pcs MOQ) of specific size, length and stroke with a fixed force value. WDS can work from a drawing or from details entered into our online enquiry form.



GAS STRUTS & GAS SPRINGS

Gas struts are available in various sizes and materials including; Stainless steel and carbon steel. Selecting the right gas strut has never been easier with parts available complete with end fittings or single struts that can be customised to your requirement

P 55-57, 59-61, 66-69, 71



ROD ENDS & FITTINGS

Rod ends & end fittings can be used on many applications from car boots to machine enclosures. WDS has a range of angle joints, swivel eye joints, clevis eyes, forks and pins to suit its range of gas struts.

P 56-58, 61-65, 67-74

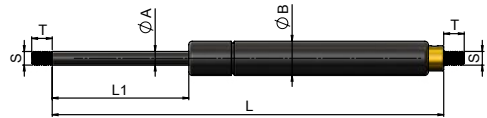


GAS STRUT / SPRING MOUNTING BRACKETS

Gas strut mounting brackets are available in a choice of three options: a Flat mounting angle model, a folded internal facing mount and an external facing folded mount each with a ball fitting stud. Sizes include: 10mm or 13mm ball fitting and material options available are zinc plated steel and stainless steel grade 316.

P 75-76

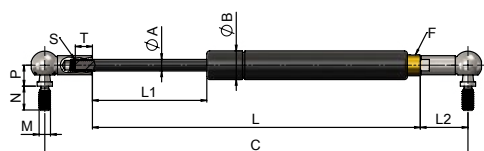




WDS 550 Gas Struts (Gas Springs) with No End Fittings

Cylinder - Powder coated steel, and Rod - Black nitride hardened steel - (See technical page vi)

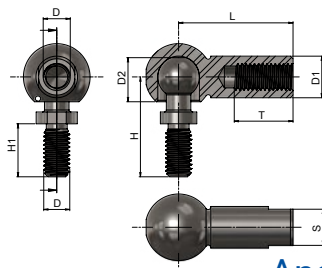
WDS No.	A	B	L	L1	S	T	Force Range (N)	Weight (kg)
550-0615040XX	6	15	132	40	M6x1.0	9	20-400	0.13
550-0615060XX	6	15	172	60	M6x1.0	9	20-400	0.14
550-0615080XX	6	15	212	80	M6x1.0	9	20-400	0.15
550-0615100XX	6	15	252	100	M6x1.0	9	20-400	0.17
550-0615120XX	6	15	292	120	M6x1.0	9	20-400	0.18
550-0615150XX	6	15	352	150	M6x1.0	9	20-400	0.2
550-0615200XX	6	15	452	200	M6x1.0	9	20-400	0.23
550-0819050XX	6	15	152	50	M6x1.0	9	50-700	0.19
550-0819075XX	6	15	202	75	M6x1.0	9	50-700	0.22
550-0819100XX	8	19	252	100	M6x1.0	9	50-700	0.24
550-0819125XX	8	19	302	125	M6x1.0	9	50-700	0.27
550-0819150XX	8	19	352	150	M6x1.0	9	50-700	0.29
550-0819175XX	8	19	402	175	M6x1.0	9	50-700	0.32
550-0819200XX	8	19	452	200	M6x1.0	9	50-700	0.35
550-0819250XX	8	19	552	250	M6x1.0	9	50-700	0.4
550-0819300XX	8	19	652	300	M6x1.0	9	50-700	0.65
550-1022100XX	10	22	257	100	M8x1.25	12	100-1200	0.38
550-1022150XX	10	22	357	150	M8x1.25	12	100-1200	0.45
550-1022200XX	10	22	457	200	M8x1.25	12	100-1200	0.53
550-1022250XX	10	22	557	250	M8x1.25	12	100-1200	0.6
550-1022300XX	10	22	657	300	M8x1.25	12	100-1200	0.67
550-1022400XX	10	22	857	400	M8x1.25	12	100-1200	0.81
550-1428100XX	14	28	254	100	M10x1.5	14	200-2500	0.64
550-1428200XX	14	28	454	200	M10x1.5	14	200-2500	0.89
550-1428300XX	14	28	654	300	M10x1.5	14	200-2500	1.15
550-1428400XX	14	28	854	400	M10x1.5	14	200-2500	1.41
550-1428500XX	14	28	1054	500	M10x1.5	14	200-2500	1.67



Gas Struts (Gas Springs) with Angle Joints - Steel WDS 550

Cylinder - Powder coated steel, and Rod - Black nitride hardened steel - (See technical page vi)

WDS No.	A	B	C	L	L1	L2	M	N	P	S	T	Angle Joint Ball Diameter	Force Range (N)	Weight (kg)
550-0615040	6	15	182	132	40	25	M6x1.0	12.5	11	M6x1.0	9	10	20-400	0.17
550-0615060	6	15	222	172	60	25	M6x1.0	12.5	11	M6x1.0	9	10	20-400	0.14
550-0615080	6	15	262	212	80	25	M6x1.0	12.5	11	M6x1.0	9	10	20-400	0.19
550-0615100	6	15	302	252	100	25	M6x1.0	12.5	11	M6x1.0	9	10	20-400	0.17
550-0615120	6	15	342	292	120	25	M6x1.0	12.5	11	M6x1.0	9	10	20-400	0.22
550-0615150	6	15	402	352	150	25	M6x1.0	12.5	11	M6x1.0	9	10	20-400	0.2
550-0615200	6	15	502	452	200	25	M6x1.0	12.5	11	M6x1.0	9	10	20-400	0.23
550-0819050	8	19	202	152	50	25	M6x1.0	12.5	11	M6x1.0	9	10	50-700	0.23
550-0819075	8	19	252	202	75	25	M6x1.0	12.5	11	M6x1.0	9	10	50-700	0.26
550-0819100	8	19	302	252	100	25	M6x1.0	12.5	11	M6x1.0	9	10	50-700	0.24
550-0819125	8	19	352	302	125	25	M6x1.0	12.5	11	M6x1.0	9	10	50-700	0.31
550-0819150	8	19	402	352	150	25	M6x1.0	12.5	11	M6x1.0	9	10	50-700	0.29
550-0819175	8	19	452	402	175	25	M6x1.0	12.5	11	M6x1.0	9	10	50-700	0.36
550-0819200	8	19	502	452	200	25	M6x1.0	12.5	11	M6x1.0	9	10	50-700	0.35
550-0819250	8	19	602	552	250	25	M6x1.0	12.5	11	M6x1.0	9	10	50-700	0.35
550-0819300	8	19	702	652	300	25	M6x1.0	12.5	11	M6x1.0	9	10	50-700	0.69
550-1022100	10	22	317	257	100	30	M8x1.25	16.5	13	M8x1.25	12	13	100-1200	0.48
550-1022150	10	22	417	357	150	30	M8x1.25	16.5	13	M8x1.25	12	13	100-1200	0.55
550-1022200	10	22	517	457	200	30	M8x1.25	16.5	13	M8x1.25	12	13	100-1200	0.47
550-1022250	10	22	617	557	250	30	M8x1.25	16.5	13	M8x1.25	12	13	100-1200	0.52
550-1022300	10	22	717	657	300	30	M8x1.25	16.5	13	M8x1.25	12	13	100-1200	0.67
550-1022400	10	22	917	857	400	30	M8x1.25	16.5	13	M8x1.25	12	13	100-1200	0.81
550-1428100	14	28	324	254	100	35	M10x1.5	20	16	M10x1.5	14	16	200-2500	0.76
550-1428200	14	28	524	454	200	35	M10x1.5	20	16	M10x1.5	14	16	200-2500	0.89
550-1428300	14	28	724	654	300	35	M10x1.5	20	16	M10x1.5	14	16	200-2500	1.15
550-1428400	14	28	924	854	400	35	M10x1.5	20	16	M10x1.5	14	16	200-2500	1.23
550-1428500	14	28	1124	1054	500	35	M10x1.5	20	16	M10x1.5	14	16	200-2500	1.67

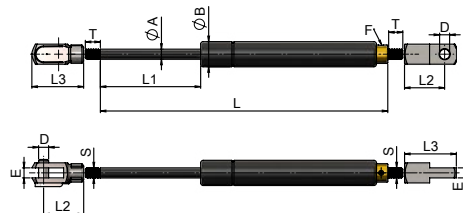


ZP

Angle Joint - Zinc Plated Steel (DIN71802) WDS 551

Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	L	S	T	Weight (kg)
551-705	M5	8	8	19.2	10.2	22	7	10.2	0.02
551-706	M6	12.5	10	23.5	12.5	25	8	11.5	0.02
551-708	M8	16.5	13	29.5	16.5	30	11	14	0.05
551-710	M10	16	16	36	20	35	13	15.5	0.06
551-712	M12	16	16	36	20	35	13	15.5	0.11

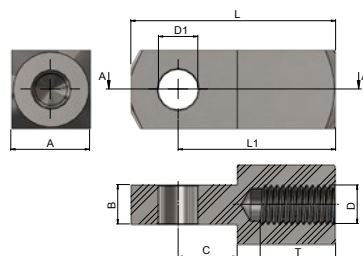


WDS 550 Gas Struts (Gas Springs) with Clevis Fork & Clevis Eye

Cylinder - Powder coated steel, and Rod - Black nitride hardened steel - (See technical page vi)

WDS No.	A	B	D	E	L	L1	L2	L3	S	T	Force Range (N)	Weight (kg)
550-0615040CE	6	15	6	6	132	40	24	31	M6x1.0	9	20-400	0.17
550-0615060CE	6	15	6	6	172	60	24	31	M6x1.0	9	20-400	0.18
550-0615080CE	6	15	6	6	212	80	24	31	M6x1.0	9	20-400	0.19
550-0615100CE	6	15	6	6	252	100	24	31	M6x1.0	9	20-400	0.21
550-0615120CE	6	15	6	6	292	120	24	31	M6x1.0	9	20-400	0.22
550-0615150CE	6	15	6	6	352	150	24	31	M6x1.0	9	20-400	0.24
550-0615200CE	6	15	6	6	452	200	24	31	M6x1.0	9	20-400	0.27
550-0819050CE	8	19	6	6	152	50	24	31	M6x1.0	9	50-700	0.23
550-0819075CE	8	19	6	6	202	75	24	31	M6x1.0	9	50-700	0.26
550-0819100CE	8	19	6	6	252	100	24	31	M6x1.0	9	50-700	0.28
550-0819125CE	8	19	6	6	302	125	24	31	M6x1.0	9	50-700	0.31
550-0819150CE	8	19	6	6	352	150	24	31	M6x1.0	9	50-700	0.33
550-0819175CE	8	19	6	6	402	175	24	31	M6x1.0	9	50-700	0.36
550-0819200CE	8	19	6	6	452	200	24	31	M6x1.0	9	50-700	0.39
550-0819250CE	8	19	6	6	552	250	24	31	M6x1.0	9	50-700	0.44
550-0819300CE	8	19	6	6	652	300	24	31	M6x1.0	9	50-700	0.69
550-1022100CE	10	22	8	8	257	100	32	42	M8x1.25	12	100-1200	0.48
550-1022150CE	10	22	8	8	357	150	32	42	M8x1.25	12	100-1200	0.55
550-1022200CE	10	22	8	8	457	200	32	42	M8x1.25	12	100-1200	0.62
550-1022250CE	10	22	8	8	557	250	32	42	M8x1.25	12	100-1200	0.7
550-1022300CE	10	22	8	8	657	300	32	42	M8x1.25	12	100-1200	0.76
550-1022400CE	10	22	8	8	857	400	32	42	M8x1.25	12	100-1200	0.91
550-1428100CE	14	28	10	10	254	100	40	52	M10x1.5	12	200-2500	0.84
550-1428200CE	14	28	10	10	454	200	40	52	M10x1.5	14	200-2500	1.08
550-1428300CE	14	28	10	10	654	300	40	52	M10x1.5	14	200-2500	1.34
550-1428400CE	14	28	10	10	854	400	40	52	M10x1.5	14	200-2500	1.6
550-1428500CE	14	28	10	10	1054	500	40	52	M10x1.5	14	200-2500	1.86

ZP

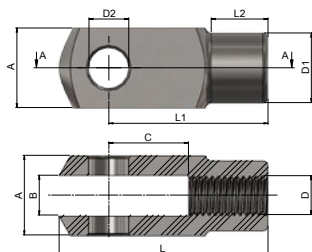


WDS 551 Clevis Eye - Zinc Plated Steel (Mating part for DIN71752)

Zinc Plated Steel

Clevis Eye attachments can be used on applications such as industrial machinery and inspection hatches

WDS No.	A	B	C	D	D1	L	L1	T	Weight (kg)
551-405	10	5	7.5	M5	5	26	20	8	0.01
551-406	12	6	9	M6	6	31	24	11	0.02
551-408	16	8	12	M8	8	42	32	14	0.03
551-410	20	10	15	M10	10	52	40	18	0.1
551-412	24	12	18	M12	12	62	48	22	0.02

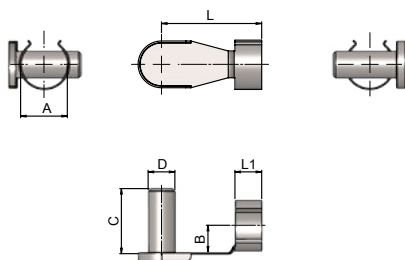


Clevis Fork - Zinc Plated Steel (DIN71752) WDS 551

Zinc Plated Steel

Can be utilised on applications such as industrial machinery and enclosures

WDS No.	A	B	C	D	D1	D2	L	L1	L2	Weight (kg)
551-204	8	4	8	M4	8	4	21	16	6	0.01
551-204E	8	4	16	M4	8	4	29	24	6	0.01
551-205	10	5	10	M5	9	5	26	20	7.5	0.02
551-206	12	6	12	M6	10	6	31	24	9	0.02
551-206E	12	6	24	M6	10	6	43	36	9	0.02
551-208	16	8	16	M8	14	8	42	32	12	0.04
551-208E	16	8	32	M8	14	8	58	48	12	0.05
551-210	20	10	20	M10	18	10	52	40	15	0.05
551-210E	20	10	40	M10	18	10	72	60	15	0.12
551-212	24	12	24	M12	20	12	62	48	18	0.12
551-212E	24	12	48	M12	20	12	86	72	18	0.18
551-216	32	16	32	M16	26	16	83	64	24	0.28

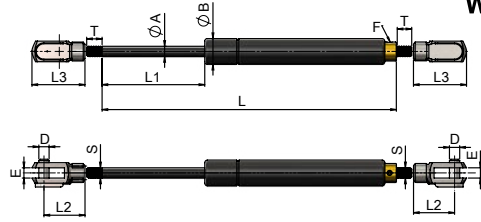


Spring Bolt (use with DIN71752) WDS 551

Zinc Plated Steel

Spring bolt end fittings allow swift installation when used with Clevis Fork

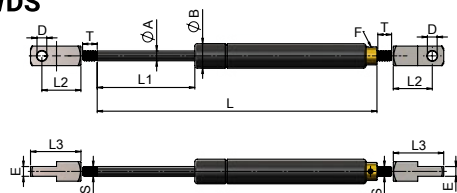
WDS No.	A	B	C	D	L	L1	Suitable for use with	Weight (kg)
551-305	9	5	12	5	19	5.5	551-205	0.02
551-306	10	6	14	6	23	6.5	551-206	0.01
551-308	14	8	19	8	30	8	551-208	0.01
551-310	18	10	23	10	38	10	551-210	0.03
551-312	20	12	28	12	45	12	551-212	0.04



WDS 550 Gas Struts (Gas Springs) with Clevis Forks & Spring Bolts

Cylinder - Powder coated steel, and Rod - Black nitride hardened steel - (See technical page vi)

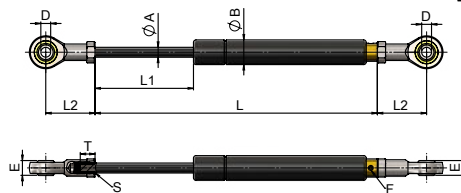
WDS No.	A	B	D	E	L	L1	L2	L3	S	T	Force Range (N)	Weight (kg)
550-0615040CC	6	15	6	6	132	40	24	31	M6x1.0	9	20-400	0.17
550-0615060CC	6	15	6	6	172	60	24	31	M6x1.0	9	20-400	0.18
550-0615080CC	6	15	6	6	212	80	24	31	M6x1.0	9	20-400	0.19
550-0615100CC	6	15	6	6	252	100	24	31	M6x1.0	9	20-400	0.21
550-0615120CC	6	15	6	6	292	120	24	31	M6x1.0	9	20-400	0.22
550-0615150CC	6	15	6	6	352	150	24	31	M6x1.0	9	20-400	0.24
550-0615200CC	6	15	6	6	452	200	24	31	M6x1.0	9	20-400	0.27
550-0819050CC	8	19	6	6	152	50	24	31	M6x1.0	9	50-700	0.23
550-0819075CC	8	19	6	6	202	75	24	31	M6x1.0	9	50-700	0.26
550-0819100CC	8	19	6	6	252	100	24	31	M6x1.0	9	50-700	0.28
550-0819125CC	8	19	6	6	302	125	24	31	M6x1.0	9	50-700	0.31
550-0819150CC	8	19	6	6	352	150	24	31	M6x1.0	9	50-700	0.33
550-0819175CC	8	19	6	6	402	175	24	31	M6x1.0	9	50-700	0.36
550-0819200CC	8	19	6	6	452	200	24	31	M6x1.0	9	50-700	0.39
550-0819250CC	8	19	6	6	552	250	24	31	M6x1.0	9	50-700	0.44
550-0819300CC	8	19	6	6	652	300	24	31	M6x1.0	9	50-700	0.69
550-1022100CC	10	22	8	8	257	100	32	42	M8x1.25	12	100-1200	0.45
550-1022150CC	10	22	8	8	357	150	32	42	M8x1.25	12	100-1200	0.52
550-1022200CC	10	22	8	8	457	200	32	42	M8x1.25	12	100-1200	0.62
550-1022250CC	10	22	8	8	557	250	32	42	M8x1.25	12	100-1200	0.7
550-1022300CC	10	22	8	8	657	300	32	42	M8x1.25	12	100-1200	0.76
550-1022400CC	10	22	8	8	857	400	32	42	M8x1.25	12	100-1200	0.91
550-1428100CC	14	28	10	10	254	100	40	52	M10x1.5	14	200-2500	0.74
550-1428200CC	14	28	10	10	454	200	40	52	M10x1.5	14	200-2500	1.08
550-1428300CC	14	28	10	10	654	300	40	52	M10x1.5	14	200-2500	1.33
550-1428400CC	14	28	10	10	854	400	40	52	M10x1.5	14	200-2500	1.6
550-1428500CC	14	28	10	10	1054	500	40	52	M10x1.5	14	200-2500	1.85

**WDS**

Gas Struts (Gas Springs) with Clevis Eyes WDS 550

Cylinder - Powder coated steel, and Rod - Black nitride hardened steel - (See technical page vi)

WDS No.	A	B	D	E	L	L1	L2	L3	S	T	Force Range (N)	Weight (kg)
550-0615040EE	6	15	6	6	132	40	24	31	M6x1.0	9	20-400	0.17
550-0615060EE	6	15	6	6	172	60	24	31	M6x1.0	9	20-400	0.18
550-0615080EE	6	15	6	6	212	80	24	31	M6x1.0	9	20-400	0.19
550-0615100EE	6	15	6	6	252	100	24	31	M6x1.0	9	20-400	0.21
550-0615120EE	6	15	6	6	292	120	24	31	M6x1.0	9	20-400	0.22
550-0615150EE	6	15	6	6	352	150	24	31	M6x1.0	9	20-400	0.24
550-0615200EE	6	15	6	6	452	200	24	31	M6x1.0	9	20-400	0.27
550-0819050EE	8	19	6	6	152	50	24	31	M6x1.0	9	50-700	0.23
550-0819075EE	8	19	6	6	202	75	24	31	M6x1.0	9	50-700	0.26
550-0819100EE	8	19	6	6	252	100	24	31	M6x1.0	9	50-700	0.28
550-0819125EE	8	19	6	6	302	125	24	31	M6x1.0	9	50-700	0.31
550-0819150EE	8	19	6	6	352	150	24	31	M6x1.0	9	50-700	0.33
550-0819175EE	8	19	6	6	402	175	24	31	M6x1.0	9	50-700	0.36
550-0819200EE	8	19	6	6	452	200	24	31	M6x1.0	9	50-700	0.39
550-0819250EE	8	19	6	6	552	250	24	31	M6x1.0	9	50-700	0.44
550-0819300EE	8	19	6	6	652	300	24	31	M6x1.0	9	50-700	0.69
550-1022100EE	10	22	8	8	257	100	32	42	M8x1.25	12	100-1200	0.48
550-1022150EE	10	22	8	8	357	150	32	42	M8x1.25	12	100-1200	0.55
550-1022200EE	10	22	8	8	457	200	32	42	M8x1.25	12	100-1200	0.63
550-1022250EE	10	22	8	8	557	250	32	42	M8x1.25	12	100-1200	0.7
550-1022300EE	10	22	8	8	657	300	32	42	M8x1.25	12	100-1200	0.77
550-1022400EE	10	22	8	8	857	400	32	42	M8x1.25	12	100-1200	0.91
550-1428100EE	14	28	10	10	254	100	40	52	M10x1.5	14	200-2500	0.84
550-1428200EE	14	28	10	10	454	200	40	52	M10x1.5	14	200-2500	1.09
550-1428300EE	14	28	10	10	654	300	40	52	M10x1.5	14	200-2500	1.34
550-1428400EE	14	28	10	10	854	400	40	52	M10x1.5	14	200-2500	1.61
550-1428500EE	14	28	10	10	1054	500	40	52	M10x1.5	14	200-2500	1.86

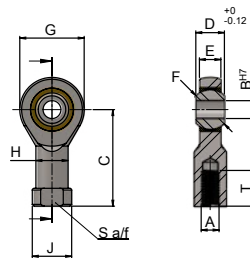


WDS 550 Gas Struts (Gas Springs) with Swivel Eye Rose Joints

Cylinder - Powder coated steel, and Rod - Black nitride hardened steel - (See technical page vi)

WDS No.	A	B	D	E	L	L1	L2	S	T	Force Range (N)	Weight (kg)
550-0615040RR	6	15	6	9	132	40	30	M6x1.0	9	20-400	0.17
550-0615060RR	6	15	6	9	172	60	30	M6x1.0	9	20-400	0.18
550-0615080RR	6	15	6	9	212	80	30	M6x1.0	9	20-400	0.2
550-0615100RR	6	15	6	9	252	100	30	M6x1.0	9	20-400	0.21
550-0615120RR	6	15	6	9	292	120	30	M6x1.0	9	20-400	0.22
550-0615150RR	6	15	6	9	352	150	30	M6x1.0	9	20-400	0.24
550-0615200RR	6	15	6	9	452	200	30	M6x1.0	9	20-400	0.27
550-0819050RR	8	19	6	9	152	50	30	M6x1.0	9	50-700	0.23
550-0819075RR	8	19	6	9	202	75	30	M6x1.0	9	50-700	0.26
550-0819100RR	8	19	6	9	252	100	30	M6x1.0	9	50-700	0.28
550-0819125RR	8	19	6	9	302	125	30	M6x1.0	9	50-700	0.31
550-0819150RR	8	19	6	9	352	150	30	M6x1.0	9	50-700	0.33
550-0819175RR	8	19	6	9	402	175	30	M6x1.0	9	50-700	0.36
550-0819200RR	8	19	6	9	452	200	30	M6x1.0	9	50-700	0.39
550-0819250RR	8	19	6	9	552	250	30	M6x1.0	9	50-700	0.44
550-0819300RR	8	19	6	9	652	300	30	M6x1.0	9	50-700	0.69
550-1022100RR	10	22	8	12	257	100	36	M8x1.25	12	100-1200	0.47
550-1022150RR	10	22	8	12	357	150	36	M8x1.25	12	100-1200	0.54
550-1022200RR	10	22	8	12	457	200	36	M8x1.25	12	100-1200	0.62
550-1022250RR	10	22	8	12	557	250	36	M8x1.25	12	100-1200	0.69
550-1022300RR	10	22	8	12	657	300	36	M8x1.25	12	100-1200	0.76
550-1022400RR	10	22	8	12	857	400	36	M8x1.25	12	100-1200	0.9
550-1428100RR	14	28	10		254	100	43	M10x1.5	14	200-2500	0.73
550-1428200RR	14	28	10	14	454	200	43	M10x1.5	14	200-2500	1.04
550-1428300RR	14	28	10	14	654	300	43	M10x1.5	14	200-2500	1.3
550-1428400RR	14	28	10	14	854	400	43	M10x1.5	14	200-2500	1.56
550-1428500RR	14	28	10	14	1054	500	43	M10x1.5	14	200-2500	1.82

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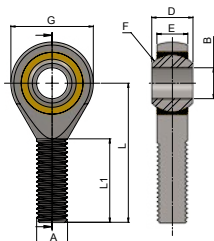
WDS 552 Swivel Eye Rose Joint (Rod Ends) - Zinc Plated Steel (DIN648)

Zinc Plated Steel

Ball - Hardened Steel

WDS No.	A	B	C	D	E	F	F1	F2	G	H	J	S	T	Thread	Weight (kg)
552-205	M5x0.8	5	27	8	6	11.1	580	611	18	9	11	9	10	Right Hand	0.02
552-206	M6x1.0	6	30	9	6.8	12.7	730	780	20	10	13	11	12	Right Hand	0.02
552-208	M8x1.25	8	36	12	9	15.9	1180	1315	24	12.5	16	14	16	Right Hand	0.05
552-210	M10x1.5	10	43	14	10.5	19	1470	1835	28	15	19	17	20	Right Hand	0.08
552-212	M12x1.75	12	50	16	12	22.2	1730	2440	32	17.5	22	19	22	Right Hand	0.1

WDS No.	A	B	C	D	E	F	F1	F2	G	H	J	S	T	Thread	Weight (kg)
552-205L	M5x0.8	5	27	8	6	11.1	580	611	18	9	11	9	10	Left Hand	0.02
552-206L	M6x1.0	6	30	9	6.8	12.7	730	780	20	10	13	11	12	Left Hand	0.02
552-208L	M8x1.25	8	36	12	9	15.9	1180	1315	24	12.5	16	14	16	Left Hand	0.05
552-210L	M10x1.5	10	43	14	10.5	19	1470	1835	28	15	19	17	20	Left Hand	0.08
552-212L	M12x1.75	12	50	16	12	22.2	1730	2440	32	17.5	22	19	22	Left Hand	0.1

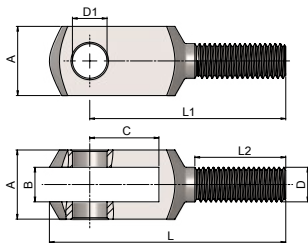


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Swivel Eye Rose Joint (Rod Ends) with Male Thread - Zinc Plated Steel (DIN648) WDS 552

Zinc Plated Steel
Ball - Hardened Steel

WDS No.	A	B	D	E	F	F1	F2	G	L	L1	Thread	Weight (kg)
552-405	M5 x 0.8	5	8	6	11.1	580	611	18	33	19	Right Hand	0.01
552-406	M6 x 1.0	6	9	6.75	12.7	730	780	20	36	21	Right Hand	0.02
552-408	M8 x 1.25	8	12	9	15.875	1180	1315	24	42	25	Right Hand	0.04
552-410	M10 x 1.5	10	14	10.5	19	1470	1835	28	48	28	Right Hand	0.06
552-412	M12 x 1.75	12	16	12	22.22	1730	2440	32	54	32	Right Hand	0.09
552-405L	M5 x 0.8	5	8	6	11.1	580	611	18	33	19	Left Hand	0.01
552-406L	M6 x 1.0	6	9	6.75	12.7	730	780	20	36	21	Left Hand	0.02
552-408L	M8 x 1.25	8	12	9	15.875	1180	1315	24	42	25	Left Hand	0.04
552-410L	M10 x 1.5	10	14	10.5	19	1470	1835	28	48	28	Left Hand	0.06
552-412L	M12 x 1.75	12	16	12	22.22	1730	2440	32	54	32	Left Hand	0.09



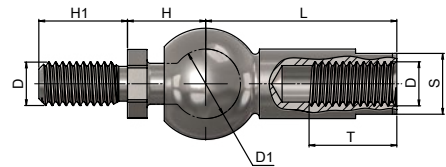
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Male Threaded Clevis Joints (DIN 71752) WDS 551

Zinc Plated Steel

WDS No.	A	B	C	D	D1	L	L1	L2	Thread	Weight (kg)
551-106	12	6	12	M6	6	44	37	15	Right Hand	0.02
551-108	16	8	16	M8	8	57	47	20	Right Hand	0.04
551-110	20	10	20	M10	10	69	57	25	Right Hand	0.07
551-112	24	12	24	M12	12	82	68	30	Right Hand	0.12
551-106L	12	6	12	M6	6	44	37	15	Left Hand	0.02
551-108L	16	8	16	M8	8	57	47	20	Left Hand	0.04
551-110L	20	10	20	M10	10	69	57	25	Left Hand	0.07
551-112L	24	12	24	M12	12	82	68	30	Left Hand	0.12

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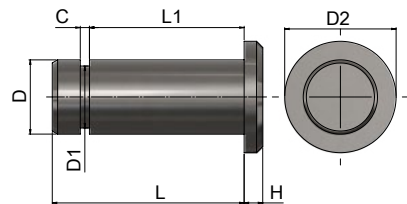


WDS 551 Steel Axial Ball Joints (Similar to DIN 71802)

Zinc Plated Steel
EF = Extraction Force

WDS No.	D	D1	EF (kg)	H	H1	L	S	T	Weight (kg)
551-755	M5	8	3.1	9	10.2	22	7	10.2	0.02
551-756	M6	10	4.1	11	12.5	25	8	11.5	0.03
551-758	M8	13	6.1	13	16.5	30	11	14	0.06
551-750	M10	16	8.2	16	20	35	13	15.5	0.1
551-752	M12	16	8.2	16	20	35	13	15.5	0.1

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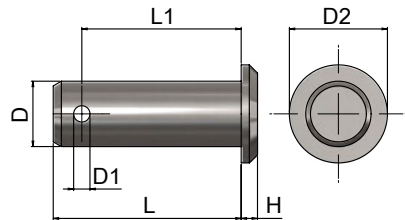


WDS 551 Clevis Pins - Zinc Plated Steel (use with DIN71752)

Zinc Plated Steel

WDS No.	C	D	D1	D2	H	L	L1	Weight (kg)
551-504	0.64	4	3.2	6	1	10.5	8.5	0.01
551-505	0.74	5	4	8	1.5	13	10.5	0.01
551-506	0.74	6	5	9	1.5	15.5	12.5	0.01
551-508	0.94	8	6	12	1.5	20	16.5	0.01
551-510	1.05	10	8	14	2	25	20.5	0.02
551-512	1.15	12	9	17	3	30	24.5	0.04

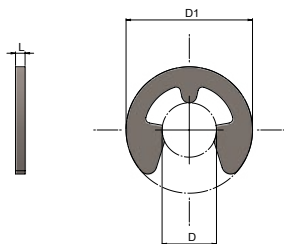
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WDS 551 Clevis Pins - Zinc Plated Steel (use with DIN71752)

Zinc Plated Steel

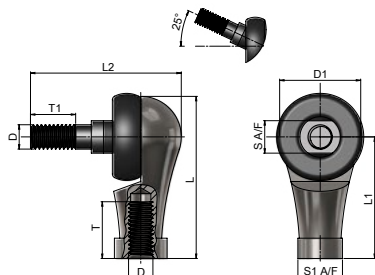
WDS No.	D	D1	D2	H	L	L1	Weight (kg)
551-804	4	1	6	1	12	10	0.01
551-805	5	1	8	1.5	15	12.3	0.01
551-806	6	1.6	9	1.5	18	15.3	0.01
551-808	8	2	12	2	23	19.5	0.01
551-810	10	3.2	14	2	29	24.5	0.02
551-812	12	4	17	3	35	29.5	0.03



E-Clip (Circlip) - Zinc Plated Steel (DIN6799) WDS 551

Zinc Plated Steel

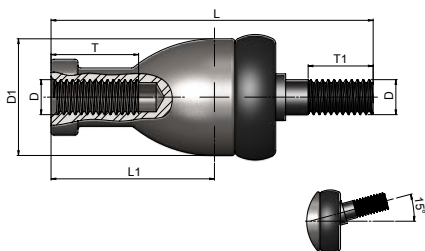
WDS No.	D	D1	L	Weight (kg)
551-604	3.2	7.3	0.6	0.01
551-605	4	9.3	0.7	0.01
551-606	5	11.3	0.7	0.01
551-608	6	12.3	0.7	0.01
551-610	8	16.3	1	0.01
551-612	9	18.8	1.1	0.01



Zinc Alloy Angle Ball Joints WDS 551

Housing - Zinc Alloy, Ball Stud - Carbon Steel 1045, Sealing - Nitrile Rubber
AL=Axial Load

WDS No.	D	D1	L	L1	L2	S	S1	T	T1	AL (kgf)	Weight (kg)
551-745	M5	16	35	27	30	7	9	14	8	285	0.03
551-746	M6	20	40	30	37	8	11	14	11	365	0.04
551-748	M8	22	48	36	43	10	14	17	12	670	0.07
551-740	M10	27	56	43	56	11	17	21	21	1015	0.11
551-742	M12	31	66	50	66	15	19	25	24	1630	0.17

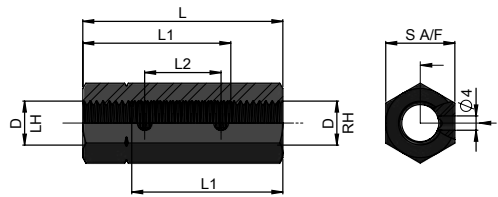


Zinc Alloy Axial Ball Joint WDS 551

Housing - Zinc Alloy, Ball Stud - Carbon Steel 1045, Sealing - Nitrile Rubber
AL=Axial Load

WDS No.	D	D1	L	L1	T	T1	AL (kgf)	Weight (kg)
551-765	M5	17	46	24	14	8	285	0.03
551-766	M6	20	55	28	14	11	377	0.04
551-768	M8	24	64	31	17	12	590	0.07
551-760	M10	29	78	35	21	21	856	0.12
551-762	M12	31	91	40	25	24	1120	0.18

ZP

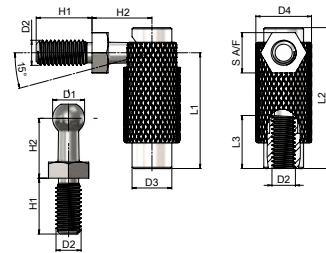


WDS 552 Hexagonal Turn-buckle Nut (DIN1479)

Steel BS 970 Gr 070M20
Clear Passivated, Zinc

WDS No.	D	L	L1	L2	S	Weight (kg)
552-406LR	M6	30	22.5	11	10	0.02
552-408LR	M8	35	25	11	13	0.03
552-410LR	M10	45	33	17	16	0.06
552-412LR	M12	55	40	21	18	0.09

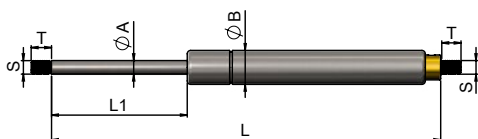
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WDS 557 Steel Quick Release Ball Joints – Metric equivalent to SAE-J-490

Body, Stem and Sleeve - Zinc Plated Steel
Spring - 302S26

WDS No.	D1	D2	D3	D4	H1	H2	L1	L2	L3	S	Weight (kg)
557-205	6.4	M5	7.9	11.1	11.1	11.9	23	28	11.1	8	0.02
557-206	7.9	M6	9.4	13	12.6	12.6	24.6	30	13	10	0.03
557-208	8.6	M8	11.1	16	15.2	15.2	31.7	40	14.3	11	0.05
557-210	10.7	M10	14.1	19	19.8	19.8	39.7	49	20	13	0.08

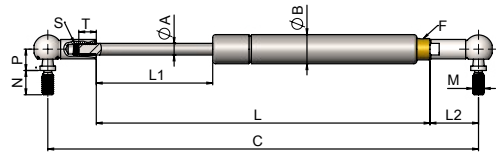


Stainless Steel Gas Struts (Gas Springs) with No End Fittings WDS 850

Cylinder - 316 Stainless Steel, and Rod - Hardened 316 Stainless Steel - (See technical page vi)

WDS No.	A	B	L	L1	S	T	Force Range (N)	Weight (kg)
850-0615040XX	6	15	132	40	M6x1.0	9	20-400	0.13
850-0615060XX	6	15	172	60	M6x1.0	9	20-400	0.14
850-0615080XX	6	15	212	80	M6x1.0	9	20-400	0.15
850-0615100XX	6	15	252	100	M6x1.0	9	20-400	0.17
850-0615120XX	6	15	292	120	M6x1.0	9	20-400	0.18
850-0615150XX	6	15	352	150	M6x1.0	9	20-400	0.2
850-0615200XX	6	15	452	200	M6x1.0	9	20-400	0.23
850-0819050XX	8	19	152	50	M6x1.0	9	50-700	0.19
850-0819075XX	8	19	202	75	M6x1.0	9	50-700	0.22
850-0819100XX	8	19	252	100	M6x1.0	9	50-700	0.21
850-0819125XX	8	19	302	125	M6x1.0	9	50-700	0.27
850-0819150XX	8	19	352	150	M6x1.0	9	50-700	0.26
850-0819175XX	8	19	402	175	M6x1.0	9	50-700	0.32
850-0819200XX	8	19	452	200	M6x1.0	9	50-700	0.3
850-0819250XX	8	19	552	250	M6x1.0	9	50-700	0.35
850-0819300XX	8	19	652	300	M6x1.0	9	50-700	0.65
850-1022100XX	10	22	257	100	M8x1.25	12	100-1200	0.38
850-1022150XX	10	22	357	150	M8x1.25	12	100-1200	0.45
850-1022200XX	10	22	457	200	M8x1.25	12	100-1200	0.47
850-1022250XX	10	22	557	250	M8x1.25	12	100-1200	0.52
850-1022300XX	10	22	657	300	M8x1.25	12	100-1200	0.59
850-1022400XX	10	22	857	400	M8x1.25	12	100-1200	0.71
850-1428100XX	14	28	254	100	M10x1.5	14	200-2500	0.64
850-1428200XX	14	28	454	200	M10x1.5	14	200-2500	0.78
850-1428300XX	14	28	654	300	M10x1.5	14	200-2500	1
850-1428400XX	14	28	854	400	M10x1.5	14	200-2500	1.23
850-1428500XX	14	28	1054	500	M10x1.5	14	200-2500	1.45

316

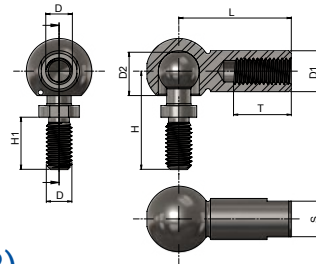


WDS 850 Stainless Steel Gas Struts (Gas Springs) with Angle Joints

Cylinder - 316 Stainless Steel, and Rod - Hardened 316 Stainless Steel - (See technical page vi)

WDS No.	A	B	C	L	L1	L2	M	N	P	S	T	Angle Joint Ball Dia	Force Range (N)	Weight (kg)
850-0615040	6	15	182	132	40	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	20-400	0.17
850-0615060	6	15	222	172	60	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	20-400	0.14
850-0615080	6	15	262	212	80	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	20-400	0.19
850-0615100	6	15	302	252	100	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	20-400	0.17
850-0615120	6	15	342	292	120	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	20-400	0.22
850-0615150	6	15	402	352	150	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	20-400	0.2
850-0615200	6	15	502	452	200	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	20-400	0.23
850-0819050	8	19	202	152	50	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	50-700	0.23
850-0819075	8	19	252	202	75	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	50-700	0.26
850-0819100	8	19	302	252	100	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	50-700	0.21
850-0819125	8	19	352	302	125	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	50-700	0.31
850-0819150	8	19	402	352	150	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	50-700	0.26
850-0819175	8	19	452	402	175	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	50-700	0.36
850-0819200	8	19	502	452	200	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	50-700	0.3
850-0819250	8	19	602	552	250	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	50-700	0.35
850-0819300	8	19	702	652	300	25	M6 x 1.0	12.5	11	M6 x 1.0	9	10	50-700	0.69
850-1022100	10	22	317	257	100	30	M8 x 1.25	16.5	13	M8 x 1.25	12	13	100-1200	0.48
850-1022150	10	22	417	357	150	30	M8 x 1.25	16.5	13	M8 x 1.25	12	13	100-1200	0.55
850-1022200	10	22	517	457	200	30	M8 x 1.25	16.5	13	M8 x 1.25	12	13	100-1200	0.47
850-1022250	10	22	617	557	250	30	M8 x 1.25	16.5	13	M8 x 1.25	12	13	100-1200	0.6
850-1022300	10	22	717	657	300	30	M8 x 1.25	16.5	13	M8 x 1.25	12	13	100-1200	0.67
850-1022400	10	22	917	857	400	30	M8 x 1.25	16.5	13	M8 x 1.25	12	13	100-1200	0.81
850-1428100	14	28	314	254	100	30	M10 x 1.5	20	16	M10 x 1.5	14	16	200-2500	0.76
850-1428200	14	28	524	454	200	30	M10 x 1.5	20	16	M10 x 1.5	14	16	200-2500	0.89
850-1428300	14	28	724	654	300	35	M10 x 1.5	20	16	M10 x 1.5	14	16	200-2500	1.15
850-1428400	14	28	924	854	400	35	M10 x 1.5	20	16	M10 x 1.5	14	16	200-2500	1.41
850-1428500	14	28	1132	1054	500	35	M10 x 1.5	20	16	M10 x 1.5	14	16	200-2500	1.67

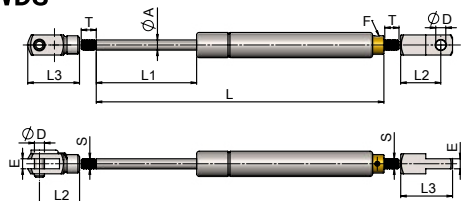
304



WDS 851 Angle Joint - Stainless Steel (DIN71802)

304 Stainless Steel
For use on access hatches and industrial machinery

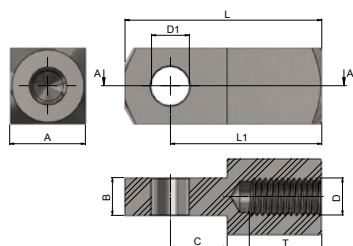
WDS No.	D	D1	D2	H	H1	L	S	T	Weight (kg)
851-705	M5	8	8	19.2	10.2	22	7	10.2	0.03
851-706	M6	12.5	10	23.5	12.5	25	8	11.5	0.03
851-708	M8	16.5	13	29.5	16.5	30	11	14	0.05
851-710	M10	16	16	36	20	35	13	15.5	0.1
851-712	M12	16	16	36	20	35	13	15.5	0.02



Stainless Steel Gas Struts (Gas Springs) with Clevis Fork & Clevis Eye WDS 850

Cylinder - 316 Stainless Steel, and Rod - Hardened 316 Stainless Steel - (See technical page vi)

WDS No.	A	B	D	E	L	L1	L2	L3	S	T	Force Range (N)	Weight (kg)
850-0615040CE	6	15	6	6	132	40	24	31	M6x1.0	9	20-400	0.17
850-0615060CE	6	15	6	6	172	60	24	31	M6x1.0	9	20-400	0.18
850-0615080CE	6	15	6	6	212	80	24	31	M6x1.0	9	20-400	0.19
850-0615100CE	6	15	6	6	252	100	24	31	M6x1.0	9	20-400	0.21
850-0615120CE	6	15	6	6	292	120	24	31	M6x1.0	9	20-400	0.22
850-0615150CE	6	15	6	6	352	150	24	31	M6x1.0	9	20-400	0.24
850-0615200CE	6	15	6	6	452	200	24	31	M6x1.0	9	20-400	0.27
850-0819050CE	8	19	6	6	152	50	24	31	M6x1.0	9	50-700	0.23
850-0819075CE	8	19	6	6	202	75	24	31	M6x1.0	9	50-700	0.26
850-0819100CE	8	19	6	6	252	100	24	31	M6x1.0	9	50-700	0.25
850-0819125CE	8	19	6	6	302	125	24	31	M6x1.0	9	50-700	0.31
850-0819150CE	8	19	6	6	352	150	24	31	M6x1.0	9	50-700	0.3
850-0819175CE	8	19	6	6	402	175	24	31	M6x1.0	9	50-700	0.36
850-0819200CE	8	19	6	6	452	200	24	31	M6x1.0	9	50-700	0.34
850-0819250CE	8	19	6	6	552	250	24	31	M6x1.0	9	50-700	0.39
850-0819300CE	8	19	6	6	652	300	24	31	M6x1.0	9	50-700	0.69
850-1022100CE	10	22	8	8	257	100	32	42	M8x1.25	12	100-1200	0.48
850-1022150CE	10	22	8	8	357	150	32	42	M8x1.25	12	100-1200	0.55
850-1022200CE	10	22	8	8	457	200	32	42	M8x1.25	12	100-1200	0.56
850-1022250CE	10	22	8	8	557	250	32	42	M8x1.25	12	100-1200	0.62
850-1022300CE	10	22	8	8	657	300	32	42	M8x1.25	12	100-1200	0.68
850-1022400CE	10	22	8	8	857	400	32	42	M8x1.25	12	100-1200	0.8
850-1428100CE	14	28	10	10	254	100	40	52	M10x1.5	14	200-2500	0.84
850-1428200CE	14	28	10	10	454	200	40	52	M10x1.5	14	200-2500	0.97
850-1428300CE	14	28	10	10	654	300	40	52	M10x1.5	14	200-2500	1.19
850-1428400CE	14	28	10	10	854	400	40	52	M10x1.5	14	200-2500	1.42
850-1428500CE	14	28	10	10	1054	500	40	52	M10x1.5	14	200-2500	1.64

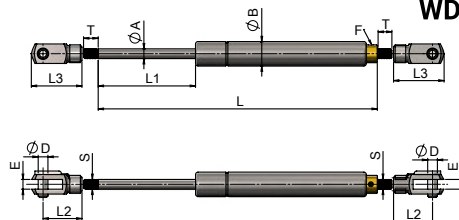


Clevis Eye - Stainless Steel (Mating part for DIN71752) WDS 851

304 Stainless Steel

WDS No.	A	B	C	D	D1	L	L1	T	Weight (kg)
851-405	10	5	7.5	M5	5	26	20	8	0.01
851-406	12	6	9	M6	6	31	24	11	0.02
851-408	16	8	12	M8	8	42	32	14	0.05
851-410	20	10	15	M10	10	52	40	18	0.1
851-412	24	12	18	M12	12	62	48	22	0.17

316

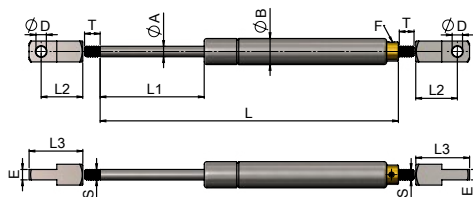


WDS 850 Stainless Steel Gas Struts (Gas Springs) with Clevis Forks & Pins

Cylinder - 316 Stainless Steel, and Rod - Hardened 316 Stainless Steel - (See technical page vi)

WDS No.	A	B	D	E	L	L1	L2	L3	S	T	Force Range (N)	Weight (kg)
850-0615040CC	6	15	6	6	132	40	24	31	M6x1.0	9	20-400	0.17
850-0615060CC	6	15	6	6	172	60	24	31	M6x1.0	9	20-400	0.18
850-0615080CC	6	15	6	6	212	80	24	31	M6x1.0	9	20-400	0.19
850-0615100CC	6	15	6	6	252	100	24	31	M6x1.0	9	20-400	0.21
850-0615120CC	6	15	6	6	292	120	24	31	M6x1.0	9	20-400	0.22
850-0615150CC	6	15	6	6	352	150	24	31	M6x1.0	9	20-400	0.24
850-0615200CC	6	15	6	6	452	200	24	31	M6x1.0	9	20-400	0.27
850-0819050CC	8	19	6	6	152	50	24	31	M6x1.0	9	50-700	0.23
850-0819075CC	8	19	6	6	202	75	24	31	M6x1.0	9	50-700	0.26
850-0819100CC	8	19	6	6	252	100	24	31	M6x1.0	9	50-700	0.25
850-0819125CC	8	19	6	6	302	125	24	31	M6x1.0	9	50-700	0.31
850-0819150CC	8	19	6	6	352	150	24	31	M6x1.0	9	50-700	0.3
850-0819175CC	8	19	6	6	402	175	24	31	M6x1.0	9	50-700	0.36
850-0819200CC	8	19	6	6	452	200	24	31	M6x1.0	9	50-700	0.34
850-0819250CC	8	19	6	6	552	250	24	31	M6x1.0	9	50-700	0.39
850-0819300CC	8	19	6	6	652	300	24	31	M6x1.0	9	50-700	0.69
850-1022100CC	10	22	8	8	257	100	32	42	M8x1.25	12	100-1200	0.45
850-1022150CC	10	22	8	8	357	150	32	42	M8x1.25	12	100-1200	0.52
850-1022200CC	10	22	8	8	457	200	32	42	M8x1.25	12	100-1200	0.56
850-1022250CC	10	22	8	8	557	250	32	42	M8x1.25	12	100-1200	0.62
850-1022300CC	10	22	8	8	657	300	32	42	M8x1.25	12	100-1200	0.68
850-1022400CC	10	22	8	8	857	400	32	42	M8x1.25	12	100-1200	0.8
850-1428100CC	14	28	10	10	254	100	40	52	M10x1.5	14	200-2500	0.74
850-1428200CC	14	28	10	10	454	200	40	52	M10x1.5	14	200-2500	0.96
850-1428300CC	14	28	10	10	654	300	40	52	M10x1.5	14	200-2500	1.18
850-1428400CC	14	28	10	10	854	400	40	52	M10x1.5	14	200-2500	1.42
850-1428500CC	14	28	10	10	1054	500	40	52	M10x1.5	14	200-2500	1.64

316

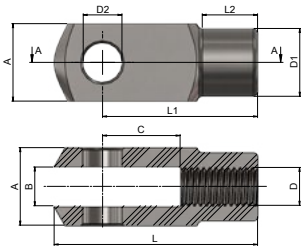


WDS 850 Stainless Steel Gas Struts (Gas Springs) with Clevis Eyes

Cylinder - 316 Stainless Steel, and Rod - Hardened 316 Stainless Steel - (See technical page vi)

WDS No.	A	B	D	E	L	L1	L2	L3	S	T	Force Range (N)	Weight (kg)
850-0615040EE	6	15	6	6	132	40	24	31	M6x1.0	9	20-400	0.17
850-0615060EE	6	15	6	6	172	60	24	31	M6x1.0	9	20-400	0.18
850-0615080EE	6	15	6	6	212	80	24	31	M6x1.0	9	20-400	0.19
850-0615100EE	6	15	6	6	252	100	24	31	M6x1.0	9	20-400	0.21
850-0615120EE	6	15	6	6	292	120	24	31	M6x1.0	9	20-400	0.22

WDS No.	A	B	D	E	L	L1	L2	L3	S	T	Force Range (N)	Weight (kg)
850-0615150EE	6	15	6	6	352	150	24	31	M6x1.0	9	20-400	0.24
850-0615200EE	6	15	6	6	452	200	24	31	M6x1.0	9	20-400	0.27
850-0819050EE	8	19	6	6	152	50	24	31	M6x1.0	9	50-700	0.23
850-0819075EE	8	19	6	6	202	75	24	31	M6x1.0	9	50-700	0.26
850-0819100EE	8	19	6	6	252	100	24	31	M6x1.0	9	50-700	0.25
850-0819125EE	8	19	6	6	302	125	24	31	M6x1.0	9	50-700	0.31
850-0819150EE	8	19	6	6	352	150	24	31	M6x1.0	9	50-700	0.3
850-0819175EE	8	19	6	6	402	175	24	31	M6x1.0	9	50-700	0.36
850-0819200EE	8	19	6	6	452	200	24	31	M6x1.0	9	50-700	0.34
850-0819250EE	8	19	6	6	552	250	24	31	M6x1.0	9	50-700	0.39
850-0819300EE	8	19	6	6	652	300	24	31	M6x1.0	9	50-700	0.69
850-1022100EE	10	22	8	8	257	100	32	42	M8x1.25	12	100-1200	0.48
850-1022150EE	10	22	8	8	357	150	32	42	M8x1.25	12	100-1200	0.55
850-1022200EE	10	22	8	8	457	200	32	42	M8x1.25	12	100-1200	0.57
850-1022250EE	10	22	8	8	557	250	32	42	M8x1.25	12	100-1200	0.62
850-1022300EE	10	22	8	8	657	300	32	42	M8x1.25	12	100-1200	0.69
850-1022400EE	10	22	8	8	857	400	32	42	M8x1.25	12	100-1200	0.81
850-1428100EE	14	28	10	10	254	100	40	52	M10x1.5	14	200-2500	0.84
850-1428200EE	14	28	10	10	454	200	40	52	M10x1.5	14	200-2500	0.97
850-1428300EE	14	28	10	10	654	300	40	52	M10x1.5	14	200-2500	1.19
850-1428400EE	14	28	10	10	854	400	40	52	M10x1.5	14	200-2500	1.43
850-1428500EE	14	28	10	10	1054	500	40	52	M10x1.5	14	200-2500	1.65



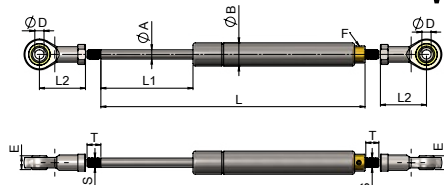
304

Clevis Fork - Stainless Steel (DIN71752) WDS 851

304 Stainless Steel DIN 71752 end fitting for Gas Struts

WDS No.	A	B	C	D	D1	D2	L	L1	L2	Weight (kg)
851-204	8	4	8	M4	8	4	21	16	6	0.01
851-204E	8	4	16	M4	8	4	29	24	6	0.01
851-205	10	5	10	M5	9	5	26	20	7.5	0.02
851-206	12	6	12	M6	10	6	31	24	9	0.02
851-206E	12	6	24	M6	10	6	43	36	9	0.02
851-208	16	8	16	M8	14	8	42	32	12	0.04
851-208E	16	8	32	M8	14	8	58	48	12	0.05
851-210	20	10	20	M10	18	10	52	40	15	0.07
851-210E	20	10	40	M10	18	10	72	60	15	0.07
851-212	24	12	24	M12	20	12	62	48	18	0.12
851-212E	24	12	48	M12	20	12	86	72	18	0.18

316

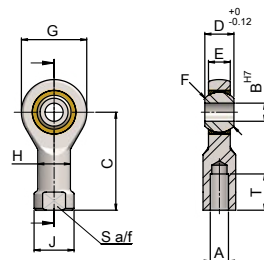


WDS 850 Stainless Steel Gas Struts (Gas Springs) with Swivel Eye Rose Joints

Cylinder - 316 Stainless Steel, and Rod - Hardened 316 Stainless Steel - (See technical page vi)

WDS No.	A	B	D	E	L	L1	L2	S	T	Force Range (N)	Weight (kg)
850-0615040RR	6	15	6	9	132	40	30	M6x1.0	9	20-400	0.17
850-0615060RR	6	15	6	9	172	60	30	M6x1.0	9	20-400	0.18
850-0615080RR	6	15	6	9	212	80	30	M6x1.0	9	20-400	0.2
850-0615100RR	6	15	6	9	252	100	30	M6x1.0	9	20-400	0.21
850-0615120RR	6	15	6	9	292	120	30	M6x1.0	9	20-400	0.22
850-0615150RR	6	15	6	9	352	150	30	M6x1.0	9	20-400	0.24
850-0615200RR	6	15	6	9	452	200	30	M6x1.0	9	20-400	0.27
850-0819050RR	8	19	6	9	152	50	30	M6x1.0	9	50-700	0.23
850-0819075RR	8	19	6	9	202	75	30	M6x1.0	9	50-700	0.26
850-0819100RR	8	19	6	9	252	100	30	M6x1.0	9	50-700	0.25
850-0819125RR	8	19	6	9	302	125	30	M6x1.0	9	50-700	0.31
850-0819150RR	8	19	6	9	352	150	30	M6x1.0	9	50-700	0.3
850-0819175RR	8	19	6	9	402	175	30	M6x1.0	9	50-700	0.36
850-0819200RR	8	19	6	9	452	200	30	M6x1.0	9	50-700	0.34
850-0819250RR	8	19	6	9	552	250	30	M6x1.0	9	50-700	0.39
850-0819300RR	8	19	6	9	652	300	30	M6x1.0	9	50-700	0.69
850-1022100RR	10	22	8	12	257	100	36	M8x1.25	12	100-1200	0.47
850-1022150RR	10	22	8	12	357	150	36	M8x1.25	12	100-1200	0.54
850-1022200RR	10	22	8	12	457	200	36	M8x1.25	12	100-1200	0.56
850-1022250RR	10	22	8	12	557	250	36	M8x1.25	12	100-1200	0.61
850-1022300RR	10	22	8	12	657	300	36	M8x1.25	12	100-1200	0.68
850-1022400RR	10	22	8	12	857	400	36	M8x1.25	12	100-1200	0.8
850-1428100RR	14	28	10	14	254	100	43	M10x1.5	14	200-2500	0.73
850-1428200RR	14	28	10	14	454	200	43	M10x1.5	14	200-2500	0.93
850-1428300RR	14	28	10	14	654	300	43	M10x1.5	14	200-2500	1.15
850-1428400RR	14	28	10	14	854	400	43	M10x1.5	14	200-2500	1.38
850-1428500RR	14	28	10	14	1054	500	43	M10x1.5	14	200-2500	1.6

304

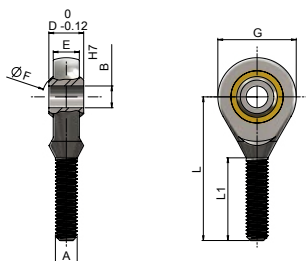


WDS 852 Swivel Eye Rose Joint (Rod Ends) - Stainless Steel (DIN648)

Body - 304 Stainless Steel

Ball - 440 Stainless Steel

WDS No.	A	B	C	D	E	F	F1	F2	G	H	J	S	T	Weight (kg)
852-205	M5	5	27	8	6	11.1	580	611	18	9	11	9	10	0.02
852-206	M6	6	30	9	6.8	12.7	730	780	20	10	13	11	12	0.02
852-208	M8	8	36	12	9	15.9	1180	1315	24	12.5	16	14	16	0.05
852-210	M10	10	43	14	10.5	19	1470	1835	28	15	19	17	20	0.08
852-212	M12	12	50	16	12	22.2	1730	2440	32	17.5	22	19	22	0.1

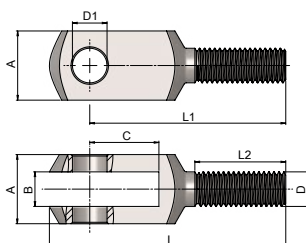


Swivel Eye Rose Joint (Rod Ends) with Male Thread - Stainless Steel (DIN648) WDS 852

Body - 304 Stainless Steel

Ball - 440 Stainless Steel

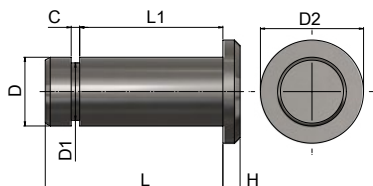
WDS No.	A	B	D	E	F	F1	F2	G	L	L1	Weight (kg)
852-405	M5 x 0.8	5	8	6	11.1	580	611	18	33	19	0.01
852-406	M6 x 1.0	6	9	6.75	12.7	730	780	20	36	21	0.02
852-408	M8 x 1.25	8	12	9	15.875	1180	1315	24	42	25	0.04
852-410	M10 x 1.5	10	14	10.5	19	1470	1835	28	48	28	0.06
852-412	M12 x 1.75	12	16	12	22.22	1730	2440	32	54	32	0.09



Stainless Steel Male Threaded Clevis Joints (DIN 71752) WDS 851

304 Stainless Steel

WDS No.	A	B	C	D	D1	L	L1	L2	Weight (kg)
851-106	12	6	12	M6	6	44	37	15	0.02
851-108	16	8	16	M8	8	57	47	20	0.04
851-110	20	10	20	M10	10	69	57	25	0.07
851-112	24	12	24	M12	12	82	68	30	0.12

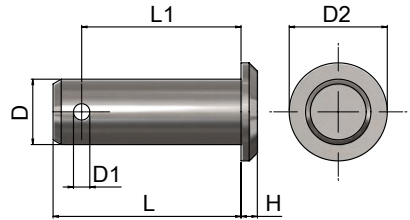


Clevis Pin - Stainless Steel (For use with DIN71752) WDS 851

304 Stainless Steel

WDS No.	C	D	D1	D2	H	L	L1	Weight (kg)
851-504	0.64	4	3.2	6	1	10.5	8.5	0.01
851-505	0.74	5	4	8	1.5	13	10.5	0.01
851-506	0.74	6	5	9	1.5	15.5	12.5	0.01
851-508	0.94	8	6	12	1.5	20	16.5	0.01
851-510	1.05	10	8	14	2	25	20.5	0.02
851-512	1.15	12	9	17	3	30	24.5	0.03

304

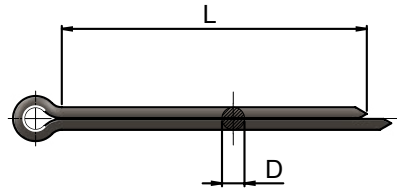


WDS 851 Stainless Steel Clevis Pins for use with Cotter Pins

304 Stainless Steel

WDS No.	D	D1	D2	H	L	L1	Weight (kg)
851-804	4	3.2	1	1	12	10	0.01
851-805	5	4	1	1.5	15	12.3	0.01
851-806	6	5	1.6	1.5	18	15.3	0.01
851-808	8	6	2	2	23	19.5	0.01
851-810	10	8	3.2	2	29	24.5	0.02
851-812	12	9	4	3	35	29.5	0.001

304

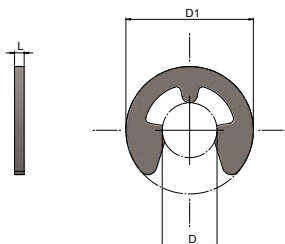


WDS 851 Stainless Steel Cotter Pins (Split Pins) - (DIN94)

304 Stainless Steel / A2 Stainless Steel

Supplied in bagged quantities

WDS No.	D	L	Quantity Pack	Weight (kg)
851-81012	1	12	250	0.02
851-81016	1	16	250	0.02
851-81516	1.5	16	200	0.04
851-81520	1.5	20	200	0.04
851-81525	1.5	25	200	0.05
851-82020	2	20	200	0.08
851-82025	2	25	200	0.09
851-82030	2	30	200	0.11
851-82525	2.5	25	100	0.09
851-82530	2.5	30	100	0.11
851-82540	2.5	40	100	0.13
851-83225	3.2	25	50	0.07
851-83230	3.2	30	50	0.08
851-83240	3.2	40	50	0.1
851-84030	4	30	50	0.12
851-84040	4	40	50	0.15

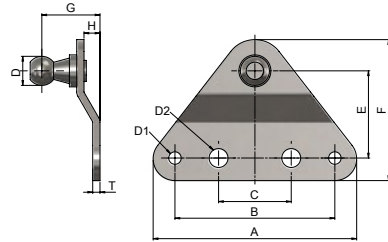


E-clip (Circlip) – Stainless Steel (DIN6799) **WDS 851**

304 Stainless Steel

WDS No.	D	D1	L	Weight (kg)
851-604	3.2	7.3	0.6	0.01
851-605	4	9.3	0.7	0.01
851-606	5	11.3	0.7	0.01
851-608	6	12.3	0.7	0.01
851-610	8	16.3	1	0.01
851-612	9	18.8	1.1	0.01

ZP

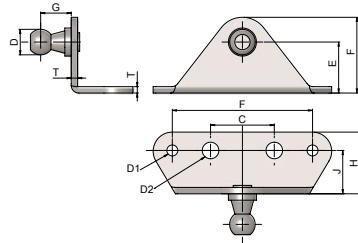


WDS 551 Gas Strut Mounting Bracket - Flat with Ball Stud

Zinc Plated Steel

WDS No.	A	B	C	D	E	F	G	H	T	Weight (kg)
551-716	70	55	25	10	30	48.5	20	5.5	2.5	0.05
551-718	70	55	25	13	30	48.5	20	5.5	2.5	0.06

ZP

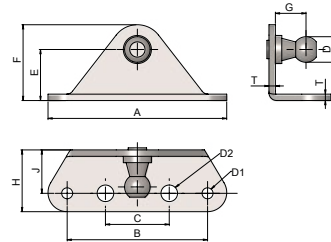
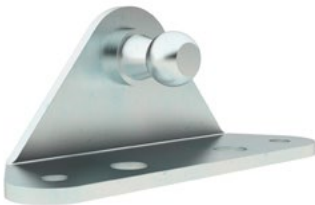


WDS 551 Gas Strut Mounting Bracket - Folded with External Ball Stud

Zinc Plated Steel

WDS No.	A	B	C	D	E	F	G	H	J	T	Weight (kg)
551-736	70	55	25	10	20	29.7	12	24.2	17	2.5	0.05
551-738	70	55	25	13	20	29.7	14	24.2	17	2.5	0.06

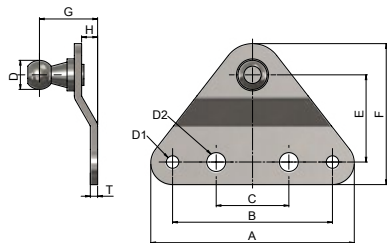
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WDS 551 Gas Strut Mounting Brackets - Folded with Internal Ball Stud

Zinc Plated Steel

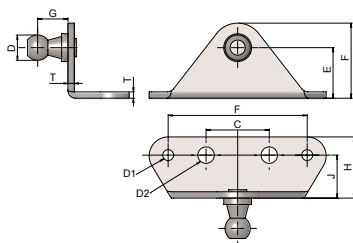
WDS No.	A	B	C	D	E	F	G	H	J	T	Weight (kg)
551-726	70	55	25	10	20	29.7	12	24.2	17	2.5	0.05
551-728	70	55	25	13	20	29.7	14	24.2	17	2.5	0.06



Stainless Strut Mounting Bracket - Flat with Ball Stud **WDS 851**

316 Stainless Steel

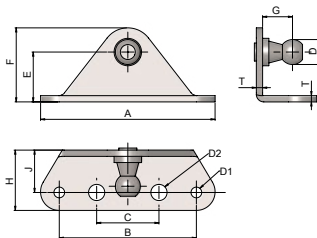
WDS No.	A	B	C	D	E	F	G	H	T	Weight (kg)
851-716	70	55	25	10	30	48.5	20	5.5	2.5	0.05
851-718	70	55	25	13	30	48.5	20	5.5	2.5	0.06



Stainless Strut Mounting Bracket - Folded with External Ball Stud **WDS 851**

316 Stainless Steel

WDS No.	A	B	C	D	E	F	G	H	J	T	Weight (kg)
851-736	70	55	25	10	20	29.7	12	24.2	17	2.5	0.05
851-738	70	55	25	13	20	29.7	14	24.2	17	2.5	0.06



Stainless Strut Mounting Bracket - Folded with Internal Ball Stud **WDS 851**

316 Stainless Steel

WDS No.	A	B	C	D	E	F	G	H	J	T	Weight (kg)
851-726	70	55	25	10	20	29.7	12	24.2	17	2.5	0.05
851-728	70	55	25	13	20	29.7	14	24.2	17	2.5	0.06



HAND KNOBS & THUMB SCREWS

P 81-170

The hand knob and thumb screw range consists of thermoplastic & Bakelite materials with the metal range available in steel, steel zinc plated and stainless steel. Styles include tri-Knobs, star knobs, ball knobs plus many more.



STAR KNOBS

Star Knobs are operational hand knobs or screws that can be used as a fixed handle on drawers or machines. Star Knobs are also referred to as either Lobe Knobs, scallop knobs or Tri Knobs. Ideal for cabinets, machine access doors, drawers & panels, fixtures and clamping set ups.

Materials include: plastics, thermoplastic, Bakelite, glass reinforced plastic (GRP) and nylon as well as alloys and metals including cast iron, aluminium and stainless steel.

P 81-111



MUSHROOM PULL KNOBS

Mushroom Knobs are push pull knobs that can be used on access panels, drawers and lids. This style of knob is available in materials such as Bakelite, thermoplastic and glass reinforced plastic (GRP). Other materials include steel or brass inserts. Select model include a coloured cap and are available with a female insert or male screw which can be either steel or stainless steel.

P 112-118



BALL KNOBS

Ball Knobs are round knobs commonly used on operational handles.

Each Ball Knob comes in a choice of material including: aluminium, Bakelite, steel, stainless steel and thermoplastic. Both female threaded and male threaded handles are available.

P 119-126



ROUND KNOBS

Knurled round knobs are available with both male and female threads. These operating knobs can be used for adjusting or as fixed hand knobs. On select models coloured caps are available as well as alternative materials such as thermoplastic and nylon.

P 127-132



CONTROL KNOBS

Control knobs are often used on machines and operating equipment indicating a position for an action. This range has optional coloured caps to help identify operational actions such as on or off

P 133-134





THUMB NUTS

Thumb nuts are available in both metric and imperial (inch) sizes. In addition to the standard steel Thumb Nuts 303 and 316 stainless steel nuts are available for applications which require durability and resistances to weather and chemical wash down.

P 135-143



THUMB SCREWS

Thumb screws are available in both metric and imperial (inch) sizes. In addition to the standard steel range of knurled thumb screws and wing Thumb screws many are also available in stainless steel grades 303 and 316.

P 144-150



QUARTER TURN SCREWS

Quarter turn screws are ideal for fixturing systems and access panels allowing quick access to an application by simply applying a 1/4 turn (90 degree) to the screw. Quarter turn screws are available in both steel and stainless steel.

P 151



WING GRIPS & T HANDLE KNOBS

Wing grips, t handle knobs and screws are ideal for applications which need an adjustable nut or screw and which can be simply tightened by hand. Select models are available with coloured caps giving them a distinct visual reference. T grips are excellent for manual pulling or lifting action applications providing an ergonomic handling surface.

P 152-160



TOMMY BAR SCREWS

Tommy screws are adjustable screws with a solid bar through the head of the unit. Using the bar the user can manually adjust the screw to the desired force. There are several designs of tommy bar screw with fixed and swivel end models available. Pads can be applied to the screw to give the user a conical clamping movement option.

P 161-162

BAR KNOBS

Bar Knobs are specialist hand knobs that can be tightened by hand and then with the use of the piece of metal bar it can be tightened securely over the cross section.

P 163



TORQUE SCREWS & KNOBS

Torque screws and torque knobs are unique to WDS. Torque applied to the knurled knob is transmitted to the driving plate of the screw by means of two spring loaded balls in conical seatings, thereby tightening the screw. Dependent upon the spring loading, the balls will be forced up the inclined sides of the dimples until they reach the flat surface of the driving plate. Slippage will then occur and no further increase in the clamping load of the screw is possible. To unclasp, the screw is simply turned in an anti clockwise direction.

P 164-165



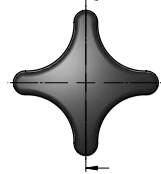
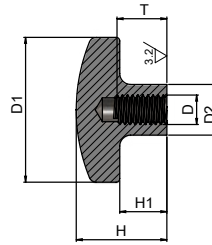
SWIVEL END SCREWS & PADS

Bar knobs are specialist hand knobs that can be tightened by hand and then with the use of the piece of metal bar it can be tightened securely over the cross section.

P 166-170



CI
IN"

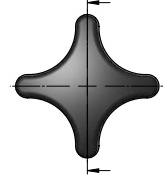
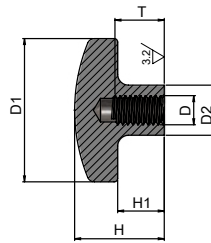


WDS 100 Hand Knob - Cast Iron - Inch - BSW

Cast Iron
Gr 250

WDS No.	D	D1	D2	H	H1	T	Weight (kg)
100-53	3/8-16	50	18	32	18	18	0.08
100-73	1/2-16	63	20	40	23	22	0.18

CI
IN"

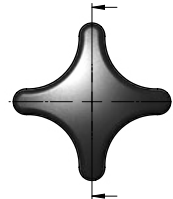
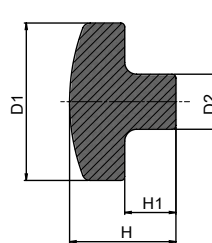


WDS 100 Hand Knob - Cast Iron - Inch - UNC

Cast Iron
Gr 250

WDS No.	D	D1	D2	H	H1	T	Weight (kg)
100-34	5/16-18	40	14	25	13	15	0.06
100-54	3/8-16	50	18	32	18	18	0.08
100-74	1/2-13	63	20	40	23	22	0.18

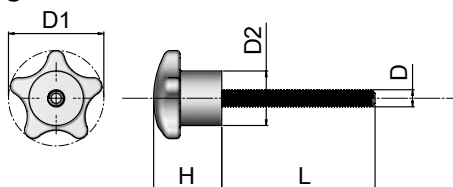
CI



WDS 100 Hand Knob - Cast Iron - Blank

Cast Iron
Gr 250

WDS No.	D1	D2	H	H1	Weight (kg)
100-31	40	14	25	13	0.06
100-51	50	18	32	18	0.12
100-71	63	20	40	23	0.2
100-96	80	25	50	28	0.38

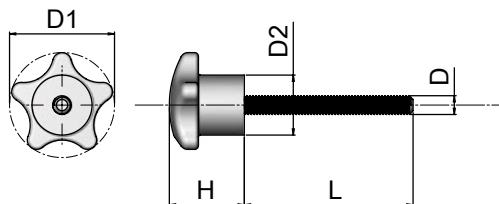


Hand Screw - Metric WDS 102

Hand Knob - Cast Iron BS.1452 Gr.250

Screw - Steel BS.970 Gr.230M07

WDS No.	D	D1	D2	H	L	Weight (kg)
102-210545	M5	28	16	20	45	0.04
102-20140	M6	28	16	20	40	0.04
102-20160	M6	28	16	20	60	0.05
102-20240	M8	35	20	25	40	0.09
102-20260	M8	35	20	25	60	0.1
102-20360	M10	40	23	25	60	0.13
102-20385	M10	40	23	25	85	0.15
102-20455	M12	60	25	32	55	0.24
102-20675	M16	75	32	38	75	0.29
102-206100	M16	75	32	38	100	0.31

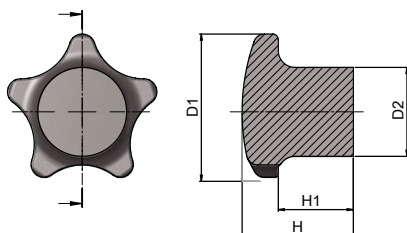


Hand Screw - Inch UNC WDS 102

Hand Knob - Cast Iron BS.1452 Gr.250

Screw - Steel BS.970 Gr.230M07

WDS No.	D	D1	D2	H	L	Weight (kg)
102-61	1/4-20	28	16	20	3	0.04
102-65	5/16-18	35	20	25	3	0.08
102-69	3/8-16	40	23	25	3 1/4	0.13



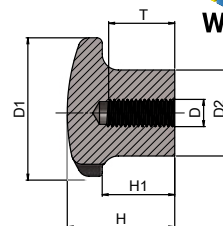
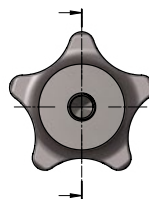
Hand Knob - Blank - Cast Iron WDS 104

Cast Iron BS 1452 Gr 250

WDS No.	D1	D2	H	H1	Weight (kg)
104-201	28	16	20	13.5	0.04
104-202	35	20	25	16	0.08
104-203	40	23	25	16	0.1
104-204	60	25	32	20	0.22
104-205	75	32	38	25	0.4
104-206	90	38	45	25	0.72

CI

IN"

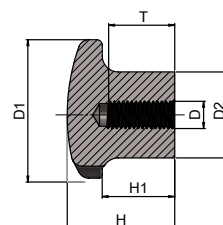
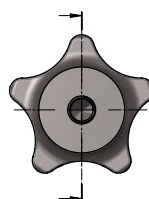


WDS 104 Hand Knob - Inch - BA/BSF - Cast Iron

Cast Iron
BS 1452 Gr 250

WDS No.	D	D1	D2	H	H1	T	Weight (kg)
104-17	2 BA	28	16	20	13.5	12	0.03
104-32	5/16 BSF	35	20	25	16	16	0.06
104-52	3/8 BSF	40	23	25	16	16	0.08

CI



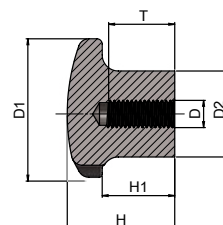
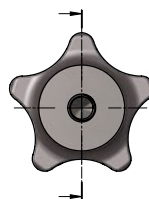
WDS 104 Hand Knob - Metric - Tapped - Cast Iron

Cast Iron
BS 1452 Gr 250

WDS No.	D	D1	D2	H	H1	T	(g)	Weight (kg)
104-2105	M5	28	16	20	13.5	12	35	0.04
104-211	M6	28	16	20	13.5	12	35	0.04
104-212	M8	35	20	25	16	16	65	0.07
104-213	M10	40	23	25	16	16	65	0.07
104-214	M12	60	25	32	20	22	190	0.19
104-215	M14	60	25	32	20	22	185	0.19
104-216	M16	75	32	38	25	28	365	0.37
104-217	M20	90	38	45	25	32	635	0.64

CI

IN"



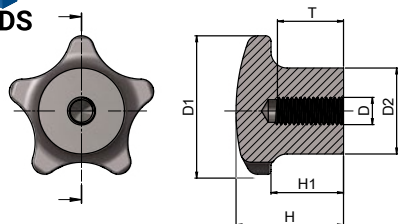
WDS 104 Hand Knob - Inch - BSW - Cast Iron

Cast Iron
BS 1452 Gr 250

WDS No.	D	D1	D2	H	H1	T	Weight (kg)
104-13	1/4 BSW	28	16	20	13.5	12	0.03
104-33	5/16 BSW	35	20	25	16	16	0.06
104-53	3/8 BSW	40	23	25	16	16	0.08
104-73	1/2 BSW	60	26	32	20	22	0.18

CI

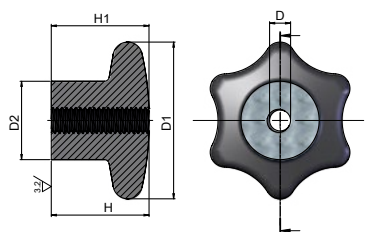
IN"



Hand Knob - Inch - UNC - Cast Iron WDS 104

Cast Iron
BS 1452 Gr 250

WDS No.	D	D1	D2	H	H1	T	Weight (kg)
104-14	1/4-20	28	16	20	13.5	12	0.03
104-34	5/16-18	35	20	25	16	16	0.06
104-54	3/8-16	40	23	25	16	16	0.07
104-74	1/2-13	60	26	32	20	22	0.18



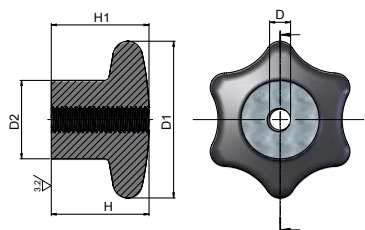
CI

IN"

Hand Knob - Cast Iron - Inch - BSW or UNC WDS 107

Cast Iron
BS 1452 Gr 250

WDS No.	D	D1	D2	H	H1	Weight (kg)
107-05	3/8-16 UNC	50	25	32	12	0.18
107-07	3/8-16 BSW	50	25	32	12	0.18
107-10	1/2-13 UNC	50	25	32	12	0.18
107-12	1/2-12 BSW	50	25	32	12	0.18



CI

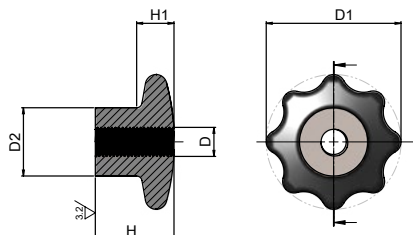
Hand Knob - Cast Iron - Metric WDS 107

Cast Iron
BS 1452 Gr 250

WDS No.	D	D1	D2	H	H1	Weight (kg)
107-2105	M8	50	25	32	12	0.18
107-211	M10	50	25	32	12	0.19
107-212	M12	50	25	32	12	0.18

CI

IN"



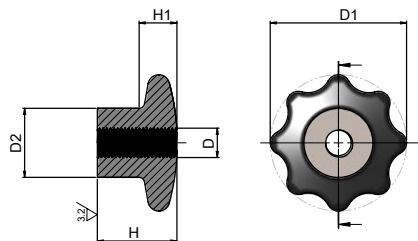
WDS 108 Hand Knob - Solid - Cast Iron - Inch BSW or UNC

Cast Iron

BS 1452 Gr 250

WDS No.	D	D1	D2	H	H1	Weight (kg)
108-04	1/2 UNC	75	38	45	18	0.58
108-05	5/8 UNC	75	38	45	18	0.57
108-06	1/2 BSW	75	38	45	18	0.58
108-07	5/8 BSW	75	38	45	18	0.58

CI



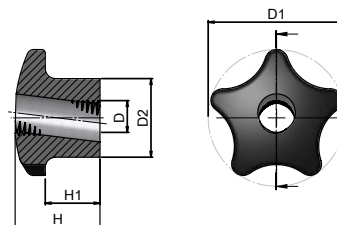
WDS 108 Hand Knob - Solid - Cast Iron - Metric

Cast Iron

BS 1452 Gr 250

WDS No.	D	D1	D2	H	H1	Weight (kg)
108-211	M12	75	38	45	18	0.63
108-213	M16	75	38	45	18	0.58

CI

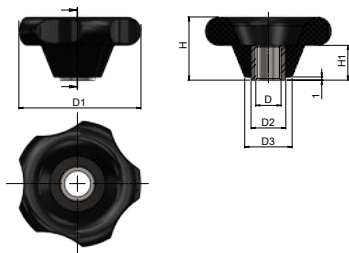


WDS 113 Hand Knob - Quick Action - Cast Iron

Cast Iron

BS 1452 Gr 250

WDS No.	D	D1	D2	H	H1	Weight (kg)
113-201	M6	35	16	25	16	0.07
113-202	M8	35	16	25	16	0.07
113-203	M10	40	20	25	16	0.08
113-204	M12	60	25	32	20	0.17
113-206	M16	75	32	38	25	0.28



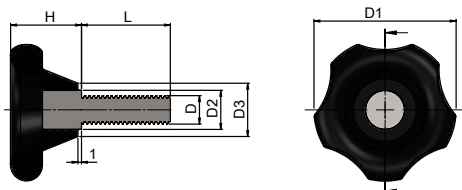
BR

TP

Hand Knob With Threaded Bush WDS 8114

Body - Thermoplastic
Bush - Brass

WDS No.	D	D1	D2	D3	H	H1	Weight (kg)
8114-201	M4	40	11	15	20	11	0.02
8114-202	M5	40	11	15	20	11	0.02
8114-203	M6	40	11	15	20	11	0.01
8114-204	M8	40	11	15	20	11	0.01

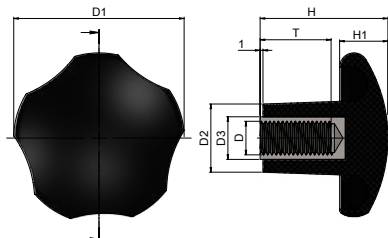


ZP

Hand Screw - Concave WDS 8115

Body - Impact resistant plastic
Stem - Zinc Plated Steel

WDS No.	D	D1	D2	D3	H	L	Weight (kg)
8115-20518	M5	40	11	15	20	18	0.02
8115-20620	M6	40	11	15	20	20	0.02
8115-20825	M8	40	11	15	20	25	0.02



ZP

BK

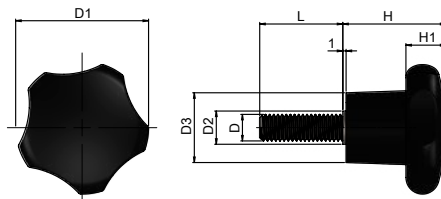
Hand Knob - Steel Zinc Plated Insert WDS 8125

Grip - PF31 (Bakelite)
Insert - Zinc Plated Steel

WDS No.	D	D1	D2	D3	H	H1	T	Weight (kg)
8125-201	M6	40	21	8	30	12	12	0.02
8125-202	M8	50	21	10	36	14	16	0.04
8125-203	M10	60	24	13	44	17	20	0.06
8125-204	M12	60	24	15	44	17	25	0.07

ZP

BK



WDS 8126 Hand Knob - Bakelite - Steel Screw

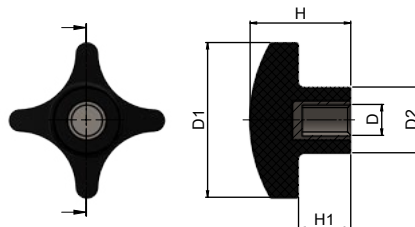
Body - PF31 (Bakelite)

Thread - Zinc Plated Steel

WDS No.	D	D1	D2	D3	H	H1	L	Weight (kg)
8126-20620	M6	40	10	21	30	12	20	0.04
8126-20825	M8	40	10	21	30	12	25	0.04
8126-20835	M8	50	10	21	36	14	35	0.05
8126-21040	M10	60	12	24	44	17	40	0.09
8126-21240	M12	60	14	24	44	17	40	0.11

ZP

BK



WDS 8141 Hand Knob - Bakelite with Steel Insert

Body - PF31 (Bakelite)

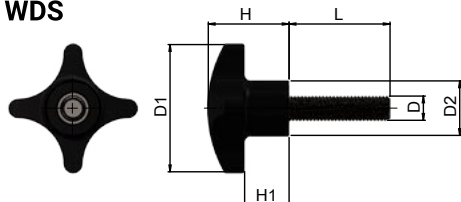
Insert - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	T	Weight (kg)
8141-2004	M4	25	10	15	7	6	0.01
8141-2005	M5	25	10	15	7	7.5	0.01
8141-201	M6	32	14	20	10	12	0.01
8141-202	M8	40	17	26	14	15	0.02
8141-203	M10	50	22	33	19	15	0.03
8141-204	M12	63	27	40	22	20	0.07
8141-205	M16	80	34	52	27	25	0.14



ZP

BK



Hand Screw - Bakelite with Steel Screw **WDS 8141**

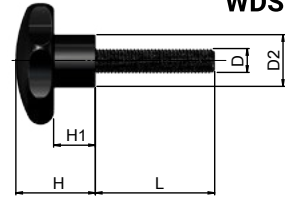
Bakelite, black

Screw - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	L	Weight (kg)
8141-211	M4	25	10	15	7	10	0.01
8141-212	M4	25	10	15	7	15	0.01
8141-2155	M4	20	10	13	7	30	0.01
8141-215	M4	25	10	15	7	25	0.01
8141-2152	M4	20	10	13	7	25	0.01
8141-213	M4	25	10	15	7	20	0.01
8141-216	M5	25	10	15	7	10	0.01
8141-2165	M5	25	10	15	7	15	0.01
8141-217	M5	25	10	15	7	20	0.01
8141-218	M5	25	10	15	7	25	0.01
8141-219	M5	25	10	15	7	30	0.01
8141-220	M6	32	14	20	10	10	0.01
8141-221	M6	32	14	20	10	15	0.02
8141-222	M6	32	14	20	10	20	0.01
8141-223	M6	32	14	20	10	25	0.01
8141-224	M6	32	14	20	10	30	0.01
8141-231	M8	40	18	25	10	50	0.03
8141-225	M6	32	14	20	10	40	0.02
8141-2245	M6	32	14	20	10	35	0.02
8141-226	M8	40	18	25	13	20	0.02
8141-227	M8	40	18	25	13	25	0.02
8141-228	M8	40	18	25	13	30	0.03
8141-229	M8	40	18	25	13	35	0.03
8141-230	M8	40	18	25	13	40	0.03
8141-2305	M8	40	18	25	13	45	0.03
8141-2255	M8	40	18	25	13	15	0.02
8141-232	M10	50	22	32	20	20	0.04
8141-233	M10	50	22	32	20	25	0.05
8141-234	M10	50	22	32	20	30	0.05
8141-235	M10	50	22	32	20	35	0.05
8141-236	M10	50	22	32	20	40	0.06
8141-2365	M10	50	22	32	20	45	0.05
8141-237	M10	50	22	32	20	50	0.06
8141-238	M12	63	26	40	25	20	0.08
8141-239	M12	63	26	40	25	30	0.08
8141-240	M12	63	26	40	25	40	0.09
8141-241	M12	63	26	40	25	50	0.1
8141-242	M12	63	26	40	25	60	0.11

ZP

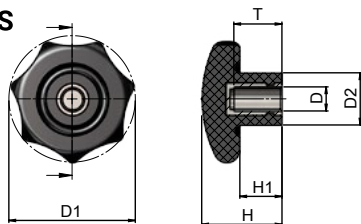
BK



WDS 8142 Scallop Hand Screw - Bakelite

Bakelite, black
Screw - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	L	Weight (kg)
8142-210	M4	20	10	13	7	10	0.01
8142-212	M4	20	10	13	7	20	0.01
8142-214	M4	20	10	13	7	30	0.01
8142-215	M5	25	12	16	8	10	0.01
8142-216	M5	25	12	16	8	15	0.01
8142-217	M5	25	12	16	8	20	0.01
8142-218	M5	25	12	16	8	25	0.01
8142-219	M5	25	12	16	8	30	0.01
8142-220	M6	32	14	20	10	10	0.01
8142-221	M6	32	14	20	10	15	0.02
8142-222	M6	32	14	20	10	20	0.02
8142-223	M6	32	14	20	10	25	0.02
8142-224	M6	32	14	20	10	30	0.02
8142-2245	M6	32	14	20	10	35	0.02
8142-225	M6	32	14	20	10	40	0.02
8142-2255	M8	40	18	25	13	15	0.03
8142-226	M8	40	18	25	13	20	0.03
8142-227	M8	40	18	25	13	25	0.03
8142-228	M8	40	18	25	13	30	0.03
8142-229	M8	40	18	25	13	35	0.04
8142-230	M8	40	18	25	13	40	0.04
8142-2305	M8	40	18	25	13	45	0.04
8142-231	M8	40	18	25	13	50	0.04
8142-232	M10	50	22	32	17	20	0.05
8142-233	M10	50	22	32	17	25	0.06
8142-234	M10	50	22	32	17	30	0.06
8142-235	M10	50	22	32	17	35	0.06
8142-236	M10	50	22	32	17	40	0.06
8142-2365	M10	50	22	32	17	45	0.06
8142-237	M10	50	22	32	17	50	0.07
8142-238	M12	63	26	40	21	20	0.1
8142-240	M12	63	26	40	21	40	0.11
8142-241	M12	63	26	40	21	50	0.12
8142-242	M12	63	26	40	21	60	0.12



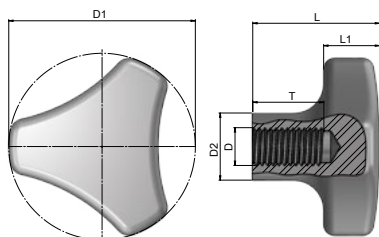
ZP

BK

Scallop Hand Knob - Bakelite WDS 8142

Bakelite, black
Insert - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	T	Weight (kg)
8142-2004	M4	20	10	13	7	6.5	0.01
8142-2005	M5	25	12	16	8	9.5	0.01
8142-201	M6	32	14	20	10	12	0.01
8142-202	M8	40	18	25	13	16	0.02
8142-203	M10	50	22	32	17	20	0.04
8142-204	M12	63	26	40	21	24	0.08
8142-205	M16	80	35	50	25	32	0.16



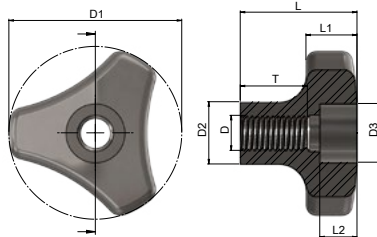
316

Tri-Knob with Threaded Hole - 316 Stainless Steel WDS 8147

BS970 Gr 316S
Available in Polished or Matt finish

Polished	Matt	D	D1	D2	L	L1	T	Weight (kg)
8147-63205	8147-63205M	M5	32	12	21	11	12	0.04
8147-63206	8147-63206M	M6	32	12	21	11	12	0.04
8147-63208	8147-63208M	M8	32	12	21	11	12	0.04
8147-64006	8147-64006M	M6	40	14	26	13	15	0.09
8147-64008	8147-64008M	M8	40	14	26	13	15	0.09
8147-64010	8147-64010M	M10	40	14	26	13	15	0.08
8147-65008	8147-65008M	M8	50	18	34	15	18	0.15
8147-65010	8147-65010M	M10	50	18	34	15	18	0.15
8147-65012	8147-65012M	M12	50	18	34	15	18	0.15
8147-66310	8147-66310M	M10	63	20	43	15	22	0.17
8147-66312	8147-66312M	M12	63	20	43	15	22	0.16

316



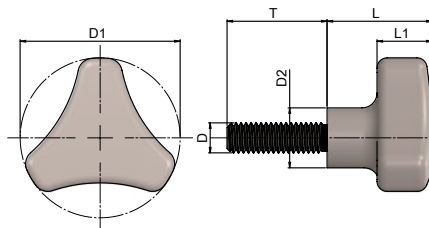
WDS 8147 Tri-Knob with Threaded Through Hole - 316 Stainless Steel Polished

BS970 Gr 316S

Polished finish

WDS No.	D	D1	D2	D3	L	L1	L2	T	Weight (kg)
8147-70632	M6	32	12	11	21	11	7	12	0.04
8147-70840	M8	40	14	14	26	13	9	15	0.08
8147-71050	M10	50	18	17	34	15	11	18	0.15
8147-71263	M12	63	20	19	43	15	13	22	0.16

316



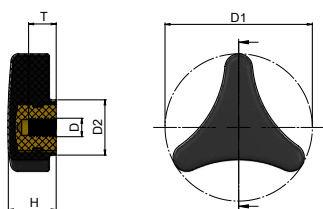
WDS 8147 Tri-Knob with Male Thread - 316 Stainless Steel

BS970 Gr 316S, 316S Thread

Available in Polished or Matt finish

Polished	Matt	D	D1	D2	L	L1	T	Weight (kg)
8147-6320520	8147-6320520M	M5	32	12	21	11	20	0.05
8147-6320530	8147-6320530M	M5	32	12	21	11	30	0.05
8147-6320540	8147-6320540M	M5	32	12	21	11	40	0.05
8147-6320620	8147-6320620M	M6	32	12	21	11	20	0.05
8147-6320630	8147-6320630M	M6	32	12	21	11	30	0.05
8147-6320640	8147-6320640M	M6	32	12	21	11	40	0.05
8147-6320650	8147-6320650M	M6	32	12	21	11	50	0.06
8147-6320820	8147-6320820M	M8	32	12	21	11	20	0.05
8147-6320830	8147-6320830M	M8	32	12	21	11	30	0.06
8147-6320840	8147-6320840M	M8	32	12	21	11	40	0.06
8147-6320850	8147-6320850M	M8	32	12	21	11	50	0.06
8147-6400620	8147-6400620M	M6	40	14	26	13	60	0.1
8147-6400630	8147-6400630M	M6	40	14	26	13	30	0.1
8147-6400640	8147-6400640M	M6	40	14	26	13	40	0.1
8147-6400650	8147-6400650M	M6	40	14	26	13	50	0.1
8147-6400820	8147-6400820M	M8	40	14	26	13	20	0.1
8147-6400830	8147-6400830M	M8	40	14	26	13	30	0.1
8147-6400840	8147-6400840M	M8	40	14	26	13	40	0.11
8147-6400850	8147-6400850M	M8	40	14	26	13	50	0.11
8147-6401030	8147-6401030M	M10	40	14	26	13	30	0.11
8147-6401040	8147-6401040M	M10	40	14	26	13	40	0.11
8147-6401050	8147-6401050M	M10	40	14	26	13	50	0.12
8147-6401060	8147-6401060M	M10	40	14	26	13	60	0.12

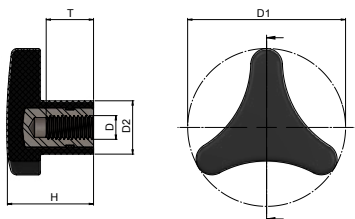
Polished	Matt	D	D1	D2	L	L1	T	Weight (kg)
8147-6500820	8147-6500820M	M8	50	18	34	15	20	0.18
8147-6500830	8147-6500830M	M8	50	18	34	15	30	0.19
8147-6500840	8147-6500840M	M8	50	18	34	15	40	0.19
8147-6500850	8147-6500850M	M8	50	18	34	15	50	0.19
8147-6501030	8147-6501030M	M10	50	18	34	15	30	0.19
8147-6501040	8147-6501040M	M10	50	18	34	15	40	0.2
8147-6501050	8147-6501050M	M10	50	18	34	15	50	0.2
8147-6501060	8147-6501060M	M10	50	18	34	15	60	0.21
8147-6501230	8147-6501230M	M12	50	18	34	15	30	0.2
8147-6501240	8147-6501240M	M12	50	18	34	15	40	0.2
8147-6501250	8147-6501250M	M12	50	18	34	15	50	0.21
8147-6501260	8147-6501260M	M12	50	18	34	15	60	0.22
8147-6631030	8147-6631030M	M10	63	20	43	15	30	0.3
8147-6631040	8147-6631040M	M10	63	20	43	15	40	0.31
8147-6631050	8147-6631050M	M10	63	20	43	15	50	0.31
8147-6631060	8147-6631060M	M10	63	20	43	15	60	0.32
8147-6631230	8147-6631230M	M12	63	20	43	15	30	0.31
8147-6631240	8147-6631240M	M12	63	20	43	15	40	0.31
8147-6631250	8147-6631250M	M12	63	20	43	15	50	0.32
8147-6631260	8147-6631260M	M12	63	20	43	15	60	0.33



Tri-Knob Bakelite with Brass Insert WDS 8147

Insert - Brass

WDS No.	D	D1	D2	H	T	Weight (kg)
8147-211	M4	32	12	10.5	6	0.01
8147-212	M6	40	15	13.1	6	0.01
8147-213	M6	50	19	16.3	6	0.02
8147-214	M8	62	24	20.6	8	0.04



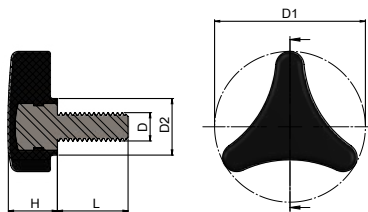
Tri-Knob - High Version - Bakelite with Steel Insert WDS 8147

Insert - Zinc Plated Steel

WDS No.	D	D1	D2	H	T	Weight (kg)
8147-412	M6	40	14	22	12	0.04
8147-414	M8	50	18	28	15	0.05
8147-416	M10	62	22	35	18	0.07

ZP

BK



WDS 8147 Tri-Screw - Bakelite With Steel Screw

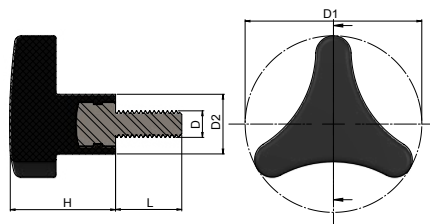
Bakelite, black

Screw - Zinc Plated Steel

WDS No.	D	D1	D2	H	L	Weight (kg)
8147-221	M6	32	12	10.5	15	0.01
8147-222	M6	40	15	13.1	15	0.01
8147-223	M8	50	19	16.3	20	0.03
8147-224	M10	62	24	21	25	0.05

ZP

BK



WDS 8147 Tri-Screw - High Version - Bakelite with Steel Screw

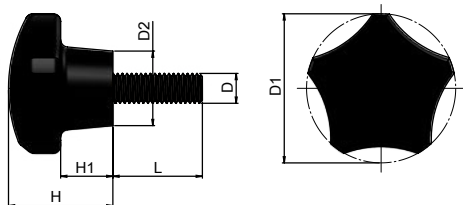
Bakelite, black

Screw - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	L	Weight (kg)
8147-421	M6	40	13.5	24	13.5	15	0.02
8147-423	M8	40	13.5	24	13.5	20	0.09
8147-425	M8	40	13.5	24	13.5	30	0.04
8147-429	M8	50	17.4	28	14	30	0.05
8147-430	M8	50	17.4	28	14	40	0.01
8147-431	M10	50	17.4	28	14	25	0.06
8147-432	M10	50	17.4	28	14	30	0.01
8147-433	M10	62	21.8	34	17	25	0.07
8147-434	M10	62	21.8	34	17	30	0.01

ZP

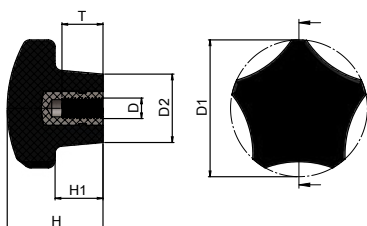
BK



Hand Knob - Bakelite - Steel Screw WDS 8148

Bakelite, black
Screw - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	L	Weight (kg)
8148-22112	M6	32	16	22.4	11.2	12	0.02
8148-22118	M6	32	16	22.4	11.2	18	0.02
8148-22216	M8	32	16	22.4	11.2	16	0.02
8148-22224	M8	32	16	22.4	11.2	24	0.03
8148-22312	M6	40	20	28	14	12	0.03
8148-22318	M6	40	20	28	14	18	0.03
8148-22416	M8	40	20	28	14	16	0.04
8148-22424	M8	40	20	28	14	24	0.04
8148-22516	M8	50	25	35	17.5	16	0.06
8148-22524	M8	50	25	35	17.5	24	0.06
8148-22620	M10	50	25	35	17.5	20	0.08
8148-22630	M10	50	25	35	17.5	30	0.08



ZP

BK

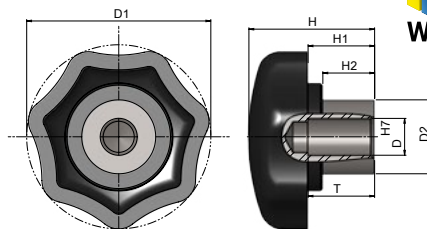
Hand Knob - Bakelite - Steel Insert WDS 8148

Bakelite, black
Insert - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	T	Weight (kg)
8148-211	M5	32	16	22	11	10	0.01
8148-212	M6	32	16	22	11	9	0.01
8148-213	M6	40	20	28	14	12	0.03
8148-214	M8	40	20	28	14	14	0.04
8148-216	M8	50	25	35	17	14	0.05
8148-215	M10	40	20	28	14	14	0.04
8148-217	M10	50	25	35	17	14	0.06

ZP

TP



WDS 8161 Scallop Hand Knob - Thermoplastic with Steel Bush

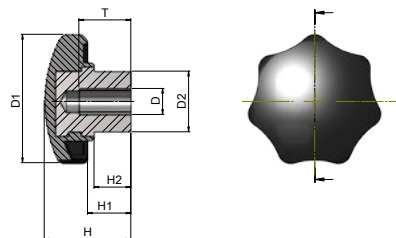
Black Thermoplastic

Insert - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	H2	T	Weight (kg)
8161-3155	5	25	10	17	9	7	9	0.01
8161-315	6	32	12	21	11	9.5	12	0.01
8161-31606	6	40	14	25	13	10	12	0.03
8161-316	8	40	14	25	13	10	12	0.02
8161-31708	8	50	18	32	17	12	17	0.06
8161-317	10	50	18	32	17	12	17	0.06
8161-318010	10	63	20	37	18	12	17	0.07
8161-318	12	63	20	37	18	12	17	0.08
8161-318016	16	63	20	40	21	15	23	0.09

ZP

TP

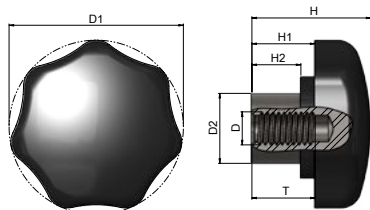


WDS 8161 Scallop Hand Knob - Thermoplastic with Exposed Bush

Black Thermoplastic

Insert - Zinc Plated Steel

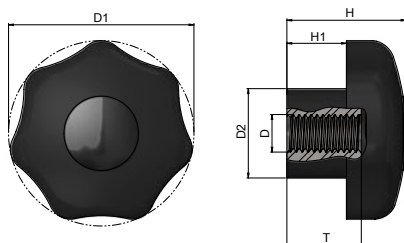
WDS No.	D	D1	D2	H	H1	H2	T	Weight (kg)
8161-2155	M5	25	10	17	9	7	9	0.02
8161-215	M6	32	12	21	11	9.5	12	0.01
8161-216M6	M6	40	14	25	13	10	12	0.03
8161-216	M8	40	14	25	13	10	12	0.02
8161-217M8	M8	50	18	32	17	12	17	0.06
8161-217	M10	50	18	32	17	12	17	0.06
8161-218M10	M10	63	20	37	18	12	17	0.09
8161-218	M12	63	20	37	18	12	17	0.08
8161-218M16	M16	63	20	40	21	15	23	0.09



Scallop Hand Knob - Thermoplastic with Stainless Steel Insert **WDS 8161**

Black Thermoplastic with Exposed Bush
Insert - 303 Stainless Steel

WDS No.	D	D1	D2	H	H1	H2	T	Weight (kg)
8161-614M5	M5	25	10	17	9	7	9	0.01
8161-615M6	M6	32	12	21	11	9.5	12	0.02
8161-616M6	M6	40	14	25	13	10	12	0.03
8161-616M8	M8	40	14	25	13	10	12	0.02
8161-617M8	M8	50	18	32	17	12	17	0.07
8161-617M10	M10	50	18	32	17	12	17	0.06
8161-618M10	M10	63	20	37	18	12	17	0.07
8161-618M12	M12	63	20	37	18	12	17	0.07
8161-618M16	M16	63	20	40	21	15	23	0.09



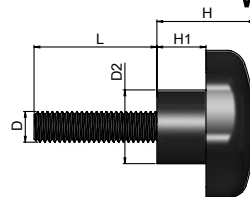
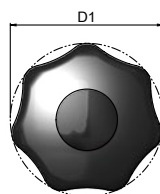
Scallop Hand Knob - Removable Cap **WDS 8161**

Black Thermoplastic with Steel Bush
Insert - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	T	Weight (kg)
8161-210M4	M4	25	12	16	8	10	0.01
8161-2105M5	M5	25	12	16	8	10	0.01
8161-210M5	M5	32	14	20	10	10	0.01
8161-210M6	M6	25	12	16	8	10	0.01
8161-211	M6	32	14	20	10	10	0.01
8161-212	M8	40	18	25	13	14	0.02
8161-212M08	M8	50	22	32	17	14	0.02
8161-212M10	M10	40	18	25	13	14	0.02
8161-213	M10	50	22	32	17	14	0.02
8161-213M12	M12	50	22	32	17	18	0.04
8161-214M10	M10	63	26	40	21	14	0.04
8161-214	M12	63	26	40	21	18	0.05

ZP

TP



WDS 8161 Scallop Hand Screw - Thermoplastic

Thermoplastic, black

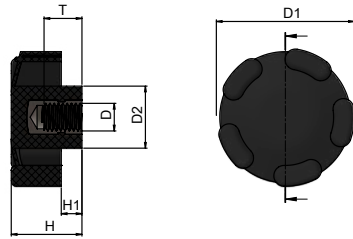
Screw - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	L	Weight (kg)
8161-228M515	M5	25	12	16	8	15	0.01
8161-228M520	M5	25	12	16	8	20	0.01
8161-228M525	M5	25	12	16	8	25	0.01
8161-228M530	M5	25	12	16	8	30	0.01
8161-228M535	M5	25	12	16	8	35	0.01
8161-228M540	M5	25	12	16	8	40	0.01
8161-228M545	M5	25	12	16	8	45	0.01
8161-228M550	M5	25	12	16	8	50	0.01
8161-228M560	M5	25	12	16	8	60	0.01
8161-229M610	M6	25	12	16	8	10	0.01
8161-229M615	M6	25	12	16	8	15	0.01
8161-229M620	M6	25	12	16	8	20	0.01
8161-228M510	M5	25	12	16	8	10	0.01
8161-229M625	M6	25	12	16	8	25	0.01
8161-229M630	M6	25	12	16	8	30	0.01
8161-229M635	M6	25	12	16	8	35	0.01
8161-229M640	M6	25	12	16	8	40	0.01
8161-229M645	M6	25	12	16	8	45	0.01
8161-229M650	M6	25	12	16	8	50	0.01
8161-229M660	M6	25	12	16	8	60	0.02
8161-230	M5	32	14	20	10	10	0.01
8161-231	M6	32	14	20	10	15	0.01
8161-232	M6	32	14	20	10	20	0.01
8161-232M625	M6	32	14	20	10	25	0.01
8161-233	M6	32	14	20	10	30	0.01
8161-233M635	M6	32	14	20	10	35	0.01
8161-233M640	M6	32	14	20	10	40	0.01
8161-233M645	M6	32	14	20	10	45	0.02
8161-233M650	M6	32	14	20	10	50	0.02
8161-233M660	M6	32	14	20	10	60	0.02
8161-233M815	M8	32	14	20	10	15	0.01
8161-233M820	M8	32	14	20	10	20	0.02
8161-233M825	M8	32	14	20	10	25	0.02
8161-233M830	M8	32	14	20	10	30	0.02
8161-233M835	M8	32	14	20	10	35	0.02
8161-233M840	M8	32	14	20	10	40	0.02
8161-233M845	M8	32	14	20	10	45	0.02
8161-233M850	M8	32	14	20	10	50	0.03
8161-233M860	M8	32	14	20	10	60	0.03
8161-234M815	M8	40	18	25	13	15	0.02
8161-234	M8	40	18	25	13	20	0.02
8161-235	M8	40	18	25	13	25	0.02
8161-236	M8	40	18	25	13	30	0.03
8161-236M835	M8	40	18	25	13	35	0.03
8161-237	M8	40	18	25	13	40	0.03
8161-237M1015	M10	40	18	25	13	15	0.03



WDS No.	D	D1	D2	H	H1	L	Weight (kg)
8161-237M1020	M10	40	18	25	13	20	0.03
8161-237M1025	M10	40	18	25	13	25	0.03
8161-237M1030	M10	40	18	25	13	30	0.03
8161-237M1035	M10	40	18	25	13	35	0.04
8161-237M1040	M10	40	18	25	13	40	0.04
8161-237M1045	M10	40	18	25	13	45	0.04
8161-237M1050	M10	40	18	25	13	50	0.04
8161-237M1060	M10	40	18	25	13	60	0.05
8161-237M845	M8	40	18	25	13	45	0.03
8161-237M850	M8	40	18	25	13	50	0.03
8161-237M860	M8	40	18	25	13	60	0.03
8161-238	M10	50	22	32	17	30	0.04
8161-238M1015	M10	50	22	32	17	15	0.03
8161-238M1020	M10	50	22	32	17	20	0.04
8161-238M1025	M10	50	22	32	17	25	0.04
8161-238M1035	M10	50	22	32	17	35	0.04
8161-239	M10	50	22	32	17	40	0.05
8161-240	M10	50	22	32	17	50	0.05
8161-240M1060	M10	50	22	32	17	60	0.06
8161-241	M12	50	22	32	17	30	0.07
8161-241M1220	M12	50	22	32	17	20	0.06
8161-241M1225	M12	50	22	32	17	25	0.06
8161-241M1235	M12	50	22	32	17	35	0.07
8161-241M1240	M12	50	22	32	17	40	0.07
8161-241M1245	M12	50	22	32	17	45	0.08
8161-241M1250	M12	50	22	32	17	50	0.08
8161-242	M12	50	22	32	17	60	0.09
8161-243M1025	M10	63	26	40	21	25	0.05
8161-243M1030	M10	63	26	40	21	30	0.06
8161-243M1035	M10	63	26	40	21	35	0.06
8161-243M1040	M10	63	26	40	21	40	0.06
8161-243M1045	M10	63	26	40	21	45	0.06
8161-243M1050	M10	63	26	40	21	50	0.07
8161-243M1060	M10	63	26	40	21	60	0.07
8161-243M1220	M12	63	26	40	21	20	0.05
8161-243M1225	M12	63	26	40	21	25	0.05
8161-243M1230	M12	63	26	40	21	30	0.06
8161-243M1235	M12	63	26	40	21	35	0.06
8161-243M1240	M12	63	26	40	21	40	0.06
8161-243M1245	M12	63	26	40	21	45	0.06
8161-243M1250	M12	63	26	40	21	50	0.07
8161-243M1260	M12	63	26	40	21	60	0.07
8161-243M1630	M16	63	26	40	21	30	0.11
8161-243M1635	M16	63	26	40	21	35	0.12
8161-243M1640	M16	63	26	40	21	40	0.12
8161-243M1645	M16	63	26	40	21	45	0.13
8161-243M1650	M16	63	26	40	21	50	0.14
8161-243M1660	M16	63	26	40	21	60	0.15

ZP

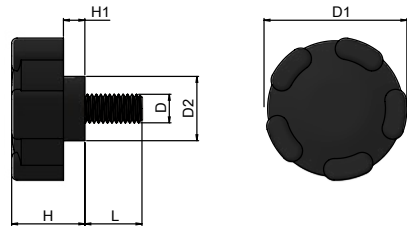


WDS 8167 Hand Knob - Steel Insert

Glass fibre reinforced plastic, black
Insert - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	T	Weight (kg)
8167-201	M6	32	15	17	5	9	0.01
8167-202	M8	40	18	20.5	6	11	0.03
8167-203	M10	50	20	25	7	14	0.04

ZP

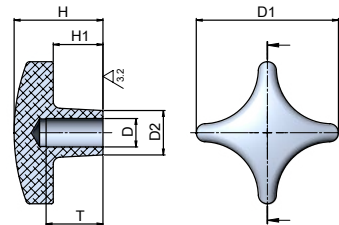


WDS 8167 Hand Knob - Steel Screw

Glass fibre reinforced plastic, black
Screw - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	L	Weight (kg)
8167-251	M6	32	15	17	5	15	0.02
8167-252	M8	40	18	20.5	6	16	0.03
8167-253	M10	50	20	25	7	20	0.06

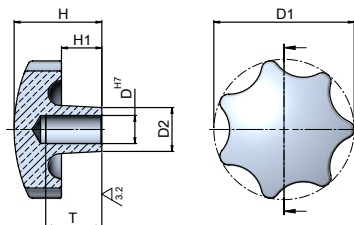
AL



WDS 8171 Hand Knob - Reamed - Aluminium

Aluminium
Available in Polished or Anodised finish

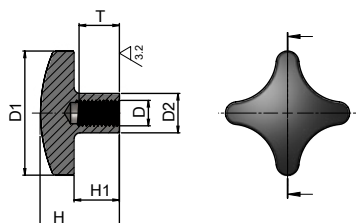
Polished	Anodised	D (H7)	D1	D2	H	H1	T	Weight (kg)
8171-201	8171-401	8	40	14	25	14	18	0.04
8171-202	8171-402	10	50	18	32	20	21	0.06
8171-203	8171-403	12	63	20	40	25	25	0.08
8171-204	8171-404	16	80	25	50	30	32	0.14



Hand Knob Reamed - Aluminium WDS 8172

Available in Polished or Anodised finish
Please note - Item has a 3 degree draft angle

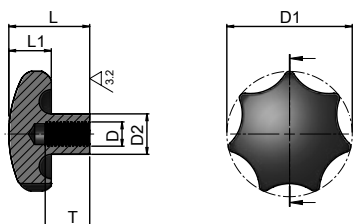
Polished	Anodised	D (H7)	D1	D2	H	H1	T	Weight (kg)
8172-201	8172-401	8	40	14	26	13	15	0.09
8172-202	8172-402	10	50	18	34	17	18	0.12
8172-203	8172-403	12	63	20	42	21	22	0.2
8172-204	8172-404	16	80	25	52	25	28	0.3



Hand Knob - Cast Iron - Metric WDS 8184

Cast Iron
Gr 250

WDS No.	D	D1	D2	H	H1	T	Weight (kg)
8184-201	M6	32	12	20	9	12	0.03
8184-202	M8	40	14	25	13	15	0.02
8184-203	M10	50	18	32	18	18	0.11
8184-204	M12	63	20	40	23	22	0.17
8184-205	M16	80	25	50	28	28	0.35
8184-206	M20	100	32	63	36	36	0.68

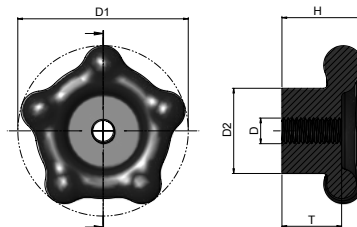


Hand Knob - Cast Iron WDS 8185

Cast Iron
Gr 250

WDS No.	D	D1	D2	H	H1	T	Weight (kg)
8185-201	M6	32	12	21	9	12	0.05
8185-202	M8	40	14	26	12	15	0.07
8185-203	M10	50	18	34	15	18	0.13
8185-204	M12	63	20	44	19	22	0.26

BK



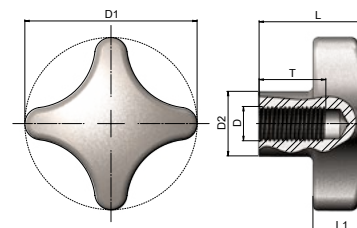
WDS 8199 Hand Knob - Threaded Through Hole

Bakelite, black with moulded thread

WDS No.	D	D1	D2	H	T	Weight (kg)
8199-201	M6	40	20	19	14	0.03
8199-202	M8	50	24	24	18	0.04
8199-203	M10	60	28	28	22	0.05

316

IN"



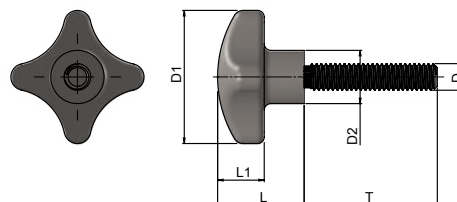
WDS 8205 Threaded Hand Knob - Inch 316 Stainless Steel

BS970 Gr 316S

Available in Polished or Matt finish

Polished	Matt	D	D1	D2	L	L1	T	Weight (kg)
8205-01432	8205-01432M	1/4"-20 UNC	32	12	21	11	10	0.04
8205-01640	8205-01640M	5/16"-18 UNC	40	14	26	13	12	0.06
8205-01850	8205-01850M	3/8"-16 UNC	50	18	34	17	15	0.11
8205-02263	8205-02263M	1/2"-13 UNC	63	20	43	15	19	0.2

316



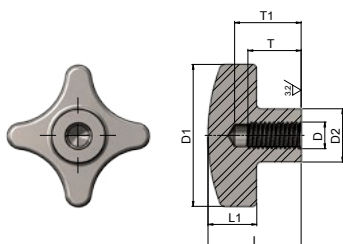
WDS 8205 Hand Knob with Male Thread - 316 Stainless Steel

BS970 Gr 316S

Available in Polished or Matt finish

Polished	Matt	D	D1	D2	L	L1	T	Weight (kg)
8205-4090420	8205-4090420M	M4	20	8	13	7	20	0.01
8205-4090430	8205-4090430M	M4	20	8	13	7	30	0.01
8205-4090520	8205-4090520M	M5	20	8	13	7	20	0.01
8205-4090530	8205-4090530M	M5	20	8	13	7	30	0.02
8205-4090540	8205-4090540M	M5	20	8	13	7	40	0.02
8205-4100520	8205-4100520M	M5	25	10	16	8	20	0.02
8205-4100530	8205-4100530M	M5	25	10	16	8	30	0.03
8205-4100540	8205-4100540M	M5	25	10	16	8	40	0.03
8205-4110520	8205-4110520M	M5	32	12	21	11	20	0.04
8205-4110530	8205-4110530M	M5	32	12	21	11	30	0.04
8205-4110540	8205-4110540M	M5	32	12	21	11	40	0.04

Polished	Matt	D	D1	D2	L	L1	T	Weight (kg)
8205-4110620	8205-4110620M	M6	32	12	21	11	20	0.04
8205-4110630	8205-4110630M	M6	32	12	21	11	30	0.04
8205-4110640	8205-4110640M	M6	32	12	21	11	40	0.04
8205-4110650	8205-4110650M	M6	32	12	21	11	50	0.05
8205-4120620	8205-4120620M	M6	40	14	26	13	20	0.09
8205-4120630	8205-4120630M	M6	40	14	26	13	30	0.09
8205-4120640	8205-4120640M	M6	40	14	26	13	40	0.09
8205-4120650	8205-4120650M	M6	40	14	26	13	50	0.09
8205-4120820	8205-4120820M	M8	40	14	26	13	20	0.09
8205-4120830	8205-4120830M	M8	40	14	26	13	30	0.09
8205-4120840	8205-4120840M	M8	40	14	26	13	40	0.09
8205-4120850	8205-4120850M	M8	40	14	26	13	50	0.1
8205-4131030	8205-4131030M	M10	50	18	34	17	30	0.02
8205-4131040	8205-4131040M	M10	50	18	34	17	40	0.15
8205-4131050	8205-4131050M	M10	50	18	34	17	50	0.16
8205-4131060	8205-4131060M	M10	50	18	34	17	60	0.16
8205-4141030	8205-4141030M	M10	63	20	43	15	30	0.21
8205-4141040	8205-4141040M	M10	63	20	43	15	40	0.21
8205-4141050	8205-4141050M	M10	63	20	43	15	50	0.21
8205-4141060	8205-4141060M	M10	63	20	43	15	60	0.22
8205-4141230	8205-4141230M	M12	63	20	43	15	30	0.21
8205-4141240	8205-4141240M	M12	63	20	43	15	40	0.21
8205-4141250	8205-4141250M	M12	63	20	43	15	50	0.22
8205-4141260	8205-4141260M	M12	63	20	43	15	60	0.23



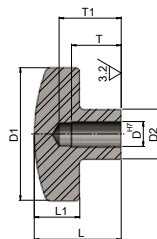
316

Hand Knob Threaded - 316 Stainless Steel WDS 8205

BS970 Gr 304S11

Available in Polished or Matt finish

Polished	Matt	D	D1	D2	L	L1	T	T1	Weight (kg)
8205-40904	8205-40904M	M4	20	8	13	7	6.5	9	0.1
8205-40905	8205-40905M	M5	20	8	13	7	7.5	10	0.1
8205-41005	8205-41005M	M5	25	10	16	8	9.5	12	0.1
8205-41105	8205-41105M	M5	32	12	21	11	10	13	0.04
8205-41006	8205-41006M	M6	25	10	16	8	12	15	0.1
8205-411	8205-411M	M6	32	12	21	11	12	15	0.04
8205-41206	8205-41206M	M6	40	14	26	13	12	15	0.06
8205-41108	8205-41108M	M8	32	12	21	11	15	18	0.04
8205-412	8205-412M	M8	40	14	26	13	15	18	0.06
8205-41210	8205-41210M	M10	40	14	26	13	18	21	0.06
8205-413	8205-413M	M10	50	18	34	17	18	21	0.11
8205-41308	8205-41308M	M8	50	18	34	17	16	21	0.11
8205-41410	8205-41410M	M10	63	20	43	15	22	25	0.2
8205-41312	8205-41312M	M12	50	18	34	17	22	25	0.11
8205-414	8205-414M	M12	63	20	43	15	22	25	0.2



WDS 8205 Hand Knob Reamed - 304 Stainless Steel

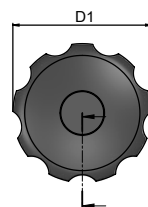
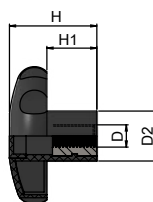
BS970 Gr 304S11

Polished finish

WDS No.	D (H7)	D1	D2	L	L1	T	T1	Weight (kg)
8205-201	6	32	12	21	11	12	15	0.04
8205-202	8	40	14	26	13	15	18	0.06
8205-203	10	50	18	34	17	18	21	0.11
8205-204	12	63	20	42	21	22	25	0.2

ZP

TP



WDS 8210 Scallop Hand Knob - Removable Top Cap

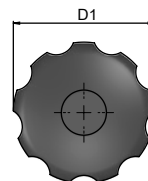
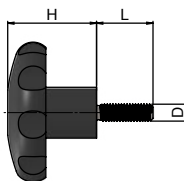
Thermoplastic black

Insert - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	Weight (kg)
8210-201	M6	40	18	24	13	0.02
8210-202	M8	40	18	24	13	0.02
8210-203	M8	50	18	32	18	0.02
8210-204	M10	50	22.5	32	18	0.02

ZP

TP

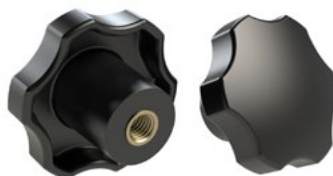
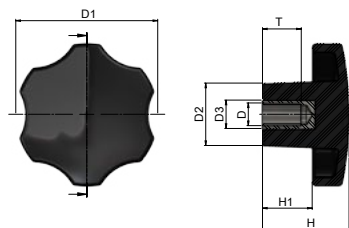


WDS 8210 Scallop Hand Screw - Thermoplastic

Thermoplastic black

Screw - Zinc Plated Steel

WDS No.	D	D1	H	L	Weight (kg)
8210-206	M6	40	24	20	0.02
8210-208	M6	40	24	30	0.02
8210-210	M6	40	24	50	0.02
8210-216	M8	40	24	20	0.02
8210-218	M8	40	24	30	0.03
8210-219	M8	40	24	40	0.03
8210-223	M8	50	32	30	0.03
8210-225	M8	50	32	50	0.04
8210-232	M10	50	32	20	0.03
8210-241	M10	63	40	50	0.04
8210-242	M12	63	40	30	0.04



BR

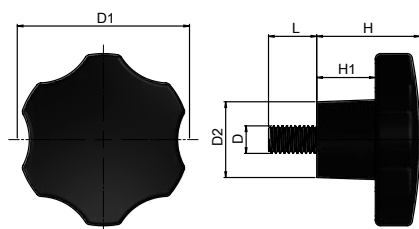
BK

Hand Knob - Bakelite WDS 8214

Grip - Bakelite PF31

Insert - Brass

WDS No.	D	D1	D2	D3	H	H1	T	Weight (kg)
8214-202	M8	50	22	10	30	17	16	0.02
8214-203	M10	60	26	13	35	18	20	0.02
8214-204	M12	75	32	15	40	24	25	0.02



ZP

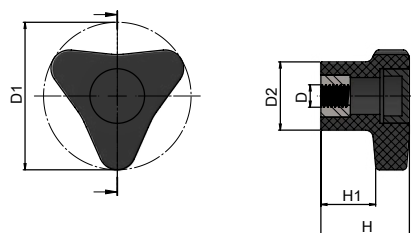
BK

Hand Screw - Bakelite WDS 8214

Grip - Bakelite PF31

Thread - Zinc Plated Steel

WDS No.	D	D1	D2	D3	H	H1	L	Weight (kg)
8214-20850	M8	50	22	10	30	17	14	0.05
8214-21060	M10	60	26	13	33	18	18	0.07
8214-21275	M12	75	32	15	40	24	25	0.13



ZP

TP

Tri-Star Hand Knob - Thermoplastic with Steel Insert WDS 8215

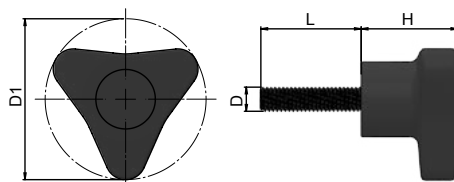
Thermoplastic, black

Insert - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	Weight (kg)
8215-201	M6	40	18.5	24	14	0.01
8215-203	M8	50	18.5	32	18	0.01
8215-205	M10	63	25	40	18	0.02

ZP

TP



WDS 8215 Tri-Star Hand Screw - Thermoplastic with Steel Screw

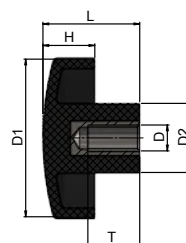
Thermoplastic, black

Screw - Zinc Plated Steel

WDS No.	D	D1	H	L	Weight (kg)
8215-216	M8	40	24	20	0.01
8215-219	M8	40	24	40	0.02
8215-223	M8	50	32	30	0.02

BR

NYL



WDS 8216 Delta Style Hand Knob

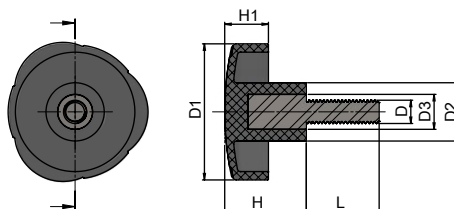
Grip - Nylon PA6

Insert - Brass

WDS No.	D	D1	D2	D3	H	H1	T	Weight (kg)
8216-201	M6	40	16	8	22.4	12	12	0.02
8216-203	M8	50	20	10	28	15	16	0.04
8216-205	M10	60	24	13	33.6	18.4	20	0.06
8216-206	M12	60	24	15	33.6	18.4	21	0.05

ZP

NYL



WDS 8217 Tri-Lobe Hand Screw

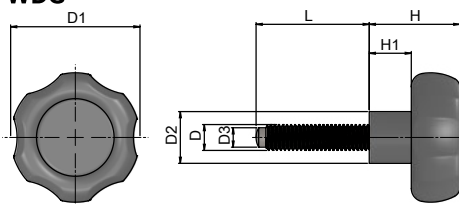
Grip - Nylon PA6

Stem - Zinc Plated Steel

WDS No.	D	D1	D2	D3	H	H1	L	Weight (kg)
8217-20632	M6	40	16	8	22.7	12	32	0.03
8217-20840	M8	50	20	12	28	15	40	0.05
8217-21040	M10	60	24	14	33.3	18.4	40	0.09
8217-21240	M12	60	24	14	33.3	18.4	40	0.1

**WDS**

STAR KNOBS



ZP

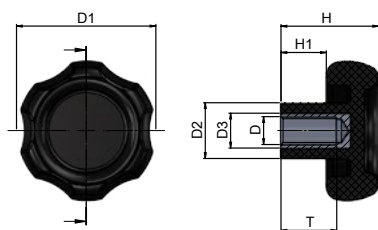
NYL

Hand Screw - Nylon with Steel Screw **WDS 8223**

Grip - Nylon PA6

Stem - Zinc Plated Steel

WDS No.	D	D1	D2	D3	H	H1	L	Weight (kg)
8223-20616	M6	40	16	4	28	13	16	0.02
8223-20825	M8	40	16	6	28	13	25	0.03
8223-20835	M8	40	16	6	28	13	35	0.03



BR

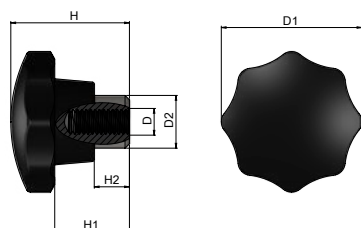
NYL

Hand Knob - Nylon **WDS 8224**

Grip - Nylon PA6

Insert - Brass

WDS No.	D	D1	D2	D3	H	H1	T	Weight (kg)
8224-201	M6	40	16	8	28	13	12	0.02
8224-202	M8	40	16	10	28	13	16	0.02



BK

BR

Scallop Knob - Bakelite **WDS 8225**

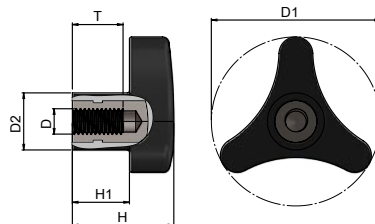
8225-201/204/210 - Brass

8225-203 - Light Alloy

WDS No.	D	D1	D2	H	H1	H2	Weight (kg)
8225-201	M6	32	12	27	17	8	0.02
8225-203	M8	32	12	27	17	8	0.02
8225-204	M8	44	14	29	16	8	0.03
8225-205	M8	57	18	38	22	10	0.06
8225-207	M10	57	18	38	22	10	0.06
8225-210	M12	70	22	44	26	12	0.08

303

BK



WDS 8305 Tri-Knob - High Version - Bakelite with 303 Stainless Steel Insert

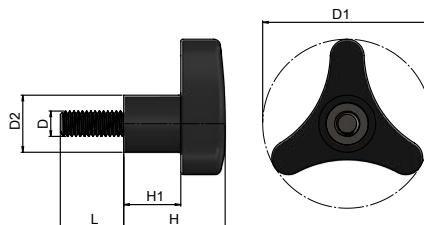
Bakelite, black

Insert - 303 Stainless Steel

WDS No.	D	D1	D2	H	T	Weight (kg)
8305-412	M6	40	14	22	12	0.04
8305-414	M8	50	18	28	15	0.05
8305-416	M10	62	22	35	18	0.07

303

BK



WDS 8305 Tri-Screw - High Version - Bakelite with 303 Stainless Steel Screw

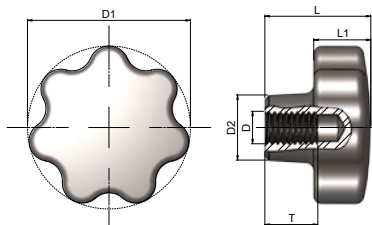
Bakelite, black

Screw - 303 Stainless Steel

WDS No.	D	D1	D2	H	H1	L	Weight (kg)
8305-422	M6	40	13.5	24	13.5	20	0.03
8305-423	M8	40	13.5	24	13.5	20	0.04
8305-428	M8	50	17.4	28	14	20	0.05
8305-432	M10	50	17.4	28	14	30	0.07
8305-434	M10	62	21.8	34	17	30	0.07

316

IN"

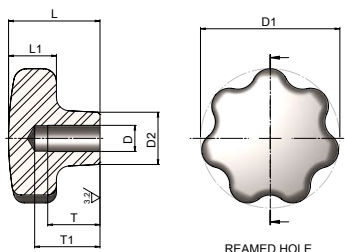


WDS 8321 Threaded Hand Knob - Inch 316 Stainless Steel

BS970 Gr 316S Stainless Steel casting

Available in Polished or Matt finish

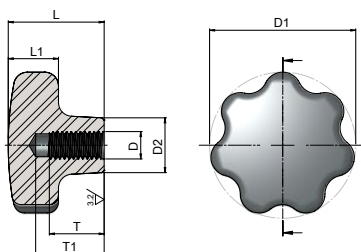
Polished	Matt	D	D1	D2	L	L1	T	Weight (kg)
8321-01432	8321-01432M	1/4 UNC	32	12	21	11	10	0.05
8321-01640	8321-01640M	5/16 UNC	40	14	26	13	12	0.1
8321-01850	8321-01850M	3/8 UNC	50	18	32	17	15	0.19
8321-02263	8321-02263M	1/2 UNC	63	20	40	21	19	0.36



Hand Knob Reamed - 304 Stainless Steel WDS 8321

BS970 Gr 304S11 Stainless Steel casting
Polished finish

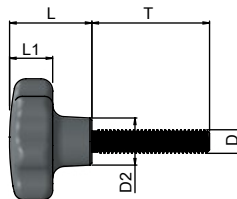
WDS No.	D (H7)	D1	D2	L	L1	T	T1	Weight (kg)
8321-201	6	32	12	21	11	12	15	0.05
8321-202	8	40	14	26	13	15	18	0.1
8321-203	10	50	18	34	17	18	21	0.2
8321-204	12	63	20	42	21	22	25	0.37



Hand Knob - 316 Stainless Steel WDS 8321

BS970 Gr 316S11 Stainless Steel casting
Available in Polished or Matt finish

Polished	Matt	D	D1	D2	L	L1	T	Weight (kg)
8321-40904	8321-40904M	M4	20	8	13	7	6	0.02
8321-40905	8321-40905M	M5	20	8	13	7	7.5	0.02
8321-41005	8321-41005M	M5	25	10	16	8	7.5	0.03
8321-41006	8321-41006M	M6	25	10	16	8	9	0.03
8321-411	8321-411M	M6	32	12	21	11	9	0.05
8321-41105	8321-41105M	M5	32	12	21	11	7.5	0.05
8321-41108	8321-41108M	M8	32	12	21	11	12	0.05
8321-412	8321-412M	M8	40	14	26	13	12	0.1
8321-41206	8321-41206M	M6	40	14	26	13	9	0.1
8321-41210	8321-41210M	M10	40	14	26	13	15	0.1
8321-413	8321-413M	M10	50	18	32	17	15	0.19
8321-41308	8321-41308M	M8	50	18	32	17	12	0.19
8321-41312	8321-41312M	M12	50	18	32	17	18	0.19
8321-414	8321-414M	M12	63	20	40	21	18	0.34
8321-41410	8321-41410M	M10	63	20	40	21	15	0.36



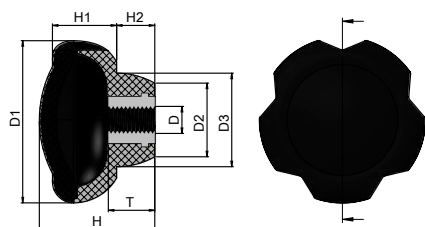
WDS 8321 Lobed Hand Screw - 316 Stainless Steel

BS970 Gr 316S Stainless

Available in Polished or Matt finish

Polished	Matt	D	D1	D2	L	L1	T	Weight (kg)
8321-4090420	8321-4090420M	M4	20	8	13	7	20	0.02
8321-4090430	8321-4090430M	M4	20	8	13	7	30	0.02
8321-4090520	8321-4090520M	M5	20	8	13	7	20	0.02
8321-4090530	8321-4090530M	M5	20	8	13	7	30	0.02
8321-4090540	8321-4090540M	M5	20	8	13	7	40	0.02
8321-4100520	8321-4100520M	M5	25	10	16	8	20	0.03
8321-4100530	8321-4100530M	M5	25	10	16	8	30	0.03
8321-4100540	8321-4100540M	M5	25	10	16	8	40	0.03
8321-4100620	8321-4100620M	M5	25	10	16	8	20	0.03
8321-4100630	8321-4100630M	M5	25	10	16	8	30	0.03
8321-4100640	8321-4100640M	M6	25	10	16	8	40	0.03
8321-4100650	8321-4100650M	M6	25	10	16	8	50	0.04
8321-4110520	8321-4110520M	M5	32	12	21	11	20	0.05
8321-4110530	8321-4110530M	M5	32	12	21	11	30	0.05
8321-4110540	8321-4110540M	M5	32	12	21	11	40	0.05
8321-4110620	8321-4110620M	M6	32	12	21	11	20	0.05
8321-4110630	8321-4110630M	M6	32	12	21	11	30	0.06
8321-4110640	8321-4110640M	M6	32	12	21	11	40	0.06
8321-4110650	8321-4110650M	M6	32	12	21	11	50	0.06
8321-4110820	8321-4110820M	M8	32	12	21	11	20	0.05
8321-4110830	8321-4110830M	M8	32	12	21	11	30	0.06
8321-4110840	8321-4110840M	M8	32	12	21	11	40	0.06
8321-4110850	8321-4110850M	M8	32	12	21	11	50	0.06
8321-4120620	8321-4120620M	M8	40	14	26	13	12	0.1
8321-4120630	8321-4120630M	M6	40	14	26	13	30	0.1
8321-4120640	8321-4120640M	M6	40	14	26	13	40	0.11
8321-4120650	8321-4120650M	M6	40	14	26	13	50	0.11
8321-4120820	8321-4120820M	M8	40	14	26	13	20	0.11
8321-4120830	8321-4120830M	M8	40	14	26	13	30	0.11
8321-4120840	8321-4120840M	M8	40	14	26	13	40	0.11
8321-4120850	8321-4120850M	M8	40	14	26	13	50	0.12
8321-4121030	8321-4121030M	M10	40	14	26	13	30	0.11
8321-4121040	8321-4121040M	M10	40	14	26	13	40	0.12
8321-4121050	8321-4121050M	M10	40	14	26	13	50	0.12
8321-4121060	8321-4121060M	M10	40	14	26	13	60	0.13
8321-4130820	8321-4130820M	M8	50	18	32	17	20	0.21
8321-4130830	8321-4130830M	M8	50	18	32	17	30	0.22
8321-4130840	8321-4130840M	M8	50	18	32	17	40	0.22
8321-4130850	8321-4130850M	M8	50	18	32	17	50	0.22
8321-4131030	8321-4131030M	M10	50	18	32	17	30	0.22
8321-4131040	8321-4131040M	M10	50	18	32	17	40	0.22
8321-4131050	8321-4131050M	M10	50	18	32	17	50	0.23
8321-4131060	8321-4131060M	M10	50	18	32	17	60	0.23
8321-4131230	8321-4131230M	M12	50	18	32	17	30	0.22
8321-4131240	8321-4131240M	M12	50	18	32	17	40	0.23

Polished	Matt	D	D1	D2	L	L1	T	Weight (kg)
8321-4131250	8321-4131250M	M12	50	18	32	17	50	0.23
8321-4131260	8321-4131260M	M12	50	18	32	17	60	0.24
8321-4141030	8321-4141030M	M10	63	20	40	21	30	0.38
8321-4141040	8321-4141040M	M10	63	20	40	21	40	0.39
8321-4141050	8321-4141050M	M10	63	20	40	21	50	0.39
8321-4141060	8321-4141060M	M10	63	20	40	21	60	0.4
8321-4141230	8321-4141230M	M12	63	20	40	21	30	0.39
8321-4141240	8321-4141240M	M12	63	20	40	21	40	0.39
8321-4141250	8321-4141250M	M12	63	20	40	21	50	0.4
8321-4141260	8321-4141260M	M12	63	20	40	21	60	0.41



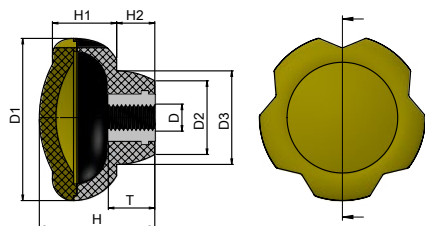
ZP

TP

Clamp Grip - Steel Insert WDS 8475

Body - Thermoplastic
Insert - Zinc Plated Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	D3	H	H1	H2	T	Weight (kg)
8475-202BG	8475-202PG	8475-202CY	8475-202TR	M8	50	22.2	28.2	34.8	17.8	11.5	14	0.03
8475-204BG	8475-204PG	8475-204CY	8475-204TR	M10	50	22.2	28.2	34.8	17.8	11.5	14	0.02
8475-206BG	8475-206PG	8475-206CY	8475-206TR	M12	50	22.2	28.2	34.8	17.8	11.5	18	0.04
8475-208BG	8475-208PG	8475-208CY	8475-208TR	M10	63	28	35.5	44	22.5	14.5	14	0.04
8475-210BG	8475-210PG	8475-210CY	8475-210TR	M12	63	28	35.5	44	22.5	14.5	18	0.06
8475-212BG	8475-212PG	8475-212CY	8475-212TR	M16	63	28	35.5	44	22.5	14.5	18	0.05



303

TP

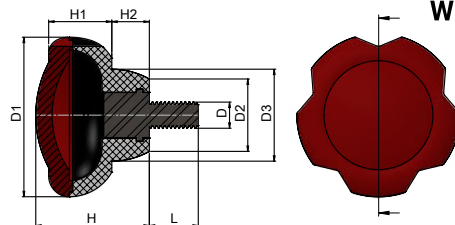
Clamp Grip - Stainless Steel Insert WDS 8475

Body - Thermoplastic
Insert - 303 Stainless Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	D3	H	H1	H2	T	Weight (kg)
8475-302BG	8475-302PG	8475-302CY	8475-302TR	M8	50	22.2	28.2	34.8	17.8	11.5	14	0.03
8475-304BG	8475-304PG	8475-304CY	8475-304TR	M10	50	22.2	28.2	34.8	17.8	11.5	14	0.02
8475-306BG	8475-306PG	8475-306CY	8475-306TR	M12	50	22.2	28.2	34.8	17.8	11.5	18	0.04
8475-308BG	8475-308PG	8475-308CY	8475-308TR	M10	63	28	35.5	44	22.5	14.5	14	0.04
8475-310BG	8475-310PG	8475-310CY	8475-310TR	M12	63	28	35.5	44	22.5	14.5	18	0.05

ZP

TP



WDS 8475 Clamp Grip - Steel Screw

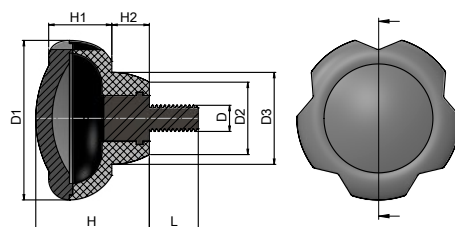
Body - Thermoplastic

Screw - Zinc Plated Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	D3	H	H1	H2	L	Weight (kg)
8475-402BG	8475-402PG	8475-402CY	8475-402TR	M10	50	22.2	28.2	34.8	17.8	11.5	20	0.04
8475-404BG	8475-404PG	8475-404CY	8475-404TR	M10	50	22.2	28.2	34.8	17.8	11.5	30	0.04
8475-406BG	8475-406PG	8475-406CY	8475-406TR	M10	50	22.2	28.2	34.8	17.8	11.5	40	0.05
8475-408BG	8475-408PG	8475-408CY	8475-408TR	M10	50	22.2	28.2	34.8	17.8	11.5	50	0.05
8475-410BG	8475-410PG	8475-410CY	8475-410TR	M10	50	22.2	28.2	34.8	17.8	11.5	60	0.06
8475-412BG	8475-412PG	8475-412CY	8475-412TR	M12	50	22.2	28.2	34.8	17.8	11.5	20	0.05
8475-414BG	8475-414PG	8475-414CY	8475-414TR	M12	50	22.2	28.2	34.8	17.8	11.5	30	0.05
8475-416BG	8475-416PG	8475-416CY	8475-416TR	M12	50	22.2	28.2	34.8	17.8	11.5	40	0.06
8475-418BG	8475-418PG	8475-418CY	8475-418TR	M12	50	22.2	28.2	34.8	17.8	11.5	50	0.07
8475-420BG	8475-420PG	8475-420CY	8475-420TR	M12	50	22.2	28.2	34.8	17.8	11.5	60	0.06
8475-422BG	8475-422PG	8475-422CY	8475-422TR	M10	63	28	35.5	44	22.5	14.5	20	0.06
8475-424BG	8475-424PG	8475-424CY	8475-424TR	M10	63	28	35.5	44	22.5	14.5	30	0.06
8475-426BG	8475-426PG	8475-426CY	8475-426TR	M10	63	28	35.5	44	22.5	14.5	40	0.06
8475-428BG	8475-428PG	8475-428CY	8475-428TR	M10	63	28	35.5	44	22.5	14.5	50	0.07
8475-430BG	8475-430PG	8475-430CY	8475-430TR	M10	63	28	35.5	44	22.5	14.5	60	0.07
8475-432BG	8475-432PG	8475-432CY	8475-432TR	M12	63	28	35.5	44	22.5	14.5	20	0.06
8475-434BG	8475-434PG	8475-434CY	8475-434TR	M12	63	28	35.5	44	22.5	14.5	30	0.07
8475-436BG	8475-436PG	8475-436CY	8475-436TR	M12	63	28	35.5	44	22.5	14.5	40	0.07
8475-438BG	8475-438PG	8475-438CY	8475-438TR	M12	63	28	35.5	44	22.5	14.5	50	0.08
8475-440BG	8475-440PG	8475-440CY	8475-440TR	M12	63	28	35.5	44	22.5	14.5	60	0.07

303

TP

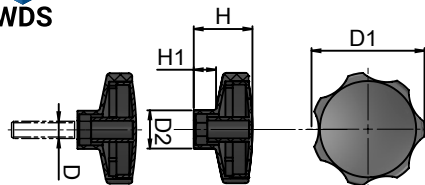


WDS 8475 Clamp Grip - Stainless Steel Screw

Body - Thermoplastic

Screw - 303 Stainless Steel

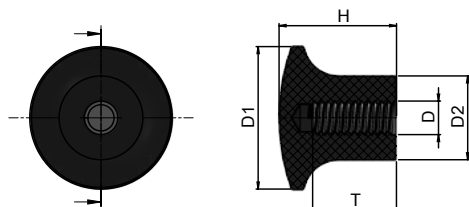
Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	D3	H	H1	H2	L	Weight (kg)
8475-502BG	8475-502PG	8475-502CY	8475-502TR	M10	50	22.2	28.2	34.8	17.8	11.5	20	0.04
8475-504BG	8475-504PG	8475-504CY	8475-504TR	M10	50	22.2	28.2	34.8	17.8	11.5	30	0.04
8475-506BG	8475-506PG	8475-506CY	8475-506TR	M10	50	22.2	28.2	34.8	17.8	11.5	40	0.04
8475-508BG	8475-508PG	8475-508CY	8475-508TR	M10	50	22.2	28.2	34.8	17.8	11.5	50	0.05
8475-510BG	8475-510PG	8475-510CY	8475-510TR	M10	50	22.2	28.2	34.8	17.8	11.5	60	0.04
8475-522BG	8475-522PG	8475-522CY	8475-522TR	M10	63	28	35.5	44	22.5	14.5	20	0.05
8475-524BG	8475-524PG	8475-524CY	8475-524TR	M10	63	28	35.5	44	22.5	14.5	30	0.06
8475-526BG	8475-526PG	8475-526CY	8475-526TR	M10	63	28	35.5	44	22.5	14.5	40	0.06
8475-528BG	8475-528PG	8475-528CY	8475-528TR	M10	63	28	35.5	44	22.5	14.5	50	0.07
8475-530BG	8475-530PG	8475-530CY	8475-530TR	M10	63	28	35.5	44	22.5	14.5	60	0.07



Hand Knob/Screw Kit - Glass Reinforced Plastic **WDS 8100**

Glass fibre reinforced plastic, black

WDS No.	D	D1	D2	H	H1	Weight (kg)
8100-201	M6	32	18	18	10	0.01
8100-202	M6	42	21	28	10	0.01
8100-203	M8	32	18	18	10	0.01
8100-204	M8	42	21	28	10	0.01
8100-205	M8	62	21	34	12	0.02
8100-206	M10	62	21	34	12	0.02

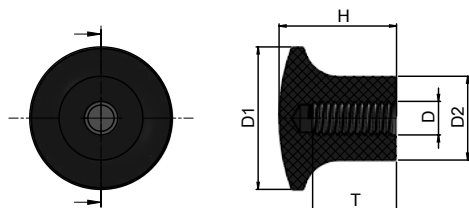


BK

Hand Knob Moulded Thread - Bakelite **WDS 8109**

PF31 (Bakelite)
Moulded Thread

WDS No.	D	D1	D2	H	T	Weight (kg)
8109-201	M4	17	10	14	10	0.01
8109-202	M5	21	12	17	11	0.01
8109-203	M6	29	16	25	14	0.01
8109-204	M8	33	18	29	14	0.02



BK

BR

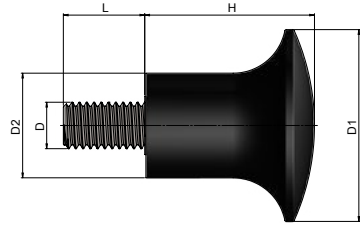
Hand Knob - Bakelite with a Brass Insert **WDS 8110**

PF31 (Bakelite)
Insert - Brass

WDS No.	D	D1	D2	H	T	Weight (kg)
8110-201	M4	17	10	14	7	0.01
8110-202	M5	21	12	17	11	0.01
8110-203	M6	25	14	21	11	0.01
8110-204	M8	33	18	29	16	0.02

ZP

BK



WDS 8111 Hand Knob - Bakelite with a Steel Screw

Body - PF31 (Bakelite)

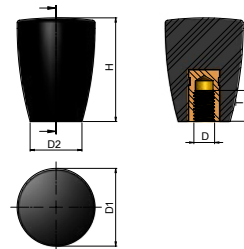
Thread - Zinc Plated Steel

WDS No.	D	D1	D2	H	L	Weight (kg)
8111-20408	M4	17	10	14	8	0.01
8111-20509	M5	21	12	17	9	0.01
8111-20610	M6	25	14	21	10	0.01
8111-20814	M8	33	18	29	14	0.02

BK

ZP

BR



WDS 8117 Tapered Knob - Metric with Threaded Insert

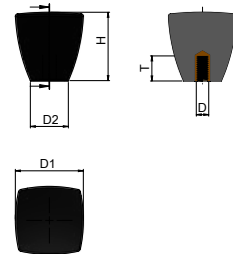
Body - PF31 (Bakelite)

Insert - M4 & M5 in Brass / M6 to M12 Inserts in Zinc Plated Steel

WDS No.	D	D1	D2	H	T	Weight (kg)
8117-201	M4	20	10	12	6	0.01
8117-202	M5	20	10	12	7.5	0.01
8117-203	M6	22	12	30	9	0.02
8117-204	M8	22	12	30	12	0.02
8117-205	M8	30	20	40	12	0.04
8117-206	M12	39	26	52	18	0.09

BK

BR

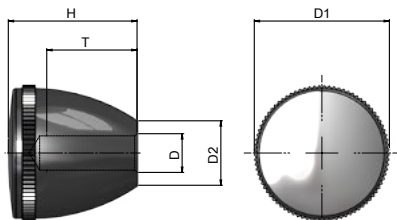


WDS 8133 Cubed Knob - Bakelite with Brass Insert

Body - PF31 (Bakelite)

Insert - Brass

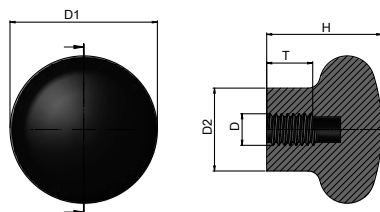
WDS No.	D	D1	D2	H	T	Weight (kg)
8133-202	M6	35	20	35	11	0.05
8133-203	M8	45	25	45	16	0.1


ZP
BK

Taper Knob - Bakelite with Steel Insert **WDS 8144**

Bakelite, black
Insert - Zinc Plated Steel

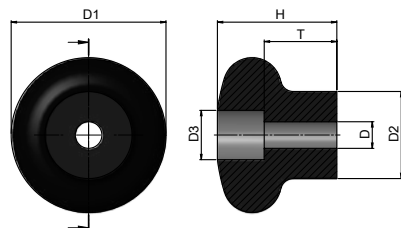
WDS No.	D	D1	D2	H	T	Weight (kg)
8144-204	M8	30	14	30	18	0.02
8144-206	M10	35	16	35	22	0.03
8144-208	M12	45	20	45	36	0.07
8144-211	M6	20	10	20	6.5	0.01
8144-212	M6	30	14	30	12	0.03
8144-213	M8	30	14	30	14	0.04
8144-217	M12	40	18	40	21	0.08
8144-218	M10	45	20	45	22	0.09
8144-219	M12	45	20	45	21	0.1


BK

Hand Knob - Domed - Bakelite With Moulded Thread **WDS 8145**

PF31 Bakelite
Moulded Thread

WDS No.	D	D1	D2	H	T	Weight (kg)
8145-201	M6	30	16	24	12	0.01
8145-2025	M8	32	18	25	16	0.01
8145-2045	M10	45	21	30	18	0.03
8145-2075	M12	52	24	35	18	0.06

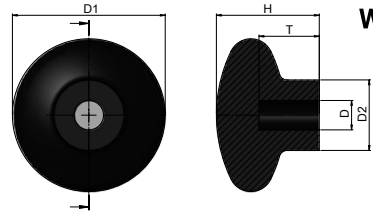

BK

Hand Knob to Suit M5 Capscrew - Bakelite **WDS 8145**

PF31 Bakelite
Moulded Thread

WDS No.	D	D1	D2	D3	H	T	Weight (kg)
8145-301	5.5	32	18	10.2	25	15	0.01

BK

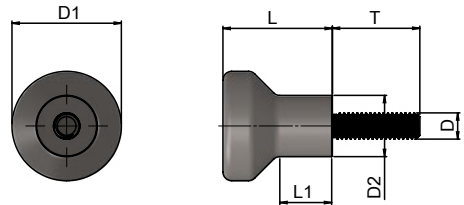


WDS 8145 Hand Knob - Push Fit - Bakelite

PF31 Bakelite
Moulded Thread

WDS No.	D	D1	D2	H	T	Weight (kg)
8145-403	10	52	24	35	20.5	0.06

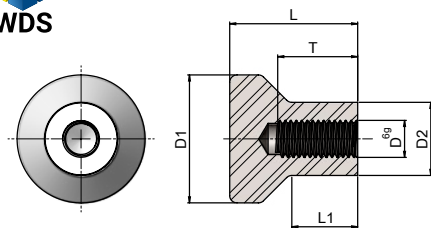
316



WDS 8303 Stainless Steel 316 Mushroom Thumb Screw

Stainless Steel 316S11
Available in Polished or Satin finish

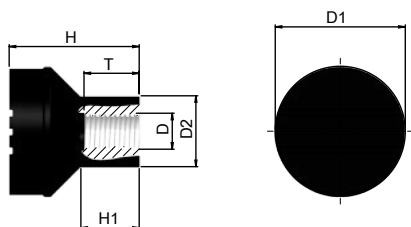
Polished	Satin	D	D1	D2	L	L1	T	Weight (kg)
8303-20420	8303-50420	M4	18	10	21	10	20	0.03
8303-20430	8303-50430	M4	18	10	21	10	30	0.03
8303-20520	8303-50520	M5	25	14	25	12	20	0.06
8303-20530	8303-50530	M5	25	14	25	12	30	0.06
8303-20540	8303-50540	M5	25	14	25	12	40	0.06
8303-20620	8303-50620	M6	25	14	25	12	20	0.06
8303-20630	8303-50630	M6	25	14	25	12	30	0.06
8303-20640	8303-50640	M6	25	14	25	12	40	0.06
8303-20650	8303-50650	M6	25	14	25	12	50	0.07
8303-20820	8303-50820	M8	35	20	35	18	20	0.16
8303-20830	8303-50830	M8	35	20	35	18	30	0.17
8303-20840	8303-50840	M8	35	20	35	18	40	0.17
8303-20850	8303-50850	M8	35	20	35	18	50	0.17
8303-21030	8303-51030	M10	35	20	35	18	30	0.16
8303-21040	8303-51040	M10	35	20	35	18	40	0.17
8303-21050	8303-51050	M10	35	20	35	18	50	0.17
8303-21060	8303-51060	M10	35	20	35	18	60	0.18



Stainless Steel 316 Mushroom Thumb Knob WDS 8303

Stainless Steel 316S11
Available in Polished or Satin finish

Polished	Satin	D	D1	D2	L	L1	T	Weight (kg)
8303-203	8303-503	M3	18	10	21	10	7	0.03
8303-204	8303-504	M4	18	10	21	10	7	0.03
8303-205	8303-505	M5	25	14	25	12	9	0.05
8303-206	8303-506	M6	25	14	25	12	9	0.05
8303-208	8303-508	M8	35	20	35	18	15	0.11
8303-210	8303-510	M10	35	20	35	18	15	0.11



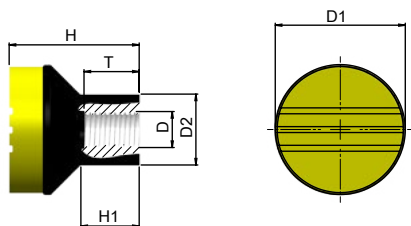
ZP

TP

Mushroom Knob - Thermoplastic with Steel Insert WDS 8445

Body - Thermoplastic
Insert - Zinc Plated Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	H	H1	T	Weight (kg)
8445-202BG	8445-202PG	8445-202CY	8445-202TR	M4	21	12	21	10	10	0.01
8445-204BG	8445-204PG	8445-204CY	8445-204TR	M5	21	12	21	10	10	0.01
8445-206BG	8445-206PG	8445-206CY	8445-206TR	M6	25	14	25	12	10	0.01
8445-208BG	8445-208PG	8445-208CY	8445-208TR	M8	33	18	33	15	14	0.02



303

TP

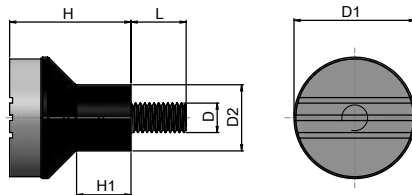
Mushroom Knob - Thermoplastic with 303 Stainless Steel Insert WDS 8445

Body - Thermoplastic
Insert - 303 Stainless Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	H	H1	T	Weight (kg)
8445-302BG	8445-302PG	8445-302CY	8445-302TR	M4	21	12	21	10	10	0.01
8445-304BG	8445-304PG	8445-304CY	8445-304TR	M5	21	12	21	10	10	0.01
8445-306BG	8445-306PG	8445-306CY	8445-306TR	M6	25	14	25	12	10	0.01
8445-308BG	8445-308PG	8445-308CY	8445-308TR	M8	33	18	33	15	14	0.02

ZP

TP



WDS 8445 Mushroom Knob - Black Grey - Thermoplastic with Steel Screw

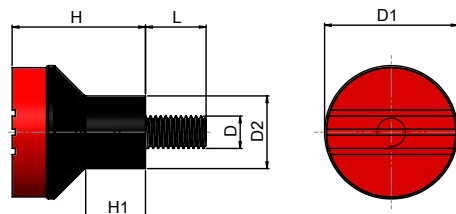
Body - Thermoplastic

Screw - Zinc Plated Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	H	H1	L	Weight (kg)
8445-402BG	8445-402PG	8445-402CY	8445-402TR	M4	21	12	21	10	10	0.02
8445-404BG	8445-404PG	8445-404CY	8445-404TR	M5	21	12	21	10	10	0.01
8445-406BG	8445-406PG	8445-406CY	8445-406TR	M6	25	14	25	12	15	0.01
8445-408BG	8445-408PG	8445-408CY	8445-408TR	M8	33	18	33	15	15	0.03

303

TP



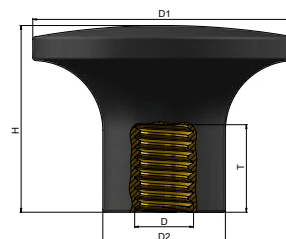
WDS 8445 Mushroom Knob - Black Grey - Thermoplastic with Stainless Screw

Body - Thermoplastic

Screw - 303 Stainless Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	H	H1	L	Weight (kg)
8445-502BG	8445-502PG	8445-502CY	8445-502TR	M4	21	12	21	10	10	0.02
8445-504BG	8445-504PG	8445-504CY	8445-504TR	M5	21	12	21	10	10	0.01
8445-506BG	8445-506PG	8445-506CY	8445-506TR	M6	25	14	25	12	15	0.01
8445-508BG	8445-508PG	8445-508CY	8445-508TR	M8	33	18	33	15	15	0.03

BR

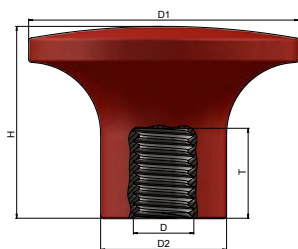


WDS 8462 Pull Knob GRP with Brass Thread Insert

Body - Reinforced Polyamide

Insert - Brass

Black Grey	Traffic Red	D	D1	D2	H	T	Weight (kg)
8462-22204BG	8462-22204TR	M4	22	11	17	8	0.01
8462-22205BG	8462-22205TR	M5	22	11	17	9	0.01
8462-22605BG	8462-22605TR	M5	26	13	20.5	9	0.01
8462-22606BG	8462-22606TR	M6	26	13	20.5	11	0.01
8462-23206BG	8462-23206TR	M6	32	15	24	11	0.02
8462-23208BG	8462-23208TR	M8	32	15	24	14	0.01
8462-24508BG	8462-24508TR	M8	45	21	32	14	0.03
8462-24510BG	8462-24510TR	M10	45	21	32	15.5	0.03



Pull Knob GRP with Stainless Steel Thread Insert **WDS 8462**

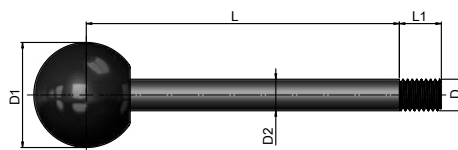
Body - Reinforced Polyamide

Insert - 303 Stainless Steel

Black Grey	Traffic Red	D	D1	D2	H	T	Weight (kg)
8462-62204BG	8462-62204TR	M4	22	11	17	8	0.01
8462-62205BG	8462-62205TR	M5	22	11	17	9	0.01
8462-62605BG	8462-62605TR	M5	26	13	20.5	9	0.01
8462-62606BG	8462-62606TR	M6	26	13	20.5	11	0.01
8462-63206BG	8462-63206TR	M6	32	15	24	11	0.02
8462-63208BG	8462-63208TR	M8	32	15	24	14	0.01
8462-64508BG	8462-64508TR	M8	45	21	32	14	0.03
8462-64510BG	8462-64510TR	M10	45	21	32	15.5	0.03

BK

IN"

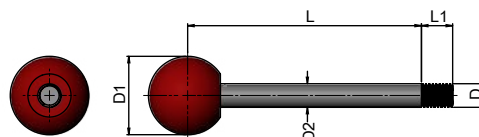


WDS 135 Ball Knob Handle - Black Bakelite Knob with Steel Hand - Inch BSW

Handle - Steel BS 970 Gr 230M07, Knob - PF31 (Bakelite)

WDS No.	D	D1	D2	L	L1	Weight (kg)
135-01B	3/8 BSW	20	10	63	13	0.05
135-04B	1/2 BSW	40	12	120	16	0.14

BK



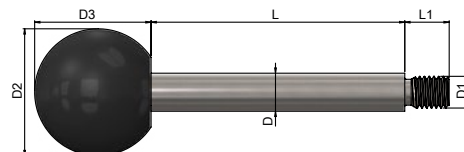
WDS 135 Ball Knob Handle - Bakelite Knob with Steel Handle - Metric

Handle - Steel BS 970 Gr 230M07, Knob - PF31 (Bakelite)

Black	Red	D	D1	D2	L	L1	Weight (kg)
135-201B	135-201R	M10	25	10	63	14	0.05
135-202B	135-202R	M10	25	10	90	14	0.07
135-203B	135-203R	M12	40	12	120	16	0.16
135-204B	135-204R	M12	40	12	145	16	0.15

304

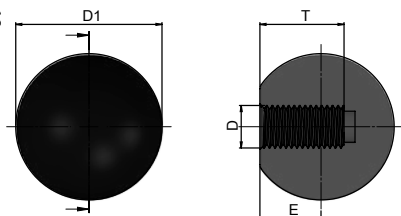
BK



WDS 8050 Stainless Steel Gear Lever with Bakelite Ball Knob

Lever - 304 Stainless Steel, Knob - PF31 (Bakelite)

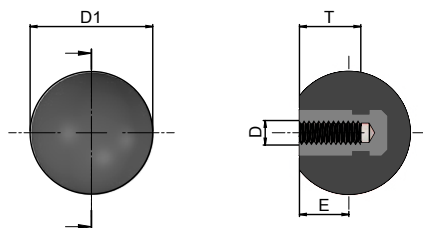
Black	Red	D	D1	D2	D3	L	L1	Weight (kg)
8050-506035	8050-506035R	8	M6	22	20.3	35	9	0.02
8050-506050	8050-506050R	8	M6	22	20.3	50	9	0.03
8050-506065	8050-506065R	8	M6	22	20.3	80	9	0.03
8050-508050	8050-508050R	10	M8	32	29	50	12	0.06
8050-508065	8050-508065R	10	M8	32	29	65	12	0.06
8050-508080	8050-508080R	10	M8	32	29	80	12	0.07
8050-508100	8050-508100R	10	M8	32	29	100	12	0.09
8050-510060	8050-510060R	12	M10	40	38	60	14	0.11
8050-510080	8050-510080R	12	M10	40	38	80	14	0.13
8050-510100	8050-510100R	12	M10	40	38	100	14	0.15
8050-510125	8050-510125R	12	M10	40	38	125	14	0.17
8050-512080	8050-512080R	16	M12	50	47.5	80	16	0.23
8050-512100	8050-512100R	16	M12	50	47.5	100	16	0.26
8050-512125	8050-512125R	16	M12	50	47.5	125	16	0.3
8050-512160	8050-512160R	16	M12	50	47.5	160	16	0.36



Ball Knob - Bakelite with Moulded Thread WDS 8143

Knob - PF31 (Bakelite)

Black	Red	D	D1	E	T	Weight (kg)
8143-2004	-	M4	12	5	8	0.01
8143-20045	8143-20045R	M4	16	7	8	0.01
8143-20048	-	M5	16	7	7	0.01
8143-2005	8143-2005R	M5	18	8	10	0.01
8143-20055	-	M5	20	8.5	10	0.01
8143-20058	-	M6	20	8	9	0.01
8143-201	8143-201R	M6	22	9.3	13	0.01
8143-202	-	M6	25	10.5	12	0.01
8143-2025	-	M6	36	16	22	0.03
8143-203	8143-203R	M8	25	12	20	0.01
8143-2035	-	M8	28	12	20	0.01
8143-204	8143-204R	M8	32	13	14	0.02
8143-205	-	M10	32	12.5	18	0.02
8143-206	8143-206R	M10	36	16	20	0.03
8143-207	8143-207R	M10	40	21	23	0.04
8143-2075	-	M10	45	21	20	0.06
8143-208	8143-2085R	M12	40	21	23	0.04
8143-2085	-	M12	45	21	27	0.06
8143-209	-	M12	50	22.5	31	0.08
8143-210	-	M12	56	25.8	20	0.13

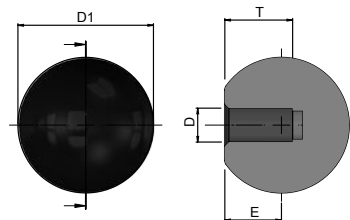


Ball Knob - Bakelite with Steel Zinc Plated Insert WDS 8143

Knob - PF31 (Bakelite)

Black	Red	D	D1	E	T	Weight (kg)
8143-2104	-	M4	16	7.3	9	0.01
8143-2105	-	M5	18	7.5	10	0.01
8143-2107	-	M5	20	8.5	10	0.01
8143-2115	8143-2115R	M6	22	9.2	11	0.01
8143-212	-	M6	25	11.5	12	0.02
8143-211	-	M6	20	8	6.5	0.01
8143-213	8143-213R	M8	28	10.5	11	0.02
8143-214	-	M8	30	13.5	16	0.03
8143-2153	-	M8	32	13	12	0.03
8143-2158	-	M10	32	13	12	0.03
8143-216	8143-216R	M10	35	15.5	14	0.05
8143-217	-	M10	40	17.5	22	0.06
8143-2175	-	M10	45	20.7	20	0.08
8143-218	8143-218R	M12	40	17.5	21	0.08
8143-219	-	M12	50	22.5	21	0.11
8143-220	-	M12	56	25	22	0.15

TP



WDS 8143 Ball Knob Push Fit - Black Thermoplastic

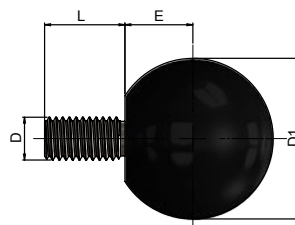
Thermoplastic Black

This item is a push fit on corresponding diameter to tolerance h9

WDS No.	D	D1	E	T	Weight (kg)
8143-221	8	22	9	14	0.01
8143-2215	10	28	12	20	0.01
8143-222	10	30	13	22	0.02
8143-223	12	30	13	22	0.02
8143-225	12	40	18	26	0.03
8143-226	14	40	18	28	0.03
8143-227	16	45	20.5	28	0.04

ZP

BK

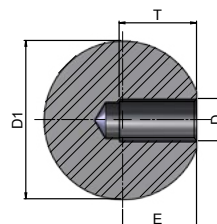


WDS 8143 Ball Knob - Black Bakelite with Zinc Plated Steel Male Thread

Body - PF31 (Bakelite)

Thread - Zinc Plated Steel

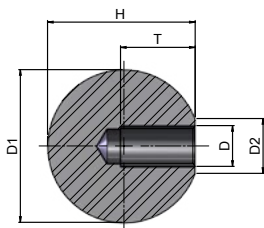
WDS No.	D	D1	E	L	Weight (kg)
8143-429	M4	16	7.3	8	0.01
8143-430	M5	18	8.5	10	0.01
8143-431	M6	22	9.2	10	0.01
8143-433	M8	30	13	15	0.03
8143-436	M10	45	20.7	20	0.09
8143-438	M12	56	25.8	25	0.16



WDS 8186 Ball Knob - Steel

Steel, chemical black finish

WDS No.	D	D1	E	T	Weight (kg)
8186-201	M6	25	12	13	0.06
8186-202	M8	30	14	16	0.11
8186-203	M10	35	16	18	0.16
8186-204	M12	45	21	22	0.34
8186-205	M16	57	27	28	0.71

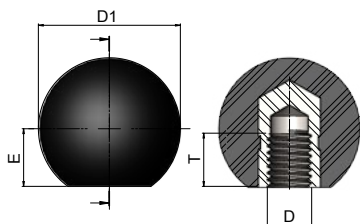


AL

Ball Knob - Aluminium WDS 8202

Aluminium
Polished finish

WDS No.	D	D1	D2	H	T	Weight (kg)
8202-201	M4	16	8	15	7	0.01
8202-202	M5	20	12	18	9	0.01
8202-203	M6	25	15	22.5	11	0.02
8202-204	M8	32	18	29	14.5	0.04
8202-205	M10	40	22	37	18	0.08
8202-206	M12	50	28	46	21	0.17



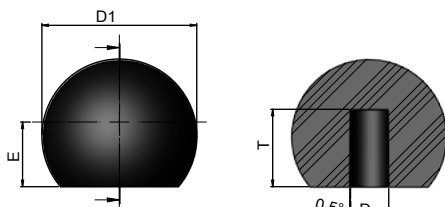
ZP

TP

Thermoplastic Ball Knobs - Steel Threaded Insert WDS 8209

PA6 Thermoplastic Matt Black
Insert - Zinc Plated Steel

WDS No.	D	D1	E	T (Min)	Weight (kg)
8209-10520	M5	20	8	7.5	0.01
8209-10620	M6	20	8	7.5	0.01
8209-10625	M6	25	10	9	0.02
8209-10825	M8	25	10	9	0.02
8209-10832	M8	32	13	12	0.03
8209-11032	M10	32	13	12	0.03



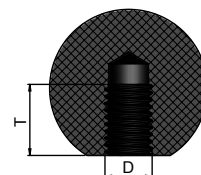
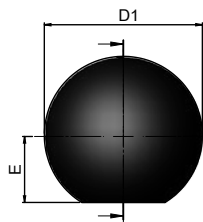
TP

Thermoplastic Ball Knobs - Taper Push Fit WDS 8209

PA6 Thermoplastic Matt Black

WDS No.	D	D1	E	T (Min)	Weight (kg)
8209-30520	5	20	8	12	0.01
8209-30625	6	25	10	15	0.01
8209-30825	8	25	10	15	0.01
8209-30832	8	32	13	15	0.02
8209-31032	10	32	13	15	0.02
8209-31040	10	40	17	20	0.04
8209-31240	12	40	17	20	0.04

TP

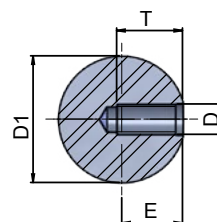


WDS 8209 Thermoplastic Ball Knobs - Moulded Thread

PA6 Thermoplastic Matt Black

WDS No.	D	D1	E	T (Min)	Weight (kg)
8209-20416	M4	16	7	7	0.01
8209-20516	M5	16	7	7	0.01
8209-20520	M5	20	8	7.5	0.01
8209-20620	M6	20	8	7.5	0.01
8209-20625	M6	25	10	9	0.01
8209-20825	M8	25	10	9	0.01
8209-20832	M8	32	13	12	0.03
8209-21032	M10	32	13	12	0.02
8209-21040	M10	40	17	18	0.04
8209-21240	M12	40	17	18	0.04

316

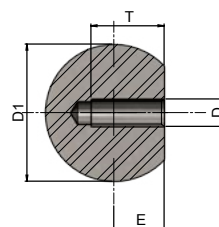


WDS 8230 Ball Knob - 316 Stainless Steel

BS 970 Gr 316S11

WDS No.	D	D1	E	T	Weight (kg)
8230-206	M6	25	12	13	0.06
8230-208	M8	30	14	16	0.11
8230-210	M10	35	16	18	0.16
8230-212	M12	45	21	22	0.34

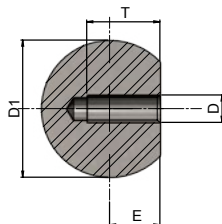
304



WDS 8231 Ball Knob - 304 Stainless Steel

304 Stainless Steel

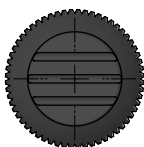
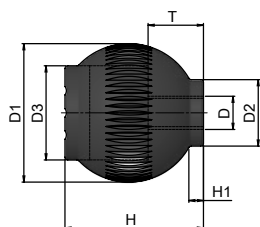
WDS No.	D	D1	E	T	Weight (kg)
8231-203	M3	15	5.5	8	0.01
8231-204	M4	20	8	9	0.01
8231-205	M5	20	8	9	0.01
8231-206	M6	25	10	11	0.06
8231-208	M8	32	13	14.5	0.12
8231-210	M10	40	17	18	0.25
8231-212	M12	50	20	24	0.49



Stainless Steel Ball Knob with Matt Finish WDS 8321

304 Stainless Steel

WDS No.	D	D1	E	T	Weight (kg)
8231-103	M3	15	5.5	8	0.01
8231-104	M4	20	8	9	0.01
8231-105	M5	20	8	9	0.01
8231-106	M6	25	10	11	0.06
8231-108	M8	32	13	14.5	0.12
8231-110	M10	40	17	18	0.25
8231-112	M12	50	20	24	0.49



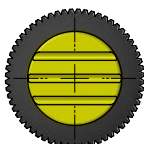
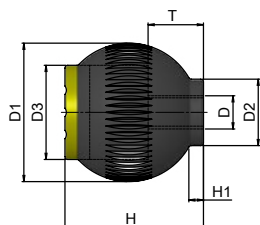
ZP

TP

Grip Ball - Thermoplastic With Steel Insert WDS 8470

Body - Thermoplastic
Insert - Zinc Plated Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	D3	H	H1	T	Weight (kg)
8470-202BG	8470-202PG	8470-202CY	8470-202TR	M6	25	12	17	25	2.5	10	0.02
8470-204BG	8470-204PG	8470-204CY	8470-204TR	M8	32	15.5	19	33	3.2	14	0.02
8470-206BG	8470-206PG	8470-206CY	8470-206TR	M10	40	19	23	41.5	4	14	0.04
8470-208BG	8470-208PG	8470-208CY	8470-208TR	M10	50	24	31	51	5	14	0.07
8470-210BG	8470-210PG	8470-210CY	8470-210TR	M12	50	24	31	51	5	18	0.08



303

TP

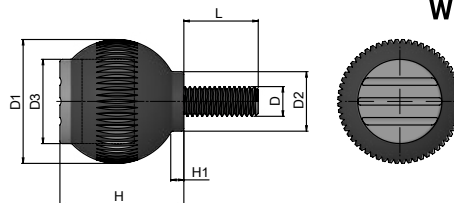
Grip Ball - Thermoplastic With 303 Stainless Steel Insert WDS 8470

Body - Thermoplastic
Insert - 303 Stainless Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	D3	H	H1	T	Weight (kg)
8470-302BG	8470-302PG	8470-302CY	8470-302TR	M6	25	12	17	25	2.5	10	0.01
8470-304BG	8470-304PG	8470-304CY	8470-304TR	M8	32	15.5	19	33	3.2	14	0.02
8470-306BG	8470-306PG	8470-306CY	8470-306TR	M10	40	19	23	41.5	4	14	0.04
8470-308BG	8470-308PG	8470-308CY	8470-308TR	M10	50	24	31	51	5	14	0.07
8470-310BG	8470-310PG	8470-310CY	8470-310TR	M12	50	24	31	51	5	18	0.07

ZP

TP



WDS 8470 Grip Ball - Thermoplastic With Steel Screw

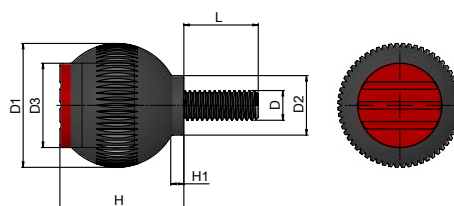
Body - Thermoplastic

Screw - Zinc Plated Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	D3	H	H1	L	Weight (kg)
8470-402BG	8470-402PG	8470-402CY	8470-402TR	M6	25	12	17	25	2.5	15	0.01
8470-404BG	8470-404PG	8470-404CY	8470-404TR	M6	25	12	17	25	2.5	20	0.01
8470-406BG	8470-406PG	8470-406CY	8470-406TR	M6	25	12	17	25	2.5	25	0.01
8470-408BG	8470-408PG	8470-408CY	8470-408TR	M6	25	12	17	25	2.5	30	0.01
8470-410BG	8470-410PG	8470-410CY	8470-410TR	M8	32	15.5	19	33	3.2	20	0.03
8470-412BG	8470-412PG	8470-412CY	8470-412TR	M8	32	15.5	19	33	3.2	25	0.04
8470-414BG	8470-414PG	8470-414CY	8470-414TR	M8	32	15.5	19	33	3.2	30	0.03
8470-416BG	8470-416PG	8470-416CY	8470-416TR	M8	32	15.5	19	33	3.2	40	0.03
8470-418BG	8470-418PG	8470-418CY	8470-418TR	M10	40	19	23	41.5	4	20	0.05
8470-420BG	8470-420PG	8470-420CY	8470-420TR	M10	40	19	23	41.5	4	30	0.05
8470-422BG	8470-422PG	8470-422CY	8470-422TR	M10	40	19	23	41.5	4	40	0.06
8470-424BG	8470-424PG	8470-424CY	8470-424TR	M10	50	24	31	51	5	20	0.07
8470-426BG	8470-426PG	8470-426CY	8470-426TR	M10	50	24	31	51	5	30	0.1
8470-428BG	8470-428PG	8470-428CY	8470-428TR	M10	50	24	31	51	5	40	0.08
8470-430BG	8470-430PG	8470-430CY	8470-430TR	M12	50	24	31	51	5	20	0.1
8470-432BG	8470-432PG	8470-432CY	8470-432TR	M12	50	24	31	51	5	30	0.11
8470-434BG	8470-434PG	8470-434CY	8470-434TR	M12	50	24	31	51	5	40	0.11

303

TP



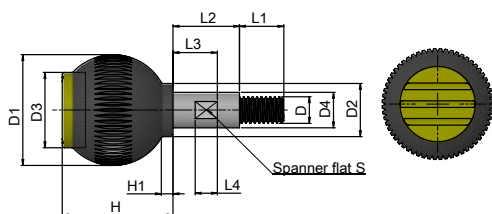
WDS 8470 Grip Ball - Thermoplastic With 303 Stainless Steel Screw

Body - Thermoplastic

Screw - 303 Stainless Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	D3	H	H1	L	Weight (kg)
8470-502BG	8470-502PG	8470-502CY	8470-502TR	M6	25	12	17	25	2.5	15	0.01
8470-504BG	8470-504PG	8470-504CY	8470-504TR	M6	25	12	17	25	2.5	20	0.02
8470-506BG	8470-506PG	8470-506CY	8470-506TR	M6	25	12	17	25	2.5	25	0.02
8470-508BG	8470-508PG	8470-508CY	8470-508TR	M6	25	12	17	25	2.5	30	0.01
8470-510BG	8470-510PG	8470-510CY	8470-510TR	M8	32	15.5	19	33	3.2	20	0.03
8470-512BG	8470-512PG	8470-512CY	8470-512TR	M8	32	15.5	19	33	3.2	25	0.04
8470-514BG	8470-514PG	8470-514CY	8470-514TR	M8	32	15.5	19	33	3.2	30	0.03
8470-516BG	8470-516PG	8470-516CY	8470-516TR	M8	32	15.5	19	33	3.2	40	0.03
8470-518BG	8470-518PG	8470-518CY	8470-518TR	M10	40	19	23	41.5	4	20	0.06
8470-520BG	8470-520PG	8470-520CY	8470-520TR	M10	40	19	23	41.5	4	30	0.06

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	D3	H	H1	L	Weight (kg)
8470-522BG	8470-522PG	8470-522CY	8470-522TR	M10	40	19	23	41.5	4	40	0.06
8470-524BG	8470-524PG	8470-524CY	8470-524TR	M10	50	24	31	51	5	20	0.07
8470-526BG	8470-526PG	8470-526CY	8470-526TR	M10	50	24	31	51	5	30	0.1
8470-528BG	8470-528PG	8470-528CY	8470-528TR	M10	50	24	31	51	5	40	0.08
8470-530BG	8470-530PG	8470-530CY	8470-530TR	M12	50	24	31	51	5	20	0.1
8470-532BG	8470-532PG	8470-532CY	8470-532TR	M12	50	24	31	51	5	30	0.11
8470-534BG	8470-534PG	8470-534CY	8470-534TR	M12	50	24	31	51	5	40	0.11



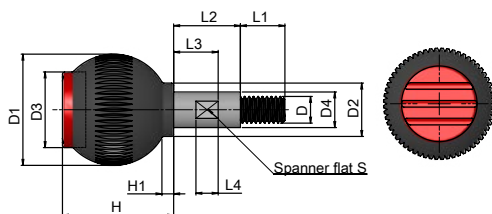
ZP

TP

Grip Ball with Revolving Spindle - Thermoplastic with Steel Spindle WDS 8470

Body - Thermoplastic
Spindle - Zinc Plated Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	D3	D4	H	H1	L1	L2	L3	L4	S	Weight (kg)
8470-602BG	8470-602PG	8470-602CY	8470-602TR	M6	25	12	17	8	25	2.5	10	15	5	5	7	0.02
8470-604BG	8470-604PG	8470-604CY	8470-604TR	M8	32	15.5	19	10	33	3.2	12	20	6	6	8	0.05
8470-606BG	8470-606PG	8470-606CY	8470-606TR	M10	40	19	23	13	41.5	4	15	25	7	9	10	0.08
8470-608BG	8470-608PG	8470-608CY	8470-608TR	M12	50	24	31	16	51	5	20	30	8	8	13	0.16



303

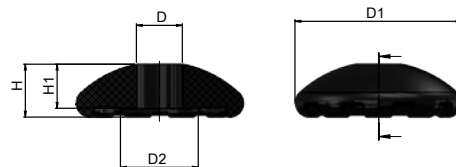
TP

Grip Ball with Revolving Spindle - Thermoplastic with 303 Stainless Steel Spindle WDS 8470

Body - Thermoplastic
Spindle - 303 Stainless Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	D3	D4	H	H1	L1	L2	L3	L4	S	Weight (kg)
8470-702BG	8470-702PG	8470-702CY	8470-702TR	M6	25	12	17	8	25	2.5	10	15	5	5	7	0.02
8470-704BG	8470-704PG	8470-704CY	8470-704TR	M8	32	15.5	19	10	33	3.2	12	20	6	6	8	0.05
8470-706BG	8470-706PG	8470-706CY	8470-706TR	M10	40	19	23	13	41.5	4	15	25	7	9	10	0.09
8470-708BG	8470-708PG	8470-708CY	8470-708TR	M12	50	25	31	16	51	5	20	30	8	8	13	0.16

BK



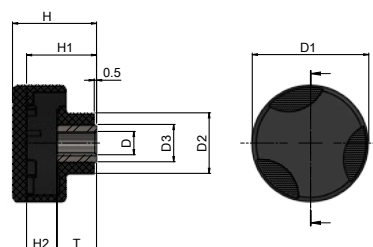
WDS 8113 Clamping Device Wheel

PF74 (Bakelite)

WDS No.	D	D1	D2	H	H1	Weight (kg)
8113-1660	16.1/16.0	60	28	20	16	0.04
8113-2280	22.1/22.0	80	38	25	20	0.08
8113-2695	26.1/26.0	95	45	30	25	0.15

BR

NYL



WDS 8221 Hand Knob - Nylon with Brass Insert

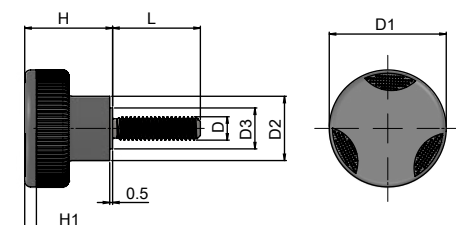
Body - Nylon

Insert - Brass

WDS No.	D	D1	D2	D3	H	H1	H2	T	Weight (kg)
8221-201	M4	20	11	7	15	13	4	9.5	0.01
8221-203	M5	25	13	8	18	15	6.5	8.5	0.01
8221-204	M5	30	15	8	21	18	6.5	11.5	0.01
8221-206	M6	30	15	9	21	18	6.5	11.5	0.01
8221-208	M8	35	17.5	11	24	20	9	11	0.01
8221-209	M10	35	17.5	14	24	20	9	11	0.02

ZP

NYL

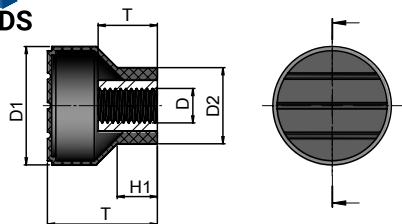


WDS 8222 Hand Screw - Nylon with Steel Zinc Plated Screw

Body - Nylon PA6

Screw - Zinc Plated Steel

WDS No.	D	D1	D2	D3	H	H1	L	Weight (kg)
8222-2042020	M4	20	11	7	15	2	20	0.01
8222-2052520	M5	20	11	8	15	2	25	0.01
8222-2062825	M6	25	13	10	18	3	28	0.01
8222-2062830	M6	30	15	10	21	3	28	0.02
8222-2083230	M8	30	17.5	12	21	3	32	0.02
8222-2103035	M10	35	17.5	14	24	4	30	0.03

**WDS**

ROUND KNOBS

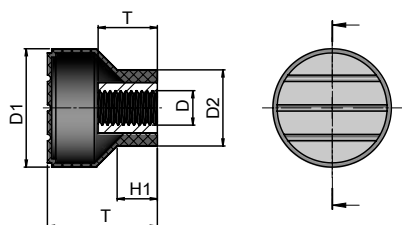
ZP

TP

Knurled Knob - Thermoplastic with Steel Insert **WDS 8440**

Body - Thermoplastic
Insert - Zinc Plated Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	H	H1	T	Weight (kg)
8440-202BG	8440-202PG	8440-202CY	8440-202TR	M4	21	14	22	8	10	0.01
8440-204BG	8440-204PG	8440-204CY	8440-204TR	M5	21	14	22	8	10	0.01
8440-206BG	8440-206PG	8440-206CY	8440-206TR	M6	21	14	22	8	10	0.01
8440-208BG	8440-208PG	8440-208CY	8440-208TR	M8	26	18	26	9.5	14	0.02
8440-210BG	8440-210PG	8440-210CY	8440-210TR	M8	34	22	36	13	14	0.02
8440-212BG	8440-212PG	8440-212CY	8440-212TR	M10	34	22	36	13	14	0.02



303

TP

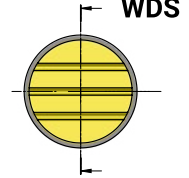
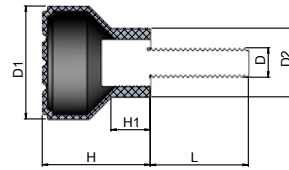
Knurled Knob - Black Grey - Thermoplastic with Stainless Steel Insert **WDS 8440**

Body - Thermoplastic
Insert - 303 Stainless Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	H	H1	T	Weight (kg)
8440-302BG	8440-302PG	8440-302CY	8440-302TR	M4	21	14	22	8	10	0.01
8440-304BG	8440-304PG	8440-304CY	8440-304TR	M5	21	14	22	8	10	0.01
8440-306BG	8440-306PG	8440-306CY	8440-306TR	M6	21	14	22	8	10	0.01
8440-308BG	8440-308PG	8440-308CY	8440-308TR	M8	26	18	26	9.5	14	0.02
8440-310BG	8440-310PG	8440-310CY	8440-310TR	M8	34	22	36	13	14	0.03
8440-312BG	8440-312PG	8440-312CY	8440-312TR	M10	34	22	36	13	14	0.02

ZP

TP



WDS 8440 Knurled Knob - Thermoplastic with Steel Screw

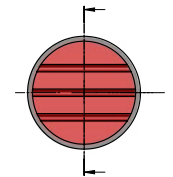
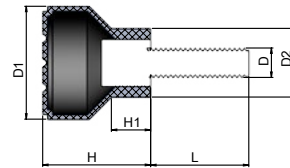
Body - Thermoplastic

Screw - Zinc Plated Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	H	H1	L	Weight (kg)
8440-402BG	8440-402PG	8440-402CY	8440-402TR	M5	21	14	22	8	10	0.01
8440-404BG	8440-404PG	8440-404CY	8440-404TR	M5	21	14	22	8	15	0.01
8440-406BG	8440-406PG	8440-406CY	8440-406TR	M5	21	14	22	8	20	0.01
8440-408BG	8440-408PG	8440-408CY	8440-408TR	M5	21	14	22	8	25	0.01
8440-410BG	8440-410PG	8440-410CY	8440-410TR	M6	21	14	22	8	15	0.01
8440-412BG	8440-412PG	8440-412CY	8440-412TR	M6	21	14	22	8	20	0.01
8440-414BG	8440-414PG	8440-414CY	8440-414TR	M6	21	14	22	8	25	0.02
8440-416BG	8440-416PG	8440-416CY	8440-416TR	M6	21	14	22	8	30	0.02
8440-418BG	8440-418PG	8440-418CY	8440-418TR	M8	26	18	26	9.5	20	0.02
8440-420BG	8440-420PG	8440-420CY	8440-420TR	M8	26	18	26	9.5	25	0.04
8440-422BG	8440-422PG	8440-422CY	8440-422TR	M8	26	18	26	9.5	30	0.04
8440-424BG	8440-424PG	8440-424CY	8440-424TR	M8	26	18	26	9.5	40	0.04
8440-426BG	8440-426PG	8440-426CY	8440-426TR	M10	34	22	36	13	20	0.03
8440-428BG	8440-428PG	8440-428CY	8440-428TR	M10	34	22	36	13	30	0.03
8440-430BG	8440-430PG	8440-430CY	8440-430TR	M10	34	22	36	13	40	0.05

303

TP

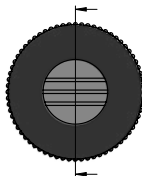
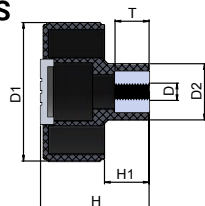


WDS 8440 Knurled Knob - Thermoplastic with Stainless Steel Screw

Body - Thermoplastic

Screw - 303 Stainless Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	H	H1	L	Weight (kg)
8440-502BG	8440-502PG	8440-502CY	8440-502TR	M5	21	14	22	8	10	0.01
8440-504BG	8440-504PG	8440-504CY	8440-504TR	M5	21	14	22	8	15	0.01
8440-506BG	8440-506PG	8440-506CY	8440-506TR	M5	21	14	22	8	20	0.01
8440-508BG	8440-508PG	8440-508CY	8440-508TR	M5	21	14	22	8	25	0.01
8440-510BG	8440-510PG	8440-510CY	8440-510TR	M6	21	14	22	8	15	0.01
8440-512BG	8440-512PG	8440-512CY	8440-512TR	M6	21	14	22	8	20	0.01
8440-514BG	8440-514PG	8440-514CY	8440-514TR	M6	21	14	22	8	25	0.01
8440-516BG	8440-516PG	8440-516CY	8440-516TR	M6	21	14	22	8	30	0.01
8440-518BG	8440-518PG	8440-518CY	8440-518TR	M8	26	18	26	9.5	20	0.03
8440-520BG	8440-520PG	8440-520CY	8440-520TR	M8	26	18	26	9.5	25	0.02
8440-522BG	8440-522PG	8440-522CY	8440-522TR	M8	26	18	26	9.5	30	0.04
8440-524BG	8440-524PG	8440-524CY	8440-524TR	M8	26	18	26	9.5	40	0.02
8440-526BG	8440-526PG	8440-526CY	8440-526TR	M10	34	22	36	13	20	0.03
8440-528BG	8440-528PG	8440-528CY	8440-528TR	M10	34	22	36	13	30	0.03
8440-530BG	8440-530PG	8440-530CY	8440-530TR	M10	34	22	36	13	40	0.05



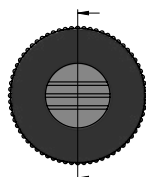
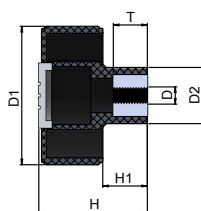
ZP

TP

Knurled Hand Knob WDS 8485

Body - Thermoplastic
Insert - Zinc Plated Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	H	H1	T	Weight (kg)
8485-202BG	8485-202PG	8485-202CY	8485-202TR	M5	40	16.5	31	13	10	12.5
8485-204BG	8485-204PG	8485-204CY	8485-204TR	M6	40	16.5	31	13	10	12.2
8485-206BG	8485-206PG	8485-206CY	8485-206TR	M8	40	16.5	31	13	14	11.5
8485-208BG	8485-208PG	8485-208CY	8485-208TR	M8	50	18	36	15	14	14.5
8485-210BG	8485-210PG	8485-210CY	8485-210TR	M10	50	18	36	15	14	14.1
8485-212BG	8485-212PG	8485-212CY	8485-212TR	M10	63	22	41	17	14	18.5
8485-214BG	8485-214PG	8485-214CY	8485-214TR	M12	63	22	41	17	18	17.9
8485-304BG	8485-304PG	8485-304CY	8485-304TR	M6	40	16.5	31	13	10	12.2
8485-308BG	8485-308PG	8485-308CY	8485-308TR	M8	50	18	36	15	14	14.5
8485-312BG	8485-312PG	8485-312CY	8485-312TR	M10	63	22	41	17	14	18.5



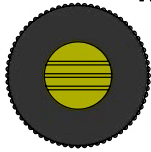
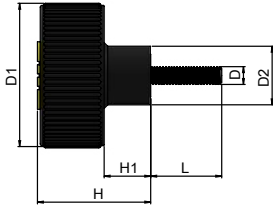
303

TP

Knurled Hand Knob WDS 8485

Body - Thermoplastic
Insert - 303 Stainless Steel

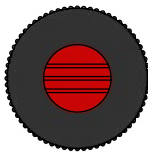
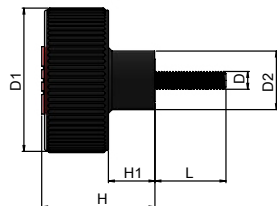
Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	H	H1	T	Weight (kg)
8485-402BG	8485-402PG	8485-402CY	8485-402TR	M5	40	16.5	31	13	10	12.5
8485-404BG	8485-404PG	8485-404CY	8485-404TR	M6	40	16.5	31	13	10	12.2
8485-406BG	8485-406PG	8485-406CY	8485-406TR	M8	40	16.5	31	13	14	11.5
8485-408BG	8485-408PG	8485-408CY	8485-408TR	M8	50	18	36	15	14	14.5
8485-410BG	8485-410PG	8485-410CY	8485-410TR	M10	50	18	36	15	14	14.1
8485-412BG	8485-412PG	8485-412CY	8485-412TR	M10	63	22	41	17	14	18.5
8485-414BG	8485-414PG	8485-414CY	8485-414TR	M12	63	22	41	17	18	17.9



WDS 8485 Knurled Hand Screw - Steel

Body - Thermoplastic
Screw - Zinc Plated Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	H	H1	L	Weight (kg)
8485-502BG	8485-502PG	8485-502CY	8485-502TR	M5	40	16.5	31	13	10	0.02
8485-504BG	8485-504PG	8485-504CY	8485-504TR	M5	40	16.5	31	13	20	0.02
8485-506BG	8485-506PG	8485-506CY	8485-506TR	M5	40	16.5	31	13	40	0.02
8485-508BG	8485-508PG	8485-508CY	8485-508TR	M6	40	16.5	31	13	10	0.02
8485-510BG	8485-510PG	8485-510CY	8485-510TR	M6	40	16.5	31	13	20	0.02
8485-512BG	8485-512PG	8485-512CY	8485-512TR	M6	40	16.5	31	13	40	0.02
8485-514BG	8485-514PG	8485-514CY	8485-514TR	M8	40	16.5	31	13	15	0.02
8485-516BG	8485-516PG	8485-516CY	8485-516TR	M8	40	16.5	31	13	30	0.03
8485-518BG	8485-518PG	8485-518CY	8485-518TR	M8	40	16.5	31	13	60	0.04
8485-520BG	8485-520PG	8485-520CY	8485-520TR	M8	50	18	36	15	15	0.03
8485-522BG	8485-522PG	8485-522CY	8485-522TR	M8	50	18	36	15	30	0.04
8485-524BG	8485-524PG	8485-524CY	8485-524TR	M8	50	18	36	15	60	0.05
8485-526BG	8485-526PG	8485-526CY	8485-526TR	M10	50	18	36	15	20	0.04
8485-528BG	8485-528PG	8485-528CY	8485-528TR	M10	50	18	36	15	30	0.05
8485-530BG	8485-530PG	8485-530CY	8485-530TR	M10	50	18	36	15	60	0.06
8485-532BG	8485-532PG	8485-532CY	8485-532TR	M10	63	22	41	17	20	0.05
8485-534BG	8485-534PG	8485-534CY	8485-534TR	M10	63	22	41	17	30	0.06
8485-536BG	8485-536PG	8485-536CY	8485-536TR	M10	63	22	41	17	60	0.07
8485-538BG	8485-538PG	8485-538CY	8485-538TR	M12	63	22	41	17	30	0.07
8485-540BG	8485-540PG	8485-540CY	8485-540TR	M12	63	22	41	17	60	0.09

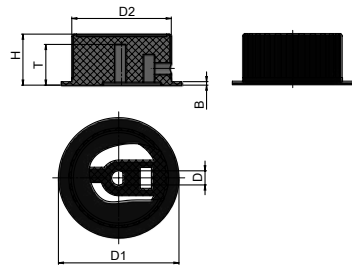


Knurled Hand Screw - Stainless Steel **WDS 8485**

Body - Thermoplastic
Screw - 303 Stainless Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	H	H1	L	Weight (kg)
8485-602BG	8485-602PG	8485-602CY	8485-602TR	M5	40	16.5	31	13	10	0.02
8485-604BG	8485-604PG	8485-604CY	8485-604TR	M5	40	16.5	31	13	20	0.02
8485-608BG	8485-608PG	8485-608CY	8485-608TR	M6	40	16.5	31	13	10	0.02
8485-610BG	8485-610PG	8485-610CY	8485-610TR	M6	40	16.5	31	13	20	0.02
8485-612BG	8485-612PG	8485-612CY	8485-612TR	M6	40	16.5	31	13	40	0.02
8485-614BG	8485-614PG	8485-614CY	8485-614TR	M8	40	16.5	31	13	15	0.02
8485-616BG	8485-616PG	8485-616CY	8485-616TR	M8	40	16.5	31	13	30	0.03
8485-618BG	8485-618PG	8485-618CY	8485-618TR	M8	40	16.5	31	13	60	0.04
8485-620BG	8485-620PG	8485-620CY	8485-620TR	M8	50	18	36	15	15	0.03
8485-622BG	8485-622PG	8485-622CY	8485-622TR	M8	50	18	36	15	30	0.04
8485-624BG	8485-624PG	8485-624CY	8485-624TR	M8	50	18	36	15	60	0.05
8485-626BG	8485-626PG	8485-626CY	8485-626TR	M10	50	18	36	15	20	0.04
8485-628BG	8485-628PG	8485-628CY	8485-628TR	M10	50	18	36	15	30	0.05
8485-630BG	8485-630PG	8485-630CY	8485-630TR	M10	50	18	36	15	60	0.06
8485-632BG	8485-632PG	8485-632CY	8485-632TR	M10	63	22	41	17	20	0.05
8485-634BG	8485-634PG	8485-634CY	8485-634TR	M10	63	22	41	17	30	0.06
8485-636BG	8485-636PG	8485-636CY	8485-636TR	M10	63	22	41	17	60	0.07

BK



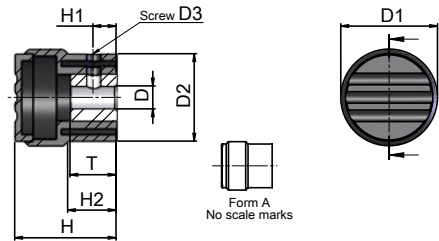
WDS 8112 Control Knob - D Fitting

PF31 (Bakelite)
Secured with M5 Screw

WDS No.	B	D	D1	D2	H	H1	T	Weight (kg)
8112-203	1.3	6.1	52	43	22	2.2	19.3	0.03

ZP

TP



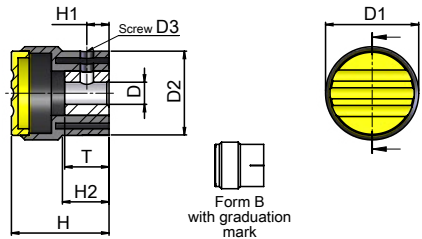
WDS 8450 Graduated Knob without Scale Marks

Body - Thermoplastic
Steel parts - Zinc Plated

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D (H8)	D1	D2	D3	H	H1	H2	T	Weight (kg)
8450-202BG	8450-202PG	8450-202CY	8450-202TR	5	21	19	M3	22	5	10.5	10	0.01
8450-204BG	8450-204PG	8450-204CY	8450-204TR	6	26	23	M3	26	6	12	10	0.02
8450-206BG	8450-206PG	8450-206CY	8450-206TR	8	34	31	M4	36	7	17.5	14	0.03

ZP

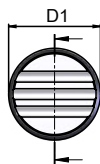
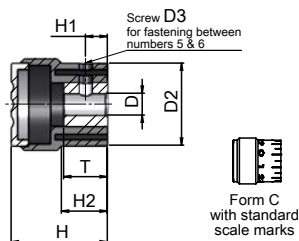
TP



WDS 8450 Graduated Knob with Graduation Mark

Body - Thermoplastic
Steel parts - Zinc Plated

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D (H8)	D1	D2	D3	H	H1	H2	T	Weight (kg)
8450-302BG	8450-302PG	8450-302CY	8450-302TR	5	21	19	M3	22	5	10.5	10	0.01
8450-304BG	8450-304PG	8450-304CY	8450-304TR	6	26	23	M3	26	6	12	10	0.02
8450-306BG	8450-306PG	8450-306CY	8450-306TR	8	34	31	M4	36	7	17.5	14	0.03



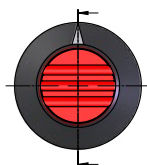
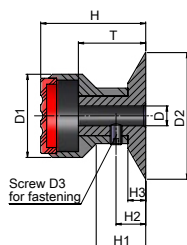
ZP

TP

Graduated Knob with Standard Scale Marks WDS 8450

Body - Thermoplastic
Steel parts - Zinc Plated

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D (H8)	D1	D2	D3	H	H1	H2	T	Weight (kg)
8450-402BG	8450-402PG	8450-402CY	8450-402TR	5	21	19	M3	22	5	10.5	10	0.01
8450-404BG	8450-404PG	8450-404CY	8450-404TR	6	26	23	M3	26	6	12	10	0.02
8450-406BG	8450-406PG	8450-406CY	8450-406TR	8	34	31	M4	36	7	17.5	14	0.03



AL

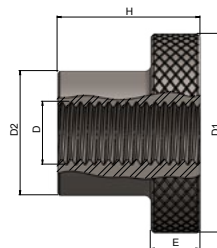
TP

Adjusting Knob WDS 8455

Body - Thermoplastic
Disc - Black anodised aluminium

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D (H7)	D1	D2	D3	H	H1	H2	H3	T	Weight (kg)
8455-202BG	8455-202PG	8455-202CY	8455-202TR	5	21	32	M3	26.5	12.5	7.5	4.5	17	0.01
8455-204BG	8455-204PG	8455-204CY	8455-204TR	6	26	40	M4	31.5	15	9.5	5.5	20.5	0.03
8455-206BG	8455-206PG	8455-206CY	8455-206TR	8	34	52	M4	43	20	12	7	22	0.03

IN"



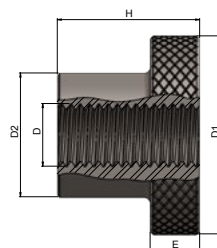
WDS 520 Thumb Nut - Steel - Inch BA

Steel BS.970 Gr.230M07

Chemical black finish

WDS No.	D	D1	D2	E	H	Weight (kg)
520-01	2-BA	19	9.5	4	11.1	0.01

IN"

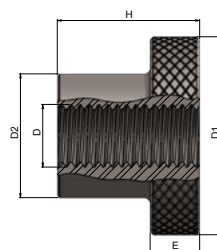


WDS 520 Thumb Nut - Steel - Inch BSW

Steel BS.970 Gr.230M07

Chemical black finish

WDS No.	D	D1	D2	E	H	Weight (kg)
520-12	1/4 BSW	25	12.7	4.8	15.9	0.03
520-13	5/16 BSW	29	15.9	6.4	19	0.04
520-14	3/8 BSW	35	19.1	7.9	22.2	0.08

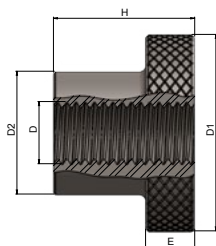


WDS 520 Thumb Nut - Steel - Metric

Steel BS.970 Gr.230M07

Chemical black finish

WDS No.	D	D1	D2	E	H	Weight (kg)
520-201	M4	16	8	3.5	9.5	0.01
520-202	M5	19	10	4	11.5	0.01
520-203	M6	25	12	5	15	0.02
520-204	M8	28	16	6	18	0.04
520-205	M10	32	20	8	23	0.09
520-206	M12	40	22	10	25	0.11

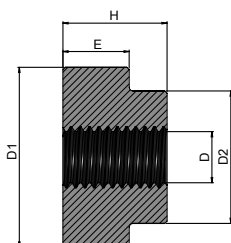


Thumb Nut - Steel - Inch UNC WDS 520

Steel BS.970 Gr.230M07

Chemical black finish

WDS No.	D	D1	D2	E	H	Weight (kg)
520-21	10 UNC	19	9.5	4	11.1	0.01
520-22	1/4 UNC	25	12.7	4.8	15.9	0.03
520-23	5/16 UNC	29	15.9	6.4	19	0.04
520-24	3/8 UNC	35	19.1	7.9	22.2	0.08

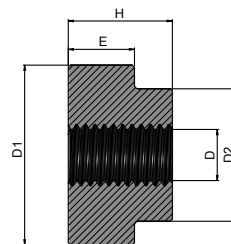


Thumb Nut - Steel - Inch WDS 522

Steel BS.970 Gr.230M07

Chemical black finish

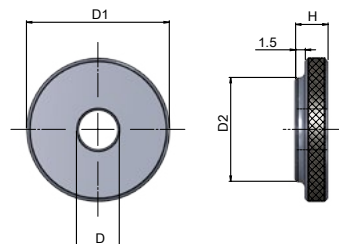
WDS No.	D (Inch)	D1	D2	E	H	Weight (kg)
522-19	2 BA	16	12	9	12	0.02
522-02	1/4 BSF	20	16	10	15	0.02
522-03	5/16 BSF	25	19	11	16	0.05
522-04	3/8 BSF	32	24	13	19	0.09
522-05	1/2 BSF	38	28	14	22	0.15
522-08	1/4 BSW	20	16	10	15	0.03
522-09	5/16 BSW	25	19	11	16	0.05
522-10	3/8 BSW	32	24	13	19	0.07
522-11	1/2 BSW	38	28	14	22	0.15
522-13	10 UNC	16	12	9	12	0.02
522-14	1/4 UNC	20	16	10	15	0.03
522-15	5/16 UNC	25	19	11	16	0.05
522-16	3/8 UNC	32	24	13	19	0.07
522-17	1/2 UNC	38	28	14	22	0.15



WDS 522 Thumb Nut - Steel - Metric

Steel BS.970 Gr.230M07

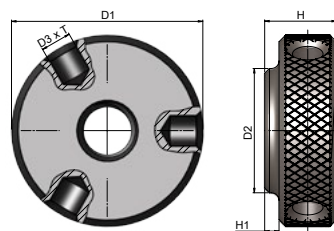
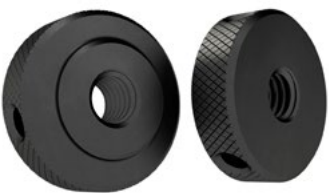
WDS No.	D	D1	D2	E	H	Weight (kg)
522-2004	M4	16	12	9	12	0.02
522-2005	M5	16	12	9	12	0.02
522-201	M6	20	16	10	15	0.03
522-202	M8	25	19	11	16	0.05
522-203	M10	32	24	13	19	0.09
522-204	M12	38	28.5	14	22	0.12
522-206	M16	40	30	14	22	0.12



WDS 612 Knurled Lock Nut - Steel

Steel BS.970 Gr.230M07

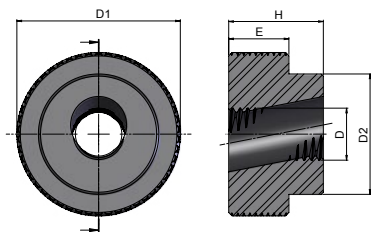
WDS No.	D	D1	D2	H	Weight (kg)
612-2004	M4	20	13	5	0.01
612-2005	M5	20	13	5	0.01
612-201	M6	22	16	5	0.01
612-202	M8	22	16	6	0.01
612-203	M10	28	22	6	0.03
612-204	M12	28	22	6	0.02
612-206	M16	28	22	6	0.02



WDS 613 Tommy Nuts - Steel

Steel BS.970 Gr.230M07

WDS No.	D	D1	D2	D3	H	H1	T	Weight (kg)
613-2004	M6	20	13	3.2	7.5	1.5	4.5	0.14
613-2006	M8	22	16	3.2	8.5	1.5	5	0.02
613-2008	M10	25	19	5.2	9.5	1.5	5	0.03
613-201	M12	32	26	6.2	11.5	1.5	7	0.05
613-202	M16	38	32	6.2	14.5	1.5	7	0.09
613-203	M20	45	38	8.2	17.5	1.5	7.5	0.15
613-204	M24	50	45	8.2	23.5	1.5	7.5	0.25

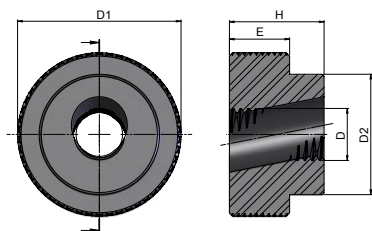


Quick Action Release Thumb Nut - Steel - Metric **WDS 669**

Steel BS.970 Gr.230M07

Chemical black finish

WDS No.	D	D1	D2	E	H	Weight (kg)
669-2505	M5	16	12	9	12	0.02
669-251	M6	20	16	10	15	0.03
669-252	M8	25	19	11	16	0.05
669-253	M10	32	24	13	19	0.09
669-254	M12	38	28.5	14	22	0.14



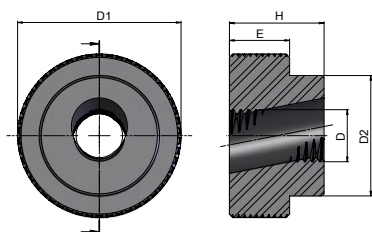
IN"

Quick Action Thumb Nut - Steel - Inch - BA/BSF **WDS 669**

Steel BS.970 Gr.230M07

Chemical black finish

WDS No.	D	D1	D2	E	H	Weight (kg)
669-51	1/4 BSF	20	16	10	15	0.03
669-67	2 BA	16	12	9	12	0.01



IN"

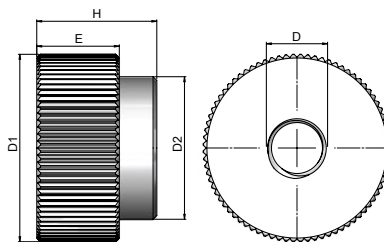
Quick Action Thumb Nut - Steel - Inch - BSW **WDS 669**

Steel BS.970 Gr.230M07

Chemical black finish

WDS No.	D	D1	D2	E	H	Weight (kg)
669-56	1/4 BSW	20	16	10	15	0.03
669-57	5/16 BSW	25	19	11	16	0.05
669-58	3/8 BSW	32	24	13	19	0.09
669-59	1/2 BSW	38	28.5	4	22	0.14

316

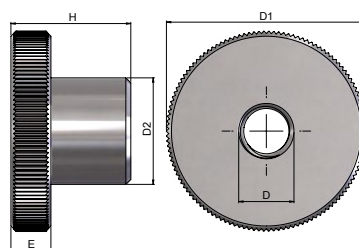


WDS 807 Thumb Nut - 316 Stainless Steel

Stainless Steel
BS 970 Gr 316S11

WDS No.	D	D1	D2	E	H	Weight (kg)
807-204	M4	16	12	9	12	0.02
807-205	M5	16	12	9	12	0.02
807-206	M6	20	16	10	15	0.03
807-208	M8	25	19	11	16	0.05
807-210	M10	30	24	13	20	0.09
807-212	M12	35	28.5	14	22	0.13

316

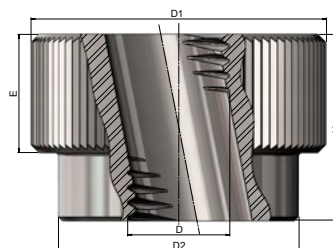


WDS 816 Thumb Nut - 316 Stainless Steel

Stainless Steel
BS 970 Gr 316S11

WDS No.	D	D1	D2	E	H	Weight (kg)
816-204	M4	16	8	3.5	9.5	0.01
816-205	M5	20	10	4	11.5	0.02
816-206	M6	25	12	5	15	0.02
816-208	M8	30	16	6	18	0.04
816-210	M10	32	20	8	23	0.08

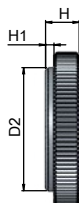
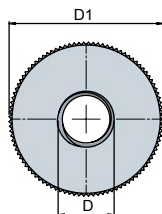
316



WDS 824 Quick Action Thumb Nut - 316 Stainless Steel

Stainless Steel
BS 970 Gr 316S11

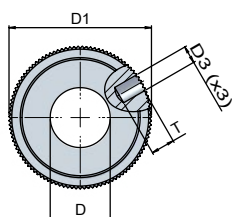
WDS No.	D	D1	D2	E	H	Weight (kg)
824-205	M5	16	12	9	12	0.01
824-206	M6	20	16	10	15	0.03
824-208	M8	25	20	11	16	0.05
824-210	M10	30	25	13	20	0.08
824-212	M12	35	28	14	22	0.12



Knurled Lock Nut - 316 Stainless Steel **WDS 836**

Stainless Steel
BS 970 Gr 316S11

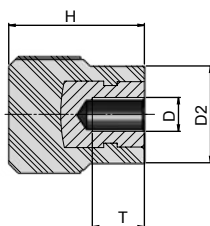
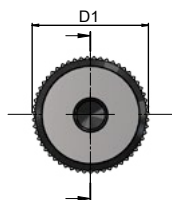
WDS No.	D	D1	D2	H	H1	Weight (kg)
836-204	M4	20	13	5	1.5	0.01
836-205	M5	20	13	5	1.5	0.1
836-206	M6	22	16	5	1.5	0.01
836-208	M8	22	16	6	1.5	0.14
836-210	M10	28	22	6	1.5	0.02
836-212	M12	28	22	6	1.5	0.02



Tommy Nuts - 316 Stainless Steel **WDS 837**

Stainless Steel
BS 970 Gr 316S11

WDS No.	D	D1	D2	D3	H	H1	T	Weight (kg)
837-206	M6	20	13	3.2	7.5	1.5	4.5	0.01
837-208	M8	22	16	3.2	8.5	1.5	5	0.02
837-210	M10	25	19	5.2	9.5	1.5	5	0.03
837-212	M12	32	26	6.2	11.5	1.5	7	0.06
837-216	M16	38	32	6.2	14.5	1.5	7	0.1



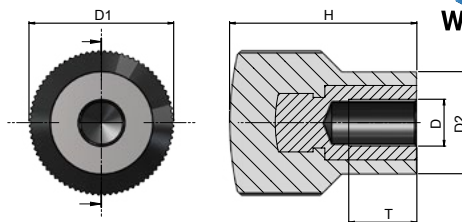
Thumb Nut **WDS 8151**

Bakelite, black
Insert - Brass

WDS No.	D	D1	D2	H	T	Weight (kg)
8151-211	M3	12	10	14	6	0.01
8151-212	M4	12	10	14	10	0.01
8151-213	M4	15	12	16	10	0.01
8151-214	M5	15	12	16	10	0.01
8151-215	M6	15	12	16	9	0.01

BR

BK



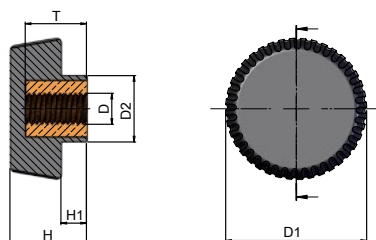
WDS 8151 Thumb Nut - Domed

Bakelite, black
Insert - Brass

WDS No.	D	D1	D2	H	T	Weight (kg)
8151-216	M5	17	12	22	10	0.01
8151-217	M6	17	12	22	9	0.01

ZP

TP



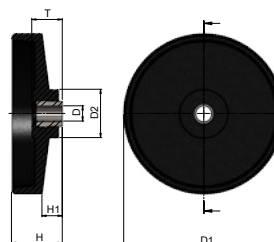
WDS 8169 Thumb Nut - Thermoplastic with Steel Zinc Plated Insert

Thermoplastic, black
Insert- Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	T	Weight (kg)
8169-206	M6	28	13	15	5	9	0.01
8169-207	M8	28	13	15	5	12	0.02

ZP

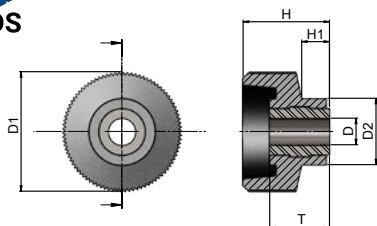
TP



WDS 8198 Hand Nut Thru-Hole - Concave - Thermoplastic with Steel Zinc Plated Insert

Thermoplastic, black
Insert- Zinc Plated Steel

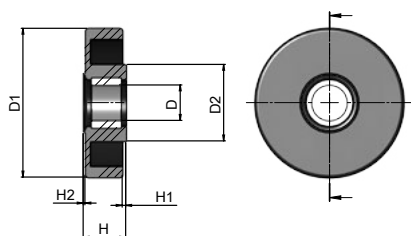
WDS No.	D	D1	D2	H	H1	T	Weight (kg)
8198-221	M6	70	19	20	7	12	0.01
8198-222	M8	70	19	20	7	12	0.03

ZP
BK


Thumb Nut - Bakelite with Steel Boss **WDS 8198**

PF31 Bakelite Black
Boss - Zinc Plated Steel

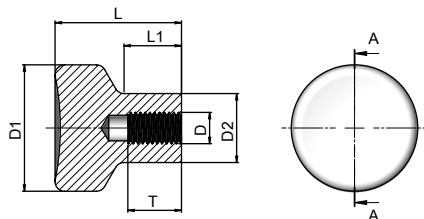
WDS No.	D	D1	D2	H	H1	T	Weight (kg)
8198-201	M4	18	10	13	5	9	0.01
8198-2025	M5	20	12	14	6	10	0.01
8198-202	M5	24	13	16	7	10	0.01
8198-2035	M6	24	13	16	7	10	0.01
8198-203	M6	30	15	18	7	11	0.01
8198-2045	M8	30	15	18	7	11	0.01
8198-204	M8	35	18	19	7	11	0.01
8198-205	M10	35	18	19	7	11	0.02


ZP
TP

Hand Nut Thru Hole - Thermoplastic with Steel Zinc Plated Insert **WDS 8198**

Thermoplastic, black
Insert- Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	H2	Weight (kg)
8198-212	M8	42	21	12	1	0.5	0.02
8198-213	M10	42	21	12	1	0.5	0.02

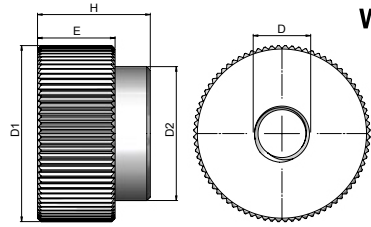

303

Thumb Nut - Stainless **WDS 8203**

Stainless Steel BS 970 Gr 303S31
Polished

WDS No.	D	D1	D2	L	L1	T	Weight (kg)
8203-201	M4	21	12	21	10	10	0.03
8203-202	M5	21	12	21	10	10	0.03
8203-203	M6	25	14	25	12	10	0.05
8203-204	M8	33	18	33	15	14	0.11

303

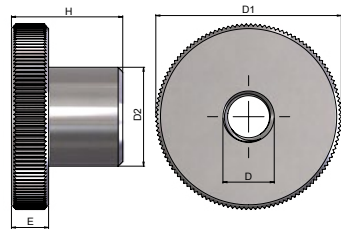


WDS 8907 Thumb Nut - 303 Stainless Steel

Stainless Steel
BS 970 Gr 303S31

WDS No.	D	D1	D2	E	H	Weight (kg)
8907-204	M4	16	12	9	12	0.01
8907-205	M5	16	12	9	12	0.01
8907-206	M6	20	16	10	15	0.03
8907-208	M8	25	19	11	16	0.05
8907-210	M10	30	24	13	20	0.09
8907-212	M12	35	28.5	14	22	0.13

303

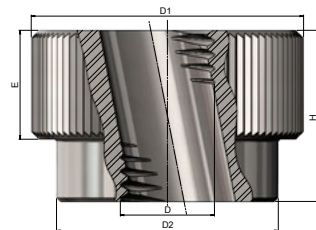


WDS 8916 Thumb Nut - 303 Stainless Steel

Stainless Steel
BS 970 Gr 303S31

WDS No.	D	D1	D2	E	H	Weight (kg)
8916-204	M4	16	8	3.5	9.5	0.01
8916-205	M5	20	10	4	11.5	0.01
8916-206	M6	25	12	5	15	0.02
8916-208	M8	30	16	6	18	0.05
8916-210	M10	32	20	8	23	0.09

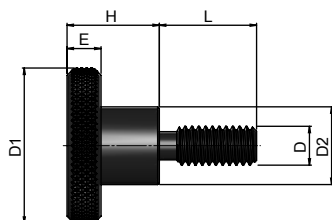
303



WDS 8924 Quick Action Thumb Nut - 303 Stainless Steel

Stainless Steel
BS 970 Gr 303S31

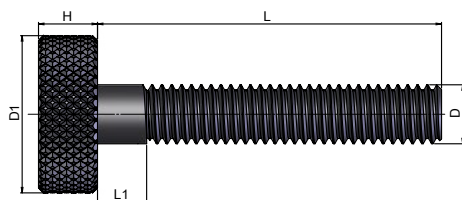
WDS No.	D	D1	D2	E	H	Weight (kg)
8924-205	M5	16	12	9	12	0.01
8924-206	M6	20	16	10	15	0.03
8924-208	M8	25	20	11	16	0.05
8924-210	M10	30	25	13	20	0.08
8924-212	M12	35	28	14	22	0.01



Knurled Locking Screw - Steel **WDS 521**

Steel BS.970 Gr.230M07
Chemical black finish

WDS No.	D	D1	D2	E	H	L	Weight (kg)
521-20110	M4	16	8	3.5	9.5	10	0.01
521-20115	M4	16	8	3.5	9.5	15	0.02
521-20120	M4	16	8	3.5	9.5	20	0.02
521-20210	M5	19	10	4	11.5	10	0.01
521-20215	M5	19	10	4	11.5	15	0.02
521-20220	M5	19	10	4	11.5	20	0.02
521-20315	M6	25	12	5	15	15	0.03
521-20320	M6	25	12	5	15	20	0.03
521-20325	M6	25	12	5	15	25	0.03
521-20415	M8	28	16	6	18	15	0.05
521-20420	M8	28	16	6	18	20	0.06
521-20425	M8	28	16	6	18	25	0.06
521-20525	M10	35	20	8	23	25	0.11
521-20530	M10	35	20	8	23	30	0.11
521-20540	M10	35	20	8	23	40	0.11
521-20625	M12	40	22	10	25	25	0.15
521-20640	M12	40	22	10	25	40	0.18

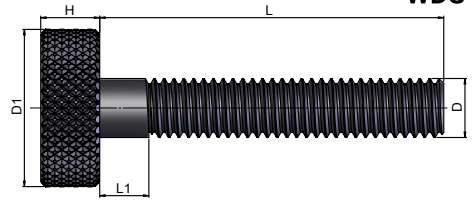


IN"

Adjusting Screw - Steel - Inch - BA/BSF **WDS 605**

Steel BS.970 Gr.230M07
Chemical black finish

WDS No.	D	D1	H	L	L1	Weight (kg)
605-011	2 BA	16	6.4	1 inch	4	0.01
605-01112	2 BA	16	6.4	1-1/2 inch	4	0.02
605-012	2 BA	16	6.4	2 inch	4	0.02
605-021	1/4 BSF	16	6.4	1 inch	4.8	0.02
605-02112	1/4 BSF	16	6.4	1-1/2 inch	4.8	0.02
605-022	1/4 BSF	16	6.4	2 inch	4.8	0.02
605-031	5/16 BSF	22	7.9	1 inch	5.6	0.03
605-03112	5/16 BSF	22	7.9	1-1/2 inch	5.6	0.04
605-032	5/16 BSF	22	7.9	2 inch	5.6	0.04
605-043	3/8 BSF	25	9.5	3 inch	6.4	0.08

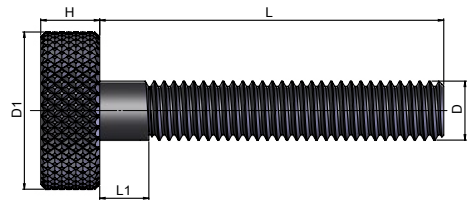


WDS 605 Adjusting Screw - Steel - Metric

Steel BS.970 Gr.230M07
Chemical black finish

WDS No.	D	D1	H	L	L1	Weight (kg)
605-200425	M4	12	5	25	3	0.01
605-200435	M4	12	5	35	3	0.01
605-200445	M4	12	5	45	3	0.01
605-200530	M5	12	5	30	4	0.01
605-200540	M5	12	5	40	4	0.01
605-200550	M5	12	5	50	4	0.01
605-20135	M6	16	6	35	5	0.02
605-20150	M6	16	6	50	5	0.02
605-20175	M6	16	6	75	5	0.02
605-20245	M8	22	8	45	6	0.04
605-20260	M8	22	8	60	6	0.04
605-20275	M8	22	8	75	6	0.05
605-202100	M8	22	8	100	6	0.06
605-20345	M10	25	10	45	7	0.06
605-20360	M10	25	10	60	7	0.07
605-20375	M10	25	10	75	7	0.08
605-203100	M10	25	10	100	7	0.09
605-20445	M12	32	12	45	8	0.11
605-20460	M12	32	12	60	8	0.12
605-20475	M12	32	12	75	8	0.13
605-204100	M12	32	12	100	8	0.16

IN"



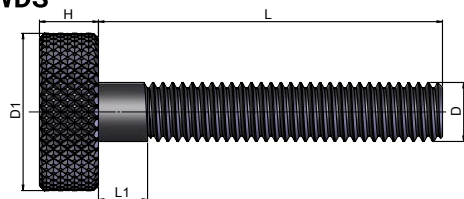
WDS 605 Adjusting Screw - Steel - Inch - BSW

Steel BS.970 Gr.230M07
Chemical black finish

WDS No.	D	D1	H	L	L1	Weight (kg)
605-061	1/4 BSW	16	6.4	1 inch	4.8	0.02
605-06112	1/4 BSW	16	6.4	1 1/2 inch	4.8	0.02
605-062	1/4 BSW	16	6.4	2 inch	4.8	0.02

**WDS**

IN"

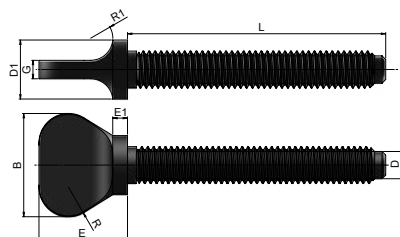


Adjusting Screw - Steel - Inch - UNC WDS 605

Steel BS.970 Gr.230M07

Chemical black finish

WDS No.	D	D1	H	L	L1	Weight (kg)
605-101	10 UNC	16	6.4	1 inch	4	0.01
605-102	10 UNC	16	6.4	2 inch	4	0.02
605-111	1/4 UNC	16	6.4	1 inch	4.8	0.02
605-11112	1/4 UNC	16	6.4	1 1/2 inch	4.8	0.02
605-112	1/4 UNC	16	6.4	2 inch	4.8	0.02
605-121	5/16 UNC	22	7.9	1 inch	5.6	0.03
605-12112	5/16 UNC	22	7.9	1 1/2 inch	5.6	0.04
605-122	5/16 UNC	22	7.9	2 inch	5.6	0.04
605-132	3/8 UNC	25	9.5	2 inch	6.4	0.06
605-133	3/8 UNC	25	9.5	3 inch	6.4	0.07
605-13112	3/8 UNC	25	9.5	1 1/2 inch	6.4	0.06



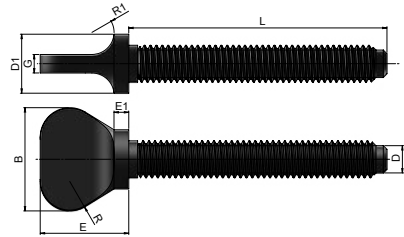
Wing Screw - Steel - Metric WDS 667

Steel BS.970 Gr.230M07

Chemical black finish

WDS No.	B	D	D1	E	E1	G	L	R	R1	Weight (kg)
667-200420	14	M4	8	12	2	2.5	20	4	3	0.01
667-200430	14	M4	8	12	2	2.5	30	4	3	0.01
667-200525	14	M5	8	12	2	2.5	25	4	3	0.01
667-200535	14	M5	8	12	2	2.5	35	4	3	0.01
667-20125	16	M6	10	14	2	2.5	25	4	3	0.07
667-20140	16	M6	10	14	2	2.5	40	4	3	0.01
667-20150	16	M6	10	14	2	2.5	50	4	3	0.01
667-20240	20	M8	13	18	3	3	40	5	3	0.02
667-20250	20	M8	13	18	3	3	50	5	3	0.03
667-20260	20	M8	13	18	3	3	60	5	3	0.03
667-20340	25	M10	16	22	4	5	40	6	3	0.04
667-20355	25	M10	16	22	4	5	55	6	3	0.05

IN"

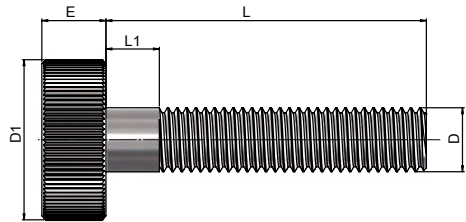


WDS 667 Wing Screw - Steel - Inch - UNC

Steel BS.970 Gr.230M07
Chemical black finish

WDS No.	B	D	D1	E	E1	G	L	R	R1	Weight (kg)
667-31	15.9	1/4 UNC	9.5	12.7	2.4	2.4	1 inch	4	3	0.01
667-32	15.9	1/4 UNC	9.5	12.7	2.4	2.4	1 1/2 inch	4	3	0.01
667-33	15.9	1/4 UNC	9.5	12.7	2	42.4	2 inch	4	3	0.02
667-34	19.1	5/16 UNC	12.7	17.5	3.2	3.2	1 inch	5.6	3	0.02
667-35	19.1	5/16 UNC	12.7	17.5	3.2	3.2	1 1/2 inch	5.6	3	0.02
667-36	19.1	5/16 UNC	12.7	17.5	3.2	3.2	2 inch	5.6	3	0.03
667-39	25.4	3/8 UNC	15.9	22.2	4.8	4	2 1/2 inch	6.4	3	0.05

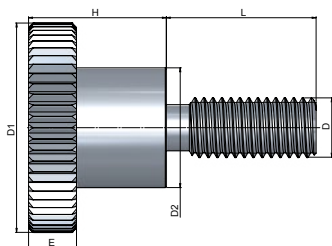
316



WDS 808 Adjusting Screw - 316 Stainless Steel

Stainless Steel
BS 970 Gr 316S11

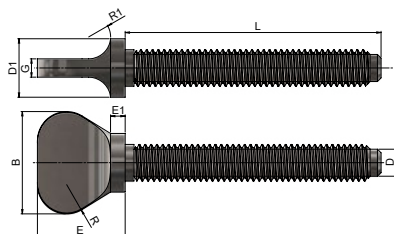
WDS No.	D	D1	E	L	L1 Max	Weight (kg)
808-20425	M4	12	5	25	3	0.01
808-20530	M5	12	5	30	3	0.01
808-20540	M5	12	5	40	3	0.01
808-20550	M5	12	5	50	3	0.02
808-20630	M6	16	6	30	5	0.02
808-20640	M6	16	6	40	5	0.02
808-20650	M6	16	6	50	5	0.02
808-20840	M8	22	8	40	6	0.04
808-20850	M8	22	8	50	6	0.04
808-20860	M8	22	8	60	6	0.04
808-21050	M10	25	10	50	8	0.07
808-21060	M10	25	10	60	8	0.07
808-21070	M10	25	10	70	8	0.07
808-21260	M12	30	12	60	10	0.11
808-21280	M12	30	12	80	10	0.13



Thumb Screw - 316 Stainless Steel WDS 817

Stainless Steel
BS 970 Gr 316S11

WDS No.	D	D1	D2	E	H	L	Weight (kg)
817-20410	M4	16	8	3.5	9.5	10	0.01
817-20415	M4	16	8	3.5	9.5	15	0.01
817-20420	M4	16	8	3.5	9.5	20	0.01
817-20510	M5	20	10	4	11.5	10	0.02
817-20515	M5	20	10	4	11.5	15	0.02
817-20520	M5	20	10	4	11.5	20	0.02
817-20615	M6	25	12	5	15	15	0.03
817-20620	M6	25	12	5	15	20	0.03
817-20625	M6	25	12	5	15	25	0.03
817-20815	M8	30	16	6	18	15	0.06
817-20820	M8	30	16	6	18	20	0.06
817-20825	M8	30	16	6	18	25	0.06
817-21020	M10	35	20	8	23	20	0.11
817-21025	M10	35	20	8	23	25	0.11
817-21030	M10	35	20	8	23	30	0.11



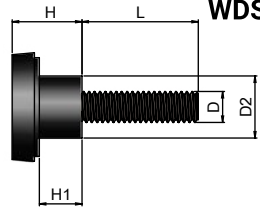
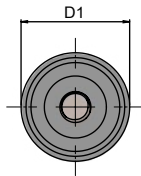
Wing Screw - 316 Stainless Steel WDS 835

Stainless Steel
BS 970 Gr 316S11

WDS No.	B	D	D1	E	E1	G	L	R	R1	Weight (kg)
835-20525	14	M5	8	12	2	2.5	25	4	3	0.01
835-20535	14	M5	8	12	2	2.5	35	4	3	0.01
835-20625	16	M6	10	14	2.5	2.5	25	4	3	0.01
835-20640	16	M6	10	14	2.5	2.5	40	4	3	0.01
835-20650	16	M6	10	14	2.5	2.5	50	4	3	0.01
835-20835	20	M8	13	18	3	3	35	5.5	3	0.02
835-20850	20	M8	13	18	3	3	50	5.5	3	0.03
835-21040	25	M10	15	22	5	4	40	6.5	3	0.04
835-21055	25	M10	15	22	5	4	55	6.5	3	0.05

ZP

TP



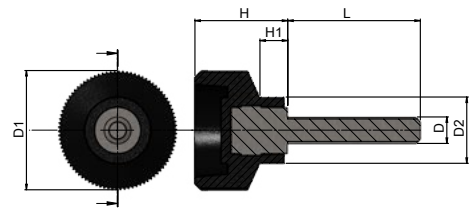
WDS 8168 Thumb Screw - Thermoplastic with Steel Zinc Plated Screw

Thermoplastic, black
Screw - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	L	Weight (kg)
8168-220	M3	10	8	4.5	0.5	10	0.01
8168-224	M4	14	8	9	5.5	10	0.01
8168-225	M4	14	8	9	5.5	15	0.01
8168-227	M4	14	8	9	5.5	25	0.01
8168-228	M5	22	12	12	3.5	10	0.01
8168-229	M5	22	12	12	3.5	15	0.01
8168-236	M6	22	12	12	3.5	15	0.02
8168-237	M6	22	12	12	3.5	20	0.02
8168-238	M6	22	12	12	3.5	25	0.02
8168-241	M6	22	12	12	3.5	50	0.02

ZP

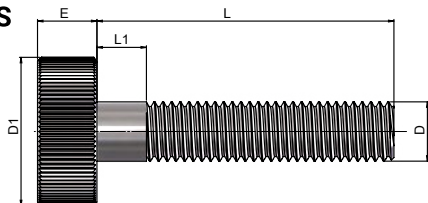
BK



WDS 8198 Thumb Screw - Bakelite with Steel Zinc Plated Screw

PF31 Bakelite Black
Boss - Zinc Plated Steel

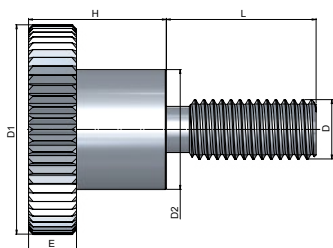
WDS No.	D	D1	D2	H	H1	L	Weight (kg)
8198-20420	M4	18	10	14	6	20	0.01
8198-20525	M5	20	12	15	6	25	0.01
8198-20628	M6	30	15	18	7	28	0.02
8198-20825	M8	35	18	20	8	25	0.03
8198-21030	M10	35	18	20	8	30	0.04



Adjusting Screw - 303 Stainless Steel WDS 8908

Stainless Steel
BS 970 Gr 303S31

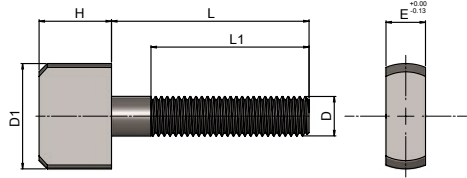
WDS No.	D	D1	E	L	L1 Max	Weight (kg)
8908-20630	M6	16	6	30	5	0.02
8908-20640	M6	16	6	40	5	0.02
8908-20650	M6	16	6	50	5	0.02
8908-20840	M8	22	8	40	6	0.04
8908-20850	M8	22	8	50	6	0.04
8908-20860	M8	22	8	60	6	0.04
8908-21050	M10	25	10	50	8	0.07
8908-21060	M10	25	10	60	8	0.07
8908-21070	M10	25	10	70	8	0.08



Thumb Screw - 303 Stainless Steel WDS 8917

Stainless Steel
BS 970 Gr 303S31

WDS No.	D	D1	D2	E	H	L	Weight (kg)
8917-20410	M4	16	8	3.5	9.5	10	0.01
8917-20415	M4	16	8	3.5	9.5	15	0.01
8917-20420	M4	16	8	3.5	9.5	20	0.01
8917-20510	M5	20	10	4	11.5	10	0.02
8917-20515	M5	20	10	4	11.5	15	0.02
8917-20520	M5	20	10	4	11.5	20	0.02
8917-20615	M6	25	12	5	15	15	0.04
8917-20620	M6	25	12	5	15	20	0.04
8917-20625	M6	25	12	5	15	25	0.04
8917-20815	M8	30	16	6	18	15	0.06
8917-20820	M8	30	16	6	18	20	0.07
8917-20825	M8	30	16	6	18	25	0.07
8917-21020	M10	35	20	8	23	20	0.11
8917-21025	M10	35	20	8	23	25	0.12
8917-21030	M10	35	20	8	23	30	0.12

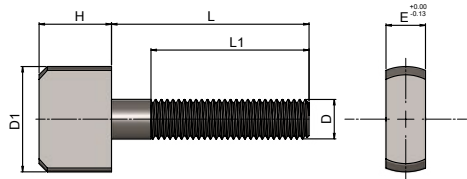


WDS 604 Quarter Turn Screw - Steel

Steel BS.970 Gr.212A42
Chemical black finish

WDS No.	D	D1	E	H	L	L1	Weight (kg)
604-2004	M4	16	4	12	25	20	0.01
604-2005	M5	20	5	16	30	25	0.02
604-201	M6	20	6	16	30	25	0.02
604-202	M8	25	8	20	40	30	0.04
604-203	M10	25	10	20	50	38	0.06
604-204	M12	32	12	22	60	48	0.11

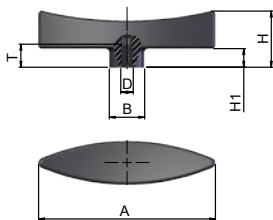
316



WDS 834 Quarter Turn Screw - 316 Stainless Steel

Stainless Steel
BS 970 Gr 316S11

WDS No.	D	D1	E	H	L	L1	Weight (kg)
834-20630	M6	20	6	16	30	25	0.02
834-20840	M8	25	8	20	40	30	0.04
834-21050	M10	25	10	20	50	38	0.06

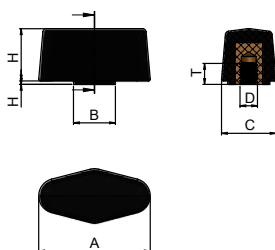


CI

T Grip - Cast Iron WDS 106

Cast Iron

WDS No.	A	B	D	H	H1	T	Weight (kg)
106-201	100	20	M6	32	10.5	11	0.03
106-202	100	20	M8	32	10.5	13	0.03
106-203	100	20	M10	32	10.5	15	0.03



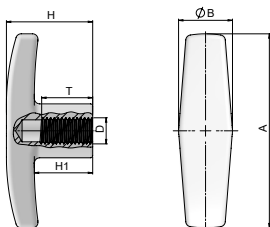
BR

Plastic Wing Knob WDS 8103

Body - PA polyamide

Insert - Brass

WDS No.	A	B	C	D	H	H1	T	Weight (kg)
8103-20532	32	12	16	M5	16	1	6	0.01
8103-20632	32	12	16	M6	16	1	6	0.01
8103-20648	48	12	16	M6	16	1	10	0.01
8103-20848	48	12	16	M8	16	1	10	0.01

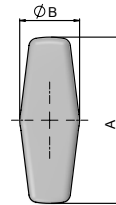
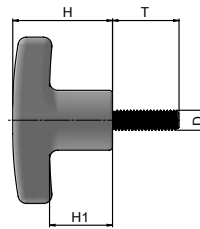


316

T-Knob - 316 Stainless Steel Polished WDS 8140

316 Stainless Steel

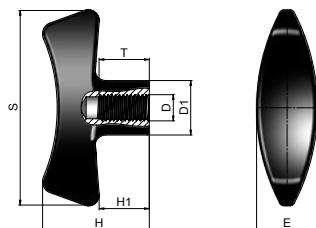
WDS No.	A	B	D	D1	H	H1	T	Weight (kg)
8140-20550	50	18	M5	18	30	19	10	0.1
8140-20650	50	18	M6	18	30	19	12	0.09
8140-20670	50	18	M8	18	30	19	16	0.18
8140-20850	70	21	M6	21	35	21.5	12	0.09
8140-20870	70	21	M8	21	35	21.5	16	0.17
8140-21070	70	21	M10	21	35	21.5	20	0.17
8140-21090	90	25	M10	25	40	27	20	0.27
8140-21290	90	25	M12	25	40	27	24	0.25
8140-21690	90	25	M16	25	40	27	28	0.23



WDS 8140 T-Knob with Male Thread - 316 Stainless Steel

316 Stainless Steel

WDS No.	A	B	D	D1	H	H1	T	Weight (kg)
8140-2055020	50	18	M5	18	30	19	20	0.1
8140-2055030	50	18	M5	18	30	19	30	0.1
8140-2055040	50	18	M5	18	30	19	40	0.1
8140-2065020	50	18	M6	18	30	19	20	0.1
8140-2065030	50	18	M6	18	30	19	30	0.1
8140-2065040	50	18	M6	18	30	19	40	0.1
8140-2065050	50	18	M6	18	30	19	50	0.11
8140-2085020	50	18	M8	18	30	19	20	0.1
8140-2085030	50	18	M8	18	30	19	30	0.1
8140-2085040	50	18	M8	18	30	19	40	0.11
8140-2085050	50	18	M8	18	30	19	50	0.11
8140-2067020	70	21	M6	21	35	21.5	20	0.18
8140-2067030	70	21	M6	21	35	21.5	30	0.18
8140-2067040	70	21	M6	21	35	21.5	40	0.19
8140-2067050	70	21	M6	21	35	21.5	50	0.19
8140-2087020	70	21	M6	21	35	21.5	20	0.18
8140-2087030	70	21	M8	21	35	21.5	30	0.19
8140-2087040	70	21	M8	21	35	21.5	40	0.19
8140-2087050	70	21	M8	21	35	21.5	50	0.19
8140-2107030	70	21	M10	21	35	21.5	30	0.19
8140-2107040	70	21	M10	21	35	21.5	40	0.2
8140-2107050	70	21	M10	21	35	21.5	50	0.2
8140-2107060	70	21	M10	21	35	21.5	60	0.21
8140-2109030	90	25	M10	25	40	27	30	0.29
8140-2109040	90	25	M10	25	40	27	40	0.29
8140-2109050	90	25	M10	25	40	27	50	0.3
8140-2109060	90	25	M10	25	40	27	60	0.3
8140-2129030	90	25	M12	25	40	27	30	0.29
8140-2129040	90	25	M12	25	40	27	40	0.29
8140-2129050	90	25	M12	25	40	27	50	0.3
8140-2129060	90	25	M12	25	40	27	60	0.31



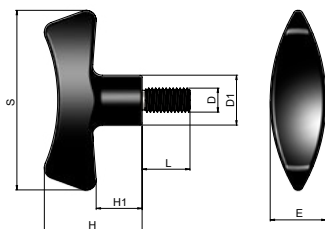
ZP

BK

T Grip Hand Knob - Bakelite WDS 8146

Bakelite, black
Insert - Zinc Plated Steel

WDS No.	D	D1	E	H	H1	T	S	Weight (kg)
8146-210	M6	19	21	38	18	12	70	0.03
8146-211	M8	19	21	38	18	14	70	0.04
8146-212	M10	19	21	38	18	14	70	0.04
8146-213	M8	21	24	44	21	14	80	0.06
8146-214	M10	21	24	44	21	22	80	0.06
8146-215	M12	25	27	49	23	21	90	0.09



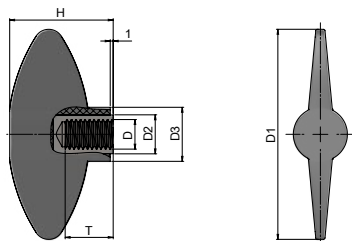
ZP

BK

T Grip Hand Screw - Bakelite WDS 8146

Bakelite, black
Screw - Zinc Plated Steel

WDS No.	D	D1	E	H	H1	L	S	Weight (kg)
8146-220	M6	20	21	37	18	18	70	0.03
8146-221	M8	20	21	37	18	24	70	0.05
8146-222	M10	22	24	42	21	30	80	0.07
8146-224	M10	25	27	48	23	30	90	0.09
8146-225	M12	25	27	48	23	24	90	0.1



BR

NYL

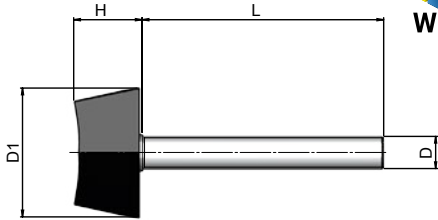
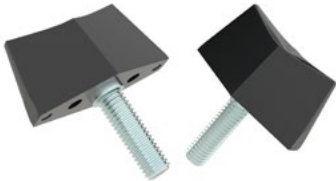
Wing Nut with Female Threaded Bush WDS 8218

Body - Nylon PA6 Anthracite Grey
Bush - Brass

WDS No.	D	D1	D2	D3	H	T	Weight (kg)
8218-201	M4	35	7	11	17	7	0.01
8218-202	M5	35	7	11	17	7	0.01
8218-203	M5	50	7	15.6	24	7	0.01
8218-204	M6	50	8	15.6	24	12	0.01
8218-205	M8	50	10	15.6	24	16	0.01
8218-206	M8	70	10	18	33.5	16	0.02
8218-207	M10	70	13	18	33.5	20	0.03

ZP

TP



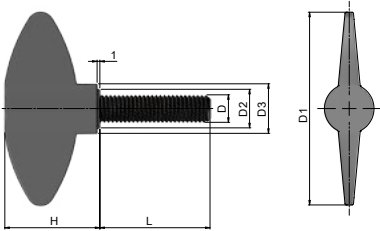
WDS 8200 T-Screw

Thermoplastic, black
Screw - Zinc Plated Steel

WDS No.	D	D1	H	L	Weight (kg)
8200-205	M3	18	10	10	0.01
8200-207	M3	18	10	20	0.01
8200-209	M4	18	10	10	0.01
8200-210	M4	18	10	15	0.01
8200-215	M5	28	14	20	0.01
8200-219	M6	28	14	10	0.01
8200-220	M6	28	14	15	0.01
8200-221	M6	28	14	20	0.02
8200-222	M6	28	14	25	0.02
8200-223	M6	28	14	30	0.02
8200-224	M6	28	14	40	0.02
8200-225	M6	28	14	50	0.02
8200-226	M8	32	17	15	0.02
8200-227	M8	32	17	20	0.02
8200-228	M8	32	17	30	0.02
8200-229	M8	32	17	40	0.02
8200-231	M8	32	17	60	0.02

ZP

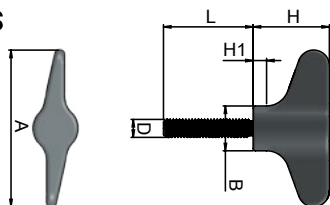
NYL



WDS 8219 Wing Screw with Male Threaded Stem

Body - Nylon PA6 Anthracite Grey
Stem - Zinc Plated Steel

WDS No.	D	D1	D2	H	L	Weight (kg)
8219-2042035	M4	35	8	17	20	0.01
8219-2052535	M5	35	8	17	25	0.01
8219-2052550	M5	50	8	24	25	0.01
8219-2063250	M6	50	8	24	32	0.02
8219-2084050	M8	50	12	24	40	0.03
8219-2084070	M8	70	12	33.5	40	0.04
8219-2104070	M10	70	14	33.5	40	0.05

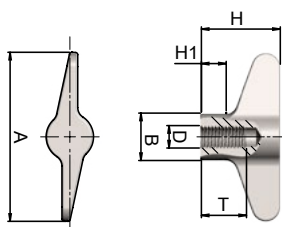


Wing Knob with Male Thread - 316 Stainless Steel WDS 8302

Stainless Steel 316S11

Available in Polished or Matt finish

Polished	Matt	A	B	D	H	H1	L	Weight (kg)
8302-2043520	8302-5043520	35	10	M4	17	3	20	0.02
8302-2043530	8302-5043530	35	10	M4	17	3	30	0.02
8302-2053520	8302-5053520	35	10	M5	17	3	20	0.02
8302-2053530	8302-5053530	35	10	M5	17	3	30	0.02
8302-2053540	8302-5053540	35	10	M5	17	3	40	0.02
8302-2063520	8302-5063520	35	10	M6	17	3	20	0.02
8302-2063530	8302-5063530	35	10	M6	17	3	30	0.02
8302-2063540	8302-5063540	35	10	M6	17	3	40	0.02
8302-2063550	8302-5063550	35	10	M6	17	3	50	0.02
8302-2065020	8302-5065020	50	14	M6	24	5	20	0.05
8302-2065030	8302-5065030	50	14	M6	24	5	30	0.05
8302-2065040	8302-5065040	50	14	M6	24	5	40	0.05
8302-2065050	8302-5065050	50	14	M6	24	5	50	0.05
8302-2085020	8302-5085020	50	14	M8	24	5	20	0.05
8302-2085030	8302-5085030	50	14	M8	24	5	30	0.05
8302-2085040	8302-5085040	50	14	M8	24	5	40	0.06
8302-2085050	8302-5085050	50	14	M8	24	5	50	0.06
8302-2107530	8302-5107530	75	21	M10	35	11	30	0.15
8302-2107540	8302-5107540	75	21	M10	35	11	40	0.15
8302-2107550	8302-5107550	75	21	M10	35	11	50	0.16
8302-2107560	8302-5107560	75	21	M10	35	11	60	0.16
8302-2127530	8302-5127530	75	21	M12	35	11	30	0.15
8302-2127540	8302-5127540	75	21	M12	35	11	40	0.16
8302-2127550	8302-5127550	75	21	M12	35	11	50	0.17
8302-2127560	8302-5127560	75	21	M12	35	11	60	0.17



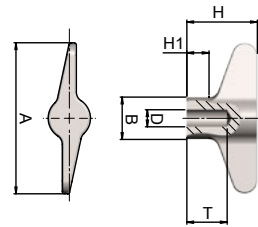
Wing Knob - 316 Stainless Steel WDS 8302

Stainless Steel 316S11

Available in Polished or Matt finish

Polished	Matt	A	B	D	H	H1	T	Weight (kg)
8302-20435	8302-50435	35	10	M4	17	3	8	0.02
8302-20535	8302-50535	35	10	M5	17	3	10	0.02
8302-20635	8302-50635	35	10	M6	17	3	12	0.01
8302-20650	8302-50650	50	14	M6	24	5	12	0.04
8302-20850	8302-50850	50	14	M8	24	5	16	0.04
8302-21075	8302-51075	75	21	M10	35	11	20	0.13
8302-21275	8302-51275	75	21	M12	35	11	24	0.12

316

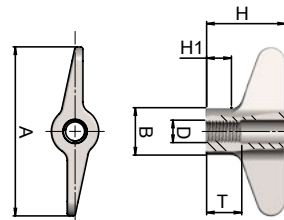


WDS 8302 Wing Knob - Pilot Hole 316 Stainless Steel Matt Finish

Stainless Steel 316S11
Matt finish

WDS No.	A	B	D	H	H1	T	Weight (kg)
8302-52035	35	10	3.3	17	3	8	0.02
8302-52050	50	14	5	24	5	12	0.04
8302-52075	75	21	8.5	35	11	20	0.13

316

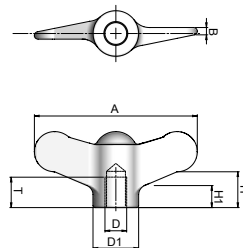


WDS 8302 Wing Knob - Through Hole 316 Stainless Steel Matt Finish

Stainless Steel 316S11
Matt finish

WDS No.	A	B	D	D2	H	H1	T	Weight (kg)
8302-60435	35	10	M4	4.5	17	3	6	0.02
8302-60535	35	10	M5	5.5	17	3	8	0.01
8302-60635	35	10	M6	6.5	17	3	9	0.01
8302-60650	50	14	M6	6.5	24	5	9	0.04
8302-60850	50	14	M8	8.5	24	5	12	0.03
8302-61075	75	21	M10	10.5	35	11	15	0.11
8302-61275	75	21	M12	12.5	35	11	18	0.1

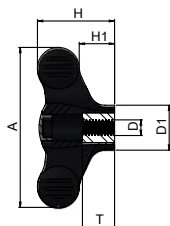
304



WDS 8322 Wing Nut - 304 Stainless Steel

BS970 Gr 304S11
Stainless Steel casting

WDS No.	A	B	D	D1	H	H1	T	Weight (kg)
8322-201	50	2.3	M5	14	24	11.5	10	0.04
8322-202	50	2.3	M6	14	24	11.5	10	0.04
8322-203	75	3.4	M8	21	35	16.5	14	0.12
8322-204	75	3.4	M10	21	35	16.5	14	0.12



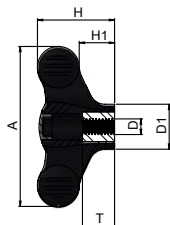
ZP

TP

Wing Grip - Thermoplastic with Steel Insert WDS 8460

Body - Thermoplastic
Insert - Zinc Plated Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	A	B	D	D1	H	H1	T	Weight (kg)
8460-202BG	8460-202PG	8460-202CY	8460-202TR	50	5	M5	14	24	11.5	10	0.01
8460-204BG	8460-204PG	8460-204CY	8460-204TR	50	5	M6	14	24	11.5	10	0.01
8460-206BG	8460-206PG	8460-206CY	8460-206TR	75	7	M8	21	35	16.5	14	0.02
8460-208BG	8460-208PG	8460-208CY	8460-208TR	75	7	M10	21	35	16.5	14	0.02



303

TP

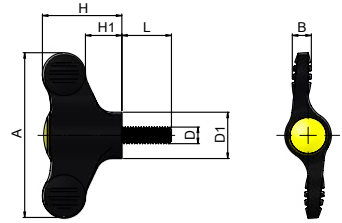
Wing Grip - Thermoplastic with 303 Stainless Steel Insert WDS 8460

Body - Thermoplastic
Insert - 303 Stainless Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	A	B	D	D1	H	H1	T	Weight (kg)
8460-302BG	8460-302PG	8460-302CY	8460-302TR	50	5	M5	14	24	11.5	10	0.01
8460-304BG	8460-304PG	8460-304CY	8460-304TR	50	5	M6	14	24	11.5	10	0.01
8460-306BG	8460-306PG	8460-306CY	8460-306TR	75	7	M8	21	35	16.5	14	0.02
8460-308BG	8460-308PG	8460-308CY	8460-308TR	75	7	M10	21	35	16.5	14	0.02

ZP

TP



WDS 8460 Wing Grip - Thermoplastic with Steel Screw

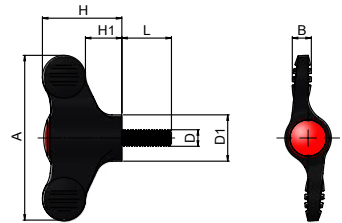
Body - Thermoplastic

Screw - Zinc Plated Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	A	B	D	D1	H	H1	L	Weight (kg)
8460-402BG	8460-402PG	8460-402CY	8460-402TR	50	5	M5	14	24	11.5	15	0.01
8460-404BG	8460-404PG	8460-404CY	8460-404TR	50	5	M5	14	24	11.5	20	0.01
8460-406BG	8460-406PG	8460-406CY	8460-406TR	50	5	M6	14	24	11.5	20	0.01
8460-408BG	8460-408PG	8460-408CY	8460-408TR	50	5	M6	14	24	11.5	30	0.02
8460-410BG	8460-410PG	8460-410CY	8460-410TR	50	5	M6	14	24	11.5	40	0.01
8460-412BG	8460-412PG	8460-412CY	8460-412TR	50	5	M8	14	24	11.5	20	0.02
8460-414BG	8460-414PG	8460-414CY	8460-414TR	50	5	M8	14	24	11.5	30	0.02
8460-416BG	8460-416PG	8460-416CY	8460-416TR	50	5	M8	14	24	11.5	40	0.03
8460-418BG	8460-418PG	8460-418CY	8460-418TR	75	7	M8	21	35	16.5	20	0.01
8460-420BG	8460-420PG	8460-420CY	8460-420TR	75	7	M8	21	35	16.5	30	0.03
8460-422BG	8460-422PG	8460-422CY	8460-422TR	75	7	M8	21	35	16.5	40	0.05
8460-424BG	8460-424PG	8460-424CY	8460-424TR	75	7	M10	21	35	16.5	20	0.03
8460-426BG	8460-426PG	8460-426CY	8460-426TR	75	7	M10	21	35	16.5	30	0.04
8460-428BG	8460-428PG	8460-428CY	8460-428TR	75	7	M10	21	35	16.5	40	0.05
8460-430BG	8460-430PG	8460-430CY	8460-430TR	75	7	M10	21	35	16.5	50	0.06

303

TP

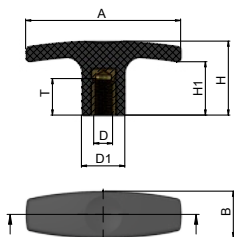


WDS 8460 Wing Grip - Thermoplastic with 303 Stainless Steel Screw

Body - Thermoplastic

Screw - 303 Stainless Steel

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	A	B	D	D1	H	H1	L	Weight (kg)
8460-502PG	8460-502PG	8460-502CY	8460-502TR	50	5	M5	14	24	11.5	15	0.01
8460-504PG	8460-504PG	8460-504CY	8460-504TR	50	5	M5	14	24	11.5	20	0.01
8460-506PG	8460-506PG	8460-506CY	8460-506TR	50	5	M6	14	24	11.5	20	0.01
8460-508PG	8460-508PG	8460-508CY	8460-508TR	50	5	M6	14	24	11.5	30	0.02
8460-510PG	8460-510PG	8460-510CY	8460-510TR	50	5	M6	14	24	11.5	40	0.01
8460-512PG	8460-512PG	8460-512CY	8460-512TR	50	5	M8	14	24	11.5	20	0.02
8460-514PG	8460-514PG	8460-514CY	8460-514TR	50	5	M8	14	24	11.5	30	0.02
8460-516PG	8460-516PG	8460-516CY	8460-516TR	50	5	M8	14	24	11.5	40	0.02
8460-518PG	8460-518PG	8460-518CY	8460-518TR	75	7	M8	21	35	16.5	20	0.04
8460-520PG	8460-520PG	8460-520CY	8460-520TR	75	7	M8	21	35	16.5	30	0.04
8460-522PG	8460-522PG	8460-522CY	8460-522TR	75	7	M8	21	35	16.5	40	0.05
8460-524PG	8460-524PG	8460-524CY	8460-524TR	75	7	M10	21	35	16.5	20	0.04
8460-526PG	8460-526PG	8460-526CY	8460-526TR	75	7	M10	21	35	16.5	30	0.04
8460-528PG	8460-528PG	8460-528CY	8460-528TR	75	7	M10	21	35	16.5	40	0.04
8460-530PG	8460-530PG	8460-530CY	8460-530TR	75	7	M10	21	35	16.5	50	0.06



NYL

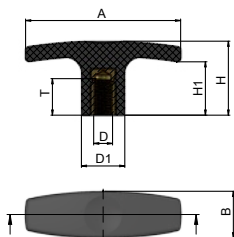
BR

Nylon Plastic T-Handle with Brass Insert **WDS 8461**

Handle - PA6GF30

Insert - Brass

WDS No.	A	B	D	D1	H	H1	T	Weight (kg)
8461-2505	50	15	M5	14	24	17	9	0.01
8461-2506	50	15	M6	14	24	17	11	0.01
8461-2606	60	18	M6	16.5	33	24	11	0.02
8461-2608	60	18	M8	16.5	33	24	14	0.02
8461-2708	72	19	M8	18	34	20	14	0.03
8461-2710	72	19	M10	18	34	20	15.5	0.03
8461-2712	72	19	M12	18	34	20	19	0.03



NYL

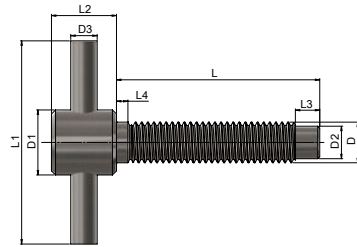
304

Nylon Plastic T-Handle With Stainless Steel Insert **WDS 8461**

Handle - PA6GF30

Insert - 304 Stainless Steel

WDS No.	A	B	D	D1	H	H1	T	Weight (kg)
8461-6505	50	15	M5	14	24	17	9	0.01
8461-6506	50	15	M6	14	24	17	11	0.01
8461-6606	60	18	M6	16.5	33	24	11	0.02
8461-6608	60	18	M8	16.5	33	24	14	0.02
8461-6708	72	19	M8	18	34	20	14	0.03
8461-6710	72	19	M10	18	34	20	15.5	0.03
8461-6712	72	19	M12	18	34	20	19	0.03

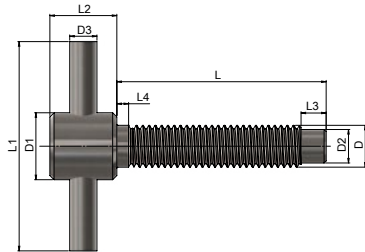


WDS 663 Tommy Bar Screw - Steel - Metric

Steel BS.970 Gr.212A42
Chemical black finish

WDS No.	D	D1	D2	D3	L	L1	L2	L3	L4	Weight (kg)
663-200525	M5	10	3.7	5	25	32	12	3	3	0.02
663-20125	M6	10	4.5	5	25	32	12	3	3	0.01
663-20135	M6	10	4.5	5	35	32	12	3	3	0.02
663-20150	M6	10	4.5	5	50	32	12	3	3	0.02
663-20225	M8	12	6	5	25	45	14	4	3	0.02
663-20235	M8	12	6	5	35	45	14	4	3	0.02
663-20250	M8	12	6	5	50	45	14	4	3	0.03
663-20335	M10	16	7.8	5	35	45	16	6	3	0.04
663-20350	M10	16	7.8	5	50	45	16	6	3	0.05
663-20360	M10	16	7.8	5	60	45	16	6	3	0.06
663-20450	M12	20	9.4	6.5	50	50	20	6	3	0.08
663-20475	M12	20	9.4	6.5	75	50	20	6	3	0.11
663-204100	M12	20	9.4	6.5	100	50	20	6	3	0.12

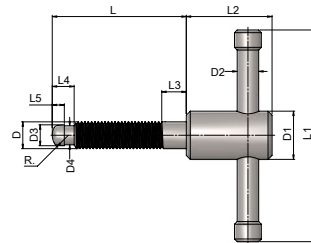
IN"



WDS 663 Tommy Bar Screw - Steel - Inch

Steel BS.970 Gr.212A42
Chemical black finish

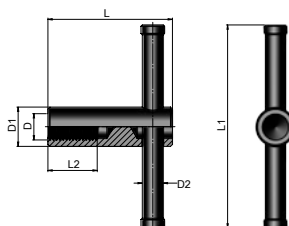
WDS No.	D	D1	D2	D3	L	L1	L2	L3	L4	Weight (kg)
663-222	5/16 inch	12.7	5.6	5	2 inch	45	12.7	4.8	3	0.04
663-232	3/8 inch	15.9	7.1	5	2 inch	45	15.9	6.4	3	0.05



WDS 676 Swivel End Tommy Bar Screw

Steel BS.970 Gr.212A42
Chemical black finish

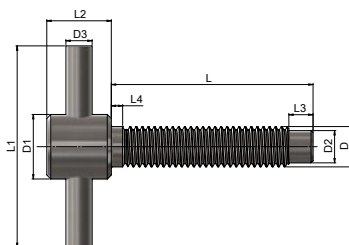
WDS No.	D	D1	D2	D3	D4	L	L1	L2	L3	L4	L5	R	Weight (kg)
676-41050	M10	18	8	8	7.2	50	80	32	10	9	4.5	6	0.1
676-41250	M12	20	10	8	7.2	50	100	35	10	10	4.5	6	0.16
676-412100	M12	20	10	8	7.2	100	100	35	10	10	4.5	6	0.2



Tommy Bar Nut WDS 677

Steel BS.970 Gr.212A42
Chemical black finish

WDS No.	D	D1	D2	L	L1	L2	Weight (kg)
677-410	M10	18	8	60	80	20	0.12
677-412	M12	20	10	70	100	25	0.19
677-416	M16	24	13	85	120	35	0.33
677-420	M20	30	16	95	140	40	0.59

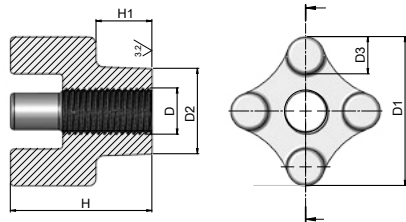

316

Tommy Bar Screw - 316 Stainless Steel WDS 833

Stainless Steel
BS 970 Gr 316S11

WDS No.	D	D1	D2	D3	L	L1	L2	L3	L4	Weight (kg)
833-20625	M6	10	4.5	5	25	32	12	3	3	0.01
833-20635	M6	10	4.5	5	35	32	12	3	3	0.02
833-20650	M6	10	4.5	5	50	32	12	3	3	0.02
833-20825	M8	12	6	5	25	45	14	4	3	0.03
833-20835	M8	12	6	5	35	45	14	4	3	0.03
833-20850	M8	12	6	5	50	45	14	4	3	0.03
833-21035	M10	16	7.8	5	35	45	16	6	3	0.04
833-21050	M10	16	7.8	5	50	45	16	6	3	0.05
833-21060	M10	16	7.8	5	60	45	16	6	3	0.06
833-21250	M12	20	9.4	6.5	50	50	19	6	3	0.08
833-21275	M12	20	9.4	6.5	75	50	19	6	3	0.11
833-212100	M12	20	9.4	6.5	100	50	19	6	3	0.12

CI

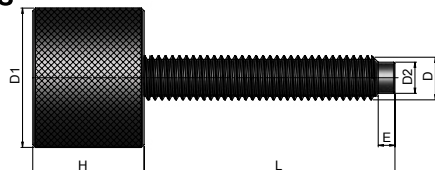


WDS

WDS 103 Bar Knob - Cast Iron

Spheroidal Graphite Cast Iron (S. G. Iron)

WDS No.	D	D1	D2	D3	H	H1	Thread	Weight (kg)
103-202	-	63	38	16	60	24	Blank	0.63
103-211	M10	50	32	12	53	22	Metric	0.36
103-212	M12	50	32	12	53	22	Metric	0.35
103-213	M14	50	32	12	53	22	Metric	0.35
103-214	M16	50	32	12	53	22	Metric	0.34
103-215	M20	63	38	16	60	24	Metric	0.56
103-216	M24	90	53	16	60	24	Metric	0.99

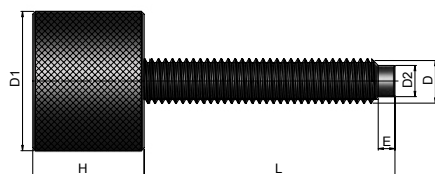


Torque Screw - Steel - Metric - BS.970 - GR.230M07 WDS 700

F1 = Minimum End Pressure (kg)

F2 = Max End Pressure (kg)

WDS No.	D	D1	D2	E	F1	F2	H	L	Weight (kg)
700-201	M6	25	4.5	3	4	80	20	40	0.08
700-202	M6	25	4.5	3	4	80	20	60	0.08
700-203	M8	25	6	3	4	65	20	40	0.08
700-204	M8	25	6	3	4	65	20	60	0.09
700-205	M8	25	6	3	4	65	20	80	0.09
700-206	M10	25	7.8	3	4	55	20	40	0.09
700-207	M10	25	7.8	3	4	55	20	60	0.11
700-208	M10	25	7.8	3	4	55	20	80	0.11
700-209	M12	25	9.4	3	4	45	20	40	0.09
700-210	M12	25	9.4	3	4	45	20	60	0.12
700-211	M12	25	9.4	3	4	45	20	80	0.13
700-212	M12	25	9.4	3	4	45	20	100	0.14



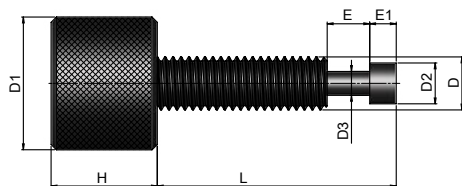
IN"

Torque Screw - Steel - Inch - BS.970 - GR.230M07 WDS 700

F1 = Minimum End Pressure (kg)

F2 = Max End Pressure (kg)

WDS No.	D	D1	D2	E	F1	F2	H	L	Weight (kg)
700-45	1/4 inch	25	4.4	3	4	80	20	45	0.08
700-47	5/16 inch	25	5.6	3	4	60	20	45	0.09

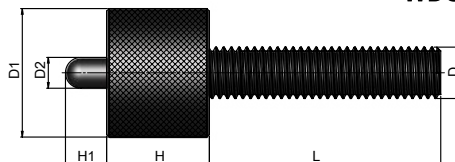


T-End Torque Screw - Steel - BS.970 - Gr.230M07 WDS 701

F1 = Minimum End Pressure (kg)

F2 = Max End Pressure (kg)

WDS No.	D	D1	D2	D3	E	E1	F1	F2	H	L	Weight (kg)
701-201	M6	25	4.7	2.5	8	5	4	80	20	45	0.07
701-203	M10	25	7.7	4.5	8	5	4	55	20	45	0.09



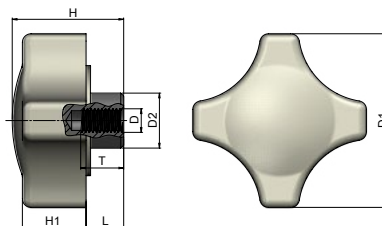
WDS 703 Torque Support Screw - Steel - BS.970 - Gr.230M07

F1 = Minimum End Pressure (kg)

F2 = Max End Pressure (kg)

WDS No.	D	D1	D2	F1	F2	H	H1	L	Weight (kg)
703-201	M6	25	6	4	80	20	8	45	0.08
703-202	M10	25	6	4	55	20	8	45	0.09
703-203	M12	25	6	4	45	20	8	45	0.11

CI

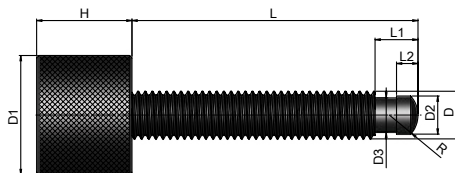


WDS 705 Torque Knob - Cast Iron - Steel BS.970 Gr.212A42

F1 = Minimum End Pressure (kg)

F2 = Max End Pressure (kg)

WDS No.	D	D1	D2	F1	F2	H	H1	L	T	Weight (kg)
705-201	M6	60	20	4	130	40	22	12	13	0.34
705-202	M8	60	20	4	90	40	22	12	13	0.34
705-203	M10	60	20	4	70	40	22	12	13	0.34
705-204	M12	60	20	4	50	40	22	12	13	0.34

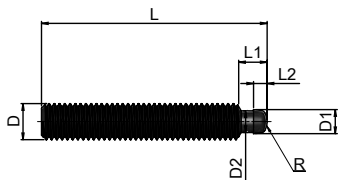


WDS 706 Swivel End Torque Screw - Steel - BS.970 - Gr.230M07

F1 = Minimum End Pressure (kg)

F2 = Max End Pressure (kg)

WDS No.	D	D1	D2	D3	F1	F2	H	L	L1	L2	R	Weight (kg)
706-401	M6	25	4.5	4.1	4	80	20	40	6	2.5	3	0.08
706-402	M6	25	4.5	4.1	4	80	20	60	6	2.5	3	0.08
706-403	M8	25	6	5.3	4	65	20	60	7.5	3	5	0.09
706-404	M8	25	6	5.3	4	65	20	80	7.5	3	5	0.09
706-405	M10	25	8	7.2	4	55	20	60	9	4.5	6	0.1
706-406	M10	25	8	7.2	4	55	20	80	9	4.5	6	0.11
706-407	M12	25	8	7.2	4	45	20	80	10	4.5	6	0.12
706-408	M12	25	8	7.2	4	45	20	100	10	4.5	6	0.14



P = safe working load in kg
(Static load only)

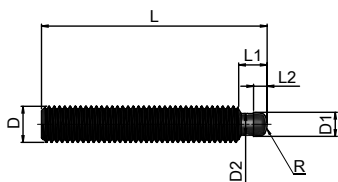


Swivel End Screw - Steel - Metric WDS 670

Steel BS.970 Gr.212A42

Chemical black finish

WDS No.	D	D1	D2	L	L1	L2	P	R	Weight (kg)
670-400650	M6	4.5	4.1	50	6	2.5	110	3	0.01
670-400850	M8	6	5.3	50	7.5	3	170	5	0.02
670-400875	M8	6	5.03	75	7.5	3	170	5	0.02
670-40150	M10	8	7.2	50	9	4.5	320	6	0.03
670-40175	M10	8	7.2	75	9	4.5	320	6	0.04
670-40275	M12	8	7.2	75	10	4.5	310	6	0.05
670-401125	M10	8	7.2	125	9	4.5	320	6	0.06
670-402125	M12	8	7.2	125	10	4.5	320	6	0.09



P = safe working load in kg
(Static load only)



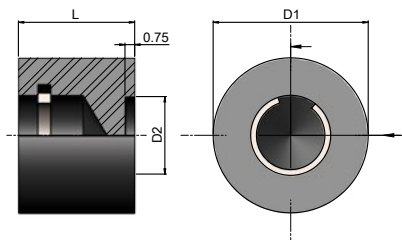
IN"

Swivel End Screw - Steel - Inch WDS 670

Steel BS.970 Gr.212A42

Chemical black finish

WDS No.	D	D1	D2	L	L1	L2	P	R	Weight (kg)
670-60	1/4 UNC	4.5	4.1	50	6	2.5	110	3	0.01
670-69	1/2 UNC	8	7.2	150	10	4.5	320	6	0.11



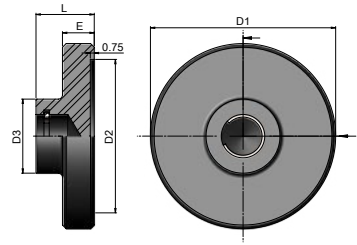
Swivel Pad - Steel - Diameter Base 10mm-14mm WDS 671

Steel BS.970 Gr.230M07 Case Hardened

Chemical Black Finish

WDS No.	D	D1	D2	L	Weight (kg)
671-4002	M6 or 1/4	10	5	8	0.01
671-4006	M8 or 5/16	12	6	9	0.01
671-401	M10 M12 or 1/2	14	8	11	0.01

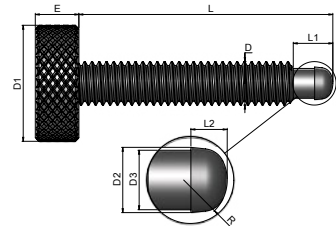
IN"



WDS 671 Swivel Pad - Steel - Diameter Base 16mm-35mm

Steel BS.970 Gr.230M07 Case Hardened

WDS No.	D	D1	D2	D3	E	L	Weight (kg)
671-4004	M6 or 1/4	16	10	10	3	8	0.01
671-4008	M8 or 5/16	18	12	12	4	9	0.01
671-402	M10 M12 or 1/2	22	16	14	5	11	0.02
671-404	M10 M12 or 1/2	28	22	14	6	11	0.03
671-406	M10 M12 or 1/2	35	29	14	6	11	0.05

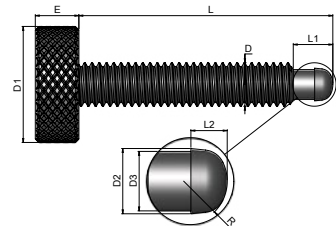


WDS 672 Swivel End Adjusting Screw - Steel - Metric

Steel BS.970 Gr.230M07

WDS No.	D	D1	D2	D3	E	L	L1	L2	R	Weight (kg)
672-400635	M6	16	4.5	4.1	6	35	6	2.5	3	0.02
672-400650	M6	16	4.5	4.1	6	50	6	2.5	3	0.02
672-400675	M6	16	4.5	4.1	6	75	6	2.5	3	0.02
672-400850	M8	22	6	5.3	8	50	7.5	3	5	0.04
672-400875	M8	22	6	5.3	8	75	7.5	3	5	0.05
672-40150	M10	25	8	7.2	10	50	9	4.5	6	0.07
672-40175	M10	25	8	7.2	10	75	9	4.5	6	0.09
672-40250	M12	32	8	7.2	12	50	10	4.5	6	0.13
672-40275	M12	32	8	7.2	12	75	10	4.5	6	0.15
672-402100	M12	32	8	7.2	12	100	10	4.5	6	0.16

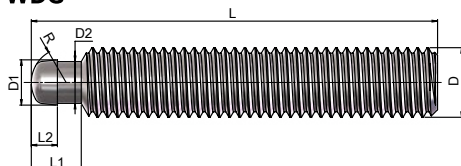
IN"



WDS 672 Swivel End Adjusting Screw - Steel - Inch

Steel BS.970 Gr.230M07

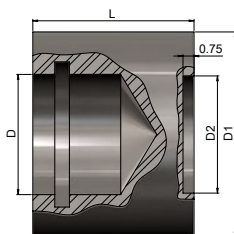
WDS No.	D	D1	D2	D3	E	L	L1	L2	R	Weight (kg)
672-50	1/4 BSW	16	4.5	4.1	6	50	6	2.5	3	0.02
672-53	5/16 BSW	22	6	5.3	8	50	7.5	3	5	0.04
672-60	1/4 UNC	16	4.5	4.1	6	50	6	2.5	3	0.02
672-61	1/4 UNC	16	4.5	4.1	6	75	6	2.5	3	0.02
672-64	5/16 UNC	22	6	5.3	8	75	7.5	3	5	0.05
672-69	1/2 UNC	32	8	7.2	12	100	10	4.5	6	0.16



Swivel End Screw - 316 Stainless Steel WDS 820

Stainless Steel
BS 970 Gr 316S11

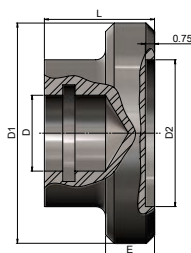
WDS No.	D	D1	D2	L	L1	L2	R	Weight (kg)
820-40640	M6	4.5	4.1	40	6	2.5	3	0.01
820-40660	M6	4.5	4.1	60	6	2.5	3	0.01
820-40850	M8	6	5.3	50	7.5	3	5	0.02
820-40870	M8	6	5.3	70	7.5	3	5	0.02
820-41060	M10	8	7.2	60	9	4.5	6	0.03
820-41080	M10	8	7.2	80	9	4.5	6	0.04
820-41270	M12	8	7.2	70	10	4.5	6	0.05
820-412100	M12	8	7.2	100	10	4.5	6	0.07



Swivel Pad - 316 Stainless Steel - Diameter Base 10mm-14mm WDS 821

Stainless Steel
BS 970 Gr 316S11

WDS No.	D	D1	D2	L	Weight (kg)
821-4002	M6	10	5	8	0.01
821-4006	M8	12	6	9	0.01
821-401	M10 or M12	14	8	11	0.01

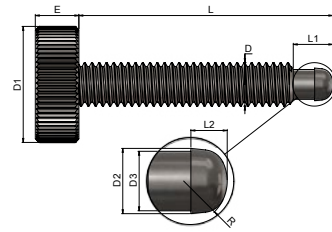


Swivel Pad - 316 Stainless Steel - Diameter Base 10mm-14mm WDS 821

Stainless Steel
BS 970 Gr 316S11

WDS No.	D	D1	D2	D3	E	L	Weight (kg)
821-4004	M6	16	10	10	3	8	0.02
821-4008	M8	18	12	12	4	9	0.01
821-402	M10 or M12	22	16	14	5	11	0.02
821-404	M10 or M12	28	22	14	6	11	0.03
821-406	M10 or M12	35	29	14	6	11	0.05

316

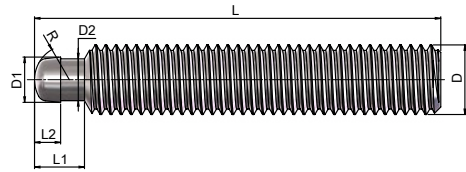


WDS 822 Swivel End Adjusting Screw - 316 Stainless Steel

Stainless Steel
BS 970 Gr 316S11

WDS No.	D	D1	D2	D3	E	L	L1	L2	R	Weight (kg)
822-40630	M6	16	4.5	4.1	6	30	6	2.5	3	0.02
822-40650	M6	16	4.5	4.1	6	50	6	2.5	3	0.02
822-40840	M8	22	6	5.3	8	40	7.5	3	5	0.04
822-40860	M8	22	6	5.3	8	60	7.5	3	5	0.04
822-41050	M10	25	8	7.2	10	50	9	4.5	6	0.06
822-41070	M10	25	8	7.2	10	70	9	4.5	6	0.08
822-41290	M12	30	8	7.2	12	90	10	4.5	6	0.13

303

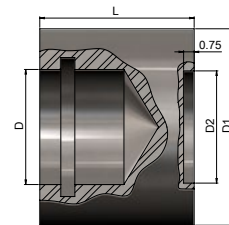


WDS 8920 Swivel End Screw - 303 Stainless Steel

Stainless Steel
BS 970 Gr 303S31

WDS No.	D	D1	D2	L	L1	L2	R	Weight (kg)
8920-40640	M6	4.5	4.1	40	6	2.5	3	0.01
8920-40850	M8	6	5.3	50	7.5	3	5	0.01
8920-41060	M10	8	7.2	60	9	4.5	6	0.03
8920-41270	M12	8	7.2	70	10	4.5	6	0.05

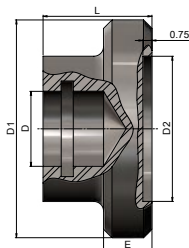
303



WDS 8921 Swivel Pad - 303 Stainless Steel - Diameter Base 10mm-14mm

Stainless Steel
BS 970 Gr 303S31

WDS No.	D	D1	D2	L	Weight (kg)
8921-4002	M6	10	5	8	0.01
8921-4006	M8	12	6	9	0.01
8921-401	M10 OR M12	14	8	11	0.01

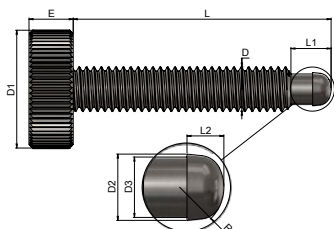


303

Swivel Pad - 303 Stainless Steel - Diameter Base 18mm-35mm **WDS 8921**

Stainless Steel
BS 970 Gr 303S31

WDS No.	D	D1	D2	D3	E	L	Weight (kg)
8921-4008	M8	18	12	12	4	9	0.01
8921-402	M10 OR M12	22	16	14	5	11	0.03
8921-404	M10 OR M12	28	22	14	6	11	0.03
8921-406	M10 OR M12	35	29	14	6	11	0.05



303

Swivel End Adjusting Screw - 303 Stainless Steel **WDS 8922**

Stainless Steel BS 970 Gr 303S31

WDS No.	D	D1	D2	D3	E	L	L1	L2	R	Weight (kg)
8922-40650	M6	16	4.5	4.1	6	50	6	2.5	3	0.02
8922-40840	M8	22	6	5.3	8	40	7.5	3	5	0.04
8922-40860	M8	22	6	5.3	8	60	7.5	3	5	0.05
8922-41050	M10	25	8	7.2	10	50	9	4.5	6	0.06
8922-41070	M10	25	8	7.2	10	70	9	4.5	6	0.08
8922-41290	M12	30	8	7.2	12	90	10	4.5	6	0.13



HAND LEVERS

P 173-212

Hand levers come in many form these include cam clamping levers, clamping handles, crank handles and ball handles. Hand levers can be used in several different ways and are ideal for clamping actions or as adjusting handles.



CLAMPING HANDLES & LEVERS

Clamping handles and levers operate by simply lifting the body of the handle and rotating to the desired location and release offering a quick adjustable clamping lever. Fixed non-adjustable levers are also included in the range. Select models are available with coloured handles or with coloured release buttons. Materials include plastic and stainless steel with male and female threads.

P 173-190



CAM LEVERS & CAM CLAMPS

Cam Levers and clamps are quick action fastening devices allowing the user to quickly release a workpiece without the use of tools or equipment. Once the lever is threaded onto the application, clamping force is applied by pushing down the lever. The clamping force is released by lifting up the lever. Male and female threaded models are available in steel, stainless steel and glass reinforced plastic (GRP).

P 191-206



CRANK HANDLES

Crank handles can be used as winding handles and are often attached to a shaft for adjusting applications. The crank handles are available with either a fixed, revolving or fold away grip. When used with a WDS position indicator the user can accurately adjust a machine or drive.

P 207-208



BALL HANDLES

Ball handles and clamping ball levers are swing action clamping devices that can be used almost anywhere. Models include threaded in both metric and imperial/inch sizes and blank. Materials include steel and 303 / 316 stainless steel.

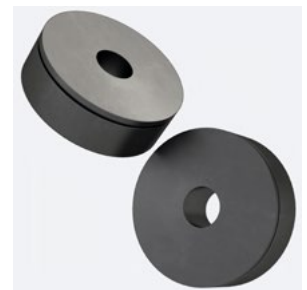
P 209-212



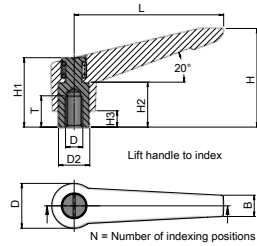
AXIAL BEARINGS

The axial bearing gives approximately twice the clamping force with the same size lever. This gives protection for the stationary support surface due to the integrated bearing, fitted with needle rollers, and two load bearing faces.

P 190



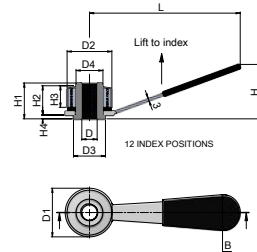
IN"



WDS 117 Clamping Handle - Indexing - Inch - BSW or UNC

Handle - Zinc diecast painted grey
Insert - Steel, Chemical black finish

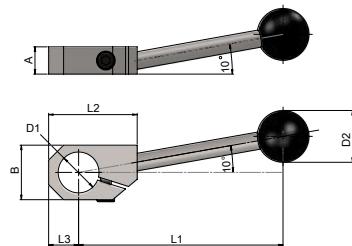
WDS No.	B	D	D1	D2	H	H1	H2	H3	L	N	T	Weight (kg)
117-08	13	1/2 BSW	27.5	19	61	42.5	27	10	95	24	17	0.31
117-09	15.5	1/2 BSW	32.5	23	72.5	51	33	12	110	26	23	0.3
117-12	7.5	1/4 UNC	14.5	10	29.5	24	15	4	40	16	9	0.02
117-14	9.5	5/16 UNC	19.5	13.5	41	29	17.5	6.5	65	20	12	0.06
117-16	11	3/8 UNC	23	16	53	37.5	24	10	80	22	14	0.11
117-17	13	3/8 UNC	27.5	19	61	42.5	27	10	95	24	17	0.18



WDS 525 Clamping Lever - Indexing

Nut - Steel BS.970 Gr.212A42
Handle, Washer and Cover - Steel BS.970 Gr.230M07

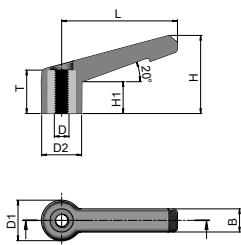
WDS No.	B	D	D1	D2	D3	D4	H	H1	H2	H3	H4	L	Weight (kg)
525-202	25	M8	38	35	25	21	42	28	22	16	3	115	0.2
525-203	25	M10	38	35	25	21	42	28	22	16	3	115	0.19
525-204	25	M12	38	35	25	21	42	28	22	16	3	115	0.18



WDS 6821 Clamping Handle

Steel

WDS No.	A	B	D1	D2	L1	L2	L3	Weight (kg)
6821-205	20	30	22	32	200	60	19	0.4
6821-208	20	40	30	38	250	65	22	0.5
6821-213	25	50	42	38	200	90	32	0.8

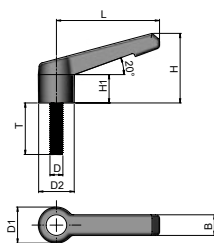


Clamping Lever - Glass Fibre Reinforced Plastic **WDS 8162**

Handle - Glass fibre reinforced plastic, black

Insert - Zinc Plated Steel

WDS No.	B	D	D1	D2	H	H1	L	T	Weight (kg)
8162-212	8	M5	14	13.8	27	11	40	11	0.01
8162-213	8	M6	14	13.8	27	11	40	11	0.02
8162-214	9	M8	18.5	18.3	37	11	65	12	0.02
8162-215	11	M10	22	21.8	45	14	80	16	0.02
8162-216	13	M12	26	25.8	54	17	95	20	0.05
8162-217	16	M16	31	30.8	63	21	110	24	0.08

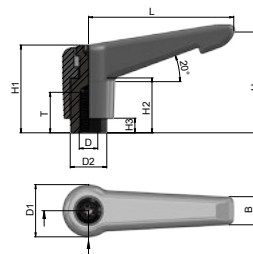


Clamping Lever - Glass Fibre Reinforced Plastic with Steel Screw **WDS 8162**

Handle - Glass fibre reinforced plastic, black

Screw - Zinc Plated Steel

WDS No.	B	D	D1	D2	H	H1	L	L1	T	Weight (kg)
8162-222	8	M5	14	13.8	27	11	40	20	11	0.02
8162-223	8	M6	14	13.8	27	11	40	20	11	0.01
8162-224	9	M8	18.5	18.3	37	11	65	20	12	0.03
8162-225	11	M10	22	21.8	45	14	80	30	16	0.04
8162-226	13	M12	26	25.8	54	17	95	30	20	0.06
8162-227	16	M16	31	30.8	63	21	110	40	24	0.17

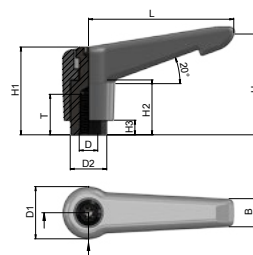


WDS 8188 Clamping Handle - Indexing - Metric

Handle - Zinc diecast painted grey
Insert - Steel, chemical black finish

WDS No.	B	D	D1	D2	H	H1	H2	H3	L	N	T	Weight (kg)
8188-198	7	M3	14	10	30	24.5	14.5	4	30	16	9	0.03
8188-199	7	M4	14	10	30	24.5	14.5	4	30	16	9	0.03
8188-200	7	M5	14	10	30	24.5	14.5	4	30	16	9	0.03
8188-202	7.5	M5	14.5	10	29.5	24	15	4	40	16	9	0.02
8188-203	7.5	M6	14.5	10	29.5	24	15	4	40	16	9	0.07
8188-204	9.5	M6	19.5	13	41	29	17.5	6.5	65	20	12	0.06
8188-205	9.5	M8	19.5	13	41	29	17.5	6.5	65	20	12	0.06
8188-206	11	M8	23	16	53	37.5	24	10	80	22	14	0.13
8188-207	11	M10	23	16	53	37.5	24	10	80	22	14	0.11
8188-208	13	M10	27.5	19	61	42.5	27	10	95	24	17	0.18
8188-209	13	M12	27.5	19	61	42.5	27	10	95	24	17	0.31
8188-210	15.5	M12	32.5	23	72.5	51	33	12	110	26	23	0.3
8188-211	15.5	M16	32.5	23	72.5	51	33	12	110	26	23	0.29

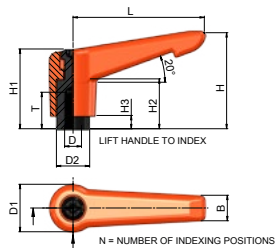
303



WDS 8188 Zinc Die Cast Clamping Handle Stainless Steel Thread Insert Metric

Handle - Zinc diecast painted grey
Insert - 303 Stainless Steel

WDS No.	B	D	D1	D2	H	H1	H2	H3	L	N	T	Weight (kg)
8188-603003	7	M3	14	10	30	24.5	14.5	4	30	16	9	0.03
8188-603004	7	M4	14	10	30	24.5	14.5	4	30	16	9	0.03
8188-603005	7	M5	14	10	30	24.5	14.5	4	30	16	9	0.03
8188-604004	7	M4	14	10	31	24.5	14.5	4	40	16	9	0.03
8188-604005	7	M5	14	10	31	24.5	14.5	4	40	16	9	0.04
8188-604006	7	M6	14	10	31	24.5	14.5	4	40	16	9	0.03
8188-606506	9.5	M6	19	13.5	42.5	28.5	17.5	6.5	65	20	12	0.08
8188-606508	9.5	M8	19	13.5	42.5	28.5	17.5	6.5	65	20	12	0.08
8188-608008	11	M8	22	16	58.5	37	24	10	80	22	14	0.13
8188-608010	11	M10	22	16	58.5	37	24	10	80	22	14	0.04
8188-609510	13	M10	27.5	19	63	43	27	10	95	24	17	0.21
8188-609512	13	M12	27.5	19	63	43	27	10	95	24	17	0.2
8188-611012	15	M12	32	23	73	49	31.5	12	110	26	23	0.42
8188-611016	15	M16	32	23	73	49	31.5	12	110	26	23	0.41

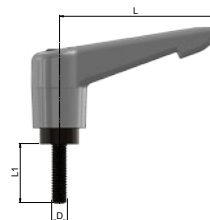


Clamping Handle Indexing **WDS 8188**

Handle - Glass fibre reinforced
Insert - Steel, chemical black finish

Black Grey	Cadmium Yellow	Signal Green	B	D	D1	D2	H	H1	H2	H3	L	N	T	Weight (kg)
8188-221	8188-221CY	8188-221SG	7.5	M4	14.5	10	29.5	24	15	4	40	16	9	0.01
8188-222	8188-222CY	8188-222SG	7.5	M5	14.5	10	29.5	24	15	4	40	16	9	0.01
8188-223	8188-223CY	8188-223SG	7.5	M6	14.5	10	29.5	24	15	4	40	16	9	0.01
8188-224	8188-224CY	8188-224SG	9.5	M6	19.5	13	41	29	17.5	6.5	65	20	12	0.03
8188-225	8188-225CY	8188-225SG	9.5	M8	19.5	13	41	29	17.5	6.5	65	20	12	0.03
8188-226	8188-226CY	8188-226SG	11	M8	23	16	53	37.5	24	10	80	22	14	0.05
8188-227	8188-227CY	8188-227SG	11	M10	23	16	53	37.5	24	10	80	22	14	0.05
8188-228	8188-228CY	8188-228SG	13	M10	27.5	19	61	42.5	27	10	95	24	17	0.08
8188-229	8188-229CY	8188-229SG	13	M12	27.5	19	61	42.5	27	10	95	24	17	0.08
8188-230	8188-230CY	8188-230SG	15.5	M12	32.5	23	72.5	51	33	12	110	26	23	0.15
8188-231	8188-231CY	8188-231SG	15.5	M16	32.5	23	72.5	51	33	12	110	26	23	0.12

Traffic Blue	Traffic Red	Pure Orange	B	D	D1	D2	H	H1	H2	H3	L	N	T	Weight (kg)
8188-221TB	8188-221TR	8188-221PO	7.5	M4	14.5	10	29.5	24	15	4	40	16	9	0.01
8188-222TB	8188-222TR	8188-222PO	7.5	M5	14.5	10	29.5	24	15	4	40	16	9	0.01
8188-223TB	8188-223TR	8188-223PO	7.5	M6	14.5	10	29.5	24	15	4	40	16	9	0.01
8188-224TB	8188-224TR	8188-224PO	9.5	M6	19.5	13	41	29	17.5	6.5	65	20	12	0.03
8188-225TB	8188-225TR	8188-225PO	9.5	M8	19.5	13	41	29	17.5	6.5	65	20	12	0.03
8188-226TB	8188-226TR	8188-226PO	11	M8	23	16	53	37.5	24	10	80	22	14	0.05
8188-227TB	8188-227TR	8188-227PO	11	M10	23	16	53	37.5	24	10	80	22	14	0.05
8188-228TB	8188-228TR	8188-228PO	13	M10	27.5	19	61	42.5	27	10	95	24	17	0.08
8188-229TB	8188-229TR	8188-229PO	13	M12	27.5	19	61	42.5	27	10	95	24	17	0.08
8188-230TB	8188-230TR	8188-230PO	15.5	M12	32.5	23	72.5	51	33	12	110	26	23	0.15
8188-231TB	8188-231TR	8188-231PO	15.5	M16	32.5	23	72.5	51	33	12	110	26	23	0.12



WDS 8189 Clamping Handle - Indexing - Zinc Diecast

Handle - Zinc diecast painted grey

Screw - Steel, chemical black finish

WDS No.	D	L	L1	Weight (kg)
8189-19910	M4	30	10	0.03
8189-19915	M4	30	15	0.03
8189-19920	M4	30	20	0.03
8189-19925	M4	30	25	0.03
8189-19930	M4	30	30	0.03
8189-19935	M4	30	35	0.03
8189-19940	M4	30	40	0.04
8189-19945	M4	30	45	0.03
8189-19950	M4	30	50	0.03
8189-20010	M5	30	10	0.03
8189-20015	M5	30	15	0.03
8189-20020	M5	30	20	0.03
8189-20025	M5	30	25	0.03
8189-20030	M5	30	30	0.04
8189-20035	M5	30	35	0.04
8189-20040	M5	30	40	0.04
8189-20045	M5	30	45	0.04
8189-20050	M5	30	50	0.04
8189-20120	M4	40	20	0.03
8189-20125	M4	40	25	0.03
8189-20130	M4	40	30	0.03
8189-20210	M5	40	10	0.03
8189-20215	M5	40	15	0.03
8189-20220	M5	40	20	0.03
8189-20225	M5	40	25	0.03
8189-20230	M5	40	30	0.04
8189-20235	M5	40	35	0.04
8189-20240	M5	40	40	0.04
8189-20245	M5	40	45	0.04
8189-20250	M5	40	50	0.04
8189-20310	M6	40	10	0.03
8189-20315	M6	40	15	0.03
8189-20320	M6	40	20	0.03
8189-20325	M6	40	25	0.04
8189-20330	M6	40	30	0.04
8189-20335	M6	40	35	0.04
8189-20340	M6	40	40	0.04
8189-20345	M6	40	45	0.04
8189-20350	M6	40	50	0.04
8189-20515	M8	65	15	0.07
8189-20520	M8	65	20	0.08
8189-20525	M8	65	25	0.08
8189-20530	M8	65	30	0.08
8189-20535	M8	65	35	0.1
8189-20540	M8	65	40	0.08
8189-20545	M8	65	45	0.09

WDS No.	D	L	L1	Weight (kg)
8189-20550	M8	65	50	0.09
8189-20555	M8	65	55	0.1
8189-20560	M8	65	60	0.09
8189-20615	M8	80	15	0.14
8189-20620	M8	80	20	0.14
8189-20630	M8	80	30	0.15
8189-20635	M8	80	35	0.15
8189-20640	M8	80	40	0.15
8189-20645	M8	80	45	0.15
8189-20650	M8	80	50	0.15
8189-20655	M8	80	55	0.15
8189-20660	M8	80	60	0.16
8189-20720	M10	80	20	0.08
8189-20725	M10	80	25	0.15
8189-20730	M10	80	30	0.14
8189-20735	M10	80	35	0.15
8189-20740	M10	80	40	0.14
8189-20745	M10	80	45	0.16
8189-20750	M10	80	50	0.15
8189-20755	M10	80	55	0.16
8189-20760	M10	80	60	0.15
8189-20820	M10	95	20	0.23
8189-20825	M10	95	25	0.21
8189-20830	M10	95	30	0.2
8189-20835	M10	95	35	0.23
8189-20840	M10	95	40	0.21
8189-20845	M10	95	45	0.23
8189-20850	M10	95	50	0.22
8189-20855	M10	95	55	0.24
8189-20860	M10	95	60	0.24
8189-20870	M10	95	70	0.23
8189-20880	M10	95	80	0.26
8189-20890	M10	95	90	0.24
8189-20920	M12	95	25	0.21
8189-20925	M12	95	25	0.21
8189-20930	M12	95	30	0.22
8189-20935	M12	95	35	0.24
8189-20940	M12	95	40	0.22
8189-20945	M12	95	45	0.24
8189-20950	M12	95	50	0.23
8189-20955	M12	95	55	0.25
8189-20960	M12	95	60	0.24
8189-20970	M12	95	70	0.25
8189-20980	M12	95	20	0.28
8189-20990	M12	95	90	0.27
8189-21025	M12	110	25	0.01

WDS No.	D	L	L1	Weight (kg)
8189-21030	M12	110	30	0.35
8189-21035	M12	110	35	0.36
8189-21040	M12	110	40	0.36
8189-21045	M12	110	45	0.36
8189-21050	M12	110	50	0.36
8189-21055	M12	110	55	0.37
8189-21060	M12	110	60	0.37
8189-21070	M12	110	70	0.38
8189-21080	M12	110	80	0.39
8189-21090	M12	110	90	0.4
8189-21125	M16	110	25	0.36

WDS No.	D	L	L1	Weight (kg)
8189-21130	M16	110	30	0.37
8189-21135	M16	110	35	0.38
8189-21140	M16	110	40	0.38
8189-21145	M16	110	45	0.39
8189-21150	M16	110	50	0.39
8189-21155	M16	110	55	0.4
8189-21160	M16	110	60	0.41
8189-21170	M16	110	70	0.42
8189-21180	M16	110	80	0.44
8189-21190	M16	110	90	0.47



303

Zinc Die Cast Clamping Handle with Metric Stainless Steel Screw **WDS 8189**

Handle - Zinc Die Cast painted grey

Screw - 303 Stainless Steel

WDS No.	D	L	L1	Weight (kg)
8189-60015	M4	30	15	0.03
8189-60010	M4	30	10	0.03
8189-60020	M4	30	20	0.03
8189-60025	M4	30	25	0.03
8189-60110	M5	30	10	0.03
8189-60115	M5	30	15	0.03
8189-60120	M5	30	20	0.03
8189-60125	M5	30	25	0.03
8189-60210	M5	40	10	0.04
8189-60215	M5	40	15	0.04
8189-60220	M5	40	20	0.03
8189-60225	M5	40	25	0.04
8189-60310	M6	40	10	0.04
8189-60315	M6	40	15	0.04
8189-60320	M6	40	20	0.04
8189-60325	M6	40	25	0.04
8189-60330	M6	40	30	0.04
8189-60340	M6	40	40	0.04
8189-60350	M6	40	50	0.04
8189-60515	M8	65	15	0.09
8189-60520	M8	65	20	0.09
8189-60525	M8	65	25	0.09
8189-60530	M8	65	30	0.1

WDS No.	D	L	L1	Weight (kg)
8189-60540	M8	65	40	0.1
8189-60550	M8	65	50	0.1
8189-60560	M8	65	60	0.1
8189-60620	M8	80	20	0.14
8189-60630	M8	80	30	0.15
8189-60640	M8	80	40	0.15
8189-60650	M8	80	50	0.15
8189-60660	M8	80	60	0.15
8189-60720	M10	80	20	0.14
8189-60725	M10	80	25	0.15
8189-60730	M10	80	30	0.15
8189-60740	M10	80	40	0.16
8189-60750	M10	80	50	0.17
8189-60760	M10	80	60	0.17
8189-60925	M12	95	25	0.23
8189-60930	M12	95	30	0.24
8189-60940	M12	95	40	0.25
8189-60950	M12	95	50	0.25
8189-60960	M12	95	60	0.25
8189-61130	M16	110	30	0.37
8189-61140	M16	110	40	0.38
8189-61150	M16	110	50	0.4
8189-61160	M16	110	60	0.41



WDS 8189 Clamping Handle Indexing with Steel Screw

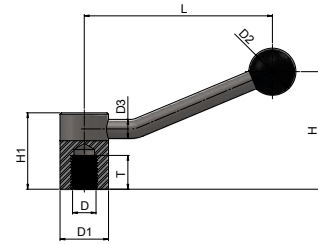
Handle - Glass fibre reinforced plastic

Screw - Steel, chemical black finish

Black Grey	Cadmium Yellow	Signal Green	Traffic Blue	Traffic Red	Pure Orange	D	L	L1	Weight (kg)
8189-22120	-	-	-	-	-	M4	40	20	0.02
8189-22125	-	-	-	-	-	M4	40	25	0.01
8189-22130	-	-	-	-	-	M4	40	30	0.02
8189-22210	8189-22210CY	8189-22210SG	8189-22210TB	8189-22210TR	8189-22210PO	M5	40	10	0.02
8189-22215	8189-22215CY	8189-22215SG	8189-22215TB	8189-22215TR	8189-22215PO	M5	40	15	0.02
8189-22220	8189-22220CY	8189-22220SG	8189-22220TB	8189-22220TR	8189-22220PO	M5	40	20	0.02
8189-22225	8189-22225CY	8189-22225SG	8189-22225TB	8189-22225TR	8189-22225PO	M5	40	25	0.02
8189-22230	8189-22230CY	8189-22230SG	8189-22230TB	8189-22230TR	8189-22230PO	M5	40	30	0.02
8189-22235	8189-22235CY	8189-22235SG	8189-22235TB	8189-22235TR	8189-22235PO	M5	40	35	0.02
8189-22240	8189-22240CY	8189-22240SG	8189-22240TB	8189-22240TR	8189-22240PO	M5	40	40	0.02
8189-22245	8189-22245CY	8189-22245SG	8189-22245TB	8189-22245TR	8189-22245PO	M5	40	45	0.02
8189-22250	8189-22250CY	8189-22250SG	8189-22250TB	8189-22250TR	8189-22250PO	M5	40	50	0.02
8189-22310	8189-22310CY	8189-22310SG	8189-22310TB	8189-22310TR	8189-22310PO	M6	40	10	0.02
8189-22315	8189-22315CY	8189-22315SG	8189-22315TB	8189-22315TR	8189-22315PO	M6	40	15	0.02
8189-22320	8189-22320CY	8189-22320SG	8189-22320TB	8189-22320TR	8189-22320PO	M6	40	20	0.02
8189-22325	8189-22325CY	8189-22325SG	8189-22325TB	8189-22325TR	8189-22325PO	M6	40	25	0.02
8189-22330	8189-22330CY	8189-22330SG	8189-22330TB	8189-22330TR	8189-22330PO	M6	40	30	0.02
8189-22335	8189-22335CY	8189-22335SG	8189-22335TB	8189-22335TR	8189-22335PO	M6	40	35	0.02
8189-22340	8189-22340CY	8189-22340SG	8189-22340TB	8189-22340TR	8189-22340PO	M6	40	40	0.02
8189-22345	8189-22345CY	8189-22345SG	8189-22345TB	8189-22345TR	8189-22345PO	M6	40	45	0.02
8189-22350	8189-22350CY	8189-22350SG	8189-22350TB	8189-22350TR	8189-22350PO	M6	40	50	0.02
8189-22415	8189-22415CY	8189-22415SG	8189-22415TB	8189-22415TR	8189-22415PO	M6	65	15	0.03
8189-22420	8189-22420CY	8189-22420SG	8189-22420TB	8189-22420TR	8189-22420PO	M6	65	20	0.03
8189-22425	8189-22425CY	8189-22425SG	8189-22425TB	8189-22425TR	8189-22425PO	M6	65	25	0.04
8189-22435	8189-22435CY	8189-22435SG	8189-22435TB	8189-22435TR	8189-22435PO	M6	65	35	0.04
8189-22440	8189-22440CY	8189-22440SG	8189-22440TB	8189-22440TR	8189-22440PO	M6	65	40	0.04
8189-22445	8189-22445CY	8189-22445SG	8189-22445TB	8189-22445TR	8189-22445PO	M6	65	45	0.04
8189-22450	8189-22450CY	8189-22450SG	8189-22450TB	8189-22450TR	8189-22450PO	M6	65	50	0.04
8189-22455	8189-22455CY	8189-22455SG	8189-22455TB	8189-22455TR	8189-22455PO	M6	65	55	0.04
8189-22460	8189-22460CY	8189-22460SG	8189-22460TB	8189-22460TR	8189-22460PO	M6	65	60	0.04
8189-22515	8189-22515CY	8189-22515SG	8189-22515TB	8189-22515TR	8189-22515PO	M8	65	15	0.04
8189-22520	8189-22520CY	8189-22520SG	8189-22520TB	8189-22520TR	8189-22520PO	M8	65	20	0.04
8189-22525	8189-22525CY	8189-22525SG	8189-22525TB	8189-22525TR	8189-22525PO	M8	65	25	0.04
8189-22530	8189-22530CY	8189-22530SG	8189-22530TB	8189-22530TR	8189-22530PO	M8	65	30	0.04
8189-22535	8189-22535CY	8189-22535SG	8189-22535TB	8189-22535TR	8189-22535PO	M8	65	35	0.04
8189-22540	8189-22540CY	8189-22540SG	8189-22540TB	8189-22540TR	8189-22540PO	M8	65	40	0.05
8189-22545	8189-22545CY	8189-22545SG	8189-22545TB	8189-22545TR	8189-22545PO	M8	65	45	0.05
8189-22550	8189-22550CY	8189-22550SG	8189-22550TB	8189-22550TR	8189-22550PO	M8	65	50	0.05
8189-22555	8189-22555CY	8189-22555SG	8189-22555TB	8189-22555TR	8189-22555PO	M8	65	55	0.05
8189-22560	8189-22560CY	8189-22560SG	8189-22560TB	8189-22560TR	8189-22560PO	M8	65	60	0.05
8189-225515	8189-225515CY	8189-225515SG	8189-225515TB	8189-225515TR	8189-225515PO	M10	65	15	0.04
8189-225520	8189-225520CY	8189-225520SG	8189-225520TB	8189-225520TR	8189-225520PO	M10	65	20	0.04
8189-225525	8189-225525CY	8189-225525SG	8189-225525TB	8189-225525TR	8189-225525PO	M10	65	25	0.04
8189-225530	8189-225530CY	8189-225530SG	8189-225530TB	8189-225530TR	8189-225530PO	M10	65	30	0.05
8189-225535	8189-225535CY	8189-225535SG	8189-225535TB	8189-225535TR	8189-225535PO	M10	65	35	0.05
8189-225540	8189-225540CY	8189-225540SG	8189-225540TB	8189-225540TR	8189-225540PO	M10	65	40	0.05
8189-225545	8189-225545CY	8189-225545SG	8189-225545TB	8189-225545TR	8189-225545PO	M10	65	45	0.05
8189-225550	8189-225550CY	8189-225550SG	8189-225550TB	8189-225550TR	8189-225550PO	M10	65	50	0.06
8189-225555	8189-225555CY	8189-225555SG	8189-225555TB	8189-225555TR	8189-225555PO	M10	65	55	0.06
8189-225560	8189-225560CY	8189-225560SG	8189-225560TB	8189-225560TR	8189-225560PO	M10	65	60	0.06
8189-22615	8189-22615CY	8189-22615SG	8189-22615TB	8189-22615TR	8189-22615PO	M8	80	15	0.06

**WDS**

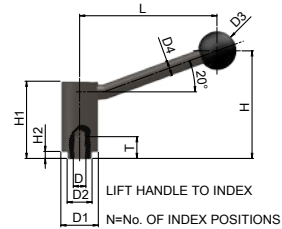
Black Grey	Cadmium Yellow	Signal Green	Traffic Blue	Traffic Red	Pure Orange	D	L	L1	Weight (kg)
8189-22620	8189-22620CY	8189-22620SG	8189-22620TB	8189-22620TR	8189-22620PO	M8	80	20	0.06
8189-22625	8189-22625CY	8189-22625SG	8189-22625TB	8189-22625TR	8189-22625PO	M8	80	25	0.06
8189-22630	8189-22630CY	8189-22630SG	8189-22630TB	8189-22630TR	8189-22630PO	M8	80	30	0.07
8189-22635	8189-22635CY	8189-22635SG	8189-22635TB	8189-22635TR	8189-22635PO	M8	80	35	0.07
8189-22640	8189-22640CY	8189-22640SG	8189-22640TB	8189-22640TR	8189-22640PO	M8	80	40	0.07
8189-22645	8189-22645CY	8189-22645SG	8189-22645TB	8189-22645TR	8189-22645PO	M8	80	45	0.07
8189-22650	8189-22650CY	8189-22650SG	8189-22650TB	8189-22650TR	8189-22650PO	M8	80	50	0.07
8189-22655	8189-22655CY	8189-22655SG	8189-22655TB	8189-22655TR	8189-22655PO	M8	80	55	0.08
8189-22660	8189-22660CY	8189-22660SG	8189-22660TB	8189-22660TR	8189-22660PO	M8	80	60	0.08
8189-22715	8189-22715CY	8189-22715SG	8189-22715TB	8189-22715TR	8189-22715PO	M10	80	15	0.06
8189-22720	8189-22720CY	8189-22720SG	8189-22720TB	8189-22720TR	8189-22720PO	M10	80	20	0.07
8189-22725	8189-22725CY	8189-22725SG	8189-22725TB	8189-22725TR	8189-22725PO	M10	80	25	0.07
8189-22730	8189-22730CY	8189-22730SG	8189-22730TB	8189-22730TR	8189-22730PO	M10	80	30	0.07
8189-22735	8189-22735CY	8189-22735SG	8189-22735TB	8189-22735TR	8189-22735PO	M10	80	35	0.07
8189-22740	8189-22740CY	8189-22740SG	8189-22740TB	8189-22740TR	8189-22740PO	M10	80	40	0.01
8189-22745	8189-22745CY	8189-22745SG	8189-22745TB	8189-22745TR	8189-22745PO	M10	80	45	0.08
8189-22750	8189-22750CY	8189-22750SG	8189-22750TB	8189-22750TR	8189-22750PO	M10	80	50	0.01
8189-22755	8189-22755CY	8189-22755SG	8189-22755TB	8189-22755TR	8189-22755PO	M10	80	55	0.08
8189-22760	8189-22760CY	8189-22760SG	8189-22760TB	8189-22760TR	8189-22760PO	M10	80	60	0.09
8189-22820	8189-22820CY	8189-22820SG	8189-22820TB	8189-22820TR	8189-22820PO	M10	95	20	0.11
8189-22825	8189-22825CY	8189-22825SG	8189-22825TB	8189-22825TR	8189-22825PO	M10	95	25	0.1
8189-22830	8189-22830CY	8189-22830SG	8189-22830TB	8189-22830TR	8189-22830PO	M10	95	30	0.11
8189-22835	8189-22835CY	8189-22835SG	8189-22835TB	8189-22835TR	8189-22835PO	M10	95	35	0.12
8189-22840	8189-22840CY	8189-22840SG	8189-22840TB	8189-22840TR	8189-22840PO	M10	95	40	0.11
8189-22845	8189-22845CY	8189-22845SG	8189-22845TB	8189-22845TR	8189-22845PO	M10	95	45	0.12
8189-22850	8189-22850CY	8189-22850SG	8189-22850TB	8189-22850TR	8189-22850PO	M10	95	50	0.12
8189-22855	8189-22855CY	8189-22855SG	8189-22855TB	8189-22855TR	8189-22855PO	M10	95	55	0.12
8189-22860	8189-22860CY	8189-22860SG	8189-22860TB	8189-22860TR	8189-22860PO	M10	95	60	0.13
8189-22870	8189-22870CY	8189-22870SG	8189-22870TB	8189-22870TR	8189-22870PO	M10	95	70	0.13
8189-22880	8189-22880CY	8189-22880SG	8189-22880TB	8189-22880TR	8189-22880PO	M10	95	80	0.14
8189-22890	8189-22890CY	8189-22890SG	8189-22890TB	8189-22890TR	8189-22890PO	M10	95	90	0.14
8189-22920	8189-22920CY	8189-22920SG	8189-22920TB	8189-22920TR	8189-22920PO	M12	95	20	0.11
8189-22925	8189-22925CY	8189-22925SG	8189-22925TB	8189-22925TR	8189-22925PO	M12	95	25	0.11
8189-22930	8189-22930CY	8189-22930SG	8189-22930TB	8189-22930TR	8189-22930PO	M12	95	30	0.12
8189-22935	8189-22935CY	8189-22935SG	8189-22935TB	8189-22935TR	8189-22935PO	M12	95	35	0.12
8189-22940	8189-22940CY	8189-22940SG	8189-22940TB	8189-22940TR	8189-22940PO	M12	95	40	0.12
8189-22945	8189-22945CY	8189-22945SG	8189-22945TB	8189-22945TR	8189-22945PO	M12	95	45	0.13
8189-22950	8189-22950CY	8189-22950SG	8189-22950TB	8189-22950TR	8189-22950PO	M12	95	50	0.13
8189-22955	8189-22955CY	8189-22955SG	8189-22955TB	8189-22955TR	8189-22955PO	M12	95	55	0.13
8189-22960	8189-22960CY	8189-22960SG	8189-22960TB	8189-22960TR	8189-22960PO	M12	95	60	0.14
8189-22970	8189-22970CY	8189-22970SG	8189-22970TB	8189-22970TR	8189-22970PO	M12	95	70	0.14
8189-22980	8189-22980CY	8189-22980SG	8189-22980TB	8189-22980TR	8189-22980PO	M12	95	80	0.16
8189-22990	8189-22990CY	8189-22990SG	8189-22990TB	8189-22990TR	8189-22990PO	M12	95	90	0.16
8189-23025	8189-23025CY	8189-23025SG	8189-23025TB	8189-23025TR	8189-23025PO	M12	110	25	0.18
8189-23030	8189-23030CY	8189-23030SG	8189-23030TB	8189-23030TR	8189-23030PO	M12	110	30	0.18
8189-23035	8189-23035CY	8189-23035SG	8189-23035TB	8189-23035TR	8189-23035PO	M12	110	35	0.18
8189-23040	8189-23040CY	8189-23040SG	8189-23040TB	8189-23040TR	8189-23040PO	M12	110	40	0.19
8189-23045	8189-23045CY	8189-23045SG	8189-23045TB	8189-23045TR	8189-23045PO	M12	110	45	0.19
8189-23050	8189-23050CY	8189-23050SG	8189-23050TB	8189-23050TR	8189-23050PO	M12	110	50	0.19
8189-23055	8189-23055CY	8189-23055SG	8189-23055TB	8189-23055TR	8189-23055PO	M12	110	55	0.2
8189-23060	8189-23060CY	8189-23060SG	8189-23060TB	8189-23060TR	8189-23060PO	M12	110	60	0.2
8189-23070	8189-23070CY	8189-23070SG	8189-23070TB	8189-23070TR	8189-23070PO	M12	110	70	0.21
8189-23080	8189-23080CY	8189-23080SG	8189-23080TB	8189-23080TR	8189-23080PO	M12	110	80	0.22
8189-23090	8189-23090CY	8189-23090SG	8189-23090TB	8189-23090TR	8189-23090PO	M12	110	90	0.23
8189-23125	8189-23125CY	8189-23125SG	8189-23125TB	8189-23125TR	8189-23125PO	M16	110	25	0.19
8189-23130	8189-23130CY	8189-23130SG	8189-23130TB	8189-23130TR	8189-23130PO	M16	110	30	0.2
8189-23135	8189-23135CY	8189-23135SG	8189-23135TB	8189-23135TR	8189-23135PO	M16	110	35	0.21
8189-23140	8189-23140CY	8189-23140SG	8189-23140TB	8189-23140TR	8189-23140PO	M16	110	40	0.21
8189-23145	8189-23145CY	8189-23145SG	8189-23145TB	8189-23145TR	8189-23145PO	M16	110	45	0.22
8189-23150	8189-23150CY	8189-23150SG	8189-23150TB	8189-23150TR	8189-23150PO	M16	110	50	0.22
8189-23155	8189-23155CY	8189-23155SG	8189-23155TB	8189-23155TR	8189-23155PO	M16	110	55	0.23
8189-23160	8189-23160CY	8189-23160SG	8189-23160TB	8189-23160TR	8189-23160PO	M16	110	60	0.24
8189-23170	8189-23170CY	8189-23170SG	8189-23170TB	8189-23170TR	8189-23170PO	M16	110	70	0.25
8189-23180	8189-23180CY	8189-23180SG	8189-23180TB	8189-23180TR	8189-23180PO	M16	110	80	0.27
8189-23190	8189-23190CY	8189-23190SG	8189-23190TB	8189-23190TR	8189-23190PO	M16	110	90	0.28



WDS 8194 Clamping Handle

Steel, chemical black finish
Black plastic ball knob

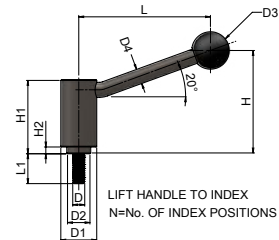
WDS No.	D	D1	D2	D3	H	H1	L	T	Weight (kg)
8194-2508	M8	24	25	10	60	40	81	18	0.17
8194-251	M10	24	25	10	60	40	81	18	0.17
8194-252	M12	28	30	11	70	46	99	20	0.26
8194-253	M16	33	32	12	82	52	118	23	0.39



WDS 8196 Clamping Lever - Indexing

Steel, chemical black finish
Black plastic ball knob

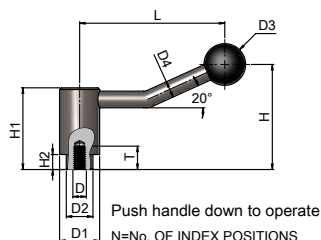
WDS No.	D	D1	D2	D3	D4	H	H1	H2	L	N	T	Size	Weight (kg)
8196-211	M8	24	17	25	10	64	44	4	81	28	23	1	0.17
8196-212	M10	28	20	30	11	76	51	5	99	30	26	2	0.26
8196-213	M12	33	24	32	12	87	57	5	118	35	30	3	0.39
8196-214	M16	41	30	37	14	100	67	6	136	38	35	4	0.67



WDS 8196 Clamping Lever - Indexing with Steel Screw

Steel, chemical black finish
Black plastic ball knob

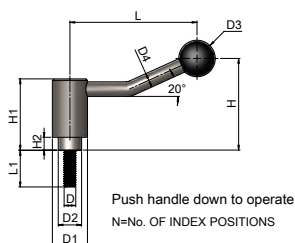
WDS No.	D	D1	D2	D3	D4	H	H1	H2	L	L1	N	Weight (kg)
8196-221	M8	24	16	25	10	68.5	49.5	4.5	88	20	28	0.18
8196-222	M8	24	16	25	10	68.5	49.5	4.5	88	30	28	0.19
8196-223	M8	24	16	25	10	68.5	49.5	4.5	88	40	28	0.19
8196-224	M8	24	16	25	10	68.5	49.5	4.5	88	50	28	0.19
8196-225	M10	28	19	32	12	68.5	51.5	5.5	111	20	30	0.19
8196-226	M10	28	19	32	12	68.5	51.5	5.5	111	30	30	0.18
8196-227	M10	28	19	32	12	68.5	51.5	5.5	111	40	30	0.2
8196-230	M12	33	23	32	13	81	58	6	135	20	35	0.44
8196-231	M12	33	23	32	13	81	58	6	135	30	35	0.44
8196-232	M12	33	23	32	13	81	58	6	135	40	35	0.45
8196-234	M12	33	23	32	13	81	58	6	135	60	35	0.47



Safety Clamping Lever WDS 8197

Steel, chemical black finish
Black plastic ball knob

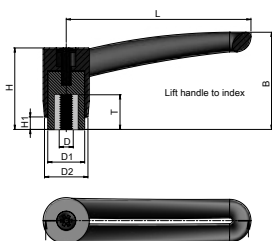
WDS No.	D	D1	D2	D3	D4	H	H1	H2	L	T	Size	Weight (kg)
8197-211	M8	24	17	25	10	69	49	9	81	23	1	0.16
8197-212	M10	28	20	30	11	82	57	11	99	26	2	0.25
8197-213	M12	33	24	32	12	94	64	12	118	30	3	0.37



Safety Clamping Lever with Steel Screw WDS 8197

Steel Gr 5.8, chemical black finish
Black plastic ball knob

WDS No.	D	D1	D2	D3	D4	H	H1	H2	L	L1	T	Weight (kg)
8197-223	M8	24	17	25	10	69	49	9	81	40	23	0.19
8197-225	M8	24	17	25	10	69	49	9	81	60	23	0.19
8197-228	M10	28	20	30	11	82	57	11	99	40	26	0.2
8197-229	M10	28	20	30	11	82	57	11	99	50	26	0.2
8197-234	M12	33	24	32	12	94	64	12	118	50	30	0.46
8197-235	M12	33	24	32	12	94	64	12	118	60	30	0.47



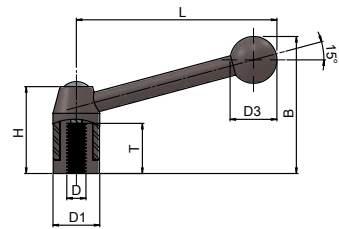
TP

ZP

Lever - Indexing - Thermoplastic with Steel Insert WDS 8226

PA6 - Thermoplastic Anthracite Grey
Insert - Zinc Plated Steel

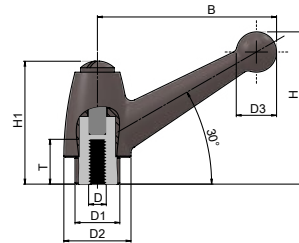
WDS No.	B	D	D1	D2	H	H1	L	T	Weight (kg)
8226-201	33.9	M4	11.8	14.3	29.3	4.3	45	11	0.01
8226-203	33.9	M5	11.8	14.3	29.3	4.3	45	11	0.01
8226-207	42.1	M6	16	18.8	35.3	5.4	80	15	0.03
8226-208	42.1	M8	16	18.8	35.3	5.4	80	15	0.03
8226-209	47.3	M10	20.8	23.8	38.3	5.4	100	18	0.05
8226-210	47.3	M12	20.8	23.8	38.3	5.4	100	18	0.04



WDS 8232 Indexing Lever with Ball Knob

Body - Steel
Knob - Bakelite

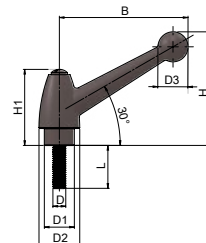
WDS No.	B	D	D1	D3	H	L	T	Weight (kg)
8232-201	41	M6	14	14	26	60	15	0.04
8232-202	49	M8	18	18	31.5	70	20	0.07
8232-203	53	M10	22	18	31.5	77	20	0.1
8232-204	72	M12	28	28	43	108	25	0.23



WDS 8233 Indexing Lever - Die Cast Aluminium

Body - Die Cast Aluminium
Insert - Steel

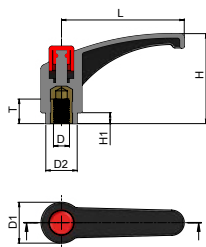
WDS No.	B	D	D1	D2	D3	H	H1	T	Weight (kg)
8233-201	40	M4	10	15	9	34	25	6	0.02
8233-202	40	M5	10	15	9	34	25	10	0.02
8233-203	60	M6	14	19	14	53	33	40	0.04
8233-204	60	M8	18	19	14	53	33	16	0.04
8233-205	80	M10	22	28	18	67	45	22	0.11
8233-206	80	M12	26	28	18	67	45	22	0.11



WDS 8234 Indexing Lever - Die Cast Aluminium Body with Steel Screw

Body - Die Cast Aluminium
Insert - Steel

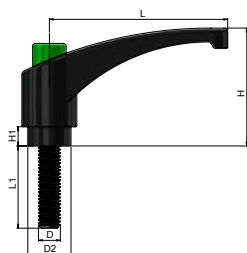
WDS No.	B	D	D1	D2	D3	H	H1	L	Weight (kg)
8234-20620	60	M6	14	19	14	53	33	20	0.05
8234-20830	60	M8	18	19	14	53	33	30	0.06
8234-21020	80	M10	22	28	18	67	45	20	0.13


NYL
BR

Clamping Lever - Thermoplastic **WDS 8237**

Handle - Nylon PA6
Metal Insert - Brass

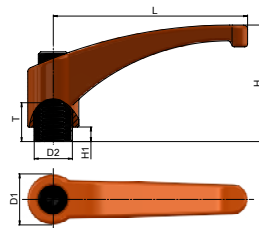
Black Knob	Red Knob	Orange Knob	Green Knob	D	D1	D2	H	H1	L	T	Weight (kg)
8237-205	8237-305	8237-405	8237-505	M5	15	11.5	33	4	45	9	0.01
8237-206	8237-306	8237-406	8237-506	M6	15	11.5	33	4	45	9	0.01
8237-208	8237-308	8237-408	8237-508	M8	20	16	43	7	65	12	0.02
8237-210	8237-310	8237-410	8237-510	M10	22.5	19	54	12	80	17	0.04
8237-212	8237-312	8237-412	8237-512	M12	27	21.5	63	13	95	22	0.06


NYL
ZP

Clamping Lever - Thermoplastic with Steel Screw **WDS 8238**

Handle - Nylon PA6
Thread - Zinc Plated Steel

Black Knob	Red Knob	Orange Knob	Green Knob	D	D1	D2	H	H1	L	L1	Weight (kg)
8238-20515	8238-30515	8238-40515	8238-50515	M5	15	11.5	33	4	45	15	0.01
8238-20520	8238-30520	8238-40520	8238-50520	M5	15	11.5	33	4	45	20	0.01
8238-20525	8238-30525	8238-40525	8238-50525	M5	15	11.5	33	4	45	25	0.02
8238-20530	8238-30530	-	-	M5	15	11.5	33	4	45	30	0.01
8238-20615	8238-30615	8238-40615	8238-50615	M6	15	11.5	33	4	45	15	0.01
8238-20620	8238-30620	8238-40620	8238-50620	M6	15	11.5	33	4	45	20	0.01
8238-20625	8238-30625	-	-	M6	15	11.5	33	4	45	25	0.01
8238-20630	8238-30630	8238-40630	8238-50630	M6	15	11.5	33	4	45	30	0.01
8238-20820	8238-30820	8238-40820	8238-50820	M8	20	16	43	7	65	20	0.03
8238-20825	8238-30825	-	-	M8	20	16	43	7	65	25	0.03
8238-20830	8238-30830	8238-40830	8238-50830	M8	20	16	43	7	65	30	0.03
8238-20840	8238-30840	-	-	M8	20	16	43	7	65	40	0.03
8238-20850	8238-30850	8238-40850	8238-50850	M8	20	16	43	7	65	50	0.04
8238-21020	8238-31020	-	-	M10	20	16	43	7	65	20	0.04
8238-21025	8238-31025	8238-41025	8238-51025	M10	22.5	19	54	12	80	25	0.05
8238-21030	8238-31030	-	-	M10	22.5	19	54	12	80	30	0.05
8238-21040	8238-31040	8238-41040	8238-51040	M10	22.5	19	54	12	80	40	0.05
8238-21050	8238-31050	8238-41050	8238-51050	M10	22.5	19	54	12	80	50	0.07
8238-21225	8238-31225	8238-41225	8238-51225	M12	27	21.5	63	13	95	25	0.07
8238-21230	8238-31230	-	-	M12	27	21.5	63	13	95	30	0.08
8238-21240	8238-31240	8238-41240	8238-51240	M12	27	21.5	63	13	95	40	0.08
8238-21250	8238-31250	-	-	M12	27	21.5	63	13	95	50	0.09
8238-21260	8238-31260	8238-41260	8238-51260	M12	27	21.5	63	13	95	60	0.1

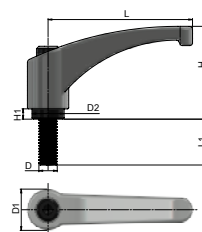


WDS 8241 Zinc Die Cast Clamping Handle - Female

Zinc Die Cast Handle

24 different locking positions

Jet Black	Pure Orange	Light Grey	D	D1	D2	H	H1	L	T	Stroke	Weight (kg)
8241-24505JB	8241-24505PO	8241-24505LG	M5	14	9.75	30	3	45	7	2.4	0.04
8241-24506JB	8241-24506PO	8241-24506LG	M6	14	9.75	30	3	45	7	2.4	0.04
8241-26308JB	8241-26308PO	8241-26308LG	M8	18	14	40.5	4.5	63	11	3	0.08
8241-28010JB	8241-28010PO	8241-28010LG	M10	21	15.7	48	6	80	16	3.5	0.13

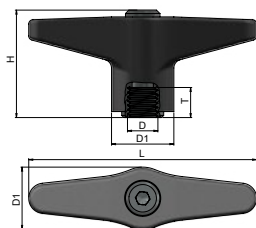


WDS 8242 Zinc Die Cast Clamping Handle - Male

Zinc Die Cast Handle

24 different locking positions

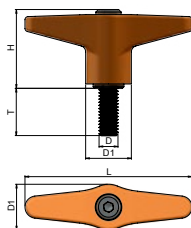
Jet Black	Pure Orange	Light Grey	D	D1	D2	H	H1	L	L1	Stroke	Weight (kg)
8242-2450515JB	8242-2450515PO	8242-2450515LG	M5	14	9.8	30	3	45	15	2.4	0.04
8242-2450520JB	8242-2450520PO	8242-2450520LG	M5	14	9.8	30	3	45	20	2.4	0.04
8242-2450525JB	8242-2450525PO	8242-2450525LG	M5	14	9.8	30	3	45	25	2.4	0.04
8242-2450530JB	8242-2450530PO	8242-2450530LG	M5	14	9.8	30	3	45	30	2.4	0.04
8242-2450615JB	8242-2450615PO	8242-2450615LG	M6	14	9.8	30	3	45	15	2.4	0.04
8242-2450620JB	8242-2450620PO	8242-2450620LG	M6	14	9.8	30	3	45	20	2.4	0.04
8242-2450625JB	8242-2450625PO	8242-2450625LG	M6	14	9.8	30	3	45	25	2.4	0.04
8242-2450630JB	8242-2450630PO	8242-2450630LG	M6	14	9.8	30	3	45	30	2.4	0.04
8242-2450635JB	8242-2450635PO	8242-2450635LG	M6	14	9.8	30	3	45	35	2.4	0.05
8242-2450640JB	8242-2450640PO	8242-2450640LG	M6	14	9.8	30	3	45	40	2.4	0.05
8242-2630820JB	8242-2630820PO	8242-2630820LG	M8	18	14	40.5	4.5	63	20	3	0.09
8242-2630825JB	8242-2630825PO	8242-2630825LG	M8	18	14	40.5	4.5	63	25	3	0.09
8242-2630830JB	8242-2630830PO	8242-2630830LG	M8	18	14	40.5	4.5	63	30	3	0.09
8242-2630835JB	8242-2630835PO	8242-2630835LG	M8	18	14	40.5	4.5	63	35	3	0.09
8242-2630840JB	8242-2630840PO	8242-2630840LG	M8	18	14	40.5	4.5	63	40	3	0.09
8242-2630845JB	8242-2630845PO	8242-2630845LG	M8	18	14	40.5	4.5	63	45	3	0.1
8242-2630850JB	8242-2630850PO	8242-2630850LG	M8	18	14	40.5	4.5	63	50	3	0.1
8242-2801020JB	8242-2801020PO	8242-2801020LG	M10	21	15.7	48	6	80	20	3.5	0.14
8242-2801025JB	8242-2801025PO	8242-2801025LG	M10	21	15.7	48	6	80	25	3.5	0.14
8242-2801030JB	8242-2801030PO	8242-2801030LG	M10	21	15.7	48	6	80	30	3.5	0.14
8242-2801040JB	8242-2801040PO	8242-2801040LG	M10	21	15.7	48	6	80	40	3.5	0.14
8242-2801050JB	8242-2801050PO	8242-2801050LG	M10	21	15.7	48	6	80	50	3.5	0.15
8242-2801060JB	8242-2801060PO	8242-2801060LG	M10	21	15.7	48	6	80	60	3.5	0.15



Indexing Clamping T Handle - Female Thread WDS 8243

Reinforced Polyamide with cast zinc indexing insert
24 Indexing Positions

Black Grey	Pure Orange	D	D1	H	L	T	Weight (kg)
8243-25305BG	8243-25305PO	M5	14.5	25	53	7	0.02
8243-25306BG	8243-25306PO	M6	14.5	25	53	7	0.02
8243-26808BG	8243-26808PO	M8	19.5	32	68	11	0.04
8243-27910BG	8243-27910PO	M10	22.5	37	79	16	0.06

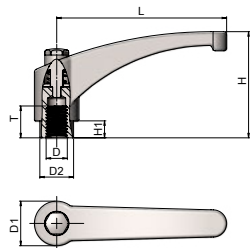


Indexing Clamping T Handle - Male Thread WDS 8244

Reinforced Polyamide with cast zinc indexing insert
24 Indexing Positions

Black Grey	Pure Orange	D	D1	H	L	T	Weight (kg)
8244-2530515BG	8244-2530515PO	M5	14.5	25	53	15	0.02
8244-2530520BG	8244-2530520PO	M5	14.5	25	53	20	0.02
8244-2530525BG	8244-2530525PO	M5	14.5	25	53	25	0.03
8244-2530530BG	8244-2530530PO	M5	14.5	25	53	30	0.03
8244-2530615BG	8244-2530615PO	M6	14.5	25	53	15	0.02
8244-2530620BG	8244-2530620PO	M6	14.5	25	53	20	0.03
8244-2530625BG	8244-2530625PO	M6	14.5	25	53	25	0.03
8244-2530630BG	8244-2530630PO	M6	14.5	25	53	30	0.03
8244-2530635BG	8244-2530635PO	M6	14.5	25	53	35	0.03
8244-2530640BG	8244-2530640PO	M6	14.5	25	53	40	0.03
8244-2680820BG	8244-2680820PO	M8	19.5	32	68	20	0.05
8244-2680825BG	8244-2680825PO	M8	19.5	32	68	25	0.05
8244-2680830BG	8244-2680830PO	M8	19.5	32	68	30	0.05
8244-2680835BG	8244-2680835PO	M8	19.5	32	68	35	0.05
8244-2680840BG	8244-2680840PO	M8	19.5	32	68	40	0.05
8244-2680845BG	8244-2680845PO	M8	19.5	32	68	45	0.05
8244-2680850BG	8244-2680850PO	M8	19.5	32	68	50	0.06
8244-2791020BG	8244-2791020PO	M10	22.5	37	79	20	0.07
8244-2791025BG	8244-2791025PO	M10	22.5	37	79	25	0.07
8244-2791030BG	8244-2791030PO	M10	22.5	37	79	30	0.07
8244-2791040BG	8244-2791040PO	M10	22.5	37	79	40	0.08
8244-2791050BG	8244-2791050PO	M10	22.5	37	79	50	0.08
8244-2791060BG	8244-2791060PO	M10	22.5	37	79	60	0.09

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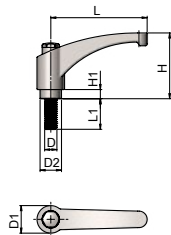


WDS 8245 Clamping Levers 316 Stainless Steel - Female

316 Stainless Steel

WDS No.	D	D1	D2	H	H1	L	T	Weight (kg)
8245-206	M6	15	12	30	6	45	8	0.05
8245-208	M8	18	14	45	8	63	10	0.1
8245-210	M10	22	16	58	10	80	12	0.16

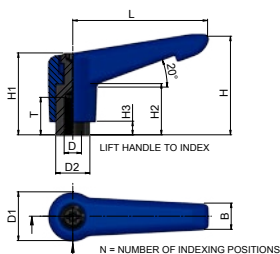
316



WDS 8246 Clamping Levers 316 Stainless Steel - Male

316 Stainless Steel

WDS No.	D	D1	D2	H	H1	L	L1	Weight (kg)
8246-20616	M6	15	10	30	6	45	16	0.06
8246-20620	M6	15	10	30	6	45	20	0.06
8246-20632	M6	15	10	30	6	45	32	0.06
8246-20640	M6	15	10	30	6	45	40	0.06
8246-20650	M6	15	10	30	6	45	50	0.06
8246-20820	M8	18	12	45	8	63	20	0.11
8246-20832	M8	18	12	45	8	63	32	0.11
8246-20840	M8	18	12	45	8	63	40	0.12
8246-20850	M8	18	12	45	8	63	50	0.12
8246-21025	M10	22	14	58	10	80	25	0.18
8246-21030	M10	22	14	58	10	80	30	0.18
8246-21040	M10	22	14	58	10	80	40	0.19
8246-21050	M10	22	14	58	10	80	50	0.19
8246-21060	M10	22	14	58	10	80	60	0.2



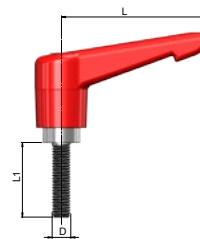
Clamping Handle Indexing with Stainless Insert **WDS 8320**

Handle - Glass fibre reinforced plastic

Screw - Stainless Steel - 321S12

Black Grey	Cadmium Yellow	Signal Green	B	D	D1	D2	H	H1	H2	H3	L	N	T	Weight (kg)
8320-221	8320-221CY	8320-221TB	7.5	M4	14.5	10	30	24.5	15	4	40	16	9	0.01
8320-222	8320-222CY	8320-222TB	7.5	M5	14.5	10	30	24.5	15	4	40	16	9	0.01
8320-223	8320-223CY	8320-223TB	7.5	M6	14.5	10	30	24.5	15	4	40	16	9	0.01
8320-224	8320-224CY	8320-224TB	9.5	M6	19.5	13	41	29	17.5	6.5	65	20	12	0.03
8320-225	8320-225CY	8320-225TB	9.5	M8	19.5	13	41	29	17.5	6.5	65	20	12	0.03
8320-226	8320-226CY	8320-226TB	11	M8	23	16	53	37.5	24	10	80	22	14	0.05
8320-227	8320-227CY	8320-227TB	11	M10	23	16	53	37.5	24	10	80	22	14	0.05
8320-228	8320-228CY	8320-228TB	13	M10	27.5	19	61	42.5	27	10	95	24	17	0.08
8320-229	8320-229CY	8320-229TB	13	M12	27.5	19	61	42.5	27	10	95	24	17	0.08
8320-230	8320-230CY	8320-230TB	15.5	M12	32.5	23	72.5	51	33	12	110	26	23	0.15
8320-231	8320-231CY	8320-231TB	15.5	M16	32.5	23	72.5	51	33	12	110	26	23	0.12

Traffic Blue	Traffic Red	Pure Orange	B	D	D1	D2	H	H1	H2	H3	L	N	T	Weight (kg)
8320-221TR	8320-221SG	8320-221PO	7.5	M4	14.5	10	30	24.5	15	4	40	16	9	0.01
8320-222TR	8320-222SG	8320-222PO	7.5	M5	14.5	10	30	24.5	15	4	40	16	9	0.01
8320-223TR	8320-223SG	8320-223PO	7.5	M6	14.5	10	30	24.5	15	4	40	16	9	0.01
8320-224TR	8320-224SG	8320-224PO	9.5	M6	19.5	13	41	29	17.5	6.5	65	20	12	0.03
8320-225TR	8320-225SG	8320-225PO	9.5	M8	19.5	13	41	29	17.5	6.5	65	20	12	0.03
8320-226TR	8320-226SG	8320-226PO	11	M8	23	16	53	37.5	24	10	80	22	14	0.05
8320-227TR	8320-227SG	8320-227PO	11	M10	23	16	53	37.5	24	10	80	22	14	0.05
8320-228TR	8320-228SG	8320-228PO	13	M10	27.5	19	61	42.5	27	10	95	24	17	0.08
8320-229TR	8320-229SG	8320-229PO	13	M12	27.5	19	61	42.5	27	10	95	24	17	0.08
8320-230TR	8320-230SG	8320-230PO	15.5	M12	32.5	23	72.5	51	33	12	110	26	23	0.15
8320-231TR	8320-231SG	8320-231PO	15.5	M16	32.5	23	72.5	51	33	12	110	26	23	0.12



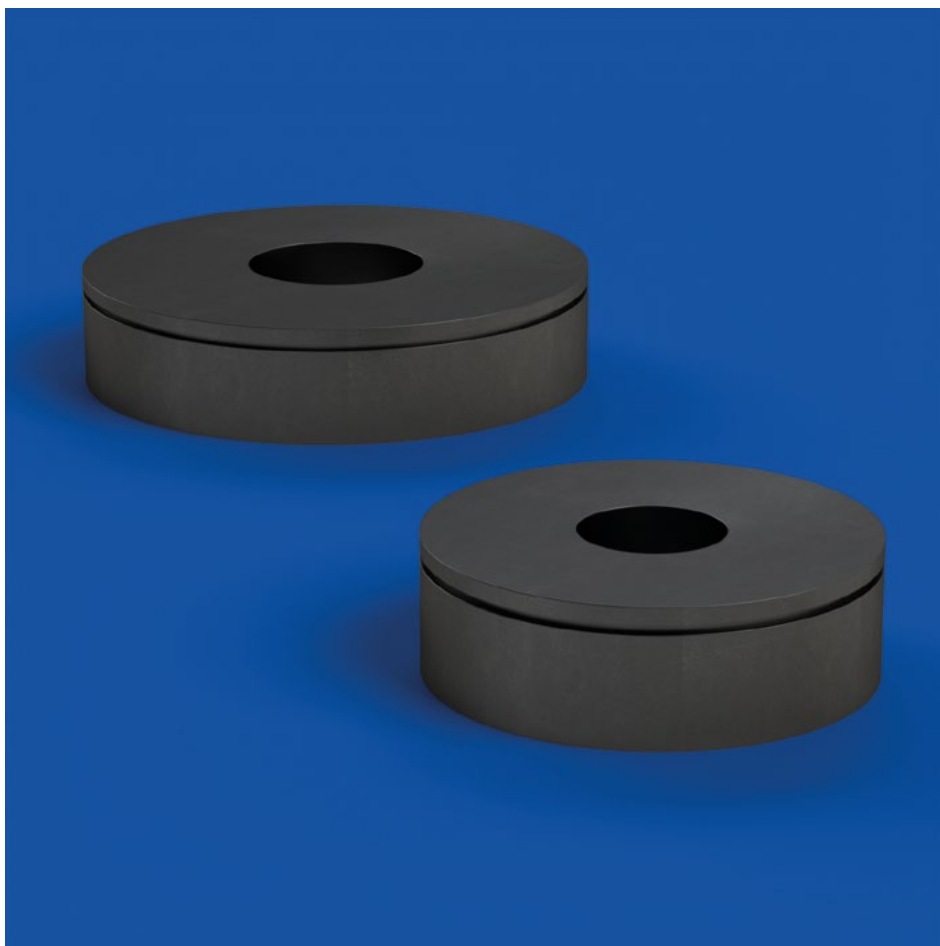
WDS 8325 Clamping Handle Indexing with Stainless Steel Screw

Handle - Glass fibre reinforced plastic

Screw - Stainless Steel - 321S12

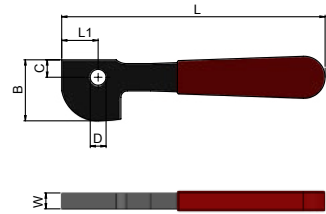
Black Grey	Cadmium Yellow	Signal Green	Traffic Blue	Traffic Red	Pure Orange	D	L	L1	Weight (kg)
8325-22215	8325-22215TB	8325-22215TR	8325-22215CY	8325-22215PO	8325-22215SG	M5	40	15	0.02
8325-22220	8325-22220TB	8325-22220TR	8325-22220CY	8325-22220PO	8325-22220SG	M5	40	20	0.02
8325-22225	8325-22225TB	8325-22225TR	8325-22225CY	8325-22225PO	8325-22225SG	M5	40	25	0.02
8325-22310	8325-22310TB	8325-22310TR	8325-22310CY	8325-22310PO	8325-22310SG	M6	40	10	0.02
8325-22315	8325-22320TB	8325-22315TR	8325-22315CY	8325-22315PO	8325-22315SG	M6	40	15	0.02
8325-22320	8325-22325TB	8325-22320TR	8325-22320CY	8325-22320PO	8325-22320SG	M6	40	20	0.02
8325-22325	8325-22330TB	8325-22325TR	8325-22325CY	8325-22325PO	8325-22325SG	M6	40	25	0.02
8325-22330	8325-22315TB	8325-22330TR	8325-22330CY	8325-22330PO	8325-22330SG	M6	40	30	0.02
8325-22340	8325-22340TB	8325-22340TR	8325-22340CY	8325-22340PO	8325-22340SG	M6	40	40	0.02
8325-22350	8325-22350TB	8325-22350TR	8325-22350CY	8325-22350PO	8325-22350SG	M6	40	50	0.02
8325-22415	8325-22415TB	8325-22415TR	8325-22415CY	8325-22415PO	8325-22415SG	M6	65	15	0.04
8325-22420	8325-22420TB	8325-22420TR	8325-22420CY	8325-22420PO	8325-22420SG	M6	65	20	0.04
8325-22425	8325-22425TB	8325-22425TR	8325-22425CY	8325-22425PO	8325-22425SG	M6	65	25	0.04
8325-22440	8325-22440TB	8325-22440TR	8325-22440CY	8325-22440PO	8325-22440SG	M6	65	40	0.04
8325-22450	8325-22450TB	8325-22450TR	8325-22450CY	8325-22450PO	8325-22450SG	M6	65	50	0.04
8325-22460	8325-22460TB	8325-22460TR	8325-22460CY	8325-22460PO	8325-22460SG	M6	65	60	0.04
8325-22515	8325-22515TB	8325-22515TR	8325-22515CY	8325-22515PO	8325-22515SG	M8	65	15	0.04
8325-22520	8325-22520TB	8325-22520TR	8325-22520CY	8325-22520PO	8325-22520SG	M8	65	20	0.04
8325-22525	8325-22525TB	8325-22525TR	8325-22525CY	8325-22525PO	8325-22525SG	M8	65	25	0.04
8325-22530	8325-22530TB	8325-22530TR	8325-22530CY	8325-22530PO	8325-22530SG	M8	65	30	0.04
8325-22540	8325-22540TB	8325-22540TR	8325-22540CY	8325-22540PO	8325-22540SG	M8	65	40	0.05
8325-22550	8325-22550TB	8325-22550TR	8325-22550CY	8325-22550PO	8325-22550SG	M8	65	50	0.05
8325-22560	8325-22560TB	8325-22560TR	8325-22560CY	8325-22560PO	8325-22560SG	M8	65	60	0.05
8325-22620	8325-22620TB	8325-22620TR	8325-22620CY	8325-22620PO	8325-225520SG	M10	65	20	0.04
8325-22625	8325-22625TB	8325-22625TR	8325-22625CY	8325-22625PO	8325-225525SG	M10	65	25	0.04
8325-22630	8325-22630TB	8325-22630TR	8325-22630CY	8325-22630PO	8325-225530SG	M10	65	30	0.05
8325-22640	8325-22640TB	8325-22640TR	8325-22640CY	8325-22640PO	8325-225540SG	M10	65	40	0.05
8325-22650	8325-22650TB	8325-22650TR	8325-22650CY	8325-22650PO	8325-225550SG	M10	65	50	0.06
8325-22660	8325-22660TB	8325-22660TR	8325-22660CY	8325-22660PO	8325-225560SG	M10	65	60	0.06
8325-225520	8325-225520TB	8325-225520TR	8325-225520CY	8325-225520PO	8325-22620SG	M8	80	20	0.06
8325-225525	8325-225525TB	8325-225525TR	8325-225525CY	8325-225525PO	8325-22625SG	M8	80	25	0.07
8325-225530	8325-225530TB	8325-225530TR	8325-225530CY	8325-225530PO	8325-22630SG	M8	80	30	0.08
8325-225540	8325-225540TB	8325-225540TR	8325-225540CY	8325-225540PO	8325-22640SG	M8	80	40	0.08
8325-225550	8325-225550TB	8325-225550TR	8325-225550CY	8325-225550PO	8325-22650SG	M8	80	50	0.09
8325-225560	8325-225560TB	8325-225560TR	8325-225560CY	8325-225560PO	8325-22660SG	M8	80	60	0.09
-	8325-22725TB	8325-22725TR	8325-22725CY	8325-22725PO	8325-22725SG	M10	80	20	0.05
8325-22725	8325-22720TB	8325-22720TR	8325-22720CY	8325-22720PO	8325-22720SG	M10	80	25	0.05
8325-22730	8325-22730TB	8325-22730TR	8325-22730CY	8325-22730PO	8325-22730SG	M10	80	30	0.05
8325-22740	8325-22740TB	8325-22740TR	8325-22740CY	8325-22740PO	8325-22740SG	M10	80	40	0.08
8325-22750	8325-22750TB	8325-22750TR	8325-22750CY	8325-22750PO	8325-22750SG	M10	80	50	0.05
8325-22760	8325-22760TB	8325-22760TR	8325-22760CY	8325-22760PO	8325-22760SG	M10	80	60	0.05
8325-22925	8325-22925TB	8325-22925TR	8325-22950CY	8325-22950PO	8325-22925SG	M12	95	25	0.11
8325-22930	8325-22930TB	8325-22930TR	8325-22925CY	8325-22925PO	8325-22930SG	M12	95	30	0.11
8325-22940	8325-22940TB	8325-22940TR	8325-22930CY	8325-22930PO	8325-22940SG	M23	95	40	0.11
8325-22950	8325-22950TB	8325-22950TR	8325-22940CY	8325-22940PO	8325-22950SG	M12	95	50	0.11

Black Grey	Cadmium Yellow	Signal Green	Traffic Blue	Traffic Red	Pure Orange	D	L	L1	Weight (kg)
8325-22960	8325-22960TB	8325-22960TR	8325-22960CY	8325-22960PO	8325-22960SG	M12	95	60	0.14
-	8325-23130TB	8325-23130TR	8325-23130CY	8325-23130PO	8325-23130SG	M16	110	30	0.2
8325-23140	8325-23140TB	8325-23140TR	8325-23140CY	8325-23140PO	8325-23140SG	M16	110	40	0.21
-	8325-23150TB	8325-23150TR	8325-23150CY	8325-23150PO	8325-23150SG	M16	110	50	0.23
-	8325-23160TB	8325-23160TR	8325-23160CY	8325-23160PO	8325-23160SG	M16	110	60	0.23



AXIAL BEARINGS

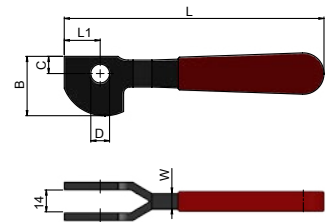
For the full range of Axial Bearings please see page 514



WDS 355 Eccentric Cam Lever - Single

Carbon Steel hardened
Chemical black finish

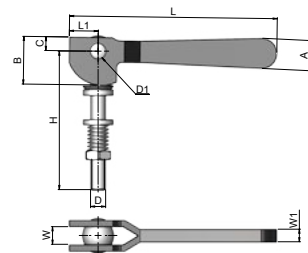
WDS No.	A	B	C	D	L	L1	W	Weight (kg)
355-201	24	38	11	10	165	23	10	0.3



WDS 357 Eccentric Cam Lever - Double

Carbon Steel hardened
Chemical black finish

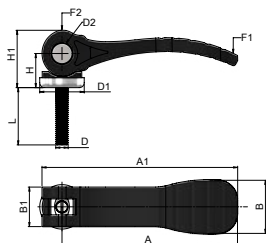
WDS No.	A	B	C	D	L	L1	W	W1	Weight (kg)
357-201	24	38	11	12	165	23	10	14	0.31



WDS 358 Eccentric CAM Lever with Eyebolt

Carbon Steel hardened
Chemical black finish

WDS No.	A	B	C	D	D1	H	L	L1	W	W1	Weight (kg)
358-201	24	38	11	M12	12	110	165	23	14	10	0.5
358-202	24	38	11	M16	12	120	165	23	14	10	0.61

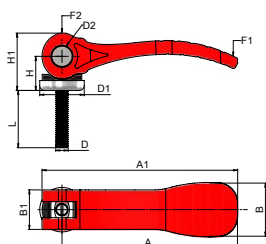


Cam Lever (Cam Clamp) - Handle with Adjustable Steel Screw WDS 363

Handle - PA 66 fibreglass reinforced, Pin - 303 Stainless Steel, Stud & Washer - in Grade 5.8 steel

F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	L	Stroke	Weight (kg)
363-20520	363-20520R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	20	1.15	0.03
363-20530	363-20530R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	30	1.15	0.03
363-20540	363-20540R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	40	1.15	0.03
363-20550	363-20550R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	50	1.15	0.03
363-20620	363-20620R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	20	1.15	0.03
363-20630	363-20630R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	30	1.15	0.03
363-20640	363-20640R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	40	1.15	0.03
363-20650	363-20650R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	50	1.15	0.04
363-20830	363-20825R	100	110	33	24	M8	27	11	170	5	16.2	27.7	30	1.5	0.07
363-20850	363-20830R	100	110	33	24	M8	27	11	170	5	16.2	27.7	50	1.5	0.07
363-20825	363-20840R	100	110	33	24	M8	27	11	170	5	16.2	27.7	25	1.5	0.07
363-20840	363-20850R	100	110	33	24	M8	27	11	170	5	16.2	27.7	40	1.5	0.07
363-21025	363-21025R	100	110	33	24	M10	27	11	170	5	16.2	27.7	25	1.5	0.07
363-21030	363-21030R	100	110	33	24	M10	27	11	170	5	16.2	27.7	30	1.5	0.08
363-21040	363-21040R	100	110	33	24	M10	27	11	170	5	16.2	27.7	40	1.5	0.08
363-21050	363-21050R	100	110	33	24	M10	27	11	170	5	16.2	27.7	50	1.5	0.08



303

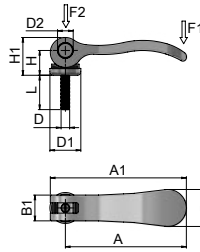
Cam Lever (Cam Clamp) - Handle with Adjustable Stainless Steel Screw WDS 363

Handle - PA 66 fibreglass reinforced, Pin, Stud and Washer - 303 Stainless Steel

F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	L	Stroke	Weight (kg)
363-60520	363-60520R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	20	1.15	0.03
363-60530	363-60530R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	30	1.15	0.03
363-60540	363-60540R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	40	1.15	0.03
363-60550	363-60550R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	50	1.15	0.03
363-60620	363-60620R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	20	1.15	0.03
363-60630	363-60630R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	30	1.15	0.03
363-60640	363-60640R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	40	1.15	0.03
363-60650	363-60650R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	50	1.15	0.03
363-60825	363-60825R	100	110	33	24	M8	27	11	170	5	16.2	27.7	25	1.5	0.03
363-60830	363-60830R	100	110	33	24	M8	27	11	170	5	16.2	27.7	30	1.5	0.08
363-60840	363-60840R	100	110	33	24	M8	27	11	170	5	16.2	27.7	40	1.5	0.03
363-60850	363-60850R	100	110	33	24	M8	27	11	170	5	16.2	27.7	50	1.5	0.07
363-61025	363-61025R	100	110	33	24	M10	27	11	170	5	16.2	27.7	25	1.5	0.03
363-61030	363-61030R	100	110	33	24	M10	27	11	170	5	16.2	27.7	30	1.5	0.08
363-61040	363-61040R	100	110	33	24	M10	27	11	170	5	16.2	27.7	40	1.5	0.07
363-61050	363-61050R	100	110	33	24	M10	27	11	170	5	16.2	27.7	50	1.5	0.08

304

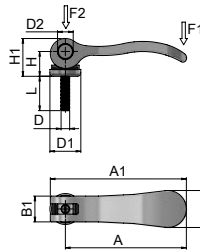


WDS 362 Cam Lever (Cam Clamp) - Adjustable 304 Stainless Steel with Stainless Screw

Handle - 304 Stainless Steel Polished, Pin, stud and washer - 303 Stainless Steel
F1=Hand Force (N), F2=Clamping Force (kN)

WDS No.	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	L	Stroke	Weight (kg)
362-20520	71	80	22	15	M5	18	9	125	4	14.5	22	20	1.2	0.08
362-20530	71	80	22	15	M5	18	9	125	4	14.5	22	30	1.2	0.08
362-20540	71	80	22	15	M5	18	9	125	4	14.5	22	40	1.2	0.08
362-20550	71	80	22	15	M5	18	9	125	4	14.5	22	50	1.2	0.08
362-20620	71	80	22	15	M6	18	9	125	4	14.5	22	20	1.2	0.08
362-20630	71	80	22	16	M6	18	9	125	4	13.8	23.1	30	1.15	0.08
362-20640	71	80	22	15	M6	18	9	125	4	14.5	22	40	1.2	0.08
362-20650	71	80	22	16	M6	18	9	125	4	13.8	23.1	50	1.15	0.08
362-20825	100	110	33	24	M8	27	11	350	8	18	28.5	25	1.5	0.24
362-20830	100	110	33	24	M8	27	11	170	5	16.2	27.7	30	1.5	0.24
362-20840	100	110	33	24	M8	27	11	350	8	18	28.5	40	1.5	0.24
362-20850	100	110	33	24	M8	27	11	170	5	16.2	27.7	50	1.5	0.25
362-21025	100	110	33	24	M10	27	11	350	8	18	28.5	25	1.5	0.25
362-21030	100	110	33	24	M10	27	11	170	5	16.2	27.7	30	1.5	0.25
362-21040	100	110	33	24	M10	27	11	350	8	18	28.5	40	1.5	0.25
362-21050	100	110	33	24	M10	27	11	170	5	16.2	27.7	50	1.5	0.26

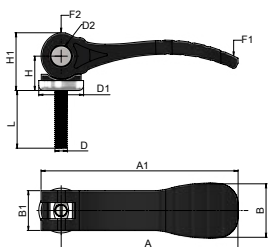
304



WDS 364 Cam Lever (Cam Clamp) - 304 Stainless Steel with Stainless Screw

Handle - 304 Stainless Steel Polished , Pin, stud and washer - 303 Stainless Steel
F1=Hand Force (N), F2=Clamping Force (kN)

WDS No.	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	L	Stroke	Weight (kg)
364-20520	71	80	22	15	M5	18	9	120	4	14.5	22	20	1.2	0.03
364-20530	71	80	22	15	M5	18	9	120	4	14.5	22	30	1.2	0.08
364-20540	71	80	22	15	M5	18	9	120	4	14.5	22	40	1.2	0.08
364-20550	71	80	22	15	M5	18	9	120	4	14.5	22	50	1.2	0.08
364-20620	71	80	22	15	M6	18	9	120	4	14.5	22	20	1.2	0.08
364-20630	71	80	22	15	M6	18	9	120	4	14.5	22	30	1.2	0.08
364-20640	71	80	22	15	M6	18	9	120	4	14.5	22	40	1.2	0.08
364-20650	71	80	22	15	M6	18	9	120	4	14.5	22	50	1.2	0.08
364-20825	100	110	33	24	M8	27	11	350	8	18	28.5	25	1.5	0.24
364-20830	100	110	33	24	M8	27	11	350	8	18	28.5	30	1.5	0.24
364-20840	100	110	33	24	M8	27	11	350	8	18	28.5	40	1.5	0.24
364-20850	100	110	33	24	M8	27	11	350	8	18	28.5	50	1.5	0.24
364-21025	100	110	33	24	M10	27	11	350	8	18	28.5	25	1.5	0.25
364-21030	100	110	33	24	M10	27	11	350	8	18	28.5	30	1.5	0.25
364-21040	100	110	33	24	M10	27	11	350	8	18	28.5	40	1.5	0.25
364-21050	100	110	33	24	M10	27	11	350	8	18	28.5	50	1.5	0.25

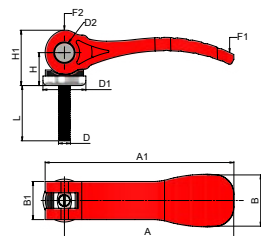


Cam Lever (Cam Clamp) Plastic Handle - Steel Screw WDS 365

Handle - PA 66 fibreglass reinforced, Pin - 303 Stainless Steel, Stud & Washer - in Grade 5.8 Steel

F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	L	Stroke	Weight (kg)
365-20520	365-20520R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	20	1.15	0.03
365-20530	365-20530R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	30	1.15	0.03
365-20540	365-20540R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	40	1.15	0.03
365-20550	365-20550R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	50	1.15	0.03
365-20620	365-20620R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	20	1.15	0.03
365-20630	365-20630R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	30	1.15	0.03
365-20640	365-20640R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	40	1.15	0.03
365-20650	365-20650R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	50	1.15	0.03
365-20825	365-20825R	100	110	33	24	M8	27	11	170	5	16.2	27.7	25	1.5	0.07
365-20830	365-20830R	100	110	33	24	M8	27	11	170	5	16.2	27.7	30	1.5	0.07
365-20840	365-20840R	100	110	33	24	M8	27	11	170	5	16.2	27.7	40	1.5	0.07
365-20850	365-20850R	100	110	33	24	M8	27	11	170	5	16.2	27.7	50	1.5	0.07
365-21025	365-21025R	100	110	33	24	M10	27	11	170	5	16.2	27.7	25	1.5	0.08
365-21030	365-21030R	100	110	33	24	M10	27	11	170	5	16.2	27.7	30	1.5	0.08
365-21040	365-21040R	100	110	33	24	M10	27	11	170	5	16.2	27.7	40	1.5	0.08
365-21050	365-21050R	100	110	33	24	M10	27	11	170	5	16.2	27.7	50	1.5	0.08



303

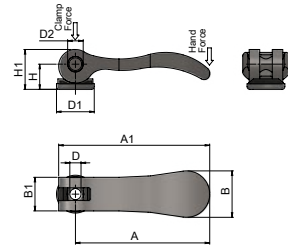
Cam Lever (Cam Clamp) Plastic Handle - Stainless Steel Screw WDS 365

Handle - PA 66 fibreglass reinforced, Pin, stud and washer - 303 Stainless Steel

F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	L	Stroke	Weight (kg)
365-60520	365-60520R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	20	1.15	0.03
365-60530	365-60530R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	30	1.15	0.03
365-60540	365-60540R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	40	1.15	0.03
365-60550	365-60550R	71	80	22	16	M5	18	9	125	2.5	13.8	23.1	50	1.15	0.03
365-60620	365-60620R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	20	1.15	0.03
365-60630	365-60630R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	30	1.15	0.03
365-60640	365-60640R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	40	1.15	0.03
365-60650	365-60650R	71	80	22	16	M6	18	9	125	2.5	13.8	23.1	50	1.15	0.03
365-60825	365-60825R	100	110	33	24	M8	27	11	170	5	16.2	27.7	25	1.5	0.07
365-60830	365-60830R	100	110	33	24	M8	27	11	170	5	16.2	27.7	30	1.5	0.07
365-60840	365-60840R	100	110	33	24	M8	27	11	170	5	16.2	27.7	40	1.5	0.07
365-60850	365-60850R	100	110	33	24	M8	27	11	170	5	16.2	27.7	50	1.5	0.07
365-61025	365-61025R	100	110	33	24	M10	27	11	170	5	16.2	27.7	25	1.5	0.08
365-61030	365-61030R	100	110	33	24	M10	27	11	170	5	16.2	27.7	30	1.5	0.08
365-61040	365-61040R	100	110	33	24	M10	27	11	170	5	16.2	27.7	40	1.5	0.08
365-61050	365-61050R	100	110	33	24	M10	27	11	170	5	16.2	27.7	50	1.5	0.08

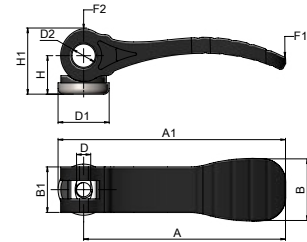
304



WDS 366 Cam Lever (Cam Clamp) - 304 Stainless Steel

Handle - 304 Stainless Steel Polished

WDS No.	A	A1	B	B1	D	D1	D2	H	H1	Clamping Force (kN)	Hand Force (N)	Stroke	Weight (kg)
366-205	71	79	22	16	M5	18	9	14.5	22	4	120	1.15	0.07
366-206	71	79	22	16	M6	18	9	14.5	22	4	120	1.15	0.02
366-208	96	108	33	24	M8	27	11	18	28.5	8	350	1.15	0.05



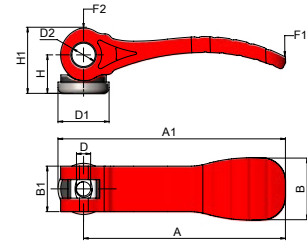
WDS 367 Cam Lever (Cam Clamp) Plastic Handle - Steel Washer

Handle - PA 66 fibreglass reinforced, Pin - 303 Stainless Steel, Washer - in Grade 5.8 steel

F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	Stroke	Weight (kg)
367-205	367-205R	71	79	22	16	M5	18	9	125	2.5	14	23.4	1.15	0.02
367-206	367-206R	71	79	22	16	M6	18	9	125	2.5	14	23.4	1.15	0.02
367-208	367-208R	96	108	33	24	M8	27	11	170	5	16	27.7	1.5	0.05

303

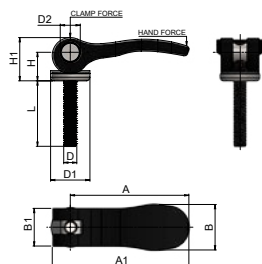


WDS 367 Cam Lever (Cam Clamp) Plastic Handle - Stainless Steel Washer

Handle - PA 66 fibreglass reinforced, Pin - 303 Stainless Steel, Internal Thread and washer - 303 Stainless Steel

F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	Stroke	Weight (kg)
367-605	367-605R	71	79	22	16	M5	18	9	125	2.5	14	23.4	1.15	0.02
367-606	367-606R	71	79	22	16	M6	18	9	125	2.5	14	23.4	1.15	0.02
367-608	367-608R	96	108	33	24	M8	27	11	170	5	16	27.7	1.5	0.05



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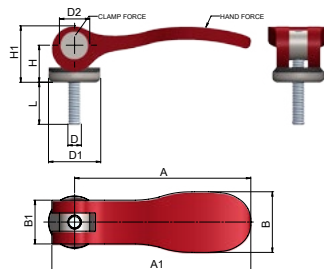
Inch Cam Lever (Cam Clamp) - Aluminium Handle WDS 368

Handle - Cast Aluminium EN: AC-46200, Pin - Stainless Steel 1.4305

F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	L	Stroke	Weight (kg)
368-1008010	368-1008010R	36	42	14	11.5	6-32 UNC	12	6	90	1.5	9	13	10	1	0.01
368-1008015	368-1008015R	36	42	14	11.5	6-32 UNC	12	6	90	1.5	9	13	15	1	0.01
368-1008030	368-1008030R	36	42	14	11.5	6-32 UNC	12	6	90	1.5	9	13	30	1	0.01
368-1010010	368-1010010R	36	42	14	11.5	8-32 UNC	12	6	90	1.5	9	13	10	1	0.01
368-1010015	368-1010015R	36	42	14	11.5	8-32 UNC	12	6	90	1.5	9	13	15	1	0.01
368-1010030	368-1010030R	36	42	14	11.5	8-32 UNC	12	6	90	1.5	9	13	30	1	0.01
368-1010115	368-1010115R	52	59	18	13	8-32 UNC	15.5	8	100	2.5	11	17	15	1	0.02
368-1010120	368-1010120R	52	59	18	13	8-32 UNC	15.5	8	100	2.5	11	17	15	1	0.02
368-1010130	368-1010130R	52	59	18	13	8-32 UNC	15.5	8	100	2.5	11	17	15	1	0.02
368-1012120	368-1012120R	52	59	18	13	10-24 UNC	15.5	8	100	2.5	11	17	20	1	0.02
368-1012130	368-1012130R	52	59	18	13	10-24 UNC	15.5	8	100	2.5	11	17	30	1	0.02
368-1012140	368-1012140R	52	59	18	13	10-24 UNC	15.5	8	100	2.5	11	17	40	1	0.02
368-1012150	368-1012150R	52	59	18	13	10-24 UNC	15.5	8	100	2.5	11	17	50	1	0.02
368-1012220	368-1012220R	70	79	22	15	10-32 UNF	18	9	120	4	14.5	22	20	1.2	0.04
368-1012230	368-1012230R	70	79	22	15	10-32 UNF	18	9	120	4	14.5	22	30	1.2	0.04
368-1012240	368-1012240R	70	79	22	15	10-32 UNF	18	9	120	4	14.5	22	40	1.2	0.04
368-1012250	368-1012250R	70	79	22	15	10-32 UNF	18	9	120	4	14.5	22	50	1.2	0.04
368-1013120	368-1013120R	52	59	18	13	10-32 UNF	15.5	8	100	2.5	11	17	20	1.2	0.02
368-1013130	368-1013130R	52	59	18	13	10-32 UNF	15.5	8	100	2.5	11	17	30	1.2	0.02
368-1013140	368-1013140R	52	59	18	13	10-32 UNF	15.5	8	100	2.5	11	17	40	1.2	0.02
368-1013150	368-1013150R	52	59	18	13	10-32 UNF	15.5	8	100	2.5	11	17	50	1.2	0.03
368-1014220	368-1014220R	70	79	22	15	1/4-20 UNC	18	9	120	4	14.5	22	20	1.2	0.04
368-1014230	368-1014230R	70	79	22	15	1/4-20 UNC	18	9	120	4	14.5	22	30	1.2	0.04
368-1014240	368-1014240R	70	79	22	15	1/4-20 UNC	18	9	120	4	14.5	22	40	1.2	0.04
368-1014250	368-1014250R	70	79	22	15	1/4-20 UNC	18	9	120	4	14.5	22	50	1.2	0.05
368-1016325	368-1016325R	96	108	33	24	5/16-18 UNC	27	11	350	8	18	28	25	1.5	0.11
368-1016330	368-1016330R	96	108	33	24	5/16-18 UNC	27	11	350	8	18	28	30	1.5	0.11
368-1016340	368-1016340R	96	108	33	24	5/16-18 UNC	27	11	350	8	18	28	40	1.5	0.12
368-1016350	368-1016350R	96	108	33	24	5/16-18 UNC	27	11	350	8	18	28	50	1.5	0.12
368-1018325	368-1018325R	96	108	33	24	3/8-16 UNC	27	11	350	8	18	28	50	1.5	0.12
368-1018330	368-1018330R	96	108	33	24	3/8-16 UNC	27	11	350	8	18	28	50	1.5	0.12
368-1018340	368-1018340R	96	108	33	24	3/8-16 UNC	27	11	350	8	18	28	50	1.5	0.12
368-1018350	368-1018350R	96	108	33	24	3/8-16 UNC	27	11	350	8	18	28	50	1.5	0.13

AL

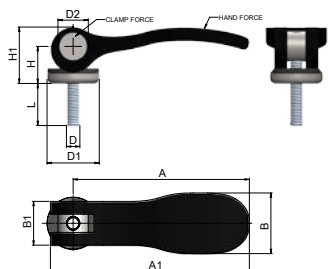


WDS 368 Cam Lever (Cam Clamp) - Aluminium Handle

Handle - Cast Aluminium EN: AC-46200, Pin - Stainless Steel 1.4305

F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	L	Stroke	Weight (kg)
368-20310	368-20310R	36	42	14	11.5	M3	12	6	90	1.5	9	13	10	1	0.02
368-20315	368-20315R	36	42	14	11.5	M3	12	6	90	1.5	9	13	15	1	0.02
368-20330	368-20330R	36	42	14	11.5	M3	12	6	90	1.5	9	13	30	1	0.03
368-20410	368-20410R	36	42	14	11.5	M4	12	6	90	1.5	9	13	10	1	0.03
368-20415	368-20415R	36	42	14	11.5	M4	12	6	90	1.5	9	13	15	1	0.03
368-20430	368-20430R	36	42	14	11.5	M4	12	6	90	1.5	9	13	30	1	0.03
368-21415	368-21415R	52	59	18	13	M4	15.5	8	100	2.5	11	17	15	1	0.03
368-21420	368-21420R	52	59	18	13	M4	15.5	8	100	2.5	11	17	20	1	0.04
368-21430	368-21430R	52	59	18	13	M4	15.5	8	100	2.5	11	17	30	1	0.05
368-20520	368-20520R	52	59	18	13	M5	15.5	8	100	2.5	11	17	20	1.2	0.04
368-20530	368-20530R	52	59	18	13	M5	15.5	8	100	2.5	11	17	30	1.2	0.03
368-20540	368-20540R	52	59	18	13	M5	15.5	8	100	2.5	11	17	40	1.2	0.04
368-20550	368-20550R	52	59	18	13	M5	15.5	8	100	2.5	11	17	50	1.2	0.05
368-21520	368-21520R	70	79	22	15	M5	18	9	120	4	14.5	22	20	1.2	0.04
368-21530	368-21530R	70	79	22	15	M5	18	9	120	4	14.5	22	30	1.2	0.04
368-21540	368-21540R	70	79	22	15	M5	18	9	120	4	14.5	22	40	1.2	0.04
368-21550	368-21550R	70	79	22	15	M5	18	9	120	4	14.5	22	50	1.2	0.04
368-20620	368-20620R	70	79	22	15	M6	18	9	120	4	14.5	22	20	1.2	0.04
368-20630	368-20630R	70	79	22	15	M6	18	9	120	4	14.5	22	30	1.2	0.04
368-20640	368-20640R	70	79	22	15	M6	18	9	120	4	14.5	22	40	1.2	0.04
368-20650	368-20650R	70	79	22	15	M6	18	9	120	4	14.5	22	50	1.2	0.04
368-20825	368-20825R	96	108	33	24	M8	18	9	350	8	18	28.5	25	1.5	0.11
368-20830	368-20830R	96	108	33	24	M8	18	9	350	8	18	28.5	30	1.5	0.11
368-20840	368-20840R	96	108	33	24	M8	18	9	350	8	18	28.5	40	1.5	0.12
368-20850	368-20850R	96	108	33	24	M8	18	9	350	8	18	28.5	50	1.5	0.12
368-21025	368-21025R	96	108	33	24	M10	27	11	350	8	18	28.5	25	1.5	0.12
368-21030	368-21030R	96	108	33	24	M10	27	11	350	8	18	28.5	30	1.5	0.13
368-21040	368-21040R	96	108	33	24	M10	27	11	350	8	18	28.5	40	1.5	0.13
368-21050	368-21050R	96	108	33	24	M10	27	11	350	8	18	28.5	50	1.5	0.13



Cam Lever (Cam Clamp) - Aluminium Handle with Stainless Pin WDS 368

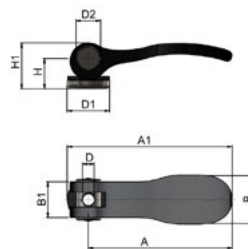
Handle - Cast Aluminium EN: AC-46200, Stud, Pin, and Washer-Stainless Steel 1.4305

F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	L	Stroke	Weight (kg)
368-60310	368-60310R	36	42	14	11.5	M3	12	6	90	1.5	9	13	10	1	0.03
368-60315	368-60315R	36	42	14	11.5	M3	12	6	90	1.5	9	13	15	1	0.03
368-60330	368-60330R	36	42	14	11.5	M3	12	6	90	1.5	9	13	30	1	0.03
368-60410	368-60410R	36	42	14	11.5	M4	12	6	90	1.5	9	13	10	1	0.03
368-60415	368-60415R	36	42	14	11.5	M4	12	6	90	1.5	9	13	15	1	0.03
368-60430	368-60430R	36	42	14	11.5	M4	12	6	90	1.5	9	13	20	1	0.01
368-61415	368-61415R	52	59	18	13	M4	15.5	8	100	2.5	11	17	15	1	0.02
368-61420	368-61420R	52	59	18	13	M4	15.5	8	100	2.5	11	17	20	1	0.03
368-61430	368-61430R	52	59	18	13	M4	15.5	8	100	2.5	11	17	30	1	0.03
368-60520	368-60520R	52	59	18	13	M5	15.5	8	100	2.5	11	17	20	1.2	0.03
368-60530	368-60530R	52	59	18	13	M5	15.5	8	100	2.5	11	17	30	1.2	0.02
368-60540	368-60540R	52	59	18	13	M5	15.5	8	100	2.5	11	17	40	1.2	0.03
368-60550	368-60550R	52	59	18	13	M5	15.5	8	100	2.5	11	17	50	1.2	0.04
368-61520	368-61520R	70	79	22	15	M5	18	9	120	4	14.5	22	20	1.2	0.04
368-61530	368-61530R	70	79	22	15	M5	18	9	120	4	14.5	22	30	1.2	0.04
368-61540	368-61540R	70	79	22	15	M5	18	9	120	4	14.5	22	40	1.2	0.04
368-61550	368-61550R	70	79	22	15	M5	18	9	120	4	14.5	22	50	1.2	0.04
368-60620	368-60620R	70	79	22	15	M6	18	9	120	4	14.5	22	20	1.2	0.04
368-60630	368-60630R	70	79	22	15	M6	18	9	120	4	14.5	22	30	1.2	0.04
368-60640	368-60640R	70	79	22	15	M6	18	9	120	4	14.5	22	40	1.2	0.04
368-60650	368-60650R	70	79	22	15	M6	18	9	120	4	14.5	22	50	1.2	0.04
368-60825	368-60825R	96	108	33	24	M8	18	9	350	8	18	28.5	25	1.5	0.11
368-60830	368-60830R	96	108	33	24	M8	18	9	350	8	18	28.5	30	1.5	0.12
368-60840	368-60840R	96	108	33	24	M8	18	9	350	8	18	28.5	40	1.5	0.12
368-60850	368-60850R	96	108	33	24	M8	18	9	350	8	18	28.5	50	1.5	0.12
368-61025	368-61025R	96	108	33	24	M10	27	11	350	8	18	28.5	25	1.5	0.12
368-61030	368-61030R	96	108	33	24	M10	27	11	350	8	18	28.5	30	1.5	0.13
368-61040	368-61040R	96	108	33	24	M10	27	11	350	8	18	28.5	40	1.5	0.13
368-61050	368-61050R	96	108	33	24	M10	27	11	350	8	18	28.5	50	1.5	0.13

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WDS 369 Inch Cam Lever (Cam Clamp) Female Thread - Aluminium Handle

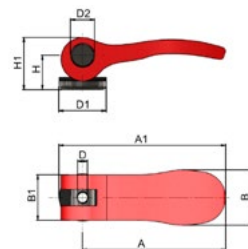
Handle - Cast Aluminium EN: AC-46200, Internal Thread, stud & washer - Steel Class 5.8

F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	Stroke	Weight (kg)
369-10080	369-10080R	36	42	14	11.5	6-32	12	6	90	1.5	9	13	1	0.01
369-10100	369-10101R	36	42	14	11.5	8-32	12	6	90	1.5	9	13	1	0.02
369-10101	369-10121R	52	59	18	13	8-32	15.5	8	100	2.5	11.2	17	1	0.02
369-10121	369-10122R	52	59	18	13	10-24	15.5	8	100	2.5	11.2	17	1	0.02
369-10122	369-10131R	70	79	22	15	10-32	18	9	120	4	14.5	22	1.2	0.03
369-10131	369-10142R	52	59	18	13	10-32	15.5	8	100	2.5	11.2	17	1	0.02
369-10142	369-10163R	70	79	22	15	1/4-20	18	9	120	4	14.5	22	1.2	0.03
369-10163	369-10183R	96	108	33	24	5/16-18	27	11	350	8	18	28.5	1.5	0.1

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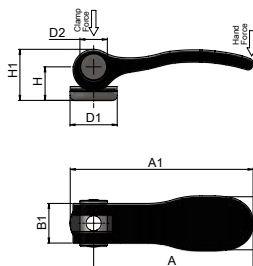


WDS 369 Inch Cam Lever (Cam Clamp) Stainless Female Thread - Aluminium Handle

Handle - Cast Aluminium EN - AC-46200, Internal Thread, stud & washer - 303 Stainless

F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	Stroke	Weight (kg)
369-60080	369-60080R	36	42	14	11.5	6-32	12	6	90	1.5	9	13	1	0.01
369-60100	369-60100R	36	42	14	11.5	8-32	12	6	90	1.5	9	13	1	0.01
369-60101	369-60101R	52	59	18	13	8-32	15.5	8	100	2.5	11.2	17	1	0.02
369-60121	369-60121R	52	59	18	13	10-24	15.5	8	100	2.5	11.2	17	1	0.02
369-60122	369-60122R	70	79	22	15	10-32	18	9	120	4	14.5	22	1.2	0.01
369-60131	369-60131R	52	59	18	13	10-32	15.5	8	100	2.5	11.2	17	1	0.02
369-60142	369-60142R	70	79	22	15	1/4-20	18	9	120	4	14.5	22	1.2	0.03
369-60163	369-60163R	96	108	33	24	5/16-18	27	11	350	8	18	28.5	1.5	0.1



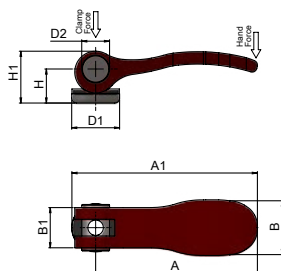
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Cam Lever (Cam Clamp) Female Thread - Aluminium Handle WDS 369

Handle - Cast Aluminium EN: AC-46200, Internal Thread, stud & washer - Steel Class 5.8

F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	Stroke	Weight (kg)
369-203	369-203R	36	42	14	11.5	M3	12	6	90	1.5	9	13	1	0.01
369-204	369-204R	36	42	14	11.5	M4	12	6	90	1.5	9	13	1	0.01
369-214	369-214R	52	59	18	13	M4	15.5	8	100	2.5	11.2	17	1	0.02
369-205	369-205R	52	59	18	13	M5	15.5	8	100	2.5	11.2	17	1	0.02
369-215	369-215R	70	79	22	15	M5	18	9	120	4	14.5	22	1.2	0.03
369-206	369-206R	70	79	22	15	M6	18	9	120	4	14.5	22	1.2	0.03
369-208	369-208R	96	108	33	24	M8	27	11	350	8	18	28.5	1.5	0.1



AL

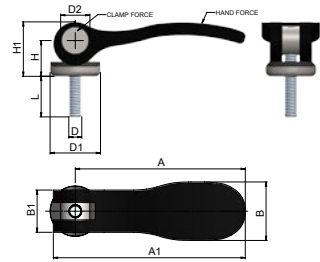
303

Cam Lever (Cam Clamp) Stainless Female Thread - Aluminium Handle WDS 369

Handle - Cast Aluminium EN - AC-46200, Internal Thread, stud & washer - 303 Stainless

F1=Hand Force (N), F2=Clamping Force (kN)

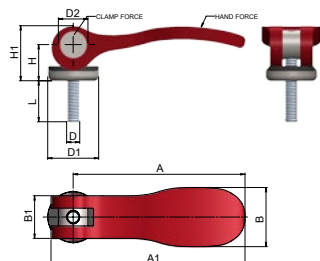
Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	Stroke	Weight (kg)
369-603	369-603R	36	42	14	11.5	M3	12	6	90	1.5	9	13	1	0.02
369-604	369-604R	36	42	14	11.5	M4	12	6	90	1.5	9	13	1	0.01
369-614	369-614R	52	59	18	13	M4	15.5	8	100	2.5	11.2	17	1	0.02
369-605	369-605R	52	59	18	13	M5	15.5	8	100	2.5	11.2	17	1	0.02
369-615	369-615R	70	79	22	15	M5	18	9	120	4	14.5	22	1.2	0.03
369-606	369-606R	70	79	22	15	M6	18	9	120	4	14.5	22	1.2	0.03
369-608	369-608R	96	108	33	24	M8	27	11	350	8	18	28.5	1.5	0.1



WDS 370 Inch Adjustable Cam Lever (Cam Clamp) - Aluminium Handle

Handle Aluminium EN - AC-46200 , Stud and washer - Steel Grade 5.8
F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	L	Stroke	Weight (kg)
370-1008010	370-1008010R	36.2	41.7	14.4	11.5	6-32 UN	12	6	90	1.5	9	13	10	1	0.01
370-1008015	370-1008015R	36.2	41.7	14.4	11.5	6-32 UN	12	6	90	1.5	9	13	15	1	0.01
370-1008030	370-1008030R	36.2	41.7	14.4	11.5	6-32 UN	12	6	90	1.5	9	13	30	1	0.01
370-1010010	370-1010010R	36.2	41.7	14.4	11.5	8-32 UNC	12	6	90	1.5	9	13	10	1	0.01
370-1010015	370-1010015R	36.2	41.7	14.4	11.5	8-32 UNC	12	6	90	1.5	9	13	15	1	0.01
370-1010030	370-1010030R	36.2	41.7	14.4	11.5	8-32 UNC	12	6	90	1.5	9	13	30	1	0.01
370-1010115	370-1010115R	52.3	59.1	18	13	8-32 UNC	15.4	8	100	2.5	11.2	17	15	1	0.02
370-1010120	370-1010120R	52.3	59.1	18	13	8-32 UNC	15.4	8	100	2.5	11.2	17	20	1	0.02
370-1010130	370-1010130R	52.3	59.1	18	13	8-32 UNC	15.4	8	100	2.5	11.2	17	30	1	0.02
370-1012120	370-1012120R	52.3	59.1	18	13	10-24 UNC	15.4	8	100	2.5	11.2	17	20	1	0.02
370-1012130	370-1012130R	52.3	59.1	18	13	10-24 UNC	15.4	8	100	2.5	11.2	17	30	1	0.02
370-1012140	370-1012140R	52.3	59.1	18	13	10-24 UNC	15.4	8	100	2.5	11.2	17	40	1	0.02
370-1012150	370-1012150R	52.3	59.1	18	13	10-24 UNC	15.4	8	100	2.5	11.2	17	50	1	0.02
370-1013120	370-1013120R	52.3	59.1	18	13	10-32 UNF	15.4	8	100	2.5	11.2	17	20	1	0.02
370-1013130	370-1013130R	52.3	59.1	18	13	10-32 UNF	15.4	8	100	2.5	11.2	17	30	1	0.02
370-1013140	370-1013140R	52.3	59.1	18	13	10-32 UNF	15.4	8	100	2.5	11.2	17	40	1	0.02
370-1013150	370-1013150R	52.3	59.1	18	13	10-32 UNF	15.4	8	100	2.5	11.2	17	50	1.2	0.02
370-1013220	370-1013220R	71	80	22	15	10-32 UNF	18	9	120	4	14.5	22	20	1.2	0.04
370-1013230	370-1013230R	71	80	22	15	10-32 UNF	18	9	120	4	14.5	22	30	1.2	0.04
370-1013240	370-1013240R	71	80	22	15	10-32 UNF	18	9	120	4	14.5	22	40	1.2	0.04
370-1013250	370-1013250R	71	80	22	15	10-32 UNF	18	9	120	4	14.5	22	50	1.2	0.04
370-1014220	370-1014220R	71	80	22	15	1/4-20 UNC	18	9	120	4	14.5	22	30	1.2	0.04
370-1014230	370-1014230R	71	80	22	15	1/4-20 UNC	18	9	120	4	14.5	22	40	1.2	0.04
370-1014240	370-1014240R	71	80	22	15	1/4-20 UNC	18	9	120	4	14.5	22	50	1.2	0.04
370-1014250	370-1014250R	71	80	22	15	1/4-20 UNC	18	9	120	4	14.5	22	20	1.2	0.04
370-1016325	370-1016325R	100	110	33	24	5/16-18 UNC	27	11	350	8	18	28	25	1.5	0.12
370-1016330	370-1016330R	100	110	33	24	5/16-18 UNC	27	11	350	8	18	28	30	1.5	0.12
370-1016340	370-1016340R	100	110	33	24	5/16-18 UNC	27	11	350	8	18	28	40	1.5	0.12
370-1016350	370-1016350R	100	110	33	24	5/16-18 UNC	27	11	350	8	18	28	50	1.5	0.12
370-1018325	370-1018325R	100	110	33	24	3/8-16 UNC	27	11	350	8	18	28	25	1.5	0.12
370-1018330	370-1018330R	100	110	33	24	3/8-16 UNC	27	11	350	8	18	28	30	1.5	0.12
370-1018340	370-1018340R	100	110	33	24	3/8-16 UNC	27	11	350	8	18	28	40	1.5	0.12
370-1018350	370-1018350R	100	110	33	24	3/8-16 UNC	27	11	350	8	18	28	50	1.5	0.12



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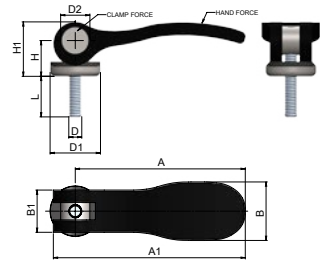
Inch Adjustable Cam Lever (Cam Clamp) - Aluminium Handle with Stainless Pin **WDS 370**

Handle Aluminium EN - AC-46200, Hinge Pin, Stud & Washer 1.4305

F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	L	Stroke	Weight (kg)
370-6008010	370-6008010R	36.2	41.7	14.4	11.5	6-32 UN	12	6	90	1.5	9	13	10	1	0.01
370-6008015	370-6008015R	36.2	41.7	14.4	11.5	6-32 UN	12	6	90	1.5	9	13	15	1	0.01
370-6008030	370-6008030R	36.2	41.7	14.4	11.5	6-32 UN	12	6	90	1.5	9	13	30	1	0.01
370-6010010	370-6010010R	36.2	41.7	14.4	11.5	8-32 UNC	12	6	90	1.5	9	13	10	1	0.01
370-6010015	370-6010015R	36.2	41.7	14.4	11.5	8-32 UNC	12	6	90	1.5	9	13	15	1	0.01
370-6010030	370-6010030R	36.2	41.7	14.4	11.5	8-32 UNC	12	6	90	1.5	9	13	30	1	0.01
370-6010115	370-6010115R	52.3	59.1	18	13	8-32 UNC	15.4	8	100	2.5	11.2	17	15	1	0.02
370-6010120	370-6010120R	52.3	59.1	18	13	8-32 UNC	15.4	8	100	2.5	11.2	17	20	1	0.02
370-6010130	370-6010130R	52.3	59.1	18	13	8-32 UNC	15.4	8	100	2.5	11.2	17	30	1	0.02
370-6012120	370-6012120R	52.3	59.1	18	13	10-24 UNC	15.4	8	100	2.5	11.2	17	20	1	0.02
370-6012130	370-6012130R	52.3	59.1	18	13	10-24 UNC	15.4	8	100	2.5	11.2	17	30	1	0.02
370-6012140	370-6012140R	52.3	59.1	18	13	10-24 UNC	15.4	8	100	2.5	11.2	17	40	1	0.02
370-6012150	370-6012150R	52.3	59.1	18	13	10-24 UNC	15.4	8	100	2.5	11.2	17	50	1	0.02
370-6013120	370-6013120R	52.3	59.1	18	13	10-32 UNF	15.4	8	100	2.5	11.2	17	20	1	0.03
370-6013130	370-6013130R	52.3	59.1	18	13	10-32 UNF	15.4	8	100	2.5	11.2	17	30	1	0.02
370-6013140	370-6013140R	52.3	59.1	18	13	10-32 UNF	15.4	8	100	2.5	11.2	17	40	1	0.02
370-6013150	370-6013150R	52.3	59.1	18	13	10-32 UNF	15.4	8	100	2.5	11.2	17	50	1.2	0.02
370-6013220	370-6013220R	71	80	22	15	10-32 UNF	18	9	120	4	14.5	22	20	1.2	0.04
370-6013230	370-6013230R	71	80	22	15	10-32 UNF	18	9	120	4	14.5	22	30	1.2	0.04
370-6013240	370-6013240R	71	80	22	15	10-32 UNF	18	9	120	4	14.5	22	40	1.2	0.04
370-6013250	370-6013250R	71	80	22	15	10-32 UNF	18	9	120	4	14.5	22	50	1.2	0.04
370-6014220	370-6014220R	71	80	22	15	1/4-20 UNC	18	9	120	4	14.5	22	30	1.2	0.04
370-6014230	370-6014230R	71	80	22	15	1/4-20 UNC	18	9	120	4	14.5	22	40	1.2	0.04
370-6014240	370-6014240R	71	80	22	15	1/4-20 UNC	18	9	120	4	14.5	22	50	1.2	0.04
370-6014250	370-6014250R	71	80	22	15	1/4-20 UNC	18	9	120	4	14.5	22	20	1.2	0.05
370-6016325	370-6016325R	100	110	33	24	5/16-18 UNC	27	11	350	8	18	28	25	1.5	0.11
370-6016330	370-6016330R	100	110	33	24	5/16-18 UNC	27	11	350	8	18	28	30	1.5	0.12
370-6016340	370-6016340R	100	110	33	24	5/16-18 UNC	27	11	350	8	18	28	40	1.5	0.12
370-6016350	370-6016350R	100	110	33	24	5/16-18 UNC	27	11	350	8	18	28	50	1.5	0.12
370-6018325	370-6018325R	100	110	33	24	3/8-16 UNC	27	11	350	8	18	28	25	1.5	0.12
370-6018330	370-6018330R	100	110	33	24	3/8-16 UNC	27	11	350	8	18	28	30	1.5	0.12
370-6018340	370-6018340R	100	110	33	24	3/8-16 UNC	27	11	350	8	18	28	40	1.5	0.12
370-6018350	370-6018350R	100	110	33	24	3/8-16 UNC	27	11	350	8	18	28	50	1.5	0.12

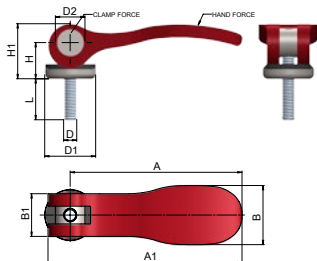
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WDS 370 Adjustable Cam Lever (Cam Clamp) - Aluminium Handle

Handle Aluminium EN - AC-46200 , Stud and washer - Steel Grade 5.8
F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	L	Stroke	Weight (kg)
370-20310	370-20310R	36.2	41.7	14.4	11.5	M3	12	6	90	1.5	9	13	10	1	0.01
370-20315	370-20315R	36.2	41.7	14.4	11.5	M3	12	6	90	1.5	9	13	15	1	0.01
370-20330	370-20330R	36.2	41.7	14.4	11.5	M3	12	6	90	1.5	9	13	30	1	0.01
370-20410	370-20410R	36.2	41.7	14.4	11.5	M4	12	6	90	1.5	9	13	10	1	0.01
370-20415	370-20415R	36.2	41.7	14.4	11.5	M4	12	6	90	1.5	9	13	15	1	0.01
370-20430	370-20430R	36.2	41.7	14.4	11.5	M4	12	6	90	1.5	9	13	30	1	0.01
370-21415	370-21415R	52.3	59.1	18	13	M4	15.4	8	100	2.5	11.2	17	15	1	0.02
370-21420	370-21420R	52.3	59.1	18	13	M4	15.4	8	100	2.5	11.2	17	20	1	0.02
370-21430	370-21430R	52.3	59.1	18	13	M4	15.4	8	100	2.5	11.2	17	30	1	0.02
370-20520	370-20520R	71	80	22	15	M5	18	9	120	4	14.5	22	20	1.2	0.04
370-20530	370-20530R	71	80	22	15	M5	18	9	120	4	14.5	22	30	1.2	0.04
370-20540	370-20540R	71	80	22	15	M5	18	9	120	4	14.5	22	40	1.2	0.04
370-20550	370-20550R	71	80	22	15	M5	18	9	120	4	14.5	22	50	1.2	0.04
370-20620	370-20620R	71	80	22	15	M6	18	9	120	4	14.5	22	20	1.2	0.04
370-20630	370-20630R	71	80	22	15	M6	18	9	120	4	14.5	22	30	1.2	0.04
370-20640	370-20640R	71	80	22	15	M6	18	9	120	4	14.5	22	40	1.2	0.04
370-20650	370-20650R	71	80	22	15	M6	18	9	120	4	14.5	22	50	1.2	0.05
370-20825	370-20825R	100	110	33	24	M8	27	11	350	8	18	28.5	25	1.5	0.11
370-20830	370-20830R	100	110	33	24	M8	27	11	350	8	18	28.5	30	1.5	0.12
370-20840	370-20840R	100	110	33	24	M8	27	11	350	8	18	28.5	40	1.5	0.12
370-20850	370-20850R	100	110	33	24	M8	27	11	350	8	18	28.5	50	1.5	0.12
370-21025	370-21025R	100	110	33	24	M10	27	11	350	8	18	28.5	25	1.5	0.12
370-21030	370-21030R	100	110	33	24	M10	27	11	350	8	18	28.5	30	1.5	0.13
370-21040	370-21040R	100	110	33	24	M10	27	11	350	8	18	28.5	40	1.5	0.13
370-21050	370-21050R	100	110	33	24	M10	27	11	350	8	18	28.5	50	1.5	0.13

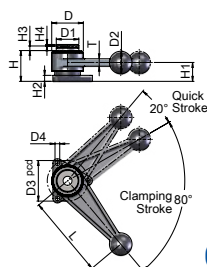


Adjustable Cam Lever (Cam Clamp) - Aluminium Handle with Stainless Pin **WDS 370**

Handle Aluminium EN - AC-46200, Hinge Pin, Stud & Washer 1.4305

F1=Hand Force (N), F2=Clamping Force (kN)

Black	Red	A	A1	B	B1	D	D1	D2	F1	F2	H	H1	L	Stroke	Weight (kg)
370-60310	370-60310R	36.2	41.7	14.4	11.5	M3	12	6	90	1.5	9	13	10	1	0.01
370-60315	370-60315R	36.2	41.7	14.4	11.5	M3	12	6	90	1.5	9	13	15	1	0.01
370-60330	370-60330R	36.2	41.7	14.4	11.5	M3	12	6	90	1.5	9	13	30	1	0.01
370-60410	370-60410R	36.2	41.7	14.4	11.5	M4	12	6	90	1.5	9	13	10	1	0.01
370-60415	370-60415R	36.2	41.7	14.4	11.5	M4	12	6	90	1.5	9	13	15	1	0.01
370-60430	370-60430R	36.2	41.7	14.4	11.5	M4	12	6	90	1.5	9	13	30	1	0.01
370-61415	370-61415R	52.3	59.1	18	13	M4	15.4	8	100	2.5	11.2	17	15	1	0.02
370-61420	370-61420R	52.3	59.1	18	13	M4	15.4	8	100	2.5	11.2	17	20	1	0.02
370-61430	370-61430R	52.3	59.1	18	13	M4	15.4	8	100	2.5	11.2	17	30	1	0.02
370-60520	370-60520R	71	80	22	15	M5	18	9	120	4	14.5	22	20	1.2	0.04
370-60530	370-60530R	71	80	22	15	M5	18	9	120	4	14.5	22	30	1.2	0.04
370-60540	370-60540R	71	80	22	15	M5	18	9	120	4	14.5	22	40	1.2	0.04
370-60550	370-60550R	71	80	22	15	M5	18	9	120	4	14.5	22	50	1.2	0.04
370-60620	370-60620R	71	80	22	15	M6	18	9	120	4	14.5	22	20	1.2	0.04
370-60630	370-60630R	71	80	22	15	M6	18	9	120	4	14.5	22	30	1.2	0.04
370-60640	370-60640R	71	80	22	15	M6	18	9	120	4	14.5	22	40	1.2	0.04
370-60650	370-60650R	71	80	22	15	M6	18	9	120	4	14.5	22	50	1.2	0.04
370-60825	370-60825R	100	110	33	24	M8	27	11	350	8	18	28.5	25	1.5	0.11
370-60830	370-60830R	100	110	33	24	M8	27	11	350	8	18	28.5	30	1.5	0.12
370-60840	370-60840R	100	110	33	24	M8	27	11	350	8	18	28.5	40	1.5	0.12
370-60850	370-60850R	100	110	33	24	M8	27	11	350	8	18	28.5	50	1.5	0.12
370-61025	370-61025R	100	110	33	24	M10	27	11	350	8	18	28.5	25	1.5	0.12
370-61030	370-61030R	100	110	33	24	M10	27	11	350	8	18	28.5	30	1.5	0.13
370-61040	370-61040R	100	110	33	24	M10	27	11	350	8	18	28.5	40	1.5	0.13
370-61050	370-61050R	100	110	33	24	M10	27	11	350	8	18	28.5	50	1.5	0.13



Cam Ram Clamp - Clockwise or Anti-Clockwise **WDS 4100**

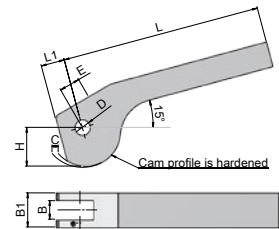
Steel parts with chemical black finish, All wearing parts hardened

H3 - Quick Stroke, H4 - Clamping Stroke

4100-201 Tapped M12 x 20 from this face. Drilled from this face Ø 12.3 from bottom face

4100-203 Tapped M16 x 25 from this face. Drilled from this face Ø 16.3 from bottom face

WDS No.	D	D1	D2	D3	D4	H	H1	H2	H3	H4	L	P	P1	T	Weight (kg)
4100-201A	42	30	30	54	6.3	41	22	8	6	2	110	75	400	10	0.55
4100-201C	42	30	30	54	6.3	41	22	8	6	2	110	75	400	10	0.55
4100-203A	56	42	40	72	8.3	57	28	10	8	2.5	140	85	500	14	1.3
4100-203C	56	42	40	72	8.3	57	28	10	8	2.5	140	85	500	14	1.3

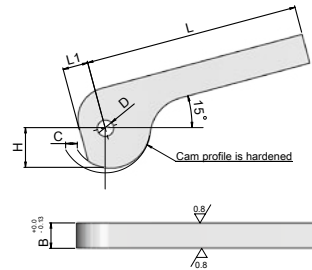


Supplied complete with pin and screw

WDS 619 Double Cam Lever

Steel BS.970 Gr.080M15
Chemical black finish

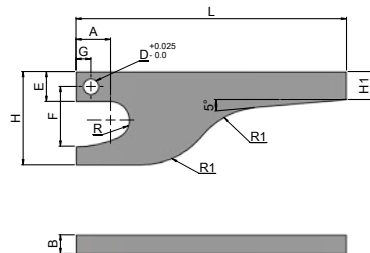
WDS No.	B	B1	C	D	E	H	L	L1	Weight (kg)
619-201	6.5	16	1.5	5	8	16	90	13	0.2
619-202	8.5	19	1.5	6	10	16	100	13	0.18
619-203	10.5	22	1.5	8	12	19	125	14	0.33
619-204	12.5	32	1.5	10	14	25	135	16	0.52



WDS 620 Single Cam Lever

Steel BS.970 Gr.080M15
Chemical black finish

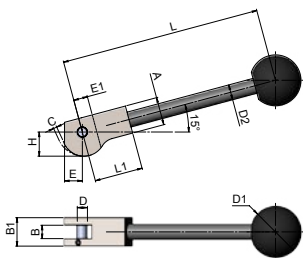
WDS No.	B	C	D	H	L	L1	Weight (kg)
620-201	6	1.5	5	16	90	12	0.08
620-202	10	1.5	8	19	125	14	0.2
620-203	16	1.5	10	25	135	16	0.39



WDS 621 Latch Cam Lever

Steel BS.970 Gr.070M20
Chemical black finish

WDS No.	A	B	D	E	F	G	H	H1	L	R	R1	Weight (kg)
621-202	15	8	6	14	26	7	42	12	115	8	35	0.16
621-203	18.5	10	8	16	32	8	50	15	145	10	42	0.26

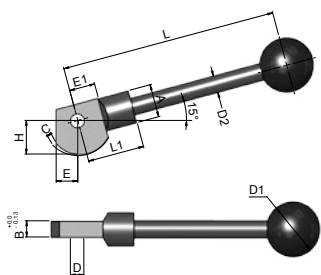


Double Cam Lever WDS 665

Cam - Steel BS.970 Gr.070M20

Handle - Steel BS.970 Gr.230M07

WDS No.	A	B	B1	C	D	D1	D2	E	E1	H	L	L1	Weight (kg)
665-201	18	6.5	16	2	5	25	10	13	8	16	122	32	0.14
665-202	18	8.5	19	2	6	25	10	13	9.5	16	122	32	0.16
665-203	22	10.5	22	2	8	40	12	14	11	19	158	38	0.25
665-2035	18	12.5	25	2	10	25	10	13	11.5	16	119	29	0.17
665-204	25	12.5	32	2	10	40	12.7	16	14	25	161	42	0.47
665-2045	24	14.5	32	2	12	40	12	15	16	19	159	39	0.36
665-205	32	16.5	45	2.5	12	40	15.9	28.5	17.5	38	218	51	1.24
665-206	38	20.5	50	3	16	40	19.1	32	21	50	320	65	2.22

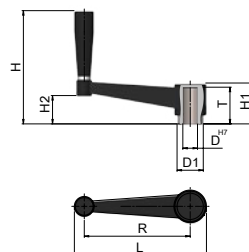


Single Cam Lever WDS 666

Cam - Steel BS.970 Gr.070M20

Handle - Steel BS.970 Gr.230M07

WDS No.	A	B	C	D	D1	D2	E	E1	H	L	L1	Weight (kg)
666-2005	17.5	6	2	5	25	10	13	10	16	120	30	0.09
666-2006	17.5	8	2	6	25	10	13	11	16	120	30	0.13
666-201	23.5	10	2	8	40	12	15	14	19	160	39	0.22
666-202	24.5	12	2	10	40	12.7	16	19	25	160	42	0.4

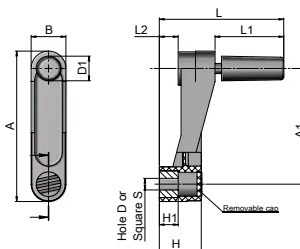


WDS 8166 Crank Handle With Fixed Revolving Grip - GRP

Crank - PA6, Glassfibre reinforced plastic black
Boss - Zinc Plated Steel

WDS No.	D	D1	H	H1	H2	L	R	T	Weight (kg)
8166-201	10	25	100	39	26	103	80	35	0.15
8166-2015	10	25	101	39	26	124	100	35	0.16
8166-202	12	25	107	39	26	103	80	35	0.15
8166-203	12	25	108	39	27	124	100	35	0.15
8166-2045	14	25	100	39	27	103	80	35	0.13
8166-204	14	25	108	39	27	124	100	35	0.15

TP

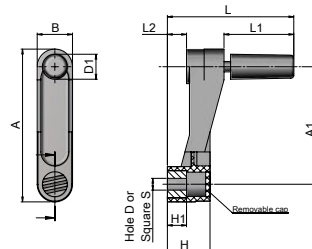


WDS 8420 Crank Handle with Fixed Revolving Grip - Reamed Hole

Handle - Thermoplastic
Insert - Steel, chemical black finish

WDS No.	A	A1	B	D	D1	H	H1	L	L1	L2	S	Weight (kg)
8420-202	104	80	24	8	13	29	13	85.5	49	13	8	0.11
8420-204	104	80	24	10	13	29	13	85.5	49	13	10	0.11
8420-208	129	100	29	10	16	36	13	105	59.5	16	10	0.21
8420-210	129	100	29	12	16	36	13	105	59.5	16	12	0.21
8420-212	161	125	36	12	20	44	18.5	140	83.5	19.5	12	0.41
8420-214	161	125	36	14	20	44	18.5	140	83.5	19.5	14	0.41

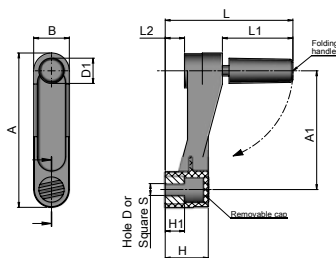
TP



WDS 8420 Crank Handle with Fixed Revolving Grip - Square Hole

Handle - Thermoplastic
Insert - Steel, chemical black finish

WDS No.	A	A1	B	D	D1	H	H1	L	L1	L2	S	Weight (kg)
8420-302	104	80	24	8	13	29	13	85.5	49	13	8	0.11
8420-304	104	80	24	10	13	29	13	85.5	49	13	10	0.11
8420-308	129	100	29	10	16	36	13	105	59.5	16	10	0.21
8420-310	129	100	29	12	16	36	13	105	59.5	16	12	0.19
8420-312	161	125	36	12	20	44	18.5	140	83.5	19.5	12	0.41
8420-314	161	125	36	14	20	44	18.5	140	83.5	19.5	14	0.41

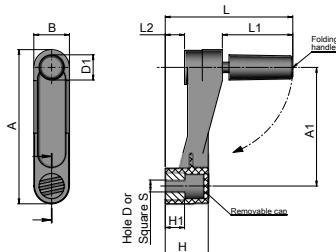


TP

Crank Handle with Foldaway Revolving Grip - Reamed Hole WDS 8425

Handle - Thermoplastic
Insert - Steel, chemical black finish

WDS No.	A	A1	B	D	D1	H	H1	L	L1	L2	S	Weight (kg)
8425-202	104	80	24	8	13	29	13	85.5	49	13	8	0.1
8425-204	104	80	24	10	13	29	13	85.5	49	13	10	0.1
8425-208	129	100	29	10	16	36	13	105	59.5	16	10	0.19
8425-210	129	100	29	12	16	36	13	105	59.5	16	12	0.19
8425-212	161	125	36	12	20	44	18.5	140	83.5	19.5	12	0.37
8425-214	161	125	36	14	20	44	18.5	140	83.5	19.5	14	0.37

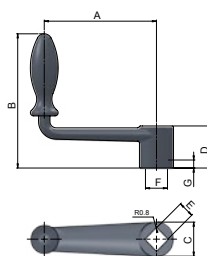


TP

Crank Handle with Foldaway Revolving Grip - Square Hole WDS 8425

Handle - Thermoplastic
Insert - Steel, chemical black finish

WDS No.	A	A1	B	D	D1	H	H1	L	L1	L2	S	Weight (kg)
8425-302	104	80	24	8	13	29	13	85.5	49	13	8	0.1
8425-304	104	80	24	10	13	29	13	85.5	49	13	10	0.1
8425-308	129	100	29	10	16	36	13	105	59.5	16	10	0.19
8425-310	129	100	29	12	16	36	13	105	59.5	16	12	0.19
8425-312	161	125	36	12	20	44	18.5	140	83.5	19.5	12	0.37
8425-314	161	125	36	14	20	44	18.5	140	83.5	19.5	14	0.37



CI

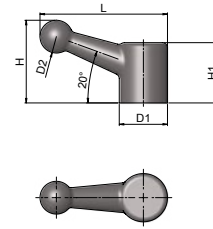
IN"

Forged Crank Handle - Inch WDS 8701

C-1021 Forging, Mill finish

WDS No.	A	B	C	D	E	F	G	Weight (kg)
8701-101	2 1/4	3 3/4	1	1 1/4	1/2 sq	3/4	3/16	0.23
8701-102	3	4 1/4	1 1/4	1 1/2	9/16 sq	3/4	1/4	0.37
8701-103	3 1/2	4 3/16	1 1/16	1 15/16	1/2 sq	11/16	1/4	0.34
8701-104	4	4 1/2	1 1/4	1 3/8	9/16 sq	3/4	5/16	0.44
8701-105	5	4 15/16	1 1/4	1 3/16	5/8 sq	7/8	3/8	0.62
8701-106	6	5 1/16	1 1/4	1 15/16	11/16 sq	15/16	3/8	0.57
8701-107	7	5 7/16	1 3/8	2 1/16	3/4 sq	1 1/16	1/2	0.76
8701-108	8	6 1/16	1 9/16	2 7/16	7/8 sq	1 1/4	1/2	1.11
8701-109	9 1/8	6 1/4	1 1/2	2 1/2	7/8 sq	1 1/4	1/2	1.18
8701-110	10	7	1 3/4	3	1 sq	1 3/8	9/16	1.64

CI

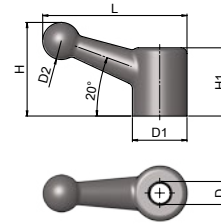


WDS 101 Ball Handle - Single Leg - Blank

Spheroidal Graphite Cast Iron (S. G. Iron)

WDS No.	D1	D2	H	H1	L	Weight (kg)
101-202	35	22	52	35	75	0.36

CI



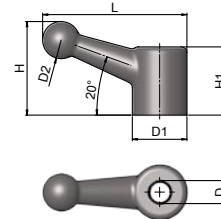
WDS 101 Ball Handle - Single Leg - Metric

Spheroidal Graphite Cast Iron (S. G. Iron)

WDS No.	D	D1	D2	H	H1	L	Weight (kg)
101-211	M12	28	19	48	35	60	0.2
101-213	M16	35	22	52	35	75	0.31

CI

IN"

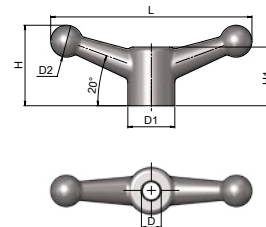


WDS 101 Ball Handle - Single Leg - Inch - BSW or UNC

Spheroidal Graphite Cast Iron (S. G. Iron)

WDS No.	D	D1	D2	H	H1	L	Type	Weight (kg)
101-03	1/2 inch	28	19	48	35	60	BSW	0.21
101-04	1/2 inch	28	19	48	35	60	UNC	0.21

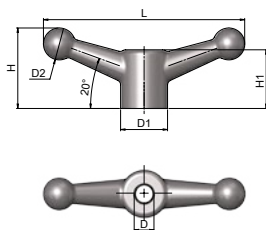
CI



WDS 101 Ball Handle - Double Leg - Metric

Spheroidal Graphite Cast Iron (S. G. Iron)

WDS No.	D	D1	D2	H	H1	L	Weight (kg)
101-215	M12	28	19	48	35	120	0.2
101-217	M16	35	22	52	35	150	0.31
101-218	M20	42	25	63	38	200	0.68



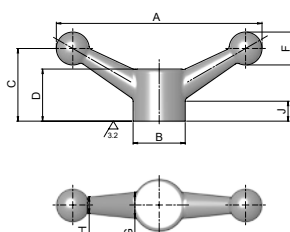
CI

IN"

Ball Handle - Double Leg - Inch - BSW or UNC WDS 101

Spheroidal Graphite Cast Iron (S. G. Iron)

WDS No.	D	D1	D2	H	H1	L	Weight (kg)
101-08	1/2 inch BSW	28	19	48	35	120	0.23
101-09	1/2 inch UNC	28	19	48	35	120	0.23

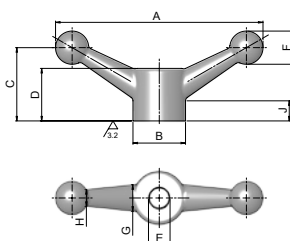


AL

Ball Handle - Double Leg - Aluminium - Blank WDS 101

319 Aluminium, Mill finish

WDS No.	A	B	C	D	F Dia	G	H	J	Weight (kg)
101-301	113	28	38	25	17	19	11	13	0.09
101-304	150	38	53	38	24	22	16	19	0.11
101-307	219	50	75	50	30	26	22	24	0.45

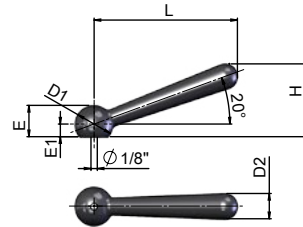


AL

Ball Handle - Double Leg - Aluminium - Metric WDS 101

319 Aluminium, Mill finish

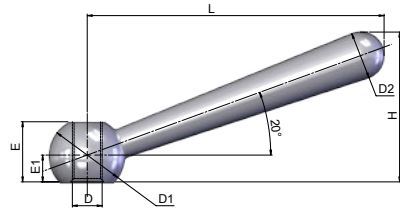
WDS No.	A	B	C	D	E	F Dia	G	H	J	Weight (kg)
101-302	113	28	38	25	M10	17	19	11	13	0.09
101-303	113	28	38	25	M12	17	19	11	13	0.11
101-305	150	38	53	38	M12	24	22	16	19	0.23
101-306	150	38	53	38	M16	24	22	16	19	0.23



WDS 111 Clamping Hand Lever - 1/8" Pilot Hole

Steel. BS.970 Gr.230M07
Chemical black finish

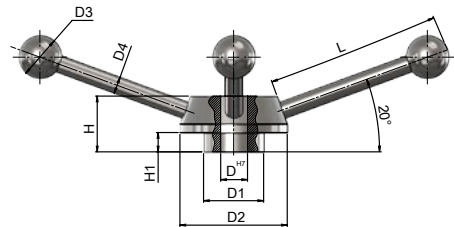
WDS No.	D	D1	D2	E	E1	H	L	Weight (kg)
111-201	"1/8"" Pilot Hole"	16	11	12	5	28	48	0.05
111-202	"1/8"" Pilot Hole"	19	13	15	6	38	72	0.08
111-203	"1/8"" Pilot Hole"	25	16	19	8	48	95	0.17



WDS 111 Clamping Hand Lever - Inch - BSF or BSW

Steel. BS.970 Gr.230M07
Chemical black finish

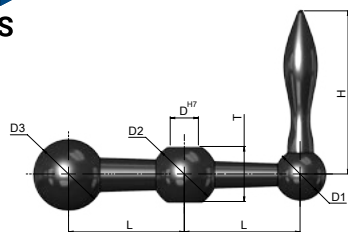
WDS No.	D	D1	D2	E	E1	H	L	Type	Weight (kg)
111-02	5/16	16	11	12	5	28	48	BSW	0.03
111-03	3/8	19	13	15	6	38	72	BSW	0.06
111-04	1/2	25	16	19	8	48	95	BSW	0.28
111-08	5/16	16	11	12	5	28	48	BSF	0.05
111-09	3/8	19	13	15	6	38	72	BSF	0.07



WDS 8170 Turret Lever

Steel, chemical black finish
Black plastic ball

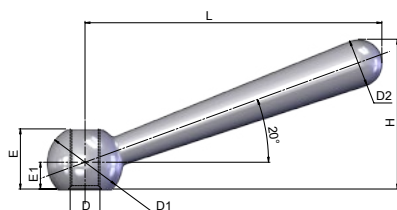
WDS No.	D	D1	D2	D3	D4	H	H1	L	Weight (kg)
8170-101	12	28	50	20	8	26	9	82	0.38
8170-103	14	30	55	25	10	28	10	96	0.54
8170-105	15	32	60	25	10	30	11	96	0.63
8170-107	16	35	65	30	12	32	12	110	0.85
8170-109	18	40	72	32	12	36	14	124	1.13
8170-111	20	44	80	35	14	40	16	158	1.53



Tri-ball Handle WDS 8183

Chrome

WDS No.	D	D1	D2	D3	H	L	T	Weight (kg)
8183-101	7	13	16	18	37	25	13	0.06
8183-103	8	15	19	20	46	28	17	0.1
8183-105	8	16	20	22	46	34	17	0.14
8183-107	10	18	23	25	57	41	19.5	0.28
8183-109	12	20	26	28	65	50	21.5	0.19

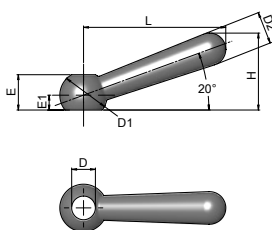


Clamping Hand Lever - Metric WDS 8187

Steel. BS.970 Gr.230M07

Chemical black finish

WDS No.	D	D1	D2	E	E1	H	L	Weight (kg)
8187-201	M6	16	11	12	5	28	48	0.04
8187-202	M8	16	11	12	5	28	48	0.04
8187-203	M10	19	13	15	6	38	72	0.07
8187-204	M12	25	16	19	8	48	95	0.14
8187-205	M16	32	20	24	10	58	120	0.27
8187-206	M20	38	26	28	11	72	140	0.49
8187-207	M24	50	32	41	18	97	200	1.09



303

316

Clamping Hand Lever - Stainless Steel WDS 825/8925

303/316 Stainless Steel

303	316	D	D1	D2	E	E1	H	L	Weight (kg)
825-206	8925-206	M6	16	11	12	5	28	48	0.04
825-208	8925-208	M8	16	11	12	5	28	48	0.04
825-210	8925-210	M10	19	13	15	6	38	72	0.07
825-212	8925-212	M12	25	16	19	8	48	95	0.14
825-216	8925-216	M16	32	20	24	10	58	120	0.27



HAND WHEELS & GRIPS

P 216-256

WDS Hand Wheels are available in Spoked, Solid & Keywayed versions. Generally used on machines for adjusting and calibrating, Hand Wheels can also be used for the operation of valves, on pipes, tables and cutters and precision machinery. The range includes both plastic and metal Hand Wheels with materials including: Aluminium, Bakelite, Cast Iron, Glass Fibre Reinforced Plastic (GRP), Pressed Steel, Stainless Steel & Thermoplastic.



SPOKED HAND WHEELS

Spoked hand wheels are available in a selection of materials including: aluminium, Bakelite, cast iron, GRP, pressed steel and stainless steel. Each design is unique with a choice of centre hole options these include round hole, keywayed and square fitting hole. On select designs, a revolving or rotating grip can also be utilised.

P 216-231



SOLID DISHED HAND WHEELS

Solid centre hand wheels are available in aluminium, Bakelite and thermoplastic. Models can be hand operated or cranked via a hand grip. Select styles have either a Revolving Grip or a Folding Grip. Smaller Positioning Wheels are also available with useful colour coded caps.

P 232-237



FIXED GRIPS FOR HAND WHEELS

Fixed grips are ideal for use on operational hand wheels, the grip allows the user to accurately rotate the hand wheel on applications such as machinery. Materials include: aluminium, Bakelite, steel and stainless steel. Male threaded and female threaded version are available with several designs offering an ergonomic grip to the handle.

P 238-242



REVOLVING GRIPS FOR HAND WHEELS

Revolving and rotating grips are excellent for fast action operational hand wheels materials include: aluminium, stainless steel, thermoplastic and Bakelite.

P 243-247



SHAFT POSITION INDICATORS

Digital shaft position indicators are position indicator dials available in vertical and horizontal orientations. This product allows the user to accurately and repeatedly define position by using the digital dial. Options include: four and five digit digital position indicators.

P 249-254





CONTROL KNOBS

Control knobs are often used on machines and operating equipment indicating a position for an action. This range has optional coloured caps to help identify operational actions such as on or off.

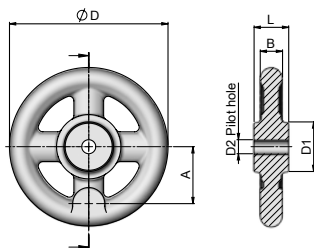
P 255



PARALLEL SHAFT KEYS

WDS Parallel Keys can be used with Keywayed Hand Wheels on a shaft acting as a locking mechanism to ensure the Hand Wheel stays in fixed position when being operated. Often called Feather Keys a range of sizes are manufactured to DIN6885A standards.

P 256

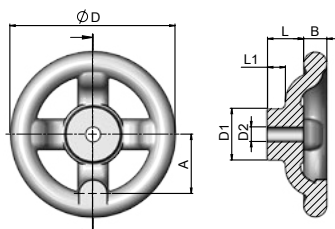

CI

Cast Iron Hand Wheel - Flat WDS 130

Cast Iron BS 1452 Gr 250

*Please note that D2 is a pilot diameter only

WDS No.	A	B	D	D1	D2*	L	N	Weight (kg)
130-02	42	18	5"	38	9	24	4	1
130-03	54	18	6"	44	9	28	4	1.5
130-05	75	23	8"	58	9	32	6	3

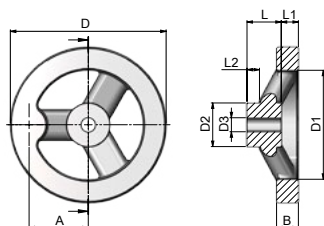

CI

Cast Iron Hand Wheel - Dished WDS 130

Cast Iron BS 1452 Gr 250

*Please note that D2 is a pilot diameter only

WDS No.	A	B	D	D1	D2*	L	L1	N	Weight (kg)
130-11	36	14	4 inch	32	9	22	11	4	0.6
130-12	42	18	5 inch	38	9	24	12	4	1
130-13	54	18	6 inch	41	9	28	14	4	1.75
130-14	64	20	7 inch	51	9	32	12	6	2.25
130-15	75	23	8 inch	57	9	32	16	6	3
130-17	95	24	10 inch	60	12	44	22	6	5
130-18	120	27	12 inch	63.5	12	51	25	6	9.1


CI

Cast Iron Hand Wheel WDS 130

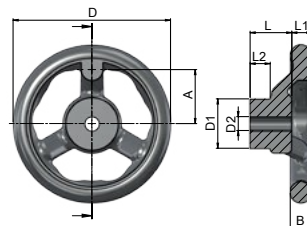
Cast Iron BS 1452 Gr 250

*Please note that D3 is a pilot diameter only

WDS No.	A	B	D	D1	D2	D3*	L	L1	L2	N	Weight (kg)
130-251	38	14	100	70	28	9	22	11	8	3	0.56
130-253	65	17	160	124	35	9	30	15	13	3	1.38
130-254	80	19	200	155	42	9	35	19	14	3	2.39

AL

IN"



WDS 133 Aluminium Hand Wheel - Spoked - Inch

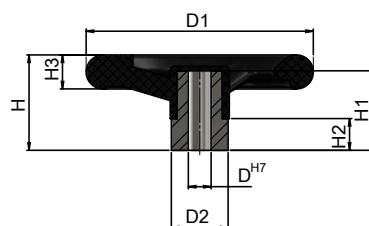
Aluminium

*Please note that D2 is a pilot diameter only

WDS No.	A	B	D	D1	D2*	L	L1	L2	Weight (kg)
133-01	35	14	4"	32	9	27	13	13	0.2
133-04	57	17	6"	51	9	37	21	16	0.4
133-06	79	23	8"	52	9	42	33	21	0.9

BK

ZP



WDS 8130 Hand Wheel - 3 Spoke Press Fit

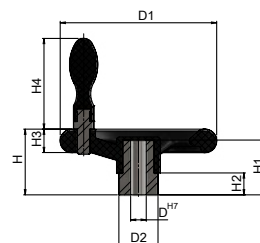
PF31 (Bakelite)

Insert - Zinc Plated Steel

WDS No.	D (H7)	D1	D2	H	H1	H2	H3	Weight (kg)
8130-201	10	100	25	42	35	14	15	0.19
8130-204	10	125	25	47	35	14	16	0.21
8130-207	10	160	32	52	35	12	21	0.39
8130-214	16	200	40	54	35	14	24	0.64
8130-217	18	250	50	59	40	14	28	1.18
8130-220	25	315	60	67	45	16	32	1.75

BK

ZP

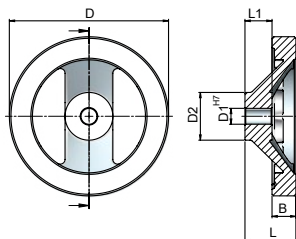


WDS 8131 Hand Wheel with Revolving Grip - Press Fit

PF31 (Bakelite)

Insert - Zinc Plated Steel

WDS No.	D (H7)	D1	D2	H	H1	H2	H3	H4	Weight (kg)
8131-201	10	100	25	42	35	14	15	58	0.22
8131-204	10	125	25	47	35	14	16	58	0.24
8131-207	10	160	32	52	35	12	21	68	0.43
8131-214	16	200	40	54	35	14	24	86	0.71
8131-217	18	250	50	59	40	14	28	86	1.23
8131-220	25	315	60	67	45	16	32	86	1.85

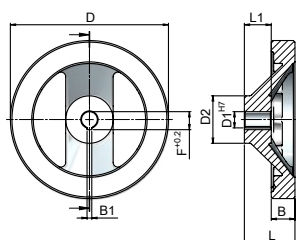


AL

Hand Wheel - Round Hole WDS 8178

Aluminium, available in Polished or Anodised finish
Boss machined, rim machined

Polished	Anodised	B	D	D1 (H7)	D2	L	L1	Weight (kg)
8178-200	-	15	80	10	25	31	16	0.14
8178-201	8178-401	15	100	10	30	32	17	0.14
8178-202	8178-402	16	125	12	35	34	18	0.21
8178-203	8178-403	18	160	14	40	37	20	0.6
8178-204	-	21	200	18	45	45	24	0.78
8178-205	-	24	250	22	50	50	28	1.55
8178-206	-	30	315	26	51	61	33	2.45

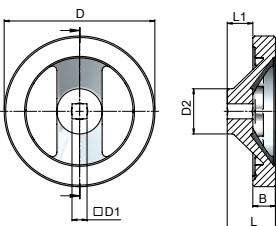


AL

Hand Wheel - Keywayed WDS 8178

Aluminium, available in Polished or Anodised finish
Boss machined, rim machined

Polished	Anodised	B	B1 (JS9)	D	D1 (H7)	D2	F	L	L1	Weight (kg)
8178-250	-	15	3	80	10	25	11.4	31	16	0.14
8178-251	8178-451	15	3	100	10	30	11.4	32	17	0.14
8178-252	8178-452	16	4	125	12	35	13.8	34	18	0.21
8178-253	8178-453	18	5	160	14	40	16.3	37	20	0.48
8178-254	-	21	6	200	18	45	20.8	45	24	0.78
8178-255	-	24	6	250	22	50	24.8	50	28	1.55
8178-256	-	30	8	315	26	51	29.3	61	33	2.45



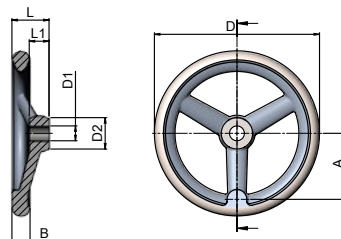
AL

Hand Wheel - Square Hole Polished WDS 8178

Aluminium - Polished finish
Boss machined, rim machined

WDS No.	B	D	D1 (H8)	D2	L	L1	Weight (kg)
8178-500	15	80	10	25	31	16	0.14
8178-501	15	100	10	30	32	17	0.14
8178-502	16	125	12	35	34	18	0.21
8178-503	18	160	14	40	37	20	0.6
8178-504	21	200	18	45	45	24	0.78

AL



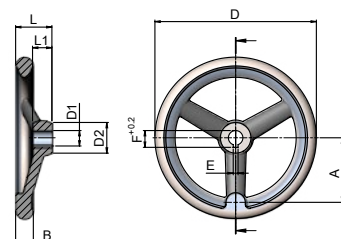
WDS 8179 Aluminium Hand Wheel - Round Hole

Aluminium

N = Number of Spokes

Polished	Turned Rim	A	B	D	D1 (H7)	D2	L	L1	N	Weight (kg)
8179-200	8179-220	27	14	80	10	24	29	16	3	0.11
8179-201	8179-221	36	15	100	10	26	33	17	3	0.19
8179-202	8179-222	47	16	125	12	28	36	18	3	0.24
8179-20214	-	47	16	125	14	28	36	18	3	0.24
8179-203	8179-223	62	18	160	14	32	40	20	3	0.43
8179-20316	-	62	18	160	16	32	40	20	3	0.43
8179-204	8179-224	80	22	200	18	38	45	24	3	0.78
8179-20422	-	80	22	200	22	38	45	24	3	0.78
8179-205	8179-225	101	26	250	22	45	50	28	5	1.57
8179-206	8179-226	132	26	315	26	53	56	33	5	2.37
8179-207	8179-227	171	32	400	30	65	63	38	5	3.8
8179-208	8179-228	220	34	500	34	78	72	45	5	5.66

AL

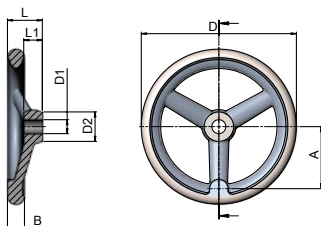


WDS 8179 Aluminium Hand Wheel - Keywayed

Aluminium

N = Number of Spokes

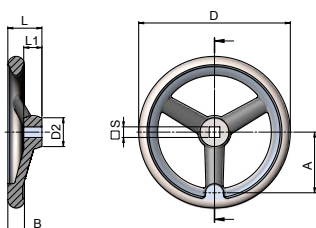
Polished	Turned Rim	A	B	D	D1 (H7)	D2	E (JS9)	F	L	L1	N	Weight (kg)
8179-250	8179-260	27	14	80	10	24	3	11.4	29	16	3	0.11
8179-251	8179-261	36	15	100	10	26	3	11.4	33	17	3	0.14
8179-252	8179-262	47	16	125	12	28	4	13.8	36	18	3	0.21
8179-25214	-	47	16	125	14	28	5	16.3	36	18	3	0.24
8179-253	8179-263	62	18	160	14	32	5	16.3	40	20	3	0.46
8179-25316	-	62	18	160	16	32	5	16.3	40	20	3	0.43
8179-254	8179-264	80	22	200	18	38	6	20.8	45	24	3	0.78
8179-25422	-	80	22	200	22	38	6	24.8	45	24	3	0.78
8179-255	8179-265	101	26	250	22	45	6	24.8	50	28	5	1.55
8179-256	8179-266	132	26	315	26	53	8	29.3	56	33	5	2.45
8179-257	8179-267	171	32	400	30	65	8	33.3	63	38	5	3.8
8179-258	8179-268	220	34	500	34	78	10	37.3	72	45	5	6.9


AL

Aluminium Hand Wheel - Pilot Hole **WDS 8179**

Aluminium
N = Number of Spokes

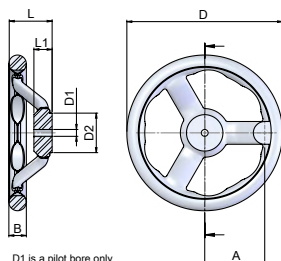
Polished	Turned Rim	A	B	D	D1	D2	L	L1	N	Weight (kg)
8179-400	8179-420	27	14	80	5	24	29	16	3	0.11
8179-401	8179-421	36	15	100	5	26	33	17	3	0.19
8179-402	8179-422	47	16	125	6	28	36	18	3	0.24
8179-403	8179-423	62	18	160	6	32	40	20	3	0.43
8179-404	8179-424	80	22	200	6	38	45	24	3	0.78
8179-405	8179-425	101	26	250	8	45	50	28	5	1.57
8179-406	8179-426	132	26	315	8	53	56	33	5	2.37
8179-407	8179-427	171	32	400	8	65	63	38	5	3.8
8179-408	8179-428	220	34	500	10	78	72	45	5	5.66


AL

Aluminium Hand Wheel - Square Hole **WDS 8179**

Aluminium
N = Number of Spokes

Polished	Turned Rim	A	B	D	D2	L	L1	N	S	Weight (kg)
8179-500	8179-520	27	14	80	24	29	16	3	9	0.11
8179-501	8179-521	36	15	100	26	33	17	3	9	0.19
8179-502	8179-522	47	16	125	28	36	18	3	11	0.24
8179-503	8179-523	62	18	160	32	40	20	3	12	0.43
8179-504	8179-524	80	22	200	38	45	24	3	14	0.78
8179-505	8179-525	101	26	250	45	50	28	5	17	1.57
8179-506	8179-526	132	26	315	63	56	33	5	19	2.37

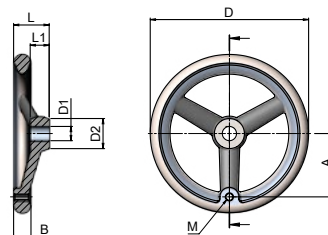

AL

Aluminium Hand Wheel - Spoked Pilot Bore **WDS 8179**

Aluminium AISi9Mg
*Please note that D2 is a pilot diameter only

WDS No.	A	B	D	D1	D2*	L	L1	Weight (kg)
8179-5045	79	23	205	9	52	33	24	1.08

AL



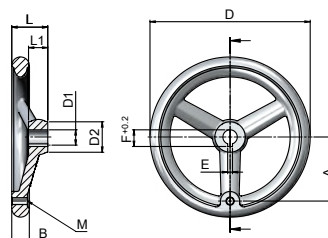
WDS 8179 Aluminium Hand Wheel with Turned Rim - Round Hole Tapped for Grip

Aluminium, Boss machined, Rim finished turned, Boss Tapped for Grip

N = Number of spokes

WDS No.	A	B	D	D1 (H7)	D2	L	L1	M	N	Weight (kg)
8179-270	27	80	14	10	24	29	16	M6	3	0.11
8179-271	36	100	15	10	26	33	17	M6	3	0.18
8179-272	47	125	16	12	28	36	18	M8	3	0.26
8179-27214	47	125	16	14	28	36	18	M8	3	0.24
8179-273	62	160	18	14	32	40	20	M10	3	0.41
8179-27316	62	160	18	16	32	40	20	M10	3	0.43
8179-274	80	200	22	18	38	45	24	M10	3	0.76
8179-27422	80	200	22	22	38	45	24	M10	3	0.78
8179-275	101	250	26	22	45	50	28	M12	5	1.42
8179-276	132	315	26	26	53	56	33	M12	5	2.25
8179-277	171	400	32	30	65	63	38	M16	5	3.81
8179-278	220	500	34	34	78	72	45	M16	5	5.69

AL

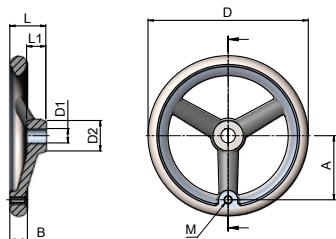


WDS 8179 Aluminium Hand Wheel with Turned Rim - Keywayed Bore Tapped for

Aluminium, Boss machined, Rim finished turned, Boss Tapped for Grip

N = Number of spokes

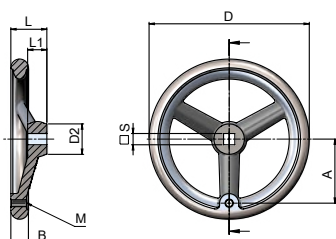
WDS No.	A	B	D	D1 (H7)	D2	E (JS9)	F	L	L1	M	N	Weight (kg)
8179-450	27	14	80	10	24	3	11.4	29	16	M6	3	0.12
8179-451	36	15	100	10	26	3	11.4	33	17	M6	3	0.18
8179-452	47	16	125	12	28	4	13.8	36	18	M8	3	0.26
8179-45214	47	16	125	14	28	5	16.3	36	18	M8	3	0.26
8179-453	62	18	160	14	32	5	16.3	40	20	M10	3	0.41
8179-45316	62	18	160	16	32	5	16.3	40	20	M10	3	0.41
8179-454	80	22	200	18	38	6	20.8	45	24	M10	3	0.76
8179-45422	80	22	200	22	38	6	24.8	45	24	M10	3	0.76
8179-455	101	26	250	22	45	6	24.8	50	28	M12	5	1.42
8179-456	132	26	315	26	53	8	29.3	56	33	M12	5	2.25
8179-457	171	32	400	30	65	8	33.3	63	38	M16	5	3.81
8179-458	220	34	500	34	78	10	37.3	72	45	M16	5	5.69



Aluminium Hand Wheel - Pilot Bore Tapped for Grip **WDS 8179**

Aluminium, Boss machined, Rim finished turned, Boss Tapped for Grip
N = Number of Spokes

WDS No.	A	B	D	D1	D2	L	L1	M	N	Weight (kg)
8179-470	27	14	80	5	24	29	16	M6	3	0.11
8179-471	36	15	100	6.5	26	33	17	M6	3	0.18
8179-472	47	16	125	6.5	28	36	18	M8	3	0.26
8179-473	62	18	160	6	32	40	20	M10	3	0.42
8179-474	80	22	200	8	38	45	24	M10	3	0.77
8179-475	101	26	250	8	45	50	28	M12	5	1.44
8179-476	132	26	315	8	63	56	33	M12	5	2.27
8179-477	171	32	400	8	65	63	38	M16	5	3.83
8179-478	220	34	500	10	78	72	45	M16	5	5.69

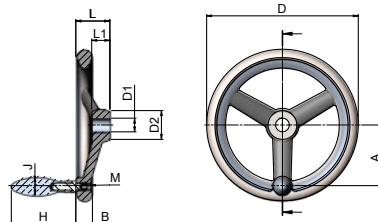


Aluminium Hand Wheel - Square Hole & Tapped for Grip **WDS 8179**

Aluminium, Boss machined, Rim finished turned, Boss Tapped for Grip
N = Number of Spokes

WDS No.	A	B	D	D2	L	L1	M	N	S	Weight (kg)
8179-570	27	14	80	24	29	16	M6	3	9	0.11
8179-571	36	15	100	26	33	17	M6	3	9	0.18
8179-572	47	16	125	28	36	18	M8	3	11	0.26
8179-573	62	18	160	32	40	20	M10	3	12	0.41
8179-574	80	22	200	38	45	24	M10	3	14	0.76
8179-575	101	26	250	45	50	28	M12	5	17	1.42
8179-576	132	26	315	63	56	33	M12	5	19	2.25

AL



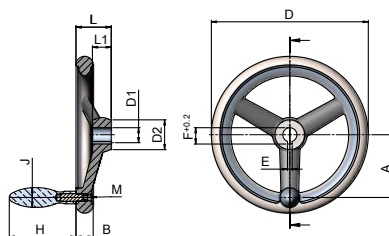
WDS 8179 Aluminium Hand Wheel with Turned Rim - Round Hole & Grip

Aluminium, Boss machined, Rim finished turned

N = Number of spokes

Fixed Grip	Revolving Grip	A	B	D	D1 (H7)	D2	H	J	L	L1	M	N	Weight (kg)
8179-270AF	8179-270AR	27	14	80	10	24	55	16	29	16	M6	3	0.14
8179-271AF	8179-271AR	36	15	100	10	26	55	16	33	17	M6	3	0.2
8179-272AF	8179-272AR	47	16	125	12	28	70	20	36	18	M8	3	0.3
8179-27214AF	8179-27214AR	47	16	125	14	28	70	20	36	18	M8	3	0.24
8179-273AF	8179-273AR	62	18	160	14	32	85	25	40	20	M10	3	0.5
8179-27316AF	8179-27316AR	62	18	160	16	32	85	25	40	20	M10	3	0.43
8179-274AF	8179-274AR	80	22	200	18	38	85	25	45	24	M10	3	0.85
8179-27422AF	8179-27422AR	80	22	200	22	38	85	25	45	24	M10	3	0.78
8179-275AF	8179-275AR	101	26	250	22	45	100	32	50	28	M12	5	1.58
8179-276AF	8179-276AR	132	26	315	26	53	100	32	56	33	M12	5	2.41
8179-277AF	8179-277AR	171	32	400	30	65	111	36	63	38	M16	5	4.04
8179-278AF	8179-278AR	220	34	500	34	78	111	36	72	45	M16	5	5.92

AL

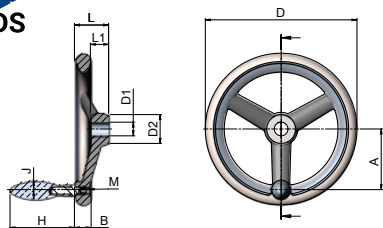


WDS 8179 Aluminium Hand Wheel with Turned Rim - Keywayed Bore with Grip

Aluminium, Boss machined, Rim finished turned

N = Number of spokes

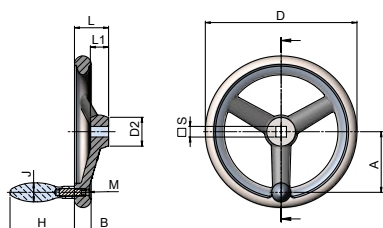
Fixed Grip	Revolving Grip	A	B	D	D1 (H7)	D2	E (JS9)	F	H	J	L	L1	M	N	Weight (kg)
8179-450AF	8179-450AR	27	14	80	10	24	3	11.4	55	16	29	16	M6	3	0.13
8179-451AF	8179-451AR	36	15	100	10	26	3	11.4	55	16	33	17	M6	3	0.2
8179-452AF	8179-452AR	47	16	125	12	28	4	13.8	70	20	36	18	M8	3	0.3
8179-45214AF	8179-45214AR	47	16	125	14	28	5	16.3	70	20	36	18	M8	3	0.24
8179-453AF	8179-453AR	62	18	160	14	32	5	16.3	85	25	40	20	M10	3	0.5
8179-45316AF	8179-45316AR	62	18	160	16	32	5	16.3	85	25	40	20	M10	3	0.43
8179-454AF	8179-454AR	80	22	200	18	38	6	20.8	85	25	45	24	M10	3	0.85
8179-45422AF	8179-45422AR	80	22	200	22	38	6	24.8	85	25	45	24	M10	3	0.78
8179-455AF	8179-455AR	101	26	250	22	45	6	24.8	100	32	50	28	M12	5	1.58
8179-456AF	8179-456AR	132	26	315	26	53	8	29.3	100	32	56	33	M12	5	2.41
8179-457AF	8179-457AR	171	32	400	30	65	8	33.3	111	36	63	38	M16	5	4.04
8179-458AF	8179-458AR	220	34	500	34	78	10	37.3	111	36	72	45	M16	5	5.92



Aluminium Hand Wheel with Turned Rim - Pilot Bore with Grip WDS 8179

Aluminium, Boss machined, Rim finished turned, Boss Tapped for Grip
N = Number of Spokes

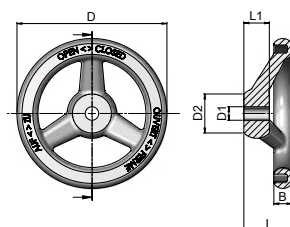
Fixed Grip	Revolving Grip	A	B	D	D1	D2	H	J	L	L1	M	N	Weight (kg)
8179-470AF	8179-470AR	27	14	80	5	24	55	16	29	16	M6	3	0.13
8179-471AF	8179-471AR	36	15	100	6.5	26	55	16	33	17	M6	3	0.2
8179-472AF	8179-472AR	47	16	125	6.5	28	70	20	36	18	M8	3	0.31
8179-473AF	8179-473AR	62	18	160	6	32	85	25	40	20	M10	3	0.51
8179-474AF	8179-474AR	80	22	200	8	38	85	25	45	24	M10	3	0.86
8179-475AF	8179-475AR	101	26	250	8	45	100	32	50	28	M12	5	1.59
8179-476AF	8179-476AR	132	26	315	8	63	100	32	56	33	M12	5	2.42
8179-477AF	8179-477AR	171	32	400	8	65	111	36	63	38	M16	5	4.05
8179-478AF	8179-478AR	220	34	500	10	78	111	36	72	45	M16	5	5.92



Aluminium Hand Wheel with Turned Rim - Square Hole with Grip WDS 8179

Aluminium, Boss machined, Rim finished turned, Boss Tapped for Grip
N = Number of Spokes

Fixed Grip	Revolving Grip	A	B	D	D2	H	J	L	L1	M	N	S	Weight (kg)
8179-570AF	8179-570AR	27	14	80	24	55	16	29	16	M6	3	9	0.13
8179-571AF	8179-571AR	36	15	100	26	55	16	33	17	M6	3	9	0.2
8179-572AF	8179-572AR	47	16	125	28	70	20	36	18	M8	3	11	0.3
8179-573AF	8179-573AR	62	18	160	32	85	25	40	20	M10	3	12	0.5
8179-574AF	8179-574AR	80	22	200	38	85	25	45	24	M10	3	14	0.85
8179-575AF	8179-575AR	101	26	250	45	100	32	50	28	M12	5	17	1.58
8179-576AF	8179-576AR	132	26	315	63	100	32	56	33	M12	5	19	2.41

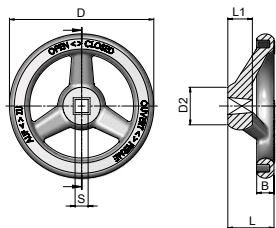


Hand Wheel - Round Hole WDS 8180

Aluminium, unmachined
N = Number of Spokes

WDS No.	B	D	D1	D2	L	L1	N	Weight (kg)
8180-201	12	100	9	26	32	17	3	0.13
8180-202	13	125	9	40	31	18	3	0.21
8180-203	16	160	9	40	30	20	3	0.35
8180-204	18	200	9	45	43	22	3	0.67

AL



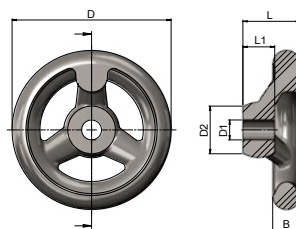
WDS 8180 Hand Wheel - Square Hole

Aluminium, unmachined

N = Number of Spokes

WDS No.	B	D	D2	L	L1	N	S	Weight (kg)
8180-251	12	100	26	32	17	3	9/12	0.5
8180-254	18	200	45	43	22	3	15/17	2.1

316



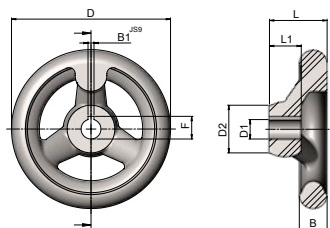
WDS 8181 Stainless Steel Hand Wheel - Round Hole

Cast Stainless Steel S3100:1991:316C16F, Boss machined, rim machined and polished

N = Number of Spokes

WDS No.	B	D	D1 (H7)	D2	L	L1	N	Weight (kg)
8181-200	14	80	10	24	29	16	3	0.34
8181-201	15	100	10	26	33	17	3	0.5
8181-202	16	125	12	28	36	18	3	0.76
8181-203	18	160	14	32	40	20	3	1
8181-204	22	200	18	38	45	24	3	2.1
8181-205	26	250	22	45	50	28	5	4.07
8181-206	28	315	26	53	56	33	5	6.2

316

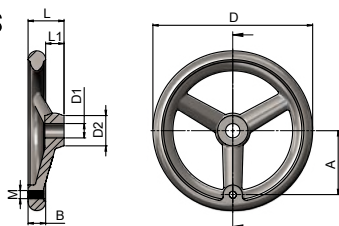


WDS 8181 Stainless Steel Hand Wheel - Keyway Hole

Cast Stainless Steel S3100:1991:316C16F, Boss machined, rim machined and polished

N = Number of Spokes

WDS No.	B	B1 (JS9)	D	D1 (H7)	D2	F	L	L1	N	Weight (kg)
8181-250	14	3	80	10	24	11.4	29	15	3	0.34
8181-251	15	4	100	10	26	11.4	33	17	3	0.5
8181-252	16	5	125	12	28	13.8	36	18	3	0.76
8181-253	18	6	160	14	32	16.3	40	20	3	1
8181-254	22	6	200	18	38	20.8	45	24	3	2.1
8181-255	26	8	250	22	45	24.8	50	28	5	4.07
8181-256	28	8	315	26	53	29.3	56	33	5	6.2

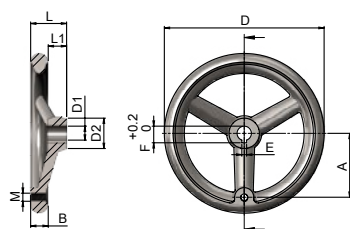


Stainless Steel Hand Wheel - Round Hole Tapped for Handle **WDS 8181**

Cast Stainless Steel S3100:1991:316C16F

N = Number of Spokes

WDS No.	A	B	D	D1 (H7)	D2	L	L1	M	N	Weight (kg)
8181-270	27	14	80	10	24	29	16	M6	3	0.34
8181-271	36	15	100	10	26	33	17	M6	3	0.5
8181-272	47	16	125	12	28	36	18	M8	3	0.76
8181-273	62	18	160	14	32	40	20	M10	3	1
8181-274	80	22	200	18	38	45	24	M10	3	2.1
8181-275	101	26	250	22	45	50	28	M10	5	4.07
8181-276	132	26	315	26	53	56	33	M10	5	6.2

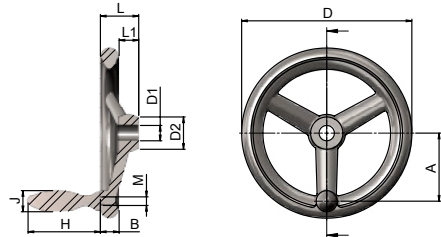


Stainless Steel Hand Wheel - Keyway Hole Tapped for Handle **WDS 8181**

Cast Stainless Steel S3100:1991:316C16F

N = Number of Spokes

WDS No.	A	B	D	D1 (H7)	D2	E (JS9)	F	L	L1	M	N	Weight (kg)
8181-450	27	14	80	10	24	3	11.4	29	16	M6	3	0.34
8181-451	36	15	100	10	26	3	11.4	33	17	M6	3	0.5
8181-452	47	16	125	12	28	4	13.8	36	18	M8	3	0.76
8181-453	62	18	160	14	32	5	16.3	40	20	M10	3	1
8181-454	80	22	200	18	38	6	20.8	45	24	M10	3	2.1
8181-455	101	26	250	22	45	6	24.8	50	28	M10	5	4.07
8181-456	132	26	315	26	53	8	29.3	56	33	M10	5	6.2

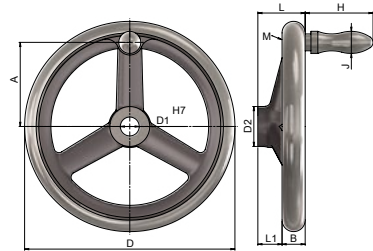


WDS 8181 Stainless Steel Hand Wheel - Round Hole with Fixed Handle

Cast Stainless Steel S3100:1991:316C16F

N = Number of Spokes

WDS No.	A	B	D	D1 (H7)	D2	H	J	L	L1	N	Weight (kg)
8181-270AF	27	14	80	10	24	50	16	29	16	3	0.39
8181-271AF	36	15	100	10	26	50	16	33	17	3	0.55
8181-272AF	47	16	125	12	28	70	20	36	18	3	0.87
8181-273AF	62	18	160	14	32	85	25	40	20	3	1.21
8181-274AF	80	22	200	18	38	85	25	45	24	3	2.31
8181-275AF	101	26	250	22	45	85	25	50	28	5	4.28
8181-276AF	132	26	315	26	53	85	25	56	33	5	6.41

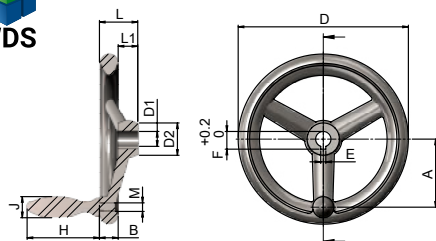


WDS 8193 Cast Iron Hand Wheel - Bore Hole and Grip

Grey Cast Iron Hand Wheel Steel Grip, Boss machined, rim machined and polished

N = Number of Spokes

Fixed Grip	Revolving Grip	A	B	D	D1 (H7)	D2	H	J	L	L1	M	N	Weight (kg)
-	8193-270SR	27	14	80	10	24	54.5	16	29	16	M6	3	0.32
8193-2705SF	8193-2705SR	27	14	80	12	24	54.5	16	29	16	M6	3	0.32
8193-271SF	8193-271SR	36	15	100	10	26	54.5	16	33	17	M6	3	0.5
8193-2715SF	8193-2715SR	36	15	100	12	26	54.5	16	33	17	M6	3	0.43
8193-272SF	8193-272SR	47	16	125	12	28	67	20	36	18	M8	3	0.73
8193-2725SF	8193-2725SR	47	16	125	14	28	67	20	36	18	M8	3	0.72
8193-273SF	8193-273SR	62	18	160	14	32	83	25	40	20	M10	3	1.3
8193-2735SF	8193-2735SR	62	18	160	16	32	83	25	40	20	M10	3	1.3
8193-274SF	8193-274SR	80	22	200	18	38	83	25	45	24	M10	3	2.1
8193-2745SF	8193-2745SR	80	22	200	22	38	83	25	45	24	M10	3	2.1
8193-275SF	8193-275SR	101	26	250	22	45	105.5	32	50	28	M12	5	3.68
8193-2755SF	8193-2755SR	101	26	250	26	45	105.5	32	50	28	M12	5	3.74
8193-276SF	8193-276SR	132	28	315	26	53	105.5	32	56	33	M12	5	6.02
8193-2765SF	8193-2765SR	132	28	315	30	53	105.5	32	56	33	M12	5	0.38
8193-277SF	8193-277SR	171	32	400	30	65	117	36	63	38	M16	5	10.36
8193-2775SF	8193-2775SR	171	32	400	34	65	117	36	63	38	M16	5	9.5
8193-278SF	8193-278SR	220	34	500	34	78	117	36	72	45	M16	5	15.28
8193-279SF	8193-279SR	220	34	500	40	78	117	36	72	45	M16	5	15.76

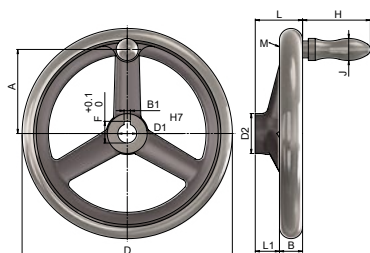


Stainless Steel Hand Wheel - Keywayed Hole with Fixed Handle **WDS 8181**

Cast Stainless Steel S3100:1991:316C16F

N = Number of Spokes

WDS No.	A	B	D	D1 (H7)	D2	E (JS9)	F	H	J	L	L1	N	Weight (kg)
8181-450AF	27	14	80	10	24	3	11.4	50	16	29	16	3	0.39
8181-451AF	36	15	100	10	26	3	11.4	50	16	33	17	3	0.55
8181-452AF	47	16	125	12	28	4	13.8	70	20	36	18	3	0.87
8181-453AF	62	18	160	14	32	5	16.3	85	25	40	20	3	1.21
8181-454AF	80	22	200	18	38	6	20.8	85	25	45	24	3	2.31
8181-455AF	101	26	250	22	45	6	24.8	85	25	50	28	5	4.28
8181-456AF	132	26	315	26	53	8	29.3	85	25	56	33	5	6.41

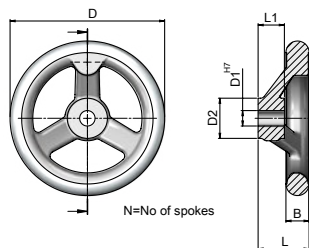


Cast Iron Hand Wheel - Keywayed with Grip **WDS 8193**

Grey Cast Iron Hand Wheel Steel Grip, Boss machined, rim machined and polished

N = Number of Spokes

Fixed Grip	Revolving Grip	A	B	B1	D	D1 (H7)	D2	F	H	J	L	L1	M	N	Weight (kg)
8193-450SF	8193-450SR	27	14	3	80	10	24	11.4	50	16	29	16	M6	3	0.33
8193-4505SF	8193-4505SR	27	14	4	80	12	24	13.8	50	16	29	16	M6	3	0.34
8193-451SF	8193-451SR	36	15	3	100	10	26	11.4	50	16	33	17	M6	3	0.43
8193-4515SF	8193-4515SR	36	15	4	100	12	26	13.8	50	16	33	17	M6	3	0.43
8193-452SF	8193-452SR	47	16	4	125	12	28	13.8	64	20	36	18	M8	3	0.71
8193-4525SF	8193-4525SR	47	16	5	125	14	28	16.3	64	20	36	18	M8	3	0.62
8193-453SF	8193-453SR	62	18	5	160	14	32	16.3	80	25	40	20	M10	3	1.3
8193-4535SF	8193-4535SR	62	18	5	160	16	32	18.3	80	25	40	20	M10	3	1.83
8193-454SF	8193-454SR	80	22	6	200	18	38	20.8	80	25	45	24	M10	3	2.05
8193-4545SF	8193-4545SR	80	22	6	200	22	38	24.8	80	25	45	24	M10	3	2.02
8193-455SF	8193-455SR	101	26	6	250	22	45	24.8	100	32	50	28	M12	5	3.98
8193-4555SF	8193-4555SR	101	26	8	250	26	45	29.3	100	32	50	28	M12	5	3.72
8193-456SF	8193-456SR	132	28	8	315	26	53	29.3	100	32	56	33	M12	5	6
8193-4565SF	8193-4565SR	132	28	8	315	30	53	33.3	100	32	56	33	M12	5	6
8193-457SF	8193-457SR	171	32	8	400	30	65	33.3	112	36	63	38	M16	5	9.7
8193-4575SF	8193-4575SR	171	32	10	400	34	65	37.3	112	36	63	38	M16	5	9.78
8193-458SF	8193-458SR	220	34	10	500	34	78	37.3	112	36	72	45	M16	5	15.14
8193-459SF	8193-459SR	220	34	12	500	40	78	43.3	112	36	72	45	M16	5	15.26

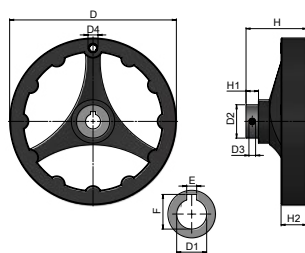


WDS 8193 Cast Iron Hand Wheel - Round Hole

Cast Iron, Boss machined, rim machined and polished

N = Number of Spokes

WDS No.	B	D	D1 (H7)	D2	L	L1	N	Weight (kg)
8193-200	14	80	10	25	29	16	3	0.3
8193-2005	14	80	12	5	29	16	3	0.28
8193-201	15	100	10	26	33	17	3	0.5
8193-2015	15	100	12	26	33	17	3	0.4
8193-202	16	125	12	28	36	18	3	0.7
8193-2025	16	125	14	28	36	18	3	0.64
8193-203	18	160	14	32	40	20	3	1.4
8193-2035	18	160	16	32	40	20	3	1.15
8193-204	22	200	18	38	45	24	3	2.1
8193-2045	22	200	22	38	45	24	3	1.9
8193-205	26	250	22	45	50	28	5	3.7
8193-2055	26	250	26	45	50	28	5	3.6
8193-206	28	315	26	53	56	33	5	6.2
8193-2065	28	315	30	53	56	33	5	5.6
8193-207	32	400	30	65	63	38	5	10.6
8193-2075	32	400	34	65	63	38	5	9.35
8193-208	34	500	34	78	72	45	5	15.45
8193-209	34	500	40	78	72	45	5	14.45

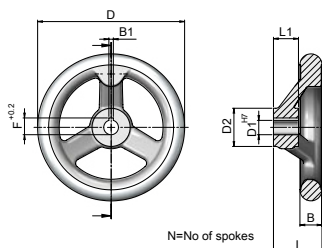


WDS 8404 Polyamide Keywayed Hand Wheel - 3 Spoke with Bore for Grip

Hand Wheel - Reinforced polyamide

Boss - Steel, chemical black finish

WDS No.	D	D1	D2	D3	D4	E (JS9)	F	H	H1	H2	Weight (kg)
8404-21012	100	12	24	M5	M6	4	13.8	45	12	20	0.15
8404-21212	125	12	24	M5	M8	4	13.8	50	12	24	0.21
8404-21616	160	16	32	M6	M10	5	18.3	60	15	28	0.38
8404-22018	200	18	40	M8	M10	6	20.8	73	15	31	0.72

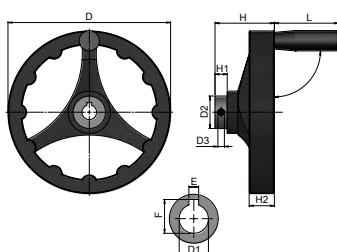


Cast Iron Hand Wheel - Keywayed WDS 8193

Cast Iron, Boss machined, rim machined and polished

N = Number of Spokes

WDS No.	B	B1	D	D1 (H7)	D2	L	L1	N	Weight (kg)
8193-250	14	3	80	10	24	29	16	3	0.3
8193-2505	14	4	80	12	24	29	16	3	0.29
8193-251	15	3	100	10	26	33	17	3	0.5
8193-2515	15	4	100	12	26	33	17	3	0.4
8193-252	16	4	125	12	28	36	18	3	0.7
8193-2525	16	5	125	14	28	36	18	3	0.63
8193-253	18	5	160	14	32	40	20	3	1
8193-2535	18	5	160	16	32	40	20	3	1.16
8193-254	22	6	200	18	38	45	24	3	2.1
8193-2545	22	6	200	22	38	45	24	3	2.04
8193-255	26	6	250	22	45	50	28	5	3.7
8193-2555	26	8	250	26	45	50	28	5	3.68
8193-256	28	8	315	26	53	56	33	5	6.2
8193-2565	28	8	315	30	53	56	33	5	5.54
8193-257	32	8	400	30	65	63	38	5	10.6
8193-2575	32	10	400	34	65	63	38	5	8.83
8193-258	34	10	500	34	78	72	45	5	17
8193-259	34	12	500	40	78	72	45	5	14.8



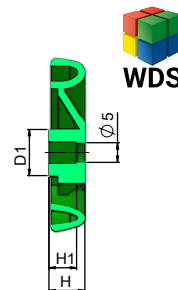
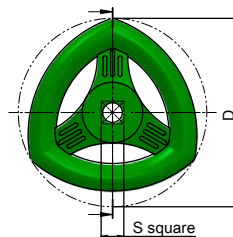
Polyamide Keywayed Hand Wheel - 3 Spoke with Folding Grip WDS 8414

Hand Wheel - Reinforced polyamide

Boss - Steel, chemical black finish

WDS No.	D	D1	D2	D3	E (JS9)	F	H	H1	H2	Weight (kg)
8414-21012	100	12	24	M5	4	13.8	45	12	20	0.19
8414-21212	125	12	24	M5	4	13.8	50	12	24	0.26
8414-21616	160	16	32	M6	5	18.3	60	15	28	0.48
8414-22018	200	18	40	M8	6	20.8	73	15	31	0.81

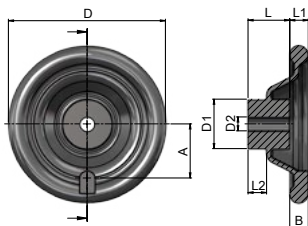
TP



WDS 8495 Delta Wheel

Fibreglass Reinforced Thermoplastic
Available in 5 colours

Black Grey	Cadmium Yellow	Signal Green	Traffic Blue	Traffic Red	D	D1	H	H1	S	Weight (kg)
8495-202BG	8495-202CY	8495-202SG	8495-202TB	8495-202TR	50	12.5	10	7.3	5	0.01
8495-204BG	8495-204CY	8495-204SG	8495-204TB	8495-204TR	50	12.5	10	7.3	6	0.01
8495-206BG	8495-206CY	8495-206SG	8495-206TB	8495-206TR	63	15.8	12.6	9	6	0.02
8495-208BG	8495-208CY	8495-208SG	8495-208TB	8495-208TR	63	15.8	12.6	9	7	0.02
8495-210BG	8495-210CY	8495-210SG	8495-210TB	8495-210TR	80	20	18	12	8	0.04
8495-212BG	8495-212CY	8495-212SG	8495-212TB	8495-212TR	80	20	18	12	9	0.04



AL

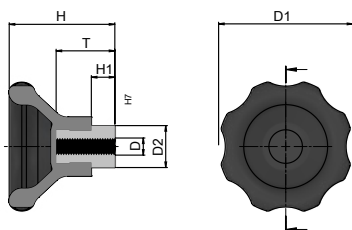
IN"

Aluminium Hand Wheel - Solid - Inch WDS 133

Aluminium

*Please note that D2 is a pilot diameter only

WDS No.	A	B	D	D1	D2*	L	L1	L2	Weight (kg)
133-13	57	17	6"	35	9	27	21	14	0.6



BK

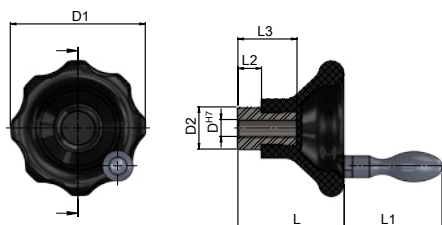
ZP

Hand Wheel - Press Fit WDS 8107

PF31 (Bakelite)

Boss - Zinc Plated Steel

WDS No.	D	D1	D2	H	H1	T	Weight (kg)
8107-201	10	80	25	49	14	35	0.16
8107-204	10	100	25	55	14	35	0.21
8107-207	10	125	25	59	14	35	0.27



BK

ZP

Hand Wheel and Revolving Grip - Press Fit - Bakelite WDS 8108

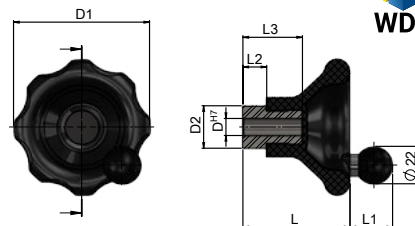
PF31 (Bakelite)

Boss - Zinc Plated Steel

WDS No.	D	D1	D2	L	L1	L2	L3	Weight (kg)
8108-201	10	80	25	49	58	14	35	0.2
8108-204	10	100	25	55	58	14	35	0.24
8108-207	10	125	25	59	68	14	35	0.33

BK

ZP



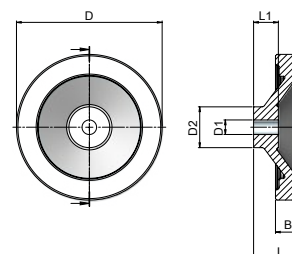
WDS 8108 Hand Wheel and Revolving Ball Handle - Press Fit - Bakelite

Hand Wheel - Bakelite

Boss - Zinc Plated Steel

WDS No.	D (H7)	D1	D2	L	L1	L2	L3	Weight (kg)
8108-401	10	80	25	49	27	14	35	0.18
8108-404	10	100	25	55	27	14	35	0.23
8108-407	10	125	25	59	27	14	35	0.3

AL



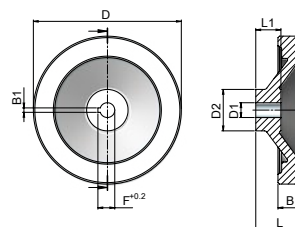
WDS 8177 Hand Wheel - Round Hole

Aluminium

Boss machined, rim machined and polished

WDS No.	B	D	D1 (H7)	D2	L	L1	Weight (kg)
8177-200	15	80	10	25	31	16	0.14
8177-201	18	100	10	28	33	17	0.3
8177-202	20	125	12	30	36	18	0.5
8177-203	23	160	14	40	40	20	0.87
8177-204	26	200	18	50	45	24	1.65
8177-205	30	250	22	50	50	28	2.34
8177-206	33	315	26	55	56	33	3.3

AL

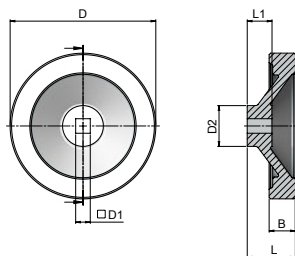


WDS 8177 Hand Wheel - Keywayed

Aluminium

Boss machined, rim machined and polished

WDS No.	B	B1 (JS9)	D	D1 (H7)	D2	F	L	L1	Weight (kg)
8177-250	15	3	80	10	25	11.4	31	16	0.17
8177-251	18	3	100	10	28	11.4	33	17	0.3
8177-252	20	4	125	12	30	13.8	36	18	0.5
8177-253	23	5	160	14	40	16.3	40	20	0.87
8177-254	26	6	200	18	50	20.8	45	24	1.65
8177-255	30	6	250	22	50	24.8	50	28	2.34
8177-256	33	8	315	26	55	29.3	56	33	3.3

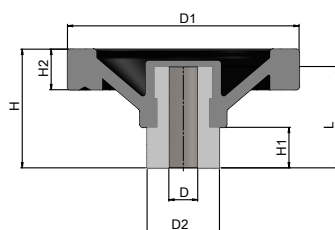

AL

Hand Wheel - Square Hole **WDS 8177**

Aluminium

Boss machined, rim machined and polished

WDS No.	B	D	D1 (H8)	D2	L	L1	Weight (kg)
8177-500	15	80	10	25	31	16	0.14
8177-501	18	100	10	28	33	17	0.3
8177-502	20	125	12	30	36	18	0.5
8177-503	23	160	14	40	40	20	0.87
8177-504	26	200	18	50	45	24	1.65

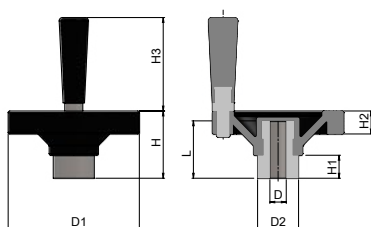

BK
ZP

Hand Wheel - Bakelite **WDS 8235**

PF31 (Bakelite)

Insert - Zinc Plated Steel

WDS No.	D (H7)	D1	D2	H	H1	H2	L	Weight (kg)
8235-201	10	80	25	41	14	14	35	0.17
8235-204	10	100	25	43	14	17	35	0.21
8235-207	10	125	25	44	14	18	35	0.28
8235-210	12	160	32	50	14	20	35	0.44
8235-215	16	200	40	56	14	22	35	0.78


BK
ZP

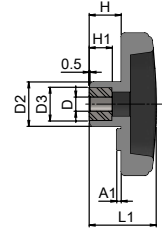
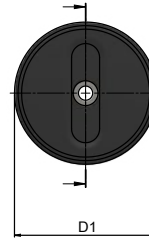
Hand Wheel & Revolving Grip - Bakelite **WDS 8236**

PF31 (Bakelite)

Insert - Zinc Plated Steel

WDS No.	D (H7)	D1	D2	H	H1	H2	H3	L	Weight (kg)
8236-201	10	80	25	41	14	14	57	35	0.21
8236-204	10	100	25	43	14	17	57	35	0.25
8236-207	10	125	25	44	14	18	57	35	0.32
8236-210	12	160	32	50	14	20	69	35	0.51
8236-215	16	200	40	56	14	22	69	35	0.84
8236-218	20	250	50	67	16	23	69	40	1.44

TP



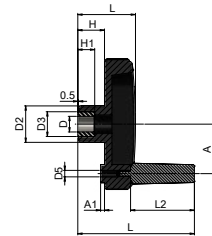
WDS 8400 Hand Wheel without Grip

Wheel - Thermoplastic

Insert - Steel, chemical black finish

WDS No.	A1	D (H7)	D1	D2	D3	H	H1	L1	Weight (kg)
8400-202	2.5	8	80	25	19	17.5	13	37.5	0.08
8400-204	2.5	10	80	25	19	17.5	13	37.5	0.07
8400-206	2.5	12	80	25	19	17.5	13	37.5	0.07
8400-208	3	10	100	28	19	20	13	44	0.13
8400-210	3	12	100	28	19	20	13	44	0.13
8400-212	4	12	125	35	25	23.5	18.5	53	0.23
8400-214	4	14	125	35	25	23.5	18.5	53	0.23
8400-216	4	16	125	35	25	23.5	18.5	53	0.23
8400-218	5.6	14	160	45	25	28	18.5	64.5	0.43
8400-220	5.6	16	160	45	25	28	18.5	64.5	0.43

TP

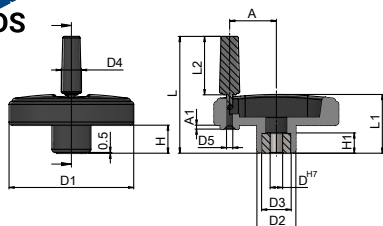


WDS 8405 Hand Wheel with Fixed Revolving Grip

Wheel - Thermoplastic

Insert - Steel, chemical black finish

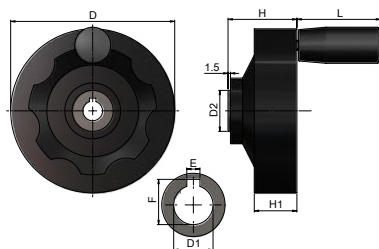
WDS No.	A	A1	D (H7)	D1	D2	D3	D4	D5	H	H1	L	L1	L2	Weight (kg)
8405-202	30	2.5	8	80	25	19	13	M4	17.5	13	75	37.5	40	0.1
8405-204	30	2.5	10	80	25	19	13	M4	17.5	13	75	37.5	40	0.1
8405-206	30	2.5	12	80	25	19	13	M4	17.5	13	75	37.5	40	0.1
8405-208	38	3	10	100	28	19	16	M5	20	13	90	44	49.5	0.18
8405-210	38	3	12	100	28	19	16	M5	20	13	90	44	49.5	0.18
8405-212	47.5	4	12	125	35	25	20	M6	23.5	18.5	109	53	60	0.32
8405-214	47.5	4	14	125	35	25	20	M6	23.5	18.5	109	53	60	0.32
8405-216	47.5	4	16	125	35	25	20	M6	23.5	18.5	109	53	60	0.34
8405-218	62	5.6	14	160	45	25	25	M8	28	18.5	144	64.5	83.5	0.64
8405-220	62	5.6	16	160	45	25	25	M8	28	18.5	144	64.5	83.5	0.64



Hand Wheel with Foldaway Revolving Grip **WDS 8410**

Wheel - Thermoplastic
Insert - Steel, chemical black finish

WDS No.	A	A1	D (H7)	D1	D2	D3	D4	D5	H	H1	L	L1	L2	Weight (kg)
8410-202	30	2.5	8	80	25	19	13	M4	17.5	13	75	37.5	40	0.1
8410-204	30	2.5	10	80	25	19	13	M4	17.5	13	75	37.5	40	0.1
8410-206	30	2.5	12	80	25	19	13	M4	17.5	13	75	37.5	40	0.09
8410-208	38	3	10	100	28	19	16	M5	20	13	90	44	49	0.18
8410-210	38	3	12	100	28	19	16	M5	20	13	90	44	49	0.18
8410-212	47.5	4	12	125	35	25	20	M6	23.5	18.5	109	53	59.5	0.33
8410-214	47.5	4	14	125	35	25	20	M6	23.5	18.5	109	53	59.5	0.33
8410-216	47.5	4	16	125	35	25	20	M6	23.5	18.5	109	53	59.5	0.33
8410-218	62	5.6	14	160	45	25	26	M8	28	18.5	144	64.5	83.5	0.65
8410-220	62	5.6	16	160	45	25	26	M8	28	18.5	144	64.5	83.5	0.65



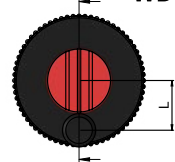
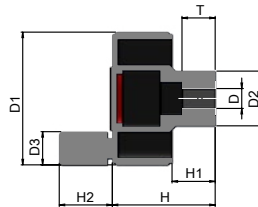
Bakelite Keywayed Hand Wheel - Solid Dish with Folding (Revolving) Grip **WDS 8416**

Hand Wheel - Bakelite
Boss - Zinc Plated Steel

WDS No.	D	D1 (H7)	D2	E (JS9)	F	H	H1	L	Weight (kg)
8416-21012	100	12	25	4	13.8	42	26	50	0.35
8416-21212	125	12	28	4	13.8	43	30	63	0.54
8416-21616	160	16	32	5	19.3	50	32	80	0.86
8416-22018	200	18	34	6	20.8	55	34	80	1.29

TP

ZP



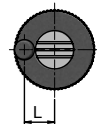
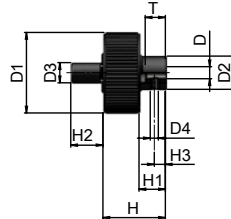
WDS 8490 Positioning Wheel with Revolving Grip

Body - Thermoplastic
Insert - Zinc Plated Steel

Black Grey	Cadmium Yellow	Pale Grey	Traffic Red	D (H8)	D1	D2	D3	H	H1	H2	L	T	Weight (kg)
8490-202BG	8490-202CY	8490-202PG	8490-202TR	6	40	16.5	10	31	13	16	15	10	0.02
8490-206BG	8490-204CY	8490-204PG	8490-204TR	8	63	22	10	41	17	16	25	14	0.04
8490-204BG	8490-206CY	8490-206PG	8490-206TR	6	50	18	10	36	15	16	18.5	10	0.03

TP

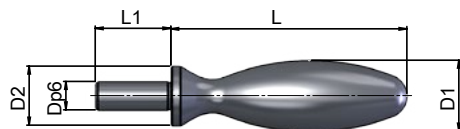
ZP



WDS 8490 Positioning Wheel with Revolving Grip Tapped Hole

Body - Thermoplastic
Insert - Zinc Plated Steel

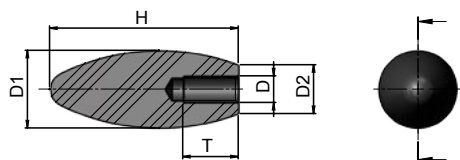
Black Grey	Cadmium Yellow	Pale Grey	Traffic Red	D (H8)	D1	D2	D3	D4	H	H1	H2	H3	L	T	Weight (kg)
8490-302BG	8490-302CY	8490-302PG	8490-302TR	6	40	16.5	10	M4	31	13	16	5.5	15	10	0.02
8490-304BG	8490-304CY	8490-304PG	8490-304TR	6	50	18	10	M4	36	15	16	5.5	18.5	10	0.03
8490-306BG	8490-306CY	8490-306PG	8490-306TR	8	63	22	10	M4	41	17	16	8	25	14	0.02



Fixed Grip WDS 138

Steel BS 970 Gr 230M07

WDS No.	D	D1	D2	L	L1	Weight (kg)
138-401	6	16	13	50	16	0.04
138-402	8	20	18	70	20	0.12
138-403	10	25	22	85	25	0.19
138-404	12	30	25	100	32	0.33

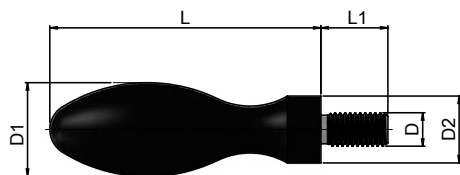


BK

Barrel Grip with Moulded Thread WDS 8118

Body - PF31 Black

WDS No.	D	D1	D2	H	T	Weight (kg)
8118-201	M6	23	14	60	17	0.02
8118-202	M8	23	14	60	17	0.02
8118-203	M8	26	16	70	19	0.03
8118-204	M10	26	16	70	19	0.03
8118-205	M10	35	22	85	25	0.07
8118-206	M12	35	22	85	25	0.07



BK

ZP

Fixed Grip WDS 8119

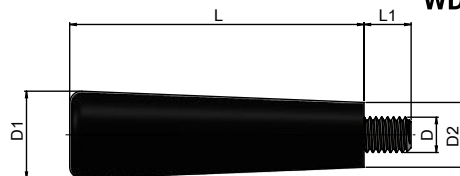
Body - PF31 Black

Stem - Zinc Plated Steel

WDS No.	D	D1	D2	L	L1	Weight (kg)
8119-208	M8	23	14	68	12	0.04
8119-210	M10	28	20	81	20	0.05
8119-212	M12	28	20	81	25	0.08

BK

ZP



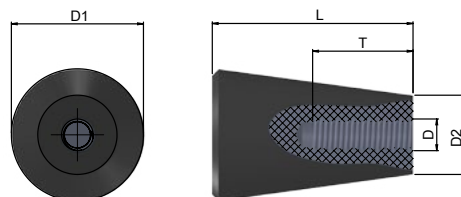
WDS 8121 Fixed Grip - Tapered

Body - PF31 Black

Stem - Zinc Plated Steel

WDS No.	D	D1	D2	L	L1	Weight (kg)
8121-201	M4	12	9	40	8	0.01
8121-202	M5	12	9	40	7	0.01
8121-204	M5	15	11	50	7	0.03
8121-203	M6	15	11	50	8	0.02
8121-205	M6	18	13	64	8	0.03
8121-206	M6	21	15	72	10	0.04
8121-207	M8	21	15	72	10	0.06
8121-208	M8	25	17	90	10	0.07

BK

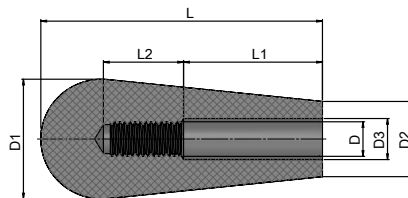


WDS 8123 Fixed Grip - Tapered

Body - PF31 Black

WDS No.	D	D1	D2	L	T	Weight (kg)
8123-201	M5	20	12	30	15	0.01
8123-203	M6	25	15	38	19	0.02
8123-205	M8	30	18	46	16	0.03
8123-208	M10	35	21	53	19	0.04
8123-209	M12	35	21	53	25	0.04

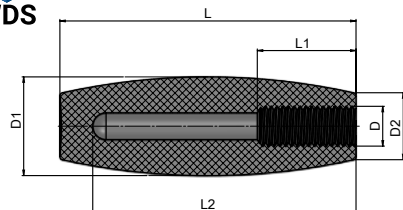
BK



WDS 8127 Grip - Domed

Body - PF31 Black

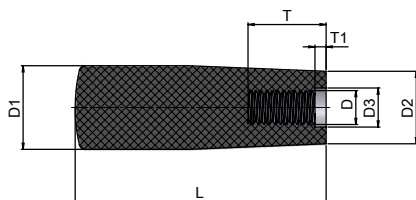
WDS No.	D	D1	D2	D3	L	L1	L2	Weight (kg)
8127-201	M6	25	16	8	58	29	14	0.03
8127-202	M8	30	19	10	70	35	17	0.04
8127-203	M10	35	22	12	81	41	22	0.07



Grip - Barrel WDS 8128

Body - PF31 Black

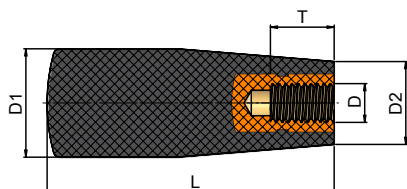
WDS No.	D	D1	D2	L	L1	L2	Weight (kg)
8128-201	M6	16	10	50	16	45	0.01
8128-202	M8	20	13	60	20	52	0.02
8128-203	M10	25	19	75	26	67	0.04
8128-204	M12	30	20	90	30	80	0.07



Fixed Grip with No Insert WDS 8153

Body - PF31 Black
Moulded thread

WDS No.	D	D1	D2	D3	L	T	T1	Weight (kg)
8153-201	M6	17	13	6.2	45	14	2	0.01
8153-202	M8	17	13	8.2	45	16	2	0.01
8153-203	M8	23	16	8.5	60	24	8	0.03
8153-204	M10	28	18	10.5	70	28	10	0.05



Fixed Grip with Brass Insert WDS 8153

Body - PF31 Black
Insert - Brass

WDS No.	D	D1	D2	L	T	Weight (kg)
8153-211	M5	17	15	45	10	0.01
8153-212	M6	17	15	45	9	0.02
8153-213	M8	23	18	60	14	0.04
8153-214	M8	28	21	70	14	0.06

BK

ZP



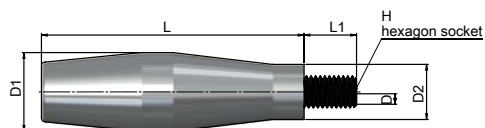
WDS 8153 Fixed Grip with Screw

Bakelite, black

Screw - Zinc Plated Steel

WDS No.	D	D1	D2	L	L1	Weight (kg)
8153-221	M6	17	15	45	18	0.02
8153-222	M8	23	18	60	12	0.04
8153-223	M10	28	21	70	20	0.09

AL



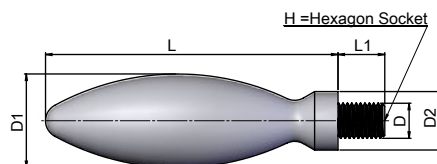
WDS 8173 Fixed Grip

Aluminium, polished or anodised

Screw - Steel

Polished	Anodised	D	D1	D2	H	L	L1	Weight (kg)
8173-201	8173-401	M6	16	10	3	40	11	0.03
8173-202	8173-402	M8	20	13	4	64	13	0.05
8173-203	8173-403	M10	25	17	5	80	14	0.11
8173-204	8173-404	M12	30	21	6	100	20	0.18

AL

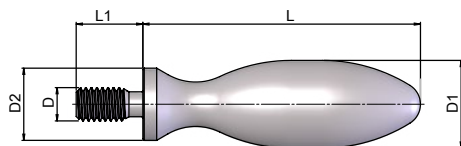


WDS 8175 Fixed Grip

Aluminium, polished

Screw - Steel

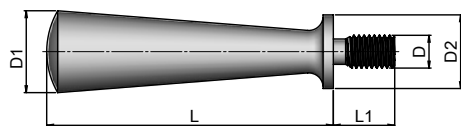
WDS No.	D	D1	D2	H	L	L1	Weight (kg)
8175-201	M6	16	10	3	55	13	0.02
8175-202	M8	20	13	4	70	14	0.04
8175-203	M10	25	16	5	85	15	0.08
8175-204	M12	32	20	6	100	16	0.15
8175-205	M16	36	22	8	111	24	0.22



Fixed Grip Stainless Steel WDS 8182

Stainless Steel BS 970. Gr 316S11

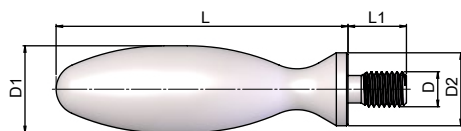
WDS No.	D	D1	D2	L	L1	Weight (kg)
8182-201	M6	16	13	50	12	0.05
8182-202	M8	20	18	70	15	0.11
8182-203	M10	25	22	85	18	0.21



Fixed Grip WDS 8190

Steel BS 970 Gr 230M07

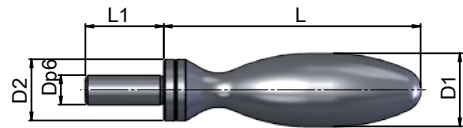
WDS No.	D	D1	D2	L	L1	Weight (kg)
8190-202	M8	20	18	70	15	0.11
8190-203	M10	25	22	85	18	0.22
8190-204	M12	30	25	100	20	0.38



Fixed Grip WDS 8191

Steel BS 970 Gr 230M07

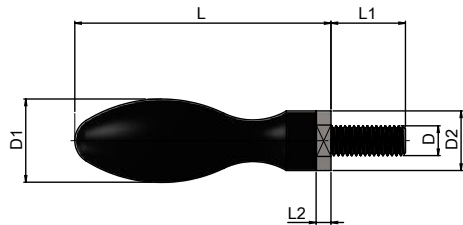
WDS No.	D	D1	D2	L	L1	Weight (kg)
8191-201	M6	16	13	50	12	0.05
8191-202	M8	20	18	70	15	0.11
8191-203	M10	25	22	85	18	0.21
8191-204	M12	30	25	100	20	0.35



WDS 136 Revolving Grip

Steel BS 970 Gr 230M07

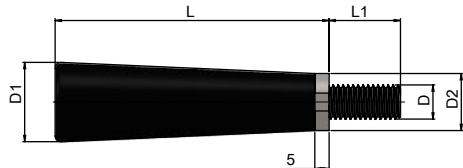
WDS No.	D	D1	D2	L	L1	Weight (kg)
136-401	6	16	13	54	16	0.15
136-402	8	20	18	75	20	0.17
136-403	10	25	22	90	25	0.19
136-404	12	30	25	105	32	0.21



WDS 8120 Revolving Grip - Threaded Stem

Body - PF31 Black
Stem - Zinc Plated Steel

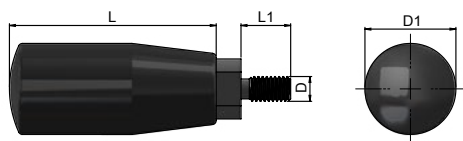
WDS No.	D	D1	D2	L	L1	L2	Weight (kg)
8120-206	M6	14	10	46	14	3.6	0.02
8120-208	M8	18	13	58	16	5	0.03
8120-210	M10	28	20	86	25	5	0.09
8120-212	M12	28	20	86	25	5	0.1



WDS 8122 Rotating Grip - Tapered

Body - PF31 Black
Stem - Zinc Plated Steel

WDS No.	D	D1	D2	L	L1	Weight (kg)
8122-201	M8	18	13	57	16	0.03
8122-202	M10	23	16	69	20	0.67
8122-203	M10	28	20	96	25	0.11
8122-204	M12	28	20	96	25	0.12

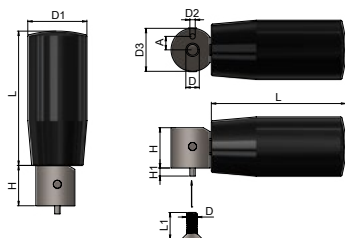


Revolving Grip - Bakelite **WDS 8124**

Body - PF31 Black

Spindle - Steel, chemical black finish

WDS No.	D	D1	L	L1	Weight (kg)
8124-25006	M6	22	50	12	0.05
8124-26308	M8	24	63	12	0.08
8124-28010	M10	27	80	14	0.1
8124-20012	M12	28	100	14	0.13

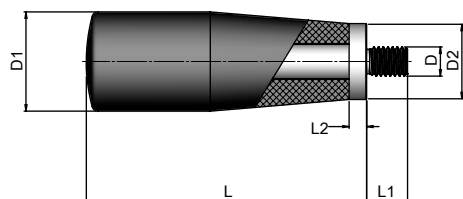


Folding Revolving Grip - Bakelite **WDS 8129**

Body - PF31 Black

Spindle - Steel, chemical black finish

WDS No.	A	D	D1	D2	D3	H	H1	L	L1	Weight (kg)
8129-25016	5	M4	22	2	16	15	3	50	10	0.06
8129-26316	5	M4	24	2	16	15	3	63	10	0.08
8129-26320	5	M6	24	2	20	20	3	63	16	0.11
8129-28020	5	M6	27	2	20	20	3	80	16	0.13
8129-20020	5	M6	28	2	20	20	3	100	20	0.15



Revolving Grip **WDS 8154**

Body - PF31 Black

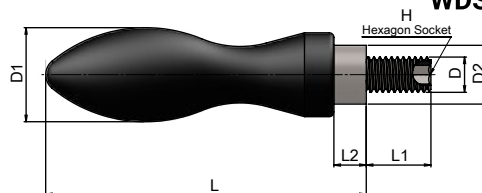
Spindle - Zinc Plated Steel

WDS No.	D	D1	D2	L	L1	L2	Weight (kg)
8154-201	M5	17	15	48	7	3	0.02
8154-203	M8	23	18	64	9	4	0.05
8154-204	M10	28	21	74	11	4	0.08



WDS

BK

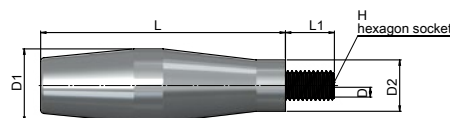


WDS 8155 Revolving Grip

Bakelite, black
Spindle - Steel

WDS No.	D	D1	D2 (H13)	L	L1	L2	Weight (kg)
8155-202	M8	20	13	61	13	6	0.02
8155-204	M12	32	20	95	21	10.5	0.08

AL

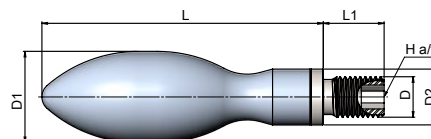


WDS 8174 Revolving Grip

Aluminium, polished or anodised
Screw - Steel

Polished	Anodised	D	D1	D2	H	L	L1	Weight (kg)
8174-201	8174-401	M6	18	10	2	43	12	0.04
8174-202	8174-402	M8	20	13	2	65	13	0.08
8174-203	8174-403	M10	25	16	2	75	14	0.13
8174-204	8174-404	M12	32	20	2	95	16	0.21

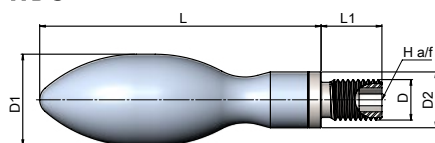
AL



WDS 8176 Revolving Grip

Aluminium, polished
Screw - Steel

WDS No.	D	D1	D2	L	L1	L2	Weight (kg)
8176-201	M6	16	10	50	11	5	0.04
8176-202	M8	20	13	65	13	9	0.06
8176-203	M10	25	16	75	14	11	0.1
8176-204	M12	32	20	95	15	11	0.18



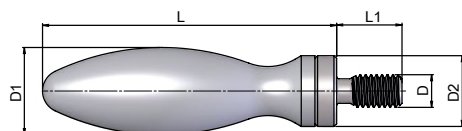
AL

ZP

Aluminium Revolving Grip WDS 8176

Aluminium Grip - Polished
Screw - Zinc Plated Steel

WDS No.	D	D1	D2	H	L	L1	Weight (kg)
8176-306	M6	16	10	3	55	12	0.02
8176-308	M8	20	13	4	70	13	0.05
8176-310	M10	25	16	5	85	14	0.09
8176-312	M12	32	20	6	100	16	0.16
8176-316	M16	36	22	8	111	24	0.23



Revolving Grip WDS 8192

Steel BS 970 Gr 230M07

WDS No.	D	D1	D2	L	L1	Weight (kg)
8192-2006	M6	16	13	54	12	0.09
8192-201	M8	20	18	75	15	0.12
8192-202	M10	25	22	90	18	0.24
8192-203	M12	30	25	105	20	0.36

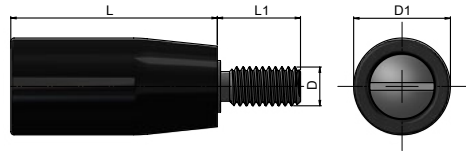


TP

Fixed Revolving Cylindrical Grip WDS 8430

Body - Black thermoplastic
Steel parts - Chemical black finish

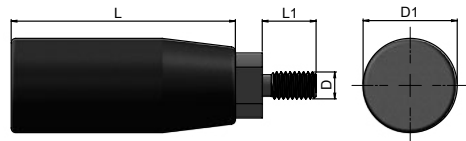
WDS No.	D	D1	D2	L	L3	L4	S	Weight (kg)
8430-202	M4	13	9	35	11	5	8	0.01
8430-204	M5	16	11	44	13	5.5	10	0.03
8430-206	M6	20	14	55	14	5	12	0.05
8430-208	M8	25	18	70.5	25	13	15	0.16



WDS 8432 Mini Revolving Grip

Handle - Reinforced polyamide
Spindle - Steel, chemical black finish

WDS No.	D	D1	L	L1	Weight (kg)
8432-22506	M6	13	25	10	0.01
8432-23206	M6	15	32	12	0.02
8432-24006	M6	17	40	14	0.03

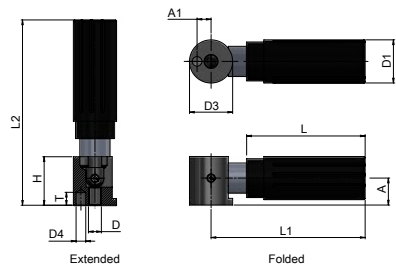


WDS 8434 Revolving Grip - Polyamide

Handle - Reinforced polyamide
Spindle - Steel, chemical black finish

WDS No.	D	D1	L	L1	Weight (kg)
8434-25006	M6	21	50	12	0.05
8434-26308	M8	23	63	12	0.08
8434-28010	M10	25	80	14	0.09
8434-20012	M12	27	100	14	0.12

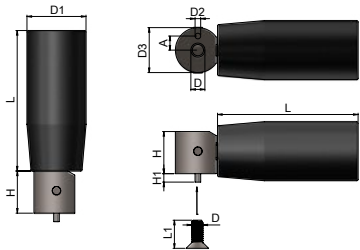
TP



WDS 8435 Folding Revolving Cylindrical Grip

Body - Black thermoplastic
Steel parts - Chemical black finish

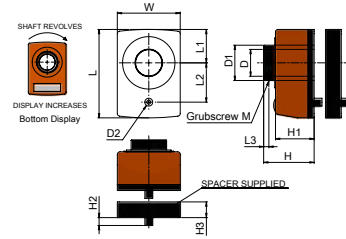
WDS No.	A	A1	D	D1	D3	D4	H	L	L1	L2	T	Weight (kg)
8435-202	8	4.3	M4	13	13	2.5	14.5	35	47	54.5	4.5	0.03
8435-204	10	5.3	M5	16	16	3.5	18	44	58	67	4.5	0.05
8435-206	12.5	6.5	M6	20	20	4.5	22.5	55	71.5	82	6	0.1
8435-208	16	9	M8	25	26	5.5	29	70.5	98.5	112.5	6.5	0.22



Folding Revolving Grip - Polyamide **WDS 8436**

Handle - Reinforced polyamide
Spindle - Steel, chemical black finish

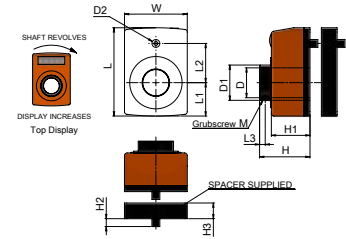
WDS No.	A	D	D1	D2	D3	H	H1	L	L1	Weight (kg)
8436-25016	5	M4	21	2	16	15	3	50	10	0.05
8436-26316	5	M4	23	2	16	15	3	63	10	0.08
8436-26320	5	M6	23	2	20	20	3	63	16	0.1
8436-28020	5	M6	25	2	20	20	3	80	16	0.12
8436-20020	5	M6	27	2	20	20	3	100	20	0.13



WDS 494 Digital Shaft Position Indicators Horizontal Clockwise - 14mm Bore - Bottom Display

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

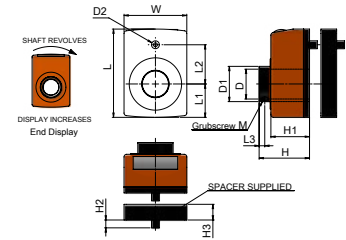
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
494-144010C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	1	0.09
494-144020C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2	0.09
494-144025C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2.5	0.09
494-144030C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	3	0.09
494-144040C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	4	0.09
494-144050C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	5	0.09



WDS 494 Digital Shaft Position Indicators Horizontal Clockwise - 14mm Bore - Top Display

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

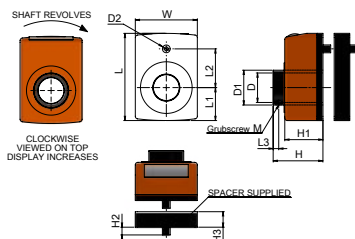
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
494-143010C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	1	0.09
494-143020C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2	0.09
494-143025C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2.5	0.09
494-143030C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	3	0.09
494-143040C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	4	0.09
494-143050C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	5	0.09



WDS 494 Digital Shaft Position Indicators Horizontal Clockwise - 14mm Bore - End Display

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

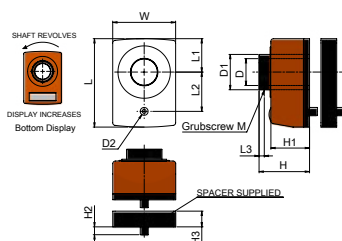
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
494-141010C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	1	0.05
494-141020C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2	0.05
494-141025C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2.5	0.05
494-141030C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	3	0.05
494-141040C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	4	0.05
494-141050C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	5	0.05



Digital Shaft Position Indicators Vertical Clockwise - 14mm Bore - End Display **WDS 495**

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

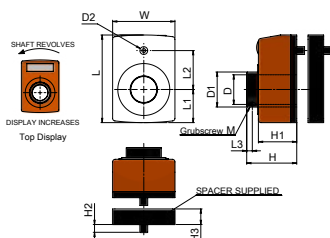
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
495-142010C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	1	0.03
495-142020C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2	0.03
495-142025C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2.5	0.03
495-142030C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	3	0.03
495-142040C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	4	0.03
495-142050C	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	5	0.03



Digital Shaft Position Indicators Horizontal Anti-Clockwise - 14mm Bore - Bottom Display **WDS 494**

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

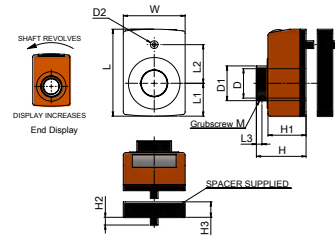
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
494-144010A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	1	0.09
494-144020A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2	0.09
494-144025A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2.5	0.09
494-144030A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	3	0.09
494-144040A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	4	0.09
494-144050A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	5	0.09



Digital Shaft Position Indicators Horizontal Anti-Clockwise - 14mm Bore - Top Display **WDS 494**

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

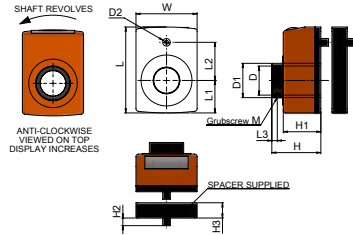
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
494-143010A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	1	0.09
494-143020A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2	0.09
494-143025A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2.5	0.09
494-143030A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	3	0.09
494-143040A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	4	0.09
494-143050A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	5	0.09



WDS 494 Digital Shaft Position Indicators Horizontal Anti-Clockwise - 14mm Bore - End Display

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

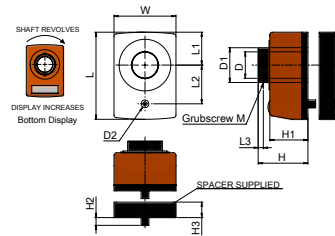
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
494-141010A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	1	0.03
494-141020A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2	0.03
494-141025A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2.5	0.05
494-141030A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	3	0.03
494-141040A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	4	0.03
494-141050A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	5	0.05



WDS 495 Digital Shaft Position Indicators Vertical Anti-Clockwise - 14mm Bore - End Display

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

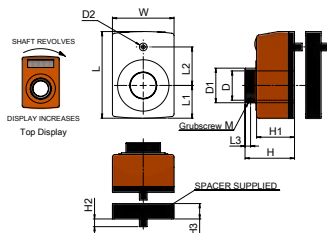
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
495-142010A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	1	0.05
495-142020A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2	0.05
495-142025A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	2.5	0.05
495-142030A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	3	0.05
495-142040A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	4	0.05
495-142050A	14	19.7	6	31	24	5	15	47	16.5	22	3.5	M4	33	5	0.05



WDS 494 Digital Shaft Position Indicators Horizontal Clockwise - 20mm Bore - Bottom Display

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

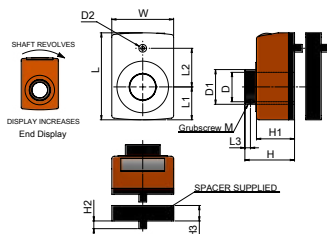
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
494-204010C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	1	0.09
494-204020C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	2	0.09
494-204025C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	2.5	0.09
494-204030C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	3	0.09
494-204040C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	4	0.09
494-204050C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	5	0.09



Digital Shaft Position Indicators Horizontal Clockwise - 20mm Bore - Top Display **WDS 494**

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

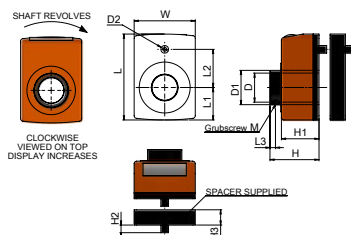
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
494-203010C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	1	0.09
494-203020C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	2	0.09
494-203025C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	2.5	0.09
494-203030C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	3	0.09
494-203040C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	4	0.09
494-203050C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	5	0.09



Digital Shaft Position Indicators Horizontal Clockwise - 20mm Bore - End Display **WDS 494**

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

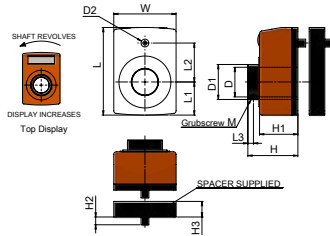
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
494-201010C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	1	0.09
494-201020C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	2	0.09
494-201025C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	2.5	0.09
494-201030C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	3	0.09
494-201040C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	4	0.09
494-201050C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	5	0.09



Digital Shaft Position Indicators Vertical Clockwise - 20mm Bore - End Display **WDS 495**

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

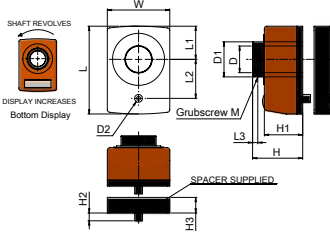
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
495-202010C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	1	0.09
495-202020C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	2	0.05
495-202025C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	2.5	0.05
495-202030C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	3	0.05
495-202040C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	4	0.05
495-202050C	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	5	0.05



WDS 494 Digital Shaft Position Indicators Horizontal Anti-Clockwise - 20mm Bore - Top Display

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

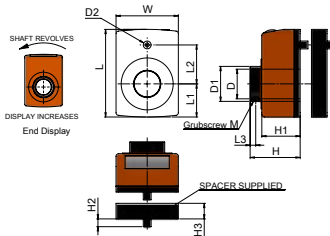
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
494-203010A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	1	0.09
494-203020A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	2	0.09
494-203025A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	2.5	0.09
494-203030A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	3	0.09
494-203040A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	4	0.09
494-203050A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	5	0.09



WDS 494 Digital Shaft Position Indicators Horizontal Anti-Clockwise - 20mm Bore - Bottom Display

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

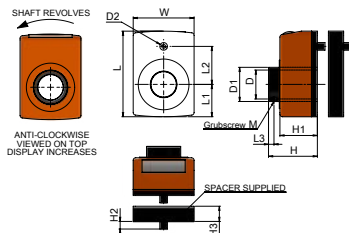
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
494-204010A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	1	0.09
494-204020A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	2	0.09
494-204025A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	2.5	0.09
494-204030A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	3	0.09
494-204040A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	4	0.09
494-204050A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	5	0.09



WDS 494 Digital Shaft Position Indicators Horizontal Anti-Clockwise - 20mm Bore - End Display

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

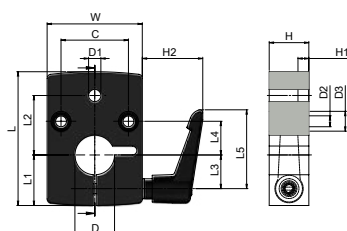
WDS No.	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
494-201010A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	1	0.05
494-201020A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	2	0.05
494-201025A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	2.5	0.05
494-201030A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	3	0.09
494-201040A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	4	0.09
494-201050A	20	27	6	38.5	30	6	12	67.5	25.5	30	4.3	M5	48	5	0.05



Digital Shaft Position Indicators Vertical Anti-Clockwise - 20mm Bore - End Display **WDS 495**

Housing - Polyamide 6, Shockproof
Drive Shaft - Chemically Blacked Mild Steel

WDS No.	D	D1	D2	H	H1	H2	L	L1	L2	L3	M	W	Pitch mm	Weight (kg)
495-202050A	20	27	6	38.5	30	6	67.5	25.5	30	4.3	M5	48	1	0.09
495-202020A	20	27	6	38.5	30	6	67.5	25.5	30	4.3	M5	48	2	0.09
495-202025A	20	27	6	38.5	30	6	67.5	25.5	30	4.3	M5	48	2.5	0.09
495-202030A	20	27	6	38.5	30	6	67.5	25.5	30	4.3	M5	48	3	0.09
495-202040A	20	27	6	38.5	30	6	67.5	25.5	30	4.3	M5	48	4	0.09
495-202010A	20	27	6	38.5	30	6	67.5	25.5	30	4.3	M5	48	5	0.09

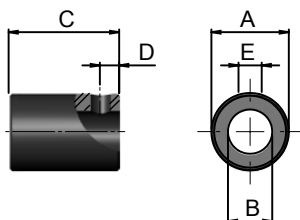


AL

Mounting Block for Digital Position Indicators **WDS 496**

Housing - Aluminium, Anodized
Clamping Lever - Plastic, Engaging

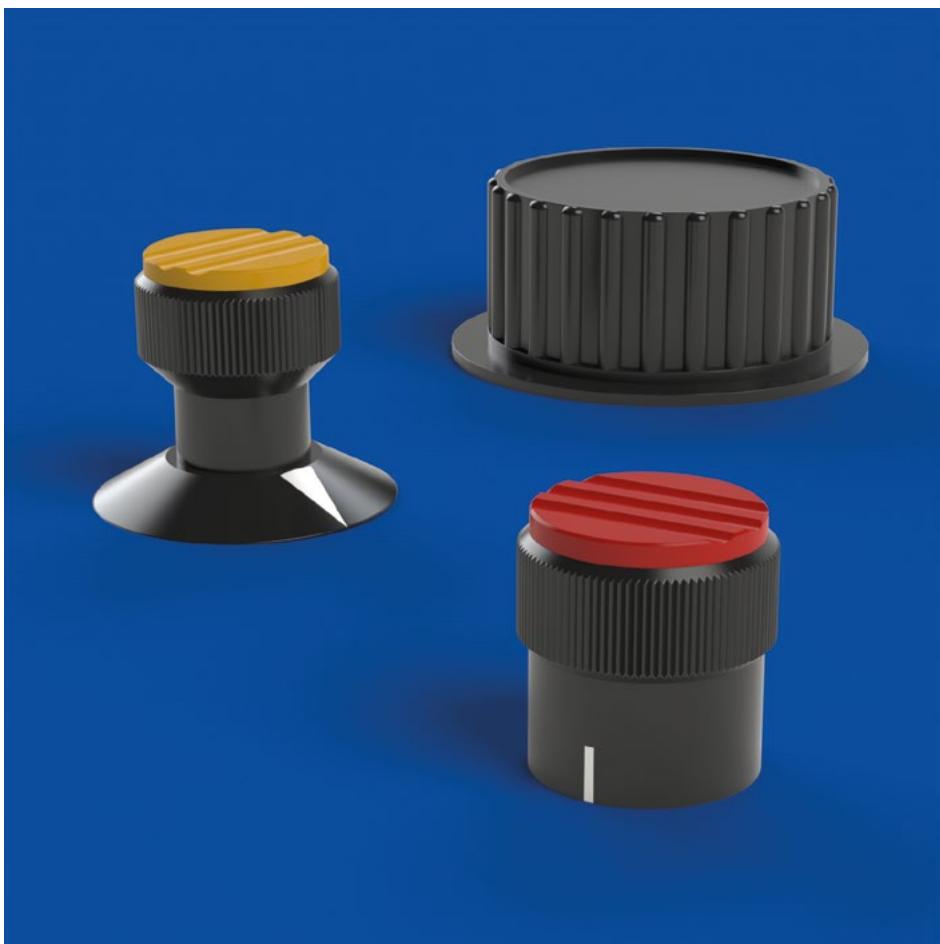
WDS No.	C	D	D1	D2	D3	H	H1	H2	L	L1	L2	L3	L4	L5	W	Weight (kg)
496-14P	21	14	6.2	4.5	8	15	4.6	30	47	16.5	22	11	23.5	40	33	0.01
496-20P	34	20	6.2	5.5	10	20	5.5	30	67.5	25.5	30	17	17	40	48	0.02



Reducing Sleeve for Digital Position Indicator **WDS 497**

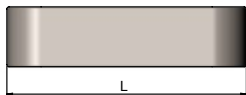
Steel, chemically black finish

WDS No.	A	B	C	D	E	Weight (kg)
497-206	14	6	20	3.5	4.2	0.019
497-208	14	8	20	3.5	4.2	0.04
497-210	14	10	20	3.5	4.2	0.04
497-212	14	12	20	3.5	4.2	0.04
497-312	20	12	20	4	5.3	0.04
497-314	20	14	20	4	5.3	0.04
497-315	20	15	20	4	5.3	0.04
497-316	20	16	20	4	5.3	0.04
497-318	20	18	20	4	5.3	0.04



CONTROL KNOBS

For the full range of Control Knobs please see pages **133-134**



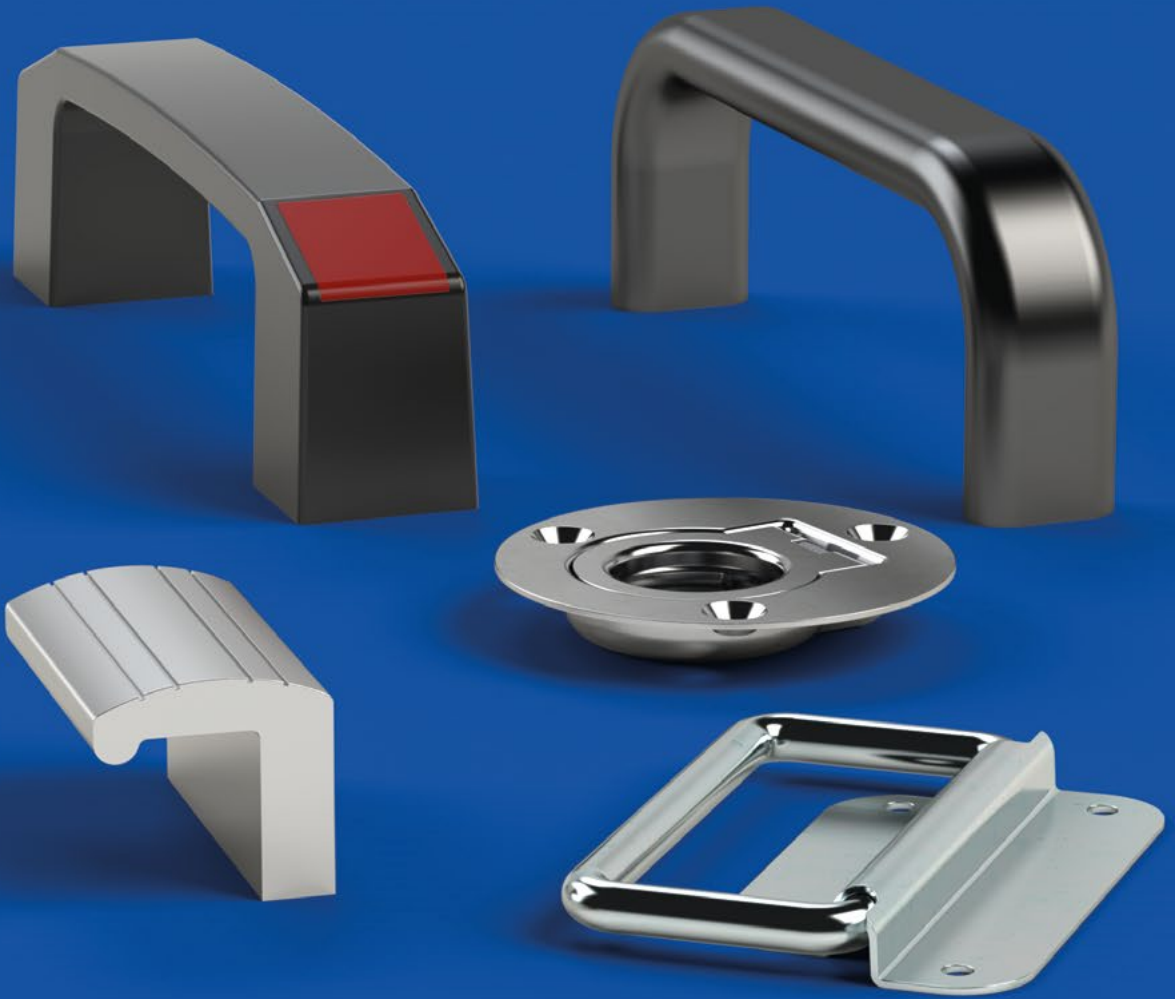
Parallel Feather Shaft Keys DIN6885A WDS 682

Steel - Breaking strain - 60Kg/mm²
DIN6882A

WDS No.	A	H	L	Weight (kg)
682-20303008	3	3	8	0.01
682-20303010	3	3	10	0.01
682-20303012	3	3	12	0.01
682-20303014	3	3	14	0.01
682-20303015	3	3	15	0.01
682-20303016	3	3	16	0.01
682-20303018	3	3	18	0.01
682-20303020	3	3	20	0.01
682-20303022	3	3	22	0.01
682-20303025	3	3	25	0.01
682-20303028	3	3	28	0.01
682-20404008	4	4	8	0.01
682-20404010	4	4	10	0.01
682-20404012	4	4	12	0.01
682-20404014	4	4	14	0.01
682-20404015	4	4	15	0.01
682-20404016	4	4	16	0.01
682-20404018	4	4	18	0.01
682-20404020	4	4	20	0.01
682-20404022	4	4	22	0.01
682-20404025	4	4	25	0.01
682-20404028	4	4	28	0.01
682-20404030	4	4	30	0.01
682-20505010	5	5	10	0.01
682-20505012	5	5	12	0.01
682-20505014	5	5	14	0.01
682-20505015	5	5	15	0.01
682-20505016	5	5	16	0.01
682-20505018	5	5	18	0.01
682-20505020	5	5	20	0.01
682-20505022	5	5	22	0.01
682-20505025	5	5	25	0.01
682-20505028	5	5	28	0.01
682-20505030	5	5	30	0.01
682-20505032	5	5	32	0.01
682-20505035	5	5	35	0.01
682-20505036	5	5	36	0.01
682-20505040	5	5	40	0.01
682-20505050	5	5	50	0.01
682-20606010	6	6	10	0.01
682-20606012	6	6	12	0.01
682-20606014	6	6	14	0.01
682-20606015	6	6	15	0.01
682-20606016	6	6	16	0.01
682-20606018	6	6	18	0.01
682-20606020	6	6	20	0.01

WDS No.	A	H	L	Weight (kg)
682-20606022	6	6	22	0.01
682-20606025	6	6	25	0.01
682-20606028	6	6	28	0.01
682-20606030	6	6	30	0.01
682-20606032	6	6	32	0.01
682-20606035	6	6	35	0.01
682-20606036	6	6	36	0.01
682-20606040	6	6	40	0.01
682-20606045	6	6	45	0.01
682-20606050	6	6	50	0.01
682-20606056	6	6	56	0.02
682-20606060	6	6	60	0.02
682-20807014	8	7	14	0.01
682-20807016	8	7	16	0.01
682-20807018	8	7	18	0.01
682-20807020	8	7	20	0.01
682-20807022	8	7	22	0.01
682-20807025	8	7	25	0.01
682-20807028	8	7	28	0.01
682-20807030	8	7	30	0.01
682-20807032	8	7	32	0.01
682-20807035	8	7	35	0.01
682-20807036	8	7	36	0.01
682-20807040	8	7	40	0.02
682-20807045	8	7	45	0.02
682-20807050	8	7	50	0.02
682-20807055	8	7	55	0.02
682-20807060	8	7	60	0.02
682-20807070	8	7	70	0.03
682-20807080	8	7	80	0.03
682-20807090	8	7	90	0.04
682-20807100	8	7	100	0.04
682-21008022	10	8	22	0.01
682-21008025	10	8	25	0.01
682-21008028	10	8	28	0.01
682-21008030	10	8	30	0.02
682-21008032	10	8	32	0.02
682-21008035	10	8	35	0.02
682-21008036	10	8	36	0.02
682-21008040	10	8	40	0.02
682-21008045	10	8	45	0.03
682-21008050	10	8	50	0.03
682-21008056	10	8	56	0.03
682-21008060	10	8	60	0.04
682-21008065	10	8	65	0.04
682-21008070	10	8	70	0.04

WDS No.	A	H	L	Weight (kg)
682-21008080	10	8	80	0.05
682-21008090	10	8	90	0.05
682-21008100	10	8	100	0.06
682-21208025	12	8	25	0.02
682-21208028	12	8	28	0.02
682-21208030	12	8	30	0.02
682-21208032	12	8	32	0.02
682-21208036	12	8	36	0.02
682-21208040	12	8	40	0.03
682-21208045	12	8	45	0.03
682-21208050	12	8	50	0.03
682-21208056	12	8	56	0.04
682-21208060	12	8	60	0.04
682-21208070	12	8	70	0.05
682-21208080	12	8	80	0.06
682-21208090	12	8	90	0.06
682-21208100	12	8	100	0.07
682-21208125	12	8	125	0.09
682-21409025	14	9	25	0.02
682-21409028	14	9	28	0.02
682-21409030	14	9	30	0.02
682-21409032	14	9	32	0.03
682-21409036	14	9	36	0.03
682-21409040	14	9	40	0.03
682-21409045	14	9	45	0.04
682-21409050	14	9	50	0.04
682-21409055	14	9	55	0.05
682-21409056	14	9	56	0.05
682-21409060	14	9	60	0.05
682-21409070	14	9	70	0.06
682-21409080	14	9	80	0.07
682-21409090	14	9	90	0.08
682-21409100	14	9	100	0.09
682-21610050	16	10	50	0.05
682-21610056	16	10	56	0.06
682-21610063	16	10	63	0.07
682-21610065	16	10	65	0.07
682-21610070	16	10	70	0.08
682-21610075	16	10	75	0.09
682-21610080	16	10	80	0.09
682-21610085	16	10	85	0.1
682-21610090	16	10	90	0.1
682-21610100	16	10	100	0.12



HANDLES

P 259-294

The vast range of handle includes: bridge and bow handles for doors, drawers, cabinets and access panels, case handles for flight cases and moveable storage units, recessed handles for applications which require a flush surface finish and ledge handles for enclosures hatches and shutters. These plastic, metal & stainless steel handles and accessories are ideal for everyday domestic applications, for OEM machine builders and enclosure manufacturers.



BRIDGE & BOW PULL HANDLES

Pull handles are ideal for domestic doors, drawers, access points, appliances as well as for mechanical machinery. WDS offers a selection of these metal pull handles in steel, aluminium, chrome glass reinforced plastic, Bakelite and stainless steel. They are also useful for more specialist applications such as wash down environments.

P 259-282



CASE HANDLES

Case fitting handles are plate fitting handles commonly used on moveable storage cases. These light duty handles are available in steel zinc plated and stainless steel. In addition to the standard range, plastic strap handles with anodised steel end plates are also available.

P 283-285



RECESSED & TRAY HANDLES

Recessed handles are fold-away pull handles that are fixed into a 'cut to size' recessed hole. They are ideal for applications where a flush finish is required. There are three styles of handle, snap back handles, spring loaded handles and lift and stay handles. In addition finger pull handles are available in stainless steel.

P 286-290

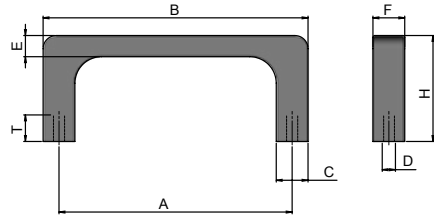


LEDGE HANDLES & PULLS

Ledge handles are fixed handles often used on access panel doors and drawers. Ledge pulls are available in a white natural matt or black anodised finish.

P 291-294



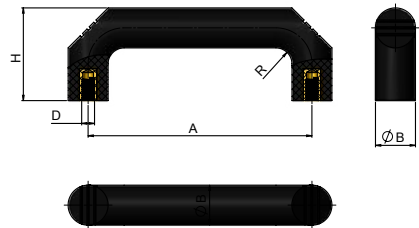
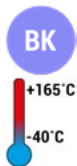


WDS 8500 Bow Handle - Square Profile - Aluminium

Surface finish - Anodised Matt in black or silver

Screws and Washers supplied

Black	Silver	A	B	C	D	E	F	H	T	Weight (kg)
8500-201	8500-251	55	67	12	M5	8	12	40	10	0.03
8500-202	8500-252	88	100	12	M5	8	12	40	10	0.05
8500-203	8500-253	120	132	12	M5	8	12	40	10	0.06
8500-204	8500-254	180	192	12	M5	8	12	40	10	0.07
8500-205	8500-255	235	247	12	M5	8	12	40	10	0.09

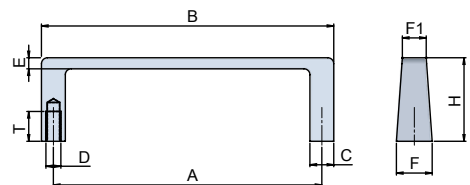


WDS 8501 Bakelite Bridge Handle with Brass or Steel Insert

Handle - Bakelite, Insert - 8501-201 Brass / 8501-202 Zinc Plated Steel

Min Stress 1000N

WDS No.	A	B	D	H	R	Weight (kg)
8501-201	140	25	M8 x 14	58	10	0.16
8501-202	140	25	M8 x 14	58	10	0.16

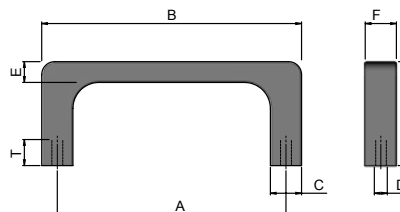


WDS 8502 Square Profile Bow Handle with Wide Base - Aluminium

Surface finish - Anodised Matt in black or silver

Screws and Washers supplied, MG-01 min. 300N

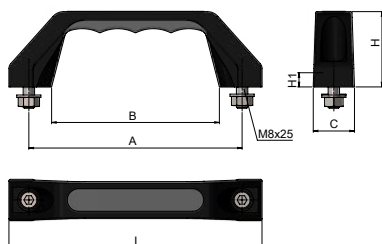
Black	Silver	A	B	C	D	E	F	F1	H	T	Weight (kg)
8502-3025	8502-3525	90	98	8	M5	3.7	12	8	28	10	0.02



Bow Handle - Square Profile - Aluminium WDS 8502

Surface finish - Anodised Matt in black or silver
Screws and Washers supplied

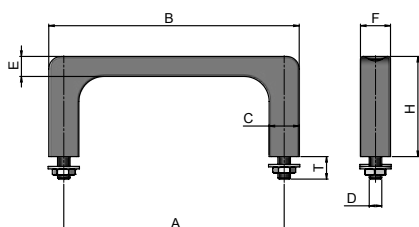
Black	Silver	A	B	C	D	E	F	H	T	Weight (kg)
8502-201	8502-251	55	67	12	M4	8	8	40	8	0.04
8502-202	8502-252	88	100	12	M4	8	8	40	8	0.04
8502-203	8502-253	120	132	12	M4	8	8	40	8	0.06
8502-2035	8502-2535	120	132	12	M6	8	18	40	12	0.08
8502-204	8502-254	180	192	12	M4	8	8	40	8	0.05
8502-205	8502-255	235	247	12	M4	8	8	40	8	0.06



Soft Grip Bridge Handle with Fittings WDS 8503

Handle - Polyamide-Glass Reinforced-Black
Steel Black or Stainless Steel fittings, Min Stress 700N

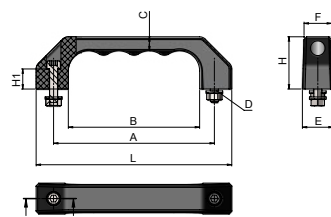
Steel Black	Stainless Steel	A	B	C	H	H1	L	Weight (kg)
8503-201	8503-202	150	118	29	53	10	178	0.19



Bow Handle - Through Bolt Top Mounted - Aluminium WDS 8504

Surface finish - Anodised Matt in black or silver
Screws and Washers supplied, Min Stress 500N

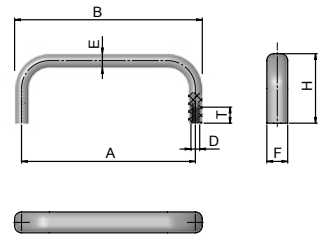
Black	Silver	A	B	C	D	E	F	H	T	Weight (kg)
8504-201	8504-251	55	67	12	M5	8	12	40	9	0.04
8504-202	8504-252	88	100	12	M5	8	12	40	9	0.05
8504-203	8504-253	120	132	12	M5	8	12	40	9	0.05
8504-204	8504-254	180	192	12	M5	8	12	40	9	0.07
8504-205	8504-255	235	247	12	M5	8	12	40	9	5.37



WDS 8505 Polyamide Bridge Handle with Fittings

Handle - Polyamide-Glass Reinforced - Black
Steel Black or Stainless Steel fittings

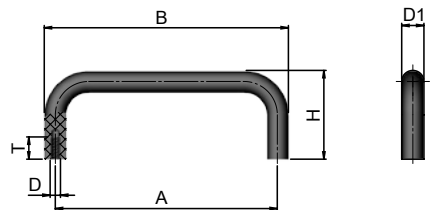
Steel Black	Stainless Steel	A	B	C	D	E	F	H	H1	L	Weight (kg)
8505-201	8505-601	100	82	8.5	M5x22	19	19	33	13	122	0.06
8505-202	8505-602	120	98	10.5	M6x25	23	23	39	15	146	0.09
8505-203	8505-603	140	114	12	M8x30	27	27	45	16	170	0.17
8505-204	8505-604	160	130	13.5	M8x35	31	31	52	20	194	0.22
8505-205	8505-605	180	146	15.5	M10x40	35	35	58	20	218	0.32



WDS 8506 Bow Handle - Oval Profile - Aluminium

Surface finish - Anodised Matt in black or silver

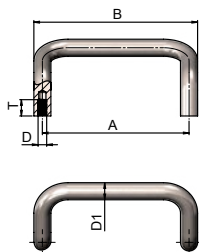
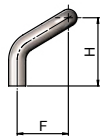
Black	Silver	A	B	D	E	F	H	T	Weight (kg)
8506-201	8506-251	55	63	M5	8	12	40	10	0.03
8506-202	8506-252	88	96	M5	8	12	40	10	0.03
8506-203	8506-253	100	108	M5	8	12	40	10	0.04
8506-204	8506-254	120	128	M5	8	12	40	10	0.04
8506-205	8506-255	180	188	M5	8	12	40	10	0.05
8506-206	8506-256	200	208	M5	8	12	40	10	0.06
8506-207	8506-257	235	243	M5	8	12	40	10	0.06
8506-208	8506-258	250	258	M5	8	12	40	10	0.07



WDS 8508 Bow Handle - Round Profile - Aluminium

Surface finish - Anodised Matt in black or silver

Black	Silver	A	B	D	D1	H	T	Weight (kg)
8508-201	8508-251	55	65	M5	10	40	10	0.03
8508-202	8508-252	88	98	M5	10	40	10	0.03
8508-203	8508-253	100	110	M5	10	40	10	0.03
8508-204	8508-254	120	130	M5	10	40	10	0.04
8508-205	8508-255	180	190	M5	10	40	10	0.05
8508-206	8508-256	200	210	M5	10	40	10	0.05
8508-207	8508-257	235	245	M5	10	40	10	0.06
8508-208	8508-258	250	260	M5	10	40	10	0.06

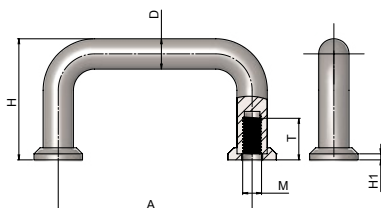


Bow Handle - Round Profile - Aluminium WDS 8509

Surface finish - Anodised Matt in black or silver

P = Load Rating (kg)

Black	Silver	A	B	D	D1	F	H	P	T	Weight (kg)
8509-201	8509-251	86	96	M5	10	30	40	50	10	0.04
8509-202	8509-252	120	130	M5	10	30	40	50	10	0.04
8509-203	8509-253	180	190	M5	10	30	40	50	10	0.06
8509-207	-	200	216	M8	16	100	90	100	15	0.26
8509-208	-	250	266	M8	16	100	90	100	15	0.27
8509-209	-	300	316	M8	16	100	90	100	15	0.3
8509-210	-	400	416	M8	16	100	90	100	15	0.35
8509-211	-	500	518	M8	18	100	90	100	15	0.52

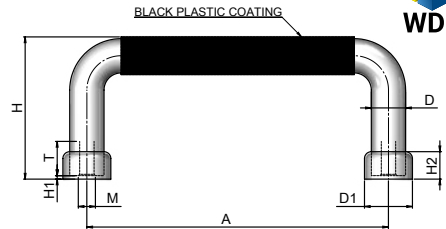


Bow Handle - Round Profile - Chromium Plated WDS 8510

Surface finish - Precision ground and Chromium plated

WDS No.	A	D	H	H1	M	T	Weight (kg)
8510-201	32	5	21	1	M3	6	0.01
8510-202	42	5	25	1	M3	6	0.02
8510-203	55	5	25	1	M3	6	0.02
8510-204	76	5	25	1	M3	6	0.07
8510-205	88	5	25	1	M3	6	0.02
8510-206	32	8	33	1	M4	8	0.03
8510-207	55	8	33	1	M4	8	0.04
8510-209	88	8	33	1	M4	8	0.05
8510-210	96	8	33	1	M4	8	0.06
8510-211	98	8	33	1	M4	8	0.06
8510-212	102	8	33	1	M4	8	0.06
8510-213	120	8	33	1	M4	8	0.07
8510-214	128	8	33	1	M4	8	0.07
8510-215	136	8	33	1	M4	8	0.08
8510-216	55	10	41	1	M5	10	0.07
8510-217	88	10	41	1	M5	10	0.09
8510-218	100	10	41	1	M5	10	0.1
8510-219	102	10	41	1	M5	10	0.1
8510-220	115	10	41	1	M5	10	0.11
8510-221	120	10	41	1	M5	10	0.16
8510-222	136	10	41	1	M5	10	0.12
8510-223	180	10	41	1	M5	10	0.15
8510-224	200	10	41	1	M5	10	0.16
8510-225	235	10	41	1	M5	10	0.18
8510-226	250	10	41	1	M5	10	0.18

CR

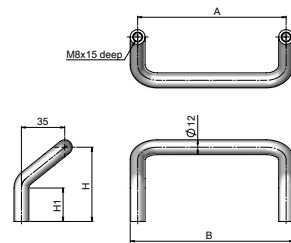


WDS 8512 Bow Handle - Round Profile with Grip

Surface finish - Precision ground and Matt Chromium

WDS No.	A	D	D1	H	H1	H2	M	T	Weight (kg)
8512-201	55	10	14	41	1	8	M5	10	0.08
8512-202	88	10	14	41	1	8	M5	10	0.1
8512-203	100	10	14	41	1	8	M5	10	0.11
8512-205	102	10	14	41	1	8	M5	10	0.11
8512-2055	115	10	14	41	1	8	M5	10	0.12
8512-206	120	10	14	41	1	8	M5	10	0.12
8512-2065	136	10	14	41	1	8	M5	10	0.12
8512-209	180	10	14	41	1	8	M5	10	0.16
8512-2095	200	10	14	41	1	8	M5	10	0.17
8512-210	235	10	14	41	1	8	M5	10	0.18
8512-211	250	10	14	41	1	8	M5	10	0.21

CR

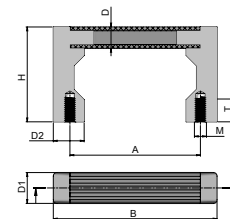


WDS 8513 Bow Handle - Round Profile - Chromium Plated

Surface finish - Precision ground and Chromium plated

WDS No.	A	B	H	H1	Weight (kg)
8513-201	120	132	60	27	0.21
8513-202	120	132	120	87	0.32

AL

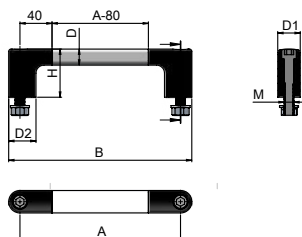


WDS 8514 Bridge Handle - Aluminium

Sides - Plastic, matt black finish

Grip - Aluminium Tube matt finish, black or silver

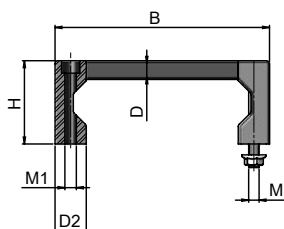
Black	Silver	A	B	D	D1	D2	H	M	T	Weight (kg)
8514-201	8514-251	25	39	9	12	13	40	M5	10	0.02
8514-202	8514-252	55	69	9	12	13	40	M5	10	0.04
8514-203	8514-253	88	102	9	12	13	40	M5	10	0.05
8514-204	8514-254	100	114	9	12	13	40	M5	10	0.05
8514-205	8514-255	120	134	9	12	13	40	M5	10	0.05
8514-206	8514-256	180	194	9	12	13	40	M5	10	0.06
8514-207	8514-257	235	249	9	12	13	40	M5	10	0.06



Bridge Handle - Front Mounted - Aluminium WDS 8515

Aluminium Tube, Anodised silver

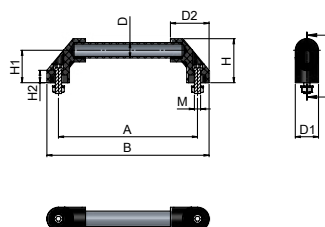
WDS No.	A	B	D	D1	D2	H	M	Weight (kg)
8515-201	180	208	20	28	34	60	M12	0.55
8515-202	200	228	20	28	34	60	M12	0.56
8515-203	250	278	20	28	34	60	M12	0.58
8515-204	300	328	20	28	34	60	M12	0.59
8515-205	350	378	20	28	34	60	M12	0.61
8515-206	400	428	20	28	34	60	M12	0.76
8515-207	500	528	20	28	34	60	M12	0.82
8515-208	600	628	20	28	34	60	M12	0.92



Bridge Handle - Front Mounted - Aluminium WDS 8516

Aluminium Tube matt finish, black or silver

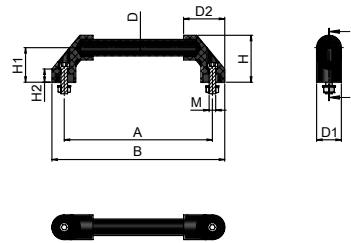
Black	Silver	A	B	D	D1	D2	H	M	M1	Weight (kg)
8516-201	8516-251	55	70	9	12	15	40	M5	5.5	0.04
8516-202	8516-252	88	103	9	12	15	40	M5	5.5	0.05
8516-203	8516-253	100	115	9	12	15	40	M5	5.5	0.05
8516-204	8516-254	120	135	9	12	15	40	M5	5.5	0.05
8516-205	8516-255	180	195	9	12	15	40	M5	5.5	0.07
8516-206	8516-256	235	250	9	12	15	40	M5	5.5	0.07



Tubed Handle with Stainless Steel Grip WDS 8517

Screws, Nuts and Washers supplied

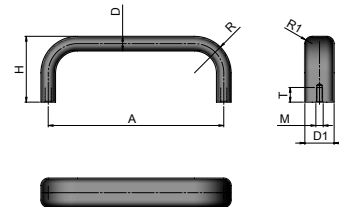
WDS No.	A	B	D	D1	D2	H	H1	H2	M	Weight (kg)
8517-603	250	294	30	44	73	80	60	25	M10x45	0.53
8517-604	300	344	30	44	73	80	60	25	M10x45	0.57
8517-605	350	394	30	44	73	80	60	25	M10x45	0.63
8517-606	400	444	30	44	73	80	60	25	M10x45	0.66
8517-607	500	544	30	44	73	80	60	25	M10x45	0.79
8517-608	600	644	30	44	73	80	60	25	M10x45	0.9



WDS 8517 Tubed Bridge Handle - Front Mounted

Screws, Nuts and Washers supplied

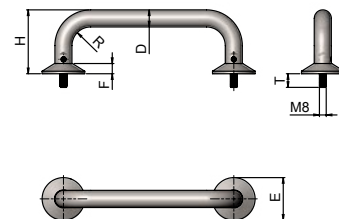
Black	Silver	A	B	D	D1	D2	H	H1	H2	M	Weight (kg)
8517-201	8517-251	180	204	20	30	50	55	42	16	M8x30	0.17
8517-202	8517-252	200	224	20	30	50	55	42	16	M8x30	0.18
8517-203	8517-253	250	274	20	30	50	55	42	16	M8x30	0.19
8517-204	8517-254	300	324	20	30	50	55	42	16	M8x30	0.21
8517-205	8517-255	350	374	20	30	50	55	42	16	M8x30	0.22
8517-206	8517-256	400	424	20	30	50	55	42	16	M8x30	0.35
8517-207	8517-257	500	524	20	30	50	55	42	16	M8x30	0.3
8517-208	8517-258	600	624	20	30	50	55	42	16	M8x30	0.35
8517-213	8517-263	250	294	30	44	73	80	60	25	M10x45	0.42
8517-214	8517-264	300	344	30	44	73	80	60	25	M10x45	0.46
8517-215	8517-265	350	394	30	44	73	80	60	25	M10x45	0.48
8517-216	8517-266	400	444	30	44	73	80	60	25	M10x45	0.49
8517-217	8517-267	500	544	30	44	73	80	60	25	M10x45	0.57
8517-218	8517-268	600	644	30	44	73	80	60	25	M10x45	0.62



WDS 8518 Bow Handle - Oval Profile

Screws, Nuts and Washers supplied

Black	Silver	A	D	D1	H	M	R	R1	T	Weight (kg)
8518-201	8518-251	120	10	20	45	M5	25	5	10	0.09
8518-202	8518-252	180	10	20	45	M5	25	5	10	0.11
8518-203	8518-253	200	10	20	45	M5	25	5	10	0.12
8518-204	8518-254	350	10	20	45	M6	25	5	12	0.2

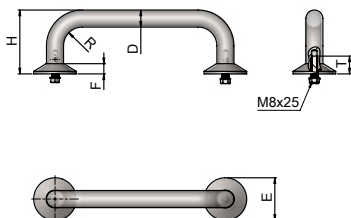


WDS 8519 Stainless Steel Stirrup Handle - Front Mounting

Handle - Stainless Steel 1.4305

Fittings 1.4301

WDS No.	A	D	E	F	H	R	T	Weight (kg)
8519-201	200	20	50	12	75	22	16	0.96
8519-202	250	20	50	12	75	22	16	1.14

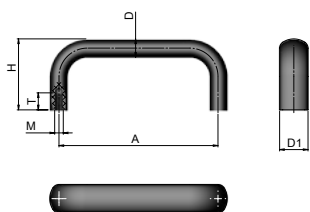

304


Stainless Steel Stirrup Handle - Rear Mounting **WDS 8519**

Handle - Stainless Steel 1.4305

Fittings 1.4301

WDS No.	A	D	E	F	H	R	T	Weight (kg)
8519-251	200	20	50	12	75	22	21	1.01
8519-252	250	20	50	12	75	22	21	1.16

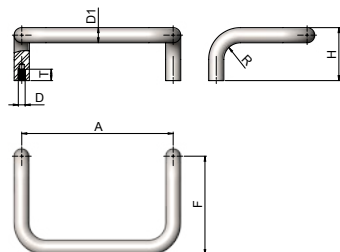

AL


Bow Handle - Oval Profile **WDS 8520**

Surface Finish - Anodised with a matt finish in black or silver

Screws and Washers supplied

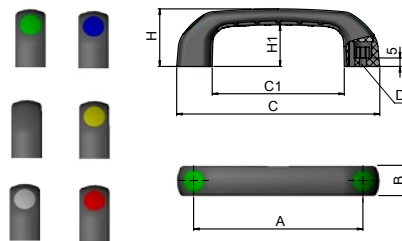
Black	Silver	A	D	D1	H	M	T	Weight (kg)
8520-201	8520-251	100	13	20	50	M6	12	0.09
8520-202	8520-252	112	13	20	50	M6	12	0.1
8520-203	8520-253	120	13	20	50	M6	12	0.1
8520-2035	8520-2535	128	13	20	50	M6	12	0.11
8520-204	8520-254	160	13	20	50	M6	12	0.13
8520-212	8520-262	112	17	26	55	M8	14	0.17
8520-213	8520-263	120	17	26	55	M8	14	0.17
8520-2135	8520-2635	128	17	26	55	M8	14	0.18
8520-214	8520-264	160	17	26	55	M8	14	0.22
8520-216	8520-266	180	17	26	55	M8	14	0.23
8520-217	8520-267	192	17	26	55	M8	14	0.25
8520-218	8520-268	350	17	26	55	M8	14	0.4


CR


Handle - Offset **WDS 8522**

Available in Black Powder Coated or Matt Chrome finish

Black	Chrome	A	D	D1	F	H	R	T	Weight (kg)
8522-201	8522-251	200	M8	20	130	70	22	15	1.16
8522-202	8522-252	350	M8	20	130	70	22	15	1.54

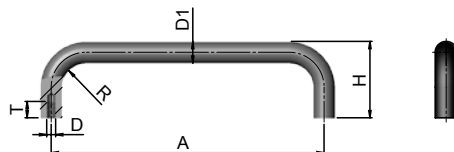


WDS 8521 Plastic Bridge Handles with Coloured Cover Caps

Polyamide PA6 GF30 Black

Load Capacity - 54kg

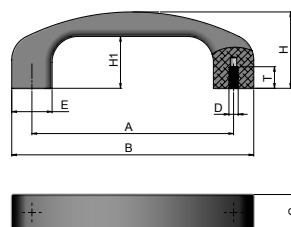
WDS No.	A	B	C	C1	D	H	H1	L	S	Weight (kg)
8521-201BG	100	18	120	78	M5	34	24	101/99	Black	0.03
8521-201PG	100	18	120	78	M5	34	24	101/99	Pale Grey	0.03
8521-201TR	100	18	120	78	M5	34	24	101/99	Red	0.03
8521-201TB	100	18	120	78	M5	34	24	101/99	Blue	0.03
8521-201CY	100	18	120	78	M5	34	24	101/99	Yellow	0.03
8521-201SG	100	18	120	78	M5	34	24	101/99	Green	0.03
8521-203BG	120	22.5	145	92	M6	40	26	122.5/119.5	Black	0.05
8521-203PG	120	22.5	145	92	M6	40	26	122.5/119.5	Pale Grey	0.05
8521-203TR	120	22.5	145	92	M6	40	26	122.5/119.5	Red	0.05
8521-203TB	120	22.5	145	92	M6	40	26	122.5/119.5	Blue	0.05
8521-203CY	120	22.5	145	92	M6	40	26	122.5/119.5	Yellow	0.05
8521-203SG	120	22.5	145	92	M6	40	26	122.5/119.5	Green	0.05



WDS 8523 D Handle

Available in Black Powder Coated or Matt Chrome finish

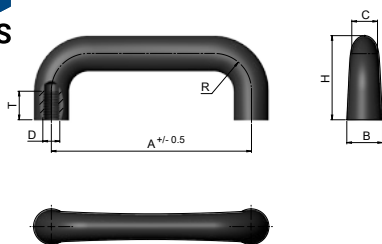
Black	Chrome	A	D	D1	H	R	T	Weight (kg)
8523-201	8523-251	200	M8	20	70	22	15	0.69
8523-202	8523-252	250	M8	20	70	22	15	0.81
8523-203	8523-253	300	M8	20	70	22	15	0.93
8523-204	8523-254	350	M8	20	70	22	15	1.06



WDS 8524 Anodised Aluminium Bridge Handle

Available in Black or Silver

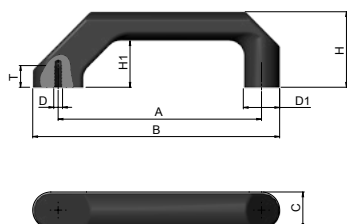
Black	Silver	A	B	C	D	E	H	H1	T	Weight (kg)
8524-201	8524-251	120	144	22	M6	24	46	31	12	0.15
8524-202	8524-252	140	168	25	M8	28	53	36	15	0.22



Cast Iron Handle **WDS 8529**

Cast Iron (GJS400)

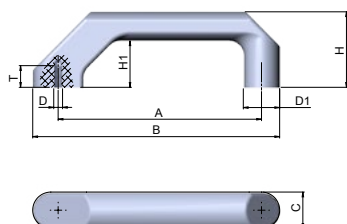
Normal	Black Powder Coat	A	B	C	D	H	R	T	Weight (kg)
8529-201	8529-251	100	18	12	M6	42	20	12	0.18
8529-202	8529-252	112	20	14	M8	47	22	15	0.25
8529-203	8529-253	120	22	16	M10	53	24	18	0.38
8529-204	8529-254	140	25	18	M12	59	26	20	0.51



Black Powder Coated Bridge Handle **WDS 8531**

Aluminium AlMg

WDS No.	A	B	C	D	D1	H	H1	T	Weight (kg)
8531-201	140	170	25	M6	25	52	32	15	0.26

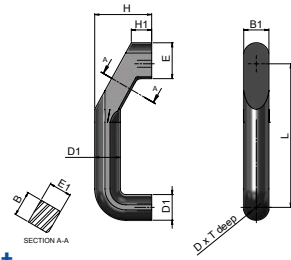


Aluminium Bridge Handle Natural Finish **WDS 8531**

Aluminium AlMg

WDS No.	A	B	C	D	D1	H	H1	T	Weight (kg)
8531-251	140	170	25	M6	25	52	32	15	0.25

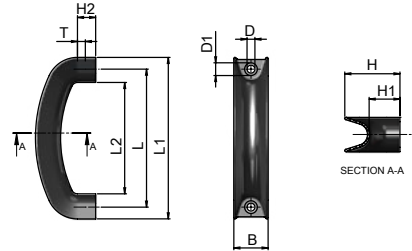
BK

MAX LOAD
30KG

WDS 8532 Bridge Handle with Steel or Brass Insert

Handle - Bakelite, Insert - Zinc Plated Steel or Brass
Min Stress 1000N

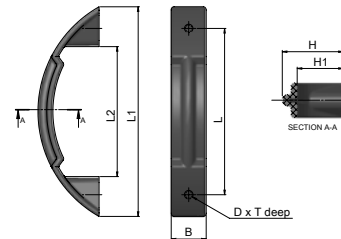
WDS No.	B	B1	D	D1	E	E1	H	H1	L	T	Weight (kg)
8532-201	25	25	M8	25	35	22	44.5	17	140	14	0.17
8532-251	25	25	M8	25	35	22	44.5	17	140	14	0.17

MAX LOAD
100KG

WDS 8533 Bow Handle

Glass fibre reinforced plastic

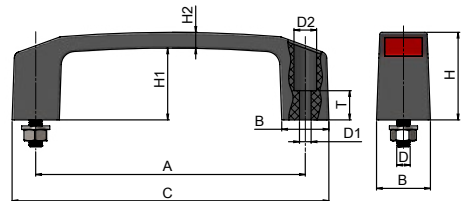
WDS No.	B	D	D1	H	H1	H2	L	L1	L2	T	Weight (kg)
8533-211	28	6.5	10.5	48	29	15	114	134	92	6.5	0.04

MAX LOAD
100KG

WDS 8534 Bow Handle - Steel Zinc Plated Insert

Glass fibre reinforced plastic

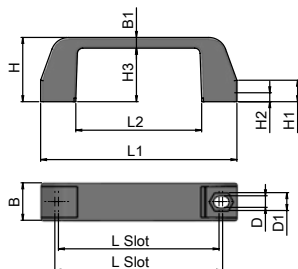
WDS No.	B	D	H	H1	L	L1	L2	T	Weight (kg)
8534-201	25	M6	43.5	33	119	150	93	10	0.05

MAX LOAD
100KG

WDS 8535 Bridge Handle with coloured caps

Glass fibre reinforced plastic

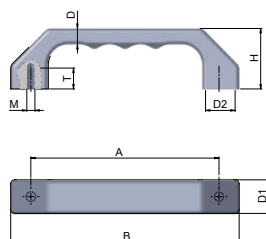
No Caps	Traffic Blue	Cadmium Yellow	Signal Green	A	B	C	D	D1	D2	H	H1	H2	T	Weight (kg)
8535-302NC	8535-302TB	8535-302CY	8535-302SG	120	24	141	M6 x 25	6	10.5	39	32	7	13	0.08
8535-305NC	8535-305TB	8535-305CY	8535-305SG	140	28	164	M8 x 30	8	13.5	45	37	8	15	0.13
Traffic Red	Pale Grey	Black Grey		A	B	C	D	D1	D2	H	H1	H2	T	Weight (kg)
8535-302TR	8535-302PG	8535-302BG		120	24	141	M6 x 25	6	10.5	39	32	7	13	0.08
8535-305TR	8535-305PG	8535-305BG		140	28	164	M8 x 30	8	13.5	45	37	8	15	0.13



Bridge Handle - Hidden Front Mounting WDS 8535

Glass Fibre Reinforced Plastic

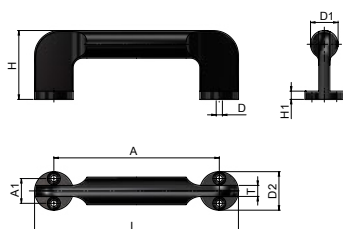
WDS No.	B	B1	D	D1	H	H1	H2	H3	L (Adj)	L1	L2	Weight (kg)
8535-201	21	6	6.5	10	36	12	5	30	90/94	110	72.5	0.03
8535-202	26	7	8.5	13	42	13.5	5	35	112/118	137	92.5	0.03
8535-203	26	7	8.5	13	42	13.5	5	35	126/132	151	106.5	0.04



Bridge Handle - Aluminium WDS 8536

Surface finish - Anodised in black or silver
Screws and Washers supplied

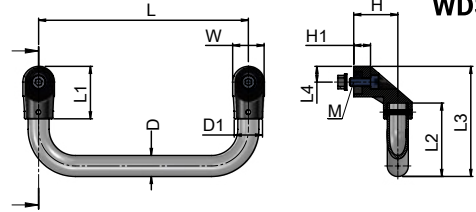
Black	Silver	A	B	D	D1	D2	H	M	T	Weight (kg)
8536-201	8536-251	120	146	10.5	22	24	39	M6	12	0.13
8536-202	8536-252	140	170	12	25	28	45	M8	15	0.16
8536-203	8536-253	160	194	13.5	28	32	52	M8	15	0.18



Plastic Bridge Handle WDS 8537

Glass fibre reinforced plastic
Screws, Nuts and Washers supplied

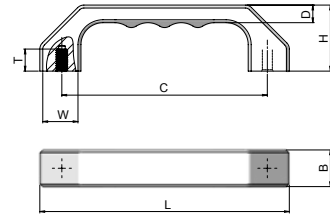
WDS No.	A	A1	D	D1	D2	H	H1	L	M	T	Weight (kg)
8537-201	120	18	4.5	20	28	50	6	148	M4 x 16	8	0.08
8537-204	150	22	5.5	25	34	62.5	7	184	M5 X 20	10	0.15



WDS 8538 Tube Handle - Front Mounted

Grip - Aluminium round

WDS No.	D	D1	H	H1	L	L1	L2	L3	L4	M	W	Weight (kg)
8538-201	20	27	42	16	200	50	70	105	15	M8 x 30	30	0.37
8538-202	20	27	42	16	250	50	70	105	15	M8 x 30	30	0.41
8538-203	20	27	42	16	300	50	70	105	15	M8 x 30	30	0.46
8538-204	20	27	42	16	350	50	70	105	15	M8 x 30	30	0.5
8538-205	20	27	42	16	400	50	70	105	15	M8 x 30	30	0.54

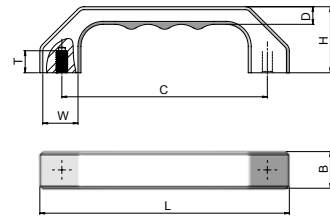


Supplied with Screws 'M'

WDS 8545 Bridge Handle - Stainless Steel - Rear Mounted

Handle - Stainless Steel BS970 Gr303S31
Screws supplied 'M'

WDS No.	B	C	D	H	L	M	T	W	Weight (kg)
8545-201	25	140	12	45	170	M8 x 18	15	28	0.54
8545-203	32	180	15	58	218	M10 x 20	18	36	1.45

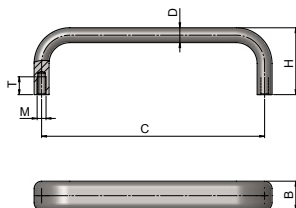


Supplied with Screws 'M'

WDS 8545 Bridge Handle - Stainless Steel - Front Mounted

Handle - Stainless Steel BS970 Gr303S31
Screws supplied 'M'

WDS No.	B	C	D	H	L	M	T	W	Weight (kg)
8545-301	25	140	12	45	170	M8 x 18	15	28	0.54
8545-303	32	180	15	58	218	M10 x 20	18	36	1.24



Supplied with 2 pan head screws M5x10



303

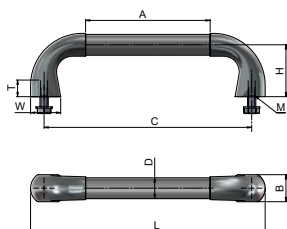


Bridge Handle - Oval Profile WDS 8546

Handle - Stainless steel BS 970 Gr303S31

Supplied with 2 Pan Head screws M5x10

WDS No.	B	C	D	H	M	R	T	Weight (kg)
8546-201	12	100	8	40	M5 x 10	22	10	0.11
8546-203	12	120	8	40	M5 x 10	22	10	0.12
8546-204	12	150	8	40	M5 x 10	22	10	0.14
8546-205	12	180	8	40	M5 x 10	22	10	0.16
8546-207	12	250	8	40	M5 x 10	22	10	0.21
8546-208	12	350	8	40	M5 x 10	22	10	0.27
8546-209	19.5	100	10	45	M6 x 12	24	12	0.22
8546-211	19.5	120	10	45	M6 x 12	24	12	0.24
8546-212	19.5	150	10	45	M6 x 12	24	12	0.28
8546-213	19.5	180	10	45	M6 x 12	24	12	0.32
8546-215	19.5	250	10	45	M6 x 12	24	12	0.41
8546-216	19.5	350	10	45	M6 x 12	24	12	0.54



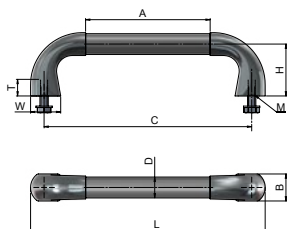
303



Bridge Handle - Tube Profile Stainless Steel - Matt Finish Rear Mounted WDS 8547

Handle ends - Stainless Steel BS970 Gr303S31

WDS No.	A	B	C	D	H	L	M	T	W	Weight (kg)
8547-201	120	26	200	20	50	226	M8 x 20	16	29	0.71
8547-203	220	26	300	20	50	326	M8 x 20	16	29	0.8
8547-205	320	26	400	20	50	426	M8 x 20	16	29	0.89



303

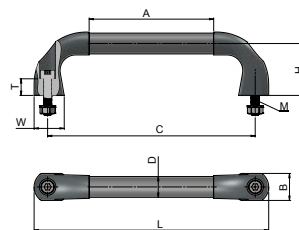


Bridge Handle - Tube Profile Stainless Steel - Ribbed Plastic Coating Rear Mounted WDS 8547

Handle ends - Stainless Steel BS970 Gr303S31

WDS No.	A	B	C	D	H	L	M	T	W	Weight (kg)
8547-207	120	26	200	20	50	226	M8 x 20	16	29	0.72
8547-209	220	26	300	20	50	326	M8 x 20	16	29	0.81
8547-211	320	26	400	20	50	426	M8 x 20	16	29	0.91

303



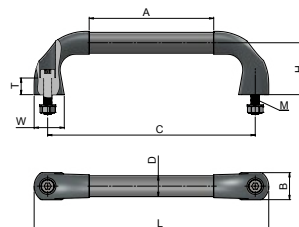
WDS 8547 Bridge Handle - Tube Profile Stainless Steel - Matt Finish Front Mounted

Handle ends - Stainless Steel BS970 Gr303S31

Screws supplied 'M'

WDS No.	A	B	C	D	H	L	M	T	W	Weight (kg)
8547-251	120	26	200	20	50	226	M8x35	16	29	0.66
8547-253	220	26	300	20	50	526	M8x35	16	29	0.77
8547-255	320	26	400	20	50	326	M8x35	16	29	0.86

303



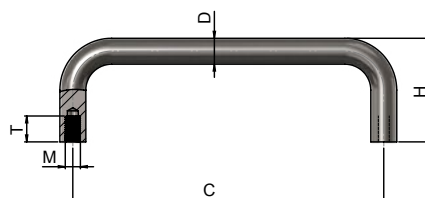
WDS 8547 Bridge Handle - Tube Profile Stainless Steel - Ribbed Plastic Coating Front Mounted

Handle ends - Stainless Steel BS970 Gr303S31

Screws supplied 'M'

WDS No.	A	B	C	D	H	L	M	T	W	Weight (kg)
8547-257	120	26	200	20	50	226	M8x35	16	29	0.69
8547-259	220	26	300	20	50	326	M8x35	16	29	0.78
8547-261	320	26	400	20	50	426	M8x35	16	29	0.88

303



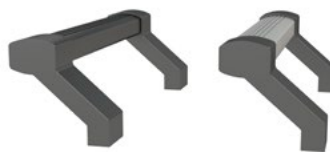
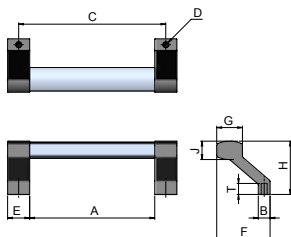
Supplied with 2 pan head screws M5x10

WDS 8549 Stainless Steel Bridge Handle - Round Profile

Handle - Stainless steel BS 970 Gr303S31

Supplied with 2 Pan Head screws 'M'

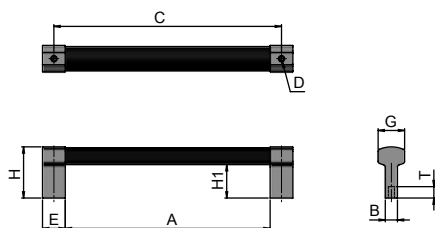
WDS No.	C	D	H	M	T	Weight (kg)
8549-201	64	8	35	M5	10	0.04
8549-203	88	8	35	M5	10	0.05
8549-205	100	8	35	M5	10	0.06
8549-207	120	10	40	M5	10	0.11
8549-209	180	10	40	M5	10	0.14
8549-211	250	10	40	M5	10	0.18
8549-213	350	10	40	M5	10	0.25



Aluminium Machine Handle WDS 8584

Available in Black or Silver

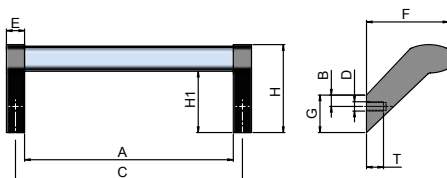
Black	Silver	A	B	C	D	E	F	G	H	J	T	Weight (kg)
8584-201	8584-251	170	16	200	M8	30	72.5	35	72.5	25	15	0.54
8584-202	8584-252	270	16	300	M8	30	72.5	35	72.5	25	15	0.7
8584-203	8584-253	370	16	400	M8	30	72.5	35	72.5	25	15	0.84
8584-204	8584-254	470	16	500	M8	30	72.5	35	72.5	25	15	0.97



Aluminium Machine T Shape Handle WDS 8585

Available in Black or Silver

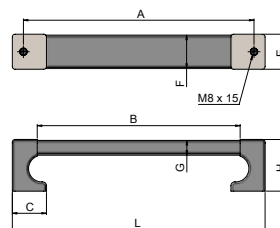
Black	Silver	A	B	C	D	E	F	G	H	H1	T	Weight (kg)
8585-201	8585-251	170	16	200	M8	30	72.5	35	67.5	44	15	0.5
8585-202	8585-252	270	16	300	M8	30	72.5	35	67.5	44	15	0.64
8585-203	8585-253	370	16	400	M8	30	72.5	35	67.5	44	15	0.78
8585-204	8585-254	470	16	500	M8	30	72.5	35	67.5	44	15	0.91



Aluminium Machine Handle WDS 8586

Available in Black or Silver

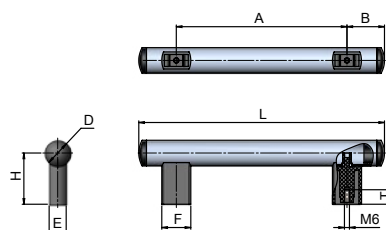
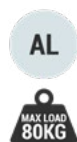
Black	Silver	A	B	C	D	E	F	G	H	H1	T	Weight (kg)
8586-201	8586-251	184	10	200	M8	16	72.5	33	77.5	54	15	0.48
8586-202	8586-252	284	10	300	M8	16	72.5	33	77.5	54	15	0.62
8586-203	8586-253	384	10	400	M8	16	72.5	33	77.5	54	15	0.75
8586-204	8586-254	484	10	500	M8	16	72.5	33	77.5	54	15	0.89



WDS 8590 Aluminium Bridge Handle

Available in Black or Silver

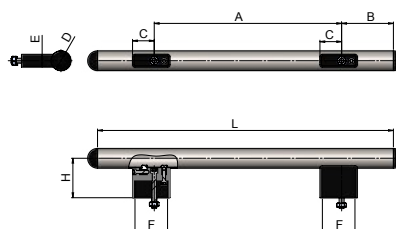
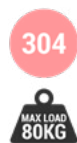
Black	Silver	A	B	C	E	F	G	H	L	Weight (kg)
8590-201	8590-251	250	220	37	38	36	16	56	274	0.56
8590-202	8590-252	300	270	37	38	36	16	56	324	0.62
8590-203	8590-253	400	370	37	38	36	16	56	424	0.74
8590-204	8590-254	500	470	37	38	36	16	56	524	0.87
8590-205	8590-255	600	570	37	38	36	16	56	624	0.99



WDS 8591 Aluminium Tube Handle

Available in Black or Silver

Black	Silver	A	B	C	D	E	F	H	L	T	Weight (kg)
8591-201	8591-251	200	44	44	30	20	34	60	288	17	0.21
8591-202	8591-252	250	44	44	30	20	34	60	338	17	0.24
8591-203	8591-253	300	44	44	30	20	34	60	388	17	0.25
8591-204	8591-254	400	44	44	30	20	34	60	488	17	0.28
8591-205	8591-255	500	44	44	30	20	34	60	588	17	0.34

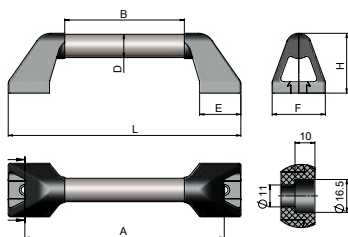


WDS 8592 Large Stainless Steel Tube Handles

Heavy Duty Handle

Minimum Stress resistance 1000N

WDS No.	A	B	C	D	E	F	H	L	Weight (kg)
8592-201	380	105	44	40	26	76	80	600	1.9
8592-202	480	105	44	40	26	76	80	700	2.12
8592-203	500	145	44	40	26	76	80	800	2.18
8592-204	600	145	44	40	26	76	80	900	2.4
8592-205	700	145	44	40	26	76	80	1000	2.58



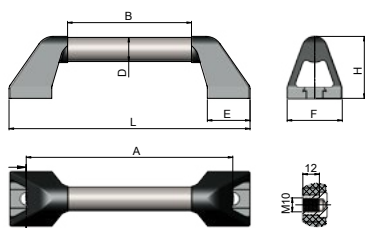
304



Stainless Steel Tube Handles - Front Mounted WDS 8593

304 Stainless Steel

WDS No.	A	B	D	E	F	H	L	Weight (kg)
8593-201	300	180	35	62	80	90	350	0.78
8593-202	350	230	35	62	80	90	400	0.89
8593-203	400	280	35	62	80	90	450	1.02
8593-204	500	380	35	62	80	90	550	1.18
8593-205	600	480	35	62	80	90	650	1.31



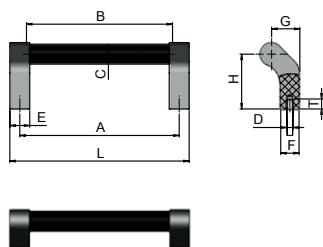
304



Stainless Steel Tube Handles - Rear Mounted WDS 8593

304 Stainless Steel

WDS No.	A	B	D	E	F	H	L	Weight (kg)
8593-251	300	180	35	62	80	90	350	0.81
8593-252	350	230	35	62	80	90	400	0.88
8593-253	400	280	35	62	80	90	450	0.95
8593-254	500	380	35	62	80	90	550	1.14
8593-255	600	480	35	62	80	90	650	1.3



AL

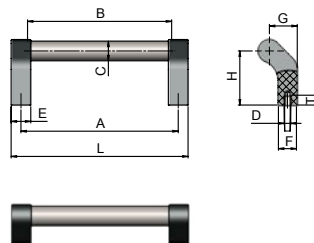


Aluminium Tube Handles WDS 8594

Thread Insert - Brass

Black	Silver	A	B	C	D	E	F	G	H	L	T	Weight (kg)
8594-201	8594-251	88	80	12	M4	12	12	17	33	100	12	0.03
8594-202	8594-252	96	88	12	M4	12	12	17	33	108	12	0.03
8594-203	8594-253	120	112	12	M4	12	12	17	33	132	12	0.03
8594-204	8594-254	128	120	12	M4	12	12	17	33	140	12	0.03
8594-205	8594-255	160	152	12	M4	12	12	17	33	172	12	0.04
8594-206	8594-256	180	172	12	M4	12	12	17	33	192	12	0.04

304

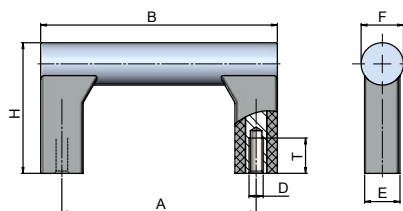


WDS 8594 Stainless Grip Tube Handle

Thread Insert - Brass

WDS No.	A	B	C	D	E	F	G	H	L	T	Weight (kg)
8594-601	88	80	12	M4	12	12	17	33	100	12	0.04
8594-602	96	88	12	M4	12	12	17	33	108	12	0.04
8594-603	120	112	12	M4	12	12	17	33	132	12	0.04
8594-604	128	120	12	M4	12	12	17	33	140	12	0.05
8594-605	160	152	12	M4	12	12	17	33	172	12	0.06
8594-606	180	172	12	M4	12	12	17	33	192	12	0.07

AL



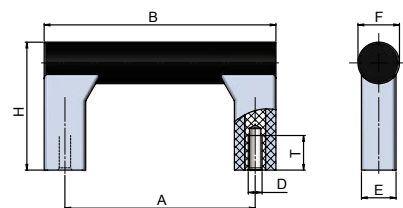
WDS 8595 Aluminium Tube Handle

Aluminium AlMgSi 0.5, Black or Grey legs

Min Stress 500N

Grey	Black	A	B	D	E	F	H	T	Weight (kg)
8595-211	8595-251	55	67	M4	10	12	37	10	0.04
8595-212	8595-252	88	100	M4	10	12	37	10	0.04
8595-213	8595-253	100	112	M4	10	12	37	10	0.05
8595-214	8595-254	120	132	M4	10	12	37	10	0.05
8595-215	8595-255	180	192	M4	10	12	37	10	0.07

AL

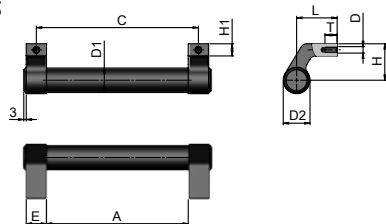


WDS 8595 Black Aluminium Tube Handle

Aluminium AlMgSi 0.5, Black or Grey legs

Min Stress 500N

Grey	Black	A	B	D	E	F	H	T	Weight (kg)
8595-201	8595-261	55	67	M4	10	12	37	10	0.04
8595-202	8595-262	88	100	M4	10	12	37	10	0.04
8595-203	8595-263	100	112	M4	10	12	37	10	0.05
8595-204	8595-264	120	132	M4	10	12	37	10	0.05
8595-205	8595-265	180	192	M4	10	12	37	10	0.07



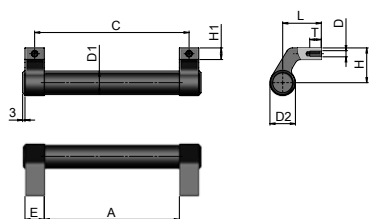
AL



Black Anodized Aluminium Handle - Angled WDS 8596

Tube - Aluminium AW-6060 with black anodized finish

WDS No.	A	C	D	D1	D2	E	H	H1	L	T	Weight (kg)
8596-201	175	200	M8	30	33	25	45	15	50	15	0.28
8596-202	225	250	M8	30	33	25	45	15	50	15	0.3
8596-203	275	300	M8	30	33	25	45	15	50	15	0.32
8596-204	325	350	M8	30	33	25	45	15	50	15	0.34
8596-205	375	400	M8	30	33	25	45	15	50	15	0.38
8596-206	475	500	M8	30	33	25	45	15	50	15	0.39
8596-207	575	600	M8	30	33	25	45	15	50	15	0.43



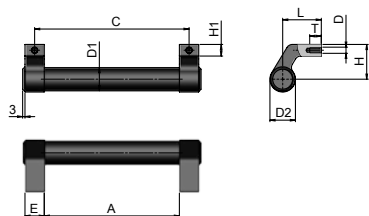
AL



Black Powder Coated Aluminium Handle - Angled WDS 8596

Tube - Aluminium AW-6060 with black anodized finish

WDS No.	A	C	D	D1	D2	E	H	H1	L	T	Weight (kg)
8596-211	175	200	M8	30	33	25	45	15	50	15	0.27
8596-212	225	250	M8	30	33	25	45	15	50	15	0.3
8596-213	275	300	M8	30	33	25	45	15	50	15	0.32
8596-214	325	350	M8	30	33	25	45	15	50	15	0.34
8596-215	375	400	M8	30	33	25	45	15	50	15	0.36
8596-216	475	500	M8	30	33	25	45	15	50	15	0.4
8596-217	575	600	M8	30	33	25	45	15	50	15	0.42



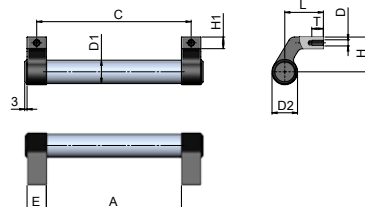
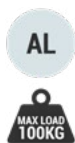
AL



Black Serrated Covered Aluminium Handle - Angled WDS 8596

Tube - Aluminium AW-6060 with black anodized finish

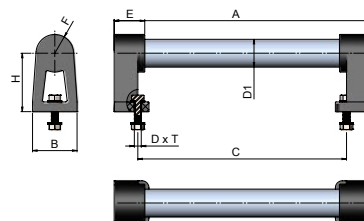
WDS No.	A	C	D	D1	D2	E	H	H1	L	T	Weight (kg)
8596-221	175	200	M8	30	33	25	45	15	50	15	0.3
8596-222	225	250	M8	30	33	25	45	15	50	15	0.32
8596-223	275	300	M8	30	33	25	45	15	50	15	0.35
8596-224	325	350	M8	30	33	25	45	15	50	15	0.37
8596-225	375	400	M8	30	33	25	45	15	50	15	0.41
8596-226	475	500	M8	30	33	25	45	15	50	15	0.44
8596-227	575	600	M8	30	33	25	45	15	50	15	0.5



WDS 8596 Anodized Aluminium Handle - Angled

Tube - Aluminium AW-6060 with black anodized finish

WDS No.	A	C	D	D1	D2	E	H	H1	L	T	Weight (kg)
8596-251	175	200	M8	30	33	25	45	15	50	15	0.29
8596-252	225	250	M8	30	33	25	45	15	50	15	0.29
8596-253	275	300	M8	30	33	25	45	15	50	15	0.31
8596-254	325	350	M8	30	33	25	45	15	50	15	0.33
8596-255	375	400	M8	30	33	25	45	15	50	15	0.35
8596-256	475	500	M8	30	33	25	45	15	50	15	0.39
8596-257	575	600	M8	30	33	25	45	15	50	15	0.42

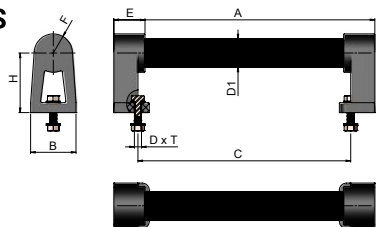


WDS 8597 Aluminium Tube Handles with Black Plastic Legs

Tube - Aluminium AW-6060

Legs - Polyamide reinforced

WDS No.	A	B	C	D	D1	E	F	H	T	Weight (kg)
8597-201	184	32	150	M5	20	22	13.5	42	20	0.12
8597-202	234	32	200	M5	20	22	13.5	42	20	0.13
8597-203	334	32	300	M5	20	22	13.5	42	20	0.17
8597-204	434	32	400	M5	20	22	13.5	42	20	0.2
8597-205	534	32	500	M5	20	22	13.5	42	20	0.23
8597-206	200	48	150	M8	30	32	20	60	25	0.27
8597-207	250	48	200	M8	30	32	20	60	25	0.28
8597-208	350	48	300	M8	30	32	20	60	25	0.33
8597-209	450	48	400	M8	30	32	20	60	25	0.36
8597-210	550	48	500	M8	30	32	20	60	25	0.42

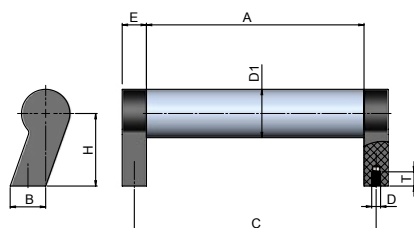


Aluminium Tube Handle with Serrated Black Plastic Cover and Black Plastic **WDS 8597**

Tube - Aluminium AW-6060

Legs - Polyamide reinforced

WDS No.	A	B	C	D	D1	E	F	H	T	Weight (kg)
8597-251	184	32	150	M5	20	22	13.5	42	20	0.14
8597-252	234	32	200	M5	20	22	13.5	42	20	0.16
8597-253	334	32	300	M5	20	22	13.5	42	20	0.19
8597-254	434	32	400	M5	20	22	13.5	42	20	0.23
8597-255	534	32	500	M5	20	22	13.5	42	20	0.27
8597-256	200	48	150	M8	30	32	20	60	25	0.3
8597-257	250	48	200	M8	30	32	20	60	25	0.31
8597-258	350	48	300	M8	30	32	20	60	25	0.35
8597-259	450	48	400	M8	30	32	20	60	25	0.4
8597-260	550	48	500	M8	30	32	20	60	25	0.16

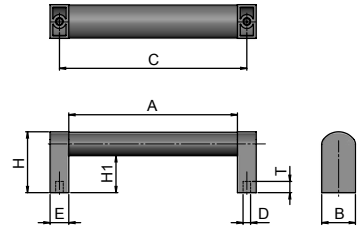


Aluminium Tube Handle with Black Legs **WDS 8598**

Tube - Aluminium AW-6060

Legs - Polyamide reinforced, threaded bush in Brass

WDS No.	A	B	C	D	D1	E	H	T	Weight (kg)
8598-201	135	22	150	M6	30	15	45	9	0.13
8598-202	185	22	200	M6	30	15	45	9	0.13
8598-203	235	22	250	M6	30	15	45	9	0.15
8598-204	285	22	300	M6	30	15	45	9	0.17
8598-205	335	22	350	M6	30	15	45	9	0.21
8598-206	385	22	400	M6	30	15	45	9	0.2

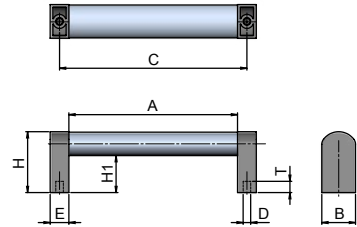


WDS 8599 Aluminium Tube Handle

Tube - Aluminium AW-6060

Legs - Polyamide reinforced, threaded bush in Brass

Black	Silver	A	B	C	D	E	H	H1	T	Weight (kg)
8599-201	8599-221	180	36	200	M8	20	65	39.5	12	0.26
8599-202	8599-222	230	36	250	M8	20	65	39.5	12	0.3
8599-203	8599-223	280	36	300	M8	20	65	39.5	12	0.33
8599-204	8599-224	380	36	400	M8	20	65	39.5	12	0.41
8599-205	8599-225	480	36	500	M8	20	65	39.5	12	0.52

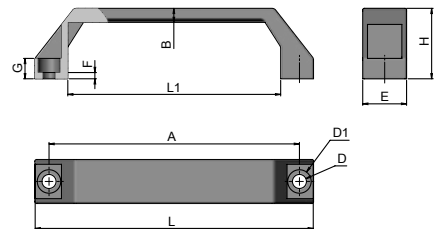


WDS 8599 Natural Aluminium Tube Handle with Black Legs

Tube - Aluminium AW-6060

Legs - Polyamide reinforced, threaded bush in Brass

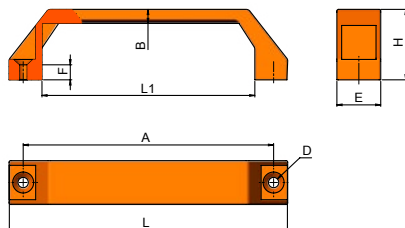
WDS No.	A	B	C	D	E	H	H1	T	Weight (kg)
8599-251	180	36	200	M8	20	65	39.5	12	0.26
8599-252	230	36	250	M8	20	65	39.5	12	0.3
8599-253	280	36	300	M8	20	65	39.5	12	0.33
8599-254	380	36	400	M8	20	65	39.5	12	0.43
8599-255	480	36	500	M8	20	65	39.5	12	0.49



WDS 8751 Bridge Handle - Caphead Screw Fitting

Glass Reinforced Plastic

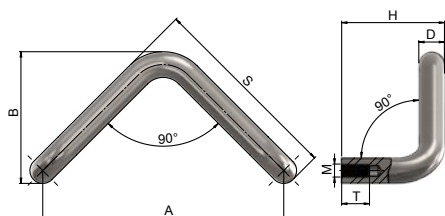
Black	Orange	A	B	D	D1	E	F	G	H	L	L1	Weight (kg)
8751-201	8751-301	120	8	9	15	26	4	13	42	138	96	0.06
8751-202	8751-302	140	8	9	15	26	4	13	42	158	116	0.06
8751-203	8751-303	160	9	9	15	28	4	13	45	178	136	0.07



Bridge Handle - Countersink Screw Fitting **WDS 8751**

Glass Reinforced Plastic

Black	Orange	A	B	D	E	F	H	L	L1	Weight (kg)
8751-251	8751-351	120	8	6.6	26	9.6	42	138	96	0.06
8751-252	8751-352	140	8	6.6	26	9.6	42	158	116	0.06
8751-253	8751-353	160	9	6.6	28	9.6	45	178	136	0.08



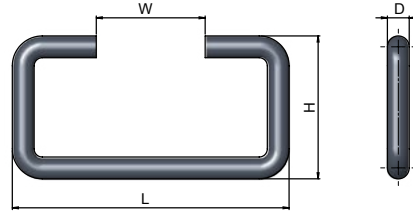
Steel Angled Offset Handles **WDS 8754**

Round steel bar
Precision ground and bright chromium plated

WDS No.	A	B	D	H	M	S	T	Weight (kg)
8754-275	75	41	8	32	M4	61	8	0.06
8754-290	90	49	10	40	M5	73	10	0.11

304

ZP



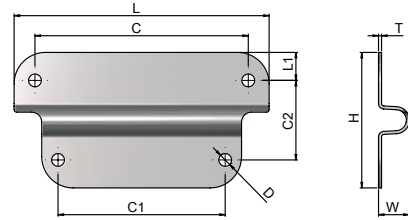
WDS 4211 Case Fitting Handle

Available in Stainless Steel or Zinc Plated Steel
Use with WDS 4212

Zinc Plated	Stainless Steel	D	H	L	W	Weight (kg)
4211-201	4211-601	8	52.5	101.7	20	0.09

304

ZP



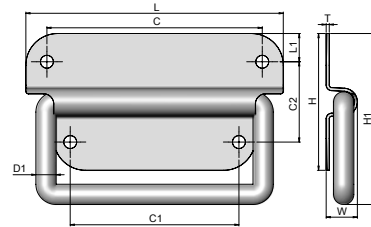
WDS 4212 Case Fitting Bracket

Available in Stainless Steel or Zinc Plated Steel
Use with WDS 4211

Zinc Plated	Stainless Steel	C	C1	C2	D	H	L	L1	T	W	Weight (kg)
4212-201	4212-601	85	66.6	31.7	5.1	54	101.6	9.5	1.2	12.3	0.05

304

ZP



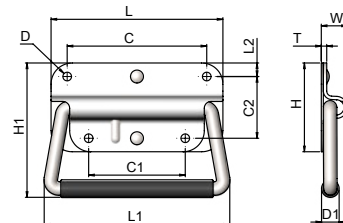
WDS 4212 Case Fitting Handle Assembly

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	C	C1	C2	D	D1	H	H1	L	L1	T	W	Weight (kg)
4212-201A	4212-601A	85	66.6	31.7	5.1	8	54	76	101.6	9.5	1.2	12.3	0.14

304

ZP



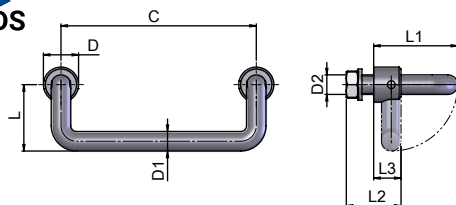
WDS 4213 Case Fitting Handle Spring Return

Available in Stainless Steel or Zinc Plated Steel
Spring Return Action

Zinc Plated	Stainless Steel	C	C1	C2	D	D1	H	H1	L	L1	L2	T	W	Weight (kg)
4213-201	4213-601	82.5	57.1	36.5	5.1	15	52.5	88.5	101.6	112.7	8	3.2	13.9	0.26



CR



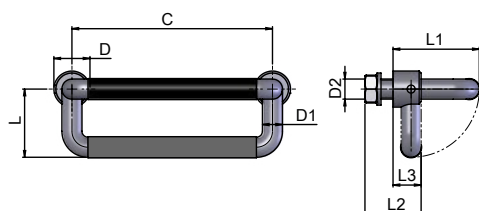
Spring detent for both positions



Collapsible Steel Handle WDS 8511

Chromium plated finish
Nuts and Washers supplied

WDS No.	C	D	D1	D2	L	L1	L2	L3	Weight (kg)
8511-201	100	18	10	M10 x 1	34	43	28	14	0.13
8511-202	120	18	10	M10 x 1	34	43	28	14	0.16
8511-203	180	18	10	M10 x 1	34	43	28	14	0.21



Spring detent for both positions



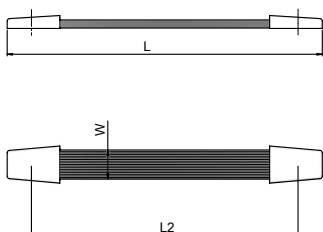
CR



Collapsible Steel Handle with Smooth Plastic Grip WDS 8511

Chromium plated finish
Nuts and Washers supplied

WDS No.	C	D	D1	D2	L	L1	L2	L3	Weight (kg)
8511-211	100	18	10	M10 x 1	34	43	28	14	0.14
8511-212	120	18	10	M10 x 1	34	43	28	14	0.16
8511-213	180	18	10	M10 x 1	34	43	28	14	0.22



Strap Handles WDS 8530

Plastic Strap Black
Anodised Steel End-Plates

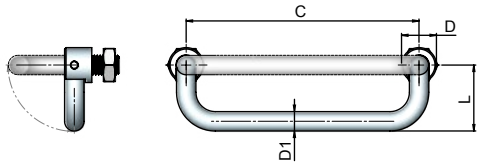
WDS No.	L	L2	W	Weight (kg)
8530-201	195	165	13	0.07
8530-202	210	185	22	0.07

303

MAX LOAD
50KG



WDS



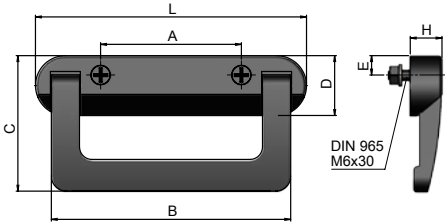
Spring detent for both positions

WDS 8548 Hinged Handle - Stainless Steel

Handle - Stainless Steel BS970 Gr303S31
Nuts and Washers supplied

WDS No.	C	D	D1	D2	L	L1	L2	L 3	Weight (kg)
8548-201	100	18	10	M10 x 1	34	45	28	14	0.13
8548-203	120	18	10	M10 x 1	34	45	28	14	0.16
8548-205	180	18	10	M10 x 1	34	45	28	14	0.21

MAX LOAD
30KG

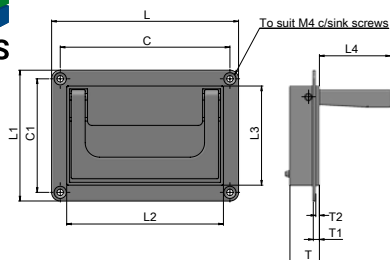


DIN 965
M6x30

WDS 8589 Folding Spring Pull Handle

Polyamide-Glass Reinforced-Black
Pins & Spring in Stainless steel

WDS No.	A	B	C	D	E	H	L	Weight (kg)
8589-201	80	136	77	34	11	18	154	0.16



AL

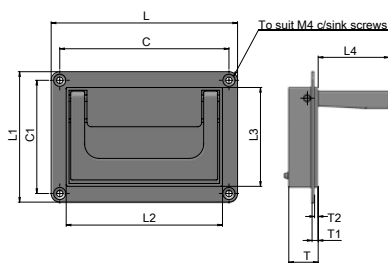


MAX LOAD
50KG

Collapsible Tray Handle with Snap Lock **WDS 8539**

Aluminium in black, grey and white

Black	Grey	White	C	C1	L	L1	L2	L3	L4	T	T1	T2	Weight (kg)
8539-201	8539-202	8539-203	118	79	129	91	109	69	48	20.5	4.5	2	0.2



AI

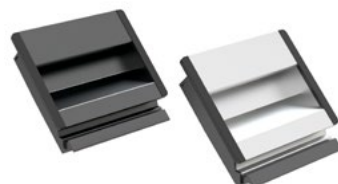
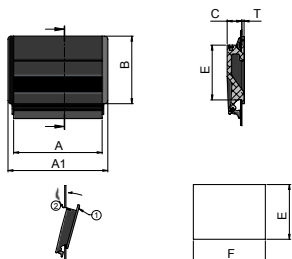


MAX LOAD
50KG

Collapsible Tray Handle with Pull Back Spring **WDS 8539**

Aluminium in black, grey and white

Black	Grey	White	C	C1	L	L1	L2	L3	L4	T	T1	T2	Weight (kg)
8539-201	8539-202	8539-203	118	79	129	91	109	69	48	20.5	4.5	2	0.2



AL

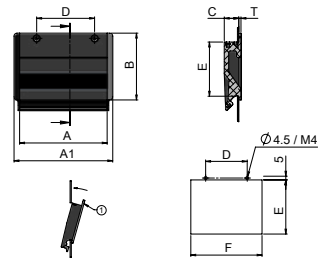


MAX LOAD
50KG

Aluminium Tray Handle with Rubber Inserts - Aluminium **WDS 8557**

Anodised black or natural
Polyamide end caps (black)

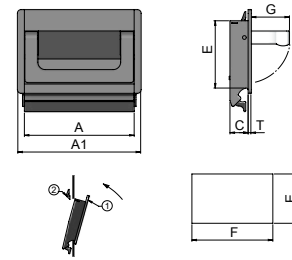
Black	Natural	A	A1	B	C	E	F	T	Weight (kg)
8557-201	8557-211	100	115	90	19.5	73	104	3	0.14
8557-202	8557-212	118	133	90	19.5	73	122	3	0.17
8557-203	8557-213	167	182	90	19.5	73	171	3	0.24



WDS 8557 Aluminium Tray Handle with Screw Mounting - Anodised

Anodised black or natural
Polyamide end caps (black)

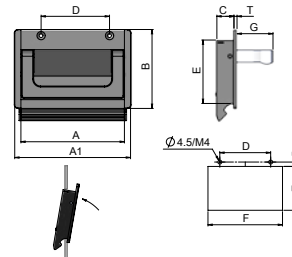
Black	Natural	A	A1	B	C	D	E	F	T	Weight (kg)
8557-301	8557-311	100	115	90	19.5	60	73	104	3	0.14
8557-302	8557-312	118	133	90	19.5	78	73	122	3	0.17
8557-303	8557-313	167	182	90	19.5	127	73	171	3	0.22



WDS 8560 Tray Handle with Folding Handle with Rubber Inserts - Aluminium finish

Anodised black or natural
Polyamide end caps (black)

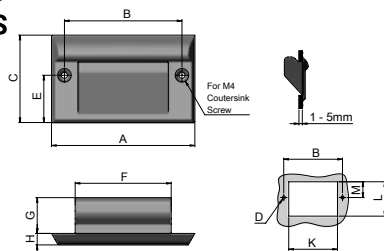
Black	Natural	A	A1	B	C	E	F	G	T	Weight (kg)
8560-201	8560-251	100	115	90	19.5	73	107	41	3	0.27
8560-202	8560-252	118	133	90	19.5	73	125	41	3	0.32
8560-203	8560-253	167	182	90	19.5	73	174	41	3	0.43



WDS 8561 Screw Mounting Tray Handle with Folding Handle - Aluminium finish

Anodised black or natural
Polyamide end caps (black)

Black	Natural	A	A1	B	C	D	E	F	G	T	Weight (kg)
8561-201	8561-251	100	115	90	19.5	60	73	107	41	3	0.28
8561-202	8561-252	118	133	90	19.5	78	73	125	41	3	0.32
8561-203	8561-253	167	182	90	19.5	127	73	174	41	3	0.44

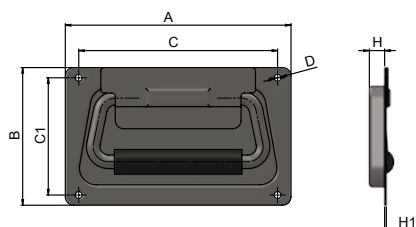


Recessed Tray Handle WDS 8588

Polyamide - Glass Reinforced

Available in black of light grey

Black	Grey	A	B	C	D	E	F	G	H	K	L	M	Weight (kg)
8588-201	8588-211	100	82	61	4.3	33	67	25	8	68	48	22	0.05
8588-202	8588-212	130	112	61	4.3	33	97	25	8	98	48	22	0.06

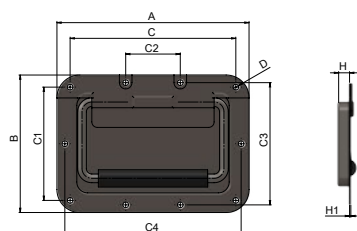


ZP

Recessed Handles - Spring Loaded Return 4 Mounting Holes WDS 8661

Zinc Plated Steel with Black PVC Grip

WDS No.	A	B	C	C1	D	H	H1	Weight (kg)
8661-201	133	81	117	69	4.1	9	1	0.23



ZP

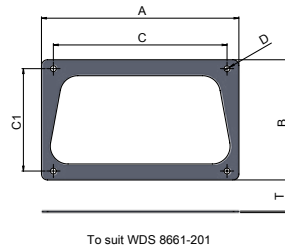
Recessed Handles - Spring Loaded Return 10 Mounting Holes WDS 8661

Zinc Plated Steel with Black PVC Grip

WDS No.	A	B	C	C1	C2	C3	C4	D	H	H1	Max Load (Kg)	Weight (kg)
8661-202	162	108	138.8	86.5	42	94.5	147.5	5.2	10	1.2	40	0.39
8661-203	176	126	151.8	103.8	50	112	161.5	5.2	10	1.2	35	0.49



ZP

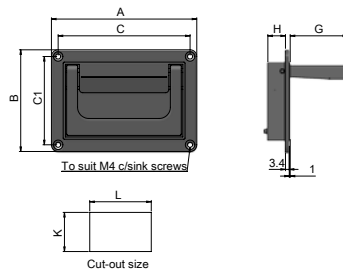


WDS 8662 Mounting Plate 4 Hole - To Suit WDS 8661

Zinc Plated Steel

WDS No.	A	B	C	C1	D	T	Weight (kg)
8662-201	133	81	117	69	4.1	1	0.17

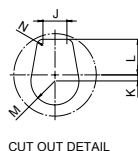
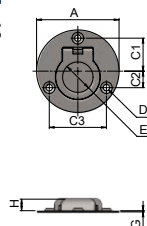
AL



WDS 8663 Recessed Handles - Spring Loaded Return

Aluminium Alloy
Black finish

WDS No.	A	B	C	C1	G	H	K	L	Weight (kg)
8663-201	130	91	118	79	49.5	16	109	69	0.23
8663-202	200	80	184	50	51	16	169	71	0.32

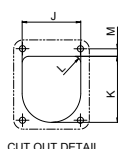
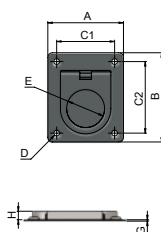


304

Round Finger Pull Recessed Handles - Spring Loaded Return **WDS 8664**

Stainless Steel 304 Grade
Screws included

WDS No.	A	C1	C2	C3	D	E	G	H	J	K	L	M	N	Weight (kg)
8664-201	55	22	11	38.1	4.2	20	0.8	7.8	16	4	17.5	16	4	0.03

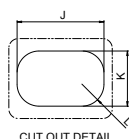
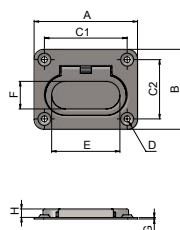


304

Square Finger Pull Recessed Handles - Spring Loaded Return **WDS 8664**

Stainless Steel 304 Grade
Screws included

WDS No.	A	B	C1	C2	D	E	G	H	J	K	L	M	Weight (kg)
8664-202	38	44	29	35	3.2	17.3	1	6	31	34	4	3.5	0.03
8664-203	55.5	65.5	42.5	52.5	4.1	27.5	1	7	43	48.5	5	5.5	0.05

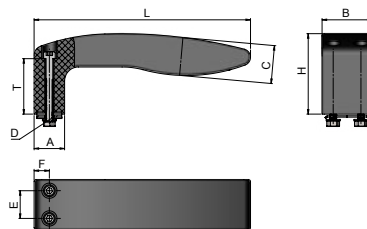


304

Rectangle Finger Pull Recessed Handles - Spring Loaded Return **WDS 8664**

Stainless Steel 304 Grade
Screws included

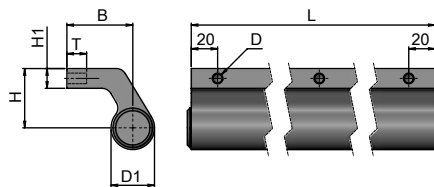
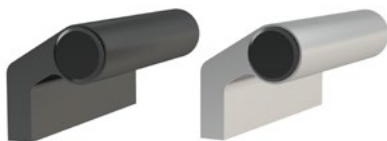
WDS No.	A	B	C1	C2	D	E	F	G	H	J	K	L	Weight (kg)
8664-204	75	58	60	43	4.2	49.5	20	1	6.5	63	40	16	0.06



WDS 8507 L Handle

Handle - Polyamide - Glass Reinforced - Black
Nuts, Screws, Washer in Stainless Steel (1.4601)

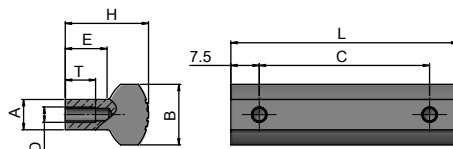
WDS No.	A	B	C	D	E	F	H	L	Max Load (Kg)	Weight (kg)
8507-201	18	30	20	M5x45	17	9	48	128	80	0.11
8507-202	22	36	24	M6x55	20	11	58	156	100	0.19



WDS 8525 Anodised Aluminium Ledge Pull Handles

Available in anodised black or natural Aluminium
End caps in Thermoplastic (Black)

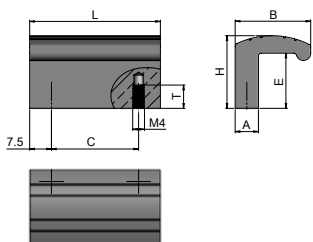
Black	Natural	B	C	D	D1	H	H1	L	T	Weight (kg)
8525-201	8525-251	50	2	M8	33	45	15	150	15	0.54
8525-202	8525-252	50	2	M8	33	45	15	200	15	0.68
8525-203	8525-253	50	2	M8	33	45	15	250	15	0.84
8525-204	8525-254	50	2	M8	33	45	15	300	15	1.01
8525-205	8525-255	50	2	M8	33	45	15	350	15	1.17
8525-206	8525-256	50	3	M8	33	45	15	400	15	1.29
8525-207	8525-257	50	3	M8	33	45	15	500	15	1.65
8525-208	8525-258	50	3	M8	33	45	15	600	15	1.97



WDS 8526 Anodised Aluminium Ledge Handles

Available in anodised black or natural Aluminium

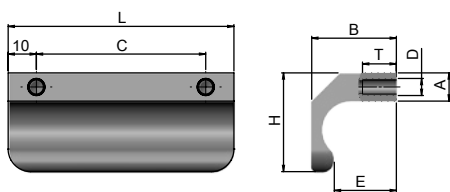
Black	Natural	A	B	C	D	E	H	L	T	Weight (kg)
8526-201	8526-251	8	16	30	M4	12	22	45	8	0.03
8526-202	8526-252	8	16	45	M4	12	22	60	8	0.04
8526-203	8526-253	8	16	70	M4	12	22	85	8	0.06
8526-204	8526-254	8	16	90	M4	12	22	105	8	0.07
8526-205	8526-255	8	16	105	M4	12	22	120	8	0.07
8526-206	8526-256	8	16	120	M4	12	22	135	8	0.08



Anodised Ledge Pull Handle WDS 8527

Available in anodised black or natural Aluminium

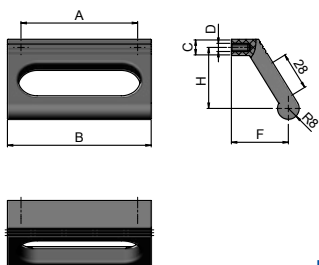
Black	Natural	A	B	C	D	E	H	L	T	Weight (kg)
8527-201	8527-251	8	26	30	M4	19	25	45	8	0.36
8527-202	8527-252	8	26	45	M4	19	25	60	8	0.05
8527-203	8527-253	8	26	70	M4	19	25	85	8	0.06
8527-204	8527-254	8	26	90	M4	19	25	105	8	0.83
8527-205	8527-255	8	26	105	M4	19	25	120	8	0.1
8527-206	8527-256	8	26	120	M4	19	25	135	8	0.1



316 Stainless Steel Ledge Pull Handle WDS 8528

316 Stainless Steel

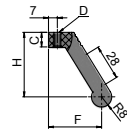
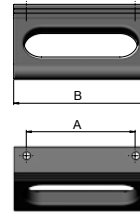
WDS No.	A	B	C	D	E	H	L	T	Weight (kg)
8528-201	10	30	60	M6	22	35	80	12	0.25
8528-202	10	30	80	M6	22	35	100	12	0.31
8528-203	10	30	100	M6	22	35	120	12	0.38
8528-204	10	30	130	M6	22	35	150	12	0.47



Ledge Handle - Slotted - Rear Mounting WDS 8540

Available in anodised black or silver Aluminium
Screws and Washers supplied

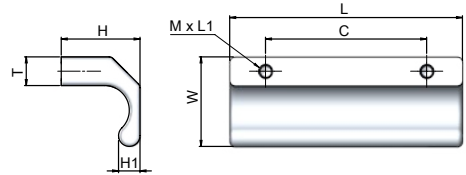
Black	Natural	A	B	C	D	F	H	H1	Weight (kg)
8540-201	8540-251	86	106	12	M6	42	51	45	0.22
8540-202	8540-252	100	120	12	M6	42	51	45	0.22
8540-203	8540-253	120	140	12	M6	42	51	45	0.25



WDS 8540 Ledge Handle - Slotted - Top Mounting

Available in anodised black or silver Aluminium
Screws and Washers supplied

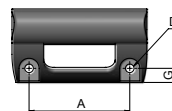
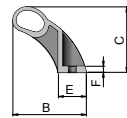
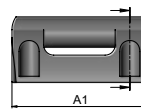
Black	Silver	A	B	C	D	F	H	Weight (kg)
8540-211	8540-261	86	106	12	5.5	42	51	0.19
8540-212	8540-262	100	120	12	5.5	42	51	0.22
8540-213	8540-263	120	140	12	5.5	42	51	0.03



WDS 8541 Ledge Handle

Available in anodised black or natural Aluminium

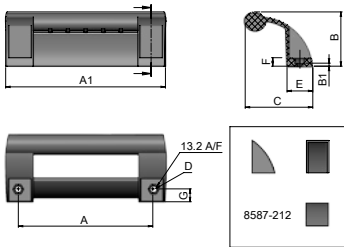
Natural	Black	C	H	H1	L	L1	M	T	W	Weight (kg)
8541-201	8541-211	30	22	6	50	10	M4	8	25	0.03
8541-202	8541-212	45	22	6	65	10	M4	8	25	0.04
8541-203	8541-213	64	22	6	84	10	M4	8	25	0.05
8541-204	8541-214	70	22	6	90	10	M4	8	25	0.05
8541-205	8541-215	80	22	6	100	10	M4	8	25	0.06
8541-206	8541-216	90	22	6	110	10	M4	8	25	0.06



WDS 8587 Thermoplastic Pull Handle for use with M8 Socket head screws

Handle - Glass ball reinforced Thermoplastic - Black
Caps Ordered Separately - WDS 8587-211

WDS No.	A	A1	B	C	D	E	F	G	Weight (kg)
8587-201	100	134	73	65	8.5	28	6	14	0.11
8587-211	2 x CAP ONLY	-	-	-	-	-	-	-	0.01



Thermoplastic Pull Handles with Ergonomic Grip **WDS 8587**

Handle - Glass ball reinforced Thermoplastic - Black
Caps Ordered Separately - WDS 8587-212

WDS No.	A	A1	B	B1	C	D	E	F	G	Weight (kg)
8587-202	198	236	80	4.5	100	8.8	38	12.5	19	0.31
8587-212	2 x CAPS ONLY	-	-	-	-	-	-	-	-	0.02



HINGES

P 298-324

The range includes several styles of hinge for all applications including doors, enclosures, access points, gates, windows and furniture available in materials such as steel, aluminium and stainless steel. Plastic hinges are also available in black glass reinforced plastic (GRP) and black polyamide.



SURFACE MOUNTED HINGES

Included in this range are counter sunk surface hinges, male threaded hinges and locking lever hinges. Materials include: steel, stainless steel, zinc die cast and polyamide.

P 298-308



CONCEALED HINGES

Concealed hinges are ideal for applications where the hinge is required to be hidden from sight either for aesthetic or tamper proofing reasons.

Hinge variants include: Quick release pin hinges and weldable hinges for more permanent doors, access points and fixtures.

P 309-311



LIFT OFF HINGES

Lift off & detachable hinges are designed to be fastened onto a surface or with some models, to be welded to your application for a semi-permanent finish but with the benefit of a removable feature should it be required.

P 312-314



LOCKING & TORQUE ADJUSTABLE HINGES

Locking hinges are ideal for positioning applications such as enclosure doors and windows and machine access points. Using the clamping handle attached to the hinge, the position of the hinge can be locked to allow the user to freely access the job without the fear of the door or window closing. Torque Hinges are designed to offer greater support for heavy loads which may include doors and access points. Due to their rigid design, these torque hinges are also really useful for positioning applications. The pressure can be adjusted to suit the load.

P 315-317



BUTT HINGES

Butt hinges are available in two variants. A standard butt hinge and a lift off butt hinge. This type of hinge is typically morticed into a door frame for a flush finish.

P 318





EXPOSED HINGES

Exposed hinges differ from traditional hinges as the butt of the hinge is fully visible from the outside.

P 319-320



SPRING RELEASE HINGES

Spring release hinges are designed for access doors on machinery. Depending on the model, the quick release hinge can be screwed or welded to the application's door frame and then by simply pulling the release pin, the access panel can quickly be removed.

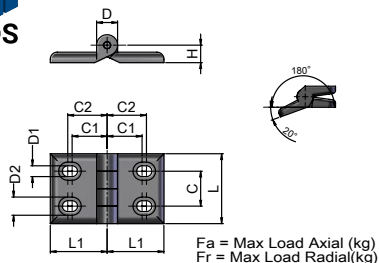
P 321-322



PIANO HINGES (CONTINUOUS HINGES)

Piano hinges or continuous hinges as they are also known, are available in several lengths. This extended length hinge is ideal for light to medium duty applications such as supporting access panels and doors.

P 323

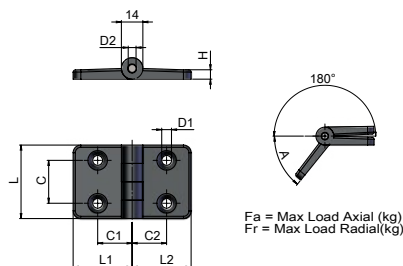


Hinges Non-Detachable - GRP WDS 8601

Leaves - Black Glass Reinforced Plastic, Pin - Zinc Plated Steel

F_a = Max Load Axial (kg), F_r = Max Load Radial (kg) - (See technical page vi)

WDS No.	C	C1	C2	D	D1	D2	FA	FR	H	L	L1	Weight (kg)
8601-201	20	20.5	23	12	6.3	10.5	30	51	10	40	33	0.02



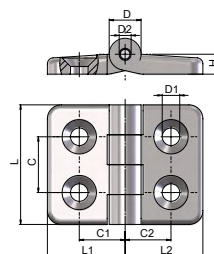
Hinges Non-Detachable - GRP WDS 8605

Leaves - Black Glass Reinforced Plastic, Pin - Stainless steel 430F (1.4104)

F_a = Max Load Axial (kg), F_r = Max Load Radial (kg) - (See technical page vi)

WDS No.	A	C	C1	C2	D	D1	D2	FA	FR	H	L	L1	L2	Weight (kg)
8605-201	50	14	11.5	11.5	8	4.4	3	20	40	5	30	19.5	19.5	0.01
8605-203	40	28	17.5	17.5	14	6.4	6	40	71	9	48	29.5	29.5	0.04
8605-205	40	28	17.5	25	14	6.4	6	45	76	9	48	29.5	43.5	0.04
8605-207	40	28	17.5	32.5	14	6.4	6	20	86	9	48	29.5	57.5	0.05
8605-209	40	28	22.5	22.5	14	6.4	6	45	76	9	48	38.5	38.5	0.04
8605-211	40	28	22.5	27.5	14	6.4	6	43	81	9	48	38.5	48.5	0.05
8605-213	40	28	22.5	32.5	14	6.4	6	18	86	9	48	38.5	57.5	0.05
8605-215	40	28	25	25	14	6.4	6	46	76	9	48	43.5	43.5	0.05
8605-217	40	28	25	32.5	14	6.4	6	20	86	9	48	43.5	57.5	0.05
8605-219	40	28	27.5	27.5	14	6.4	6	43	81	9	48	48.5	48.5	0.05
8605-221	40	28	32.5	32.5	14	6.4	6	18	86	9	48	57.5	57.5	0.06

316

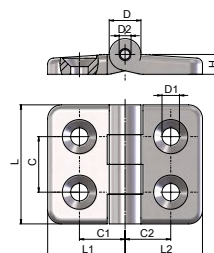


WDS 8605 316 Stainless Steel Countersunk Hinge - Polished

316 Stainless Steel
Polished finish

WDS No.	C	C1	C2	D	D1	D2	H	L	L1	L2	Weight (kg)
8605-601	14	11.5	11.5	8	4.4	3	5	30	19.5	19.5	0.05
8605-603	28	17.5	17.5	14	6.4	6	9	48	29.5	29.5	0.19
8605-605	28	17.5	25	14	6.4	6	9	48	29.5	43.5	0.24
8605-609	28	22.5	22.5	14	6.4	6	9	48	38.5	38.5	0.25
8605-615	28	25	25	14	6.4	6	9	48	43.5	43.5	0.28

316

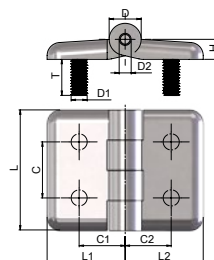


WDS 8605 316 Stainless Steel Countersunk Hinge - Matt

316 Stainless Steel
Matt finish

WDS No.	C	C1	C2	D	D1	D2	H	L	L1	L2	Weight (kg)
8605-601M	14	11.5	11.5	8	4.4	3	5	30	19.5	19.5	0.05
8605-603M	28	17.5	17.5	14	6.4	6	9	48	29.5	29.5	0.19
8605-605M	28	17.5	25	14	6.4	6	9	48	29.5	43.5	0.24
8605-609M	28	22.5	22.5	14	6.4	6	9	48	38.5	38.5	0.25
8605-615M	28	25	25	14	6.4	6	9	48	43.5	43.5	0.28

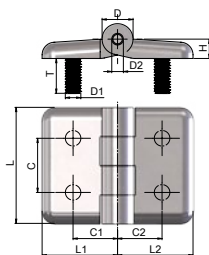
316



WDS 8605 316 Stainless Steel Stud Fitting Hinges - Polished

316 Stainless Steel
Polished finish

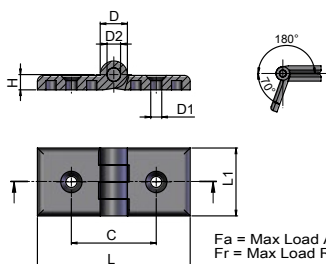
WDS No.	C	C1	C2	D	D1	D2	H	L	L1	L2	T	Weight (kg)
8605-601T	14	11.5	11.5	8	M4	3	5	30	19.5	19.5	9	0.06
8605-603T	28	17.5	17.5	14	M6	6	9	48	29.5	29.5	12	0.22
8605-605T	28	17.5	25	14	M6	6	9	48	29.5	43.5	12	0.26
8605-609T	28	22.5	22.5	14	M6	6	9	48	38.5	38.5	12	0.27
8605-615T	28	25	25	14	M6	6	9	48	43.5	43.5	12	0.31



316 Stainless Steel Stud Fitting Hinges - Matt WDS 8605

316 Stainless Steel
Matt finish

WDS No.	C	C1	C2	D	D1	D2	H	L	L1	L2	T	Weight (kg)
8605-601MT	14	11.5	11.5	8	M4	3	5	30	19.5	19.5	9	0.06
8605-603MT	28	17.5	17.5	14	M6	6	9	48	29.5	29.5	12	0.22
8605-605MT	28	17.5	25	14	M6	6	9	48	29.5	43.5	12	0.26
8605-609MT	28	22.5	22.5	14	M6	6	9	48	38.5	38.5	12	0.27
8605-615MT	28	25	25	14	M6	6	9	48	43.5	43.5	12	0.31

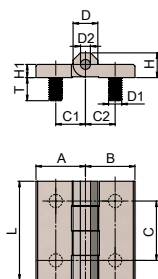


Non-Detachable Surface Mounted Hinges- GRP WDS 8610

Leaves - Black Glass Reinforced Plastic, Pin - Steel

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

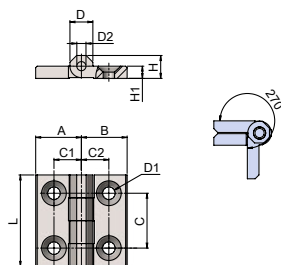
WDS No.	C	D	D1	D2	FA	FR	H	L	L1	To Suit Profile	Weight (kg)
8610-201	50	16	6.4	8	15	28	9	90	40	-	0.04
8610-202	50	16	6.4	8	15	28	9	90	40	8	0.05
8610-203	50	16	6.4	8	15	28	9	90	40	10	0.05



Stainless Steel Surface Mount Hinge with Studs WDS 8625

316 Stainless Steel
Available in Polished or Matt finish

Polished	Matt	A	B	C	C1	C2	D	D1	D2	H	H1	L	T	Weight (kg)
8625-200T	8625-200MT	15	15	18	9	9	8	M4	3	7.5	4	30	9	0.03
8625-201T	8625-201MT	20	20	25	12.5	12.5	10	M5	4	9	5	40	10	0.06
8625-203T	8625-203MT	25	25	30	15	15	12	M6	6	11.5	6	50	12	0.13
8625-205T	8625-205MT	30	30	36	18	18	16	M8	8	15	8	60	15	0.24

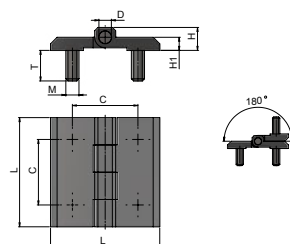


WDS 8625 Surface Mount Hinges - Stainless Steel

316 Stainless Steel

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

WDS No.	A	B	C	C1	C2	D	D1	D2	FA	FR	H	H1	L	Finish	Weight (kg)
8625-200	15	15	18	9	9	8	4.2	3	300	550	7.5	4	30	Polished	0.04
8625-201	20	20	25	12.5	12.5	10	5.2	4	700	1200	9	5	40	Polished	0.06
8625-203	25	25	30	15	15	12	6.2	6	900	1600	11.5	6	50	Polished	0.12
8625-204	25	38	30	15	28	12	6.5	6	500	1600	11.5	6	50	Polished	0.13
8625-2045	38	38	30	28	28	12	6.5	6	500	1600	11.5	6	50	Polished	0.16
8625-205	30	30	36	18	18	16	8.3	8	1100	1800	15	8	60	Polished	0.22
8625-200M	15	15	18	9	9	8	4.2	3	300	550	7.5	4	30	Matt	0.04
8625-201M	20	20	25	12.5	12.5	10	5.2	4	700	1200	9	5	40	Matt	0.06
8625-203M	25	25	30	15	15	12	6.2	6	900	1600	11.5	6	50	Matt	0.12
8625-204M	25	38	30	15	28	12	6.5	6	500	1600	11.5	6	50	Matt	0.13
8625-2045M	38	38	30	28	28	12	6.5	6	500	1600	11.5	6	50	Matt	0.16
8625-205M	30	30	36	18	18	16	8.3	8	1100	1800	15	8	60	Matt	0.22

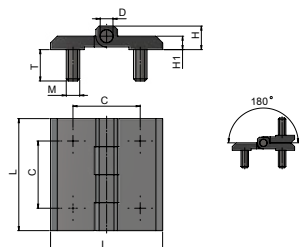


WDS 8627 Polyamide Surface Mount Hinge with Studs

Leaves - Polyamide, Pin - 303 Stainless Steel

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

WDS No.	C	D	H	H1	L	M	T	Weight (kg)
8627-201	25	4	8.75	5	40	M5	11	0.03
8627-202	30	6	10.5	6	50	M6	14	0.05

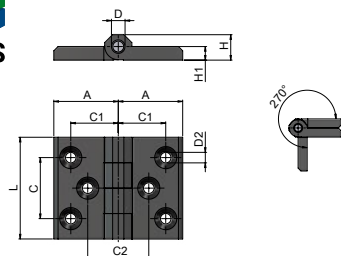


WDS 8628 Surface Mount Hinges - Zinc Die Cast

Leaves - Zinc Die Cast, black finish, Pin - 304 Stainless Steel

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

WDS No.	A	B	C	C1	D	D1	E	FA	FR @ 90	FR @ 180	H	H1	L	T	Angle	Weight (kg)
8628-201	40	20	25	25	4	M5	7.5	90	185	170	9	5	40	11.5	180°	0.06
8628-202	50	25	30	30	6	M6	10	205	200	355	11	6	50	12	180°	0.11
8628-203	76	38	30	56	6	M6	10	120	200	300	11	6	50	12	180°	0.12
8628-204	60	30	36	36	8	M8	12	305	255	403	15	8	60	14	180°	0.21

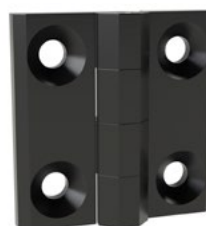
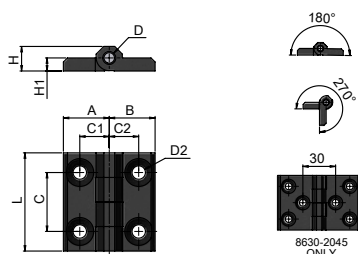


Surface Mount Hinges - Zinc Die Cast WDS 8629

Leaves - Zinc Die Cast, black finish, Pin - 304 Stainless Steel

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

WDS No.	A	C	C1	C2	D	D2	FA	FR @ 90	FR @ 180	H	H1	L	Weight (kg)
8629-201	38	36	28	36	8	6.2	150	150	450	15	8	60	0.2

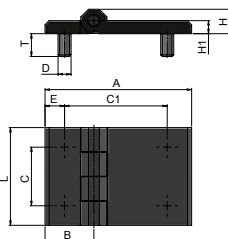


Surface Mount Hinges - Zinc Die Cast WDS 8630

Leaves - Zinc Die Cast, black finish, Pin - 304 Stainless Steel

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

WDS No.	A	B	C	C1	C2	D	D2	FA	FR @ 90	FR @ 180	H	H1	L	Angle	Weight (kg)
8630-201	20	20	25	12.5	12.5	4	5.3	115	200	210	9	5	40	270°	0.05
8630-203	25	25	30	15	15	6	6.3	210	245	350	11.5	6	50	270°	0.11
8630-205	30	30	36	18	18	8	8.3	150	125	300	15	8	60	270°	0.23
8630-204	38	25	30	28	15	6	6.3	130	125	300	11.5	6	50	270°	0.11
8630-2045	38	38	30	28	28	6	6.3	320	440	600	11.5	6	50	270°	0.13
8630-207	60	30	36	18	45	8	8.3	150	150	450	15	8	60	180°	0.23
8630-209	60	60	36	45	45	8	8.3	130	150	450	15	8	60	180°	0.3

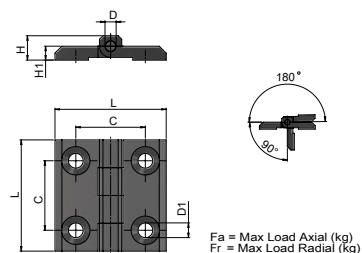


Surface Mount Hinges - Zinc Die Cast WDS 8631

Leaves - Zinc Die Cast, black finish, Pin - 304 Stainless Steel

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

WDS No.	A	B	C	C1	D	E	FA	FR @ 90	FR @ 180	H	H1	L	T	Angle	Weight (kg)
8631-201	90	30	36	63	M8	12	200	150	450	15	8	60	14	180°	0.28
8631-202	120	60	36	90	M8	15	150	150	450	15	8	60	14	180°	0.33

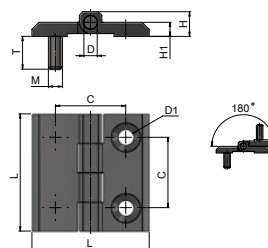


WDS 8632 Surface Mount Hinges - Polyamide

Leaves - Polyamide, Pin - 303 Stainless Steel

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

WDS No.	C	D	D1	FA	FR	H	H1	L	Weight (kg)
8632-201	25	4	5.3	180	180	8.75	5	40	0.01
8632-202	30	6	6.4	220	220	10.5	6	50	0.03

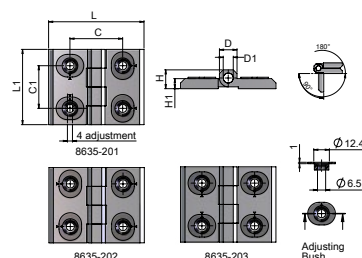


WDS 8634 Surface Mount Hinges - Polyamide

Leaves - Polyamide, Pin - 303 Stainless Steel

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

WDS No.	C	D	D1	FA	FR	H	H1	L	M	T	Weight (kg)
8634-201	25	4	5.3	180	180	8.75	5	40	M5	11	0.05
8634-202	30	6	6.4	220	220	10.5	6	50	M6	14	0.04

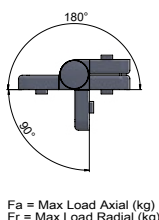
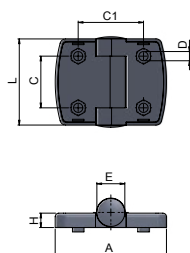


WDS 8635 Adjustable Hinge Non-Detachable - Zinc Die Cast

Leaves - Zinc Die Cast, black powder coated

Pin - Zinc Plated Steel

WDS No.	C	C1	D	D1	H	H1	L	L1	Mounting Position	Weight (kg)
8635-201	42	34	16	8	15	8	76	60	Left (Horizontal) x Right (Vertical)	0.19
8635-202	42	34	16	8	15	8	76	60	Left (Vertical) x Right (Vertical)	0.19
8635-203	42	34	16	8	15	8	76	60	Left (Horizontal) x Right (Horizontal)	0.19

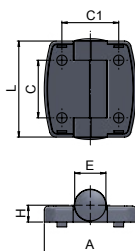


Surface Mount Hinges - Polyamide **WDS 8636**

Leaves and Covers - Black Glass Reinforced Polyamide, Detent Hinge with cover caps

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

WDS No.	A	C	C1	D	E	FA	FR	H	L	Weight (kg)
8636-201	57.5	36	35.5	6.4	20	35	40	10.5	60	0.03
8636-203	77.5	36	45.5	6.4	20	43	61	10.5	60	0.1



Fa = Max Load Axial (kg)
Fr = Max Load Radial(kg)

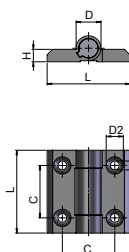


Surface Mount Detent Hinge – Polyamide **WDS 8637**

Leaves and Covers - Black Glass Reinforced Polyamide

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

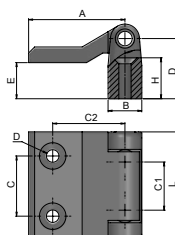
WDS No.	A	C	C1	D	E	FA	FR	H	L	Weight (kg)
8637-201	57.5	36	35.5	6.4	20	35	40	10.5	60	0.07
8637-203	77.5	36	45.5	6.4	20	43	61	10.5	60	0.08



Detent Hinge Non-Detachable - Zinc Die Cast **WDS 8640**

Leaves - Zinc Die Cast, black powder coated, Pin - Zinc Plated Steel

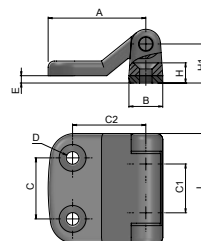
WDS No.	C	D	D1	D2	H	L	Weight (kg)
8640-201	38	18	6.5	12.4	9.8	60	0.14



Surface Mount Hinges - Zinc Die Cast **WDS 8648**

Body - Zinc Die Cast, black finish, Pin - Zinc Plated Steel

WDS No.	A	B	C	C1	C2	D	E	L	Angle	Weight (kg)
8648-215	40	14	25	20	30	5.5	15	45	180°	0.14

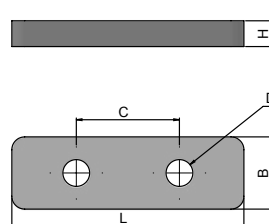


WDS 8648 Offset Surface Mounted Hinge - Zinc Die Cast

Body - Zinc Die Cast, black finish

Pin - Zinc Plated Steel

WDS No.	A	B	C	C1	C2	D	E	H	H1	L	Angle	Weight (kg)
8648-300	40	14	25	20	30	5.5	0	8.5	13	45	180°	0.09
8648-303	40	14	25	20	30	5.5	3	11.5	16	45	180°	0.11
8648-305	40	14	25	20	30	5.5	5	13.5	18	45	180°	0.12
8648-308	40	14	25	20	30	5.5	8	16.5	21	45	180°	0.13
8648-310	40	14	25	20	30	5.5	10	18.5	23	45	180°	0.14
8648-315	40	14	25	20	30	5.5	15	23.5	28	45	180°	0.16

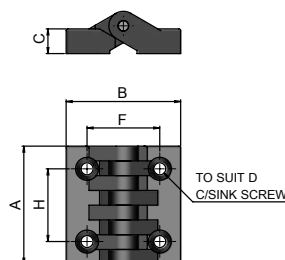


WDS 8648 Hinge Spacer

Zinc Die Cast, black finish

Frame/Door Offset

WDS No.	B	C	D	H	L	Weight (kg)
8648-103	14	20	5.5	3	45	0.02
8648-105	14	20	5.5	5	45	0.02

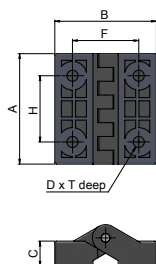


WDS 8655 Surface Mount Hinges - Polyamide

Leaves - Polyamide

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

WDS No.	A	B	C	D	F	FA	FR	H	Weight (kg)
8655-201	40	38	9	M4	25	13.9	23.4	25	0.02
8655-202	50	46	11	M5	30	36.7	31.6	30	0.05
8655-203	65	63	13.5	M6	40	51.9	49.9	40	0.09
8655-204	98	98	20	M10	62.5	107	209	60	0.24

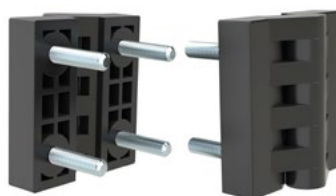
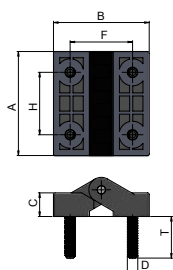


Surface Mount Hinges - Polyamide **WDS 8656**

Leaves - Polyamide, Bushes - Brass

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

WDS No.	A	B	C	D	F	FA	FR	H	T	Weight (kg)
8656-201	50	46	11	M5	30	36.7	31.6	30	7.5	0.05
8656-203	65	63	13.5	M6	40	51.9	49.9	40	7.5	0.11
8656-204	98	98	20	M10	62.5	107	209	60	15	0.29

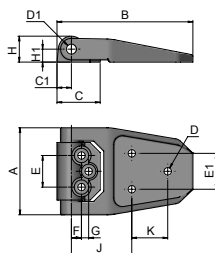


Surface Mount Hinges - Polyamide **WDS 8657**

Leaves - Polyamide, Studs - Zinc Plated Steel

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

WDS No.	A	B	C	D	F	FA	FR	H	T	Weight (kg)
8657-201	50	46	11	M5	30	36.7	31.6	30	20	0.05
8657-202	65	63	13.5	M6	40	51.9	49.9	40	15	0.11
8657-203	98	98	20	M10	62.5	107	209	60	20	0.34

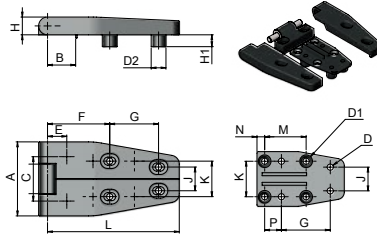


Polyamide Plastic Leaf Hinge **WDS 8666**

Body - Polyamide

Pin - Mild steel

WDS No.	A	B	C	C1	D	D1	E	E1	F	G	H	H1	J	K	Weight (kg)
8666-201	60.5	94.5	30	10	5.2	6	22	25	7	5	18	9	42	25	0.07

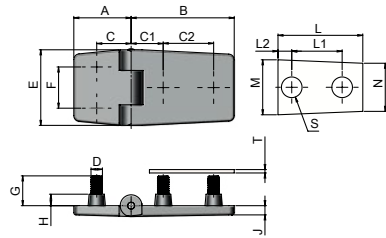


WDS 8667 Split Leaf Hinge - Zinc Die Cast

Body - Zinc Die Cast, black finish
Pin - Zinc Plated Steel

WDS No.	A	B	D	D1	D2	E	F	G	H	H1	J	K	L	M	N	P	Weight (kg)
8667-201	50	19	4.2	8.5	10	13	42	33	12	8	16	24	89	28	5.2	11.3	0.16

ZP

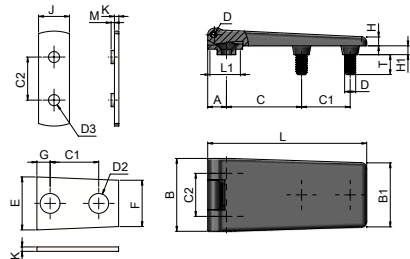


WDS 8668 Zinc Die Cast Stud Fitting Leaf Hinge

Body - Zinc Die Cast, black finish
Pin & Plate - Zinc Plated Steel

WDS No.	A	B	C	C1	C2	D	E	F	G	H	J	L	L1	L2	M	N	S	T	Weight (kg)
8668-201	25	45	15	15	22	M5	33	18	13	5	4	37	22	6	24	21	9	1.5	0.08

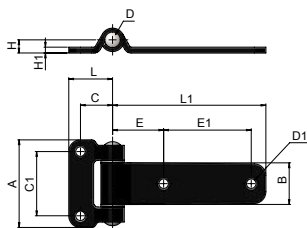
ZP



WDS 8669 Leaf Hinge - Zinc Die Cast

Body - Zinc Die Cast, black finish
Thread, Pin & Plate - Zinc Plated Steel

WDS No.	A	B	B1	C	C1	C2	D	D1	D2	D3	E	F	G	H	H1	J	K	L	L1	M	T	Weight (kg)
8669-201	8.5	33	29	34	22	19.5	2.5	M5	9	5	24	21	6	4	4	14	2	72	16	1.5	9	0.08

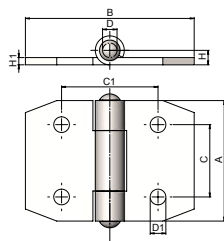


Large Leaf T Hinge **WDS 8672**

Body - Mild Steel - Black powder coated, Pin - Stainless Steel

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

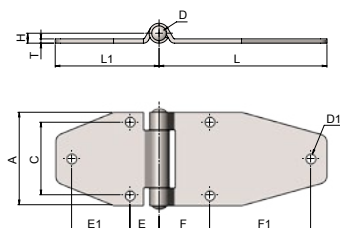
WDS No.	A	B	C	C1	D	D1	E	E1	FA	FR	H	H1	L	L1	Weight (kg)
8672-201	60	28.5	22	44	8	6.5	35	60	112	203	9	4	30	105	0.2


304
ZP

Surface Mounted Hinge **WDS 8673**

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	A	B	C	C1	D	D1	H	H1	Weight (kg)
8673-201	8673-601	50	70	30	40	6	6.5	6	3	0.11


304
ZP

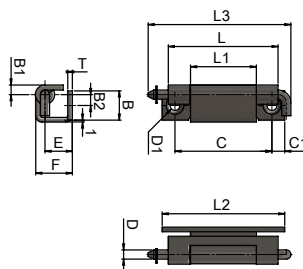
Leaf Hinge **WDS 8674**

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	A	C	D	D1	E	E1	F	F1	H	L	L1	T	Weight (kg)
8674-201	8674-601	65	51	8	6.5	20.5	41	35.5	71	7	118	73	3	0.3

304

ZP



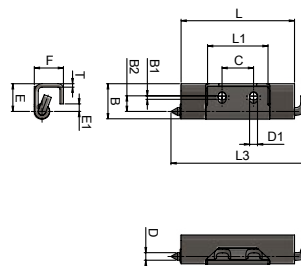
WDS 8607 Concealed Hinges

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	B	B1	B2	C	C1	D	D1	E	F	L	L1	L2	L3	T	Opening Angle	Weight (kg)
8607-201	8607-601	16	5.3	6	53	7	5	5.4	15	20	60	36	67	78	2.5	120°	0.11

304

ZP

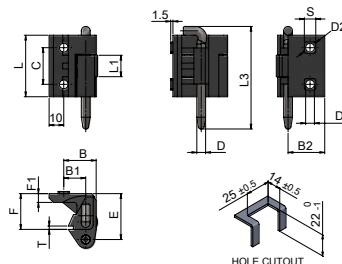


WDS 8608 Concealed Hinges

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	B	B1	B2	C	D	D1	E	E1	F	L	L1	L3	T	Opening Angle	Weight (kg)
8608-201	8608-601	27.8	2.8	12.4	25	6	6.3	22	6	23	90	48	109	2.8	120°	0.16

304



WDS 8613 Concealed Hinges - Zinc Die Cast

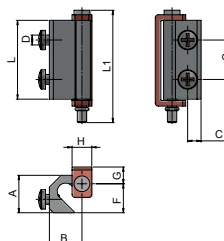
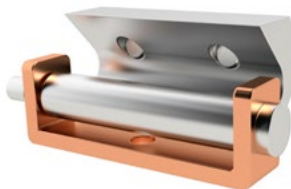
Hinge - Zinc Die Cast, black finish

Pivot - 304 Stainless Steel

WDS No.	B	B1	B2	C	D	D1	D2	E	F	F1	L	L1	L3	S	T	Hand	Opening Angle	Weight (kg)
8613-201	22	15	25	25	6	M6	9.8	31.3	24.4	6	42	14.6	70	7.8	>2	Right	180°	0.14
8613-202	22	15	25	25	6	M6	9.8	31.3	24.4	6	42	14.6	70	7.8	>2	Left	180°	0.13

AL

CU

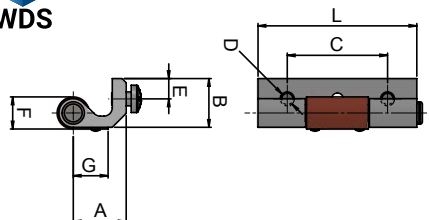


WDS 8641 Aluminium Concealed Hinges - Weld-on Plate 110° Angle

Frame Part - Aluminium

Door Part - Steel Copper Plated

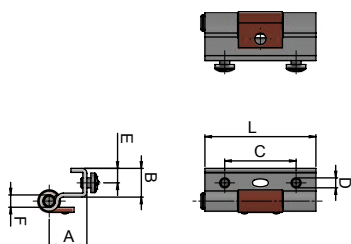
WDS No.	A	B	C	C1	D	F	G	H	L	L1	Weight (kg)
8641-201	19	16.5	20	6.8	M5	14.7	8.5	10	40	57	0.05


ZP
CU

Concealed Hinges - Zinc Die Cast **WDS 8642**

Frame Part - Zinc Die Cast
Door Part - Steel Copper Plated

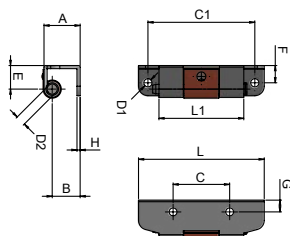
WDS No.	A	B	C	D	E	F	G	L	Weight (kg)
8642-202	19	17.5	36	M5	7.3	11.5	12.5	57	0.09


ZP
CU

Concealed Hinges - Steel **WDS 8643**

Frame Part - Zinc Die Cast
Door Part - Steel Copper Plated

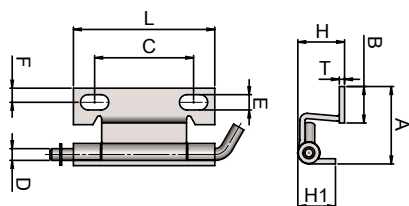
WDS No.	A	B	C	D	E	F	L	Weight (kg)
8643-202	19	14.5	36	M5	7.3	11.3	56	0.07


ZP
CU

Concealed Hinges - Steel **WDS 8644**

Frame Part - Zinc Plated Steel
Door Part - Steel Copper Plated

WDS No.	A	B	C	C1	D	D1	D2	E	F	G	H	L	L1	Weight (kg)
8644-202	23.5	17.75	36	68	M5	5	6	15	11	7.5	2	80	54	0.1


304
ZP

Concealed Hinge with Pin - Weld and Fastener Mount **WDS 8676**

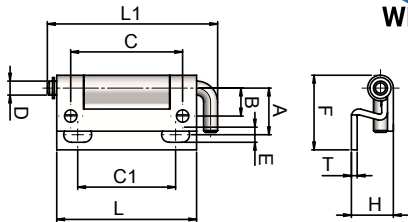
Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	A	B	C	D	E	F	H	H1	L	T	Weight (kg)
8676-201	8676-601	33	15.5	42	5	6.5	6	20	16	60	2.2	0.08



304

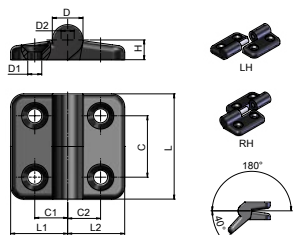
ZP



WDS 8678 Concealed Hinge with Pin & Fastener Mount

Available in Stainless Steel or Zinc Plated Steel

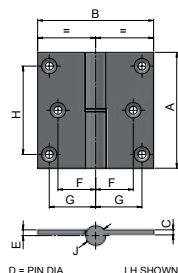
Zinc Plated	Stainless Steel	A	B	C	C1	D	E	F	H	L	L1	T	Weight (kg)
8678-201	8678-601	20	12	48	42	6	6.5	32	18	60	73	2.5	0.09



Lift off Hinges (Detachable Hinges) - GRP - Left/Right Hand **WDS 8600**

Leaves - Black Glass Reinforced Plastic, Pin - Stainless Steel Grade 1.4104
FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

Left Hand	Right Hand	C	C1	C2	D	D1	D2	FA	FR	H	L	L1	L2	Weight (kg)
8600-201	8600-301	28	15	15	14	6.4	6	40	63	9	48	24.5	24.5	0.04
8600-203	8600-303	28	15	20	14	6.4	6	40	70	9	48	24.5	33.5	0.04
8600-205	8600-305	28	17.5	17.5	14	6.4	6	50	76	9	48	29.5	29.5	0.05
8600-207	8600-307	28	17.5	25	14	6.4	6	36	81	9	48	29.5	43.5	0.04
8600-209	8600-309	28	20	20	14	6.4	6	40	76	9	48	33.5	33.5	0.05
8600-211	8600-311	28	22.5	22.5	14	6.4	6	40	81	9	48	38.5	38.5	0.05
8600-213	8600-313	28	25	25	14	6.4	6	33	81	9	48	43.5	43.5	0.05
8600-215	8600-315	28	27.5	27.5	14	6.4	6	32	81	9	48	48.5	48.5	0.05
8600-217	8600-317	28	32.5	32.5	14	6.4	6	24	91	9	48	57.5	57.5	0.05

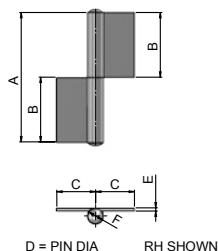


AL

Aluminium Lift Off Butt Hinges **WDS 8602**

Leaves - Aluminium, Silver Anodised
Pin - Zinc Plated Steel

WDS No.	A	B	C	D	E	F	G	H	J	Hand	Weight (kg)
8602-201	80	80	3.5	8	4	26	32	61	14	Right	0.09
8602-202	80	80	3.5	8	4	26	32	61	14	Left	0.09

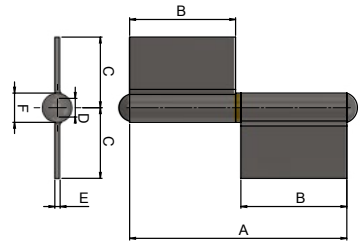
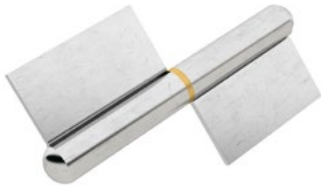


Lift off Hinges - Weldable - Steel **WDS 8603**

Steel
Detachable - Lift Off

WDS No.	A	B	C	D	E	F	Weight (kg)
8603-203	80	40	24	6	2	10	0.08
8603-204	80	40	24	6	2	10	0.09

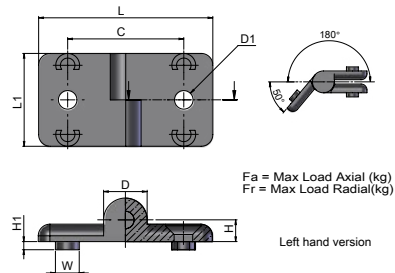
304



WDS 8604 Lift off Hinges - Weldable - Stainless Steel

304 Stainless Steel
Washer - Brass

WDS No.	A	B	C	D	E	F	Weight (kg)
8604-601	61.5	30	20	5.3	1.5	8.3	0.04
8604-603	81.5	40	25	6	2	10	0.08



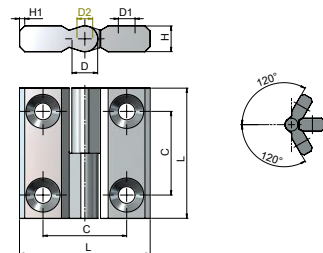
WDS 8615 Detachable Hinges - GRP - Left/Right Hand

Leaves - Black Glass Reinforced Plastic, Pin - Steel
FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

Left Hand	Right Hand	C	D	D1	FA	FR	H	H1	L	L1	W	Weight (kg)
8615-201	8615-401	40	15	6.4	10	20	8	2.5	60	32	8	0.02

316

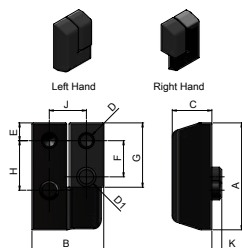
MAX LOAD
50KG



WDS 8620 Lift Off Hinges (Detachable Hinges) - Stainless Steel

316 Stainless Steel

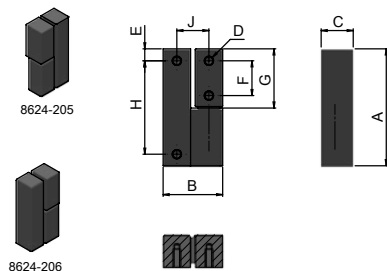
WDS No.	C	D	D1	D2	H	H1	L	Finish	Weight (kg)
8620-201	32	10	6.4	6	10	2 x 45°	50	Polished	0.17
8620-201M	32	10	6.4	6	10	2 x 45°	50	Matt	0.17



Surface Mount Hinges - Zinc Die Cast (Mini) **WDS 8624**

Body - Zinc Die Cast, black finish
Pin - Stainless Steel

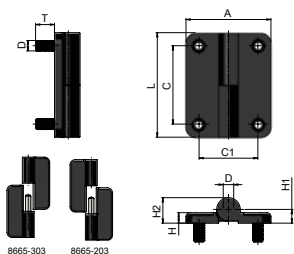
WDS No.	A	B	C	D	D1	E	F	G	H	J	K	Weight (kg)
8624-201	21.6	14.5	8	M3 x 5	4	3.6	7.3	13	10	7.5	2	0.02



Mini Lift Off Hinges - Zinc Die Cast **WDS 8624**

Body - Zinc Die Cast, black finish
Pin - Stainless Steel

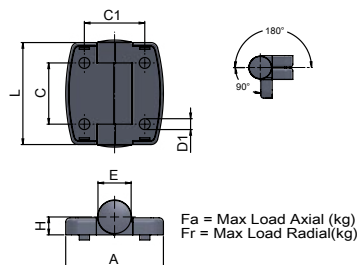
WDS No.	A	B	C	D	E	F	G	H	Hand	Weight (kg)
8624-205	64	32.5	17.5	M5	6.5	19	32	51	Right	0.15
8624-206	64	32.5	17.5	M5	6.5	19	32	51	Left	0.15



Lift Off Hinge - Zinc Die Cast Surface Mounted **WDS 8665**

Leaves - Zinc Die Cast, black finish
Pin & Thread - Zinc Plated Steel

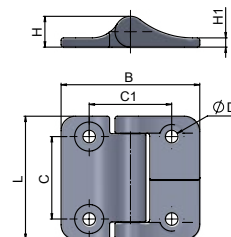
WDS No.	A	C	C1	D	D1	H	H1	H2	L	T	Weight (kg)
8665-203	60	60	45	M8	8	8	10.5	19.5	80	14.5	0.35
8665-303	60	60	45	M8	8	8	10.5	19.5	80	14.5	0.35



WDS 8637 Surface Mount Torque Hinge – Polyamide

Leaves and Covers - Black Glass Reinforced Polyamide, Mechanism - Steel
 FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

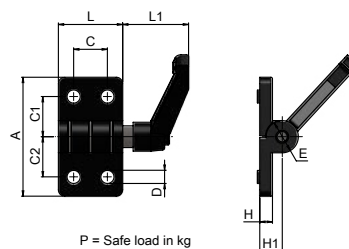
WDS No.	A	C	C1	D	E	FA	FR	H	L	Friction moment	Weight (kg)
8637-401	57.5	36	35.5	6.4	20	32	40	10.5	60	0-5 Nm	0.05
8637-403	77.5	36	45.5	6.4	20	42	60	10.5	60	0-5 Nm	0.07



WDS 8638 Zinc Die Cast Torque Hinges

Leaves - Zinc Die Cast, black finish
 Mechanism - Steel

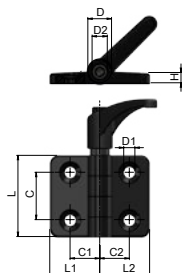
WDS No.	B	C	C1	D	H	H1	L	Angle	Torque	Weight (kg)
8638-401	40	17.8	28	4.5	10	3	38	270°	2.3Nm	0.09
8638-403	57	34	34	5.2	12.7	4.5	50.8	270°	3.4Nm	0.1



WDS 8646 Locking Lever Hinges - Zinc Die Cast

Housing - Zinc Die Cast, black finish
 Mechanism - Steel

WDS No.	A	C	C1	C2	D	E	H	H1	L	L1	P	Weight (kg)
8646-201	74	21	22.5	22.5	8.2	20	8	14	40	41	25	0.23
8646-203	74	21	25	25	8.2	20	8	14	40	41	25	0.23

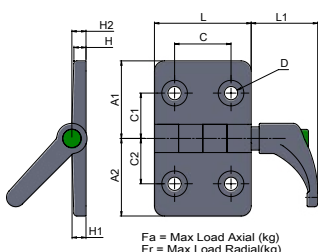


Locking Lever Hinges - Polyamide WDS 8647

Housing - Black Glass Reinforced Polyamide, Mechanism - Zinc Plated Steel

FA = Max Load Axial (kg), FR = Max Load Radial (kg) - (See technical page vi)

WDS No.	A1	A2	C	C1	C2	D	FA	FR	H	H1	H2	L	L1	Weight (kg)
8647-207	38.5	38.5	28	22.5	22.5	6.6	29.5	29.5	8	9	16	48	29.5	0.06
8647-213	57.5	57.5	28	32.5	32.5	6.6	29.5	29.5	8	9	16	48	30	0.07

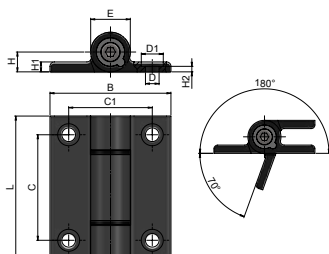


Locking Lever Hinges - Polyamide WDS 8647

Housing - Black Glass Reinforced Polyamide

Mechanism - Zinc Plated Steel

Black Grey	Pure Orange	Signal Green	Traffic Red	C	C1	C2	D	D1	D2	H	L	L1	L2	Weight (kg)
8647-203BG	8647-203PO	8647-203SG	8647-203TR	28	17.5	17.5	14	6.6	9	9	48	29.5	29.5	0.05
8647-207BG	8647-207PO	8647-207SG	8647-207TR	28	22.5	22.5	14	6.6	9	9	48	38.5	38.5	0.06
8647-209BG	8647-209PO	8647-209SG	8647-209TR	28	25	25	14	6.6	9	9	48	43.5	43.5	0.06
8647-213BG	8647-213PO	8647-213SG	8647-213TR	28	32.5	32.5	14	6.6	9	9	48	57.5	57.5	0.07



AL

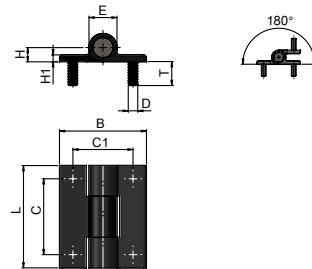
Torque Hinges - Aluminium WDS 8653

Housing - Aluminium, Black Anodised, Torque unit - Polyacetal resin

Torque Value 0.5Nm

WDS No.	B	C	C1	D	D1	E	H	H1	H2	L	Weight (kg)
8653-201	55	48	38	6.2	10.5	18	9	4.4	2.5	65	0.07

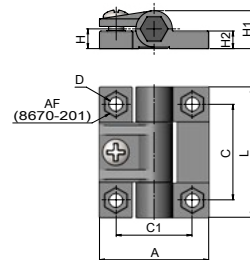
AL



WDS 8654 Torque Hinges - Aluminium

Housing - Aluminium, Black Anodised, Torque unit - Polyacetal resin
Torque Value 0.5Nm

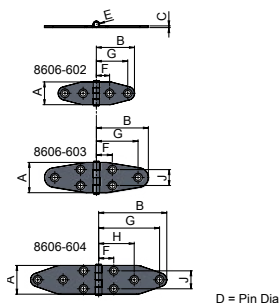
WDS No.	B	C	C1	D	E	H	H1	L	T	Weight (kg)
8654-201	55	48	38	M6	18	9	4.4	65	15	0.09



WDS 8670 Torque Hinge with Screw Adjustment

Base unit - Polyamide
Screw and Nut - Zinc Plated Steel

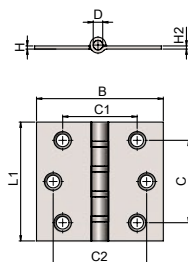
WDS No.	A	AF	C	C1	D	H	H1	H2	L	Weight (kg)
8670-201	36	7	31.5	25	4.4	6.5	12.5	5.6	43	0.02
8670-202	57.5	0	47.6	38	6.6	10.3	19.4	5.2	63.5	0.04



Strap Hinges - Stainless Steel **WDS 8606**

316 Stainless Steel - Polished

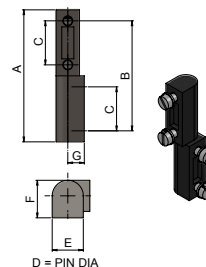
WDS No.	A	B	C	D	E	F	G	H	J	Weight (kg)
8606-602	30	50.5	2	4	8	17.5	41.5	-	-	0.09
8606-603	40	68.7	2.3	4	8	21	55.5	-	20.8	0.08
8606-604	40	90	2.3	4	8	20	80.5	47	23.8	0.09



Stainless Steel Butt Hinges **WDS 8660**

304 Stainless Steel

WDS No.	B	C	C1	C2	D	H	H1	L	Weight (kg)
8660-501	80	52	47	59	6	2	2.5	75	0.13

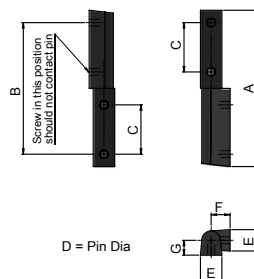


WDS 8619 Exposed Corner Hinges - Zinc Die Cast

Body - Zinc Die Cast, black finish

Pin - Zinc Plated Steel

WDS No.	A	B	C	D	E	F	G	Weight (kg)
8619-200	42	33	12	6	10.6	12.8	7.5	0.03
8619-201	60	50	20	6	10.6	12.8	7.5	0.05



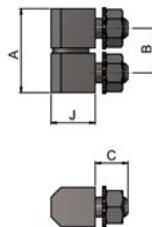
WDS 8621 Exposed Corner Hinges - Polyamide

Body - Polyamide, black

Pin - Stainless steel

WDS No.	A	B	C	D	E	F	G	Weight (kg)
8621-201	95	80	30	6	13	11.5	9	0.05

ZP



WDS 8622 Exposed Corner Hinges - 2 Threads - Steel

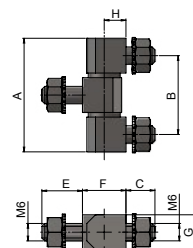
Zinc Plated Steel hinges with Brass pin and bearing washer Nickel Plated

Studs, Nuts and Washers - Zinc Plated Steel

WDS No.	A	B	C	C1	D	T	Weight (kg)
8662-201	133	81	117	69	4.1	1	0.17

304

ZP

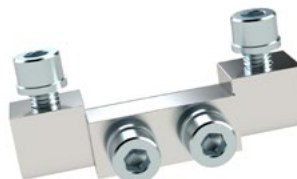
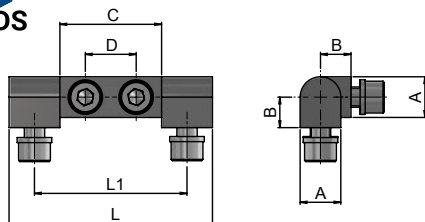


WDS 8622 Exposed Corner Hinges - 3 Threads

Zinc Plated Steel hinges with Brass pin and bearing washer Nickel Plated

Available in Stainless Steel or Zinc Plated Steel

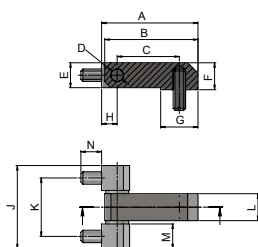
Zinc Plated	Stainless Steel	A	A1	B	B1	C	C1	C2	C3	C4	D	T	Weight (kg)
8662-202	8662-602	162	128	110	73.5	138.8	86.5	41	94.5	147.5	5.2	1.2	0.07



Exposed Corner Hinges - Brass Chrome Plated **WDS 8623**

Body - Brass, Chrome plated
Supplied with M8 screws & washers (4 off)

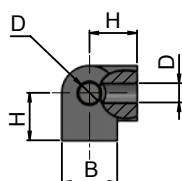
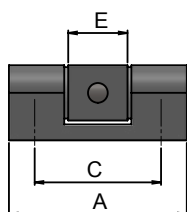
WDS No.	A	B	C	D	L	L1	Weight (kg)
8623-301	16	12	40	20	80	60	0.22



Corner Exposed Hinges - Steel Zinc Plated **WDS 8626**

Zinc Plated Steel with Brass Pin & Bearing
Washers - Nickel Plated

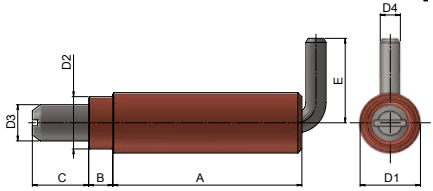
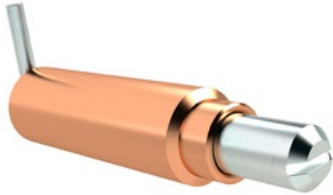
WDS No.	A	B	C	D	E	F	G	H	J	K	L	M	N	Weight (kg)
8626-202	54.5	53	38	6	12	13	18	7.5	40.2	28.2	13	12	10	0.11



Exposed Corner Hinges - Zinc Die Cast **WDS 8639**

Body - Polyamide
Pin - 304 Stainless Steel

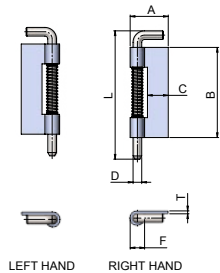
WDS No.	A	B	C	D	E	H	Weight (kg)
8639-201	45	14	32	M5	15	12	0.08



WDS 8651 Spring Release Hinges - Steel

Door Part - Steel Copper Plated
 Pin - Zinc Plated Steel

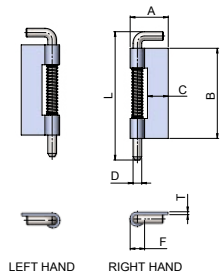
WDS No.	A	B	C	D1	D2	D3	D4	E	Weight (kg)
8651-201	47	6	14.5	15	13	9	4	20	0.07



WDS 8658 Spring Release Steel Hinge

Spring Loaded Pin for detachable doors
 Available in Stainless Steel or Zinc Plated Steel

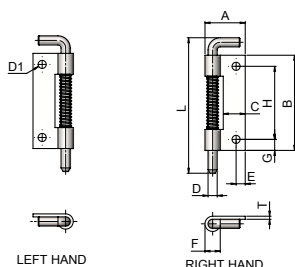
Zinc Plated	Stainless Steel	A	B	C	D	F	L	T	Supplied as	Weight (kg)
8658-203	8658-603	26.4	62.5	14.4	6	10	89	2	Left Hand	0.05
8658-204	8658-604	26.4	62.5	14.4	6	10	89	2	Right Hand	0.05



WDS 8658 Steel Spring Release Hinge Kit - Chemi-Blackd Housing

Housing - Steel, Chemical black finish
 Pin & Spring - Zinc Plated Steel

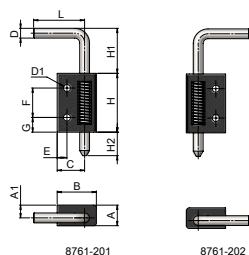
WDS No.	A	B	C	D	F	L	T	Supplied as	Weight (kg)
8658-201	26.4	62.5	14.4	6	10	89	2	Loose parts	0.05



Spring Release Hinge with Mounting Holes WDS 8659

Spring Loaded Pin for detachable doors
Available in Stainless Steel or Zinc Plated Steel

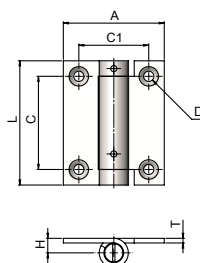
Zinc Plated	Stainless Steel	A	B	C	D	D1	E	F	G	H	L	T	Supplied as	Weight (kg)
8659-203	8659-603	26.4	62.5	14.4	6	5.3	6	10	7.25	48	89	2	Left Hand	0.05
8659-204	8659-604	26.4	62.5	14.4	6	5.3	6	10	7.25	48	89	2	Right Hand	0.05



Spring Release Hinge with Removable Pin WDS 8671

Base unit - Polyamide
Pin & Spring - Zinc Plated Steel

WDS No.	A	A1	B	C	D	D1	E	F	G	H	H1	H2	L	Weight (kg)
8671-201	10.5	6.5	20	14	5	5	5	15	7.5	30	23	12	26	0.02
8671-202	10.5	6.5	20	14	5	5	5	15	7.5	30	23	12	26	0.02



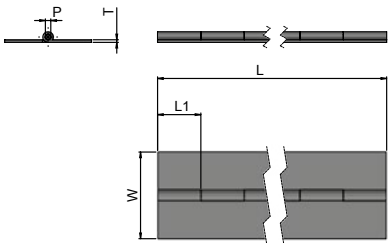
Mild Steel Spring Hinges WDS 8675

Body - Zinc Plated Steel
Pin - Zinc Plated Steel

WDS No.	A	C	C1	D	H	L	L1	T	Weight (kg)
8675-202	65	60	45	6.5	9.4	80	73	3	0.22

304

ZP

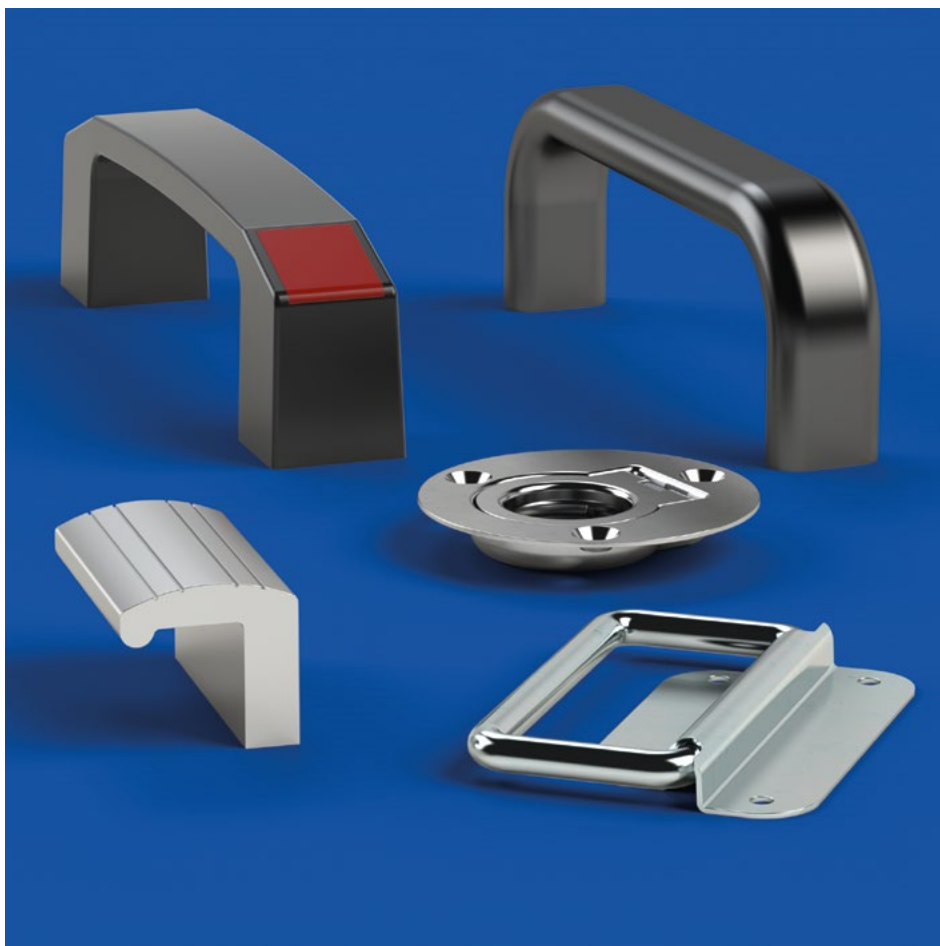


WDS

WDS 8650 Piano Hinge (Continuous Hinges)

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated Steel	Stainless Steel	L	L1	P	T	W	Weight (kg)
8650-203	8650-603	1829	12.7	2.3	0.9	25.4	0.51
8650-205	8650-605	1829	12.7	2.3	0.9	31.8	0.59
8650-207	8650-607	1829	12.7	2.3	0.9	38.1	0.68
8650-209	8650-609	1829	25.4	3.2	1.5	38.1	1.1
8650-211	8650-611	1829	25.4	3.2	1.5	50.8	1.38
8650-213	8650-613	1829	25.4	4.75	1.5	76.2	2.05
8650-215	8650-615	1829	25.4	4.75	2	50.8	2



HANDLES

For the full range of Handles please see pages **257-294**



LEVELLING FEET & MACHINE FEET

P 328-378

Levelling Feet or machine feet as they are also known are available in several styles and materials including: steel zinc plated, 303 & 304 stainless steel. These adjustable feet allow the user to ensure the application or machine is mounted correctly and levelled on uneven surfaces. 316 stainless steel levelling feet with plastic pads are ideal for more specialist applications such as food machinery, industrial machines and outdoor components.



STEEL PLATED LEVELLING FEET

Nickel plated steel levelling feet offer greater resistance to corrosion than their zinc plated counterparts. The threaded stems from are fitted with a plastic base and many models have a ball and socket arrangement for secure mounting on uneven surfaces. Some plastic bases are equipped with a non-slip rubber pad to further aid secure mounting.

P 328-345



STAINLESS STEEL LEVELLING FEET

There are three stainless steel material specifications. 303 Stainless steel levelling feet are good for mild corrosive environments. 304 stainless steel levelling feet are the most common grade of stainless steel with good resistance to non-extreme environments. They are aesthetically pleasing, which makes them preferable to standard zinc plated models. 316 stainless steel levelling feet are excellent for extreme applications involving chemicals or harsh weather conditions as they offer great durability.

P 346-371



EXTENDED BASE LEVELLING FEET

Extended base levelling feet encompass all the features and performance of their round base counterparts and can be fitted with plated steel or stainless steel stems up to M16 or UNC equivalent. The extended base adds the ability to securely fasten the base to the supporting surface.

P 372-375



ANTI VIBRATION LEVELLING FEET

Anti vibration levelling feet have a thick rubber dampener on the base of the foot to ensure machine vibration is kept to a minimum. Both light to medium duty and heavy duty variants are available.

P 375



NON SLIP PADS & PLASTIC FOOT KITS

Neoprene non slip pads are designed to be applied to the base of a levelling foot to prevent noise, movement and the marking of floors. These bolt down adjustable feet are excellent for applications sited on un-even floors. Using several of these plastic feet the user can adjust the application at several points of contact to ensure an even and secure level. This type of levelling foot would be perfect for applications such as shower bases and raised platforms where a level surface is required.

P 376



SWIVEL PADS

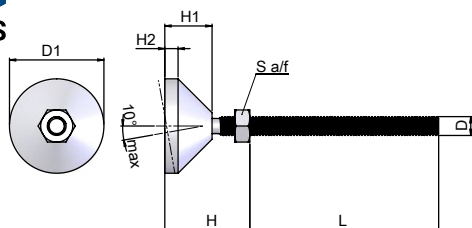
Swivel pads are available in two distinct style. The first is a pad to be used for compressive loads and which is available in both metric and imperial (inch) sizes. The second design is a flanged based swivel pad for static compressive loads with bases available in steel, sustarin C white plastic and stainless steel.



P 377-378



ZP

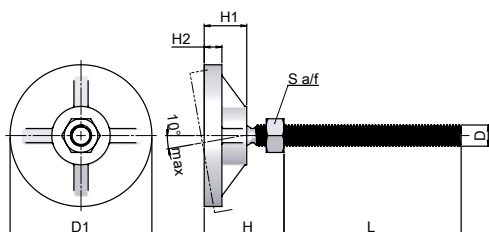


Levelling Foot - Light Duty - Conical Base - Steel Zinc Plated WDS 673

Stem - Steel Zinc Plated
Base - Moulded White Polypropylene

WDS No.	D	D1	H	H1	H2	L	P	S	Weight (kg)
673-407	M12	50	45	25	7	100	200	19	0.14
673-414	M16	80	50	25	10	150	450	24	0.37
673-418	M16	105	50	25	10	200	450	24	0.44
673-420	M20	80	50	25	10	150	550	30	0.46
673-422	M20	105	50	25	10	150	550	30	0.47
673-423	M20	105	50	25	10	200	550	30	0.58

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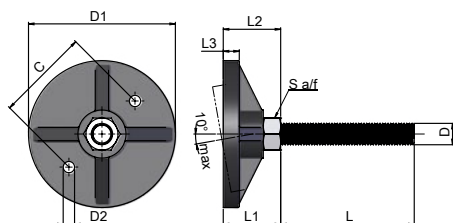


Levelling Foot - Light Duty - Bolt Down Base - Steel Zinc Plated WDS 673

Stem - Steel Zinc Plated
Base - Moulded White Polypropylene

WDS No.	D	D1	H	H1	H2	L	P	S	Weight (kg)
673-436	M12	80	45	25	10	100	200	19	0.16
673-443	M16	80	50	25	10	100	450	24	0.32
673-446	M16	105	50	25	10	200	450	24	0.44
673-452	M20	105	50	25	10	200	550	30	0.58

ZP

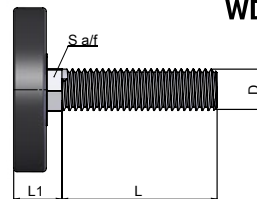
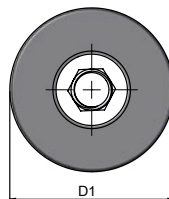


Levelling Foot - Heavy Duty - Bolt Down Base - Steel Zinc Plated WDS 673

Stem - Steel Zinc Plated
Base - Moulded Black Polypropylene

WDS No.	C	D	D1	D2	L	L1	L2	L3	P	S	Weight (kg)
673-651	70	M16	108	8.5	100	45	30	12	1600	24	0.24
673-653	70	M16	108	8.5	150	45	30	12	1600	24	0.34
673-655	70	M16	108	8.5	200	45	30	12	1600	24	0.44
673-657	70	M20	108	8.5	100	45	30	12	1600	30	0.31
673-659	70	M20	108	8.5	150	45	30	12	1600	30	0.45
673-661	70	M20	108	8.5	200	45	30	12	1600	30	0.58

ZP



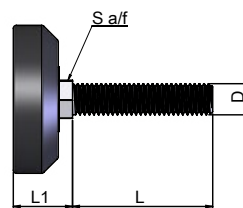
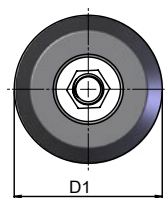
WDS 673 Levelling Foot Flat Non-Tilt - Steel Zinc Plated

Stem - Steel Zinc plated

Base - Moulded black polypropylene

WDS No.	D	D1	L	L1	P	S	Weight (kg)
673-701	M10	25	25	15	500	12	0.03
673-702	M10	25	35	15	500	12	0.03
673-703	M10	25	45	15	500	12	0.04
673-704	M10	25	70	15	500	12	0.07
673-705	M10	25	100	15	500	12	0.05
673-711	M10	37.5	25	15	750	12	0.04
673-712	M10	37.5	35	15	750	12	0.04
673-713	M10	37.5	45	15	750	12	0.06
673-714	M10	37.5	70	15	750	12	0.07
673-715	M10	37.5	100	15	750	12	0.05
673-721	M10	47.5	25	15	1000	12	0.04
673-722	M10	47.5	35	15	1000	12	0.05
673-723	M10	47.5	45	15	1000	12	0.06
673-724	M10	47.5	70	15	750	12	0.08
673-725	M10	47.5	100	15	750	12	0.06
673-706	M12	25	45	15	500	12	0.06
673-707	M12	25	65	15	500	12	0.09
673-708	M12	25	100	15	500	12	0.03
673-716	M12	37.5	45	15	750	12	0.07
673-717	M12	37.5	65	15	750	12	0.09
673-718	M12	37.5	100	15	750	12	0.04
673-726	M12	47.5	45	15	2000	12	0.07
673-727	M12	47.5	65	15	2000	12	0.1
673-728	M12	47.5	100	15	1000	12	0.04

ZP

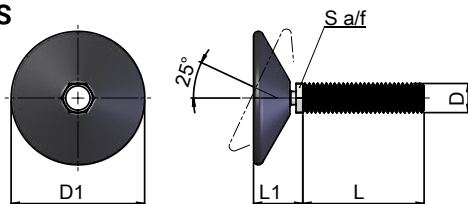


WDS 673 Levelling Foot Conical Non-Tilt - Steel Zinc Plated

Stem - Steel Zinc plated

Base - Moulded black polypropylene

WDS No.	D	D1	L	L1	P	S	Weight (kg)
673-751	M10	47.5	25	19	750	12	0.05
673-752	M10	47.5	35	19	750	12	0.05
673-753	M10	47.5	45	19	750	12	0.06
673-754	M10	47.5	70	19	750	12	0.08
673-755	M10	47.5	100	19	750	12	0.06
673-756	M12	47.5	45	19	750	12	0.08
673-757	M12	47.5	65	19	750	12	0.1
673-758	M12	47.5	100	19	750	12	0.35

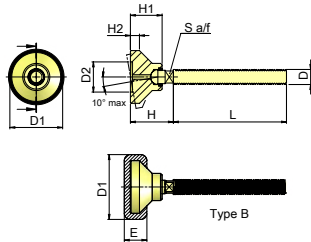


Steel Zinc Plated Levelling Foot - Tilting Base **WDS 673**

Screw - Steel Zinc plated
Base - Moulded black polypropylene

WDS No.	D	D1	L	L1	P	S	Weight (kg)
673-80212	M8	25	12.5	20	50	12	0.02
673-80225	M8	25	25	20	50	12	0.02
673-80315	M10	25	15	20	50	12	0.02
673-80337	M10	25	37.5	20	50	12	0.03
673-80350	M10	25	50	20	50	12	0.04
673-80450	M12	25	50	20	50	12	0.05
673-81212	M8	32.5	12.5	20	75	12	0.02
673-81225	M8	32.5	25	20	75	12	0.03
673-81315	M10	32.5	15	20	75	12	0.03
673-81337	M10	32.5	37.5	20	75	12	0.04
673-81350	M10	32.5	50	20	75	12	0.05
673-81450	M12	32.5	50	20	75	12	0.05
673-82212	M8	40	12.5	20	100	12	0.03
673-82225	M8	40	25	20	100	12	0.03
673-82315	M10	40	15	20	100	12	0.03
673-82337	M10	40	37.5	20	100	12	0.04
673-82350	M10	40	50	20	100	12	0.05
673-82450	M12	40	50	20	100	12	0.06
673-83212	M8	47.5	12.5	20	100	12	0.03
673-83225	M8	47.5	25	20	100	12	0.03
673-83315	M10	47.5	15	20	250	12	0.03
673-83337	M10	47.5	37.5	20	250	12	0.04
673-83350	M10	47.5	50	20	250	12	0.05
673-83450	M12	47.5	50	20	250	12	0.06
673-84212	M8	55	12.5	20	100	12	0.03
673-84225	M8	55	25	20	100	12	0.04
673-84315	M10	55	15	20	250	12	0.04
673-84337	M10	55	37.5	20	250	12	0.05
673-84350	M10	55	50	20	250	12	0.06
673-84450	M12	55	50	20	250	12	0.07

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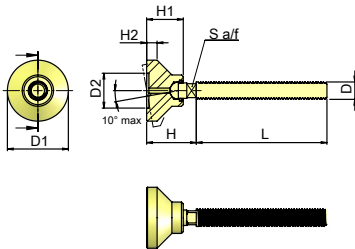


WDS 673 Levelling Foot - Zinc Plated Yellow Iridescent with PVC Pad

Steel BS.970 Gr.230M07 Zinc Plated
Yellow Iridescent

WDS No.	D	D1	D2	E	H	H1	H2	L	P	S	Weight (kg)
673-2008P100	M8	38	15	14	24	17	5	100	175	6	0.09
673-201P150	M10	43	20	15	27	20	6	150	300	7	0.21
673-201P75	M10	43	20	15	27	20	6	75	300	7	0.17
673-202P150	M12	60	25	19	35	26	8	150	500	8	0.39
673-202P75	M12	60	25	19	35	26	8	75	500	8	0.34
673-203P100	M16	83	35	19	41	31	10	100	900	12	0.87
673-203P200	M16	83	35	19	41	31	10	200	900	12	1
673-204P100	M20	108	50	24	51	36	12	100	1500	16	1.74
673-204P200	M20	108	50	24	51	36	12	200	1500	16	1.94
673-205P200	M24	128	60	28	60	39	15	200	2000	17	3.15
673-205P400	M24	128	60	28	60	39	15	400	2000	17	3.78

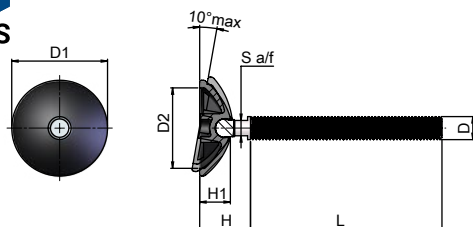
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WDS 673 Levelling Foot - Zinc Plated Yellow Iridescent

Steel BS.970 Gr.230M07 Zinc Plated
Yellow Iridescent

WDS No.	D	D1	D2	H	H1	H2	L	P	S	Weight (kg)
673-2008100	M8	30	15	24	17	5	100	175	7	0.09
673-201150	M10	35	20	27	20	6	150	300	8	0.18
673-20175	M10	35	20	27	20	6	75	300	8	0.14
673-202150	M12	50	25	35	26	8	150	500	9	0.38
673-20275	M12	50	25	35	26	8	75	500	9	0.33
673-203100	M16	75	35	41	31	10	100	900	13	0.84
673-203200	M16	75	35	41	31	10	200	900	13	0.99
673-204100	M20	100	50	51	36	12	100	1500	17	1.73
673-204200	M20	100	50	51	36	12	200	1500	17	1.93
673-205200	M24	120	60	60	39	15	200	2000	17	3.07
673-205400	M24	120	60	60	39	15	400	2000	17	3.78

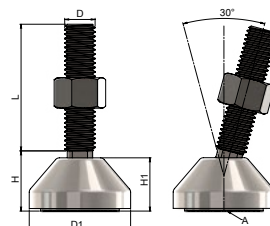


Levelling Foot - Zinc Plated Steel Stem with Plastic Base **WDS 773**

Stem - Zinc Plated

Base - Anti-microbial Plastic

WDS No.	D	D1	D2	H	H1	L	P	S	Weight (kg)
773-210100A	M10	35	28	22.5	12	100	150	7	0.07
773-210100B	M10	50	42	26.5	16	100	250	7	0.07
773-210150A	M10	35	28	22.5	12	150	150	7	0.09
773-210150B	M10	50	42	26.5	16	150	250	7	0.09
773-21075A	M10	35	28	22.5	12	75	150	7	0.05
773-21075B	M10	50	42	26.5	16	75	250	7	0.05
773-212100A	M12	35	28	22.5	12	100	150	8	0.1
773-212100B	M12	50	42	26.5	16	100	250	8	0.1
773-212150A	M12	35	28	22.5	12	150	150	8	0.14
773-212150B	M12	50	42	26.5	16	150	250	8	0.14
773-21275A	M12	35	28	22.5	12	75	150	8	0.08
773-21275B	M12	50	42	26.5	16	75	250	8	0.08
773-216100C	M16	50	42	33.5	18	100	400	12	0.18
773-216100D	M16	80	68	37.5	22	100	500	12	0.19
773-216150C	M16	50	42	33.5	18	150	400	12	0.27
773-216150D	M16	80	68	37.5	22	150	500	12	0.27
773-216200C	M16	50	42	33.5	18	200	400	12	0.35
773-216200D	M16	80	68	37.5	22	200	500	12	0.35
773-220100C	M20	50	42	33.5	18	100	400	16	0.29
773-220100D	M20	80	68	37.5	22	100	500	16	0.29
773-220150C	M20	50	42	33.5	18	150	400	16	0.41
773-220150D	M20	80	68	37.5	22	150	500	16	0.41
773-220200C	M20	50	42	33.5	18	200	400	16	0.53
773-220200D	M20	80	68	37.5	22	200	500	16	0.53

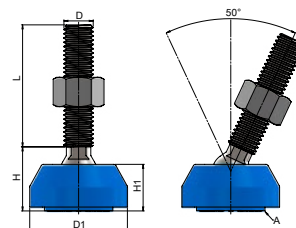


WDS 778 Levelling Feet – Steel Nickel Plated with 40mm Steel Base

Stem - Steel, Nickel Plated, Base - Steel, Nickel Plated and fitted with PVC rubber pad, black

P = Max Static Load (kg)

WDS No.	D	D1	H	H1	L	P	Weight (kg)
778-40140	M8	40	23	20	50	600	0.14
778-401540	M8	40	23	20	75	600	0.15
778-40240	M8	40	23	20	100	600	0.16
778-40340	M10	40	23	20	50	800	0.16
778-403540	M10	40	23	20	75	800	0.17
778-40440	M10	40	23	20	100	800	0.18
778-404540	M10	40	23	20	125	800	0.19
778-40540	M10	40	23	20	150	800	0.21
778-406240	M12	40	23	20	50	1000	0.16
778-406340	M12	40	23	20	75	1000	0.18
778-40640	M12	40	23	20	100	1000	0.21
778-406540	M12	40	23	20	125	1000	0.23
778-40740	M12	40	23	20	150	1000	0.23
778-408340	M12	40	23	20	200	1000	0.28
778-40840	M16	40	23	20	75	1400	0.28
778-40940	M16	40	23	20	100	1400	0.31
778-409540	M16	40	23	20	125	1400	0.34
778-41040	M16	40	23	20	150	1400	0.38
778-41140	M16	40	23	20	200	1400	0.41



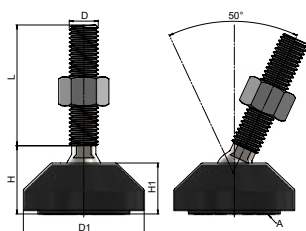
WDS 778 Levelling Feet – Steel Nickel Plated with 40mm Plastic Base

Stem - Steel, Nickel Plated, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-20140	778-20140W	778-20140B	M8	40	25	17.5	50	600	0.06
778-201540	778-201540W	778-201540B	M8	40	25	17.5	75	600	0.06
778-20240	778-20240W	778-20240B	M8	40	25	17.5	100	600	0.08
778-20340	778-20340W	778-20340B	M10	40	25	17.5	50	800	0.07
778-203540	778-203540W	778-203540B	M10	40	25	17.5	75	800	0.08
778-20440	778-20440W	778-20440B	M10	40	25	17.5	100	800	0.1
778-204540	778-204540W	778-204540B	M10	40	25	17.5	125	800	0.11
778-20540	778-20540W	778-20540B	M10	40	25	17.5	150	800	0.12
778-206240	778-206240W	778-206240B	M12	40	25	17.5	50	1000	0.09
778-206340	778-206340W	778-206340B	M12	40	25	17.5	75	1000	0.1
778-20640	778-20640W	778-20640B	M12	40	25	17.5	100	1000	0.13
778-206540	778-206540W	778-206540B	M12	40	25	17.5	125	1000	0.11
778-20740	778-20740W	778-20740B	M12	40	25	17.5	150	1000	0.16

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-20840	778-20840W	778-20840B	M12	40	25	17.5	200	1000	0.2
778-209340	778-209340W	778-209340B	M16	40	25	17.5	75	1400	0.16
778-20940	778-20940W	778-20940B	M16	40	25	17.5	100	1400	0.2
778-209540	778-209540W	778-209540B	M16	40	25	17.5	125	1400	0.23
778-21040	778-21040W	778-21040B	M16	40	25	17.5	150	1400	0.26
778-21140	778-21140W	778-21140B	M16	40	25	17.5	200	1400	0.33

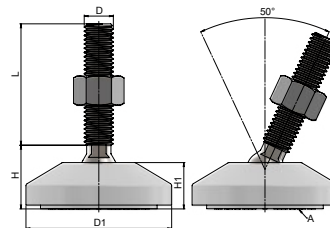


Levelling Feet - Steel Nickel Plated with 50mm Plastic Base WDS 778

Stem - Steel, Nickel Plated, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-20150	778-20150W	778-20150B	M8	50	29	19.5	50	600	0.07
778-201550	778-201550W	778-201550B	M8	50	29	19.5	75	600	0.08
778-20250	778-20250W	778-20250B	M8	50	29	19.5	100	600	0.09
778-20350	778-20350W	778-20350B	M10	50	29	19.5	50	800	0.08
778-203550	778-203550W	778-203550B	M10	50	29	19.5	75	800	0.1
778-20450	778-20450W	778-20450B	M10	50	29	19.5	100	800	0.11
778-204550	778-204550W	778-204550B	M10	50	29	19.5	125	800	0.12
778-20550	778-20550W	778-20550B	M10	50	29	19.5	150	800	0.13
778-206250	778-206250W	778-206250B	M12	50	29	19.5	50	1000	0.1
778-206350	778-206350W	778-206350B	M12	50	29	19.5	75	1000	0.12
778-20650	778-20650W	778-20650B	M12	50	29	19.5	100	1000	0.14
778-206550	778-206550W	778-206550B	M12	50	29	19.5	125	1000	0.12
778-20750	778-20750W	778-20750B	M12	50	29	19.5	150	1000	0.17
778-20850	778-20850W	778-20850B	M12	50	29	19.5	200	1000	0.21
778-209350	778-209350W	778-209350B	M16	50	29	19.5	75	1400	0.17
778-20950	778-20950W	778-20950B	M16	50	29	19.5	100	1400	0.21
778-209550	778-209550W	778-209550B	M16	50	29	19.5	125	1400	0.24
778-21050	778-21050W	778-21050B	M16	50	29	19.5	150	1400	0.27
778-21150	778-21150W	778-21150B	M16	50	29	19.5	200	1400	0.34

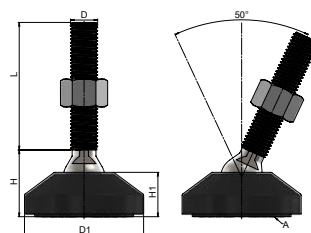


WDS 778 Levelling Feet - Steel Nickel Plated with 60mm Plastic Base

Stem - Steel, Nickel Plated, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-20160	778-20160W	778-20160B	M8	60	25	17.5	50	600	0.08
778-201560	778-201560W	778-201560B	M8	60	25	17.5	75	600	0.08
778-20260	778-20260W	778-20260B	M8	60	25	17.5	100	600	0.1
778-20360	778-20360W	778-20360B	M10	60	25	17.5	50	800	0.09
778-203560	778-203560W	778-203560B	M10	60	25	17.5	75	800	0.1
778-20460	778-20460W	778-20460B	M10	60	25	17.5	100	800	0.12
778-204560	778-204560W	778-204560B	M10	60	25	17.5	125	800	0.13
778-20560	778-20560W	778-20560B	M10	60	25	17.5	150	800	0.14
778-206260	778-206260W	778-206260B	M12	60	25	17.5	50	1000	0.11
778-206360	778-206360W	778-206360B	M12	60	25	17.5	75	1000	0.13
778-20660	778-20660W	778-20660B	M12	60	25	17.5	100	1000	0.15
778-206560	778-206560W	778-206560B	M12	60	25	17.5	125	1000	0.13
778-20760	778-20760W	778-20760B	M12	60	25	17.5	150	1000	0.18
778-20860	778-20860W	778-20860B	M12	60	25	17.5	200	1000	0.22
778-209360	778-209360W	778-209360B	M16	60	25	17.5	75	1400	0.18
778-20960	778-20960W	778-20960B	M16	60	25	17.5	100	1400	0.22
778-209560	778-209560W	778-209560B	M16	60	25	17.5	125	1400	0.25
778-21060	778-21060W	778-21060B	M16	60	25	17.5	150	1400	0.28
778-21160	778-21160W	778-21160B	M16	60	25	17.5	200	1400	0.35

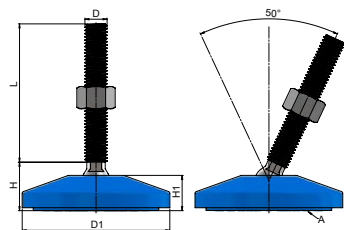


WDS 778 Levelling Feet - Steel Nickel Plated with 70mm Plastic Base

Stem - Steel, Nickel Plated, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-212370	778-212370W	778-212370B	M16	70	36	26.5	75	1400	0.25
778-21270	778-21270W	778-21270B	M16	70	36	26.5	100	1400	0.29
778-212570	778-212570W	778-212570B	M16	70	36	26.5	125	1400	0.31
778-21370	778-21370W	778-21370B	M16	70	36	26.5	150	1400	0.34
778-21470	778-21470W	778-21470B	M16	70	36.5	26.5	200	1400	0.42
778-21570	778-21570W	778-21570B	M20	70	36.5	26.5	100	1800	0.38
778-21670	778-21670W	778-21670B	M20	70	36.5	26.5	150	1800	0.49
778-21770	778-21770W	778-21770B	M20	70	36.5	26.5	200	1800	0.59
778-21870	778-21870W	778-21870B	M24	70	36.5	26.5	100	1800	0.46
778-21970	778-21970W	778-21970B	M24	70	36.5	26.5	200	1800	0.76
778-22070	778-22070W	778-22070B	M24	70	36.5	26.5	300	1800	1.06

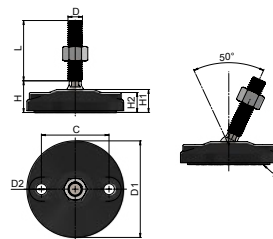


Levelling Feet - Steel Nickel Plated with 80mm Plastic Base **WDS 778**

Stem - Steel, Nickel Plated, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-20180	778-20180W	778-20180B	M8	80	25	17.5	50	600	0.1
778-201580	778-201580W	778-201580B	M8	80	25	17.5	75	600	0.11
778-20280	778-20280W	778-20280B	M8	80	25	17.5	100	600	0.12
778-20380	778-20380W	778-20380B	M10	80	25	17.5	50	800	0.12
778-203580	778-203580W	778-203580B	M10	80	25	17.5	75	800	0.13
778-20480	778-20480W	778-20480B	M10	80	25	17.5	100	800	0.14
778-204580	778-204580W	778-204580B	M10	80	25	17.5	125	800	0.15
778-20580	778-20580W	778-20580B	M10	80	25	17.5	150	800	0.17
778-206280	778-206280W	778-206280B	M12	80	25	17.5	50	1000	0.13
778-206380	778-206380W	778-206380B	M12	80	25	17.5	75	1000	0.15
778-20680	778-20680W	778-20680B	M12	80	25	17.5	100	1000	0.17
778-206580	778-206580W	778-206580B	M12	80	25	17.5	125	1000	0.15
778-20780	778-20780W	778-20780B	M12	80	25	17.5	150	1000	0.21
778-20880	778-20880W	778-20880B	M12	80	25	17.5	200	1000	0.24
778-209380	778-209380W	778-209380B	M16	80	25	17.5	75	1400	0.21
778-20980	778-20980W	778-20980B	M16	80	25	17.5	100	1400	0.24
778-209580	778-209580W	778-209580B	M16	80	25	17.5	125	1400	0.27
778-21080	778-21080W	778-21080B	M16	80	25	17.5	150	1400	0.31
778-21180	778-21180W	778-21180B	M16	80	25	17.5	200	1400	0.37

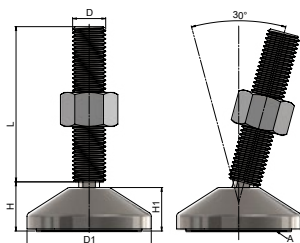


WDS 778 Levelling Feet – Steel Nickel Plated with Bolt Down Plastic Base

Stem - Steel, Nickel Plated, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

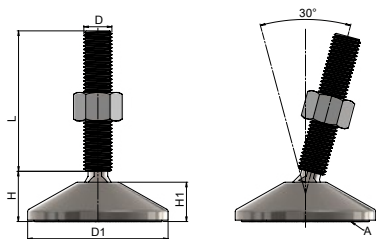
Black	White	Blue	C	D	D1	D2	H	H1	H2	L	P	Weight (kg)
778-20182	778-20182W	778-20182B	56	M8	80	9	25	17.5	15	50	600	0.1
778-201582	778-201582W	778-201582B	56	M8	80	9	25	17.5	15	75	600	0.11
778-20282	778-20282W	778-20282B	56	M8	80	9	25	17.5	15	100	600	0.12
778-20382	778-20382W	778-20382B	56	M10	80	9	25	17.5	15	50	800	0.12
778-203582	778-203582W	778-203582B	56	M10	80	9	25	17.5	15	75	800	0.13
778-20482	778-20482W	778-20482B	56	M10	80	9	25	17.5	15	100	800	0.14
778-204582	778-204582W	778-204582B	56	M10	80	9	25	17.5	15	125	800	0.15
778-20582	778-20582W	778-20582B	56	M10	80	9	25	17.5	15	150	800	0.17
778-206282	778-206282W	778-206282B	56	M12	80	9	25	17.5	15	50	1000	0.13
778-206382	778-206382W	778-206382B	56	M12	80	9	25	17.5	15	75	1000	0.15
778-20682	778-20682W	778-20682B	56	M12	80	9	25	17.5	15	100	1000	0.17
778-206582	778-206582W	778-206582B	56	M12	80	9	25	17.5	15	125	1000	0.15
778-20782	778-20782W	778-20782B	56	M12	80	9	25	17.5	15	150	1000	0.21
778-20882	778-20882W	778-20882B	56	M12	80	9	25	17.5	15	200	1000	0.24
778-209382	778-209382W	778-209382B	56	M16	80	9	25	17.5	15	75	1200	0.2
778-20982	778-20982W	778-20982B	56	M16	80	9	25	17.5	15	100	1200	0.24
778-209582	778-209582W	778-209582B	56	M16	80	9	25	17.5	15	125	1200	0.27
778-21082	778-21082W	778-21082B	56	M16	80	9	25	17.5	15	150	1200	0.31
778-21182	778-21182W	778-21182B	56	M16	80	9	25	17.5	15	200	1200	0.39
778-212302	778-212302W	778-212302B	75	M16	100	11	36	24	21	75	1200	0.31
778-21202	778-21202W	778-21202B	75	M16	100	11	36	24	21	100	1200	0.35
778-21402	778-21402W	778-21402B	75	M16	100	11	36	24	21	200	1200	0.48
778-212502	778-212502W	778-212502B	75	M16	100	11	36	24	21	125	1200	0.37
778-21302	778-21302W	778-21302B	75	M16	100	11	36	24	21	150	1200	0.41
778-212322	-	-	93	M16	125	13	46	35	27	75	1200	0.4
778-21222	-	-	93	M16	125	13	46	35	27	100	1200	0.44
778-21422	-	-	93	M16	125	13	46	35	27	200	1200	0.58
778-212522	-	-	93	M16	125	13	46	35	27	125	1200	0.47
778-21322	-	-	93	M16	125	13	46	35	27	150	1200	0.51
778-21502	778-21502W	778-21502B	75	M20	100	11	36	24	21	100	1800	0.45
778-21602	778-21602W	778-21602B	75	M20	100	11	36	24	21	150	1800	0.55
778-21702	778-21702W	778-21702B	75	M20	100	11	36	24	21	200	1800	0.65
778-21522	-	-	93	M20	125	13	46	35	27	100	1800	0.54
778-21622	-	-	93	M20	125	13	46	35	27	150	1800	0.64
778-21722	-	-	93	M20	125	13	46	35	27	200	1800	0.75
778-21802	778-21802W	778-21802B	75	M24	100	11	36	24	21	100	1800	0.53
778-21902	778-21902W	778-21902B	75	M24	100	11	36	24	21	200	1800	0.83
778-22002	-	-	75	M24	100	11	36	24	21	300	1800	1.13
778-21822	-	-	93	M24	125	13	46	35	27	100	1800	0.62
778-21922	-	-	93	M24	125	13	46	35	27	200	1800	0.92
778-22022	778-22002W	778-22002B	93	M24	125	13	46	35	27	300	1800	1.22



Levelling Feet - Steel Nickel Plated with 60mm Base WDS 778

Stem - Steel, Nickel Plated, Base - Steel, Nickel Plated and fitted with PVC rubber pad, black
P = Max Static Load (kg)

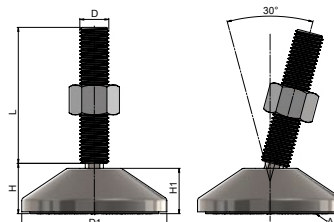
WDS No.	D	D1	H	H1	L	P	Weight (kg)
778-40160	M8	60	23	20	50	600	0.35
778-401560	M8	60	23	20	75	600	0.3
778-40260	M8	60	23	20	100	600	0.37
778-40360	M10	60	23	20	50	800	0.36
778-403560	M10	60	23	20	75	800	0.32
778-40460	M10	60	23	20	100	800	0.39
778-404560	M10	60	23	20	125	800	0.34
778-40560	M10	60	23	20	150	800	0.41
778-406260	M12	60	23	20	50	1000	0.32
778-406360	M12	60	23	20	75	1000	0.34
778-40660	M12	60	23	20	100	1000	0.42
778-406560	M12	60	23	20	125	1000	0.34
778-40760	M12	60	23	20	150	1000	0.45
778-40860	M12	60	23	20	200	1000	0.49
778-408360	M16	60	23	20	75	1400	0.4
778-40960	M16	60	23	20	100	1400	0.49
778-409560	M16	60	23	20	125	1400	0.46
778-41060	M16	60	23	20	150	1400	0.55
778-41160	M16	60	23	20	200	1400	0.63



Levelling Feet - Steel Nickel Plated with 100mm Base WDS 778

Stem - Steel, Nickel Plated, Base - Steel, Nickel Plated and fitted with PVC rubber pad, black
P = Max Static Load (kg)

WDS No.	D	D1	H	H1	L	P	Weight (kg)
778-412300	M16	100	34.8	28	75	1400	0.7
778-41200	M16	100	34.8	28	100	1400	1.09
778-412500	M16	100	34.8	28	125	1400	0.76
778-41300	M16	100	34.8	28	150	1400	1.15
778-41400	M16	100	34.8	28	200	1400	1.23
778-41500	M20	100	34.8	28	100	1800	1.29
778-41600	M20	100	34.8	28	150	1800	1.39
778-41700	M20	100	34.8	28	200	1800	1.49
778-41800	M24	100	34.8	28	100	1800	1.01
778-41900	M24	100	34.8	28	200	1800	1.31
778-42000	M24	100	34.8	28	300	1800	1.61

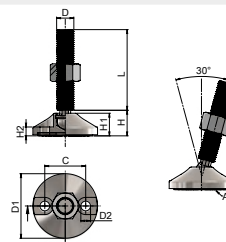


WDS 778 Levelling Feet - Steel Nickel Plated with 80mm Base

Stem - Steel, Nickel Plated, Base - Steel, Nickel Plated and fitted with PVC rubber pad, black

P = Max Static Load (kg)

WDS No.	D	D1	H	H1	L	P	Weight (kg)
778-40180	M8	80	26	24	50	600	0.58
778-401580	M8	80	26	24	75	600	0.59
778-40280	M8	80	26	24	100	600	0.6
778-40380	M10	80	26	24	50	800	0.59
778-403580	M10	80	26	24	75	800	0.61
778-40480	M10	80	26	24	100	800	0.62
778-404580	M10	80	26	24	125	800	0.64
778-40580	M10	80	26	24	150	800	0.64
778-406280	M12	80	26	24	50	1000	0.62
778-406380	M12	80	26	24	75	1000	0.63
778-40680	M12	80	26	24	100	1000	0.65
778-406580	M12	80	26	24	125	1000	0.64
778-40780	M12	80	26	24	150	1000	0.68
778-40880	M12	80	26	24	200	1000	0.72
778-409380	M16	80	26	24	75	1400	0.69
778-40980	M16	80	26	24	100	1400	0.72
778-409580	M16	80	26	24	125	1400	0.76
778-41080	M16	80	26	24	150	1400	0.78
778-41180	M16	80	26	24	200	1400	0.86
778-42480	M20	80	32	24	100	1800	0.92
778-42580	M20	80	32	24	150	1800	1.02
778-42680	M20	80	32	24	200	1800	1.12
778-42780	M24	80	32	24	100	1800	1.01
778-42880	M24	80	32	24	200	1800	1.31
778-42990	M24	80	32	24	300	1800	1.61



WDS 778 Levelling Feet – Steel Nickel Plated with Bolt Down Steel Base

Stem - Steel, Nickel Plated, Base - Steel, Nickel Plated and fitted with PVC rubber pad, black

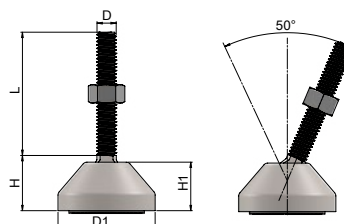
P = Max Static Load (kg)

WDS No.	C	D	D1	D2	H	H1	H2	L	P	Weight (kg)
778-40162	38	M8	60	7	7	20	23	50	600	0.35
778-40182	55	M8	80	9	7	24	26	50	600	0.57
778-401562	38	M8	60	7	7	20	23	75	600	0.28
778-401582	55	M8	80	9	7	24	26	75	600	0.64
778-40262	38	M8	60	7	7	20	23	100	600	0.36
778-40282	55	M8	80	9	7	24	26	100	600	0.59
778-40362	38	M10	60	7	7	20	23	50	800	0.36



WDS No.	C	D	D1	D2	H	H1	H2	L	P	Weight (kg)
778-40382	55	M10	80	9	7	24	27	50	800	0.59
778-403562	38	M10	60	7	7	20	23	75	800	0.3
778-403582	55	M10	80	9	7	24	27	75	800	0.66
778-40462	38	M10	60	7	7	20	23	100	800	0.39
778-40482	55	M10	80	9	7	24	27	100	800	0.61
778-404562	38	M10	60	7	7	20	23	125	800	0.33
778-404582	55	M10	80	9	7	24	27	125	800	0.68
778-40562	38	M10	60	7	7	20	23	150	800	0.41
778-40582	55	M10	80	9	7	24	27	150	800	0.64
778-406262	38	M12	60	7	7	20	23	50	1000	0.31
778-406282	55	M12	80	9	7	24	27	50	1000	0.66
778-406362	38	M12	60	7	7	20	23	75	1000	0.33
778-406382	55	M12	80	9	7	24	27	75	1000	0.68
778-40662	38	M12	60	7	7	20	23	100	1000	0.41
778-40682	55	M12	80	9	7	24	27	100	1000	0.64
778-406562	38	M12	60	7	7	20	23	125	1000	0.33
778-406582	55	M12	80	9	7	24	27	125	1000	0.68
778-40762	38	M12	60	7	7	20	23	150	1000	0.45
778-40782	55	M12	80	9	7	24	27	150	1000	0.68
778-40862	38	M12	60	7	7	20	23	200	1000	0.49
778-40882	55	M12	80	9	7	24	27	200	1000	0.71
778-409362	38	M16	60	7	7	20	23	75	1400	0.38
778-409382	55	M16	80	9	7	24	27	75	1400	0.73
778-412302	75	M16	100	11	7	28	34	75	1400	0.01
778-40962	38	M16	60	7	7	20	23	100	1400	0.49
778-40982	55	M16	80	9	7	24	27	100	1400	0.71
778-409562	38	M16	60	7	7	20	23	125	1400	0.45
778-409582	55	M16	80	9	7	24	27	125	1400	0.8
778-412502	75	M16	100	11	7	28	34	125	1400	0.01
778-41062	38	M16	60	7	7	20	23	150	1400	0.55
778-41082	55	M16	80	9	7	24	27	150	1400	0.78
778-41162	38	M16	60	7	7	20	23	200	1400	0.63
778-41182	55	M16	80	9	7	24	27	200	1400	0.84
778-41202	75	M16	100	11	7	28	34	100	1400	1.08
778-41302	75	M16	100	11	7	28	34	150	1400	1.15
778-41402	75	M16	100	11	7	28	34	200	1400	1.2
778-42582	55	M20	80	9	7	24	32	150	1800	1.02
778-42682	55	M20	80	9	7	24	32	200	1800	1.12
778-42482	55	M20	80	9	7	24	31	100	1800	0.92
778-41502	75	M20	100	11	7	28	34	100	1800	1.29
778-41602	75	M20	100	11	7	28	34	150	1800	1.39
778-41702	75	M20	100	11	7	28	34	200	1800	1.49
778-42782	55	M24	80	9	7	24	32	100	1800	0.96
778-41802	75	M24	100	11	7	28	34	100	1800	1.36
778-42882	55	M24	80	9	7	24	32	200	1800	1.26
778-41902	75	M24	100	11	7	28	34	200	1800	0.1
778-42982	55	M24	80	9	7	24	32	300	1800	1.56
778-42002	75	M24	100	11	7	28	34	300	1800	1.96

IN"



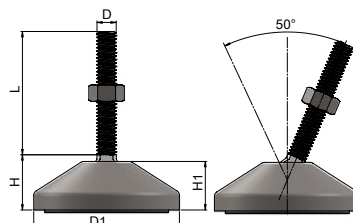
WDS 977 Levelling Feet (Inch) - Steel Nickel Plated 40mm Steel Base

Stem - Steel, Nickel Plated, Base - Steel, Nickel Plated and fitted with PVC rubber pad, black

P = Max Static Load (kg)

WDS No.	D	D1	H	H1	L	P	Weight (kg)
977-416240	5/16-18 UNC	40	23	20	50.8	600	0.14
977-416340	5/16-18 UNC	40	23	20	76.2	600	0.15
977-418240	3/8"-16 UNC	40	23	20	50.8	800	0.16
977-418340	3/8"-16 UNC	40	23	20	76.2	800	0.17
977-418440	3/8"-16 UNC	40	23	20	101.6	800	0.18
977-418540	3/8"-16 UNC	40	23	20	127	800	0.19
977-418640	3/8"-16 UNC	40	23	20	152	800	0.21
977-422340	1/2"-13 UNC	40	23	20	76.2	1000	0.19
977-422440	1/2"-13 UNC	40	23	20	101.6	1000	0.21
977-422540	1/2"-13 UNC	40	23	20	127	1000	0.23
977-422640	1/2"-13 UNC	40	23	20	152	1000	0.25
977-426440	5/8"-11 UNC	40	23	20	101.6	1400	0.28
977-426540	5/8"-11 UNC	40	23	20	127	1400	0.31
977-426640	5/8"-11 UNC	40	23	20	152	1400	0.34
977-426840	5/8"-11 UNC	40	23	20	203.2	1400	0.41

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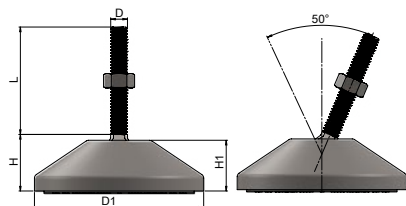


WDS 977 Levelling Feet (Inch) - Steel Nickel Plated 60mm Steel Base

Stem - Steel, Nickel Plated, Base - Steel, Nickel Plated and fitted with PVC rubber pad, black

P = Max Static Load (kg)

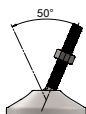
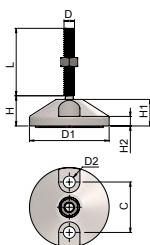
WDS No.	D	D1	H	H1	L	P	Weight (kg)
977-416260	5/16-18 UNC	60	23	20	50.8	600	0.29
977-416360	5/16-18 UNC	60	23	20	76.2	600	0.3
977-418260	3/8"-16 UNC	60	23	20	50.8	800	0.31
977-418360	3/8"-16 UNC	60	23	20	76.2	800	0.32
977-418460	3/8"-16 UNC	60	23	20	101.6	800	0.33
977-418560	3/8"-16 UNC	60	23	20	127	800	0.34
977-418660	3/8"-16 UNC	60	23	20	152	800	0.36
977-422360	1/2"-13 UNC	60	23	20	76.2	1000	0.34
977-422460	1/2"-13 UNC	60	23	20	101.6	1000	0.36
977-422560	1/2"-13 UNC	60	23	20	127	1000	0.38
977-422660	1/2"-13 UNC	60	23	20	152	1000	0.39
977-426460	5/8"-11 UNC	60	23	20	101.6	1400	0.43
977-426560	5/8"-11 UNC	60	23	20	127	1400	0.46
977-426660	5/8"-11 UNC	60	23	20	152	1400	0.49
977-426860	5/8"-11 UNC	60	23	20	203.2	1400	0.56



Levelling Feet (Inch) - Steel Nickel Plated with Steel 80mm Steel Base WDS 977

Stem - Steel, Nickel Plated, Base - Steel, Nickel Plated and fitted with PVC rubber pad, black
P = Max Static Load (kg)

WDS No.	D	D1	H	H1	L	P	Weight (kg)
977-416280	5/16-18 UNC	80	23	20	50.8	600	0.58
977-416380	5/16-18 UNC	80	23	20	76.2	600	0.59
977-418280	3/8"-16 UNC	80	23	20	50.8	800	0.6
977-418380	3/8"-16 UNC	80	23	20	76.2	800	0.61
977-418480	3/8"-16 UNC	80	23	20	101.6	800	0.62
977-418580	3/8"-16 UNC	80	23	20	127	800	0.63
977-418680	3/8"-16 UNC	80	23	20	152	800	0.65
977-422380	1/2"-13 UNC	80	23	20	76.2	1000	0.63
977-422480	1/2"-13 UNC	80	23	20	101.6	1000	0.65
977-422580	1/2"-13 UNC	80	23	20	127	1000	0.67
977-422680	1/2"-13 UNC	80	23	20	152	1000	0.69
977-426480	5/8"-11 UNC	80	23	20	101.6	1400	0.72
977-426580	5/8"-11 UNC	80	23	20	127	1400	0.75
977-426680	5/8"-11 UNC	80	23	20	152	1400	0.78
977-426880	5/8"-11 UNC	80	23	20	203.2	1400	0.85

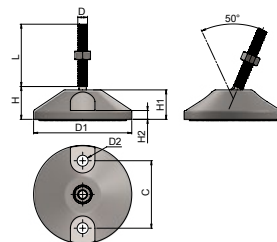


Levelling Feet (Inch) - Steel Nickel Plated with Bolt Down 60mm Steel Base WDS 977

Stem - Steel, Nickel Plated, Base - Steel, Nickel Plated and fitted with PVC rubber pad, black
P = Max Static Load (kg)

WDS No.	C	D	D1	D2	H	H1	H2	L	P	Weight (kg)
977-416262	38	5/16-18 UNC	60	7	23	20	7	50.8	600	0.27
977-416362	38	5/16-18 UNC	60	7	23	20	7	76.2	600	0.28
977-418262	38	3/8"-16 UNC	60	7	23	20	7	50.8	800	0.28
977-418362	38	3/8"-16 UNC	60	7	23	20	7	76.2	800	0.3
977-418462	38	3/8"-16 UNC	60	7	23	20	7	101.6	800	0.31
977-418562	38	3/8"-16 UNC	60	7	23	20	7	127	800	0.32
977-418662	38	3/8"-16 UNC	60	7	23	20	7	152	800	0.33
977-422362	38	1/2"-13 UNC	60	7	23	20	7	76.2	1000	0.32
977-422462	38	1/2"-13 UNC	60	7	23	20	7	101.6	1000	0.34
977-422562	38	1/2"-13 UNC	60	7	23	20	7	127	1000	0.35
977-422662	38	1/2"-13 UNC	60	7	23	20	7	152	1000	0.37
977-426462	38	5/8"-11 UNC	60	7	23	20	7	101.6	1400	0.41
977-426562	38	5/8"-11 UNC	60	7	23	20	7	127	1400	0.44
977-426662	38	5/8"-11 UNC	60	7	23	20	7	152	1400	0.47
977-426862	38	5/8"-11 UNC	60	7	23	20	7	203.2	1400	0.54

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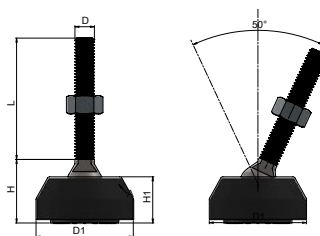
WDS 977 Levelling Feet (Inch) - Steel Nickel Plated with Bolt Down 80mm Steel Base

Stem - Steel, Nickel Plated, Base - Steel, Nickel Plated and fitted with PVC rubber pad, black

P = Max Static Load (kg)

WDS No.	C	D	D1	D2	H	H1	H2	L	P	Weight (kg)
977-416382	55	5/16-18 UNC	80	9	27	24	7	50.8	600	0.56
977-416282	55	5/16-18 UNC	80	9	23	20	7	76.2	600	0.55
977-418282	55	3/8"-16 UNC	80	9	23	20	7	50.8	800	0.57
977-418382	55	3/8"-16 UNC	80	9	23	20	7	76.2	800	0.58
977-418482	55	3/8"-16 UNC	80	9	23	20	7	101.6	800	0.59
977-418582	55	3/8"-16 UNC	80	9	23	20	7	127	800	0.61
977-418682	55	3/8"-16 UNC	80	9	23	20	7	152	800	0.62
977-422382	55	1/2"-13 UNC	80	9	23	20	7	76.2	1000	0.6
977-422482	55	1/2"-13 UNC	80	9	23	20	7	101.6	1000	0.62
977-422582	55	1/2"-13 UNC	80	9	23	20	7	127	1000	0.64
977-422682	55	1/2"-13 UNC	80	9	23	20	7	152	1000	0.66
977-426482	55	5/8"-11 UNC	80	9	23	20	7	101.6	1400	0.69
977-426582	55	5/8"-11 UNC	80	9	23	20	7	127	1400	0.72
977-426682	55	5/8"-11 UNC	80	9	23	20	7	152	1400	0.76
977-426882	55	5/8"-11 UNC	80	9	23	20	7	203.2	1400	0.82

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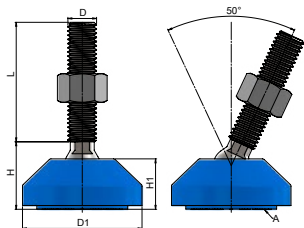


WDS 978 Levelling Feet (Inch) - Steel Nickel Plated with 40mm Plastic Base

Stem - Steel, Nickel Plated, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
978-216240	978-216240W	978-216240B	5/16"-18 UNC	40	25	17.5	50.8	600	0.06
978-216340	978-216340W	978-216340B	5/16"-18 UNC	40	25	17.5	76.2	600	0.07
978-218240	978-218240W	978-218240B	3/8"-16 UNC	40	25	17.5	50.8	600	0.07
978-218340	978-218340W	978-218340B	3/8"-16 UNC	40	25	17.5	76.2	800	0.08
978-218440	978-218440W	978-218440B	3/8"-16 UNC	40	25	17.5	101.6	800	0.1
978-218540	978-218540W	978-218540B	3/8"-16 UNC	40	25	17.5	127	800	0.11
978-218640	978-218640W	978-218640B	3/8"-16 UNC	40	25	17.5	152	800	0.12
978-222340	978-222340W	978-222340B	1/2"-13 UNC	40	25	17.5	76.2	1000	0.11
978-222440	978-222440W	978-222440B	1/2"-13 UNC	40	25	17.5	101.6	1000	0.12
978-222540	978-222540W	978-222540B	1/2"-13 UNC	40	25	17.5	127	1000	0.14
978-222640	978-222640W	978-222640B	1/2"-13 UNC	40	25	17.5	152	1000	0.16
978-226440	978-226440W	978-226440B	5/8"-11 UNC	40	25	17.5	101.6	1400	0.19
978-226540	978-226540W	978-226540B	5/8"-11 UNC	40	25	17.5	127	1400	0.23
978-226640	978-226640W	978-226640B	5/8"-11 UNC	40	25	17.5	152	1400	0.26
978-226840	978-226840W	978-226840B	5/8"-11 UNC	40	25	17.5	203.2	1400	0.33



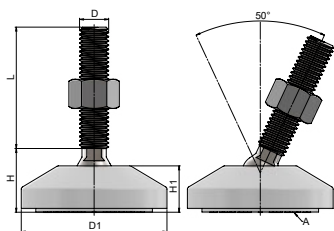
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Levelling Feet (Inch) - Steel Nickel Plated with 50mm Plastic Base WDS 978

Stem - Steel, Nickel Plated, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
978-216250	978-216250W	978-216250B	5/16"-18 UNC	50	29	19.5	50.8	600	0.07
978-216350	978-216350W	978-216350B	5/16"-18 UNC	50	29	19.5	76.2	600	0.08
978-218250	978-218250W	978-218250B	3/8"-16 UNC	50	29	19.5	50.8	800	0.08
978-218350	978-218350W	978-218350B	3/8"-16 UNC	50	29	19.5	76.2	800	0.1
978-218450	978-218450W	978-218450B	3/8"-16 UNC	50	29	19.5	101.6	800	0.11
978-218550	978-218550W	978-218550B	3/8"-16 UNC	50	29	19.5	127	800	0.12
978-218650	978-218650W	978-218650B	3/8"-16 UNC	50	29	19.5	152	800	0.13
978-222350	978-222350W	978-222350B	1/2"-13 UNC	50	29	19.5	76.2	1000	0.12
978-222450	978-222450W	978-222450B	1/2"-13 UNC	50	29	19.5	101.6	1000	0.14
978-222550	978-222550W	978-222550B	1/2"-13 UNC	50	29	19.5	127	1000	0.15
978-222650	978-222650W	978-222650B	1/2"-13 UNC	50	29	19.5	152	1000	0.17
978-226450	978-226450W	978-226450B	5/8"-11 UNC	50	29	19.5	101.6	1400	0.2
978-226550	978-226550W	978-226550B	5/8"-11 UNC	50	29	19.5	127	1400	0.24
978-226650	978-226650W	978-226650B	5/8"-11 UNC	50	29	19.5	152	1400	0.27
978-226850	978-226850W	978-226850B	5/8"-11 UNC	50	29	19.5	203.2	1400	0.34



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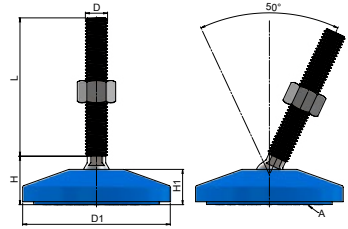
Levelling Feet (Inch) - Steel Nickel Plated with 60mm Plastic Base WDS 978

Stem - Steel, Nickel Plated, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
978-216260	978-216260W	978-216260B	5/16"-18 UNC	60	25	17.5	50.8	600	0.08
978-216360	978-216360W	978-216360B	5/16"-18 UNC	60	25	17.5	76.2	600	0.08
978-218260	978-218260W	978-218260B	3/8"-16 UNC	60	25	17.5	50.8	800	0.09
978-218360	978-218360W	978-218360B	3/8"-16 UNC	60	25	17.5	76.2	800	0.1
978-218460	978-218460W	978-218460B	3/8"-16 UNC	60	25	17.5	101.6	800	0.12
978-218560	978-218560W	978-218560B	3/8"-16 UNC	60	25	17.5	127	800	0.13
978-218660	978-218660W	978-218660B	3/8"-16 UNC	60	25	17.5	152	800	0.14
978-222360	978-222360W	978-222360B	1/2"-13 UNC	60	25	17.5	76.2	1000	0.12
978-222460	978-222460W	978-222460B	1/2"-13 UNC	60	25	17.5	101.6	1000	0.14
978-222560	978-222560W	978-222560B	1/2"-13 UNC	60	25	17.5	127	1000	0.16
978-222660	978-222660W	978-222660B	1/2"-13 UNC	60	25	17.5	152	1000	0.18
978-226460	978-226460W	978-226460B	5/8"-11 UNC	60	25	17.5	101.6	1400	0.21
978-226560	978-226560W	978-226560B	5/8"-11 UNC	60	25	17.5	127	1400	0.25
978-226660	978-226660W	978-226660B	5/8"-11 UNC	60	25	17.5	152	1400	0.28
978-226860	978-226860W	978-226860B	5/8"-11 UNC	60	25	17.5	203.2	1400	0.35

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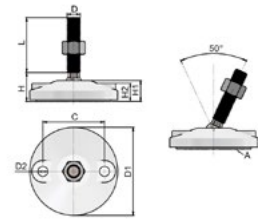
WDS 978 Levelling Feet (Inch) - Steel Nickel Plated with 80mm Plastic Base

Stem - Steel, Nickel Plated, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
978-216280	978-216280W	978-216280B	5/16"-18 UNC	80	25	17.5	50.8	600	0.1
978-216380	978-216380W	978-216380B	5/16"-18 UNC	80	25	17.5	76.2	600	0.11
978-218280	978-218280W	978-218280B	3/8"-16 UNC	80	25	17.5	50.8	800	0.12
978-218380	978-218380W	978-218380B	3/8"-16 UNC	80	25	17.5	76.2	800	0.13
978-218480	978-218480W	978-218480B	3/8"-16 UNC	80	25	17.5	101.6	800	0.14
978-218580	978-218580W	978-218580B	3/8"-16 UNC	80	25	17.5	127	800	0.15
978-218680	978-218680W	978-218680B	3/8"-16 UNC	80	25	17.5	152	800	0.17
978-222380	978-222380W	978-222380B	1/2"-13 UNC	80	25	17.5	76.2	1000	0.15
978-222480	978-222480W	978-222480B	1/2"-13 UNC	80	25	17.5	101.6	1000	0.17
978-222580	978-222580W	978-222580B	1/2"-13 UNC	80	25	17.5	127	1000	0.19
978-222680	978-222680W	978-222680B	1/2"-13 UNC	80	25	17.5	152	1000	0.21
978-226480	978-226480W	978-226480B	5/8"-11 UNC	80	25	17.5	101.6	1400	0.24
978-226580	978-226580W	978-226580B	5/8"-11 UNC	80	25	17.5	127	1400	0.27
978-226680	978-226680W	978-226680B	5/8"-11 UNC	80	25	17.5	152	1400	0.3
978-226880	978-226880W	978-226880B	5/8"-11 UNC	80	25	17.5	203.2	1400	0.37

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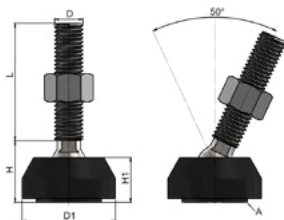


WDS 978 Levelling Feet (Inch) - Steel Nickel Plated with Bolt Down 80mm Plastic Base

Stem - Steel, Nickel Plated, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	C	D	D1	D2	H	H1	L	P	RA	Weight (kg)
978-216282	978-216282W	978-216282B	56	5/16"-18 UNC	80	9	25	17.5	50.8	600	15	0.1
978-216382	978-216382W	978-216382B	56	5/16"-18 UNC	80	9	25	17.5	76.2	600	15	0.11
978-218282	978-218282W	978-218282B	56	3/8"-16 UNC	80	9	25	17.5	50.8	800	15	0.12
978-218382	978-218382W	978-218382B	56	3/8"-16 UNC	80	9	25	17.5	76.2	800	15	0.13
978-218482	978-218482W	978-218482B	56	3/8"-16 UNC	80	9	25	17.5	101.6	800	15	0.14
978-218582	978-218582W	978-218582B	56	3/8"-16 UNC	80	9	25	17.5	127	800	15	0.15
978-218682	978-218682W	978-218682B	56	3/8"-16 UNC	80	9	25	17.5	152	800	15	0.17
978-222382	978-222382W	978-222382B	56	1/2"-13 UNC	80	9	25	17.5	76.2	1000	15	0.15
978-222482	978-222482W	978-222482B	56	1/2"-13 UNC	80	9	25	17.5	101.6	1000	15	0.17
978-222582	978-222582W	978-222582B	56	1/2"-13 UNC	80	9	25	17.5	127	1000	15	0.19
978-222682	978-222682W	978-222682B	56	1/2"-13 UNC	80	9	25	17.5	152	1000	15	0.2
978-226482	978-226482W	978-226482B	56	5/8"-11 UNC	80	9	25	17.5	101.6	1400	15	0.24
978-226582	978-226582W	978-226582B	56	5/8"-11 UNC	80	9	25	17.5	127	1400	15	0.27
978-226682	978-226682W	978-226682B	56	5/8"-11 UNC	80	9	25	17.5	152	1400	15	0.3
978-226882	978-226882W	978-226882B	56	5/8"-11 UNC	80	9	25	17.5	203.2	1400	15	0.37



Levelling Feet - 304 Stainless Steel 40mm Plastic Base WDS 778

Stem - 304 Stainless Steel, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-60140	778-60140W	778-60140B	M8	40	25	17.5	50	600	0.06
778-601540	778-601540W	778-601540B	M8	40	25	17.5	75	600	0.06
778-60240	778-60240W	778-60240B	M8	40	25	17.5	100	800	0.08
778-60340	778-60340W	778-60340B	M10	40	25	17.5	50	800	0.07
778-603540	778-603540W	778-603540B	M10	40	25	17.5	75	800	0.08
778-60440	778-60440W	778-60440B	M10	40	25	17.5	100	800	0.1
778-604540	778-604540W	778-604540B	M10	40	25	17.5	125	800	0.11
778-60540	778-60540W	778-60540B	M10	40	25	17.5	150	800	0.12
778-606240	778-606240W	778-606240B	M12	40	25	17.5	50	1000	0.08
778-606340	778-606340W	778-606340B	M12	40	25	17.5	75	1000	0.11
778-60640	778-60640W	778-60640B	M12	40	25	17.5	100	1000	0.13
778-606540	778-606540W	778-606540B	M12	40	25	17.5	125	1000	0.14
778-60740	778-60740W	778-60740B	M12	40	25	17.5	150	1000	0.16
778-60840	778-60840W	778-60840B	M12	40	25	17.5	200	1000	0.2
778-609340	778-609340W	778-609340B	M16	40	25	17.5	75	1400	0.16
778-60940	778-60940W	778-60940B	M16	40	25	17.5	100	1400	0.2
778-609540	778-609540W	778-609540B	M16	40	25	17.5	125	1400	0.22
778-61040	778-61040W	778-61040B	M16	40	25	17.5	150	1400	0.26
778-61140	778-61140W	778-61140B	M16	40	25	17.5	200	1400	0.33

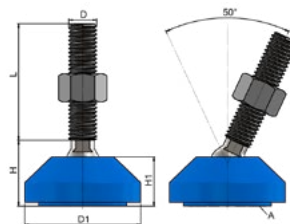
Levelling Feet - 316 Stainless Steel 40mm Plastic Base WDS 778

Stem - 316 Stainless Steel, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-70140	778-70140W	778-70140B	M8	40	25	17.5	50	600	0.06
778-701540	778-701540W	778-701540B	M8	40	25	17.5	75	600	0.06
778-70240	778-70240W	778-70240B	M8	40	25	17.5	100	600	0.08
778-70340	778-70340W	778-70340B	M10	40	25	17.5	50	800	0.07
778-703540	778-703540W	778-703540B	M10	40	25	17.5	75	800	0.08
778-70440	778-70440W	778-70440B	M10	40	25	17.5	100	800	0.1
778-704540	778-704540W	778-704540B	M10	40	25	17.5	125	800	0.11
778-70540	778-70540W	778-70540B	M10	40	25	17.5	150	800	0.12
778-706340	778-706340W	778-706340B	M12	40	25	17.5	75	1000	0.11
778-70640	778-70640W	778-70640B	M12	40	25	17.5	100	1000	0.13
778-706540	778-706540W	778-706540B	M12	40	25	17.5	125	1000	0.14
778-70740	778-70740W	778-70740B	M12	40	25	17.5	150	1000	0.16
778-709340	778-709340W	778-709340B	M16	40	25	17.5	75	1400	0.16
778-70940	778-70940W	778-70940B	M16	40	25	17.5	100	1400	0.2
778-709540	778-709540W	778-709540B	M16	40	25	17.5	125	1400	0.22
778-71040	778-71040W	778-71040B	M16	40	25	17.5	150	1400	0.26

304



WDS 778 Levelling Feet - 304 Stainless Steel 50mm Plastic Base

Stem - 304 Stainless Steel, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-60150	778-60150W	778-60150B	M8	50	29	19.5	50	600	0.07
778-601550	778-601550W	778-601550B	M8	50	29	19.5	75	600	0.08
778-60250	778-60250W	778-60250B	M8	50	29	19.5	100	600	0.09
778-60350	778-60350W	778-60350B	M10	50	29	19.5	50	800	0.08
778-603550	778-603550W	778-603550B	M10	50	29	19.5	75	800	0.1
778-60450	778-60450W	778-60450B	M10	50	29	19.5	100	800	0.11
778-604550	778-604550W	778-604550B	M10	50	29	19.5	125	800	0.12
778-60550	778-60550W	778-60550B	M10	50	29	19.5	150	800	0.13
778-606250	778-606250W	778-606250B	M12	50	29	19.5	50	1000	0.1
778-606350	778-606350W	778-606350B	M12	50	29	19.5	75	1000	0.12
778-60650	778-60650W	778-60650B	M12	50	29	19.5	100	1000	0.14
778-606550	778-606550W	778-606550B	M12	50	29	19.5	125	1000	0.15
778-60750	778-60750W	778-60750B	M12	50	29	19.5	150	1000	0.17
778-60850	778-60850W	778-60850B	M12	50	29	19.5	200	1000	0.21
778-609350	778-609350W	778-609350B	M16	50	29	19.5	75	1400	0.18
778-60950	778-60950W	778-60950B	M16	50	29	19.5	100	1400	0.21
778-609550	778-609550W	778-609550B	M16	50	29	19.5	125	1400	0.24
778-61050	778-61050W	778-61050B	M16	50	29	19.5	150	1400	0.27
778-61150	778-61150W	778-61150B	M16	50	29	19.5	200	1400	0.34

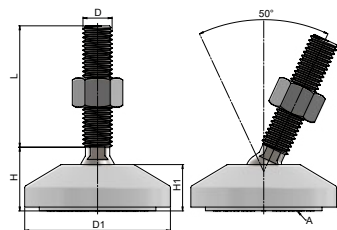
316

WDS 778 Levelling Feet - 316 Stainless Steel 50mm Plastic Base

Stem - 316 Stainless Steel, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-70150	778-70150W	778-70150B	M8	50	29	19.5	50	600	0.07
778-701550	778-701550W	778-701550B	M8	50	29	19.5	75	600	0.08
778-70250	778-70250W	778-70250B	M8	50	29	19.5	100	600	0.09
778-70350	778-70350W	778-70350B	M10	50	29	19.5	50	800	0.08
778-703550	778-703550W	778-703550B	M10	50	29	19.5	75	800	0.1
778-70450	778-70450W	778-70450B	M10	50	29	19.5	100	800	0.11
778-704550	778-704550W	778-704550B	M10	50	29	19.5	125	800	0.12
778-70550	778-70550W	778-70550B	M10	50	29	19.5	150	800	0.13
778-706350	778-706350W	778-706350B	M12	50	29	19.5	75	1000	0.12
778-70650	778-70650W	778-70650B	M12	50	29	19.5	100	1000	0.14
778-706550	778-706550W	778-706550B	M12	50	29	19.5	125	1000	0.15
778-70750	778-70750W	778-70750B	M12	50	29	19.5	150	1000	0.17
778-709350	778-709350W	778-709350B	M16	50	29	19.5	75	1400	0.18
778-70950	778-70950W	778-70950B	M16	50	29	19.5	100	1400	0.21
778-709550	778-709550W	778-709550B	M16	50	29	19.5	125	1400	0.24
778-71050	778-71050W	778-71050B	M16	50	29	19.5	150	1400	0.27



Levelling Feet - 304 Stainless Steel with 60mm Plastic Base WDS 778

Stem - 304 Stainless Steel, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

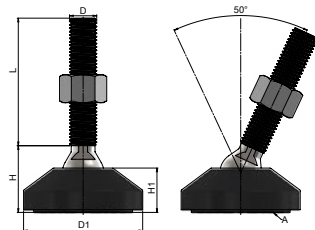
Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-60160	778-60160W	778-60160B	M8	60	25	17.5	50	600	0.08
778-601560	778-601560W	778-601560B	M8	60	25	17.5	75	600	0.08
778-60260	778-60260W	778-60260B	M8	60	25	17.5	100	600	0.1
778-60360	778-60360W	778-60360B	M10	60	25	17.5	50	800	0.09
778-603560	778-603560W	778-603560B	M10	60	25	17.5	75	800	0.1
778-60460	778-60460W	778-60460B	M10	60	25	17.5	100	800	0.12
778-604560	778-604560W	778-604560B	M10	60	25	17.5	125	800	0.13
778-60560	778-60560W	778-60560B	M10	60	25	17.5	150	800	0.14
778-606260	778-606260W	778-606260B	M12	60	25	17.5	50	1000	0.11
778-606360	778-606360W	778-606360B	M12	60	25	17.5	75	1000	0.13
778-60660	778-60660W	778-60660B	M12	60	25	17.5	100	1000	0.15
778-606560	778-606560W	778-606560B	M12	60	25	17.5	125	1000	0.16
778-60760	778-60760W	778-60760B	M12	60	25	17.5	150	1000	0.18
778-60860	778-60860W	778-60860B	M12	60	25	17.5	200	1000	0.22
778-609360	778-609360W	778-609360B	M16	60	25	17.5	75	1400	0.18
778-60960	778-60960W	778-60960B	M16	60	25	17.5	100	1400	0.22
778-609560	778-609560W	778-609560B	M16	60	25	17.5	125	1400	0.25
778-61060	778-61060W	778-61060B	M16	60	25	17.5	150	1400	0.28
778-61160	778-61160W	778-61160B	M16	60	25	17.5	200	1400	0.35

Levelling Feet - 316 Stainless Steel with 60mm Plastic Base WDS 778

Stem - 316 Stainless Steel, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

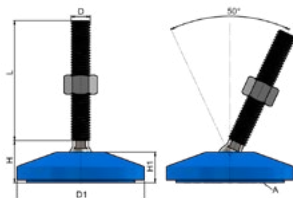
Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-70160	778-70160W	778-70160B	M8	60	25	17.5	50	600	0.08
778-701560	778-701560W	778-701560B	M8	60	25	17.5	75	600	0.08
778-70260	778-70260W	778-70260B	M8	60	25	17.5	100	600	0.1
778-70360	778-70360W	778-70360B	M10	60	25	17.5	50	800	0.09
778-703560	778-703560W	778-703560B	M10	60	25	17.5	75	800	0.1
778-70460	778-70460W	778-70460B	M10	60	25	17.5	100	800	0.12
778-704560	778-704560W	778-704560B	M10	60	25	17.5	125	800	0.13
778-70560	778-70560W	778-70560B	M10	60	25	17.5	150	800	0.14
778-706360	778-706360W	778-706360B	M12	60	25	17.5	75	1000	0.13
778-70660	778-70660W	778-70660B	M12	60	25	17.5	100	1000	0.15
778-706560	778-706560W	778-706560B	M12	60	25	17.5	125	1000	0.16
778-70760	778-70760W	778-70760B	M12	60	25	17.5	150	1000	0.18
778-709360	778-709360W	778-709360B	M16	60	25	17.5	75	1400	0.18
778-70960	778-70960W	778-70960B	M16	60	25	17.5	100	1400	0.22
778-709560	778-709560W	778-709560B	M16	60	25	17.5	125	1400	0.25
778-71060	778-71060W	778-71060B	M16	60	25	17.5	150	1400	0.28



WDS 778 Levelling Feet - 304 Stainless Steel with 70mm Plastic Base

Stem - 304 Stainless Steel, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad
Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-612370	778-612370W	778-612370B	M16	70	36	26.5	75	1400	0.2
778-61270	778-61270W	778-61270B	M16	70	36	26.5	100	1400	0.29
778-612570	778-612570W	778-612570B	M16	70	36	26.5	125	1400	0.31
778-61370	778-61370W	778-61370B	M16	70	36	26.5	150	1400	0.34
778-61470	778-61470W	778-61470B	M16	70	36.5	26.5	200	1400	0.42
778-61570	778-61570W	778-61570B	M20	70	36.5	26.5	100	1800	0.38
778-61670	778-61670W	778-61670B	M20	70	36.5	26.5	150	1800	0.49
778-61770	778-61770W	778-61770B	M20	70	36.5	26.5	200	1800	0.59
778-61870	778-61870W	778-61870B	M24	70	36.5	26.5	100	1800	0.46
778-61970	778-61970W	778-61970B	M24	70	36.5	26.5	200	1800	0.76
778-62070	778-62070W	778-62070B	M24	70	36.5	26.5	300	1800	1.06



Levelling Feet - 304 Stainless Steel with 80mm Plastic Base WDS 778

Stem - 304 Stainless Steel, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

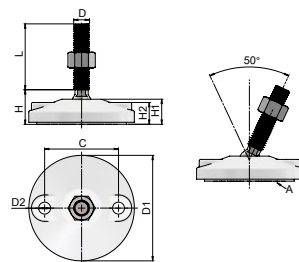
Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-60180	778-60180W	778-60180B	M8	80	25	17.5	50	600	0.11
778-601580	778-601580W	778-601580B	M8	80	25	17.5	75	600	0.11
778-60280	778-60280W	778-60280B	M8	80	25	17.5	100	600	0.12
778-60380	778-60380W	778-60380B	M10	80	25	17.5	50	800	0.12
778-603580	778-603580W	778-603580B	M10	80	25	17.5	75	800	0.13
778-60480	778-60480W	778-60480B	M10	80	25	17.5	100	800	0.14
778-604580	778-604580W	778-604580B	M10	80	25	17.5	125	800	0.15
778-60580	778-60580W	778-60580B	M10	80	25	17.5	150	800	0.17
778-606280	778-606280W	778-606280B	M12	80	25	17.5	50	1000	0.13
778-606380	778-606380W	778-606380B	M12	80	25	17.5	75	1000	0.15
778-60680	778-60680W	778-60680B	M12	80	25	17.5	100	1000	0.17
778-606580	778-606580W	778-606580B	M12	80	25	17.5	125	1000	0.18
778-60780	778-60780W	778-60780B	M12	80	25	17.5	150	1000	0.21
778-60880	778-60880W	778-60880B	M12	80	25	17.5	200	1000	0.24
778-609380	778-609380W	778-609380B	M16	80	25	17.5	75	1400	0.21
778-60980	778-60980W	778-60980B	M16	80	25	17.5	100	1400	0.24
778-609580	778-609580W	778-609580B	M16	80	25	17.5	125	1400	0.27
778-61080	778-61080W	778-61080B	M16	80	25	17.5	150	1400	0.31
778-61180	778-61180W	778-61180B	M16	80	25	17.5	200	1400	0.37

Levelling Feet - 316 Stainless Steel with 80mm Plastic Base WDS 778

Stem - 316 Stainless Steel, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
778-70180	778-70180W	778-70180B	M8	80	25	17.5	50	600	0.11
778-701580	778-701580W	778-701580B	M8	80	25	17.5	75	600	0.11
778-70280	778-70280W	778-70280B	M8	80	25	17.5	100	600	0.12
778-70380	778-70380W	778-70380B	M10	80	25	17.5	50	800	0.12
778-703580	778-703580W	778-703580B	M10	80	25	17.5	75	800	0.13
778-70480	778-70480W	778-70480B	M10	80	25	17.5	100	800	0.14
778-704580	778-704580W	778-704580B	M10	80	25	17.5	125	800	0.15
778-70580	778-70580W	778-70580B	M10	80	25	17.5	150	800	0.17
778-706380	778-706380W	778-706380B	M12	80	25	17.5	75	1000	0.15
778-70680	778-70680W	778-70680B	M12	80	25	17.5	100	1000	0.17
778-706580	778-706580W	778-706580B	M12	80	25	17.5	125	1000	0.19
778-70780	778-70780W	778-70780B	M12	80	25	17.5	150	1000	0.21
778-709380	778-709380W	778-709380B	M16	80	25	17.5	75	1400	0.21
778-70980	778-70980W	778-70980B	M16	80	25	17.5	100	1400	0.24
778-709580	778-709580W	778-709580B	M16	80	25	17.5	125	1400	0.27
778-71080	778-71080W	778-71080B	M16	80	25	17.5	150	1400	0.31

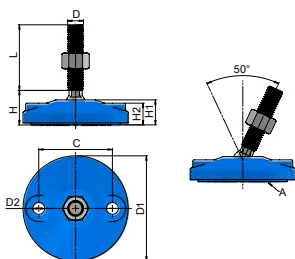


WDS 778 Levelling Feet - 304 Stainless Steel with Bolt Down Plastic Base

Stem - 304 Stainless Steel, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	C	D	D1	D2	H	H1	H2	L	P	Weight (kg)
778-60182	778-60182W	778-60182B	56	M8	80	9	25	17.5	15	50	600	0.1
778-601582	778-601582W	778-601582B	56	M8	80	9	25	17.5	15	75	600	0.11
778-60282	778-60282W	778-60282B	56	M8	80	9	25	17.5	15	100	600	0.12
778-60382	778-60382W	778-60382B	56	M10	80	9	25	17.5	15	50	800	0.12
778-603582	778-603582W	778-603582B	56	M10	80	9	25	17.5	15	75	800	0.13
778-60482	778-60482W	778-60482B	56	M10	80	9	25	17.5	15	100	800	0.14
778-604582	778-604582W	778-604582B	56	M10	80	9	25	17.5	15	125	800	0.15
778-60582	778-60582W	778-60582B	56	M10	80	9	25	17.5	15	150	800	0.17
778-606282	778-606282W	778-606282B	56	M12	80	9	25	17.5	15	50	1000	0.13
778-606382	778-606382W	778-606382B	56	M12	80	9	25	17.5	15	75	1000	0.15
778-60682	778-60682W	778-60682B	56	M12	80	9	25	17.5	15	100	1000	0.17
778-606582	778-606582W	778-606582B	56	M12	80	9	25	17.5	15	125	1000	0.18
778-60782	778-60782W	778-60782B	56	M12	80	9	25	17.5	15	150	1000	0.21
778-60882	778-60882W	778-60882B	56	M12	80	9	25	17.5	15	200	1000	0.24
778-609382	778-609382W	778-609382B	56	M16	80	9	25	17.5	15	75	1400	0.21
778-60982	778-60982W	778-60982B	56	M16	80	9	25	17.5	15	100	1400	0.24
778-609582	778-609582W	778-609582B	56	M16	80	9	25	17.5	15	125	1400	0.27
778-61082	778-61082W	778-61082B	56	M16	80	9	25	17.5	15	150	1400	0.31
778-61182	778-61182W	778-61182B	56	M16	80	9	25	17.5	15	200	1400	0.37
778-612302	778-612302W	778-612302B	75	M16	100	11	36	24	21	75	1400	0.21
778-61202	778-61202W	778-61202B	75	M16	100	11	36	24	21	100	1400	0.35
778-612502	778-612502W	778-612502B	75	M16	100	11	36	24	21	125	1400	0.37
778-61302	778-61302W	778-61302B	75	M16	100	11	36	24	21	150	1400	0.41
778-61402	778-61402W	778-61402B	75	M16	100	11	36	24	21	100	1400	0.48
778-61502	778-61502W	778-61502B	75	M20	100	11	36	24	21	100	1800	0.45
778-61602	778-61602W	778-61602B	75	M20	100	11	36	24	21	150	1800	0.55
778-61702	778-61702W	778-61702B	75	M20	100	11	36	24	21	200	1800	0.65
778-61802	778-61802W	778-61802B	75	M24	100	11	36	24	21	100	1800	0.53
778-61902	778-61902W	778-61902B	75	M24	100	11	36	24	21	200	1800	0.83
778-62002	778-62002W	778-62002B	75	M24	100	11	36	24	21	300	1800	1.13
778-612322	-	-	93	M16	125	13	46	35	27	75	1400	0.36
778-61222	-	-	93	M16	125	13	46	35	27	100	1400	0.46
778-612522	-	-	93	M16	125	13	46	35	27	125	1400	0.48
778-61322	-	-	93	M16	125	13	46	35	27	150	1400	0.52
778-61422	-	-	93	M16	125	13	46	35	27	200	1400	0.48
778-61522	-	-	93	M20	125	13	46	35	27	100	1800	0.55
778-61622	-	-	93	M20	125	13	46	35	27	150	1800	0.66
778-61722	-	-	93	M20	125	13	46	35	27	200	1800	0.76
778-61822	-	-	93	M24	125	13	46	35	27	100	1800	0.64
778-61922	-	-	93	M24	125	13	46	35	27	200	1800	0.94
778-62022	-	-	93	M24	125	13	46	35	27	300	1800	1.22



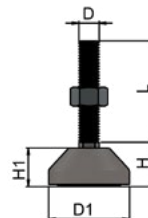
Levelling Feet - 316 Stainless Steel with Bolt Down 80mm Plastic Base **WDS 778**

Stem - 316 Stainless Steel, Base - Polypropylene black, white or blue fitted with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	C	D	D1	D2	H	H1	H2	L	P	Weight (kg)
778-70182	778-70182W	778-70182B	56	M8	80	9	25	17.5	15	50	600	0.1
778-701582	778-701582W	778-701582B	56	M8	80	9	25	17.5	15	75	600	0.11
778-70282	778-70282W	778-70282B	56	M8	80	9	25	17.5	15	100	600	0.12
778-70382	778-70382W	778-70382B	56	M10	80	9	25	17.5	15	50	800	0.12
778-703582	778-703582W	778-703582B	56	M10	80	9	25	17.5	15	75	800	0.13
778-70482	778-70482W	778-70482B	56	M10	80	9	25	17.5	15	100	800	0.14
778-704582	778-704582W	778-704582B	56	M10	80	9	25	17.5	15	125	800	0.15
778-70582	778-70582W	778-70582B	56	M10	80	9	25	17.5	15	150	800	0.17
778-706382	778-706382W	778-706382B	56	M12	80	9	25	17.5	15	75	1000	0.15
778-70682	778-70682W	778-70682B	56	M12	80	9	25	17.5	15	100	1000	0.17
778-706582	778-706582W	778-706582B	56	M12	80	9	25	17.5	15	125	1000	0.18
778-70782	778-70782W	778-70782B	56	M12	80	9	25	17.5	15	150	1000	0.21
778-709382	778-709382W	778-709382B	56	M16	80	9	25	17.5	15	75	1400	0.21
778-70982	778-70982W	778-70982B	56	M16	80	9	25	17.5	15	100	1400	0.24
778-709582	778-709582W	778-709582B	56	M16	80	9	25	17.5	15	125	1400	0.27
778-71082	778-71082W	778-71082B	56	M16	80	9	25	17.5	15	150	1400	0.31

304



WDS 778 Levelling Feet – 304 Stainless Steel with 304 Stainless Steel 40mm Base

Stem - 304 Stainless Steel, Base - 304 Stainless Steel and fitted with PVC rubber pad, black

P = Max Static Load (kg)

304 SS	D	D1	H	H1	L	P	Weight (kg)
778-80140	M8	40	22	19	50	600	0.14
778-801540	M8	40	22	19	75	600	0.14
778-80240	M8	40	22	19	100	600	0.15
778-80340	M10	40	22	19	50	800	0.15
778-803540	M10	40	22	19	75	800	0.16
778-80440	M10	40	22	19	100	800	0.18
778-804540	M10	40	22	19	125	800	0.19
778-80540	M10	40	22	19	150	800	0.2
778-806240	M12	40	22	19	50	1000	0.17
778-806340	M12	40	22	19	75	1000	0.19
778-80640	M12	40	22	19	100	1000	0.2
778-806540	M12	40	22	19	125	1000	0.22
778-80740	M12	40	22	19	150	1000	0.24
778-80840	M12	40	22	19	200	1000	0.28
778-809340	M16	40	22	19	75	1400	0.23
778-80940	M16	40	22	19	100	1400	0.26
778-809540	M16	40	22	19	125	1400	0.31
778-81040	M16	40	22	19	150	1400	0.34
778-81140	M16	40	22	19	200	1400	0.43

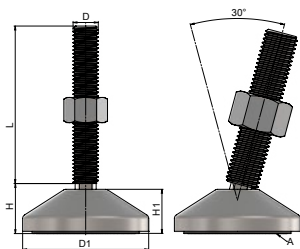
316

WDS 778 Levelling Feet – 316 Stainless Steel with 316 Stainless Steel 40mm Polished Base

Stem - 316 Stainless Steel, Base - 316 Stainless Steel and fitted with PVC rubber pad, blue with antimicrobial compound

P = Max Static Load (kg)

316 SS	D	D1	H	H1	L	P	Weight (kg)
778-90140	M8	40	22	19	50	600	0.14
778-901540	M8	40	22	19	75	600	0.14
778-90240	M8	40	22	19	100	600	0.15
778-90340	M10	40	22	19	50	800	0.15
778-903540	M10	40	22	19	75	800	0.16
778-90440	M10	40	22	19	100	800	0.18
778-904540	M10	40	22	19	125	800	0.19
778-90540	M10	40	22	19	150	800	0.2
778-906340	M12	40	22	19	75	1000	0.19
778-90640	M12	40	22	19	100	1000	0.2
778-906540	M12	40	22	19	125	1000	0.22
778-90740	M12	40	22	19	200	1000	0.28
778-909340	M16	40	22	19	75	1400	0.23
778-90940	M16	40	22	19	100	1400	0.26
778-909540	M16	40	22	19	125	1400	0.31
778-91040	M16	40	22	19	150	1400	0.34



Levelling Feet – 304 Stainless Steel with 304 Stainless Steel 60mm Base WDS 778

Stem - 304 Stainless Steel, Base - 314 Stainless Steel and fitted with PVC rubber pad, black

P = Max Static Load (kg)

304 SS	D	D1	H	H1	L	P	Weight (kg)
778-80160	M8	60	23	20	50	600	0.2
778-801560	M8	60	23	20	75	600	0.2
778-80260	M8	60	23	20	100	600	0.21
778-80360	M10	60	23	20	50	800	0.21
778-803560	M10	60	23	20	75	800	0.22
778-80460	M10	60	23	20	100	800	0.23
778-804560	M10	60	23	20	125	800	0.25
778-80560	M10	60	23	20	150	800	0.26
778-806260	M12	60	23	20	50	1000	0.22
778-806360	M12	60	23	20	75	1000	0.25
778-80660	M12	60	23	20	100	1000	0.26
778-806560	M12	60	23	20	125	1000	0.28
778-80760	M12	60	23	20	150	1000	0.3
778-80860	M12	60	23	20	200	1000	0.33
778-80960	M16	60	23	20	100	1400	0.16
778-809360	M16	60	23	20	75	1400	0.3
778-809560	M16	60	23	20	125	1400	0.36
778-81060	M16	60	23	20	150	1400	0.4
778-81160	M16	60	23	20	200	1400	0.16

Levelling Feet – 316 Stainless Steel with 316 Stainless Steel 60mm Polished Base WDS 778

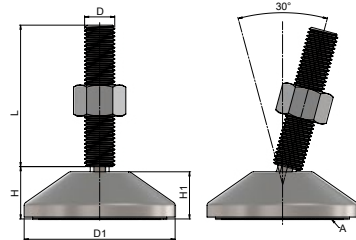
Stem - 316 Stainless Steel, Base - 316 Stainless Steel and fitted with PVC rubber pad, blue with antimicrobial compound

P = Max Static Load (kg)

316 SS	D	D1	H	H1	L	P	Weight (kg)
778-90160	M8	60	23	20	50	600	0.2
778-901560	M8	60	23	20	75	600	0.21
778-90260	M8	60	23	20	100	600	0.22
778-90360	M10	60	23	20	50	800	0.21
778-903560	M10	60	23	20	75	800	0.23
778-90460	M10	60	23	20	100	800	0.24
778-904560	M10	60	23	20	125	800	0.25
778-90560	M10	60	23	20	150	800	0.26
778-906360	M12	60	23	20	75	1000	0.25
778-90660	M12	60	23	20	100	1000	0.27
778-906560	M12	60	23	20	125	1000	0.28
778-90760	M12	60	23	20	150	1000	0.3
778-909360	M16	60	23	20	75	1400	0.31
778-90960	M16	60	23	20	100	1400	0.34
778-909560	M16	60	23	20	125	1400	0.37
778-91060	M16	60	23	20	150	1400	0.4

304

316



WDS 778 Levelling Feet – 304 Stainless Steel with 304 Stainless Steel 80mm Base

Stem - 304 Stainless Steel, Base - 304 Stainless Steel and fitted with PVC rubber pad, black

P = Max Static Load (kg)

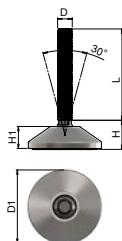
304 SS	D	D1	H	H1	L	P	Weight (kg)
778-80180	M8	80	26	24	50	600	0.33
778-801580	M8	80	26	24	75	600	0.33
778-80280	M8	80	26	24	100	600	0.34
778-80380	M10	80	26	24	50	800	0.34
778-803580	M10	80	26	24	75	800	0.35
778-80480	M10	80	26	24	100	800	0.36
778-804580	M10	80	26	24	125	800	0.38
778-80580	M10	80	26	24	150	800	0.39
778-806280	M12	80	26	24	50	1000	0.35
778-806380	M12	80	26	24	75	1000	0.38
778-80680	M12	80	26	24	100	1000	0.39
778-806580	M12	80	26	24	125	1000	0.41
778-80780	M12	80	26	24	150	1000	0.43
778-80880	M12	80	26	24	200	1000	0.46
778-809380	M16	80	26	24	75	1400	0.43
778-80980	M16	80	26	24	100	1400	0.29
778-809580	M16	80	26	24	125	1400	0.49
778-81080	M16	80	26	24	150	1400	0.53
778-81180	M16	80	26	24	200	1400	0.29
778-82480	M20	80	32	24	100	1400	0.61
778-82580	M20	80	32	24	150	1800	0.72
778-82680	M20	80	32	24	200	1800	0.82
778-82780	M24	80	32	24	100	1800	0.79
778-82880	M24	80	32	24	200	1800	1.09
778-82990	M24	80	32	24	300	1800	1.39

WDS 778 Levelling Feet – 316 Stainless Steel with 316 Stainless Steel 80mm Polished Base

Stem - 316 Stainless Steel, Base - 316 Stainless Steel and fitted with PVC rubber pad, blue with antimicrobial compound

P = Max Static Load (kg)

316 SS	D	D1	H	H1	L	P	Weight (kg)
778-90180	M8	80	26	24	50	600	0.34
778-901580	M8	80	26	24	75	600	0.34
778-90280	M8	80	26	24	100	600	0.35
778-90380	M10	80	26	24	50	800	0.35
778-903580	M10	80	26	24	75	800	0.36
778-90480	M10	80	26	24	100	800	0.37
778-904580	M10	80	26	24	125	800	0.39
778-90580	M10	80	26	24	150	800	0.4
778-906380	M12	80	26	24	75	1000	0.39
778-90680	M12	80	26	24	100	1000	0.4
778-906580	M12	80	26	24	125	1000	0.42
778-90780	M12	80	26	24	150	1000	0.44
778-909380	M16	80	26	24	75	1400	0.44
778-90980	M16	80	26	24	100	1400	0.47
778-909580	M16	80	26	24	125	1400	0.5
778-91080	M16	80	26	24	150	1400	0.54

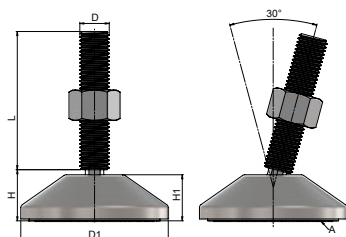


Heavy Duty Stainless Steel Levelling Feet with 304 Stainless Steel 80mm Base **WDS 778**

Stem - 304 Stainless Steel, Base - 304 Stainless Steel and fitted with PVC rubber pad, black

P = Max Static Load (kg)

WDS No.	D	D1	H	H1	L	P	Weight (kg)
778-82180	M16	80	31.8	24	100	1400	0.29
778-82280	M16	80	31.8	24	150	1400	0.29
778-82380	M16	80	31.8	24	200	1400	0.29



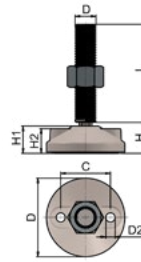
Levelling Feet – 304 Stainless Steel with 304 Stainless Steel 100mm Base **WDS 778**

Stem - 304 Stainless Steel, Base - 304 Stainless Steel and fitted with PVC rubber pad, black

P = Max Static Load (kg)

WDS No.	D	D1	H	H1	L	P	Weight (kg)
778-812300	M16	100	34.8	28	75	1400	0.59
778-81200	M16	100	34.8	28	100	1400	0.45
778-812500	M16	100	34.8	28	125	1400	0.71
778-81300	M16	100	34.8	28	150	1400	0.74
778-81400	M16	100	34.8	28	200	1400	0.81
778-81500	M20	100	34.8	28	100	1800	0.78
778-81600	M20	100	34.8	28	150	1800	0.88
778-81700	M20	100	34.8	28	200	1800	0.98
778-81800	M24	100	34.8	28	100	1800	0.95
778-81900	M24	100	34.8	28	200	1800	1.25
778-82000	M24	100	34.8	28	300	1800	1.55

316

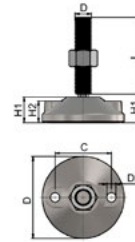


WDS 778 Levelling Feet – 316 Stainless Steel with 316 Stainless Steel 60mm Bolt Down Polished Base

Stem - 316 Stainless Steel, Base - 316 Stainless Steel and fitted with PVC rubber pad, blue with antimicrobial compound
P = Max Static Load (kg)

WDS No.	C	D	D1	D2	H	H1	H2	L	P	Weight (kg)
778-90162	38	M8	60	7	23	20	18	50	600	0.21
778-901562	38	M8	60	7	23	20	18	75	600	0.22
778-90262	38	M8	60	7	23	20	18	100	600	0.23
778-90362	38	M10	60	7	23	20	18	50	800	0.23
778-903562	38	M10	60	7	23	20	18	75	800	0.24
778-90462	38	M10	60	7	23	20	18	100	800	0.25
778-904562	38	M10	60	7	23	20	18	125	800	0.26
778-90562	38	M10	60	7	23	20	18	150	800	0.27
778-906362	38	M12	60	7	23	20	18	75	1000	0.26
778-90662	38	M12	60	7	23	20	18	100	1000	0.28
778-906562	38	M12	60	7	23	20	18	125	1000	0.29
778-90762	38	M12	60	7	23	20	18	150	1000	0.32
778-909362	38	M16	60	7	23	20	18	75	1400	0.32
778-90962	38	M16	60	7	23	20	18	100	1400	0.35
778-909562	38	M16	60	7	23	20	18	125	1400	0.38
778-91062	38	M16	60	7	23	20	18	150	1400	0.42

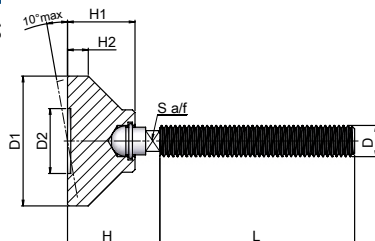
316



WDS 778 Levelling Feet – 316 Stainless Steel with 316 Stainless Steel 80mm Bolt Down Polished Base

Stem - 316 Stainless Steel, Base - 316 Stainless Steel and fitted with PVC rubber pad, blue with antimicrobial compound
P = Max Static Load (kg)

WDS No.	C	D	D1	D2	H	H1	H2	L	P	Weight (kg)
778-90182	55	M8	80	9	26	24	20	50	600	0.36
778-901582	55	M8	80	9	26	24	20	75	600	0.37
778-90282	55	M8	80	9	26	24	20	100	600	0.38
778-90382	55	M10	80	9	26	24	20	50	800	0.37
778-903582	55	M10	80	9	26	24	20	75	800	0.39
778-90482	55	M10	80	9	26	24	20	100	800	0.4
778-904582	55	M10	80	9	26	24	20	125	800	0.41
778-90582	55	M10	80	9	26	24	20	150	800	0.42
778-906382	55	M12	80	9	26	24	20	75	1000	0.41
778-90682	55	M12	80	9	26	24	20	100	1000	0.43
778-906582	55	M12	80	9	26	24	20	125	1000	0.44
778-90782	55	M12	80	9	26	24	20	150	1000	0.46
778-909382	55	M16	80	9	26	24	20	75	1400	0.47
778-90982	55	M16	80	9	26	24	20	100	1400	0.5
778-909582	55	M16	80	9	26	24	20	125	1400	0.53
778-91082	55	M16	80	9	26	24	20	150	1400	0.56

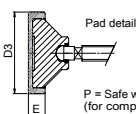
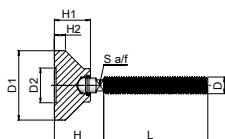


Levelling Foot - 316 Stainless Steel **WDS 818**

Stainless Steel BS 970 Gr 316S11

P = Max Static Load (kg)

WDS No.	D	D1	D2	H	H1	H2	L	P	S	Weight (kg)
818-206	M6	25	13	21	15	4	60	120	7	0.05
818-208	M8	30	15	24	17	5	80	175	6	0.09
818-210	M10	35	18	28	20	6	100	300	7	0.16
818-212150	M12	50	25	35	26	8	150	500	9	0.38
818-21275	M12	50	25	35	26	8	75	500	9	0.33
818-216100	M16	75	35	41	31	10	100	900	12	0.84
818-216200	M16	75	35	41	31	10	200	900	12	0.99
818-220100	M20	100	50	51	36	12	100	1500	12	1.73
818-220200	M20	100	50	51	36	12	200	1500	12	1.93



P = Safe working load in kg
(for compressive static load only)



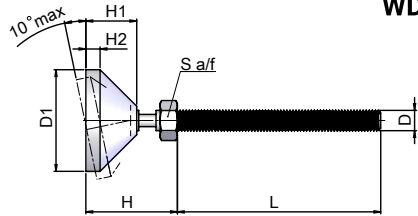
Levelling Foot - 316 Stainless Steel with PVC Pad **WDS 818**

Stainless Steel BS 970 Gr 316S11

P = Max Static Load (kg)

WDS No.	D	D1	D2	D3	E	H	H1	H2	L	P	S	Weight (kg)
818-206P	M6	25	13	32	12	21	15	4	60	120	7	0.05
818-208P	M8	30	15	38	14	24	17	5	80	175	7	0.01
818-210P	M10	35	18	43	15	28	20	6	100	300	9	0.16
818-212P75	M12	50	25	60	19	35	26	8	75	500	9	0.33
818-212P150	M12	50	25	60	19	35	26	8	150	500	9	0.38
818-216P100	M16	75	35	83	19	41	31	10	100	900	12	0.84
818-216P200	M16	75	35	83	19	41	31	10	200	900	12	0.99
818-220P200	M20	100	50	108	24	51	36	12	200	1500	12	1.93
818-220P100	M20	100	50	108	24	51	36	12	100	1500	12	1.73

304

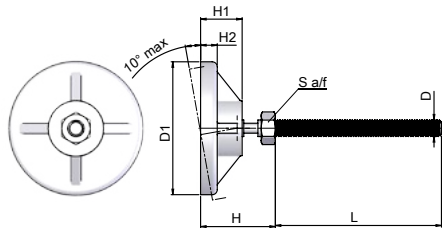


WDS 818 Levelling Foot - 304 Stainless Steel - Light Duty - Conical Base

Stem - 304 Stainless Steel, Base - Moulded White Polypropylene
P = Max Static Load (kg)

WDS No.	D	D1	H	H1	H2	L	P	S	Weight (kg)
818-401	M10	50	45	25	7	100	150	17	0.11
818-407	M12	50	45	25	7	100	200	19	0.14
818-408	M12	80	45	25	10	100	200	19	0.16
818-409	M12	50	45	25	7	150	200	19	0.18
818-410	M12	80	45	25	10	150	200	19	0.2
818-414	M16	80	50	25	10	150	450	24	0.37
818-416	M16	105	50	25	10	150	450	24	0.39
818-418	M16	105	50	25	10	200	450	24	0.44
818-420	M20	80	50	25	10	150	550	30	0.46
818-422	M20	105	50	25	10	150	550	30	0.47
818-423	M20	105	50	25	10	200	550	30	0.58

304



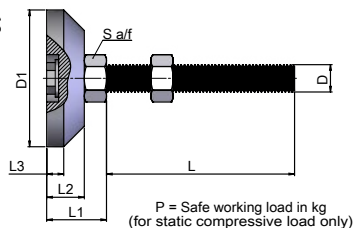
WDS 818 Levelling Foot - 304 Stainless Steel - Light Duty - Bolt Down Base

Stem - 304 Stainless Steel, Base - Moulded White Polypropylene
P = Max Static Load (kg)

WDS No.	D	D1	H	H1	H2	L	P	S	Weight (kg)
818-436	M12	80	45	25	10	100	200	19	0.16
818-437	M12	80	45	25	10	150	200	19	0.2
818-443	M16	80	50	25	10	100	450	24	0.32
818-444	M16	80	52	25	10	150	450	24	0.37
818-446	M16	105	50	25	10	200	450	24	0.44
818-449	M20	80	50	25	10	150	550	30	0.46
818-452	M20	105	50	25	10	200	550	30	0.58



316

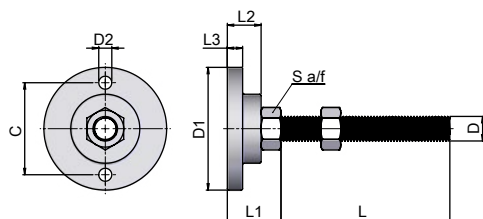


Levelling Foot - Heavy Duty - Conical Base - Stainless Steel 316 WDS 818

316 Stainless Steel

P = Max Static Load (kg)

WDS No.	D	D1	L	L1	L2	L3	P	S	Weight (kg)
818-501	M16	80	100	45	22	10	2200	24	0.9
818-503	M16	80	150	45	22	10	2200	24	0.95
818-505	M16	80	200	45	22	10	2200	24	1.03
818-507	M20	80	100	50	22	10	2200	30	0.88
818-509	M20	80	150	50	22	10	2200	30	1.21
818-511	M20	80	200	50	22	10	2200	30	1.18



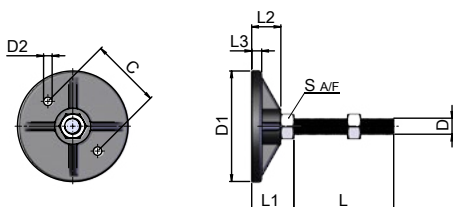
304

Levelling Foot - Heavy Duty - Bolt Down Base - 304 Stainless Steel WDS 818

304 Stainless Steel

P = Max Static Load (kg)

WDS No.	C	D	D1	D2	L	L1	L2	L3	P	S	Weight (kg)
818-551	60	M16	80	8.5	100	38	23	10	2200	24	0.68
818-553	60	M16	80	8.5	150	38	23	10	2200	24	0.76
818-555	60	M16	80	8.5	200	38	23	10	2200	24	0.82
818-557	60	M20	80	8.5	100	38	23	10	2200	30	0.81
818-559	60	M20	80	8.5	150	38	23	10	2200	30	0.88
818-561	60	M20	80	8.5	200	38	23	10	2200	30	1.08



304

Stainless Steel - Heavy Duty - Moulded Black Polypropylene Bolt Down Base WDS 818

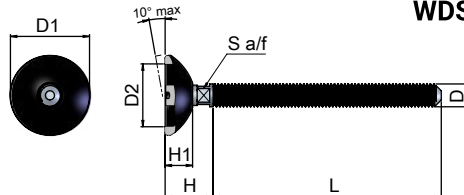
Stem - 304 Stainless Steel, Base - Moulded black polypropylene

P = Max Static Load (kg)

WDS No.	C	D	D1	D2	L	L1	L2	L3	P	S	Weight (kg)
818-601	70	M16	110	8.5	100	45	30	12	1600	24	1.08
818-603	70	M16	110	8.5	150	45	30	12	1600	24	0.34
818-605	70	M16	110	8.5	200	45	30	12	1600	24	0.48
818-607	70	M20	110	8.5	100	45	30	12	1600	30	0.51
818-609	70	M20	110	8.5	150	45	30	12	1600	30	0.61
818-611	70	M20	110	8.5	200	45	30	12	1600	30	0.71

303

316



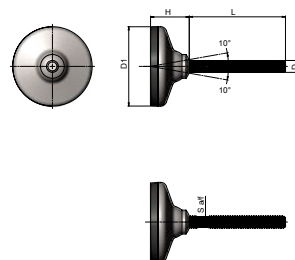
WDS 873 Levelling Foot - 303/316 Grade Stainless Steel with Plastic Base

Stem - 303/316 Stainless Steel, Base - Anti-microbial, Plastic

P = Max Static Load (kg)

303 SS	316 SS	D	D1	D2	H	H1	L	P	S	Weight (kg)
873-310100A	873-410100A	M10	35	28	22.5	12	100	150	7	0.07
873-310100B	873-410100B	M10	50	42	26.5	16	100	250	7	0.07
873-310150A	873-410150A	M10	35	28	22.5	12	150	150	7	0.1
873-310150B	873-410150B	M10	50	42	26.5	16	150	250	7	0.1
873-31075A	873-41075A	M10	35	28	22.5	12	75	150	7	0.05
873-31075B	873-41075B	M10	50	42	26.5	16	75	250	7	0.05
873-312100A	873-412100A	M12	35	28	22.5	12	100	150	8	0.1
873-312100B	873-412100B	M12	50	42	26.5	16	100	250	8	0.1
873-312150A	873-412150A	M12	35	28	22.5	12	150	150	8	0.14
873-312150B	873-412150B	M12	50	42	26.5	16	150	250	8	0.14
873-31275A	873-41275A	M12	35	28	22.5	12	75	150	8	0.08
873-31275B	873-41275B	M12	50	42	26.5	16	75	250	8	0.08
873-316100C	873-416100C	M16	50	42	33.5	18	100	400	12	0.19
873-316100D	873-416100D	M16	80	68	37.5	22	100	500	12	0.19
873-316150C	873-416150C	M16	50	42	33.5	18	150	400	12	0.27
873-316150D	873-416150D	M16	80	68	37.5	22	150	500	12	0.27
873-316200C	873-416200C	M16	50	42	33.5	18	200	400	12	0.34
873-316200D	873-416200D	M16	80	68	37.5	22	200	500	12	0.34
873-320100C	873-420100C	M20	50	42	33.5	18	100	400	16	0.28
873-320100D	873-420100D	M20	80	68	37.5	22	100	500	16	0.28
873-320150C	873-420150C	M20	50	42	33.5	18	150	400	16	0.41
873-320150D	873-420150D	M20	80	68	37.5	22	150	500	16	0.41
873-320200C	873-420200C	M20	50	42	33.5	18	200	400	16	0.53
873-320200D	873-420200D	M20	80	68	37.5	22	200	500	16	0.53

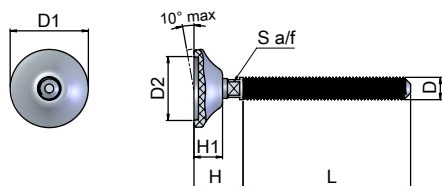
316



WDS 890 Stainless Steel 316 Hygienic Levelling Feet - Non Slip

316 Stainless Steel

WDS No.	D	D1	H	L	P1 (Kn)	P2 (Kn)	S	Weight (kg)
890-312100B	M12	80	39	97	4	15	10	0.29
890-312150B	M12	80	39	139	4	10.9	10	0.33
890-312180B	M12	80	39	172	4	7.1	10	0.36
890-316080B	M16	80	39	97	4	15	13	0.35
890-316150B	M16	80	39	139	4	15	13	0.4
890-316180B	M16	80	39	172	4	15	13	0.51
890-316100C	M16	105	39	97	4	22	13	0.54
890-316150C	M16	105	39	139	4	22	13	0.59
890-316180C	M16	105	39	172	4	22	13	0.7



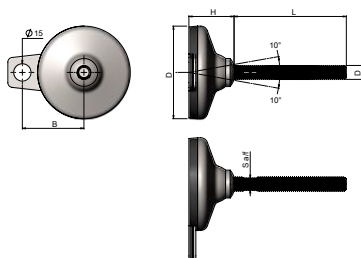
303

316

Levelling Foot - 303/316 Stainless Steel Stem and Base WDS 873

303/316 Stainless Steel
P = Max Static Load (kg)

303 SS	316 SS	D	D1	D2	H	H1	L	P	S	Weight (kg)
873-310100J	873-410100R	M10	35	28	23.5	12.8	100	300	7	0.12
873-310100K	873-410100S	M10	50	42	26.4	15.7	100	300	7	0.2
873-310150J	873-410150R	M10	35	28	23.5	12.8	150	300	7	0.15
873-310150K	873-410150S	M10	50	42	26.4	15.7	150	300	7	0.23
873-31075J	873-41075R	M10	35	28	23.5	12.8	75	300	7	0.11
873-31075K	873-41075S	M10	50	42	26.4	15.7	75	300	7	0.19
873-312100J	873-412100R	M12	35	28	23.5	12.8	100	500	8	0.15
873-312100K	873-412100S	M12	50	42	26.4	15.7	100	500	8	0.23
873-312150J	873-412150R	M12	35	28	23.5	12.8	150	500	8	0.2
873-312150K	873-412150S	M12	50	42	26.4	15.7	150	500	8	0.28
873-31275J	873-41275R	M12	35	28	23.5	12.8	75	500	8	0.13
873-31275K	873-41275S	M12	50	42	26.4	15.7	75	500	8	0.21
873-316100L	873-416100T	M16	50	42	33.8	19	100	900	12	0.35
873-316100M	873-416100U	M16	80	68	37.1	22.3	100	900	12	0.7
873-316150L	873-416150T	M16	50	42	33.8	19	150	900	12	0.43
873-316150M	873-416150U	M16	80	68	37.1	22.3	150	900	12	0.78
873-316200L	873-416200T	M16	50	42	33.8	19	200	900	12	0.51
873-316200M	873-416200U	M16	80	68	37.1	22.3	200	900	12	0.86
873-320100L	873-420100T	M20	50	42	33.8	19	100	1500	16	0.45
873-320100M	873-420100U	M20	80	68	37.1	22.3	100	1500	16	0.8
873-320150L	873-420150T	M20	50	42	33.8	19	150	1500	16	0.57
873-320150M	873-420150U	M20	80	68	37.1	22.3	150	1500	16	0.92
873-320200L	873-420200T	M20	50	42	33.8	19	200	1500	16	0.69
873-320200M	873-420200U	M20	80	68	37.1	22.3	200	1500	16	1.04



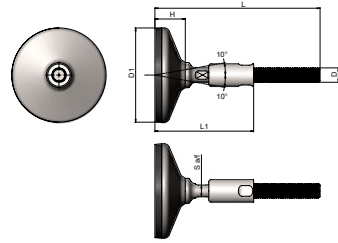
316

Stainless Steel 316 Bolt Down Hygienic Levelling Feet - Non Slip WDS 890

316 Stainless Steel

WDS No.	B	D	D1	H	L	P1 (Kn)	P2 (Kn)	S	Weight (kg)
890-412100B	53.2	M12	80	39	97	4	15	10	0.31
890-412150B	53.2	M12	80	39	139	4	10.9	10	0.35
890-412180B	53.2	M12	80	39	172	4	7.1	10	0.38
890-416100B	53.2	M16	80	39	97	4	15	13	0.37
890-416150B	53.2	M16	80	39	139	4	15	13	0.42
890-416180B	53.2	M16	80	39	172	4	15	13	0.53
890-416100C	70	M16	105	39	97	4	22	13	0.56
890-416150C	70	M16	105	39	139	4	22	13	0.61
890-416180C	70	M16	105	39	172	4	22	13	0.72

316

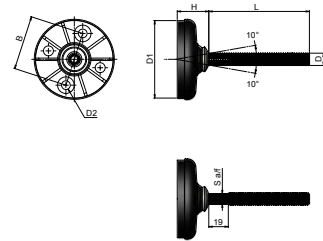


WDS 890 Stainless Steel 316 Hygienic Levelling Feet - EHEDG Certified

316 Stainless Steel

WDS No.	D	D1	H	L	L1 Max	L1 Min	P1 (Kn)	P2 (Kn)	S	Weight (kg)
890-216150C	M16	105	34	184	146	110	4	22	13	0.76
890-216210C	M16	105	34	244	140	206	4	22	13	0.9

316

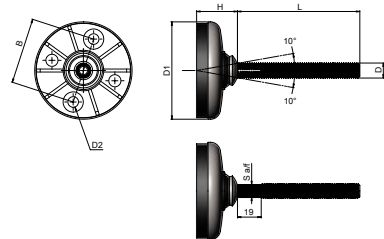


WDS 890 Stainless Steel 316 Hygienic Plastic Covered Base Levelling Feet with Optional Bolt Down

316 Stainless Steel

WDS No.	C	D	D1	D2	H	L	P1 (Kn)	P2 (Kn)	S	Weight (kg)
890-512100B	53	M12	80	8.5	31	98	0.3	15	10	0.14
890-512150B	53	M12	80	8.5	31	140	0.3	10.8	10	0.18
890-516100B	53	M16	80	8.5	31	98	0.3	15	13	0.2
890-516150B	53	M16	80	8.5	31	140	0.3	15	13	0.25
890-516180B	53	M16	80	8.5	31	173	0.3	15	13	0.32
890-512100C	63	M12	100	11	36	98	0.3	16.5	10	0.18
890-512150C	63	M12	100	11	36	140	0.3	10.8	10	0.22
890-516100C	63	M16	100	11	36	98	0.3	20	13	0.24
890-516150C	63	M16	100	11	36	140	0.3	20	13	0.29
890-516180C	63	M16	100	11	36	173	0.3	20	13	0.36

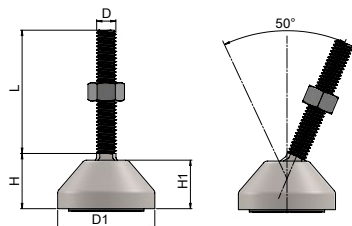
316



WDS 890 Stainless Steel 316 Covered Base Hygienic Levelling Feet - Non Slip

316 Stainless Steel

WDS No.	C	D	D1	D2	H	L	P1 (Kn)	P2 (Kn)	S	Weight (kg)
890-612100B	53	M12	80	8.5	33	98	0.3	15	10	0.17
890-612150B	53	M12	80	8.5	33	140	0.3	10.8	10	0.21
890-616100B	53	M16	80	8.5	33	98	0.3	15	13	0.22
890-616150B	53	M16	80	8.5	33	140	0.3	15	13	0.27
890-616180B	53	M16	80	8.5	33	173	0.3	15	13	0.34
890-612100C	63	M12	100	11	33	98	0.3	16.5	10	0.38
890-616100C	63	M16	100	11	33	98	0.3	20	13	0.44
890-616150C	63	M16	100	11	33	140	0.3	20	13	0.49
890-616180C	63	M16	100	11	33	173	0.3	20	13	0.56



304

IN"

Levelling Feet (Inch) - 304 Stainless Steel with 304 Stainless Steel 40mm Base WDS 977

Stem - 304 Stainless Steel, Base - 304 Stainless Steel and fitted with PVC rubber pad, black

P = Max Static Load (kg)

304 SS	D	D1	H	H1	L	P	Weight (kg)
977-816240	5/16-18 UNC	40	22	19	50.8	600	0.14
977-816340	5/16-18 UNC	40	22	19	76.2	600	0.15
977-818240	3/8"-16 UNC	40	22	19	50.8	800	0.16
977-818340	3/8"-16 UNC	40	22	19	76.2	800	0.17
977-818440	3/8"-16 UNC	40	22	19	101.6	800	0.18
977-818540	3/8"-16 UNC	40	22	19	127	800	0.19
977-818640	3/8"-16 UNC	40	22	19	152	800	0.21
977-822340	1/2"-13 UNC	40	22	19	76.2	1000	0.19
977-822440	1/2"-13 UNC	40	22	19	101.6	1000	0.21
977-822540	1/2"-13 UNC	40	22	19	127	1000	0.23
977-822640	1/2"-13 UNC	40	22	19	152	1000	0.25
977-826440	5/8"-11 UNC	40	22	19	101.6	1400	0.28
977-826540	5/8"-11 UNC	40	22	19	127	1400	0.31
977-826640	5/8"-11 UNC	40	22	19	152	1400	0.34
977-826840	5/8"-11 UNC	40	22	19	203.2	1400	0.41

316

IN"

Levelling Feet (Inch) - 316 Stainless Steel with 316 Stainless Steel 40mm Polished Base WDS 977

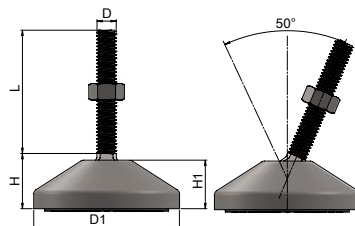
Stem - 316 Stainless Steel, Base - 316 Stainless Steel and fitted with PVC rubber pad, blue with antimicrobial compound

P = Max Static Load (kg)

316 SS	D	D1	H	H1	L	P	Weight (kg)
977-916240	5/16-18 UNC	40	22	19	50.8	600	0.14
977-916340	5/16-18 UNC	40	22	19	76.2	600	0.15
977-918240	3/8"-16 UNC	40	22	19	50.8	800	0.16
977-918340	3/8"-16 UNC	40	22	19	76.2	800	0.17
977-918440	3/8"-16 UNC	40	22	19	101.6	800	0.18
977-918540	3/8"-16 UNC	40	22	19	127	800	0.19
977-918640	3/8"-16 UNC	40	22	19	152	800	0.21
977-922340	1/2"-13 UNC	40	22	19	76.2	1000	0.19
977-922440	1/2"-13 UNC	40	22	19	101.6	1000	0.21
977-922540	1/2"-13 UNC	40	22	19	127	1000	0.23
977-922640	1/2"-13 UNC	40	22	19	152	1000	0.25
977-926440	5/8"-11 UNC	40	22	19	101.6	1400	0.28
977-926540	5/8"-11 UNC	40	22	19	127	1400	0.31
977-926640	5/8"-11 UNC	40	22	19	152	1400	0.34
977-926840	5/8"-11 UNC	40	22	19	203.2	1400	0.41

304

IN"



WDS 977 Levelling Feet (Inch) - 304 Stainless Steel with 304 Stainless Steel 60mm Base

Stem - 304 Stainless Steel, Base - 304 Stainless Steel and fitted with PVC rubber pad, black

P = Max Static Load (kg)

304 SS	D	D1	H	H1	L	P	Weight (kg)
977-816260	5/16-18 UNC	60	23	20	50.8	600	0.19
977-816360	5/16-18 UNC	60	23	20	76.2	600	0.2
977-818260	3/8"-16 UNC	60	23	20	50.8	800	0.21
977-818360	3/8"-16 UNC	60	23	20	76.2	800	0.22
977-818460	3/8"-16 UNC	60	23	20	101.6	800	0.23
977-818560	3/8"-16 UNC	60	23	20	127	800	0.25
977-818660	3/8"-16 UNC	60	23	20	152	800	0.26
977-822360	1/2"-13 UNC	60	23	20	76.2	1000	0.24
977-822460	1/2"-13 UNC	60	23	20	101.6	1000	0.26
977-822560	1/2"-13 UNC	60	23	20	127	1000	0.28
977-822660	1/2"-13 UNC	60	23	20	152	1000	0.3
977-826460	5/8"-11 UNC	60	23	20	101.6	1400	0.33
977-826560	5/8"-11 UNC	60	23	20	127	1400	0.36
977-826660	5/8"-11 UNC	60	23	20	152	1400	0.4
977-826860	5/8"-11 UNC	60	23	20	203.2	1400	0.46

316

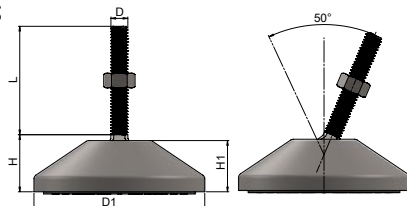
IN"

WDS 977 Levelling Feet (Inch) - 316 Stainless Steel with 316 Stainless Steel 60mm Polished Base

Stem - 316 Stainless Steel, Base - 316 Stainless Steel and fitted with PVC rubber pad, blue with antimicrobial compound

P = Max Static Load (kg)

316 SS	D	D1	H	H1	L	P	Weight (kg)
977-916260	5/16-18 UNC	60	23	20	50.8	600	0.19
977-916360	5/16-18 UNC	60	23	20	76.2	600	0.2
977-918260	3/8"-16 UNC	60	23	20	50.8	800	0.21
977-918360	3/8"-16 UNC	60	23	20	76.2	800	0.22
977-918460	3/8"-16 UNC	60	23	20	101.6	800	0.23
977-918560	3/8"-16 UNC	60	23	20	127	800	0.25
977-918660	3/8"-16 UNC	60	23	20	152	800	0.26
977-922360	1/2"-13 UNC	60	23	20	76.2	1000	0.24
977-922460	1/2"-13 UNC	60	23	20	101.6	1000	0.26
977-922560	1/2"-13 UNC	60	23	20	127	1000	0.28
977-922660	1/2"-13 UNC	60	23	20	152	1000	0.3
977-926460	5/8"-11 UNC	60	23	20	101.6	1400	0.33
977-926560	5/8"-11 UNC	60	23	20	127	1400	0.36
977-926660	5/8"-11 UNC	60	23	20	152	1400	0.4
977-926860	5/8"-11 UNC	60	23	20	203.2	1400	0.46



304

IN"

Levelling Feet (Inch) - 304 Stainless Steel with 304 Stainless Steel 80mm Base WDS 977

Stem - 304 Stainless Steel, Base - 304 Stainless Steel and fitted with PVC rubber pad, black

P = Max Static Load (kg)

304 SS	D	D1	H	H1	L	P	Weight (kg)
977-816280	5/16-18 UNC	80	26	24	50.8	600	0.32
977-816380	5/16-18 UNC	80	26	24	76.2	600	0.33
977-818280	3/8"-16 UNC	80	26	24	50.8	800	0.34
977-818380	3/8"-16 UNC	80	26	24	76.2	800	0.35
977-818480	3/8"-16 UNC	80	26	24	101.6	800	0.36
977-818580	3/8"-16 UNC	80	26	24	127	800	0.38
977-818680	3/8"-16 UNC	80	26	24	152	800	0.39
977-822380	1/2"-13 UNC	80	26	24	76.2	1000	0.37
977-822480	1/2"-13 UNC	80	26	24	101.6	1000	0.39
977-822580	1/2"-13 UNC	80	26	24	127	1000	0.41
977-822680	1/2"-13 UNC	80	26	24	152	1000	0.43
977-826480	5/8"-11 UNC	80	26	24	101.6	1400	0.46
977-826580	5/8"-11 UNC	80	26	24	127	1400	0.49
977-826680	5/8"-11 UNC	80	26	24	152	1400	0.53
977-826880	5/8"-11 UNC	80	26	24	203.2	1400	0.59

316

IN"

Levelling Feet (Inch) - 316 Stainless Steel with 316 Stainless Steel 80mm Polished Base WDS 977

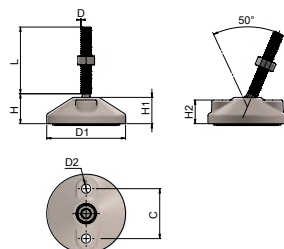
Stem - 316 Stainless Steel, Base - 316 Stainless Steel and fitted with PVC rubber pad, blue with antimicrobial compound

P = Max Static Load (kg)

316 SS	D	D1	H	H1	L	P	Weight (kg)
977-916280	5/16-18 UNC	80	26	24	50.8	600	0.32
977-916380	5/16-18 UNC	80	26	24	76.2	600	0.33
977-918280	3/8"-16 UNC	80	26	24	50.8	800	0.34
977-918380	3/8"-16 UNC	80	26	24	76.2	800	0.35
977-918480	3/8"-16 UNC	80	26	24	101.6	800	0.36
977-918580	3/8"-16 UNC	80	26	24	127	800	0.38
977-918680	3/8"-16 UNC	80	26	24	152	800	0.39
977-922380	1/2"-13 UNC	80	26	24	76.2	1000	0.37
977-922480	1/2"-13 UNC	80	26	24	101.6	1000	0.39
977-922580	1/2"-13 UNC	80	26	24	127	1000	0.41
977-922680	1/2"-13 UNC	80	26	24	152	1000	0.43
977-926480	5/8"-11 UNC	80	26	24	101.6	1400	0.46
977-926580	5/8"-11 UNC	80	26	24	127	1400	0.49
977-926680	5/8"-11 UNC	80	26	24	152	1400	0.53
977-926880	5/8"-11 UNC	80	26	24	203.2	1400	0.59

304

IN"



WDS

WDS 977 Levelling Feet (Inch) - 304 Stainless Steel with 304 Stainless Steel 60mm Bolt Down Base

Stem - 304 Stainless Steel, Base - 304 Stainless Steel and fitted with PVC rubber pad, black

P = Max Static Load (kg)

304 SS	C	D	D1	D2	H	H1	H2	L	P	Weight (kg)
977-816262	38	5/16-18 UNC	60	7	23	20	18	50.8	600	0.21
977-816362	38	5/16-18 UNC	60	7	23	20	18	76.2	600	0.21
977-818262	38	3/8"-16 UNC	60	7	23	20	18	50.8	800	0.22
977-818362	38	3/8"-16 UNC	60	7	23	20	18	76.2	800	0.23
977-818462	38	3/8"-16 UNC	60	7	23	20	18	101.6	800	0.25
977-818562	38	3/8"-16 UNC	60	7	23	20	18	127	800	0.26
977-818662	38	3/8"-16 UNC	60	7	23	20	18	152	800	0.27
977-822362	38	1/2"-13 UNC	60	7	23	20	18	76.2	1000	0.25
977-822462	38	1/2"-13 UNC	60	7	23	20	18	101.6	1000	0.27
977-822562	38	1/2"-13 UNC	60	7	23	20	18	127	1000	0.29
977-822662	38	1/2"-13 UNC	60	7	23	20	18	152	1000	0.31
977-826462	38	5/8"-11 UNC	60	7	23	20	18	101.6	1400	0.34
977-826562	38	5/8"-11 UNC	60	7	23	20	18	127	1400	0.38
977-826662	38	5/8"-11 UNC	60	7	23	20	18	152	1400	0.41
977-826862	38	5/8"-11 UNC	60	7	23	20	18	203.2	1400	0.48

316

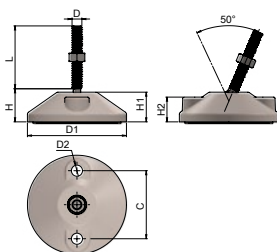
IN"

WDS 977 Levelling Feet (Inch) - 316 Stainless Steel with 316 Stainless Steel 60mm Polished Bolt Down Base

Stem - 316 Stainless Steel, Base - 316 Stainless Steel and fitted with PVC rubber pad, blue with antimicrobial compound

P = Max Static Load (kg)

316 SS	C	D	D1	D2	H	H1	H2	L	P	Weight (kg)
977-916262	38	5/16-18 UNC	60	7	23	20	18	50.8	600	0.21
977-916362	38	5/16-18 UNC	60	7	23	20	18	76.2	600	0.21
977-918262	38	3/8"-16 UNC	60	7	23	20	18	50.8	800	0.22
977-918362	38	3/8"-16 UNC	60	7	23	20	18	76.2	800	0.23
977-918462	38	3/8"-16 UNC	60	7	23	20	18	101.6	800	0.25
977-918562	38	3/8"-16 UNC	60	7	23	20	18	127	800	0.26
977-918662	38	3/8"-16 UNC	60	7	23	20	18	152	800	0.27
977-922362	38	1/2"-13 UNC	60	7	23	20	18	76.2	1000	0.25
977-922462	38	1/2"-13 UNC	60	7	23	20	18	101.6	1000	0.27
977-922562	38	1/2"-13 UNC	60	7	23	20	18	127	1000	0.29
977-922662	38	1/2"-13 UNC	60	7	23	20	18	152	1000	0.31
977-926462	38	5/8"-11 UNC	60	7	23	20	18	101.6	1400	0.34
977-926562	38	5/8"-11 UNC	60	7	23	20	18	127	1400	0.38
977-926662	38	5/8"-11 UNC	60	7	23	20	18	152	1400	0.41
977-926862	38	5/8"-11 UNC	60	7	23	20	18	203.2	1400	0.48



304

IN"

Levelling Feet (Inch) - 304 Stainless Steel with 304 Stainless Steel 80mm Bolt Down Base WDS 977

Stem - 304 Stainless Steel, Base - 304 Stainless Steel and fitted with PVC rubber pad, black

P = Max Static Load (kg)

304 SS	C	D	D1	D2	H	H1	H2	L	P	Weight (kg)
977-816282	55	5/16-18 UNC	80	9	26	24	20	50.8	600	0.34
977-816382	55	5/16-18 UNC	80	9	26	24	20	76.2	600	0.35
977-818282	55	3/8"-16 UNC	80	9	27	24	20	50.8	800	0.36
977-818382	55	3/8"-16 UNC	80	9	27	24	20	76.2	800	0.37
977-818482	55	3/8"-16 UNC	80	9	27	24	20	101.6	800	0.38
977-818582	55	3/8"-16 UNC	80	9	27	24	20	127	800	0.4
977-818682	55	3/8"-16 UNC	80	9	27	24	20	152	800	0.41
977-822382	55	1/2"-13 UNC	80	9	27	24	20	76.2	1000	0.39
977-822482	55	1/2"-13 UNC	80	9	27	24	20	101.6	1000	0.41
977-822582	55	1/2"-13 UNC	80	9	27	24	20	127	1000	0.43
977-822682	55	1/2"-13 UNC	80	9	27	24	20	152	1000	0.45
977-826482	55	5/8"-11 UNC	80	9	27	24	20	101.6	1400	0.48
977-826582	55	5/8"-11 UNC	80	9	27	24	20	127	1400	0.51
977-826682	55	5/8"-11 UNC	80	9	27	24	20	152	1400	0.55
977-826882	55	5/8"-11 UNC	80	9	27	24	20	203.2	1400	0.61

316

IN"

Levelling Feet (Inch) - 316 Stainless Steel with 316 Stainless Steel 80mm Polished Bolt Down Base WDS 977

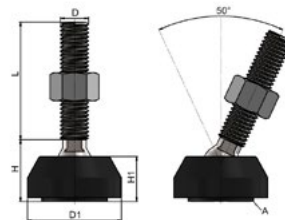
Stem - 316 Stainless Steel, Base - 316 Stainless Steel and fitted with PVC rubber pad, blue with antimicrobial compound

P = Max Static Load (kg)

316 SS	C	D	D1	D2	H	H1	H2	L	P	Weight (kg)
977-916282	55	5/16-18 UNC	80	9	26	24	20	50.8	600	0.34
977-916382	55	5/16-18 UNC	80	9	26	24	20	76.2	600	0.35
977-918282	55	3/8"-16 UNC	80	9	26	24	20	50.8	800	0.36
977-918382	55	3/8"-16 UNC	80	9	26	24	20	76.2	800	0.37
977-918482	55	3/8"-16 UNC	80	9	26	24	20	101.6	800	0.38
977-918582	55	3/8"-16 UNC	80	9	26	24	20	127	800	0.4
977-918682	55	3/8"-16 UNC	80	9	26	24	20	152	800	0.41
977-922382	55	1/2"-13 UNC	80	9	26	24	20	76.2	1000	0.39
977-922482	55	1/2"-13 UNC	80	9	26	24	20	101.6	1000	0.41
977-922582	55	1/2"-13 UNC	80	9	26	24	20	127	1000	0.43
977-922682	55	1/2"-13 UNC	80	9	26	24	20	152	1000	0.45
977-926482	55	5/8"-11 UNC	80	9	26	24	20	101.6	1400	0.48
977-926582	55	5/8"-11 UNC	80	9	26	24	20	127	1400	0.51
977-926682	55	5/8"-11 UNC	80	9	26	24	20	152	1400	0.55
977-926882	55	5/8"-11 UNC	80	9	26	24	20	203.2	1400	0.61

316

IN"



WDS 978 Levelling Feet (Inch) - 316 Stainless Steel with 40mm Plastic Base

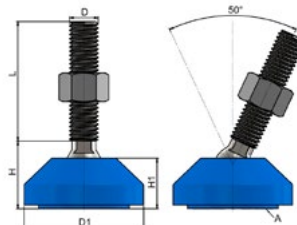
Stem - 316 Stainless Steel, Base - Polypropylene in black, white or blue with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
978-716240	978-716240W	978-716240B	5/16"-18 UNC	40	25	17.5	50.8	600	0.06
978-716340	978-716340W	978-716340B	5/16"-18 UNC	40	25	17.5	76.2	600	0.07
978-718240	978-718240W	978-718240B	3/8"-16 UNC	40	25	17.5	50.8	800	0.07
978-718340	978-718340W	978-718340B	3/8"-16 UNC	40	25	17.5	76.2	800	0.08
978-718440	978-718440W	978-718440B	3/8"-16 UNC	40	25	17.5	101.6	800	0.1
978-718540	978-718540W	978-718540B	3/8"-16 UNC	40	25	17.5	127	800	0.11
978-718640	978-718640W	978-718640B	3/8"-16 UNC	40	25	17.5	152	800	0.12
978-722340	978-722340W	978-722340B	1/2"-13 UNC	40	25	17.5	76.2	1000	0.11
978-722440	978-722440W	978-722440B	1/2"-13 UNC	40	25	17.5	101.6	1000	0.12
978-722540	978-722540W	978-722540B	1/2"-13 UNC	40	25	17.5	127	1000	0.14
978-722640	978-722640W	978-722640B	1/2"-13 UNC	40	25	17.5	152	1000	0.16
978-726440	978-726440W	978-726440B	5/8"-11 UNC	40	25	17.5	101.6	1400	0.19
978-726540	978-726540W	978-726540B	5/8"-11 UNC	40	25	17.5	127	1400	0.23
978-726640	978-726640W	978-726640B	5/8"-11 UNC	40	25	17.5	152	1400	0.26
978-726840	978-726840W	978-726840B	5/8"-11 UNC	40	25	17.5	203.2	1400	0.33

316

IN"

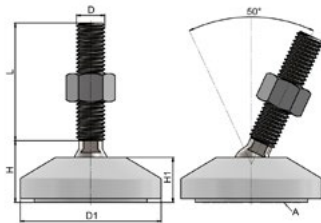


WDS 978 Levelling Feet (Inch) - 316 Stainless Steel with 50mm Plastic Base

Stem - 316 Stainless Steel, Base - Polypropylene in black, white or blue with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
978-716250	978-716250W	978-716250B	5/16"-18 UNC	50	29	19.5	50.8	600	0.07
978-716350	978-716350W	978-716350B	5/16"-18 UNC	50	29	19.5	76.2	600	0.08
978-718250	978-718250W	978-718250B	3/8"-16 UNC	50	29	19.5	50.8	800	0.08
978-718350	978-718350W	978-718350B	3/8"-16 UNC	50	29	19.5	76.2	800	0.1
978-718450	978-718450W	978-718450B	3/8"-16 UNC	50	29	19.5	101.6	800	0.11
978-718550	978-718550W	978-718550B	3/8"-16 UNC	50	29	19.5	127	800	0.12
978-718650	978-718650W	978-718650B	3/8"-16 UNC	50	29	19.5	152	800	0.13
978-722350	978-722350W	978-722350B	1/2"-13 UNC	50	29	19.5	76.2	1000	0.12
978-722450	978-722450W	978-722450B	1/2"-13 UNC	50	29	19.5	101.6	1000	0.14
978-722550	978-722550W	978-722550B	1/2"-13 UNC	50	29	19.5	127	1000	0.15
978-722650	978-722650W	978-722650B	1/2"-13 UNC	50	29	19.5	152	1000	0.17
978-726450	978-726450W	978-726450B	5/8"-11 UNC	50	29	19.5	101.6	1400	0.2
978-726550	978-726550W	978-726550B	5/8"-11 UNC	50	29	19.5	127	1400	0.24
978-726650	978-726650W	978-726650B	5/8"-11 UNC	50	29	19.5	152	1400	0.27
978-726850	978-726850W	978-726850B	5/8"-11 UNC	50	29	19.5	203.2	1400	0.34



316

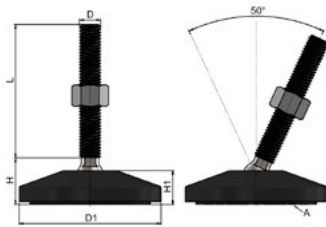
IN"

Levelling Feet (Inch) - 316 Stainless Steel with 60mm Plastic Base WDS 978

Stem - 316 Stainless Steel, Base - Polypropylene in black, white or blue with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
978-716260	978-716260W	978-716260B	5/16"-18 UNC	60	25	17.5	50.8	600	0.08
978-716360	978-716360W	978-716360B	5/16"-18 UNC	60	25	17.5	76.2	600	0.08
978-718260	978-718260W	978-718260B	3/8"-16 UNC	60	25	17.5	50.8	800	0.09
978-718360	978-718360W	978-718360B	3/8"-16 UNC	60	25	17.5	76.2	800	0.1
978-718460	978-718460W	978-718460B	3/8"-16 UNC	60	25	17.5	101.6	800	0.12
978-718560	978-718560W	978-718560B	3/8"-16 UNC	60	25	17.5	127	800	0.13
978-718660	978-718660W	978-718660B	3/8"-16 UNC	60	25	17.5	152	800	0.14
978-722360	978-722360W	978-722360B	1/2"-13 UNC	60	25	17.5	76.2	1000	0.12
978-722460	978-722460W	978-722460B	1/2"-13 UNC	60	25	17.5	101.6	1000	0.14
978-722560	978-722560W	978-722560B	1/2"-13 UNC	60	25	17.5	127	1000	0.16
978-722660	978-722660W	978-722660B	1/2"-13 UNC	60	25	17.5	152	1000	0.18
978-726460	978-726460W	978-726460B	5/8"-11 UNC	60	25	17.5	101.6	1400	0.21
978-726560	978-726560W	978-726560B	5/8"-11 UNC	60	25	17.5	127	1400	0.25
978-726660	978-726660W	978-726660B	5/8"-11 UNC	60	25	17.5	152	1400	0.28
978-726860	978-726860W	978-726860B	5/8"-11 UNC	60	25	17.5	203.2	1400	0.35



316

IN"

Levelling Feet (Inch) - 316 Stainless Steel with 80mm Plastic Base WDS 978

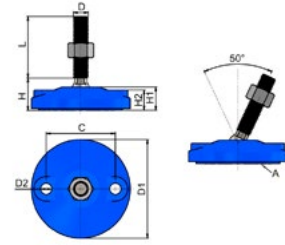
Stem - 316 Stainless Steel, Base - Polypropylene in black, white or blue with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	H	H1	L	P	Weight (kg)
978-716280	978-716280W	978-716280B	5/16"-18 UNC	80	25	17.5	50.8	600	0.1
978-716380	978-716380W	978-716380B	5/16"-18 UNC	80	25	17.5	76.2	600	0.11
978-718280	978-718280W	978-718280B	3/8"-16 UNC	80	25	17.5	50.8	800	0.12
978-718380	978-718380W	978-718380B	3/8"-16 UNC	80	25	17.5	76.2	800	0.13
978-718480	978-718480W	978-718480B	3/8"-16 UNC	80	25	17.5	101.6	800	0.14
978-718580	978-718580W	978-718580B	3/8"-16 UNC	80	25	17.5	127	800	0.15
978-718680	978-718680W	978-718680B	3/8"-16 UNC	80	25	17.5	152	800	0.17
978-722380	978-722380W	978-722380B	1/2"-13 UNC	80	25	17.5	76.2	1000	0.15
978-722480	978-722480W	978-722480B	1/2"-13 UNC	80	25	17.5	101.6	1000	0.17
978-722580	978-722580W	978-722580B	1/2"-13 UNC	80	25	17.5	127	1000	0.19
978-722680	978-722680W	978-722680B	1/2"-13 UNC	80	25	17.5	152	1000	0.21
978-726480	978-726480W	978-726480B	5/8"-11 UNC	80	25	17.5	101.6	1400	0.24
978-726580	978-726580W	978-726580B	5/8"-11 UNC	80	25	17.5	127	1400	0.27
978-726680	978-726680W	978-726680B	5/8"-11 UNC	80	25	17.5	152	1400	0.3
978-726880	978-726880W	978-726880B	5/8"-11 UNC	80	25	17.5	203.2	1400	0.37

316

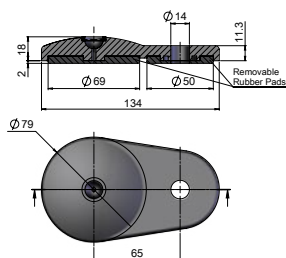
IN"



WDS 978 Levelling Feet (Inch) - 316 Stainless Steel with Bolt Down 80mm Plastic Base

Stem - 316 Stainless Steel, Base - Polypropylene in black, white or blue with matching PVC rubber pad
Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	C	D	D1	D2	H	H1	L	P	RA	Weight (kg)
978-716282	978-716282W	978-716282B	56	5/16"-18 UNC	80	9	25	17.5	50.8	600	15	0.1
978-716382	978-716382W	978-716382B	56	5/16"-18 UNC	80	9	25	17.5	76.2	600	15	0.11
978-718282	978-718282W	978-718282B	56	3/8"-16 UNC	80	9	25	17.5	50.8	800	15	0.12
978-718382	978-718382W	978-718382B	56	3/8"-16 UNC	80	9	25	17.5	76.2	800	15	0.13
978-718482	978-718482W	978-718482B	56	3/8"-16 UNC	80	9	25	17.5	101.6	800	15	0.14
978-718582	978-718582W	978-718582B	56	3/8"-16 UNC	80	9	25	17.5	127	800	15	0.15
978-718682	978-718682W	978-718682B	56	3/8"-16 UNC	80	9	25	17.5	152	800	15	0.17
978-722382	978-722382W	978-722382B	56	1/2"-13 UNC	80	9	25	17.5	76.2	1000	15	0.15
978-722482	978-722482W	978-722482B	56	1/2"-13 UNC	80	9	25	17.5	101.6	1000	15	0.17
978-722582	978-722582W	978-722582B	56	1/2"-13 UNC	80	9	25	17.5	127	1000	15	0.19
978-722682	978-722682W	978-722682B	56	1/2"-13 UNC	80	9	25	17.5	152	1000	15	0.2
978-726482	978-726482W	978-726482B	56	5/8"-11 UNC	80	9	25	17.5	101.6	1400	15	0.24
978-726582	978-726582W	978-726582B	56	5/8"-11 UNC	80	9	25	17.5	127	1400	15	0.27
978-726682	978-726682W	978-726682B	56	5/8"-11 UNC	80	9	25	17.5	152	1400	15	0.3
978-726882	978-726882W	978-726882B	56	5/8"-11 UNC	80	9	25	17.5	203.2	1400	15	0.37

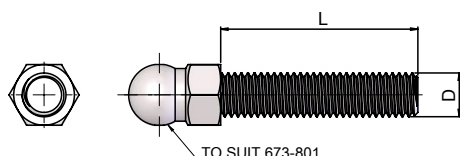


Levelling Foot Swivel Bolt Down Extended Base **WDS 673**

Die-cast Zinc

Colour Black, powder coated

WDS No.	Anti-Slip Plate	Max Load (kg)	Weight (kg)
673-801	Yes	3000	0.43

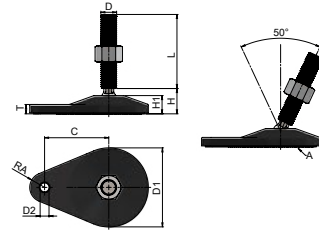


Swivel End Screw **WDS 673**

Die-cast Zinc

WDS No.	D	L	Max Load Kg	Weight (kg)
673-811	M10	45	1400	0.05
673-812	M10	70	1400	0.06
673-813	M10	90	1400	0.07
673-814	M10	125	1400	0.08
673-815	M10	150	1400	0.09
673-816	M12	45	1400	0.06
673-817	M12	66	1400	0.07
673-818	M12	100	1400	0.09
673-819	M12	125	1400	0.11
673-820	M12	150	1400	0.13
673-821	M14	66	1400	0.09
673-822	M14	100	1400	0.12
673-823	M14	125	1400	0.14
673-824	M14	150	1400	0.17
673-825	M16	66	1700	0.11
673-826	M16	100	1700	0.16
673-827	M16	125	1700	0.19
673-828	M16	150	1700	0.22
673-829	M16	200	1700	0.29
673-830	M20	85	2200	0.21
673-831	M20	100	2200	0.24
673-832	M20	125	2200	0.3
673-833	M20	150	2200	0.34
673-834	M20	200	2200	0.45

304



WDS 778 Levelling Feet - 304 Stainless Steel with Bolt Down Extended Plastic Base

Stem - 316 Stainless Steel, Base - Polypropylene in black, white or blue with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	C	D	D1	D2	H	H1	L	P	RA	T	Weight (kg)
778-60181	778-60181W	778-60181B	65	M8	80	9	25	17.5	50	600	15	8.5	0.12
778-601581	778-601581W	778-601581B	65	M8	80	9	25	17.5	75	600	15	8.5	0.12
778-60281	778-60281W	778-60281B	65	M8	80	9	25	17.5	100	600	15	8.5	0.13
778-60381	778-60381W	778-60381B	65	M10	80	9	25	17.5	50	800	15	8.5	0.13
778-603581	778-603581W	778-603581B	65	M10	80	9	25	17.5	75	800	15	8.5	0.14
778-60481	778-60481W	778-60481B	65	M10	80	9	25	17.5	100	800	15	8.5	0.15
778-604581	778-604581W	778-604581B	65	M10	80	9	25	17.5	125	800	15	8.5	0.17
778-60581	778-60581W	778-60581B	65	M10	80	9	25	17.5	150	800	15	8.5	0.18
778-606081	-	-	65	M12	80	9	25	17.5	50	1000	15	8.5	0.14
778-606281	778-606281W	778-606281B	65	M12	80	9	25	17.5	75	1000	15	8.5	0.17
778-60681	778-60681W	778-60681B	65	M12	80	9	25	17.5	100	1000	15	8.5	0.18
778-606581	778-606581W	778-606581B	65	M12	80	9	25	17.5	125	1000	15	8.5	0.2
778-60781	778-60781W	778-60781B	65	M12	80	9	25	17.5	150	1000	15	8.5	0.22
778-60881	778-60881W	778-60881B	65	M12	80	9	25	17.5	200	1000	15	8.5	0.25
778-609381	778-609381W	778-609381B	65	M16	80	9	25	17.5	75	1400	15	8.5	0.22
778-60981	778-60981W	778-60981B	65	M16	80	9	25	17.5	100	1400	15	8.5	0.25
778-609581	778-609581W	778-609581B	65	M16	80	9	25	17.5	125	1400	15	8.5	0.28
778-61081	778-61081W	778-61081B	65	M16	80	9	25	17.5	150	1400	15	8.5	0.32
778-61181	778-61181W	778-61181B	65	M16	80	9	25	17.5	200	1400	15	8.5	0.39

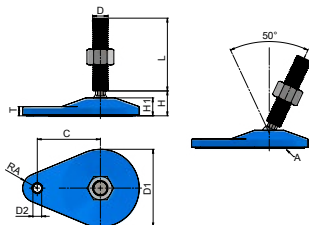
316

WDS 778 Levelling Feet - 316 Stainless Steel with Bolt Down Extended Plastic Base

Stem - 316 Stainless Steel, Base - Polypropylene in black, white or blue with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	D	D1	D2	H	H1	L	P	RA	T	Weight (kg)
778-70181	778-70181W	778-70181B	M8	80	9	25	17.5	50	600	15	8.5	0.12
778-701581	778-701581W	778-701581B	M8	80	9	25	17.5	75	600	15	8.5	0.12
778-70281	778-70281W	778-70281B	M8	80	9	25	17.5	100	600	15	8.5	0.13
778-70381	778-70381W	778-70381B	M10	80	9	25	17.5	50	800	15	8.5	0.13
778-703581	778-703581W	778-703581B	M10	80	9	25	17.5	75	800	15	8.5	0.14
778-70481	778-70481W	778-70481B	M10	80	9	25	17.5	100	800	15	8.5	0.15
778-704581	778-704581W	778-704581B	M10	80	9	25	17.5	125	800	15	8.5	0.17
778-70581	778-70581W	778-70581B	M10	80	9	25	17.5	150	800	15	8.5	0.18
778-706381	778-706381W	778-706381B	M12	80	9	25	17.5	75	1000	15	8.5	0.17
778-70681	778-70681W	778-70681B	M12	80	9	25	17.5	100	1000	15	8.5	0.18
778-706581	778-706581W	778-706581B	M12	80	9	25	17.5	125	1000	15	8.5	0.2
778-70781	778-70781W	778-70781B	M12	80	9	25	17.5	150	1000	15	8.5	0.22
778-709381	778-709381W	778-709381B	M16	80	9	25	17.5	75	1400	15	8.5	0.22
778-70981	778-70981W	778-70981B	M16	80	9	25	17.5	100	1400	15	8.5	0.25
778-709581	778-709581W	778-709581B	M16	80	9	25	17.5	125	1400	15	8.5	0.28
778-71081	778-71081W	778-71081B	M16	80	9	25	17.5	150	1400	15	8.5	0.32



Levelling Feet - Steel Nickel Plated with Bolt Down Extended Plastic Base WDS 778

Stem - Steel, Nickel Plated, Base - Polypropylene in black, white or blue with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	C	D	D1	D2	H	H1	L	P	RA	T	Weight (kg)
778-20181	778-20181W	778-20181B	65	M8	80	9	25	17.5	50	600	15	8.5	0.12
778-201581	778-201581W	778-201581B	65	M8	80	9	25	17.5	75	600	15	8.5	0.12
778-20281	778-20281W	778-20281B	65	M8	80	9	25	17.5	100	600	15	8.5	0.13
778-20381	778-20381W	778-20381B	65	M10	80	9	25	17.5	50	800	15	8.5	0.13
778-203581	778-203581W	778-203581B	65	M10	80	9	25	17.5	75	800	15	8.5	0.14
778-20481	778-20481W	778-20481B	65	M10	80	9	25	17.5	100	800	15	8.5	0.15
778-204581	778-204581W	778-204581B	65	M10	80	9	25	17.5	125	800	15	8.5	0.17
778-20581	778-20581W	778-20581B	65	M10	80	9	25	17.5	150	800	15	8.5	0.18
778-206081	778-206081W	778-206081B	65	M12	80	9	25	17.5	50	1000	15	8.5	0.15
778-206281	778-206281W	778-206281B	65	M12	80	9	25	17.5	75	1000	15	8.5	0.16
778-20681	778-20681W	778-20681B	65	M12	80	9	25	17.5	100	1000	15	8.5	0.18
778-206581	778-206581W	778-206581B	65	M12	80	9	25	17.5	125	1000	15	8.5	0.17
778-20781	778-20781W	778-20781B	65	M12	80	9	25	17.5	150	1000	15	8.5	0.22
778-20881	778-20881W	778-20881B	65	M12	80	9	25	17.5	200	1000	15	8.5	0.25
778-209381	778-209381W	778-209381B	65	M16	80	9	25	17.5	75	1400	15	8.5	0.22
778-20981	778-20981W	778-20981B	65	M16	80	9	25	17.5	100	1400	15	8.5	0.25
778-209581	778-209581W	778-209581B	65	M16	80	9	25	17.5	125	1400	15	8.5	0.29
778-21081	778-21081W	778-21081B	65	M16	80	9	25	17.5	150	1400	15	8.5	0.32
778-21181	778-21181W	778-21181B	65	M16	80	9	25	17.5	200	1400	15	8.5	0.39

IN"

Levelling Feet (Inch) - Steel Nickel Plated with Bolt Down Extended Plastic Base WDS 978

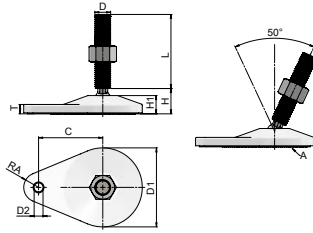
Stem - Steel, Nickel Plated, Base - Polypropylene in black, white or blue with matching PVC rubber pad

Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	C	D	D1	D2	H	H1	L	P	RA	Weight (kg)
978-216281	978-216281W	978-216281B	65	5/16"-18 UNC	80	9	25	17.5	50.8	600	15	0.11
978-216381	978-216381W	978-216381B	65	5/16"-18 UNC	80	9	25	17.5	76.2	600	15	0.12
978-218281	978-218281W	978-218281B	65	3/8"-16 UNC	80	9	25	17.5	50.8	800	15	0.13
978-218381	978-218381W	978-218381B	65	3/8"-16 UNC	80	9	25	17.5	76.2	800	15	0.14
978-218481	978-218481W	978-218481B	65	3/8"-16 UNC	80	9	25	17.5	101.6	800	15	0.15
978-218581	978-218581W	978-218581B	65	3/8"-16 UNC	80	9	25	17.5	127	800	15	0.17
978-218681	978-218681W	978-218681B	65	3/8"-16 UNC	80	9	25	17.5	152	800	15	0.18
978-222381	978-222381W	978-222381B	65	1/2"-13 UNC	80	9	25	17.5	76.2	1000	15	0.16
978-222481	978-222481W	978-222481B	65	1/2"-13 UNC	80	9	25	17.5	101.6	1000	15	0.18
978-222581	978-222581W	978-222581B	65	1/2"-13 UNC	80	9	25	17.5	127	1000	15	0.2
978-222681	978-222681W	978-222681B	65	1/2"-13 UNC	80	9	25	17.5	152	1000	15	0.22
978-226481	978-226481W	978-226481B	65	5/8"-11 UNC	80	9	25	17.5	101.6	1400	15	0.25
978-226581	978-226581W	978-226581B	65	5/8"-11 UNC	80	9	25	17.5	127	1400	15	0.28
978-226681	978-226681W	978-226681B	65	5/8"-11 UNC	80	9	25	17.5	152	1400	15	0.32
978-226881	978-226881W	978-226881B	65	5/8"-11 UNC	80	9	25	17.5	203.2	1400	15	0.38

316

IN"



WDS 978 Levelling Feet (Inch) - 316 Stainless Steel with Bolt Down Extended Plastic Base

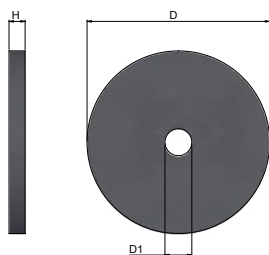
Stem - 316 Stainless Steel, Base - Polypropylene in black, white or blue with matching PVC rubber pad
Note - White and blue bases with anti-microbial compound, P = Max Static Load (kg)

Black	White	Blue	C	D	D1	D2	H	H1	L	P	RA	Weight (kg)
978-716281	978-716281W	978-716281B	65	5/16"-18 UNC	80	9	25	17.5	50.8	1000	15	0.11
978-716381	978-716381W	978-716381B	65	5/16"-18 UNC	80	9	25	17.5	76.2	1000	15	0.12
978-718281	978-718281W	978-718281B	65	3/8"-16 UNC	80	9	25	17.5	50.8	1000	15	0.13
978-718381	978-718381W	978-718381B	65	3/8"-16 UNC	80	9	25	17.5	76.2	1000	15	0.14
978-718481	978-718481W	978-718481B	65	3/8"-16 UNC	80	9	25	17.5	101.6	1000	15	0.15
978-718581	978-718581W	978-718581B	65	3/8"-16 UNC	80	9	25	17.5	127	1000	15	0.17
978-718681	978-718681W	978-718681B	65	3/8"-16 UNC	80	9	25	17.5	152	1000	15	0.18
978-722381	978-722381W	978-722381B	65	1/2"-13 UNC	80	9	25	17.5	76.2	1000	15	0.16
978-722481	978-722481W	978-722481B	65	1/2"-13 UNC	80	9	25	17.5	101.6	1000	15	0.18
978-722581	978-722581W	978-722581B	65	1/2"-13 UNC	80	9	25	17.5	127	1000	15	0.2
978-722681	978-722681W	978-722681B	65	1/2"-13 UNC	80	9	25	17.5	152	1000	15	0.22
978-726481	978-726481W	978-726481B	65	5/8"-11 UNC	80	9	25	17.5	101.6	1000	15	0.25
978-726581	978-726581W	978-726581B	65	5/8"-11 UNC	80	9	25	17.5	127	1000	15	0.28
978-726681	978-726681W	978-726681B	65	5/8"-11 UNC	80	9	25	17.5	152	1000	15	0.32
978-726881	978-726881W	978-726881B	65	5/8"-11 UNC	80	9	25	17.5	203.2	1000	15	0.38



ANTI VIBRATION LEVELLING FEET

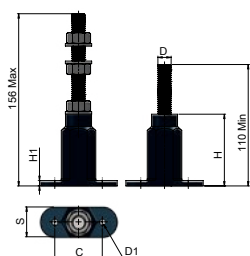
For the full range please see page 17



Non Slip Pads **WDS 873**

Neoprene

WDS No.	D	D1	H	Description	Weight (kg)
873-828	28	10	3	Non-Slip Pad to suit 35mm base	0.01
873-842	42	10	3	Non-Slip Pad to suit 50mm base	0.01
873-868	68	10	3	Non-Slip Pad to suit 80mm base	0.02



Foot Kit **WDS 692**

Mild Steel, Zinc Plated Stem

Co-Polypropylene foot

The Kit contains:

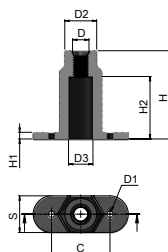
1 x 692-201 (Plastic Foot)

1 x Stud - M12 x 110 long

3 x Nuts - Nut-M12-ZP

3 x Washers - Washer-M12-ZP

WDS No.	C	D	D1	H	H1	S	Weight (kg)
692-202	43	M12	4.6	65	4.9	27	0.19

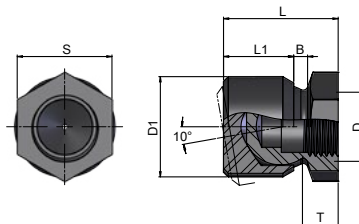


Plastic Foot **WDS 692**

Co-Polypropylene foot

WDS No.	C	D	D1	D2	H	H1	H2	L	S	Weight (kg)
692-201	43	4.6	M12	23.5	65	54	4.9	55	27	0.02

IN"

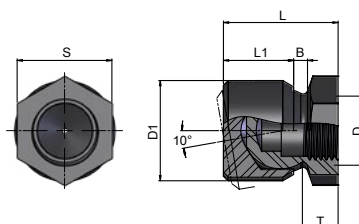


WDS 609 Swivel Pad - Inch - BSW or UNC

Steel BS.970 Gr.230M07, Chemical black finish

P = Max Static Load (kg)

WDS No.	B	D	D1	L	L1	P	S	T	Type	Weight (kg)
609-04	4	3/8	19	22.2	15	2170	0.709 inch	9.5	BSW	0.04
609-08	9.5	1	41.3	51	31.8	8500	1.480 inch	27	BSW	0.37
609-20	4.8	1/2	22.2	25	17.5	3160	0.750 inch	11.1	UNC	0.06
609-22	7.9	3/4	31.8	36.5	22.2	6900	1.125 inch	18.3	UNC	0.15

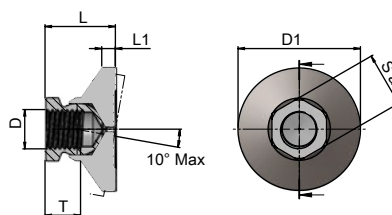


WDS 609 Swivel Pad - Metric

Steel BS.970 Gr.230M07, Chemical black finish

P = Max Static Load (kg)

WDS No.	B	D	D1	L	L1	P	S	T	Weight (kg)
609-2005	4	M5	13	18	11	530	10	6	0.02
609-201	4	M6	13	18	11	760	10	8	0.02
609-202	4	M8	16	21	14	1370	13	9	0.03
609-203	4	M10	19	22	15	2170	17	10	0.04
609-204	5	M12	22	25	17	3160	19	12	0.05
609-206	5	M16	25	30	20	5820	24	14	0.08
609-207	8	M20	32	36	22	7000	39	18	0.15

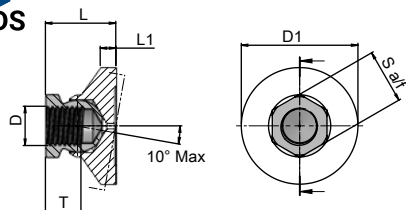


WDS 674 Swivel Pad - Steel with Chemical Black Finish

Nut and Pad - Steel BS.970, Gr.230M07 Chemical black finish

P = Max Static Load (kg)

WDS No.	D	D1	L	L1	P	S	T	Weight (kg)
674-206	M6	25	18	4	900	10	8	0.03
674-208	M8	30	22	5	1700	13	9	0.05
674-210	M10	35	24	5	2100	17	10	0.08
674-212	M12	38	26	6	3700	19	12	0.11
674-216	M16	50	30	6	4600	24	14	0.15
674-220	M20	63	40	7	5400	30	18	0.3

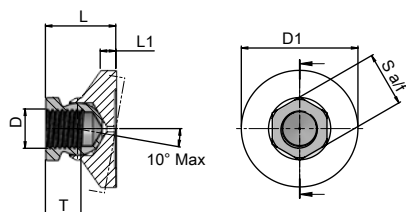


Swivel Pad - White Plastic Pad WDS 674

Nut - Stainless Steel BS.970 Gr.303S31, Pad - White Plastic (Sustarin C)

P = Max Static Load (kg)

WDS No.	D	D1	L	L1	P	S	T	Weight (kg)
674-251	M6	20	14	2.5	400	10	5	0.01
674-252	M8	25	18	4	700	13	7	0.01
674-253	M10	32	22	5	1000	17	9	0.02
674-254	M12	40	26	6	1800	19	11	0.05
674-255	M16	50	32	7	2000	24	13	0.07
674-256	M20	60	42	8	2200	30	17	0.13



Swivel Pad - White Plastic Base WDS 674

Nut - Stainless Steel BS.970 Gr.303S31, Pad - White POM (Polyoxymethylene) Material

P = Max Static Load (kg)

WDS No.	D	D1	L	L1	P	S	T	Weight (kg)
674-151	M6	20	14	2.5	400	10	5	0.01
674-152	M8	25	18	4	700	13	7	0.01
674-153	M10	32	22	5	1000	17	9	0.02
674-154	M12	40	26	6	1800	19	11	0.05
674-155	M16	50	32	7	2000	24	13	0.07
674-156	M20	60	42	8	2200	30	17	0.09



LOCKS LATCHES & CATCHES

P 382-420

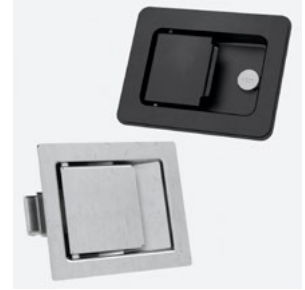
Locks, latches and catches include paddle latches, slam latches, compression latches, quarter turn catches & handles. Materials include: steel, chrome, stainless steel and plastic.



PADDLE LATCHES

Paddle latches and locks are recessed release handles with optional locking or non-locking models. Often used on enclosure doors or access panels. By simply pulling the release mechanism, the latch is retracted and the door can be opened. Materials include: steel black powder coated, stainless steel and plastic PA6.

P 382-383



SLAM LATCHES

Slam latches are door catches that can be locked by simply pushing the door closed. Models include a quarter turn slam Latch which requires a 1/4 turn to open the door, a paddle style slam latch which is opened by lifting the pull handle and ball or knuckle catch which pushes into a locking position.

P 384-385



COMPRESSION LATCHES

Compression Latches work on a trigger release mechanism. By pressing the release button or turning the key this action releases the locking arm so a door or panel can be released. Ideal for enclosures, machinery and access points.

P 386



MAGNETIC CATCHES

Magnetic Catches are ideal for use on access doors and panels where a non-locking latch can't be used or isn't required.

P 387



QUARTER TURN LATCHES AND CAMS

Quarter turn latches and catches comprise of a cylindrical body with a cam lever arm. The user can simply open a door or access panel by turning the body a 1/4 turn. This moves the cam away from the contact point to allow access. These cam Locks are adjustable via either a manual turn key or a shaped key in pin, square or triangle variants. Ideal for lockers, enclosures, machine access panels, quarter turns are available in steel zinc plated or stainless steel.

P 388-405





TOGGLE LATCHES & FASTENERS

Toggle latch fasteners are commonly used on enclosures, transport cases and safety guards. Options include; a solid latch, spring latch, return spring latch, safety release catches, adjustable latches and lockable toggle latch fasteners. Optional toggle catch plates are also available. Mild steel zinc plated and stainless steel toggle latches are available in a selection of sizes.

P 406-409



QUARTER TURN HANDLES

Quarter turn handles are available in two main styles, the t handle model and the I handle model. Materials include: chrome and zinc die cast with options of keyed or non-keyed variants

P 410-414



LOCKING PLATES & SECURITY COVERS

Locking plates and security covers provide extra security on a machine access panel, locker or enclosure.

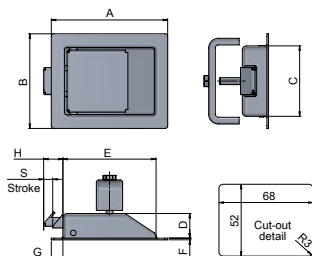
P 415



MULTI POINT LOCKING SYSTEMS

Multi point locking system ideal for securing cabinets, lockers and machine enclosures. This simple, modular design allows the user to easily customise a locking system to a specific enclosure. Working with a standard 50 x 25 mounting hole WDS offer all the parts you need for a 1, 2 and 3 point locking system.

P 416-420



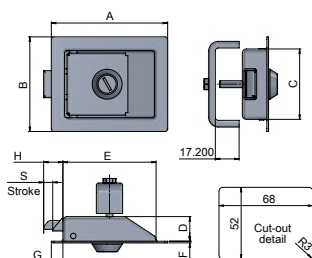
304

ZP

Paddle Latch - Small WDS 8550

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	A	B	C	D	E	F	Lock	Weight (kg)
8550-202	8550-602	84.2	68.5	51	17.8	67.4	1.2	No	0.18



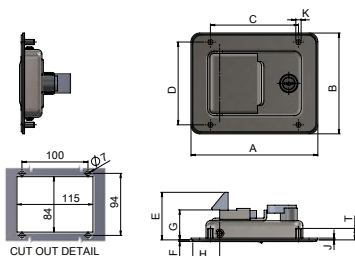
304

ZP

Paddle Latch with Lock WDS 8550

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	A	B	C	D	E	F	Lock	Weight (kg)
8550-252	8550-252	84.2	68.5	51	17.8	67.4	1.2	Yes	0.18

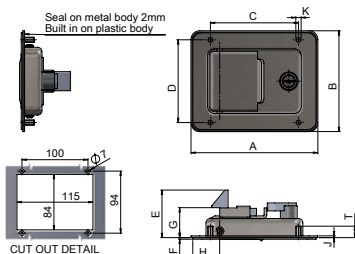


304

Paddle Latch WDS 8554

Available in Stainless Steel or Steel, Black Powder Coated

Steel	Stainless Steel	A	B	C	D	E	F	G	H	J	K	T	Weight (kg)
8554-201	8554-205	140	110	100	94	54	1.8	34	32	2	M6	13	0.08

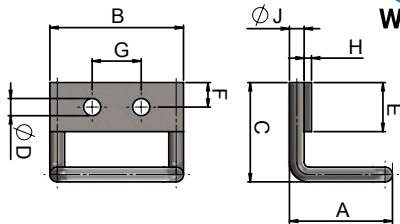


Paddle Latch - Plastic WDS 8554

Plastic PA6 GFR 30

WDS No.	A	B	C	D	E	F	G	H	J	K	T	Weight (kg)
8554-203	140	120	100	94	54	5.5	34	32	N/A	M5	13.5	0.27

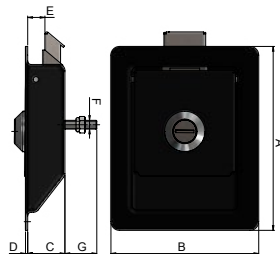
ZP



WDS 8554 Paddle Latch Bar

Zinc Plated Steel
Used mainly with Paddle Latches 8554, but also could be used with 8555 or 8556

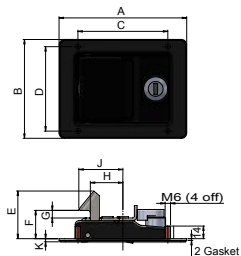
WDS No.	A	B	C	D	E	F	G	H	J	Weight (kg)
8554-701	42	54.5	40.5	7	20	10	20	3	6	0.07



WDS 8555 Paddle Latch with Lock

Steel, Black Powder Coating

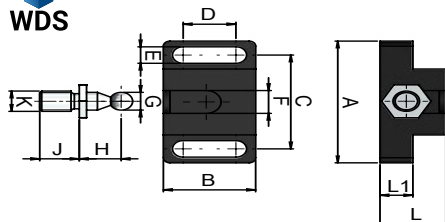
WDS No.	A	B	C	D	E	F	G	Weight (kg)
8555-201	127	102	25.5	1.5	12	M6	22	0.5



WDS 8556 Paddle Latch - Steel Black Powder Coating

Steel, Black Powder Coating

WDS No.	A	B	C	D	E	F	G	H	J	K	Weight (kg)
8556-201	140	108	100	94	53	31.5	8.5	36.2	49	3.5	0.52

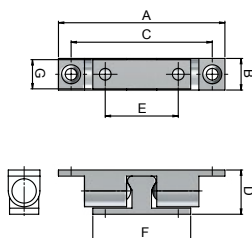


Knuckle Catch - Polyamide WDS 8542

Body - Fibreglass reinforced nylon, Ball - Zinc Plated Steel

Locking force approx 50N

WDS No.	A	B	C	D	E	F	G	H	J	K	L	L1	Weight (kg)
8542-201	47	28	37	16	6.5	9	7	12.7	12	M8	20	10	0.05



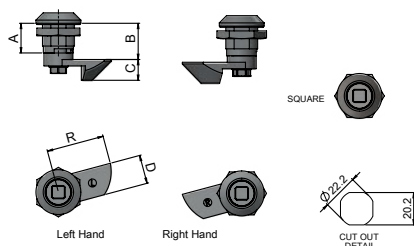
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Double Ball Catch WDS 8544

Housing and Latch - Chrome Plated Brass

Balls and Springs - Stainless Steel

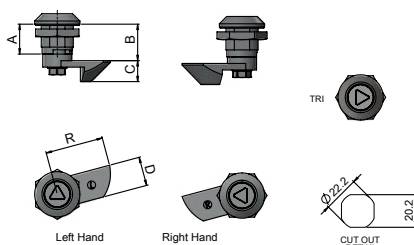
WDS No.	A	B	C	D	E	F	G	To Suit Screw	Weight (kg)
8544-201	49	8.8	39.8	13.2	19.8	28.8	7.6	M3	0.02
8544-203	68.4	13	58	18.1	30	40.2	12	M4	0.07



Quarter Turn Slam Latch - Square Type - Left or Right Hand WDS 8558

Die Cast Zinc

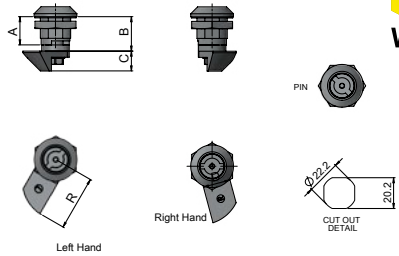
WDS No.	A	B	C	D	R	Weight (kg)
8558-203	18.5	22.5	13	18	33	0.09
8558-253	18.5	22.5	13	18	33	0.09



Quarter Turn Slam Latch - Tri-Drive Type - Left or Right Hand WDS 8558

Die Cast Zinc

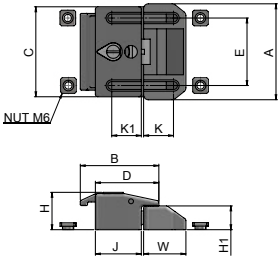
WDS No.	A	B	C	D	Hand	R	Weight (kg)
8558-205	18.5	22.5	13	18	Left	33	0.09
8558-255	18.5	22.5	13	18	Right	33	0.09



WDS 8558 Quarter Turn Slam Latch - Pin Type - Left or Right Hand

Die Cast Zinc

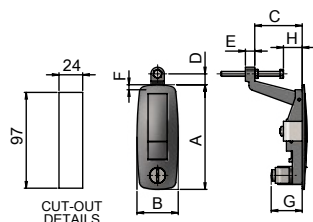
WDS No.	A	B	C	D	R	Hand	Weight (kg)
8558-201	18.5	22.5	13	18	33	Left	0.09
8558-251	18.5	22.5	13	18	33	Right	0.09



WDS 8645 Slam Latch With or Without Lock

Plates - Die Cast Zinc
Black Powder Coating

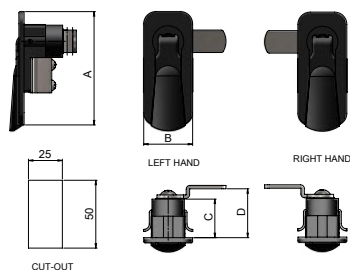
WDS No.	A	B	C	D	E	H	H1	J	K	K1	W	Type	Weight (kg)
8645-201	80	64.5	75	53	56	30	20	38	24.5	24.5	38	With Lock	0.56
8645-401	80	64.5	75	53	56	30	20	38	24.5	24.5	38	Without Lock	0.56



Compression Latch - Locking **WDS 8551**

Die Cast Zinc
Black finish

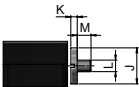
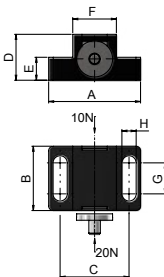
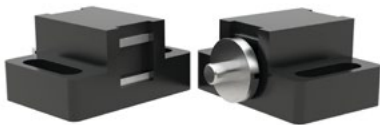
WDS No.	A	B	C	D	E	F	G	H	Type	Weight (kg)
8551-351	106	42	48	11	9.5	5	31.5	1 - 35	Locking	0.32



Lift and Turn CAM Latch - Steel Cam **WDS 8552**

Body - Glass Reinforced Polyamide (PA6/GFR30)
Cam - Steel

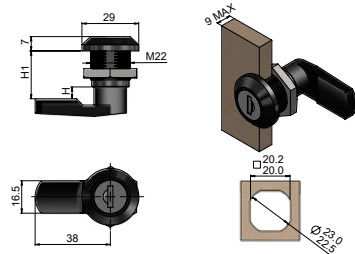
WDS No.	A	B	C	D	Hand	Weight (kg)
8552-201	83.5	36	29	29	Right	0.09
8552-202	83.5	36	29	29	Left	0.08
8552-203	83.5	36	29	36	Right	0.07
8552-204	83.5	36	29	36	Left	0.08



WDS 8543 Magnetic Catch - Polyamide

Polyamide - Black
Locking force - 20N front, 10N back

WDS No.	A	B	C	D	E	F	G	H	J	K	L	M	Weight (kg)
8543-201	40	28	30	20	10	19	13.5	6.2	15.7	2.8	M5	6	0.04

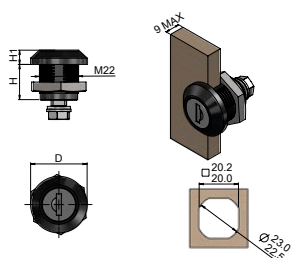


Quarter Turn Latch Kit - Polyamide (Plastic) Cylinder with Cam Key Type **WDS 8559**

Housing - Polyamide

Cam - Polyamide

WDS No.	H	H1	Weight (kg)
8559-201F0040PL	0	18	0.06
8559-201F0640PL	6	24	0.06
8559-201F1040PL	10	28	0.06

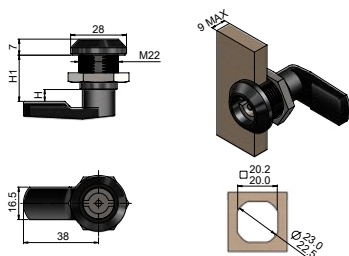


Quarter Turn - Polyamide Cylinder with Key **WDS 8559**

Housing - Polyamide

Key Code 1333 Standard

WDS No.	D	H	H1	Weight (kg)
8559-201	28	18	7	0.06

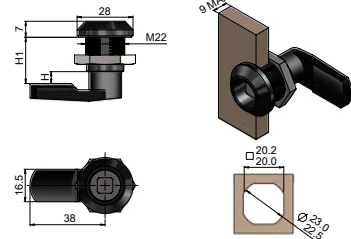


Quarter Turn Latch Kit - Polyamide (Plastic) Cylinder with Cam Pin Type **WDS 8562**

Housing - Polyamide, Zinc Die Cast Driver

Cam - Polyamide

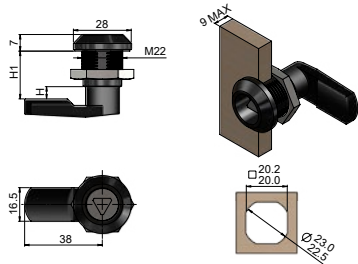
WDS No.	H	H1	Weight (kg)
8562-201F0040PL	0	18	0.04
8562-201F0640PL	6	24	0.04
8562-201F1040PL	10	28	0.04



WDS 8562 Quarter Turn Latch Kit - Polyamide (Plastic) Cylinder with Cam Square Type

Housing - Polyamide, Zinc Die Cast Driver
Cam - Polyamide

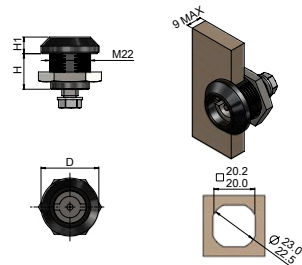
WDS No.	H	H1	Weight (kg)
8562-203F0040PL	0	18	0.03
8562-203F0640PL	6	24	0.03
8562-203F1040PL	10	28	0.03



WDS 8562 Quarter Turn Latch Kit - Polyamide (Plastic) Cylinder with Cam Tri Type

Housing - Polyamide, Zinc Die Cast Driver
Cam - Polyamide

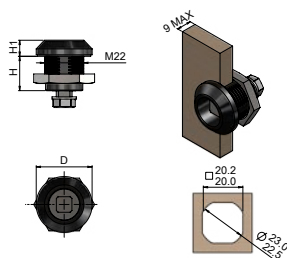
WDS No.	H	H1	Weight (kg)
8562-205F0040PL	0	18	0.05
8562-205F0640PL	6	24	0.05
8562-205F1040PL	10	28	0.05



WDS 8562 Quarter Turn Polyamide - Pin Type

Housing - Polyamide, Zinc Die Cast Driver
Suitable for use with Cams - WDS 8575

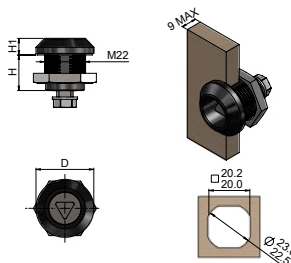
WDS No.	D	H	H1	Weight (kg)
8562-201	28	18	7	0.04



Quarter Turn Polyamide - Square Type **WDS 8562**

Housing - Polyamide, Zinc Die Cast Driver
Suitable for use with Cams - WDS 8575

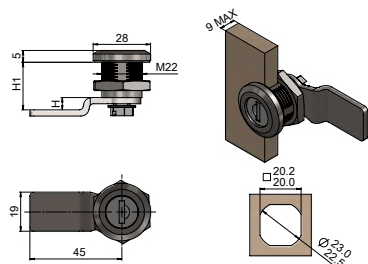
WDS No.	D	H	H1	Weight (kg)
8562-203	28	18	7	0.03



Quarter Turn Polyamide - Tri Type **WDS 8562**

Housing - Polyamide, Zinc Die Cast Driver
Suitable for use with Cams - WDS 8575

WDS No.	D	H	H1	Weight (kg)
8562-205	28	18	7	0.04



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ZP

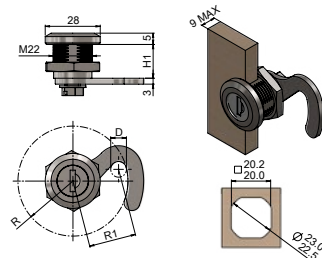
Quarter Turn Latch Kit - Chrome Finish with Key Lock and Cam **WDS 8564**

Housing - Zinc Die Cast
Key Code 1333 Standard

WDS No.	H	H1	Weight (kg)
8564-201F0045ZP	0	18	0.11
8564-201F0645ZP	6	24	0.11
8564-201F1045ZP	10	28	0.11

CR

ZP

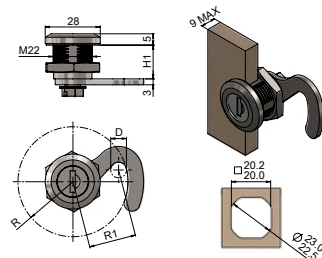


WDS 8564 Quarter Turn Latch Kit - Chrome Finish with Key Lock and Hook Cam

Housing - Zinc Die Cast
Cam - Steel Zinc Plated

WDS No.	D	H1	R	R1	Weight (kg)
8564-201F0028KZP	8	18	28	24	0.01

ZP

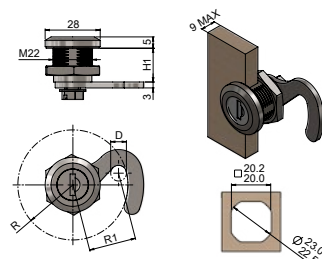


WDS 8564 Quarter Turn Latch Kit - Black Finish Cylinder with Key Lock and Cam

Housing - Zinc Die Cast
Cam - Steel Zinc Plated

WDS No.	H	H1	Weight (kg)
8564-401F0045ZP	0	18	0.01
8564-401F0645ZP	6	24	0.01
8564-401F1045ZP	10	28	0.01

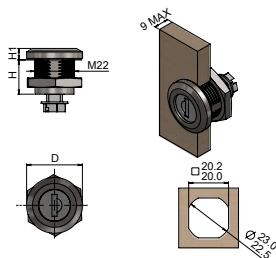
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WDS 8564 Quarter Turn Latch Kit - Black Finish Cylinder with Key Lock and Hook Cam

Housing - Zinc Die Cast
Cam - Steel Zinc Plated

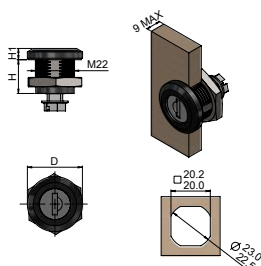
WDS No.	D	H1	R	R1	Weight (kg)
8564-401F0028KZP	8	18	28	24	0.01



Quarter Turn - Chrome Finish with Key **WDS 8564**

Housing - Zinc Die Cast
Suitable for use with Cams - WDS 8575

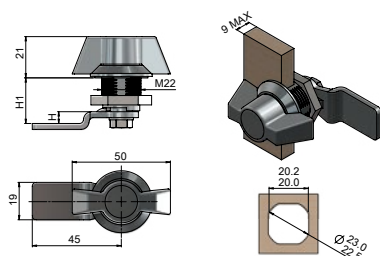
WDS No.	D	H	H1	Weight (kg)
8564-201	28	18	5	0.09



Quarter Turn - Black Finish Cylinder with Key **WDS 8564**

Housing - Zinc Die Cast
Suitable for use with Cams - WDS 8575

WDS No.	D	H	H1	Weight (kg)
8564-401	28	18	5	0.08



Quarter Turn Latch Kit - Chrome Finish with Wing Knob - Non Keyed with Cam **WDS 8565**

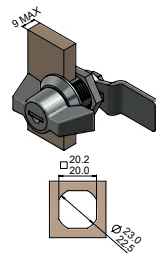
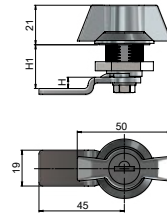
Housing and Wing Knob - Zinc Die Cast
Cam - Steel Zinc Plated

WDS No.	H	H1	Weight (kg)
8565-200L08B45ZP	-8	10	0.14
8565-200L06B45ZP	-6	12	0.14
8565-200L00A45ZP	0	18	0.14
8565-200L02A45ZP	2	20	0.14
8565-200L03A45ZP	3	21	0.14
8565-200L04A45ZP	4	22	0.14
8565-200L06A45ZP	6	24	0.14
8565-200L08A45ZP	8	26	0.14
8565-200L10A45ZP	10	28	0.14
8565-200L14A45ZP	14	32	0.14
8565-200L16A45ZP	16	34	0.14



CR

ZP

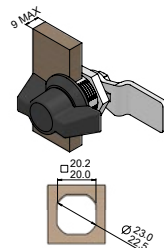
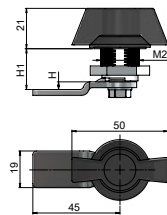


WDS 8565 Quarter Turn Latch Kit - Chrome Finish with Wing Knob Key Lock and Cam

Housing and Wing Knob - Zinc Die Cast
Cam - Steel Zinc Plated

WDS No.	H	H1	Weight (kg)
8565-205L08B45ZP	-8	10	0.16
8565-205L06B45ZP	-6	12	0.16
8565-205L00A45ZP	0	18	0.16
8565-205L02A45ZP	2	20	0.16
8565-205L03A45ZP	3	21	0.16
8565-205L04A45ZP	4	22	0.16
8565-205L06A45ZP	6	24	0.16
8565-205L08A45ZP	8	26	0.16
8565-205L10A45ZP	10	28	0.16
8565-205L14A45ZP	14	32	0.16
8565-205L16A45ZP	16	34	0.16

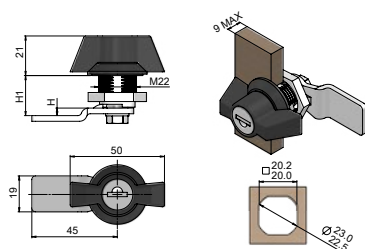
ZP



WDS 8565 Quarter Turn Latch Kit - Non Keyed Wing Knob Black Finish with Cam

Housing and Wing Knob - Zinc Die Cast
Cam - Steel Zinc Plated

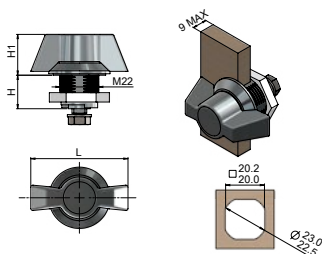
WDS No.	H	H1	Weight (kg)
8565-400L08B45ZP	-8	10	0.16
8565-400L06B45ZP	-6	12	0.16
8565-400L00A45ZP	0	18	0.14
8565-400L02A45ZP	2	20	0.14
8565-400L03A45ZP	3	21	0.14
8565-400L04A45ZP	4	22	0.14
8565-400L06A45ZP	6	24	0.14
8565-400L08A45ZP	8	26	0.16
8565-400L10A45ZP	10	28	0.16
8565-400L14A45ZP	14	32	0.16
8565-400L16A45ZP	16	34	0.16



Quarter Turn Latch Kit - Keyed Wing Knob Black Finish with Cam **WDS 8565**

Housing and Wing Knob - Zinc Die Cast
Cam - Steel Zinc Plated

WDS No.	H	H1	Weight (kg)
8565-405L08B45ZP	-8	10	0.16
8565-405L06B45ZP	-6	12	0.16
8565-405L00A45ZP	0	18	0.16
8565-405L02A45ZP	2	20	0.16
8565-405L03A45ZP	3	21	0.16
8565-405L04A45ZP	4	22	0.16
8565-405L06A45ZP	6	24	0.16
8565-405L08A45ZP	8	26	0.16
8565-405L10A45ZP	10	28	0.16
8565-405L14A45ZP	14	32	0.16
8565-405L16A45ZP	16	34	0.16

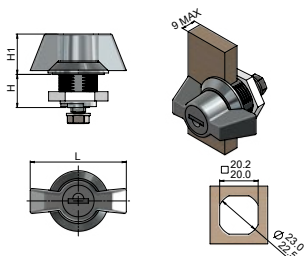


CR

Quarter Turn - Chrome Finish with Wing Knob - Non-Keyed **WDS 8565**

Housing and Wing Knob - Zinc Die Cast

WDS No.	D	H	H1	L	Weight (kg)
8565-200	32	18	20	50	0.13

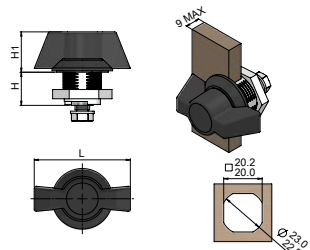


CR

Quarter Turn - Chrome Finish with Wing Knob **WDS 8565**

Housing and Wing Knob - Zinc Die Cast

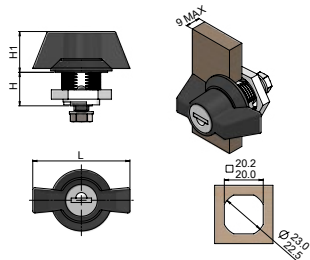
WDS No.	D	H	H1	L	Weight (kg)
8565-205	32	18	20	50	0.15



WDS 8565 Quarter Turn - Black Finish with Wing Knob - Non-Keyed

Housing & Wing Knob - Zinc Die Cast
Lock - Steel

WDS No.	D	H	H1	L	Weight (kg)
8565-400	32	18	20	50	0.12

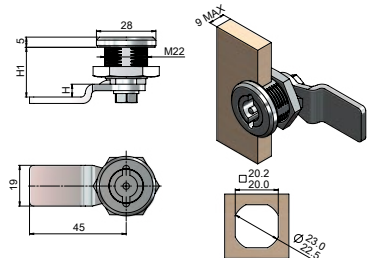


WDS 8565 Quarter Turn - Black Finish with Wing Knob - Keyed

Housing & Wing Knob - Zinc Die Cast
Lock - Steel

WDS No.	D	H	H1	L	Weight (kg)
8565-405	32	18	20	50	0.15

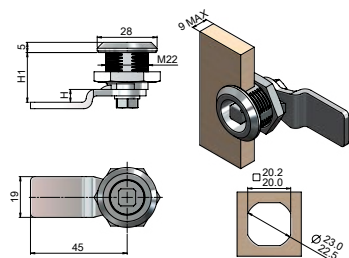
304



WDS 8567 Quarter Turn Latch Kit - 304 Stainless Steel Cylinder and CAM Pin Type

Lock - 304 Stainless Steel
Cam - 304 Stainless Steel

WDS No.	H	H1	Weight (kg)
8567-601L0045A2	0	18	0.08
8567-601L0645A2	6	24	0.08
8567-601L1045A2	10	28	0.08

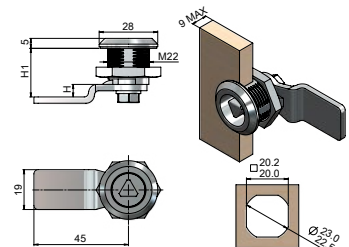


Quarter Turn Latch Kit - 304 Stainless Steel Cylinder and CAM Square Type **WDS 8567**

Lock - 304 Stainless Steel

Cam - 304 Stainless Steel

WDS No.	H	H1	Weight (kg)
8567-603L0045A2	0	18	0.07
8567-603L0645A2	6	24	0.07
8567-603L1045A2	10	28	0.07

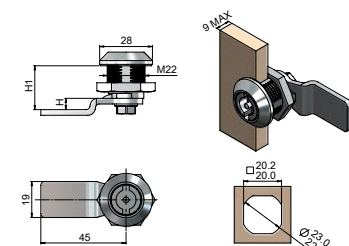


Quarter Turn Latch Kit - 304 Stainless Steel Cylinder and CAM Tri Type **WDS 8567**

Lock - 304 Stainless Steel

Cam - 304 Stainless Steel

WDS No.	H	H1	Weight (kg)
8567-605L0045A2	0	18	0.07
8567-605L0645A2	6	24	0.07
8567-605L1045A2	10	28	0.07



Quarter Turn Latch Kit - Chrome Finish Pin Type with Cam **WDS 8567**

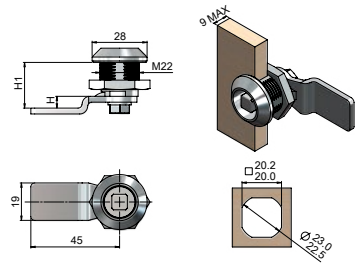
Housing - Zinc Die Cast

Cam - Steel Zinc Die Cast

WDS No.	H	H1	Weight (kg)
8567-201L08B45ZP	-8	10	0.06
8567-201L06B45ZP	-6	12	0.06
8567-201L00A45ZP	0	18	0.06
8567-201L02A45ZP	2	20	0.06
8567-201L03A45ZP	3	21	0.06
8567-201L04A45ZP	4	22	0.06
8567-201L06A45ZP	6	24	0.06
8567-201L08A45ZP	8	26	0.06
8567-201L10A45ZP	10	28	0.06
8567-201L14A45ZP	14	32	0.06
8567-201L16A45ZP	16	34	0.06

CR

ZP



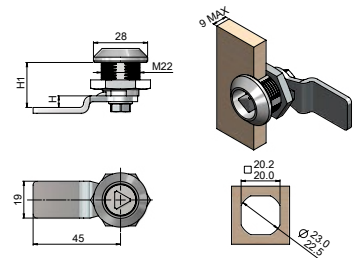
WDS 8567 Quarter Turn Latch Kit - Chrome Finish Square Type with Cam

Housing - Zinc Die Cast
Cam - Steel Zinc Die Cast

WDS No.	H	H1	Weight (kg)
8567-203L08B45ZP	-8	10	0.08
8567-203L06B45ZP	-6	12	0.08
8567-203L00A45ZP	0	18	0.08
8567-203L02A45ZP	2	20	0.08
8567-203L03A45ZP	3	21	0.08
8567-203L04A45ZP	4	22	0.08
8567-203L06A45ZP	6	24	0.08
8567-203L08A45ZP	8	26	0.08
8567-203L10A45ZP	10	28	0.08
8567-203L14A45ZP	14	32	0.08
8567-203L16A45ZP	16	34	0.08

CR

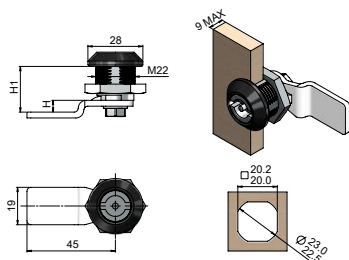
ZP



WDS 8567 Quarter Turn Latch Kit - Chrome Finish Tri Type with Cam

Housing - Zinc Die Cast
Cam - Steel Zinc Die Cast

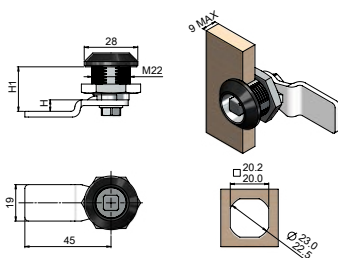
WDS No.	H	H1	Weight (kg)
8567-205L08B45ZP	-8	10	0.08
8567-205L06B45ZP	-6	12	0.08
8567-205L00A45ZP	0	18	0.08
8567-205L02A45ZP	2	20	0.08
8567-205L03A45ZP	3	21	0.08
8567-205L04A45ZP	4	22	0.08
8567-205L06A45ZP	6	24	0.08
8567-205L08A45ZP	8	26	0.08
8567-205L10A45ZP	10	28	0.08
8567-205L14A45ZP	14	32	0.08
8567-205L16A45ZP	16	34	0.08



Quarter Turn Latch Kit - Pin Type Black Finish with Cam **WDS 8567**

Housing - Zinc Die Cast
Cam - Steel Zinc Die Cast

WDS No.	H	H1	Weight (kg)
8567-401L08B45ZP	-8	10	0.08
8567-401L06B45ZP	-6	12	0.08
8567-401L00A45ZP	0	18	0.08
8567-401L02A45ZP	2	20	0.08
8567-401L03A45ZP	3	21	0.08
8567-401L04A45ZP	4	22	0.08
8567-401L06A45ZP	6	24	0.08
8567-401L08A45ZP	8	26	0.08
8567-401L10A45ZP	10	28	0.08
8567-401L14A45ZP	14	32	0.08
8567-401L16A45ZP	16	34	0.08

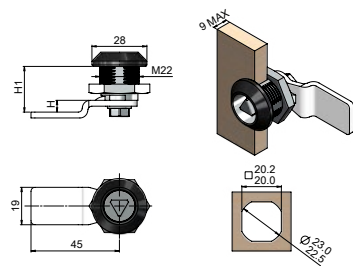


Quarter Turn Latch Kit - Square Type Black Finish with Cam **WDS 8567**

Housing - Zinc Die Cast
Cam - Steel Zinc Die Cast

WDS No.	H	H1	Weight (kg)
8567-403L08B45ZP	-8	10	0.06
8567-403L06B45ZP	-6	12	0.06
8567-403L00A45ZP	0	18	0.06
8567-403L02A45ZP	2	20	0.06
8567-403L03A45ZP	3	21	0.06
8567-403L04A45ZP	4	22	0.06
8567-403L06A45ZP	6	24	0.06
8567-403L08A45ZP	8	26	0.06
8567-403L10A45ZP	10	28	0.06
8567-403L14A45ZP	14	32	0.06
8567-403L16A45ZP	16	34	0.06

ZP

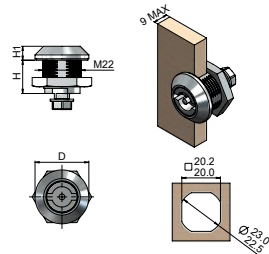


WDS 8567 Quarter Turn Latch Kit - Tri Type Black Finish with Cam

Housing - Zinc Die Cast
Cam - Steel Zinc Die Cast

WDS No.	H	H1	Weight (kg)
8567-405L08B45ZP	-8	10	0.06
8567-405L06B45ZP	-6	12	0.06
8567-405L00A45ZP	0	18	0.06
8567-405L02A45ZP	2	20	0.06
8567-405L03A45ZP	3	21	0.06
8567-405L04A45ZP	4	22	0.06
8567-405L06A45ZP	6	24	0.06
8567-405L08A45ZP	8	26	0.06
8567-405L10A45ZP	10	28	0.06
8567-405L14A45ZP	14	32	0.06
8567-405L16A45ZP	16	34	0.06

CR

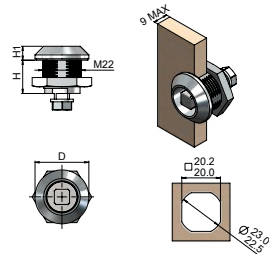


WDS 8567 Quarter Turn - Chrome Finish - Pin Type

Housing - Zinc Die Cast

WDS No.	D	H	H1	Weight (kg)
8567-201	28	18	5	0.05

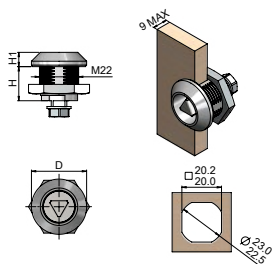
CR



WDS 8567 Quarter Turn - Chrome Finish - Square Type

Housing - Zinc Die Cast

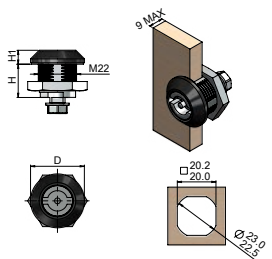
WDS No.	D	H	H1	Weight (kg)
8567-203	28	18	5	0.07



Quarter Turn Chrome Finish - Tri Type WDS 8567

Housing - Zinc Die Cast

WDS No.	D	H	H1	Weight (kg)
8567-205	28	18	5	0.06

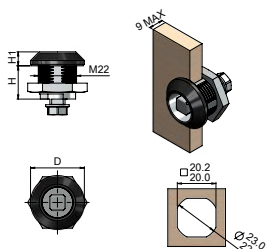


Quarter Turn - Black Finish - Pin Type WDS 8567

Housing - Zinc Die Cast

Lock - Steel

WDS No.	D	H	H1	Weight (kg)
8567-401	28	18	5	0.06

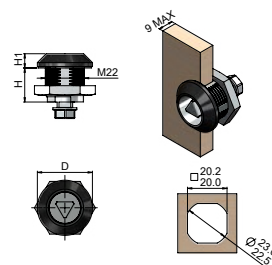


Quarter Turn - Black Finish - Square Type WDS 8567

Housing - Zinc Die Cast

Lock - Steel

WDS No.	D	H	H1	Weight (kg)
8567-403	28	18	5	0.05



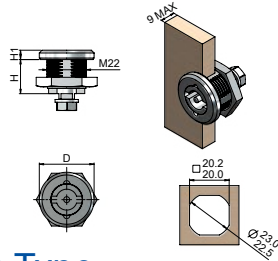
Quarter Turn - Black Finish - Tri Type WDS 8567

Housing - Zinc Die Cast

Lock - Steel

WDS No.	D	H	H1	Weight (kg)
8567-405	28	18	5	0.05

304

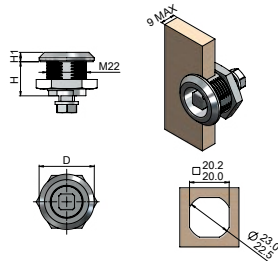


WDS 8567 Quarter Turn - 304 Stainless Steel - Pin Type

304 Stainless Steel
Lock - Stainless Steel

WDS No.	D	H	H1	Weight (kg)
8567-601	28	18	5	0.06

304

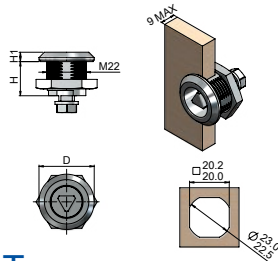


WDS 8567 Quarter Turn - 304 Stainless Steel - Square Type

304 Stainless Steel
Lock - Stainless Steel

WDS No.	D	H	H1	Weight (kg)
8567-603	28	18	5	0.05

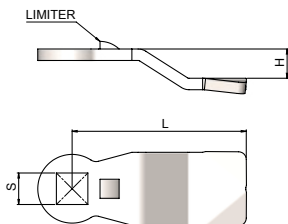
304



WDS 8567 Quarter Turn - 304 Stainless Steel - Tri Type

304 Stainless Steel
Lock - Stainless Steel

WDS No.	D	H	H1	Weight (kg)
8567-605	28	18	5	0.05

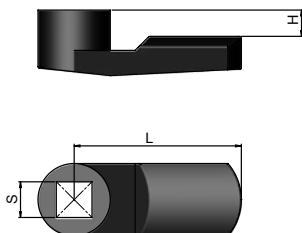


ZP

CAM with Limiter - Steel Zinc Plated WDS 8575

Zinc Plated Steel

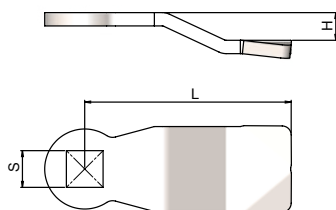
WDS No.	H	L	S	Weight (kg)
8575-200	0	45	8.2	0.02
8575-206	6	45	8.2	0.02
8575-210	10	45	8.2	0.02



CAM No Limiter - Polyamide WDS 8575

Polyamide

WDS No.	H	L	S	Weight (kg)
8575-300	0	38	8.2	0.01
8575-306	6	38	8.2	0.01
8575-310	10	38	8.2	0.01



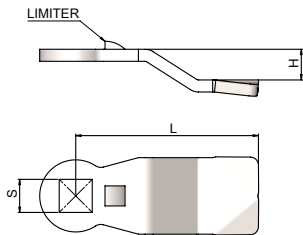
ZP

CAM No Limiter - Steel Zinc Plated WDS 8575

Zinc Plated Steel

WDS No.	H	L	S	Weight (kg)
8575-400	0	45	8.2	0.02
8575-406	6	45	8.2	0.02
8575-410	10	45	8.2	0.02

304

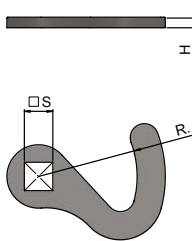


WDS 8575 CAM with Limiter - Stainless Steel

304 Stainless Steel

WDS No.	H	L	S	Weight (kg)
8575-600	0	45	8.2	0.02
8575-606	6	45	8.2	0.02
8575-610	10	45	8.2	0.02

ZP



WDS 8576 CAM - Hook - Steel Zinc Plated

Zinc Plated Steel

WDS No.	H	R	S	Weight (kg)
8576-201	3	28	8.1	0.02



WDS 8580 Key - Pin 3mm and 5mm

Zinc Die Cast Nickel Plated

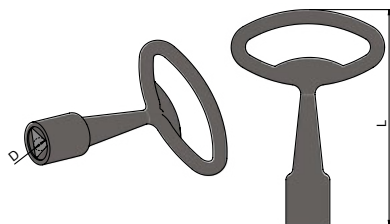
WDS No.	D	L	Weight (kg)
8580-201	3mm	68	0.02
8580-202	5mm	68	0.03



Key - Square **WDS 8580**

Zinc Die Cast Nickel Plated

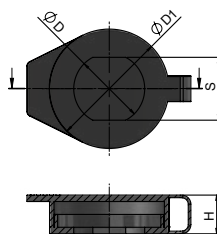
WDS No.	L	S	Weight (kg)
8580-203	68	8	0.04



Key - Triangle **WDS 8580**

Zinc Die Cast Nickel Plated

WDS No.	D	L	Weight (kg)
8580-205	6	68	0.04

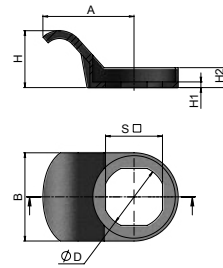


RUB

Dust Cover **WDS 8582**

Rubber

WDS No.	D	D1	H	S	Weight (kg)
8582-201	22	37	12	19.5	0.01

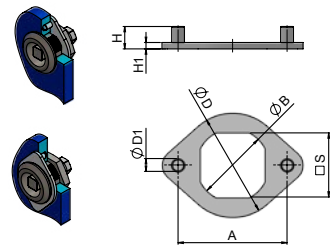


WDS 8583 Finger Pull

Polyamide

WDS No.	A	B	D	H	H1	H2	S	Weight (kg)
8583-201	32	31	22	20	2	7	19.5	0.01

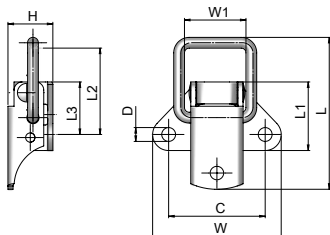
ZP



WDS 8581 Lock Plate

Zinc Plated Steel

WDS No.	A	B	D	D1	H	H1	S	Weight (kg)
8581-201	34	22.5	32.5	4	7	2	20	0.01



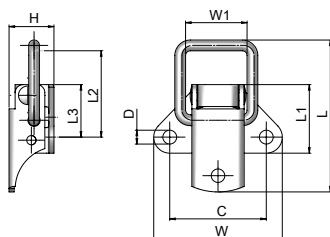
304

ZP

Toggle Latch WDS 4201

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	C	D	H	L	L1	L2	L3	W	W1	Weight (kg)
4201-201	4201-601	28.6	4.1	13.1	45	20.3	25.6	15.6	38.1	18.2	0.02



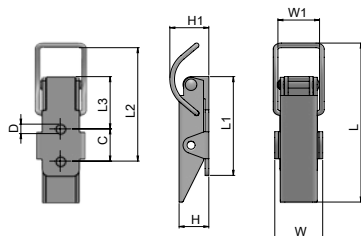
304

ZP

Toggle Latch with Spring Claw WDS 4202

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	C	D	H	H1	L	L1	L2	L3	W	W1	Weight (kg)
4202-201	4202-601	28.6	4.2	13.1	15.5	45.1	20.3	26.9	15.6	38.1	18.1	0.02



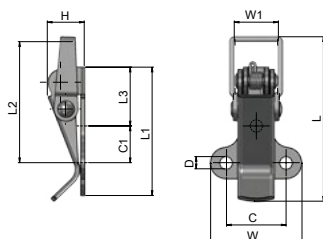
304

ZP

Toggle Latch with Spring Claw WDS 4203

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	C	D	H	H1	L	L1	L2	L3	W	W1	Weight (kg)
4203-201	4203-601	14	4.1	13.3	13.9	71.6	42.9	49.2	22.7	22.3	18	0.04



304

ZP

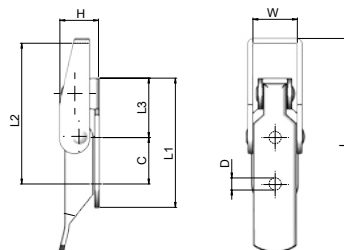
Toggle Latch with Return Spring WDS 4204

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	C	C1	D	H	L	L1	L2	L3	W	W1	Weight (kg)
4204-201	4204-601	20.61	12.7	4.2	13.9	57.6	44.4	41.8	19.8	31.7	15.1	0.03

304

ZP

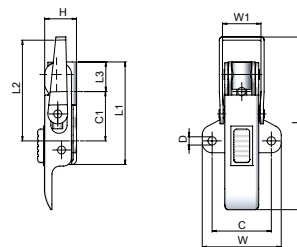


WDS 4205 Toggle Latch with Ridged Claw

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	C	D	H	L	L1	L2	L3	W	Weight (kg)
4205-201	4205-201	15.9	4.1	12.7	76.7	43.7	47.6	20.1	15.1	0.04

304



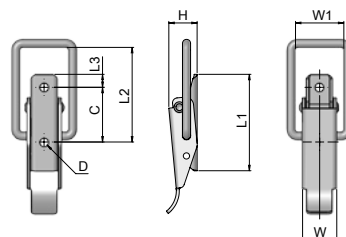
WDS 4206 Stainless Adjustable Toggle Latch with Safety Catch

304 Stainless Steel

WDS No.	C	C1	D	H	L	L1	L2	L3	W	W1	Weight (kg)
4206-601	30	25	4.2	17	83-93	52	47-57	15	40	18.5	0.08

304

ZP



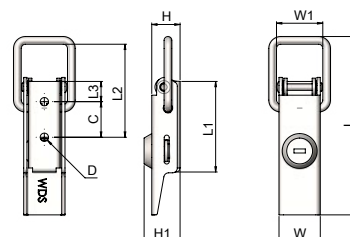
WDS 4207 Toggle Latch

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	C	D	H	L	L1	L2	L3	W	W1	Weight (kg)
4207-201	4207-201	33.3	5.1	18.3	105.9	67.4	57.6	7.9	20.8	29.4	0.07
4207-202	-	33.3	5.1	18.3	127	67.4	79	7.9	20.8	29.4	0.08
4207-203	-	33.3	5.1	18.3	146	67.4	98.3	7.9	20.8	29.4	0.08

304

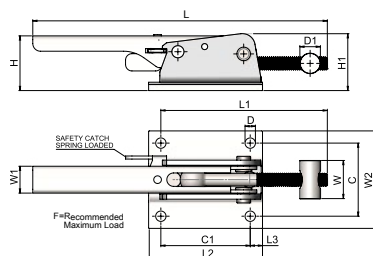
ZP



WDS 4208 Toggle Latch with Key Lock

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	C	D	H	H1	L	L1	L2	L3	W	Weight (kg)
4208-201	4208-601	22	5.1	17.5	23	113.3	58	57.5	12.5	28.6	0.13



316

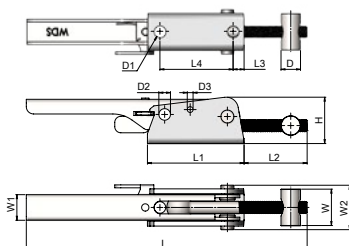
ZP

ZP

Toggle Latch - Heavy Duty with Safety Catch WDS 4209

Available in Stainless Steel or Zinc Plated Steel, F=Max Load

Zinc Plated	Stainless Steel	C	C1	D	D1	F (kg)	H	H1	L	L1	L2	L3	W	W1	W2	Weight (kg)
4209-201	4209-601	57.1	69.9	8	15.9	1000	37	45.5	229.2	130	88.8	9.5	30.2	20.5	76.2	0.9



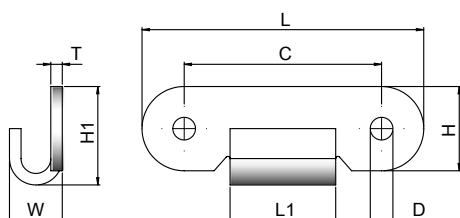
316

304

Toggle Latch - Heavy Duty Padlockable WDS 4210

Available in Stainless Steel or Zinc Plated Steel, F=Max Load

Zinc Plated	Stainless Steel	D	D1	D2	D3	F (kg)	H	L	L1	L2	L3	L4	W	W1	W2	Weight (kg)
4210-301	4210-701	16	8.3	9.5	4.7	1000	38	232	79	50	9.5	60	30.2	20.7	31	0.46



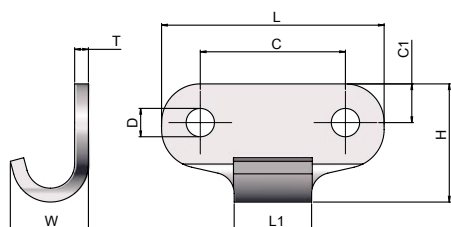
304

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Catchplate WDS 4220

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	C	D	H	H1	L	L1	T	W	Weight (kg)
4220-201	4220-601	28.6	4.1	9.5	10.5	38.1	15.9	1.6	8	0.01
4220-202	4220-602	44.5	5.1	19	22.2	60.3	23.8	2.6	11.9	0.03



304

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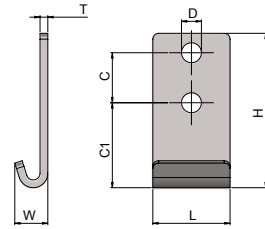
Catchplate WDS 4221

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	C	C1	D	H	L	L1	T	W	Weight (kg)
4221-201	4221-601	21	5.6	4.1	17.1	32.2	11.2	2	11.3	0.01
4221-202	4221-602	30	5	4.2	26	40	16	1.8	11.2	0.01
4221-203	4221-603	36.5	11.1	5.1	39.6	56.4	23.8	2.6	12.7	0.04

304

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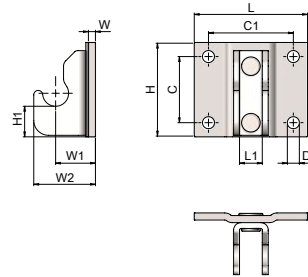
WDS 4222 Catchplate

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	C	C1	D	H	L	T	W	Weight (kg)
4222-201	4222-601	10.3	17.5	4.1	31.8	15.9	1.6	6.8	0.01

304

ZP



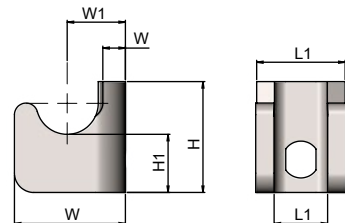
WDS 4223 Heavy Duty Catchplate

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	C	C1	D	H	H1	L	L1	W	W1	W2	Weight (kg)
4223-201	4223-601	44.5	57.1	8	63.5	20.6	76.2	15.3	4.8	27.1	42	0.24

304

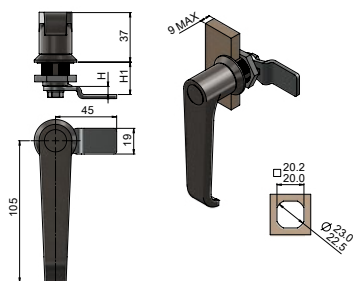
ZP



WDS 4224 Catchplate - Weldable

Available in Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	H	H1	L	L1	W	W1	W2	Weight (kg)
4224-201	4224-601	28.6	14.5	22.1	12.7	4.7	13.5	28.6	0.06



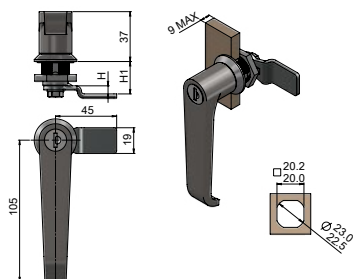
CR

Quarter Turn Latch Kit - Chrome Finish L Handle Non-Keyed with Cam **WDS 8568**

Housing and Handle - Zinc Die Cast

Lock - Steel

WDS No.	H	H1	Weight (kg)
8568-200L08B45ZP	-8	10	0.3
8568-200L06B45ZP	-6	12	0.3
8568-200L00A45ZP	0	18	0.3
8568-200L02A45ZP	2	20	0.3
8568-200L03A45ZP	3	21	0.3
8568-200L04A45ZP	4	22	0.3
8568-200L06A45ZP	6	24	0.3
8568-200L08A45ZP	8	26	0.3
8568-200L10A45ZP	10	28	0.3
8568-200L14A45ZP	14	32	0.3
8568-200L16A45ZP	16	34	0.3



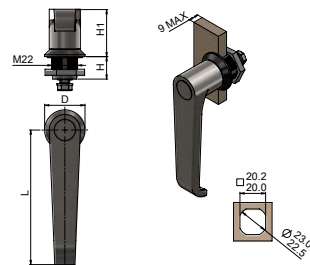
CR

Quarter Turn Latch Kit - Chrome Finish L Handle Key Lock with Cam **WDS 8568**

Housing and Handle - Zinc Die Cast

WDS No.	H	H1	Weight (kg)
8568-205L08B45ZP	-8	10	0.25
8568-205L06B45ZP	-6	12	0.25
8568-205L00A45ZP	0	18	0.25
8568-205L02A45ZP	2	20	0.25
8568-205L03A45ZP	3	21	0.25
8568-205L04A45ZP	4	22	0.25
8568-205L06A45ZP	6	24	0.25
8568-205L08A45ZP	8	26	0.25
8568-205L10A45ZP	10	28	0.25
8568-205L14A45ZP	14	32	0.25
8568-205L16A45ZP	16	34	0.25

CR

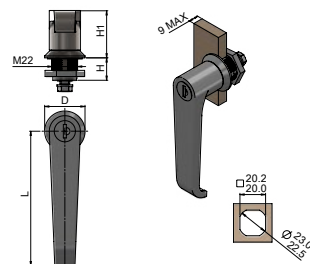


WDS 8568 Quarter Turn L Handle - Non-Keyed

Available in Chrome or Black finish

Chrome	Black	D	H	H1	L	Weight (kg)
8568-200	8568-400	31	18	37	105	0.29

CR

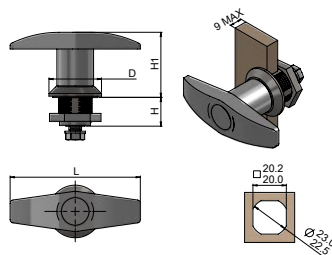


WDS 8568 Quarter Turn L Handle - Keyed

Available in Chrome or Black finish

Chrome	Black	D	H	H1	L	Weight (kg)
8568-205	8568-405	31	18	37	105	0.24

CR

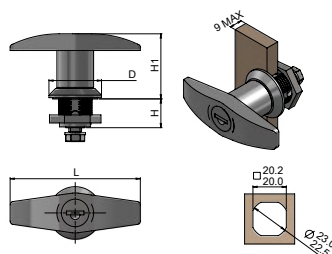


WDS 8569 Quarter Turn - T Handle - Non-Keyed

Available in Chrome or Black finish

Chrome	Black	D	H	H1	L	Weight (kg)
8569-205	8569-405	32	18	38	78	0.16

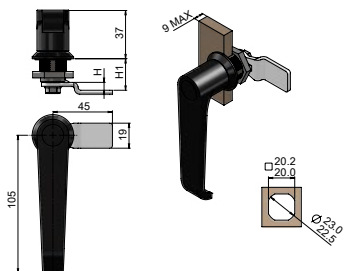
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WDS 8569 Quarter Turn - T Handle - Keyed

Available in Chrome or Black finish

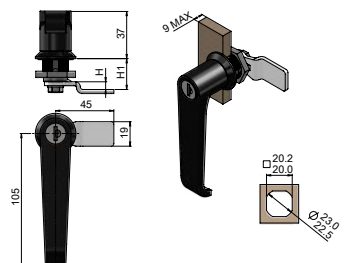
Chrome	Black	D	H	H1	L	Weight (kg)
8569-205	8569-405	32	18	38	78	0.18



Quarter Turn Latch Non Keyed L Handle - Black Finish with Cam **WDS 8568**

Housing and Handle - Zinc Die Cast
Cam - Steel

WDS No.	H	H1	Weight (kg)
8568-400L08B45ZP	-8	10	0.25
8568-400L06B45ZP	-6	12	0.25
8568-400L00A45ZP	0	18	0.25
8568-400L02A45ZP	2	20	0.25
8568-400L03A45ZP	3	21	0.25
8568-400L04A45ZP	4	22	0.25
8568-400L06A45ZP	6	24	0.25
8568-400L08A45ZP	8	26	0.25
8568-400L10A45ZP	10	28	0.25
8568-400L14A45ZP	14	32	0.25
8568-400L16A45ZP	16	34	0.25

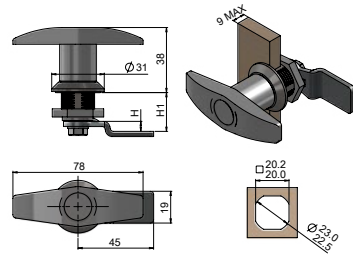


Quarter Turn Latch Keyed L Handle - Black Finish with Cam **WDS 8568**

Housing and Handle - Zinc Die Cast
Cam - Steel

WDS No.	H	H1	Weight (kg)
8568-405L08B45ZP	-8	10	0.25
8568-405L06B45ZP	-6	12	0.25
8568-405L00A45ZP	0	18	0.25
8568-405L02A45ZP	2	20	0.25
8568-405L03A45ZP	3	21	0.25
8568-405L04A45ZP	4	22	0.25
8568-405L06A45ZP	6	24	0.25
8568-405L08A45ZP	8	26	0.25
8568-405L10A45ZP	10	28	0.25
8568-405L14A45ZP	14	32	0.25
8568-405L16A45ZP	16	34	0.25

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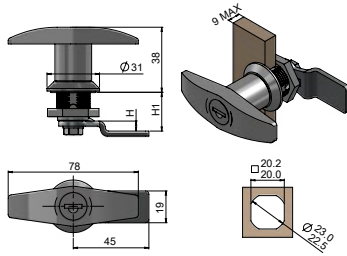


WDS 8569 Quarter Turn Latch Kit - Chrome Finish T Handle Non-Keyed

Housing and Handle - Zinc Die Cast
Lock - Steel

WDS No.	H	H1	Weight (kg)
8569-200L08B45ZP	-8	10	0.17
8569-200L06B45ZP	-6	12	0.17
8569-200L00A45ZP	0	18	0.17
8569-200L02A45ZP	2	20	0.17
8569-200L03A45ZP	3	21	0.17
8569-200L04A45ZP	4	22	0.17
8569-200L06A45ZP	6	24	0.17
8569-200L08A45ZP	8	26	0.17
8569-200L10A45ZP	10	28	0.17
8569-200L14A45ZP	14	32	0.17
8569-200L16A45ZP	16	34	0.17

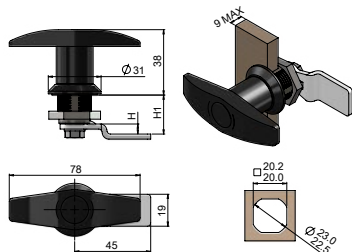
CR



WDS 8569 Quarter Turn Latch Kit - Chrome Finish T Handle with Key Lock

Housing and Handle - Zinc Die Cast
Lock - Steel

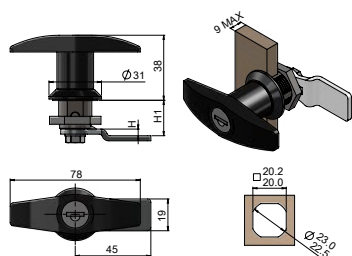
WDS No.	H	H1	Weight (kg)
8569-205L08B45ZP	-8	10	0.2
8569-205L06B45ZP	-6	12	0.2
8569-205L00A45ZP	0	18	0.2
8569-205L02A45ZP	2	20	0.2
8569-205L03A45ZP	3	21	0.2
8569-205L04A45ZP	4	22	0.2
8569-205L06A45ZP	6	24	0.2
8569-205L08A45ZP	8	26	0.2
8569-205L10A45ZP	10	28	0.2
8569-205L14A45ZP	14	32	0.2
8569-205L16A45ZP	16	34	0.2



Quarter Turn Non Keyed T Handle - Black Finish with Cam **WDS 8569**

Housing and Handle - Zinc Die Cast

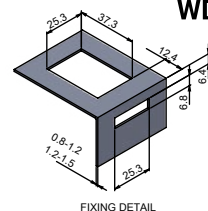
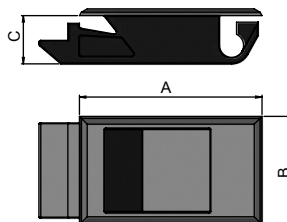
WDS No.	H	H1	Weight (kg)
8569-400L08B45ZP	-8	10	0.16
8569-400L06B45ZP	-6	12	0.16
8569-400L00A45ZP	0	18	0.16
8569-400L02A45ZP	2	20	0.16
8569-400L03A45ZP	3	21	0.16
8569-400L04A45ZP	4	22	0.16
8569-400L06A45ZP	6	24	0.16
8569-400L08A45ZP	8	26	0.16
8569-400L10A45ZP	10	28	0.16
8569-400L14A45ZP	14	32	0.16
8569-400L16A45ZP	16	34	0.16



Quarter Turn Keyed T Handle - Black Finish with Cam **WDS 8569**

Housing and Handle - Zinc Die Cast

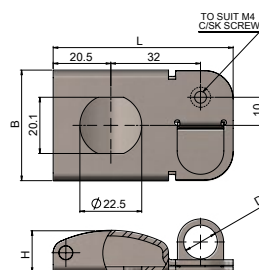
WDS No.	H	H1	Weight (kg)
8569-405L08B45ZP	-8	10	0.2
8569-405L06B45ZP	-6	12	0.2
8569-405L00A45ZP	0	18	0.2
8569-405L02A45ZP	2	20	0.2
8569-405L03A45ZP	3	21	0.2
8569-405L04A45ZP	4	22	0.2
8569-405L06A45ZP	6	24	0.2
8569-405L08A45ZP	8	26	0.2
8569-405L10A45ZP	10	28	0.2
8569-405L14A45ZP	14	32	0.2
8569-405L16A45ZP	16	34	0.2



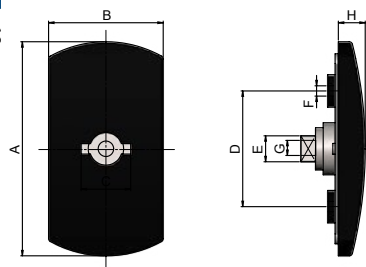
WDS No.	A	B	C	To Suit Plate	Weight (kg)
8553-201	47.25	28	12.5	0.8-1.2	0.02
8553-202	47.25	28	12.5	1.2-1.5	0.02

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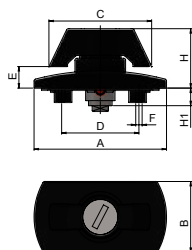
Zinc Plated	Stainless Steel	B	D	H	L	Weight (kg)
8579-201	8579-601	39	12	15	64	0.1



Escutcheon with Double Bit Lock **WDS 8563**

Polyamide Bezel
Die Cast Zinc Insert

WDS No.	A	B	C	D	E	F	G	H	Weight (kg)
8563-230	68	35	15	38	8	3.4	M6	8.5	0.03



Black Wing Knob - Cylinder **WDS 8565**

Polyamide Bezel
Die Cast Zinc Insert

WDS No.	A	B	C	D	E	F	G	H	J	Weight (kg)
8565-435	68	35	50	38	10.5	3.4	M6	29.5	8	0.13

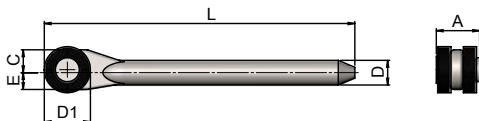


ZP

Locking Rod - Tapered **WDS 8566**

Zinc Plated Steel

WDS No.	D	L	Weight (kg)
8566-2106	8	600	0.12
8566-2110	8	1000	0.2

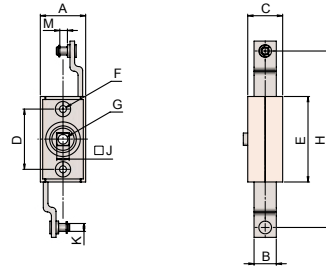


ZP

Locking Rod with Wheel **WDS 8566**

Zinc Plated Steel Rod with Polyamide rollers

WDS No.	A	C	D	D1	E	L	Weight (kg)
8566-2206	15.5	10	8	15	4	600	0.12
8566-2210	15.5	10	8	15	4	1000	0.2

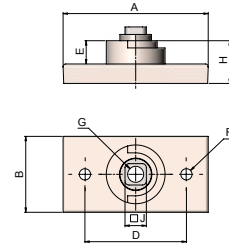


WDS 8566 2 Point Locking Gear Box

Main housings - Die Cast Zinc

Fasteners and moving parts - Zinc plated steel

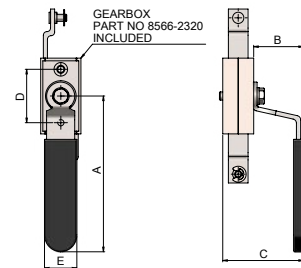
WDS No.	A	B	C	D	E	F	G	H Max	H Min	J	K	M	Weight (kg)
8566-2320	28.5	14 x 3	22	38	54	4.4	6	126	78	8	5	4	0.16



WDS 8566 Adapter Kit for 2 Point Locking

Die Cast Zinc Plate & Inserts

WDS No.	A	B	D	F	G	H	J	Weight (kg)
8566-2321	54.5	28.5	38	4.3	M6	15.8	8	0.05

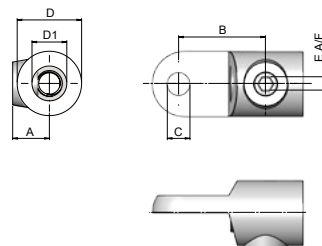


WDS 8566 Multi Point Gear Box with Lever

Main housings - Die Cast Zinc

Fasteners and moving parts - Zinc plated steel

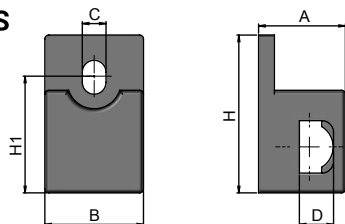
WDS No.	A	B	C	D	E	Weight (kg)
8566-2325	108	35	56	38	23	0.22



WDS 8566 Rod Holder

Die Cast Zinc with Zinc Plated Steel Screw

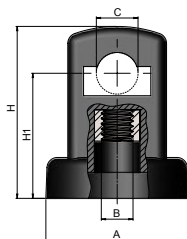
WDS No.	A	B	C	D	D1	E	Weight (kg)
8566-2301	8.6	20.3	5.3	15	8.1	3	0.02



Rod Support WDS 8566

Polyamide

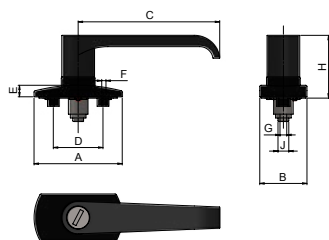
WDS No.	A	B	C	D	H	H1	Weight (kg)
8566-2414	22	25	6.3	8	40	29	0.01



Rod Guides WDS 8566

Polyamide

WDS No.	A	B	C	D	H	H1	H3	Weight (kg)
8566-2424	20	M6	8.2	28	33	24	15	0.01
8566-2430	26	M6	8.2	28	39	30	22	0.02
8566-2436	32	M8	8.2	28	47	36	25	0.02

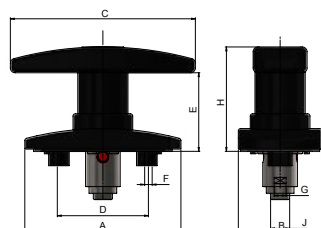


Locking L Handle WDS 8568

Polyamide Bezel

Die Cast Zinc Handle - Powder Coated

WDS No.	A	B	C	D	E	F	G	H	J	Weight (kg)
8568-435	68	35	105	38	8.5	3.4	M6	47	8	0.13



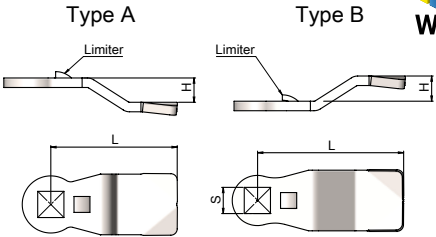
T Handle for Locking Gear Boxes WDS 8569

Polyamide Bezel

Die Cast Zinc Handle - Powder Coated

WDS No.	A	B	C	D	E	F	G	H	J	Weight (kg)
8569-435	89	35	50	38	34.5	3.4	M6	46	8	0.13

ZP

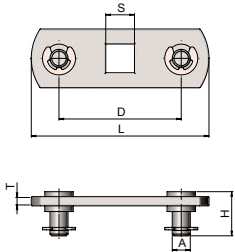


WDS 8575 Cam with Limiter

Zinc Plated Steel

WDS No.	H	L	S	Description	Weight (kg)
8575-2102	2	45	8.25	Type A	0.02
8575-2103	3	45	8.25	Type A	0.02
8575-2104	4	45	8.25	Type A	0.02
8575-2108	8	45	8.25	Type A	0.02
8575-2110	10	45	8.25	Type A	0.02
8575-2114	14	45	8.25	Type A	0.02
8575-2116	16	45	8.25	Type A	0.02
8575-2196	6	45	8.25	Type B	0.02
8575-2198	8	45	8.25	Type B	0.02

ZP

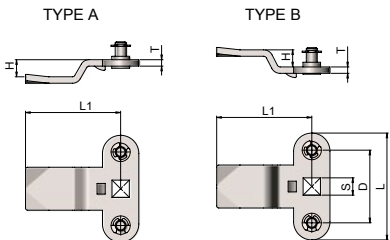
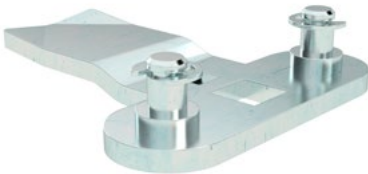


WDS 8575 Cam Plate - 2 Point Locking

Zinc Plated Steel

WDS No.	D	H	L	S	T	Weight (kg)
8575-2200	35	12.4	50	8.25	2.6	0.02

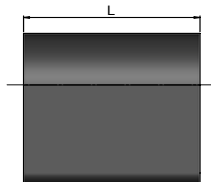
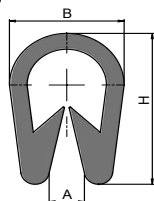
ZP



WDS 8575 Cam for 3 Point Locking Systems

Zinc Plated Steel

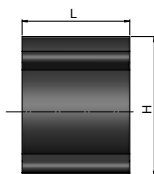
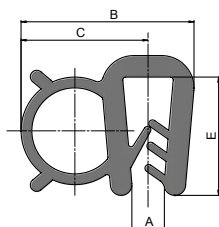
WDS No.	D	H	L	L1	S	T	Description	Weight (kg)
8575-2302	35	2	50	45	8.25	3	Type B	0.04
8575-2304	35	4	50	45	8.25	3	Type B	0.04
8575-2308	35	8	50	45	8.25	3	Type B	0.04
8575-2310	35	10	50	45	8.25	3	Type B	0.04
8575-2314	35	14	50	45	8.25	3	Type B	0.04
8575-2316	35	16	50	45	8.25	3	Type B	0.04
8575-2396	35	6	50	45	8.25	3	Type A	0.04
8575-2398	35	8	50	45	8.25	3	Type A	0.04



Gasket Edge - 1.0 by 2.0mm WDS 8582

EPDM rubber
Note - SOLD PER METRE

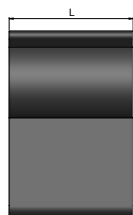
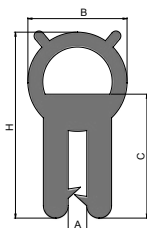
WDS No.	A	B	H	L	Weight (kg)
8582-320	0.5 - 2	6.5	9.5	Per Metre	0.09



Gasket Edge - Side Bubble 1.0 by 3.0mm WDS 8582

EPDM rubber with steel core
Note - SOLD PER METRE

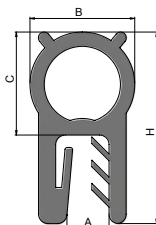
WDS No.	A	B	C	E	H	L	Weight (kg)
8582-430	1-3	16.3	11.8	11	13	Per Metre	0.25



Gasket Edge - Top Bubble - 0.5 by 1.5mm WDS 8582

EPDM rubber with steel core
Note - SOLD PER METRE

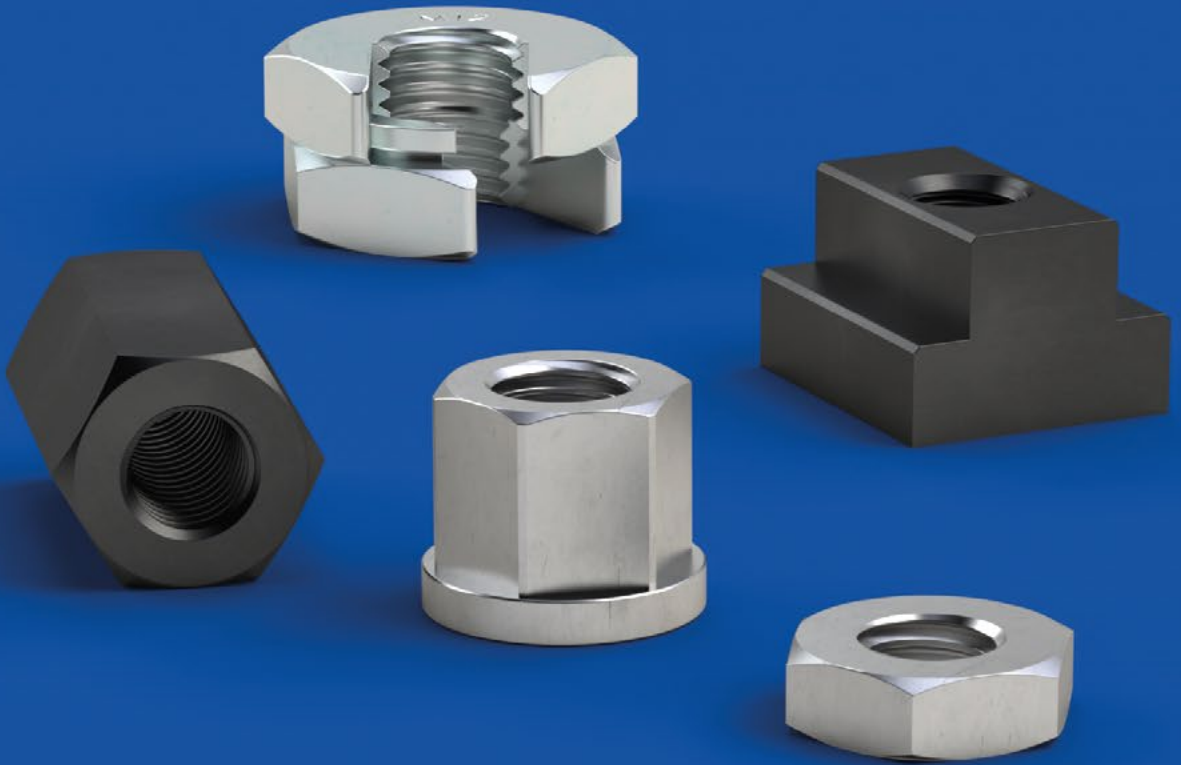
WDS No.	A	B	C	H	L	Weight (kg)
8582-515	0.5-1.5	8	10	15	Per Metre	0.12



Gasket - Top Bubble - 1.0 by 3.5mm WDS 8582

EPDM rubber with steel core
Note - SOLD PER METRE

WDS No.	A	B	C	H	L	Weight (kg)
8582-535	1-3.5	11	10.7	21.5	Per Metre	0.12



NUTS

P 424-444

This comprehensive range of nuts includes: hex full nuts, collar nuts, spherical seating nuts, coupling nuts, acorn nuts, swivel nuts, quick action nuts, tee nuts, clamping support nuts and thumb nuts.

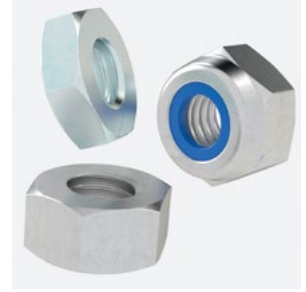
These nuts are available in steel, steel zinc plated, 303 stainless steel & 316 stainless steel.



HEX FULL NUTS

Full nuts are available in steel zinc plated, 303 and 316 stainless steel hex nuts.

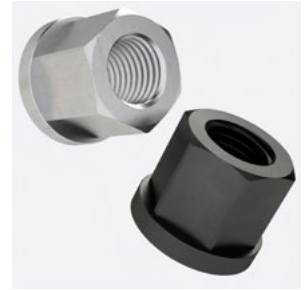
P 424-426



COLLAR NUTS

Collar nuts are similar to common hex nuts but have a flanged washer at the base of the nut. A collar nut with a flanged base offers a larger contact area which gives a greater holding force.

P 427-428



SPHERICAL SEATING NUTS

Spherical seating nuts are available in both metric and inch variants. Materials include high tensile steel and stainless steel spherical seating washers, these nuts can be used with female spherical seating washers.

P 429-430



COUPLING NUTS

Hex coupling nuts or extension nuts as they are often referred to offer an extended female threaded nut to allow two male threaded screws to be joined together.

Materials include: chemically blacked steel and 316 stainless steel.

P 431



ACORN NUTS

Acorn nuts are available in two designs, a domed hex nut version and an alternative dome nut with a flanged base for a higher surface tension.

Acorn nuts are ideal for applications where a standard nut may cause abrasion.

P 432





SWIVEL NUTS

Swivel flange nuts are a unique product offering a loose flange base allowing the nut to be tightened but with slight movement in the body. Sizes include imperial BSW and UNC inch and metric threads.

P 433



QUICK ACTION NUTS

Quick action nuts are slide on hex nuts which can be put onto a male threaded screw at any point rather than threading the nut all the way down the screw. By simply turning half the body of the nut the user can lock the nut into place.

P 434-435



TEE NUTS

The tee nut range includes blank, metric and inch sizes and extended teenuts.

P 436-442



FEET NUTS & CLAMPING SUPPORTS

Feet nuts are ideal for supporting fixture plates.

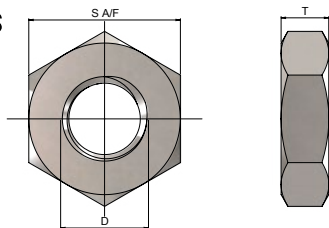
P 443



THUMB NUTS

Choose from a comprehensive collection of thumb nuts. The range includes stainless steel, steel, thermoplastic and Bakelite thumb nuts.

P 444



303

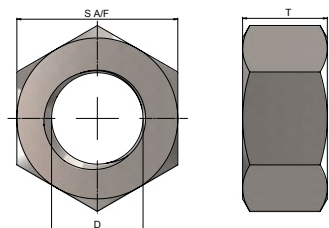
ZP

Metric Half Nuts - (DIN934) WDS 775/875

Available in 303 Stainless Steel or Zinc Plated Steel

Note - SOLD IN BAGGED QUANTITIES

Zinc Plated	Stainless Steel	D	S	T	Pack Quantity	Weight (kg)
775-2040HN	875-6040HN	M4 x 0.7	7	2.2	50pcs	0.03
775-2050HN	875-6050HN	M5 x 0.8	8	2.7	50pcs	0.04
775-2060HN	875-6060HN	M6 x 1.0	6	3.2	50pcs	0.08
775-2080HN	875-6080HN	M8 x 1.25	13	4	25pcs	0.08
775-2085HN	875-6085HN	M8 x 1.0*	13	4	10pcs	0.03
775-2100HN	875-6100HN	M10 x 1.5	17	5	25pcs	0.18
775-2105HN	875-6105HN	M10 x 1.0*	17	5	10pcs	0.07
775-2120HN	875-6120HN	M12 x 1.75	19	6	25pcs	0.26
775-2125HN	875-6125HN	M12 x 1.5*	19	6	10pcs	0.1
775-2140HN	875-6140HN	M14 x 2.0	22	7	10pcs	0.16
775-2160HN	875-6160HN	M16 x 2.0	24	8	10pcs	0.21
775-2165HN	875-6165HN	M16 x 1.5*	24	8	1pcs	0.02
775-2180HN	875-6180HN	M18 x 2.5	27	9	1pcs	0.03
775-2200HN	875-6200HN	M20 x 2.5	30	10	1pcs	0.04
775-2205HN	875-6205HN	M20 x 1.5*	30	10	1pcs	0.04
775-2240HN	875-6240HN	M24 x 3.0	36	12	1pcs	0.07



303

ZP

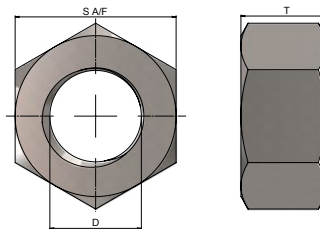
Metric Full Nuts - (DIN934) WDS 775/875

Available in 303 Stainless Steel or Zinc Plated Steel

Note - SOLD IN BAGGED QUANTITIES

Zinc Plated	Stainless Steel	D	S	T	Pack Quantity	Weight (kg)
775-2040FN	875-9040FN	M4	7	3.2	50pcs	0.04
775-2050FN	875-9050FN	M5	8	4	50pcs	0.06
775-2060FN	875-9060FN	M6	10	5	50pcs	0.13
775-2080FN	875-9080FN	M8	13	6.5	25pcs	0.13
775-2100FN	875-9100FN	M10	17	8	25pcs	0.29
775-2120FN	875-9120FN	M12	19	10	25pcs	0.43
775-2140FN	875-9140FN	M14	22	11	10pcs	0.25
775-2160FN	875-9160FN	M16	24	13	10pcs	0.33
775-2180FN	875-9180FN	M18	27	15	1pcs	0.05
775-2200FN	875-9200FN	M20	30	16	1pcs	0.07
775-2240FN	875-9240FN	M24	36	21.5	1pcs	0.11

316



WDS

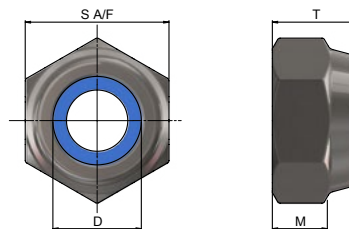
WDS 875 316 (A4) Stainless Steel Metric Full Nut - (DIN934)

316 Stainless Steel

Note - SOLD IN BAGGED QUANTITIES

WDS No.	D	S	T	Pack Quantity	Weight (kg)
875-9040FN	M4	7	3.2	50pcs	0.04
875-9050FN	M5	8	4	50pcs	0.06
875-9060FN	M6	10	5	50pcs	0.13
875-9080FN	M8	13	6.5	25pcs	0.13
875-9100FN	M10	17	8	25pcs	0.29
875-9120FN	M12	19	10	25pcs	0.43
875-9140FN	M14	22	11	10pcs	0.25
875-9160FN	M16	24	13	10pcs	0.33
875-9180FN	M18	27	15	1pc	0.05
875-9200FN	M20	30	16	1pc	0.07
875-9240FN	M24	36	21.5	1pc	0.11

316

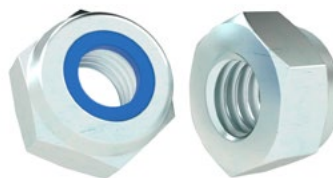
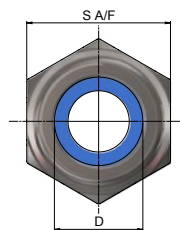


WDS 875 316 (A4) Stainless Steel Metric Nyloc Nut - (DIN982) T-Type

316 Stainless Steel

Note - SOLD IN BAGGED QUANTITIES

WDS No.	D	M	S	T	Pack Quantity	Weight (kg)
875-9040NL	M4	3.6	7	6	50pcs	0.05
875-9050NL	M5	4.4	8	6.3	50pcs	0.07
875-9060NL	M6	4.9	10	8	50pcs	0.12
875-9080NL	M8	6.44	13	9.5	25pcs	0.13
875-9100NL	M10	8.04	17	11.5	25pcs	0.27
875-9120NL	M12	10.37	19	14	25pcs	0.43
875-9140NL	M14	12.1	22	16	10pcs	0.26
875-9160NL	M16	14.1	24	18	10pcs	0.34
875-9180NL	M18	15.1	27	20	1pcs	0.05
875-9200NL	M20	16.9	30	22	1pcs	0.07
875-9240NL	M24	20.2	36	28	1pcs	0.1

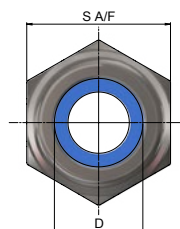


Zinc Plated Metric Nyloc Nut - (DIN982) P-Type **WDS 775**

Zinc Plated Steel

Note - SOLD IN BAGGED QUANTITIES

WDS No.	D	M	S	T	Pack Quantity	Weight (kg)
775-2040NL	M4	3.6	7	6	50pcs	0.05
775-2050NL	M5	4.4	8	6.3	50pcs	0.07
775-2060NL	M6	4.9	10	8	50pcs	0.12
775-2080NL	M8	6.44	13	9.5	25pcs	0.13
775-2100NL	M10	8.04	17	11.5	25pcs	0.27
775-2120NL	M12	10.37	19	14	25pcs	0.43
775-2140NL	M14	12.1	22	16	10pcs	0.26
775-2160NL	M16	14.1	24	18	10pcs	0.34
775-2180NL	M18	15.1	27	20	1pcs	0.05
775-2200NL	M20	16.9	30	22	1pcs	0.07
775-2240NL	M24	20.2	36	28	1pcs	0.1

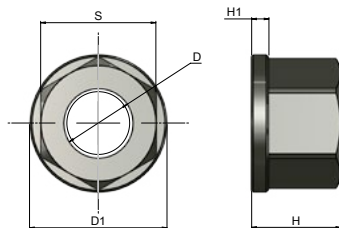


303 (A2) Stainless Steel Metric Nyloc Nut - (DIN982) T-Type **WDS 875**

303 Stainless Steel

Note - SOLD IN BAGGED QUANTITIES

WDS No.	D	M	S	T	Pack Quantity	Weight (kg)
875-6040NL	M4	3.6	7	6	50pcs	0.05
875-6050NL	M5	4.4	8	6.3	50pcs	0.07
875-6060NL	M6	4.9	10	8	50pcs	0.12
875-6080NL	M8	6.44	13	9.5	25pcs	0.13
875-6100NL	M10	8.04	17	11.5	25pcs	0.27
875-6120NL	M12	10.37	19	14	25pcs	0.43
875-6140NL	M14	12.1	22	16	10pcs	0.26
875-6160NL	M16	14.1	24	18	10pcs	0.34
875-6180NL	M18	15.1	27	20	1pcs	0.05
875-6200NL	M20	16.9	30	22	1pcs	0.07
875-6240NL	M24	20.2	36	28	1pcs	0.1



WDS 404 Collar Nut - Steel - Metric

High Tensile Steel
BS.970.Gr.606M36T

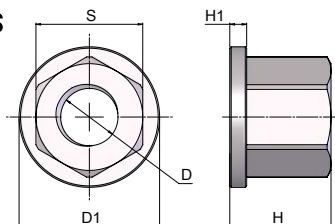
WDS No.	D	D1	H	H1	S	Weight (kg)
404-2004	M4	10	6	1.5	7	0.01
404-2005	M5	13	8	1.5	8	0.01
404-201	M6	14	9	3	10	0.01
404-202	M8	18	12	3.5	13	0.01
404-203	M10	22	15	4	17	0.02
404-204	M12	25	18	4	19	0.04
404-205	M14	28	21	4.5	22	0.05
404-206	M16	31	24	5	24	0.06
404-2065	M18	34	27	5	27	0.09
404-207	M20	37	30	6	30	0.11
404-208	M24	45	36	6	36	0.22
404-210	M30	58	45	8	46	0.32
404-212	M36	68	54	10	55	0.41

IN"

WDS 404 Collar Nut - Steel - Inch BA/BSF or BSW or UNC

High Tensile Steel
BS.970.Gr.606M36T

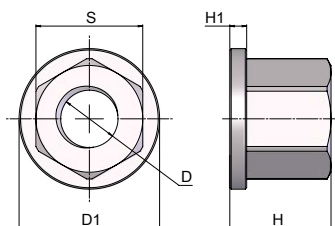
WDS No.	D	D1	H	H1	S	Thread	Weight (kg)
404-01	1/4 inch	14.3	7.9	1.6	0.445 inch	BSF	0.01
404-02	5/16 inch	16	10.3	2	0.525 inch	BSF	0.01
404-03	3/8 inch	20	12.7	2.4	0.600 inch	BSF	0.01
404-04	1/2 inch	25.4	17.5	3.2	0.820 inch	BSF	0.04
404-05	5/8 inch	32	20.6	4	1.010 inch	BSF	0.07
404-06	3/4 inch	38	25.4	4.8	1.200 inch	BSF	0.13
404-08	1 inch	50	31.8	6	1.480 inch	BSF	0.23
404-11	1/4 inch	14.3	7.9	1.6	0.437 inch	BSW	0.01
404-12	5/16 inch	16	10.3	2	0.500 inch	BSW	0.01
404-13	3/8 inch	20	12.7	2.4	0.562 inch	BSW	0.01
404-14	1/2 inch	25.4	17.5	3.2	0.750 inch	BSW	0.04
404-15	5/8 inch	32	20.6	4	0.937 inch	BSW	0.07
404-16	3/4 inch	38	25.4	4.8	1.124 inch	BSW	0.13
404-17	7/8 inch	45	28.6	5.6	-	BSW	0.16
404-18	1 inch	50	31.8	6	1.500 inch	BSW	0.23
404-21	1/4 inch	14.3	7.9	1.6	0.437 inch	UNC	0.01
404-22	5/16 inch	16	10.3	2	0.500 inch	UNC	0.01
404-23	3/8 inch	20	12.7	2.4	0.562 inch	UNC	0.02
404-24	1/2 inch	25.4	17.5	3.2	0.750 inch	UNC	0.04
404-25	5/8 inch	32	20.6	4	0.937 inch	UNC	0.07
404-26	3/4 inch	38	25.4	4.8	1.125 inch	UNC	0.14
404-28	1 inch	50	31.8	6	1.500 inch	UNC	0.28
404-31	2BA	12.7	6.4	1.6	0.324 inch	BA	0.01
404-35	10	12.7	6.4	1.6	0.437 inch	UNC	0.01



Collar Nut - 316 Stainless Steel **WDS 805**

316 Stainless Steel
BS 970 Gr 316S11

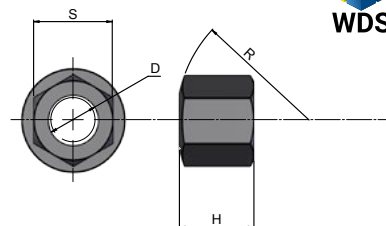
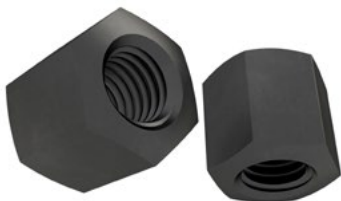
WDS No.	D	D1	H	H1	S	Weight (kg)
805-205	M5	13	8	1.5	8	0.01
805-206	M6	14	10	2	10	0.01
805-208	M8	18	12	2.5	13	0.01
805-210	M10	22	14	3	17	0.02
805-212	M12	25	18	3	19	0.04
805-216	M16	30	24	3	24	0.06



Collar Nut - 303 Stainless Steel **WDS 8905**

303 Stainless Steel
BS 970 Gr 303S11

WDS No.	D	D1	H	H1	S	Weight (kg)
8905-205	M5	13	8	1.5	8	0.01
8905-206	M6	14	10	2	10	0.01
8905-208	M8	18	12	2.5	13	0.01
8905-210	M10	22	14	3	17	0.03
8905-212	M12	25	18	3	19	0.04
8905-216	M16	30	24	3	24	0.07

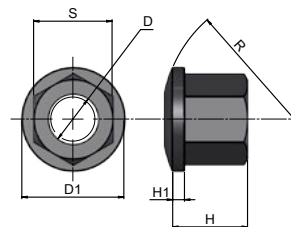


WDS 407 Spherical Seating Nut - Steel - Metric with No Flange Base

High Tensile Steel
BS.970.Gr.606M36T

WDS No.	D	H	R	S	Weight (kg)
407-201	M6	10	16	10	0.01
407-202	M8	13	19	13	0.01
407-203	M10	14	25	17	0.02
407-204	M12	18	32	19	0.03
407-205	M14	20	35	22	0.04
407-206	M16	22	40	24	0.05
407-208	M24	36	64	36	0.2

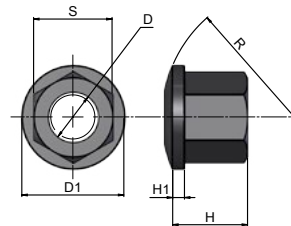
IN"



WDS 407 Spherical Seating Nut - Steel - Inch UNC with Flange Base

High Tensile Steel
BS.970.Gr.606M36T

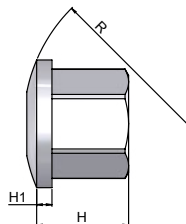
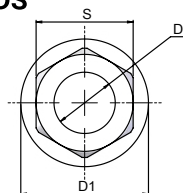
WDS No.	D	D1	H	H1	R	S	Weight (kg)
407-23	3/8 inch	22	13	2.4	25	0.562 inch	0.02
407-24	1/2 inch	29	17	3.2	32	0.750 inch	0.05
407-25	5/8 inch	35	21	4	40	0.937 inch	0.09



WDS 407 Spherical Seating Nut - Steel - Metric with Flange Base

High Tensile Steel
BS.970.Gr.606M36T

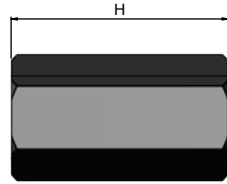
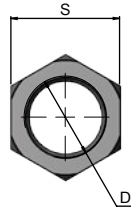
WDS No.	D	D1	H	H1	R	S	Weight (kg)
407-251	M6	14	9	2	16	10	0.01
407-252	M8	18	12	2.5	19	13	0.02
407-253	M10	22	15	3	25	17	0.03
407-254	M12	25	18	3	32	19	0.04
407-255	M14	28	21	3	35	22	0.06
407-256	M16	32	24	3	40	24	0.08
407-257	M20	38	30	4	48	30	0.14
407-258	M24	45	36	4	64	36	0.23



Spherical Seating Nut - 316 Stainless Steel **WDS 806**

316 Stainless Steel
BS 970 Gr 316S11

WDS No.	D	D1	H	H1	R	S	Weight (kg)
806-206	M6	14	9	2	16	10	0.01
806-208	M8	18	12	2.5	20	13	0.02
806-210	M10	22	15	3	25	17	0.03
806-212	M12	25	18	3	32	19	0.04

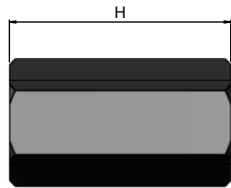
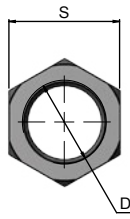


WDS 635 Coupling Nuts (Hexagonal Spacers) - Steel - Metric

Steel BS970 Gr.230M07
Chemical black finish

WDS No.	D	H	S	Weight (kg)
635-2005	M8	24	13	0.02
635-201	M10	30	17	0.04
635-202	M12	36	19	0.08
635-204	M16	48	24	0.13
635-205	M20	60	30	0.23
635-206	M24	72	36	0.33

IN"

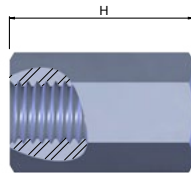
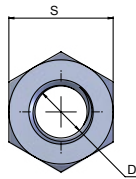


WDS 635 Coupling Nuts (Hexagonal Spacers) - Steel - Inch

Steel BS970 Gr.230M07
Chemical black finish

WDS No.	D	H	S	Thread	Weight (kg)
635-12	1/2 inch	38	0.820 inch	BSW	0.08
635-13	5/8 inch	47.5	1.010 inch	BSW	0.14
635-14	3/4 inch	57	1.200 inch	BSW	0.23
635-21	3/8 inch	28.5	0.562 inch	UNC	0.05
635-22	1/2 inch	38	0.750 inch	UNC	0.08
635-23	5/8 inch	47.5	0.937 inch	UNC	0.16
635-24	3/4 inch	57	1.125 inch	UNC	0.26

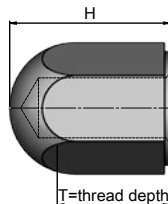
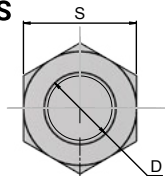
316



WDS 832 Coupling Nuts (Hexagonal Spacers) - 316 Stainless Steel

316 Stainless Steel
BS 970 Gr 316S11

WDS No.	D	H	S	Weight (kg)
832-208	M8	24	13	0.02
832-210	M10	30	17	0.04
832-212	M12	36	19	0.08



Acorn Dome Nuts - Steel - Inch - BSF or BSW or UNC WDS 617

Steel BS.970 Gr.230M07

Chemical black finish

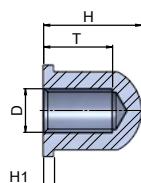
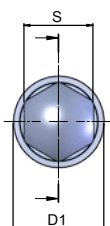
WDS No.	D	H	S	T	Thread	Weight (kg)
617-05	1/2 inch	25.4	0.820 inch	19	BSF	0.05
617-06	5/8 inch	31.8	1.010 inch	23.8	BSF	0.09
617-13	5/8 inch	31.8	1.010 inch	23.8	BSW	0.1
617-18	5/16 inch	15.9	0.500 inch	11.1	UNC	0.02
617-20	1/2 inch	25.4	0.750 inch	19	UNC	0.06

Acorn Dome Nut - Steel - Metric WDS 617

Steel BS.970 Gr.230M07

Chemical black finish

WDS No.	D	H	S	T	Weight (kg)
617-2004	M4	10	7	6	0.01
617-2005	M5	12	8	8	0.01
617-201	M6	14	10	9	0.01
617-202	M8	18	13	12	0.01
617-203	M10	22	17	15	0.03
617-204	M12	27	19	19	0.04
617-206	M16	35	24	24	0.09
617-207	M20	41	30	30	0.15

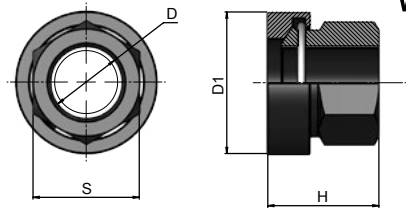


Acorn Dome Nuts - 303/316 Stainless Steel WDS 815/8195

303/316 Stainless Steel

316 SS	303 SS	D	D1	H	H1	S	T	Weight (kg)
815-204	-	M4	10	10	1.5	7	6	0.01
815-205	-	M5	13	12	1.5	8	8	0.01
815-206	8915-206	M6	14	14	2	10	9	0.02
815-208	8915-208	M8	18	18	2.5	13	12	0.02
815-210	8915-210	M10	22	22	3	17	15	0.03
815-212	8915-212	M12	25	27	3	19	19	0.05
815-216	8915-216	M16	31	36	4	24	24	0.09

IN"



WDS 408 Swivel Nut - Steel - Imperial BSW or UNC

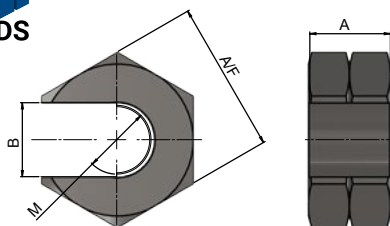
High Tensile Steel
BS.970.Gr.606M36T or BS.970.Gr 220M07

WDS No.	D	D1	H	S	Thread	Weight (kg)
408-12	1/2 inch	25	24	0.820 inch	BSW	0.05
408-13	5/8 inch	32	27	1.010 inch	BSW	0.08
408-19	3/8 inch	19	17	0.562 inch	UNC	0.02
408-20	1/2 inch	25	24	0.750 inch	UNC	0.04
408-21	5/8 inch	32	27	0.937 inch	UNC	0.08
408-22	3/4 inch	38	30	1.125 inch	UNC	0.12

WDS 408 Swivel Nut - Steel - Metric

High Tensile Steel
BS.970.Gr.606M36T or BS.970.Gr 220M07

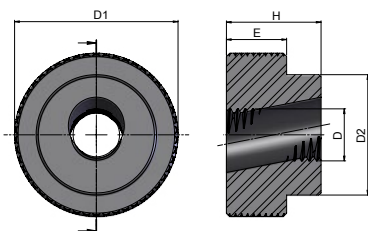
WDS No.	D	D1	H	S	Weight (kg)
408-201	M10	20	18	17	0.03
408-202	M12	25	24	19	0.05
408-203	M14	28	26	22	0.06
408-204	M16	32	28	24	0.08
408-205	M20	38	30	30	0.13
408-206	M24	45	40	36	0.14



Slide On Quick Action Nut **WDS 413**

Zinc Plated HT Steel

WDS No.	A	A/F	B	M	Max Torque (Nm)	Weight (kg)
413-206	9.5	16	7	M6	9.5	0.01
413-208	9.5	19	9	M8	17	0.02
413-210	12.5	22	11	M10	27	0.02
413-212	16	27	13	M12	74.6	0.04
413-216	16.5	34	17	M16	203	0.07
413-220	20	41	21	M20	264	0.09



Quick Action Release Thumb Nut - Steel - Metric **WDS 669**

Steel BS.970 Gr.230M07

Chemical black finish

WDS No.	D	D1	D2	E	H	Weight (kg)
669-2505	M5	16	12	9	12	0.02
669-251	M6	20	16	10	15	0.03
669-252	M8	25	19	11	16	0.05
669-253	M10	32	24	13	19	0.09
669-254	M12	38	28.5	14	22	0.14

Quick Action Thumb Nut - Steel - Inch - BA/BSF **WDS 669**

Steel BS.970 Gr.230M07

Chemical black finish

WDS No.	D	D1	D2	E	H	Weight (kg)
669-51	1/4 BSF	20	16	10	15	0.03
669-67	2 BA	16	12	9	12	0.01

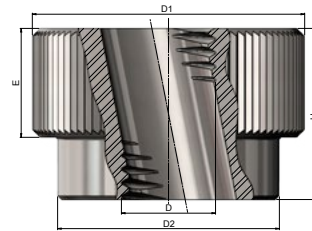
Quick Action Thumb Nut - Steel - Inch - BSW **WDS 669**

Steel BS.970 Gr.230M07

Chemical black finish

WDS No.	D	D1	D2	E	H	Weight (kg)
669-56	1/4 inch	20	16	10	15	0.03
669-57	5/16 inch	25	19	11	16	0.05
669-58	3/8 inch	32	24	13	19	0.09
669-59	1/2 inch	38	28.5	4	22	0.14

316



WDS 824 Quick Action Thumb Nut - 316 Stainless Steel

BS 970 Gr.316S11

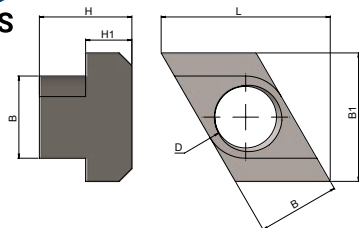
WDS No.	D	D1	D2	E	H	Weight (kg)
824-205	M5	16	12	9	12	0.01
824-206	M6	20	16	10	15	0.03
824-208	M8	25	20	11	16	0.05
824-210	M10	30	25	13	20	0.08
824-212	M12	35	28	14	22	0.12

303

WDS 8924 Quick Action Thumb Nut - 303 Stainless Steel

BS 970 Gr.303S31

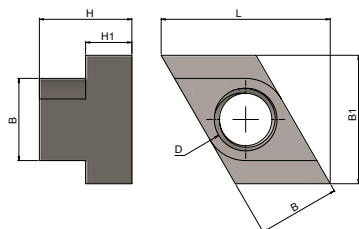
WDS No.	D	D1	D2	E	H	Weight (kg)
8924-205	M5	16	12	9	12	0.01
8924-206	M6	20	16	10	15	0.03
8924-208	M8	25	20	11	16	0.05
8924-210	M10	30	25	13	20	0.08
8924-212	M12	35	28	14	22	0.01

**WDS**

Rhomboidal T Nuts - Grade 8 Steel **WDS 651**

Steel Grade 8
Chemical black finish

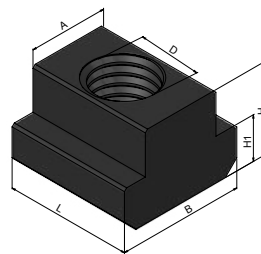
WDS No.	B	B1	D	H	H1	L	Weight (kg)
651-306M5	6	10	M5	8	4	12.7	0.01
651-308M6	8	13	M6	10	6	16.7	0.01
651-310M8	10	15	M8	12	6	20.2	0.02
651-312M10	12	18	M10	14	7	24.3	0.04
651-314M10	14	22	M10	16	8	28.9	0.05
651-314M12	14	22	M12	16	8	28.9	0.08
651-316M14	16	25	M14	18	9	33	0.03
651-318M10	18	28	M10	20	10	37	0.06
651-318M16	18	28	M16	20	10	37	0.05
651-320M16	20	32	M16	24	12	41.6	0.08
651-320M18	20	32	M18	24	12	41.6	0.07
651-322M16	22	35	M16	28	14	45.6	0.12
651-322M20	22	35	M20	28	14	45.6	0.1
651-328M16	28	44	M16	36	18	57.7	0.27
651-328M24	28	44	M24	36	18	57.7	0.21
651-336M30	36	54	M30	44	22	72.7	0.42
651-342M36	42	65	M36	52	26	86	0.69



Rhomboidal T Nuts - Steel **WDS 651**

Steel BS.970 Gr.070M20
Chemical black finish

WDS No.	B	B1	D	H	H1	L	Weight (kg)
651-201	16	25	M12	18	9	32.5	0.06
651-202	19	32	M16	22	11	40	0.06

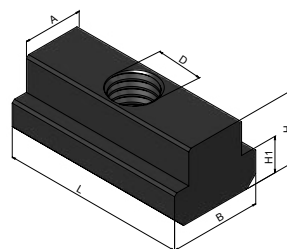


WDS 664 T Nuts - Steel - Chamfered

Steel, Class 10

Chemical black finish

WDS No.	A	B	D	H	H1	L	Weight (kg)
664-2005M5	5.6	10	M5	8	4	10	0.01
664-201	7.7	13	M6	10	6	13	0.01
664-202	9.7	15	M8	12	6	16	0.02
664-202M6	9.7	15	M6	12	6	15	0.01
664-203	11.7	18	M10	14	7	19	0.03
664-203M8	11.7	18	M8	14	7	18	0.02
664-204	13.7	22	M12	16	8	22	0.05
664-204M10	13.7	22	M10	16	8	22	0.04
664-205	15.7	25	M14	18	9	25	0.06
664-205M12	15.7	25	M12	18	9	25	0.05
664-206	17.7	28	M16	20	10	28	0.07
664-2065	19.7	32	M18	24	12	32	0.11
664-206M12	17.7	28	M12	20	10	28	0.08
664-206M14	17.7	28	M14	20	10	28	0.08
664-207	21.7	35	M20	28	14	35	0.16
664-208	27.7	44	M24	36	18	45	0.34
664-210	35.6	54	M30	44	22	53	0.4
664-212	41.6	65	M36	52	26	65	0.4

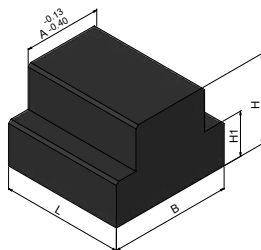


WDS 664 T Nuts Extended - Steel - Chamfered

Carbon Steel Class 10

Chemical black finish

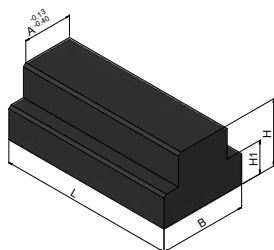
WDS No.	A	B	D	H	H1	L	Weight (kg)
664-201E	7.7	13	M6	10	6	26	0.01
664-202E	9.7	15	M8	12	6	30	0.03
664-203E	11.7	18	M10	14	7	36	0.05
664-204E	13.7	22	M12	16	8	44	0.08
664-205E	15.7	25	M14	18	9	50	0.12
664-2065E	19.7	32	M18	24	12	64	0.26
664-206E	17.7	28	M16	20	10	56	0.17
664-207E	21.7	35	M20	28	14	70	0.36
664-208E	27.7	44	M24	36	18	88	0.73
664-210E	35.6	54	M30	44	22	108	1.39



Blank Metric T Nuts - Steel **WDS 664**

Steel BS.970 Gr.070M20
Chemical black finish

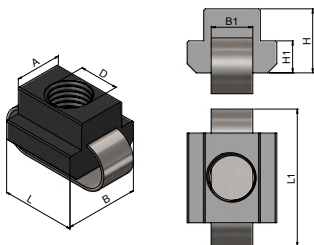
WDS No.	A	B	H	H1	L	Weight (kg)
664-223	12	19	14	7	19	0.03
664-224	14	22	16	8	22	0.05
664-225	16	25.5	19	9	25	0.08
664-226	18	28.5	19	10	28	0.1
664-227	20	32	25	12	32	0.15
664-228	22	35	30	14	36	0.23
664-229	28	45	35	18	45	0.45



Blank Extended T Nuts - Steel **WDS 664**

Steel BS.970 Gr.070M20
Chemical black finish

WDS No.	A	B	H	H1	L	Weight (kg)
664-252	10	16	12	6	32	0.04
664-256	18	28.5	19	10	56	0.2
664-257	20	32	25	12	64	0.3
664-258	22	35	30	14	72	0.44

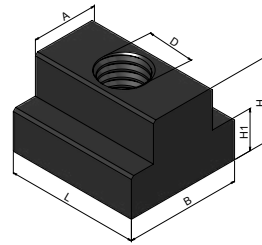


T Nuts with Spring - Steel **WDS 664**

T-Nut - Carbon Steel Class 10
Spring - Stainless Steel

WDS No.	A	B	B1	D	H	H1	H2	L	L1	Weight (kg)
664-301	11.7	18	11	M8	14	7	12.5	18	31	0.02
664-302	11.7	18	11	M10	14	7	12.5	18	31	0.02
664-303	13.7	22	13	M12	16	8	13.5	22	33	0.03
664-304	17.7	28	13	M16	20	10	17.5	28	43	0.07
664-305	21.7	55	15	M20	28	14	21.5	35	56	0.15

IN"

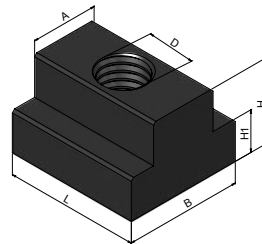


WDS 664 Inch/Metric Short T Nuts - Steel

Steel BS.970 Gr.070M20
Chemical black finish

WDS No.	A (INCHES)	B	D	H	H1	L	Weight (kg)
664-61	0.500	22.2	M10	15.9	7.9	25.4	0.05
664-62	0.563	22.2	M12	15.9	7.9	28.6	0.05
664-63	0.625	25.4	M12	19.1	9.5	28.6	0.07
664-64	0.688	25.4	M12	19.1	9.5	28.6	0.08
664-65	0.750	31.8	M12	22.2	11.1	31.8	0.12
664-66	0.750	31.8	M16	22.2	11.1	38.1	0.13
664-67	0.813	31.8	M12	22.2	11.1	31.8	0.13
664-68	0.813	31.8	M16	22.2	11.1	38.1	0.14
664-69	0.875	38.1	M16	25.4	12.7	44.5	0.23
664-70	0.875	38.1	M20	25.4	12.7	50.8	0.24
664-71	0.938	38.1	M16	25.4	12.7	50.8	0.23
664-72	0.938	38.1	M20	30	14.3	44.5	0.26
664-73	1.000	40	M16	30	14.3	50.8	0.28
664-74	1.000	40	M20	30	14.3	50.8	0.31

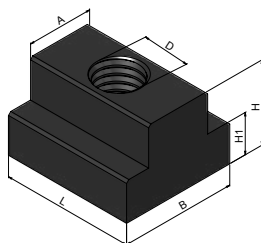
IN"



WDS 664 UNC Tall T Nuts - Steel

Steel BS.970 Gr.070M20
Chemical black finish

WDS No.	A	B	D (UNC)	H	H1	L	Weight (kg)
664-46	0.500	7/8	3/8	7/8	5/16	1	0.06
664-47	0.563	7/8	1/2	7/8	5/16	1 1/8	0.07
664-48	0.625	1	1/2	1	3/8	1 1/8	0.09
664-49	0.688	1	1/2	1	3/8	1 1/8	0.1
664-50	0.750	1 1/4	1/2	1 1/4	7/16	1 1/4	0.16
664-51	0.750	1 1/4	5/8	1 1/4	7/16	1 1/2	0.18
664-53	0.813	1 1/4	5/8	1 1/4	7/16	1 1/2	0.19
664-54	0.875	1 1/2	5/8	1 1/2	1/2	1 3/4	0.31
664-55	0.875	1 1/2	3/4	1 1/2	1/2	2	0.33
664-57	0.938	1 1/2	3/4	1 1/2	1/2	2	0.35
664-59	1.000	1 37/64	3/4	1 37/64	9/16	2	0.42
664-60	1.000	1 37/64	7/8	1 37/64	9/16	2	0.39

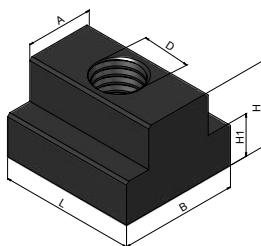


Inch/Metric Tall T Nuts - Steel WDS 664

Steel BS.970 Gr.070M20

Chemical black finish

WDS No.	A (INCHES)	B	D	H	H1	L	Weight (kg)
664-61L	0.5	22.2	M10	22.2	7.9	25.4	0.05
664-62L	0.563	22.2	M12	22.2	7.9	28.6	0.05
664-63L	0.625	25.4	M12	25.4	9.5	28.6	0.07
664-64L	0.688	25.4	M12	25.4	9.5	28.6	0.08
664-65L	0.75	31.8	M12	31.8	11.1	31.8	0.12
664-66L	0.75	31.8	M16	31.8	11.1	38.1	0.13
664-67L	0.813	31.8	M12	31.8	11.1	31.8	0.13
664-68L	0.813	31.8	M16	31.8	11.1	38.1	0.14
664-69L	0.875	38.1	M16	38.1	12.7	44.5	0.23
664-70L	0.875	38.1	M20	38.1	12.7	50.8	0.24
664-71L	0.938	38.1	M16	38.1	12.7	44.5	0.23
664-72L	0.938	38.1	M20	38.1	14.3	50.8	0.26
664-73L	1	40	M16	40	14.3	44.5	0.28
664-74L	1	40	M20	40	14.3	50.8	0.31



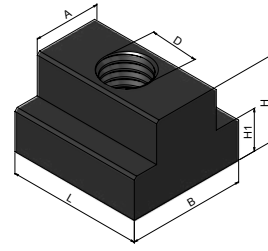
Inch BSW Short T Nuts - Steel WDS 664

Steel BS.970 Gr.070M20

Chemical black finish

WDS No.	A	B	D (BSW)	H	H1	L	Weight (kg)
664-01	0.500	7/8	3/8	5/8	5/16	1	0.05
664-02	0.563	7/8	1/2	5/8	5/16	1 1/8	0.05
664-03	0.625	1	1/2	3/4	3/8	1 1/8	0.07
664-04	0.688	1	1/2	3/4	3/8	1 1/8	0.08
664-05	0.750	1 1/4	1/2	7/8	7/16	1 1/4	0.12
664-06	0.750	1 1/4	5/8	7/8	7/16	1 1/2	0.14
664-07	0.813	1 1/4	1/2	7/8	7/16	1 1/4	0.13
664-08	0.813	1 1/4	5/8	7/8	7/16	1 1/2	0.14
664-09	0.875	1 1/2	5/8	1	1/2	1 3/4	0.23
664-10	0.875	1 1/2	3/4	1	1/2	2	0.25
664-12	0.938	1 1/2	3/4	1	1/2	2	0.26
664-13	1.000	1 37/64	5/8	1 3/16	9/16	1 3/4	0.29
664-14	1.000	1 37/64	3/4	1 3/16	9/16	2	0.32
664-15	1.000	1 37/64	7/8	1 3/16	9/16	2	0.28

IN"

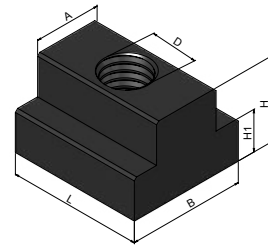


WDS 664 Inch BSW Tall T Nuts - Steel

Steel BS.970 Gr.070M20
Chemical black finish

WDS No.	A	B	D (BSW)	H	H1	L	Weight (kg)
664-31	0.500	7/8	3/8	7/8	5/16	1	0.06
664-32	0.563	7/8	1/2	7/8	5/16	1 1/8	0.07
664-33	0.625	1	1/2	1	3/8	1 1/8	0.09
664-34	0.688	1	1/2	1	3/8	1 1/8	0.09
664-35	0.750	1 1/4	1/2	1 1/4	7/16	1 1/4	0.16
664-36	0.750	1 1/4	5/8	1 1/4	7/16	1 1/2	0.18
664-37	0.813	1 1/4	1/2	1 1/4	7/16	1 1/4	0.17
664-38	0.813	1 1/4	5/8	1 1/4	7/16	1 1/2	0.19
664-39	0.875	1 1/2	5/8	1 1/2	1/2	1 3/4	0.31
664-40	0.875	1 1/2	3/4	1 1/2	1/2	2	0.34
664-41	0.938	1 1/2	5/8	1 1/2	1/2	1 3/4	0.32
664-42	0.938	1 1/2	3/4	1 1/2	1/2	2	0.36
664-43	1.000	1 37/64	5/8	1 37/64	9/16	1 3/4	0.38
664-44	1.000	1 37/64	3/4	1 37/64	9/16	2	0.42
664-45	1.000	1 37/64	7/8	1 37/64	9/16	2	0.39

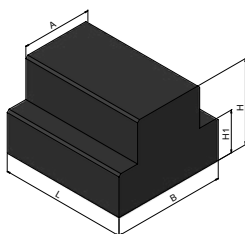
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WDS 664 Inch UNC Short T Nuts - Steel

Steel BS.970 Gr.070M20
Chemical black finish

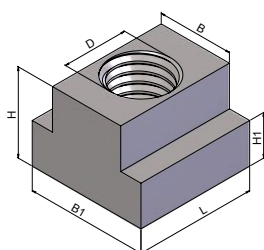
WDS No.	A	B	D (UNC)	H	H1	L	Weight (kg)
664-16	0.5	7/8	3/8	5/8	5/16	1	0.05
664-17	0.563	7/8	1/2	5/8	5/16	1 1/8	0.05
664-18	0.625	1	1/2	1	3/8	1 1/8	0.07
664-19	0.688	1	1/2	1	3/8	1 1/8	0.08
664-20	0.75	1 1/4	1/2	1 1/4	7/16	1 1/4	0.12
664-21	0.75	1 1/4	5/8	1 1/4	7/16	1 1/2	0.14
664-22	0.813	1 1/4	1/2	1 1/4	7/16	1 1/4	0.13
664-23	0.813	1 1/4	5/8	1 1/4	7/16	1 1/2	0.14
664-24	0.875	1 1/2	5/8	1	1/2	1 3/4	0.22
664-25	0.875	1 1/2	3/4	1	1/2	2	0.25
664-29	1	1 37/64	3/4	1 37/64	9/16	2	0.32
664-30	1	1 37/64	7/8	1 37/64	9/16	2	0.3



Inch Blank T Nuts - Steel **WDS 664**

Steel BS.970 Gr.070M20
Chemical black finish

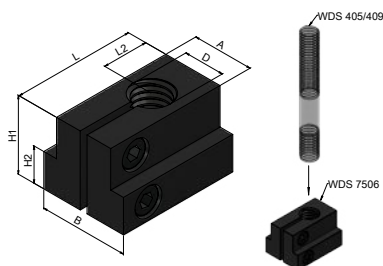
WDS No.	A	B	H	H1	L	Weight (kg)
664-83	0.625"	25.4	19.1	9.5	28.6	0.08
664-84	0.688"	25.4	19.1	9.5	28.6	0.08


316

316 Stainless Steel T Nuts **WDS 813**

BS 970 Gr 316S11

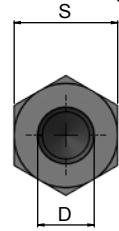
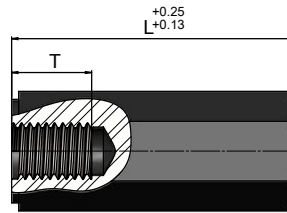
WDS No.	B	B1	D	H	H1	L	Weight (kg)
813-206	8	13	M6	10	6	13	0.01
813-208	10	15	M8	12	6.5	15	0.02
813-210	12	18	M10	14	7	18	0.03
813-212	14	22	M12	16	8	22	0.04



Split T Nuts - Steel **WDS 7506**

Steel BS.970 Gr.070M20
Chemical black finish

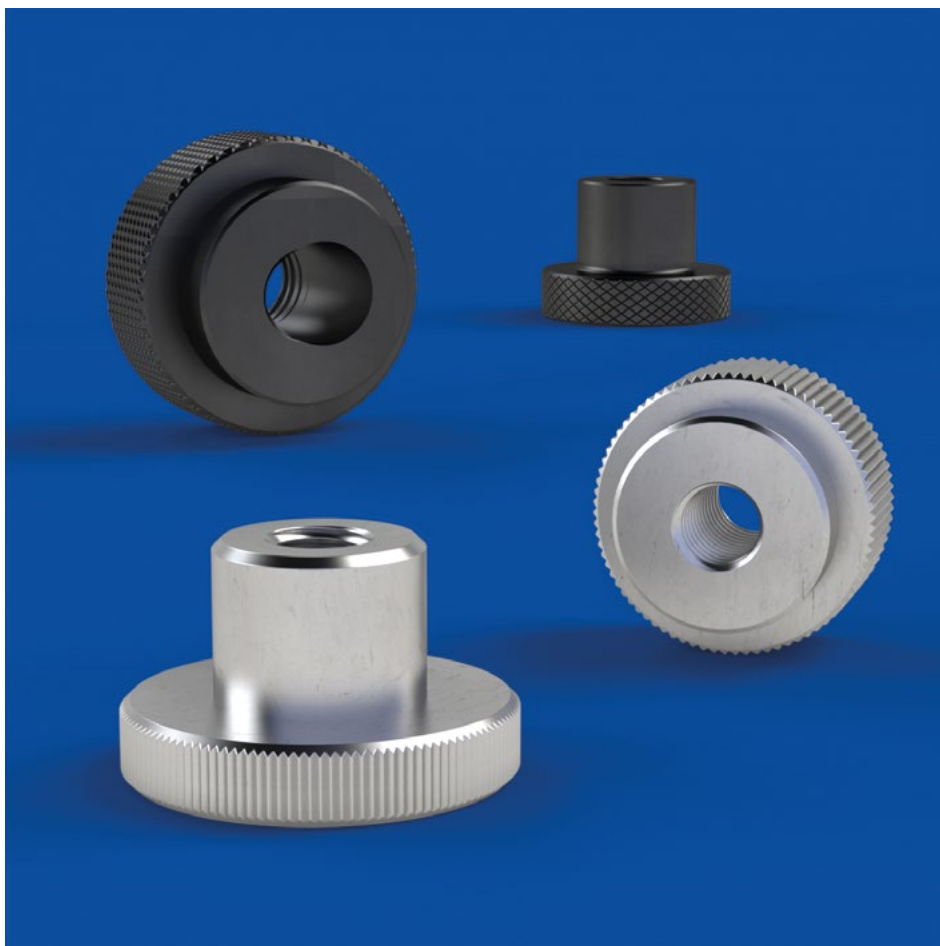
WDS No.	A	B	D	H1	H2	L1	Weight (kg)
7506-101	12	17.5	M8	16	7	22	0.03
7506-102	12	17.5	M10	16	7	22	0.03
7506-2003	15	23	M8	20	9.5	32	0.08
7506-2005	15	23	M10	20	9.5	32	0.08
7506-201	15	23	M12	20	9.5	32	0.07
7506-3005	17	29	M12	22	13	38	0.12
7506-301	17	29	M16	22	13	38	0.11



WDS 627 Feet Nuts Hexagonal Spacers

Steel BS 970 Gr 212A42
Chemical black finish

WDS No.	D	L	S	T	Weight (kg)
627-20130	M10	30	17	17	0.56
627-20160	M10	60	17	17	0.12
627-20230	M12	30	22	17	0.92
627-20260	M12	60	22	17	0.21
627-20290	M12	90	22	17	0.33



THUMB NUTS

For the full range of Thumb Nuts please see pages **135-143**

STUDS

An engineering stud is a steel or stainless steel bar with a non continuous thread at either end. Sizes include metric and imperial threads.

P 448-453



SHOULDER SCREWS & BOLTS

Shoulder screws and Shoulder Bolts include metric sizes between M5 and M10 and imperial sizes in UNC or BA/BSF. In addition to the standard steel shoulder screws, WDS also offers metric 316 stainless steel shoulder bolts.

P 454-458



SET SCREWS

The set screws range consists of steel and stainless steel models with brass or nylon tips. Also included in the range are grub screws and socket screws.

P 459-463



THREADED BAR

Threaded bar is available in steel or stainless steel offering a continuous thread down the body of the length.

P 464-466



TOMMY BAR SCREWS

A tommy bar screw is an adjustable screw with a bar running through the body of the screw so the user can manually adjust the screw depth. Both metric and imperial (inch) sizes are available in materials steel and stainless steel. Alternative types include a swivel end version which a pad can be fitted or a female threaded tommy nut version.

P 467-468





SOCKET CAP SCREWS

Socket cap screws are available in various sizes ranging from metric M4 to M16 to Imperial (inch sizes) BA, UNC and BSW measurements.

P 469-471



LATCH SCREWS

A latch screw is a type of swing latch that can be clamped down or opened/cleared using a quarter turn action.

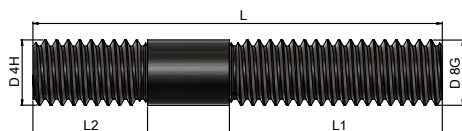
P 472



SWIVEL END SCREWS & PADS

Swivel end screws are adjustable screws with a bullet end nose where a swivel pad can be attached. Materials include steel and stainless steel.

P 472



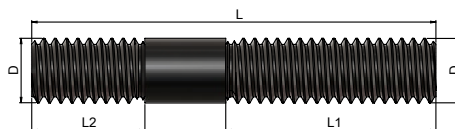
Metric Steel Studs WDS 405

BS.970 Gr.606M36T *BS.970 080A42

WDS No.	D	L	L1	L2	Weight (kg)
405-200425	M4*	25	13	7	0.01
405-200430	M4*	30	13	7	0.01
405-200440	M4*	40	20	7	0.01
405-200445	M4*	45	20	7	0.01
405-200450	M4*	50	20	7	0.01
405-200525	M5*	25	12	8	0.01
405-200530	M5*	30	13	8	0.01
405-200535	M5*	35	13	8	0.01
405-200540	M5*	40	20	8	0.01
405-200550	M5*	50	20	8	0.01
405-201100	M6*	100	40	10	0.02
405-201125	M6*	125	40	10	0.03
405-201150	M6*	150	40	10	0.03
405-20125	M6*	25	11	9	0.01
405-20130	M6*	30	13	10	0.01
405-20135	M6*	35	13	10	0.01
405-20140	M6*	40	25	10	0.01
405-20145	M6*	45	25	10	0.01
405-20150	M6*	50	25	10	0.01
405-20160	M6*	60	25	10	0.01
405-20170	M6*	70	25	10	0.02
405-20180	M6*	80	40	10	0.02
405-20190	M6*	90	40	10	0.02
405-202100	M8	100	40	13	0.04
405-202125	M8	125	40	13	0.05
405-202150	M8	150	40	13	0.06
405-202175	M8	175	40	13	0.07
405-202200	M8	200	40	13	0.08
405-20240	M8	40	24	13	0.01
405-20250	M8	50	30	13	0.02
405-20260	M8	60	30	13	0.02
405-20270	M8	70	30	13	0.02
405-20280	M8	80	40	13	0.03
405-20290	M8	90	40	13	0.03
405-203100	M10	100	40	15	0.05
405-203125	M10	125	40	15	0.07
405-203150	M10	150	40	15	0.09
405-203175	M10	175	40	15	0.1
405-203200	M10	200	40	15	0.11
405-20340	M10	40	20	15	0.02
405-20350	M10	50	30	15	0.02
405-20360	M10	60	30	15	0.03
405-20370	M10	70	30	15	0.03
405-20380	M10	80	40	15	0.04
405-20390	M10	90	40	15	0.05
405-204100	M12	100	65	19	0.09
405-204125	M12	125	65	19	0.11
405-204150	M12	150	65	19	0.13
405-204175	M12	175	65	19	0.14
405-204200	M12	200	65	19	0.16

WDS No.	D	L	L1	L2	Weight (kg)
405-204225	M12	225	65	19	0.19
405-204250	M12	250	65	19	0.21
405-204300	M12	300	65	19	0.25
405-20450	M12	50	25	19	0.04
405-20460	M12	60	38	19	0.05
405-20470	M12	70	40	19	0.06
405-20480	M12	80	40	19	0.07
405-20490	M12	90	40	19	0.09
405-205100	M14	100	65	21	0.1
405-205125	M14	125	65	21	0.13
405-205150	M14	150	65	21	0.15
405-205200	M14	200	65	21	0.22
405-205250	M14	250	65	21	0.28
405-205300	M14	300	65	21	0.34
405-20560	M14	60	33	21	0.05
405-20570	M14	70	40	21	0.07
405-20580	M14	80	40	21	0.08
405-20590	M14	90	40	21	0.1
405-206100	M16	100	65	24	0.13
405-206125	M16	125	65	24	0.17
405-206150	M16	150	65	24	0.21
405-206175	M16	175	65	24	0.25
405-206200	M16	200	65	24	0.29
405-206225	M16	225	65	24	0.33
405-206250	M16	250	65	24	0.37
405-206275	M16	275	65	24	0.41
405-206300	M16	300	65	24	0.45
405-20670	M16	70	40	24	0.09
405-20675	M16	75	45	24	0.11
405-20680	M16	80	45	24	0.11
405-20690	M16	90	45	24	0.14
405-207100	M20	100	65	30	0.2
405-207125	M20	125	65	30	0.26
405-207150	M20	150	65	30	0.32
405-207175	M20	175	65	30	0.38
405-207200	M20	200	65	30	0.46
405-207225	M20	225	65	30	0.51
405-207250	M20	250	65	30	0.58
405-207275	M20	275	65	30	0.63
405-207300	M20	300	65	30	0.69
405-20790	M20	90	50	30	0.19
405-208100	M24	100	55	38	0.3
405-208125	M24	125	65	38	0.38
405-208150	M24	150	65	38	0.46
405-208175	M24	175	65	38	0.55
405-208200	M24	200	65	38	0.59
405-208225	M24	225	65	38	0.66
405-208250	M24	250	65	38	0.75
405-208300	M24	300	65	38	0.99

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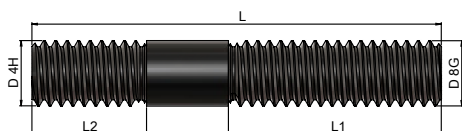


WDS 405 Steel Studs - Inch UNC

BS.970. Gr.606M36T *BS.970 080A42

WDS No.	D	L	L1	L2	Weight (kg)
405-171	1/4 inch*	1 inch	7/16 inch	3/8 inch	0.01
405-17112	1/4 inch*	1 1/2 inch	1/2 inch	3/8 inch	0.01
405-17114	1/4 inch*	1 1/4 inch	1/2 inch	3/8 inch	0.01
405-17134	1/4 inch*	1 3/4 inch	1/2 inch	3/8 inch	0.01
405-172	1/4 inch*	2 inch	1/2 inch	3/8 inch	0.01
405-17212	1/4 inch*	2 1/2 inch	1 1/2 inch	3/8 inch	0.01
405-173	1/4 inch*	3 inch	1 1/2 inch	3/8 inch	0.02
405-174	1/4 inch*	4 inch	1 1/2 inch	3/8 inch	0.02
405-18112	5/16 inch	1 1/2 inch	5/8 inch	1/2 inch	0.01
405-18114	5/16 inch	1 1/4 inch	9/16 inch	1/2 inch	0.01
405-18134	5/16 inch	1 3/4 inch	5/8 inch	1/2 inch	0.01
405-182	5/16 inch	2 inch	5/8 inch	1/2 inch	0.02
405-18212	5/16 inch	2 1/2 inch	1 inch	1/2 inch	0.02
405-18214	5/16 inch	2 1/4 inch	1 inch	1/2 inch	0.02
405-18234	5/16 inch	2 1/4 inch	1 inch	1/2 inch	0.02
405-183	5/16 inch	3 inch	1 1/2 inch	1/2 inch	0.03
405-18312	5/16 inch	3 1/2 inch	1 1/2 inch	1/2 inch	0.03
405-184	5/16 inch	4 inch	1 1/2 inch	1/2 inch	0.03
405-186	5/16 inch	6 inch	1 1/2 inch	1/2 inch	0.05
405-19112	3/8 inch	1 1/2 inch	3/4 inch	9/16 inch	0.02
405-19134	3/8 inch	1 3/4 inch	1 inch	9/16 inch	0.02
405-192	3/8 inch	2 inch	1 1/4 inch	9/16 inch	0.02
405-19212	3/8 inch	2 1/2 inch	1 1/4 inch	9/16 inch	0.02
405-19214	3/8 inch	2 1/4 inch	1 1/4 inch	9/16 inch	0.02
405-19234	3/8 inch	2 3/4 inch	1 1/4 inch	9/16 inch	0.02
405-193	3/8 inch	3 inch	1 1/4 inch	9/16 inch	0.03
405-19312	3/8 inch	3 1/2 inch	1 1/4 inch	9/16 inch	0.04
405-19314	3/8 inch	3 1/4 inch	1 1/4 inch	9/16 inch	0.03
405-194	3/8 inch	4 inch	1 1/2 inch	9/16 inch	0.04
405-19412	3/8 inch	4 1/2 inch	1 1/2 inch	9/16 inch	0.05
405-195	3/8 inch	5 inch	1 1/2 inch	9/16 inch	0.06
405-196	3/8 inch	6 inch	1 1/2 inch	9/16 inch	0.08
405-198	3/8 inch	8 inch	1 1/2 inch	9/16 inch	0.11
405-2010	1/2 inch	10 inch	2 inch	3/4 inch	0.23
405-2012	1/2 inch	12 inch	2 inch	3/4 inch	0.28
405-202	1/2 inch	2 inch	1 inch	3/4 inch	0.04
405-20212	1/2 inch	2 1/2 inch	1 1/2 inch	3/4 inch	0.04
405-203	1/2 inch	3 inch	1 1/2 inch	3/4 inch	0.06
405-20312	1/2 inch	3 1/2 inch	1 1/2 inch	3/4 inch	0.08
405-204	1/2 inch	4 inch	1 1/2 inch	3/4 inch	0.09
405-20412	1/2 inch	4 1/2 inch	1 1/2 inch	3/4 inch	0.1
405-205	1/2 inch	5 inch	1 1/2 inch	3/4 inch	0.12
405-20512	1/2 inch	5 1/2 inch	1 1/2 inch	3/4 inch	0.13
405-206	1/2 inch	6 inch	2 inch	3/4 inch	0.13
405-207	1/2 inch	7 inch	2 inch	3/4 inch	0.14
405-312	10 UNC	2 inch	1/2 inch	5/16 inch	0.01

WDS No.	D	L	L1	L2	Weight (kg)
405-208	1/2 inch	8 inch	2 inch	3/4 inch	0.18
405-21212	5/8 inch	2 1/2 inch	1 5/16 inch	15/16 inch	0.07
405-213	5/8 inch	3 inch	1 3/4 inch	15/16 inch	0.09
405-21312	5/8 inch	3 1/2 inch	1 3/4 inch	15/16 inch	0.11
405-214	5/8 inch	4 inch	1 3/4 inch	15/16 inch	0.13
405-215	5/8 inch	5 inch	1 3/4 inch	15/16 inch	0.17
405-216	5/8 inch	6 inch	2 inch	15/16 inch	0.21
405-217	5/8 inch	7 inch	2 inch	15/16 inch	0.25
405-218	5/8 inch	8 inch	2 inch	15/16 inch	0.28
405-223	3/4 inch	3 inch	1 5/8 inch	1 1/8 inch	0.15
405-22312	3/4 inch	3 1/2 inch	2 inch	1 1/8 inch	0.16
405-224	3/4 inch	4 inch	2 inch	1 1/8 inch	0.19
405-225	3/4 inch	5 inch	2 inch	1 1/8 inch	0.24
405-226	3/4 inch	6 inch	2 1/4 inch	1 1/8 inch	0.3
405-228	3/4 inch	8 inch	2 1/4 inch	1 1/8 inch	0.41
405-311	10UNC*	1 inch	1/2 inch	5/16 inch	0.01
405-31112	10 UNC*	1 1/2 inch	1/2 inch	5/16 inch	0.01



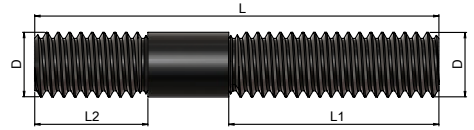
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Steel Studs - Inch BA/BSF WDS 405

BS.970. Gr.606M36T *BS.970 080A42

WDS No.	D	L	L1	L2	Weight (kg)
405-091	1/4 inch*	1 inch	7/16 inch	3/8 inch	0.01
405-09112	1/4 inch*	1 1/2 inch	1/2 inch	3/8 inch	0.01
405-09114	1/4 inch*	1 1/4 inch	1/2 inch	3/8 inch	0.01
405-09134	1/4 inch*	1 3/4 inch	1/2 inch	3/8 inch	0.01
405-09212	1/4 inch*	2 1/2 inch	3/8 inch	3/8 inch	0.01
405-093	1/4 inch*	3 inch	1 1/2 inch	3/8 inch	0.02
405-094	1/4 inch*	4 inch	1 1/2 inch	3/8 inch	0.02
405-11112	3/8 inch	1 1/2 inch	3/4 inch	9/16 inch	0.01
405-112	3/8 inch	2 inch	1 1/4 inch	9/16 inch	0.03
405-113	3/8 inch	3 inch	1 1/4 inch	9/16 inch	0.03
405-114	3/8 inch	4 inch	1 1/2 inch	9/16 inch	0.05
405-122	1/2 inch	2 inch	1 inch	3/4 inch	0.04
405-123	1/2 inch	3 inch	1 1/2 inch	3/4 inch	0.06
405-124	1/2 inch	4 inch	1 1/2 inch	3/4 inch	0.09
405-251	2 BA*	1 inch	1/2 inch	5/16 inch	0.01
405-25112	2BA*	1 1/2 inch	1/2 inch	5/16 inch	0.01
405-252	2 BA*	2 inch	1/2 inch	5/16 inch	0.01

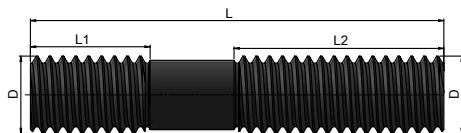
IN"



WDS 405 Steel Studs - Inch BSW

BS.970. Gr.606M36T *BS.970 080A42

WDS No.	D	L	L1	L2	Weight (kg)
405-011	1/4 inch*	1 inch	7/16 inch	3/8 inch	0.01
405-01112	1/4 inch*	1-1/2 inch	1/2 inch	3/8 inch	0.01
405-01114	1/4 inch*	1-1/4 inch	1/2 inch	3/8 inch	0.01
405-01134	1/4 inch*	1-3/4 inch	1/2 inch	3/8 inch	0.01
405-012	1/4 inch*	2 inch	1/2 inch	3/8 inch	0.01
405-01212	1/4 inch*	2-1/2 inch	3/8 inch	3/8 inch	0.01
405-02112	5/16 inch	11/2 inch	5/8 inch	1/2 inch	0.01
405-02134	5/16 inch	1-3/4 inch	5/8 inch	1/2 inch	0.02
405-022	5/16 inch	2 inch	5/8 inch	1/2 inch	0.02
405-02212	5/16 inch	2-1/2 inch	1 inch	1/2 inch	0.02
405-023	5/16 inch	3 inch	1 1/2 inch	1/2 inch	0.03
405-03112	3/8 inch	1-1/2 inch	3/4 inch	9/16 inch	0.01
405-03134	3/8 inch	1-3/4 inch	1 inch	9/16 inch	0.02
405-032	3/8 inch	2 inch	1 1/4 inch	9/16 inch	0.02
405-03212	3/8 inch	2 1/2 inch	1 1/4 inch	9/16 inch	0.03
405-03214	3/8 inch	2 1/4 inch	1 1/4 inch	9/16 inch	0.03
405-033	3/8 inch	3 inch	1-1/4 inch	9/16 inch	0.04
405-03312	3/8 inch	3-1/2 inch	1-1/4 inch	9/16 inch	0.04
405-034	3/8 inch	4 inch	1-1/2 inch	9/16 inch	0.05
405-035	3/8 inch	5 inch	1-1/2 inch	9/16 inch	0.06
405-0410	1/2 inch	10 inch	2 inch	3/4 inch	0.24
405-042	1.2 inch	2 inch	1 inch	3/4 inch	0.03
405-04212	1/2 inch	2-1/2 inch	1-1/2 inch	3/4 inch	0.04
405-043	1/2 inch	3 inch	1 1/2 inch	3/4 inch	0.06
405-04312	1/2 inch	3 1/2 inch	1 1/2 inch	3/4 inch	0.07
405-044	1/2 inch	4 inch	1 1/2 inch	3/4 inch	0.08
405-045	1/2 inch	5 inch	1 1/2 inch	3/4 inch	0.12
405-046	1/2 inch	6 inch	2 inch	3/4 inch	0.14
405-047	1/2 inch	7 inch	2 inch	3/4 inch	0.16
405-048	1/2 inch	8 inch	2 inch	3/4 inch	0.18
405-049	1/2 inch	9 inch	2 inch	3/4 inch	0.21
405-05212	5/8 inch	2 1/2 inch	1 5/16 inch	15/16 inch	0.07
405-053	5/8 inch	3 inch	1 3/4 inch	15/16 inch	0.08
405-05312	5/8 inch	3 1/2 inch	1 3/4 inch	15/16 inch	0.09
405-054	5/8 inch	4 inch	1 3/4 inch	15/16 inch	0.13
405-05412	5/8 inch	4 1/2 inch	1 3/4 inch	15/16 inch	0.14
405-055	5/8 inch	5 inch	1 3/4 inch	15/16 inch	0.17
405-05512	5/8 inch	5 1/2 inch	1 3/4 inch	15/16 inch	0.19
405-056	5/8 inch	6 inch	2 inch	15/16 inch	0.21
405-057	5/8 inch	7 inch	2 inch	15/16 inch	0.25
405-058	5/8 inch	8 inch	2 inch	15/16 inch	0.29
405-063	3/4 inch	3 inch	1 5/8 inch	1 1/8 inch	0.14
405-064	3/4 inch	4 inch	2 inch	1 1/8 inch	0.19
405-065	3/4 inch	5 inch	2 inch	1 1/8 inch	0.25
405-066	3/4 inch	6 inch	2 1/4 inch	1 1/8 inch	0.32
405-068	3/4 inch	8 inch	2 1/4 inch	1 1/8 inch	0.43



Rolled Studs - Steel WDS 409

M6-M12 Tempered to class 10.9

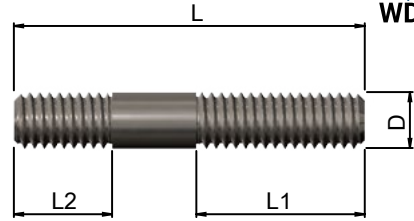
M14-M30 Tempered to class 8.8

WDS No.	D	L	L1	L2	Class	Weight (kg)
409-20632	M6	32	9	16	10.9	0.01
409-20640	M6	40	9	20	10.9	0.09
409-20650	M6	50	9	30	10.9	0.01
409-20663	M6	63	9	40	10.9	0.01
409-20680	M6	80	9	50	10.9	0.02
409-208100	M8	100	11	63	10.9	0.03
409-208125	M8	125	11	75	10.9	0.04
409-208160	M8	160	11	100	10.9	0.05
409-20840	M8	40	11	20	10.9	0.01
409-20863	M8	63	11	40	10.9	0.02
409-20880	M8	80	11	50	10.9	0.03
409-210100	M10	100	13	75	10.9	0.05
409-210125	M10	125	13	75	10.9	0.06
409-210160	M10	160	13	100	10.9	0.08
409-210200	M10	200	13	125	10.9	0.1
409-21050	M10	50	13	25	10.9	0.03
409-21080	M10	80	13	50	10.9	0.04
409-212100	M12	100	15	63	10.9	0.07
409-212125	M12	125	15	75	10.9	0.09
409-212160	M12	160	15	100	10.9	0.11
409-212200	M12	200	15	125	10.9	0.14
409-21250	M12	50	15	25	10.9	0.04
409-21263	M12	63	15	32	10.9	0.05
409-21280	M12	80	15	50	10.9	0.06
409-214100	M14	100	17	63	8.8	0.1
409-214125	M14	125	17	75	8.8	0.24
409-214160	M14	160	17	100	8.8	0.15
409-214200	M14	200	17	125	8.8	0.2
409-214250	M14	250	17	160	8.8	0.24
409-21463	M14	63	17	32	8.8	0.08
409-216100	M16	100	19	63	8.8	0.13
409-216125	M16	125	19	75	8.8	0.16
409-216160	M16	160	19	100	8.8	0.22
409-216200	M16	200	19	125	8.8	0.28
409-216250	M16	250	19	160	8.8	0.33
409-216315	M16	315	19	190	8.8	0.43
409-216500	M16	500	19	315	8.8	0.65
409-21663	M16	63	19	32	8.8	0.09
409-21680	M16	80	19	50	8.8	0.11
409-218125	M18	125	23	75	8.8	0.2
409-218160	M18	160	23	100	8.8	0.26
409-218200	M18	200	23	125	8.8	0.35
409-218250	M18	250	23	150	8.8	0.4
409-220125	M20	125	27	70	8.8	0.26
409-220160	M20	160	27	100	8.8	0.33

WDS No.	D	L	L1	L2	Class	Weight (kg)
409-220200	M20	200	27	125	8.8	0.41
409-220250	M20	250	27	160	8.8	0.51
409-220315	M20	315	27	190	8.8	0.64
409-220400	M20	400	27	250	8.8	0.82
409-220500	M20	500	27	315	8.8	1.02
409-22080	M20	80	27	32	8.8	0.19
409-222100	M22	100	31	45	8.8	0.25
409-222160	M22	160	31	100	8.8	0.4
409-222200	M22	200	31	125	8.8	0.5
409-222250	M22	250	31	160	8.8	0.62
409-222315	M22	315	31	190	8.8	0.79
409-222400	M22	400	31	250	8.8	1
409-224100	M24	100	35	45	8.8	0.29
409-224125	M24	125	35	70	8.8	0.38
409-224160	M24	160	35	100	8.8	0.47
409-224200	M24	200	35	125	8.8	0.58
409-224250	M24	250	35	160	8.8	0.73
409-224315	M24	315	35	190	8.8	0.92
409-224400	M24	400	35	250	8.8	1.16
409-224500	M24	500	35	315	8.8	1.46
409-224630	M24	630	35	315	8.8	1.85
409-2301000	M30	1000	43	400	8.8	4.7
409-230125	M30	125	43	56	8.8	0.6
409-230200	M30	200	43	125	8.8	0.95
409-230315	M30	315	43	190	8.8	1.49
409-230500	M30	500	43	315	8.8	2.36
409-230700	M30	700	43	400	8.8	3.26
409-236160	M36	160	51	80	8.8	1.06
409-236200	M36	200	51	125	8.8	1.34
409-236250	M36	250	51	160	8.8	1.68
409-236315	M36	315	51	190	8.8	2.15
409-236400	M36	400	51	250	8.8	2.7
409-236500	M36	500	51	315	8.8	3.45
409-236700	M36	700	51	400	8.8	3.26
409-242315	M42	315	59	190	8.8	2.9
409-242400	M42	400	59	250	8.8	3.65
409-242500	M42	500	59	315	8.8	4.6

316

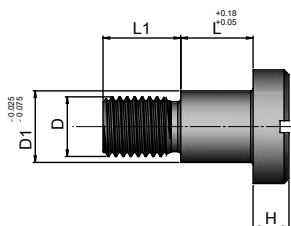
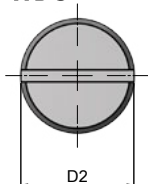
303



WDS 801/8901 316/303 Stainless Steel Studs - Metric

316/303 Stainless Steel

316 SS	303 SS	D	L	L1	L2	Weight (kg)
801-20425	8901-20425	M4	25	12	7	0.01
801-20435	8901-20435	M4	35	12	7	0.01
801-20445	8901-20445	M4	45	20	7	0.01
801-20525	8901-20525	M5	25	12	8	0.01
801-20530	8901-20530	M5	30	12	8	0.01
801-20540	8901-20540	M5	40	20	8	0.01
801-20550	8901-20550	M5	50	20	8	0.01
801-20630	8901-20630	M6	30	13	9	0.01
801-20635	8901-20635	M6	35	13	9	0.01
801-20640	8901-20640	M6	40	25	9	0.01
801-20645	8901-20645	M6	45	25	9	0.01
801-20650	8901-20650	M6	50	25	9	0.02
801-20660	8901-20660	M6	60	25	9	0.01
801-20670	8901-20670	M6	70	25	9	0.02
801-208100	8901-208100	M8	100	30	11	0.04
801-20840	8901-20840	M8	40	25	11	0.02
801-20845	8901-20845	M8	45	25	11	0.02
801-20850	8901-20850	M8	50	30	11	0.02
801-20860	8901-20860	M8	60	30	11	0.02
801-20870	8901-20870	M8	70	30	11	0.03
801-20880	8901-20880	M8	80	30	11	0.03
801-20890	8901-20890	M8	90	30	11	0.04
801-210100	8901-210100	M10	100	40	13	0.06
801-210125	8901-210125	M10	125	40	13	0.07
801-21050	8901-21050	M10	50	30	13	0.03
801-21060	8901-21060	M10	60	30	13	0.03
801-21070	8901-21070	M10	70	30	13	0.04
801-21080	8901-21080	M10	80	40	13	0.05
801-21090	8901-21090	M10	90	40	13	0.05
801-212100	8901-212100	M12	100	65	15	0.08
801-212125	8901-212125	M12	125	65	15	0.11
801-212150	8901-212150	M12	150	65	15	0.12
801-21260	8901-21260	M12	60	40	15	0.05
801-21270	8901-21270	M12	70	40	15	0.06
801-21280	8901-21280	M12	80	40	15	0.07
801-21290	8901-21290	M12	90	40	15	0.07
801-216100	8901-216100	M16	100	65	22	0.13
801-216125	8901-216125	M16	125	65	22	0.17
801-216150	8901-216150	M16	150	65	22	0.21
801-216175	8901-216175	M16	175	65	22	0.25
801-21675	8901-21675	M16	75	45	22	0.11

**WDS**

Shoulder Screws (Shoulder Bolts) - Steel - Metric **WDS 615**

Steel BS.970 Gr. 230M07

Chemical black finish

WDS No.	D	D1	D2	H	L	L1	Weight (kg)
615-2006	M5	6	13	4	6	6	0.01
615-2008	M5	7	13	4	6	6	0.01
615-201	M6	8	13	4	6	8	0.01
615-2015	M6	8	13	4	8	8	0.01
615-202	M6	8	13	4	10	8	0.01
615-203	M8	10	16	5	10	11	0.02
615-204	M8	10	16	5	12	11	0.02
615-205	M10	12	19	6	12	13	0.03
615-2055	M10	12	19	6	16	13	0.04
615-2058	M10	13	19	4.5	16	13	0.03
615-206	M10	14	22	6	16	13	0.04

IN"

Retaining Screws Suitable For Drill Bushes - Steel - Inch BA/BSF or UNC **WDS 615**

Steel BS.970 Gr. 230M07

Chemical black finish

WDS No.	D	D1	D2	H	L	L1	Thread	Weight (kg)
615-30	5/16 inch	9.5	15.9	3.5	0.125 inch	9.5	BSF	0.01
615-32	5/16 inch	9.5	15.9	3.5	0.250 inch	9.5	BSF	0.01
615-34	3/8 inch	11.1	19.1	5	0.188 inch	15.9	BSF	0.02
615-36	3/8 inch	11.1	19.1	5	0.313 inch	15.9	BSF	0.02
615-40	5/16 inch	9.5	15.9	3.5	0.125 inch	9.5	UNC	0.01
615-42	5/16 inch	9.5	15.9	3.5	0.250 inch	9.5	UNC	0.01
615-44	3/8 inch	11.1	19.1	5	0.188 inch	15.9	UNC	0.02
615-46	3/8 inch	11.1	19.1	5	0.313 inch	15.9	UNC	0.02

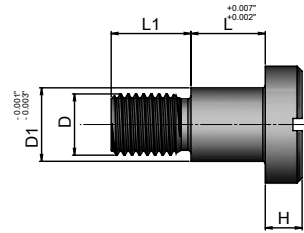
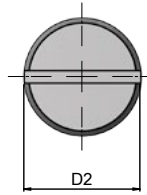
Retaining Screws Suitable For Drill Bushes - Steel - Metric **WDS 615**

Steel BS.970 Gr. 230M07

Chemical black finish

WDS No.	D	D1	D2	H	L	L1	Weight (kg)
615-401	M5	7.5	13	3.5	3	9	0.01
615-402	M5	7.5	13	3.5	6	9	0.01
615-403	M6	9.5	16	4.5	4	10	0.01
615-404	M6	9.5	16	4.5	8	10	0.01
615-405	M8	12	20	5	5.5	11.5	0.02
615-406	M8	12	20	5	10.5	11.5	0.02
615-407	M10	15	24	6	7	18.5	0.03
615-408	M10	15	24	6	13	18.5	0.04

IN"

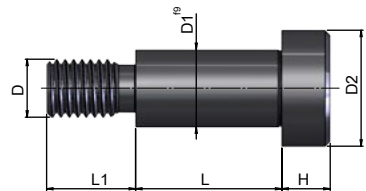
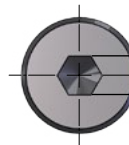


WDS 615 Shoulder Screws (Shoulder Bolts) - Steel - Inch UNC or BA/BSF

Steel BS.970 Gr.230M07
Chemical black finish

WDS No.	D	D1	D2	H	L	L1	Thread	Weight (kg)
615-01	10 UNC	6.4	12.7	4	0.188 inch	6.4	UNC	0.01
615-02	10 UNC	6.4	12.7	4	0.250 inch	6.4	UNC	0.01
615-03	1/4 inch	7.9	12.7	4	0.250 inch	7.9	UNC	0.01
615-04	1/4 inch	7.9	12.7	4	0.313 inch	7.9	UNC	0.01
615-05	1/4 inch	7.9	12.7	4	0.375 inch	7.9	UNC	0.02
615-06	1/4 inch	7.9	12.7	4	0.375 inch	7.9	UNC	0.01
615-07	1/4 inch	9.5	15.9	4	0.313 inch	7.9	UNC	0.02
615-08	5/16 inch	9.5	15.9	4.8	0.375 inch	11.1	UNC	0.02
615-09	5/16 inch	9.5	15.9	4.8	0.500 inch	11.1	UNC	0.02
615-10	5/16 inch	12.7	19.1	4.8	0.375 inch	11.1	UNC	0.03
615-11	3/8 inch	12.7	19.1	6.4	0.500 inch	12.7	UNC	0.04
615-12	3/8 inch	12.7	19.1	6.4	0.625 inch	12.7	UNC	0.04
615-13	3/8 inch	12.7	19.1	6.4	0.750 inch	12.7	UNC	0.04
615-15	2BA	6.4	12.7	4	0.188 inch	6.4	BA	0.01
615-16	2 BA	6.4	12.7	4	0.250 inch	6.4	BA	0.01
615-17	1/4 inch	7.9	12.7	4	0.250 inch	7.9	BSF	0.01
615-19	1/4 inch	7.9	12.7	4	0.375 inch	7.9	BSF	0.02
615-20	1/4 inch	9.5	15.9	4	0.250 inch	7.9	BSF	0.01
615-21	1/4 inch	9.5	15.9	4	0.313 inch	7.9	BSF	0.02
615-22	5/16 inch	9.5	15.9	4.8	0.375 inch	11.1	BSF	0.02
615-23	5/16 inch	9.5	15.9	4.8	0.500 inch	11.1	BSF	0.02
615-25	3/8 inch	12.7	19.1	6.4	0.500 inch	12.7	BSF	0.03

316



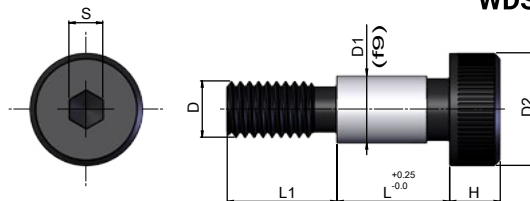
WDS 887 316 Stainless Steel Shoulder Bolts

316 Stainless Steel

WDS No.	D	D1 (h8)	D2	L	L1	H	S	Weight (g)
887-M3-4-4	M3	4	7	4	7	3	2	1.6
887-M3-4-6	M3	4	7	6	7	3	2	1.8
887-M3-4-8	M3	4	7	8	7	3	2	2.0
887-M3-4-10	M3	4	7	10	7	3	2	2.2
887-M4-5-5	M4	5	9	5	8	4	2.5	3.4
887-M4-5-6	M4	5	9	6	8	4	2.5	3.6
887-M4-5-8	M4	5	9	8	8	4	2.5	3.9
887-M4-5-10	M4	5	9	10	8	4	2.5	4.1
887-M4-5-12	M4	5	9	12	8	4	2.5	4.5



WDS No.	D	D1 (h8)	D2	L	L1	H	S	Weight (g)
887-M4-5-16	M4	5	9	16	8	4	2.5	5.1
887-M4-5-20	M4	5	9	20	8	4	2.5	5.7
887-M4-5-25	M4	5	9	25	8	4	2.5	6.5
887-M4-5-30	M4	5	9	30	8	4	2.5	7.3
887-M5-6-10	M5	6	10	10	9.75	4.5	3	6.0
887-M5-6-12	M5	6	10	12	9.75	4.5	3	6.5
887-M5-6-16	M5	6	10	16	9.75	4.5	3	7.4
887-M5-6-20	M5	6	10	20	9.75	4.5	3	8.3
887-M5-6-25	M5	6	10	25	9.75	4.5	3	9.5
887-M5-6-30	M5	6	10	30	9.75	4.5	3	10.6
887-M5-6-35	M5	6	10	35	9.75	4.5	3	11.7
887-M5-6-40	M5	6	10	40	9.75	4.5	3	12.8
887-M5-6-50	M5	6	10	50	9.75	4.5	3	15.0
887-M6-8-12	M6	8	13	12	11.25	4.5	4	12.2
887-M6-8-16	M6	8	13	16	11.25	4.5	4	13.8
887-M6-8-20	M6	8	13	20	11.25	4.5	4	15.4
887-M6-8-25	M6	8	13	25	11.25	4.5	4	17.4
887-M6-8-30	M6	8	13	30	11.25	4.5	4	19.4
887-M6-8-35	M6	8	13	35	11.25	4.5	4	21.3
887-M6-8-40	M6	8	13	40	11.25	4.5	4	23.4
887-M6-8-45	M6	8	13	45	11.25	4.5	4	25.3
887-M6-8-50	M6	8	13	50	11.25	4.5	4	27.4
887-M6-8-55	M6	8	13	55	11.25	4.5	4	29.3
887-M8-10-16	M8	10	16	16	13.25	7	5	25.0
887-M8-10-20	M8	10	16	20	13.25	7	5	27.0
887-M8-10-25	M8	10	16	25	13.25	7	5	30.0
887-M8-10-30	M8	10	16	30	13.25	7	5	33.0
887-M8-10-35	M8	10	16	35	13.25	7	5	36.8
887-M8-10-40	M8	10	16	40	13.25	7	5	40.0
887-M8-10-45	M8	10	16	45	13.25	7	5	43.0
887-M8-10-50	M8	10	16	50	13.25	7	5	46.0
887-M8-10-55	M8	10	16	55	13.25	7	5	49.0
887-M8-10-60	M8	10	16	60	13.25	7	5	52.0
887-M8-10-70	M8	10	16	70	13.25	7	5	58.0
887-M10-12-16	M10	12	18	16	16.4	8	6	38.0
887-M10-12-20	M10	12	18	20	16.4	8	6	42.0
887-M10-12-25	M10	12	18	25	16.4	8	6	46.0
887-M10-12-30	M10	12	18	30	16.4	8	6	51.0
887-M10-12-40	M10	12	18	40	16.4	8	6	60.0
887-M10-12-50	M10	12	18	50	16.4	8	6	68.0
887-M10-12-60	M10	12	18	60	16.4	8	6	76.0
887-M10-12-70	M10	12	18	70	16.4	8	6	85.0
887-M10-12-80	M10	12	18	80	16.4	8	6	94.0
887-M10-12-100	M10	12	18	100	16.4	8	6	112.0
887-M12-16-30	M12	16	24	30	18.4	10	8	94.0
887-M12-16-40	M12	16	24	40	18.4	10	8	111.0
887-M12-16-50	M12	16	24	50	18.4	10	8	125.0
887-M12-16-60	M12	16	24	70	18.4	10	8	158.0
887-M12-16-70	M12	16	24	70	18.4	10	8	158.0
887-M12-16-80	M12	16	24	80	18.4	10	8	174.0
887-M12-16-100	M12	16	24	100	18.4	10	8	201.0



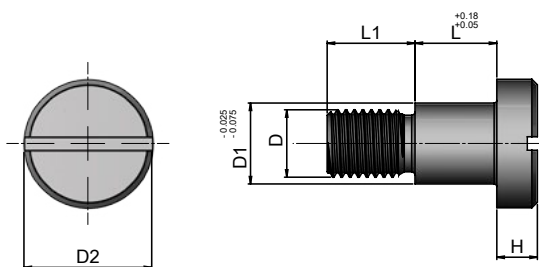
WDS 615 Socket Shoulder Screws (Shoulder Bolts) - Steel - Metric

Steel BS.970 Gr. 230M07

Chemical black finish

WDS No.	D	D1	D2	H	L	L1	S	Weight (kg)
615-M5-6-10	M5	6	10	4.5	10	9.75	3	0.01
615-M5-6-12	M5	6	10	4.5	12	9.75	3	0.01
615-M5-6-16	M5	6	10	4.5	16	9.75	3	0.01
615-M5-6-20	M5	6	10	4.5	20	9.75	3	0.01
615-M5-6-25	M5	6	10	4.5	25	9.75	3	0.01
615-M5-6-30	M5	6	10	4.5	30	9.75	3	0.01
615-M5-6-35	M5	6	10	4.5	35	9.75	3	0.01
615-M5-6-40	M5	6	10	4.5	40	9.75	3	0.01
615-M5-6-45	M5	6	10	4.5	45	9.75	3	0.02
615-M5-6-50	M5	6	10	4.5	50	9.75	3	0.02
615-M5-6-60	M5	6	10	4.5	60	9.75	3	0.02
615-M5-6-80	M5	6	10	4.5	80	9.75	3	0.02
615-M6-8-100	M6	8	13	5.5	100	11.25	4	0.04
615-M6-8-12	M6	8	13	5.5	12	11.25	4	0.01
615-M6-8-16	M6	8	13	5.5	16	11.25	4	0.02
615-M6-8-20	M6	8	13	5.5	20	11.25	4	0.02
615-M6-8-25	M6	8	13	5.5	25	11.25	4	0.02
615-M6-8-30	M6	8	13	5.5	30	11.25	4	0.02
615-M6-8-35	M6	8	13	5.5	35	11.25	4	0.02
615-M6-8-40	M6	8	13	5.5	40	11.25	4	0.02
615-M6-8-45	M6	8	13	5.5	45	11.25	4	0.03
615-M6-8-50	M6	8	13	5.5	50	11.25	4	0.03
615-M6-8-55	M6	8	13	5.5	55	11.25	4	0.03
615-M6-8-60	M6	8	13	5.5	60	11.25	4	0.03
615-M6-8-65	M6	8	13	5.5	65	11.25	4	0.03
615-M6-8-90	M6	8	13	5.5	90	11.25	4	0.04
615-M8-10-100	M8	10	16	7	100	13.25	5	0.08
615-M8-10-16	M8	10	16	7	16	13.25	5	0.03
615-M8-10-20	M8	10	16	7	20	13.25	5	0.03
615-M8-10-25	M8	10	16	7	25	13.25	5	0.03
615-M8-10-30	M8	10	16	7	30	13.25	5	0.03
615-M8-10-35	M8	10	16	7	35	13.25	5	0.04
615-M8-10-40	M8	10	16	7	40	13.25	5	0.04
615-M8-10-45	M8	10	16	7	45	13.25	5	0.04
615-M8-10-50	M8	10	16	7	50	13.25	5	0.05
615-M8-10-55	M8	10	16	7	55	13.25	5	0.05
615-M8-10-60	M8	10	16	7	60	13.25	5	0.05
615-M8-10-65	M8	10	16	7	65	13.25	5	0.06
615-M8-10-70	M8	10	16	7	70	13.25	5	0.06
615-M8-10-80	M8	10	16	7	80	13.25	5	0.06
615-M8-10-90	M8	10	16	7	90	13.25	5	0.07
615-M10-12-100	M10	12	18	8	100	16.4	6	0.11
615-M10-12-16	M10	12	18	8	16	16.4	6	0.04
615-M10-12-20	M10	12	18	8	20	16.4	6	0.04
615-M10-12-25	M10	12	18	8	25	16.4	6	0.05
615-M10-12-30	M10	12	18	8	30	16.4	6	0.05

WDS No.	D	D1	D2	H	L	L1	S	Weight (kg)
615-M10-12-35	M10	12	18	8	35	16.4	6	0.06
615-M10-12-40	M10	12	18	8	40	16.4	6	0.06
615-M10-12-50	M10	12	18	8	50	16.4	6	0.07
615-M10-12-55	M10	12	18	8	55	16.4	6	0.07
615-M10-12-60	M10	12	18	8	60	16.4	6	0.08
615-M10-12-70	M10	12	18	8	70	16.4	6	0.09
615-M10-12-80	M10	12	18	8	80	16.4	6	0.09
615-M10-12-90	M10	12	18	8	90	16.4	6	0.1
615-M12-16-100	M12	16	24	11	100	18.4	8	0.2
615-M12-16-30	M12	16	24	11	30	18.4	8	0.09
615-M12-16-35	M12	16	24	11	35	18.4	8	0.1
615-M12-16-40	M12	16	24	11	40	18.4	8	0.11
615-M12-16-45	M12	16	24	11	45	18.4	8	0.12
615-M12-16-50	M12	16	24	11	50	18.4	8	0.13
615-M12-16-55	M12	16	24	11	55	18.4	8	0.13
615-M12-16-60	M12	16	24	11	60	18.4	8	0.14
615-M12-16-70	M12	16	24	11	70	18.4	8	0.16
615-M12-16-80	M12	16	24	11	80	18.4	8	0.17
615-M12-16-90	M12	16	24	11	90	18.4	8	0.19
615-M16-20-30	M16	20	30	14	30	22	10	0.2
615-M16-20-40	M16	20	30	14	40	22	10	0.21
615-M16-20-45	M16	20	30	14	45	22	10	0.22
615-M16-20-50	M16	20	30	14	50	22	10	0.22
615-M16-20-60	M16	20	30	14	60	22	10	0.24
615-M16-20-80	M16	20	30	14	80	22	10	0.29
615-M16-20-90	M16	20	30	14	90	22	10	0.32
615-M20-24-100	M20	24	36	16	100	27	12	0.52
615-M20-24-50	M20	24	36	16	50	27	12	0.35
615-M20-24-60	M20	24	36	16	60	27	12	0.37
615-M20-24-70	M20	24	36	16	70	27	12	0.42
615-M20-24-80	M20	24	36	16	80	27	12	0.45
615-M20-24-90	M20	24	36	16	90	27	12	0.48

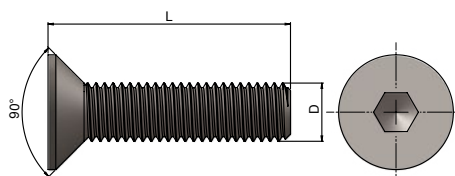


316

Shoulder Screws (Shoulder Bolts) - Metric - 316 Stainless Steel WDS 615

316 Stainless Steel

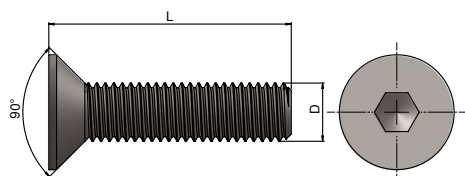
WDS No.	D	D1	D2	H	L	L1	Weight (kg)
615-6006	M5	6	13	4	6	6	0.01
615-6008	M5	7	13	4	6	6	0.01
615-601	M6	8	13	4	6	8	0.01
615-6015	M6	8	13	4	8	8	0.01
615-602	M6	8	13	4	10	8	0.01
615-603	M8	10	16	5	10	11	0.02
615-604	M8	10	16	5	12	11	0.02
615-605	M10	12	19	6	12	13	0.03
615-6055	M10	12	19	6	16	13	0.04
615-6058	M10	13	19	4.5	16	13	0.04
615-606	M10	14	22	6	16	13	0.04



WDS 421 Countersunk Socket Screws - Metric - Steel

Steel, Class - 10.9

WDS No.	D	L	Pack Quantity	Weight (kg)
421-M4-10	M4	10	50	0.05
421-M4-12	M4	12	50	0.07
421-M4-16	M4	16	50	0.08
421-M4-20	M4	20	50	0.09
421-M4-25	M4	25	50	0.12
421-M4-8	M4	8	50	0.05
421-M5-10	M5	10	50	0.09
421-M5-12	M5	12	50	0.11
421-M5-16	M5	16	50	0.13
421-M5-20	M5	20	50	0.16
421-M5-25	M5	25	50	0.19
421-M5-30	M5	30	50	0.22
421-M5-40	M5	40	25	0.15
421-M5-8	M5	8	50	0.07
421-M6-10	M6	10	50	0.14
421-M6-12	M6	12	50	0.16
421-M6-16	M6	16	50	0.19
421-M6-20	M6	20	50	0.22
421-M6-25	M6	25	50	0.21
421-M6-30	M6	30	50	0.31
421-M6-40	M6	40	50	0.4
421-M6-50	M6	50	25	0.2
421-M8-16	M8	16	25	0.19
421-M8-20	M8	20	25	0.23
421-M8-25	M8	25	25	0.27
421-M8-30	M8	30	25	0.29
421-M8-40	M8	40	25	0.38
421-M8-50	M8	50	25	0.48
421-M10-20	M10	20	25	0.31
421-M10-25	M10	25	25	0.43
421-M10-30	M10	30	25	0.67
421-M10-40	M10	40	25	0.07
421-M10-50	M10	50	25	0.74
421-M10-60	M10	60	10	0.37
421-M12-25	M12	25	25	0.06
421-M12-30	M12	30	25	0.79
421-M12-40	M12	40	25	0.9
421-M12-50	M12	50	25	1.08
421-M12-60	M12	60	10	0.51
421-M12-70	M12	70	5	0.3

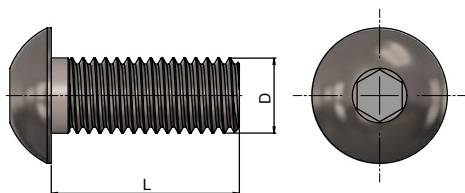


Countersunk Socket Screws - Inch BA BSW - Steel WDS 421

Steel BS.970 Gr. 230M07

Chemical black finish

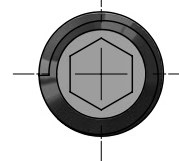
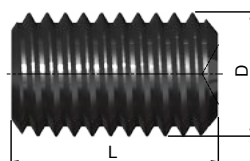
WDS No.	D	L	Pack Quantity	Weight (kg)
421-12W-1	1/2 BSW	1	10	0.25
421-12W-112	1/2 BSW	1 1/2	10	0.35
421-14W-1	1/4 BSW	1	25	0.01
421-14W-12	1/4 BSW	1/2	25	0.08
421-14W-34	1/4 BSW	3/4	25	0.13
421-2B-1	2 BA	1	25	0.08
421-2B-12	2 BA	1/2	25	0.05
421-2B-34	2 BA	3/4	25	0.06
421-2B-38	2 BA	3/8	25	0.04
421-38W-1	3/8 BSW	1	10	0.42
421-38W-34	3/8 BSW	3/4	10	0.11
421-4B-12	4 BA	1/2	25	0.03
421-4B-516	4 BA	5/16	25	0.02



Socket Dome Screws - Steel WDS 422

Steel, Class - 10.9

WDS No.	D	L	Pack Quantity	Weight (kg)
422-M4-10	M4	10	50	0.07
422-M4-16	M4	16	50	0.08
422-M4-6	M4	6	50	0.06
422-M5-12	M5	12	50	0.12
422-M5-16	M5	16	50	0.15
422-M5-20	M5	20	50	0.17
422-M5-8	M5	8	50	0.09
422-M6-10	M6	10	50	0.01
422-M6-16	M6	16	50	0.17
422-M6-20	M6	20	50	0.25
422-M6-25	M6	25	50	0.14
422-M8-12	M8	12	25	0.17
422-M8-16	M8	16	25	0.21
422-M8-20	M8	20	25	0.24
422-M8-25	M8	25	25	0.28
422-M8-30	M8	30	25	0.32
422-M10-20	M10	20	25	0.43
422-M10-25	M10	25	25	0.65
422-M10-30	M10	30	25	0.52



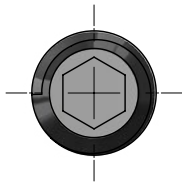
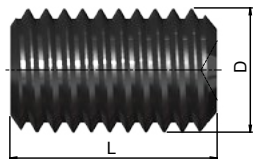
WDS 423 Socket Set Screws (Grub Screws) - Steel - Metric

Steel, Class - 10.9

WDS No.	D	L	Pack Quantity	Weight (kg)
423-M4-10	M4	10	50	0.14
423-M4-12	M4	12	50	0.04
423-M4-5	M4	5	50	0.01
423-M4-8	M4	8	50	0.01
423-M5-10	M5	10	50	0.06
423-M5-12	M5	12	50	0.06
423-M5-16	M5	16	50	0.08
423-M5-6	M5	6	50	0.03
423-M5-8	M5	8	50	0.04
423-M6-10	M6	10	50	0.14
423-M6-12	M6	12	50	0.09
423-M6-16	M6	16	50	0.12
423-M6-20	M6	20	50	0.16
423-M6-6	M6	6	50	0.13
423-M6-8	M6	8	50	0.06
423-M8-12	M8	12	25	0.06
423-M8-16	M8	16	25	0.11
423-M8-20	M8	20	25	0.14
423-M8-25	M8	25	25	0.17
423-M8-8	M8	8	25	0.05
423-M10-10	M10	10	25	0.09
423-M10-16	M10	16	25	0.16
423-M10-20	M10	20	25	0.01
423-M10-25	M10	25	25	0.25
423-M10-30	M10	30	25	0.33
423-M12-12	M12	12	25	0.01
423-M12-16	M12	16	25	0.21
423-M12-20	M12	20	25	0.27
423-M12-25	M12	25	25	0.03
423-M12-30	M12	30	10	0.01
423-M16-16	M16	16	5	0.08
423-M16-20	M16	20	5	0.1
423-M16-25	M16	25	5	0.12
423-M16-30	M16	30	5	0.16
423-M16-40	M16	40	5	0.23

**WDS**

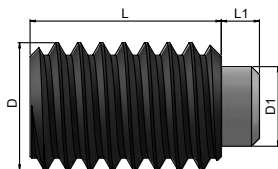
IN"



Socket Set Screws (Grub Screws) - Steel - Inch **WDS 423**

Steel, Class - 45H

WDS No.	Quantity Pack	Thread (D) x Length (L)	Weight (kg)
423-2B-12	25	2 BA X 1/2 Inch	0.03
423-2B-14	25	2 BA X 1/4 Inch	0.01
423-4B-14	25	4 BA X 1/4 Inch	0.01
423-6B-316	25	6 BA X 3/16 Inch	0.01
423-12W-1	10	1/2 BSW X 1 Inch	0.15
423-12W-12	10	1/2 BSW X 1/2 Inch	0.06
423-12W-34	10	1/2 BSW X 3/4 Inch	0.11
423-14W-12	25	1/4 BSW X 1/2 Inch	0.05
423-14W-14	25	1/4 BSW X 1/4 Inch	0.17
423-38W-12	10	3/8 BSW X 1/2 Inch	0.04
423-38W-34	10	3/8 BSW X 3/4 Inch	0.05
423-516W-12	10	5/16 BSW X 1 Inch	0.07
423-516W-34	10	5/16 BSW X 3/4 Inch	0.02
423-516W-38	10	5/16 BSW X 3/8 Inch	0.05



NYL

BR

Steel Set Screw with Nylon or Brass Tip **WDS 762**

Threaded Body - Alloy Steel with Black Oxide Finish

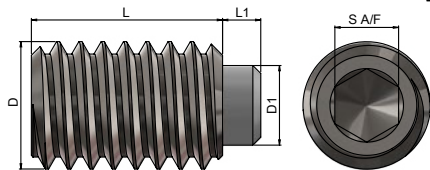
Tip - Nylon/Brass

Nylon Tip	Brass Tip	D	D1	L	L1	S	Weight (kg)
762-20406N	762-20406B	M4	2.5	6	1.2	3	0.01
762-20410N	762-20410B	M4	2.5	10	1.2	3	0.01
762-20416N	762-20416B	M4	2.5	16	1.2	2	0.01
762-20508N	762-20508B	M5	2.5	8	1.2	4	0.01
762-20512N	762-20512B	M5	2.5	12	1.2	4	0.01
762-20520N	762-20520B	M5	2.5	20	1.2	4	0.01
762-20610N	762-20610B	M6	3.4	10	1.7	4.5	0.01
762-20616N	762-20616B	M6	3.4	16	1.7	4.5	0.01
762-20625N	762-20625B	M6	3.4	25	1.7	4.5	0.01
762-20812N	762-20812B	M8	4.8	12	2.4	5.5	0.01
762-20820N	762-20820B	M8	4.8	20	2.4	5.5	0.01
762-20830N	762-20830B	M8	4.8	30	2.4	5.5	0.01
762-21016N	762-21016B	M10	4.8	16	2.4	7.3	0.01
762-21025N	762-21025B	M10	4.8	25	2.4	7.3	0.01
762-21035N	762-21035B	M10	4.8	35	2.4	7.3	0.01
762-21220N	762-21220B	M12	6.1	20	3	8.3	0.01
762-21230N	762-21230B	M12	6.1	30	3	8.3	0.02
762-21240N	762-21240B	M12	6.1	40	3	8.3	0.02

304

NYL

BR



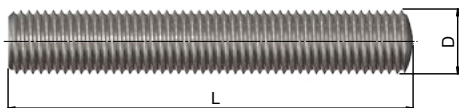
WDS

WDS 762 Stainless Steel Set Screw with Nylon or Brass Tip

Threaded Body - 304 Stainless Steel

Tip - Nylon/Brass

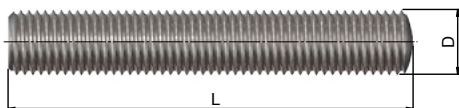
Nylon Tip	Brass Tip	D	D1	L	L1	S	Weight (kg)
762-60406N	762-60406B	M4	2.5	6	1.2	3	0.01
762-60410N	762-60410B	M4	2.5	10	1.2	3	0.01
762-60416N	762-60416B	M4	2.5	16	1.2	2	0.01
762-60508N	762-60508B	M5	2.5	8	1.2	4	0.01
762-60512N	762-60512B	M5	2.5	12	1.2	4	0.01
762-60520N	762-60520B	M5	2.5	20	1.2	4	0.01
762-60610N	762-60610B	M6	3.3	10	1.7	4.5	0.01
762-60616N	762-60616B	M6	3.3	16	1.7	4.5	0.01
762-60625N	762-60625B	M6	3.3	25	1.7	4.5	0.01
762-60812N	762-60812B	M8	4.8	12	2.4	5.5	0.01
762-60820N	762-60820B	M8	4.8	20	2.4	5.5	0.01
762-60830N	762-60830B	M8	4.8	30	2.4	5.5	0.01
762-61016N	762-61016B	M10	4.8	16	2.4	7.3	0.01
762-61025N	762-61025B	M10	4.8	25	2.4	7.3	0.01
762-61035N	762-61035B	M10	4.8	35	2.4	7.3	0.02
762-61220N	762-61220B	M12	6.1	20	3	8.3	0.01
762-61230N	762-61230B	M12	6.1	30	3	8.3	0.02
762-61240N	762-61240B	M12	6.1	40	3	8.3	0.03



Screw - Steel - Inch WDS 105

Steel. BS.970 Gr.230M07

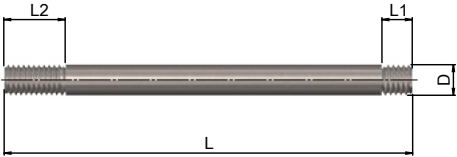
WDS No.	D	Thread	L	Weight (kg)
105-02	1/4inch	BSW	90	0.02
105-04	5/16inch	BSW	90	0.03
105-07	3/8inch	BSW	95	0.04
105-10	1/2inch	BSW	95	0.07
105-23	5/16inch	BSF	90	0.03
105-26	3/8inch	BSF	95	0.04
105-44	1/4inch	UNC	90	0.02
105-46	5/16inch	UNC	90	0.03
105-49	3/8inch	UNC	95	0.04
105-52	1/2inch	UNC	95	0.07



Screw - Steel - Metric WDS 105

Steel. BS.970 Gr.230M07

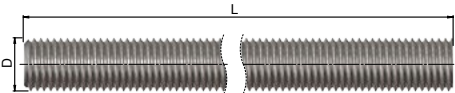
WDS No.	D	L	Weight (kg)
105-200560	M5	60	0.01
105-201125	M6	125	0.03
105-20140	M6	40	0.01
105-20155	M6	55	0.01
105-20175	M6	75	0.01
105-202125	M8	125	0.04
105-20240	M8	40	0.01
105-20255	M8	55	0.02
105-20275	M8	75	0.03
105-203100	M10	100	0.05
105-20350	M10	50	0.03
105-20375	M10	75	0.04
105-204100	M12	100	0.07
105-204125	M12	125	0.08
105-20475	M12	75	0.05
105-206100	M16	100	0.13
105-206125	M16	125	0.18



WDS 110 Ball Knob Handle - Steel

Steel BS.970 Gr.230M07
Chemical black finish

WDS No.	D (BSW)	D (Metric)	L	L1	L2	Weight (kg)
110-13	1/2 inch	-	230	22	12	0.22
110-201	-	M6	80	12	6	0.02
110-2015	-	M8	100	14	8	0.05
110-202	-	M10	140	18	10	0.07
110-203	-	M12	230	22	12	0.22



WDS 416 Threaded Bar Grade 4.6 - Mild Steel

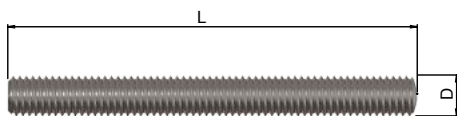
Mild Steel

WDS No.	D	L	Weight (kg)
416-206	M6	1000	0.2
416-208	M8	1000	0.3
416-210	M10	1000	0.5
416-212	M12	1000	0.7
416-216	M16	1000	1.3
416-220	M20	1000	2

WDS 416 Threaded Bar Grade 8.8 - High Tensile Steel

High Tensile Steel

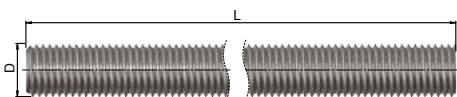
WDS No.	D	L	Weight (kg)
416-406	M6	1000	0.15
416-408	M8	1000	0.3
416-410	M10	1000	0.5
416-412	M12	1000	0.7
416-416	M16	1000	1.3
416-420	M20	1000	2



Screw - 316 Stainless Steel WDS 831

Bs 970 Gr 316S11

WDS No.	D	L	Weight (kg)
831-20550	M5	50	0.07
831-20640	M6	40	0.08
831-20655	M6	55	0.01
831-20675	M6	75	0.01
831-20840	M8	40	0.01
831-20855	M8	55	0.02
831-20875	M8	75	0.03
831-210100	M10	100	0.05
831-21050	M10	50	0.03
831-21075	M10	75	0.04
831-212100	M12	100	0.08
831-212125	M12	125	0.1
831-21275	M12	75	0.06
831-216100	M16	100	0.14
831-216125	M16	125	0.18



Threaded Bar Grade A4 - 316 Stainless Steel WDS 839

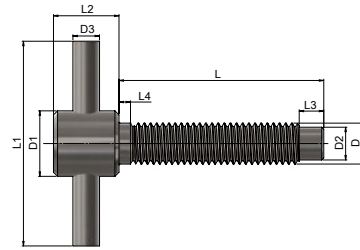
BS 970 Gr 316S11

316 SS	D	L	Weight (kg)
839-204	M4	1000	0.12
839-206	M6	1000	0.17
839-208	M8	1000	0.3
839-210	M10	1000	0.5
839-212	M12	1000	0.7
839-216	M16	1000	1.3
839-220	M20	1000	2.1

Threaded Bar Grade A2 - 303 Stainless Steel WDS 8939

BS 970 Gr 316S11

303 SS	D	L	Weight (kg)
8939-206	M6	1000	0.16
8939-208	M8	1000	0.3
8939-210	M10	1000	0.76
8939-212	M12	1000	0.72
8939-216	M16	1000	1.31
8939-220	M20	1000	2.07



WDS 663 Tommy Bar Screw - Steel - Metric

Steel BS.970 Gr.212A42
Chemical black finish

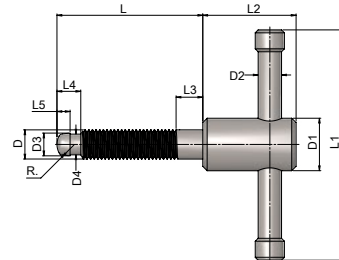
WDS No.	D	D1	D2	D3	L	L1	L2	L3	L4	Weight (kg)
663-200525	M5	10	3.7	5	25	32	12	3	3	0.02
663-20125	M6	10	4.5	5	25	32	12	3	3	0.01
663-20135	M6	10	4.5	5	35	32	12	3	3	0.02
663-20150	M6	10	4.5	5	50	32	12	3	3	0.02
663-20225	M8	12	6	5	25	45	14	4	3	0.02
663-20235	M8	12	6	5	35	45	14	4	3	0.02
663-20250	M8	12	6	5	50	45	14	4	3	0.03
663-20335	M10	16	7.8	5	35	45	16	6	3	0.04
663-20350	M10	16	7.8	5	50	45	16	6	3	0.05
663-20360	M10	16	7.8	5	60	45	16	6	3	0.06
663-20450	M12	20	9.4	6.5	50	50	20	6	3	0.08
663-20475	M12	20	9.4	6.5	75	50	20	6	3	0.11
663-204100	M12	20	9.4	6.5	100	50	20	6	3	0.12

IN"

WDS 663 Tommy Bar Screw - Steel - Inch

Steel BS.970 Gr.212A42
Chemical black finish

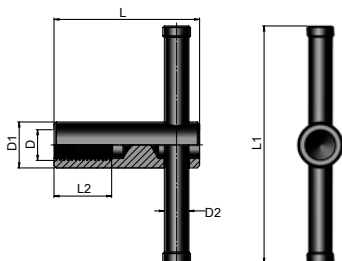
WDS No.	D	D1	D2	D3	L	L1	L2	L3	L4	Thread	Weight (kg)
663-222	5/16 inch	12.7	5.6	5	2 inch	45	12.7	4.8	3	UNC	0.04
663-232	3/8 inch	15.9	7.1	5	2 inch	45	15.9	6.4	3	UNC	0.05



WDS 676 Swivel End Tommy Bar Screw

Steel BS.970 Gr.212A42
Chemical black finish

WDS No.	D	D1	D2	D3	D4	L	L1	L2	L3	L4	L5	R	Weight (kg)
676-41050	M10	18	8	8	7.2	50	80	32	10	9	4.5	6	0.1
676-41250	M12	20	10	8	7.2	50	100	35	10	10	4.5	6	0.16
676-412100	M12	20	10	8	7.2	100	100	35	10	10	4.5	6	0.2

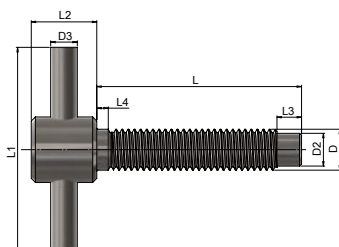


Tommy Bar Nut **WDS 677**

Steel BS.970 Gr.212A42

Chemical black finish

WDS No.	D	D1	D2	L	L1	L2	Weight (kg)
677-410	M10	18	8	60	80	20	0.12
677-412	M12	20	10	70	100	25	0.19
677-416	M16	24	13	85	120	35	0.33
677-420	M20	30	16	95	140	40	0.59



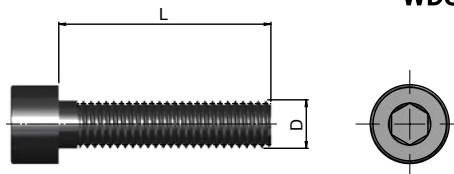
316

Tommy Bar Screw - 316 Stainless Steel **WDS 833**

Stainless Steel

BS 970 Gr 316S11

WDS No.	D	D1	D2	D3	L	L1	L2	L3	L4	Weight (kg)
833-20625	M6	10	4.5	5	25	32	12	3	3	0.01
833-20635	M6	10	4.5	5	35	32	12	3	3	0.02
833-20650	M6	10	4.5	5	50	32	12	3	3	0.02
833-20825	M8	12	6	5	25	45	14	4	3	0.03
833-20835	M8	12	6	5	35	45	14	4	3	0.03
833-20850	M8	12	6	5	50	45	14	4	3	0.03
833-21035	M10	16	7.8	5	35	45	16	6	3	0.04
833-21050	M10	16	7.8	5	50	45	16	6	3	0.05
833-21060	M10	16	7.8	5	60	45	16	6	3	0.06
833-21250	M12	20	9.4	6.5	50	50	19	6	3	0.08
833-21275	M12	20	9.4	6.5	75	50	19	6	3	0.11
833-212100	M12	20	9.4	6.5	100	50	19	6	3	0.12

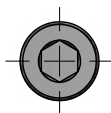
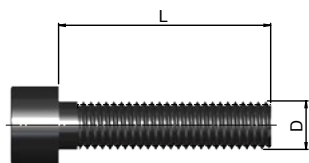


WDS 420 Socket Cap Screws - Steel - Metric M4 to M16

Steel, Class - 12.9

WDS No.	D	L	Pack Quantity	Weight (kg)
420-M4-10	M4	10	50	0.1
420-M4-12	M4	12	50	0.11
420-M4-16	M4	16	50	0.13
420-M4-20	M4	20	50	0.15
420-M4-25	M4	25	50	0.17
420-M4-30	M4	30	50	0.2
420-M4-6	M4	6	50	0.08
420-M5-10	M5	10	50	0.17
420-M5-12	M5	12	50	0.19
420-M5-16	M5	16	50	0.22
420-M5-20	M5	20	50	0.24
420-M5-25	M5	25	50	0.27
420-M5-30	M5	30	50	0.32
420-M5-40	M5	40	50	0.4
420-M5-8	M5	8	50	0.08
420-M6-10	M6	10	50	0.27
420-M6-12	M6	12	50	0.29
420-M6-16	M6	16	50	0.33
420-M6-20	M6	20	50	0.38
420-M6-25	M6	25	50	0.43
420-M6-30	M6	30	50	0.49
420-M6-35	M6	35	50	0.54
420-M6-40	M6	40	50	0.6
420-M6-50	M6	50	50	0.71
420-M6-60	M6	60	25	0.41
420-M6-70	M6	70	25	0.46
420-M8-10	M8	10	25	0.28
420-M8-100	M8	100	5	0.22
420-M8-12	M8	12	25	0.3
420-M8-16	M8	16	25	0.34
420-M8-20	M8	20	25	0.38
420-M8-25	M8	25	25	0.43
420-M8-30	M8	30	25	0.48
420-M8-35	M8	35	25	0.52
420-M8-40	M8	40	25	0.57
420-M8-45	M8	45	25	0.62
420-M8-50	M8	50	25	0.67
420-M8-60	M8	60	10	0.31
420-M8-70	M8	70	10	0.35
420-M8-80	M8	80	10	0.39
420-M10-100	M10	100	10	0.75
420-M10-12	M10	12	25	0.52
420-M10-120	M10	120	5	0.41
420-M10-150	M10	150	5	0.5
420-M10-16	M10	16	25	0.58
420-M10-20	M10	20	25	0.64

WDS No.	D	L	Pack Quantity	Weight (kg)
420-M10-25	M10	25	25	0.71
420-M10-30	M10	30	25	0.79
420-M10-35	M10	35	25	0.87
420-M10-40	M10	40	25	0.94
420-M10-45	M10	45	25	1.02
420-M10-50	M10	50	25	1.1
420-M10-60	M10	60	10	0.5
420-M10-70	M10	70	10	0.56
420-M10-80	M10	80	10	0.62
420-M10-90	M10	90	10	0.68
420-M12-100	M12	100	10	1.07
420-M12-120	M12	120	5	0.62
420-M12-150	M12	150	5	0.5
420-M12-25	M12	25	25	1.04
420-M12-30	M12	30	25	1.15
420-M12-35	M12	35	25	1.26
420-M12-40	M12	40	25	1.37
420-M12-45	M12	45	25	1.48
420-M12-50	M12	50	25	1.59
420-M12-60	M12	60	10	0.72
420-M12-70	M12	70	10	0.81
420-M12-80	M12	80	10	0.9
420-M16-100	M16	100	4	1.01
420-M16-120	M16	120	4	1.16
420-M16-150	M16	150	4	1.4
420-M16-25	M16	25	5	0.42
420-M16-30	M16	30	5	0.46
420-M16-35	M16	35	5	0.5
420-M16-40	M16	40	5	0.54
420-M16-45	M16	45	5	0.58
420-M16-50	M16	50	5	0.62
420-M16-60	M16	60	4	0.69
420-M16-70	M16	70	4	0.77
420-M16-80	M16	80	4	0.86



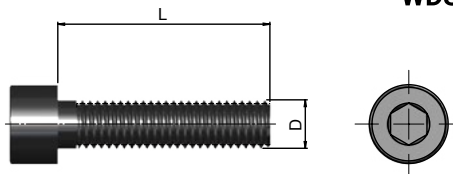
IN"

Socket Cap Screws - Steel - Inch BA WDS 420

Steel, Class - 12.9

WDS No.	D	L	Pack Quantity	Weight (kg)
420-2B-1	2 BA	1 Inch	25	0.13
420-2B-12	2 BA	1/2 Inch	25	0.08
420-2B-34	2 BA	3/4 Inch	25	0.1
420-2B-38	2 BA	3/8 Inch	25	0.07
420-4B-12	4 BA	1/2 Inch	25	0.04
420-4B-14	4 BA	1/4 Inch	25	0.03
420-4B-34	4 BA	3/4 Inch	25	0.05
420-4B-38	4 BA	3/8 Inch	25	0.03

IN"



WDS 420 Socket Cap Screws - Inch UNC

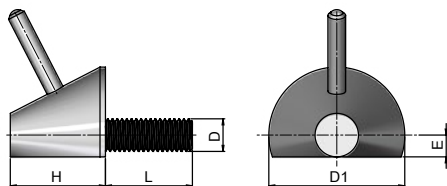
Steel, Class - 12.9

WDS No.	D	L	Pack Quantity	Weight (kg)
420-12U-1	1/2 Inch UNC	1 Inch	10	0.49
420-12U-2	1/2 Inch UNC	2 Inch	10	0.74
420-12U-112	1/2 Inch UNC	1 1/2 Inch	10	0.61
420-12U-114	1/2 Inch UNC	1/4 Inch	10	0.55
420-14U-1	1/4 Inch UNC	1 Inch	25	0.23
420-14U-12	1/4 Inch UNC	1/2 Inch	25	0.15
420-14U-34	1/4 Inch UNC	3/4 Inch	25	0.19
420-14U-112	1/4 Inch UNC	1/2 Inch	25	0.3
420-14U-114	1/4 Inch UNC	1/4 Inch	25	0.22
420-38U-1	3/8 Inch UNC	1 Inch	10	0.23
420-38U-12	3/8 Inch UNC	1/2 Inch	10	0.17
420-38U-34	3/8 Inch UNC	3/4 Inch	10	0.2
420-38U-112	3/8 Inch UNC	1/2 Inch	10	0.3
420-38U-114	3/8 Inch UNC	1/4 Inch	10	0.27
420-516U-1	5/16 Inch UNC	1 Inch	10	0.15
420-516U-34	5/16 Inch UNC	3/4 Inch	10	0.13
420-516U-112	5/16 Inch UNC	1/2 Inch	10	0.2
420-516U-114	5/16 Inch UNC	1/4 Inch	10	0.18

WDS 420 Socket Cap Screws - Inch BSW

Steel, Class - 12.9

WDS No.	D	L	Pack Quantity	Weight (kg)
420-12W-1	1/2 Inch BSW	1 Inch	10	0.49
420-12W-2	1/2 Inch BSW	2 Inch	10	0.74
420-12W-3	1/2 Inch BSW	3 Inch	5	0.49
420-12W-112	1/2 Inch BSW	1 1/2 Inch	10	0.61
420-12W-114	1/2 Inch BSW	1 1/4 Inch	10	0.55
420-12W-212	1/2 Inch BSW	2 1/2 Inch	5	0.43
420-14W-1	1/4 Inch BSW	1 Inch	25	0.23
420-14W-12	1/4 Inch BSW	1/2 Inch	25	0.15
420-14W-34	1/4 Inch BSW	3/4 Inch	25	0.19
420-14W-112	1/4 Inch BSW	1 1/2 Inch	25	0.3
420-14W-114	1/4 Inch BSW	1 1/4 Inch	25	0.25
420-38W-1	3/8 Inch BSW	1 Inch	10	0.23
420-38W-2	3/8 Inch BSW	2 Inch	10	0.37
420-38W-112	3/8 Inch BSW	1 1/2 Inch	10	0.3
420-38W-114	3/8 Inch BSW	1 1/4 Inch	10	0.26
420-38W-212	3/8 Inch BSW	2 1/2 Inch	5	0.22
420-516W-1	5/16 Inch BSW	1 Inch	10	0.15
420-516W-2	5/16 Inch BSW	2 Inch	10	0.25
420-516W-34	5/16 Inch BSW	3/4 Inch	10	0.13
420-516W-112	5/16 Inch BSW	1 1/2 Inch	10	0.2
420-516W-114	5/16 Inch BSW	1 1/4 Inch	10	0.18



Latch Screw - Steel **WDS 616**

Steel BS.970 Gr.212A42

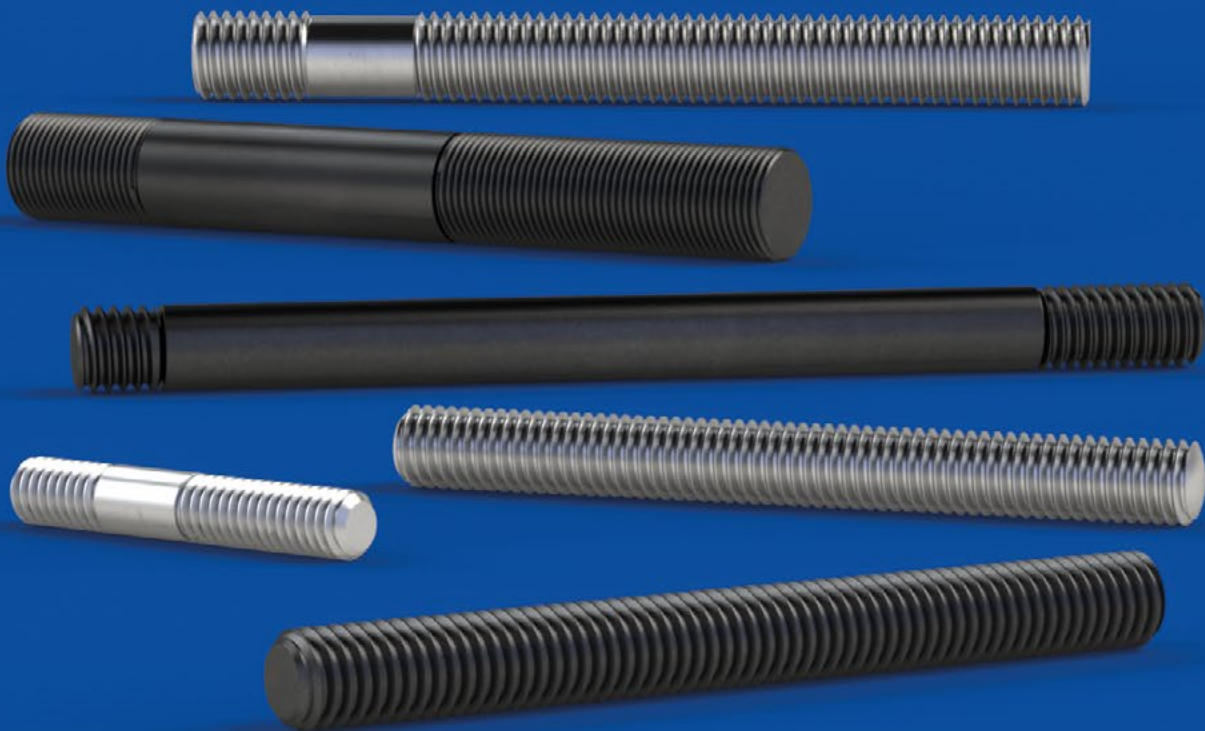
Chemical black finish

WDS No.	D	D1	E	H	L	Weight (kg)
616-201	M8	32	6	22	25	0.09
616-202	M10	38	7	25	25	0.18
616-203	M12	50	8	35	32	0.28



SWIVEL END SCREWS & PADS

For the full range of Swivel End Screws & Pads please see pages **166-170**



STUDS, STUDDING & THREADED BAR

P 475-478

The range includes metric and imperial (inch) dimensions with optional thread sizes and rod lengths.



ENGINEERS STUDS

Engineers studs are threaded steel bars with varied tapping depths at each side of the screws. These engineering studs are available in high tensile steel or stainless steel grades 303 and 316.

P 475-477



THREADED BAR

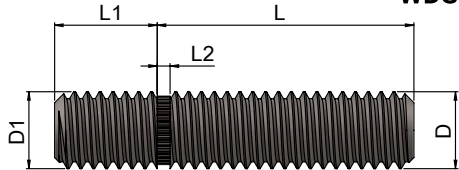
This range of threaded bar includes mild steel grade 4.6, high tensile steel Threaded Bar grade 8.8, 303 grade stainless steel and 316 grade stainless steel.

P 478



316

ZP



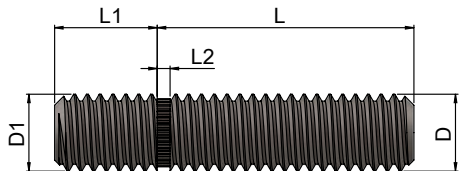
WDS 419 Conversion Studs

Available in Stainless Steel or Zinc Plated Steel
These studs are designed to be fixed to WDS Hand knobs or Levers by using adhesives

Zinc Plated	Stainless Steel	D	D1	L	L1	L2	Weight (kg)
419-204020	419-904020	M4	M4	20	6	1	0.01
419-204030	419-904030	M4	M4	30	6	1	0.01
419-205020	419-905020	M5	M5	20	8	1	0.01
419-205030	419-905030	M5	M5	30	8	1	0.01
419-205040	419-905040	M5	M5	40	8	1	0.01
419-206020	419-906020	M6	M6	20	9	1.5	0.01
419-206030	419-906030	M6	M6	30	9	1.5	0.01
419-206040	419-906040	M6	M6	40	9	1.5	0.01
419-206050	419-906050	M6	M6	50	9	1.5	0.01
419-208020	419-908020	M8	M8	20	12	1.5	0.01
419-208030	419-908030	M8	M8	30	12	1.5	0.01
419-208040	419-908040	M8	M8	40	12	1.5	0.02
419-208050	419-908050	M8	M8	50	12	1.5	0.02
419-210030	419-910030	M10	M10	30	14	2	0.02
419-210040	419-910040	M10	M10	40	14	2	0.03
419-210050	419-910050	M10	M10	50	14	2	0.03
419-210060	419-910060	M10	M10	60	14	2	0.04
419-212030	419-912030	M12	M12	30	17	2	0.03
419-212040	419-912040	M12	M12	40	17	2	0.04
419-212050	419-912050	M12	M12	50	17	2	0.05
419-212060	419-912060	M12	M12	60	17	2	0.05

316

IN"

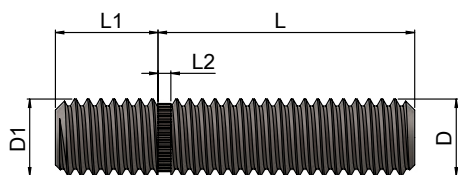


WDS 419 Stainless Steel 316 Conversion Studs - Inch UNC

316 Stainless Steel
These studs are designed to be fixed to WDS Hand knobs or Levers by using adhesives

WDS No.	D	D1	L	L1	L2	Weight (kg)
419-110020	#8-32	#8-32	20	6	1	0.01
419-110030	#8-32	#8-32	30	6	1	0.01
419-112020	#10-24	#10-24	20	8	1	0.01
419-112030	#10-24	#10-24	30	8	1	0.01
419-112040	#10-24	#10-24	40	8	1	0.01
419-114020	1/4"-20	1/4"-20	20	9	1.5	0.01
419-114030	1/4"-20	1/4"-20	30	9	1.5	0.01
419-114040	1/4"-20	1/4"-20	40	9	1.5	0.01
419-114050	1/4"-20	1/4"-20	50	9	1.5	0.01
419-116020	5/16"-18	5/16"-18	20	12	1.5	0.01
419-116030	5/16"-18	5/16"-18	30	12	1.5	0.01

WDS No.	D	D1	L	L1	L2	Weight (kg)
419-116040	5/16"-18	5/16"-18	40	12	1.5	0.02
419-116050	5/16"-18	5/16"-18	50	12	1.5	0.02
419-118030	3/8"-16	3/8"-16	30	14	2	0.02
419-118040	3/8"-16	3/8"-16	40	14	2	0.03
419-118050	3/8"-16	3/8"-16	50	14	2	0.03
419-118060	3/8"-16	3/8"-16	60	14	2	0.03
419-122030	1/2"-13	1/2"-13	30	17	2	0.04
419-122040	1/2"-13	1/2"-13	40	17	2	0.04
419-122050	1/2"-13	1/2"-13	50	17	2	0.05
419-122060	1/2"-13	1/2"-13	60	17	2	0.06



ZP

IN"

Steel Conversion Studs - Inch UNC WDS 419

Zinc Plated Steel

These studs are designed to be fixed to WDS Hand knobs or Levers by using adhesives

WDS No.	D	D1	L	L1	L2	Weight (kg)
419-012015	#10-24"	#10-24"	15	8	1	0.01
419-012020	#10-24"	#10-24"	20	8	1	0.01
419-012025	#10-24"	#10-24"	25	8	1	0.01
419-012030	#10-24"	#10-24"	30	8	1	0.01
419-014015	1/4-20"	1/4-20"	15	9	1.5	0.01
419-014020	1/4-20"	1/4-20"	20	9	1.5	0.01
419-014025	1/4-20"	1/4-20"	25	9	1.5	0.01
419-014030	1/4-20"	1/4-20"	30	9	1.5	0.01
419-014035	1/4-20"	1/4-20"	35	9	1.5	0.01
419-014040	1/4-20"	1/4-20"	40	9	1.5	0.01
419-016020	5/16-18"	5/16-18"	20	12	1.5	0.01
419-016025	5/16-18"	5/16-18"	25	12	1.5	0.01
419-016030	5/16-18"	5/16-18"	30	12	1.5	0.01
419-016035	5/16-18"	5/16-18"	35	12	1.5	0.02
419-016040	5/16-18"	5/16-18"	40	12	1.5	0.02
419-016045	5/16-18"	5/16-18"	45	12	1.5	0.02
419-016050	5/16-18"	5/16-18"	50	12	1.5	0.02
419-018020	3/8-16"	3/8-16"	20	14	2	0.02
419-018025	3/8-16"	3/8-16"	25	14	2	0.02
419-018030	3/8-16"	3/8-16"	30	14	2	0.02
419-018040	3/8-16"	3/8-16"	40	14	2	0.03
419-018050	3/8-16"	3/8-16"	50	14	2	0.03
419-018060	3/8-16"	3/8-16"	60	14	2	0.03
419-022025	1/2-13"	1/2-13"	25	17	2	0.03
419-022030	1/2-13"	1/2-13"	30	17	2	0.04
419-022040	1/2-13"	1/2-13"	40	17	2	0.04
419-022050	1/2-13"	1/2-13"	50	17	2	0.05
419-022060	1/2-13"	1/2-13"	60	17	2	0.06
419-022080	1/2-13"	1/2-13"	80	17	2	0.07



ENGINEERS STUDS

For the full range of Studs please see pages **448-453**



THREADED BAR

For the full range of Threaded Bar please see pages **464-466**



SWING BOLTS & EYE BOLTS

P 481-486

Swing bolts are manufactured from high tensile steel, 303 stainless steel or 316 stainless steel. These threaded eye bolts have either a metric or imperial (inch) eye at the top of the bolt. They are ideal for use on heavy duty applications such as large access panels and gates.



STEEL SWING BOLTS

These high tensile steel swing bolts are available in metric and inch sizes with the option of a heavy duty swing bolt version for more complex applications.

P 481-482



STAINLESS STEEL SWING BOLTS

Heavy duty stainless steel swing bolts are available in both 303 and 316 grade stainless steel.

316 stainless Swing Bolts are ideal for applications where there is a risk of extended exposure to weather conditions or chemicals.

P 483

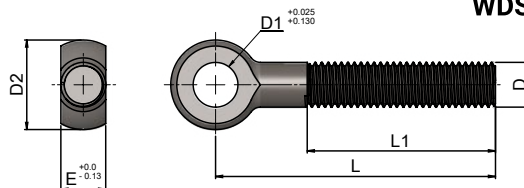


LIFTING EYE NUTS & SCREWS

Lifting eyes also known as eye bolts and eye nuts are used in the materials handling industry for lifting and lashing. Each style of eye bolt when used within the indicated safe working load (SWL) is flexible enough to suit most applications each model is supplied with the indicated safety certificate

P 484-485

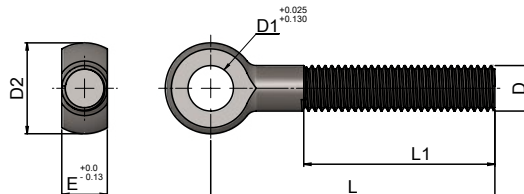




WDS 611 Swing Bolt - Steel - Metric

High tensile steel
BS 970. Gr. 606M36T

WDS No.	D	D1	D2	E	L	L1	Weight (kg)
611-2003	M4	4	8	4	25	14	0.01
611-2005	M5	5	10	5	25	14	0.01
611-2007	M5	5	10	5	50	25	0.01
611-201	M6	6	12	6	50	36	0.01
611-202	M6	6	12	6	75	45	0.02
611-203	M8	8	16	8	50	36	0.02
611-204	M8	8	16	8	75	45	0.04
611-205	M10	10	20	10	50	36	0.04
611-206	M10	10	20	10	75	50	0.05
611-207	M10	10	20	10	100	50	0.06
611-208	M12	12	24	12	75	50	0.1
611-209	M12	12	24	12	100	50	0.12
611-210	M12	12	24	12	125	70	0.14
611-214	M16	16	32	16	125	80	0.22
611-215	M16	16	32	16	175	100	0.3
611-216	M16	16	32	16	250	125	0.41
611-217	M20	20	40	20	125	80	0.46
611-218	M20	20	40	20	175	100	0.49
611-219	M20	20	40	20	250	125	0.51
611-220	M24	24	48	24	150	90	0.55
611-221	M24	24	48	24	200	110	0.59

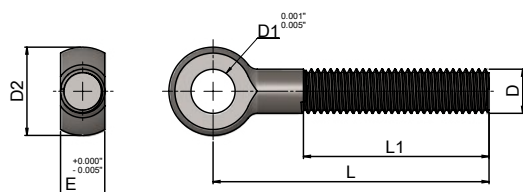


WDS 611 Heavy Duty Swing Bolt - Steel

High tensile steel
BS 970. Gr. 606M36T

WDS No.	D	D1	D2	E	L	L1	Weight (kg)
611-251	M4	4	10	5	30	20	0.01
611-252	M5	5	12	6	40	25	0.01
611-253	M5	5	12	6	60	30	0.02
611-254	M6	6	14	7	40	25	0.02
611-255	M6	6	14	7	50	30	0.02
611-256	M6	6	14	7	75	40	0.02
611-257	M8	8	18	9	40	25	0.02
611-258	M8	8	18	9	50	30	0.03
611-259	M8	8	18	9	75	40	0.04
611-260	M10	10	20	12	50	30	0.04

WDS No.	D	D1	D2	E	L	L1	Weight (kg)
611-261	M10	10	20	12	75	40	0.05
611-262	M10	10	20	12	100	40	0.07
611-263	M12	12	25	14	75	50	0.08
611-264	M12	12	25	14	100	60	0.1
611-265	M12	12	25	14	125	60	0.13
611-266	M12	12	25	14	150	60	0.15
611-267	M14	14	28	16	100	60	0.14
611-268	M14	14	28	16	125	60	0.17
611-269	M16	16	32	17	125	60	0.22
611-270	M16	16	32	17	150	75	0.26
611-271	M20	18	40	22	150	75	0.44
611-272	M20	18	40	22	175	100	0.47
611-273	M24	22	48	25	150	75	0.65
611-274	M24	22	48	25	200	100	0.81



IN"

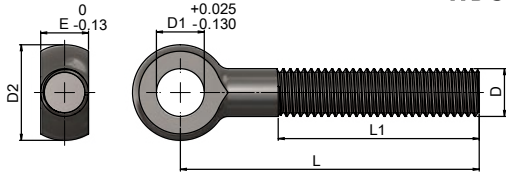
Swing Bolt - Steel - Inch WDS 611

High tensile steel
BS 970. Gr. 606M36T

WDS No.	D	D1	D2	E	L	L1	Thread	Weight (kg)
611-02	1/4 inch	4.76	12.7	6.4	51	19.1	BSF	0.02
611-06	5/16 inch	6.35	16	7.9	51	19.1	BSF	0.03
611-12	3/8 inch	7.94	19	9.5	64	32	BSF	0.04
611-20	1/2 inch	9.53	25.4	12.7	152	76	BSF	0.16
611-27	2 BA	3.97	9.5	4.8	38	19.1	BA	0.01
611-34	5/16 inch	6.35	16	7.9	51	19.1	BSW	0.02
611-39	3/8 inch	7.94	19	9.5	51	25.4	BSW	0.04
611-40	3/8 inch	7.94	19	9.5	64	32	BSW	0.04
611-41	3/8 inch	7.94	19	9.5	76	38	BSW	0.05
611-42	3/8 inch	7.94	19	9.5	89	38	BSW	0.06
611-44	3/8 inch	7.94	19	9.5	152	76	BSW	0.09
611-45	1/2 inch	9.53	25.4	12.7	76	44	BSW	0.09
611-46	1/2 inch	9.53	25.4	12.7	102	44	BSW	0.12
611-50	5/8 inch	12.7	32	15.9	152	76	BSW	0.27
611-55	1/4 inch	4.76	12.7	6.4	38	15.9	UNC	0.02
611-56	1/4 inch	4.76	12.7	6.4	51	19.1	UNC	0.02
611-58	1/4 inch	4.76	12.7	6.4	76	32	UNC	0.02
611-60	5/16 inch	6.35	16	7.9	51	19.1	UNC	0.02
611-62	5/16 inch	6.35	16	7.9	76	32	UNC	0.03
611-65	3/8 inch	7.94	19	9.5	51	25.4	UNC	0.04
611-66	3/8 inch	7.94	19	9.5	64	32	UNC	0.04
611-67	3/8 inch	7.94	19	9.5	76	38	UNC	0.05
611-68	3/8 inch	7.94	19	9.5	89	38	UNC	0.06
611-69	3/8 inch	7.94	19	9.5	102	51	UNC	0.06
611-71	1/2 inch	9.53	25.4	12.7	76	44	UNC	0.1
611-72	1/2 inch	9.53	25.4	12.7	102	44	UNC	0.12
611-73	1/2 inch	9.53	25.4	12.7	127	64	UNC	0.14
611-74	1/2 inch	9.53	25.4	12.7	152	76	UNC	0.17
611-75	5/8 inch	12.7	32	15.9	114	44	UNC	0.22
611-76	5/8 inch	12.7	32	15.9	152	76	UNC	0.27
611-79	3/4 inch	15.88	38	19.1	152	76	UNC	0.39
611-80	3/4 inch	15.88	38	19.1	305	152	UNC	0.71

316

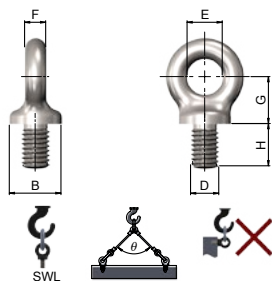
303



WDS 810/8910 Swing Bolt - 303/316 Stainless Steel - Heavy Duty

303/316 Stainless Steel

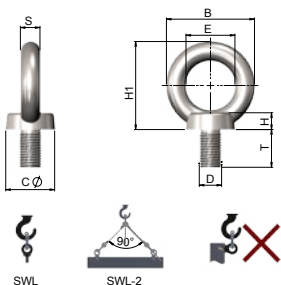
316 SS	303 SS	D	D1	D2	E	L	L1	Weight (kg)
810-20540	8910-20540	M5	5	12	6	40	25	0.02
810-20560	8910-20560	M5	5	12	6	60	30	0.13
810-20640	8910-20640	M6	6	14	7	40	25	0.01
810-20650	8910-20650	M6	6	14	7	50	30	0.02
810-20850	8910-20850	M8	8	18	9	50	30	0.03
810-20875	8910-20875	M8	8	18	9	75	40	0.04
810-210100	8910-210100	M10	10	20	12	100	50	0.1
810-21050	8910-21050	M10	10	20	12	50	30	0.04
810-21075	8910-21075	M10	10	20	12	75	40	0.06
810-212100	8910-212100	M12	12	25	14	100	60	0.11
810-212125	8910-212125	M12	12	25	14	125	60	0.13
810-21275	8910-21275	M12	12	25	14	75	50	0.08
810-216100	8910-216100	M16	16	32	17	100	60	0.18
810-216125	8910-216125	M16	16	32	17	125	60	0.23
810-216150	8910-216150	M16	16	32	17	150	75	0.26



Collared Eye Bolts To BS4278:1 WDS 695

Steel to BS970:080A27 (EN5A) Forged, hardened and tempered
CE marked

WDS No.	B	D	E	F	G	H	SWL (kg)	Weight (kg)
695-427808	22	M8	15	9	20	18	150	0.06
695-427810	22	M10	15	9	20	18	250	0.07
695-427812	22	M12	15	9	20	18	400	0.07
695-427816	29	M16	20	12	26	23	800	0.16
695-427820	40	M20	27	16	36	32	1600	0.44

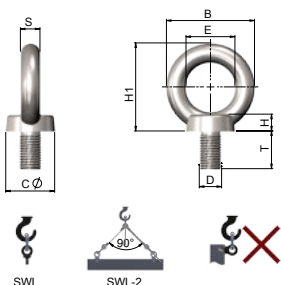


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Eyebolts To DIN580 - Metric Coarse Thread C15 Steel WDS 695

Bright Zinc Plated
CE marked

WDS No.	B	C	D	E	H	H1	S	T	SWL (kg)	SWL-2 (kg)	Weight (kg)
695-580206	36	20	M6	20	6	36	8	13	70	50	0.06
695-580208	36	20	M8	20	6	36	8	13	140	95	0.06
695-580210	45	25	M10	25	8	45	10	17	230	170	0.11
695-580212	54	30	M12	30	10	53	12	20.5	340	240	0.17
695-580216	63	35	M16	35	12	62	14	27	700	500	0.28



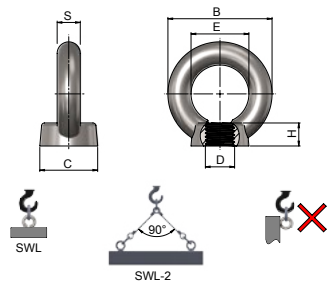
316

Eyebolts Similar To DIN580 - Metric Coarse Thread 316 Stainless Steel WDS 695

316 Stainless Steel
CE marked

WDS No.	B	C	D	E	H	H1	S	T	SWL (kg)	SWL-2 (kg)	Weight (kg)
695-580606	36	20	M6	20	6	36	8	13	70	50	0.06
695-580608	36	20	M8	20	6	36	8	13	140	95	0.06
695-580610	45	25	M10	25	8	45	10	17	230	170	0.11
695-580612	54	30	M12	30	10	53	12	20.5	340	240	0.17
695-580616	63	35	M16	35	12	62	14	27	700	500	0.28

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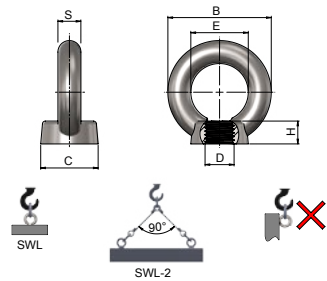


WDS 695 Eyenuts To DIN580 - Metric Coarse Thread C15 Steel

Bright Zinc Plated
CE marked

WDS No.	B	C	D	E	H	S	SWL (kg)	SWL-2 (kg)	Weight (kg)
695-582206	36	20	M6	20	8.5	8	70	50	0.06
695-582208	36	20	M8	20	8.5	8	140	95	0.06
695-582210	45	25	M10	25	10	10	230	170	0.11
695-582212	54	30	M12	30	11	12	340	240	0.17
695-582216	63	35	M16	35	13	14	700	500	0.28

316



WDS 695 Eyenuts Similar To DIN580 - Metric Coarse Thread 316 Stainless Steel

316 Stainless Steel
CE marked

WDS No.	B	C	D	E	H	S	SWL (kg)	SWL-2 (kg)	Weight (kg)
695-582606	36	20	M6	20	8.5	8	70	50	0.06
695-582608	36	20	M8	20	8.5	8	140	95	0.06
695-582610	45	25	M10	25	10	10	230	170	0.11
695-582612	54	30	M12	30	11	12	340	240	0.17
695-582616	63	35	M16	35	13	14	700	500	0.28



LIFTING EYES & HOIST RINGS

For the full range of Lifting Eyes & Hoist Rings please see pages **714-721**



THREAD REPAIR KITS & THREADED INSERTS

P 489-496

Thread repair kits are used to repair worn or broken threads on anything from a machine bed to an engine manifold. It is a simple process to drill out the previous thread, tap the hole with the tapping tool, then screw in the threaded insert using the insert tool and finally break off the tangs.



THREADED INSERTS FOR THREAD REPAIR

Two types of the threaded insert are available. The first type are wire threaded inserts, these are coiled wire inserts tightly wound to replicate a tapped thread. The second type of threaded insert are heavy duty thread inserts. These are available in sizes M5 to M12 and available in carbon steel and 303 stainless steel.

P 489-492

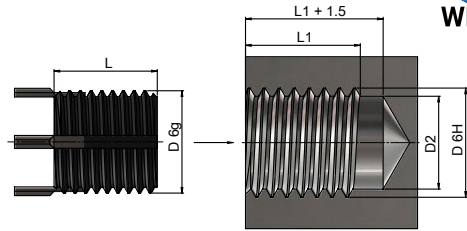


THREAD REPAIR KITS & TOOLS

Thread repair kits includes a large mixed size wire threaded kit, this contains five different sized threaded inserts ranging from M5 to M12, the kit also includes a drill bit, tapping tool, inserting tool, a punch and an Allen key. Also available are single size kits available in sizes from M3 to M16. In addition to the standard wire inserts WDS offer a range of heavy duty threaded insert kits, these offer six sizes range from M5 to M16.

P 493-496



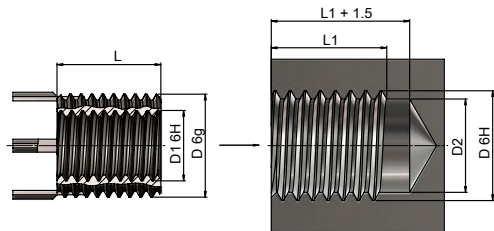


WDS 412 Thread Inserts (Thread Repair) - Steel - Solid

Carbon steel
Chemical black finish

WDS No.	D (Tap)	D2 (Drill)	F (Fitting Tool)	L	L1	Weight (kg)
412-308	M8x1.25	6.9	412-608	8	9.5	0.01
412-310	M10x1.25	8.8	412-610	10	11.5	0.01
412-312	M12x1.25	10.8	412-612	12	13.5	0.01
412-314	M14x1.5	12.8	412-614	14	15.5	0.03
412-316	M16x1.5	14.75	412-616	16	17.5	0.02
412-318	M18x1.5	16.75	412-618	18	19.5	0.03
412-320	M20x1.5	18.75	412-620	20	21.5	0.03
412-322	M22x1.5	20.5	412-622	22	23.5	0.03
412-324	M24x1.5	22.5	412-624	24	25.5	0.03
412-330	M30x2.0	28	412-630	30	31.5	0.03

IN"



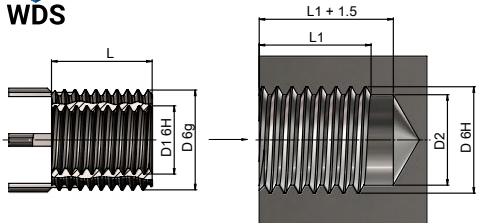
WDS 415 Thread Inserts (Thread Repair) - Steel - Thin Wall UNC Inch

Carbon steel
Chemical black finish

WDS No.	D (Tap)	D1	D2 (Drill)	F (Fitting Tool)	L	L1	Weight (kg)
415-112	5/16-18	10 - 24	I	415-812	0.31"	0.37"	0.01
415-114	3/8-16	1/4 - 20	Q	415-814	0.37"	0.43"	0.01
415-118	1/2-13	3/8 - 16	29/64"	415-818	0.5"	0.56"	0.01
415-122	5/8-11	1/2 - 13	37/64"	415-822	0.62"	0.68"	0.01



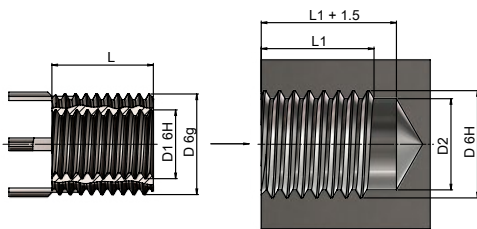
WDS



Thread Inserts (Thread Repair) - Steel - Thin Wall **WDS 415**

Carbon steel
Chemical black finish

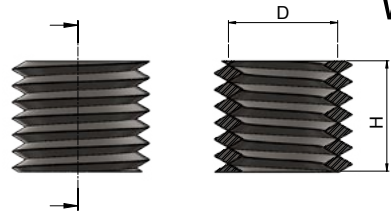
WDS No.	D (Tap)	D1	D2 (Drill)	D3 (Chamfer)	L	L1	Weight (kg)
415-201	M8 x 1.25	M5 x 0.8	6.9	8.3	8	9.5	0.01
415-202	M10 x 1.25	M6 x 1.0	8.8	10.3	10	11.5	0.01
415-203	M12 x 1.25	M8 x 1.25	10.8	12.3	12	13.5	0.01
415-204	M12 x 1.25	M8 x 1.0	10.8	12.3	12	13.5	0.01
415-205	M14 x 1.5	M10 x 1.5	12.8	14.3	14	15.5	0.01
415-206	M14 x 1.5	M10 x 1.25	12.8	14.3	14	15.5	0.01
415-207	M16 x 1.5	M12 x 1.75	14.8	16.3	16	17.5	0.01
415-208	M16 x 1.5	M12 x 1.25	14.8	16.3	16	17.5	0.01



Heavy Duty Thread Inserts (Thread Repair) - Steel **WDS 415**

Carbon steel
Chemical black finish

WDS No.	D (Tap)	D1	D2 (Drill)	D3 (Chamfer)	F (Fitting Tool)	L	L1	Weight (kg)
415-401	M10 x 1.25	M5 x 0.8	8.8	10.3	415-651	10	9.5	0.01
415-402	M12 x 1.25	M6 x 1.0	10.8	12.25	652	12	14.5	0.01
415-403	M14 x 1.5	M8 x 1.25	12.8	14.25	653	14	16.5	0.01
415-404	M14 x 1.5	M8 x 1.0	12.8	14.25	653	14	16.5	0.01
415-405	M16 x 1.5	M10 x 1.5	14.75	16.25	654	16	18.5	0.01
415-406	M16 x 1.5	M10 x 1.25	14.75	16.25	654	16	18.5	0.01
415-407	M18 x 1.5	M12 x 1.75	16.75	18.25	655	18	20.5	0.01
415-408	M18 x 1.5	M12 x 1.25	16.75	18.25	655	18	20.5	0.02
415-411	M22 x 1.5	M16 x 2.0	20.5	22.25	656	22	24.5	0.03

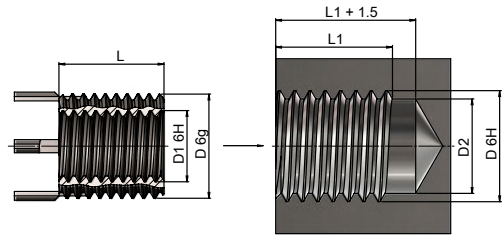


WDS 417 Wire Thread Inserts (Thread Repair) - 204 Stainless Steel

204 Stainless Steel
See Special Drills & Taps (WDS 418)

WDS No.	D	H (Insert Length)	Pack Quantity	Weight (kg)
417-203	M3 x 0.5	1 x D	Pack of 10	0.01
417-204	M4 x 0.7	1 x D	Pack of 10	0.01
417-205	M5 x 0.8	1 x D	Pack of 10	0.01
417-206	M6 x 1.0	1 x D	Pack of 10	0.01
417-208	M8 x 1.25	1 x D	Pack of 10	0.01
417-210	M10 x 1.50	1 x D	Pack of 10	0.02
417-212	M12 x 1.75	1 x D	Pack of 10	0.01
417-2145	M14 x 1.25	1 x D	Pack of 5	0.01
417-216	M16 x 2.00	1 x D	Pack of 5	0.03
417-303	M3 x 0.5	1.5 x D	Pack of 10	0.01
417-304	M4 x 0.7	1.5 x D	Pack of 10	0.01
417-305	M5 x 0.8	1.5 x D	Pack of 10	0.01
417-306	M6 x 1.0	1.5 x D	Pack of 10	0.01
417-308	M8 x 1.25	1.5 x D	Pack of 10	0.02
417-310	M10 x 1.50	1.5 x D	Pack of 10	0.03
417-312	M12 x 1.75	1.5 x D	Pack of 10	0.05
417-3145	M14 x 1.25	1.5 x D	Pack of 5	0.01
417-316	M16 x 2.00	1.5 x D	Pack of 5	0.04
417-403	M3 x 0.5	2 x D	Pack of 10	0.01
417-404	M4 x 0.7	2 x D	Pack of 10	0.01
417-405	M5 x 0.8	2 x D	Pack of 10	0.01
417-406	M6 x 1.0	2 x D	Pack of 10	0.01
417-408	M8 x 1.25	2 x D	Pack of 10	0.02
417-410	M10 x 1.50	2 x D	Pack of 10	0.04
417-412	M12 x 1.75	2 x D	Pack of 10	0.07
417-4145	M14 x 1.25	2 x D	Pack of 5	0.03
417-416	M16 x 2.00	2 x D	Pack of 5	0.06

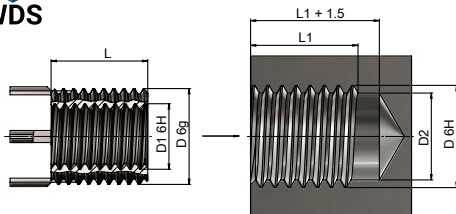
303
IN"



WDS 830 Thread Insert (Thread Repair) - 303 Stainless Steel - Thin Wall UNC Inch

Stainless Steel BS 970 303S31

WDS No.	D (Tap)	D1	D2 (Drill)	F (Fitting Tool)	L	L1	Weight (kg)
830-112	10-24 UNC	5/16-18 UNC	"I" (0.272")	415-812	0.31"	0.37"	0.01
830-114	1/4-20 UNC	3/8-16 UNC	"Q" (0.332")	415-814	0.37"	0.43"	0.01
830-118	3/8-16 UNC	1/2-13 UNC	29/64"	415-818	0.50"	0.56"	0.01
830-122	1/2-13 UNC	5/8-11 UNC	37/64"	415-822	0.62"	0.68"	0.01



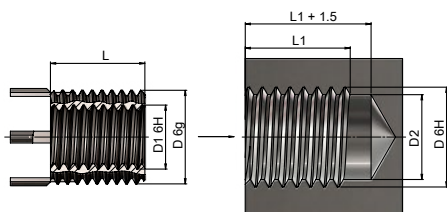
303

IN"

Heavy Duty Thread Insert (Thread Repair) - 303 Stainless Steel UNC Inch WDS 830

Body - 303 Stainless Steel, Pin - 302 CRES

WDS No.	D	D1	D2 (Drill)	D3 (Chamfer)	F (Fitting Tool)	L	L1	Weight (kg)
830-012	3/8-16 UNC	10-24 UNC	Q (.332")	0.38"	415-712	0.31"	0.37"	0.01
830-014	7/16 -14 UNC	1/4-20 UNC	X(0.397")	0.44"	415-714	0.37"	0.43"	0.01
830-016	1/2 -13 UNC	5/16-18 UNC	29/64"	0.51"	415-716	0.43"	0.50"	0.01
830-022	3/4 -16 UNF	1/2 -13 UNC	45/64"	0.76"	415-722	0.62"	0.68"	0.02
830-026	7/8-14 UNF	5/8 -11 UNC	53/64"	0.88"	415-726	0.87"	1.00"	0.03

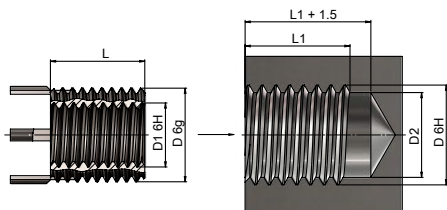


303

Thread Insert (Thread Repair) - 303 Stainless Steel - Thin Wall WDS 830

Stainless Steel BS 970 303S31

WDS No.	D	D1 (Tap)	D2 (Drill)	D3 (Chamfer)	F (Fitting Tool)	L	L1	Weight (kg)
830-201	M5 x 0.8	M8 x 1.25	6.9	8.3	415-601	8	9.5	0.01
830-202	M6 x 1.0	M10 x 1.25	8.8	10.3	602	10	11.5	0.01
830-203	M8 x 1.25	M12 x 1.25	10.8	12.3	603	12	13.5	0.01
830-204	M8 x 1.0	M12 x 1.25	10.8	12.3	603	12	13.5	0.01
830-205	M10 x 1.5	M14 x 1.5	12.8	14.3	604	14	15.5	0.01
830-206	M10 x 1.25	M14 x 1.5	12.8	14.3	604	14	15.5	0.02
830-207	M12 x 1.75	M16 x 1.5	14.8	16.3	605	16	17.5	0.01
830-208	M12 x 1.25	M16 x 1.5	14.8	16.3	605	16	17.5	0.35

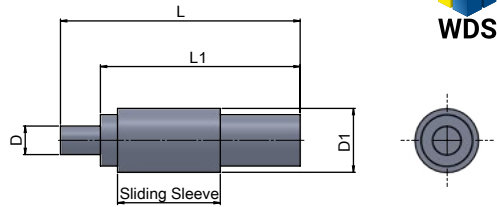


303

Heavy Duty Thread Insert (Thread Repair) - 303 Stainless Steel WDS 830

Body - 303 Stainless Steel, Pin - 302 CRES

WDS No.	D	D1 (Tap)	D2 (Drill)	D3 (Chamfer)	F (Fitting Tool)	L	L1	Weight (kg)
830-401	M5 x 0.8	M10 x 1.25	8.8	10.3	415-601	10	9.5	0.01
830-402	M6 x 1.0	M12 x 1.25	10.8	12.25	652	12	14.5	0.01
830-403	M8 x 1.25	M14 x 1.5	12.8	14.25	652	14	16.5	0.01
830-404	M8 x 1.0	M14 x 1.5	12.8	14.25	653	14	16.5	0.01
830-405	M10 x 1.5	M16 x 1.5	14.75	16.25	653	16	18.5	0.01
830-406	M10 x 1.25	M16 x 1.5	14.75	16.25	654	16	18.5	0.01
830-407	M12 x 1.75	M18 x 1.5	16.75	18.25	655	18	20.5	0.02
830-408	M12 x 1.25	M18 x 1.5	16.75	18.25	655	18	20.5	0.02
830-411	M16 x 2.0	M22 x 1.5	20.5	22.25	656	22	24.5	0.03



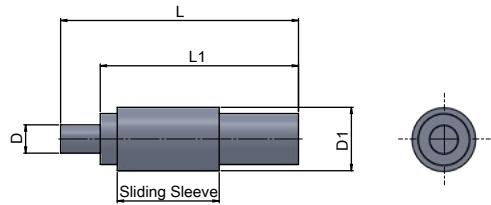
D = Internal Thread of Insert

WDS 412 Thread Inserts (Thread Repair) Fitting Tool - Steel - Solid

Carbon steel
Chemical black finish

WDS No.	To Suit	Weight (kg)
412-608	412-308	0.03
412-610	412-310	0.03
412-612	412-312	0.04
412-614	412-314	0.03
412-616	412-316	0.06
412-618	412-318	0.03
412-620	412-320	0.03
412-622	412-322	0.03
412-624	412-324	0.03
412-630	412-330	0.03

IN"



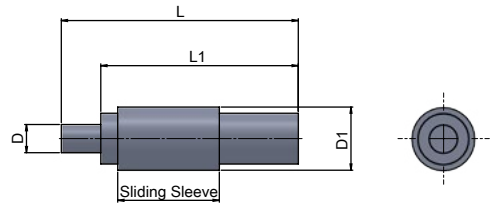
D = Internal Thread of Insert

WDS 415 Thread Insert Fitting Tool (Thread Repair) - Steel UNC Inch

Carbon steel
Chemical black finish

WDS No.	To Suit	Weight (kg)
415-812	415-112/830-112 and 415-113/830-113	0.02
415-814	415-114/830-114 and 415-115/830-115	0.03
415-818	415-116/830-116 and 415-117/830-117	0.04
415-822	415-118/830-118 and 415-119/830-119	0.07

IN"

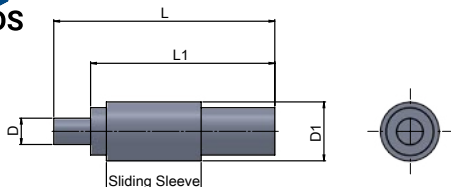


D = Internal Thread of Insert

WDS 415 Fitting Tool for Heavy Duty Threaded Inserts - UNC Inch

Carbon steel
Chemical black finish

WDS No.	To Suit	Weight (kg)
415-712	415-011/830-011 and 415-012/830-012 and 415-013/830-013	0.03
415-714	415-014/830-014 and 415-015/830-015	0.03
415-716	415-016/830-016 and 415-017/830-017	0.04
415-722	415-018/830-018 and 415-019/830-019	0.09
415-726	415-020/830-020 and 415-021/830-021	0.12

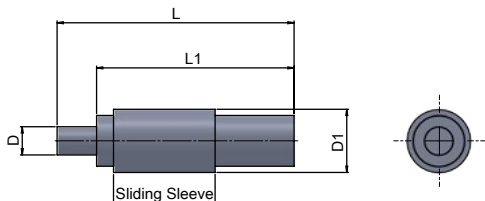


D = Internal Thread of Insert

Thread Insert Fitting Tool (Thread Repair) - Steel **WDS 415**

Carbon steel
Chemical black finish

WDS No.	D	D1	L	L1	Weight (kg)
415-601	M5	11.2	42	35	0.01
415-602	M6	13.3	42	35	0.01
415-603	M8	15.3	43	35	0.01
415-604	M10	17.3	43	35	0.01
415-605	M12	19.2	45	35	0.01



D = Internal Thread of Insert

Fitting Tool for Heavy Duty Threaded Inserts **WDS 415**

Carbon steel
Chemical black finish

WDS No.	D	D1	L	L1	Weight (kg)
415-651	M5	13.2	42.2	35	0.03
415-652	M6	15.2	42.5	35	0.04
415-653	M8	17.2	42.5	35	0.05
415-654	M10	19.2	42.5	35	0.06
415-655	M12	21.5	45	35	0.08
415-656	M16	25.5	45	35	0.12

Kit Includes

- WDS 415-201 M5 x 0.8 Threaded Insert x 8
- WDS 415-202 M6 x 1.0 Threaded Insert x 8
- WDS 415-203 M8 x 1.25 Threaded Insert x 6
- WDS 415-204 M8 x 1.0 Threaded Insert x 6
- WDS 415-205 M10 x 1.5 Threaded Insert x 4
- WDS 415-206 M10 x 1.25 Threaded Insert x 4
- WDS 415-207 M12 x 1.75 Threaded Insert x 3
- WDS 415-208 M16 x 1.25 Threaded Insert x 3



Thread Repair Kit - Thin Wall **WDS 415**

WDS No.	Quantity	Weight (kg)
415-800	1	1



Kit Includes
M5 x 0.8 (25 of each)
M6 x 1.0 (25 of each)
M8 x 1.25 (25 of each)
M10 x 1.5 (25 of each)
M12 x 1.75 (10 of each)
Drill Bit (x 1)
Tap (x 1)
Inserting Tool (x 1)
Punch (x 1)
Allen Key (x 1)

WDS 417 Thread Repair Kit - Thin Wall

WDS No.	Insert Length	Weight (kg)
417-500	1 x D	2.2



Kit Includes
Drill Bit
Thread Inserts
Inserting Tool
Allen Key
Codes 417-5145 and 417-516 are not supplied with tapping drill or punch

WDS 417 Size Thread Repair Kit - 204 Stainless Steel

WDS No.	D (Thread Size)	Insert Length	Pack Quantity	Weight (kg)
417-503	M3 X 0.5	1.5D	20	0.38
417-504	M4 X 0.7	1.5D	20	0.37
417-505	M5 X 0.8	1.5D	20	0.4
417-506	M6 X 1.0	1.5D	20	0.43
417-508	M8 X 1.25	1.5D	20	0.5
417-510	M10 X 1.50	1.5D	15	0.58
417-512	M12 X 1.75	1.5D	10	0.68
417-5145	M14 X 1.25	1.5D	10	0.58
417-516	M16 X 2.0	1.5D	10	0.65



Wire Thread Insert Tapping Tool **WDS 418**

M14 x 1.25 Fine Pitch (Common Spark Plug Thread)

WDS No.	Tap For Threaded Insert	Weight (kg)
418-203	M3 x 0.5	0.01
418-204	M4 x 0.7	0.01
418-205	M5 x 0.8	0.02
418-206	M6 x 1.0	0.02
418-208	M8 x 1.25	0.04
418-210	M10 x 1.50	0.05
418-212	M12 x 1.75	0.07
418-2145	M14 x 1.25	0.09
418-216	M16 x 2.00	0.13



Wire Thread Insert Drill Bit **WDS 418**

M14 x 1.25 Fine Pitch (Common Spark Plug Thread)

WDS No.	Drill For Threaded Insert	Weight (kg)
418-303	M3 x 0.5	0.01
418-304	M4 x 0.7	0.01
418-305	M5 x 0.8	0.01
418-306	M6 x 1.0	0.02
418-308	M8 x 1.25	0.03
418-310	M10 x 1.50	0.06
418-312	M12 x 1.75	0.08
418-3145	M14 x 1.25	0.16
418-316	M16 x 2.00	0.22



TUBE INSERTS

P 499-502

Tube inserts are ideal for fitting into furniture table ends, light duty machinery, desks and workstations. The push fit glass reinforced plastic model comes with a female thread allows the user to screw in either a levelling foot or a castor to the bottom of the application.

WDS supplies two main types of insert; expander fitting tube inserts and push fitting inserts. Both are available in either round or square hollow fitting profiles.



ROUND TUBE INSERTS

These round push fitting version of the plastic tube insert are made from glass reinforced plastic (GRP) and the expander fitting tube insert is made from steel with a nylon sleeve.

P 499-500



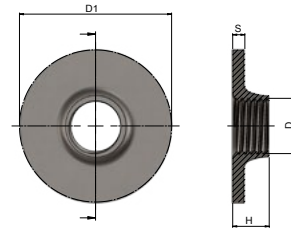
SQUARE TUBE INSERTS

Square tube fitting inserts are ideal for fitting onto tables, conveying units or machinery allowing the user to attach levelling feet or castors via a threaded stud.

P 501-502



304

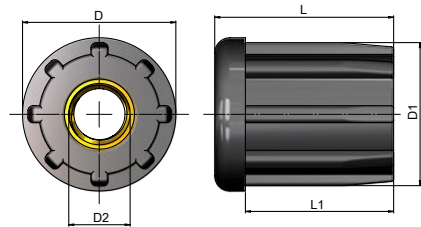


WDS 688 Round 304 Stainless Steel Threaded Weld Plates

304 Stainless Steel
Maximum static load capacity= 1000kg

WDS No.	D	D1	H	S	Weight (kg)
688-35016	M16	50	12	4	0.06

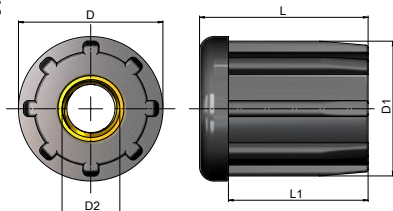
BR



WDS 690 Plastic Insert for Round Tube

Body - Glass reinforced plastic, Insert - Brass Nickel Plated
P = Load Capacity (Kn)

WDS No.	D	D1	D2	L	L1	P	T	Weight (kg)
690-203	30	28.4	M16	35	29	3	30 x 1	0.04
690-205	38	35.5	M12	43	34	5	38 x 1.5	0.05
690-206	38	35.5	M16	43	34	5	38 x 1.5	0.05
690-207	42	39.9	M10	42	34	6	42.4 x 1.5	0.06
690-209	42	39.9	M16	42	34	6	42.4 x 1.5	0.06
690-210	42	39.9	M20	42	34	6	42.4 x 1.5	0.07
690-211	48	45.8	M12	49	38	6	48.3 x 1.5	0.08
690-212	48	45.8	M16	49	38	6	48.3 x 1.5	0.08
690-213	48	45.8	M20	49	38	6	48.3 x 1.5	0.08
690-214	50	48.4	M12	49	38	8	50.9 x 1.5	0.08
690-215	50	48.4	M16	49	38	8	50.9 x 1.5	0.08
690-216	50	48.4	M20	49	38	8	50.9 x 1.5	0.09

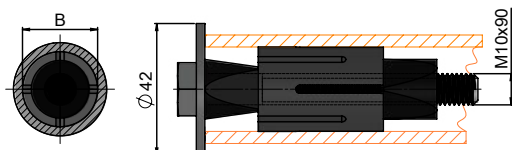


Round Plastic Threaded Tube Inserts WDS 690

Body - Glass reinforced plastic, Insert - Brass Nickel Plated

P = Load Capacity (Kn)

WDS No.	D	D1	D2	L	L1	T	P Max	Weight (kg)
690-301008	30	28	M8	30	24	30 x 1	2.4	0.03
690-301010	30	28	M10	30	24	30 x 1	2.4	0.03
690-301012	30	28	M12	30	24	30 x 1	2.4	0.03
690-301016	30	28	M16	32	28	30 x 1	2.4	0.03
690-381508	38.1	35.1	M8	42	34	38.1 x 1.5	4	0.05
690-381510	38.1	35.1	M10	42	34	38.1 x 1.5	4	0.05
690-381512	38.1	35.1	M12	42	34	38.1 x 1.5	4	0.05
690-381516	38.1	35.1	M16	42	34	38.1 x 1.5	4	0.05
690-421510	42.4	39.4	M10	42	34	42.4 x 1.5	4	0.05
690-421512	42.4	39.4	M12	42	34	42.4 x 1.5	4	0.05
690-421516	42.4	39.4	M16	42	34	42.4 x 1.5	4	0.05
690-421520	42.4	39.4	M20	42	34	42.4 x 1.5	4	0.05
690-481510	48.3	45.3	M10	42	34	48.3 x 1.5	4.8	0.06
690-481512	48.3	45.3	M12	42	34	48.3 x 1.5	4.8	0.06
690-481516	48.3	45.3	M16	42	34	48.3 x 1.5	4.8	0.06
690-481520	48.3	45.3	M20	42	34	48.3 x 1.5	4.8	0.06
690-511512	50.8	47.8	M12	42	34	50.8 x 1.5	6.4	0.07
690-511516	50.8	47.8	M16	42	34	50.8 x 1.5	6.4	0.07
690-511520	50.8	47.8	M20	42	34	50.8 x 1.5	6.4	0.07



Ideal solution for mounting
bolt hole fitting castors to
round hollow tube



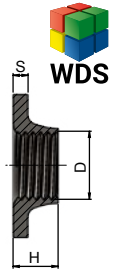
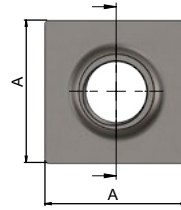
Round Expander Tube Insert - Type R WDS 12186

Steel bolt and washer

Nylon Wedge and expanders

WDS No.	B Max (Diameter)	B Min (Diameter)	Weight (kg)
12186-190R	21.5	19	0.05
12186-1922R	22	19	0.09
12186-215R	24	21.5	0.05
12186-2225R	25	22	0.1
12186-240R	27	24	0.05
12186-270R	30	27	0.05
12186-2730R	30	27	0.1
12186-310R	35	31	0.05

304



WDS

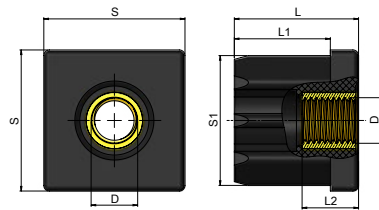
WDS 688 Square 304 Stainless Steel Threaded Weld Plates

304 Stainless Steel

Maximum static load capacity= 1000kg

WDS No.	A	D	H	S	Weight (kg)
688-13816	38	M16	12	4	0.04
688-13820	38	M20	12	4	0.04
688-15016	50	M16	12	4	0.07

BR



P = Maximum Load in kN
(1kN = 102kg approx)
T = Tube size x wall thickness

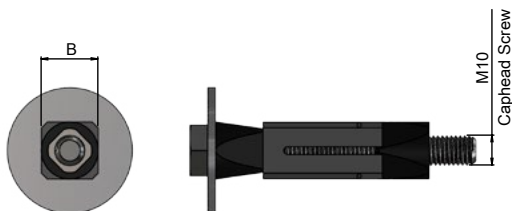
WDS 689 Square Plastic Threaded Tube Inserts

Body - Glass reinforced plastic

Insert - Brass Nickel Plated

WDS No.	D	L	L1	L2	P	S	S1	T	Weight (kg)
689-301508	M8	34	28	20	2.9	30	27	30 x 1.5	0.03
689-301510	M10	34	28	20	2.9	30	27	30 x 1.5	0.03
689-301512	M12	34	28	20	2.9	30	27	30 x 1.5	0.03
689-301516	M16	34	28	20	2.9	30	27	30 x 1.5	0.03
689-302008	M8	34	28	20	2.9	30	26	30 x 2	0.03
689-302010	M10	34	28	20	2.9	30	26	30 x 2	0.03
689-302012	M12	34	28	20	2.9	30	26	30 x 2	0.03
689-302016	M16	34	28	20	2.9	30	26	30 x 2	0.03
689-401508	M8	42	34	22	6.9	40	37	40 x 1.5	0.06
689-401510	M10	42	34	22	6.9	40	37	40 x 1.5	0.06
689-401512	M12	42	34	22	6.9	40	37	40 x 1.5	0.06
689-401516	M16	42	34	22	6.9	40	37	40 x 1.5	0.06
689-401520	M20	42	34	22	6.9	40	37	40 x 1.5	0.06
689-402008	M8	42	34	22	6.9	40	36	40 x 2	0.06
689-402010	M10	42	34	22	6.9	40	36	40 x 2	0.06
689-402012	M12	42	34	22	6.9	40	36	40 x 2	0.06
689-402016	M16	42	34	22	6.9	40	36	40 x 2	0.06
689-402020	M20	42	34	22	6.9	40	36	40 x 2	0.06
689-402508	M8	42	34	22	6.9	40	35	40 x 2.5	0.06
689-402510	M10	42	34	22	6.9	40	35	40 x 2.5	0.06
689-402512	M12	42	34	22	6.9	40	35	40 x 2.5	0.06
689-402516	M16	42	34	22	6.9	40	35	40 x 2.5	0.06
689-402520	M20	42	34	22	6.9	40	35	40 x 2.5	0.06
689-501510	M10	44	34	22	9.8	50	47	50 x 1.5	0.09
689-501512	M12	44	34	22	9.8	50	47	50 x 1.5	0.09
689-501516	M16	44	34	22	9.8	50	47	50 x 1.5	0.09
689-501520	M20	44	34	22	9.8	50	47	50 x 1.5	0.09
689-502010	M10	44	34	22	9.8	50	46	50 x 2	0.09

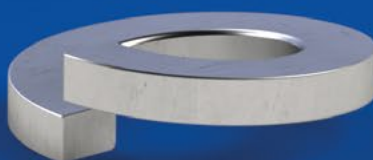
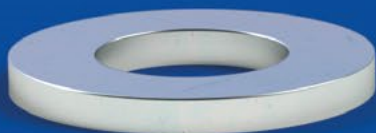
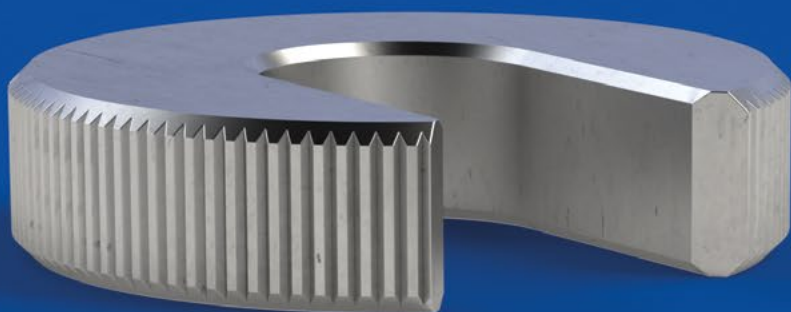
WDS No.	D	L	L1	L2	P	S	S1	T	Weight (kg)
689-502012	M12	44	34	22	9.8	50	46	50 x 2	0.09
689-502016	M16	44	34	22	9.8	50	46	50 x 2	0.09
689-502020	M20	44	34	22	9.8	50	46	50 x 2	0.09
689-502510	M10	44	34	22	9.8	50	45	50 x 2.5	0.09
689-502512	M12	44	34	22	9.8	50	45	50 x 2.5	0.09
689-502516	M16	44	34	22	9.8	50	45	50 x 2.5	0.09
689-502520	M20	44	34	22	9.8	50	45	50 x 2.5	0.09
689-503010	M10	44	34	22	9.8	50	44	50 x 3	0.09
689-503012	M12	44	34	22	9.8	50	44	50 x 3	0.09
689-503016	M16	44	34	22	9.8	50	44	50 x 3	0.09
689-503020	M20	44	34	22	9.8	50	44	50 x 3	0.09



Square Expander Tube Insert - Type S **WDS 12186**

Steel with Nylon Sleeve

WDS No.	B Max (AFS _q)	B Min (AFS _q)	Weight (kg)
12186-1922S	22	19	0.09
12186-2225S	25	22	0.09
12186-240S	27	24	0.05
12186-2730S	30	27	0.1
12186-320S	35	32	0.05
12186-360S	40	36	0.05



WASHERS

P 505-514

The washers range includes plain Washers or form 'A' washers as they are also known, jig Washers, c washers and spherical seating washers.

Materials include steel washers, steel zinc plated washers and stainless steel grades 303 and 316 washers.



PLAIN WASHERS

Plain washers or flat washers as they are commonly referred to, are standard spacing washers used on thousands of industrial and domestic applications. Materials include: steel, zinc plated washers, 303 stainless steel washers and 316 stainless steel washers.

P 505-507



C WASHERS & CAPTIVE WASHERS

WDS offer a range of c washers ideal for quick change and spacing applications allowing the user to slide the washer on to a bar without completely removing the nut.

Captive washers are swing c washers ideal for securing a workpiece into a fixture.

P 508-509



SPHERICAL SEATING WASHERS

Seating washers are dish shaped washers in either a male with conical base or female with concave base when placed together they become flat.

These dished washers are Ideal for locating two elements into a fixture.

The seating washers provide a visual indication as to whether the dowel or screw is accurately located.

P 510-511



MITEE-BITE REPLACEMENT WASHERS

WDS offer replacement washers for Mitee Bite products.

Models include hex washers, square washers, knife edge washers, slot washers and machinable flat face washers.

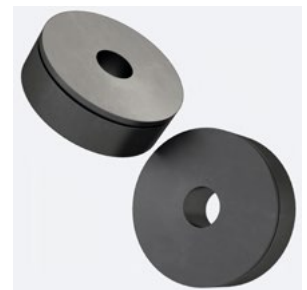
P 512-513

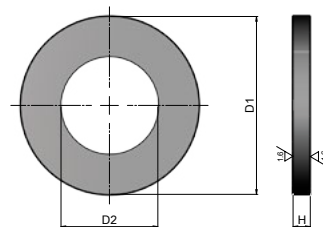


AXIAL BEARINGS

The axial bearing gives approximately twice the clamping force with the same size lever. This gives protection for the stationary support surface due to the integrated bearing, fitted with needle rollers, and two load bearing faces.

P 514





WDS 400 Plain Thick Jig Washer - Steel

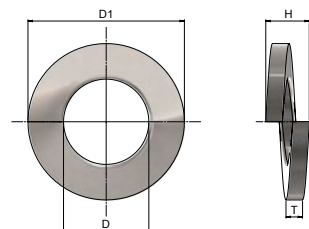
Steel, BS.970 Gr.230M07

Chemical black finish

WDS No.	D1	D2	H	D (to suit Inch Stud)	D (to suit Metric Stud)	Weight (kg)
400-2004	10	4.5	1.5	-	M4	0.01
400-2005	12	5	2.5	2BA	M5	0.01
400-201	16	6.7	2.5	1/4"	M6	0.01
400-202	19	8.5	3	5/16"	M8	0.01
400-203	22	10.5	3	3/8"	M10	0.01
400-204	25	10.5	5	3/8"	M10	0.02
400-205	28	13	3	1/2"	M12	0.01
400-206	28	14.5	3	-	M14	0.01
400-207	32	16.5	3	5/8"	M16	0.01
400-208	38	16.5	6.5	5/8"	M16	0.04
400-209	38	20.5	4	3/4"	M20	0.03
400-211	50	27	5	1"	M24	0.05

ZP

303

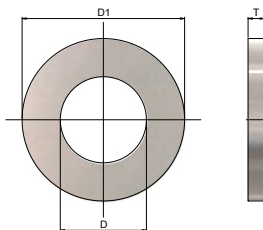


WDS 776/876 Metric Spring Washer - DIN 127

Available in Zinc Plated Steel or 303 Stainless Steel

Note - SOLD IN BAGGED QUANTITIES

Zinc Plated	Stainless Steel	D	D1	H	T	Pack Quantity	To Suit	Weight (kg)
776-2040SP	876-6040PW	4.4	7.6	2.1	0.9	50pcs	M4	0.01
776-2050SP	876-6050PW	5.4	9.2	2.8	1.2	50pcs	M5	0.02
776-2060SP	876-6060PW	6.5	11.8	3.8	1.6	50pcs	M6	0.04
776-2080SP	876-6080PW	8.5	14.8	4.7	2	25pcs	M8	0.04
776-2100SP	876-6100PW	10.7	18.1	5.2	2.2	25pcs	M10	0.06
776-2120SP	876-6120PW	12.7	21.1	5.9	2.5	25pcs	M12	0.1
776-2140SP	876-6140PW	14.7	24.1	7.1	3	10pcs	M14	0.06
776-2160SP	876-6160PW	17	27.4	8.3	3.5	10pcs	M16	0.09
776-2180SP	876-6180PW	19	29.4	8.3	3.5	1pcs	M18	0.01
776-2200SP	876-6200PW	21.2	33.6	9.4	4	1pcs	M20	0.02
776-2240SP	876-6240PW	25.5	40	11.8	5	1pcs	M24	0.03

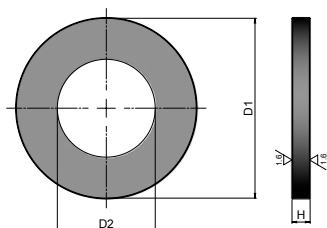


Zinc Plated Metric Plain Washer - DIN 125 **WDS 776**

Zinc Plated Steel DIN 125

Note - SOLD IN BAGGED QUANTITIES

WDS No.	D	D1	T	Pack Quantity	To Suit	Weight (kg)
776-2040PW	4.3	9	0.8	50pcs	M4	0.02
776-2050PW	5.3	10	1	50pcs	M5	0.02
776-2060PW	6.4	12	1.6	50pcs	M6	0.05
776-2080PW	8.4	16	1.6	25pcs	M8	0.05
776-2100PW	10.5	20	2	25pcs	M10	0.09
776-2120PW	13	24	2.5	25pcs	M12	0.16
776-2140PW	15	28	2.5	10pcs	M14	0.09
776-2160PW	17	30	3	10pcs	M16	0.11
776-2180PW	19	34	3	1pcs	M18	0.02
776-2200PW	21	37	3	1pcs	M20	0.02
776-2240PW	25	44	4	1pcs	M24	0.03


316
303

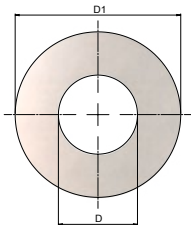
Plain Thick Jig Washer - 303/316 Stainless Steel **WDS 802/8902**

303/316 Stainless Steel

316 SS	303 SS	D	D1	D2	H	Weight (kg)
802-206	8902-206	M6	16	6.5	2.5	0.01
802-208	8902-208	M8	20	8.5	2.5	0.01
802-210	8902-210	M10	25	10.5	3	0.01
802-212	8902-212	M12	30	12.5	3.5	0.02
802-216	8902-216	M16	35	16.5	4	0.02

303

316

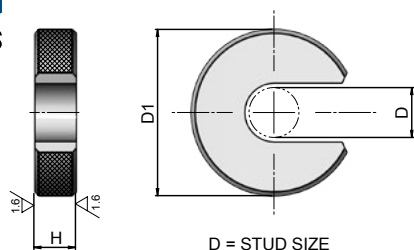


WDS

WDS 876 303/316 Stainless Steel Form 'A' Washers

303/316 Stainless Steel To DIN 125
Note - SOLD IN BAGGED QUANTITIES

303 SS	316 SS	D	D1	T	Pack Quantity	To Suit	Weight (kg)
876-6040PW	876-9040PW	4.3	9	0.8	50pcs	M4	0.02
876-6050PW	876-9050PW	5.3	10	1	50pcs	M5	0.02
876-6060PW	876-9060PW	6.4	12	1.6	50pcs	M6	0.05
876-6080PW	876-9080PW	8.4	16	1.6	25pcs	M8	0.05
876-6100PW	876-9100PW	10.5	20	2	25pcs	M10	0.09
876-6120PW	876-9120PW	13	24	2.5	25pcs	M12	0.16
876-6140PW	876-9140PW	15	28	2.5	10pcs	M14	0.09
876-6160PW	876-9160PW	17	30	3	10pcs	M16	0.11
876-6180PW	876-9180PW	19	34	3	1pcs	M18	0.02
876-6200PW	876-9200PW	21	37	3	1pcs	M20	0.02
876-6240PW	876-9240PW	25	44	4	1pcs	M24	0.03

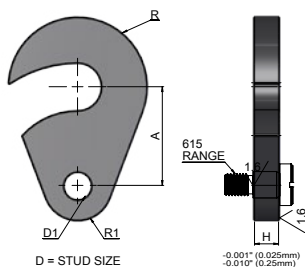


C Washer - Steel **WDS 402**

Steel, BS.970 Gr. 220M07

Case hardened

WDS No.	D (to suit Inch Stud)	D (to suit Metric Stud)	D1	H	Weight (kg)
402-2004	-	M4	16	3	0.01
402-2005	2BA	M5	30	5	0.02
402-201	1/4	M6	20	5	0.01
402-202	1/4	M6	25	5	0.02
402-203	1/4	M6	32	5	0.03
402-204	5/16	M8	35	6.5	0.03
402-205	5/16	M8	38	6.5	0.04
402-206	5/16	M8	45	6.5	0.07
402-207	3/8	M10	32	6.5	0.03
402-208	3/8	M10	38	6.5	0.04
402-209	3/8	M10	45	8	0.08
402-210	3/8	M10	50	8	0.1
402-211	3/8	M10	55	8	0.14
402-212	3/8	M10	63	9.5	0.2
402-214	1/2	M12	50	9.5	0.12
402-215	1/2	M12	63	9.5	0.19
402-216	1/2	M12	75	11	0.34
402-219	5/8	M16	54	9.5	0.13
402-220	5/8	M16	75	12.5	0.37
402-221	3/4	M20	63	11	0.2
402-222	3/4	M20	75	12.5	0.35
402-226	1	M24	75	12.5	0.3



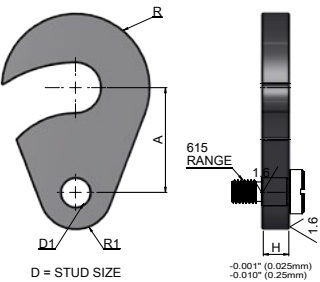
Captive C Washer - Steel - Metric **WDS 403**

Steel, BS.970 Gr. 220M07

Case hardened

WDS No.	A	D	D1	H	R	R1	Weight (kg)
403-2005	19	M5	8	6	12.5	8	0.02
403-201	19	M6	8	6	12.5	8	0.02
403-202	22	M8	8	6	16	8	0.04
403-203	25	M10	8	6	19	10	0.06
403-204	32	M12	10	10	22	13	0.11
403-206	38	M16	10	10	25	14	0.34
403-207	45	M20	12	12	32	16	0.3

IN"

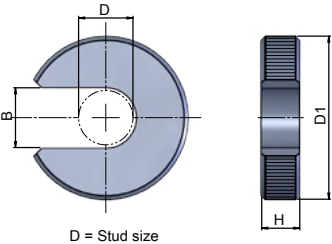


WDS 403 Captive C Washer - Steel - Inch

Steel, BS.970 Gr.070M20
Case hardened

WDS No.	A	D	D1	H	R	R1	Weight (kg)
403-03	22	5/16	7.9	0.250	16	8	0.04
403-04	25.4	3/8	9.5	0.250	19	10	0.05
403-05	32	1/2	9.5	0.313	22	13	0.11
403-06	38	5/8	12.7	0.375	25	14	0.17
403-07	44.5	3/4	12.7	0.500	32	16	0.33
403-11	34.9	3/8	9.5	0.250	19	10	0.07
403-12	38	1/2	9.5	0.313	22	13	0.12

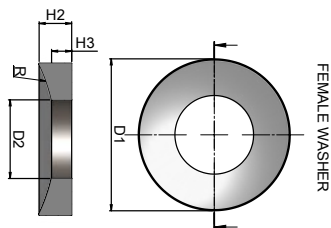
316



WDS 804 C Washer - 316 Stainless Steel

Stainless Steel
BS 970 Gr 316S11

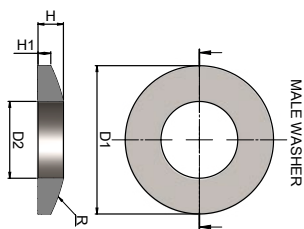
WDS No.	B	D	D1	H	Weight (kg)
804-206	7	M6	25	5	0.02
804-208	9	M8	25	6	0.02
804-210	11	M10	30	7	0.03
804-212	13	M12	35	8	0.05



Spherical Seating Washer Female - Steel WDS 401

Steel, BS.970 Gr.230M07
Surface hardened

WDS No.	D (to suit Inch Stud)	D (to suit Metric Stud)	D1	D2	H2	H3	R	Weight (kg)
401-2004F	2BA	M4	12	5.5	3.3	2.1	13	0.01
401-2005F	-	M5	12	6.5	3.3	2.2	13	0.01
401-201F	1/4 inch	M6	16	8	3.7	2.1	16	0.01
401-202F	5/16 inch	M8	19	10	4.5	2.6	19	0.01
401-203F	3/8 inch	M10	22	12	5.3	3.5	25	0.01
401-204F	1/2 inch	M12	28	14.5	6.1	3.7	32	0.01
401-205F	-	M14	32	16.5	6.1	3.2	35	0.03
401-2065F	-	M18	38	20.5	6.6	3.8	48	0.04
401-206F	5/8 inch	M16	35	18.5	6.1	3.2	40	0.02
401-207F	3/4 inch	M20	40	22.5	7.3	4.3	48	0.04
401-208F	7/8 inch	M22	48	25.5	8.9	5	57	0.07
401-209F	1 inch	M24	53	28.5	9.7	5.6	64	0.09
401-2105F	1-1/4 inch	M30	63	33	10.5	5	70	0.15
401-211F	-	M33	67	35.5	10.5	5.1	80	0.14
401-212F	1-1/2 inch	M39	80	42	10.5	4	95	0.2



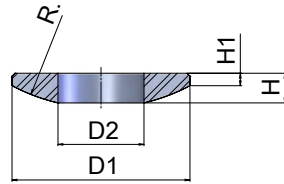
Spherical Seating Washer Male - Steel WDS 401

Steel, BS.970 Gr.230M07
Surface hardened

WDS No.	D (to suit Inch Stud)	D (to suit Metric Stud)	D1	D2	H	H1	R	Weight (kg)
401-2004M	2BA	M4	12	5.5	2.6	1.4	13	0.01
401-2005M	-	M5	12	6.5	2.8	1.7	13	0.01
401-201M	1/4 inch	M6	16	8	3.2	1.6	16	0.01
401-202M	5/16 inch	M8	19	10	4	2.1	19	0.01
401-203M	3/8 inch	M10	22	12	4.4	2.6	25	0.01
401-204M	1/2 inch	M12	28	14.5	4.8	2.4	32	0.01
401-205M	-	M14	32	16.5	5	2.1	35	0.03
401-2065M	-	M18	38	20.5	5.5	2.7	48	0.03
401-206M	5/8 inch	M16	35	18.5	5.2	2.3	40	0.02
401-207M	3/4 inch	M20	40	22.5	6	3	48	0.03
401-208M	7/8 inch	M22	48	25.5	6.4	2.5	57	0.05
401-209M	1 inch	M24	53	28.5	7.6	3.5	64	0.07
401-2105M	1-1/4 inch	M30	63	33	8	2.5	70	0.1
401-211M	-	M33	67	35.5	8.4	3	80	0.11
401-212M	1-1/2 inch	M39	80	42	9.2	2.7	95	0.17

316

303



D = Stud size

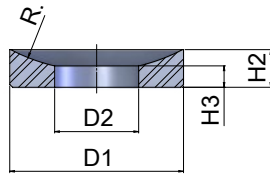
WDS 803/8903 Spherical Seating Washer Male - 303/316 Stainless Steel

303/316 Stainless Steel

316 SS	303 SS	D	D1	D2	H	H1	R	Weight (kg)
803-206M	8903-206M	M6	16	8	3	1.4	16	0.01
803-208M	8903-208M	M8	20	10	4	2	20	0.01
803-210M	8903-210M	M10	22	12	4.5	2.7	25	0.01
803-212M	8903-212M	M12	30	14.5	5	2.1	32	0.02
803-216M	8903-216M	M16	35	18.5	6.1	3.2	40	0.02

316

303

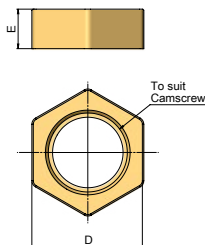


D = Stud size

WDS 803/8903 Spherical Seating Washer Female - 303/316 Stainless Steel

303/316 Stainless Steel

316 SS	303 SS	D	D1	D2	H2	H3	R	Weight (kg)
803-206F	8903-206F	M6	16	8	3.6	2	16	0.01
803-208F	8903-208F	M8	20	10	4.6	2.6	20	0.01
803-210F	8903-210F	M10	22	12	5.6	3.8	25	0.01
803-212F	8903-212F	M12	30	14.5	6.6	3.7	32	0.02
803-216F	8903-216F	M16	35	18.5	6.1	3.2	40	0.02



Hex Washers Mitee-bite WDS 590

Steel / Stainless Steel

WDS No.	D	E	Capscrew	Material
590-10580	7.93	2.8	M4	Steel
590-10582	15.86	4.75	M6	Steel
590-10584	20.6	4.75	M8	Steel
590-10585	20.6	4.75	M8	Stainless Steel
590-10586	20.6	6.35	M10	Steel
590-10590	25.4	9.52	M12	Steel
590-10592	30.13	12.7	M16	Steel

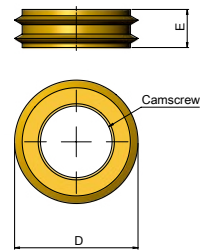
WDS No.	Pack Quantity	Screw Size	To Suit	Weight (kg)
590-10580	10	M4	590-50204	0.03
590-10582	10	M6	590-50642 / 590-50644 / 590-50206	0.03
590-10584	10	M8	590-50646 / 590-50208	0.03
590-10585	4	M8 - Stainless Steel	590-50207	0.03
590-10586	10	M10	590-50648 / 590-50210	0.03
590-10590	8	M12	590-50650 / 590-50652 / 590-50212	0.03
590-10592	4	M16	590-50654 / 590-50656 / 590-50216	0.03



Square Washers Mitee-bite WDS 590

Hardened Steel

WDS No.	Screw Size	Weight (kg)
590-21006	10 MM	0.01
590-21026	16 MM	0.01
590-51016	12 MM	0.01



WDS 590 Knife Edge Washers Mitee-bite

Hardened Steel

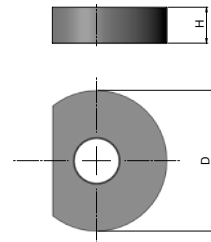
WDS No.	Pack Quantity	To Suit	Weight (kg)
590-12584	8	590-82584	0.01
590-12592	4	590-82592	0.01
590-52588	8	590-82588	0.01



WDS 590 Slot Washer Mitee-bite

Steel

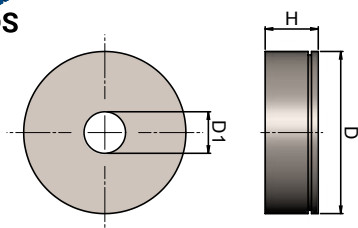
WDS No.	To Suit	To Suit Screw Size	Weight (kg)
590-20014	590-53150 / 590-23200	M12	0.01
590-20016	590-53170 / 590-23240	M16	0.01



WDS 590 Machinable Washers Mitee-bite

Steel

WDS No.	D	H	To Suit	Pack Quantity	Weight (kg)
590-10604	24.9	6.4	590-50506	4	0.01
590-10606	31.2	8.9	590-50510	4	0.01
590-10612	37.6	11.4	590-50512	4	0.01
590-10610	43.9	14	590-50516	4	0.01



Axial Bearing Washers - Metric **WDS 414**

Steel

WDS No.	D	D1	H	Maximum Dynamic Load	Maximum Static Load	Weight (kg)
414-206	24	6.15	7.9	6.8	15.5	0.02
414-208	25	8.15	7.9	7.8	19.4	0.02
414-210	30	10.15	7.9	9.2	25.5	0.03
414-212	35	12.15	7.9	9.9	29	0.05



INDUSTRIAL AUTOMATION

BALL TRANSFER UNITS	Page 518
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FORK ENDS & END FITTINGS	Page 564
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BALL TRANSFER UNITS

P 519-527

Ball transfer units or conveyor balls as they are also known are available in the most popular designs surface mounting ball transfer units, recess mount ball transfer units and spring loaded ball transfer units.



SURFACE MOUNT BALL TRANSFER UNIT

Surface mounting ball transfer units allow the user to securely fasten down and secure the Ball Transfer Unit onto a flat surface. Models include top mount fitting and base fitting variants.

P 519-520



RECESS MOUNT BALL TRANSFER UNITS

Recessed ball transfer units fit into pre-defined holes on conveyor set ups and are an ideal solution for the smooth and precise moving of loads. Several of these models are 'push fit' ball transfer units, allowing the user to simply drop the unit into place on an application.

P 521-525



SPRING LOADED BALL TRANSFER UNITS

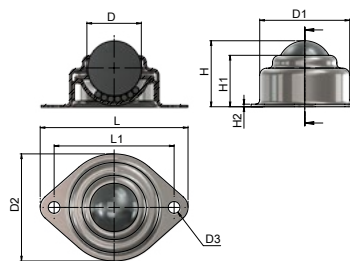
Strengthened by a heavy duty spring, spring loaded ball transfer units this allows the unit to carry a high load capacity.

P 526-527



ZP

304



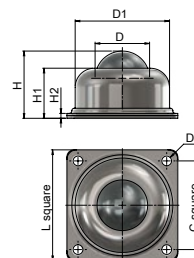
WDS 566 Ball Transfer Unit - Surface Mounting 2 Hole Fitting (Ball Rollers)

Body - Carbon Steel - Zinc Plated / 304 Stainless Steel

Ball - Steel 9Cr18Mo / 420 Stainless Steel

Zinc Plated	Stainless Steel	D	D1	D2	D3	H	H1	H2	L	L1	Dynamic Load (kg)	Static Load (kg)	Weight (kg)
566-215	566-615	15.9	27.8	33	4.2	20.7	16	0.6	50	40	20	15	0.04
566-218	-	18	30	38	5.3	21	16	0.8	58	46	25	20	0.05
566-225	566-625	25.4	42	50	5.5	30.8	24	1.2	69	56	30	25	0.14
566-230	-	30	52	60	7	40	31	1.5	86	70	50	40	0.24

ZP



WDS 566 Ball Transfer Unit - Surface Mounting 4 Hole Fitting (Ball Rollers)

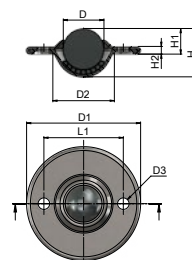
Body - Carbon Steel - Zinc Plated

Ball - Steel 9Cr18Mo

WDS No.	C	D	D1	D2	H	H1	H2	L	Dynamic Load (kg)	Static Load (kg)	Weight (kg)
566-438	62	38.1	65	6.7	46	33	3.4	77	110	90	0.48

ZP

304

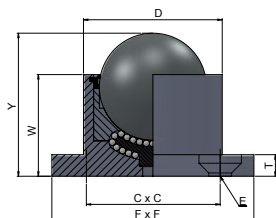


WDS 567 Ball Transfer Unit - Surface Mounting Hole Fitting - Dish Surface Mounting

Body - Carbon Steel - Zinc Plated / 304 Stainless Steel

Ball - Steel 9Cr18Mo / 420 Stainless Steel

Zinc Plated	Stainless Steel	D	D1	D2	D3	H	H1	H2	L1	Holes	Dynamic Load (kg)	Static Load (kg)	Weight (kg)
567-215	567-615	15.8	44.5	23	4.5	19	10	3	31	2	15	10	0.04
567-225	567-625	25.4	71	40	5.5	30	15.4	3	55.5	2	55	45	0.15
567-232	567-632	31.8	73	46	6.5	37	18	4	60	3	35	30	0.25

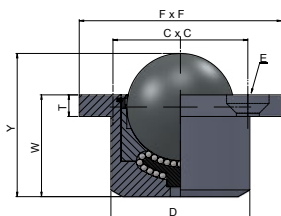


Ball Transfer Unit - High Capacity Base Mounted WDS 570

Body - Mild Steel Zinc Plated

Ball - Steel 9Cr18Mo / 420 Stainless Steel

Zinc Plated	Stainless Steel	CXC (mm)	D (mm)	E (Dia) (mm)	FXF (mm)	T (mm)	W (mm)	Y (mm)	Ball Dia (mm)	Load Capacity (lbs)	Load Capacity (kg)	Weight (kg)
570-301	570-301A	34.8-pcd	23.8	2 x 3.6	44.5	3.2	19.1	22.3	12.7	75	35	0.08
570-302	570-302A	44.5 sq	44.5	4 x 5.6	57.2	4.8	35.9	41.3	25.4	350	160	0.45
570-303	570-303A	57.9 sq	50.8	4 x 7.1	76.2	6.3	38.1	44.5	25.4	700	320	0.7
570-304	570-304A	57.9 sq	60.3	4 x 7.1	76.2	12.7	48.8	61.5	38.1	2240	1000	1.26
570-305	570-305A	101.6 sq	105-111	4 x 10.3	127	9.6	82.6	98.4	50.8	4480	2000	6.05

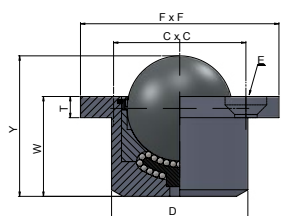


Ball Transfer Unit - High Capacity Top Mounted - Steel Balls WDS 570

Body - Black finish

Ball - Steel 9Cr18Mo

Steel	CXC (mm)	D (mm)	E (Dia) (mm)	FXF (mm)	T (mm)	W (mm)	Y (mm)	Ball Dia (mm)	Load Capacity (lbs)	Load Capacity (kg)	Mounting Type	Weight (kg)
570-401	34.8-pcd	23.8	2 x 3.6	44.5	3.2	14.6	22.6	12.7	79	36	Round	0.08
570-402	44.5 sq	44.5	4 x 5.6	57.2	4.8	35.8	41.3	25.4	401	182	Square	0.45
570-403	57.9 sq	50.8	4 x 7.1	76.2	6.4	38.2	44.5	25.4	720	327	Square	0.7
570-404	57.9 sq	60	4 x 7.1	76.2	12.7	47.6	60.3	38.1	2244	1010	Square	1.26
570-405	101.6 sq	110	4 x 10.3	127	19.1	84.2	98.4	50.8	4488	2036	Square	6.32



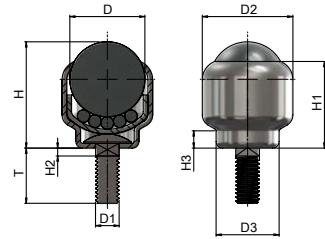
Ball Transfer Unit - High Capacity Top Mounted - Stainless Steel Balls WDS 570

Body - Black finish

Ball - 420 Stainless Steel

Stainless Steel	CXC (mm)	D (mm)	E (Dia) (mm)	FXF (mm)	T (mm)	W (mm)	Y (mm)	Ball Dia (mm)	Load Capacity (lbs)	Load Capacity (kg)	Mounting Type	Weight (kg)
570-401A	34.8-pcd	23.8	2 x 3.6	44.5	3.2	14.6	22.6	12.7	79	36	Round	0.08
570-402A	44.5 sq	44.5	4 x 5.6	57.2	4.8	35.8	41.3	25.4	401	182	Square	0.45
570-403A	57.9 sq	50.8	4 x 7.1	76.2	6.4	38.2	44.5	25.4	720	327	Square	0.7
570-404A	57.9 sq	60	4 x 7.1	76.2	12.7	47.6	60.3	38.1	2244	1010	Square	1.26
570-405A	101.6 sq	110	4 x 10.3	127	19.1	84.2	98.4	50.8	4488	2036	Square	6.32

ZP

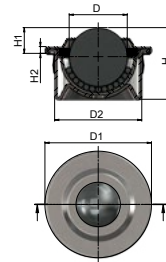


WDS 568 Ball Transfer Unit - Stem Fitting

Body - Carbon Steel - Zinc Plated
Ball - Steel 9Cr18M

WDS No.	D	D1	D2	D3	H	H1	H2	H3	T	Load Capacity (kg)	Weight (kg)
568-219	19.05	M6	23	16	27	22	2	4.5	14	30	0.05
568-225	25.4	M8	31	25	36	28	3.3	9.8	20	40	0.13

ZP

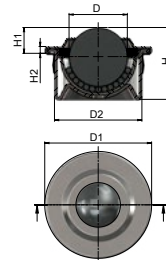


WDS 569 Ball Transfer Unit - Light Duty - Steel

Body - Carbon Steel - Zinc Plated
Ball - Steel 9Cr18Mo
Note - 215 & 222 supplied with clip, 230 supplied without clip

WDS No.	D	D1	D2	D3	H	H1	H2	Load Capacity (kg)	Weight (kg)
569-215	15.88	32	24.5	25.0/25.5	21	10	4	17	0.05
569-222	22.22	45	35.8	37.0/37.5	27.7	10	3	50	0.13
569-230	30	55	45	-	37	13.8	4	100	0.32

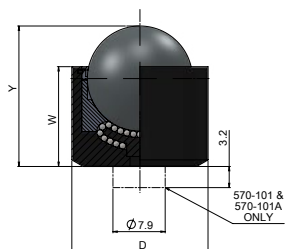
304



WDS 569 Ball Transfer Unit - Light Duty - Stainless Steel

Body - 304 Stainless Steel
Ball - 402 Stainless Steel
Note - 615, 622 supplied with clip, 630 supplied without clip.

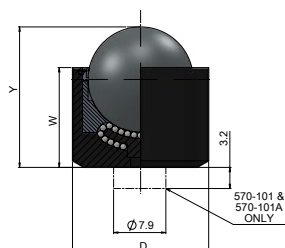
WDS No.	D	D1	D2	D3	H	H1	H2	Load Capacity (kg)	Weight (kg)
569-615	15.88	32	24.5	25.0/25.5	21	10	4	11.39	0.05
569-622	22.22	45	35.8	37.0/37.5	27.7	9	3	33.5	0.13
569-630	30	55	45	-	37	13.8	4	67	0.32



Ball Transfer Unit High Capacity - Push Fit Series - Steel Balls WDS 570

Body - Black finish
Ball - Steel 9Cr18Mo

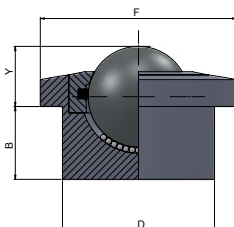
WDS No.	D	W	Y	Ball Dia (mm)	Load Capacity (kg)	Weight (kg)
570-101	20.64 / 20.54	15.3	19.1	12.7	35	0.23
570-102	44.45 / 44.35	35.6	41.3	25.4	165	0.39
570-103	50.8 / 50.7	38.1	44.5	25.4	320	0.54
570-104	60.32 / 60.22	48.8	61.5	38.1	1000	1
570-105	101.6 / 101.5	82.5	98.4	50.8	2000	4.92



Ball Transfer Unit High Capacity - Push Fit Series - Stainless Steel Balls WDS 570

Body - Black finish
Ball - 420 Stainless Steel

WDS No.	D	W	Y	Ball Dia (mm)	Load Capacity (kg)	Weight (kg)
570-101A	20.64 / 20.54	15	19	12.7	25	0.23
570-102A	44.45 / 44.35	35.6	41.3	25.4	116	0.39
570-103A	50.8 / 50.7	38.1	44.5	25.4	224	0.54
570-104A	60.32 / 60.22	48.8	61.5	38.1	700	1
570-105A	101.6 / 101.5	82.5	98.4	50.8	1400	4.92



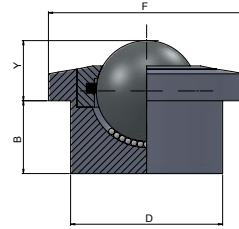
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Ball Transfer Unit - Medium Duty - Steel Balls WDS 570

Body - Case Hardened Steel Housing with Zinc Plated Finish
Ball - Steel 9Cr18Mo

WDS No.	B	D	F	Y	Ball Dia (mm)	Load Capacity (kg)	Weight (kg)
570-701	11.5	24	31	9.5	15.9	40	0.06
570-702	20.7	36	45	9.8	22.2	120	0.21
570-703	23	45	55	13.8	30.2	250	0.37
570-704	34.5	62	75	19	44.5	500	1.03

ZP

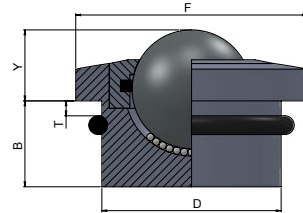


WDS 570 Ball Transfer Unit - Medium Duty - Stainless Steel Balls

Body - Case Hardened Steel Housing with Zinc Plated Finish
Ball - 402 Stainless Steel

WDS No.	B	D	F	Y	Ball Dia (mm)	Load Capacity (kg)	Weight (kg)
570-701A	11.5	24	31	9.5	15.9	27	0.06
570-702A	20.7	36	45	9.8	22.2	80	0.21
570-703A	23	45	55	13.8	30.2	167	0.37
570-704A	34.5	62	75	19	44.5	335	1.03

ZP

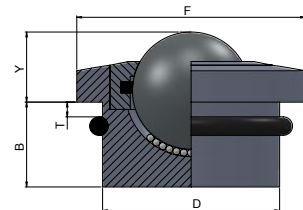


WDS 570 Ball Transfer Unit - Medium Duty with Rubber O-Ring - Steel Balls

Body - Mild Steel Zinc Plated
Ball - Steel 9Cr18Mo

WDS No.	B	D	F	T	Y	Ball Dia (mm)	Load Capacity (kg)	Weight (kg)
570-801	11.5	24	31	2	9.5	15.9	40	0.06
570-802	20.7	36	45	3	9.8	22.2	120	0.2
570-803	23	45	55	4	13.8	30.2	250	0.36
570-804	34.5	62	75	5	19	44.5	500	1.04

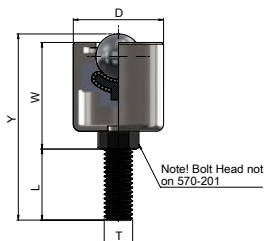
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WDS 570 Ball Transfer Unit - Medium Duty with Rubber O-Ring - Stainless Steel

Body - Mild Steel Zinc Plated
Ball - 420 Stainless Steel

WDS No.	B	D	F	T	Y	Ball Dia (mm)	Load Capacity (kg)	Weight (kg)
570-801A	11.5	24	31	2	9.5	15.9	27	0.06
570-802A	20.7	36	45	3	9.8	22.2	80	0.2
570-803A	23	45	55	4	13.8	30.2	167	0.36
570-804A	34.5	62	75	5	19	44.5	335	1.04

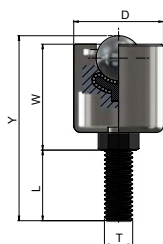


IN"

Ball Transfer Unit High Capacity - Hex Threaded Stud Series - Steel Balls - Inch UNF WDS 570

Body - Black finish
Ball - Steel 9Cr18Mo

WDS No.	D (mm)	L (mm)	T	W (mm)	Y (mm)	Ball Dia (mm)	Load capacity (lbs)	Load Capacity (kg)	Weight (kg)
570-201	20.6	16.5	5/16 inch UNF	16	35.7	12.7	75	35	0.04
570-203	44.5	25.4	1/2 inch UNF	42.5	72.3	25.4	350	160	0.42
570-206	50.8	25.4	1/2 inch UNF	45.1	76.9	25.4	700	320	0.54
570-208	60.3	40.9	3/4 inch UNF	60.3	4.5	38.1	2240	1000	1.36
570-210	101.6	50.8	1 inch UNF	50.8	159	50.8	4480	2000	5.3

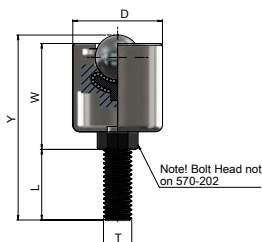


IN"

Ball Transfer Unit High Capacity - Hex Threaded Stud Series - Stainless Steel Balls - Inch UNF WDS 570

Body - Black finish
Ball - 420 Stainless Steel

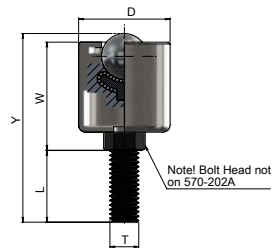
WDS No.	D (mm)	L (mm)	T	W (mm)	Y (mm)	Ball Dia (mm)	Load capacity (lbs)	Load Capacity (kg)	Weight (kg)
570-203A	44.5	25.4	1/2 inch UNF	42.5	72.3	25.4	75	112	0.04
570-206A	50.8	25.4	1/2 inch UNF	45.1	76.9	25.4	700	224	0.54
570-208A	60.3	40.9	3/4 inch UNF	60.3	4.5	38.1	2240	700	1.36
570-210A	101.6	50.8	1 inch UNF	50.8	159	50.8	4480	1400	5.3



Ball Transfer Unit High Capacity - Hex Threaded Stud Series - Steel Balls - Metric WDS 570

Body - Black finish
Ball - Steel 9Cr18Mo

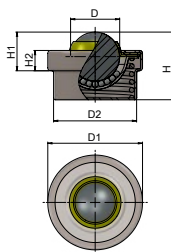
WDS No.	D (mm)	L (mm)	T	W (mm)	Y (mm)	Ball Dia (mm)	Load Capacity (kg)	Weight (kg)
570-202	20.6	16.5	M8	16	35.7	12.7	35	0.04
570-204	44.5	25.4	M12	42.5	72.3	25.4	160	0.42
570-205	50.8	25.4	M12	45.1	76.9	25.4	320	0.54
570-207	60.3	40.9	M20	60.3	4.5	38.1	1000	1.36
570-209	101.6	50.8	M24	50.8	159	50.8	2000	5.3



WDS 570 Ball Transfer Unit High Capacity - Hex Threaded Stud Series - Stainless Steel Balls - Metric

Body - Black finish
Ball - 420 Stainless Steel

WDS No.	D (mm)	L (mm)	T	W (mm)	Y (mm)	Ball Dia (mm)	Load Capacity (lbs)	Load Capacity (kg)	Weight (kg)
570-202A	20.6	15.9	M8	15.1	35	12.7	79	25	0.04
570-204A	44.5	25.4	M12	41	72.4	25.4	401	112	0.42
570-205A	50.8	25.4	M12	44	76.2	25.4	720	224	0.54
570-207A	60.3	40	M20	61.5	111.5	38.1	2244	700	1.36
570-209A	101.6	50.8	M24	98.4	161.2	50.8	4488	1400	5.3



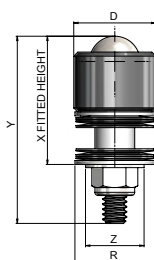
ZP

Spring Loaded Ball Transfer Unit - Light Duty - Steel WDS 569

Body - Carbon Steel - Zinc Plated

Ball - Steel 9Cr18Mo

WDS No.	D	D1	D2	H	H1	H2	Dynamic Load (kg)	Static Load (kg)	Weight (kg)
569-425	25.4	49	43	35	20	10.5	55	45	0.18



LMD = Load to Max Deflection (kg)
MD = Max Deflection (mm)



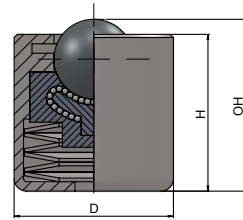
ZP

Ball Transfer Unit - High Capacity (Spring-Loaded-External) WDS 570

Body - Mild Steel Zinc Plated

Ball - Steel 9Cr18Mo / 420 Stainless Steel

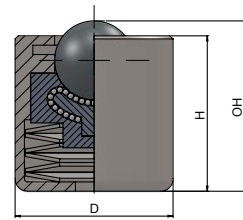
Steel	Stainless Steel	D (mm)	MD	R (mm)	X (mm)	Y (mm)	Z (mm)	Ball Dia (mm)	LMD	Supports Load (kg)	Weight (kg)
570-501	570-501A	20.6	2	20	32.2	47	15	12.7	32	7	0.06
570-502	570-502A	20.6	2	20	31.8	47	15	12.7	35	14	0.06
570-503	570-503A	20.6	2	20	32.2	47	15	12.7	38	23	0.06
570-504	570-504A	44.5	3.2	31.8	61.9	77.2	19.2	25.4	102	7	0.52
570-505	570-505A	44.5	3.2	31.8	61.5	77.2	19.2	25.4	109	23	0.52
570-506	570-506A	44.5	3.2	31.8	60.7	77.2	19.2	25.4	120	45	0.52
570-507	570-507A	44.5	3.2	31.8	61.9	77.2	19.2	25.4	125	68	0.52
570-508	570-508A	50.8	3.2	38.1	80.8	98.4	19.2	25.4	209	91	0.78
570-509	570-509A	50.8	3.2	38.1	79.6	98.4	19.2	25.4	245	136	0.79
570-510	570-510A	50.8	3.2	38.1	80.5	98.4	19.2	25.4	272	119	0.79
570-511	570-511A	50.8	3.2	38.1	80.9	98.4	19.2	25.4	308	227	0.82
570-512	570-512A	60.3	5.6	59.4	115.5	161.1	35.6	38.1	658	227	0.86
570-513	570-513A	60.3	5.6	59.4	121.1	161.1	35.6	38.1	699	318	1.94
570-514	570-514A	60.3	5.6	59.4	128.2	161.1	35.6	38.1	771	454	2
570-515	570-515A	60.3	5.6	59.4	127	161.1	35.6	38.1	828	567	2
570-516	570-516A	60.3	5.6	59.4	146.1	189.7	35.6	38.1	863	681	2
570-517	570-517A	60.3	5.6	59.4	156.4	189.7	35.6	38.1	1000	749	2.2
570-518	570-518A	101.6	6.3	101.6	179.4	200.8	43.2	50.8	1398	762	2.63
570-519	570-519A	101.6	6.3	101.6	177.4	200.8	43.2	50.8	1597	1000	8.9
570-520	570-520A	101.6	6.3	101.6	174.6	200.8	43.2	50.8	1797	1270	9.1
570-521	570-521A	101.6	6.3	101.6	171.5	200.8	43.2	50.8	2033	1525	9.1



WDS 570 Ball Transfer Unit - High Capacity (Spring-Loaded-Internal) - Steel Balls

Body - High Grade Carbon Steel Housing - Zinc Plated, Ball - Steel 9Cr18M0
LMD = Load@Max Deflection

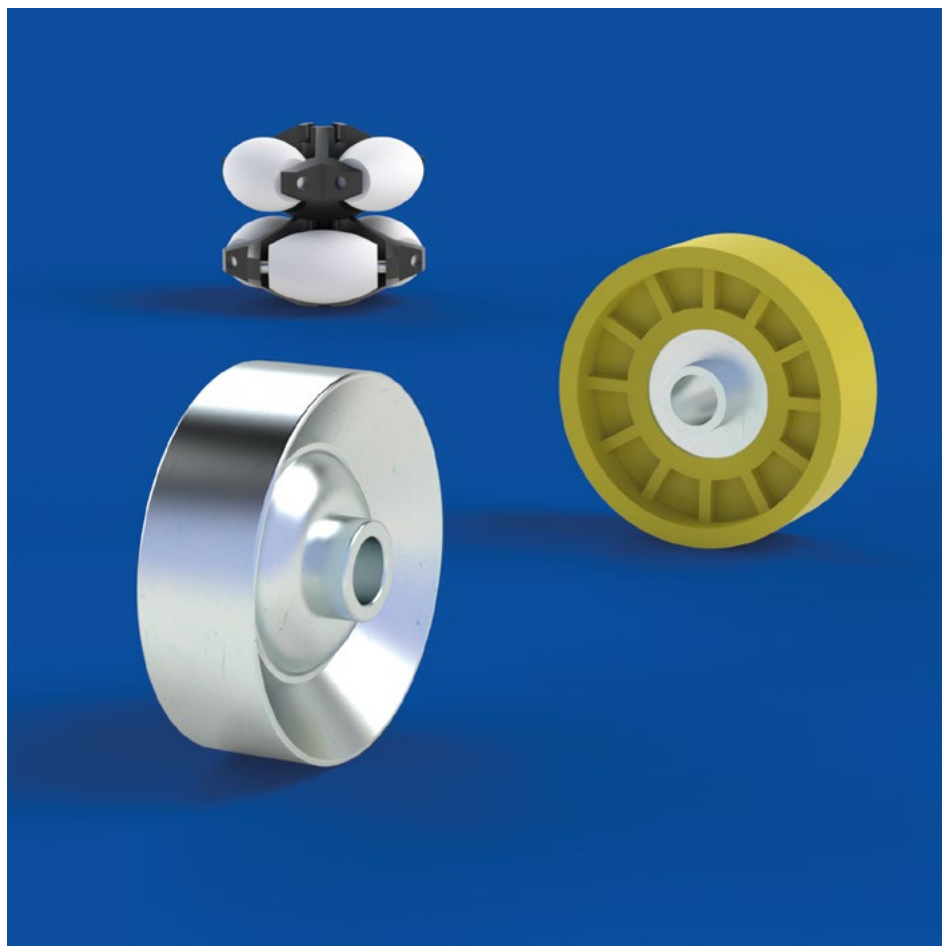
WDS No.	D	H	MD	OH	Ball Dia (mm)	LMD (kg)	Load (kg)	Weight (kg)
570-601	25.4	25.4	3.48	27.9	12.7	38	23	0.07
570-602	50.8	55.5	4.7	60.2	25.4	120	91	0.71
570-603	63.5	60.3	2.4	62.7	25.4	300	227	1.19



WDS 570 Ball Transfer Unit - High Capacity (Spring-Loaded-Internal) - Stainless Steel Balls

Body - High Grade Carbon Steel Housing - Zinc Plated, Ball - 420 Stainless Steel
LMD = Load@Max Deflection

WDS No.	D	H	MD	OH	Ball Dia (mm)	LMD (kg)	Load (kg)	Weight (kg)
570-601A	25.4	25.4	3.48	27.9	12.7	38	16	0.07
570-602A	50.8	55.5	4.7	60.2	25.4	120	64	0.71
570-603A	63.5	60.3	2.4	62.7	25.4	300	159	1.19



SKATE WHEELS & OMNI WHEELS

For the full range of Skate Wheels & Omni Wheels please see pages **558-559**



CONVEYOR COMPONENTS & PARTS

P 532-560

This extensive range of conveyor components and parts offer excellent building elements for material handling equipment.

Ideal for applications such as food conveyors, roller conveyors and belt conveyor systems, the range consists of support bases, connecting joints, mounting brackets, supporting head mounts, guide rail equipment and clamping rails & rods.



CLAMPING RAILS & RODS

Clamping Rods are adjustable clamps for use with side guides. These should be used in conjunction with adjustable or fixed mounting brackets. Also in this range are Cross Clamps, Photocell Clamps and Reflector Clamps.

P 532-541



GUIDE RAILS & BRACKETS

Guide rail mounting brackets are available in either fixed or adjustable options. These brackets can be used with Clamping Rods to provide the ideal modular conveyor solution.

P 542-547



MOUNTING BRACKETS

There are several styles of conveyor mounting bracket. Styles including horizontal mountings ideal for mounting guide brackets. The other designs include side brackets and top brackets excellent for mounting framework or aluminium extrusion as part of a conveyor frame.

P 548-549



CONNECTING JOINTS

Connecting Joints are plastic cross joints which allow the user to connect two hollow tubes and apply rigidity to a modular conveyor system. These plastic joints for modular tubing offer great flexibility allowing conveyor builders to sure up and extend conveyor equipment.

P 550



SUPPORT HEADS

Conveyor Support Heads are tube fitting mounting heads that allow the user to secure a conveying surface on to a modular framework.

P 551-556





SUPPORT BASES

Support bases are available in three variants, BI pod base, Tri-pod base and Tri-pod with a cross section hole piece. Each base has a fitting hole of 48.3mm for use with hollow tubing which is also available from WDS. The foot of the base has a zinc plated threaded insert allowing the user to apply levelling feet, castors or anti-vibration feet.

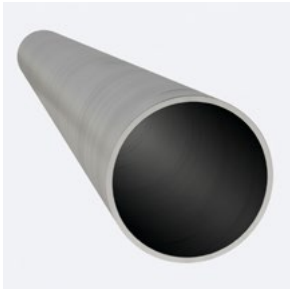
P 557



SKATE WHEELS & OMNI WHEELS

Conveyor Skate Wheels are an economical and efficient solution to materials handling. Typically used on gravity conveyors, these wheels are excellent for moving packages from A to B quickly. The wheels rotate on a bearing making it almost effortless to move goods around a factory on a conveyor. Omni Wheels like the standard Skate Wheels not only move in linear direction but they also offer the added benefit of moving in an 'omni directional' manner, meaning packages can be moved forwards, backwards and sideways.

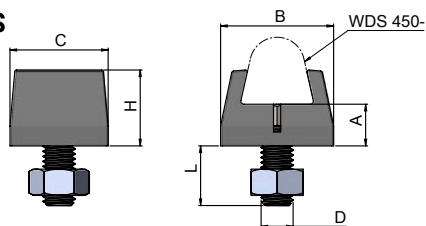
P 558-559



TUBE AND TUBING

This selection of stainless steel tube is available in various lengths and is ideal for building modular conveyors and frameworks.

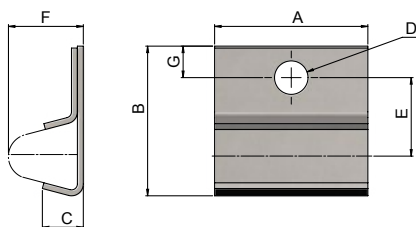
P 560



Single Cone Clamp with Thread Mounting **WDS 435**

PA Nylon (Thermoplastic)
Bolt - 304 A2 Stainless steel

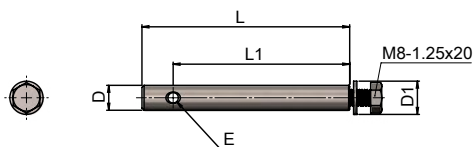
WDS No.	A	B	C	D	H	L	Weight (kg)
435-312XX	10.4	28.2	24.5	M8	19	15	0.03



Single Cone Clamp - Plate **WDS 435**

304 Stainless Steel

WDS No.	A	B	C	D	E	F	G	Weight (kg)
435-61200	38.5	38	10	8.5	20	19	8	0.03

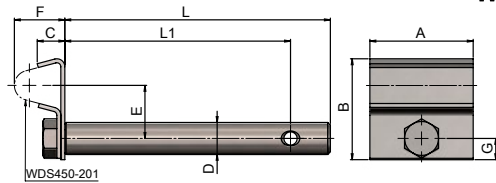


Support Rods - Stainless Steel **WDS 435**

304 Stainless Steel

WDS No.	D	D1	E	L	L1	Weight (kg)
435-12100	12	16	5	100	85	0.08
435-12150	12	16	5	150	135	0.12
435-12200	12	16	5	200	185	0.18
435-12300	12	16	5	300	285	0.27

304

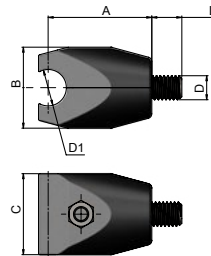


WDS 435 Single Cone Clamp - Stainless Steel with Rod

304 A2 Stainless Steel

WDS No.	A	B	C	D	E	F	G	L	L1	Weight (kg)
435-61210	38.5	38	10	12	20	19	8	100	85	0.11
435-61215	38.5	38	10	12	20	19	8	150	135	0.15
435-61220	38.5	38	10	12	20	19	8	200	185	0.21
435-61230	38.5	38	10	12	20	19	8	300	285	0.3

TP



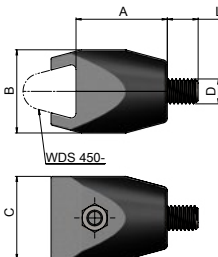
WDS 435 Single Round Clamp

Moulding - PA Nylon (Thermoplastic)

Bolt & Nut - 304 A2 Stainless Steel

WDS No.	A	B	C	D	D1	L	Weight (kg)
435-21200	34	26.7	26.7	M8	12	9.5	0.04

TP



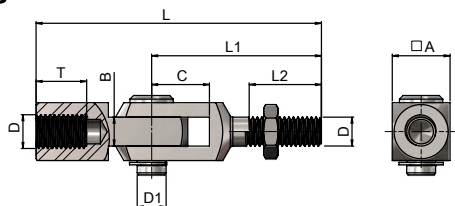
WDS 435 Single Cone Clamp

Moulding - PA Nylon (Thermoplastic)

Bolt & Nut - 304 A2 Stainless Steel

WDS No.	A	B	C	D	L	Weight (kg)
435-31200	29	26.7	26.7	M8	9.5	0.03

304

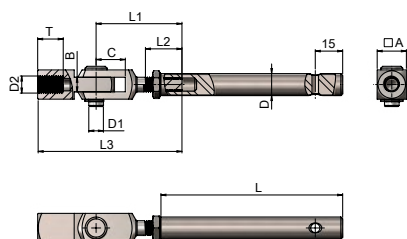


Clamp Support Angle Joint WDS 435

304 Stainless Steel
Pin and E-clip supplied

WDS No.	A	B	C	D	D1	L	L1	L2	T	Weight (kg)
435-120005	16	8	16	M8	8	79	47	20	14	0.1

304



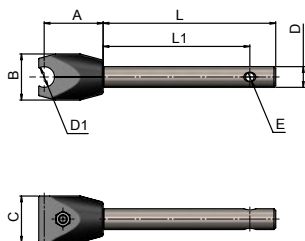
Clamp Support Rod with Angle Joint WDS 435

304 Stainless Steel
Pin and E-clip supplied

WDS No.	A	B	C	D	D1	D2	L	L1	L2	L3	T	Weight (kg)
435-121005	16	8	16	12	8	M8	100	31	20	79	14	0.18
435-121505	16	8	16	12	8	M8	150	31	20	79	14	0.23
435-122015	16	8	16	12	8	M8	200	31	20	79	14	0.28
435-123005	16	8	16	12	8	M8	300	31	20	79	14	0.37

TP

304



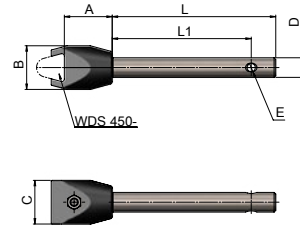
Single Round Clamp with Rod WDS 435

Moulding - PA Nylon (Thermoplastic)
Rod, Bolt & Nut - 304 A2 Stainless Steel

WDS No.	A	B	C	D	D1	E	L	L1	Weight (kg)
435-21210	34	26.7	26.7	12	12	5	100	85	0.12
435-21215	34	26.7	26.7	12	12	5	150	135	0.16
435-21220	34	26.7	26.7	12	12	5	200	185	0.22
435-21230	34	26.7	26.7	12	12	5	300	285	0.31

TP

304

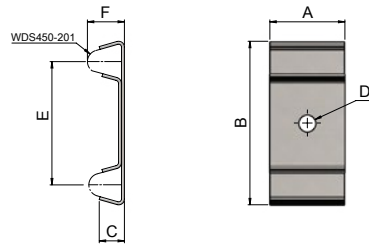


WDS 435 Single Cone Clamp with Rod

Moulding - PA Nylon (Thermoplastic)
Bolt & Nut - 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	L	L1	Weight (kg)
435-31210	29	26.7	26.7	12	5	100	85	0.12
435-31215	29	26.7	26.7	12	5	150	135	0.16
435-31220	29	26.7	26.7	12	5	200	185	0.22
435-31230	29	26.7	26.7	12	5	300	285	0.31

304

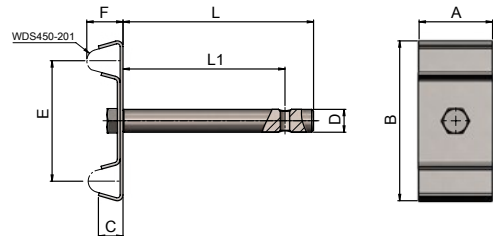


WDS 436 Double Cone Clamp - Plate

304 Stainless Steel

WDS No.	A	B	C	D	E	F	Weight (kg)
436-612600	38.5	84	13	8.5	63.5	19	0.06

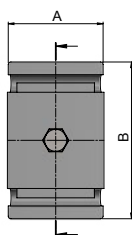
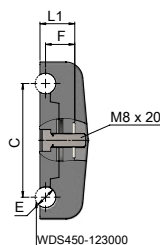
304



WDS 436 Double Cone Clamp - Stainless steel with Rod

304 Stainless Steel

WDS No.	A	B	C	D	E	F	L	L1	Weight (kg)
436-612610	38.5	84	13	12	63.5	19	100	85	0.14
436-612615	38.5	84	13	12	63.5	19	150	135	0.18
436-612620	38.5	84	13	12	63.5	19	200	185	0.24
436-612630	38.5	84	13	12	63.5	19	300	285	0.33



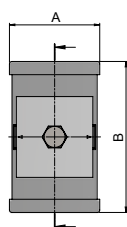
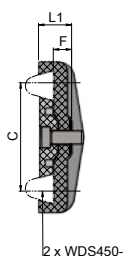
TP

Double Round Guide Rails Clamp No Rod WDS 436

Moulding - PA Nylon (Thermoplastic)

Bolt & Nut - 304 A2 Stainless Steel

WDS No.	A	B	C	E	F	L1	Weight (kg)
436-212400	58	63	40	12	17	20	0.07
436-212600	56	91	66	12	17	20	0.1



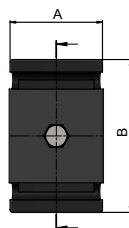
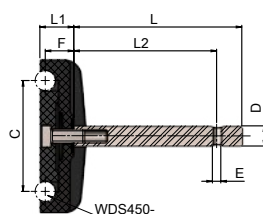
TP

Double Cone Guide Rails Clamp No Rod WDS 436

Moulding - PA Nylon (Thermoplastic)

Bolt & Nut - 304 A2 Stainless Steel

WDS No.	A	B	C	F	L1	Weight (kg)
436-312400	58	62	40	11	18	0.07
436-312600	55	91	66	11	18	0.09



TP

304

Double Round Guide Rail Clamps WDS 436

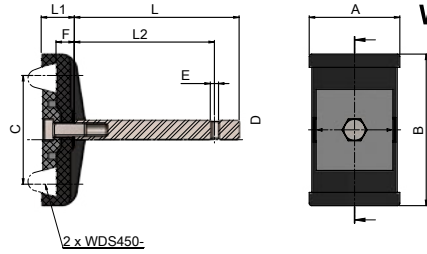
Moulding - PA Nylon (Thermoplastic)

Rod, Bolt & Nut - 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	F	L	L1	L2	Weight (kg)
436-212410	58	63	40	12	5	17	100	20	85	0.15
436-212415	58	63	40	12	5	17	150	20	135	0.2
436-212420	58	63	40	12	5	17	200	20	185	0.25
436-212430	58	63	40	12	5	17	300	20	285	0.34
436-212610	56	91	66	12	5	17	100	20	85	0.18
436-212615	56	91	66	12	5	17	150	20	135	0.23
436-212620	56	91	66	12	5	17	200	20	185	0.28
436-212630	56	91	66	12	5	17	300	20	285	0.37

TP

304



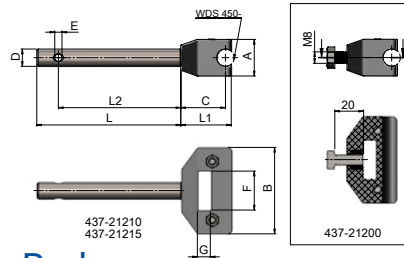
WDS 436 Double Cone Guide Rail Clamp

Moulding - PA Nylon (Thermoplastic)
Rod, Bolt & Nut - 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	F	L	L1	L2	Weight (kg)
436-312410	58	62	40	12	5	11	100	18	85	0.16
436-312415	58	62	40	12	5	11	150	18	135	0.2
436-312420	58	62	40	12	5	11	200	18	185	0.25
436-312430	58	62	40	12	5	11	300	18	285	0.34
436-312610	55	91	66	12	5	11	100	18	85	0.17
436-312615	55	91	66	12	5	11	150	18	135	0.21
436-312620	55	91	66	12	5	11	200	18	185	0.27
436-312630	55	91	66	12	5	11	300	18	285	0.36

TP

304



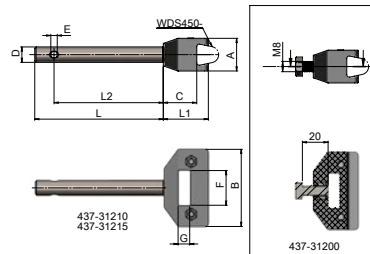
WDS 437 Adjustable Single Round Clamp with Rod

Moulding - PA Nylon (Thermoplastic)
Rod, Bolt & Nut - 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	F	G	L	L1	L2	Weight (kg)
437-21200	25	60	31	-	-	27	9.5	-	35	-	0.05
437-21210	25	60	31	12	5	27	9.5	100	35	85	0.13
437-21215	25	60	31	12	5	27	9.5	150	35	135	0.17
437-21220	25	60	31	12	5	27	9.5	200	35	185	0.23
437-21230	25	60	31	12	5	27	9.5	300	35	285	0.32

TP

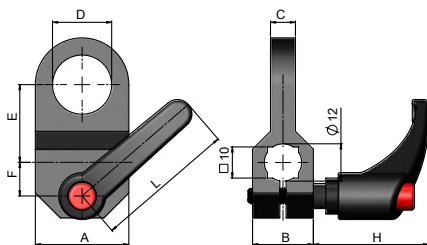
304



WDS 437 Adjustable Single Cone Clamp with Rod

Moulding - PA Nylon (Thermoplastic)
Rod, Bolt & Nut - 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	F	G	L	L1	L2	Weight (kg)
437-31200	25	60	26	-	-	27	9.5	-	35	-	0.06
437-31210	25	60	26	12	5	27	9.5	100	35	85	0.14
437-31215	25	60	26	12	5	27	9.5	150	35	135	0.18
437-31220	25	60	26	12	5	27	9.5	200	35	185	0.24
437-31230	25	60	26	12	5	27	9.5	300	35	285	0.33



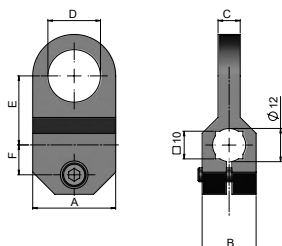
TP

Photocell Clamp - Quick Adjust Handle WDS 438

Moulding - PA Nylon (Thermoplastic)

Nut - 304 A2 Stainless Steel, Male thread - Zinc Plated Steel

WDS No.	A	B	C	D	E	F	H	L	Weight (kg)
438-2125	30	20	8	19	25	19.5	37	45	0.04



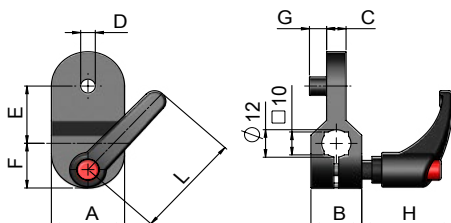
TP

Photocell Clamps WDS 438

Moulding - PA Nylon (Thermoplastic)

Bolt & Nut - 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	F	Weight (kg)
438-212	30	20	8	19	25	19.5	0.02



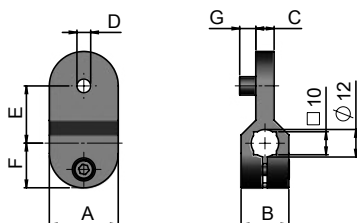
TP

Reflector Clamp - Quick Adjust Handle WDS 439

Moulding - PA Nylon (Thermoplastic)

Nut - 304 A2 Stainless Steel, Male thread - Zinc Plated Steel

WDS No.	A	B	C	D	E	F	G	H	L	Weight (kg)
439-2125	30	20	8	6	25	19.5	7	37	45	0.05



TP

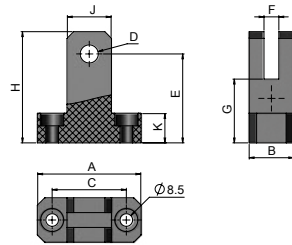
Reflector Clamp WDS 439

Moulding - PA Nylon (Thermoplastic)

Bolt & Nut - 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	F	G	Weight (kg)
439-212	30	20	8	6	25	19.5	7	0.02

TP

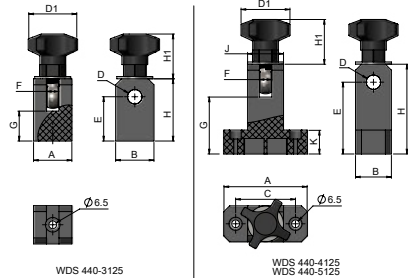


WDS 440 Plastic Mounting T Clamps 12mm Hole - Side Mounted

Material - PA Nylon (Thermoplastic)
Nuts and Screws 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	F	G	H	J	K	Weight (kg)
440-612	70	30	50	12.2	60	10.5	45	76	30	20	0.04

TP

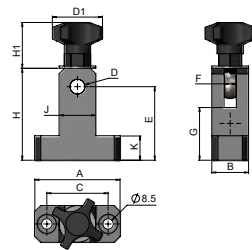


WDS 440 Plastic Mounting T-clamp with Eye-bolt Set

Material - PA Nylon (Thermoplastic)
Nuts and Screws 304 A2 Stainless Steel

WDS No.	A	B	C	D	D1	E	F	G	H	H1	J	K	Weight (kg)
440-3125	32	32	-	12.2	44	37	10.5	25	52	37.5	-	-	0.09
440-4125	70	30	50	12.2	44	60	10.5	46	75	37.5	30	20	0.12
440-5125	70	30	50	12.2	44	30	10.5	18	45	37.5	30	15	0.12

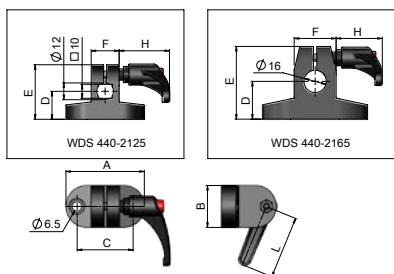
TP



WDS 440 Plastic Mounting T-Clamp with Eye-bolt

Material - PA Nylon (Thermoplastic)
Nuts and Screws 304 A2 Stainless Steel

WDS No.	A	B	C	D	D1	E	F	G	H	H1	J	K	Weight (kg)
440-6125	70	30	50	12.2	44	60	10.5	45	76	37.5	30	20	0.09



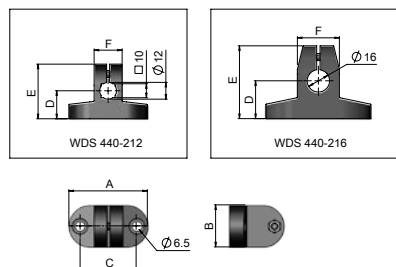
TP

T-Clamp - Quick Adjust Handle WDS 440

Moulding - PA Nylon (Thermoplastic)

Male thread - Zinc Plated Steel

WDS No.	A	B	C	D	E	F	H	L	Weight (kg)
440-2125	56	30	40	20	39	20	36	45	0.05
440-2165	75	40	55	27	52	30	33	45	0.1



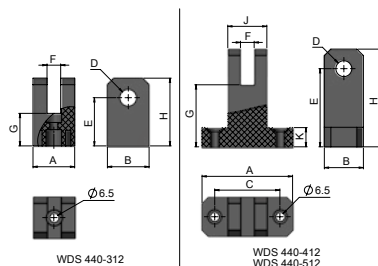
TP

T-Clamp WDS 440

Moulding - PA Nylon (Thermoplastic)

Clamping Bolt & Nut - 304 A2 Stainless Steel - supplied

WDS No.	A	B	C	D	E	F	Weight (kg)
440-212	56	30	40	20	39	20	0.03
440-216	75	40	55	27	52	30	0.07



TP

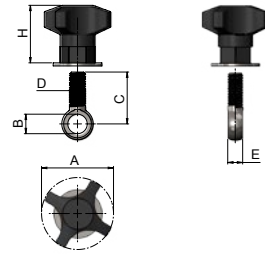
Plastic Mounting T Clamps 12mm Hole WDS 440

Material - PA Nylon (Thermoplastic)

Nuts and Screws 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	F	G	H	J	K	Weight (kg)
440-312	32	32	-	12.2	37	10.5	25	52	-	-	0.04
440-412	70	30	50	12.2	60	10.5	46	75	30	20	0.06
440-512	70	30	50	12.2	30	10.5	18	45	30	15	0.06

TP

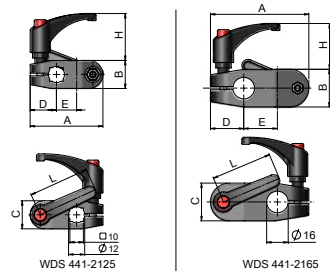


WDS 440 Star Knob & 12mm Eye Bolt Set

Moulding - PA Nylon (Thermoplastic)
Washer & Screw - 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	H	Weight (kg)
440-112	44	12	32	M10	9.8	35	0.05

TP

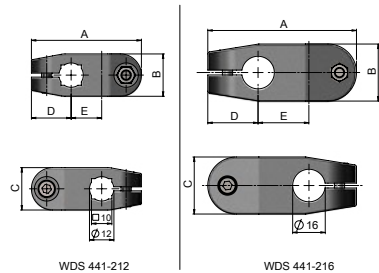


WDS 441 Cross Clamp with Quick Adjust Handles

Moulding - PA Nylon (Thermoplastic)
Nut - 304 A2 Stainless Steel, Male thread - Zinc Plated Steel

WDS No.	A	B	C	D	E	H	L	Weight (kg)
441-2125	54	21	21	19.5	15	35	45	0.07
441-2165	74	29	29	24.5	25	34	45	0.1

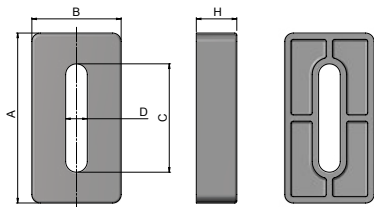
TP



WDS 441 Cross Clamp

Moulding - PA Nylon (Thermoplastic)
Bolt & Nut - 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	Weight (kg)
441-212	54	21	21	19.5	15	0.02
441-216	74	29	29	24.5	25	0.05

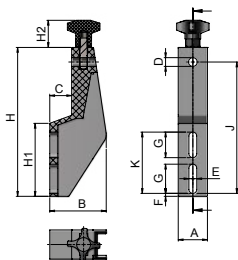


TP

Guide Rail Bracket Side Spacer WDS 442

PA Nylon (Thermoplastic)

WDS No.	A	B	C	D	H	Weight (kg)
442-101	80	42	51	10.2	19.05	0.03



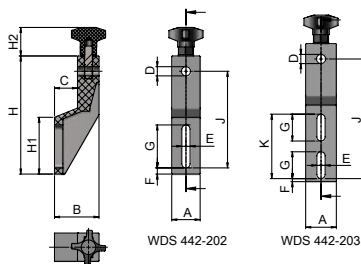
TP

Guide Rail Mounting Bracket - Large WDS 442

Moulding - PA Nylon (Thermoplastic)

Bolt - 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	F	G	H	H1	H2	J	K	Weight (kg)
442-204	40	76	30	12.2	10.8	4	40	204	100	37.5	188	86	0.22



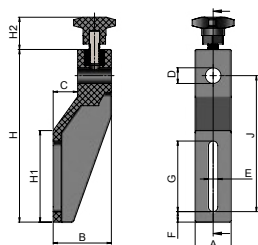
TP

Guide Rail Mounting Bracket WDS 442

Moulding - PA Nylon (Thermoplastic)

Bolt - 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	F	G	H	H1	H2	J	K	Weight (kg)
442-202	37	58	30	12.2	10.8	8	56	154	74	37.5	126	-	0.15
442-203	37	60	30	12.2	10.8	8	35	179	100	37.5	179	84	0.19



TP

Mini Guide Rail Mounting Brackets WDS 442

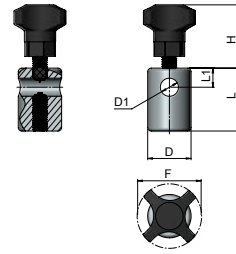
Moulding - PA Nylon (Thermoplastic)

Threads - Nickel Plated Steel

WDS No.	A	B	C	D	E	F	G	H	H1	H2	J	Weight (kg)
442-102	28	45	19	12	7.2	8	54	132	70	24	104	0.1

TP

304



WDS 443 Adjustable Bracket Head for Guide Rails

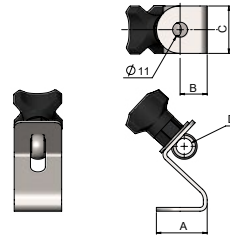
Body - 304 Stainless Steel

Star Knob - PA Nylon (Thermoplastic), Bolt & Thread 304 Stainless Steel

WDS No.	D	D1	F	H	L	L1	Weight (kg)
443-60328	29.9	12.4	44	44	43.3	13.2	0.23
443-60360	29.9	12.4	44	44	75	13.2	0.4

TP

304



WDS 443 Adjustable Bracket Head for Guide Rails with Z Bracket

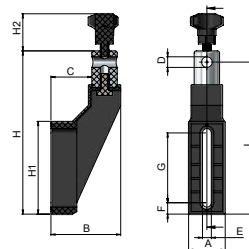
Bracket - 304 Stainless Steel

Star Knob - PA Nylon (Thermoplastic), Bolt & Thread 304 Stainless Steel

WDS No.	A	B	C	D	Weight (kg)
443-60343	37.5	20	35	12	0.14

TP

304

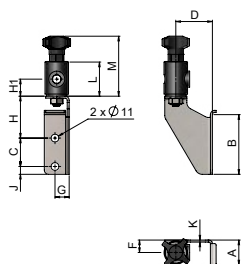


WDS 443 Adjustable Guide Rail Mounting Bracket with 304 Stainless Head

Moulding - PA Nylon (Thermoplastic)

Head - 304 A2 Stainless Steel

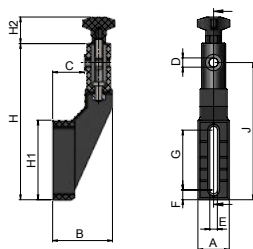
WDS No.	A	B	C	D	E	F	G	H	H1	H2	J	Weight (kg)
443-20369	43	82	48	12.5	10.4	13.5	82	192	109	44	179	0.43
443-20399	43	82	48	12.5	10.4	13.5	82	224	109	44	210	0.6



Side Bracket with Nylon Head - 304 Stainless Steel WDS 443

Frame - 304 Stainless Steel
Bolt, Nut and Eye - 304 A2 Stainless Steel

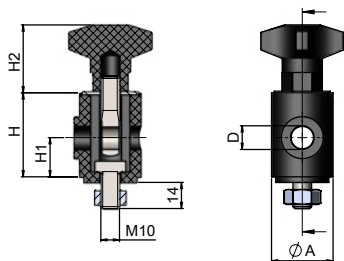
WDS No.	A	B	C	D	E	F	G	H	H1	J	K	L	M	Weight (kg)
443-60346	35	84	40	52	35	17.5	20	59	24	11	2.8	48	84	0.32
443-60363	35	84	40	52	35	17.5	20	59	39	11	2.8	65	101	0.33



Adjustable Guide Rail Mounting Bracket WDS 443

Moulding - PA Nylon (Thermoplastic)
Threads & Fixings - 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	F	G	H	H1	H2	J	Weight (kg)
443-20366	43	82	43.5	12	10.4	13.5	82	197	109	37.5	173	0.28
443-20384	43	82	43.5	12	10.4	13.5	82	214	109	37.5	188	0.29

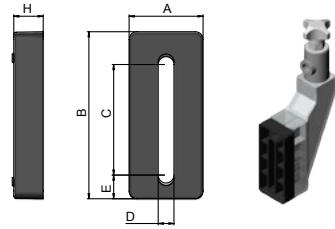


Adjustable Bracket Head for Guide Rails WDS 443

Housing - PA Nylon (Thermoplastic)
Fixings - 304 A2 Stainless Steel

WDS No.	A	D	H	H1	H2	Weight (kg)
443-20322	33	12	45	21	37.5	0.12
443-20340	33	12	62	36	37.5	0.12

TP

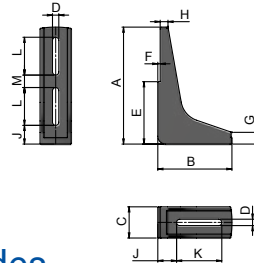


WDS 443 Conveyor Guide Bracket Side Spacer

PA Nylon (Thermoplastic)

WDS No.	A	B	C	D	E	H	Weight (kg)
443-101	48	108	71.5	10.2	15.3	19	0.05

TP

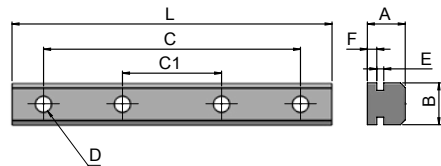


WDS 443 Side Mounting Bracket for Conveyor Guides

PA Nylon (Thermoplastic)

WDS No.	A	B	C	D	E	F	G	H	J	K	L	M	Weight (kg)
443-001	150	95	40	8.2	80	3	15	10	24	58	48.5	16	0.12

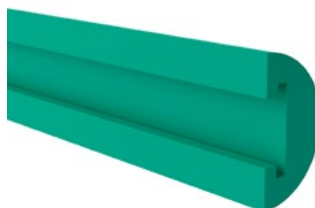
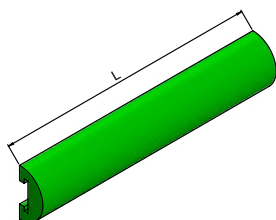
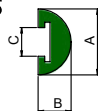
AL



WDS 450 T-slot Conveyor Guide Rail Connector

Aluminium profile

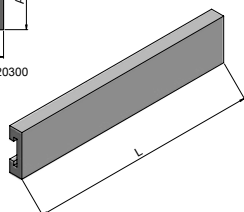
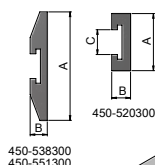
WDS No.	A	B	C	C1	D	E	F	L	Weight (kg)
450-5015	12	13.25	81.4	31.4	M6	2	2	101	0.04



T-slot Conveyor Guide Rail Wear Strip HDPE - Green **WDS 450**

Moulding - HDPE - Green

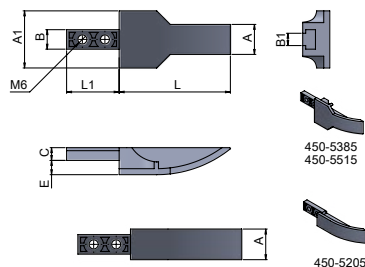
WDS No.	A	B	C	L	Weight (kg)
450-518300	20	10	8.7	3000	0.36



T-slot Conveyor Guide Rail Wear Strip HDPE - White **WDS 450**

Moulding - HDPE - White

WDS No.	A	B	C	L	Weight (kg)
450-520300	20.4	6.6	8.7	3000	0.26
450-538300	38.1	6	8.7	3000	0.48
450-551300	50.8	6	8.7	3000	0.6



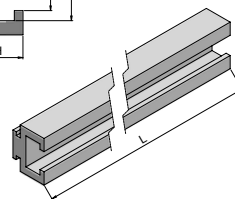
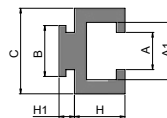
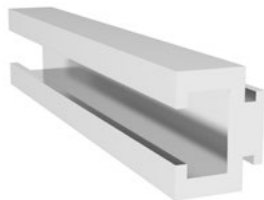
NYL

T-slot Conveyor Guide Rail Shoe **WDS 450**

Nylon

WDS No.	A	A1	B	B1	C	E	L	L1	Weight (kg)
450-5205	20	-	13	8.2	8.5	9.5	75	35	0.02
450-5385	20	38.1	13	8.2	8.5	9.5	75	35	0.02
450-5515	20	50.8	13	8.2	8.5	9.5	75	35	0.03

AL



WDS 450 Conveyor Guide Support Aluminium

Aluminium profile

WDS No.	A	A1	B	C	H	H1	L	Weight (kg)
450-501300	8.7	13.4	11.9	20	11.8	3.6	3000	1.31

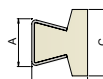
303



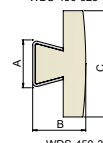
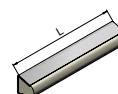
WDS-450-201



WDS-450-312



WDS-450-325



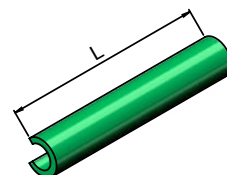
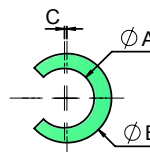
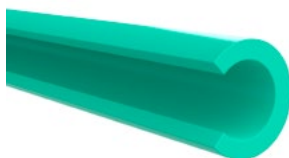
WDS-450-340

WDS 450 Conveyor Linear Guide Rails - Stainless Backed HDPE

Moulding - HDPE

Frame - 303 Stainless Steel

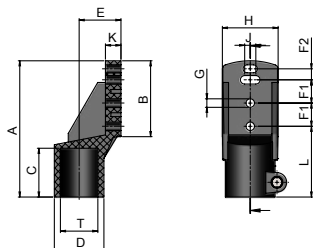
WDS No.	A	B	C	L	Weight (kg)
450-201	17	17.5	7	3000	0.58
450-312	17	17.5	12	3000	1.7
450-325	17	17.5	25	3000	2.02
450-340	17	17.5	40	3000	2.44



WDS 450 Conveyor Guide Rail HDPE 12mm Guide Sheath

Moulding - HDPE - Green

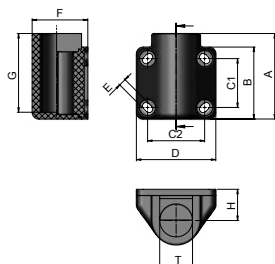
WDS No.	A	B	C	L	Weight (kg)
450-112	12	18	0.5	Per Metre	0.07



Side Mounting Top Bracket with Fixing Holes WDS 433

Moulding - PA Nylon (Thermoplastic)
Bolt and nut in 304 A2 Stainless Steel

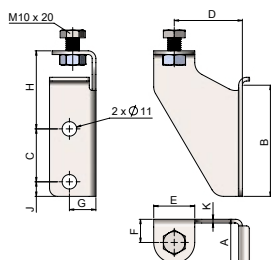
WDS No.	A	B	C	D	E	F1	F2	G	H	J	K	L	T	Weight (kg)
433-248	176	98	63	64	54	30	14.2	11	72	14.4	20	91	48.3	0.38



Side Mounting Top Bracket with Parallel Fixing Holes WDS 433

Moulding - PA Nylon (Thermoplastic)

WDS No.	A	B	C1	C2	D	E	F	G	H	T	Weight (kg)
433-348	126	106	72	84	117	11	82	116	46	48.3	0.45

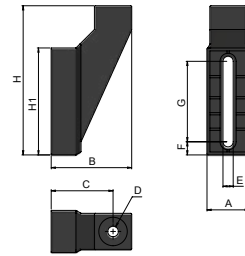


Side Bracket Base - 304 Stainless Steel WDS 433

Frame - 304 Stainless Steel
Bolt and Nut in 304 Stainless Steel

WDS No.	A	B	C	D	E	F	G	H	J	K	Weight (kg)
443-60300	35	84	40	52	35	17.5	20	59	11	2.8	0.21

TP

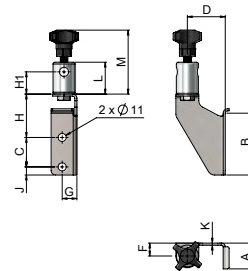


WDS 443 Adjustable Guide Rail Mounting Base

PA Nylon (Thermoplastic)

WDS No.	A	B	C	D	E	F	G	H	H1	Weight (kg)
443-20300	43	82	63	10.8	10.4	13.5	82	152	109	0.17

304



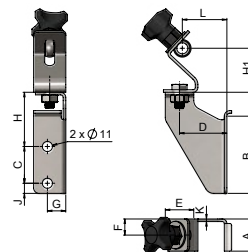
WDS 443 Side Bracket with Stainless Steel Head - 304 Stainless Steel

Frame - 304 Stainless Steel

Head, Bolt in 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	F	G	H	H1	J	K	L	M	Weight (kg)
443-60352	35	84	40	52	35	17.5	20	59	30	11	2.8	43	87	0.44
443-60383	35	84	40	52	35	17.5	20	59	62	11	2.8	75	119	0.6

304

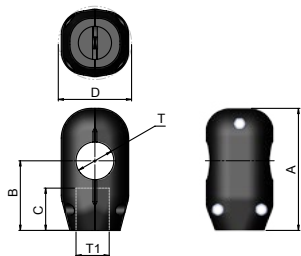


WDS 443 Side Bracket with Z Bracket Head - 304 Stainless Steel

Frame - 304 Stainless Steel

Head, Bolt in 304 A2 Stainless Steel

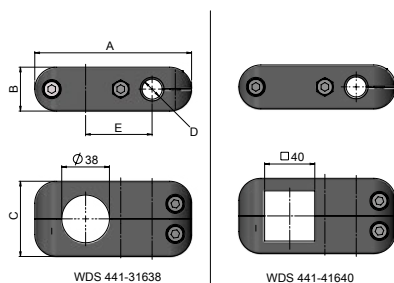
WDS No.	A	B	C	D	E	F	G	H	H1	J	K	L	Weight (kg)
443-60366	35	84	40	52	35	17.5	20	59	48	11	2.8	48	0.34



Connecting Joint Support - Vert: 48.3mm Horiz: 42.4mm **WDS 432**

Moulding - PA Nylon (Thermoplastic)
Bolt and nut in 304 A2 Stainless Steel

WDS No.	A	B	C	D	T	T1	Weight (kg)
432-248	156	89	54	94	48.3	42.4	0.52

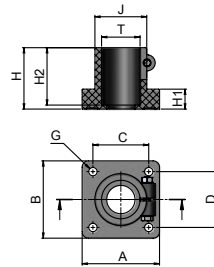


Cross Clamp for Conveyors **WDS 441**

Moulding - PA Nylon (Thermoplastic)
Bolt and nut in 304 A2 Stainless Steel

WDS No.	A	B	C	D	E	Weight (kg)
441-31638	124	35	60	16	52	0.26
441-41640	124	35	60	16	52	0.23

TP

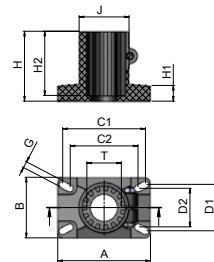


WDS 434 Square Support Heads

Moulding - PA Nylon (Thermoplastic)
Bolt and nut in 304 A2 Stainless Steel

WDS No.	A	B	C	D	G	H	H1	H2	J	T	Weight (kg)
434-248	97	97	70	70	10.5	77	25	72	65	48.3	0.26

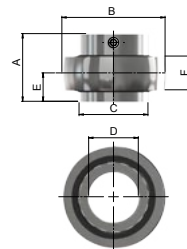
TP



WDS 434 Rectangle Support Heads

Moulding - PA Nylon (Thermoplastic)
Bolt and nut in 304 A2 Stainless Steel

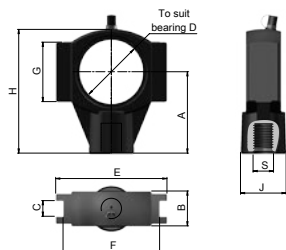
WDS No.	A	B	C1	C2	D1	D2	G	H	H1	H2	J	T	Weight (kg)
434-348	130	85	116	95	65	54	9	98	22	90	70	48.3	0.35



WDS 444 Support Bearing - Self Aligning

Bearing Steel/404 Stainless Steel Body
Bearing Steel/404 Stainless Steel Balls, Plastic Seals

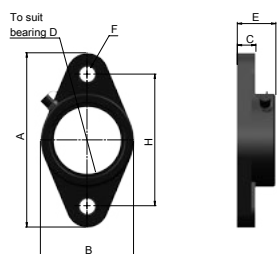
Steel	Stainless Steel	A	B	C	D	E	F	Weight (kg)
444-2025	444-6025	34.1	52	34.7	25	14.3	17	0.2



Support Bearing Housing Mount - Self Aligning WDS 444

Housing - High performance thermoset resin plastic

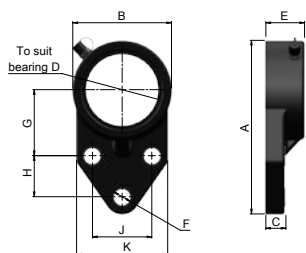
WDS No.	A	B	C	D	E	F	G	H	J	S	Weight (kg)
444-2125	64	27.5	12	25	87.5	76	47	98	38	M16x2.0	0.15



Support Bearing Housing Mount 2 Hole - Self Aligning WDS 444

Housing - High performance thermoset resin plastic

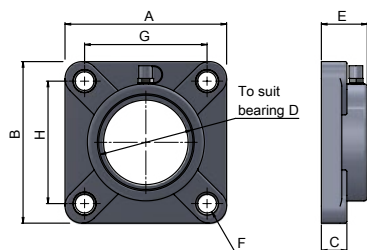
WDS No.	A	B	C	D	E	F	H	Weight (kg)
444-2225	131	70	14	25	29	11	99	0.1



Support Bearing Housing Mount 3 Hole - Self Aligning WDS 444

Housing - High performance thermoset resin plastic

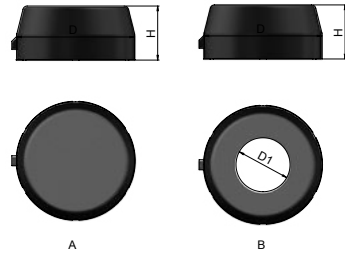
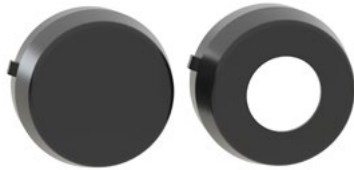
WDS No.	A	B	C	D	E	F	G	H	J	K	Weight (kg)
444-2325	121	70	14	25	27	11	46	28.6	41.3	63.5	0.1



Support Bearing Housing Mount 4 Hole - Self Aligning WDS 444

Housing - High performance thermoset resin plastic

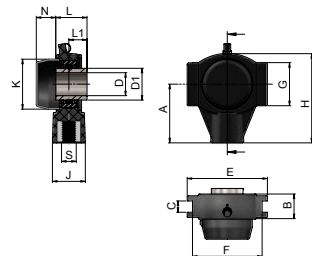
WDS No.	A	B	C	D	E	F	G	H	Weight (kg)
444-2425	95	95	15	25	29	11	75	75	0.15



WDS 444 Bearing Cover

ABS Plastic with EPDM seal

WDS No.	D	D1	H	Description	Weight (kg)
444-2525	54.5	0	25	B	0.02
444-2625	54.5	25	25	A	0.01



WDS 444 Bearing Housing M16 with Steel Bearing and Blind Cover

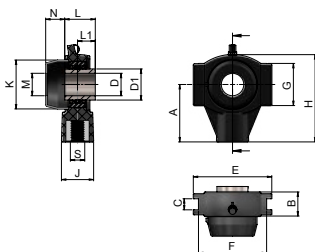
Housing - High performance thermoset resin plastic
Bearing - Steel with plastic seals

WDS No.	A	B	C	D	D1	E	F	G	H	J	K	L	L1	N	S	Weight (kg)
444-212520	64	27.5	12	25	34.7	87.5	76	47	98	38	54.5	34.1	19.8	21.2	M16x2.0	0.36

WDS 444 Bearing Housing M16 with Stainless Steel Bearing and Through Hole Cover

Housing - High performance thermoset resin plastic
Bearing - Stainless Steel 404 with plastic seals

WDS No.	A	B	C	D	D1	E	F	G	H	J	K	L	L1	N	S	Weight (kg)
444-212560	64	27.5	12	25	34.7	87.5	76	47	98	38	54.5	34.1	19.8	21.2	M16x2.0	0.36



Bearing Housing M16 with Steel Bearing and Through Hole Cover WDS 444

Housing - High performance thermoset resin plastic

Bearing - Steel with plastic seals

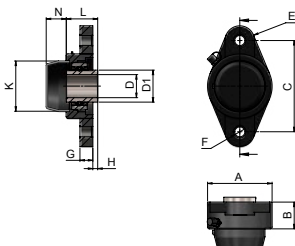
WDS No.	A	B	C	D	D1	E	F	G	H	J	K	L	L1	M	N	S	Weight (kg)
444-212525	64	27.5	12	25	34.7	87.5	76	47	98	38	54.5	34.1	19.8	25	21.2	M16x2.0	0.37

Bearing Housing M16 with Stainless Steel Bearing and Through Hole Cover WDS 444

Housing - High performance thermoset resin plastic

Bearing - Stainless Steel 404 with plastic seals

WDS No.	A	B	C	D	D1	E	F	G	H	J	K	L	L1	M	N	S	Weight (kg)
444-212565	64	27.5	12	25	34.7	87.5	76	47	98	38	54.5	34.1	19.8	25	21.2	M16x2.0	0.37

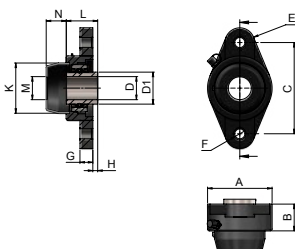


2-hole Bearing Housing with Stainless Steel Bearing and Blind Cover WDS 444

Housing - High performance thermoset resin plastic

Bearing - Stainless Steel 404 with plastic seals

WDS No.	A	B	C	D	D1	E	F	G	H	K	L	M	N	Weight (kg)
444-222525	70	29	99	25	34.7	16	11	14	5.3	54.5	34.1	25	21.2	0.32



2-hole Bearing Housing with Steel Bearing and Through Hole Cover WDS 444

Housing - High performance thermoset resin plastic

Bearing - Steel with plastic seals

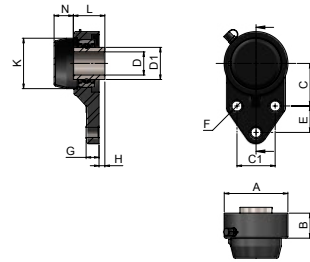
WDS No.	A	B	C	D	D1	E	F	G	H	K	L	N	Weight (kg)
444-222520	70	29	99	25	34.7	16	11	14	5.3	54.5	34.1	21.2	0.32

2-hole Bearing Housing with Stainless Steel Bearing and Through Hole Cover WDS 444

Housing - High performance thermoset resin plastic

Bearing - Stainless Steel 404 with plastic seals

WDS No.	A	B	C	D	D1	E	F	G	H	K	L	M	N	Weight (kg)
444-222565	70	29	99	25	34.7	16	11	14	5.3	54.5	34.1	25	21.2	0.32



WDS 444 3-hole Bearing Housing with Steel Bearing and Blind Cover

Housing - High performance thermoset resin plastic

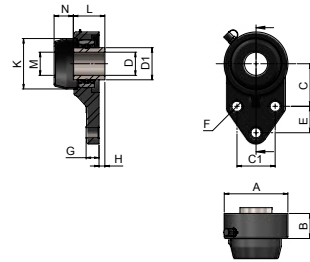
WDS No.	A	B	C	C1	D	D1	E	F	G	H	K	L	N	Weight (kg)
444-232520	70	27	46	41.3	25	34.7	28.6	11	14	6.3	54.5	34.1	21.2	0.32

WDS 444 3-hole Bearing Housing with Stainless Steel Bearing and Blind Cover

Housing - High performance thermoset resin plastic

Bearing - 404 Stainless Steel with plastic seals

WDS No.	A	B	C	C1	D	D1	E	F	G	H	K	L	N	Weight (kg)
444-232560	70	27	46	41.3	25	34.7	28.6	11	14	6.3	54.5	34.1	21.2	0.32



WDS 444 3-hole Bearing Housing with Steel Bearing and Through Hole Cover

Housing - High performance thermoset resin plastic

Bearing - Steel with plastic seals

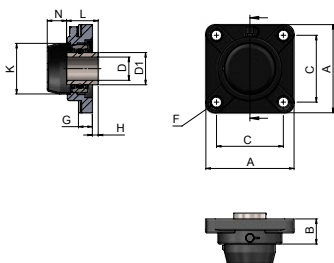
WDS No.	A	B	C	C1	D	D1	E	F	G	H	K	L	N	Weight (kg)
444-232525	70	27	46	41.3	25	34.7	28.6	11	14	6.3	54.5	34.1	21.2	0.32

WDS 444 3-hole Bearing Housing with Stainless Steel Bearing and Through Hole Cover

Housing - High performance thermoset resin plastic

Bearing - 404 Stainless Steel with plastic seals

WDS No.	A	B	C	C1	D	D1	E	F	G	H	K	L	M	N	Weight (kg)
444-232565	70	27	46	41.3	25	34.7	28.6	11	14	6.3	54.5	34.1	25	21.2	0.32



4-hole Bearing Housing with Steel Bearing and Blind Cover **WDS 444**

Housing - High performance thermoset resin plastic

Bearing - Steel with plastic seals

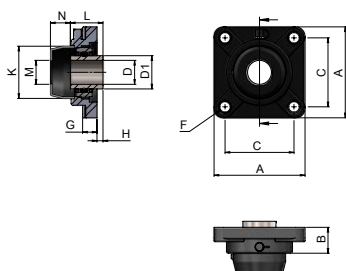
WDS No.	A	B	C	D	D1	F	G	H	K	L	N	Weight (kg)
444-242520	95	27	72	25	34.7	11	15	6.3	54.5	34.1	21	0.36

4-hole Bearing Housing with Stainless Steel Bearing and Blind Cover **WDS 444**

Housing - High performance thermoset resin plastic

Bearing - 404 Stainless Steel with plastic seals

WDS No.	A	B	C	D	D1	F	G	H	K	L	N	Weight (kg)
444-242560	95	27	72	25	34.7	11	15	6.3	54.5	34.1	21	0.36



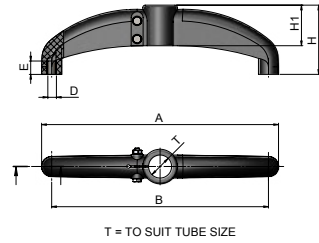
4-hole Bearing Housing with Stainless Steel Bearing and Through Hole Cover **WDS 444**

Housing - High performance thermoset resin plastic

Bearing - 404 Stainless Steel with plastic seals

WDS No.	A	B	C	D	D1	F	G	H	K	L	M	N	Weight (kg)
444-242565	95	27	72	25	34.7	11	15	6.3	54.5	34.1	25	21	0.37

TP

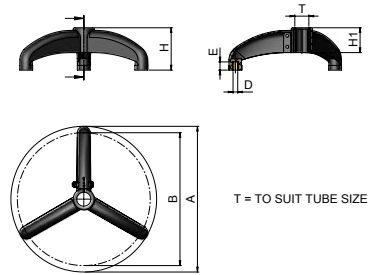


WDS 430 Bipod Support Bases - Straight 48.3

Frame - PA Nylon (Thermoplastic)
Threaded Insert - Brass - Zinc plated

WDS No.	A	B	D	E	H	H1	T	LOAD	Weight (kg)
430-248	500	455	M16 x 2.0	28	145	85	48.3	500kg	1.08

TP

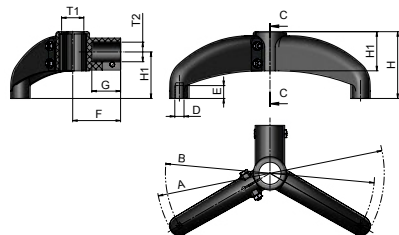


WDS 430 Tripod Support Bases

Frame - PA Nylon (Thermoplastic)
Threaded Insert - Brass - Zinc plated

WDS No.	A	B	D	E	H	H1	T	LOAD	Weight (kg)
430-348	500	455	M16 x 2.0	28	145	85	48.3	500 kg	1.54

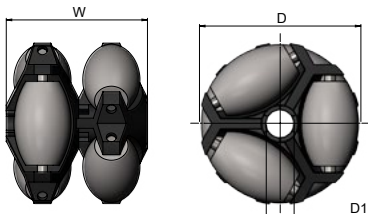
TP



WDS 431 Bipod Support Base with Cross Support

Frame - PA Nylon (Thermoplastic)
Threaded Insert - Brass - Zinc plated

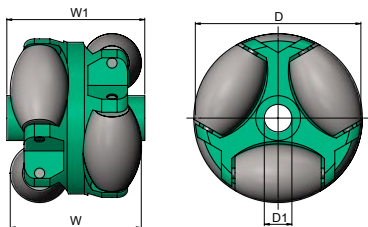
WDS No.	A	B	D	E	F	G	H	H1	T1	T2	LOAD	Weight (kg)
431-248	500	455	M16 x 2.0	28	104	62.5	145	101	48.3	42.4	500kg	1.35



Plastic Omni Wheel for Conveyors **WDS 565**

Polyoxymethylene (POM)

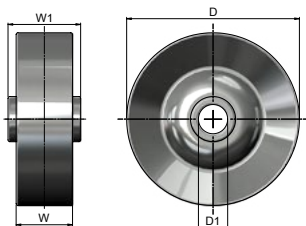
WDS No.	D	D1	W	Dynamic Load (kg)	Sold as	Static Load (kg)	Weight (kg)
565-2488	48	8.3	40	5 (Per Wheel)	Pair of interlocking wheels	5 (Per Wheel)	0.06



Plastic Omni Wheel for Conveyors - Bearing Type **WDS 565**

Polyoxymethylene (POM)

WDS No.	D	D1	W	W1	Dynamic Load (kg)	Static Load (kg)	Weight (kg)
565-3488	48	8.3	37	40	20	20	0.07

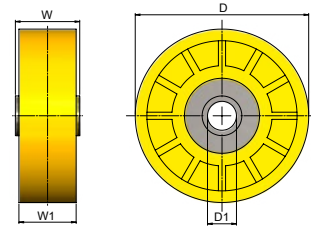


ZP

Steel Skate Wheel for Gravity Roller Conveyors **WDS 565**

Zinc Plated Steel

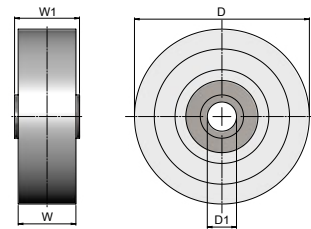
WDS No.	D	D1	W	W1	Dynamic Load (kg)	Static Load (kg)	Weight (kg)
565-4498	49	8.1	16	20.6	15	8	0.07



WDS 565 Plastic Skate Wheels for Gravity Roller Conveyors - ABS Yellow

Yellow ABS Plastic
Shielded Miniature Deep Grove Ball Bearing

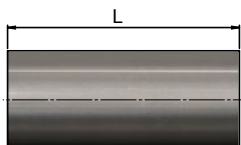
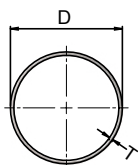
WDS No.	D	D1	W	W1	Dynamic Load (kg)	Static Load (kg)	Weight (kg)
565-4498Y	48.5	8.1	18	16	60	40	0.03



WDS 565 Plastic Skate Wheels for Gravity Roller Conveyors - ABS Grey

Grey ABS Plastic
Shielded Miniature Deep Grove Ball Bearing

WDS No.	D	D1	W	W1	Dynamic Load (kg)	Static Load (kg)	Weight (kg)
565-4498G	48.5	8.1	18	16	60	40	0.04



Conveyor Support Tube - 304 Stainless Steel **WDS 450**

Tube - 304 Stainless Steel

WDS No.	D	L	T	Weight (kg)
450-123000	12	3000	1	0.83
450-420500	42.4	500	1.5	0.77
450-420750	42.4	750	1.5	1.16
450-421000	42.4	1000	1.5	1.54
450-421250	42.4	1250	1.5	1.93
450-421500	42.4	1500	1.5	2.31
450-423000	42.4	3000	1.5	4.63
450-480500	48.3	500	1.5	0.88
450-480750	48.3	750	1.5	1.32
450-481000	48.3	1000	1.5	1.76
450-481250	48.3	1250	1.5	2.21
450-481500	48.3	1500	1.5	2.65
450-483000	48.3	3000	1.5	5.29



LEVELLING FEET

For the full range of Levelling Feet please see pages **325-378**

THREADED TUBE INSERTS

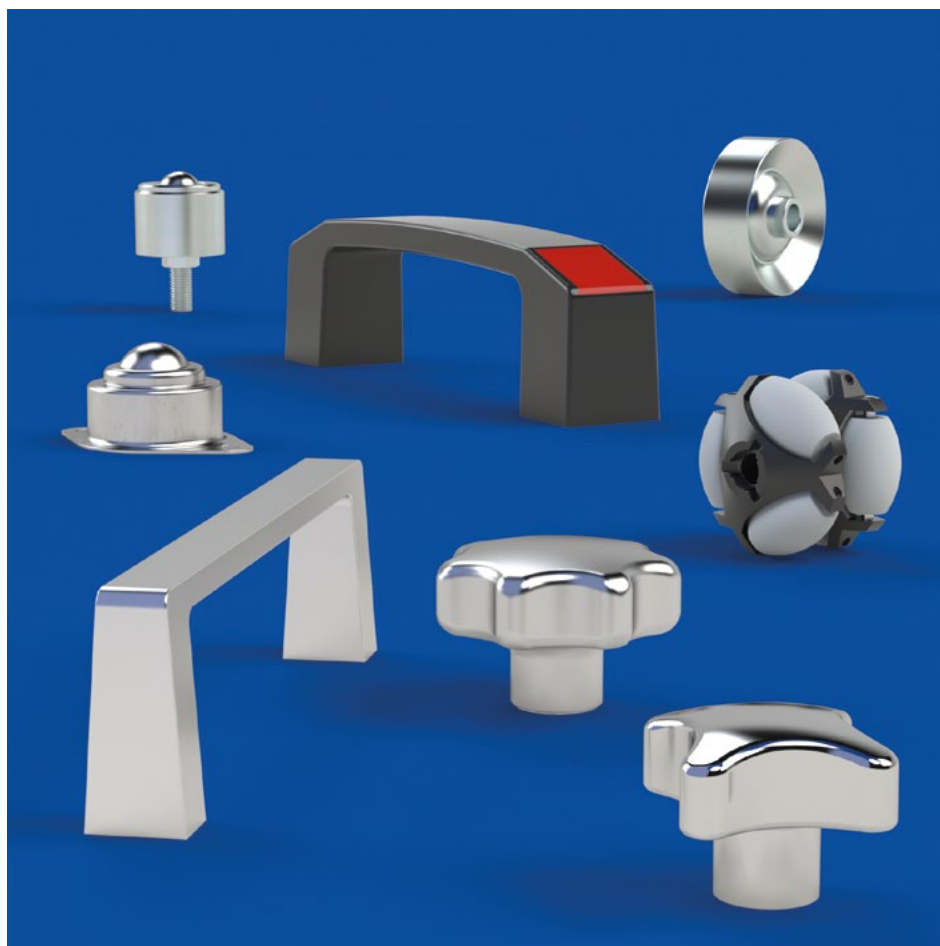
For the full range of Tube Inserts please see pages **497-502**

HAND LEVERS

For the full range of Hand Levers please see pages **171-212**

HINGES

For the full range of Hinges please see pages **295-323**



BRIDGE & BOW HANDLES

For the full range of Handles please see pages **257-282**

STAR KNOBS

For the full range of Hand Knobs please see pages **77-111**

SKATE WHEELS

For the full range of Skate Wheels please see pages **558-559**

BALL TRANSFER UNITS

For the full range of Ball Transfer Units please see pages **517-527**

FORK ENDS

Three versions of Fork Ends are available including a female threaded fork end, a Plain Shank Fork End and a Threaded Shank Fork End.

P 565

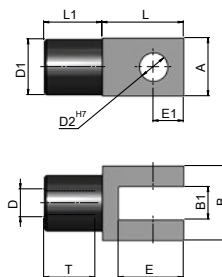


END FITTINGS

The end fitting range includes Clevis Forks, Clevis Eyes, Clevis Pins and Angle Joints. Materials include steel zinc plated and stainless steel.

P 566



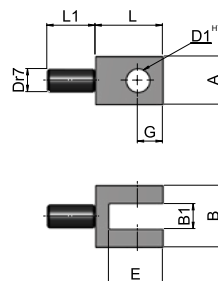


WDS 659 Fork Ends - Steel

Steel BS.970 Gr.070M20

Chemical black finish

WDS No.	A	B	B1	D	D1	D2 H7	E	E1	L	L1	T	Weight (kg)
659-201	12	16	7	M6	12	6	14	7	20	12	12	0.03
659-202	16	20	9	M8	15	8	18	9	23	16	14	0.05
659-203	20	25	11	M10	17	10	22	11	28	20	18	0.09
659-2035	20	25	12	M10	17	10	22	11	28	20	18	0.15
659-204	25	32	13	M12	24	12	28	13	35	25	22	0.2
659-2045	25	32	14	M12	24	12	28	13	35	25	22	0.19

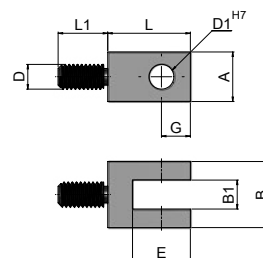


WDS 661 Fork End - Steel Plain Shank

Steel BS.970 Gr.070M20

Chemical black finish

WDS No.	A	B	B1	D r7	D1 H7	E	G	L	L1	Weight (kg)
661-202	16	20	9	8	8	18	9	23	16	0.04
661-203	20	25	11	10	10	22	11	28	20	0.08
661-2035	20	25	12	10	10	22	11	28	20	0.07
661-204	25	32	13	12	12	28	13	35	25	0.16
661-2045	25	32	14	12	12	28	13	35	25	0.15



WDS 661 Fork End - Steel - Threaded Shank

Steel BS.970 Gr.070M20

Chemical black finish

WDS No.	A	B	B1	D	E	G	L	L1	Weight (kg)
661-221	12	16	7	M6	14	7	20	12	0.02
661-222	16	20	9	M8	18	9	23	16	0.04
661-223	20	25	11	M10	22	11	28	20	0.08
661-2235	20	25	12	M10	22	11	28	20	0.07
661-224	25	32	13	M12	28	13	35	25	0.16
661-2245	25	32	14	M12	28	13	35	25	0.15



END FITTINGS

For the full range of End Fittings please see pages **53-73**



INDUSTRIAL SHOCK ABSORBERS

P 569-570

Industrial Shock Absorbers are designed to help improve manual product handling or when dealing with automated package handling. Benefits include: Increased productivity through raised machine speeds, smoother operation and operator comfort. Smooth deceleration of moving parts leading to reduced wear, lower noise and extended equipment life. Reduced maintenance, vibration and noise with benefits to health, safety and the working environment.



ADJUSTABLE SHOCK ABSORBERS

Adjustable Shock Absorbers have a single variable orifice connected to the adjuster wheel with a graduated scale. A few strokes after initial installation, the unit can be adjusted to match the application. The scale enables return to previous settings but does not in itself relate to a force value. The adjuster can be locked using the key supplied.

P 569

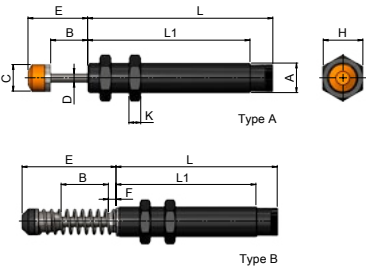
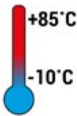


SELF COMPENSATING SHOCK ABSORBERS

Self Compensating Shock Absorbers are of the double tube type in which hydraulic oil is forced through small orifices as the piston retracts. The spacing and design of the orifices maintains a constant pressure on the piston throughout the full stroke leading to a near linear deceleration.

P 570

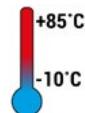
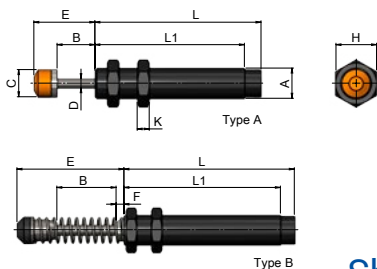




WDS 559 Shock Absorbers - Adjustable

Body - Steel
End Cap - Rubber
Operating Temperature: -10°C to 85°C
V = Velocity (m/s)
MEM = Max Effective Mass (kg)
MEC= Maximum Energy per cycle (Nm)
MEH = Maximum Energy per hour (Nm/hr)

WDS No.	A	B	C	D	E	F	H	K	L	L1	V	MEC	MEH	MEM	Type	Weight (kg)
559-14165P	M14x1.5	16	12	4	28	-	19	6	86	72	3.2	22	26400	120	A	0.11
559-20255P	M20X1.5	25	18	6	40	-	27	8	126	110	3.6	39	30000	312	A	0.28
559-25405P	M25x1.5	40	22	8	80	6.5	32	9	136	118	3.6	100	84000	700	B	0.47
559-36505P	M36X1.5	50	36	10	84	14	45	15	157	135	3.2	150	108000	1400	B	1.14



Shock Absorbers - Self Compensating WDS 559

Body - Steel

End Cap - See Table

Operating Temperature: -10°C to 85°C

V = Velocity (m/s)

MEM = Max Effective Mass (kg)

MEC = Maximum Energy per cycle (Nm)

MEH = Maximum Energy per hour (Nm/hr)

WDS No.	A	B	C	D	E	F	H	K	L	L1	V	CAP	Description	MEC	MEH	MEM	Type	Weight (kg)
559-10081P	M10x1.0	8	9	3	14	-	14	4	43	38	3	Nylon	Type A	4	14400	2	A	0.02
559-10082P	M10x1.0	8	9	3	14	-	14	4	43	38	1.5	Rubber	Type A	4	14400	4	A	0.02
559-10083P	M10x1.0	8	9	3	14	-	14	4	43	38	0.8	Rubber	Type A	4	14400	9	A	0.02
559-12101P	M12X1.0	10	10	3	19	-	14	4	48	45	3	Rubber	Type A	5	18800	5	A	0.03
559-12102P	M12X1.0	10	10	3	19	-	14	4	48	45	1.5	Rubber	Type A	5	18800	10	A	0.03
559-12103P	M12X1.0	10	10	3	19	-	14	4	48	45	0.8	Rubber	Type A	5	18800	30	A	0.03
559-14121P	M14x1.5	12	12	4	24	-	19	6	78	67	3	Rubber	Type A	15	36000	8	A	0.1
559-14122P	M14x1.5	12	12	4	24	-	19	6	78	67	1.5	Rubber	Type A	15	36000	50	A	0.1
559-14123P	M14x1.5	12	12	4	24	-	19	6	78	67	0.8	Rubber	Type A	15	36000	100	A	0.1
559-14201P	M14x1.5	20	12	4	32	-	19	6	83	72	3	Rubber	Type A	25	48000	12	A	0.1
559-14202P	M14x1.5	20	12	4	32	-	19	6	83	72	1.5	Rubber	Type A	25	48000	80	A	0.1
559-14203P	M14x1.5	20	12	4	32	-	19	6	83	72	0.8	Rubber	Type A	25	48000	160	A	0.1
559-20201P	M20x1.5	20	18	6	40	-	26	8	110	99	3.5	Rubber	Type A	40	48000	30	A	0.24
559-20202P	M20x1.5	20	18	6	40	-	26	8	110	99	2	Rubber	Type A	40	48000	200	A	0.24
559-20203P	M20x1.5	20	18	6	40	-	26	8	110	99	1	Rubber	Type A	40	48000	700	A	0.24
559-20501P	M20x1.5	50	18	6	65	-	26	8	140	128	3.5	Rubber	Type A	60	66000	50	A	0.3
559-20502P	M20x1.5	50	18	6	65	-	26	8	140	128	2	Rubber	Type A	60	66000	400	A	0.3
559-20503P	M20x1.5	50	18	6	65	-	26	8	140	128	1	Rubber	Type A	60	66000	1200	A	0.3
559-25251P	M25x1.5	25	22	8	40	-	32	9	112	100	4	Rubber	Type A	80	60000	200	A	0.36
559-25252P	M25x1.5	25	22	8	40	-	32	9	112	100	2.5	Rubber	Type A	80	60000	600	A	0.36
559-25253P	M25x1.5	25	22	8	40	-	32	9	112	100	1	Rubber	Type A	80	60000	1000	A	0.36
559-25501P	M25x1.5	50	22	8	88	6.5	32	9	142	130	4	Rubber	Type B	98	98000	15	B	0.49
559-25502P	M25x1.5	50	22	8	88	6.5	32	9	142	130	2.5	Rubber	Type B	98	98000	40	B	0.49
559-25503P	M25x1.5	50	22	8	88	6.5	32	9	142	130	1	Rubber	Type B	98	98000	160	B	0.49



UNIVERSAL JOINT & COUPLINGS

P 573-577

A Universal Joint acts as a shaft power transfer coupling between two rotary elements and is typically used to transmit motion over non-linear applications such as drive shafts. Each steel joint consists of two yoke end fittings positioned at 90 degrees of each other with a connecting cross shaft allowing the transmission of rotary motion between two unaligned shafts.



PLAIN BEARING UNIVERSAL JOINT

Steel Plain Bearing Universal Joints suitable for manual drives on platforms, slides, shutters etc.

P 573



NEEDLE ROLLER BEARING UNIVERSAL JOINTS

Needle roller bearing universal joints incorporate a closed end and can be used on various applications in the automotive industry and other specialist requirements.

P 574



RUBBER BELLOWS & GAITERS

Rubber Bellows & Gaiters are ideal for protecting universal joints from grease, dirt and dust

P 575



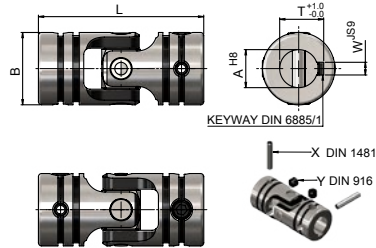
LINEAR COUPLINGS

Linear Couplings commonly act as a link between a piston rod and a fixture. Radial Offset Couplings offer a limited misalignment enabling compensation for any offset between the components.

The design allows the user to quickly couple or uncouple components using a T Slot configuration reducing assembly time and improving swap out action speeds

P 576-577





WDS 553 Single Plain Bearing Steel Universal Joint

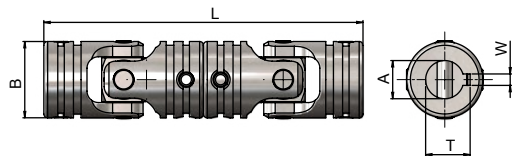
Joint yokes = 530M40 Alloy steel locally hardened and tempered around the bearings
Spider pins = 708M20 Molybdenum Chrome steel hardened and tempered

MAX RPM = 1500

F1 = Max Torque (Nm)
F2 = Static Torque (Nm)

X - Dowel pin DIN 1481 (2 off supplied)
Y - Screw DIN 916 (2 off supplied)

WDS No.	A	B	F1	F2	L	T	W (JS9)	X	Y	Max RPM	Weight (kg)
553-208	8	16	10	33	36	9	2	4x14	M4x4	1500	0.04
553-210	10	20	25	70	42	11.4	3	4x18	M4x5	1300	0.07
553-212	12	23	45	130	52	13.8	4	4x20	M6x5	1100	0.11
553-216	16	30	100	262	74	18.3	5	5x28	M6x6	900	0.26
553-220	20	36	150	463	87	22.8	6	6x35	M6x8	700	0.43
553-225	25	44	300	954	105	28.3	8	8x40	M8x8	600	0.77



KEYWAYED BOTH ENDS
DOWEL PIN 'X' SUPPLIED (2 OFF)
SCREW 'Y' SUPPLIED (2 OFF)

WDS 555 Double Plain Bearing Steel Universal Joint

Joint yokes = 530M40 Alloy steel locally hardened and tempered around the bearings
Spider pins = 708M20 Molybdenum Chrome steel hardened and tempered

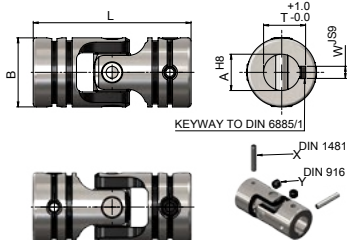
MAX RPM = 1500

X - Dowel pin DIN 1481 (2 off supplied)
Y - Screw DIN 916 (2 off supplied)

WDS No.	A (H8)	B	L	T	W (JS9)	X	Y	Max Torque Nm	Weight (kg)
555-208	8	16	72	9	2	4x14	M4x4	8	0.08
555-210	10	20	84	11.4	3	4x18	M4x5	17	0.15
555-212	12	23	104	13.8	4	4x20	M6x5	30	0.24
555-216	16	30	148	18.3	5	5x28	M6x6	62	0.6
555-220	20	36	174	22.8	6	6x35	M6x8	116	1
555-225	25	44	210	28.3	8	8x40	M8x8	230	1.82



WDS



Single Needle Roller Bearing Universal Joint **WDS 553**

Joint yokes = 530M40 Alloy steel locally hardened and tempered around the bearings.

Spider pins = 708M20 Molybdenum Chrome steel hardened and tempered.

MAX RPM = 3000

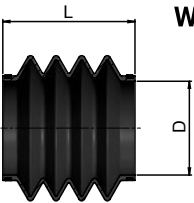
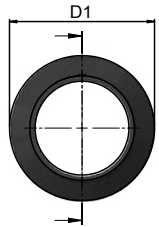
F1 = Max Torque (Nm)

F2 = Static Torque (Nm)

X - Dowel pin DIN 1481 (2 off supplied)

Y - Screw DIN 916 (2 off supplied)

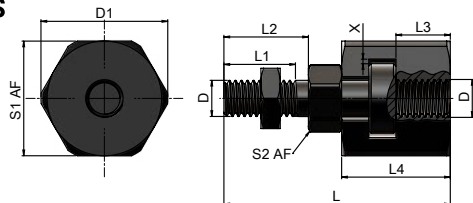
WDS No.	A	B	F1	F2	L	T	W (JS9)	X	Y	Weight (kg)
553-314	14	28	68	218	60	16.3	5	5x28	M6x6	0.18
553-319	19	36	176	564	78	21.8	6	6x35	M6x8	0.4
553-324	24	42	256	820	82	27.3	8	8x40	M8x8	0.56
553-328	28	50	328	1074	108	31.3	8	8x50	M8x10	1.03



WDS 554 Rubber Gaiters for Universal Joints

Oil and grease resistant rubber - EPDM
To suit Universal Joint with plain bearing
Supplied complete with nylon ties (2)

WDS No.	D	D1	L	Suits Universal Joint	Weight (kg)
554-016	16	24	24	553-208	0.01
554-020	20	32	29	553-210	0.01
554-023	23	35	35	553-212	0.01
554-030	30	44	45	553-216	0.01
554-036	36	59	51	553-220	0.02
554-044	44	68	62	553-225	0.03



Quick Fit Linear Coupling - Radial Offset Male Threaded Bolt Female Receiver **WDS 557**

EN8T (Phosphate Surface Coated)

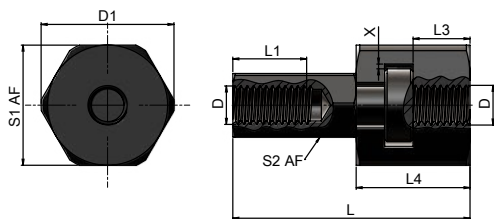
Metric Thin Nut Supplied

X = Maximum Radial Offset (mm)

Maximum axial load is the maximum permissible tensile or compressive stress (kN)

Note - The couplings are for use in linear motion and do not transmit any torque

WDS No.	D	D1	L	L1	L2	L3	L4	S1	S2	Max Axial Load (kN)	Radial Offset 'X'	Weight (kg)
557-306CA	M6 x 1.0	21	37.5	11	14	9	18	19	10	2.5	0.6	0.05
557-308CA	M8 x 1.25	26	45	13.5	17	11.5	22.5	24	13	4.5	0.7	0.09
557-310CA	M10 x 1.50	30	56.2	16	20	16	29	27	17	6.5	0.7	0.15
557-310FA	M10 x 1.25	30	56.2	16	20	16	29	27	17	6.5	0.7	0.15
557-312CA	M12 x 1.75	32.5	66.7	21	25	17	34	30	19	10	0.8	0.22
557-312FA	M12 x 1.25	32.5	66.7	21	25	17	34	30	19	10	0.8	0.22
557-316CA	M16 x 2.0	39	83	25	30	23	42	36	24	18	1	0.4
557-316FA	M16 x 1.5	39	83	25	30	23	42	36	24	18	1	0.41



Quick Fit Linear Coupling - Radial Offset Female Threaded Bolt Female Receiver **WDS 557**

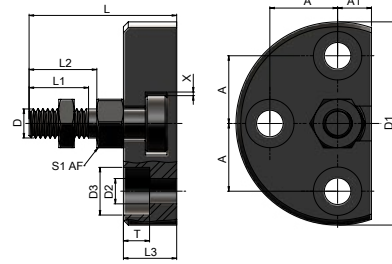
EN8T (Phosphate Surface Coated)

X = Maximum Radial Offset (mm)

Maximum axial load is the maximum permissible tensile or compressive stress (kN)

Note - The couplings are for use in linear motion and do not transmit any torque

WDS No.	D	D1	L	L1	L3	L4	S1	S2	Max Axial Load (kN)	Radial Offset 'X'	Weight (kg)
557-306CB	M6 x 1.0	21	37.5	11	9	18	19	10	2.5	0.6	0.05
557-308CB	M8 x 1.25	26	45	13.5	11.5	22.5	24	13	4.5	0.7	0.09
557-310CB	M10 x 1.50	30	56.2	15	16	29	27	17	6.5	0.7	0.16
557-310FB	M10 x 1.25	30	56.2	15	16	29	27	17	6.5	0.7	0.16
557-312CB	M12 x 1.75	32.5	66.7	17.5	17	34	30	19	10	0.8	0.23
557-312FB	M12 x 1.25	32.5	66.7	17.5	17	34	30	19	10	0.8	0.23
557-316CB	M16 x 2.0	39	83	22	23	42	36	24	18	1	0.41
557-316FB	M16 x 1.5	39	83	22	23	42	36	24	18	1	0.41



WDS 557 Quick Fit Linear Coupling - Radial Offset Male Threaded Bolt Plate Receiver

EN8T (Phosphate Surface Coated)

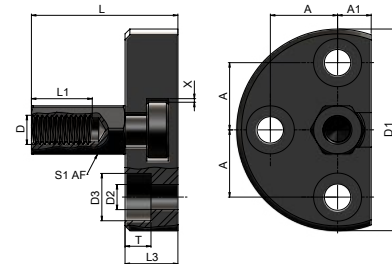
Metric Thin Nut Supplied

X = Maximum Radial Offset (mm)

Maximum axial load is the maximum permissible tensile or compressive stress (kN)

Note - The couplings are for use in linear motion and do not transmit any torque

WDS No.	D	D1	D2	D3	L	L1	L2	L3	S1	T	Max Axial Load (kN)	Radial Offset 'X'	Weight (kg)
557-406CA	M6 x 1.0	42	5.5	10	30.5	11	14	11	10	5.4	2.5	0.6	0.07
557-408CA	M8 x 1.25	48	6.6	11	35.5	13.5	17	13	13	6.4	4.5	0.7	0.13
557-410CA	M10 x 1.50	50	6.6	11	43.2	16	20	16	17	6.4	6.5	0.7	0.17
557-410FA	M10 x 1.25	50	6.6	11	43.2	16	20	16	17	6.4	6.5	0.7	0.17
557-412CA	M12 x 1.75	55	6.6	11	53.2	21	25	20.5	19	6.4	10	0.8	0.28
557-412FA	M12 x 1.25	55	6.6	11	53.2	21	25	20.5	19	6.4	10	0.8	0.28
557-416CA	M16 x 2.0	65	9	15	64	25	30	23	24	8.5	18	1	0.46
557-416FA	M16 x 1.5	65	9	15	64	25	30	23	24	8.5	18	1	0.47



WDS 557 Quick Fit Linear Coupling - Radial Offset Female Threaded Bolt Plate Receiver

EN8T (Phosphate Surface Coated)

X = Maximum Radial Offset (mm)

Maximum axial load is the maximum permissible tensile or compressive stress (kN)

Note - The couplings are for use in linear motion and do not transmit any torque

WDS No.	D	D1	D2	D3	L	L1	L3	S1	T	Max Axial Load (kN)	Radial Offset 'X'	Weight (kg)
557-406CB	M6 x 1.0	42	5.5	10	30.5	11	11	10	5.4	2.5	0.6	0.08
557-408CB	M8 x 1.25	48	6.6	11	35.5	13.5	13	13	6.4	4.5	0.7	0.13
557-410CB	M10 x 1.50	50	6.6	11	43.2	15	16	17	6.4	6.5	0.7	0.18
557-410FB	M10 x 1.25	50	6.6	11	43.2	15	16	17	6.4	6.5	0.7	0.18
557-412CB	M12 x 1.75	55	6.6	11	53.2	17.5	20.5	19	6.4	10	0.8	0.29
557-412FB	M12 x 1.25	55	6.6	11	53.2	17.5	20.5	19	6.4	10	0.8	0.29
557-416CB	M16 x 2.0	65	9	15	64	22	23	24	8.5	18	1	0.47
557-416FB	M16 x 1.5	65	9	15	64	22	23	24	8.5	18	1	0.47



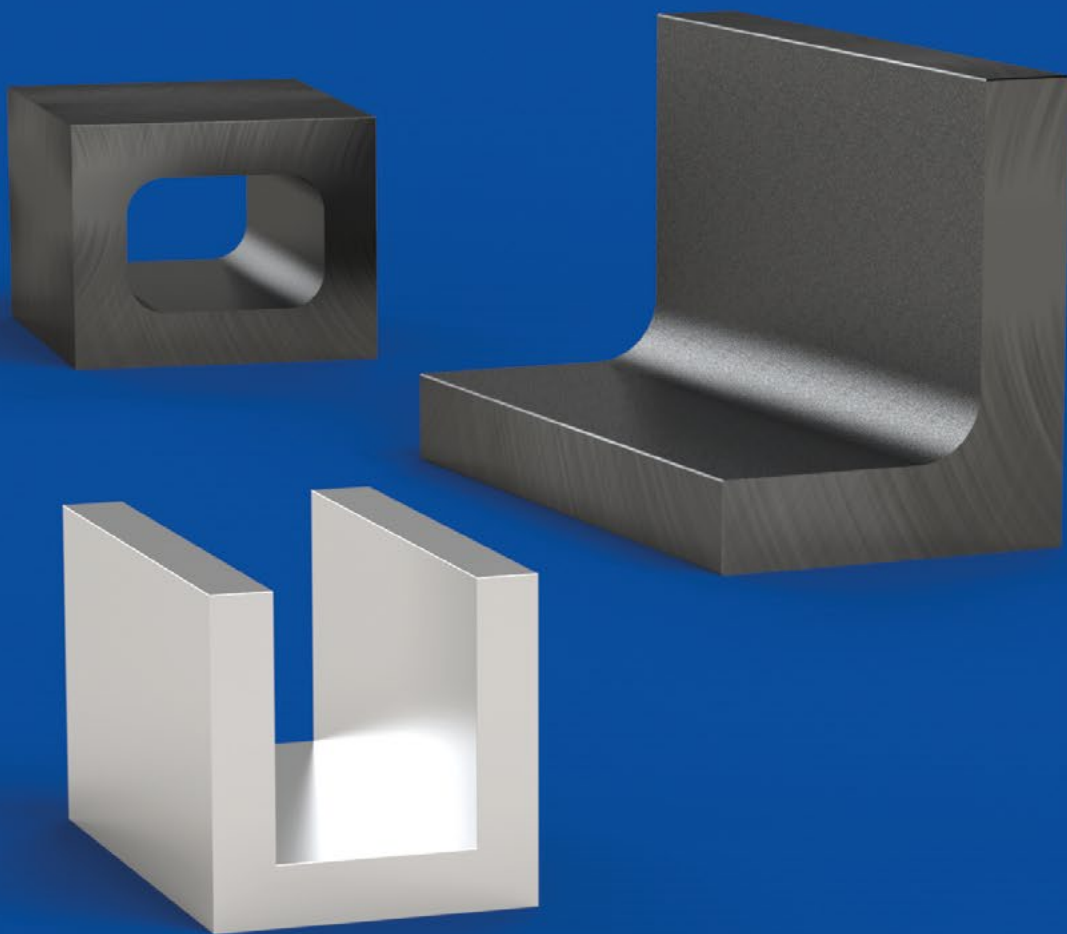
PARALLEL SHAFT KEYS

For the full range of Parallel Shaft Keys please see page **256**



JIG & FIXTURE

CAST IRON STEEL & ALUMINIUM PROFILES	Page 582
CLAMPS	Page 606
CNC FIXTURES TOMBSTONES & CUBES	Page 670
DRILL, GUIDE & LOCATION BUSHES	Page 676
GRIPPERS & CARBIDE CLAMPING PADS	Page 688
LIFTING EYES & HOIST RINGS	Page 716
LOCATION & RETRACTABLE SPRING PLUNGERS	Page 724
LOCATION PINS & POSITIONING PARTS	Page 756
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T NUTS AND T BOLTS	Page 854
TOGGLE CLAMPS & LATCHES	Page 864
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CAST IRON STEEL & ALUMINIUM PROFILES

P 584-604

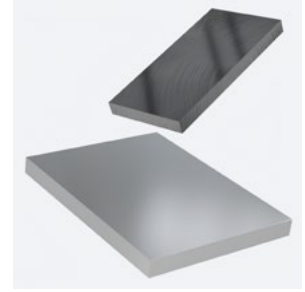
Choose from an extensive range of metal profiles consisting of cast iron, steel Profiles & aluminium Profiles. The plate range includes Base Plates, Back Plates, Hollow Blocks & a variety of shaped section including T-Section and U-Section.



METAL RECTANGULAR PLATES

WDS offers a choice of Metal Plate and which is available in different sizes and lengths. The range includes steel Rectangular Plate, cast iron Rectangular Plate & blocks and aluminium Rectangular Plate. These plates can be used on anything from workholding fixtures to machine building applications.

P 584-588

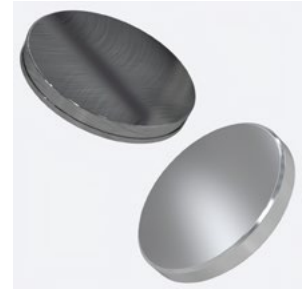


ROUND & CIRCULAR METAL PLATE

WDS Round Metal Plate or Circular Metal Plate as its also referred to can be used on workholding applications, jig and fixture tasks or for OEM machine builds.

Materials available include: steel and cast iron

P 589-590

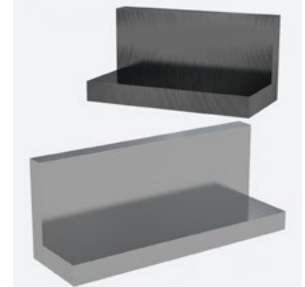


CAST IRON & ALUMINIUM L SECTION

The WDS range of Section includes cast iron L Section and aluminium L Section.

Variations on the standard L Section include Webbed L-Section, Slotted L Section and Unequal L Section.

P 591-595



U SECTION & PROFILE

WDS supply a select range of U Section and U Profile. U Section is also referred to as Channel Section and can be used on almost any engineering and manufacturing application.

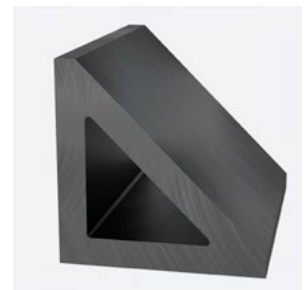
P 596-597

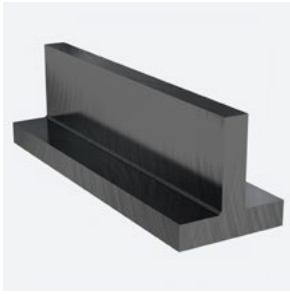


ANGULAR AND ANGLE SECTION

WDS Angular Section or Tri-Angle Section as it is also known offers a 30 or 45 degree angle for surface mounting, positioning or general use in the manufacturing and machine building process.

P 598





T SECTION

WDS offers two types of the T section: Equal T section and Unequal T section, both models are manufactured in cast iron.

P 599-600



H SECTION

WDS supplies high quality cast iron H Section from stock. Sizes available include 200 to 600 mm long with special sizes available upon request.

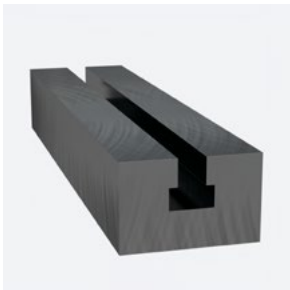
P 601



SQUARE & RECTANGULAR HOLLOW SECTION

WDS offers a range of rectangular and square hollow Section available from stock. This Hollow Block is manufactured from cast iron and is available in lengths of 100mm to 600mm. Special sizes are available upon request.

P 602



T SLOTTED SECTION

Choose from a selection of WDS T slotted section. This cast iron block has a 'T' slot cast in the centre for use with T nuts and T bolts.

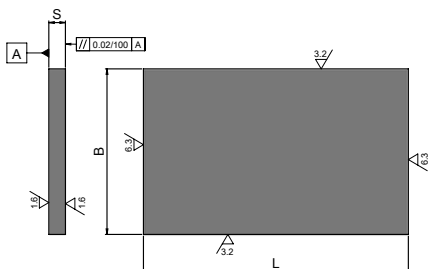
P 603



V BLOCK SECTION

V Block Section can be used on fixtures where round bar needs securing to a jig. V blocks are available from stock in lengths from 100mm to 500mm long. Other sizes are available upon request.

P 604



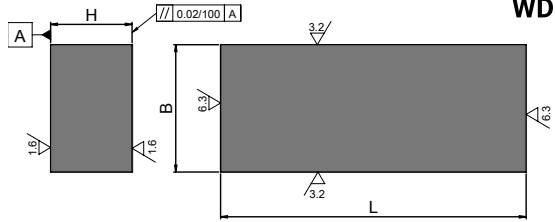
Rectangular Plate - Cast Iron - Thickness from 32mm-50mm WDS 920

BS EN 1561 1997-EN/GJL-250

(BS 1452 Gr 250)

WDS No.	B	L	S	Weight (kg)
920-429100	160	100	32	3.7
920-429200	160	200	32	7.4
920-429300	160	300	32	11.1
920-429400	160	400	32	14.7
920-429500	160	500	32	18.4
920-429600	160	600	32	22.1
920-429700	160	700	32	25.8
920-429800	160	800	32	29.5
920-430100	200	100	32	4.6
920-430200	200	200	32	9.2
920-430300	200	300	32	14
920-430400	200	400	32	18
920-430500	200	500	32	23
920-430600	200	600	32	28
920-430700	200	700	32	32
920-430800	200	800	32	36.53
920-431100	250	100	32	6
920-431200	250	200	32	12
920-431300	250	300	32	18
920-431400	250	400	32	23.5
920-431500	250	500	32	29.5
920-431600	250	600	32	36
920-431700	250	700	32	41.5
920-431800	250	800	32	47
920-432100	315	100	32	7.3
920-432200	315	200	32	14.5
920-432300	315	300	32	21.8
920-432400	315	400	32	29
920-432500	315	500	32	36.3
920-432600	315	600	32	43.5
920-432700	315	700	32	50.8
920-432800	315	800	32	58
920-433200	400	200	32	18.4

WDS No.	B	L	S	Weight (kg)
920-433400	400	400	32	36.8
920-433600	400	600	32	55.3
920-433800	400	800	32	73.7
920-4351000	200	1000	40	63
920-435200	200	200	40	11.5
920-435400	200	400	40	23
920-435600	200	600	40	34.5
920-435800	200	800	40	46
920-4361000	250	1000	40	76
920-436200	250	200	40	14.4
920-436400	250	400	40	28.8
920-436600	250	600	40	43.2
920-436800	250	800	40	57.6
920-4371000	315	1000	40	86
920-437200	315	200	40	18
920-437400	315	400	40	36
920-437600	315	600	40	54
920-437800	315	800	40	72
920-4381000	400	1000	40	115
920-438200	400	200	40	23
920-438400	400	400	40	46
920-438600	400	600	40	69
920-438800	400	800	40	92
920-4401000	250	1000	50	98
920-440200	250	200	50	19
920-440400	250	400	50	37
920-440600	250	600	50	54
920-440800	250	800	50	72
920-4431000	500	1000	50	180
920-443200	500	200	50	36
920-443400	500	400	50	72
920-443600	500	600	50	108
920-443800	500	800	50	144



WDS 920 Rectangular Block - Cast Iron

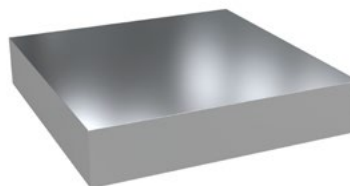
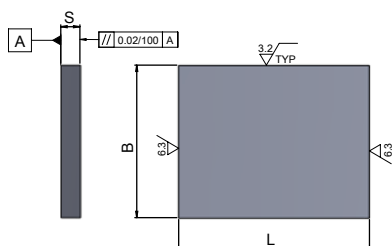
BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	B	H	L	Weight (kg)
920-451300	25	16	300	0.9
920-451600	25	16	600	1.8
920-451900	25	16	900	2.7
920-452300	32	20	300	1.5
920-452600	32	20	600	2.8
920-452900	32	20	900	4.2
920-453300	40	25	300	2.2
920-453600	40	25	600	4.4
920-453900	40	25	900	6.6
920-4541000	50	32	1000	11.5
920-454200	50	32	200	2.3
920-454400	50	32	400	4.6
920-454600	50	32	600	6.9
920-454800	50	32	800	6.9
920-4551000	40	40	1000	11.5
920-455200	40	40	200	2.3
920-455400	40	40	400	4.6
920-455600	40	40	600	6.9
920-455800	40	40	800	9.2
920-457100	63	40	100	1.8
920-4571000	63	40	1000	18
920-457200	63	40	200	3.6
920-457300	63	40	300	5.4
920-457400	63	40	400	7.2
920-457500	63	40	500	9
920-457600	63	40	600	10.8
920-457700	63	40	700	12.6
920-457800	63	40	800	14.4
920-459100	50	50	100	1.8
920-4591000	50	50	1000	18
920-459200	50	50	200	3.6
920-459300	50	50	300	5.4
920-459400	50	50	400	7.2
920-459500	50	50	500	9
920-459600	50	50	600	10.8
920-459700	50	50	700	12.6
920-459800	50	50	800	14.4
920-461100	80	50	100	2.9
920-461200	80	50	200	5.8
920-461300	80	50	300	8.6
920-461400	80	50	400	11.5
920-461500	80	50	500	14.4
920-461600	80	50	600	17.3
920-461700	80	50	700	20
920-461800	80	50	800	23
920-463100	63	63	100	2.9

WDS No.	B	H	L	Weight (kg)
920-4631000	63	63	1000	28.8
920-463200	63	63	200	5.8
920-463300	63	63	300	8.6
920-463400	63	63	400	11.5
920-463500	63	63	500	14.7
920-463600	63	63	600	17.3
920-463700	63	63	700	20
920-463800	63	63	800	23
920-465100	100	63	100	4.5
920-4651000	100	63	1000	45
920-465200	100	63	200	9
920-465300	100	63	300	13.5
920-465400	100	63	400	18
920-465500	100	63	500	22.5
920-465600	100	63	600	27
920-465700	100	63	700	31.5
920-465800	100	63	800	36
920-465900	100	63	900	40.5
920-467100	80	80	100	4.6
920-4671000	80	80	1000	46
920-467200	80	80	200	9.2
920-467300	80	80	300	13.8
920-467400	80	80	400	18.4
920-467500	80	80	500	23
920-467600	80	80	600	27.6
920-467700	80	80	700	32.2
920-467800	80	80	800	36.8
920-467900	80	80	900	41.4
920-468100	125	80	100	7.2
920-4681000	125	80	1000	72
920-468200	125	80	200	14.4
920-468300	125	80	300	21.6
920-468400	125	80	400	28.8
920-468500	125	80	500	36
920-4685100	160	80	100	9.2
920-46851000	160	80	1000	92
920-4685200	160	80	200	18.4
920-4685300	160	80	300	27.6
920-4685400	160	80	400	36.8
920-4685500	160	80	500	46
920-4685600	160	80	600	55.2
920-4685700	160	80	700	64.4
920-4685800	160	80	800	73.6
920-4685900	160	80	900	82.8
920-468600	125	80	600	43.2
920-468700	125	80	700	50.4

WDS No.	B	H	L	Weight (kg)
920-468800	125	80	800	57.5
920-468900	125	80	900	64.7
920-469100	80	100	100	5.8
920-4691000	80	100	1000	58
920-469200	80	100	200	11.6
920-469300	80	100	300	17.4
920-469400	80	100	400	23.2
920-469500	80	100	500	29
920-469600	80	100	600	34.8
920-469700	80	100	700	40.6
920-469800	80	100	800	46.4

WDS No.	B	H	L	Weight (kg)
920-469900	80	100	900	52.2
920-470100	100	100	100	7.2
920-4701000	100	100	1000	72
920-470200	100	100	200	14.4
920-470300	100	100	300	21.6
920-470400	100	100	400	28.8
920-470500	100	100	500	36
920-470600	100	100	600	43.2
920-470700	100	100	700	50.4
920-470800	100	100	800	57.6
920-470900	100	100	900	64.8



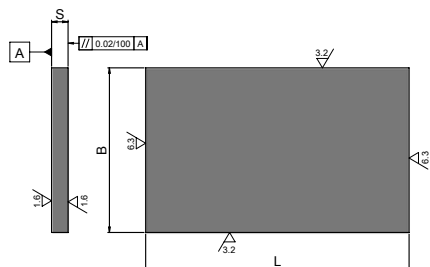
AL

Rectangular Plate - Aluminium WDS 945

Aluminium high tensile AA-70-75

WDS No.	B	L	S	Weight (kg)
945-401100	100	100	20	0.5
945-401200	100	200	20	1.1
945-401300	100	300	20	1.5
945-401400	100	400	20	2.2
945-401500	100	500	20	2.7
945-4015100	160	100	20	0.97
945-4015200	160	200	20	1.93
945-4015300	160	300	20	2.9
945-4015400	160	400	20	3.87
945-4015500	160	500	20	4.83
945-4015600	160	600	20	5.8
945-401600	100	600	20	0.5
945-402100	200	100	20	1.1
945-402200	200	200	20	2.2
945-402300	200	300	20	3.2
945-402400	200	400	20	4.3
945-402500	200	500	20	5.4
945-4025100	200	100	25	1.2
945-4025200	200	200	25	2.4
945-4025300	200	300	25	3.6
945-4025400	200	400	25	4.8
945-4025500	200	500	25	6
945-4025600	200	600	25	7.2
945-402600	200	600	20	6.5
945-403100	250	100	25	1.7
945-403200	250	200	25	3.4
945-403300	250	300	25	5.1
945-403400	250	400	25	6.7
945-403500	250	500	25	8.4
945-4035100	315	100	25	2.2

WDS No.	B	L	S	Weight (kg)
945-4035200	315	200	25	4.4
945-4035300	315	300	25	6.6
945-4035400	315	400	25	8.8
945-4035500	315	500	25	11
945-4035600	315	600	25	13.2
945-403600	250	600	25	10
945-4037100	315	100	25	2.5
945-4037200	315	200	32	5
945-4037300	315	300	32	7.5
945-4037400	315	400	32	10
945-4037500	315	500	32	12.5
945-4037600	315	600	32	15
945-4039100	315	100	40	3.53
945-4039200	315	200	40	7.06
945-4039300	315	300	40	10.59
945-4039400	315	400	40	14.12
945-4039500	315	500	40	17.65
945-4039600	315	600	40	21.18
945-404100	400	100	40	4.3
945-404200	400	200	40	8.6
945-404300	400	300	40	13
945-404400	400	400	40	17
945-404500	400	500	40	22
945-404600	400	600	40	26
945-405100	500	100	50	10.2
945-405200	500	200	50	20.4
945-405300	500	300	50	30.6
945-405400	500	400	50	40.8
945-405500	500	500	50	51
945-405600	500	600	50	61.2

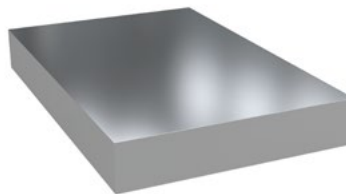
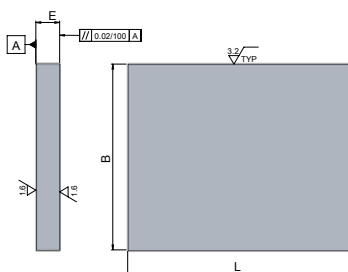


WDS 920 Rectangular Plate - Cast Iron - Thickness from 12mm-25mm

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	B	L	S	Weight (kg)
920-401300	63	300	12	1.6
920-402300	80	300	12	2.5
920-403300	100	300	12	3
920-404300	125	300	12	3
920-405300	160	300	12	4
920-406300	200	300	12	5
920-409300	63	300	16	2
920-410300	80	300	16	2.4
920-411300	100	300	16	3.5
920-412300	125	300	16	4.5
920-413300	160	300	16	5.75
920-414300	200	300	16	7
920-415300	80	300	20	3.5
920-416200	100	200	20	2.9
920-416400	100	400	20	5.8
920-416600	100	600	20	8.6
920-417100	125	100	20	1.8
920-417200	125	200	20	3.6
920-417300	125	300	20	5.4
920-417400	125	400	20	7.2
920-417500	125	500	20	8
920-417600	125	600	20	9.8
920-418100	160	100	20	2.3
920-418200	160	200	20	4.6
920-418300	160	300	20	6.9
920-418400	160	400	20	9.2
920-418500	160	500	20	11.5
920-418600	160	600	20	13.8
920-419100	200	100	20	2.9
920-419200	200	200	20	5.8
920-419300	200	300	20	8.6
920-419400	200	400	20	11.5
920-419500	200	500	20	14.4
920-419600	200	600	20	18.5
920-420100	250	100	20	3.6

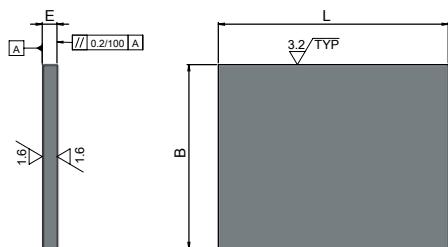
WDS No.	B	L	S	Weight (kg)
920-420200	250	200	20	7.2
920-420300	250	300	20	10.8
920-420400	250	400	20	14.4
920-420500	250	500	20	18
920-420600	250	600	20	23
920-423100	125	100	25	2.2
920-423200	125	200	25	4.5
920-423300	125	300	25	6.7
920-423400	125	400	25	9
920-423500	125	500	25	11.2
920-423600	125	600	25	15
920-424100	160	100	25	3
920-424200	160	200	25	6
920-424300	160	300	25	9
920-424400	160	400	25	12
920-424500	160	500	25	15
920-424600	160	600	25	19
920-425100	200	100	25	3.6
920-425200	200	200	25	7.2
920-425300	200	300	25	10.8
920-425400	200	400	25	14.4
920-425500	200	500	25	18
920-425600	200	600	25	23
920-426100	250	100	25	4.5
920-426200	250	200	25	9
920-426300	250	300	25	13.5
920-426400	250	400	25	18
920-426500	250	500	25	22.5
920-426600	250	600	25	27
920-427100	315	100	25	5.7
920-427200	315	200	25	11.3
920-427300	315	300	25	17
920-427400	315	400	25	22.7
920-427500	315	500	25	28.3
920-427600	315	600	25	34



Rectangular Plate - Steel **WDS 930**

Steel BS EN 10025

WDS No.	B	E	L	Weight (kg)
930-402	100	20	150	2.3
930-403	150	25	200	5.9
930-404	200	25	200	7.8
930-405	150	25	250	7.3
930-406	200	25	250	9.8
930-407	250	25	250	12
930-408	250	32	300	19
930-409	300	32	300	23
930-410	300	32	400	30
930-411	400	32	400	40
930-412	400	40	450	56
930-414	500	50	500	98



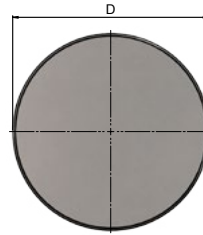
CI

Rectangular Plate - Cast Iron **WDS 931**

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	B	E	L	Weight (kg)
931-420	400	25	400	30
931-421	400	32	500	46
931-422	500	32	500	57
931-424	630	38	630	100

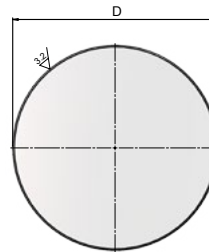
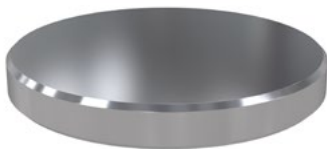
CI



WDS 904 Circular Plate - Cast Iron

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

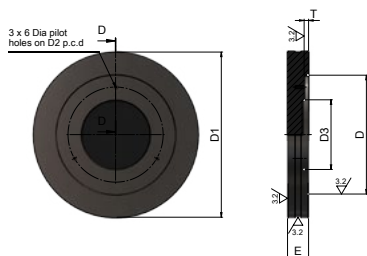
WDS No.	D	E	Weight (kg)
904-403	100	20	1.5
904-404	125	25	2.25
904-405	160	32	2.75
904-406	200	32	7
904-407	200	63	14.5
904-4085	250	36	13
904-410	315	45	25.5
904-412	400	45	42
904-4145	500	50	70
904-4165	630	50	112
904-418	800	56	166
904-419	1000	63	356
904-445	150	25	4.6



WDS 905 Circular Plate - Steel

Steel BS 970 : 070M20

WDS No.	D	E	Weight (kg)
905-403	125	12	1.25
905-404	125	16	2
905-405	160	16	2.3
905-406	160	20	2.6
905-407	200	16	2.9
905-408	200	20	3.2
905-410	250	25	10
905-411	315	22	13.5
905-412	315	28	17
905-413	400	25	25

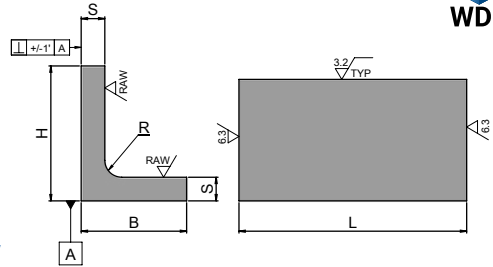


Capstan Base Plate - Cast Iron **WDS 906**

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	D	D1	D2	D3	E	T	Weight (kg)
906-401	5 1/4	152	119	65	32	4.8	3.6
906-403	5 1/4	254	119	65	32	4.8	11
906-405	7 1/2	254	159	105	32	7.9	9.8
906-406	7 1/2	305	159	105	32	7.9	15
906-408	10	356	203	149	45	9.5	28

CI



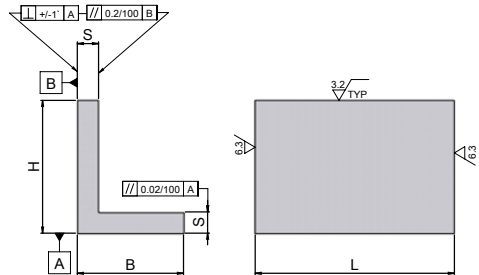
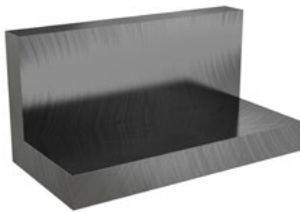
WDS 912 L Section - Cast Iron - Heavy Duty

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	B	H	L	R	S	Weight (kg)
912-401100	50	63	100	12	20	1.4
912-401200	50	63	200	12	20	2.7
912-401300	50	63	300	12	20	4.1
912-401400	50	63	400	12	20	5.4
912-401500	50	63	500	12	20	6.8
912-401600	50	63	600	12	20	9.75
912-402100	63	80	100	14	20	1.8
912-402200	63	80	200	14	20	3.6
912-402300	63	80	300	14	20	5.4
912-402400	63	80	400	14	20	7.2
912-402500	63	80	500	14	20	9
912-4025100	80	100	100	16	22	2.5
912-4025200	80	100	200	16	22	5.1
912-4025300	80	100	300	16	22	7.6
912-4025400	80	100	400	16	22	10
912-4025500	80	100	500	16	22	12.5
912-4025600	80	100	600	16	22	15
912-402600	63	80	600	14	20	11.5
912-403100	100	125	100	18	25	3.6
912-403200	100	125	200	18	25	7.3
912-403300	100	125	300	18	25	10.5
912-403400	100	125	400	18	25	15
912-403500	100	125	500	18	25	17.5
912-4035100	125	160	100	20	28	5.2

WDS No.	B	H	L	R	S	Weight (kg)
912-4035200	125	160	200	20	28	10
912-4035300	125	160	300	20	28	16.5
912-4035400	125	160	400	20	28	21
912-4035500	125	160	500	20	28	26
912-4035600	125	160	600	20	28	33
912-403600	100	125	600	18	25	20
912-404100	160	200	100	22	32	7.6
912-404200	160	200	200	22	32	15
912-404300	160	200	300	22	32	22.5
912-404400	160	200	400	22	32	31
912-404500	160	200	500	22	32	37.5
912-404600	160	200	600	22	32	47
912-405100	200	250	100	25	40	12
912-405200	200	250	200	25	40	24
912-405300	200	250	300	25	40	36
912-405400	200	250	400	25	40	48
912-405500	200	250	500	25	40	59
912-405600	200	250	600	25	40	80
912-406100	250	315	100	28	40	15
912-406200	250	315	200	28	40	30
912-406300	250	315	300	28	40	46
912-406400	250	315	400	28	40	61
912-406500	250	315	500	28	40	76
912-406600	250	315	600	28	40	91

CI



WDS 913 L Section - Cast Iron

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

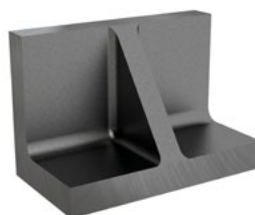
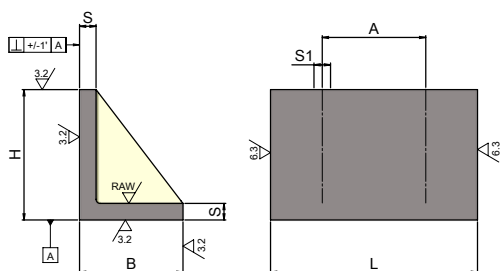
WDS No.	B	H	L	S	Weight (kg)
913-401100	50	50	100	12	0.8
913-4011000	50	50	1000	12	7.6
913-401200	50	50	200	12	1.5
913-401300	50	50	300	12	2.3
913-401400	50	50	400	12	3
913-401500	50	50	500	12	3.8
913-401600	50	50	600	12	4.6
913-401800	50	50	800	12	6

WDS No.	B	H	L	S	Weight (kg)
913-402100	63	63	100	14	1.1
913-4021000	63	63	1000	14	1.1
913-402200	63	63	200	14	2.3
913-402300	63	63	300	14	3.4
913-402400	63	63	400	14	4.5
913-402500	63	63	500	14	5.6
913-402600	63	63	600	14	6.6
913-402800	63	63	800	14	9

**WDS**

WDS No.	B	H	L	S	Weight (kg)
913-403100	80	80	100	16	1.7
913-403200	80	80	200	16	3.3
913-403300	80	80	300	16	5
913-403400	80	80	400	16	6.6
913-403500	80	80	500	16	8.3
913-403600	80	80	600	16	12
913-404100	100	100	100	20	2.6
913-404200	100	100	200	20	5.2
913-404300	100	100	300	20	7.8
913-404400	100	100	400	20	10.4
913-404500	100	100	500	20	13
913-404600	100	100	600	20	15.5
913-404700	100	100	700	20	18.1
913-404800	100	100	800	20	20.7
913-405100	125	125	100	22	3.6
913-405200	125	125	200	22	7.2
913-405300	125	125	300	22	10.8
913-405400	125	125	400	22	14.4
913-405500	125	125	500	22	18
913-4055100	150	150	100	25	4.9
913-4055200	150	150	200	25	9.9
913-4055300	150	150	300	25	15
913-4055400	150	150	400	25	20
913-4055500	150	150	500	25	25
913-4055600	150	150	600	25	30
913-4055700	150	150	700	25	35
913-4055800	150	150	800	25	32
913-405600	125	125	600	22	21.7
913-405700	125	125	700	22	25.3
913-405800	125	125	800	22	28.8
913-406100	160	160	100	25	5.3

WDS No.	B	H	L	S	Weight (kg)
913-406200	160	160	200	25	10.6
913-406300	160	160	300	25	15.9
913-406400	160	160	400	25	21.2
913-406500	160	160	500	25	26.5
913-406600	160	160	600	25	31.8
913-406700	160	160	700	25	37.1
913-406800	160	160	800	25	42.4
913-407100	200	200	100	32	8.5
913-407200	200	200	200	32	17
913-407300	200	200	300	32	25.4
913-407400	200	200	400	32	33.9
913-407500	200	200	500	32	42.4
913-407600	200	200	600	32	50.9
913-407700	200	200	700	32	59.3
913-407800	200	200	800	32	67.8
913-408100	250	250	100	36	12
913-408200	250	250	200	36	24
913-408300	250	250	300	36	36
913-408400	250	250	400	36	48
913-408500	250	250	500	36	60
913-408600	250	250	600	36	72
913-408700	250	250	700	36	84
913-408800	250	250	800	36	100
913-409100	315	315	100	38	16
913-409200	315	315	200	38	32
913-409300	315	315	300	38	49
913-409400	315	315	400	38	64
913-409500	315	315	500	38	80
913-409600	315	315	600	38	96
913-409700	315	315	700	38	112
913-409800	315	315	800	38	128

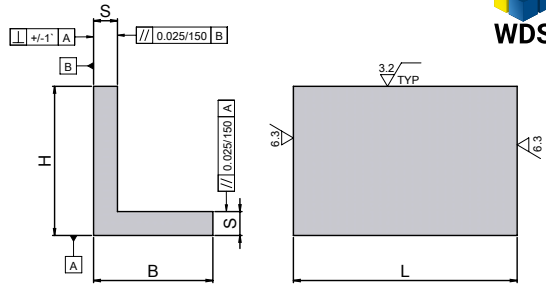
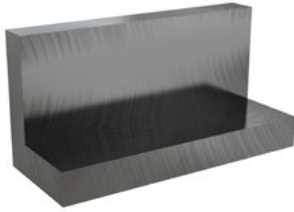


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Webbed L Section - Cast Iron WDS 914BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	A	B	H	L	S	S1	Weight (kg)
914-401150	-	80	100	150	20	16	4
914-401300	150	80	100	300	20	16	8
914-402150	-	100	125	150	22	18	6
914-402300	150	100	125	300	22	18	12
914-403150	-	125	160	150	25	20	8.5
914-403300	150	125	160	300	25	20	17
914-404150	-	160	200	150	32	22	13
914-404300	150	160	200	300	32	22	35
914-405200	-	200	250	200	36	25	24.51
914-405400	200	200	250	400	36	25	49.5
914-406250	-	250	315	250	40	28	44.5
914-406500	250	250	315	500	40	28	89

CI

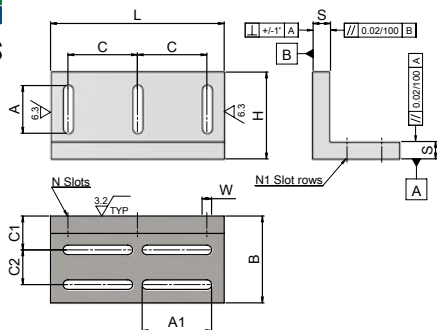


WDS 935 Unequal L Section - Cast Iron

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	B	H	L	S	Weight (kg)
935-401100	40	50	100	12	0.7
935-401200	40	50	200	12	1.3
935-401300	40	50	300	12	2
935-401400	40	50	400	12	2.5
935-401500	40	50	500	12	3.65
935-402100	50	63	100	14	1
935-402200	50	63	200	14	2
935-402300	50	63	300	14	3
935-402400	50	63	400	14	4
935-402500	50	63	500	14	5
935-402600	50	63	600	14	6
935-403100	63	80	100	16	1.5
935-403200	63	80	200	16	2.9
935-403300	63	80	300	16	4.4
935-403400	63	80	400	16	5.8
935-403500	63	80	500	16	7.3
935-403600	63	80	600	16	9.25
935-404100	80	100	100	20	2.3
935-404200	80	100	200	20	4.6
935-404300	80	100	300	20	6.9
935-404400	80	100	400	20	9.2
935-404500	80	100	500	20	11.5
935-404600	80	100	600	20	13.8
935-404700	80	100	700	20	16.1
935-404800	80	100	800	20	18.4
935-405100	100	125	100	22	3.2
935-405200	100	125	200	22	6.4
935-405300	100	125	300	22	9.6
935-405400	100	125	400	22	12.9
935-405500	100	125	500	22	16
935-405600	100	125	600	22	19.3
935-405700	100	125	700	22	22.5

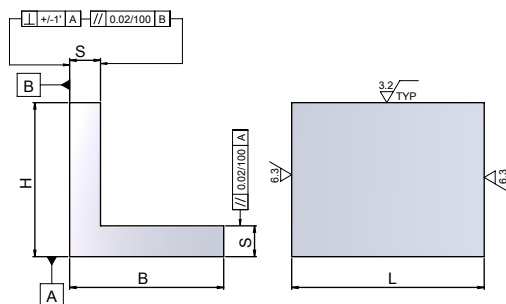
WDS No.	B	H	L	S	Weight (kg)
935-405800	100	125	800	22	25.8
935-406200	125	160	200	25	9.4
935-406300	125	160	300	25	14
935-406400	125	160	400	25	18.7
935-406500	125	160	500	25	23
935-406600	125	160	600	25	28.1
935-406700	125	160	700	25	32.7
935-406800	125	160	800	25	37.4
935-407100	160	200	100	32	7.6
935-407200	160	200	200	32	15.1
935-407300	160	200	300	32	22.7
935-407400	160	200	400	32	30.2
935-407500	160	200	500	32	38
935-407600	160	200	600	32	45.4
935-407700	160	200	700	32	53
935-407800	160	200	800	32	60.4
935-408100	200	250	100	36	10.7
935-408200	200	250	200	36	21.4
935-408300	200	250	300	36	32.2
935-408400	200	250	400	36	42.8
935-408500	200	250	500	36	53.5
935-408600	200	250	600	36	64.4
935-408700	200	250	700	36	75
935-408800	200	250	800	36	85.6
935-409100	250	315	100	38	14.4
935-409200	250	315	200	38	28.8
935-409300	250	315	300	38	43.2
935-409400	250	315	400	38	57.6
935-409500	250	315	500	38	72
935-409600	250	315	600	38	86.4
935-409700	250	315	700	38	101
935-409800	250	315	800	38	115



Slotted L Section - Cast Iron WDS 932

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	A	A1	B	C	C1	C2	H	L	N	N1	S	W	Weight (kg)
932-401	55	71	100	60	39	40	100	100	2	2	20	11	2.5
932-403	55	80	100	80	39	40	100	200	3	2	20	11	5
932-405	107	75	160	75	55	40	160	200	3	3	25	14	10.4
932-407	140	75	200	75	55	60	200	200	3	3	32	14	16.8



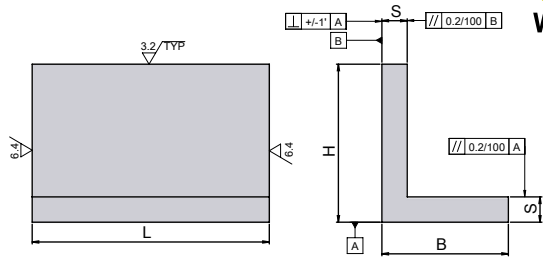
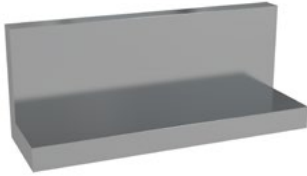
L Section - Aluminium WDS 944

Aluminium high tensile AA-70-75

WDS No.	B	H	L	S	Weight (kg)
944-400100	63	63	100	12	0.35
944-400200	63	63	200	12	0.7
944-400300	63	63	300	12	1.05
944-400400	63	63	400	12	1.4
944-400500	63	63	500	12	1.75
944-400600	63	63	600	12	2.1
944-401100	80	80	100	16	0.6
944-401200	80	80	200	16	1.2
944-401300	80	80	300	16	1.9
944-401400	80	80	400	16	2.5
944-401500	80	80	500	16	3.1
944-401600	80	80	600	16	3.7
944-402100	100	100	100	20	1
944-402200	100	100	200	20	1.9
944-402300	100	100	300	20	2.9
944-402400	100	100	400	20	3.9
944-402500	100	100	500	20	4.9
944-402600	100	100	600	20	5.8

WDS No.	B	H	L	S	Weight (kg)
944-403100	125	125	100	20	1.4
944-403200	125	125	200	20	2.7
944-403300	125	125	300	20	4.1
944-403400	125	125	400	20	5.4
944-403500	125	125	500	20	6.8
944-4035100	160	160	100	25	1.8
944-4035200	160	160	200	25	3.6
944-4035300	160	160	300	25	5.4
944-4035400	160	160	400	25	7.2
944-4035500	160	160	500	25	9
944-4035600	160	160	600	25	10.8
944-403600	125	125	600	20	8.1
944-404100	200	200	100	32	3.2
944-404200	200	200	200	32	6.4
944-404300	200	200	300	32	9.5
944-404400	200	200	400	32	13
944-404500	200	200	500	32	16
944-404600	200	200	600	32	19

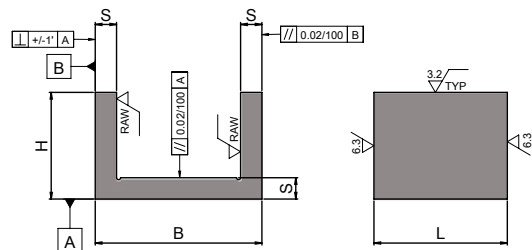
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WDS 946 Unequal L Section

Aluminium, high tensile AA-70-75

WDS No.	B	H	L	S	Weight (kg)
946-401100	63	80	100	16	0.5
946-401200	63	80	200	16	1
946-401300	63	80	300	16	1.5
946-401400	63	80	400	16	2
946-401500	63	80	500	16	2.5
946-401600	63	80	600	16	3
946-402100	80	100	100	20	0.8
946-402200	80	100	200	20	1.6
946-402300	80	100	300	20	2.4
946-402400	80	100	400	20	3.2
946-402500	80	100	500	20	4
946-402600	80	100	600	20	4.8
946-403100	100	125	100	20	0.83
946-403200	100	125	200	20	1.67
946-403300	100	125	300	20	2.5
946-403400	100	125	400	20	3.33
946-403500	100	125	500	20	4.17
946-403600	100	125	600	20	5
946-404100	125	160	100	25	1.6
946-404200	125	160	200	25	3.2
946-404300	125	160	300	25	4.8
946-404400	125	160	400	25	6.4
946-404500	125	160	500	25	8
946-404600	125	160	600	25	9.6
946-405100	160	200	100	32	2.6
946-405200	160	200	200	32	5.2
946-405300	160	200	300	32	7.8
946-405400	160	200	400	32	10.4
946-405500	160	200	500	32	13
946-405600	160	200	600	32	15.6

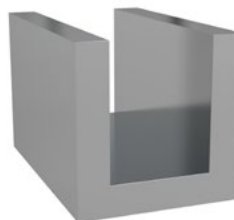
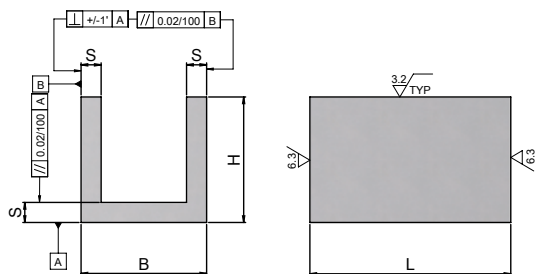
**WDS****CI**

Channel Section - Cast Iron WDS 910

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	B	H	L	S	Weight (kg)
910-401100	80	45	100	12	1.3
910-401200	80	45	200	12	2.5
910-401300	80	45	300	12	3.8
910-401400	80	45	400	12	5
910-401500	80	45	500	12	7.5
910-402100	100	63	100	16	2.2
910-402200	100	63	200	16	4.5
910-402300	100	63	300	16	6.8
910-402400	100	63	400	16	8.8
910-402500	100	63	500	16	11.2
910-403100	125	80	100	16	2.9
910-403200	125	80	200	16	5.8
910-403300	125	80	300	16	8.7
910-403400	125	80	400	16	12
910-403500	125	80	500	16	15

WDS No.	B	H	L	S	Weight (kg)
910-404100	160	90	100	20	4.3
910-404200	160	90	200	20	8.6
910-404300	160	90	300	20	13
910-404400	160	90	400	20	17.2
910-404500	160	90	500	20	20
910-405100	200	90	100	22	5.3
910-405200	200	90	200	22	10.6
910-405300	200	90	300	22	16
910-405400	200	90	400	22	21.2
910-405500	200	90	500	22	28
910-406100	250	100	100	25	7.2
910-406200	250	100	200	25	14.4
910-406300	250	100	300	25	21.6
910-406400	250	100	400	25	36
910-406500	250	100	500	25	40

**AL**

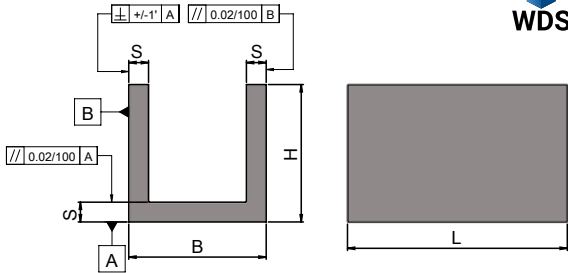
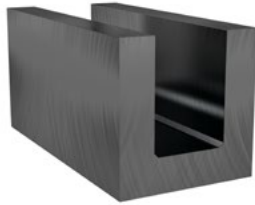
Aluminium U Section WDS 943

Aluminium high tensile AA-70-75

WDS No.	B	H	L	S	Weight (kg)
943-400100	63	63	100	12	0.5
943-400200	63	63	200	12	1
943-400300	63	63	300	12	1.5
943-400400	63	63	400	12	2
943-400500	63	63	500	12	2.5
943-400600	63	63	600	12	3
943-401100	80	80	100	16	0.09
943-401200	80	80	200	16	1.7
943-401300	80	80	300	16	2.6
943-401400	80	80	400	16	3.6
943-401500	80	80	500	16	4.5
943-401600	80	80	600	16	5.4
943-402100	100	100	100	20	1.1
943-402200	100	100	200	20	2.8
943-402300	100	100	300	20	4.2
943-402400	100	100	400	20	5.6
943-402500	100	100	500	20	7
943-402600	100	100	600	20	8.4

WDS No.	B	H	L	S	Weight (kg)
943-403100	125	125	100	20	1.7
943-403200	125	125	200	20	3.6
943-403300	125	125	300	20	5.4
943-403400	125	125	400	20	7.2
943-403500	125	125	500	20	9
943-4035100	160	160	100	25	2.67
943-4035200	160	160	200	25	5.33
943-4035300	160	160	300	25	8
943-4035400	160	160	400	25	10.67
943-4035500	160	160	500	25	13.33
943-4035600	160	160	600	25	16
943-403600	125	125	600	20	11
943-404100	200	200	100	32	4.6
943-404200	200	200	200	32	9.3
943-404300	200	200	300	32	14
943-404400	200	200	400	32	19
943-404500	200	200	500	32	23
943-404600	200	200	600	32	28

CI

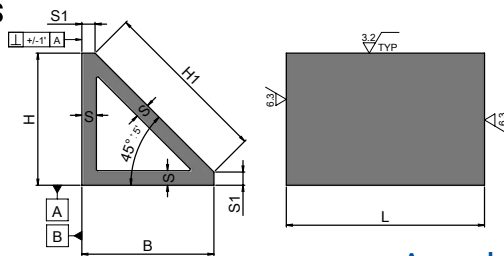


WDS 911 Cast Iron U Section

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	B	H	L	S	Weight (kg)
911-401100	50	50	100	12	1.1
911-4011000	50	50	1000	12	11
911-401200	50	50	200	12	2.2
911-401300	50	50	300	12	3.3
911-401400	50	50	400	12	4.4
911-401500	50	50	500	12	10.39
911-401600	50	50	600	12	6.6
911-401800	50	50	800	12	8.8
911-402100	63	63	100	14	1.6
911-4021000	63	63	1000	14	16
911-402200	63	63	200	14	3.2
911-402300	63	63	300	14	4.9
911-402400	63	63	400	14	6.5
911-402500	63	63	500	14	8.1
911-402600	63	63	600	14	9.6
911-402800	63	63	800	14	13
911-403100	80	80	100	16	2.4
911-403200	80	80	200	16	4.8
911-403300	80	80	300	16	7.2
911-403400	80	80	400	16	9.6
911-403500	80	80	500	16	11.5
911-403600	80	80	600	16	19
911-404100	100	100	100	20	3.7
911-404200	100	100	200	20	7.5
911-404300	100	100	300	20	11.1
911-404400	100	100	400	20	14.8
911-404500	100	100	500	20	18.5
911-404600	100	100	600	20	22
911-404700	100	100	700	20	26
911-404800	100	100	800	20	32
911-405100	125	125	100	22	5.2
911-405200	125	125	200	22	10
911-405300	125	125	300	22	15.7
911-405400	125	125	400	22	21
911-405500	125	125	500	22	26.2

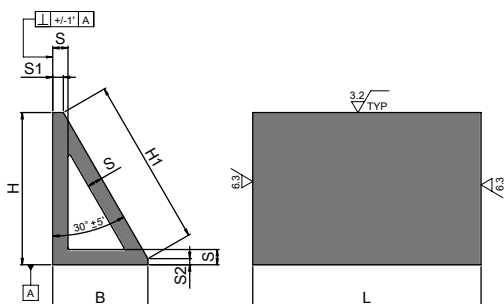
WDS No.	B	H	L	S	Weight (kg)
911-4055100	150	150	100	25	7.2
911-4055200	150	150	200	25	14
911-4055300	150	150	300	25	22
911-4055400	150	150	400	25	29
911-4055500	150	150	500	25	36
911-4055600	150	150	600	25	43
911-4055700	150	150	700	25	50
911-4055800	150	150	800	25	46
911-405600	125	125	600	22	31.4
911-405700	125	125	700	22	36.7
911-405800	125	125	800	22	42
911-406100	160	160	100	25	7.7
911-406200	160	160	200	25	15.5
911-406300	160	160	300	25	23.2
911-406400	160	160	400	25	31
911-406500	160	160	500	25	38.7
911-406600	160	160	600	25	46.4
911-406700	160	160	700	25	54.2
911-406800	160	160	800	25	62
911-407100	200	200	100	32	12.3
911-407200	200	200	200	32	24.7
911-407300	200	200	300	32	37
911-407400	200	200	400	32	49
911-407500	200	200	500	32	61.7
911-407600	200	200	600	32	74
911-407700	200	200	700	32	86.4
911-407800	200	200	800	32	98.8
911-408200	250	250	200	36	35.1
911-408400	250	250	400	36	70.3
911-4085200	315	250	200	36	38
911-4085400	315	250	400	36	76
911-4085600	315	250	600	36	114
911-4085800	315	250	800	36	152
911-408600	250	250	600	36	105
911-408800	250	250	800	36	140



Angular Hollow Block 45° - Cast Iron **WDS 936**

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

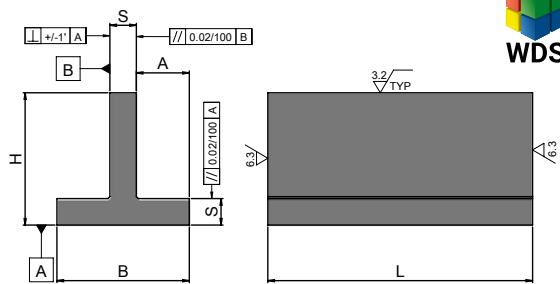
WDS No.	B	H	H1	L	S	S1	Weight (kg)
936-401150	100	100	127	150	14	10	4.75
936-401300	100	100	127	300	14	10	9.5
936-404150	200	200	255	150	22	20	14.75
936-404300	200	200	255	300	22	20	29.5



Angular Hollow Block 30° - Cast Iron **WDS 937**

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr250)

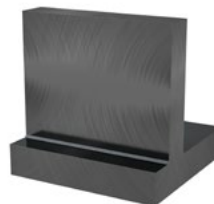
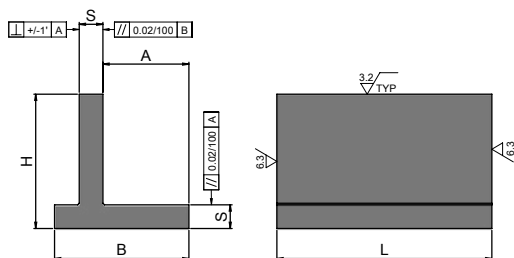
WDS No.	B	H	H1	L	S	S1	S2	Weight (kg)
937-401150	63	100	108	150	12	9	6	3
937-401300	63	100	108	300	12	9	6	6
937-404150	125	200	222	150	20	14	8	10.5
937-404300	125	200	222	300	20	14	8	21



WDS 917 Equal T-Section - Cast Iron

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	A	B	H	L	S	Weight (kg)
917-401300	19	50	50	300	12	2.5
917-401600	19	50	50	600	12	4.6
917-401900	19	50	50	900	12	6.9
917-4021000	24.5	63	63	1000	14	11.3
917-402200	24.5	63	63	200	14	2.3
917-402400	24.5	63	63	400	14	4.5
917-402600	24.5	63	63	600	14	6.8
917-402800	24.5	63	63	800	14	9
917-403100	32	80	80	100	16	1.7
917-403200	32	80	80	200	16	3.3
917-403300	32	80	80	300	16	5
917-403400	32	80	80	400	16	6.6
917-403500	32	80	80	500	16	8.3
917-403600	32	80	80	600	16	9.9
917-403700	32	80	80	700	16	12
917-403800	32	80	80	800	16	13.5
917-404200	40	100	100	200	20	5.2
917-404400	40	100	100	400	20	10.5
917-404600	40	100	100	600	20	16
917-404800	40	100	100	800	20	20.7
917-405200	51.5	125	125	200	22	7.2
917-405400	51.5	125	125	400	22	14.4
917-405600	51.5	125	125	600	22	21.7
917-405800	51.5	125	125	800	22	28.8
917-406100	67.5	160	160	100	25	5.3
917-406200	67.5	160	160	200	25	10.6
917-406300	67.5	160	160	300	25	15.9
917-406400	67.5	160	160	400	25	21.2
917-406500	67.5	160	160	500	25	26.5
917-406600	67.5	160	160	600	25	31.8
917-406700	67.5	160	160	700	25	37.1
917-406800	67.5	160	160	800	25	42.4
917-407100	84	200	200	100	32	8.5
917-407200	84	200	200	200	32	17
917-407300	84	200	200	300	32	25.4
917-407400	84	200	200	400	32	33.9
917-407500	84	200	200	500	32	42.4
917-407600	84	200	200	600	32	50.9
917-407700	84	200	200	700	32	59.3
917-407800	84	200	200	800	32	67.8

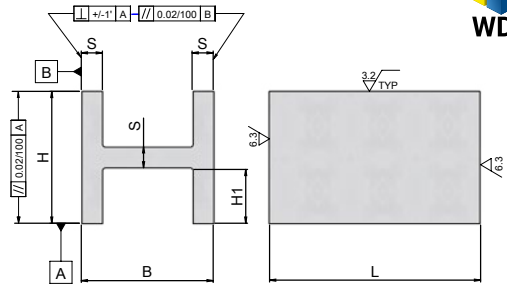


Unequal T-Section - Cast Iron **WDS 919**

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	A	B	H	L	S	Weight (kg)
919-401100	63	100	100	100	20	2.6
919-401200	63	100	100	200	20	5.2
919-401300	63	100	100	300	20	7.8
919-401400	63	100	100	400	20	10.4
919-401500	63	100	100	500	20	13
919-401600	63	100	100	600	20	17
919-402100	80	125	125	100	22	3.6
919-402200	80	125	125	200	22	7.2
919-402300	80	125	125	300	22	10.8
919-402400	80	125	125	400	22	14.4
919-402500	80	125	125	500	22	18
919-402600	80	125	125	600	22	24
919-403100	100	160	160	100	25	5.3
919-403200	100	160	160	200	25	10.6
919-403300	100	160	160	300	25	15.9
919-403400	100	160	160	400	25	21.2
919-403500	100	160	160	500	25	26.5
919-403600	100	160	160	600	25	35
919-404100	125	200	200	100	32	8.5
919-404200	125	200	200	200	32	17
919-404300	125	200	200	300	32	25.4
919-404400	125	200	200	400	32	33.9
919-404500	125	200	200	500	32	42.4
919-404600	125	200	200	600	32	54

CI



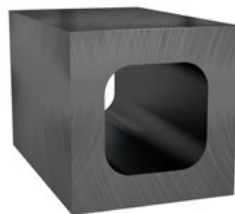
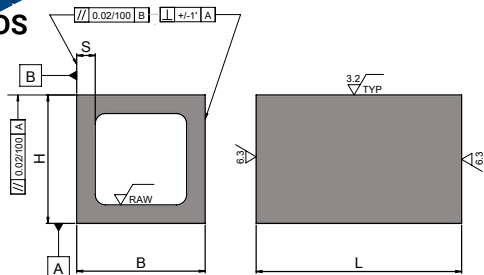
WDS 907 H Section - Cast Iron

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	B	H	H1	L	S	Weight (kg)
907-401200	80	80	32	200	16	4.8
907-401400	80	80	32	400	16	9.6
907-401600	80	80	32	600	16	13.8
907-402200	100	100	40	200	20	7.4
907-402400	100	100	40	400	20	14.8
907-402600	100	100	40	600	20	22
907-403200	125	125	52.5	200	20	9.6
907-403400	125	125	52.5	400	20	19.3
907-403600	125	125	52.5	600	20	29
907-404200	160	160	67.5	200	25	15.5
907-404400	160	160	67.5	400	25	31
907-404600	160	160	67.5	600	25	46.4
907-405200	200	200	84	200	32	24.7
907-405400	200	200	84	400	32	49
907-405600	200	200	84	600	32	74



WDS



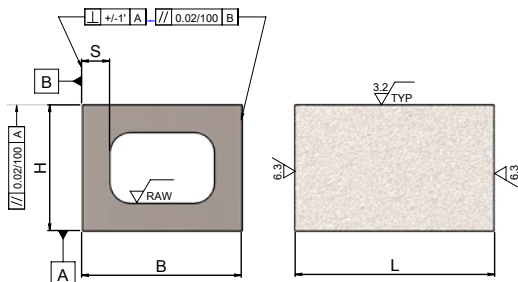
CI

Square Hollow Block - Cast Iron WDS 908

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	B	H	L	S	Weight (kg)
908-401100	63	63	100	12	1.5
908-401200	63	63	200	12	2.3
908-401300	63	63	300	12	3.5
908-402100	80	80	100	14	2.8
908-402300	80	80	300	14	8.4
908-402500	80	80	500	14	15.2
908-403100	100	100	100	16	4
908-403200	100	100	200	16	8
908-403300	100	100	300	16	12
908-403400	100	100	400	16	16
908-403500	100	100	500	16	20
908-403600	100	100	600	16	24
908-404100	125	125	100	18	5.6
908-404200	125	125	200	18	11.2
908-404300	125	125	300	18	16.8

WDS No.	B	H	L	S	Weight (kg)
908-404400	125	125	400	18	22.4
908-404500	125	125	500	18	28
908-404600	125	125	600	18	33.6
908-405200	160	160	200	20	16.5
908-405400	160	160	400	20	33
908-405600	160	160	600	20	50
908-406200	200	200	200	25	26
908-406400	200	200	400	25	52
908-406600	200	200	600	25	78
908-407200	250	250	200	28	36
908-407400	250	250	400	28	72
908-407600	250	250	600	28	108
908-408200	315	315	200	32	52
908-408400	315	315	400	32	104
908-408600	315	315	600	32	156



CI

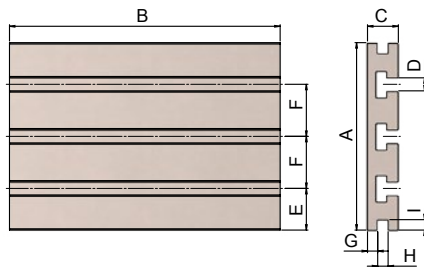
Rectangular Hollow Block - Cast Iron WDS 909

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	B	H	L	S	Weight (kg)
909-401100	80	63	100	14	2.5
909-401200	80	63	200	14	5
909-401300	80	63	300	14	7.5
909-402100	100	80	100	16	3.5
909-402200	100	80	200	16	7
909-402300	100	80	300	16	10.5
909-402400	100	80	400	16	14
909-402500	100	80	500	16	17.5
909-4025100	125	80	100	14	4.2
909-4025200	125	80	200	14	8.5
909-4025300	125	80	300	14	13
909-4025400	125	80	400	14	17
909-4025500	125	80	500	14	21
909-4025600	125	80	600	14	25
909-402600	100	80	600	16	21

WDS No.	B	H	L	S	Weight (kg)
909-403100	160	100	100	18	5.8
909-403200	160	100	200	18	11.6
909-403300	160	100	300	18	17.4
909-403400	160	100	400	18	23.2
909-403500	160	100	500	18	29
909-403600	160	100	600	18	34.8
909-404200	200	160	200	20	19.5
909-404400	200	160	400	20	38
909-404600	200	160	600	20	61
909-405200	250	200	200	25	29
909-405400	250	200	400	25	58
909-405600	250	200	600	25	87
909-406200	315	250	200	30	37
909-406400	315	250	400	30	65
909-406600	315	250	600	30	129.9

AL

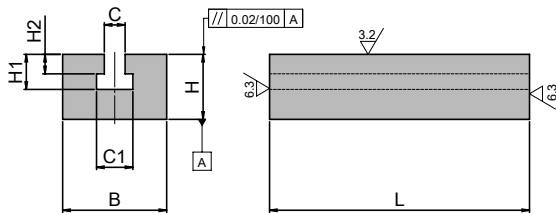


WDS 590 Aluminium Sub Plates Mitee-Bite

WDS Extruded Aluminium Sub Plates are available in standard sizes in stock, as well as in custom lengths to order. Standard sizes are premachined to .13 flatness and parallelism per 300mm.

WDS No.	A	B	C	D	E	F	G	H	I	Weight (kg)
590-22913	228	330	38	16	50.8	63.5	12.7	12.7	12.7	7
590-22918	228	457	38	16	50.8	63.5	12.7	12.7	12.7	9.7
590-22924	228	610	38	16	50.8	63.5	12.7	12.7	12.7	13

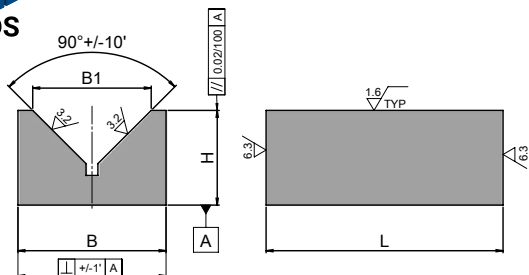
CI



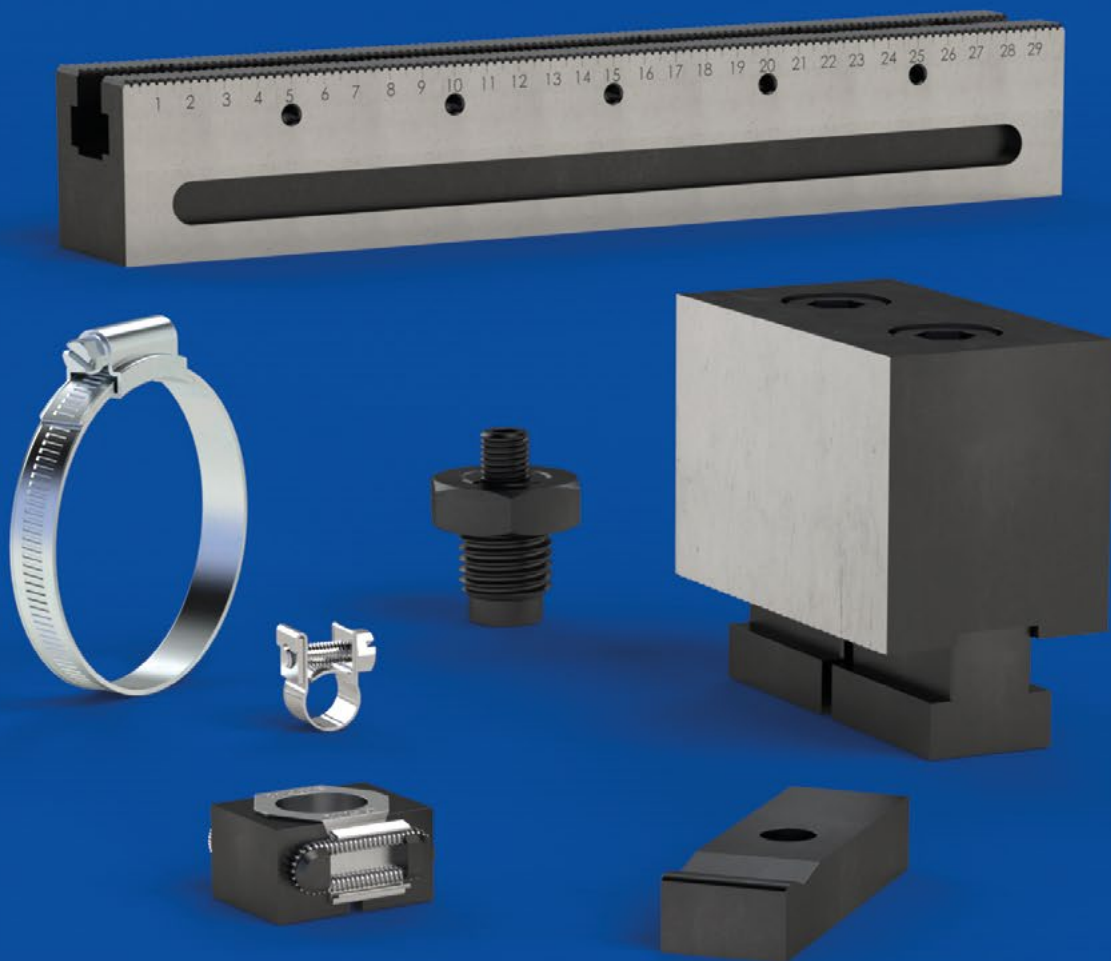
WDS 933 Tee Slot Section - Cast Iron

BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	B	C	C1	H	H1	H2	L	Weight (kg)
933-401	50	10	16	32	18	10	200	2.2
933-403	50	10	16	32	18	10	400	4.4
933-405	50	10	16	32	18	10	600	6.6
933-407	63	12	22	40	22	12	200	3.4
933-409	63	12	22	40	22	12	400	6.8
933-411	63	12	22	40	22	12	600	10.2
933-413	63	12	22	40	22	12	800	13.6
933-415	80	16	28	50	27	15	200	5.6
933-417	80	16	28	50	27	15	400	11.2
933-419	80	16	28	50	27	15	600	16.8
933-421	80	16	28	50	27	15	800	22.4

**WDS****V Block - Cast Iron WDS 922**BS EN 1561 1997-EN/GJL-250
(BS 1452 Gr 250)

WDS No.	B	B1	H	L	Weight (kg)
922-4012100	50	32	36	100	1.1
922-40121000	50	32	36	1000	1.1
922-4012200	50	32	36	200	2.2
922-4012300	50	32	36	300	3.3
922-4012400	50	32	36	400	4.4
922-4012500	50	32	36	500	5.5
922-4012600	50	32	36	600	6.6
922-4012800	50	32	36	800	8.8
922-4032100	80	50	50	100	2.4
922-4032200	80	50	50	200	4.8
922-4032300	80	50	50	300	7.2
922-4032400	80	50	50	400	9.6
922-4032500	80	50	50	500	12
922-4035100	125	50	55	100	4.5
922-4035200	125	50	55	200	9
922-4035300	125	50	55	300	13.5
922-4035400	125	50	55	400	18
922-4035500	125	50	55	500	22.5
922-4052100	100	80	70	100	3.9
922-4052200	100	80	70	200	7.8
922-4052300	100	80	70	300	11.7
922-4052400	100	80	70	400	15.5
922-4052500	100	80	70	500	19.4
922-406100	125	100	80	100	5.4
922-406200	125	100	80	200	10.8
922-406300	125	100	80	300	16.2
922-406400	125	100	80	400	21.6
922-406500	125	100	80	500	27



CLAMPS

P 610-668

This range of clamps and fixturing clamping equipment includes standard Bridge Clamps, Edge Clamps, Swing & Hook Clamps, Cam Clamps, Bar and Pipe Clamps. The WDS range of clamping tools, hand clamps and quick clamping tool accessories are available from stock for fast delivery.



BRIDGE CLAMPS, SLOTTED CLAMPS, FORK & PEG CLAMPS

Bridge clamps are commonly used on Jig and Fixture applications where adjustable and fixed clamping of a workpiece is required. Choose from Slotted, Peg & Fork Clamps all of which can be loosened and adjusted into position.

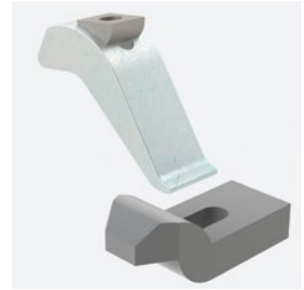
P 610-617



SWAN NECK & S CLAMPS

The 'S' Clamp or Swan Neck Clamp as they are also known are adjustable clamps used on clamping fixtures. Using a Stud and Nut, (not supplied) the user can easily adjust the height of the Clamp's neck to suit any workpiece to provide complete flexibility.

P 618



EDGE CLAMPS / OK VISE CLAMPS

WDS stocks a wide range of Edge Clamps for use on Jig and Fixture systems. This type of clamp is supplied in two formats; Fixed Edge Clamps and Adjustable Edge Clamp. The OK Vice brand incorporates a range of low profile clamps and rail systems allowing the user to build the perfect fixture for milling machines and machine centres. The quick change design allows fixtures to be swapped out faster than using a traditional Jig or fixture.

P 619-637



SWING CLAMPS, HOOK CLAMPS & LATCH CLAMPS

Hook and Swing Clamps are useful in the quick change of clamping applications. Hook Clamps, Hook Clamp Assemblies and CAM Hook Clamps are available in metric and imperial sizes.

P 639-643



AXIAL IN-LINE CLAMPS

The straight line action clamps operate using a variable stroke action. The In Line Clamp uses a plunger to easily adjust the pressure on a workpiece.

P 644-647





PULL DOWN INSERTS

The WDS Pull Down Insert is a unique pull back threaded clamping insert that provides clamping for up to 5 axis operations and for unusual shaped workpieces. Commonly used in the aerospace industry WDS Pull-Down Inserts are designed to be fitted into the fixture plate in the compressed condition, with the whole of the insert below the location face. This enables the workpiece to be manoeuvred into position over the inserts. A standard Hexagon Key is then passed down one of the pre-tapped holes in the workpiece and engaged into the hexagon socket in the inner component of the insert.

P 648



BAR AND PIPE CLAMPS

Bar Clamps allow the user to manually clamp a pipe or round bar in position so that work can be carried out. The use of either an Index Handle or thumb operated Wing knob, allows pressure to be applied to the bar ensuring rigidity.

P 649-650



JIG LOCATION ELEMENTS

WDS offers an extensive range of Jig elements including Jig Feet Buttons, Rest Buttons, Jig Pillars and Clamping Pads from stock.

P 651-652



MANUAL PLIER CLAMPS

Clamping Pliers are manually operated using a plier handle and are ideal for use in simple manual tasks.

P 653



CLAMPING SUPPORTS, STEP BLOCKS, HEEL PINS & MORE

WDS offers a wide range of clamping support elements these include: Step Blocks, Clamping Heels, Support Jacks, Heel Pins and Feet Buttons.

P 654-664

SPRINGS

WDS supplies high quality Springs in a selection of sizes for use with clamping elements

P 665



CAM LEVERS & CLAMPS

CAM Operated Clamps and assemblies can be used on fixtures to facilitate a rapid clamping action on a workpiece when used in conjunction with WDS Bridge Clamps. These Clamps use a CAM Lever to provide an accurate and sturdy clamping solution.

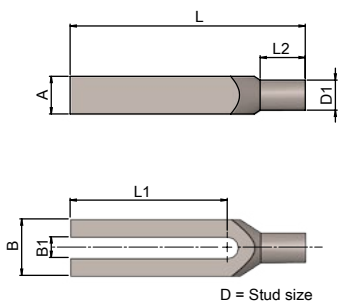
P 666-668





TOGGLE CLAMPS & LATCHES

For the full range of Toggle Clamps & Latches please see pages **863-908**

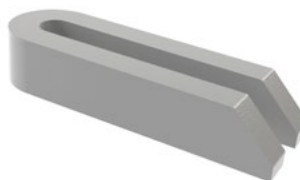
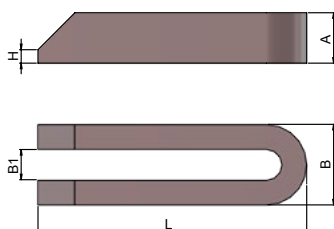


Peg Clamp WDS 208

Steel forging, BS 970 Gr 080M36

Painted grey finish

WDS No.	A	B	B1	D1	L	L1	L2	D Inch	D Metric	Weight (kg)
208-202	20	30	11	16	125	83.5	24	3/8	M10	0.36
208-203	25	40	14	20	160	108	30	1/2	M12	0.83
208-204	30	50	18	24	200	136	36	5/8	M16	1.57
208-205	40	60	22	30	250	174	45	3/4	M20	2.89

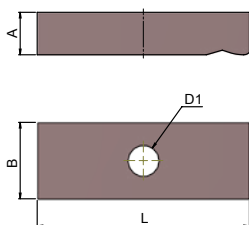


Fork Clamp WDS 213

Steel forging, BS 970 Gr 080M36

Painted grey finish

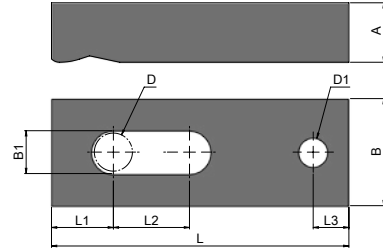
WDS No.	A	B	B1	D	H	L	Weight (kg)
213-208	15	25	9	M8	4	80	0.14
213-2121	25	38	14	M12	6	125	0.56
213-2122	25	38	14	M12	6	160	0.71
213-2161	30	48	18	M16	8	160	1.07
213-2162	30	48	18	M16	8	200	1.34
213-2201	40	52	22	M20	10	200	1.79
213-2241	40	66	26	M24	10	250	3.04



Clamp WDS 223

Steel BS 970 Gr 070M20, Chemical black finish

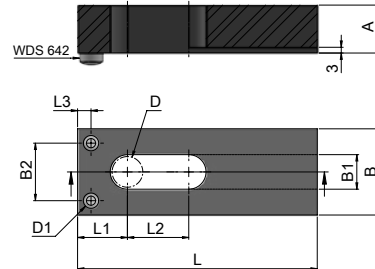
WDS No.	A	B	D	D1	L	Weight (kg)
223-201	10	16	M6	7	50	0.06
223-202	12	20	M8	9	63	0.11
223-203	16	25	M10	11	63	0.18
223-204	16	25	M10	11	80	0.22
223-205	25	32	M12	14	80	0.46
223-206	25	32	M12	14	100	0.59
223-208	25	45	M16	18	125	1.04



WDS 224 Clamp

Steel BS 970 Gr 070M20, Chemical black finish

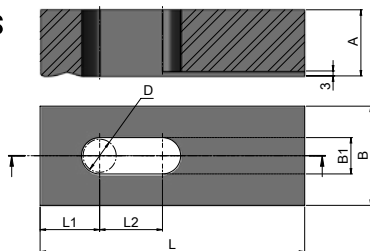
WDS No.	A	B	B1	D	D1	L	L1	L2	L3	Weight (kg)
224-201	10	12	5.5	M5	M5	50	10	13	6	0.04
224-202	10	16	7	M6	M6	50	10	13	7	0.05
224-203	10	16	7	M6	M6	63	12	17	7	0.07
224-204	12	20	9	M8	M6	63	12	18	7	0.1
224-205	12	20	9	M8	M6	80	15	22	7	0.13
224-206	16	25	11	M10	M8	63	14	16	10	0.16
224-207	16	25	11	M10	M8	80	14	22	10	0.21
224-208	16	25	11	M10	M8	100	20	28	10	0.26
224-209	25	32	14	M12	M10	80	16	20	12	0.39
224-210	25	32	14	M12	M10	100	20	26	12	0.5
224-211	25	45	18	M16	M12	100	24	24	15	0.71
224-212	25	45	18	M16	M12	125	26	32	15	0.91



WDS 228 Clamp

Steel BS 970 Gr 070M20, Chemical black finish

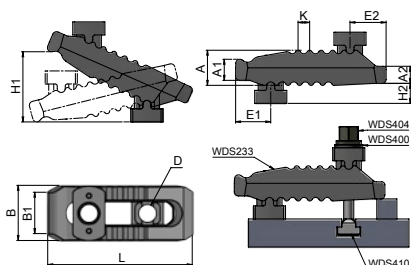
WDS No.	A	B	B1	B2	D	D1 (H7)	L	L1	L2	L3	Weight (kg)
228-201	12	20	9	10	M8	6	63	12	18	5	0.09
228-202	16	25	11	15	M10	6	80	14	22	5	0.19
228-203	25	32	14	18	M12	8	80	16	20	7	0.38
228-204	25	32	14	18	M12	8	100	20	26	7	0.49
228-206	25	45	18	30	M16	8	125	26	32	7	0.63



Clamp WDS 230

Steel BS 970 Gr 070M20, Chemical black finish

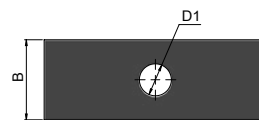
WDS No.	A	B	B1	D	L	L1	L2	Weight (kg)
230-201	10	12	5.5	M5	50	10	13	0.04
230-202	10	16	7	M6	50	10	13	0.05
230-203	10	16	7	M6	63	12	17	0.06
230-204	12	20	9	M8	50	12	12	0.07
230-205	12	20	9	M8	63	12	18	0.09
230-206	12	20	9	M8	80	15	22	0.12
230-207	16	25	11	M10	63	14	16	0.15
230-208	16	25	11	M10	80	14	22	0.2
230-209	16	25	11	M10	100	20	28	0.25
230-210	25	32	14	M12	80	16	20	0.4
230-211	25	32	14	M12	100	20	26	0.51
230-212	25	32	14	M12	125	25	32	0.64
230-213	25	45	18	M16	100	24	24	0.72
230-214	25	45	18	M16	125	26	32	0.92
230-215	30	50	18	M16	160	34	42	1.6
230-216	30	50	22	M20	100	22	24	0.94
230-217	30	50	22	M20	125	28	30	1.15
230-218	40	60	22	M20	160	34	44	2.48
230-219	40	60	22	M24	125	28	30	1.82
230-220	40	60	22	M24	160	36	38	2.4



Stepped Crocodile Clamps WDS 233

Heat treated and tempered
Galvanised Clamp

WDS No.	A	A1	A2	B	B1	D	E1	E2	H1	H2	K	L	*Clamping Force (kN)	Weight (kg)
233-055	27	17	12	44	30	13	25	30	0 - 55	18	11	115	30	0.51
233-070	36	21	17	55	41	17	35	36	0 - 70	20	12	150	40	1.38
233-080	42	27	20	62	30	21	44	44	0 - 80	30	14	187	60	2.24
233-100	51	34	24	70	30	25	60	47	0-100	31	17	235	75	3.48

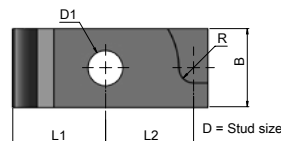


D = Stud size

WDS 234 Plain Bridge Clamps

Steel BS 970 Gr 070M20, Chemical black finish

WDS No.	A	B	D	D1	L	Weight (kg)
234-202	12	20	M8	9	63	0.1
234-203	16	25	M10	11	63	0.18
234-204	16	25	M10	11	80	0.23
234-205	25	32	M12	14	80	0.46
234-206	25	32	M12	14	100	0.59
234-207	25	45	M16	18	100	0.81
234-208	25	45	M16	18	125	1.03



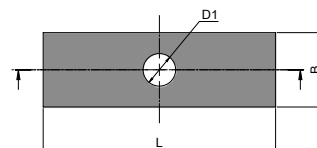
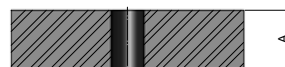
D = Stud size



WDS 236 Clamp

Steel BS 970 Gr 070M20, Chemical black finish

WDS No.	A	B	D	D1	L	L1	L2	R	Weight (kg)
236-201	10	16	M6	7	50	24	23	3	0.06
236-202	12	20	M8	9	63	30	28	4	0.11
236-203	16	25	M10	11	63	30	28	5	0.18
236-204	16	25	M10	11	80	38	36	5	0.23
236-205	25	32	M12	14	80	38	36	6	0.46
236-206	25	32	M12	14	100	48	45	6	0.59
236-207	25	45	M16	18	100	48	44	8	0.81
236-208	25	45	M16	18	125	60	57	8	1.03

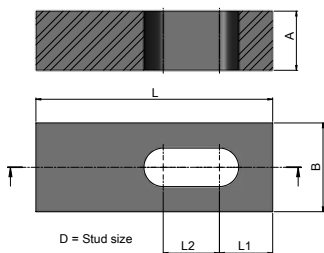


D = Stud size

WDS 246 Plain Bridge Clamp - Flat Profile

Steel BS 970 Gr 070M20, Chemical black finish

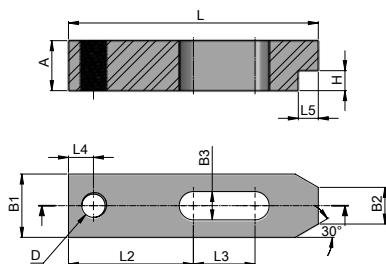
WDS No.	A	B	D	D1	L	Weight (kg)
246-201	10	16	M6	7	50	0.06
246-202	12	20	M8	9	63	0.11
246-203	16	25	M10	11	63	0.19
246-204	16	25	M10	11	80	0.24
246-205	25	32	M12	14	80	0.47
246-206	25	32	M12	14	100	0.6
246-207	25	45	M16	18	100	0.83
246-208	25	45	M16	18	125	1.05



Slotted Clamp WDS 248

Steel BS 970 Gr 070M20, Chemical black finish

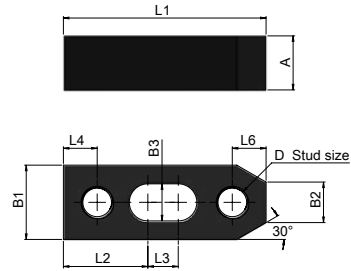
WDS No.	A	B	D	L	L1	L2	Weight (kg)
248-201	10	12	M5	50	10	13	0.04
248-202	10	16	M6	50	10	13	0.05
248-203	10	16	M6	63	12	17	0.07
248-204	12	20	M8	50	12	12	0.08
248-205	12	20	M8	63	12	18	0.1
248-206	12	20	M8	80	15	22	0.13
248-207	16	25	M10	63	14	16	0.16
248-208	16	25	M10	80	14	22	0.21
248-209	16	25	M10	100	20	28	0.26
248-210	25	32	M12	80	16	20	0.42
248-211	25	32	M12	100	20	26	0.53
248-212	25	32	M12	125	25	32	0.67
248-213	25	45	M16	100	24	24	0.76
248-214	25	45	M16	125	26	32	0.59
248-215	30	50	M16	160	34	42	1.65
248-217	30	50	M20	125	28	30	1.22
248-218	40	60	M20	160	34	44	2.58
248-220	40	60	M24	160	36	38	2.52



Stepped Clamp WDS 260

Steel BS 970 Gr 070M20, Chemical black finish

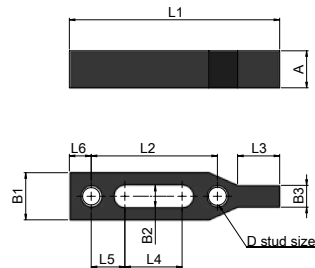
WDS No.	A	B1	B2	B3	D	H	L1	L2	L3	L4	L5	Weight (kg)
260-201	16	22	12	11	M10	6	60	30	9	8	7	0.12
260-202	16	22	12	11	M10	6	75	37	17	8	7	0.15
260-203	16	22	12	11	M10	6	100	50	29	8	7	0.2
260-204	16	22	12	11	M10	6	125	62	42	8	7	0.25
260-205	22	28	15	13	M12	8	75	32	15	10	9	0.27
260-206	22	28	15	13	M12	8	100	45	27	10	9	0.37
260-207	22	28	15	13	M12	8	125	57	40	10	9	0.44
260-208	22	28	15	13	M12	8	150	70	52	10	9	0.54
260-211	30	38	22	17	M16	12	100	50	12	15	12	0.68
260-212	30	38	22	17	M16	12	125	62	25	15	12	0.86
260-213	30	38	22	17	M16	12	150	75	37	15	12	1.03
260-214	30	38	22	17	M16	12	175	87	50	15	12	1.2



WDS 262 Tapped Clamp

Steel BS 970 Gr 070M20, Chemical black finish

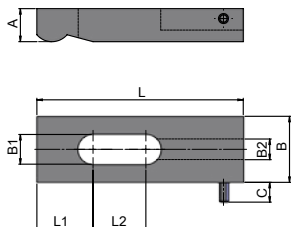
WDS No.	A	B1	B2	B3	D	L1	L2	L3	L4	L6	Weight (kg)
262-201	16	22	12	11	M10	60	25	9	10	10	0.12
262-202	16	22	12	11	M10	75	32	17	10	10	0.15
262-203	16	22	12	11	M10	100	45	29	10	10	0.2
262-204	16	22	12	11	M10	125	57	42	10	10	0.26
262-205	22	28	15	13	M12	75	32	15	10	11	0.26
262-206	22	28	15	13	M12	100	45	27	10	11	0.34
262-207	22	28	15	13	M12	125	57	40	10	11	0.38
262-208	22	28	15	13	M12	150	70	52	10	11	0.54
262-209	22	28	15	13	M12	200	95	77	10	11	0.74
262-210	22	28	15	13	M12	250	120	102	10	11	0.9
262-211	30	38	22	17	M16	100	50	12	15	15	0.68
262-212	30	38	22	17	M16	125	62	25	15	15	0.85
262-213	30	38	22	17	M16	150	75	37	15	15	1.01
262-214	30	38	22	17	M16	175	87	50	15	15	1.19



WDS 264 Clamp

Steel BS 970 Gr 070M20, Chemical black finish

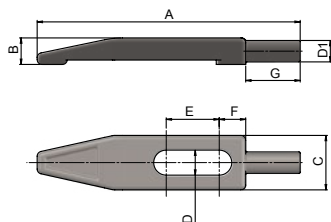
WDS No.	A	B1	B2	B3	D	L1	L2	L3	L4	L5	L6	Weight (kg)
264-201	16	22	11	9	M10	80	44	15	13	15.5	10	0.15
264-202	16	22	11	9	M10	90	54	15	23	15.5	10	0.16
264-203	16	22	11	9	M10	105	69	15	38	15.5	10	0.18
264-204	16	22	11	9	M10	130	94	15	63	15.5	10	0.21
264-205	22	28	13	13	M12	113	63	25	22	20	13	0.36
264-206	22	28	13	13	M12	125	75	25	34	20	13	0.39
264-207	22	28	13	13	M12	150	100	25	59	20	13	0.45
264-208	22	28	13	13	M12	175	125	25	84	20	13	0.53
264-209	22	28	13	13	M12	200	150	25	109	20	13	0.58
264-210	22	28	13	13	M12	250	200	25	159	20	13	0.7
264-211	30	38	17	22	M16	143	75	32	25	25	18	0.91
264-212	30	38	17	22	M16	168	100	32	50	25	18	0.71
264-213	30	38	17	22	M16	193	125	32	75	25	18	1.15
264-214	30	38	17	22	M16	218	150	32	100	25	18	1.28



Clamp with Dowel WDS 359

Steel BS 970 Gr 070M20, Chemical black finish

WDS No.	A	B	B1	B2	C	L	L1	L2	Weight (kg)
359-201	20	30	14	12.5	12	100	21	22	0.35
359-202	20	40	18	12.5	12	125	34	32	0.59



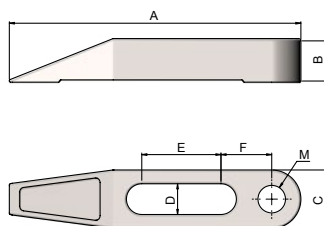
17-4

Strap Clamps WDS 590

Guaranteed replacement if permanently distorted on your machine

Heat treated 17-4 P.H. Stainless Steel

WDS No.	A	B	C	D	D1	E	F	G	Weight (kg)
590-36100	92	11	22.6	10.4	8.9	22	11	22.8	0.12



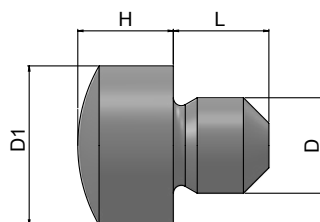
17-4

Strap Clamps with Fixing Hole WDS 590

Guaranteed replacement if permanently distorted on your machine

Heat treated 17-4 P.H. Stainless Steel

WDS No.	A	B	C	D	E	F	Tapped Hole	Weight (kg)
590-36200	127	19	25.4	13.4	34.5	22.1	M12	0.22
590-36300	152	22	30.5	16.5	38.1	32.3	M16	0.7
590-36400	178	27	35.6	19.8	38.1	42.4	M20	1.1



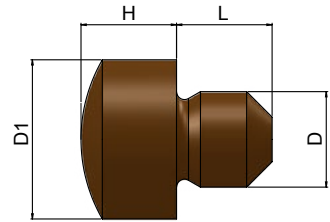
NYL

Clamp Button - Nylon WDS 642

Nylon

WDS No.	D	D1	H	L	Material	Weight (kg)
642-201	6.100 / 6.050	10	6	6	Nylon	0.01
642-202	8.100 8.050	13	6	8	Nylon	0.01

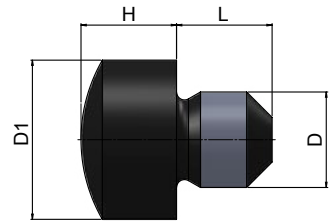
BR



WDS 642 Clamp Button - Brass

Brass

WDS No.	D	D1	H	L	Weight (kg)
642-203	6.050 / 6.025	10	6	6	0.01
642-204	8.050 / 8.025	13	6	8	0.01

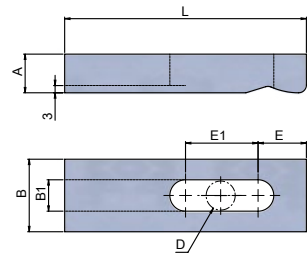


WDS 642 Clamp Button - Steel

Steel BS 970 Gr 070M20, Chemical black finish

WDS No.	D	D1	H	L	Weight (kg)
642-205	6.025 / 6.015	10	6	6	0.01
642-206	8.025 / 8.015	13	6	8	0.01

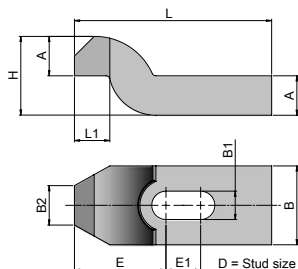
316



WDS 814 Stub Slotted Clamp - Stainless

Stainless Steel
BS 970 Gr 316S11

WDS No.	A	B	B1	D	E	E1	L	Weight (kg)
814-2065	10	16	7	M6	12	10	50	0.05
814-2086	10	20	9	M8	15	15	60	0.07
814-2109	12	25	11	M10	15	30	90	0.21
814-2129	16	30	13	M12	20	30	100	0.31

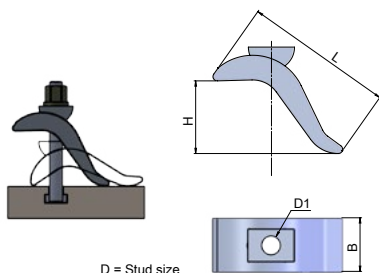


Swan Neck Clamp WDS 209

Steel forging, BS 970 Gr 080M36

Painted grey finish

WDS No.	A	B	B1	B2	E	E1	H	L	L1	D Inch	D Metric	Weight (kg)
209-2006	10	20	7	10	23.5	13	20	60	8	1/4	M6	0.08
209-2008	12	25	9	12	29.5	16	24	80	9	5/16	M8	0.18
209-201	15	30	11	15	37.5	21	30	100	12	3/8	M10	0.34
209-202	20	40	14	20	47	26	40	125	16	1/2	M12	0.66
209-2026	25	50	18	25	58	22	50	125	20	5/8	M16	0.66
209-203	25	50	18	25	58	32	50	160	20	5/8	M16	1.4
209-204	30	60	22	30	66	33	60	160	24	3/4	M20	2
209-205	35	70	26	35	85	34	70	200	28	1	M24	3.76



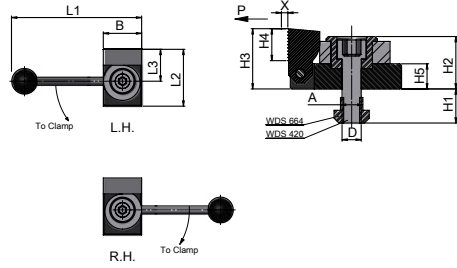
ZP

S Clamp WDS 214

Steel Forging, Zinc Plated

Stud, T-Nut, Washer and Nut are not supplied with this item

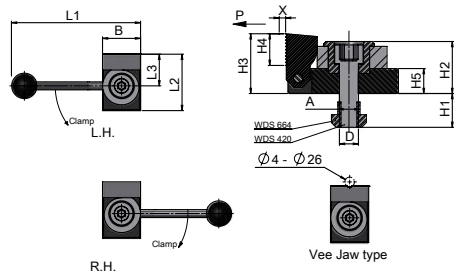
WDS No.	B	D	D1	L	H Max	H Min	Weight (kg)
214-216	50	M16	17	140	75	-	0.87
214-220	60	M20	21	175	85	-	1.8
214-230	90	M30	31	290	125	-	8.8



WDS 216 Cam Operated Edge Clamp with Serrated Jaw - Left or Right hand

Steel, Case Hardened, Chemical black finish
P = Clamping Pressure (kg)

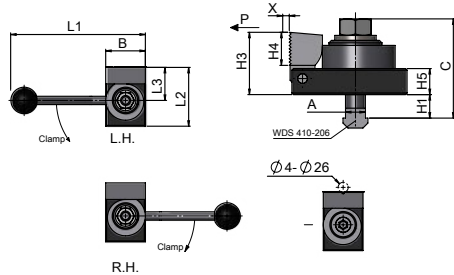
WDS No.	A (Across Flats)	B	D	H1	H2	H3	H4	H5	L1	L2	L3	P	X	Jaw Type	Weight (kg)
216-200LH	10	32	M8	18	20	20	11	8	100	50	32	350	3	Flat Serrated	0.26
216-200RH	10	32	M8	18	20	20	11	8	100	50	32	350	3	Flat Serrated	0.26
216-201LH	14	48	M12	22	33	38	20	16	150	72	40	700	4	Flat Serrated	0.87
216-201RH	14	48	M12	22	33	38	20	16	150	72	40	700	4	Flat Serrated	0.87



WDS 216 Cam Operated Edge Clamp with Vee Serrated Jaw - Left or Right Hand

Steel, Case Hardened, Chemical black finish
P = Clamping Pressure (kg)

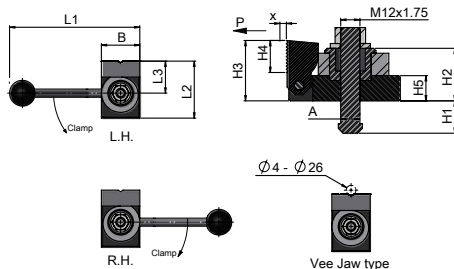
WDS No.	A	B	H1	H2	H3	H4	H5	L1	L2	L3	P	X	Jaw Type	Weight (kg)
216-210LH	10	32	18	20	20	11	8	100	50	32	350	3	Vee	0.26
216-210RH	10	32	18	20	20	11	8	100	50	32	350	3	Vee	0.26
216-212LH	14	48	22	33	38	20	16	150	72	40	700	4	Vee	0.84
216-212RH	14	48	22	33	38	20	16	150	72	40	700	4	Vee	0.84



WDS 216 Cam Operated Edge Clamp with Serrated Jaw T Bolt Fitting - Left or Right Hand

Steel, Case Hardened, Chemical black finish
P = Clamping Pressure (kg)

WDS No.	A	B	C	H1	H2	H3	H4	H5	L1	L2	L3	P	X	Jaw Type	Weight (kg)
216-2005LH	12	48	60	22	33	38	20	16	150	72	40	700	4	Flat Serrated	0.87
216-2005RH	12	48	60	22	33	38	20	16	150	72	40	700	4	Flat Serrated	0.87

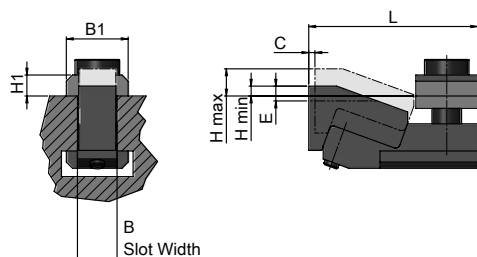


Cam Operated Edge Clamp with Vee Serrated Jaw T Bolt Fitting - Left or Right Hand **WDS 216**

Steel, Case Hardened, Chemical black finish

P = Clamping Pressure (kg)

WDS No.	A	B	C	H1	H2	H3	H4	H5	L1	L2	L3	P	X	Jaw Type	Weight (kg)
216-211LH	12	48	60	22	33	38	20	16	150	72	40	700	4	Vee	0.9
216-211RH	12	48	60	22	33	38	20	16	150	72	40	700	4	Vee	0.89

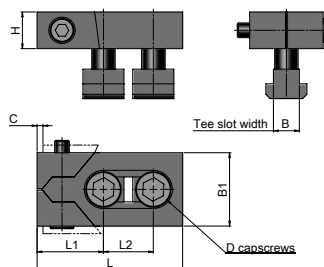


Mini Edge Clamp **WDS 217**

Steel, Case Hardened, Chemical black finish

For shallower clamping heights, the jaw can be machined back by 'E' dim

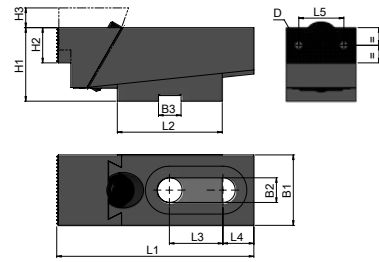
WDS No.	B	B1	C	E	H Max	H Min	H1	L	Weight (kg)
217-201	12	18	1.8	5	8.5	3.5	7	52	0.11
217-202	14	22	1.8	5	7.5	2.5	8	55	0.16
217-203	16	25	2.5	6	11	4	9	68	0.25
217-204	18	28	2.5	6	9	2	10	71	0.4



Edge Clamp **WDS 218**

Steel, Case Hardened, Chemical black finish

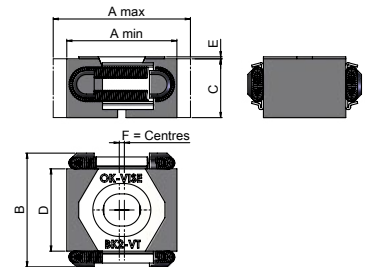
WDS No.	B	B1	C	D	H	L	L1	L2	Weight (kg)
218-201	12	40	3	M10	20	80	39	26	0.4
218-202	14	40	3	M12	20	80	39	26	0.5
218-203	18	50	4	M16	25	100	46	34	1.5



WDS 219 Edge Clamp

Steel, BS 970 Gr 080M15
Hardened

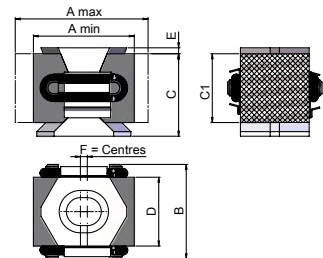
WDS No.	B1	B2	B3	D	H1	H2	H3	L1	L2	L3	L4	L5	Weight (kg)
219-201	40	11	8	M5	30	25	8	70	40	14	15	22	0.51
219-202	40	13	12	M5	35	25	10	90	50	22	17	22	0.7
219-203	50	17	16	M6	52	25	14	140	75	38	22	32	2



WDS 220 OK Vise® Double Edge Clamp

Tool Steel BS 4659 Gr BH13, Hardened as shown
HRC = Hardness of jaws in Rockwell C
P1 = Tightening Torque (Nm)
P2 = Jaw Pressure (kgf)
S = Socket head screw size (not supplied)

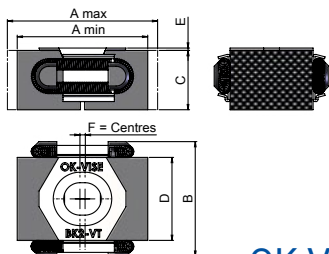
WDS No.	A Max	A Min	B	C	D	E	F	P1	P2	S	Jaw	Weight (kg)
220-201	31	27	29	15	21	2.5	1	44	2549	M8 x 20	Smooth	0.06
220-202	31	27	29	15	21	2.5	1	44	2549	M8 x 20	Serrated	0.06
220-203	49	42	41	22	30	4	2	145	6628	M12 x 30	Serrated	0.18
220-203A	49	42	41	22	30	4	2	145	6628	1/2 UNC x 1.1/4	Serrated	0.18
220-204	49	42	41	22	30	4	2	145	6628	M12 x 30	Smooth	0.18
220-204A	49	42	41	22	30	4	2	145	6628	1/2 UNC x 1.1/4	Smooth	0.18
220-205	66	57	56	29	42	5	3	360	11217	M16 x 40	Serrated	0.47
220-206	66	57	56	29	42	5	3	360	11217	M16 x 40	Smooth	0.47



WDS 220 OK Vise® Double Edge Clamp - Pull Down Type

Tool Steel BS 4659 Gr BH13, Hardened as shown
HRC = Hardness of jaws in Rockwell C
P1 = Tightening Torque (Nm)
P2 = Jaw Pressure (kgf)
S = Socket head screw size (not supplied)

WDS No.	A Max	A Min	B	C	C1	D	E	F	P1	P2	S	Weight (kg)
220-207	49	42	41	36	30	30	5	2	145	9177	M12	0.28
220-207A	49	42	41	36	30	30	5	2	145	9177	"1/2"UNCx1.3/4"	0.28
220-209	67	57	56	50	42	42	5	3	360	15296	M16	0.73



OK Vise Double Edge Clamp - Soft Jaw Type WDS 220

Tool Steel BS 4659 Gr BH13, Hardened as shown

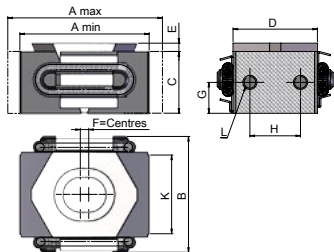
HRC = Hardness of jaws in Rockwell C

P1 = Tightening Torque (Nm)

P2 = Jaw Pressure (kgf)

S = Socket head screw size (not supplied)

WDS No.	A Max	A Min	B	C	D	E	F	P1	P2	S	Weight (kg)
220-211	37	33	29	15	21	2.5	1	44	2549	M8x20	0.07
220-213	59	52	41	22	30	4	2	145	6628	M12x30	0.24
220-213A	59	52	41	22	30	4	2	145	6628	"1/2"UNCx1.1/4"	0.24
220-215	76	67	56	29	42	5	3	360	11217	M16x40	0.55



OK Vise® Double Edge Clamp - Tapped Jaw Type WDS 220

Tool Steel BS 4659 Gr BH13, Hardened as shown

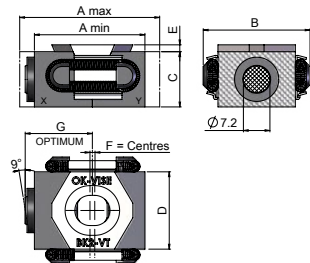
HRC = Hardness of jaws in Rockwell C

P1 = Tightening Torque (Nm)

P2 = Jaw Pressure (kgf)

S = Socket head screw size (not supplied)

WDS No.	A Max	A Min	B	C	D	E	F	G	H	K	L	P1	P2	S	Weight (kg)
220-217	37	33	29	15	21	2.5	1	7.5	12	-	4x M5	43	2243	M8x20	0.06
220-219	53	46	41	22	30	4	2	11	18	28	4 x M5	145	5608	M12x30	0.2
220-219A	53	46	41	22	30	4	2	11	18	28	4 x M5	145	5608	1/2 inch UNCx1.1/4 inch	0.2
220-221	70	61	56	29	42	5	3	14.5	26	40	4 x M5	360	10197	M16x40	0.48



OK Vise® Double Edge Clamp - Ball Bearing Gripper WDS 220

Tool Steel BS 4659 Gr BH13, Hardened as shown

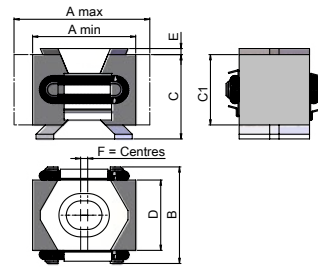
HRC = Hardness of jaws in Rockwell C

P1 = Tightening Torque (Nm)

P2 = Jaw Pressure (kgf)

S = Socket head screw size (not supplied)

WDS No.	A Max	A Min	B	C	D	E	F	G	P1	P2	S	Weight (kg)
220-223	37	33	29	15	21	2.5	1	20.5	43	2243	M8x20	0.06
220-225	54	47	41	22	30	4	2	32.5	145	5608	M12x30	0.21
220-225A	54	47	41	22	30	4	2	32.5	145	5608	1/2 inch UNCx1.1/4 inch	0.21



WDS 220 OK Vise Double Edge Clamp - Pull Down Smooth Type

Tool Steel BS 4659 Gr BH13

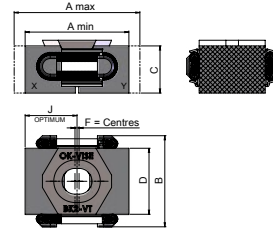
HRC = Hardness of jaws in Rockwell C

P1 = Tightening Torque (Nm)

P2 = Jaw Pressure (kgf)

S = Socket head screw size (not supplied)

WDS No.	A Max	A Min	B	C	C1	D	E	F	P1	P2	S	Weight (kg)
220-243	48	41	41	36	30	30	5	2	145	9177	M12x40	0.28
220-243A	48	41	41	36	30	30	5	2	145	9177	"1/2" UNCx1.3/4"	0.28
220-245	66	58	56	50	42	52	5	3	360	15296	M16x60	0.73



WDS 220 OK Vise Double Edge Clamp - Machinable & Smooth Jaw Type

Tool Steel BS 4659 Gr BH13

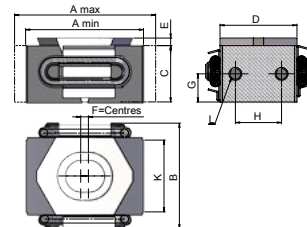
HRC = Hardness of jaws in Rockwell C

P1 = Tightening Torque (Nm)

P2 = Jaw Pressure (kgf)

S = Socket head screw size (not supplied)

WDS No.	A Max	A Min	B	C	D	E	F	J	P1	P2	S	Weight (kg)
220-411	34	30	29	15	21	2.5	1	17.5	43	2243	M8x20	0.06
220-413	54	47	41	22	30	4	2	27.5	145	5608	M12x30	0.21
220-413A	54	47	41	22	30	4	2	27.5	145	5608	1/2" UNCx1.1/4"	0.21
220-415	70	62	56	29	42	5	3	35	360	10197	M16x40	0.5



WDS 220 OK Vise Double Edge Clamp - Tapped and Smooth Jaw Type

Tool Steel BS 4659 Gr BH13

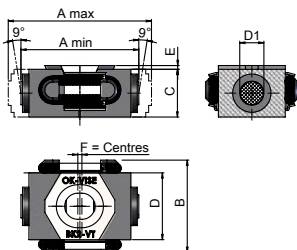
HRC = Hardness of jaws in Rockwell C

P1 = Tightening Torque (Nm)

P2 = Jaw Pressure (kgf)

S = Socket head screw size (not supplied)

WDS No.	A Max	A Min	B	C	D	E	F	G	H	J	K	L	P1	P2	S	Weight (kg)
220-231	34	30	29	15	21	2.5	1	7.5	12	17.5	21	M5x4	43	2243	M8x20	0.06
220-233	54	47	41	22	30	4	2	11	18	24.5	29	M5x4	145	5608	M12x30	0.19
220-233A	54	47	41	22	30	4	2	11	18	24.5	28	M5x4	145	5608	1/2 inch UNCx1.1/4 inch	0.19
220-235	70	62	56	29	42	5	3	14.5	26	32.5	40	M5x4	360	10197	M16x40	0.48



OK Vise Double Edge Clamp - Two Self - Adjusting Jaws WDS 220

Tool Steel BS 4659 Gr BH13, Hardened as shown

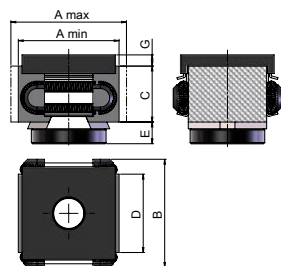
HRC = Hardness of jaws in Rockwell C

P1 = Tightening Torque (Nm)

P2 = Jaw Pressure (kgf)

S = Socket head screw size (not supplied)

WDS No.	A Max	A Min	B	C	D	D1	E	F	G	P1	P2	S	Weight (kg)
220-253	43	39	29	15	21	7.2	2.5	1	20.5	43	2243	M8x20	0.07
220-255	69	62	41	44	30	10.7	4	2	32.5	145	5608	M12x40	0.06
220-255A	2.75	62	41	44	30	10.7	4	2	32.5	145	5608	1/2 inch UNCx1.1/4 inch	0.24



OK Vise Single Edge Clamp - Pull Down Serrated Jaw Type WDS 220

Tool Steel BS 4659 Gr BH13, Hardened as shown

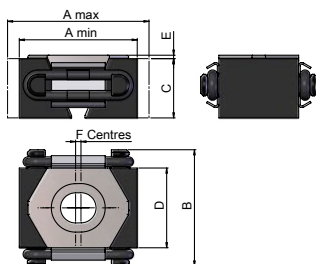
HRC = Hardness of jaws in Rockwell C

P1 = Tightening Torque (Nm)

P2 = Jaw Pressure (kgf)

S = Socket head screw size (not supplied)

WDS No.	A Max	A Min	B	C	D	E Max	G	P1	P2	S	Weight (kg)
220-271	31	27	29	15	21	7	3	44	2500	M8x30	0.07
220-273	49	42	41	22	30	9.5	4	145	6600	M12x60	0.27
220-273A	49	42	41	22	30	9.5	4	145	6600	1/2 inch UNCx2.1/4 inch	0.27
220-275	65	57	56	29	42	11.5	5	360	11200	M16x60	0.62



OK Vise Economy Double Edge Clamp WDS 220

Tool Steel BS 4659 Gr BH13, Hardened as shown

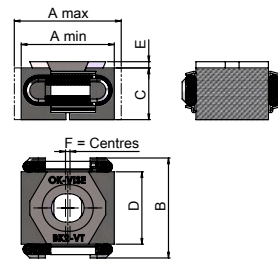
HRC = Hardness of jaws in Rockwell C

P1 = Tightening Torque (Nm)

P2 = Jaw Pressure (kgf)

S = Socket head screw size (not supplied)

WDS No.	A Max	A Min	B	C	D	E	F	P1	P2	S	Jaw	Weight (kg)
220-301	25	20	22	11	15	4.2	5	10	1000	M5 x 25	Smooth	0.02
220-302	32	28	29	15	21	4	4	25	1500	M8 x 20	Serrated	0.06
220-303	32	28	29	15	21	4	4	25	1500	M8 x 20	Smooth	0.06



WDS 220 OK Vise Double Edge Clamp - Stainless Steel

Stainless Steel - AISI 416
HRC = Hardness of jaws in Rockwell C
P1 = Tightening Torque (Nm)
P2 = Jaw Pressure (kgf)
S = Socket head screw size (not supplied)

WDS No.	A Max	A Min	B	C	D	E	P1	P2	S	Weight (kg)
220-602	31	27	29	15	21	2.5	44	2549	M8 x 20	0.06



WDS 220 OK-Vise Spare Parts - Spring

302 Stainless Steel

WDS No.	To Suit	Weight (kg)
220-701	220-201, 220-202, 220-211, 220-217, 220-231, 220-223, 220-271, 220-302, 220-303, 220-411, 220-602	0.01
220-702	220-203(A), 220-204(A), 220-207(A), 220-213(A), 220-219(A), 220-225(A), 220-233(A), 220-243(A), 220-255(A), 220-273(A)	0.01
220-703	220-205, 220-206, 220-209, 220-215, 220-221, 220-235, 220-245, 220-275, 220-415	0.01

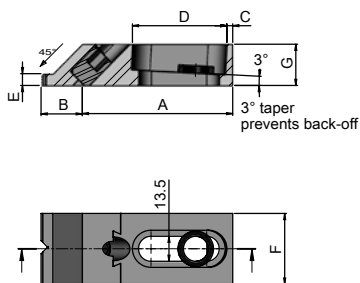
304



WDS 220 OK-Vise Spare Parts - Sideplate

Stainless Steel - AISI 304

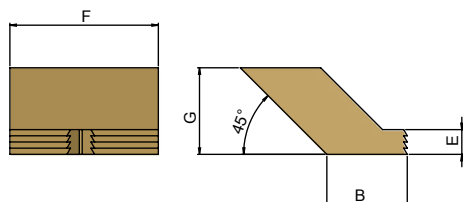
WDS No.	To Suit	Weight (kg)
220-711	220-201, 220-202, 220-211, 220-217, 220-231, 220-223, 220-271, 220-302, 220-303, 220-411, 220-602	0.01
220-712	220-203(A), 220-204(A), 220-207(A), 220-213(A), 220-219(A), 220-225(A), 220-233(A), 220-243(A), 220-255(A), 220-273(A)	0.01
220-713	220-205, 220-206, 220-209, 220-215, 220-221, 220-235, 220-245, 220-275, 220-415	0.01



Toe Edge Clamps WDS 229

Steel or brass toe and special washer are included with each clamp
Brass toe available to special order
Slotted for M12/1/2" Cap Screws

WDS No.	A	B	C	D	E	F	G	Toe Material	Toe Style	Weight (kg)
229-101	3 1/4	13/16	1/8	2	1/4	1 1/2	7/8	Steel	Standard	0.45
229-102	3 1/4	13/16	1/8	2	7/8	1 1/2	7/8	Steel	High Grip	0.59
229-103	4 11/16	13/16	1/2	2 3/4	1/4	1 1/2	7/8	Steel	Standard	0.64
229-104	4 11/16	13/16	1/2	2 3/4	7/8	1 1/2	7/8	Steel	High Grip	0.77
229-105	6 5/8	13/16	1	3 3/4	1/4	1 1/2	7/8	Steel	Standard	0.91
229-106	6 5/8	13/16	1	3 3/4	7/8	1 1/2	7/8	Steel	High Grip	1.04

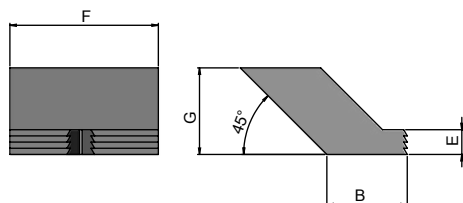


BR

Brass Toe WDS 229

Brass
To Suit WDS 229 Toe Clamp

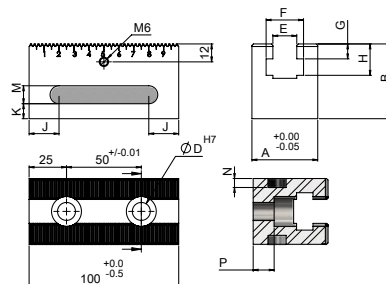
WDS No.	A	B	C	D	E	F	G	wt kg	Weight (kg)
229-301	3 1/4	13/16	1/8	2	1/4	1 1/2	7/8	1.1	0.23
229-302	3 1/4	13/16	1/8	2	7/8	1 1/2	7/8	1.7	0.28



Steel Toe WDS 229

Steel
To suit WDS 229 Toe Clamp

WDS No.	A	B	C	D	E	F	G	Toe Style	Weight (kg)
229-201	3 1/4	13/16	1/8	2	1/4	1 1/2	7/8	Standard	0.23
229-202	3 1/4	13/16	1/8	2	7/8	1 1/2	7/8	High Grip	0.23

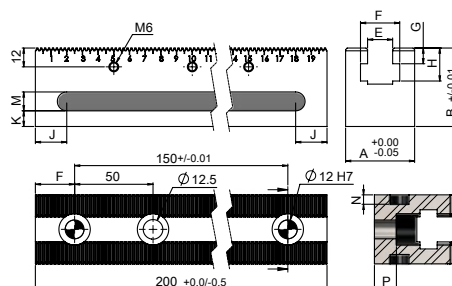


WDS 240 100mm Length OK Vise Rail for WDS 220 Series Clamps

Body - Steel

Serration Pitch - 2.5 (+/-0.01) mm

WDS No.	A	B	D	E	F	G	H	J	K	M	N	P	Type	Weight (kg)
240-210	44	50	12	16	25	10	21	20	10	12	6	14	RM	1.16

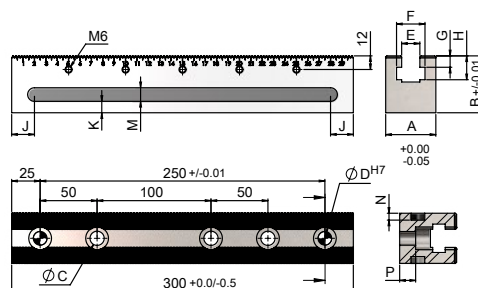


WDS 240 200mm Length OK Vise Rail-RM TYPE for WDS 220 Series Clamps

Body - Steel

Serration Pitch - 2.5 (+/-0.01) mm

WDS No.	A	B	C	D	E	F	G	H	J	K	M	N	P	Type	Weight (kg)
240-220	44	50	12.5	12	16	25	10	21	20	10	12	6	14	RM	2.32

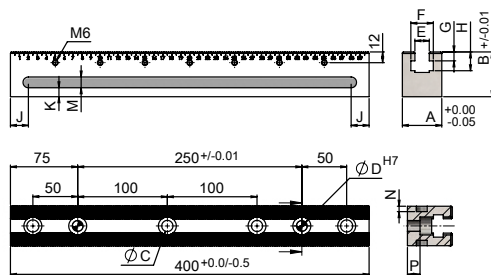


WDS 240 300mm Length OK Vise Rail-RM TYPE for WDS 220 Series Clamps

Body - Steel

Serration Pitch - 2.5 (+/-0.01) mm

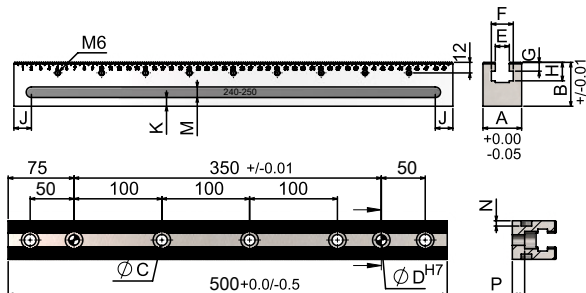
WDS No.	A	B	C	D	E	F	G	H	J	K	M	N	P	Type	Weight (kg)
240-230	44	50	12.5	12	16	25	10	21	20	10	12	6	14	RM	3.45



400mm Length OK Vise RAIL for WDS 220 Series Clamps **WDS 240**

Body - Steel
Serration Pitch - 2.5 (+/-0.01) mm

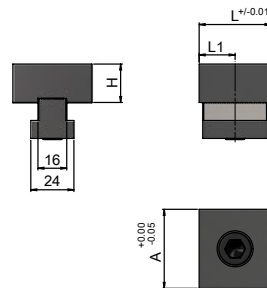
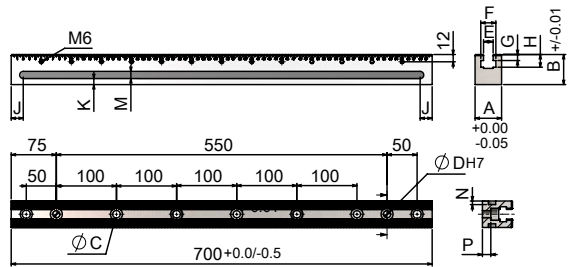
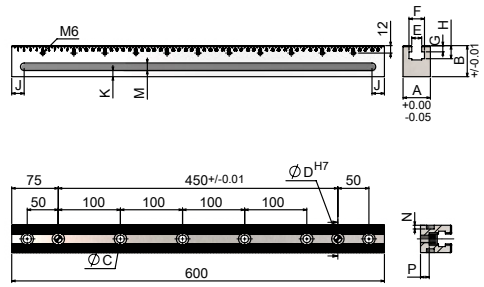
WDS No.	A	B	C	D	E	F	G	H	J	K	M	N	P	Type	Weight (kg)
240-240	44	50	12.5	12	16	25	10	21	20	10	12	6	14	RM	4.62
240-440	60	60	16.5	16	20	32	18	32	31	10	14	8	12	RH	7.4

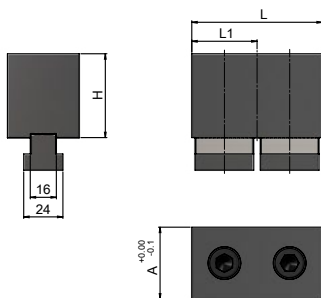


500mm Length OK Vise RAIL for WDS 220 Series Clamps **WDS 240**

Body - Steel
Serration Pitch - 2.5 (+/-0.01) mm

WDS No.	A	B	C	D	E	F	G	H	J	K	M	N	P	Type	Weight (kg)
240-250	44	50	12.5	12	16	25	10	21	20	10	12	6	14	RM	5.8
240-450	60	60	16.5	16	20	32	18	32	31	10	14	8	12	RH	9.25

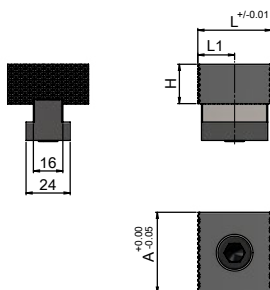




OK Vise Stop Block - High WDS 241

Body - Steel
Serration Pitch - 2.5 (+/-0.01) mm

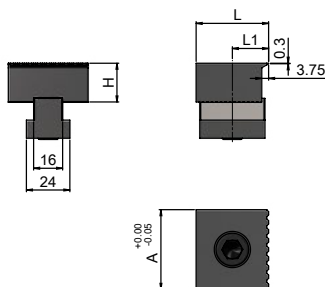
WDS No.	A	H	L	L1	Weight (kg)
241-203	44	51.4	80	40	1.6



OK Vise Stop Block - Serrated WDS 241

Body - Steel
Serration Pitch - 2.5 (+/-0.01) mm
Clamping faces nitrided

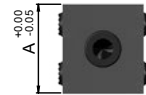
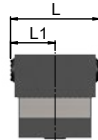
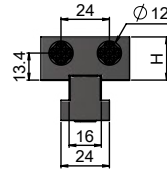
WDS No.	A	H	L	L1	Weight (kg)
241-205	44	21.4	40	20	0.4



OK Vise Stop Block - Serrated Jaw WDS 241

Body - Steel
Serration Pitch - 2.5 (+/-0.01) mm

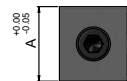
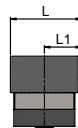
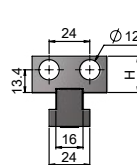
WDS No.	A	H	L	L1	Weight (kg)
241-211	44	21.4	40	20	0.39



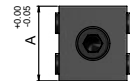
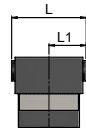
WDS 241 OK Vise Stop Block - Serrated Pads

Body - Steel
Serration Pitch - 2.5 (+/-0.01) mm
Serrated Hard Pads

WDS No.	A	H	L	L1	Weight (kg)
241-221	44	21.4	40	20	0.39



WDS 241-231

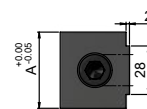
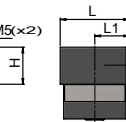
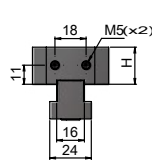


WDS 241-232

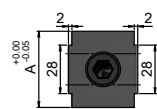
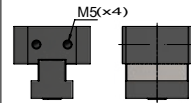
WDS 241 OK Vise Stop Block - Diamond Faced

Body - Steel
Serration Pitch - 2.5 (+/-0.01) mm
Diamond Faced Pads

WDS No.	A	H	L	L1	Weight (kg)
241-231	44	21.4	42	22	0.39
241-232	44	21.4	44	22	0.39



WDS 241-251



WDS 241-252

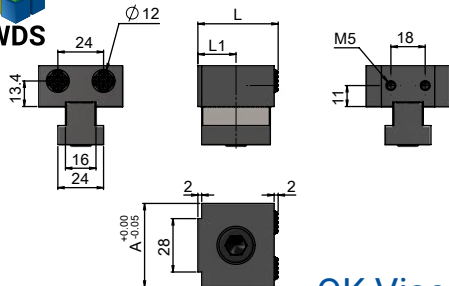
WDS 241 OK Vise Stop Block - Threaded M5

Body - Steel
Serration Pitch - 2.5 (+/-0.01) mm
Hardened pins

WDS No.	A	H	L	L1	Weight (kg)
241-251	44	21.4	40	20	0.4
241-252	44	21.4	40	20	0.4



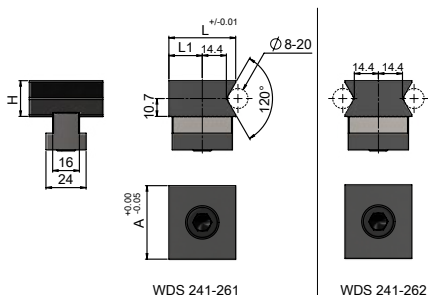
WDS



OK Vise Stop Block - Serrated/Threaded M5 WDS 241

Body - Steel
Serration Pitch - 2.5 (+/-0.01) mm
Hardened Serrated pins
M5 (2) Threaded Holes

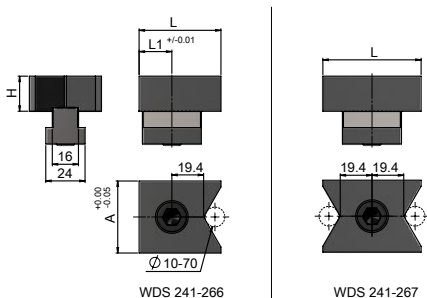
WDS No.	A	H	L	L1	Weight (kg)
241-253	44	21.4	42	20	0.4



OK Vise Stop Block - Horizontal Vee WDS 241

Body - Steel
Serration Pitch - 2.5 (+/-0.01) mm
Hardened Serrated pins
M5 (2) Threaded Holes

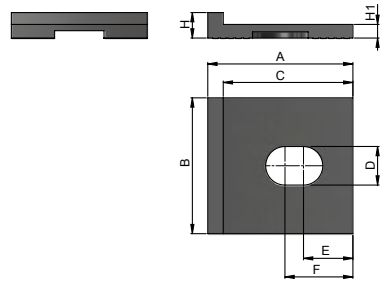
WDS No.	A	H	L	L1	Weight (kg)
241-261	44	21.4	40	20	0.39
241-262	44	21.4	40	20	0.45



OK Vise Stop Block - Vertical Vee WDS 241

Body - Steel
Serration Pitch - 2.5 (+/-0.01) mm

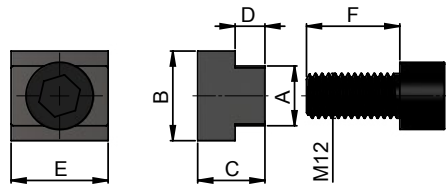
WDS No.	A	H	L	L1	Weight (kg)
241-266	44	21.4	50	20	0.49
241-267	44	21.4	60	-	0.45



WDS 241 OK Vise Stop Block - Stop Plate

Steel

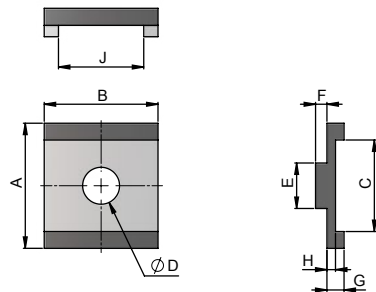
WDS No.	A	B	C	D	E	F	H	H1	Weight (kg)
241-271	47	44	42	12.5	16	22	8.25	4.4	0.06



WDS 241 OK Vise T-Nut with Screw

Steel

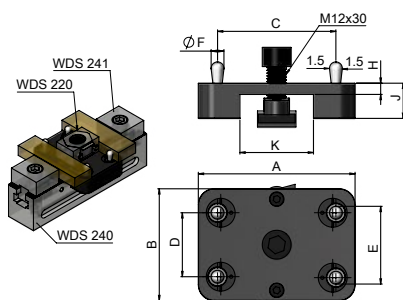
WDS No.	A	B	C	D	E	Weight (kg)
241-274	6.4	44	22	8.4	25	0.1



WDS 241 OK Vise Rotation Stop Plate

Steel

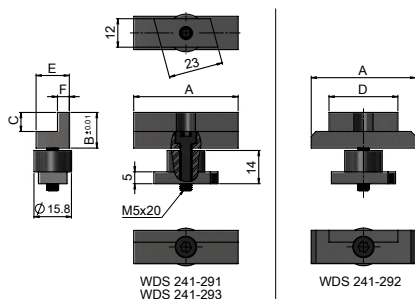
WDS No.	A	B	C	D	E	F	G	H	J	Weight (kg)
241-275	44	40	32.2	13	16	4	6	3	30	0.06



OK Vise Load Assist WDS 241

Steel
For use with WDS220

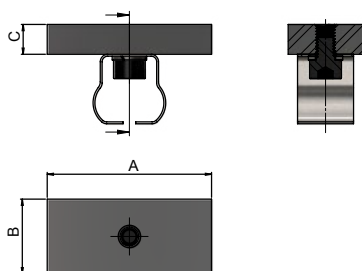
WDS No.	A	B	C	D	E	F	H	J	K	Weight (kg)
241-290	98	70	66-74	36-44	44-52	8	7	22	46	0.8



OK Vise Riser Plates WDS 241

Steel

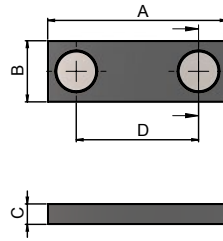
WDS No.	A	B	C	D	E	F	Weight (kg)
241-291	44	15	8	-	14	5	0.07
241-292	44	15	8	29	14	5	0.06
241-293	44	8	1	-	14	5	0.06



OK Vise Riser Plate - Spring Fitting WDS 241

Steel

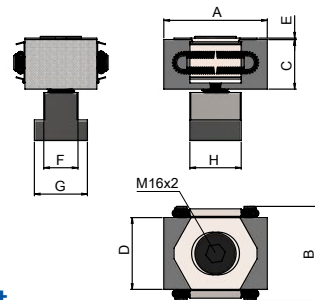
WDS No.	A	B	C	Weight (kg)
241-295	44	20	8	0.03



WDS 241 OK Vise Magnetic Parallel Plate

Steel

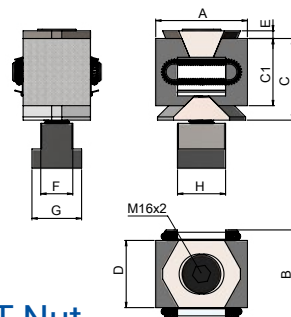
WDS No.	A	B	C	D	Weight (kg)
241-296	44	15	5	30	0.3



WDS 241 OK Vise Double Edge Clamp with T Nut

Steel

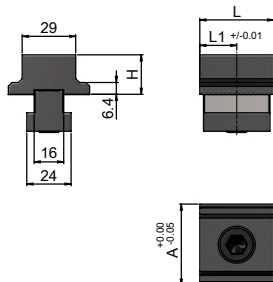
WDS No.	B	C	D	E	F	G	H	A Max	A Min	Jaw Face	Weight (kg)
241-401	56	29	42	5	20	31	30	66	57	Smooth	0.7
241-402	56	29	42	5	20	31	30	66	57	Serrated	0.7



WDS 241 OK Vise Double Edge Clamp Stop with T Nut

Steel

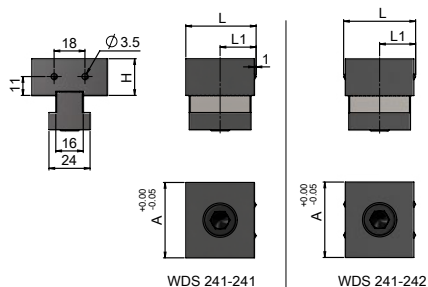
WDS No.	A	B	C	E	F	G	H	Type	Weight (kg)
241-412	60	80	40	70	20	31	55.4	Serrated	1



OK Vise Stop Block - Flanged WDS 241

Body - Steel
Serration Pitch - 2.5 (+/-0.01)mm

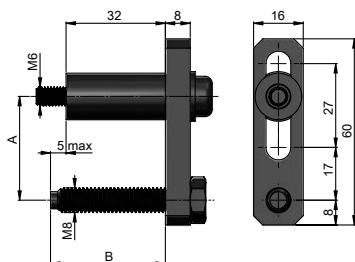
WDS No.	A	H	L	L1	Weight (kg)
241-202	44	21.4	40	20	0.34



OK Vise Stop Block - Pin Faced WDS 241

Body - Steel
Serration Pitch - 2.5 (+/-0.01)mm
Pins - Hardened Steel

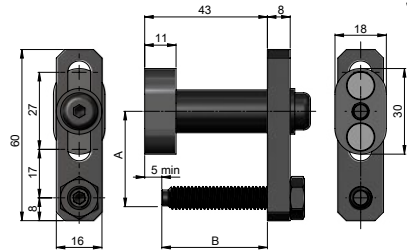
WDS No.	A	H	L	L1	Weight (kg)
241-241	44	21.4	41	21	0.39
241-242	44	21.4	42	21	0.4



OK Vise Side Locator WDS 241

Steel

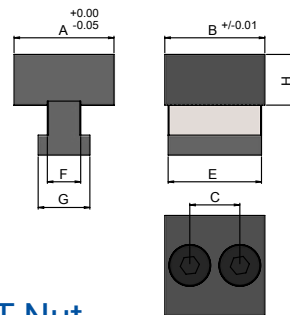
WDS No.	A	B	Weight (kg)
241-282	17 - 44	0 - 37	0.29



WDS 241 OK Vice Magnetic Side Locators

Steel

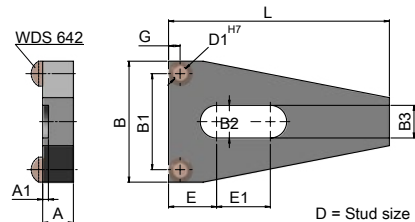
WDS No.	A	B	Weight (kg)
241-281	17 - 44	0 - 37	0.16



WDS 241 OK Vice Double Edge Clamp Stop with T Nut

Steel

WDS No.	A	B	C	E	F	G	H	Weight (kg)
241-421	60	60	30	56	20	31	30.4	1.15
241-422	60	80	40	70	20	31	55.4	2.42



WDS 641 Button Type Wide Clamp

Steel BS 970 Gr 070M20
Chemical black finish

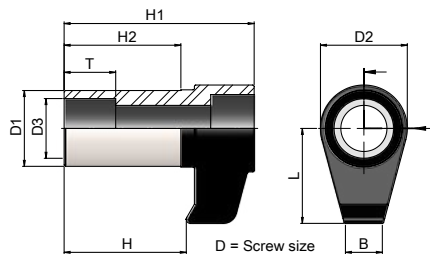
WDS No.	A	A1	B	B1	B2	B3	D	D1 (H7)	E	E1	G	L	Weight (kg)
641-203	10	3	50	40	11	11	M10	6	18	20	5	75	0.2
641-204	10	3	75	65	11	11	M10	6	18	20	5	75	0.3
641-2041	12	3	63	50	13	13	M12	8	22	25	6	100	0.44
641-2051	16	3	63	50	17	17	M16	8	25	28	6	115	0.63



MITEE-BITE WORK HOLDING

For the full range of Mitee-Bite Work Holding please see pages **823-843**

IN"



WDS 201 Hook Clamp - Inch

Steel BS 3146; Pt1: CLA4

Hook Clamp supplied without screw and spring

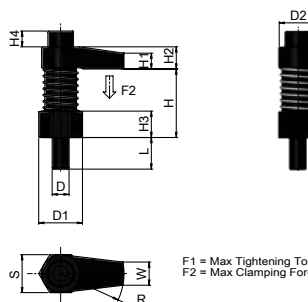
WDS No.	B	D	D1 Inch	D2	D3	H	H1	H2	L	T	Weight (kg)
201-01	10	5/16	0.624	19	11.5	21	35	19	18	11	0.04
201-02	8	3/8	0.749	22	13	40	57	38	25	14	0.1
201-03	15	1/2	0.999	28	19	36	57	34	25	19	0.18

WDS 201 Hook Clamp - Metric

Steel BS 3146; Pt1: CLA4

Hook Clamp supplied without screw and spring

WDS No.	B	D Metric	D1 Metric	D2	D3	H	H1	H2	L	T	Weight (kg)
201-201	10	M8	15.98/15.90	19	11.5	21	35	19	18	11	0.04
201-202	8	M10	18.98/18.90	22	13	40	57	38	25	14	0.1
201-203	15	M12	24.98/24.90	28	19	36	57	34	25	19	0.16
201-204	15	M16	27.98/27.90	32	22	45	70	43	35	19	0.25



WDS 281 Hook Clamp with Collar

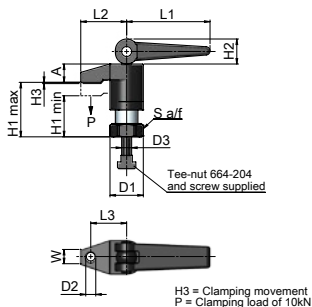
Heat treated steel

Chemical black finish

T = Maximum Tightening Torque (Nm)

F1 = Max Tightening Torque (Nm)
F2 = Max Clamping Force (kN)

WDS No.	D	D1	D2	F1	F2	H	H1	H2	H3	H4	L	R	S	T	W	Weight (kg)
281-2002	M8	25	22	20	7.9	35-45	7	12	6	2	19	20	22	20	10	0.13
281-2003	M8	25	22	20	7.3	35-45	7	12	6	2	19	25	22	20	10	0.14
281-2004	M8	25	22	20	6.7	35-45	7	12	6	2	19	30	22	20	10	0.14
281-2005	M8	25	22	20	7.9	45-55	7	12	16	2	19	20	22	20	10	0.16
281-2006	M8	25	22	20	7.3	45-55	7	12	16	2	19	25	22	20	10	0.17
281-2007	M8	25	22	20	6.7	45-55	7	12	16	2	19	30	22	20	10	0.18
281-201	M12	40	32	45	13.5	50-65	10	16	10	11	30	40	36	45	18	0.43
281-202	M12	40	32	45	12.6	50-65	12	18	10	11	30	50	36	45	18	0.5
281-203	M12	40	32	45	11.7	50-65	12	18	10	11	30	60	36	45	18	0.54
281-204	M12	40	32	45	13.5	65-80	10	16	25	11	30	40	36	45	18	0.56
281-205	M12	40	32	45	12.6	65-80	12	18	25	11	30	50	36	45	18	0.62
281-206	M12	40	32	45	11.7	65-80	12	18	25	11	30	60	36	45	18	0.66
281-207	M16	40	36	60	13.4	50-65	15	21	10	15	30	40	36	60	22	0.66
281-208	M16	40	36	60	12.4	50-65	15	21	10	15	30	50	36	60	22	0.7
281-209	M16	40	36	60	12	50-65	15	21	10	15	30	60	36	60	22	0.74
281-210	M16	40	36	60	13.4	65-80	15	21	25	15	30	40	36	60	22	0.77
281-211	M16	40	36	60	12.4	65-80	15	21	25	15	30	50	36	60	22	0.82
281-212	M16	40	36	60	12	65-80	15	21	25	15	30	60	36	60	22	0.87

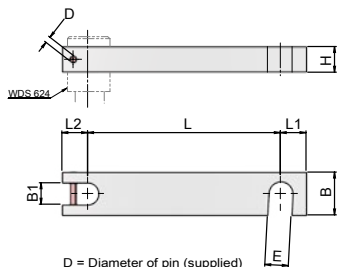


Cam Hook Clamp WDS 280

Steel - hardened and ground, Chemical black finish

These Hook Clamps have a conventional downward clamping action which is achieved by means of a cam handle. Workpieces can easily be loaded and unloaded simply by swinging the clamping arm. The whole unit is robust and compact, utilising the minimum amount of space. Workpiece height variations can be accommodated by the use of height extensions (WDS 282) These have the effect of increasing both the minimum and maximum clamping height of the unit.

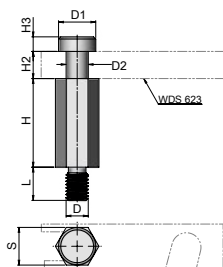
WDS No.	A	D1	D2	D3	H1 Max	H1 Min	H2	H3	L1	L2	L3	S	W	Weight (kg)
280-201	23	40	M12	M12	70	50	28	1.5	100	55	43	36	17	1.17
280-202	23	40	M12	M12	98	68	28	1.5	100	55	43	36	17	1.35
280-203	23	40	M12	M12	135	95	28	1.5	100	55	43	36	17	1.54



Swing Latch WDS 623

Steel BS.970 Gr.070M20
Chemical black finish

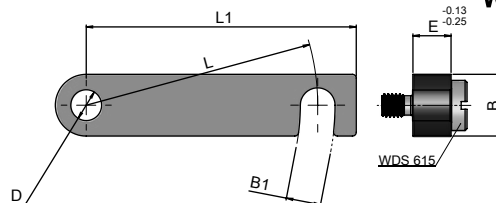
WDS No.	B	B1	D	E	H	L	L1	L2	Weight (kg)
623-201	20	10	3	11	12	65	12	12	0.14
623-202	20	10	3	11	12	90	12	12	0.19



Latch Pillar WDS 624

Steel BS.970 Gr.230M07
Chemical black finish

WDS No.	D	D1	D2	H	H2	H3	L	S	Weight (kg)
624-201	M10	16.8	10	25	12.25	6.6	15	17	0.08
624-202	M10	16.8	10	40	12.25	6.6	15	17	0.08
624-203	M10	16.8	10	60	12.25	6.6	15	17	0.17

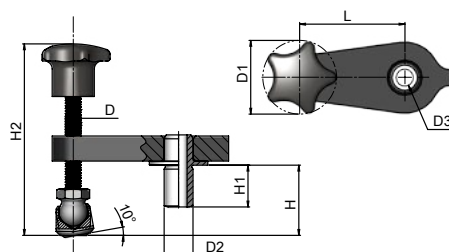


WDS 630 Swing Latch

Steel BS 3146: Pt1: CLA4

Hook Clamp supplied without screw and spring

WDS No.	B	B1	D	E	L	L1	Weight (kg)
630-2006	12	7	6	6	50	57	0.06
630-201	16	9	8	10	60	70	0.06
630-202	16	9	8	10	80	90	0.1
630-203	20	11	10	12	105	117	0.21
630-204	20	11	10	12	125	137	0.24



WDS 656 Swing Latch Clamp

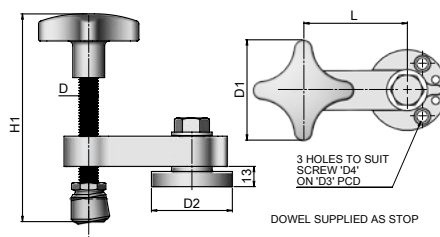
Swing Latch - Steel BS 970 Gr 070M20

Swivel Pad and Bush - Steel BS 970 Gr 230M07

Chemical black finish

Hand Knob - Cast Iron BS 1452 Gr 250

WDS No.	D	D1	D2	D3	H Max	H Min	H1	H2	L	Weight (kg)
656-201	M6	32	11 (e9)	6.5	37	16	16	70	40	0.14
656-203	M12	63	16 (e9)	10.5	71	22	19	128	65	0.6



WDS 656 Swing Latch Clamp - 3 Hole Mounting

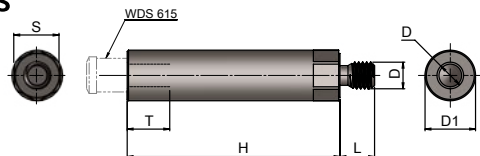
Swing Latch - Steel BS 970 Gr 070M20

Swivel Pad and Plate - Steel BS 970 Gr 230M07

Chemical black finish

Hand Knob - Cast Iron BS 1452 Gr 250

WDS No.	D	D1	D2	D3	D4	H Max	H Min	H1	L	Weight (kg)
656-210	M12	63	50	38	M6	61	12	128	65	0.77
656-212	M12	63	50	38	M6	61	12	128	90	0.84
656-214	M12	63	50	38	M6	61	12	128	115	0.92

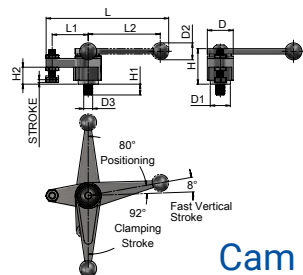


Latch Pillar WDS 680

Steel BS.970 Gr.230M07

Chemical black finish

WDS No.	D	D1	H	L	S	T	Weight (kg)
680-20620	M6	13	20	8	10	10	0.02
680-20640	M6	13	40	8	10	10	0.03
680-20660	M6	13	60	8	10	10	0.05
680-20830	M8	16	30	10	13	13	0.04
680-20850	M8	16	50	10	13	13	0.07
680-20870	M8	16	70	10	13	13	0.07
680-21040	M10	19	40	13	17	16	0.08
680-21060	M10	19	60	13	17	16	0.12
680-21080	M10	19	80	13	17	16	0.17



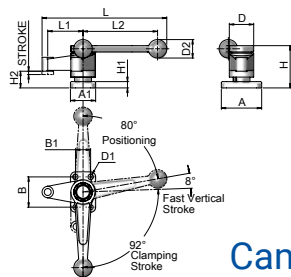
Cam Swing Clamp - Clockwise or Anti-Clockwise WDS 4101

Steel parts with black finish

All wearing parts hardened

Available in Clockwise (C) and Anti-clockwise (A) models

WDS No.	D	D1	D2	D3	H	H1	H2	L	L1	L2	P	Weight (kg)
4101-201A	25	18	16	M8	32	10	10	111	32	65	30	0.2
4101-201C	25	18	16	M8	32	10	10	111	32	65	30	0.2



Cam Swing Clamp - Clockwise or Anti-Clockwise WDS 4102

Steel parts with black finish

All wearing parts hardened

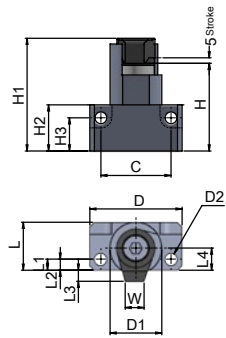
Available in Clockwise (C) and Anti-clockwise (A) models

Hand push =36 kgf

P = Max holding force kg hand

P1 = Max holding force kg mallet

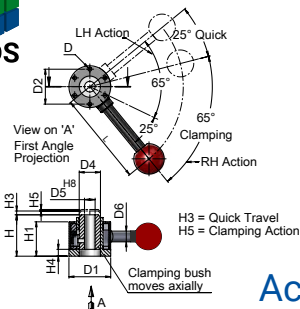
WDS No.	A	A1	B	B1	D	D1	D2	H	H1	H2	kg	L	L1	L2	P	P1	Weight (kg)
4102-201A	48	30	36	18	29	6.3	22	50	7.5	20	0.4	150	42	90	500	800	0.4
4102-201C	48	30	36	18	29	6.3	22	50	7.5	20	0.4	150	42	90	500	800	0.4
4102-203A	65	40	50	25	38	8.3	30	67	10	26	0.9	200	55	120	600	1200	0.9
4102-203C	65	40	50	25	38	8.3	30	67	10	26	0.9	200	55	120	600	1200	0.9



WDS 4105 Swing Clamp Assembly

Carbon Steel, Tempered
Chemical black finish
P = Max holding force KG using Allen key

WDS No.	C	D	D1	D2	H	H1	H2	H3	L	L1	L2	L3	L4	P	W	Weight (kg)
4105-201	38	52	28	6.4	47.5	62	25	18	26	19.5	6	6	12	180	10	0.33
4105-202	48	64	34	8.4	57.5	74	30	21	31	22.5	7.5	9	14	200	12	0.56
4105-203	55	75	40	10.5	67	87	35	24	36.5	26	9	10.5	16.5	250	15	0.81
4105-204	65	88	48	12.8	87	112	45	32	43.5	31	10	16.5	19.5	300	20	1.6



Actima Clamping Device - Left or Right Hand WDS 2300

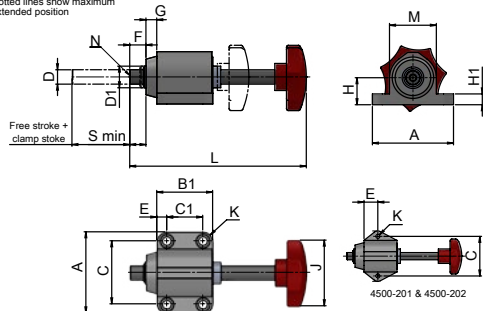
Surface Finish, Steel parts with black finish, Red plastic ball knob
All wearing parts hardened
H3 = Quick Travel, H5 = Clamping Action

1. Simplicity of attachment to jigs and fixtures
2. Locking occurs within a clamping distance of 2 mm allowing the clamping of parts within a tolerance range of 1.5 mm
3. Fitted either vertically or horizontally
4. Maximum clamping load = 500kg

The clamping lever can be right hand or left hand operating. Please state when ordering

WDS No.	D	D1	D2	D3	D4	D5	D6	H	H1	H2	H3	H4	H5	L	Weight (kg)
2300-01LH	M6	55	46	35	28	14	14	54.5	46.5	26	10	9	2	120	0.74
2300-01RH	M6	55	46	35	28	14	14	54.5	46.5	26	10	9	2	120	0.74

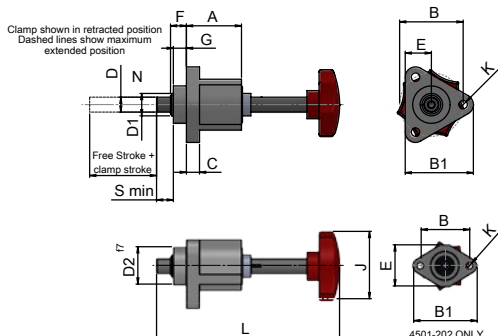
Clamp shown in retracted position
Dotted lines show maximum
extended position



In-Line Clamp with Base Flange - Hand Screw WDS 4500

Steel Clamping Rod, Clamp force is based on an operating force of 10daN

WDS No.	A	B	C	C1	D	D1	E	F	G	H	H1	J	K	L	M	N	S	Clamp Force daN	Clamp Stroke	Free Stroke	Holding Force daN	Weight (kg)
4500-201	56	37	44	-	8	16	15.3	9	10	18	5	40	4.5	128	35	M5x8	9	45	2.5	40	150	0.33
4500-202	68	44	52	-	12	20	19	15	12	20	6.3	52	6.5	153	40	M6x12	15	55	3	45	300	0.61
4500-203	90	62	70	40	16	25	11	18	12	30	12	75	9	196	52	M8x15	18	85	4	60	900	1.33



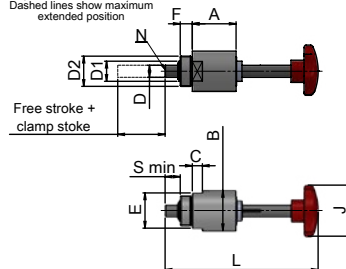
In-Line Clamp with Front Flange - Hand Screw WDS 4501

Steel Clamping Rod, Clamp force is based on an operating force of 10daN

WDS No.	A	B	B1	C	D	D1	D2	E	F	G	J	K	L	N	S	Weight (kg)
4501-202	44	52	68	6	12	20	30	-	15	12	52	6.5	153	M6x12	15	0.55
4501-203	60	68	73	14	16	25	40	28	18	14	75	9	196	M8x15	18	1.43



Clamp shown in retracted position
Dashed lines show maximum
extended position

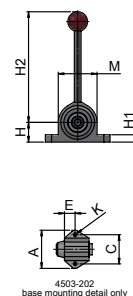
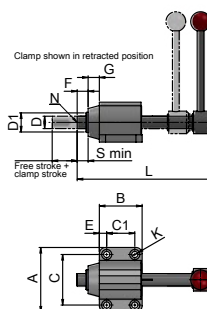


WDS 4502 In-Line Clamp with Screw Fitting - Hand Screw

Steel Clamping Rod

Clamp force is based on an operating force of 10daN

WDS No.	A	B	C	D	D1	D2	E	F	J	L	N	S	Clamp Force daN	Clamp Stroke	Free Stroke	Holding Force daN	Weight (kg)
4502-201	37	35	8	8	16	M24x1.5	30	10	40	153	M6x12	15	45	2.5	20	150	0.3
4502-202	44	40	10	12	20	M30x1.5	35	12	52	196	M8x15	18	55	3	45	300	0.54

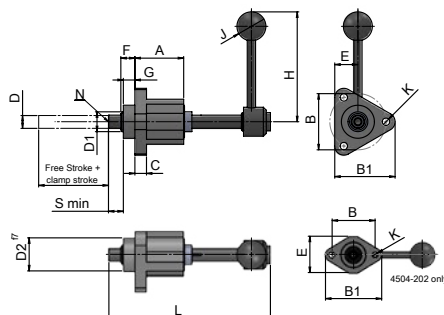


WDS 4503 In-Line Clamp with Base Flange - Lever operating

Steel Clamping Rod

Clamp force is based on an operating force of 10daN

WDS No.	A	B	C	C1	D	D1	E	F	G	H	H1	H2	K	L	M	N	S	Weight (kg)
4503-202	68	44	52	-	12	20	19	15	12	20	6.3	95	6.5	153	40	M6x12	15	0.67
4503-203	90	62	70	40	16	25	11	18	12	30	12	130	9	196	52	M8x15	18	1.54
4503-204	115	75	90	50	22	36	13	20	20	35	15	197	11	245	69	M12x25	20	3.39

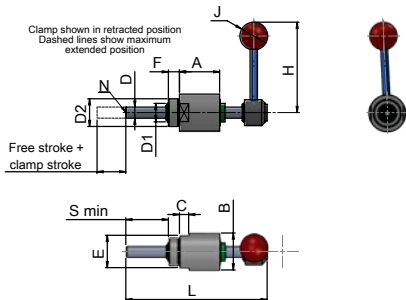


WDS 4504 In-Line Clamp with Front Flange - Lever type

Steel Clamping Rod

Clamp force is based on an operating force of 10daN

WDS No.	A	B	B1	C	D	D1	D2	E	F	G	J	K	L	N	S	Weight (kg)
4504-202	44	52	68	6	12	20	30 f7	44	14.5	12	52	6.5	153	M6x12	15	0.61
4504-203	60	68	73	14	16	25	40 f7	28	17	14	75	9	196	M8x15	18	1.43

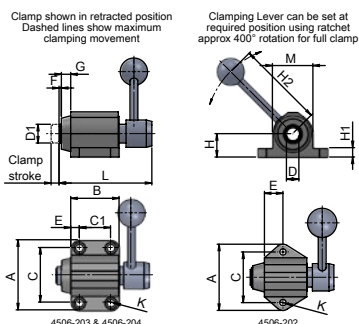


In-Line Clamp with Screw Fitting - Lever operating WDS 4505

Steel Clamping Rod

Clamp force is based on an operating force of 10daN

WDS No.	A	B	C	D	D1	D2	E	F	H	J	L	N	S	Clamp Force daN	Clamp Stroke	Free Stroke	Holding Force daN	Weight (kg)
4505-202	44	40	10	12	20	M30x1.5	35	12	95	30	196	M6x15	18	190	3	45	300	0.6

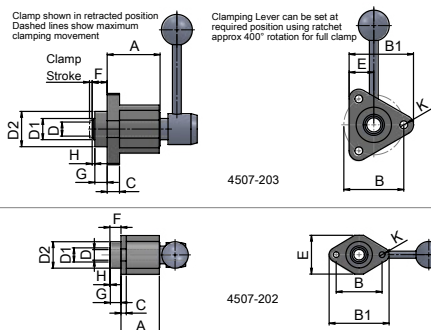


In-Line Clamp Base Flange Body WDS 4506

Steel Clamping Rod

Clamp force is based on an operating force of 10daN

WDS No.	A	B	C	C1	D	D1	E	F	G	H	H1	H2	K	L	M	S	Weight (kg)
4506-202	68	44	52	-	12	20	19	2.5	12	20	6.3	95	6.5	86	40	2.5	0.54
4506-203	90	62	70	40	16	25	11	3	12	30	12	130	9	119	52	3	1.24
4506-204	115	75	90	50	22	36	13	3	20	35	15	197	11	138	69	3	2.66



In-Line Front Flange Body WDS 4507

Steel Clamping Rod

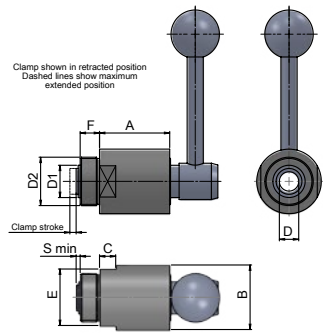
Clamp force is based on an operating force of 10daN

WDS No.	A	B	B1	C	D	D1	D2	E	F	G	H	K	Weight (kg)
4507-202	44	52	68	6	12	20	30 f7	44	14.5	12	2.5	6.5	0.49
4507-203	60	68	73	14	16	25	40 f7	28	17	14	3	9	1.13

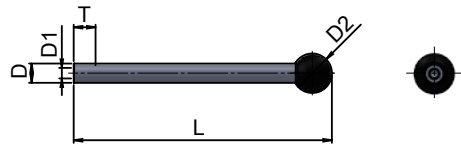


WDS 4508 In-Line Screw Fitting Body

Steel Clamping Rod
Clamp force is based on an operating force of 10daN



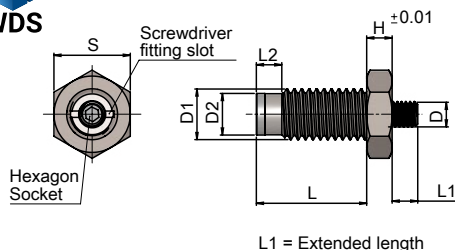
WDS No.	A	B	C	D	D1	D2	E	F	S	Weight (kg)
4508-202	44	40	10	12	20	M30x1.5	35	12	2.5	0.47



WDS 4509 In-Line Clamping Rod

Steel Clamping Rod
Clamp force is based on an operating force of 10daN

WDS No.	D	D1	D2	L	T	For use on	Weight (kg)
4509-12100	12	M6	20	228	12	4506-202 4507-202 4508-202	0.14
4509-12200	12	M6	20	328	12	4506-202 4507-202 4508-202	0.28
4509-12300	12	M6	20	428	12	4506-202 4507-202 4508-202	0.37
4509-16100	16	M8	35	280	15	4506-203 4507-203	0.4
4509-16200	16	M8	35	380	15	4506-203 4507-203	0.5
4509-16300	16	M8	35	480	15	4506-203 4507-203	0.7
4509-22100	20	M12	40	295	25	4506-204	1
4509-22200	20	M12	40	395	25	4506-204	1.09
4509-22300	20	M12	40	495	25	4506-204	1.39



Pull Down Insert with Nut WDS 411

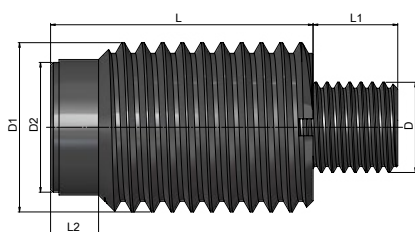
Steel

A pull back threaded clamping insert provides clamping for up to 5 axis operations and unusual shapes

Benefits include:

- Cheaper than a full matrix price
 - No product marking
- Horizontal/Vertical applications
- Less chance of cutter and clamping interference
- Allows more complex profile work to be completed in fewer operations
- Reduces pre-machining operations
- Access to 5 face / axis machining
- Minimum component distortion
- Increased number of operations completed per set-up
 - Improved 'prove-out' time for CAM packages
 - Tool clearance
- Matched sets of Nuts available

WDS No.	D	D1	D2	H	L	L1	L2	S	Max Tightening Torque Kgm	Max Tightening Torque Nm	Weight (kg)
411-1230A	M6	M12	10	6	24	6	6	19	0.78	7.65	0.02
411-1630A	M8	M16	13	7	23	8	6	24	1.87	18.34	0.04
411-2030A	M10	M20	16	8	22	10	8	30	3.69	36.19	0.07
411-2440A	M12	M24	19	9	31	12	9	36	6.17	603.51	0.1



Pull Down Insert - PDI WDS 411

Steel

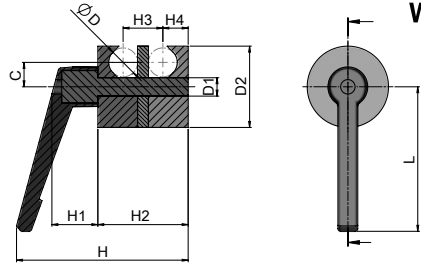
A pull back threaded clamping insert provides clamping for up to 5 axis operations and unusual shapes

Benefits include:

- Cheaper than a full matrix price
 - No product marking
- Horizontal/Vertical applications
- Less chance of cutter and clamping interference
- Allows more complex profile work to be completed in fewer operations
- Reduces pre-machining operations
- Access to 5 face / axis machining
- Minimum component distortion
- Increased number of operations completed per set-up
 - Improved 'prove-out' time for CAM packages

WDS No.	D	D1	D2	L	L1	L2	Axial Clamping Force Kgf	Axial Clamping Force KN	Max Tightening Torque Kgm	Max Tightening Torque Nm	Weight (kg)
411-1230	M6	M12	9.6	30	6	6	345	3.38	0.78	7.65	0.02
411-1630	M8	M16	13.3	30	8	6	590	5.78	1.87	18.34	0.03
411-2030	M10	M20	16.7	32	8	8	955	9.37	3.69	36.19	0.06
411-2440	M12	M24	20	40	12	9	1360	13.34	6.17	60.51	0.09

AL

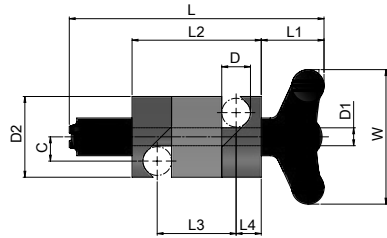


WDS 287 Clamping Joint

Handle - Glass reinforced plastic
Clamp parts Aluminium - Nickel anodized

WDS No.	C	D	D1	D2	H	H1	H2	H3	H4	L	Weight (kg)
287-201	8.5	8	M8	28	72	29	31	13	9	65	0.09
287-202	9.5	10	M8	32	76	29	35	15	10	65	0.1
287-203	10.5	12	M8	36	81	29	40	18	11	65	0.13
287-204	13.5	16	M10	45	103	37.5	50	22	14	80	0.23

AL



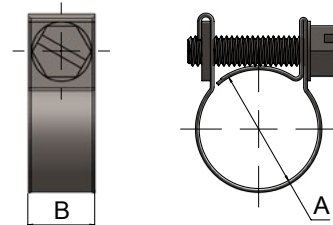
WDS 288 Clamping Joint

Handle - Glass reinforced plastic
Clamp parts Aluminium - Nickel anodized

WDS No.	C	D	D1	D2	L	L1	L2	L3	L4	W	Weight (kg)
288-201	8.5	8	M8	28	90	24	42	24	9	50	0.09
288-202	9.5	10	M8	32	100	24	52	32	10	50	0.13
288-203	10.5	12	M8	36	104	24	56	34	11	50	0.16
288-204	13.5	16	M10	45	142	35	72	44	14	75	0.35

304

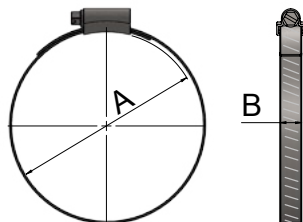
ZP



WDS 971 Mini Hose Clamps

Available in 304 Stainless Steel or Zinc Plated Steel

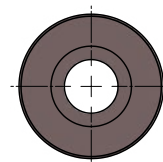
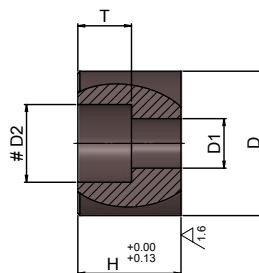
Zinc Plated	Stainless Steel	A	B	Weight (kg)
971-20810	971-60810	8-10	9	0.01
971-21012	971-61012	10-12	9	0.01
971-21214	971-61214	12-14	9	0.01
971-21416	971-61416	14-16	9	0.01
971-21618	971-61618	16-18	9	0.01


304
ZP

Worm Drive Hose Clamps with Adjusting Screw **WDS 972**

Available in 304 Stainless Steel or Zinc Plated Steel

Zinc Plated	Stainless Steel	A	B	Torque (N.m)	Weight (kg)
972-21320	972-61320	13-20	9.7	3 Nm	0.02
972-21825	972-61825	18-25	11.7	4.8 Nm	0.02
972-22230	972-62230	22-30	11.7	4.8 Nm	0.02
972-23040	972-63040	30-40	11.7	4.8 Nm	0.02
972-24055	972-64055	40-55	11.7	5.2 Nm	0.03
972-25570	972-65570	55-70	11.7	5.2 Nm	0.03
972-27090	972-67090	70-90	11.7	5.2 Nm	0.03
972-28500	972-68500	85-100	11.7	5.2 Nm	0.04



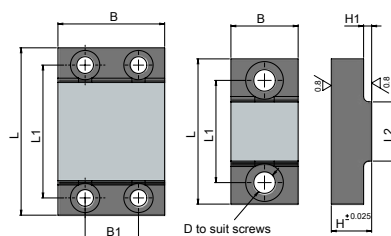
600-2002 & 600-2004
D2 is countersunk at 90°

WDS 600 Jig Feet Button

Steel BS 970 Gr 230M07

Case Hardened, Chemical black finish

WDS No.	D	D1	D2	H	T	Weight (kg)
600-2002	12	4.3	9.5	6	*	0.01
600-2004	16	5.3	11.5	6	*	0.01
600-2005	16	5.3	9.5	12	5.5	0.02
600-2006	16	5.3	9.5	19	5.5	0.03
600-201	16	6.5	11	12	7	0.13
600-202	20	6.5	11	12	7	0.03
600-2025	20	6.5	11	16	7	0.03
600-203	22	8.5	14	16	9	0.04
600-204	22	8.5	14	25	9	0.04
600-205	25	8.5	14	16	9	0.05
600-2055	25	8.5	14	18	9	0.06
600-206	32	10.5	17	19	11	0.09
600-207	35	13	19.5	25	13	0.13



WDS 628-202

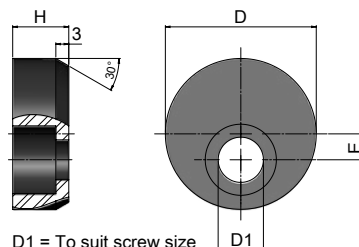
WDS 628-201

WDS 628 Rest Block

Steel BS 970 Gr 080M15

Case Hardened, Chemical black finish

WDS No.	B	B1	D	H	H1	L	L1	L2	Weight (kg)
628-201	25	-	M8	15	3	54	38	22	0.14
628-202	51	25.5	M8	15	3	80	63.5	47	0.42



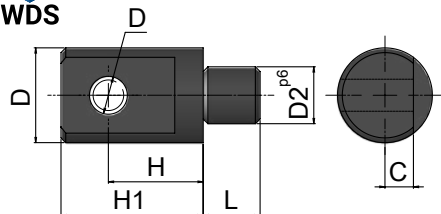
D1 = To suit screw size

WDS 629 Eccentric Jig Button

Steel BS 970 Gr 230M07

Case Hardened, Chemical black finish

WDS No.	D	D1	D1 Inch	E	H	Weight (kg)
629-201	16	M6	1/4	1.5	13	0.02
629-202	19	M6	5/16	2.5	13	0.02
629-203	25	M8	5/16	3	13	0.04
629-204	32	M8	-	5	13	0.07
629-205	35	M10	1/4	6	13	0.08

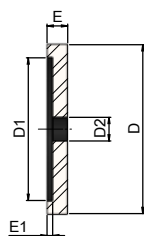
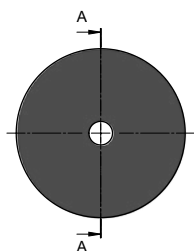
**WDS**

Jig Pillar WDS 632

Steel BS 970 Gr 230M07

Case Hardened, Chemical black finish

WDS No.	C	D	D1	D2 p6	H	H1	L	Weight (kg)
632-211	6	M6	20	12	10	18	12	0.05
632-212	6	M6	20	12	15	24	12	0.06
632-213	6	M8	20	12	20	30	12	0.07
632-214	6	M8	20	12	25	35	12	0.08
632-215	8	M10	22	15	30	42	15	0.12
632-216	8	M10	22	15	40	52	15	0.16
632-217	8	M10	22	15	50	62	15	0.19



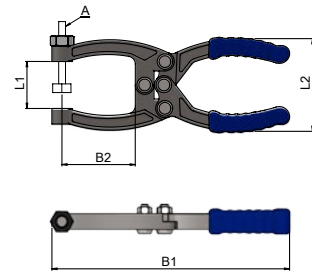
Clamping Pad WDS 643

Steel BS 970 Gr 230M07

Case Hardened, Chemical black finish

WDS No.	D	D1	D2	E	E1	Weight (kg)
643-201	16	10	5	5	1.5	0.01
643-202	20	13	5	5	1.5	0.01
643-203	25	20	5	5	1.5	0.02
643-204	32	25	6.3	5	1.5	0.02
643-206	45	38	6.3	5.5	1.5	0.05
643-207	50	45	6.3	6.5	1.5	0.08

ZP

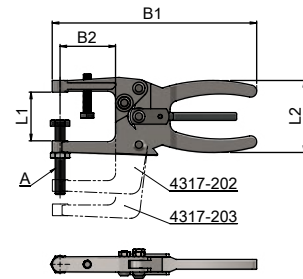


WDS 4317 Plier Clamp with Adjusting Bolt

Heavy gauge steel, hardened pins and bushes
Finishing - Zinc plated
Holding pressure: 150daN
Clamping pressure: 80daN
Medium duty plier clamp

WDS No.	A	B1	B2	L1	L2	Weight (kg)
4317-101	6x40mm	150	47	30	60	0.27

ZP

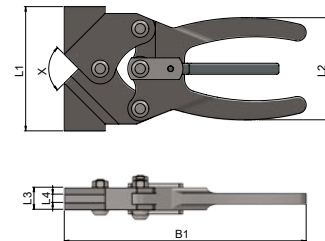


WDS 4317 Plier Clamp with 2 Adjusting Bolts

Heavy gauge steel, hardened pins and bushes
Finishing - Zinc plated
Holding pressure: 545daN
Clamping pressure: 250daN
Heavy duty plier clamps. Operates in double shear for long life
Fitted with triggers for quick release. 3 jaws widths

WDS No.	A	B1	B2	L1	L2	Weight (kg)
4317-201	10X70mm	203	57	50	75	0.9
4317-202	10X70mm	203	57	90	75	1
4317-203	10X70mm	203	57	115	75	1.1

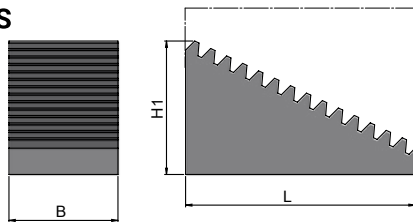
ZP



WDS 4317 Weldable Plier Clamp

Heavy gauge steel, hardened pins and bushes
Finishing - Zinc Plated
Holding pressure: 545daN
Clamping pressure: 100-200daN dependent on jaw length
Designed for easy fitting of customised jaws (not supplied). Heavy duty plier clamp
Operates in double shear for long life
Fitted with trigger for quick release

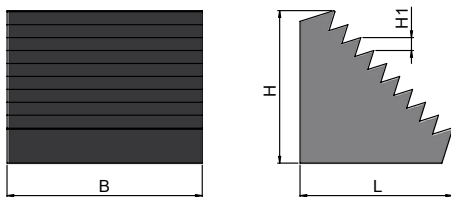
WDS No.	B1	L1	L2	L3	L4	X	Weight (kg)
4317-301	175	90	76	16	6	90	0.56



Step Blocks - Small or Large Set **WDS 205**

Steel BS 970 Gr.070M20
Surface hardened, Chemical black finish

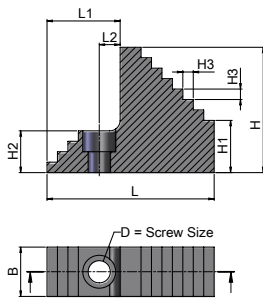
WDS No.	B	G	H	H1	L	Weight (kg)
205-205L	20	395	43	38	63	0.4
205-205S	20	175	29	24	40	0.18



Step Blocks - Pair **WDS 205**

Steel BS 970 Gr.070M20
Surface hardened, Chemical black finish

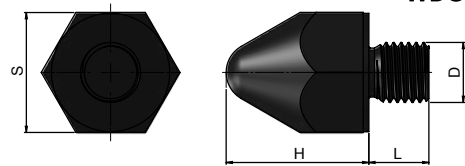
WDS No.	B	H	H1	L	Weight (kg)
205-211	30	25	2	25	0.21
205-212	30	50	2	50	0.74
205-213	30	100	2	100	2.74



Step Blocks **WDS 205**

Steel BS 970 Gr.070M20
Surface hardened, Chemical black finish

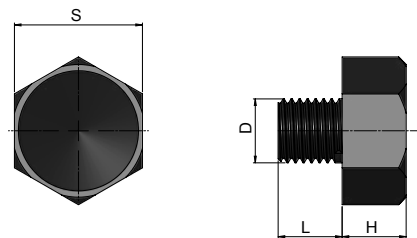
WDS No.	B	D	H	H1	H2	H3	L	L1	L2	Weight (kg)
205-222	30	M12	75	32	25	6	100	45	12	0.93



WDS 270 Clamp Heel

Steel BS 970 Gr 606M36T
Chemical black finish

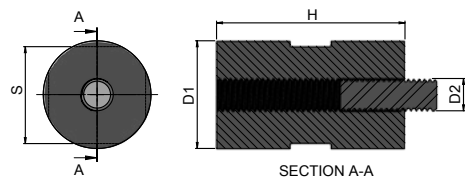
WDS No.	D	H	L	S	Weight (kg)
270-201	M10	20	10	17	0.03
270-202	M12	25	12	22	0.07
270-203	M16	38	16	32	0.2



WDS 272 Clamp Heel Seating

Steel BS 970 Gr 606M36T
Chemical black finish

WDS No.	D	H	L	S	Weight (kg)
272-201	M10	10	10	17	0.02
272-202	M12	12	12	22	0.04
272-203	M16	16	16	32	0.12

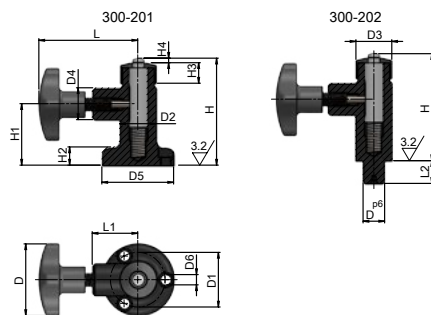


WDS 282 Height Extension

Steel - hardened and ground
Chemical black finish

Height Extensions are used in conjunction with Cam Hook Clamps (WDS 280) and provide an extension to the clamp body, thereby increasing the overall clamping height.

WDS No.	D1	D2	H	S	Weight (kg)
282-201	40	M12	35	36	0.33
282-202	40	M12	70	36	0.65
282-203	40	M12	140	36	1.33

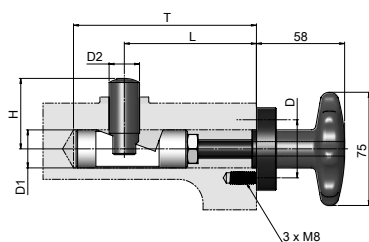


Spring Loaded Jack Lock WDS 300

Body and Hand Knob Cast Iron BS 1452 Gr.250

Support Pin Steel BS 970 Gr.080M15

WDS No.	D	D p6	D1	D2	D3	D4	D5	D6	H Max	H Min	H1	H2	H3	H4	L	L1	L2	Weight (kg)
300-201	50	-	38	25	-	22	50	M6	84	75	43	13	13	3	65	32	-	0.53
300-202	-	15	-	-	25	-	-	-	84	75	-	-	-	-	-	-	16	0.48



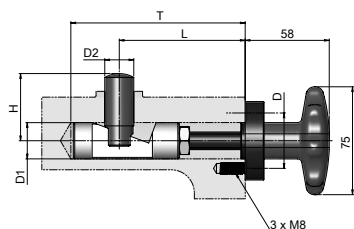
Support Jack WDS 301

Support Pin and Wedge Steel BS 970 Gr.080M15

Hand Knob Cast Iron BS 1452 Gr.250

Max. Load - 1.5 t

WDS No.	D	D1 e8	D2 g5	H Max	H Min	L	T	Weight (kg)
301-201	38	25	20	50	42	70	120	1.11



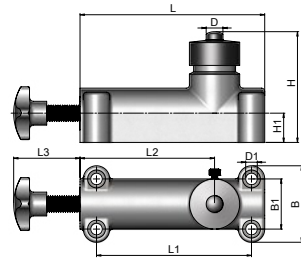
Support Jack WDS 302

Support Pin and Wedge Steel BS 970 Gr.080M15

Hand Knob Cast Iron BS 1452 Gr.250

Max. Load - 2.0 t

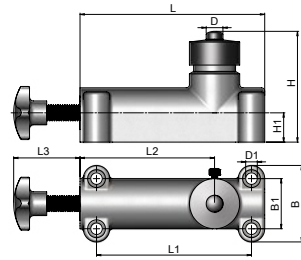
WDS No.	D	D1 e8	D2 g5	H Max	H Min	L	T	Weight (kg)
302-205	45	32	25	60	50	100	165	1.52



WDS 303 Jack Lock

Support Pin - Steel BS 970 Gr.080M15
Wedge - Steel BS 970 Gr.212A42
Body and Hand Knob - Cast Iron BS 1452 Gr.250
Max Load -1.0t

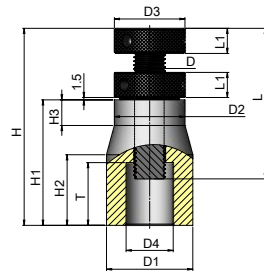
WDS No.	B	B1	D	D1	H Max	H Min	H1	L	L1	L2	L3	Weight (kg)
303-210	45	28.5	8	M6	90	83	16	90	70	62	28	1



WDS 304 Jack Lock

Support Pin - Steel BS 970 Gr.080M15
Wedge - Steel BS 970 Gr.212A42
Body and Hand Knob - Cast Iron BS 1452 Gr.250
Max Load -1.5t

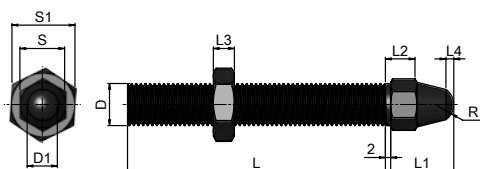
WDS No.	B	B1	D	D1	H Max	H Min	H1	L	L1	L2	L3	Weight (kg)
304-215	58	38	13	M8	90	83	22	140	117.5	102	28	1.75



WDS 309 Screw Jack

Body - Cast Iron BS 1452 Gr.250
Screw - Steel BS 970 Gr.080M15
Head Hardened
Chemical black finish
Maximum load adjustable by hand = 50kg

WDS No.	D	D1	D2	D3	D4	H Max	H Min	H1	H2	H3	L	L1	T	Weight (kg)
309-201	M12	45	35	32	25	105	85	55	25	10	75	10	20	0.63
309-202	M12	45	35	32	25	125	105	75	45	10	75	10	40	0.86
309-206	M20	55	45	45	30	145	125	80	45	15	95	15	40	1.4
309-207	M20	55	45	45	30	165	145	100	65	15	95	15	60	1.8

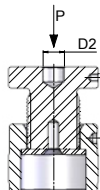
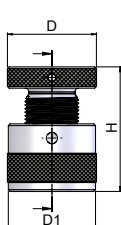
**WDS**

Adjustable Support WDS 310

Steel BS 970 Gr 212A42

Hardened radius, Chemical black finish

WDS No.	D	D1	L	L1	L2	L3	L4	R	S	S1	Weight (kg)
310-201	M6	5	30	11	5	3	1.5	3	7	10	0.01
310-203	M6	5	50	11	5	3	1.5	3	7	10	0.02
310-205	M8	6	40	14	6	5	1.5	4	9	13	0.03
310-207	M8	6	65	14	6	5	1.5	4	9	13	0.04
310-209	M10	8	50	17	7	5.8	2	5	11	17	0.05
310-211	M10	8	85	17	7	5.8	2	5	11	17	0.07
310-213	M12	10	60	20	8	6.5	2.5	6	13	19	0.08
310-215	M12	10	110	20	8	6.5	2.5	6	13	19	0.13
310-217	M16	12	70	24	10	7.5	3	7	17	24	0.16
310-219	M16	12	130	24	10	7.5	3	7	17	24	0.26

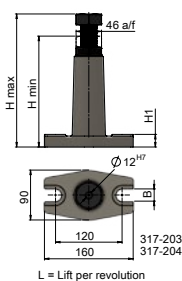
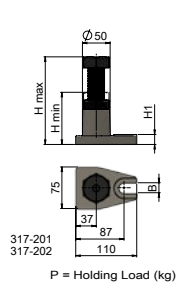


Screw Jack WDS 314

Carbon steel enamelled

P = Holding Load kg

WDS No.	D	D1	D2	H Max	H Min	P	Weight (kg)
314-201	32	32	-	50	40	1515	0.19
314-202	50	50	12	52	42	6060	0.55
314-203	50	50	12	70	50	6060	0.64
314-204	50	50	12	100	70	6060	0.9
314-205	65	70	12	140	100	10100	2.64
314-206	70	80	12	210	140	17170	4.6
314-207	80	100	12	300	190	35350	9.7

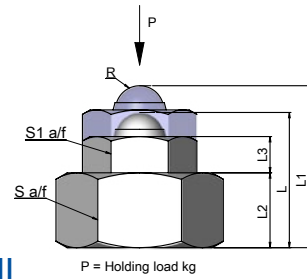


Screw Jack WDS 317

Spindle - Carbon steel

Housing - Cast iron

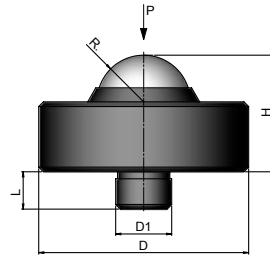
WDS No.	B	H1	H Max	H Min	L	P	Weight (kg)
317-201	18	18	140	100	6	6060	1.75
317-202	18	18	200	140	6	6060	2.2
317-203	22	22	320	200	6	4040	3.4
317-204	22	25	550	320	6	2525	4.6



WDS 350 Height Setting Screw Jack Revolving Ball

Carbon Steel, Chemical black finish
Hardened Steel Ball, Jack Thread - M39 x 3

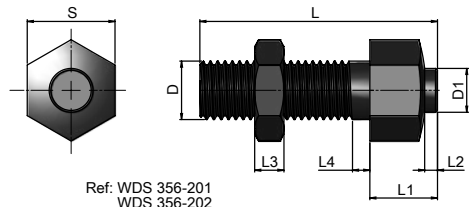
WDS No.	L	L1	L2	L3	P	R	S	S1	Weight (kg)
350-201	56	70	31	15	3000	10	60	41	0.95



WDS 352 Support with Revolving Ball

Carbon Steel, Chemical black finish
Hardened Steel Ball

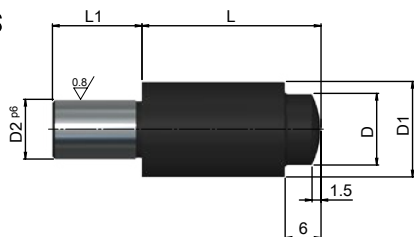
WDS No.	D	D1	H	L	P	R	Weight (kg)
352-201	45	12	25	8	3000	10	0.24



WDS 360 Heel Pin with Nut

Carbon Steel, Chemical black finish
For use with clamp set 356-201 & 356-202

WDS No.	D	D1	L	L1	L2	L3	L4	S	Weight (kg)
360-201	M12	12	58	13.5	3.5	5.5	5	19	0.07
360-202	M16	12	65	18.5	3.5	8	6.5	24	0.14



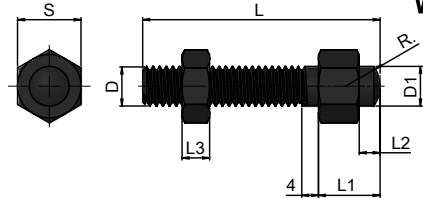
Heel Pin WDS 607

Steel BS 970 Gr.230M07

Case Hardened and Ground, Chemical black finish

WDS No.	D	D1	D2 p6	L	L1	Weight (kg)
607-200610	6	8	5	10	6	0.01
607-200620	6	8	5	20	6	0.01
607-20110	8	10	6	10	8	0.06
607-20115	8	10	6	15	8	0.08
607-20120	8	10	6	20	8	0.01
607-20125	8	10	6	25	8	0.02
607-20130	8	10	6	30	8	0.02
607-20210	10	13	8	10	13	0.01
607-20215	10	13	8	15	13	0.02
607-20220	10	13	8	20	13	0.02
607-20225	10	13	8	25	13	0.03
607-20230	10	13	8	30	13	0.04
607-20235	10	13	8	35	13	0.04
607-20240	10	13	8	40	13	0.04
607-202510	12	16	10	10	15	0.02
607-202515	12	16	10	15	15	0.03
607-202520	12	16	10	20	15	0.04
607-202525	12	16	10	25	15	0.04
607-202530	12	16	10	30	15	0.05
607-202535	12	16	10	35	15	0.06
607-202540	12	16	10	40	15	0.07
607-202545	12	16	10	45	15	0.08
607-20315	14	16	12	15	16	0.04
607-20340	14	16	12	40	16	0.07
607-203515	16	20	12	15	18	0.04
607-203525	16	20	12	25	18	0.07
607-203535	16	20	12	35	18	0.09
607-203545	16	20	12	45	18	0.11
607-203555	16	20	12	55	18	0.13
607-20415	20	20	12	15	20	0.05
607-20425	20	20	12	25	20	0.07
607-20435	20	20	12	35	20	0.09

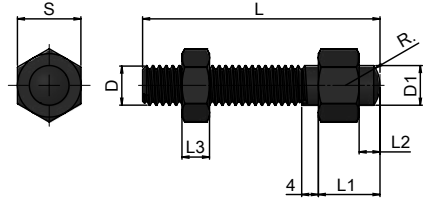
IN"



WDS 610 Adjustable Heel Pin - Inch

Steel BS 970 Gr.212A42
Surface hardened, Chemical black finish

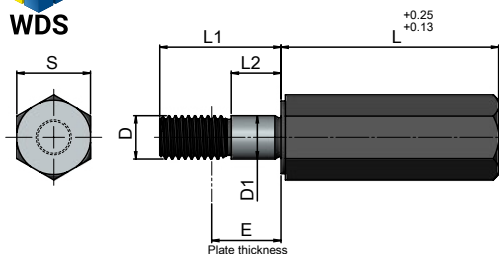
WDS No.	D	D1	L	L1	L2	L3	R	S- BSW	S-UNC	Weight (kg)
610-21	3/8	9.5	57	14.8	5	5.5	8.3	0.600	-	0.04
610-24	1/2	12.7	75	17.5	5	7.5	14.2	0.820	-	0.1
610-27	5/8	15.9	105	20.5	5	9.5	21.8	1.010	-	0.21
610-33	1/4	6.4	50	11.1	5	3.6	4.1	-	0.437"	0.02
610-34	5/16	7.9	52	12.7	5	4	6	-	0.500"	0.03
610-35	5/16	7.9	84	12.7	5	4	6	-	0.500	0.04
610-36	3/8	9.8	57	14.8	5	5.5	8.3	-	0.562	0.04
610-37	3/8	9.5	70	14.8	5	5.5	8.3	-	0.562	0.05
610-40	1/2	12.7	106	17.5	5	7.5	14.2	-	0.750	0.12
610-41	5/8	15.9	79	20.5	5	9.5	21.8	1.010	-	0.17
610-42	5/8	15.9	105	20.5	5	9.5	21.8	-	0.937	0.2
610-45	3/4	19	110	24	5	11.2	31	-	1.125	0.34



WDS 610 Adjustable Heel Pin - Metric

Steel BS 970 Gr.212A42
Surface hardened, Chemical black finish

WDS No.	D	D1	L	L1	L2	L3	R	S	Weight (kg)
610-501	M5	5	30	7	4	2.5	2.8	8	0.01
610-502	M5	5	50	7	4	2.5	2.8	8	0.01
610-503	M6	6	30	9	5	3	3.8	10	0.01
610-504	M6	6	50	9	5	3	3.8	10	0.02
610-505	M8	8	40	10	5	5	6.1	13	0.03
610-506	M8	8	60	10	5	5	6.1	13	0.03
610-507	M10	10	50	12	6	5.8	9.1	17	0.04
610-508	M10	10	70	12	6	5.8	9.1	17	0.06
610-509	M12	12	65	16	8	6.5	12.8	19	0.08
610-510	M12	12	90	16	8	6.5	12.8	19	0.1
610-511	M16	16	70	20	10	7.5	22.1	24	0.16
610-512	M16	16	95	20	10	7.5	22.1	24	0.17
610-513	M16	16	120	20	10	7.5	22.1	24	0.21
610-514	M20	20	95	24	12	8.5	34.1	30	0.29
610-515	M20	20	120	24	12	8.5	34.1	30	0.34

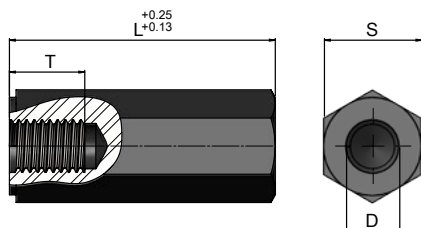


Foot Bolt Hexagonal Spacers WDS 626

Steel BS 970 Gr 212A42

Chemical black finish

WDS No.	D	D1	E Max	E Min	L	L1	L2	S	Weight (kg)
626-201100	M10	10	19	13	100	28	11.5	17	0.23
626-20150	M10	10	19	13	50	28	11.5	17	0.12
626-20175	M10	10	19	13	75	28	11.5	17	0.18
626-202100	M12	12	25	19	100	35	18	22	0.42
626-202125	M12	12	25	19	125	35	18	22	0.53
626-20250	M12	12	25	19	50	35	18	22	0.21
626-20275	M12	12	25	19	75	35	18	22	0.31

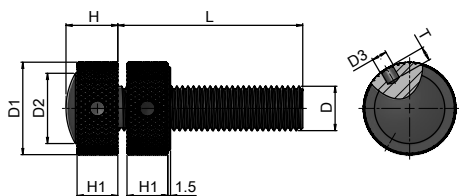


Foot Nuts Hexagonal Spacers WDS 627

Steel BS 970 Gr 212A42

Chemical black finish

WDS No.	D	L	S	T	Weight (kg)
627-20130	M10	30	17	17	0.56
627-20160	M10	60	17	17	0.12
627-20230	M12	30	22	17	0.92
627-20260	M12	60	22	17	0.21
627-20290	M12	90	22	17	0.33

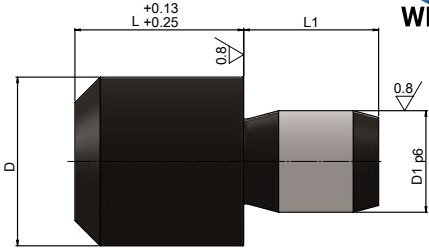


Jack Screw WDS 631

Steel BS 970 Gr 212A42 head hardened,
Nut surface hardened, Chemical black finish

WDS No.	D	D1	D2	D3	H	H1	L	T	Weight (kg)
631-2006	M6	20	12	3.2	10	6	40	4.5	0.04
631-2008	M8	22	14	3.2	12	7	45	5	0.06
631-2009	M10	25	16	5.2	14	8	50	5	0.09
631-201	M12	32	20	6.2	16	10	60	7	0.17
631-202	M16	38	25	6.2	20	13	70	7	0.3
631-203	M20	45	32	8.2	22	16	80	7.5	0.5
631-204	M24	50	38	8.2	28	22	100	7.5	0.93

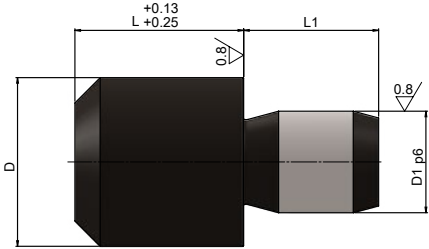
IN"



WDS 633 Feet Button - Inch

Steel BS 970 Gr 220M07
Case hardened, Chemical black finish

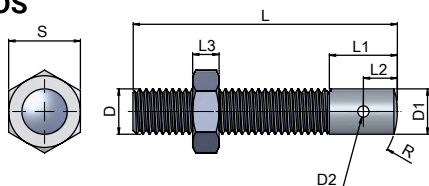
WDS No.	D	D1 p6	L	L1	Weight (kg)
633-01	1/2 inch	0.313 inch	0.250 inch	9.5	0.01
633-02	1/2 inch	0.313 inch	0.500 inch	9,5	0.02
633-03	3/4 inch	0.375 inch	0.250 inch	12.7	0.02
633-05	3/4 inch	0.375 inch	0.750 inch	12.7	0.05
633-07	1 inch	0.500 inch	0.500 inch	15.9	0.07
633-08	1 inch	0.500 inch	1.000 inch	15.9	0.12



WDS 633 Feet Button - Metric

Steel BS 970 Gr 220M07
Case hardened, Chemical black finish

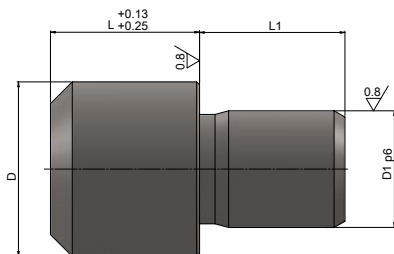
WDS No.	D	D1 p6	L	L1	Weight (kg)
633-200510	10	6	10	8	0.01
633-200515	10	6	15	8	0.01
633-20110	12	8	10	10	0.01
633-20115	12	8	15	10	0.02
633-20210	20	10	10	12	0.03
633-20220	20	10	20	12	0.05
633-20230	20	10	30	12	0.08
633-20310	25	12	10	16	0.06
633-20320	25	12	20	16	0.09
633-20330	25	12	30	16	0.13
633-20340	25	12	40	16	0.17
633-20350	25	12	50	16	0.21
633-20420	32	16	20	20	0.15
633-20430	32	16	30	20	0.22
633-20450	32	16	50	20	0.34
633-20465	32	16	65	20	0.45



Adjustable Heel Pin - Stainless WDS 809

Stainless Steel
BS 970 Gr 316S11

WDS No.	D	D1	D2	L	L1	L2	L3	R	S	Weight (kg)
809-20530	M5	5	2	30	5	3	2.6	6	8	0.05
809-20540	M5	5	2	40	5	3	2.6	6	8	0.06
809-20550	M5	5	2	50	5	3	2.6	6	8	0.08
809-20630	M 6	6	2	30	8	5	3.2	6	10	0.01
809-20640	M 6	6	2	40	8	5	3.2	6	10	0.01
809-20650	M 6	6	2	50	8	5	3.2	6	10	0.01
809-20840	M 8	8	3	40	12	6	3.7	10	13	0.02
809-20850	M 8	8	3	50	12	6	3.7	10	13	0.02
809-20860	M 8	8	3	60	12	6	3.7	10	13	0.02
809-21060	M10	10	3	60	16	8	5	16	17	0.04
809-21070	M10	10	3	70	16	8	5	16	17	0.04
809-21260	M12	12	3	60	18	9	5.8	20	19	0.06
809-21280	M12	12	3	80	18	9	5.8	20	19	0.06

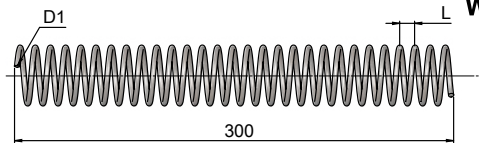


Feet Button - Stainless WDS 811

Stainless Steel
BS 970 Gr 316S11

WDS No.	D	D1 p6	L	L1	Weight (kg)
811-21010	10	6	10	8	0.01
811-2106	10	6	6	8	0.01
811-21210	12	8	10	10	0.02
811-21220	12	8	20	10	0.02
811-21620	16	8	20	10	0.04
811-21630	16	8	30	10	0.05

IN"



D = to suit stud size

P = N/mm

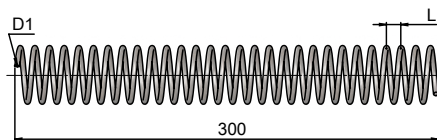
WDS 660 Spring - Steel - Metric or Inch

Spring Steel BS 5216 B Range 3

Chemical black finish

WDS No.	D Inch	D Metric	D1	L	P	Weight (kg)
660-2004	-	M4	0.7	4	0.96	0.01
660-2005	3/16	M5	0.7	4	0.56	0.01
660-201	1/4	M6	0.8	4	0.48	0.01
660-202	5/16	M8	1.0	4	0.60	0.01
660-203	3/8	M10	1.2	5	1.33	0.01
660-204	1/2	M12	1.6	5	1.33	0.05
660-205	9/16	M14	1.6	5	1.04	0.06
660-206	5/8	M16	1.6	6	0.89	0.06
660-2065	-	M18	2.0	5	1.24	0.1
660-207	-	M20	2.0	6	1.13	0.11
660-208	1	M24	2.35	7	1.17	0.19

316



D = to suit stud size

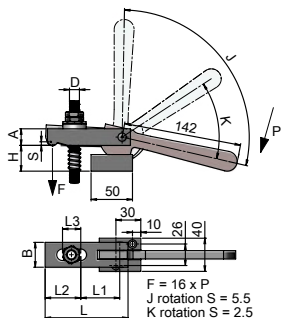
P = spring rate N/mm

WDS 812 Springs - 316 Stainless Steel

Stainless Steel

BS 970 Gr 316S42

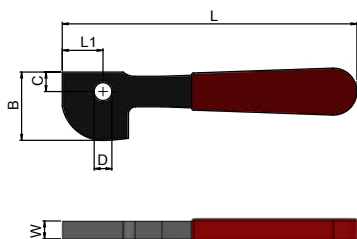
WDS No.	D	D1	L	P	Weight (kg)
812-206	M6	0.7	4	0.27	0.01
812-208	M8	0.8	4	0.24	0.01
812-210	M10	0.9	5	0.27	0.02
812-212	M12	1.5	5	1.42	0.02



Cam Operated Clamp Assembly WDS 354

Carbon Steel hardened
Chemical black finish

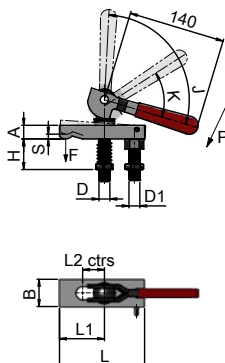
WDS No.	A	B	D	H	L	L1	L2	L3	Weight (kg)
354-201	20	30	M12	26-35	100	47	43	22	1
354-202	20	40	M16	26-35	125	49	66	32	1.4



Eccentric Cam Lever - Single WDS 355

Carbon Steel hardened
Chemical black finish

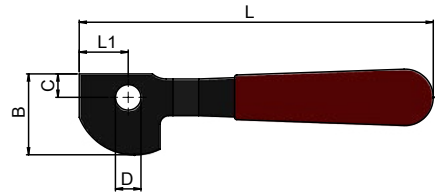
WDS No.	A	B	C	D	L	L1	W	Weight (kg)
355-201	24	38	11	10	165	23	10	0.3



Cam Operated Clamp Assembly WDS 356

Carbon Steel hardened
Chemical black finish

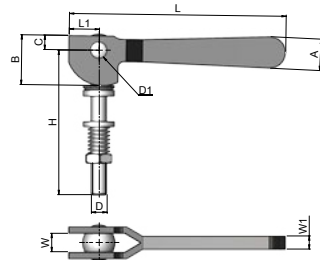
WDS No.	A	B	D	D1	H	L	L1	L2	Weight (kg)
356-201	20	30	M12	M12	30-45	100	43	22	1
356-202	20	40	M16	M12	35-50	125	66	32	1.45



WDS 357 Eccentric Cam Lever - Double

Carbon Steel hardened
Chemical black finish

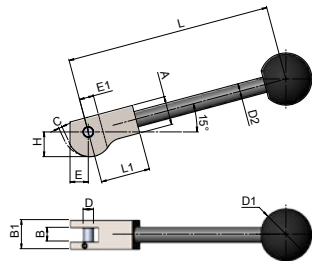
WDS No.	A	B	C	D	L	L1	W	W1	Weight (kg)
357-201	24	38	11	12	165	23	10	14	0.31



WDS 358 Eccentric CAM Lever with Eyebolt

Carbon Steel hardened
Chemical black finish

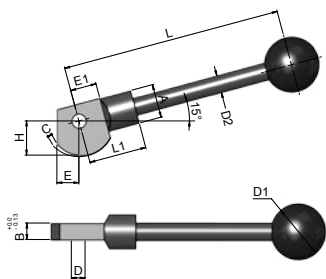
WDS No.	A	B	C	D	D1	H	L	L1	W	W1	Weight (kg)
358-201	24	38	11	M12	12	110	165	23	14	10	0.5
358-202	24	38	11	M16	12	120	165	23	14	10	0.61



WDS 665 Double Cam Lever

Cam - Steel BS.970 Gr.070M20
Handle - Steel BS.970 Gr.230M07

WDS No.	A	B	B1	C	D	D1	D2	E	E1	H	L	L1	Weight (kg)
665-201	18	6.5	16	2	5	25	10	13	8	16	122	32	0.14
665-202	18	8.5	19	2	6	25	10	13	9.5	16	122	32	0.16
665-203	22	10.5	22	2	8	40	12	14	11	19	158	38	0.25
665-2035	18	12.5	25	2	10	25	10	13	11.5	16	119	29	0.17
665-204	25	12.5	32	2	10	40	12.7	16	14	25	161	42	0.47
665-2045	24	14.5	32	2	12	40	12	15	16	19	159	39	0.36
665-205	32	16.5	45	2.5	12	40	15.9	28.5	17.5	38	218	51	1.24
665-206	38	20.5	50	3	16	40	19.1	32	21	50	320	65	2.22

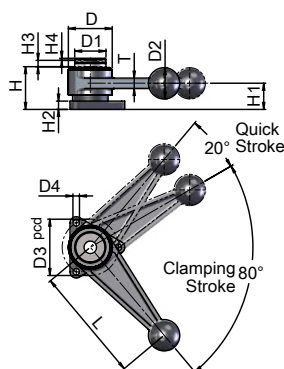


Single Cam Lever WDS 666

Cam - Steel BS.970 Gr.070M20

Handle - Steel BS.970 Gr.230M07

WDS No.	A	B	C	D	D1	D2	E	E1	H	L	L1	Weight (kg)
666-2005	17.5	6	2	5	25	10	13	10	16	120	30	0.09
666-2006	17.5	8	2	6	25	10	13	11	16	120	30	0.13
666-201	23.5	10	2	8	40	12	15	14	19	160	39	0.22
666-202	24.5	12	2	10	40	12.7	16	19	25	160	42	0.4



Cam Ram Clamp - Clockwise or Anti-Clockwise WDS 4100

Steel parts with black finish

All wearing parts hardened

Available in Clockwise (C) and Anti-clockwise (A) models

WDS No.	D	D1	D2	D3	D4	H	H1	H2	H3	H4	L	P	P1	T	Weight (kg)
4100-201A	42	30	30	54	6.3	41	22	8	6	2	110	75	400	10	0.55
4100-201C	42	30	30	54	6.3	41	22	8	6	2	110	75	400	10	0.55
4100-203A	56	42	40	72	8.3	57	28	10	8	2.5	140	85	500	14	1.3
4100-203C	56	42	40	72	8.3	57	28	10	8	2.5	140	85	500	14	1.3



CAM LEVERS & CAM CLAMPS

For the full range of Cam Levers please see pages 191-206



CNC FIXTURES TOMBSTONES & CUBES

P 671-673

CNC Tombstones & cubes can be used to design jig and fixture applications for use on the CNC machines and welding fixtures.



CNC DOUBLE SIDERS & TOMBSTONES

Machine double siders or tombstones as they are also known, are designed to be part of a modular jig and fixture system for use on CNC and turning machines. By attaching a clamping system to the flat face of the column, the workpiece can be clamped into position and then drilled or machined as required. A fixture can be attached to either side of the Double Sider for quick change on job turn arounds.

P 671



CNC CUBES

Stock CNC machine cubes can be customised to allow plate fixtures to be attached to four sides of the cubes making machine turn arounds quicker and more cost effective

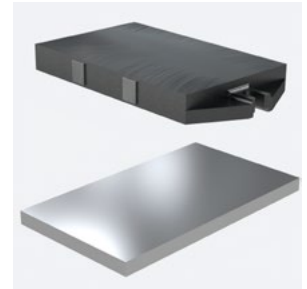
P 672



CNC FIXTURE PLATES & BASEPLATES

These base plates can be used to design jig and fixture applications for use on the CNC machines and welding fixtures

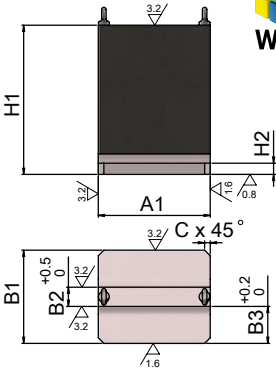
P 673





WDS 7060 Stock Cast Iron Double-Siders - Light Duty

Cast Iron BS1452 Gr250
Cast Iron Double-siders are supplied with machining allowance on working faces.
Surface ground finish on underside of flange for machine pallet mounting.
Two adjacent flange edges fine milled for edge location.
Supplied complete with two lifting eyes.

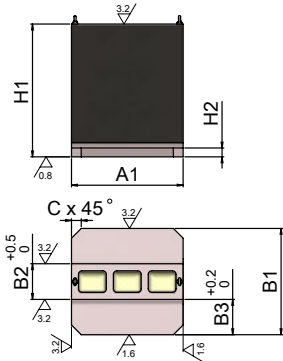


WDS No.	A1	B1	B2	H1	Weight (kg)
7060-01U	300	250	51	400	62
7060-02U	400	350	61	500	141
7060-03U	500	350	71	600	221
7060-04U	600	400	81	750	381

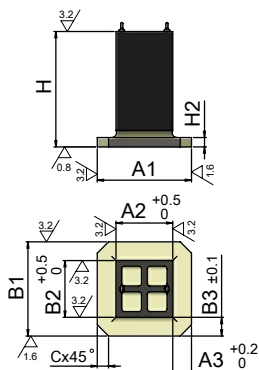


WDS 7060 Stock Double-Siders - Cast Iron

Cast Iron BS1452 Gr250
Double Siders are supplied with machining allowance on working faces.
Surface ground finish on underside of flange for machine pallet mounting.
Two adjacent flange edges fine milled for edge location.
Supplied complete with two lifting eyes.



WDS No.	A1	B1	B2	H1	Weight (kg)
7060-125U	400	400	126	600	191
7060-13U	500	350	151	600	246
7060-145U	630	600	201	750	532
7060-14U	630	500	201	750	509



Stock Cubes - Cast Iron **WDS 7070**

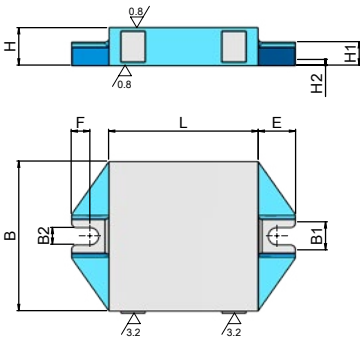
Cast Iron BS1452 Gr250

Cubes are supplied with machining allowance on working faces.
Surface ground finish on underside of flange for machine pallet mounting.

Two adjacent flange edges fine milled for edge location.

Supplied complete with two lifting eyes.

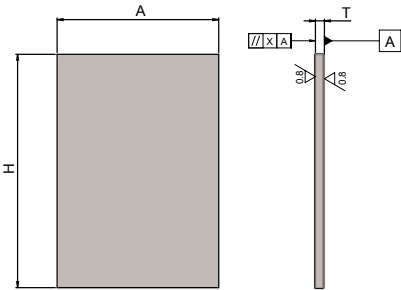
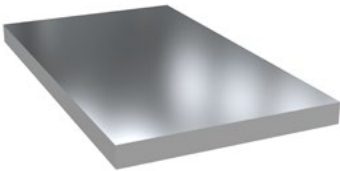
WDS No.	A1	A2	B1	B2	H1	Weight (kg)
7070-015U	400	201	400	201	500	119
7070-022U	400	251	400	251	600	222
7070-025U	500	251	500	251	600	257
7070-03U	500	301	500	301	600	296
7070-04U	630	451	630	451	750	672



WDS 900 Base Plate - Cast Iron

Cast Iron BS 1452 Gr 250
BS EN 1561 1997-EN/GJL-250

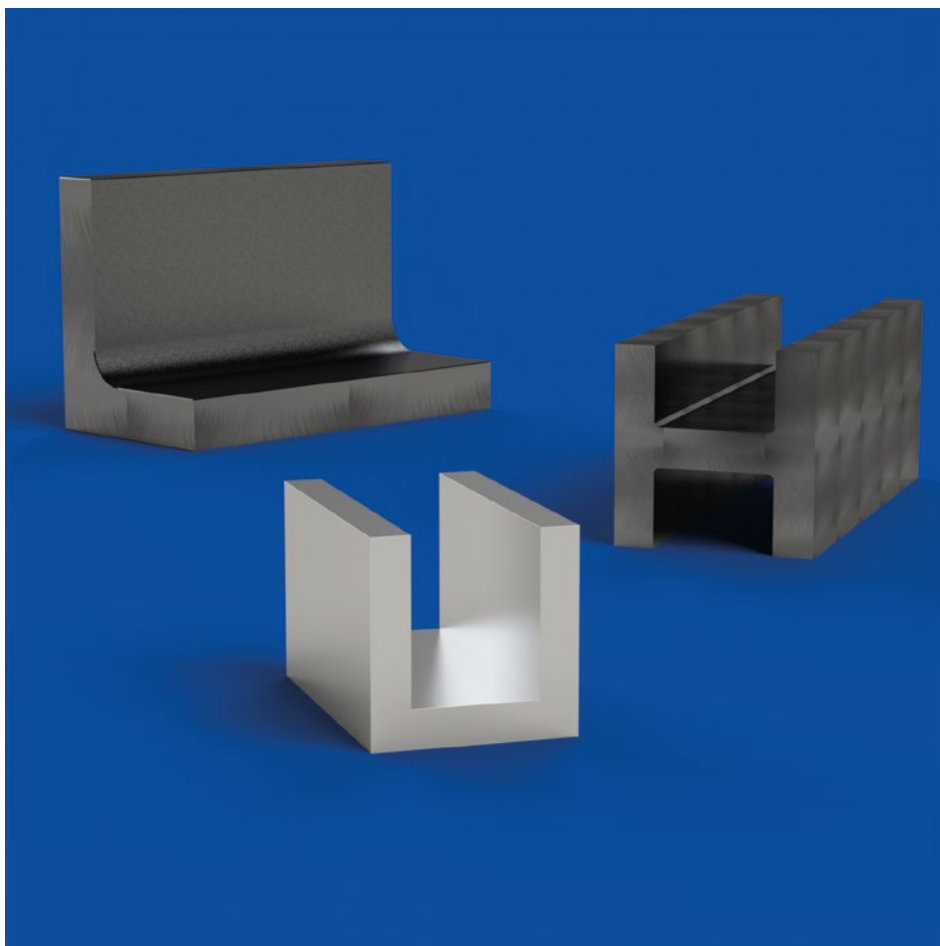
WDS No.	B	B1	B2	E	F	H	H1	H2	L	Weight (kg)
900-401	160	30	18	40	20	40	25	6	160	6
900-403	200	30	18	40	20	40	25	6	315	15
900-405	250	30	18	40	20	40	25	6	315	19.5



WDS 7081 Fixture Plates - Steel

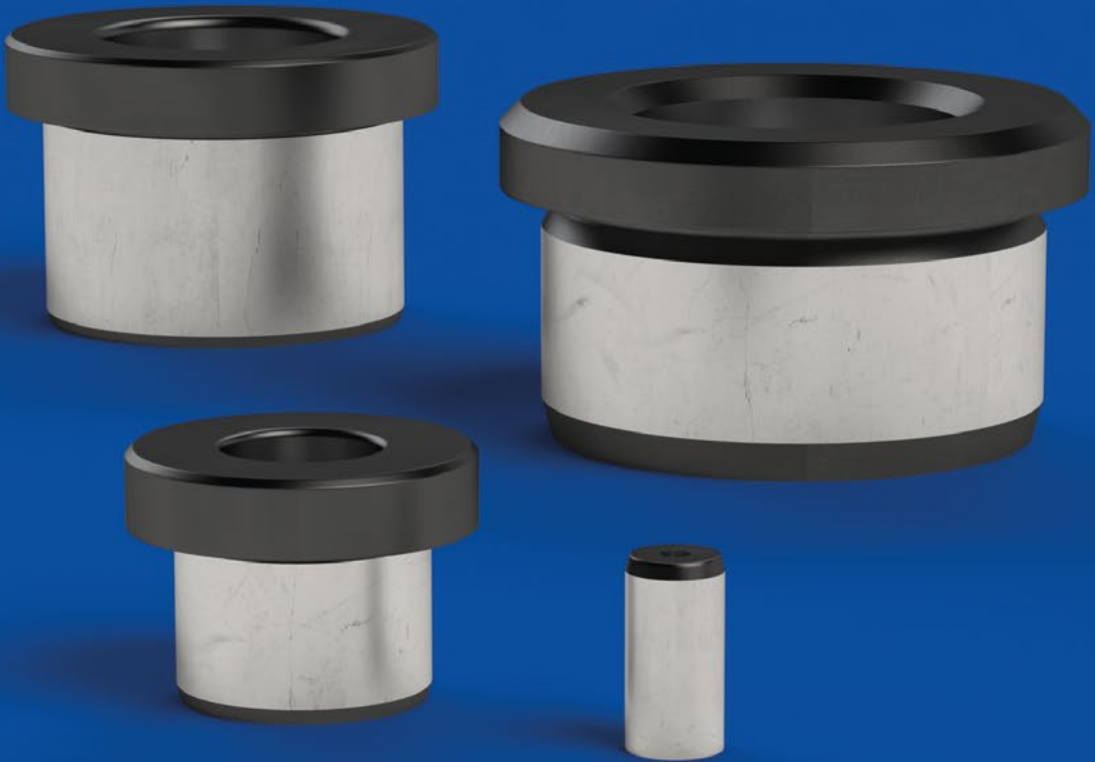
Steel
The Fixture Plates are designed for use in conjunction with 7061 and 7071 Double-Siders and Cubes.
Counterbored fastening holes and location bushes can be fitted on request.

WDS No.	A -1.0 -2.0	H -1.0 -2.0	T ± 0.025	X	Weight (kg)
7081-10	200	345	20	0.01	11
7081-100	450	650	25	0.025	58
7081-110	500	900	25	0.025	89
7081-120	500	512	25	0.025	51
7081-130	630	650	25	0.025	81
7081-140	630	670	25	0.025	83
7081-150	630	675	25	0.025	84
7081-160	800	900	25	0.03	142
7081-20	200	444	25	0.01	18
7081-30	200	600	25	0.01	24
7081-40	250	425	25	0.01	21
7081-50	250	512	25	0.01	25
7081-60	300	345	20	0.025	16
7081-70	300	512	25	0.025	30
7081-80	400	425	25	0.025	34
7081-90	400	525	25	0.025	41



CAST IRON STEEL & ALUMINIUM PROFILES

For the full range of Cast Iron Steel & Aluminium Profiles please see pages **581-604**



DRILL, GUIDE & LOCATION BUSHES

P 677-686

Drill Bushes are an accurate bushing tool used to guide cutting tools and drill bits. They are typically used on metal working jigs where repetitive high accuracy is required.



PLAIN DRILL BUSHES

Plain guide bushes allow a flush fitting in to a fixture.

P 677-680



HEADED DRILL BUSHES

This headed drill bush allows the guide to be in place with the head preventing the guide slipping through the fixture.

P 681-684



PLUNGER BUSHES

Plunger bushes are an accurate bushing tool used to guide index plungers.

P 685





WDS 779 Plain Drill Bush to DIN179A Standard-Long

DIN 179A

Steel - Hardened to 63/65HRC

WDS No.	D1	D2	L	To suit tap drill	Weight (kg)
779-2009PL	0.9	3	9	-	0.01
779-2010PL	1	3	9	-	0.01
779-2011PL	1.1	4	9	M1.4 x 0.3	0.01
779-2012PL	1.2	4	9	-	0.01
779-2013PL	1.3	4	9	-	0.01
779-2014PL	1.4	4	9	-	0.01
779-2015PL	1.5	4	9	-	0.01
779-2016PL	1.6	4	9	M2.0 x 0.4	0.01
779-2017PL	1.7	4	9	-	0.01
779-2018PL	1.8	4	9	-	0.01
779-2019PL	1.9	5	9	-	0.01
779-2020PL	2	5	9	-	0.01
779-2021PL	2.1	5	9	-	0.01
779-2022PL	2.2	5	9	-	0.01
779-2023PL	2.3	5	9	-	0.01
779-2024PL	2.4	5	9	-	0.01
779-2025PL	2.5	5	9	M3 x 0.5	0.01
779-2026PL	2.6	5	9	-	0.01
779-2027PL	2.7	6	12	-	0.01
779-2028PL	2.8	6	12	-	0.01
779-2029PL	2.9	6	12	M3.5 x 0.6	0.01
779-2030PL	3	6	12	-	0.01
779-2031PL	3.1	6	12	-	0.01
779-2032PL	3.2	6	12	-	0.01
779-2033PL	3.3	6	12	M4 x 0.7	0.01
779-2034PL	3.4	7	12	-	0.01
779-2035PL	3.5	7	12	-	0.01
779-2036PL	3.6	7	12	-	0.01
779-2037PL	3.7	7	12	M4.5 x 0.75	0.01
779-2038PL	3.8	7	12	-	0.01
779-2039PL	3.9	7	12	-	0.01
779-2040PL	4	7	12	-	0.01
779-2041PL	4.1	8	12	-	0.01
779-2042PL	4.2	8	12	M5 x 0.8	0.01
779-2043PL	4.3	8	12	-	0.01
779-2044PL	4.4	8	12	-	0.01
779-2045PL	4.5	8	12	-	0.01
779-2046PL	4.6	8	12	-	0.01
779-2047PL	4.7	8	12	-	0.01
779-2048PL	4.8	8	12	-	0.01
779-2049PL	4.9	8	12	-	0.01
779-2050PL	5	8	12	M6 x 1.0	0.01
779-2051PL	5.1	10	16	-	0.01
779-2052PL	5.2	10	16	-	0.01
779-2053PL	5.3	10	16	-	0.01
779-2054PL	5.4	10	16	-	0.01

WDS No.	D1	D2	L	To suit tap drill	Weight (kg)
779-2055PL	5.5	10	16	-	0.01
779-2056PL	5.6	10	16	-	0.01
779-2057PL	5.7	10	16	-	0.01
779-2058PL	5.8	10	16	-	0.01
779-2059PL	5.9	10	16	-	0.01
779-2060PL	6	10	16	M7 x 1.0	0.01
779-2061PL	6.1	12	16	-	0.01
779-2062PL	6.2	12	16	-	0.01
779-2063PL	6.3	12	16	-	0.01
779-2064PL	6.4	12	16	-	0.01
779-2065PL	6.5	12	16	-	0.01
779-2066PL	6.6	12	16	-	0.01
779-2067PL	6.7	12	16	-	0.01
779-2068PL	6.8	12	16	M8 x 1.25	0.01
779-2069PL	6.9	12	16	-	0.01
779-2070PL	7	12	16	-	0.01
779-2071PL	7.1	12	16	-	0.01
779-2072PL	7.2	12	16	-	0.01
779-2073PL	7.3	12	16	-	0.01
779-2074PL	7.4	12	16	-	0.01
779-2075PL	7.5	12	16	-	0.01
779-2076PL	7.6	12	16	-	0.01
779-2077PL	7.7	12	16	-	0.01
779-2078PL	7.8	12	16	-	0.01
779-2079PL	7.9	12	16	-	0.01
779-2080PL	8	12	16	-	0.01
779-2081PL	8.1	15	20	-	0.02
779-2082PL	8.2	15	20	-	0.02
779-2083PL	8.3	15	20	-	0.02
779-2084PL	8.4	15	20	-	0.02
779-2085PL	8.5	15	20	M10 x 1.50	0.02
779-2086PL	8.6	15	20	-	0.02
779-2087PL	8.7	15	20	-	0.02
779-2088PL	8.8	15	20	-	0.02
779-2089PL	8.9	15	20	-	0.02
779-2090PL	9	15	20	-	0.02
779-2091PL	9.1	15	20	-	0.02
779-2092PL	9.2	15	20	-	0.02
779-2093PL	9.3	15	20	-	0.02
779-2094PL	9.4	15	20	-	0.02
779-2095PL	9.5	15	20	M11 x 1.5	0.02
779-2096PL	9.6	15	20	-	0.02
779-2097PL	9.7	15	20	-	0.02
779-2098PL	9.8	15	20	-	0.02
779-2099PL	9.9	15	20	-	0.02
779-2100PL	10	15	20	-	0.02

WDS No.	D1	D2	L	To suit tap drill	Weight (kg)
779-2101PL	10.1	18	20	-	0.03
779-2102PL	10.2	18	20	M12 x 1.75	0.02
779-2103PL	10.3	18	20	-	0.03
779-2104PL	10.4	18	20	-	0.03
779-2105PL	10.5	18	20	-	0.03
779-2106PL	10.6	18	20	-	0.03
779-2107PL	10.7	18	20	-	0.03
779-2108PL	10.8	18	20	-	0.03
779-2109PL	10.9	18	20	-	0.02
779-2110PL	11	18	20	-	0.02
779-2111PL	11.1	18	20	-	0.02
779-2112PL	11.2	18	20	-	0.02
779-2113PL	11.3	18	20	-	0.02
779-2114PL	11.4	18	20	-	0.02
779-2115PL	11.5	18	20	-	0.02
779-2116PL	11.6	18	20	-	0.02
779-2117PL	11.7	18	20	-	0.02
779-2118PL	11.8	18	20	-	0.02
779-2119PL	11.9	18	20	-	0.02
779-2120PL	12	18	20	M14 x 2.0	0.02
779-2121PL	12.1	22	28	-	0.06
779-2122PL	12.2	22	28	-	0.06
779-2123PL	12.3	22	28	-	0.06
779-2124PL	12.4	22	28	-	0.06
779-2125PL	12.5	22	28	-	0.06
779-2126PL	12.6	22	28	-	0.06
779-2127PL	12.7	22	28	-	0.06
779-2128PL	12.8	22	28	-	0.05
779-2129PL	12.9	22	28	-	0.05
779-2130PL	13	22	28	-	0.05
779-2131PL	13.1	22	28	-	0.05
779-2132PL	13.2	22	28	-	0.05
779-2133PL	13.3	22	28	-	0.05
779-2134PL	13.4	22	28	-	0.05
779-2135PL	13.5	22	28	-	0.05
779-2136PL	13.6	22	28	-	0.05
779-2137PL	13.7	22	28	-	0.05
779-2138PL	13.8	22	28	-	0.05
779-2139PL	13.9	22	28	-	0.05
779-2140PL	14	22	28	M16 x 2.0	0.05
779-2141PL	14.1	22	28	-	0.05
779-2142PL	14.2	22	28	-	0.05
779-2143PL	14.3	22	28	-	0.05

WDS No.	D1	D2	L	To suit tap drill	Weight (kg)
779-2144PL	14.4	22	28	-	0.05
779-2145PL	14.5	22	28	-	0.05
779-2146PL	14.6	22	28	-	0.05
779-2147PL	14.7	22	28	-	0.05
779-2148PL	14.8	22	28	-	0.05
779-2149PL	14.9	22	28	-	0.05
779-2150PL	15	22	28	-	0.08
779-21525PL	15.25	26	28	-	0.07
779-2155PL	15.5	26	28	M18 x 2.5	0.07
779-21575PL	15.75	26	28	-	0.07
779-2160PL	16	26	28	-	0.07
779-21625PL	16.25	26	28	-	0.07
779-2165PL	16.5	26	28	-	0.07
779-21675PL	16.75	26	28	-	0.07
779-2170PL	17	26	28	-	0.07
779-21725PL	17.25	26	28	-	0.06
779-2175PL	17.5	26	28	M20 x 2.5	0.07
779-21775PL	17.75	26	28	-	0.06
779-2180PL	18	26	28	-	0.06
779-2190PL	19	30	36	-	0.12
779-2200PL	20	30	36	-	0.11
779-2210PL	21	30	36	M24 x 3.0	0.09
779-2220PL	22	30	36	-	0.12
779-2230PL	23	35	36	-	0.15
779-2240PL	24	35	36	M27 x 3.0	0.14
779-2250PL	25	35	36	-	0.13
779-2260PL	26	35	36	-	0.12
779-2270PL	27	42	45	-	0.28
779-2280PL	28	42	45	-	0.27
779-2290PL	29	42	45	-	0.25
779-2300PL	30	42	45	-	0.24
779-2310PL	31	48	45	-	0.37
779-2320PL	32	48	45	M36 x 4.0	0.35
779-2330PL	33	48	45	-	0.33
779-2340PL	34	48	45	-	0.31
779-2350PL	35	48	45	M39 x 4.0	0.3
779-2360PL	36	55	56	-	0.59
779-2370PL	37	55	56	-	0.56
779-2380PL	38	55	56	-	0.55
779-2390PL	39	55	56	-	0.5
779-2400PL	40	55	56	-	0.48
779-2410PL	41	55	56	-	0.45
779-2420PL	42	55	56	-	0.43



WDS 779 Plain Drill Bush to DIN179A Standard-Short

DIN 179A

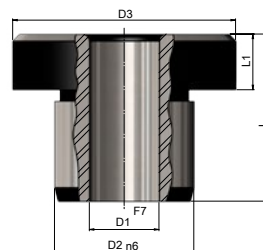
Steel - Hardened to 63/65HRC

WDS No.	D1	D2	L	To suit tap drill	Weight (kg)
779-2009PS	0.9	3	6	-	0.01
779-2010PS	1	3	6	-	0.01
779-2011PS	1.1	4	6	M1.4 x 0.3	0.01
779-2012PS	1.2	4	6	-	0.01
779-2013PS	1.3	4	6	-	0.01
779-2014PS	1.4	4	6	-	0.01
779-2015PS	1.5	4	6	-	0.01
779-2016PS	1.6	4	6	M2.0 x 0.4	0.01
779-2017PS	1.7	4	6	-	0.01
779-2018PS	1.8	4	6	-	0.01
779-2019PS	1.9	5	6	-	0.01
779-2020PS	2	5	6	-	0.01
779-2021PS	2.1	5	6	-	0.01
779-2022PS	2.2	5	6	-	0.01
779-2023PS	2.3	5	6	-	0.01
779-2024PS	2.4	5	6	-	0.01
779-2025PS	2.5	5	6	M3 x 0.5	0.01
779-2026PS	2.6	5	6	-	0.01
779-2027PS	2.7	6	8	-	0.01
779-2028PS	2.8	6	8	-	0.01
779-2029PS	2.9	6	8	M3.5 x 0.6	0.01
779-2030PS	3	6	8	-	0.01
779-2031PS	3.1	6	8	-	0.01
779-2032PS	3.2	6	8	-	0.01
779-2033PS	3.3	6	8	M4 x 0.7	0.01
779-2034PS	3.4	7	8	-	0.01
779-2035PS	3.5	7	8	-	0.01
779-2036PS	3.6	7	8	-	0.01
779-2037PS	3.7	7	8	M4.5 x 0.75	0.01
779-2038PS	3.8	7	8	-	0.01
779-2039PS	3.9	7	8	-	0.01
779-2040PS	4	7	8	-	0.01
779-2041PS	4.1	8	8	-	0.01
779-2042PS	4.2	8	8	M5 x 0.8	0.01
779-2043PS	4.3	8	8	-	0.01
779-2044PS	4.4	8	8	-	0.01
779-2045PS	4.5	8	8	-	0.01
779-2046PS	4.6	8	8	-	0.01
779-2047PS	4.7	8	8	-	0.01
779-2048PS	4.8	8	8	-	0.01
779-2049PS	4.9	8	8	-	0.01
779-2050PS	5	8	8	M6 x 1.0	0.01
779-2051PS	5.1	10	10	-	0.01
779-2052PS	5.2	10	10	-	0.01
779-2053PS	5.3	10	10	-	0.01
779-2054PS	5.4	10	10	-	0.01

WDS No.	D1	D2	L	To suit tap drill	Weight (kg)
779-2055PS	5.5	10	10	-	0.01
779-2056PS	5.6	10	10	-	0.01
779-2057PS	5.7	10	10	-	0.01
779-2058PS	5.8	10	10	-	0.01
779-2059PS	5.9	10	10	-	0.01
779-2060PS	6	10	10	M7 x 1.0	0.01
779-2061PS	6.1	12	10	-	0.01
779-2062PS	6.2	12	10	-	0.01
779-2063PS	6.3	12	10	-	0.01
779-2064PS	6.4	12	10	-	0.01
779-2065PS	6.5	12	10	-	0.01
779-2066PS	6.6	12	10	-	0.01
779-2067PS	6.7	12	10	-	0.01
779-2068PS	6.8	12	10	M8 x 1.25	0.01
779-2069PS	6.9	12	10	-	0.01
779-2070PS	7	12	10	-	0.01
779-2071PS	7.1	12	10	-	0.01
779-2072PS	7.2	12	10	-	0.01
779-2073PS	7.3	12	10	-	0.01
779-2074PS	7.4	12	10	-	0.01
779-2075PS	7.5	12	10	-	0.01
779-2076PS	7.6	12	10	-	0.01
779-2077PS	7.7	12	10	-	0.01
779-2078PS	7.8	12	10	-	0.01
779-2079PS	7.9	12	10	-	0.01
779-2080PS	8	12	10	-	0.01
779-2081PS	8.1	15	12	-	0.01
779-2082PS	8.2	15	12	-	0.01
779-2083PS	8.3	15	12	-	0.01
779-2084PS	8.4	15	12	-	0.01
779-2085PS	8.5	15	12	M10 x 1.50	0.01
779-2086PS	8.6	15	12	-	0.01
779-2087PS	8.7	15	12	-	0.01
779-2088PS	8.8	15	12	-	0.01
779-2089PS	8.9	15	12	-	0.01
779-2090PS	9	15	12	-	0.01
779-2091PS	9.1	15	12	-	0.01
779-2092PS	9.2	15	12	-	0.01
779-2093PS	9.3	15	12	-	0.01
779-2094PS	9.4	15	12	-	0.01
779-2095PS	9.5	15	12	M11 x 1.5	0.01
779-2096PS	9.6	15	12	-	0.01
779-2097PS	9.7	15	12	-	0.01
779-2098PS	9.8	15	12	-	0.01
779-2099PS	9.9	15	12	-	0.01
779-2100PS	10	15	12	-	0.01

WDS No.	D1	D2	L	To suit tap drill	Weight (kg)
779-2101PS	10.1	18	12	-	0.02
779-2102PS	10.2	18	12	M12 x 1.75	0.02
779-2103PS	10.3	18	12	-	0.02
779-2104PS	10.4	18	12	-	0.02
779-2105PS	10.5	18	12	-	0.02
779-2106PS	10.6	18	12	-	0.02
779-2107PS	10.7	18	12	-	0.02
779-2108PS	10.8	18	12	-	0.02
779-2109PS	10.9	18	12	-	0.02
779-2110PS	11	18	12	-	0.02
779-2111PS	11.1	18	12	-	0.01
779-2112PS	11.2	18	12	-	0.01
779-2113PS	11.3	18	12	-	0.01
779-2114PS	11.4	18	12	-	0.01
779-2115PS	11.5	18	12	-	0.01
779-2116PS	11.6	18	12	-	0.01
779-2117PS	11.7	18	12	-	0.01
779-2118PS	11.8	18	12	-	0.01
779-2119PS	11.9	18	12	-	0.01
779-2120PS	12	18	12	M14 x 2.0	0.02
779-2121PS	12.1	22	16	-	0.03
779-2122PS	12.2	22	16	-	0.03
779-2123PS	12.3	22	16	-	0.03
779-2124PS	12.4	22	16	-	0.03
779-2125PS	12.5	22	16	-	0.03
779-2126PS	12.6	22	16	-	0.03
779-2127PS	12.7	22	16	-	0.03
779-2128PS	12.8	22	16	-	0.03
779-2129PS	12.9	22	16	-	0.03
779-2130PS	13	22	16	-	0.03
779-2131PS	13.1	22	16	-	0.03
779-2132PS	13.2	22	16	-	0.03
779-2133PS	13.3	22	16	-	0.03
779-2134PS	13.4	22	16	-	0.03
779-2135PS	13.5	22	16	-	0.03
779-2136PS	13.6	22	16	-	0.03
779-2137PS	13.7	22	16	-	0.03
779-2138PS	13.8	22	16	-	0.03
779-2139PS	13.9	22	16	-	0.03
779-2140PS	14	22	16	M16 x 2.0	0.03
779-2141PS	14.1	22	16	-	0.05
779-2142PS	14.2	22	16	-	0.05
779-2143PS	14.3	22	16	-	0.05

WDS No.	D1	D2	L	To suit tap drill	Weight (kg)
779-2144PS	14.4	22	16	-	0.05
779-2145PS	14.5	22	16	-	0.05
779-2146PS	14.6	22	16	-	0.05
779-2147PS	14.7	22	16	-	0.05
779-2148PS	14.8	22	16	-	0.05
779-2149PS	14.9	22	16	-	0.05
779-2150PS	15	22	16	-	0.05
779-21525PS	15.25	26	16	-	0.04
779-2155PS	15.5	26	16	M18 x 2.5	0.04
779-21575PS	15.75	26	16	-	0.04
779-2160PS	16	26	16	-	0.04
779-21625PS	16.25	26	16	-	0.05
779-2165PS	16.5	26	16	-	0.05
779-21675PS	16.75	26	16	-	0.04
779-2170PS	17	26	16	-	0.04
779-21725PS	17.25	26	16	-	0.04
779-2175PS	17.5	26	16	M20 x 2.5	0.04
779-21775PS	17.75	26	16	-	0.04
779-2180PS	18	26	16	-	0.07
779-2190PS	19	30	20	-	0.06
779-2200PS	20	30	20	-	0.06
779-2210PS	21	30	20	M24 x 3.0	0.06
779-2220PS	22	30	20	-	0.05
779-2230PS	23	35	20	-	0.08
779-2240PS	24	35	20	M27 x 3.0	0.08
779-2250PS	25	35	20	-	0.07
779-2260PS	26	35	20	-	0.07
779-2270PS	27	42	25	-	0.16
779-2280PS	28	42	25	-	0.15
779-2290PS	29	42	25	-	0.14
779-2300PS	30	42	25	-	0.13
779-2310PS	31	48	25	-	0.2
779-2320PS	32	48	25	M36 x 4.0	0.18
779-2330PS	33	48	25	-	0.18
779-2340PS	34	48	25	-	0.17
779-2350PS	35	48	25	M39 x 4.0	0.16
779-2360PS	36	55	30	-	0.31
779-2370PS	37	55	30	-	0.29
779-2380PS	38	55	30	-	0.29
779-2390PS	39	55	30	-	0.29
779-2400PS	40	55	30	-	0.26
779-2410PS	41	55	30	-	0.24
779-2420PS	42	55	30	-	0.23



WDS 779 Headed Drill Bushes to DIN172A Standard-Long

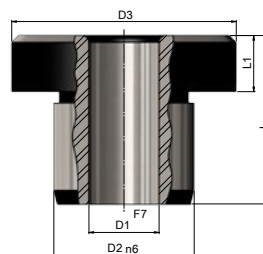
DIN 172A

Steel - Hardened to 63/65HRC

WDS No.	D1	D2	D3	L	L1	To suit tap drill	Weight (kg)
779-2009HL	0.9	3	6	9	2	-	0.01
779-2010HL	1	3	6	9	2	-	0.01
779-2011HL	1.1	4	7	9	2	M1.4 x 0.3	0.01
779-2012HL	1.2	4	7	9	2	-	0.01
779-2013HL	1.3	4	7	9	2	-	0.01
779-2014HL	1.4	4	7	9	2	-	0.01
779-2015HL	1.5	4	7	9	2	-	0.01
779-2016HL	1.6	4	7	9	2	M2.0 x 0.4	0.01
779-2017HL	1.7	4	7	9	2	-	0.01
779-2018HL	1.8	4	7	9	2	-	0.01
779-2019HL	1.9	5	8	9	2	-	0.01
779-2020HL	2	5	8	9	2	-	0.01
779-2021HL	2.1	5	8	9	2	-	0.01
779-2022HL	2.2	5	8	9	2	-	0.01
779-2023HL	2.3	5	8	9	2	-	0.01
779-2024HL	2.4	5	8	9	2	-	0.01
779-2025HL	2.5	5	8	9	2	M3 x 0.5	0.01
779-2026HL	2.6	5	8	9	2	-	0.01
779-2027HL	2.7	6	9	12	2.5	-	0.01
779-2028HL	2.8	6	9	12	2.5	-	0.01
779-2029HL	2.9	6	9	12	2.5	M3.5 x 0.6	0.01
779-2030HL	3	6	9	12	2.5	-	0.01
779-2031HL	3.1	6	9	12	2.5	-	0.01
779-2032HL	3.2	6	9	12	2.5	-	0.01
779-2033HL	3.3	6	9	12	2.5	M4 x 0.7	0.01
779-2034HL	3.4	7	10	12	2.5	-	0.01
779-2035HL	3.5	7	10	12	2.5	-	0.01
779-2036HL	3.6	7	10	12	2.5	-	0.01
779-2037HL	3.7	7	10	12	2.5	M4.5 x 0.75	0.01
779-2038HL	3.8	7	10	12	2.5	-	0.01
779-2039HL	3.9	7	10	12	2.5	-	0.01
779-2040HL	4	7	10	12	2.5	-	0.01
779-2041HL	4.1	8	11	12	2.5	-	0.01
779-2042HL	4.2	8	11	12	2.5	M5 x 0.8	0.01
779-2043HL	4.3	8	11	12	2.5	-	0.01
779-2044HL	4.4	8	11	12	2.5	-	0.01
779-2045HL	4.5	8	11	12	2.5	-	0.01
779-2046HL	4.6	8	11	12	2.5	-	0.01
779-2047HL	4.7	8	11	12	2.5	-	0.01
779-2048HL	4.8	8	11	12	2.5	-	0.01
779-2049HL	4.9	8	11	12	2.5	-	0.01
779-2050HL	5	8	11	12	2.5	M6 x 1.0	0.01
779-2051HL	5.1	10	13	16	3	-	0.01
779-2052HL	5.2	10	13	16	3	-	0.01
779-2053HL	5.3	10	13	16	3	-	0.01
779-2054HL	5.4	10	13	16	3	-	0.01

WDS No.	D1	D2	D3	L	L1	To suit tap drill	Weight (kg)
779-2055HL	5.5	10	13	16	3	-	0.01
779-2056HL	5.6	10	13	16	3	-	0.01
779-2057HL	5.7	10	13	16	3	-	0.01
779-2058HL	5.8	10	13	16	3	-	0.01
779-2059HL	5.9	10	13	16	3	-	0.01
779-2060HL	6	10	13	16	3	M7 x 1.0	0.01
779-2061HL	6.1	12	15	16	3	-	0.01
779-2062HL	6.2	12	15	16	3	-	0.01
779-2063HL	6.3	12	15	16	3	-	0.01
779-2064HL	6.4	12	15	16	3	-	0.01
779-2065HL	6.5	12	15	16	3	-	0.01
779-2066HL	6.6	12	15	16	3	-	0.01
779-2067HL	6.7	12	15	16	3	-	0.01
779-2068HL	6.8	12	15	16	3	M8 x 1.25	0.01
779-2069HL	6.9	12	15	16	3	-	0.01
779-2070HL	7	12	15	16	3	-	0.01
779-2071HL	7.1	12	15	16	3	-	0.01
779-2072HL	7.2	12	15	16	3	-	0.01
779-2073HL	7.3	12	15	16	3	-	0.01
779-2074HL	7.4	12	15	16	3	-	0.01
779-2075HL	7.5	12	15	16	3	-	0.01
779-2076HL	7.6	12	15	16	3	-	0.01
779-2077HL	7.7	12	15	16	3	-	0.01
779-2078HL	7.8	12	15	16	3	-	0.01
779-2079HL	7.9	12	15	16	3	-	0.01
779-2080HL	8	12	15	16	3	-	0.01
779-2081HL	8.1	15	18	20	3	-	0.02
779-2082HL	8.2	15	18	20	3	-	0.02
779-2083HL	8.3	15	18	20	3	-	0.02
779-2084HL	8.4	15	18	20	3	-	0.02
779-2085HL	8.5	15	18	20	3	M10 x 1.50	0.02
779-2086HL	8.6	15	18	20	3	-	0.02
779-2087HL	8.7	15	18	20	3	-	0.02
779-2088HL	8.8	15	18	20	3	-	0.02
779-2089HL	8.9	15	18	20	3	-	0.02
779-2090HL	9	15	18	20	3	-	0.02
779-2091HL	9.1	15	18	20	3	-	0.02
779-2092HL	9.2	15	18	20	3	-	0.02
779-2093HL	9.3	15	18	20	3	-	0.02
779-2094HL	9.4	15	18	20	3	-	0.02
779-2095HL	9.5	15	18	20	3	M11 x 1.5	0.02
779-2096HL	9.6	15	18	20	3	-	0.02
779-2097HL	9.7	15	18	20	3	-	0.02
779-2098HL	9.8	15	18	20	3	-	0.02
779-2099HL	9.9	15	18	20	3	-	0.02
779-2100HL	10	15	18	20	3	-	0.02

WDS No.	D1	D2	D3	L	L1	To suit tap drill	Weight (kg)	WDS No.	D1	D2	D3	L	L1	To suit tap drill	Weight (kg)
779-2101HL	10.1	18	22	20	4	-	0.03	779-2144HL	14.4	22	26	28	4	-	0.06
779-2102HL	10.2	18	22	20	4	M12 x 1.75	0.03	779-2145HL	14.5	22	26	28	4	-	0.06
779-2103HL	10.3	18	22	20	4	-	0.03	779-2146HL	14.6	22	26	28	4	-	0.06
779-2104HL	10.4	18	22	20	4	-	0.03	779-2147HL	14.7	22	26	28	4	-	0.06
779-2105HL	10.5	18	22	20	4	-	0.03	779-2148HL	14.8	22	26	28	4	-	0.06
779-2106HL	10.6	18	22	20	4	-	0.03	779-2149HL	14.9	22	26	28	4	-	0.06
779-2107HL	10.7	18	22	20	4	-	0.03	779-2150HL	15	22	26	28	4	-	0.05
779-2108HL	10.8	18	22	20	4	-	0.03	779-21525HL	15.25	26	30	28	4	-	0.08
779-2109HL	10.9	18	22	20	4	-	0.03	779-2155HL	15.5	26	30	28	4	M18 x 2.5	0.08
779-2110HL	11	18	22	20	4	-	0.03	779-21575HL	15.75	26	30	28	4	-	0.08
779-2111HL	11.1	18	22	20	4	-	0.03	779-2160HL	16	26	30	28	4	-	0.08
779-2112HL	11.2	18	22	20	4	-	0.03	779-21625HL	16.25	26	30	28	4	-	0.08
779-2113HL	11.3	18	22	20	4	-	0.03	779-2165HL	16.5	26	30	28	4	-	0.07
779-2114HL	11.4	18	22	20	4	-	0.03	779-21675HL	16.75	26	30	28	4	-	0.07
779-2115HL	11.5	18	22	20	4	-	0.03	779-2170HL	17	26	30	28	4	-	0.07
779-2116HL	11.6	18	22	20	4	-	0.03	779-21725HL	17.25	26	30	28	4	-	0.06
779-2117HL	11.7	18	22	20	4	-	0.03	779-2175HL	17.5	26	30	28	4	M20 x 2.5	0.07
779-2118HL	11.8	18	22	20	4	-	0.03	779-21775HL	17.75	26	30	28	4	-	0.05
779-2119HL	11.9	18	22	20	4	-	0.03	779-2180HL	18	26	30	28	4	-	0.08
779-2120HL	12	18	22	20	4	M14 x 2.0	0.03	779-2190HL	19	30	34	36	5	-	0.12
779-2121HL	12.1	22	26	28	4	-	0.06	779-2200HL	20	30	34	36	5	-	0.12
779-2122HL	12.2	22	26	28	4	-	0.06	779-2210HL	21	30	34	36	5	M24 x 3.0	0.11
779-2123HL	12.3	22	26	28	4	-	0.06	779-2220HL	22	30	34	36	5	-	0.1
779-2124HL	12.4	22	26	28	4	-	0.06	779-2230HL	23	35	39	36	5	-	0.16
779-2125HL	12.5	22	26	28	4	-	0.06	779-2240HL	24	35	39	36	5	M27 x 3.0	0.15
779-2126HL	12.6	22	26	28	4	-	0.06	779-2250HL	25	35	39	36	5	-	0.14
779-2127HL	12.7	22	26	28	4	-	0.06	779-2260HL	26	35	39	36	5	-	0.13
779-2128HL	12.8	22	26	28	4	-	0.06	779-2270HL	27	42	46	45	5	-	0.29
779-2129HL	12.9	22	26	28	4	-	0.06	779-2280HL	28	42	46	45	5	-	0.28
779-2130HL	13	22	26	28	4	-	0.06	779-2290HL	29	42	46	45	5	-	0.26
779-2131HL	13.1	22	26	28	4	-	0.06	779-2300HL	30	42	46	45	5	-	0.25
779-2132HL	13.2	22	26	28	4	-	0.06	779-2310HL	31	48	52	45	5	-	0.38
779-2133HL	13.3	22	26	28	4	-	0.06	779-2320HL	32	48	52	45	5	M36 x 4.0	0.36
779-2134HL	13.4	22	26	28	4	-	0.06	779-2330HL	33	48	52	45	5	-	0.34
779-2135HL	13.5	22	26	28	4	-	0.06	779-2340HL	34	48	52	45	5	-	0.32
779-2136HL	13.6	22	26	28	4	-	0.06	779-2350HL	35	48	52	45	5	M39 x 4.0	0.31
779-2137HL	13.7	22	26	28	4	-	0.06	779-2360HL	36	55	59	56	6	-	0.6
779-2138HL	13.8	22	26	28	4	-	0.05	779-2370HL	37	55	59	56	6	-	0.57
779-2139HL	13.9	22	26	28	4	-	0.05	779-2380HL	38	55	59	56	6	-	0.55
779-2140HL	14	22	26	28	4	M16 x 2.0	0.05	779-2390HL	39	55	59	56	6	-	0.52
779-2141HL	14.1	22	26	28	4	-	0.05	779-2400HL	40	55	59	56	6	-	0.5
779-2142HL	14.2	22	26	28	4	-	0.05	779-2410HL	41	55	59	56	6	-	0.46
779-2143HL	14.3	22	26	28	4	-	0.06	779-2420HL	42	55	59	56	6	-	0.44



WDS 779 Headed Drill Bushes to DIN172A Standard-Short

DIN 172A

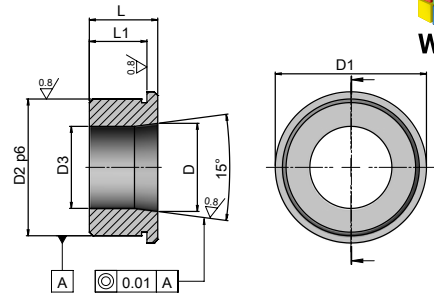
Steel - Hardened to 63/65HRC

WDS No.	D1	D2	D3	L	L1	To suit tap drill	Weight (kg)
779-2009HS	0.9	3	6	6	2	-	0.01
779-2010HS	1	3	6	6	2	-	0.01
779-2011HS	1.1	4	7	6	2	M1.4 x 0.3	0.01
779-2012HS	1.2	4	7	6	2	-	0.01
779-2013HS	1.3	4	7	6	2	-	0.01
779-2014HS	1.4	4	7	6	2	-	0.01
779-2015HS	1.5	4	7	6	2	-	0.01
779-2016HS	1.6	4	7	6	2	M2.0 x 0.4	0.01
779-2017HS	1.7	4	7	6	2	-	0.01
779-2018HS	1.8	4	7	6	2	-	0.01
779-2019HS	1.9	5	8	6	2	-	0.01
779-2020HS	2	5	8	6	2	-	0.01
779-2021HS	2.1	5	8	6	2	-	0.01
779-2022HS	2.2	5	8	6	2	-	0.01
779-2023HS	2.3	5	8	6	2	-	0.01
779-2024HS	2.4	5	8	6	2	-	0.01
779-2025HS	2.5	5	8	6	2	M3 x 0.5	0.01
779-2026HS	2.6	5	8	6	2	-	0.01
779-2027HS	2.7	6	9	8	2.5	-	0.01
779-2028HS	2.8	6	9	8	2.5	-	0.01
779-2029HS	2.9	6	9	8	2.5	M3.5 x 0.6	0.01
779-2030HS	3	6	9	8	2.5	-	0.01
779-2031HS	3.1	6	9	8	2.5	-	0.01
779-2032HS	3.2	6	9	8	2.5	-	0.01
779-2033HS	3.3	6	9	8	2.5	M4 x 0.7	0.01
779-2034HS	3.4	7	10	8	2.5	-	0.01
779-2035HS	3.5	7	10	8	2.5	-	0.01
779-2036HS	3.6	7	10	8	2.5	-	0.01
779-2037HS	3.7	7	10	8	2.5	M4.5 x 0.75	0.01
779-2038HS	3.8	7	10	8	2.5	-	0.01
779-2039HS	3.9	7	10	8	2.5	-	0.01
779-2040HS	4	7	10	8	2.5	-	0.01
779-2041HS	4.1	8	11	8	2.5	-	0.01
779-2042HS	4.2	8	11	8	2.5	M5 x 0.8	0.01
779-2043HS	4.3	8	11	8	2.5	-	0.01
779-2044HS	4.4	8	11	8	2.5	-	0.01
779-2045HS	4.5	8	11	8	2.5	-	0.01
779-2046HS	4.6	8	11	8	2.5	-	0.01
779-2047HS	4.7	8	11	8	2.5	-	0.01
779-2048HS	4.8	8	11	8	2.5	-	0.01
779-2049HS	4.9	8	11	8	2.5	-	0.01
779-2050HS	5	8	11	8	2.5	M6 x 1.0	0.01
779-2051HS	5.1	10	13	10	3	-	0.01
779-2052HS	5.2	10	13	10	3	-	0.01
779-2053HS	5.3	10	13	10	3	-	0.01
779-2054HS	5.4	10	13	10	3	-	0.01

WDS No.	D1	D2	D3	L	L1	To suit tap drill	Weight (kg)
779-2055HS	5.5	10	13	10	3	-	0.01
779-2056HS	5.6	10	13	10	3	-	0.01
779-2057HS	5.7	10	13	10	3	-	0.01
779-2058HS	5.8	10	13	10	3	-	0.01
779-2059HS	5.9	10	13	10	3	-	0.01
779-2060HS	6	10	13	10	3	M7 x 1.0	0.01
779-2061HS	6.1	12	15	10	3	-	0.01
779-2062HS	6.2	12	15	10	3	-	0.01
779-2063HS	6.3	12	15	10	3	-	0.01
779-2064HS	6.4	12	15	10	3	-	0.01
779-2065HS	6.5	12	15	10	3	-	0.01
779-2066HS	6.6	12	15	10	3	-	0.01
779-2067HS	6.7	12	15	10	3	-	0.01
779-2068HS	6.8	12	15	10	3	M8 x 1.25	0.01
779-2069HS	6.9	12	15	10	3	-	0.01
779-2070HS	7	12	15	10	3	-	0.01
779-2071HS	7.1	12	15	10	3	-	0.01
779-2072HS	7.2	12	15	10	3	-	0.01
779-2073HS	7.3	12	15	10	3	-	0.01
779-2074HS	7.4	12	15	10	3	-	0.01
779-2075HS	7.5	12	15	10	3	-	0.01
779-2076HS	7.6	12	15	10	3	-	0.01
779-2077HS	7.7	12	15	10	3	-	0.01
779-2078HS	7.8	12	15	10	3	-	0.01
779-2079HS	7.9	12	15	10	3	-	0.01
779-2080HS	8	12	15	10	3	-	0.01
779-2081HS	8.1	15	18	12	3	-	0.01
779-2082HS	8.2	15	18	12	3	-	0.01
779-2083HS	8.3	15	18	12	3	-	0.01
779-2084HS	8.4	15	18	12	3	-	0.01
779-2085HS	8.5	15	18	12	3	M10 x 1.50	0.01
779-2086HS	8.6	15	18	12	3	-	0.01
779-2087HS	8.7	15	18	12	3	-	0.01
779-2088HS	8.8	15	18	12	3	-	0.01
779-2089HS	8.9	15	18	12	3	-	0.01
779-2090HS	9	15	18	12	3	-	0.01
779-2091HS	9.1	15	18	12	3	-	0.01
779-2092HS	9.2	15	18	12	3	-	0.01
779-2093HS	9.3	15	18	12	3	-	0.01
779-2094HS	9.4	15	18	12	3	-	0.01
779-2095HS	9.5	15	18	12	3	M11 x 1.5	0.01
779-2096HS	9.6	15	18	12	3	-	0.01
779-2097HS	9.7	15	18	12	3	-	0.01
779-2098HS	9.8	15	18	12	3	-	0.01
779-2099HS	9.9	15	18	12	3	-	0.01
779-2100HS	10	15	18	12	3	-	0.01

WDS No.	D1	D2	D3	L	L1	To suit tap drill	Weight (kg)
779-2101HS	10.1	18	22	12	4	-	0.02
779-2102HS	10.2	18	22	12	4	M12 x 1.75	0.02
779-2103HS	10.3	18	22	12	4	-	0.02
779-2104HS	10.4	18	22	12	4	-	0.02
779-2105HS	10.5	18	22	12	4	-	0.02
779-2106HS	10.6	18	22	12	4	-	0.02
779-2107HS	10.7	18	22	12	4	-	0.02
779-2108HS	10.8	18	22	12	4	-	0.02
779-2109HS	10.9	18	22	12	4	-	0.02
779-2110HS	11	18	22	12	4	-	0.02
779-2111HS	11.1	18	22	12	4	-	0.02
779-2112HS	11.2	18	22	12	4	-	0.02
779-2113HS	11.3	18	22	12	4	-	0.02
779-2114HS	11.4	18	22	12	4	-	0.02
779-2115HS	11.5	18	22	12	4	-	0.02
779-2116HS	11.6	18	22	12	4	-	0.02
779-2117HS	11.7	18	22	12	4	-	0.02
779-2118HS	11.8	18	22	12	4	-	0.02
779-2119HS	11.9	18	22	12	4	-	0.02
779-2120HS	12	18	22	12	4	M14 x 2.0	0.02
779-2121HS	12.1	22	26	16	4	-	0.04
779-2122HS	12.2	22	26	16	4	-	0.04
779-2123HS	12.3	22	26	16	4	-	0.04
779-2124HS	12.4	22	26	16	4	-	0.04
779-2125HS	12.5	22	26	16	4	-	0.04
779-2126HS	12.6	22	26	16	4	-	0.04
779-2127HS	12.7	22	26	16	4	-	0.04
779-2128HS	12.8	22	26	16	4	-	0.04
779-2129HS	12.9	22	26	16	4	-	0.04
779-2130HS	13	22	26	16	4	-	0.04
779-2131HS	13.1	22	26	16	4	-	0.04
779-2132HS	13.2	22	26	16	4	-	0.04
779-2133HS	13.3	22	26	16	4	-	0.04
779-2134HS	13.4	22	26	16	4	-	0.04
779-2135HS	13.5	22	26	16	4	-	0.03
779-2136HS	13.6	22	26	16	4	-	0.03
779-2137HS	13.7	22	26	16	4	-	0.03
779-2138HS	13.8	22	26	16	4	-	0.03
779-2139HS	13.9	22	26	16	4	-	0.03
779-2140HS	14	22	26	16	4	M16 x 2.0	0.03
779-2141HS	14.1	22	26	16	4	-	0.03
779-2142HS	14.2	22	26	16	4	-	0.03
779-2143HS	14.3	22	26	16	4	-	0.03

WDS No.	D1	D2	D3	L	L1	To suit tap drill	Weight (kg)
779-2144HS	14.4	22	26	16	4	-	0.03
779-2145HS	14.5	22	26	16	4	-	0.03
779-2146HS	14.6	22	26	16	4	-	0.04
779-2147HS	14.7	22	26	16	4	-	0.04
779-2148HS	14.8	22	26	16	4	-	0.04
779-2149HS	14.9	22	26	16	4	-	0.04
779-2150HS	15	22	26	16	4	-	0.04
779-21525HS	15.25	26	30	16	4	-	0.05
779-2155HS	15.5	26	30	16	4	M18 x 2.5	0.05
779-21575HS	15.75	26	30	16	4	-	0.05
779-2160HS	16	26	30	16	4	-	0.05
779-21625HS	16.25	26	30	16	4	-	0.05
779-2165HS	16.5	26	30	16	4	-	0.05
779-21675HS	16.75	26	30	16	4	-	0.04
779-2170HS	17	26	30	16	4	-	0.04
779-21725HS	17.25	26	30	16	4	-	0.04
779-2175HS	17.5	26	30	16	4	M20 x 2.5	0.05
779-21775HS	17.75	26	30	16	4	-	0.04
779-2180HS	18	26	30	16	4	-	0.04
779-2190HS	19	30	34	20	5	-	0.08
779-2200HS	20	30	34	20	5	-	0.07
779-2210HS	21	30	34	20	5	M24 x 3.0	0.06
779-2220HS	22	30	34	20	5	-	0.05
779-2230HS	23	35	39	20	5	-	0.09
779-2240HS	24	35	39	20	5	M27 x 3.0	0.09
779-2250HS	25	35	39	20	5	-	0.08
779-2260HS	26	35	39	20	5	-	0.07
779-2270HS	27	42	46	25	5	-	0.17
779-2280HS	28	42	46	25	5	-	0.16
779-2290HS	29	42	46	25	5	-	0.15
779-2300HS	30	42	46	25	5	-	0.14
779-2310HS	31	48	52	25	5	-	0.21
779-2320HS	32	48	52	25	5	M36 x 4.0	0.2
779-2330HS	33	48	52	25	5	-	0.19
779-2340HS	34	48	52	25	5	-	0.18
779-2350HS	35	48	52	25	5	M39 x 4.0	0.17
779-2360HS	36	55	59	30	6	-	0.33
779-2370HS	37	55	59	30	6	-	0.31
779-2380HS	38	55	59	30	6	-	0.3
779-2390HS	39	55	59	30	6	-	0.28
779-2400HS	40	55	59	30	6	-	0.27
779-2410HS	41	55	59	30	6	-	0.26
779-2420HS	42	55	59	30	6	-	0.24

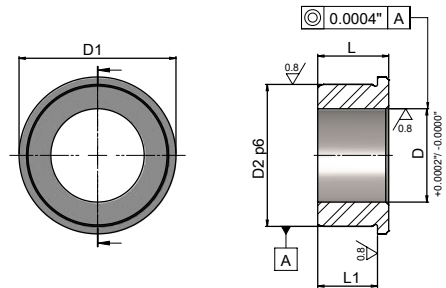


WDS 646 Index Plunger Bush - Taper

Steel BS.970 Gr. 220M07
Case Hardened and Ground

WDS No.	D	D1	D2 p6	D3	L	L1	Weight (kg)
646-2005	9.5	19	16	8.2	11	8.5	0.01
646-201	12.5	22	19	10.8	13	10	0.02
646-2015	15.5	28	25	13.8	17	14	0.05
646-202	18.5	32	28.5	16.8	16	13	0.06
646-2025	19.5	32	30	17.8	16	13	0.06
646-203	25.4	42	38	22.8	19	16	0.12

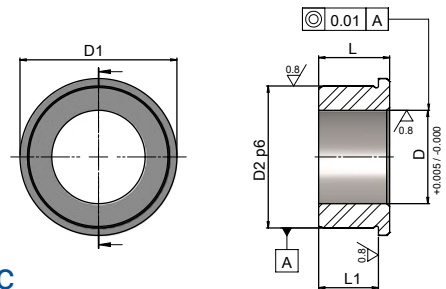
IN"



WDS 648 Index Plunger Bush Parallel - Inch

Steel BS.970 Gr. 220M07
Case Hardened and Ground

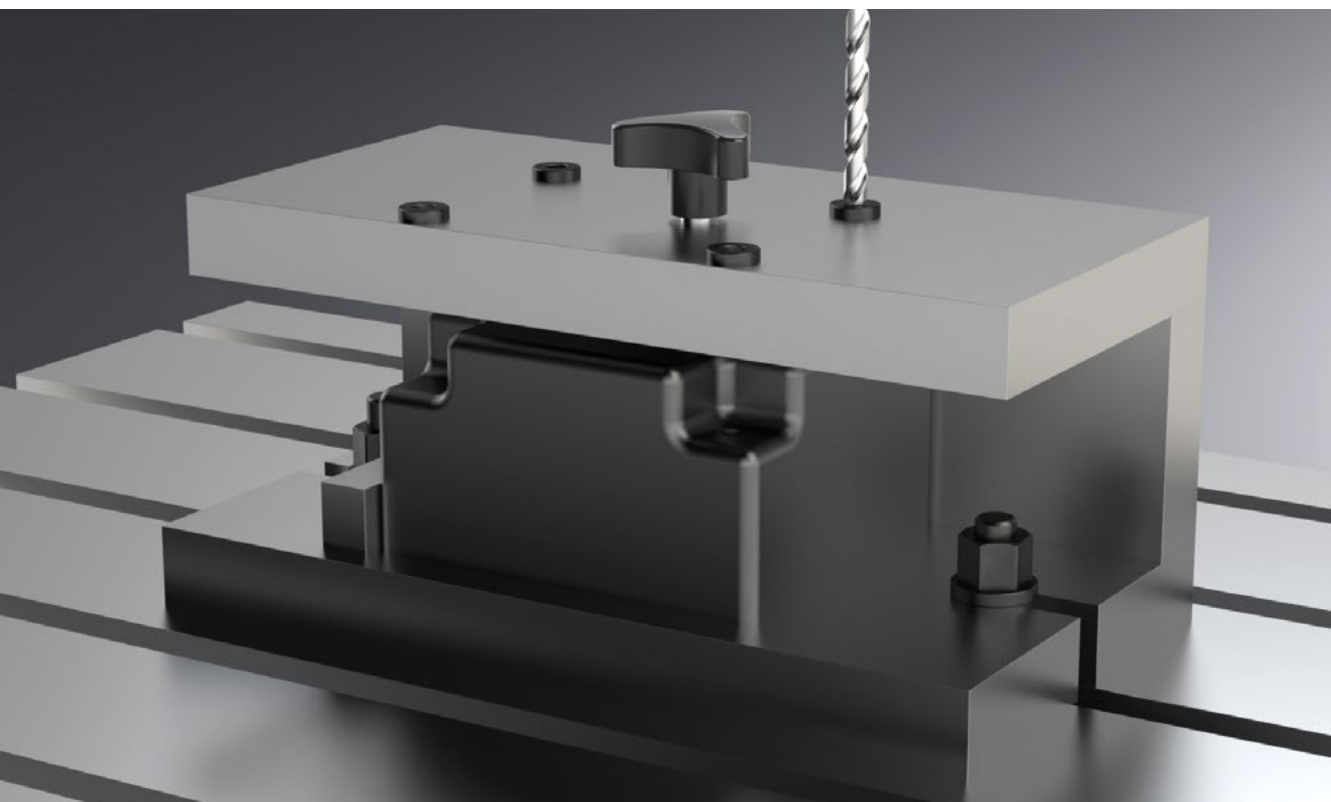
WDS No.	D	D1	D2 p6	L	L1	Weight (kg)
648-01	1/2 inch	22.2	0.750 inch	12.7	9.5	0.02
648-02	3/4 inch	32	1.125 inch	15.9	12.7	0.05



WDS 648 Index Plunger Bush Parallel - Metric

Steel BS.970 Gr. 220M07
Case Hardened and Ground

WDS No.	D	D1	D2 p6	L	L1	Weight (kg)
648-2005	10	19	16	11	8.5	0.01
648-201	13	22	19	13	10	0.02
648-2015	16	28	25	17	14	0.04
648-202	19	32	28.5	16	13	0.05
648-2025	20	32	30	16	13	0.05
648-203	25	42	38	19	16	0.1





GRIPPERS & CARBIDE CLAMPING PADS

P 689-714

Carbide, steel and hardened steel grippers and inserts have either a flat or “tooth” style head with the teeth available in both fine or extra fine options.



ADJUSTABLE GRIPPERS

Adjustable grippers offer the versatility of having a fixed grip with the ability to adjust a thread to position the gripper accurately on to a workpiece. Some designs have a swivel head allowing the gripper to be positioned at non absolute angles.

P 689-697



FIXED & EDGE GRIPPERS

Fixed grippers are available in several model variations: round grippers, square grippers and counter-bored grippers.

An edge gripper is an alternative to the standard top, bottom or counterbored fitting gripper and allows the user to use the product in an horizontal orientation.

P 698-710



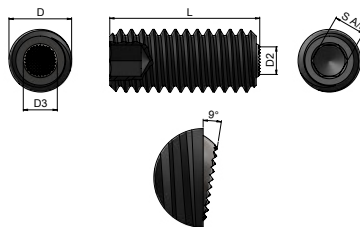
CARBIDE PADS

Carbide pads are available in round, square and rectangular shapes with options of flat, fine and extra fine carbide tips.

Carbide gripper pads can be used on many applications ranging from workholding to basic positioning.

P 711-714

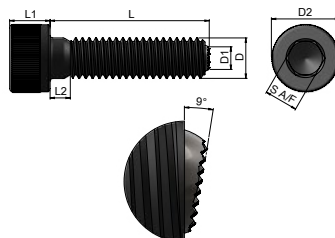




WDS 652 Clamping Screw Pad - Serrated Face

Steel, Chemical Black Finish, Pad Hardened, Non-restricted ball
Screw Heat-treated steel, $1200 \pm 100 \text{ N/mm}^2$, P = Max Load (kg)

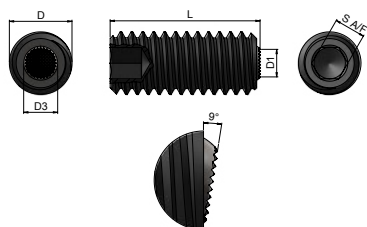
WDS No.	D	D1	D3	L	P	S	Weight (kg)
652-247	M8	4.5	5.5	10	1500	4	0.01
652-248	M8	4.5	5.5	12	1500	4	0.01
652-249	M8	4.5	5.5	20	1500	4	0.03
652-250	M8	4.5	5.5	30	1500	4	0.01
652-251	M10	6	7	12	2000	5	0.01
652-252	M10	6	7	16	2000	5	0.01
652-253	M10	6	7	25	2000	5	0.01
652-254	M10	6	7	35	2000	5	0.02
652-255	M12	7.2	8.5	16	3000	6	0.01
652-256	M12	7.2	8.5	20	3000	6	0.01
652-257	M12	7.2	8.5	30	3000	6	0.02
652-258	M12	7.2	8.5	40	3000	6	0.03
652-259	M16	10.7	12	20	6000	8	0.02
652-260	M16	10.7	12	25	6000	8	0.03
652-261	M16	10.7	12	35	6000	8	0.04
652-262	M16	10.7	12	50	6000	8	0.06



WDS 652 Headed Clamping Screw Pad - Serrated Restricted Swivel Ball

Steel, Chemical Black Finish, Pad Hardened
Screw Heat-treated steel, $1200 \pm 100 \text{ N/mm}^2$, P = Max Load (kg)

WDS No.	D	D1	D2	L	L1	L2	P	S	Weight (kg)
652-70820	M8	4.5	13	20	8	3.5	917	6	0.01
652-70835	M8	4.5	13	35	8	3.5	917	6	0.02
652-70850	M8	4.5	13	50	8	22	917	6	0.02
652-71025	M10	6	16	25	10	4.5	1223	8	0.03
652-71040	M10	6	16	40	10	4.5	1223	8	0.03
652-71060	M10	6	16	60	10	28	1223	8	0.05
652-71230	M12	7.2	18	30	12	5	1835	10	0.04
652-71250	M12	7.2	18	50	12	5	1835	10	0.06
652-71280	M12	7.2	18	80	12	44	1835	10	0.08
652-71640	M16	10.7	24	40	16	6	3670	14	0.09
652-71660	M16	10.7	24	60	16	6	3670	14	0.12
652-71680	M16	10.7	24	80	16	36	3670	14	0.15
652-720050	M20	13.5	30	50	20	7.5	6116	17	0.18
652-720080	M20	13.5	30	80	20	28	6116	17	0.25
652-720100	M20	13.5	30	100	20	48	6116	17	0.3
652-724060	M24	15.8	36	60	24	9	8155	19	0.32
652-724090	M24	15.8	36	90	24	30	8155	19	0.42
652-724120	M24	15.8	36	120	24	60	8155	19	0.54

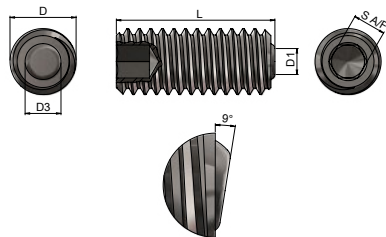


Clamping Screw Pad - Serrated Restricted Swivel Ball **WDS 652**

Steel, Chemical Black Finish, Pad Hardened
Screw Heat-treated steel, 1200 ±100 N/mm², P = Max Load (kg)

WDS No.	D	D1	D3	L	P	S	Weight (kg)
652-50816	M8	4.5	5.5	16	917	4	0.01
652-50820	M8	4.5	5.5	20	917	4	0.01
652-508025	M8	4.5	5.5	25	917	4	0.01
652-50830	M8	4.5	5.5	30	917	4	0.01
652-51020	M10	6	7	20	1223	5	0.09
652-51025	M10	6	7	25	1223	5	0.01
652-51035	M10	6	7	35	1223	5	0.02
652-510040	M10	6	7	40	1223	5	0.02
652-51220	M12	7.2	8.5	20	1835	6	0.01
652-51230	M12	7.2	8.5	30	1835	6	0.02
652-51240	M12	7.2	8.5	40	1835	6	0.03
652-512050	M12	7.2	8.5	50	1835	6	0.03
652-516020	M16	10.7	12	20	3670	8	0.02
652-516025	M16	10.7	12	25	3670	8	0.03
652-51635	M16	10.7	12	35	3670	8	0.04
652-51650	M16	10.7	12	50	3670	8	0.05
652-520030	M20	13.5	15	30	6116	10	0.05
652-520040	M20	13.5	15	40	6116	10	0.07
652-520050	M20	13.5	15	50	6116	10	0.09
652-520060	M20	13.5	15	60	6116	10	0.11
652-524035	M24	15.8	18	35	8155	12	0.08
652-524050	M24	15.8	18	50	8155	12	0.13
652-524080	M24	15.8	18	80	8155	12	0.22

303



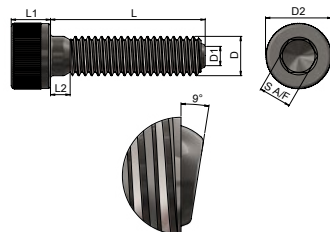
WDS 652 Clamping Screw Pad - Stainless Steel Plain Restricted Swivel Ball

Ball - Stainless steel, hardened, Screw - 303 Stainless

P = Max Load (kg)

WDS No.	D	D1	D3	L	P	S	Weight (kg)
652-906012	M6	3.2	4	12	611	3	0.01
652-906016	M6	3.2	4	16	611	3	0.01
652-906020	M6	3.2	4	20	611	3	0.01
652-906025	M6	3.2	4	25	611	3	0.01
652-908016	M8	4.5	5.5	16	917	4	0.01
652-908020	M8	4.5	5.5	20	917	4	0.01
652-908025	M8	4.5	5.5	25	917	4	0.01
652-908030	M8	4.5	5.5	30	917	4	0.01
652-910020	M10	6	7	20	1223	5	0.01
652-910025	M10	6	7	25	1223	5	0.01
652-910035	M10	6	7	35	1223	5	0.02
652-910040	M10	6	7	40	1223	5	0.02
652-912020	M12	7.2	8.5	20	1834	6	0.01
652-912030	M12	7.2	8.5	30	1834	6	0.02
652-912040	M12	7.2	8.5	40	1834	6	0.02
652-912050	M12	7.2	8.5	50	1834	6	0.03
652-916020	M16	10.7	12	20	3669	8	0.02
652-916025	M16	10.7	12	25	3669	8	0.03
652-916035	M16	10.7	12	35	3669	8	0.04
652-916050	M16	10.7	12	50	3669	8	0.06

303

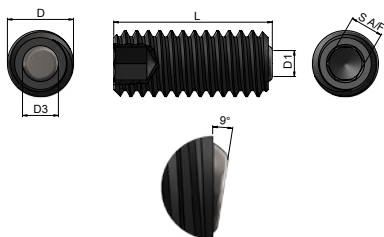


WDS 652 Headed Clamping Screw Pad - Stainless Steel Plain Restricted Swivel Ball

Ball - Stainless steel, hardened, Screw - 303 Stainless

P = Max Load (kg)

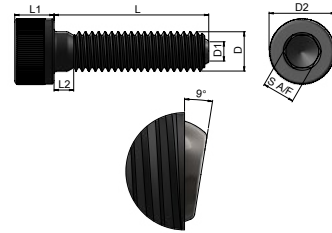
WDS No.	D	D1	D2	D3	L	L1	L2	P	S	Weight (kg)
652-806020	M6	3.2	10	4	20	6	3	612	5	0.01
652-806030	M6	3.2	10	4	30	6	3	612	5	0.01
652-806040	M6	3.2	10	4	40	6	16	612	5	0.01
652-808020	M8	4.5	13	5.5	20	8	3.5	917	6	0.01
652-808035	M8	4.5	13	5.5	35	8	3.5	917	6	0.02
652-808050	M8	4.5	13	5.5	50	8	22	917	6	0.02
652-810025	M10	6	16	7	25	10	4.5	1223	8	0.02
652-810040	M10	6	16	7	40	10	4.5	1223	8	0.03
652-810060	M10	6	16	7	60	10	28	1223	8	0.04
652-812030	M12	7.2	18	8.5	30	12	5	1835	10	0.04
652-812050	M12	7.2	18	8.5	50	12	5	1835	10	0.05
652-812080	M12	7.2	18	8.5	80	12	44	1835	10	0.08
652-816040	M16	10.7	24	12	40	16	6	3670	14	0.09
652-816060	M16	10.7	24	12	60	16	6	3670	14	0.12
652-816080	M16	10.7	24	12	80	16	36	3670	14	0.16



Clamping Screw Pad - Plain Face **WDS 652**

Steel, Chemical Black Finish, Pad Hardened, Non-restricted ball
Screw Heat-treated steel, $1200 \pm 100 \text{ N/mm}^2$, P = Max Load (kg)

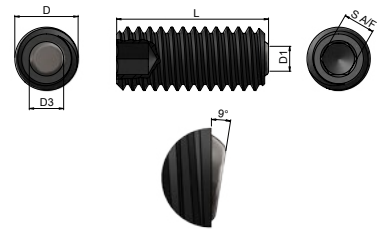
WDS No.	D	D1	D3	L	P	S	Weight (kg)
652-2004	M4	1.8	2.5	5.6	357	2	0.01
652-2005	M4	1.8	2.5	9.6	357	2	0.01
652-2006	M4	1.8	2.5	15.6	357	2	0.01
652-2007	M5	2.2	3	7.5	459	2.5	0.01
652-2008	M5	2.2	3	11.5	459	2.5	0.01
652-2009	M5	2.2	3	19.5	459	2.5	0.01
652-201	M6	3.2	4	10	918	3	0.01
652-202	M6	3.2	4	16	918	3	0.01
652-203	M6	3.2	4	25	918	3	0.01
652-204	M8	4.5	5.5	10	1530	4	0.01
652-205	M8	4.5	5.5	12	1530	4	0.01
652-206	M8	4.5	5.5	20	1530	4	0.01
652-207	M8	4.5	5.5	30	1530	4	0.01
652-208	M10	6	7	12	2040	5	0.01
652-209	M10	6	7	16	2040	5	0.01
652-210	M10	6	7	25	2040	5	0.01
652-211	M10	6	7	35	2040	5	0.02
652-212	M12	7.2	8.5	16	3060	6	0.01
652-213	M12	7.2	8.5	20	3060	6	0.01
652-214	M12	7.2	8.5	30	3060	6	0.02
652-215	M12	7.2	8.5	40	3060	6	0.03
652-216	M16	10.7	12	20	6120	8	0.02
652-217	M16	10.7	12	25	6120	8	0.03
652-218	M16	10.7	12	35	6120	8	0.04
652-219	M16	10.7	12	50	6120	8	0.05



WDS 652 Headed Clamping Screw Pad - Plain Restricted Swivel Ball

Steel, Chemical Black Finish, Pad Hardened
Screw Heat-treated steel, 1200 ±100 N/mm², P = Max Load (kg)

WDS No.	D	D1	D2	D3	L	L1	L2	P	S	Weight (kg)
652-60620	M6	3.2	10	4	20	6	3	612	5	0.01
652-60630	M6	3.2	10	4	30	6	3	612	5	0.01
652-60640	M6	3.2	10	4	40	6	16	612	5	0.01
652-60820	M8	4.5	13	5.5	20	8	3.5	917	6	0.01
652-60835	M8	4.5	13	5.5	35	8	3.5	917	6	0.01
652-60850	M8	4.5	13	5.5	50	8	22	917	6	0.02
652-61025	M10	6	16	7	25	10	4.5	1223	8	0.03
652-61040	M10	6	16	7	40	10	4.5	1223	8	0.03
652-61060	M10	6	16	7	60	10	28	1223	8	0.05
652-61230	M12	7.2	18	8.5	30	12	5	1835	10	0.04
652-61250	M12	7.2	18	8.5	50	12	5	1835	10	0.06
652-61280	M12	7.2	18	8.5	80	12	44	1835	10	0.08
652-61640	M16	10.7	24	12	40	16	6	3670	14	0.09
652-61660	M16	10.7	24	12	60	16	6	3670	14	0.12
652-61680	M16	10.7	24	12	80	16	36	3670	14	0.15
652-620050	M20	13.5	30	15	50	20	7.5	6116	17	0.18
652-620080	M20	13.5	30	15	80	20	28	6116	17	0.25
652-620100	M20	13.5	30	15	100	20	48	6116	17	0.3
652-624060	M24	15.8	36	18	60	24	9	8155	19	0.33
652-624090	M24	15.8	36	18	90	24	30	8155	19	0.42
652-624120	M24	15.8	36	18	120	24	60	8155	19	0.53

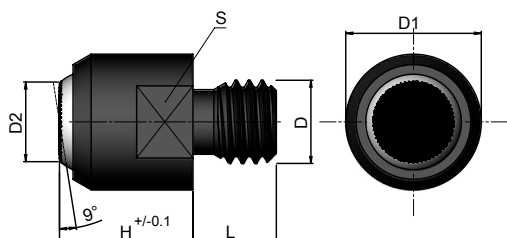


WDS 652 Clamping Screw Pad - Plain Restricted Swivel Ball

Steel, Chemical Black Finish, Pad Hardened
Screw Heat-treated steel, 1200 ±100 N/mm², P = Max Load (kg)

WDS No.	D	D1	D3	L	P	S	Weight (kg)
652-406020	M6	3.2	4	20	612	3	0.01
652-40612	M6	3.2	4	12	612	3	0.01
652-40616	M6	3.2	4	16	612	3	0.01
652-40625	M6	3.2	4	25	612	3	0.01
652-408025	M8	4.5	5.5	25	917	4	0.01
652-40816	M8	4.5	5.5	16	917	4	0.01
652-40820	M8	4.5	5.5	20	917	4	0.01
652-40830	M8	4.5	5.5	30	917	4	0.01
652-410040	M10	6	7	40	1223	5	0.02
652-41020	M10	6	7	20	1223	5	0.01
652-41025	M10	6	7	25	1223	5	0.01

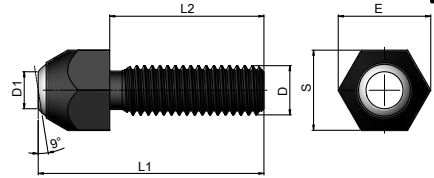
WDS No.	D	D1	D3	L	P	S	Weight (kg)
652-41035	M10	6	7	35	1223	5	0.02
652-412050	M12	7.2	8.5	50	1835	6	0.03
652-41220	M12	7.2	8.5	20	1835	6	0.01
652-41230	M12	7.2	8.5	30	1835	6	0.02
652-41240	M12	7.2	8.5	40	1835	6	0.03
652-416020	M16	10.7	12	20	3670	8	0.02
652-416025	M16	10.7	12	25	3670	8	0.01
652-41635	M16	10.7	12	35	3670	8	0.04
652-41650	M16	10.7	12	50	3670	8	0.05
652-420030	M20	13.5	15	30	6116	10	0.05
652-420040	M20	13.5	15	40	6116	10	0.07
652-420050	M20	13.5	15	50	6116	10	0.09
652-420060	M20	13.5	15	60	6116	10	0.11
652-424035	M24	15.8	18	35	8155	12	0.09
652-424050	M24	15.8	18	50	8155	12	0.12
652-424080	M24	15.8	18	80	8155	12	0.22



Clamping Pad - Plain or Serrated WDS 653

Steel, Chemical Black Finish, Pad Hardened
Heat-treated, P = Max Load (kg)

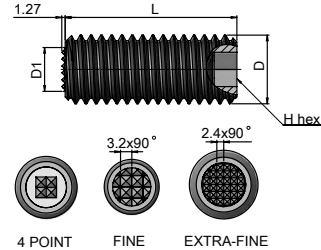
WDS No.	D	D1	D2	H	L	P	S	Plain/Serrated	Weight (kg)
653-201	M8	13	7	13	8	1000	11	Plain	0.01
653-202	M10	20	10.5	18	10	2500	17	Plain	0.04
653-203	M12	20	10.5	18	12	2500	17	Plain	0.04
653-204	M16	30	20	27	16	9000	27	Plain	0.3
653-205	M20	50	34.5	35	20	16500	41	Plain	0.52
653-251	M8	13	7	13	8	1000	11	Serrated	0.01
653-252	M10	20	10.5	18	10	2500	17	Serrated	0.04
653-253	M12	20	10.5	18	12	2500	17	Serrated	0.04
653-254	M16	30	20	27	16	9000	27	Serrated	0.15
653-255	M20	50	34.5	35	20	16500	41	Serrated	0.52



WDS 653 Clamping Pad - Adjustable - Plain or Serrated

Steel, Chemical Black Finish
Pad Hardened

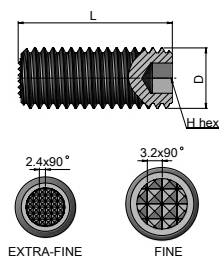
WDS No.	D	D1	E	L1	L2	P	S	Plain/Serrated	Weight (kg)
653-401	M8	5.8	14.5	36.6	25	800	13	Plain	0.03
653-402	M10	8.6	19.6	45.7	30	800	17	Plain	0.06
653-403	M12	8.6	19.6	50.7	35	1500	17	Plain	0.06
653-404	M16	10.5	27.7	60.7	40	2500	24	Plain	0.12
653-405	M20	20	33	77.3	50	9000	30	Plain	0.23
653-451	M8	5.8	14.5	36.6	25	800	13	Serrated	0.03
653-452	M10	8.6	19.6	45.7	30	800	17	Serrated	0.06
653-453	M12	8.6	19.6	50.7	35	1500	17	Serrated	0.06
653-454	M16	10.5	27.7	60.7	40	2500	24	Serrated	0.12
653-455	M20	20	33	77.3	50	9000	30	Serrated	0.23



WDS 697 Metric Round Adjustable Carbide Tipped Gripper - Ex-Fine 4 Point or Fine Tooth Pattern

Body - Steel hardened to RC 43/46
Insert - Carbide

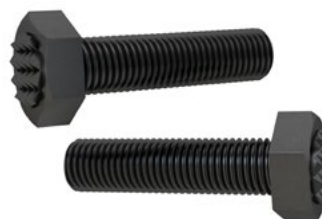
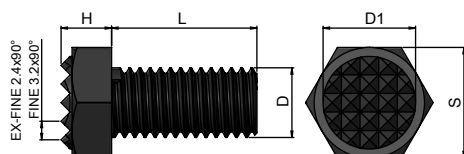
WDS No.	D	D1	H	L	Tooth Pattern	Weight (kg)
697-201	M10	6.4	5	25	Ex-Fine	0.01
697-202	M10	6.4	5	50	Ex-Fine	0.03
697-203	M12	7.9	6	25	4 Point	0.02
697-204	M12	7.9	6	25	Ex-Fine	0.02
697-205	M12	7.9	6	50	4 Point	0.04
697-206	M12	7.9	6	50	Ex-Fine	0.04
697-207	M16	11.1	8	25	4 Point	0.04
697-208	M16	11.1	8	25	Fine	0.04
697-209	M16	11.1	8	50	4 Point	0.08
697-210	M16	11.1	8	50	Fine	0.08
697-211	M20	12.7	10	25	4 Point	0.06
697-212	M20	12.7	10	25	Fine	0.06
697-213	M20	12.7	10	50	4 Point	0.12
697-214	M20	12.7	10	50	Fine	0.12



Metric Round Adjustable Hardened Steel Gripper - Ex Fine or Fine Tooth Pattern **WDS 697**

Tool Steel hardened
Chemical Black Finish

WDS No.	D	H	L	Tooth Pattern	Weight (kg)
697-301	M10	3	40	Ex-Fine	0.02
697-303	M12	5	25	Fine	0.02
697-305	M12	5	40	Fine	0.03
697-307	M16	6	40	Fine	0.06
697-309	M20	8	40	Fine	0.1



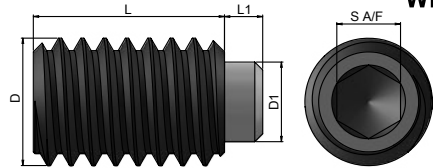
Metric Adjustable Carbide Tipped Gripper - Ex Fine and Fine Tooth Pattern **WDS 699**

Body - Steel, Grade 8
Insert - Carbide

WDS No.	D	D1	H	L	S	Tooth Pattern	Weight (kg)
699-201	M6	7.9	5	12	10	Ex-Fine	0.01
699-202	M6	7.9	5	25	10	Ex-Fine	0.01
699-203	M8	9.5	6.4	12	13	Fine	0.01
699-204	M8	9.5	6.4	25	13	Fine	0.02
699-205	M8	9.5	6.4	35	13	Fine	0.02
699-206	M10	12.7	8.3	12	17	Fine	0.02
699-207	M10	12.7	8.3	25	17	Fine	0.03
699-208	M10	12.7	8.3	40	17	Fine	0.04
699-209	M12	15.9	8.7	25	19	Fine	0.04
699-210	M12	15.9	8.7	40	19	Fine	0.06
699-211	M16	19	11	35	24	Fine	0.09
699-212	M16	19	11	50	24	Fine	0.12
699-213	M20	25.4	13.7	40	30	Ex-Fine	0.18
699-214	M20	25.43	13.7	60	30	Ex-Fine	0.23

NYL

BR



WDS 762 Steel Set Screw with Nylon or Brass Tip

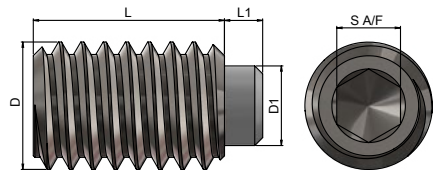
Threaded Body - Alloy Steel with Black Oxide Finish, Tip - Nylon/Brass

Nylon Tip	Brass Tip	D	D1	L	L1	S	Weight (kg)
762-20406N	762-20406B	M4	2.5	6	1.2	3	0.01
762-20410N	762-20410B	M4	2.5	10	1.2	3	0.01
762-20416N	762-20416B	M4	2.5	16	1.2	2	0.01
762-20508N	762-20508B	M5	2.5	8	1.2	4	0.01
762-20512N	762-20512B	M5	2.5	12	1.2	4	0.01
762-20520N	762-20520B	M5	2.5	20	1.2	4	0.01
762-20610N	762-20610B	M6	3.4	10	1.7	4.5	0.01
762-20616N	762-20616B	M6	3.4	16	1.7	4.5	0.01
762-20625N	762-20625B	M6	3.4	25	1.7	4.5	0.01
762-20812N	762-20812B	M8	4.8	12	2.4	5.5	0.01
762-20820N	762-20820B	M8	4.8	20	2.4	5.5	0.01
762-20830N	762-20830B	M8	4.8	30	2.4	5.5	0.01
762-21016N	762-21016B	M10	4.8	16	2.4	7.3	0.01
762-21025N	762-21025B	M10	4.8	25	2.4	7.3	0.01
762-21035N	762-21035B	M10	4.8	35	2.4	7.3	0.01
762-21220N	762-21220B	M12	6.1	20	3	8.3	0.01
762-21230N	762-21230B	M12	6.1	30	3	8.3	0.02
762-21240N	762-21240B	M12	6.1	40	3	8.3	0.02

304

NYL

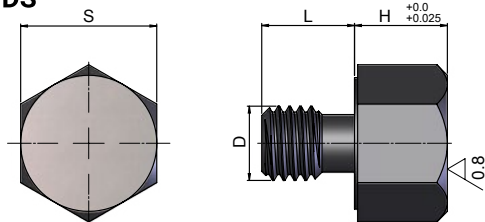
BR



WDS 762 Stainless Steel Set Screw with Nylon or Brass Tip

Threaded Body - 304 Stainless Steel, Tip - Nylon/Brass

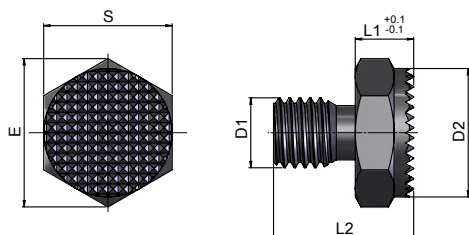
Nylon Tip	Brass Tip	D	D1	L	L1	S	Weight (kg)
762-60406N	762-60406B	M4	2.5	6	1.2	3	0.01
762-60410N	762-60410B	M4	2.5	10	1.2	3	0.01
762-60416N	762-60416B	M4	2.5	16	1.2	2	0.01
762-60508N	762-60508B	M5	2.5	8	1.2	4	0.01
762-60512N	762-60512B	M5	2.5	12	1.2	4	0.01
762-60520N	762-60520B	M5	2.5	20	1.2	4	0.01
762-60610N	762-60610B	M6	3.3	10	1.7	4.5	0.01
762-60616N	762-60616B	M6	3.3	16	1.7	4.5	0.01
762-60625N	762-60625B	M6	3.3	25	1.7	4.5	0.01
762-60812N	762-60812B	M8	4.8	12	2.4	5.5	0.01
762-60820N	762-60820B	M8	4.8	20	2.4	5.5	0.01
762-60830N	762-60830B	M8	4.8	30	2.4	5.5	0.01
762-61016N	762-61016B	M10	4.8	16	2.4	7.3	0.01
762-61025N	762-61025B	M10	4.8	25	2.4	7.3	0.01
762-61035N	762-61035B	M10	4.8	35	2.4	7.3	0.02
762-61220N	762-61220B	M12	6.1	20	3	8.3	0.01
762-61230N	762-61230B	M12	6.1	30	3	8.3	0.02
762-61240N	762-61240B	M12	6.1	40	3	8.3	0.03



Rest Button - Plain WDS 602

Steel BS 970 Gr 212A42, Surface Hardened
Chemical Black Finish

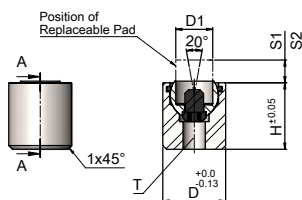
WDS No.	D	H	L	S	Weight (kg)
602-2015	M8	10	10	13	0.02
602-202	M10	10	12	19	0.03
602-203	M10	15	12	19	0.04
602-204	M12	15	15	22	0.06
602-205	M12	20	15	22	0.08
602-206	M12	25	15	22	0.09
602-207	M16	15	20	30	0.11
602-208	M16	20	20	30	0.14



Rest Button - Serrated WDS 602

Steel Case Hardened
Chemical Black Finish

WDS No.	D1	D2	E	L1	L2	S	Weight (kg)
602-401	M8	17	19.4	10	20	17	0.03
602-402	M12	22	25.2	10	24	22	0.04
602-403	M12	22	25.2	15	29	22	0.06
602-404	M16	30	34.6	15	50	30	0.13
602-405	M16	30	34.6	20	55	30	0.16



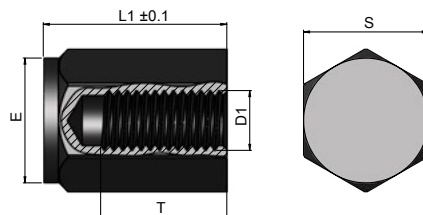
S1 = Stand off on 10mm thick inserts
S2 = Stand off on 12mm thick inserts



Metric Plain Body Clamping Pad - Replaceable Gripper WDS 653

Alloy Steel Rc43/46 - Black Oxide finish
Supplied without Inserts - For Inserts refer to 698 range

WDS No.	C	D	D1	H	S1	S2	T	Type	Weight (kg)
653-511722	7.5	17	10	18	4	6	M6	Replaceable	0.01
653-511924	8.5	19	12	20	4	6	M8	Replaceable	0.01
653-512428	9	24	16	24	4	6	M10	Replaceable	0.01
653-513030	8.5	30	20	26	4	6	M12	Replaceable	0.02
653-513636	12	36	25	32	4	6	M12	Replaceable	0.04

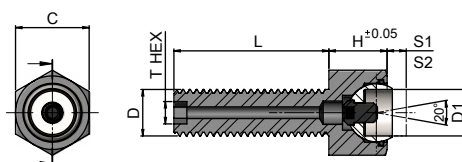


WDS 603 Rest Button - Plain or Serrated

Steel Case Hardened, Chemical Black Finish

These rest buttons are available with either a plain clamping face, or with a serrated clamping face.

WDS No.	D1	D2	E	L1	S	T	Type	Weight (kg)
603-401	M8	17	19.4	15	17	6	Plain	0.03
603-402	M8	17	19.4	25	17	16	Plain	0.04
603-403	M12	22	25.2	20	22	10	Plain	0.05
603-404	M12	22	25.2	25	22	15	Plain	0.07
603-405	M12	22	25.2	30	22	20	Plain	0.08
603-406	M12	22	25.2	40	22	25	Plain	0.11
603-407	M12	22	25.2	50	22	25	Plain	0.14
603-408	M16	30	34.6	30	30	20	Plain	0.14
603-409	M16	30	34.6	50	30	25	Plain	0.25
603-451	M8	17	19.4	15	17	6	Serrated	0.02
603-452	M8	17	19.4	25	17	16	Serrated	0.04
603-453	M12	22	25.2	20	22	10	Serrated	0.05
603-454	M12	22	25.2	25	22	15	Serrated	0.07
603-455	M12	22	25.2	30	22	20	Serrated	0.08
603-456	M12	22	25.2	40	22	25	Serrated	0.11
603-457	M12	22	25.2	50	22	25	Serrated	0.14
603-458	M16	30	34.6	30	30	20	Serrated	0.05
603-459	M16	30	34.6	50	30	25	Serrated	0.25



S1 = Stand off on 10mm thick inserts
S2 = Stand off on 12mm thick inserts

WDS 653 Hex Head Body Clamping Pad - Replaceable Gripper

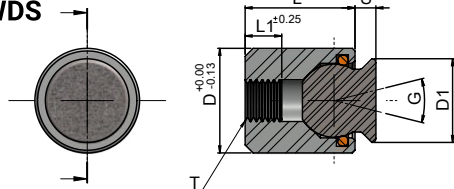
Alloy Steel Rc43/46 - Black Oxide finish

Supplied without Inserts - For Inserts refer to 698 range

WDS No.	C	D	D1	H	L	S1	S2	T	Weight (kg)
653-5210015	17	M10x1.5	10	13	15	4	6	3	0.03
653-5210030	17	M10x1.5	10	13	30	4	6	3	0.03
653-5210050	17	M10x1.5	10	13	50	4	6	3	0.04
653-5212020	19	M12x1.75	12	15	20	4	6	5	0.04
653-5212040	19	M12x1.75	12	15	40	4	6	5	0.05
653-5212060	19	M12x1.75	12	15	60	4	6	5	0.07
653-5216025	24	M16x2.0	16	19	25	4	6	6	0.07
653-5216050	24	M16x2.0	16	19	50	4	6	6	0.07
653-5216080	24	M16x2.0	16	19	80	4	6	6	0.07
653-5220030	30	M20x2.5	20	20	30	4	6	8	0.15
653-5220060	30	M20x2.5	20	20	60	4	6	8	0.2
653-5220100	30	M20x2.5	20	20	100	4	6	8	0.28
653-5224040	36	M24x3.0	25	26	40	4	6	10	0.29
653-5224100	36	M24x3.0	25	26	100	4	6	10	0.45



WDS



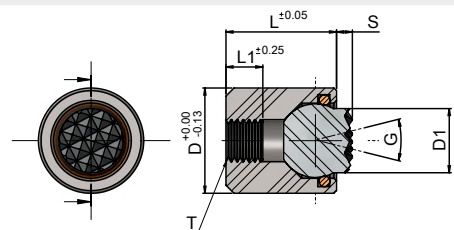
M = Max Load (kg)

Plain Body Clamping Pad - Diamond Faced Gripper WDS 653

Body - Alloy Steel HRc43/46 - Black Oxide finish

Ball - 300 series Stainless Steel with a bonded Diamond face (100 Grit equivalent)

WDS No.	D	D1	G (Degrees)	L	L1	M	S	T	Weight (kg)
653-611012D	10	8	28	10.5	3.5	1175	2	M4	0.01
653-611025D	10	8	28	23.5	9	1175	2	M4	0.01
653-611316D	13	11	28	14.5	6.5	2020	3	M5	0.02
653-611325D	13	11	28	23.5	9	2020	3	M5	0.02
653-611722D	17	14	28	18	7.5	2800	3	M6	0.03
653-611924D	19	19	24	20	8.5	3950	4	M8	0.05
653-612428D	24	21	24	24	9	5950	4	M10	0.08



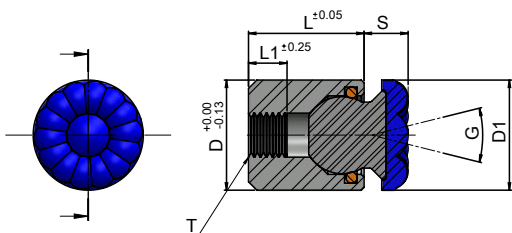
M = Max Load (kg)

Plain Body Clamping Pad - Serrated Faced Gripper WDS 653

Body - Alloy Steel HRc43/46 - Black Oxide finish

Ball - M2 High Speed Steel HRc60/62

WDS No.	D	D1	G (Degrees)	L	L1	M	S	T	Weight (kg)
653-611012S	10	6	28	10.5	3.5	1175	1.5	M4	0.01
653-611025S	10	6	28	23.5	9	1175	1.5	M4	0.01
653-611316S	13	8.5	24	14.5	6.5	2020	1.5	M5	0.01
653-611325S	13	8.5	24	23.5	9	2020	1.5	M5	0.02
653-611722S	17	10	42	18	7.5	2800	4	M6	0.03
653-611924S	19	12	45	20	8.5	3950	4	M8	0.04
653-612428S	24	16	40	24	9	5950	4	M10	1

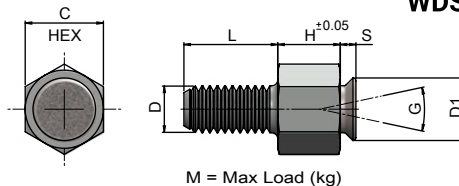


Plain Body Clamping Pad - Urethane Faced Gripper WDS 653

Body - Alloy Steel HRc43/46 - Black Oxide finish

Ball - 300 series Stainless Steel with a bonded Urethane pad (Durometer Rating 60)

WDS No.	D	D1	G (Degrees)	L	L1	S	T	Weight (kg)
653-611012U	10	10	28	10.5	3.5	4	M4	0.01
653-611025U	10	10	28	23.5	9	4	M4	0.01
653-611316U	13	13	28	14.5	6.5	5	M5	0.02
653-611325U	13	13	28	23.5	9	5	M5	0.02
653-611722U	17	16	28	18	7.5	5	M6	0.03
653-611924U	19	21	24	20	8.5	6	M8	0.05
653-612428U	24	23	24	24	9	6	M10	0.09



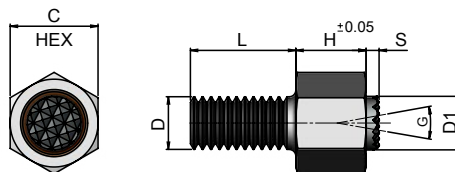
M = Max Load (kg)

WDS 653 Hexagon Body Clamping Pads - Diamond Faced Gripper

Body - Alloy Steel HRc43/46 - Black Oxide finish

Ball - 300 series Stainless Steel with a bonded Diamond face (100 Grit equivalent)

WDS No.	C	D	D1	G (Degrees)	H	L	M	S	Weight (kg)
653-626012D	10	M6	6	28	8	12	935	2	0.01
653-626025D	10	M6	6	28	8	25	935	2	0.01
653-626040D	10	M6	6	28	8	40	935	2	0.01
653-628012D	13	M8	8.5	28	11.5	12	1550	3	0.02
653-628025D	13	M8	8.5	28	11.5	25	1550	3	0.02
653-628040D	13	M8	8.5	28	11.5	40	1550	3	0.03



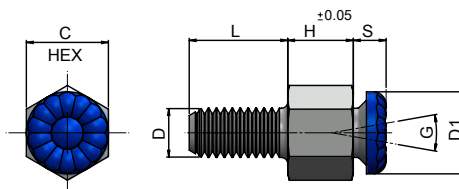
M = Max Load (kg)

WDS 653 Hexagon Body Clamping Pad - Serrated Gripper

Body - Alloy Steel HRc43/46 - Black Oxide finish

Ball - M2 High Speed Steel HRc60/62

WDS No.	C	D	D1	G (Degrees)	H	L	M	S	Weight (kg)
653-626012S	10	M6	6	28	8	12	935	1.5	0.01
653-626025S	10	M6	6	28	8	25	935	1.5	0.01
653-626040S	10	M6	6	28	8	40	935	1.5	0.01
653-628012S	13	M8	8.5	24	11.5	12	1550	1.5	0.02
653-628025S	13	M8	8.5	24	11.5	25	1550	1.5	0.02
653-628040S	13	M8	8.5	24	11.5	40	1550	1.5	0.02

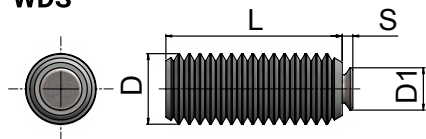


WDS 653 Hexagon Body Clamping Pads - Urethane Gripper

Body - Alloy Steel HRc43/46 - Black Oxide finish

Ball - 300 series Stainless Steel with a bonded Urethane pad (Durometer Rating 60) Medium duty applications

WDS No.	C	D	D1	G (Degrees)	H	L	S	Weight (kg)
653-626012U	10	M6	6	28	8	12	4	0.01
653-626025U	10	M6	6	28	8	25	4	0.01
653-626040U	10	M6	6	28	8	40	4	0.01
653-628012U	13	M8	8.5	28	11.5	12	5	0.02
653-628025U	13	M8	8.5	28	11.5	25	5	0.02
653-628040U	13	M8	8.5	28	11.5	40	5	0.03



M = Max Load (kg)

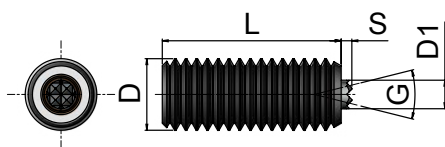


Threaded Body Clamping Pad - Diamond Faced Gripper **WDS 653**

Body - Alloy Steel HRc43/46 - Black Oxide finish

Ball - 300 series Stainless Steel with a diamond face (100 grit equivalent)

WDS No.	D	D1	G (Degrees)	L	M	S	Weight (kg)
653-6310025D	M10	6	28	25	-	1.5	0.01
653-6310035D	M10	6	28	35	-	1.5	0.01
653-6310050D	M10	6	28	50	-	1.5	0.02
653-6312025D	M12	8	28	25	1550	2	0.02
653-6312035D	M12	8	28	35	1550	2	0.02
653-6312050D	M12	8	28	50	1550	2	0.03
653-6316025D	M16	11	28	25	2350	3	0.03
653-6316035D	M16	11	28	35	2350	3	0.04
653-6316050D	M16	11	28	50	2350	3	0.06



M = Max Load (kg)

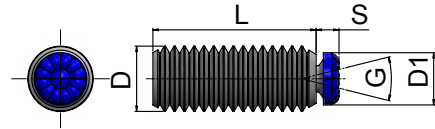


Threaded Body Clamping Pad - Serrated Gripper **WDS 653**

Body - Alloy Steel HRc43/46 - Black Oxide finish

Ball - M2 High Speed Steel HRc60/62

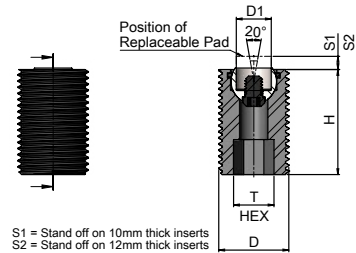
WDS No.	D	D1	G (Degrees)	L	M	S	Weight (kg)
653-6310025S	M10	4	28	25	-	1.5	0.01
653-6310035S	M10	4	28	35	-	1.5	0.01
653-6310050S	M10	4	28	50	-	1.5	0.02
653-6312025S	M12	6	28	25	1550	1.5	0.01
653-6312035S	M12	6	28	35	1550	1.5	0.02
653-6312050S	M12	6	28	50	1550	1.5	0.03
653-6316025S	M16	8.5	24	25	2350	1.5	0.03
653-6316035S	M16	8.5	24	35	2350	1.5	0.04
653-6316050S	M16	8.5	24	50	2350	1.5	0.06



WDS 653 Threaded Body Clamping Pad - Urethane Gripper

Body - Alloy Steel HRc43/46 - Black Oxide finish
 Ball - 300 series Stainless Steel with a bonded Urethane pad (Durometer Rating 60)

WDS No.	D	D1	G (Degrees)	L	S	Weight (kg)
653-6310025U	M10	8	28	25	3.5	0.01
653-6310035U	M10	8	28	35	3.5	0.01
653-6310050U	M10	8	28	50	3.5	0.02
653-6312025U	M12	10	28	25	4	0.02
653-6312035U	M12	10	28	35	4	0.02
653-6312050U	M12	10	28	50	4	0.03
653-6316025U	M16	13	28	25	5	0.03
653-6316035U	M16	13	28	35	5	0.04
653-6316050U	M16	13	28	50	5	0.06



WDS 653 Threaded Body Clamping Pad - Replaceable Gripper

Alloy Steel Rc43/46 - Black Oxide finish
 Supplied without Inserts - For Inserts refer to 698 range

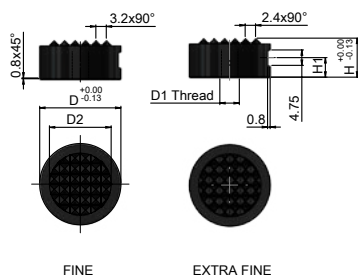
WDS No.	D	D1	H	S1	S2	T	Weight (kg)
653-5320030	M20x2.5	10	30	4	6	10	0.04
653-5320050	M20x2.5	10	50	4	6	10	0.08
653-5320070	M20x2.5	10	70	4	6	10	0.12
653-5324040	M24x3.0	12	50	4	6	10	0.09
653-5324080	M24x3.0	12	80	4	6	10	0.21



WDS 668 Packing Block

Steel BS 970 Gr 070M20, Case Hardened and Ground
 Chemical Black Finish

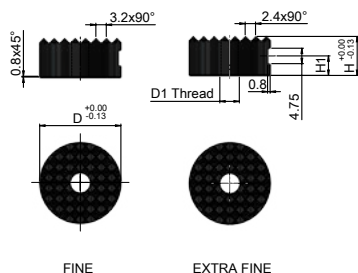
WDS No.	B	H	L	Weight (kg)
668-201	12	19	75	0.14
668-202	12	19	150	0.27
668-203	19	25	75	0.28
668-204	19	25	150	0.56
668-205	25	50	75	0.73
668-206	38	63	100	0.85



Metric Round Carbide Tipped Gripper - Ex Fine and Fine Tooth Pattern **WDS 698**

Body - Steel
Insert - Carbide

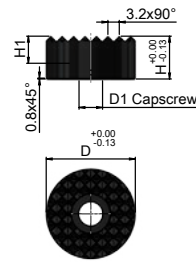
WDS No.	D	D1	D2	H	H1	Tooth Pattern	Weight (kg)
698-201	10	M5	7.9	10	4.5	Ex-Fine	0.01
698-202	10	M5	7.9	12	6	Ex-Fine	0.01
698-203	12	M5	9.5	10	4.5	Fine	0.01
698-204	12	M5	9.5	12	6	Fine	0.01
698-205	16	M6	12.7	10	4.5	Fine	0.01
698-206	16	M6	12.7	12	6	Fine	0.02
698-207	20	M6	15.9	10	4.5	Fine	0.02
698-208	20	M6	15.9	12	6	Fine	0.03
698-209	25	M6	19	10	4.5	Fine	0.04
698-210	25	M6	19	12	6	Fine	0.04



Metric Round Hardened Steel Gripper - Ex-Fine and Fine Tooth Pattern **WDS 698**

Tool Steel hardened
Chemical Black Finish

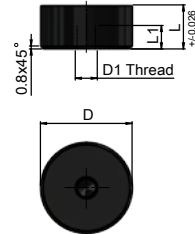
WDS No.	D	D1	H	H1	Tooth Pattern	Weight (kg)
698-301	10	M5	10	4.5	Ex-Fine	0.01
698-302	10	M5	12	6	Ex-Fine	0.01
698-303	12	M5	10	4.5	Fine	0.01
698-304	12	M5	12	6	Fine	0.01
698-305	16	M6	10	4.5	Fine	0.01
698-306	16	M6	12	6	Fine	0.02
698-307	20	M6	10	4.5	Fine	0.02
698-308	20	M6	12	6	Fine	0.03
698-309	25	M6	10	4.5	Fine	0.04
698-310	25	M6	12	6	Fine	0.04



WDS 698 Metric Round Hardened Steel C/Bored Gripper - Fine Tooth Pattern

Tool Steel Hardened
Chemical Black Finish

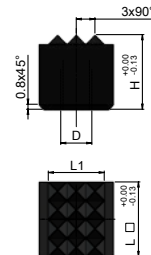
WDS No.	D	D1	H	H1	Weight (kg)
698-353	12	M4	10	5.6	0.01
698-354	12	M4	12	5.6	0.01
698-355	16	M4	10	5.6	0.01
698-356	16	M4	12	5.6	0.01
698-357	20	M5	10	6.6	0.01
698-358	20	M5	12	6.6	0.01
698-359	25	M6	10	7.6	0.01
698-360	25	M6	12	7.6	0.01



WDS 698 Metric Round Hardened Steel Rest Pad

Steel Case, Hardened to Rc 60/62
Chemical Black Finish

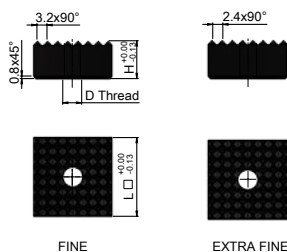
WDS No.	D	D1	L	L1	Weight (kg)
698-401	10	M5	10	5	0.01
698-402	10	M5	12	6.4	0.01
698-403	12	M5	10	5	0.01
698-404	12	M5	12	6.4	0.01
698-405	16	M6	10	5	0.01
698-406	16	M6	12	6.4	0.02
698-407	20	M6	10	5	0.02
698-408	20	M6	12	6.4	0.03
698-409	25	M6	10	5	0.04
698-410	25	M6	12	6.4	0.04



WDS 698 Metric Square Carbide Tipped Gripper - Fine Tooth Pattern

Steel Case Hardened
Chemical Black Finish

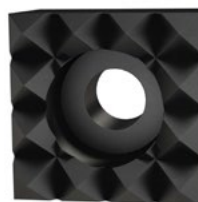
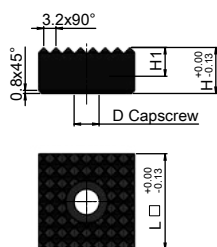
WDS No.	D	H	L	L1	Weight (kg)
698-503	M5	10	12	10.3	0.01
698-504	M5	12	12	10.3	0.01



Metric Square Hardened Steel Gripper - Ex-Fine or Fine Tooth Pattern **WDS 698**

Tool Steel Hardened

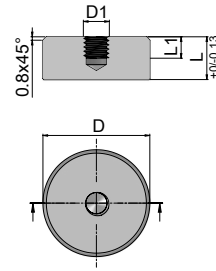
WDS No.	D	H	L	Tooth Pattern	Weight (kg)
698-601	M5	10	10	Ex-Fine	0.01
698-602	M5	12	10	Ex-Fine	0.01
698-603	M5	10	12	Fine	0.01
698-604	M5	12	12	Fine	0.01
698-607	M5	10	20	Fine	0.03
698-608	M5	12	20	Fine	0.03
698-609	M6	10	25	Fine	0.04
698-610	M6	12	25	Fine	0.05



Metric Square Hardened Steel C/Bored Gripper - Fine Tooth Pattern **WDS 698**

Tool Steel Hardened

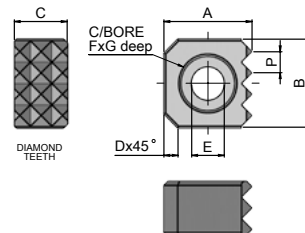
WDS No.	D	H	H1	L	Weight (kg)
698-653	M4	10	5.5	12	0.01
698-654	M4	12	5.5	12	0.01
698-655	M4	10	5.5	16	0.01
698-656	M4	12	5.5	16	0.01
698-657	M5	10	6.5	20	0.01
698-658	M5	12	6.5	20	0.01
698-659	M6	10	7.5	25	0.01
698-660	M6	12	7.5	25	0.01



WDS 698 Round Delrin Rest Pad - Metric

White Delrin

WDS No.	D	D1	L	L1	Weight (kg)
698-701	10	M5	10	5	0.01
698-702	10	M5	12	6.4	0.01
698-703	12	M5	10	5	0.01
698-704	12	M5	12	6.4	0.01
698-705	16	M6	10	5	0.01
698-706	16	M6	12	6.4	0.01
698-707	20	M6	10	5	0.01
698-708	20	M6	12	6.4	0.01
698-709	25	M6	10	5	0.01
698-710	25	M6	12	6.4	0.01

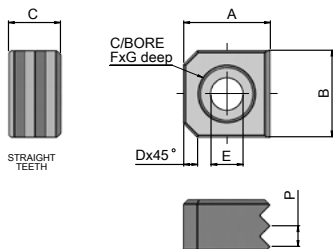


WDS 698 Edge Grippers - Diamond Tooth Pattern

Steel, Hardened to Rc 60/62

A = +0/-0.13, B = +0/-0.13, C = +0/-0.13

WDS No.	A	B	C	D	E	F	G	P	Weight (kg)
698-801	10	10	6	1.6	3.7	6.1	3.2	2.38	0.01
698-802	10	10	10	1.6	3.7	6.1	3.2	2.38	0.05
698-803	12	12	6	2.3	4.5	8	4.1	3.18	0.05
698-804	12	12	10	2.3	4.5	8	4.1	3.18	0.05
698-805	12	12	12	2.3	4.5	8	4.1	3.18	0.01
698-806	16	16	6	3.2	6.6	11	4.2	3.18	0.03
698-807	16	16	10	3.2	6.6	11	4.2	3.18	0.03
698-808	16	16	12	3.2	6.6	11	4.2	3.18	0.03
698-809	20	20	6	3.2	9	15	5.1	3.18	0.02
698-810	20	20	10	3.2	9	15	5.1	3.18	0.03
698-811	20	20	12	3.2	9	15	5.1	3.18	0.05
698-812	25	25	10	3.2	11	18	6.6	3.18	0.05
698-813	25	25	12	3.2	11	18	6.6	3.18	0.05

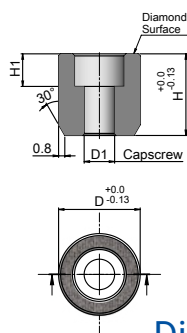


Edge Grippers - Straight Tooth Pattern **WDS 698**

Steel, Hardened to Rc 60/62

A = +0/-0.13, B = +0/-0.13, C = +0/-0.13

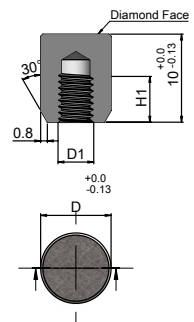
WDS No.	A	B	C	D	E	F	G	P	Weight (kg)
698-851	10	10	6	1.6	3.7	6.1	3.2	2.38	0.01
698-852	10	10	10	1.6	3.7	6.1	3.2	2.38	0.01
698-853	12	12	6	2.3	4.5	8	4.1	3.18	0.01
698-854	12	12	10	2.3	4.5	8	4.1	3.18	0.01
698-855	12	12	12	2.3	4.5	8	4.1	3.18	0.01
698-856	16	16	6	3.2	6.6	11	4.2	3.18	0.02
698-857	16	16	10	3.2	6.6	11	4.2	3.18	0.02
698-858	16	16	12	3.2	6.6	11	4.2	3.18	0.03
698-859	20	20	6	3.2	9	15	5.1	3.18	0.02
698-860	20	20	10	3.2	9	15	5.1	3.18	0.03
698-861	20	20	12	3.2	9	15	5.1	3.18	0.03
698-862	25	25	10	3.2	11	18	6.6	3.18	0.04
698-863	25	25	12	3.2	11	18	6.6	3.18	0.02



Diamond Faced Counter Bored Gripper - Metric **WDS 698**

300 series Stainless Steel with a bonded Diamond face (100 Grit equivalent)

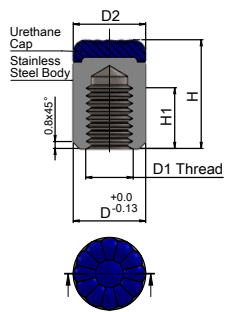
WDS No.	D	D1	H	H1	Weight (kg)
698-451	10	M3	10	5	0.01
698-452	10	M3	12	5	0.01
698-453	12	M4	10	5.6	0.01
698-454	12	M4	12	5.6	0.01
698-455	16	M5	10	6.6	0.01
698-456	16	M5	12	6.6	0.01
698-457	20	M6	10	7.6	0.02
698-458	20	M6	12	7.6	0.02
698-459	25	M6	10	7.6	0.03
698-460	25	M6	12	7.6	0.04



WDS 698 Diamond Faced Gripper - Metric

300 series Stainless Steel with a bonded Diamond face (100 Grit equivalent)

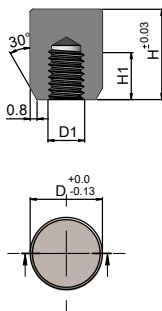
WDS No.	D	D1	H	H1	Weight (kg)
698-4207	8	M4	10	5	0.01
698-4208	8	M4	12	6.4	0.01
698-421	10	M5	10	5	0.01
698-422	10	M5	12	6.4	0.01
698-423	12	M5	10	5	0.01
698-424	12	M5	12	6.4	0.01
698-425	16	M6	10	5	0.01
698-426	16	M6	12	6.4	0.02
698-427	20	M6	10	5	0.02
698-428	20	M6	12	6.4	0.03
698-429	25	M6	10	5	0.04
698-430	25	M6	12	6.4	0.04



WDS 698 Urethane Faced Gripper - Metric

300 series Stainless Steel with a bonded Urethane pad (Durometer Rating 60)

WDS No.	D	D1	D2	H	H1	Weight (kg)
698-4308	8	M4	8	12	6	0.01
698-432	10	M5	10	12	6	0.01
698-434	12	M5	13	12	6	0.01
698-436	16	M6	16	12	6	0.01
698-438	20	M6	21	12	6	0.02
698-440	25	M6	27	12	6	0.03



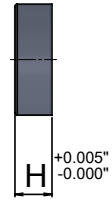
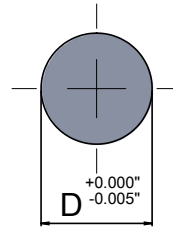
Stainless Steel Gripper - Metric **WDS 698**

17-4 Stainless Steel Heat Treated to HRC43/46

Can be used independently or to suit WDS 653 Gripper Bodies

WDS No.	D	D1	H	H1	Weight (kg)
698-4407	8	M4	10	5	0.01
698-4408	8	M4	12	6.5	0.01
698-441	10	M5	10	5	0.01
698-442	10	M5	12	6.4	0.01
698-443	12	M5	10	5	0.01
698-444	12	M5	12	6.4	0.01
698-445	16	M6	10	5	0.01
698-446	16	M6	12	6.5	0.02
698-447	20	M6	10	5	0.02
698-448	20	M6	12	6.4	0.03
698-449	25	M6	10	5	0.04
698-450	25	M6	12	6.4	0.04

IN"

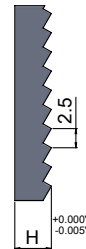
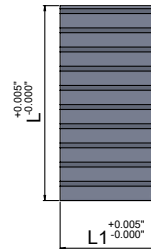


WDS 696 Round Carbide Pad - Flat

Solid Carbide
These pads can be held in position by brazing silver soldering or gluing to any flat surface.

WDS No.	D (Inch)	H	Weight (kg)
696-101	1/4	1/8	0.01
696-102	5/16	1/8	0.01
696-103	3/8	1/8	0.01
696-105	1/2	1/8	0.01
696-107	5/8	1/8	0.01
696-108	3/4	1/8	0.02

IN"

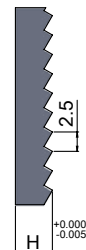
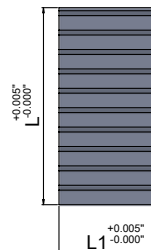


WDS 696 Square or Rectangle Carbide Pad - Saw Tooth - Inch

Solid Carbide
Tooth Pattern - Saw Tooth

WDS No.	H	L	L1	Tooth Pattern	Weight (kg)
696-609	3/16	1	1/2	Saw Tooth	0.02
696-611	1/4	11/2	3/4	Saw Tooth	0.05

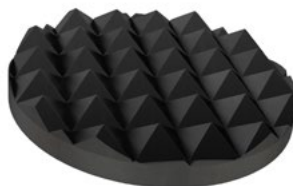
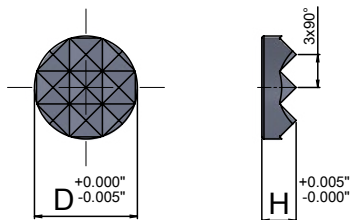
IN"



WDS 696 Round Carbide Pad - 4 Point

Solid Carbide
These pads can be held in position by brazing silver soldering or gluing to any flat surface

WDS No.	D	H	Weight (kg)
696-202	5/16	1/8	0.01
696-203	3/8	1/8	0.01
696-204	7/16	5/32	0.01
696-206	1/2	5/32	0.01

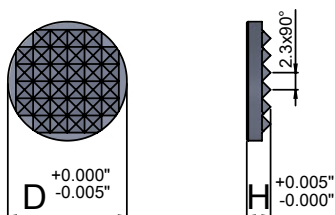


Round Carbide Pad - Fine WDS 696

Solid Carbide

These pads can be held in position by brazing silver soldering or gluing to any flat surface

WDS No.	D	H	Weight (kg)
696-303	3/8	1/8	0.01
696-304	7/16	5/32	0.01
696-305	1/2	1/8	0.01
696-307	5/8	1/8	0.01
696-308	3/4	1/8	0.98

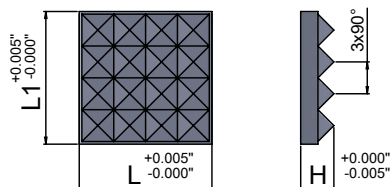


Round Carbide Pad - Extra-Fine WDS 696

Solid Carbide

These pads can be held in position by brazing silver soldering or gluing to any flat surface

WDS No.	D	H	Weight (kg)
696-401	1/4	1/8	0.01
696-402	5/16	1/8	0.01
696-403	3/8	1/8	0.01
696-404	7/16	5/32	0.01
696-405	1/2	1/8	0.01
696-407	5/8	1/8	0.01
696-408	3/4	1/8	0.01
696-409	1	5/32	0.02



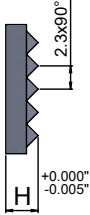
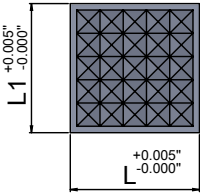
Square or Rectangle Carbide Pad - Fine - Inch WDS 696

Solid Carbide

Tooth Pattern - Fine

WDS No.	H	L	L1	Weight(g)	Weight (kg)
696-501	1/8	1/2	1/2	5.5	0.01
696-602	1/8	1/2	13/32	4.5	0.01
696-605	1/8	29/64	13/32	8.5	0.01

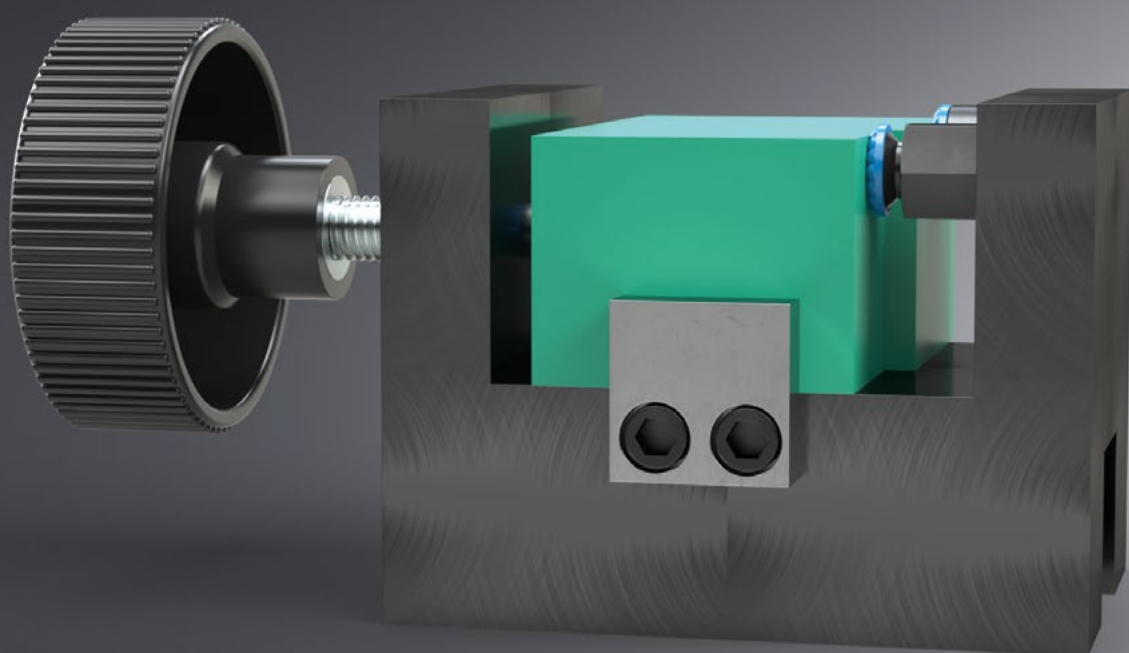
IN"



WDS 696 Square or Rectangular Carbide Pad - Ex-Fine - Inch

Solid Carbide
Tooth Pattern - Ex Fine

WDS No.	H	L	L1	Weight (kg)
696-502	1/8	1/2	1/2	0.01
696-503	1/8	5/8	5/8	0.01
696-504	5/32	3/4	3/4	0.02
696-505	5/32	1	1	0.03
696-601	1/8	3/8	1/4	0.01
696-603	1/8	1/2	13/32	0.01
696-610	3/16	1	1/2	0.02





LIFTING EYES & HOIST RINGS

P 717-722

These high quality lifting eyes are available in alloy steel making them ideal for more extreme environments. Stainless steel hoist rings can be used in more sensitive environments such as outdoor use.



HOIST RINGS

WDS hoist rings are manufactured to the highest standards with load capacity ranging from 200kg to 22500kg. Manufactured from alloy steel these robust lifting rings are available in three types; vertical hoist rings, side pull hoist rings and pivoting lifting rings. Each hoist ring is supplied with a proof load certificate so safety and performance are assured.

P 717-719



ANTI-TAMPER & TAMPER PROOF HOIST RINGS

These anti tamper hoist rings or tamper proof lifting rings are specially designed with security and safety in mind.

The eye bolts are designed to swivel giving both 360 degree rotation plus an hinged action on the pull bar itself.

P 720-721

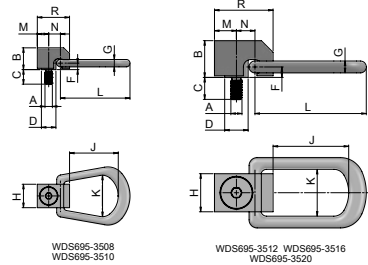


EYE BOLTS & LIFTING EYES

Lifting eyes also known as eye bolts and eye nuts can be used for materials handling, lifting and lashing. Each size and style of eye bolt or nut is rated for a maximum Safe Working Load (SWL) and are suited to a wide variety of applications. These eye nuts are available in zinc plated steel or 316 stainless steel and are supplied with a safety document confirming the SWL.

P 722

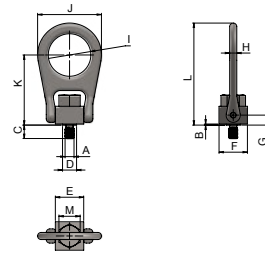




WDS 695 Side Pull Hoist Ring - Alloy Steel

Alloy steel, Chemical black finish
 Forged Ring Strength Factor 5:1, Supplied with Certificate of Proof Test

WDS No.	A	B	C	D	F	G	H	J	K	L	M	N	R	Load Capacity (Kg)	Tightening Torque (Nm)	Weight (kg)
695-3508	M8x1.25	23.8	15.8	15.8	7.2	7.9	25.4	52.4	44.5	75.4	6	12.7	12.7	325	4.2 Nm	0.27
695-3510	M10x1.5	23.8	19.8	15.8	7.2	7.9	25.4	52.4	44.5	75.4	6	12.7	12.7	500	6 Nm	0.27
695-3512	M12x1.75	40.1	23.8	25.4	11.1	12.7	41.3	82.6	50.8	120.7	10	20	24	725	20 Nm	1.14
695-3516	M16x2.0	40.1	31.8	25.4	11.1	12.7	41.3	82.6	50.8	120.7	10	20	24	1400	40 Nm	1.14
695-3520	M20x2.5	40.1	39.7	25.4	11.1	12.7	41.3	82.6	50.8	120.7	10	20	24	2290	70 Nm	1.18

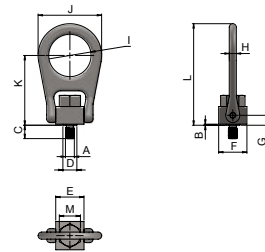


WDS 695 Forged Centre Pull Hoist Ring - Bail Type

Alloy steel, Chemical black finish
 Forged Ring Strength Factor 5:1, Supplied with Certificate of Proof Test

WDS No.	A	B	C	D	E	F	G	H	I	J	K	L	M	Load Capacity (Kg)	Torque (N.m)	Weight (kg)
695-3708	M8x1.25	1.2	12	12.7	25.4	25.4	8.7	6.3	38.1	57.2	62.7	91.3	19	400	10 Nm	0.27
695-3710	M10x1.5	1.2	15	12.7	25.4	25.4	8.7	6.3	38.1	57.2	62.7	91.3	19	450	17 Nm	0.27
695-3712	M12x1.75	1.6	18	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	1050	37 Nm	1.64
695-3716	M16x2.0	1.6	24	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	1900	80 Nm	1.64

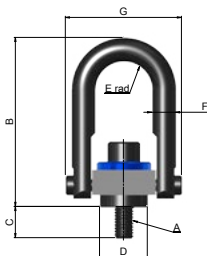
17-4



WDS 695 Forged Centre Pull Hoist Ring Stainless Steel - Bail Type

17-4 PH Stainless Steel
 Forged Ring Strength Factor 5:1, Supplied with Certificate of Proof Test

WDS No.	A	B	C	D	E	F	G	H	I	J	K	L	M	Load Capacity (Kg)	Torque (N.m)	Weight (kg)
695-3708S	M8x1.25	1.2	12	12.7	25.4	25.4	8.7	6.3	38.1	57.2	62.7	91.3	19	400	10 Nm	0.27
695-3710S	M10x1.5	1.2	15	12.7	25.4	25.4	8.7	6.3	38.1	57.2	62.7	91.3	19	450	17 Nm	0.27
695-3712S	M12x1.75	1.6	18	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	1050	37 Nm	1.64
695-3716S	M16x2.0	1.6	24	25.4	50.8	38.1	14.3	19	76.2	112.7	101.6	161.9	32	1900	80 Nm	1.64

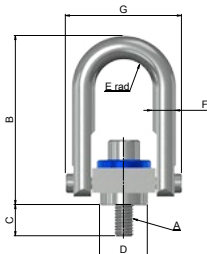


Hoist Ring - Swivel and Pivot Action WDS 695

Alloy steel, Chemical black finish

Forged Ring Strength Factor 5:1, Supplied with Certificate of Proof Test

WDS No.	A	B	C	D	E	F	G	Load Capacity (Kg)	Thread Torque (Kg.m)	Weight (kg)
695-200	M6x1.0	67.8	12	19	10.9	9.7	46.7	200	6 Nm	0.17
695-201	M8x1.25	67.8	12.5	19	10.9	9.7	46.7	400	10 Nm	0.17
695-202	M10x1.5	67.8	17.5	19	10.9	9.7	46.7	450	17 Nm	0.17
695-203	M12x1.75	121.4	19	38.1	22.4	19	89.4	1050	37 Nm	1.08
695-204	M16x2.0	121.4	29	38.1	22.4	19	89.4	1900	80 Nm	1.12
695-205	M20x2.5	121.4	34	38.1	22.4	19	89.4	2150	135 Nm	1.19
695-206	M20x2.5	165.6	32	58.7	35.6	25.4	130.6	3000	135 Nm	3.03
695-207	M24x3.0	165.6	37	58.7	35.6	25.4	130.6	4200	305 Nm	3.1
695-208	M30x3.5	221.7	46	81	44.5	31.7	165.1	7000	590 Nm	6.3
695-209	M30x3.5	221.7	66	81	44.5	31.7	165.1	7000	590 Nm	6.4
695-210	M36x4.0	316.7	68	106.4	57.2	44.4	217.2	11000	980 Nm	16
695-211	M42x4.5	316.7	68	106.4	57.2	44.4	217.2	12500	980 Nm	16
695-212	M48x5.0	316.7	88	106.4	57.2	44.4	217.2	13500	980 Nm	16.8
695-213	M64x6.0	419.1	96	146	76.2	57.15	297.6	22500	2845 Nm	40

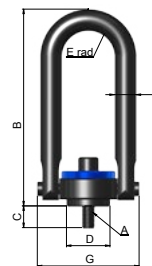


Hoist Ring - Swivel and Pivot Action Nickel Plated WDS 695

Alloy steel, Electroless Nickel Plated

Forged Ring Strength Factor 5:1, Supplied with Certificate of Proof Test

WDS No.	A	B	C	D	E	F	G	Load Capacity (Kg)	Thread Torque (Kg.m)	Weight (kg)
695-200N	M6x1.0	67.8	13.5	19	10.9	9.7	46.7	200	6 Nm	0.17
695-201N	M8x1.25	67.8	12.5	19	10.9	9.7	46.7	400	10 Nm	0.17
695-202N	M10x1.5	67.8	17.5	19	10.9	9.7	46.7	450	17 Nm	0.17
695-203N	M12x1.75	123	19	38.1	22.4	19	89.4	1050	37 Nm	1.1
695-204N	M16x2.0	123	29	38.1	22.4	19	89.4	1900	80 Nm	1.1
695-205N	M20x2.5	123	34	38.1	22.4	19	89.4	2150	135 Nm	1.2
695-206N	M20x2.5	163	32	58.7	35.6	25.4	130.6	3000	135 Nm	3
695-207N	M24x3.0	163	37	58.7	35.6	25.4	130.6	4200	305 Nm	3.1
695-208N	M30x3.5	221.7	46	81	44.5	31.7	165.1	7000	590 Nm	6.3
695-209N	M30x3.5	221.7	66	81	44.5	31.7	165.1	7000	590 Nm	6.72
695-210N	M36x4.0	316.7	68	106.4	57.2	44.4	217.2	11000	980 Nm	16
695-211N	M42x4.5	316.7	68	106.4	57.2	44.4	217.2	12500	980 Nm	16
695-212N	M48x5.0	316.7	88	106.4	57.2	44.4	217.2	13500	980 Nm	16.8
695-213N	M64x6.0	419.1	96	146	76.2	57.15	297.6	22500	2845 Nm	40

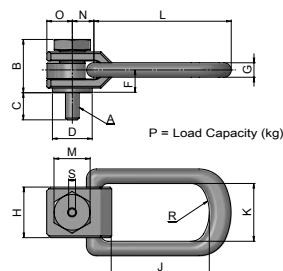


WDS 695 Hoist Ring with Long Bar - Swivel and Pivot Action

Alloy steel, Chemical black finish (Washer Zinc plated)

Forged Ring Strength Factor 5:1, Supplied with Certificate of Proof Test

WDS No.	A	B	C	D	E	F	G	Load Capacity (Kg)	Thread Torque (Kg.m)	Weight (kg)
695-203E	M12x1.75	170.7	19	38.1	22.4	19	89.4	1050	37 Nm	1.1
695-204E	M16x2.0	170.7	29	38.1	22.4	19	89.4	1900	80 Nm	1.1
695-205E	M20x2.5	170.7	34	38.1	22.4	19	89.4	2150	135 Nm	1.2
695-206E	M20x2.5	206	32	58.7	35.6	25.4	130.6	3000	135 Nm	3

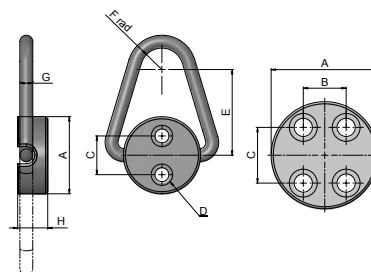


WDS 695 Side Pull Hoist Ring

Alloy steel, Chemical black finish (Washer Zinc plated)

Forged Ring Strength Factor 5:1, Supplied with Certificate of Proof Test

WDS No.	A	B	C	D	F	G	H	J	K	L	M	N	O	P	R	S	Weight (kg)
695-501	M8	33	16	21	14	8	25	52	44	76	19	13	13	325	25	-	0.25
695-503	M10	33	20	21	14	8	25	52	44	76	19	13	13	500	25	-	0.25
695-505	M12	48	24	35	21	13	44	75	51	110	32	19	22	725	38	6	1
695-507	M16	48	32	35	21	13	44	75	51	110	32	19	22	1400	38	8	1
695-509	M20	59	40	48	26	16	57	102	67	145	44	25	29	2290	51	10	1
695-511	M24	59	48	48	26	16	57	102	67	145	44	25	29	3050	51	12	2
695-513	M30	90	60	83	42	27	95	196	111	265	76	49	48	4850	76	19	9
695-515	M36	90	72	83	42	27	95	196	111	265	76	49	48	7500	76	19	9
695-517	M48	90	96	83	42	27	95	196	111	265	76	49	48	10000	76	19	10

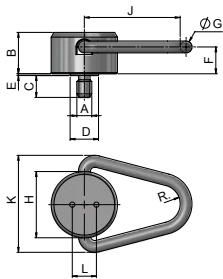


WDS 695 Pivoting Lift Ring

Black Oxide

Forged Ring Strength Factor 6:1, Supplied with Certificate of Proof Test

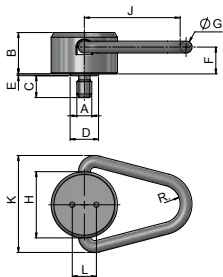
WDS No.	A	B	C	E	F	G	H	Load Capacity (Kg)	Mounting Screw Size D	Weight (kg)
695-701	45	-	25.4	51	13	8	19	900	M8 x 35mm	0.34
695-702	57	-	28.6	64	16	10	22	1100	M10 x 40mm	0.61
695-703	64	-	38.1	76	19	13	29	2250	M12 x 45mm	0.99
695-704	80	31.8	41.3	102	22	19	35	5400	M12 x 65mm	2.1
695-705	92	31.8	52.4	127	25.4	25.4	48	9000	M16 x 65mm	3.98



Swivel Eyebolt - Alloy Steel WDS 695

Alloy steel, Chemical black finish
Tamper Resistant, Supplied with Certificate of Proof Test

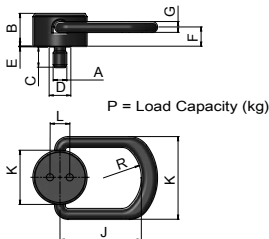
WDS No.	A	B	C	D	E	F	G	H	J	K	L	P	R	Weight (kg)
695-301	M10	27.8	14.6	19.1	1.2	17.9	7.9	44.5	63.5	66.7	16.2	500	12.7	0.4
695-302	M12	27.8	19.1	19.1	1.2	17.9	7.9	44.5	63.5	66.7	16.2	700	12.7	0.4


316

Swivel Eyebolt Lifting Ring - 316 Stainless Steel WDS 695

316 Stainless Steel
Tamper Resistant, Supplied with Certificate of Proof Test

WDS No.	A	B	C	D	E	F	G	H	J	K	L	P	R	Weight (kg)
695-601	M10	27.8	14.6	19.1	1.2	17.9	7.9	44.5	63.5	66.7	16.2	250	12.7	0.4
695-602	M12	27.8	19.1	19.1	1.2	17.9	7.9	44.5	63.5	66.7	16.2	350	12.7	0.4

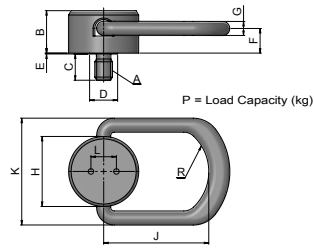


Swivel Eyebolt - Alloy Steel with Chemical Black Finish WDS 695

Alloy steel, Chemical black finish
Tamper Resistant, Supplied with Certificate of Proof Test

WDS No.	A	B	C	D	E	F	G	H	J	K	L	P	R	Weight (kg)
695-311	M16	38.5	23.8	22.2	0.8	22.6	12.7	63.5	88.9	96.8	23.1	1500	44.5	1.2
695-312	M20	38.5	30.2	25.4	0.8	22.6	12.7	63.5	88.9	96.8	23.1	2000	44.5	1.2

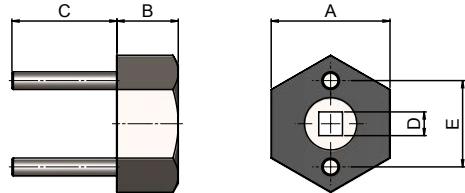
316



WDS 695 Medium Duty Swivel Eyebolt Lifting Ring - 316 Stainless Steel

316 Stainless Steel
Forged Ring Strength Factor 5:1, Supplied with Certificate of Proof Test

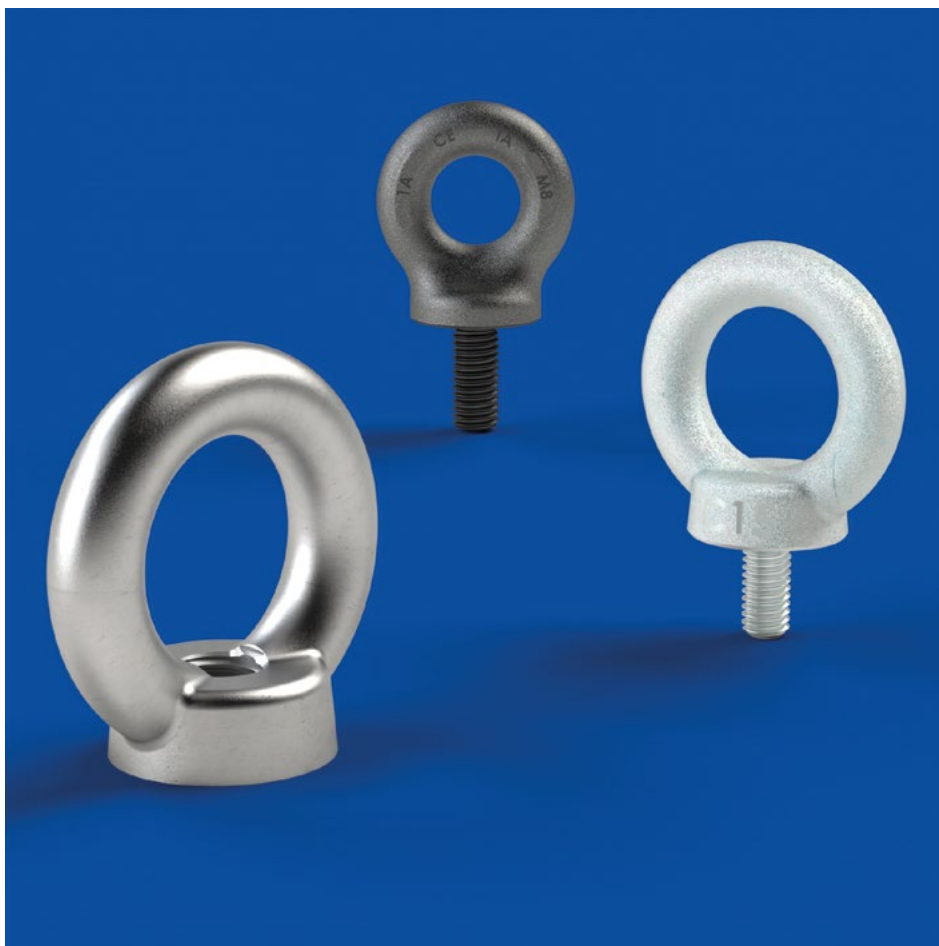
WDS No.	A	B	C	D	E	F	G	H	J	K	L	P	R	Weight (kg)
695-611	M16	38.5	23.8	22.2	0.8	22.6	12.7	63.5	88.9	96.8	23.1	750	44.5	1.2
695-612	M20	38.5	30.2	25.4	0.8	22.6	12.7	63.5	88.9	96.8	23.1	1000	44.5	1.2



WDS 695 Installation Tool

Alloy steel
Chemical black finish

WDS No.	A	B	C	D	E	Weight (kg)
695-801	23.8	14	17.5	6.35	16.2	0.05
695-802	31.8	16.5	28.5	9.5	23.1	0.11



EYE BOLTS & LIFTING EYES

For the full range of Eye Bolts & Lifting Eyes please see pages **484-485**



LOCATION & RETRACTABLE SPRING PLUNGERS

P 725-754

Location plungers and spring plungers are essential work holding tools designed for locating, positioning or locking a work piece into position



SPRING PLUNGERS & BALL PLUNGERS

Spring plungers are locating products that utilise either a ball or pin to accurately locate a pre defined hole in a work piece. Both metric (M3 to M20) and imperial (inch) sizes are available.

Pin plungers give the user precise locating using an extended pin available in either hardened steel, nylon or plastic. The pin can retract into the threaded body and will locate the hole when the workpiece is in place.

Ball spring plungers operate in a similar manner to the pin counter part, however the ball movement allows for a heavier duty workload. For more specialist applications consider stainless steel spring plungers.

P 725-743



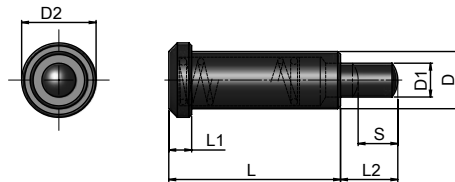
INDEX PLUNGERS & INDEX BOLTS

Indexing plungers and bolts are commonly used on applications where there is a predefined stop location.

A retractable spring plunger makes this requirement a simple task.

P 744-754



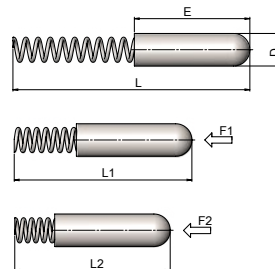


P = Spring End Loading (kgf)

WDS 526 Smooth Body Spring Plunger

Steel chemical black finish pressure pin hardened

WDS No.	D	D1	D2	L	L1	L2	S	P Initial	P Final	Weight (kg)
526-001	6	2.95	8	20	3.2	6	3.5	1	2.2	0.01
526-101	8	3.95	10	24	3.2	8	4.5	3	9	0.01
526-201	10.00/9.95	5.9	13	30	4	10	5.5	4.5	10.1	0.01
526-301	12	7.95	16	36	5	12	6.5	5	12	0.03

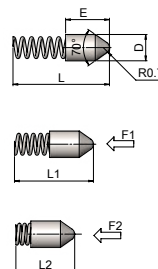


WDS 572 Plain Domed Spring Plunger Sleeves

Plunger - Nickel Plated Steel

Spring - Stainless Steel 1.4310

WDS No.	D	E	L	L1	L2	F1 (kg)	F2 (kg)	kg/mm	Weight (kg)
572-22216	2.2	7.8	16	12	10.5	0.22	0.3	0.05	0.01
572-22608	2.6	3.8	8	6.5	5.2	0.11	0.2	0.07	0.01
572-23012	3	6	12	9	8.7	0.62	0.68	0.2	0.01
572-23016	3	8.5	16	13	10.7	0.48	0.84	0.16	0.01
572-23412	3.4	6	12	9	7.8	0.5	0.7	0.17	0.01
572-23415	3.4	7.3	15	12	8.2	0.6	1.33	0.2	0.01
572-24014	4	8	14	12	9	0.5	1.23	0.25	0.01
572-25016	5	8	16	13	10.4	0.8	1.5	0.27	0.01

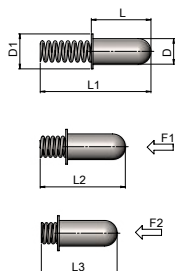


WDS 572 Plain Pointed Spring Plunger Sleeves

Plunger - Nickel Plated Steel

Spring - Stainless Steel 1.4310

WDS No.	D	E	L	L1	L2	F1 (kg)	F2 (kg)	kg/mm	Weight (kg)
572-33011	3	5	11	9	6.7	0.16	0.34	0.08	0.01
572-33016	3	8.5	16	13	10.7	0.48	0.84	0.16	0.01

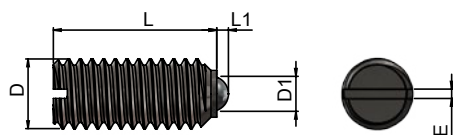


Shoulder Domed Spring Plunger Sleeves (Spring Sleeves) WDS 572

Plunger - Stainless Steel 1.4303

Spring - Stainless Steel 1.4310

WDS No.	D	D1	E	L	L1	L2	F1 (kg)	F2 (kg)	kg/mm	Weight (kg)
572-83013	3	4.1	7	13	10	8.9	0.53	0.72	0.175	0.01



P1 = Initial Spring Force (kgf)
P2 = Final Spring Force (kgf)



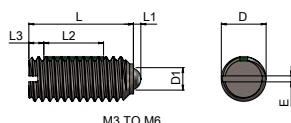
303

Ball Spring Plungers - Threaded WDS 606/823

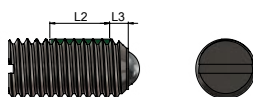
Steel, Chemical black finish

303 Stainless Steel

Steel	Stainless Steel	D	D1	E	L	L1	P1 Initial (Kgf)	P2 Final (Kgf)	Weight (kg)
606-2703	823-203	M3	1.5	0.4	7	0.5	0.15	0.31	0.01
606-2704	823-204	M4	2.5	0.6	9	0.8	0.41	1.02	0.01
606-2705	823-205	M5	3	0.8	12	0.9	0.61	1.12	0.01
606-2706	823-206	M6	3.5	1	14	1	0.92	1.33	0.01
606-2708	823-208	M8	5	1.2	16	1.5	1.53	3.06	0.01
606-2710	823-210	M10	6	1.6	19	2	2.04	3.57	0.01
606-2712	823-212	M12	8	2	22	2.5	3.06	5.61	0.01
606-2716	823-216	M16	10	2.5	24	3.5	6.63	12.74	0.02
606-2720	823-220	M20	12	2.5	30	4.5	8.16	16.32	0.05



M3 TO M6



M8 TO M16

P = Spring Force (kgf)



303

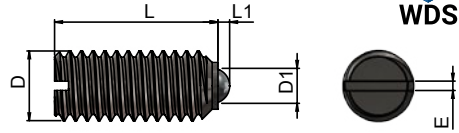
Ball Spring Plungers - Long-Lok Thread WDS 606/823

Steel, Chemical black finish

303 Stainless Steel

Steel	Stainless Steel	D	D1	E	L	L1	L2	L3	P Initial	P Final	Weight (kg)
606-403	823-403	M3	1.5	0.4	7	0.5	4	approx. 2 x thread pitch	0.15	0.31	0.01
606-404	823-404	M4	2.5	0.6	9	0.8	5	approx. 2 x thread pitch	0.41	1.02	0.01
606-405	823-405	M5	3	0.8	12	0.9	6	approx. 2 x thread pitch	0.61	1.12	0.01
606-406	823-406	M6	3.5	1	14	1	7	approx. 2 x thread pitch	0.92	1.33	0.01
606-408	823-408	M8	5	1.2	16	1.5	8	approx. 2 x thread pitch	1.53	3.06	0.01
606-410	823-410	M10	6	1.6	19	2	9	approx. 2 x thread pitch	2.04	3.57	0.01
606-412	823-412	M12	8	2	22	2.5	10	approx. 2 x thread pitch	3.06	5.61	0.01
606-416	823-416	M16	10	2.5	24	3.5	14	approx. 2 x thread pitch	6.63	12.74	0.02

303



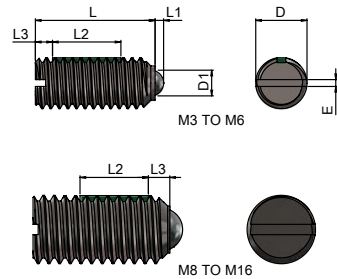
P1 = Initial Spring Force (kgf)
P2 = Final Spring Force (kgf)

WDS 606/823 Strong Force Ball Spring Plungers - Threaded

Steel, Chemical black finish Class 5.8
303 Stainless Steel

Steel	Stainless Steel	D	D1	E	L	L1	P1 Initial (Kgf)	P2 Final (Kgf)	Weight (kg)
606-5703	823-503	M3	1.5	0.4	7	0.5	0.51	0.71	0.01
606-5704	823-504	M4	2.5	0.6	9	0.8	1.22	2.24	0.01
606-5705	823-505	M5	3	0.8	12	0.9	1.94	3.06	0.01
606-5706	823-506	M6	3.5	1	14	1	2.85	4.08	0.01
606-5708	823-508	M8	5	1.2	16	1.5	4.79	7.44	0.01
606-5710	823-510	M10	6	1.6	19	2	6.73	10.2	0.01
606-5712	823-512	M12	8	2	22	2.5	6.73	12.24	0.01
606-5716	823-516	M16	10	2.5	24	3.5	9.18	18.36	0.02
606-5720	823-520	M20	12	2.5	30	4.5	11.73	24.47	0.04

303

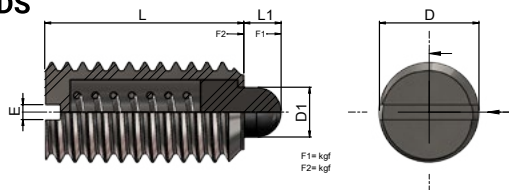


P1 = Spring Initial Force (kgf)
P2 = Spring Final Force (kgf)

WDS 606/823 Strong Force Ball Spring Plungers - Long-Lok Thread

Steel, Chemical black finish
303 Stainless Steel

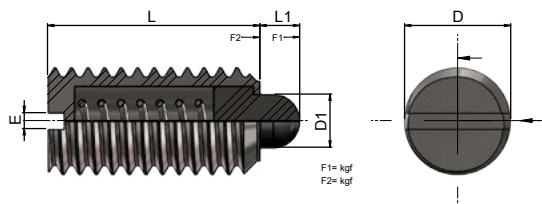
Steel	Stainless Steel	D	D1	E	L	L1	L2	L3	P1 Initial (Kgf)	P2 Final (Kgf)	Weight (kg)
606-503	823-603	M3	1.5	0.4	7	0.5	4	1	0.51	0.71	0.01
606-504	823-604	M4	2.5	0.6	9	0.8	5	1.4	1.22	2.24	0.01
606-505	823-605	M5	3	0.8	12	0.9	6	1.6	1.94	3.06	0.01
606-506	823-606	M6	3.5	1	14	1	7	2	2.85	4.08	0.01
606-508	823-608	M8	5	1.2	16	1.5	8	2.5	4.79	7.44	0.01
606-510	823-610	M10	6	1.6	19	2	9	3	6.73	10.2	0.01
606-512	823-612	M12	8	2	22	2.5	10	3.5	6.73	12.24	0.01
606-516	823-616	M16	10	2.5	24	3.5	14	4	9.18	18.36	0.12



Light Force Spring Plunger With Slotted Thrust Pin WDS 606/823

Steel, Chemical black finish
Stainless Steel

Steel	Stainless Steel	D	D1	E	F1	F2	L	L1	Weight (kg)
606-1804	823-1804	M4x0.7	1.8	0.6	0.31	1.02	9	1.5	0.01
606-1805	823-1805	M5x0.8	2.4	0.8	0.31	1.02	12	2	0.01
606-1806	823-1806	M6x1.0	2.7	1	0.41	1.02	14	2	0.01
606-1808	823-1808	M8x1.25	4	1.2	0.71	1.53	16	2	0.01
606-1810	823-1810	M10x1.5	4.5	1.6	0.92	1.63	19	2.5	0.01
606-1812	823-1812	M12x1.75	6	2	1.43	2.65	22	3.5	0.01
606-1816	823-1816	M16x2.0	8.5	2.5	2.24	5.11	24	4.5	0.02
606-1820	823-1820	M20x2.5	10	2.5	3.06	6.12	30	6.5	0.05

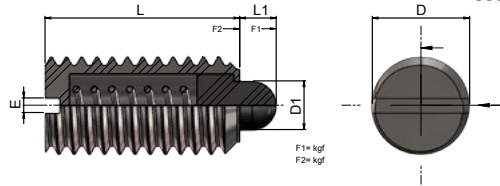


Medium Force Spring Plunger with Slotted Thrust Pin WDS 606/823

Pressure Pin Hardened, Steel, Chemical black finish Class 5.8
Stainless Steel

Steel	Stainless Steel	D	D1	E	F1	F2	L	L1	Weight (kg)
606-2804	823-2804	M4x0.7	1.8	0.6	0.61	2.04	9	1.5	0.01
606-2805	823-2805	M5x0.8	2.4	0.8	0.61	2.04	12	2	0.01
606-2806	823-2806	M6x1.0	2.7	1	0.71	2.04	14	2	0.01
606-2808	823-2808	M8x1.25	4	1.2	1.53	3.06	16	2	0.01
606-2810	823-2810	M10x1.5	4.5	1.6	2.04	3.57	19	2.5	0.01
606-2812	823-2812	M12x1.75	6	2	3.06	5.61	22	3.5	0.01
606-2816	823-2816	M16x2.0	8.5	2.5	4.59	10.19	24	4.5	0.02
606-2820	823-2820	M20x2.5	10	2.5	6.12	12.23	30	6.5	0.05

303

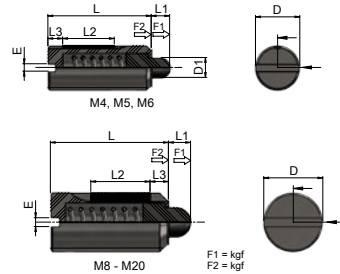


WDS 606/823 Strong Force Spring Plunger with Slotted Thrust Pin

Steel, Chemical black finish/Stainless Steel

Steel	Stainless Steel	D	D1	E	F1	F2	L	L1	Weight (kg)
606-3805	823-3805	M5x0.8	2.4	0.8	0.92	2.55	12	2	0.01
606-3806	823-3806	M6x1.0	2.7	1	1.12	2.55	14	2	0.01
606-3808	823-3808	M8x1.25	4	1.2	2.24	4.38	16	2	0.01
606-3810	823-3810	M10x1.5	4.5	1.6	2.04	5.49	19	2.5	0.01
606-3812	823-3812	M12x1.75	6	2	3.67	9.58	22	3.5	0.01
606-3816	823-3816	M16x2.0	8.5	2.5	5.11	11.21	24	4.5	0.02

303

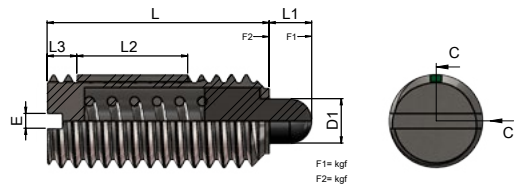


WDS 606/823 Medium Force Spring Plunger with Slotted Thrust Pin and Long-Lok

Steel, Chemical black finish/Stainless Steel

Steel	Stainless Steel	D	D1	E	F1	F2	L	L1	L2	L3	Weight (kg)
606-2404	823-2404	M4x0.7	1.8	0.6	0.61	2.04	9	1.5	5	1.4	0.01
606-2405	823-2405	M5x0.8	2.4	0.8	0.61	2.04	12	2	6	1.6	0.01
606-2406	823-2406	M6x1.0	2.7	1	0.71	2.04	14	2	7	2	0.01
606-2408	823-2408	M8x1.25	4	1.2	1.53	3.06	16	2	8	2.5	0.01
606-2410	823-2410	M10x1.5	4.5	1.6	2.04	3.57	19	2.5	9	3	0.01
606-2412	823-2412	M12x1.75	6	2	3.06	5.61	22	3.5	10	3.5	0.01
606-2416	823-2416	M16x2.0	8.5	2.5	4.59	10.19	24	4.5	14	4	0.02

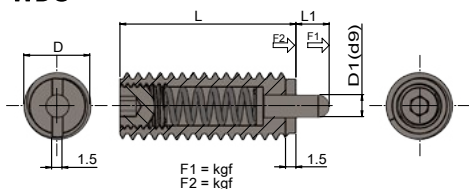
303



WDS 606/823 Strong Force Spring Plunger with Slotted Thrust Pin and Long-Lok

Steel, Chemical black finish/Stainless Steel

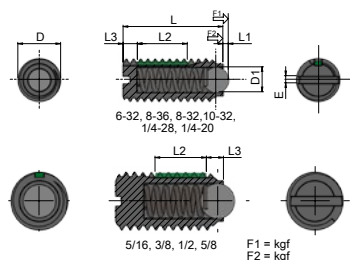
Steel	Stainless Steel	D	D1	E	F1	F2	L	L1	L2	L3	Weight (kg)
606-3405	823-3405	M5x0.8	2.4	0.8	0.92	2.55	12	2	6	1.6	0.01
606-3406	823-3406	M6x1.0	2.7	1	1.12	2.55	14	2	7	2	0.01
606-3408	823-3408	M8x1.25	4	1.2	2.24	4.38	16	2	8	2.5	0.01
606-3410	823-3410	M10x1.5	4.5	1.6	2.04	5.5	19	2.5	9	3	0.01
606-3412	823-3412	M12x1.75	6	2	3.67	9.58	22	3.5	10	3.5	0.01
606-3416	823-3416	M16x2.0	8.5	2.5	6.12	11.21	24	4.5	14	4	0.02



Spring Plunger with Steel Pin - Inch UNC WDS 606

Pressure Pin Hardened, Steel, Chemical black finish

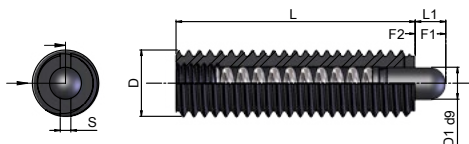
WDS No.	D (UNC)	D1	E	F1	F2	L	L1	Weight (kg)
606-4501	6-32	1	0.035	0.05	0.31	10	1.5	0.01
606-4502	8-32	1.5	0.05	0.51	1.63	15	1.5	0.01
606-4504	10-32	2.4	1/16	0.61	2.04	18	2.3	0.01
606-4506	1/4-28	2.7	5/64	0.71	2.04	20	2.5	0.01
606-4507	5/16-18	3.5	3/32	0.92	3.57	22	3	0.01
606-4508	3/8-16	4	1/8	0.92	3.57	22	3	0.01
606-4509	1/2-13	6	5/32	1.22	5.61	28	4	0.02
606-4510	5/8-11	7.5	3/16	4.59	10.19	32	5	0.03



Ball Spring Plungers Long-Lok - Inch UNC WDS 606

Steel, Chemical black finish

WDS No.	D	D1	E	F1	F2	L	L1	L2	L3	Weight (kg)
606-4401	6-32	1.5	0.4	0.15	0.31	7	0.4	4	1	0.01
606-4402	8-32	2.5	0.6	0.41	1.02	9	0.8	5	1.4	0.01
606-4404	10-32	3	0.8	0.61	1.12	12	0.9	6	1.6	0.01
606-4406	1/4-28	3.5	1	0.92	1.33	14	1	7	2	0.01
606-4407	5/16-18	5	1.2	1.53	3.06	16	1.5	8	2.5	0.01
606-4408	3/8-16	6	1.6	2.04	3.57	19	2	9	3	0.01
606-4409	1/2-13	8	2	3.06	5.61	22	2.5	10	3.5	0.01



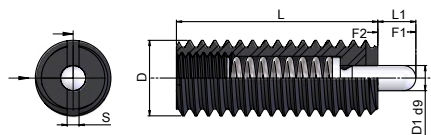
Spring Plungers with Steel Pin - BSW Inch WDS 606

Steel, Chemical black finish

WDS No.	D	D1 d9	L	L1	P	Weight (kg)
606-07	3/8"	0.125"	25.4	4.8	2.27	0.01

IN"

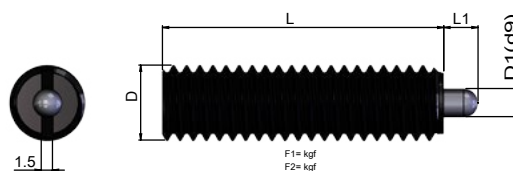
NYL



WDS 606 Spring Plungers with Nylon Pin - UNC Inch

Steel, Chemical black finish
Nylon Pin

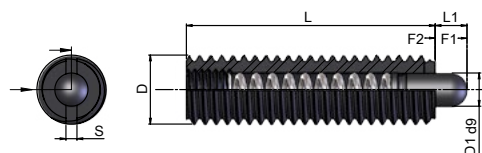
WDS No.	D	D1 d9	L	L1	P	BSW/UNC	Weight (kg)
606-13	3/8	0.125	25.4	4.8	2.27	UNC	0.01
606-14	1/2	0.188	28.6	4.8	2.27	UNC	0.01



WDS 606 Light Force Spring Plunger With Thrust Pin

Steel, Chemical black finish
Thrust Pin Hardened

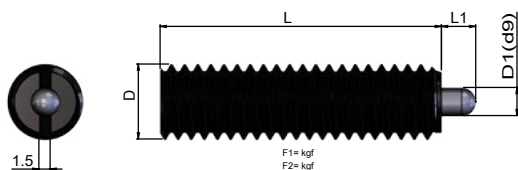
WDS No.	D	D1	F1	F2	L	L1	Weight (kg)
606-1004	M4x0.7	1.5	0.2	0.71	15	1.5	0.01
606-1005	M5x0.8	2.4	0.31	1.02	18	2.3	0.01
606-1006	M6x1.0	2.7	0.31	0.92	20	2.5	0.01
606-1008	M8x1.25	3.5	0.41	1.63	22	3	0.01
606-1010	M10x1.5	4	0.41	1.63	22	3	0.09
606-1012	M12x1.75	6	0.51	2.75	28	4	0.02
606-1016	M16x2.0	7.5	2.04	4.59	32	5	0.03



WDS 606 Spring Plungers with Steel Pin - Metric

Steel, Chemical black finish
Thrust Pin Hardened

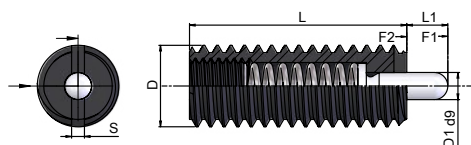
WDS No.	D	D1	F1	F2	L	L1	Weight (kg)
606-2003	M3	1	0.05	0.31	10	1.5	0.01
606-2004	M4	1.5	0.2	0.71	15	1.5	0.01
606-2005	M5	2.4	0.31	1.02	18	2.3	0.01
606-2006	M6	2.7	0.31	0.92	20	2.5	0.01
606-2008	M8	3.5	0.41	1.63	22	3	0.01
606-201	M10	4	0.41	1.63	22	3	0.01
606-2017	M12	6	0.51	2.75	28	4	0.02
606-2025	M16	7.5	2.04	4.59	32	5	0.03
606-2035	M20	10	6.12	12.23	40	7	0.07
606-2045	M24	12	8.15	16.31	52	10	0.18



Strong Force Spring Plunger with Thrust Pin **WDS 606**

Steel, Chemical black finish
Thrust Pin Hardened

WDS No.	D	D1	F1	F2	L	L1	Weight (kg)
606-3005	M5x0.8	2.4	1.12	2.96	18	2.3	0.01
606-3006	M6x1.0	2.7	1.43	3.77	20	2.5	0.01
606-3008	M8x1.25	3.5	2.24	6.63	22	3	0.01
606-3010	M10x1.5	4	1.94	7.14	22	3	0.01
606-3012	M12x1.75	6	2.55	8.66	28	4	0.02
606-3016	M16x2.0	7.5	6.12	15.29	32	5	0.05
606-3020	M20x2.5	10	7.65	19.37	40	7	0.07
606-3024	M24x3.0	12	9.68	24.46	52	10	0.13

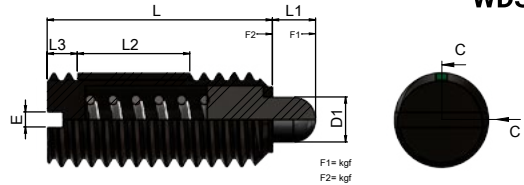


NYL

Spring Plungers with Nylon Pin - Metric **WDS 606**

Steel, Chemical black finish
Nylon Pin

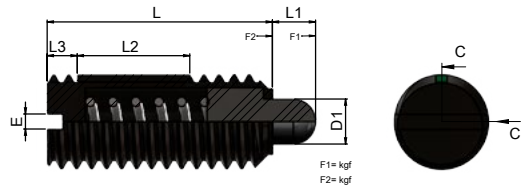
WDS No.	D	D1	F1	F2	L	L1	Weight (kg)
606-2503	M3	1	0.05	0.31	10	1.5	0.01
606-2504	M4	1.5	0.51	1.63	15	1.5	0.01
606-2505	M5	2.4	0.61	2.04	18	2.3	0.01
606-2506	M6	2.7	0.71	2.04	20	2.5	0.01
606-2508	M8	3.5	0.92	3.57	22	3	0.01
606-251	M10	4	0.92	3.57	22	3	0.01
606-2517	M12	6	1.22	5.61	28	4	0.01
606-2518	M16	7.5	4.59	10.19	32	5	0.03



WDS 606 Light Force Spring Plungers with Slotted Thrust Pin and Long-Lok

Steel, Chemical black finish, Nylon Threaded Lok

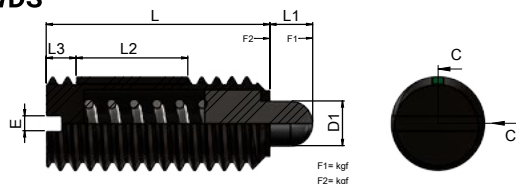
WDS No.	D	D1	E	F1	F2	L	L1	L2	L3	Weight (kg)
606-1404	M4x0.7	1.8	0.6	0.31	1.02	9	1.5	5	1.4	0.01
606-1405	M5x0.8	2.4	0.8	0.31	1.02	12	2	6	1.6	0.01
606-1406	M6x1.0	2.7	1	0.41	1.02	14	2	7	2	0.01
606-1408	M8x1.25	4	1.2	0.71	1.53	16	2	8	2.5	0.01
606-1410	M10x1.5	4.5	1.6	0.92	1.63	19	2.5	9	3	0.01
606-1412	M12x1.75	6	2	1.43	2.65	22	3.5	10	3.5	0.01
606-1416	M16x2.0	8.5	2.5	2.24	5.1	24	4.5	14	4	0.02



WDS 606 Medium Force Spring Plunger with POM Thrust Pin

Steel, Chemical black finish, Plastic Pin - POM

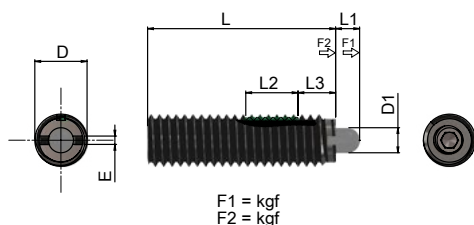
WDS No.	D	D1	F1	F2	L	L1	Weight (kg)
606-1504	M4x0.7	1.5	0.21	0.71	15	1.5	0.01
606-1505	M5x0.8	2.4	0.31	1.02	18	2.3	0.01
606-1506	M6x1.0	2.7	0.31	0.92	20	2.5	0.01
606-1508	M8x1.25	3.5	0.41	1.63	22	3	0.01
606-1510	M10x1.5	4	0.41	1.63	22	3	0.01
606-1512	M12x1.75	6	0.51	2.75	28	4	0.01
606-1516	M16x2.0	7.5	2.04	4.59	32	5	0.03



Light Force Spring Plunger with Thrust Pin and Long-Lok WDS 606

Steel, Chemical black finish, Nylon Threaded Lok

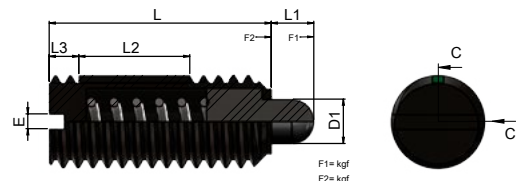
WDS No.	D	D1	E	F1	F2	L	L1	L2	L3	Weight (kg)
606-1605	M5x0.8	2.4	0.8	0.31	1.02	12	2	6	1.6	0.01
606-1606	M6x1.0	2.7	1	0.31	0.92	14	2	7	2	0.01
606-1608	M8x1.25	4	1.2	0.41	1.63	16	2	8	2.5	0.01
606-1610	M10x1.5	4.5	1.6	0.41	1.63	19	2.5	9	3	0.01
606-1612	M12x1.75	6	2	0.51	2.75	22	3.5	10	3.5	0.02
606-1616	M16x2.0	8.5	2.5	2.04	4.59	24	4.5	14	4	0.03



Light Force Spring Plunger with POM Thrust Pin and Long-Lok WDS 606

Steel, Chemical black finish, Nylon Threaded Lok

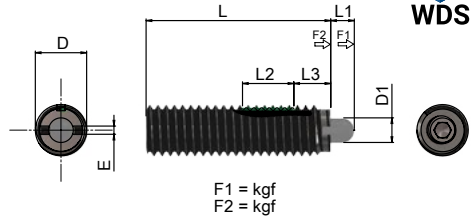
WDS No.	D	D1	E	F1	F2	L	L1	L2	L3	Weight (kg)
606-1905	M5x0.8	2.4	0.8	0.31	1.02	18	2.3	7	1.6	0.01
606-1906	M6x1.0	2.7	1	0.31	0.92	20	2.5	7	2	0.01
606-1908	M8x1.25	3.5	1.2	0.41	1.63	22	3	8	2.5	0.01
606-1910	M10x1.5	4	1.6	0.41	1.63	22	3	9	3	0.01
606-1912	M12x1.75	6	2	0.51	2.75	28	4	10	3.5	0.01
606-1916	M16x2.0	7.5	2.5	2.04	4.59	32	5	14	4	0.03



Medium Force Spring Plunger with Thrust Pin and Long-Lok WDS 606

Steel, Chemical black finish, Nylon Threaded Lok

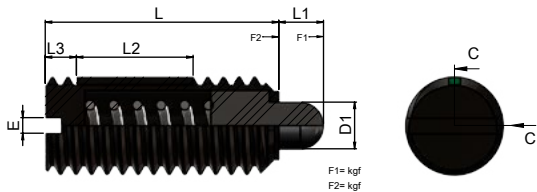
WDS No.	D	D1	E	F1	F2	L	L1	L2	L3	Weight (kg)
606-2605	M5x0.8	2.4	0.8	0.61	2.04	18	2.3	7	1.6	0.01
606-2606	M6x1.0	2.7	1	0.71	2.04	20	2.5	7	2	0.01
606-2608	M8x1.25	4	1.2	1.53	3.06	22	3	8	2.5	0.01
606-2610	M10x1.5	4.5	1.6	2.04	3.57	22	3	9	3	0.01
606-2612	M12x1.75	6	2	3.06	5.61	28	4	10	3.5	0.02
606-2616	M16x2.0	8.5	2.5	4.59	10.19	32	5	14	4	0.03



WDS 606 Spring Plunger with POM Thrust Pin and Long-Lok

Steel, Chemical black finish, Nylon Threaded Lok

WDS No.	D	D1	E	F1	F2	L	L1	L2	L3	Weight (kg)
606-2905	M5x0.8	2.4	0.8	0.61	2.04	18	2.3	7	1.6	0.01
606-2906	M6x1.0	2.7	1	0.71	2.04	20	2.5	7	2	0.01
606-2908	M8x1.25	3.5	1.2	0.92	3.57	22	3	8	2.5	0.01
606-2910	M10x1.5	4	1.6	0.92	3.57	22	3	9	3	0.01
606-2912	M12x1.75	6	2	1.22	5.61	28	4	10	3.5	0.02
606-2916	M16x2.0	7.5	2.5	4.59	10.19	32	5	14	4	0.03



WDS 606 Strong Force Spring Plunger with Thrust Pin and Long-Lok

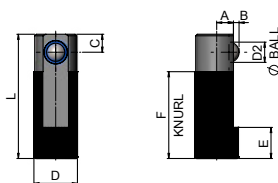
Steel, Chemical black finish, Nylon Threaded

WDS No.	D	D1	E	F1	F2	L	L1	L2	L3	Weight (kg)
606-3605	M5x0.8	2.4	0.8	1.12	2.96	12	2	6	1.6	0.01
606-3606	M6x1.0	2.7	1	1.43	3.77	14	2	7	2	0.01
606-3608	M8x1.25	4	1.2	2.24	6.63	16	2	8	2.5	0.01
606-3610	M10x1.5	4.5	1.6	1.94	7.14	19	2.5	9	3	0.01
606-3612	M12x1.75	6	2	2.55	8.66	22	3.5	10	3.5	0.02
606-3616	M16x2.0	8.5	2.5	6.12	15.29	24	4.5	14	4	0.03



Assembly Key for Spring Plunger with Thrust Pin **WDS 606**

WDS No.	Sold as	To Suit	Weight (kg)
606-2103	A	M3	0.01
606-2104	B	M4	0.01
606-2105	B	M5	0.02
606-2106	B	M6	0.02
606-2108	B	M8	0.03
606-2110	B	M10	0.05
606-2112	B	M12	0.07
606-2116	B	M16	0.09



H = Hole dia required for fitting
P1 = Initial spring force (kgf)
P2 = Final spring force (kgf)

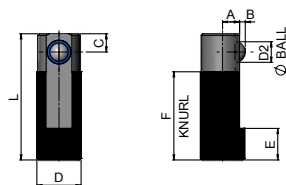
Lateral spring plunger should be inserted to depth 'E' minimum


303

Lateral Ball Spring Plunger **WDS 608**

Body - Mild Steel - Chemical black
Ball - 303 Stainless Steel/Delrin

Stainless Steel	Delrin	A	B	C	D	D1	E	F	H	L	P1 Initial (kgf)	P2 Final (kgf)	Weight (kg)
608-108	608-208	3.2	0.7	3.6	8	3	6	16.9	8 H8	25	0.255	0.663	0.01
608-110	608-210	4	1	4.2	10	4	7	20.8	10 H8	30	0.459	0.918	0.02
608-112	608-212	5	1.5	4.8	12	5	9	24.7	12 H8	35	0.663	1.326	0.03
608-114	608-214	5.4	1.8	5.8	14	6.5	10	27.95	14 H8	40	0.816	1.835	0.04



H = Hole dia required for fitting
P1 = Initial spring force (kgf)
P2 = Final spring force (kgf)

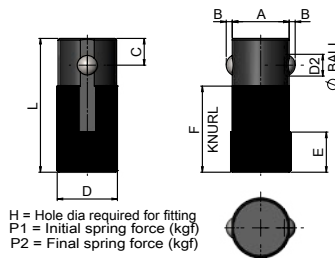
Lateral spring plunger should be inserted to depth 'E' minimum



Lateral Spring Plungers - Steel Ball Plastic Spring **WDS 608**

Body - Mild Steel - Chemical black
Ball - Hardened Steel

WDS No.	A	B	C	D	D1	E	F	H	L	P1 Initial (kgf)	P2 Final (kgf)	Weight (kg)
608-310	4.5	1	7	10	5.5	8	17.25	10 H8	30	6.12	17.34	0.01
608-312	5.5	1.5	8	12	6.5	9	20.75	12 H8	35	8.16	26.51	0.01
608-314	6.5	2	9	14	8	10	24	14 H8	40	12.24	48.95	0.02



H = Hole dia required for fitting
P1 = Initial spring force (kgf)
P2 = Final spring force (kgf)

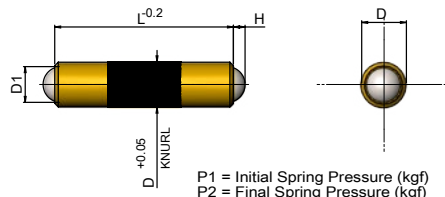
Lateral spring plunger should be inserted to depth 'E' minimum

WDS 608 Double Lateral Spring Plungers - Steel Ball Plastic Spring

Body - Mild Steel - Chemical black

Ball - Hardened Steel

WDS No.	A	B	C	D	D1	E	F	H	L	P1 Initial (kgf)	P2 Final (kgf)	Weight (kg)
608-416	15	1.5	7	16	5.5	11	22.25	16 H8	35	11.22	22.43	0.02
608-418	17	1.8	8	18	6.5	12	25.75	18 H8	40	12.24	33.65	0.03
608-422	21	2.5	9	22	8	15	29	22 H8	45	13.26	55.06	0.04



P1 = Initial Spring Pressure (kgf)
P2 = Final Spring Pressure (kgf)

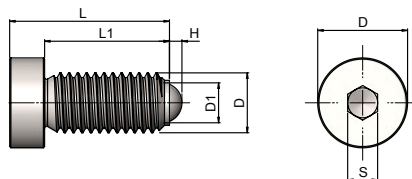
WDS 618 Double Ended Spring Plungers - Brass - Metric

Body - Brass

Ball - Stainless Steel Hardened, Spring - Stainless Steel

WDS No.	D	D1	D2	H	L	P1 Initial (kgf)	P2 Final (kgf)	Weight (kg)
618-201	2.5	2	2.55	0.65	10	0.15	0.27	0.01
618-202	3	2.5	3.05	0.8	8	0.25	0.59	0.01
618-203	4	3	4.05	0.9	10	0.29	0.69	0.01
618-204	5	4	5.05	1.2	12	0.39	0.78	0.01
618-205	6	5	6.05	1.6	16	0.59	0.98	0.01
618-206	8	6	8.05	2	20	0.78	1.18	0.01
618-207	10	8	10.05	2.9	24	0.98	1.57	0.01

303



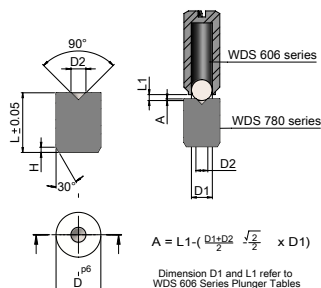
P1 = Initial Spring Force (kgf)
P2 = Final Spring Force (kgf)

WDS 622/842 Spring Plunger with Hexagon Head - Metric

Body - Steel, Chemical Black Finish/Stainless Steel

Ball - Steel/Stainless Steel, Hardened

Steel	Stainless Steel	D	D1	D2	H	L	L1	P1 Initial (kgf)	P2 Final (kgf)	Weight (kg)
622-206	842-206	M6	3.5	10	1	16	12	0.88	1.27	0.01
622-208	842-208	M8	5	13	1.5	21	16	1.47	2.94	0.01
622-210	842-210	M10	6	16	2	26	20	1.96	3.43	0.02
622-212	842-212	M12	8	18	2.5	32	25	2.94	5.39	0.03



$$A = L1 - \left(\frac{D1 + D2}{2} \times \frac{\sqrt{2}}{2} \right) \times D1$$

Dimension D1 and L1 refer to WDS 606 Series Plunger Tables

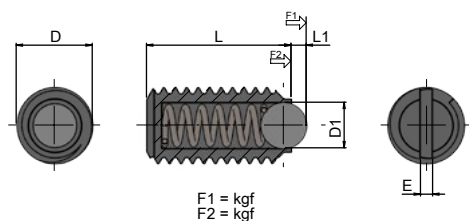


Locator Striker Bushes WDS 780

Mild steel, natural finish, hardened

Dimension D1 & L1 refer to WDS 606 Series parts for use in calculations

WDS No.	A	D	D2	H	L	Weight (kg)
780-204	0.57	4	1.5	0.5	5	0.01
780-205	0.52	5	2	0.5	6	0.01
780-206	0.72	6	2	0.7	8	0.01
780-208	1.04	8	3	1	10	0.01
780-210	1.24	10	4	1.2	12	0.01
780-212	1.16	12	6	1.5	14	0.01
780-216	1.57	16	8	2	18	0.03



F1 = kgf
F2 = kgf



303

IN"

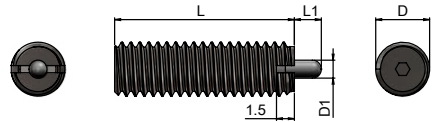
Ball Spring Plungers - Threaded - Stainless Steel - Inch WDS 823

Ball/Body - 303 Stainless Steel

Spring - 420 Stainless Steel

WDS No.	D (UNC)	D1	E	F1	F2	L	L1	Weight (kg)
823-4701	6-32	1.5	0.4	0.15	0.31	7	0.4	0.01
823-4702	8-32	2.5	0.6	0.41	1.02	9	0.8	0.01
823-4704	10-32	3	0.8	0.61	1.12	12	0.9	0.01
823-4706	1/4-28	3.5	1	0.92	1.33	14	1	0.01
823-4707	5/16-18	5	1.2	1.53	3.06	16	1.5	0.01
823-4708	3/8-16	6	1.6	2.04	3.57	19	2	0.01
823-4709	1/2-13	8	2	3.06	5.61	22	2.5	0.01
823-4710	5/8-11	10	2.5	6.63	12.74	24	3.5	0.02

303



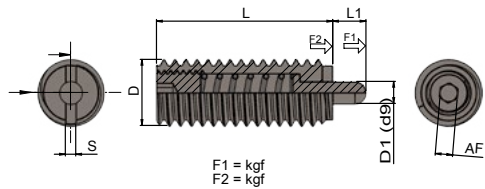
P1 = Spring Initial Force (kgf)
P2 = Spring Final Force (kgf)

WDS 823 Stainless Steel Spring Plunger with Thrust Pin (M3 to M16)

Body - Stainless Steel 1.4305, Spring - Stainless Steel 1.4310
Thrust Pin - Stainless Steel 1.4034 Hardened

WDS No.	D	D1	L	L1	P1 Initial (kgf)	P2 Final (kgf)	Weight (kg)
823-2003	M3	1	10	1.5	0.05	0.3	0.01
823-2004	M4	1.5	15	1.5	0.5	1.63	0.01
823-2005	M5	2.4	18	2.3	0.6	2.04	0.01
823-2006	M6	2.7	20	2.5	0.7	2.04	0.01
823-2008	M8	3.5	22	3	0.92	3.57	0.01
823-2010	M10	4	22	3	0.92	3.57	0.01
823-2012	M12	6	28	4	1.02	5.61	0.02
823-2016	M16	7.5	32	5	4.58	10.2	0.03

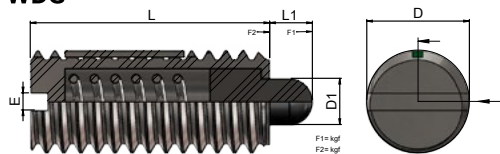
303



WDS 823 Stainless Steel Spring Plunger with Nylon Thrust Pin (M3 to M16)

Body - Stainless Steel 1.4305, Spring - Stainless Steel 1.4310
Thrust Pin - Nylon

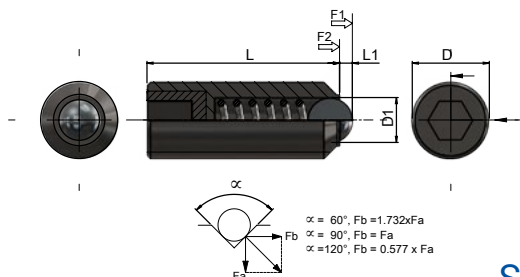
WDS No.	D	D1	L	L1	P1 Initial (kgf)	P2 Final (kgf)	Weight (kg)
823-2503	M3	1	10	1.5	0.05	0.31	0.01
823-2504	M4	1.5	15	1.5	0.51	1.63	0.01
823-2505	M5	2.4	18	2.3	0.61	2.04	0.01
823-2506	M6	2.7	20	2.5	0.71	2.04	0.01
823-2508	M8	3.5	22	3	0.92	3.57	0.01
823-2510	M10	4	22	3	0.92	3.57	0.01
823-2512	M12	6	28	4	1.02	5.61	0.01
823-2516	M16	7.5	32	5	4.58	10.2	0.03



Light Force Stainless Steel Spring Plunger with Slotted Thrust Pin and Long-Lok WDS 823

303 Stainless Steel
Nylon Threaded Lok

WDS No.	D	D1	E	F1	F2	L	L1	Weight (kg)
823-1404	M4x0.7	1.8	0.6	0.31	1.02	9	1.5	0.01
823-1405	M5x0.8	2.4	0.8	0.31	1.02	12	2	0.01
823-1406	M6x1.0	2.7	1	0.41	1.02	14	2	0.01
823-1408	M8x1.25	4	1.2	0.71	1.53	16	2	0.01
823-1410	M10x1.5	4.5	1.6	0.92	1.63	19	2.5	0.01
823-1412	M12x1.75	6	2	1.43	2.65	22	3.5	0.01
823-1416	M16x2.0	8.5	2.5	2.24	5.1	24	4.5	0.02

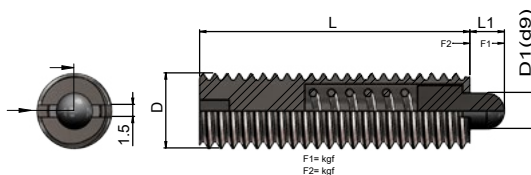


Stainless Steel Ball Spring Plunger WDS 823

Body - Stainless Steel - 1.4305, Ball - Stainless Steel - 1.4034
Spring - Stainless Steel - 1.4310

WDS No.	D	D1	F1	F2	L	L1	Weight (kg)
823-2703	M3x0.5	1.5	0.15	0.31	9	0.4	0.01
823-2704	M4x0.7	2.5	0.41	1.02	10	0.8	0.01
823-2705	M5x0.8	3	0.61	1.12	14	0.9	0.01
823-2706	M6x1.0	3.5	0.92	1.33	15	1	0.01
823-2708	M8x1.25	5	1.53	3.06	18	1.5	0.01
823-2710	M10x1.5	6	2.04	3.57	23	2	0.01
823-2712	M12x1.75	8	3.06	5.61	26	2.5	0.01
823-2716	M16x2.0	10	6.63	12.74	33	3.5	0.03
823-2720	M20x2.5	12	8.15	16.31	43	4.5	0.06
823-2724	M24x3.0	15	9.17	18.35	48	5.5	0.1

303



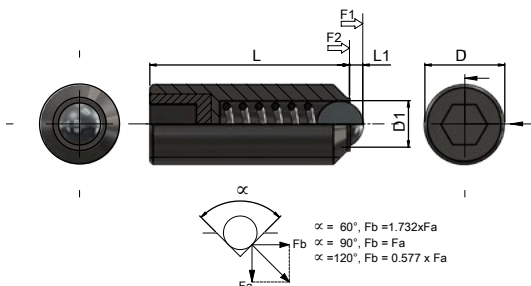
WDS 823 Strong Force Stainless Steel Spring Plunger with Thrust Pin

Body - Stainless Steel 1.4305, Spring - Stainless Steel 1.4310

Pin - Stainless Steel 1.4034

WDS No.	D	D1	F1	F2	L	L1	Weight (kg)
823-3005	M5x0.8	2.4	0.92	2.65	18	2.3	0.01
823-3006	M6x1.0	2.7	1.12	3.57	20	2.5	0.01
823-3008	M8x1.25	3.5	1.53	4.89	22	3	0.01
823-3010	M10x1.5	4	1.53	5.91	22	3	0.01
823-3012	M12x1.75	6	1.94	7.54	28	4	0.02

303



WDS 823 Strong Force Stainless Steel Ball Spring Plunger

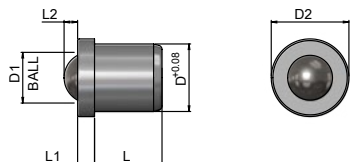
Body - Stainless Steel 1.4305, Spring - Stainless Steel 1.4310

Pin - Stainless Steel 1.4034

WDS No.	D	D1	F1	F2	L	L1	Weight (kg)
823-3703	M3x0.5	1.5	0.51	0.71	9	0.4	0.01
823-3704	M4x0.7	2.5	1.22	2.24	10	0.8	0.01
823-3705	M5x0.8	3	1.94	3.06	14	0.9	0.01
823-3706	M6x1.0	3.5	2.85	4.08	15	1	0.01
823-3708	M8x1.25	5	4.79	7.44	18	1.5	0.01
823-3710	M10x1.5	6	6.73	10.19	23	2	0.01
823-3712	M12x1.75	8	6.73	12.23	26	2.5	0.01
823-3716	M16x2.0	10	9.17	18.35	33	3.5	0.03
823-3720	M20x2.5	12	11.72	24.46	43	4.5	0.07
823-3724	M24x3.0	15	13.25	27.52	48	5.5	0.1



303



P1 = Initial Spring End Force (kgf)
P2 = Final Spring End Force (kgf)

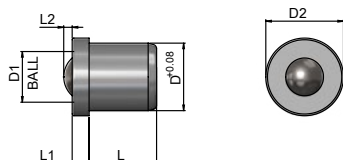


Smooth Ball Spring Plunger - Stainless Steel WDS 838

Sleeve and Spring - 303 Stainless Steel

Ball - 420 Stainless Steel

WDS No.	D	D1	D2	L	L1	L2	P1 Initial (kgf)	P2 Final (kgf)	Weight (kg)
838-2003	3	2.5	3.5	4	0.8	0.7	0.17	0.34	0.01
838-201	4	3	4.6	5	1	0.7	0.3	0.7	0.01
838-202	5	4	5.6	6	1	1	0.3	0.7	0.01
838-203	6	5	6.5	7	1	1.5	0.6	1.2	0.01
838-204	8	6.5	8.5	9	1	1.8	0.6	1.2	0.01
838-205	10	8	12	13.5	2.5	2.7	1	2	0.01
838-206	12	10	14	16	2.5	3.5	1.5	2.5	0.01



P1 = Initial Spring End Force (kgf)
P2 = Final Spring End Force (kgf)



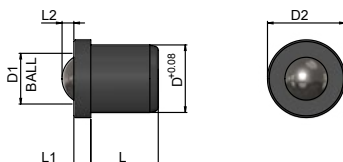
303

Stainless Steel Ball Spring Plunger with Plastic Ball WDS 838

Sleeve and Spring - 303 Stainless Steel

Ball - POM

WDS No.	D	D1	D2	L	L1	L2	P1 Initial (kgf)	P2 Final (kgf)	Weight (kg)
838-401	4	3	4.6	5	1	0.5	0.3	0.7	0.01
838-402	5	4	5.6	6	1	0.6	0.4	0.7	0.01
838-403	6	5	6.5	7	1	1.1	0.6	1.2	0.01
838-404	8	6.5	8.5	9	1	1.5	0.6	1.2	0.01
838-405	10	8	12	13.5	2.5	2.3	1	2	0.01
838-406	12	10	14	16	2.5	3.1	1.5	2.5	0.01



P1 = Initial Spring End Force (kgf)
P2 = Final Spring End Force (kgf)

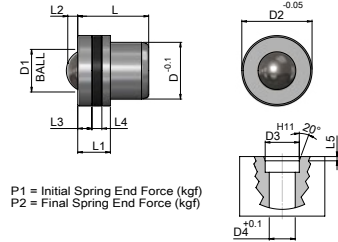


Spring Plungers - Plastic Body WDS 838

Body - Black Thermoplastic, Spring Stainless Steel

Ball - Stainless Steel/POM

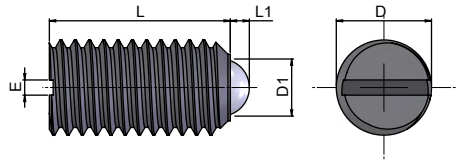
Stainless Steel	POM	D	D1	D2	L	L1	L2	P1 Initial (kgf)	P2 Final (kgf)	Weight (kg)
838-301	838-501	4	3	4.6	5	1	0.7	0.3	0.7	0.01
838-302	838-502	5	4	5.6	6	1	1	0.3	0.7	0.01
838-303	838-503	6	5	6.5	7	1	1.5	0.6	1.2	0.01
838-304	838-504	8	6.5	8.5	9	1	1.8	0.6	1.2	0.01
838-305	838-505	10	8	12	13.5	2.5	2.7	1	2	0.01
838-306	838-506	12	10	14	16	2.5	3.5	1.5	2.5	0.01



WDS 838 Stainless Steel Ball Spring Plunger with O-Ring

Sleeve, Spring - 303 Stainless Steel
 Ball - Stainless Steel, hardened, O- Ring - NBR Rubber

WDS No.	D	D1	D2	D3	D4	L	L1	L2	L3	L4	L5	P1 Initial (kgf)	P2 Final (kgf)	Weight (kg)
838-702	4	3	4.95	5	4.1	5	2.3	0.8	1	0.7	0.7	0.3	0.7	0.01
838-703	5	4	5.95	6	5.1	6	2.3	1	1	0.7	0.7	0.4	0.7	0.01
838-704	6	5	7.95	8	6.1	7	3.7	1.5	1.5	1.2	1	0.6	1.2	0.01
838-705	8	6.5	9.95	10	8.1	9	4.2	1.8	2	1.2	1.5	0.6	1.2	0.01
838-706	10	8	11.95	12	10.1	13.5	5.3	2.7	2.5	1.8	2	1	2	0.01
838-707	12	10	13.95	14	12.1	16	5.5	3.5	2.5	1.8	2	1.5	2.5	0.01

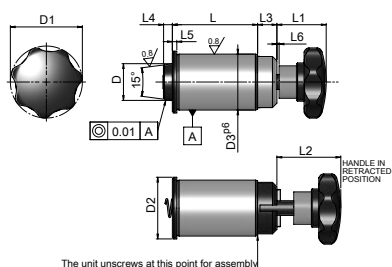


P1 = Initial Spring Force (kgf)
 P2 = Final Spring Force (kgf)

WDS 843 Spring Plunger - Plastic body

Body - Plastic, Spring - 1.4310
 Ball - Stainless Steel/Delrin

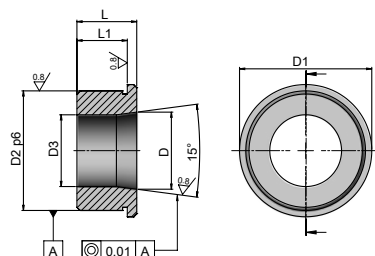
Delrin	Stainless Steel	D	D1	E	L	L1	P1 Initial (kgf)	P2 Final (kgf)	Weight (kg)
843-206	843-606	M6	3.5	1	14	1	0.9	1.3	0.01
843-208	843-608	M8	5	1.2	16	1.5	1.5	3	0.01
843-210	843-610	M10	6	1.6	19	2	2	4	0.01



Index Plunger - Taper - Parking/Non-Parking WDS 645

Body Steel BS.970 Gr.230M07 case hardened and ground
Plunger Steel BS.970 Gr.080M15 case hardened and ground

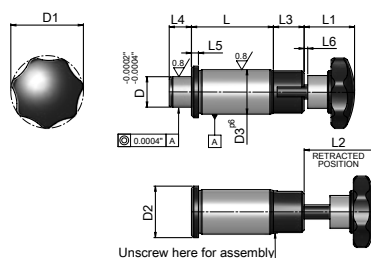
Parking	Non-Parking	D	D1	D2	D3 p6	L	L3	L4	L5	L6	Type A L1	Type B L2	Weight (kg)
645-2005P	645-2005	10	25	19	16	31	13	6	2.5	1.5	16	22	0.07
645-2015P	645-2015	16	40	28	25	42	13	6	3	1.5	26.5	32.5	0.21
645-201P	645-201	13	28	22	19	35	13	6	3	1.5	21.5	27.5	0.1
645-2025P	645-2025	20	40	32	30	51	13	6	3	1.5	26.5	32.5	0.33
645-202P	645-202	19	40	32	28.5	51	13	6	3	1.5	26.5	32.5	0.31
645-203P	645-203	25	50	42	38	58	13	6	3	1.5	33.5	39.5	0.63



Index Plunger Bush - Taper WDS 646

Steel BS.970 Gr. 220M07 case hardened and ground

WDS No.	D	D1	D2 p6	D3	L	L1	Weight (kg)
646-2005	9.5	19	16	8.2	11	8.5	0.01
646-201	12.5	22	19	10.8	13	10	0.02
646-2015	15.5	28	25	13.8	17	14	0.05
646-202	18.5	32	28.5	16.8	16	13	0.06
646-2025	19.5	32	30	17.8	16	13	0.06
646-203	25.4	42	38	22.8	19	16	0.12

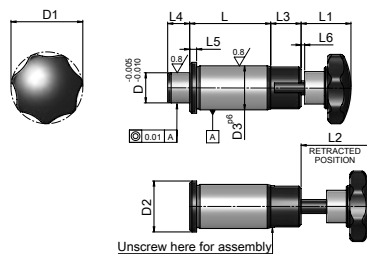


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Index Plunger Parallel - Inch - Parking/Non-Parking WDS 647

Body - Steel BS.970 Gr.230M07 case hardened and ground
Plunger - Steel BS.970 Gr.080M15 case hardened and ground

Parking	Non-Parking	D	D1	D2	D3 p6	L	L1	L2	L3	L4	L5	L6	Weight (kg)
647-01P	647-01	1/2	40	22.2	0.75	34.9	20	31	13	9.5	3	1.5	0.12
647-02P	647-02	3/4	50	31.8	1.125	50.8	32	43	13	9.5	3	1.5	0.34

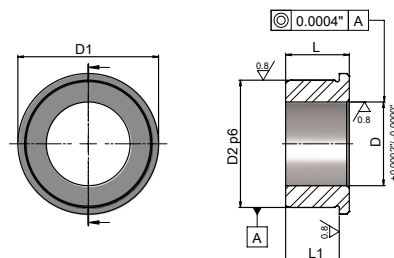


WDS 647 Index Plunger Parallel - Metric - Parking/Non-Parking

Body - Steel BS.970 Gr.230M07 case hardened and ground
Plunger - Steel BS.970 Gr.080M15 case hardened and ground

Parking	Non Parking	D	D1	D2	D3 p6	L	L1	L2	L3	L4	L5	L6	Weight (kg)
647-2005P	647-2005	10	25	19	16	31	16	26.5	13	9.5	2.5	1.5	0.07
647-201P	647-201	13	28	22	19	35	21.5	32	13	9.5	3	1.5	0.12
647-2015P	647-2015	16	40	28	25	42	26.5	37	13	9.5	3	1.5	0.22
647-2025P	647-202	19	40	32	28.5	51	26.5	37	13	9.5	3	1.5	0.34
647-202P	647-2025	20	40	32	30	51	26.5	37	13	9.5	3	1.5	0.33
647-203P	647-203	25	50	42	38	58	33.5	44	13	9.5	3	1.5	0.64

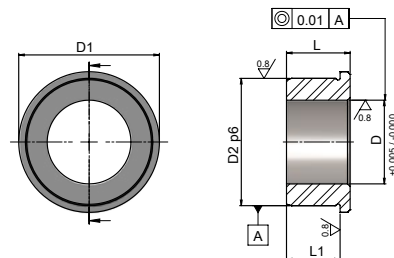
IN"



WDS 648 Index Plunger Bush Parallel - Inch

Steel BS.970 Gr. 220M07 case hardened and ground

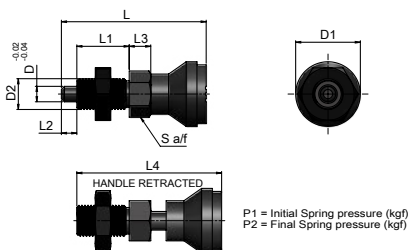
WDS No.	D	D1	D2 p6	L	L1	Weight (kg)
648-01	1/2 inch	22.2	0.750 inch	12.7	9.5	0.02
648-02	3/4 inch	32	1.125 inch	15.9	12.7	0.05



WDS 648 Index Plunger Bush Parallel - Metric

Steel BS.970 Gr. 220M07 case hardened and ground

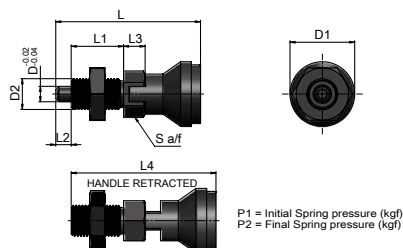
WDS No.	D	D1	D2 p6	L	L1	Weight (kg)
648-2005	10	19	16	11	8.5	0.01
648-201	13	22	19	13	10	0.02
648-2015	16	28	25	17	14	0.04
648-202	19	32	28.5	16	13	0.05
648-2025	20	32	30	16	13	0.05
648-203	25	42	38	19	16	0.1



Spring Loaded Index Bolt - Standard Type WDS 654

Steel body and pin (pin hardened), Chemical black finish
Supplied complete with lock nut, with red or black knob

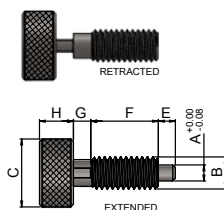
Black	Red	D	D1	D2	L	L1	L2	L3	L4	S	Weight (kg)
654-201	654-201R	5	21	M10 x 1	47	17	5	7	33	13	0.03
654-202	654-202R	6	25	M12 x 1.5	56	20	6	8	39	14	0.04
654-203	654-203R	8	33	M16 x 1.5	74	26	8	10	51	19	0.09
654-204	654-204R	10	33	M20 x 1.5	80	28	10	12	55	22	0.15



Spring Loaded Index Bolt - Parking Type WDS 654

Steel body and pin (pin hardened), Chemical black finish
Supplied complete with lock nut, with red or black knob

Black	Red	D	D1	D2	L	L1	L2	L3	L4	S	Weight (kg)
654-201P	654-201RP	5	21	M10 x 1	47	17	5	7	33	13	0.03
654-202P	654-202RP	6	25	M12 x 1.5	56	20	6	8	39	14	0.04
654-203P	654-203RP	8	33	M16 x 1.5	74	26	8	10	51	19	0.09
654-204P	654-204RP	10	33	M20 X 1.5	80	28	10	12	55	22	0.14



P1 = End Force Initial (kg)
P2 = End Force Final (kg)
Pull and 1/4 turn to retain pin in retracted position



303

ZP

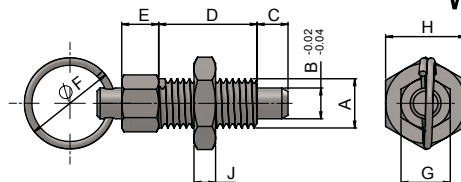
Knurled Index Plunger WDS 655/840

Available in Zinc Plated Steel or 303 Stainless Steel
Spring - Stainless Steel

Zinc Plated	Stainless Steel	A	B	C	E	F	G	H	P1	P2	Type	Weight (kg)
655-206	840-206	3	M6x1.0	13	3.2	12.7	3.2	6.4	0.45	2.27	Parking	0.01
655-208	840-208	4	M8x1.25	16	4.8	16	4.8	7	0.68	2.73	Parking	0.02
655-210	840-210	5	M10x1.5	19	5.5	19	5.5	8	0.68	3.64	Parking	0.03
655-212	840-212	6	M12X1.75	25	6.4	22	6.4	9.5	1.13	4.55	Parking	0.05

303

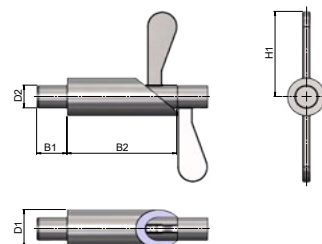
ZP



WDS 658/841 Ring Pull Spring Plungers

Available in Zinc Plated Steel or 303 Stainless Steel

Zinc Plated	Stainless Steel	A	B	C	D	E	F	G	H	J	Weight (kg)
658-206	841-206	M6	4	4.5	12	4.5	14	6	10	3	0.01
658-208	841-208	M8	5	5.5	16	6	18	8	13	4	0.01
658-210	841-210	M10	6	6	20	7.5	24	10	16	5	0.02
658-212	841-212	M12	8	8	24	9	30	12	18	6	0.04

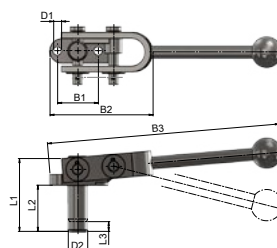


WDS 675 Spring Locator with Adjusting Handle - Precision

Heavy gauge steel precision ground and hardened casing and pin

Casing - BS.817M40T

WDS No.	B1	B2	D1 +0-0.05	D2 + 0 -0.05	H1	Stroke	Weight (kg)
675-101	16	58	20	12	45	16	0.15
675-102	32	116	40	25	90	32	1.1

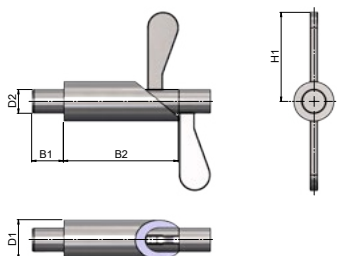


WDS 675 Spring Locator with Ball Handle

Heavy gauge steel precision ground and hardened pin

Spring loaded high precision locating pin

WDS No.	B1	B2	B3	D1	D2 +0 -0/05	L1	L2	L3	Stroke	Weight (kg)
675-201	33.5	84	190	2 x 6.3	16	62	38	8	8	0.36

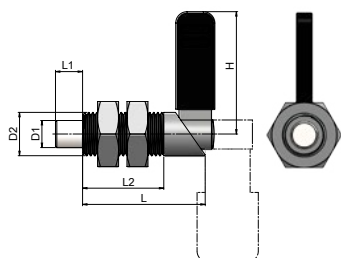


Spring Locator with Adjusting Handle WDS 675

Heavy Gauge Steel

For applications where high precision locating is not required the 675-301 may be more appropriate

WDS No.	B1	B2	D1	D2	H1	Weight (kg)
675-301	13	58	20	10	45	0.14

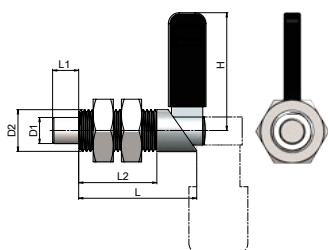


Cam Action Indexing Plungers WDS 675

Body and Pin - Steel, Grip - Polyamide plastic

2pcs Locknut included, M12 size plungers are supplied without the black plastic grip

WDS No.	D1	D2	H	L	L1	L2	Weight (kg)
675-21205	-	-	-	-	-	-	0.05
675-21206	-	-	-	-	-	-	0.05
675-21208	-	-	-	-	-	-	0.05
675-21606	6	M16 x 1.5	42	46	10	30	0.11
675-21608	8	M16 x 1.5	42	46	10	30	0.11
675-21610	10	M16 x 1.5	42	46	10	30	0.11
675-22008	8	M20 x 1.5	52	57	12	36	0.19
675-22010	10	M20 x 1.5	52	57	12	36	0.19
675-22012	12	M20 x 1.5	52	57	12	36	0.19



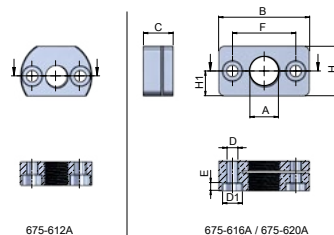
304

Stainless Steel Cam Action Indexing Plungers WDS 675

Body and Pin - 304 Stainless Steel, Grip - Polyamide plastic

2pcs Locknut included, M12 size plungers are supplied without the black plastic grip

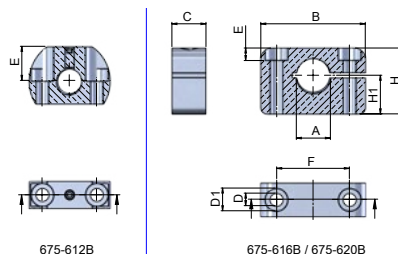
WDS No.	D1	D2	H	L	L1	L2	Weight (kg)
675-61206	6	M12 x 1.5	32	38	8	26	0.05
675-61608	8	M16 x 1.5	42	43	10	30	0.11
675-62008	8	M20 x 1.5	52	57	12	36	0.19
675-62010	10	M20 x 1.5	52	57	12	36	0.19
675-62012	12	M20 x 1.5	52	57	12	36	0.19



WDS 675 Vertical Mounting Bracket for Cam Action Indexing Plungers

Aluminium 3.2163 - Black Anodized

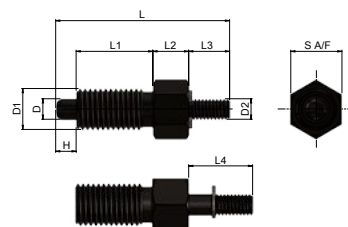
WDS No.	A	B	C	D	D1	E	F	H	H1	Weight (kg)
675-612A	M12x1.5	36	12	5.5	10	5.4	24	25	10	0.03
675-616A	M16x1.5	46	15	5.5	10	3.9	32	25	12.5	0.07
675-620A	M20x1.5	46	15	5.5	10	3.9	32	25	12.5	0.07



WDS 675 Horizontal Mounting Bracket for Cam Action Indexing Plungers

Aluminium 3.2163 - Black Anodized

WDS No.	A	B	C	D	D1	E	F	H	H1	Weight (kg)
675-612B	M12 x 1.5	36	12	5.5	10	5.5	24	25	10	0.04
675-616B	M16 x 1.5	46	15	5.5	10	5.5	32	29	17	0.07
675-620B	M20 x 1.5	46	15	5.5	10	5.5	32	29	17	0.07

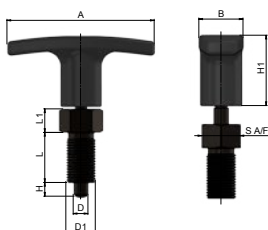


WDS 678 Steel Index Plunger with Threaded Spindle

Body and Stem - BS 970 080M40, Spring - Stainless Steel

P1= Spring Initial Pressure (kgf), P2= Spring Final Pressure (kgf)

Parking	Non-Parking	D	D1	D2	H Max	L	L1	L2	L3	L4	P1	P2	S	Weight (kg)
678-2105P	678-2105	5	M10 x 1.0	M5 x 0.80	5	38	17	8	8	13.5	0.5	1.2	13	0.02
678-2126P	678-2126	6	M12 x 1.5	M6 x 1.00	6	43	20	9	8	14.5	0.6	1.4	14	0.03
678-2168P	678-2168	8	M16 x 1.5	M8 x 1.25	8	56	26	10	12	20.5	1.5	3.5	19	0.07
678-2200P	678-2200	10	M20 x 1.5	M8 x 1.25	10	62	28	12	12	22.5	1.5	3.4	22	0.13
678-2202P	678-2202	12	M20 x 1.5	M8 x 1.25	12	64	28	14	12	24.5	1.5	3.9	22	0.13

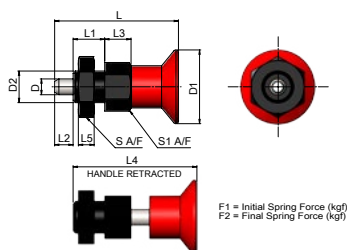


Steel T-Handle Index Plunger WDS 678

Body and Stem - BS 970 080M40, T Handle - PA6GF30

P1= Spring Initial Pressure (kgf), P2= Spring Final Pressure (kgf)

Parking	Non-Parking	A	B	D	D1	H Max	H1	L	L1	P1	P2	S	Weight (kg)
678-2105TP	678-2105T	50	15	5	M10 x 1.0	5	24	17	8	0.5	1.2	13	0.03
678-2126TP	678-2126T	50	15	6	M12 x 1.5	6	24	20	9	0.6	1.4	14	0.04
678-2168TP	678-2168T	60	18	8	M16 x 1.5	8	33	26	10	1.5	3.5	19	0.1
678-2200TP	678-2200T	72	19	10	M20 x 1.5	10	34	28	12	1.5	3.4	22	0.16
678-2202TP	678-2202T	72	19	12	M20 x 1.5	12	34	28	14	1.5	3.9	22	0.16



F1 = Initial Spring Force (kgf)
F2 = Final Spring Force (kgf)

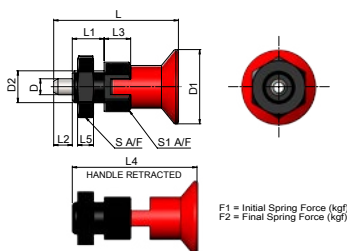


Compact Spring Loaded Index Bolt - Standard Type WDS 722

Steel body and w hardened Class 5.8), with red or black knob

Pin Tolerance D -0.02/-0.04

Black	Red	D	D1	D2	F1	F2	L	L1	L2	L3	L4	L5	S	S1	Weight (kg)
722-206	722-206R	3	14	M6 x 0.75	0.4	1	25.5	6	3.5	5	22	3	10	8	0.01
722-208	722-208R	4	18	M8 x 1.0	0.4	1.2	29.5	6	4	6	23.5	4	13	10	0.01
722-210	722-210R	5	21	M10 x 1.0	0.5	1.2	34.5	8	5	7	29.5	5	17	13	0.02
722-212	722-212R	6	25	M12 x 1.5	0.6	1.4	41.7	10	6	8	35.7	6	19	14	0.03
722-216	722-216R	8	33	M16 x 1.5	1.4	2.8	54	12	8	10	46	8	24	19	0.07
722-220	722-220R	10	33	M20 x 1.5	1.5	3.2	61	15	10	12	51	10	30	22	0.12



F1 = Initial Spring Force (kgf)
F2 = Final Spring Force (kgf)

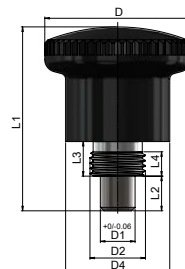


Compact Spring Loaded Index Bolt - Parking Type WDS 722

Steel body and pin (pin hardened Class 5.8), with red or black knob

Pin Tolerance D -0.02/-0.04

Black	Red	D	D1	D2	F1	F2	L	L1	L2	L3	L4	L5	S	S1	Weight (kg)
722-206P	722-206RP	3	14	M6 x 0.75	0.4	1	25.5	6	3.5	5	22	3	10	8	0.01
722-208P	722-208RP	4	18	M8 x 1.0	0.4	1.2	29.5	6	4	6	23.5	4	13	10	0.01
722-210P	722-210RP	5	21	M10 x 1.0	0.5	1.2	34.5	8	5	7	29.5	5	17	13	0.02
722-212P	722-212RP	6	25	M12 x 1.5	0.6	1.4	41.7	10	6	8	35.7	6	19	14	0.03
722-216P	722-216RP	8	33	M16 x 1.5	1.4	2.8	54	12	8	10	46	8	24	19	0.07
722-220P	722-220RP	10	33	M20 x 1.5	1.5	3.2	61	15	10	12	51	10	30	22	0.11

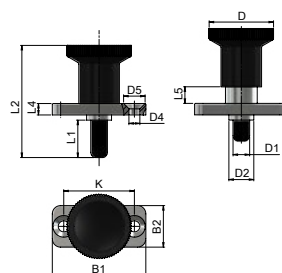


WDS 730 Mini Index Plungers

Knob - PA Black, Body - Zinc Plated Steel, Thin Nut – Zinc Plated Steel (included)

Spring & Plunger - Stainless Steel

Parking	Non-Parking	D	D1	D2	D4	L1	L2	L3	L4	Weight (kg)
730-2085P	730-2085	21	5	M8x0.75	15	26.5	5	5	3.5	0.02
730-2106P	730-2106	25	6	M10x1.0	18	34	7	7	4.5	0.03
730-2107P	730-2107	25	7	M10x1.0	18	34	7	7	4.5	0.03



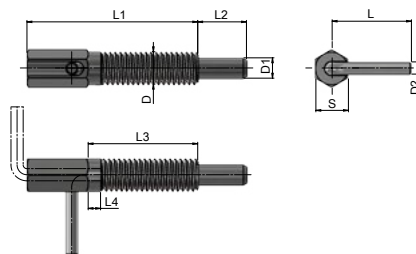
WDS 731 Plate Mounting Index Plungers

Knob - PA Black, Flange - Zinc Die-casting

Spring - Steel, Plunger - Steel Chemical black finish

Parking	Non-Parking	B1	B2	D	D1	D2	D4	D5	K	L1	L2	L4	L5	Weight (kg)
731-2606P	731-2606	40	18	25	6	10	4.3	8.3	30	6	0	4.5	6	0.04
731-2614P	731-2614	40	18	25	6	10	4.3	8.3	30	14	0	4.5	6	0.04
731-2808P	731-2808	46	20	31	8	12	5.3	10.4	34	8	0	5.5	8	0.06
731-2818P	731-2818	46	20	31	8	12	5.3	10.4	34	18	0	5.5	8	0.06

ZP

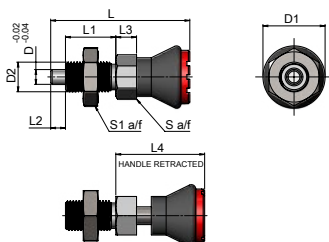


WDS 732 L-handle Indexing Plungers

Body & Handle - Zinc Plated Steel

Spring & Plunger - 304 Stainless Steel

WDS No.	D	D1	D2	L	L1	L2	L3	L4	P1 (kgf)	P2 (kgf)	Tightening Torque (Nm)	Weight (kg)
732-2085P	M8	5	3	19.5	42	12	27	3.1	0.35	1.35	4.5	0.02
732-2106P	M10	6	3.5	24	51	14	33.5	3.7	0.4	1.6	10	0.03
732-2128P	M12	8	5	32	54	19	31.8	4.3	0.4	2.2	13	0.05
732-2160P	M16	10	5	33.3	77.5	25	50.5	5	0.4	2.3	42	0.11

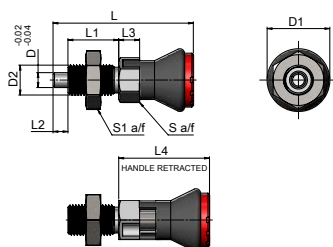


Stainless Spring Loaded Index Bolt - Standard Type WDS 826

Body - Stainless Steel BS970 Gr 321S12, Knob - Thermoplastic in black or red, Hardened Pin

P = Spring force initial pressure approx.(kgf), P1 = Spring force final pressure approx.(kgf)

Black	Red	D	D1	D2	L	L1	L2	L3	L4	P	P1	S	Weight (kg)
826-201	826-201R	5	21	M10 x 1	47	17	5	7	33	0.5	1.2	13	0.03
826-202	826-202R	6	25	M12 x 1.5	56	20	6	8	39	0.7	1.7	14	0.04
826-203	826-203R	8	33	M16 x 1.5	74	26	8	10	51	1.6	3.5	19	0.09
826-204	826-204R	10	33	M20 x 1.5	80	28	10	12	55	1.4	3.9	22	0.09

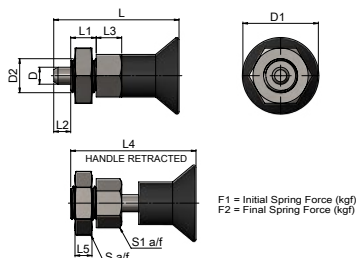


Stainless Spring Loaded Index Bolt - Parking Type WDS 826

Body - Stainless Steel BS970 Gr 321S12, Knob - Thermoplastic in black or red, Hardened Pin

P = Spring force initial pressure approx.(kgf), P1 = Spring force final pressure approx.(kgf)

Black	Red	D	D1	D2	L	L1	L2	L3	L4	P	P1	S	Weight (kg)
826-201P	826-201RP	5	21	M10 x 1	47	17	5	7	33	0.5	1.2	13	0.03
826-202P	826-202RP	6	25	M12 x 1.5	56	20	6	8	39	0.7	1.7	14	0.04
826-203P	826-203RP	8	33	M16 x 1.5	74	26	8	10	51	1.6	3.5	19	0.09
826-204P	826-204RP	10	33	M20 x 1.5	80	28	10	12	55	1.4	3.9	22	0.14

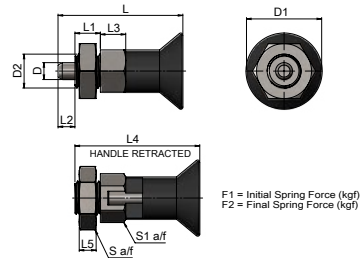


Stainless Compact Spring Loaded Index Bolt - Standard Type WDS 844

Body - Stainless Steel BS970 Gr 321S12, Knob - Thermoplastic in black or red

F1 = Initial Spring Force (kgf), F2 = Final Spring Force (kgf)

Black	Red	D	D1	D2	F1	F2	L	L1	L2	L3	L4	L5	S	S1	Weight (kg)
844-206	844-206R	3	14	M6 x 0.75	0.4	1	25.5	6	3.5	5	22	3	10	8	0.01
844-208	844-208R	4	18	M8 x 1.0	0.4	1.2	29.5	6	4	6	23.5	4	13	10	0.01
844-210	844-210R	5	21	M10 x 1.0	0.5	1.2	34.5	8	5	7	29.5	5	17	13	0.02
844-212	844-212R	6	25	M12 x 1.5	0.6	1.4	41.7	10	6	8	35.7	6	19	14	0.03
844-216	844-216R	8	33	M16 x 1.5	1.4	2.8	54	12	8	10	46	8	24	19	0.07
844-220	844-220R	10	33	M20 x 1.5	1.5	3.2	61	15	10	12	51	10	30	22	0.12

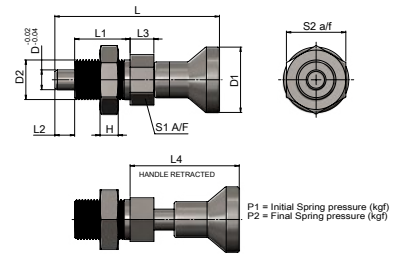


WDS 844 Stainless Compact Spring Loaded Index Bolt - Parking Type

Body - Stainless Steel BS970 Gr 321S12, Knob - Thermoplastic in black or red

F1 = Initial Spring Force (kgf), F2 = Final Spring Force (kgf)

Black	Red	D	D1	D2	F1	F2	L	L1	L2	L3	L4	L5	S	S1	Weight (kg)
844-206P	844-206RP	3	14	M6 x 0.75	0.4	1	25.5	6	3.5	5	22	3	10	8	0.01
844-208P	844-208RP	4	18	M8 x 1.0	0.4	1.2	29.5	6	4	6	23.5	4	13	10	0.01
844-210P	844-210RP	5	21	M10 x 1.0	0.5	1.2	34.5	8	5	7	29.5	5	17	13	0.02
844-212P	844-212RP	6	25	M12 x 1.5	0.6	1.4	41.7	10	6	8	35.7	6	19	14	0.03
844-216P	844-216RP	8	33	M16 x 1.5	1.4	2.8	54	12	8	10	46	8	24	19	0.07
844-220P	844-220RP	10	33	M20 x 1.5	1.5	3.2	61	15	10	12	51	10	30	22	0.11

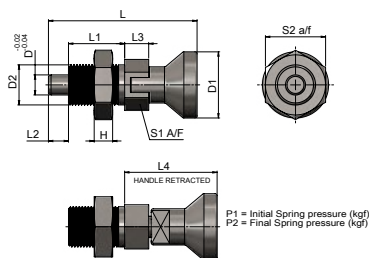


WDS 846 Spring Loaded Index Bolt - Stainless Steel

Body & Knob - Stainless Steel BS970 Gr 321S12, Hardened Pin

P1 = Initial Spring Force (kgf), P2 = Final Spring Force (kgf)

WDS No.	D	D1	D2	H	L	L1	L2	L3	L4	P1	P2	S1	S2	Weight (kg)
846-200	4	18	M8 x 1.0	4	43	15	4	6	28	0.6	1.2	10	13	0.03
846-201	5	21	M10 x 1.0	5	50	17	5	7	33	0.5	1.2	13	17	0.03
846-202	6	25	M12 x 1.5	6	59	20	6	8	39	0.6	1.4	14	19	0.05
846-203	8	33	M16 x 1.5	7.8	77	26	8	10	51	1.5	3.4	19	24	0.1
846-204	10	33	M20 x 1.5	9.8	83	28	10	14	55	1.5	3.3	22	30	0.11
846-206	16	40	M24 x 2.0	12	106	32	12	18	74	2	4.5	27	36	0.45

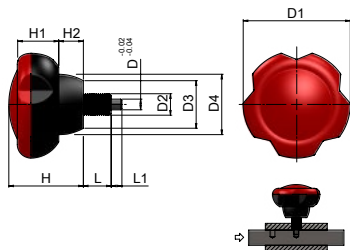


Spring Loaded Index Bolt - Parking Type - Stainless Steel WDS 846

Body & Knob - Stainless Steel BS970 Gr 321S12, Hardened Pin

P1 = Initial Spring Force (kgf), P2 = Final Spring Force (kgf)

WDS No.	D	D1	D2	H	L	L1	L2	L3	L4	P1	P2	S1	S2	Weight (kg)
846-200P	4	18	M8 x 1.0	4	38.5	15	4	6	23.5	0.59	1.18	10	13	0.02
846-201P	5	21	M10 x 1.0	5	43.5	17	5	7	26.5	0.49	1.18	13	17	0.03
846-202P	6	25	M12 x 1.5	6	51.7	20	6	8	31.7	0.59	1.37	14	19	0.05
846-203P	8	33	M16 x 1.5	7.8	68	26	8	10	42	1.47	3.43	19	24	0.16
846-204P	10	33	M20 x 1.5	9.8	74	28	10	14	46	1.47	3.33	22	30	0.11
846-206P	16	40	M24 x 2.0	12	96	32	12	18	64	1.96	4.51	27	36	0.39



TP

Locating and Clamp Grip WDS 8480

Body - Thermoplastic, Indexing Pin Hardened & Ground

Indexing Pin & Screw - Steel 5.8 - Chemical black

Black Grey	Pale Grey	Cadmium Yellow	Traffic Red	D	D1	D2	D3	D4	H	H1	H2	L	L1	Weight (kg)
8480-202BG	8480-202PG	8480-202CY	8480-202TR	5	50	M10 x 1	22.2	28.2	34.8	17.8	11.5	13	5	0.03
8480-204BG	8480-204PG	8480-204CY	8480-204TR	6	50	M12 x 1.5	22.2	28.2	34.8	17.8	11.5	17	6	0.04
8480-206BG	8480-206PG	8480-206CY	8480-206TR	8	63	M16 x 1.5	28	35.5	44	22.5	14.5	22	8	0.1
8480-208BG	8480-208PG	8480-208CY	8480-208TR	10	63	M20 x 1.5	28	35.5	44	22.5	14.5	24	10	0.14



LOCATION PINS & POSITIONING PARTS

P 759-818

This wide range of location pins includes dowel pins, stepped location pins, quick release & detent pins, index plungers, lanyards and retainers, removable location pins, ball reference pins, ball lock fixturing pins, spring loaded stops, jig location elements, set collars and tenons.



QUICK RELEASE PINS

Quick release or pip pins as they are also commonly known allow the user to quickly locate, align and fasten two applications. Once the fastening pin is inserted into the application, the location pin cannot be removed until the user depresses a button on the top of the T handle or recessed grip. Once the button is depressed this releases two balls at the base of the pin allowing the user to insert and remove from the hole freely.

P 759-772



DETENT PINS

Detent pins are a quick and easy way to locate and secure an application in place. The quick release ball locking pin uses two spring ball bearings to prevent the pin from working its way free from the application.

P 773-779



LANYARDS AND RETAINERS

Steel lanyards and retainers can be used on location products such as quick release pins, safety pull pins, ring pull spring plungers.

P 780-784



REMOVABLE LOCATION PINS

Removable location pins come in two styles: T bar pull or with an attachment hole. Both metric and imperial (inch) sizes are available

P 785-787



STEPPED LOCATION PINS

Location pins are commonly used on jig and fixtures for locating items with extreme accuracy. These location pins are available in metric and imperial versions with options of a diamond, round or flat head. Often also referred to as fixture pins or seating pins these stepped location pins allow the user to locate quickly and accurately.

P 788-790





ENGINEERS PRECISION DOWEL PINS

Engineers precision dowels are precision engineered location pins and are used for accurate locating and positioning. Available in hardened and ground steel with a silver steel variant. Dowel pins are available in metric or inch sizes.

P 791-795



BALL REFERENCE PINS & TOOLING BALLS

Ball reference pins or tooling balls as they are also known allow the user to reference points on an assembly and to accurately position a workpiece ready for machining.

P 796-797



BALL LOCK FIXTURE PINS, SHANKS AND BUSHES

The ball lock mounting system from WDS can reduce machine bed set up times without sacrificing accuracy. Ball lock systems remove the need for locating dowel pins. They are ideal for fixing component mounting plates onto machine beds and towers.

P 798-803



SPRING LOADED STOPS & SPRING RETAINERS

Spring loaded retainers and stops allow the user to locate and position a workpiece within a fixture. Force is exerted via a spring ensuring a workpiece is accurately located in a fixture. Bushes can be used with spring retainers for fine positioning to the workpiece.

P 804-807



CLAMPING PINS (CAPTIVE)

Captive clamping pins use a locking bush to accurately locate and clamp a fixture with ease.

The range includes a choice of handle, from the traditional "T" Handle designs to an ease of access star or torque knob allowing the user to quickly fasten the pin even on the tightest of fixtures

P 808-815

JIG LOCATION PARTS

The jig location parts range includes: adjustable locators, spring loaded catches, rest blocks, eccentric jig buttons and jig pillars.

P 816-817



DIGITAL POSITION INDICATORS

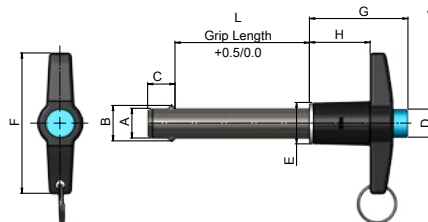
WDS digital position indicators (DPI) offer accurate positioning and locating for repeat action. Choices include both horizontal and vertical shaft fitting orientation with clockwise and anti-clockwise action. Depending on the desired gear ratio these position indicators fit on to a shaft and will measure accurate rotations ensuring you have the same reading and position every time.

P 818



AL

17-4



WDS 950 Quick Release Pins (Pip Pins) with T Handle - Metric

Black Aluminium T-handle, Blue Anodised Aluminium button, Pin - 17-4 PH Stainless Steel

(See technical page vii)

WDS No.	A Max	A Min	B +/-0.25	C +/-1.0	D Min	E Min	F Min	G Max	H1 Min	Grip Length (mm)	Pin Dia	Weight (kg)
950-951000	4.96	4.92	5.54	6	6	12	45	32	19	10	5	0.01
950-951001	4.96	4.92	5.54	6	6	12	45	32	19	15	5	0.02
950-951002	4.96	4.92	5.54	6	6	12	45	32	19	20	5	0.01
950-951003	4.96	4.92	5.54	6	6	12	45	32	19	25	5	0.01
950-951004	4.96	4.92	5.54	6	6	12	45	32	19	30	5	0.01
950-9510045	4.96	4.92	5.54	6	6	12	45	32	19	35	5	0.01
950-951005	4.96	4.92	5.54	6	6	12	45	32	19	40	5	0.01
950-9510055	4.96	4.92	5.54	6	6	12	45	32	19	45	5	0.01
950-951006	4.96	4.92	5.54	6	6	12	45	32	19	50	5	0.02
950-951007	4.96	4.92	5.54	6	6	12	45	32	19	60	5	0.01
950-951008	4.96	4.92	5.54	6	6	12	45	32	19	70	5	0.02
950-951009	4.96	4.92	5.54	6	6	12	45	32	19	80	5	0.02
950-951010	4.96	4.92	5.54	6	6	12	45	32	19	90	5	0.02
950-951011	4.96	4.92	5.54	6	6	12	45	32	19	100	5	0.02
950-951012	5.96	5.92	6.99	7	6	12	45	32	19	10	6	0.01
950-951013	5.96	5.92	6.99	7	6	12	45	32	19	15	6	0.01
950-951014	5.96	5.92	6.99	7	6	12	45	32	19	20	6	0.01
950-951015	5.96	5.92	6.99	7	6	12	45	32	19	25	6	0.01
950-951016	5.96	5.92	6.99	7	6	12	45	32	19	30	6	0.03
950-9510165	5.96	5.92	6.99	7	6	12	45	32	19	35	6	0.01
950-951017	5.96	5.92	6.99	7	6	12	45	32	19	40	6	0.01
950-9510175	5.96	5.92	6.99	7	6	12	45	32	19	45	6	0.02
950-951018	5.96	5.92	6.99	7	6	12	45	32	19	50	6	0.02
950-951019	5.96	5.92	6.99	7	6	12	45	32	19	60	6	0.02
950-951020	5.96	5.92	6.99	7	6	12	45	32	19	70	6	0.02
950-951021	5.96	5.92	6.99	7	6	12	45	32	19	80	6	0.03
950-951022	5.96	5.92	6.99	7	6	12	45	32	19	90	6	0.03
950-951023	5.96	5.92	6.99	7	6	12	45	32	19	100	6	0.04
950-951024	7.96	7.92	9.42	8	6	12	45	32	19	10	8	0.01
950-951025	7.96	7.92	9.42	8	6	12	45	32	19	15	8	0.02
950-951026	7.96	7.92	9.42	8	6	12	45	32	19	20	8	0.01
950-951027	7.96	7.92	9.42	8	6	12	45	32	19	25	8	0.02
950-951028	7.96	7.92	9.42	8	6	12	45	32	19	30	8	0.02
950-9510285	7.96	7.92	9.42	8	6	12	45	32	19	35	8	0.02
950-951029	7.96	7.92	9.42	8	6	12	45	32	19	40	8	0.02
950-9510295	7.96	7.92	9.42	8	6	12	45	32	19	45	8	0.03
950-951030	7.96	7.92	9.42	8	6	12	45	32	19	50	8	0.03
950-951031	7.96	7.92	9.42	8	6	12	45	32	19	60	8	0.04
950-951032	7.96	7.92	9.42	8	6	12	45	32	19	70	8	0.04
950-951033	7.96	7.92	9.42	8	6	12	45	32	19	80	8	0.05
950-951034	7.96	7.92	9.42	8	6	12	45	32	19	90	8	0.05
950-951035	7.96	7.92	9.42	8	6	12	45	32	19	100	8	0.06
950-951036	9.96	9.92	11.86	9	7	14	50	37	23	10	10	0.01
950-951037	9.96	9.92	11.86	9	7	14	50	37	23	15	10	0.01
950-951038	9.96	9.92	11.86	9	7	14	50	37	23	20	10	0.02
950-951039	9.96	9.92	11.86	9	7	14	50	37	23	25	10	0.02
950-951040	9.96	9.92	11.86	9	7	14	50	37	23	30	10	0.03
950-9510405	9.96	9.92	11.86	9	7	14	50	37	23	35	10	0.03

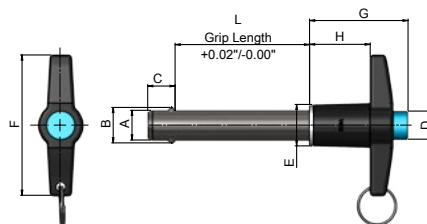


WDS No.	A Max	A Min	B +/-0.25	C +/-1.0	D Min	E Min	F Min	G Max	H1 Min	Grip Length (mm)	Pin Dia	Weight (kg)
950-951041	9.96	9.92	11.86	9	7	14	50	37	23	40	10	0.04
950-9510415	9.96	9.92	11.86	9	7	14	50	37	23	45	10	0.04
950-951042	9.96	9.92	11.86	9	7	14	50	37	23	50	10	0.05
950-951043	9.96	9.92	11.86	9	7	14	50	37	23	60	10	0.06
950-951044	9.96	9.92	11.86	9	7	14	50	37	23	70	10	0.06
950-951045	9.96	9.92	11.86	9	7	14	50	37	23	80	10	0.07
950-951046	9.96	9.92	11.86	9	7	14	50	37	23	90	10	0.09
950-951047	9.96	9.92	11.86	9	7	14	50	37	23	100	10	0.09
950-951049	11.96	11.92	14.45	10	10	18	59	43	25	15	12	0.02
950-951050	11.96	11.92	14.45	10	10	18	59	43	25	20	12	0.03
950-951051	11.96	11.92	14.45	10	10	18	59	43	25	25	12	0.03
950-951052	11.96	11.92	14.45	10	10	18	59	43	25	30	12	0.04
950-9510525	11.96	11.92	14.45	10	10	18	59	43	25	35	12	0.05
950-951053	11.96	11.92	14.45	10	10	18	59	43	25	40	12	0.05
950-9510535	11.96	11.92	14.45	10	10	18	59	43	25	45	12	0.06
950-951054	11.96	11.92	14.45	10	10	18	59	43	25	50	12	0.07
950-951055	11.96	11.92	14.45	10	10	18	59	43	25	60	12	0.08
950-951056	11.96	11.92	14.45	10	10	18	59	43	25	70	12	0.09
950-951057	11.96	11.92	14.45	10	10	18	59	43	25	80	12	0.11
950-951058	11.96	11.92	14.45	10	10	18	59	43	25	90	12	0.12
950-951059	11.96	11.92	14.45	10	10	18	59	43	25	100	12	0.13
950-951062	15.96	15.92	19	14	14	23	78	51	29	20	16	0.05
950-951063	15.96	15.92	19	14	14	23	78	51	29	25	16	0.06
950-951064	15.96	15.92	19	14	14	23	78	51	29	30	16	0.07
950-9510645	15.96	15.92	19	14	14	23	78	51	29	35	16	0.1
950-951065	15.96	15.92	19	14	14	23	78	51	29	40	16	0.09
950-951066	15.96	15.92	19	14	14	23	78	51	29	50	16	0.12
950-951067	15.96	15.92	19	14	14	23	78	51	29	60	16	0.14
950-951068	15.96	15.92	19	14	14	23	78	51	29	70	16	0.17
950-951069	15.96	15.92	19	14	14	23	78	51	29	80	16	0.19
950-951070	15.96	15.92	19	14	14	23	78	51	29	90	16	0.21
950-951071	15.96	15.92	19	14	14	23	78	51	29	100	16	0.24
950-951074	19.96	19.92	24.08	17	19	31	88	55	29	20	20	0.07
950-951076	19.96	19.92	24.08	17	19	31	88	55	29	30	20	0.11
950-951077	19.96	19.92	24.08	17	19	31	88	55	29	40	20	0.15
950-951078	19.96	19.92	24.08	17	19	31	88	55	29	50	20	0.18
950-951079	19.96	19.92	24.08	17	19	31	88	55	29	60	20	0.22
950-951080	19.96	19.92	24.08	17	19	31	88	55	29	70	20	0.26
950-951081	19.96	19.92	24.08	17	19	31	88	55	29	80	20	0.29
950-951082	19.96	19.92	24.08	17	19	31	88	55	29	90	20	0.33
950-951083	19.96	19.92	24.08	17	19	31	88	55	29	100	20	0.37
950-951089	24.96	24.92	30.94	22	19	31	88	58	33	40	25	0.23
950-951090	24.96	24.92	30.94	22	19	31	88	58	33	50	25	0.29
950-951091	24.96	24.92	30.94	22	19	31	88	58	33	60	25	0.34
950-951092	24.96	24.92	30.94	22	19	31	88	58	33	70	25	0.4
950-951093	24.96	24.92	30.94	22	19	31	88	58	33	80	25	0.46
950-951094	24.96	24.92	30.94	22	19	31	88	58	33	90	25	0.52
950-951095	24.96	24.92	30.94	22	19	31	88	58	33	100	25	0.57

AL

17-4

IN"



WDS 950 Quick Release Pins (Pip Pins) with T Handle - Inch

Black Aluminium T-handle, Blue Anodised Aluminium button, Pin - 17-4 PH Stainless Steel

(See technical page vii)

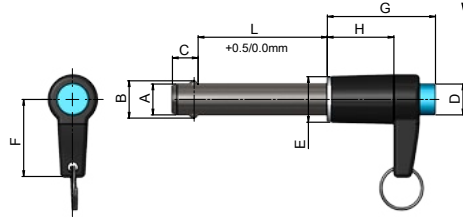
WDS No.	A Max	A Min	B +/- .005	C +.000 -.040	D Min	E Min	F Min	G Max	H Min	Grip length (inches)	Pin Dia	Weight (kg)
950-901002	0.1885	0.187	0.22	0.26	0.25	0.38	1.75	1.27	0.77	1	3/16	0.02
950-901003	0.1885	0.187	0.22	0.26	0.25	0.38	1.75	1.27	0.77	1.25	3/16	0.01
950-901004	0.1885	0.187	0.22	0.26	0.25	0.38	1.75	1.27	0.77	1.5	3/16	0.01
950-901005	0.1885	0.187	0.22	0.26	0.25	0.38	1.75	1.27	0.77	1.75	3/16	0.02
950-901006	0.1885	0.187	0.22	0.26	0.25	0.38	1.75	1.27	0.77	2	3/16	0.01
950-901007	0.1885	0.187	0.22	0.26	0.25	0.38	1.75	1.27	0.77	2.25	3/16	0.03
950-901008	0.1885	0.187	0.22	0.26	0.25	0.38	1.75	1.27	0.77	2.5	3/16	0.02
950-901009	0.1885	0.187	0.22	0.26	0.25	0.38	1.75	1.27	0.77	3	3/16	0.02
950-901010	0.1885	0.187	0.22	0.26	0.25	0.38	1.75	1.27	0.77	3.5	3/16	0.02
950-901011	0.1885	0.187	0.22	0.26	0.25	0.38	1.75	1.27	0.77	4	3/16	0.02
950-901015	0.1885	0.187	0.22	0.26	0.25	0.38	1.75	1.27	0.77	6	3/16	0.04
950-901016	0.2485	0.247	0.289	0.29	0.25	0.38	1.75	1.27	0.77	0.5	1/4	0.01
950-901017	0.2485	0.247	0.289	0.29	0.25	0.38	1.75	1.27	0.77	0.75	1/4	0.01
950-901018	0.2485	0.247	0.289	0.29	0.25	0.38	1.75	1.27	0.77	1	1/4	0.01
950-901019	0.2485	0.247	0.289	0.29	0.25	0.38	1.75	1.27	0.77	1.25	1/4	0.01
950-901020	0.2485	0.247	0.289	0.29	0.25	0.38	1.75	1.27	0.77	1.5	1/4	0.01
950-901021	0.2485	0.247	0.289	0.29	0.25	0.38	1.75	1.27	0.77	1.75	1/4	0.02
950-901022	0.2485	0.247	0.289	0.29	0.25	0.38	1.75	1.27	0.77	2	1/4	0.02
950-901023	0.2485	0.247	0.289	0.29	0.25	0.38	1.75	1.27	0.77	2.25	1/4	0.02
950-901024	0.2485	0.247	0.289	0.29	0.25	0.38	1.75	1.27	0.77	2.5	1/4	0.02
950-901025	0.2485	0.247	0.289	0.29	0.25	0.38	1.75	1.27	0.77	3	1/4	0.03
950-901026	0.2485	0.247	0.289	0.29	0.25	0.38	1.75	1.27	0.77	3.5	1/4	0.03
950-901027	0.2485	0.247	0.289	0.29	0.25	0.38	1.75	1.27	0.77	4	1/4	0.03
950-901028	0.2485	0.247	0.289	0.29	0.25	0.38	1.75	1.27	0.77	4.5	1/4	0.04
950-901030	0.2485	0.247	0.289	0.29	0.25	0.38	1.75	1.27	0.77	5.5	1/4	0.05
950-901032	0.311	0.3095	0.375	0.33	0.25	0.38	1.75	1.27	0.77	0.5	5/16	0.01
950-901033	0.311	0.3095	0.375	0.33	0.25	0.38	1.75	1.27	0.77	0.75	5/16	0.01
950-901034	0.311	0.3095	0.375	0.33	0.25	0.38	1.75	1.27	0.77	1	5/16	0.02
950-901035	0.311	0.3095	0.375	0.33	0.25	0.38	1.75	1.27	0.77	1.25	5/16	0.02
950-901036	0.311	0.3095	0.375	0.33	0.25	0.38	1.75	1.27	0.77	1.5	5/16	0.02
950-901037	0.311	0.3095	0.375	0.33	0.25	0.38	1.75	1.27	0.77	1.75	5/16	0.03
950-901038	0.311	0.3095	0.375	0.33	0.25	0.38	1.75	1.27	0.77	2	5/16	0.03
950-901040	0.311	0.3095	0.375	0.33	0.25	0.38	1.75	1.27	0.77	2.5	5/16	0.04
950-901041	0.311	0.3095	0.375	0.33	0.25	0.38	1.75	1.27	0.77	3	5/16	0.05
950-901042	0.311	0.3095	0.375	0.33	0.25	0.38	1.75	1.27	0.77	3.5	5/16	0.05
950-901043	0.311	0.3095	0.375	0.33	0.25	0.38	1.75	1.27	0.77	4	5/16	0.06
950-901045	0.311	0.3095	0.375	0.33	0.25	0.38	1.75	1.27	0.77	5	5/16	0.08
950-901048	0.3735	0.372	0.44	0.365	0.3	0.51	1.935	1.45	0.85	0.5	3/8	0.01
950-901049	0.3735	0.372	0.44	0.365	0.3	0.51	1.935	1.45	0.85	0.75	3/8	0.02
950-901050	0.3735	0.372	0.44	0.365	0.3	0.51	1.935	1.45	0.85	1	3/8	0.02
950-901051	0.3735	0.372	0.44	0.365	0.3	0.51	1.935	1.45	0.85	1.25	3/8	0.03
950-901052	0.3735	0.372	0.44	0.365	0.3	0.51	1.935	1.45	0.85	1.5	3/8	0.04
950-901053	0.3735	0.372	0.44	0.365	0.3	0.51	1.935	1.45	0.85	1.75	3/8	0.04
950-901054	0.3735	0.372	0.44	0.365	0.3	0.51	1.935	1.45	0.85	2	3/8	0.05
950-901056	0.3735	0.372	0.44	0.365	0.3	0.51	1.935	1.45	0.85	2.5	3/8	0.06
950-901057	0.3735	0.372	0.44	0.365	0.3	0.51	1.935	1.45	0.85	3	3/8	0.07
950-901058	0.3735	0.372	0.44	0.365	0.3	0.51	1.935	1.45	0.85	3.5	3/8	0.08
950-901059	0.3735	0.372	0.44	0.365	0.3	0.51	1.935	1.45	0.85	4	3/8	0.09
950-901060	0.3735	0.372	0.44	0.365	0.3	0.51	1.935	1.45	0.85	4.5	3/8	0.11



WDS No.	A Max	A Min	B +/- .005	C +.000 -.040	D Min	E Min	F Min	G Max	H Min	Grip length (inches)	Pin Dia	Weight (kg)
950-901061	0.3735	0.372	0.44	0.365	0.3	0.51	1.935	1.45	0.85	5	3/8	0.12
950-901070	0.436	0.4345	0.509	0.38	0.3	0.55	2.1	1.44	0.85	2	7/16	0.06
950-901073	0.436	0.4345	0.509	0.38	0.3	0.55	2.1	1.44	0.85	3	7/16	0.08
950-901077	0.436	0.4345	0.509	0.38	0.3	0.55	2.1	1.44	0.85	5	7/16	0.14
950-901080	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	0.5	1/2	0.02
950-901082	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	1	1/2	0.04
950-901083	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	1.25	1/2	0.05
950-901084	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	1.5	1/2	0.14
950-901085	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	1.75	1/2	0.07
950-901086	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	2	1/2	0.08
950-901087	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	2.25	1/2	0.09
950-901088	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	2.5	1/2	0.1
950-901089	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	3	1/2	0.12
950-901090	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	3.5	1/2	0.14
950-901091	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	4	1/2	0.16
950-901092	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	4.5	1/2	0.18
950-901093	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	5	1/2	0.2
950-901094	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	5.5	1/2	0.22
950-901095	0.4985	0.497	0.594	0.46	0.435	0.63	2.22	1.66	0.885	6	1/2	0.24
950-901100	0.561	0.5595	0.666	0.51	0.435	0.68	2.35	1.7	0.885	1.5	9/16	0.07
950-901101	0.561	0.5595	0.666	0.51	0.435	0.68	2.35	1.7	0.885	1.75	9/16	0.09
950-901105	0.561	0.5595	0.666	0.51	0.435	0.68	2.35	1.7	0.885	3	9/16	0.15
950-901107	0.561	0.5595	0.666	0.51	0.435	0.68	2.35	1.7	0.885	4	9/16	0.19
950-901114	0.6235	0.622	0.75	0.58	0.45	0.81	2.25	1.965	0.98	1	5/8	0.06
950-901115	0.6235	0.622	0.75	0.58	0.45	0.81	2.25	1.965	0.98	1.25	5/8	0.08
950-901116	0.6235	0.622	0.75	0.58	0.45	0.81	2.25	1.965	0.98	1.5	5/8	0.09
950-901117	0.6235	0.622	0.75	0.58	0.45	0.81	2.25	1.965	0.98	1.75	5/8	0.11
950-901118	0.6235	0.622	0.75	0.58	0.45	0.81	2.25	1.965	0.98	2	5/8	0.12
950-901120	0.6235	0.622	0.75	0.58	0.45	0.81	2.25	1.965	0.98	2.5	5/8	0.15
950-901121	0.6235	0.622	0.75	0.58	0.45	0.81	2.25	1.965	0.98	3	5/8	0.18
950-901122	0.6235	0.622	0.75	0.58	0.45	0.81	2.25	1.965	0.98	3.5	5/8	0.21
950-901123	0.6235	0.622	0.75	0.58	0.45	0.81	2.25	1.965	0.98	4	5/8	0.24
950-901124	0.6235	0.622	0.75	0.58	0.45	0.81	2.25	1.965	0.98	4.5	5/8	0.27
950-901125	0.6235	0.622	0.75	0.58	0.45	0.81	2.25	1.965	0.98	5	5/8	0.3
950-901126	0.6235	0.622	0.75	0.58	0.45	0.81	2.25	1.965	0.98	5.5	5/8	0.33
950-901127	0.6235	0.622	0.75	0.58	0.45	0.81	2.25	1.965	0.98	6	5/8	0.36
950-901132	0.7485	0.747	0.887	0.67	0.57	0.81	2.25	1.965	1.03	1.5	3/4	0.13
950-901133	0.7485	0.747	0.887	0.67	0.57	0.81	2.25	1.965	1.03	1.75	3/4	0.15
950-901134	0.7485	0.747	0.887	0.67	0.57	0.81	2.25	1.965	1.03	2	3/4	0.17
950-901135	0.7485	0.747	0.887	0.67	0.57	0.81	2.25	1.965	1.03	2.25	3/4	0.48
950-901138	0.7485	0.747	0.887	0.67	0.57	0.81	2.25	1.965	1.03	3.5	3/4	0.3
950-901139	0.7485	0.747	0.887	0.67	0.57	0.81	2.25	1.965	1.03	4	3/4	0.34
950-901141	0.7485	0.747	0.887	0.67	0.57	0.81	2.25	1.965	1.03	5	3/4	0.42
950-901150	0.8735	0.872	1.046	0.76	0.7	1.12	2.75	2.25	1.31	2	7/8	0.23
950-901166	0.9985	0.997	1.219	0.89	0.75	1.18	2.75	2.25	1.31	2	1	0.3
950-901167	0.9985	0.997	1.219	0.89	0.75	1.18	2.75	2.25	1.31	2.25	1	0.34
950-901170	0.9985	0.997	1.219	0.89	0.75	1.18	2.75	2.25	1.31	3.5	1	0.53
950-901171	0.9985	0.997	1.219	0.89	0.75	1.18	2.75	2.25	1.31	4	1	0.6
950-901172	0.9985	0.997	1.219	0.89	0.75	1.18	2.75	2.25	1.31	4.5	1	0.68
950-901174	0.9985	0.997	1.219	0.89	0.75	1.18	2.75	2.25	1.31	5.5	1	0.83
950-901175	0.9985	0.997	1.219	0.89	0.75	1.18	2.75	2.25	1.31	6	1	0.9

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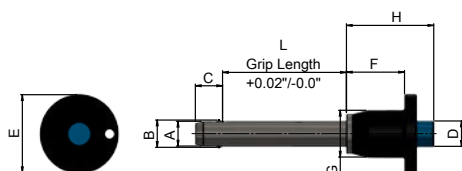


WDS 952 L Handle Quick Release Pins

Black Aluminium T-handle, Blue Anodised Aluminium button, Pin - 17-4 PH Stainless Steel
(See technical page vii)

WDS No.	A Max	A Min	A Nominal	B +/-0.25	C +/-1.0	D	E	F	G	H	L	Weight (kg)
952-205010	4.96	4.92	5	5.6	6	6	12	22.5	32	19	10	0.02
952-205015	4.96	4.92	5	5.6	6	6	12	22.5	32	19	15	0.02
952-205020	4.96	4.92	5	5.6	6	6	12	22.5	32	19	20	0.02
952-205025	4.96	4.92	5	5.6	6	6	12	22.5	32	19	25	0.02
952-205030	4.96	4.92	5	5.6	6	6	12	22.5	32	19	30	0.02
952-205035	4.96	4.92	5	5.6	6	6	12	22.5	32	19	35	0.02
952-205040	4.96	4.92	5	5.6	6	6	12	22.5	32	19	40	0.02
952-205050	4.96	4.92	5	5.6	6	6	12	22.5	32	19	50	0.02
952-205060	4.96	4.92	5	5.6	6	6	12	22.5	32	19	60	0.02
952-205070	4.96	4.92	5	5.6	6	6	12	22.5	32	19	70	0.02
952-206010	5.96	5.92	6	7.1	7	6	12	22.5	32	19	10	0.02
952-206015	5.96	5.92	6	7.1	7	6	12	22.5	32	19	15	0.02
952-206020	5.96	5.92	6	7.1	7	6	12	22.5	32	19	20	0.02
952-206025	5.96	5.92	6	7.1	7	6	12	22.5	32	19	25	0.02
952-206030	5.96	5.92	6	7.1	7	6	12	22.5	32	19	30	0.02
952-206035	5.96	5.92	6	7.1	7	6	12	22.5	32	19	35	0.02
952-206040	5.96	5.92	6	7.1	7	6	12	22.5	32	19	40	0.02
952-206050	5.96	5.92	6	7.1	7	6	12	22.5	32	19	50	0.03
952-206060	5.96	5.92	6	7.1	7	6	12	22.5	32	19	60	0.03
952-206070	5.96	5.92	6	7.1	7	6	12	22.5	32	19	70	0.03
952-208010	7.96	7.92	8	9.4	8	6	12	22.5	32	19	10	0.02
952-208015	7.96	7.92	8	9.4	8	6	12	22.5	32	19	15	0.02
952-208020	7.96	7.92	8	9.4	8	6	12	22.5	32	19	20	0.03
952-208025	7.96	7.92	8	9.4	8	6	12	22.5	32	19	25	0.03
952-208030	7.96	7.92	8	9.4	8	6	12	22.5	32	19	30	0.03
952-208035	7.96	7.92	8	9.4	8	6	12	22.5	32	19	35	0.03
952-208040	7.96	7.92	8	9.4	8	6	12	22.5	32	19	40	0.03
952-208050	7.96	7.92	8	9.4	8	6	12	22.5	32	19	50	0.04
952-208060	7.96	7.92	8	9.4	8	6	12	22.5	32	19	60	0.04
952-208070	7.96	7.92	8	9.4	8	6	12	22.5	32	19	70	0.04
952-208080	7.96	7.92	8	9.4	8	6	12	22.5	32	19	80	0.05
952-210015	9.96	9.92	10	11.9	9	7	14	25	37	23	15	0.04
952-210020	9.96	9.92	10	11.9	9	7	14	25	37	23	20	0.04
952-210025	9.96	9.92	10	11.9	9	7	14	25	37	23	25	0.05
952-210030	9.96	9.92	10	11.9	9	7	14	25	37	23	30	0.05
952-210035	9.96	9.92	10	11.9	9	7	14	25	37	23	35	0.05
952-210040	9.96	9.92	10	11.9	9	7	14	25	37	23	40	0.05
952-210050	9.96	9.92	10	11.9	9	7	14	25	37	23	50	0.06
952-210060	9.96	9.92	10	11.9	9	7	14	25	37	23	60	0.07
952-210070	9.96	9.92	10	11.9	9	7	14	25	37	23	70	0.07
952-210080	9.96	9.92	10	11.9	9	7	14	25	37	23	80	0.08
952-212025	11.96	11.92	12	14.4	10	10	18	30	43	25	25	0.07
952-212030	11.96	11.92	12	14.4	10	10	18	30	43	25	30	0.07
952-212035	11.96	11.92	12	14.4	10	10	18	30	43	25	35	0.08
952-212040	11.96	11.92	12	14.4	10	10	18	30	43	25	40	0.08
952-212050	11.96	11.92	12	14.4	10	10	18	30	43	25	50	0.09

WDS No.	A Max	A Min	A Nominal	B +/-0.25	C +/-1.0	D	E	F	G	H	L	Weight (kg)
952-212060	11.96	11.92	12	14.4	10	10	18	30	43	25	60	0.1
952-212070	11.96	11.92	12	14.4	10	10	18	30	43	25	70	0.11
952-212080	11.96	11.92	12	14.4	10	10	18	30	43	25	80	0.12
952-212100	11.96	11.92	12	14.4	10	10	18	30	43	25	100	0.13



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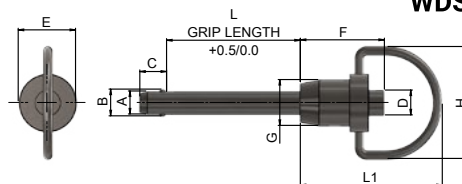
Button Handle Quick Release Pins - Inch WDS 954

Black Aluminium T-handle, Blue Anodised Aluminium button, Pin - 17-4 PH Stainless Steel
(See technical page vii)

WDS No.	A	A Max	A Min	B	C	D	E	F	G	H	L	Weight (kg)
954-2014050	1/4	0.1885	0.187	0.22	0.26	0.25	0.8	0.48	0.31	0.87	1/2	0.02
954-2014075	1/4	0.2485	0.247	0.289	0.29	0.25	0.8	0.48	0.31	0.87	3/4	0.02
954-2014100	1/4	0.2485	0.247	0.289	0.29	0.25	0.8	0.48	0.31	0.87	1	0.02
954-2014125	1/4	0.2485	0.247	0.289	0.29	0.25	0.8	0.48	0.31	0.87	1 1/4	0.02
954-2014150	1/4	0.2485	0.247	0.289	0.29	0.25	0.8	0.48	0.31	0.87	1 1/2	0.02
954-2014200	1/4	0.2485	0.247	0.289	0.29	0.25	0.8	0.48	0.31	0.87	2	0.02
954-2014250	1/4	0.2485	0.247	0.289	0.29	0.25	0.8	0.48	0.31	0.87	2 1/2	0.03
954-2316050	3/16	0.1885	0.187	0.22	0.26	0.25	0.8	0.48	0.31	0.87	1/2	0.01
954-2316075	3/16	0.1885	0.187	0.22	0.26	0.25	0.8	0.48	0.31	0.87	3/4	0.01
954-2316100	3/16	0.1885	0.187	0.22	0.26	0.25	0.8	0.48	0.31	0.87	1	0.01
954-2316125	3/16	0.1885	0.187	0.22	0.26	0.25	0.8	0.48	0.31	0.87	1 1/4	0.01
954-2316150	3/16	0.1885	0.187	0.22	0.26	0.25	0.8	0.48	0.31	0.87	1 1/2	0.02
954-2316200	3/16	0.1885	0.187	0.22	0.26	0.25	0.8	0.48	0.31	0.87	2	0.02
954-2316250	3/16	0.1885	0.187	0.22	0.26	0.25	0.8	0.48	0.31	0.87	2 1/2	0.02
954-2516075	5/16	0.311	0.3095	0.375	0.33	0.25	0.8	0.48	0.41	0.95	3/4	0.02
954-2516100	5/16	0.311	0.3095	0.375	0.33	0.25	0.8	0.48	0.41	0.95	1	0.02
954-2516125	5/16	0.311	0.3095	0.375	0.33	0.25	0.8	0.48	0.41	0.95	1 1/4	0.03
954-2516150	5/16	0.311	0.3095	0.375	0.33	0.25	0.8	0.48	0.41	0.95	1 1/2	0.03
954-2516200	5/16	0.311	0.3095	0.375	0.33	0.25	0.8	0.48	0.41	0.95	2	0.03
954-2516250	5/16	0.311	0.3095	0.375	0.33	0.25	0.8	0.48	0.41	0.95	2 1/2	0.04

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WDS 953 Stainless Steel Quick Release Pins with D Ring

Handle and Button - 303 Grade Stainless Steel, Pin - 17-4 PH Stainless Steel

(See technical page vii)

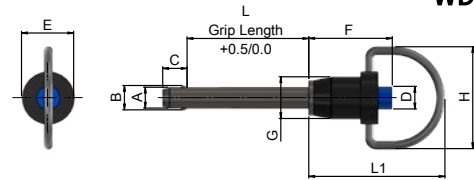
WDS No.	A Max	A Min	B +/- 0.25mm	C +/-1.0	D	E	F	G	H	L1	Grip Length L (mm)	Pin Diameter	Weight (kg)
953-05010	4.92	4.96	5.54	6	6.5	15	21	12	27	34	10	5	0.02
953-05015	4.92	4.96	5.54	6	6.5	15	21	12	27	34	15	5	0.02
953-05020	4.92	4.96	5.54	6	6.5	15	21	12	27	34	20	5	0.02
953-05025	4.92	4.96	5.54	6	6.5	15	21	12	27	34	25	5	0.02
953-05030	4.92	4.96	5.54	6	6.5	15	21	12	27	34	30	5	0.02
953-05035	4.92	4.96	5.54	6	6.5	15	21	12	27	34	35	5	0.02
953-05040	4.92	4.96	5.54	6	6.5	15	21	12	27	34	40	5	0.03
953-05045	4.92	4.96	5.54	6	6.5	15	21	12	27	34	45	5	0.03
953-05050	4.92	4.96	5.54	6	6.5	15	21	12	27	34	50	5	0.03
953-05060	4.92	4.96	5.54	6	6.5	15	21	12	27	34	60	5	0.03
953-06010	5.96	5.92	6.99	7	6.5	15	22	12	27	34	10	6	0.02
953-06015	5.96	5.92	6.99	7	6.5	15	22	12	27	34	15	6	0.02
953-06020	5.96	5.92	6.99	7	6.5	15	22	12	27	34	20	6	0.02
953-06025	5.96	5.92	6.99	7	6.5	15	22	12	27	34	25	6	0.02
953-06030	5.96	5.92	6.99	7	6.5	15	22	12	27	34	30	6	0.03
953-06035	5.96	5.92	6.99	7	6.5	15	22	12	27	34	35	6	0.03
953-06040	5.96	5.92	6.99	7	6.5	15	22	12	27	34	40	6	0.03
953-06045	5.96	5.92	6.99	7	6.5	15	22	12	27	34	45	6	0.03
953-06050	5.96	5.92	6.99	7	6.5	15	22	12	27	34	50	6	0.03
953-06060	5.96	5.92	6.99	7	6.5	15	22	12	27	34	60	6	0.03
953-06070	5.96	5.92	6.99	7	6.5	15	22	12	27	34	70	6	0.04
953-06080	5.96	5.92	6.99	7	6.5	15	22	12	27	34	80	6	0.04
953-06090	5.96	5.92	6.99	7	6.5	15	22	12	27	34	90	6	0.04
953-06100	5.96	5.92	6.99	7	6.5	15	22	12	27	34	100	6	0.04
953-08010	7.96	7.92	9.42	8	6.5	15	24	12	27	34	10	8	0.03
953-08015	7.96	7.92	9.42	8	6.5	15	24	12	27	34	15	8	0.03
953-08020	7.96	7.92	9.42	8	6.5	15	24	12	27	34	20	8	0.03
953-08025	7.96	7.92	9.42	8	6.5	15	24	12	27	34	25	8	0.03
953-08030	7.96	7.92	9.42	8	6.5	15	24	12	27	34	30	8	0.03
953-08035	7.96	7.92	9.42	8	6.5	15	24	12	27	34	35	8	0.04
953-08040	7.96	7.92	9.42	8	6.5	15	24	12	27	34	40	8	0.04
953-08045	7.96	7.92	9.42	8	6.5	15	24	12	27	34	45	8	0.04
953-08050	7.96	7.92	9.42	8	6.5	15	24	12	27	34	50	8	0.04
953-08060	7.96	7.92	9.42	8	6.5	15	24	12	27	34	60	8	0.04
953-08070	7.96	7.92	9.42	8	6.5	15	24	12	27	34	70	8	0.05
953-08080	7.96	7.92	9.42	8	6.5	15	24	12	27	34	80	8	0.05
953-08090	7.96	7.92	9.42	8	6.5	15	24	12	27	34	90	8	0.06
953-08100	7.96	7.92	9.42	8	6.5	15	24	12	27	34	100	8	0.06
953-10010	9.96	9.92	11.96	9	7.5	1	26	15	27	38	10	10	0.04
953-10015	9.96	9.92	11.96	9	7.5	1	26	15	27	38	15	10	0.04
953-10020	9.96	9.92	11.96	9	7.5	1	26	15	27	38	20	10	0.05
953-10025	9.96	9.92	11.96	9	7.5	1	26	15	27	38	25	10	0.05
953-10030	9.96	9.92	11.96	9	7.5	1	26	15	27	38	30	10	0.05
953-10035	9.96	9.92	11.96	9	7.5	1	26	15	27	38	35	10	0.05
953-10040	9.96	9.92	11.96	9	7.5	1	26	15	27	38	40	10	0.06
953-10045	9.96	9.92	11.96	9	7.5	1	26	15	27	38	45	10	0.06



WDS No.	A Max	A Min	B +/- 0.25mm	C +/-1.0	D	E	F	G	H	L1	Grip Length L (mm)	Pin Diameter	Weight (kg)
953-10050	9.96	9.92	11.96	9	7.5	1	26	15	27	38	50	10	0.06
953-10060	9.96	9.92	11.96	9	7.5	1	26	15	27	38	60	10	0.07
953-10070	9.96	9.92	11.96	9	7.5	1	26	15	27	38	70	10	0.07
953-10080	9.96	9.92	11.96	9	7.5	1	26	15	27	38	80	10	0.08
953-10090	9.96	9.92	11.96	9	7.5	1	26	15	27	38	90	10	0.09
953-10100	9.96	9.92	11.96	9	7.5	1	26	15	27	38	100	10	0.09
953-12020	11.96	11.92	14.45	10	9.5	1	31	20	29	40	20	12	0.1
953-12025	11.96	11.92	14.45	10	9.5	1	31	20	29	40	25	12	0.1
953-12030	11.96	11.92	14.45	10	9.5	1	31	20	29	40	30	12	0.07
953-12035	11.96	11.92	14.45	10	9.5	1	31	20	29	40	35	12	0.08
953-12040	11.96	11.92	14.45	10	9.5	1	31	20	29	40	40	12	0.08
953-12045	11.96	11.92	14.45	10	9.5	1	31	20	29	40	45	12	0.09
953-12050	11.96	11.92	14.45	10	9.5	1	31	20	29	40	50	12	0.09
953-12060	11.96	11.92	14.45	10	9.5	1	31	20	29	40	60	12	0.1
953-12070	11.96	11.92	14.45	10	9.5	1	31	20	29	40	70	12	0.11
953-12080	11.96	11.92	14.45	10	9.5	1	31	20	29	40	80	12	0.12
953-12090	11.96	11.92	14.45	10	9.5	1	31	20	29	40	90	12	0.1
953-12100	11.96	11.92	14.45	10	9.5	1	31	20	29	40	100	12	0.1

AL

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WDS 954 R Handle Quick Release Pins

Black Aluminium T-handle, Blue Anodised Aluminium button, Pin - 17-4 PH Stainless Steel
(See technical page vii)

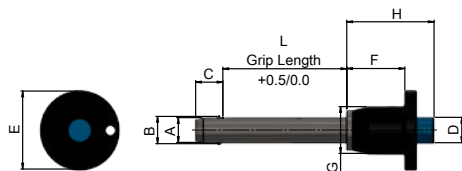
WDS No.	A Max	A Min	B +/- 0.25mm	C +/-1.0	D	E	F	G	H	L1	Grip Length L (mm)	Pin Diameter A	Weight (kg)
954-505010	4.92	4.96	5.54	6	6.5	1	22.5	12	27	38	10	5	0.01
954-505015	4.92	4.96	5.54	6	6.5	1	22.5	12	27	38	15	5	0.01
954-505020	4.92	4.96	5.54	6	6.5	1	22.5	12	27	38	20	5	0.01
954-505025	4.92	4.96	5.54	6	6.5	1	22.5	12	27	38	25	5	0.01
954-505030	4.92	4.96	5.54	6	6.5	1	22.5	12	27	38	30	5	0.01
954-505035	4.92	4.96	5.54	6	6.5	1	22.5	12	27	38	35	5	0.02
954-505040	4.92	4.96	5.54	6	6.5	1	22.5	12	27	38	40	5	0.02
954-505045	4.92	4.96	5.54	6	6.5	1	22.5	12	27	38	45	5	0.02
954-505050	4.92	4.96	5.54	6	6.5	1	22.5	12	27	38	50	5	0.02
954-505060	4.92	4.96	5.54	6	6.5	1	22.5	12	27	38	60	5	0.02
954-505070	4.92	4.96	5.54	6	6.5	1	22.5	12	27	38	70	5	0.02
954-505080	4.92	4.96	5.54	6	6.5	1	22.5	12	27	38	80	5	0.02
954-505090	4.92	4.96	5.54	6	6.5	1	22.5	12	27	38	90	5	0.02
954-505100	4.92	4.96	5.54	6	6.5	1	22.5	12	27	38	100	5	0.02
954-506010	5.96	5.92	6.99	7	6.5	1	24	12	27	38	10	6	0.01
954-506015	5.96	5.92	6.99	7	6.5	1	24	12	27	38	15	6	0.01
954-506020	5.96	5.92	6.99	7	6.5	1	24	12	27	38	20	6	0.02
954-506025	5.96	5.92	6.99	7	6.5	1	24	12	27	38	25	6	0.02
954-506030	5.96	5.92	6.99	7	6.5	1	24	12	27	38	30	6	0.02
954-506035	5.96	5.92	6.99	7	6.5	1	24	12	27	38	35	6	0.02
954-506040	5.96	5.92	6.99	7	6.5	1	24	12	27	38	40	6	0.02
954-506045	5.96	5.92	6.99	7	6.5	1	24	12	27	38	45	6	0.02
954-506050	5.96	5.92	6.99	7	6.5	1	24	12	27	38	50	6	0.02
954-506060	5.96	5.92	6.99	7	6.5	1	24	12	27	38	60	6	0.02
954-506070	5.96	5.92	6.99	7	6.5	1	24	12	27	38	70	6	0.03
954-506080	5.96	5.92	6.99	7	6.5	1	24	12	27	38	80	6	0.03
954-506090	5.96	5.92	6.99	7	6.5	1	24	12	27	38	90	6	0.03
954-506100	5.96	5.92	6.99	7	6.5	1	24	12	27	38	100	6	0.03
954-508010	7.96	7.92	9.42	8	6.5	1	25	12	27	38	10	8	0.02
954-508015	7.96	7.92	9.42	8	6.5	1	25	12	27	38	15	8	0.02
954-508020	7.96	7.92	9.42	8	6.5	1	25	12	27	38	20	8	0.02
954-508025	7.96	7.92	9.42	8	6.5	1	25	12	27	38	25	8	0.02
954-508030	7.96	7.92	9.42	8	6.5	1	25	12	27	38	30	8	0.03
954-508035	7.96	7.92	9.42	8	6.5	1	25	12	27	38	35	8	0.03
954-508040	7.96	7.92	9.42	8	6.5	1	25	12	27	38	40	8	0.03
954-508045	7.96	7.92	9.42	8	6.5	1	25	12	27	38	45	8	0.03
954-508050	7.96	7.92	9.42	8	6.5	1	25	12	27	38	50	8	0.03
954-508060	7.96	7.92	9.42	8	6.5	1	25	12	27	38	60	8	0.04
954-508070	7.96	7.92	9.42	8	6.5	1	25	12	27	38	70	8	0.04
954-508080	7.96	7.92	9.42	8	6.5	1	25	12	27	38	80	8	0.04
954-508090	7.96	7.92	9.42	8	6.5	1	25	12	27	38	90	8	0.05
954-508100	7.96	7.92	9.42	8	6.5	1	25	12	27	38	100	8	0.05
954-510015	9.96	9.92	11.96	9	7.5	1	28	15	27	38	15	10	0.03
954-510020	9.96	9.92	11.96	9	7.5	1	28	15	27	38	20	10	0.03
954-510025	9.96	9.92	11.96	9	7.5	1	28	15	27	38	25	10	0.04
954-510030	9.96	9.92	11.96	9	7.5	1	28	15	27	38	30	10	0.04



WDS No.	A Max	A Min	B +/- 0.25mm	C +/-1.0	D	E	F	G	H	L1	Grip Length L (mm)	Pin Diameter A	Weight (kg)
954-510035	9.96	9.92	11.96	9	7.5	1	28	15	27	38	35	10	0.04
954-510040	9.96	9.92	11.96	9	7.5	1	28	15	27	38	40	10	0.04
954-510045	9.96	9.92	11.96	9	7.5	1	28	15	27	38	45	10	0.05
954-510050	9.96	9.92	11.96	9	7.5	1	28	15	27	38	50	10	0.05
954-510060	9.96	9.92	11.96	9	7.5	1	28	15	27	38	60	10	0.06
954-510070	9.96	9.92	11.96	9	7.5	1	28	15	27	38	70	10	0.06
954-510080	9.96	9.92	11.96	9	7.5	1	28	15	27	38	80	10	0.07
954-510090	9.96	9.92	11.96	9	7.5	1	28	15	27	38	90	10	0.07
954-512020	11.96	11.92	14.45	10	9.5	1	33	20	29	40	20	12	0.05
954-512025	11.96	11.92	14.45	10	9.5	1	33	20	29	40	25	12	0.05
954-512030	11.96	11.92	14.45	10	9.5	1	33	20	29	40	30	12	0.06
954-512035	11.96	11.92	14.45	10	9.5	1	33	20	29	40	35	12	0.06
954-512040	11.96	11.92	14.45	10	9.5	1	33	20	29	40	40	12	0.07
954-512045	11.96	11.92	14.45	10	9.5	1	33	20	29	40	45	12	0.07
954-512050	11.96	11.92	14.45	10	9.5	1	33	20	29	40	50	12	0.07
954-512060	11.96	11.92	14.45	10	9.5	1	33	20	29	40	60	12	0.08
954-512070	11.96	11.92	14.45	10	9.5	1	33	20	29	40	70	12	0.09

AL

17-4



WDS 954 Button Handle Quick Release Pins

Black Aluminium T-handle, Blue Anodised Aluminium button, Pin - 17-4 PH Stainless Steel
(See technical page vii)

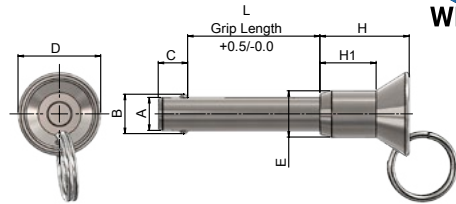
WDS No.	A Max	A Min	B +/- 0.25mm	C +/-1.0	D	E	F	G	H	Grip Length L (mm)	Pin Diameter	Weight (kg)
954-105010	4.92	4.96	5.54	6	6.5	20	15	12	22	10	5	0.01
954-105015	4.92	4.96	5.54	6	6.5	20	15	12	22	15	5	0.01
954-105020	4.92	4.96	5.54	6	6.5	20	15	12	22	20	5	0.01
954-105025	4.92	4.96	5.54	6	6.5	20	15	12	22	25	5	0.01
954-105030	4.92	4.96	5.54	6	6.5	20	15	12	22	30	5	0.01
954-105035	4.92	4.96	5.54	6	6.5	20	15	12	22	35	5	0.01
954-105040	4.92	4.96	5.54	6	6.5	20	15	12	22	40	5	0.02
954-105045	4.92	4.96	5.54	6	6.5	20	15	12	22	45	5	0.02
954-105050	4.92	4.96	5.54	6	6.5	20	15	12	22	50	5	0.02
954-105060	4.92	4.96	5.54	6	6.5	20	15	12	22	60	5	0.02
954-105070	4.92	4.96	5.54	6	6.5	20	15	12	22	70	5	0.02
954-105080	4.92	4.96	5.54	6	6.5	20	15	12	22	80	5	0.02
954-105090	4.92	4.96	5.54	6	6.5	20	15	12	22	90	5	0.02
954-105100	4.92	4.96	5.54	6	6.5	20	15	12	22	100	5	0.02
954-106010	5.96	5.92	6.99	7	6.5	20.5	16	12	23	10	6	0.01
954-106015	5.96	5.92	6.99	7	6.5	20.5	16	12	23	15	6	0.01
954-106020	5.96	5.92	6.99	7	6.5	20.5	16	12	23	20	6	0.01
954-106025	5.96	5.92	6.99	7	6.5	20.5	16	12	23	25	6	0.02
954-106030	5.96	5.92	6.99	7	6.5	20.5	16	12	23	30	6	0.02
954-106035	5.96	5.92	6.99	7	6.5	20.5	16	12	23	35	6	0.02
954-106040	5.96	5.92	6.99	7	6.5	20.5	16	12	23	40	6	0.02
954-106045	5.96	5.92	6.99	7	6.5	20.5	16	12	23	45	6	0.02
954-106050	5.96	5.92	6.99	7	6.5	20.5	16	12	23	50	6	0.02
954-106060	5.96	5.92	6.99	7	6.5	20.5	16	12	23	60	6	0.02
954-106070	5.96	5.92	6.99	7	6.5	20.5	16	12	23	70	6	0.03
954-106080	5.96	5.92	6.99	7	6.5	20.5	16	12	23	80	6	0.03
954-106090	5.96	5.92	6.99	7	6.5	20.5	16	12	23	90	6	0.03
954-106100	5.96	5.92	6.99	7	6.5	20.5	16	12	23	100	6	0.03
954-108010	7.96	7.92	9.42	8	6.5	20.5	17	12	24	10	8	0.02
954-108015	7.96	7.92	9.42	8	6.5	20.5	17	12	24	15	8	0.02
954-108020	7.96	7.92	9.42	8	6.5	20.5	17	12	24	20	8	0.02
954-108025	7.96	7.92	9.42	8	6.5	20.5	17	12	24	25	8	0.02
954-108030	7.96	7.92	9.42	8	6.5	20.5	17	12	24	30	8	0.02
954-108035	7.96	7.92	9.42	8	6.5	20.5	17	12	24	35	8	0.03
954-108040	7.96	7.92	9.42	8	6.5	20.5	17	12	24	40	8	0.03
954-108045	7.96	7.92	9.42	8	6.5	20.5	17	12	24	45	8	0.03
954-108050	7.96	7.92	9.42	8	6.5	20.5	17	12	24	50	8	0.03
954-108060	7.96	7.92	9.42	8	6.5	20.5	17	12	24	60	8	0.03
954-108070	7.96	7.92	9.42	8	6.5	20.5	17	12	24	70	8	0.04
954-108080	7.96	7.92	9.42	8	6.5	20.5	17	12	24	80	8	0.04
954-108090	7.96	7.92	9.42	8	6.5	20.5	17	12	24	90	8	0.05
954-108100	7.96	7.92	9.42	8	6.5	20.5	17	12	24	100	8	0.05
954-110015	9.96	9.92	11.96	9	7.5	25.5	20	15	28	15	10	0.03
954-110020	9.96	9.92	11.96	9	7.5	25.5	20	15	28	20	10	0.04
954-110025	9.96	9.92	11.96	9	7.5	25.5	20	15	28	25	10	0.04
954-110030	9.96	9.92	11.96	9	7.5	25.5	20	15	28	30	10	0.04



WDS No.	A Max	A Min	B +/- 0.25mm	C +/-1.0	D	E	F	G	H	Grip Length L (mm)	Pin Diameter	Weight (kg)
954-110035	9.96	9.92	11.96	9	7.5	25.5	20	15	28	35	10	0.04
954-110040	9.96	9.92	11.96	9	7.5	25.5	20	15	28	40	10	0.05
954-110045	9.96	9.92	11.96	9	7.5	25.5	20	15	28	45	10	0.05
954-110050	9.96	9.92	11.96	9	7.5	25.5	20	15	28	50	10	0.05
954-110060	9.96	9.92	11.96	9	7.5	25.5	20	15	28	60	10	0.06
954-110070	9.96	9.92	11.96	9	7.5	25.5	20	15	28	70	10	0.06
954-110080	9.96	9.92	11.96	9	7.5	25.5	20	15	28	80	10	0.07
954-110090	9.96	9.92	11.96	9	7.5	25.5	20	15	28	90	10	0.08
954-110100	9.96	9.92	11.96	9	7.5	25.5	20	15	28	100	10	0.08
954-112020	11.96	11.92	14.45	10	10.5	32.5	22	17	32	20	12	0.05
954-112025	11.96	11.92	14.45	10	10.5	32.5	22	17	32	25	12	0.05
954-112030	11.96	11.92	14.45	10	10.5	32.5	22	17	32	30	12	0.06
954-112035	11.96	11.92	14.45	10	10.5	32.5	22	17	32	35	12	0.06
954-112040	11.96	11.92	14.45	10	10.5	32.5	22	17	32	40	12	0.07
954-112045	11.96	11.92	14.45	10	10.5	32.5	22	17	32	45	12	0.07
954-112050	11.96	11.92	14.45	10	10.5	32.5	22	17	32	50	12	0.08
954-112060	11.96	11.92	14.45	10	10.5	32.5	22	17	32	60	12	0.08
954-112070	11.96	11.92	14.45	10	10.5	32.5	22	17	32	70	12	0.09

303

17-4



WDS 955 Safety Quick Release Pins with Ring

Body & Spring - 17-4 PH Grade Stainless Steel, Spindle, Button and Handle - 303 Grade Stainless Steel
(See technical page vii)

WDS No.	A Max	A Min	A Nominal	B	C	D	E	H	H1	L	Weight (kg)
955-05010	4.96	4.92	5	5.5	6	20	12	23	15	10	0.02
955-05015	4.96	4.92	5	5.5	6	20	12	23	15	15	0.02
955-05020	4.96	4.92	5	5.5	6	20	12	23	15	20	0.02
955-05025	4.96	4.92	5	5.5	6	20	12	23	15	25	0.02
955-05030	4.96	4.92	5	5.5	6	20	12	23	15	30	0.03
955-05035	4.96	4.92	5	5.5	6	20	12	23	15	35	0.03
955-05040	4.96	4.92	5	5.5	6	20	12	23	15	40	0.03
955-05045	4.96	4.92	5	5.5	6	20	12	23	15	45	0.03
955-05050	4.96	4.92	5	5.5	6	20	12	23	15	50	0.03
955-05060	4.96	4.92	5	5.5	6	20	12	23	15	60	0.03
955-06010	5.96	5.92	6	7.1	7	20	12	23	15	10	0.02
955-06015	5.96	5.92	6	7.1	7	20	12	23	15	15	0.03
955-06020	5.96	5.92	6	7.1	7	20	12	23	15	20	0.03
955-06025	5.96	5.92	6	7.1	7	20	12	23	15	25	0.03
955-06030	5.96	5.92	6	7.1	7	20	12	23	15	30	0.03
955-06035	5.96	5.92	6	7.1	7	20	12	23	15	35	0.03
955-06040	5.96	5.92	6	7.1	7	20	12	23	15	40	0.03
955-06045	5.96	5.92	6	7.1	7	20	12	23	15	45	0.03
955-06050	5.96	5.92	6	7.1	7	20	12	23	15	50	0.03
955-06060	5.96	5.92	6	7.1	7	20	12	23	15	60	0.03
955-06070	5.96	5.92	6	7.1	7	20	12	23	15	70	0.04
955-06080	5.96	5.92	6	7.1	7	20	12	23	15	80	0.04
955-06090	5.96	5.92	6	7.1	7	20	12	23	15	90	0.04
955-08010	7.96	7.93	8	9.4	8	20	12	25	15	10	0.03
955-08015	7.96	7.93	8	9.4	8	20	12	25	15	15	0.03
955-08020	7.96	7.93	8	9.4	8	20	12	25	15	20	0.03
955-08025	7.96	7.93	8	9.4	8	20	12	25	15	25	0.03
955-08030	7.96	7.93	8	9.4	8	20	12	25	15	30	0.04
955-08035	7.96	7.93	8	9.4	8	20	12	25	15	35	0.04
955-08040	7.96	7.93	8	9.4	8	20	12	25	15	40	0.04
955-08045	7.96	7.93	8	9.4	8	20	12	25	15	45	0.04
955-08050	7.96	7.93	8	9.4	8	20	12	25	15	50	0.04
955-08060	7.96	7.93	8	9.4	8	20	12	25	15	60	0.05
955-08070	7.96	7.93	8	9.4	8	20	12	25	15	70	0.05
955-08080	7.96	7.93	8	9.4	8	20	12	25	15	80	0.05
955-08090	7.96	7.93	8	9.4	8	20	12	25	15	90	0.06
955-10010	9.96	9.92	10	11.9	8	25	14	27	17	10	0.05
955-10015	9.96	9.92	10	11.9	8	25	14	27	17	15	0.05
955-10020	9.96	9.92	10	11.9	8	25	14	27	17	20	0.05
955-10025	9.96	9.92	10	11.9	8	25	14	27	17	25	0.05
955-10030	9.96	9.92	10	11.9	8	25	14	27	17	30	0.06
955-10035	9.96	9.92	10	11.9	8	25	14	27	17	35	0.06
955-10040	9.96	9.92	10	11.9	8	25	14	27	17	40	0.06
955-10045	9.96	9.92	10	11.9	8	25	14	27	17	45	0.07
955-10050	9.96	9.92	10	11.9	8	25	14	27	17	50	0.07
955-10060	9.96	9.92	10	11.9	8	25	14	27	17	60	0.08

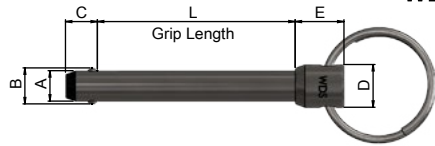


WDS

WDS No.	A Max	A Min	A Nominal	B	C	D	E	H	H1	L	Weight (kg)
955-10070	9.96	9.92	10	11.9	8	25	14	27	17	70	0.08
955-10080	9.96	9.92	10	11.9	8	25	14	27	17	80	0.09
955-12025	11.96	11.92	12	14.4	11	28	17	32	20	25	0.08
955-12030	11.96	11.92	12	14.4	11	28	17	32	20	30	0.09
955-12035	11.96	11.92	12	14.4	11	28	17	32	20	35	0.09
955-12040	11.96	11.92	12	14.4	11	28	17	32	20	40	0.1
955-12045	11.96	11.92	12	14.4	11	28	17	32	20	45	0.1
955-12050	11.96	11.92	12	14.4	11	28	17	32	20	50	0.1
955-12060	11.96	11.92	12	14.4	11	28	17	32	20	60	0.13
955-12070	11.96	11.92	12	14.4	11	28	17	32	20	70	0.13
955-12080	11.96	11.92	12	14.4	11	28	17	32	20	80	0.13

304

17-4



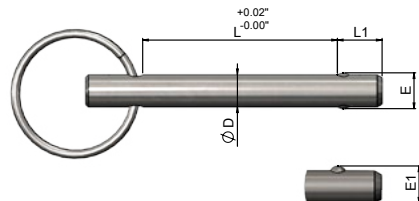
WDS 956 Heavy Duty Stainless Steel Detent Pins

17-4 PH Heat treated stainless steel
Head and Spring - 304 Stainless Steel

WDS No.	B	C	D	E	Double Shear Resistance Min (Newtons)	Grip Length L (mm)	Hole Diameter (Max)	Hole Diameter (Min)	Pin Diameter A	Pin Pullout Minimum Force (N)	Weight (kg)
956-06015	7	8.1	9.5	12.7	35650	15	6.1	6	6	17.8	0.02
956-06020	7	8.1	9.5	12.7	35650	20	6.1	6	6	17.8	0.02
956-06030	7	8.1	9.5	12.7	35650	30	6.1	6	6	17.8	0.02
956-06040	7	8.1	9.5	12.7	35650	40	6.1	6	6	17.8	0.02
956-06050	7	8.1	9.5	12.7	35650	50	6.1	6	6	17.8	0.03
956-06060	7	8.1	9.5	12.7	35650	60	6.1	6	6	17.8	0.03
956-08020	9.5	8.3	11.1	12.7	63790	20	8.1	8	8	17.8	0.02
956-08030	9.5	8.3	11.1	12.7	63790	30	8.1	8	8	17.8	0.03
956-08040	9.5	8.3	11.1	12.7	63790	40	8.1	8	8	17.8	0.03
956-08050	9.5	8.3	11.1	12.7	63790	50	8.1	8	8	17.8	0.04
956-08060	9.5	8.3	11.1	12.7	63790	60	8.1	8	8	17.8	0.04
956-08080	9.5	8.3	11.1	12.7	63790	80	8.1	8	8	17.8	0.05
956-10040	12	9.8	12.7	12.7	100060	40	10.1	10	10	17.8	0.05
956-10060	12	9.8	12.7	12.7	100060	60	10.1	10	10	17.8	0.06
956-10080	12	9.8	12.7	12.7	100060	80	10.1	10	10	17.8	0.07
956-10100	12	9.8	12.7	12.7	100060	100	10.1	10	10	17.8	0.08

316

IN"



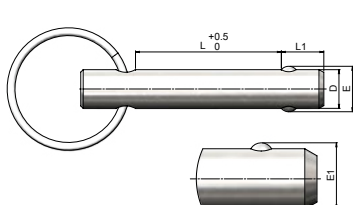
WDS 957 Detent Pins - 316 Stainless Steel - Inch

Pin - 316 Stainless Steel, Ball - 316 Stainless Steel

Note - D Dimension 3/16 have one ball

WDS No.	D	D Nominal	E	E1	L	L1	Weight (kg)
957-10105	0.1865/0.1825	3/16	-	0.217	0.5	0.349/0.289	0.01
957-10110	0.1865/0.1825	3/16	-	0.217	1	0.349/0.289	0.01
957-10115	0.1865/0.1825	3/16	-	0.217	1.5	0.349/0.289	0.01
957-10120	0.1865/0.1825	3/16	-	0.217	2	0.349/0.289	0.01
957-10125	0.1865/0.1825	3/16	-	0.217	2.5	0.349/0.289	0.01
957-10130	0.1865/0.1825	3/16	-	0.217	3	0.349/0.289	0.03
957-10205	0.249/0.245	1/4	0.28	-	0.5	0.344/0.284	0.01
957-10208	0.249/0.245	1/4	0.28	-	0.8	0.344/0.284	0.01
957-10210	0.249/0.245	1/4	0.28	-	1	0.344/0.284	0.01
957-10215	0.249/0.245	1/4	0.28	-	1.5	0.344/0.284	0.02
957-10220	0.249/0.245	1/4	0.28	-	2	0.344/0.284	0.02
957-10225	0.249/0.245	1/4	0.28	-	2.5	0.344/0.284	0.02
957-10230	0.249/0.245	1/4	0.28	-	3	0.344/0.284	0.03
957-10408	0.311/0.307	5/16	0.36	-	0.8	0.359/0.299	0.02

WDS No.	D	D Nominal	E	E1	L	L1	Weight (kg)
957-10410	0.311/0.307	5/16	0.36	-	1	0.359/0.299	0.02
957-10415	0.311/0.307	5/16	0.36	-	1.5	0.359/0.299	0.02
957-10420	0.311/0.307	5/16	0.36	-	2	0.359/0.299	0.03
957-10425	0.311/0.307	5/16	0.36	-	2.5	0.359/0.299	0.03
957-10430	0.311/0.307	5/16	0.36	-	3	0.359/0.299	0.04



316

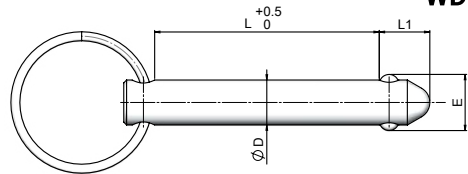
Detent Pins - 316 Stainless Steel - Metric WDS 957

Pin - 316 Stainless Steel, Ball - 316 Stainless Steel

Note - D Dimension 5 have one ball

WDS No.	D	D Nominal	E	E1	L	L1	Weight (kg)
957-20515	4.96/4.86	5	-	5.45	15	5.7/4.8	0.01
957-20520	4.96/4.86	5	-	5.45	20	5.7/4.8	0.01
957-20530	4.96/4.86	5	-	5.45	30	5.7/4.8	0.01
957-20540	4.96/4.86	5	-	5.45	40	5.7/4.8	0.02
957-20550	4.96/4.86	5	-	5.45	50	5.7/4.8	0.02
957-20560	4.96/4.86	5	-	5.45	60	5.7/4.8	0.02
957-20570	4.96/4.86	5	-	5.45	70	5.7/4.8	0.08
957-20615	5.96/5.86	6	6.45	-	15	8.7/7.2	0.01
957-20620	5.96/5.86	6	6.45	-	20	8.7/7.2	0.01
957-20630	5.96/5.86	6	6.45	-	30	8.7/7.2	0.01
957-20640	5.96/5.86	6	6.45	-	40	8.7/7.2	0.02
957-20650	5.96/5.86	6	6.45	-	50	8.7/7.2	0.02
957-20660	5.96/5.86	6	6.45	-	60	8.7/7.2	0.02
957-20670	5.96/5.86	6	6.45	-	70	8.7/7.2	0.02
957-20680	5.96/5.86	6	6.45	-	80	8.7/7.2	0.02
957-20820	7.96/7.86	8	8.58	-	20	9.1/7.6	0.02
957-20830	7.96/7.86	8	8.58	-	30	9.1/7.6	0.02
957-20840	7.96/7.86	8	8.58	-	40	9.1/7.6	0.03
957-20850	7.96/7.86	8	8.58	-	50	9.1/7.6	0.03
957-20860	7.96/7.86	8	8.58	-	60	9.1/7.6	0.03
957-20870	7.96 / 7.86	8	8.58	-	70	9.1 / 7.6	0.04
957-20880	7.96/7.86	8	8.58	-	80	9.1/7.6	0.04
957-210100	9.96/9.86	10	10.79	-	100	9.9/8.4	0.08
957-210110	9.96/9.86	10	10.79	-	110	9.9/8.4	0.09
957-21020	9.96/9.86	10	10.79	-	20	9.9/8.4	0.03
957-21030	9.96/9.86	10	10.79	-	30	9.9/8.4	0.03
957-21040	9.96/9.86	10	10.79	-	40	9.9/8.4	0.04
957-21050	9.96/9.86	10	10.79	-	50	9.9/8.4	0.05
957-21060	9.96/9.86	10	10.79	-	60	9.9/8.4	0.05
957-21070	9.96/9.86	10	10.79	-	70	9.9/8.4	0.05
957-21080	9.96/9.86	10	10.79	-	80	9.9/8.4	0.06

ZP

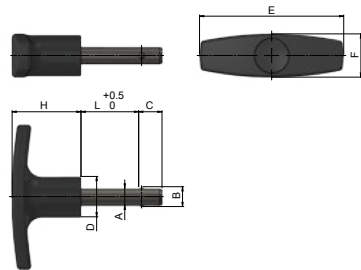


WDS 957 Detent Pins - Zinc Plated Steel - Metric

220M07 Zinc Plated

WDS No.	D	D Nominal	E	L	L1	Weight (kg)
957-40630	5.96/5.86	6	7.5	30	8	0.01
957-40640	5.96/5.86	6	7.5	40	8	0.02
957-40660	5.96/5.86	6	7.5	60	8	0.02
957-40840	7.96/7.86	8	10	40	9	0.03
957-40850	7.96/7.86	8	10	50	9	0.03
957-40870	7.96/7.86	8	10	70	9	0.04
957-41060	9.96/9.86	10	12	60	10	0.05
957-41080	9.96/9.86	10	12	80	10	0.06

316

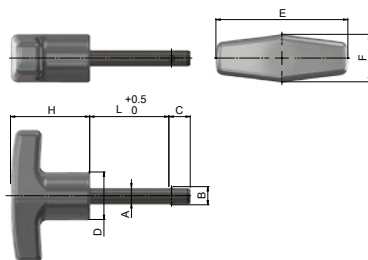


WDS 960 Threaded Detent Pin with T-Handle

Pin - Stainless steel 316

Handle - PA6GF30

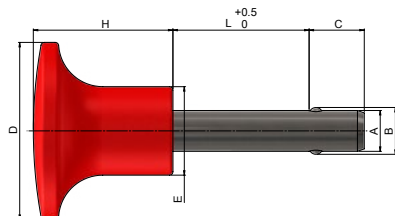
WDS No.	A	B	C	D	E	F	H	L	Weight (kg)
960-706020	6	6.88	8.1	25	50	15	24	20	0.02
960-706030	6	6.88	8.1	25	50	15	24	30	0.02
960-706040	6	6.88	8.1	25	50	15	24	40	0.02
960-706060	6	6.88	8.1	25	50	15	24	60	0.03
960-708030	8	9.35	8.3	25	60	18	33	30	0.04
960-708040	8	9.35	8.3	25	60	18	33	40	0.04
960-708050	8	9.35	8.3	25	60	18	33	50	0.05
960-708060	8	9.35	8.3	25	60	18	33	60	0.05
960-708070	8	9.35	8.3	25	60	18	33	70	0.05
960-710040	10	11.58	9.8	35	72	19	34	40	0.07
960-710060	10	11.58	9.8	35	72	19	34	60	0.08
960-710080	10	11.58	9.8	35	72	19	34	80	0.09



Detent Pins with Stainless Steel T Knob **WDS 960**

Pin - Stainless Steel 316
T-Handle - Stainless Steel 316

WDS No.	A	B	C	D	E	F	H	L	Weight (kg)
960-806020	6	6.88	8.1	18	50	18	30	20	0.1
960-806030	6	6.88	8.1	18	50	18	30	30	0.1
960-806040	6	6.88	8.1	18	50	18	30	40	0.1
960-806060	6	6.88	8.1	18	50	18	30	60	0.11
960-808030	8	9.35	8.3	21	70	21	35	30	0.19
960-808040	8	9.35	8.3	21	70	21	35	40	0.19
960-808050	8	9.35	8.3	21	70	21	35	50	0.2
960-808070	8	9.35	8.3	21	70	21	35	70	0.2
960-810040	10	11.58	9.8	21	70	21	35	40	0.2
960-810060	10	11.58	9.8	21	70	21	35	60	0.22
960-810080	10	11.58	9.8	21	70	21	35	80	0.23

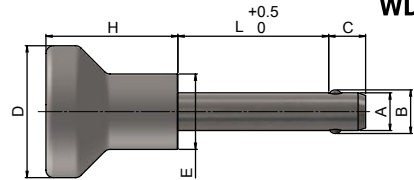


Detent Pins with Mushroom Knob **WDS 960**

316 Stainless Steel
Knob - Reinforced Polyamide with Stainless Steel Thread Insert

Black	Red	A	B	C	D	E	H	L	Weight (kg)
960-906020	960-906020TR	6	6.88	8.1	26	13	20.5	20	0.02
960-906030	960-906030TR	6	6.88	8.1	26	13	20.5	30	0.02
960-906040	960-906040TR	6	6.88	8.1	26	13	20.5	40	0.02
960-906060	960-906060TR	6	6.88	8.1	26	13	20.5	60	0.02
960-908030	960-908030TR	8	9.35	8.3	32	15	24	30	0.03
960-908040	960-908040TR	8	9.35	8.3	32	15	24	40	0.04
960-908050	960-908050TR	8	9.35	8.3	32	15	24	50	0.04
960-908060	960-908060TR	8	9.35	8.3	32	15	24	60	0.04
960-908070	960-908070TR	8	9.35	8.3	32	15	24	70	0.05
960-910040	960-910040TR	10	11.58	9.8	45	21	32	40	0.06
960-910060	960-910060TR	10	11.58	9.8	45	21	32	60	0.08
960-910080	960-910080TR	10	11.58	9.8	45	21	32	80	0.09

316

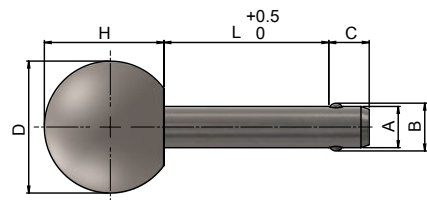


WDS 960 Detent Pin with Mushroom Knob - 316 Stainless Steel

316 Stainless Steel
Available in Matt or Polished finish

Matt	Polished	A	B	C	D	E	H	L	Weight (kg)
960-106020	960-206020	6	6.88	8.1	25	14	25	20	0.05
960-106030	960-206030	6	6.88	8.1	25	14	25	30	0.06
960-106040	960-206040	6	6.88	8.1	25	14	25	40	0.06
960-106060	960-206060	6	6.88	8.1	25	14	25	60	0.06
960-108030	960-208030	8	9.35	8.3	25	14	25	30	0.06
960-108040	960-208040	8	9.35	8.3	25	14	25	40	0.07
960-108050	960-208050	8	9.35	8.3	25	14	25	50	0.07
960-108060	960-208060	8	9.35	8.3	25	14	25	60	0.08
960-108070	960-208070	8	9.35	8.3	25	14	25	70	0.08
960-110040	960-210040	10	11.58	9.8	35	20	35	40	0.15
960-110060	960-210060	10	11.58	9.8	35	20	35	60	0.16
960-110080	960-210080	10	11.58	9.8	35	20	35	80	0.17

316



WDS 960 Detent Pin with Ball Knob - 316 Stainless Steel

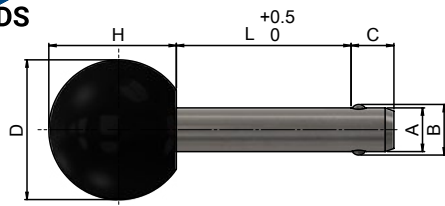
316 Stainless Steel
Available in Polished or Matt finish

Matt	Polished	A	B	C	D	H	L	Weight (kg)
960-306020	960-406020	6	6.88	8.1	20	18	20	0.02
960-306030	960-406030	6	6.88	8.1	20	18	30	0.02
960-306040	960-406040	6	6.88	8.1	20	18	40	0.02
960-306060	960-406060	6	6.88	8.1	20	18	60	0.03
960-308030	960-408030	8	9.35	8.3	25	22.5	40	0.08
960-308040	960-408040	8	9.35	8.3	25	22.5	40	0.08
960-308050	960-408050	8	9.35	8.3	25	22.5	50	0.09
960-308060	960-408060	8	9.35	8.3	25	22.5	60	0.09
960-308070	960-408070	8	9.35	8.3	25	22.5	70	0.09
-	960-410040	10	11.58	9.8	32	29	40	0.16
-	960-410060	10	11.58	9.8	32	29	60	0.17
-	960-410080	10	11.58	9.8	32	29	80	0.18



316

BK

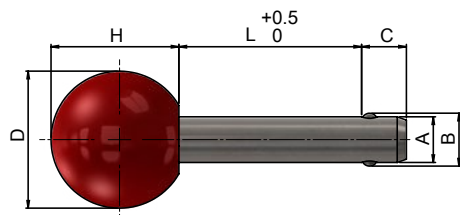


Detent Pins with Ball Knob - Black Bakelite WDS 960

Pin - 316 Stainless Steel

Ball - Black Bakelite

WDS No.	A	B	C	D	H	L	Weight (kg)
960-506020	6	6.88	8.1	20	18	20	0.01
960-506030	6	6.88	8.1	20	18	30	0.02
960-506040	6	6.88	8.1	20	18	40	0.02
960-506060	6	6.88	8.1	20	18	60	0.02
960-508030	8	9.35	8.3	25	22.5	40	0.03
960-508040	8	9.35	8.3	25	22.5	40	0.03
960-508050	8	9.35	8.3	25	22.5	50	0.04
960-508060	8	9.35	8.3	25	22.5	60	0.04
960-508070	8	9.35	8.3	25	22.5	70	0.04
960-510040	10	11.58	9.8	32	29	40	0.05
960-510060	10	11.58	9.8	32	29	60	0.06
960-510080	10	11.58	9.8	32	29	80	0.07



316

BK

Detent Pins with Ball Knob - Red Bakelite WDS 960

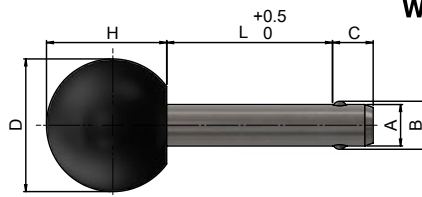
Pin - 316 Stainless Steel

Ball - Red Bakelite

WDS No.	A	B	C	D	H	L	Weight (kg)
960-506020R	6	6.88	8.1	18	17	20	0.01
960-506030R	6	6.88	8.1	18	17	30	0.01
960-506040R	6	6.88	8.1	18	17	40	0.02
960-506060R	6	6.88	8.1	18	17	60	0.02
960-508030R	8	9.35	8.3	22	20.3	40	0.02
960-508040R	8	9.35	8.3	22	20.3	40	0.03
960-508050R	8	9.35	8.3	22	20.3	50	0.03
960-508060R	8	9.35	8.3	22	20.3	60	0.04
960-508070R	8	9.35	8.3	22	20.3	70	0.04
960-510040R	10	11.58	9.8	30	28	40	0.05
960-510060R	10	11.58	9.8	30	28	60	0.06
960-510080R	10	11.58	9.8	30	28	80	0.07

316

TP



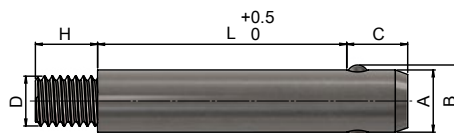
WDS 960 Detent Pins with Ball Knob - Black Thermoplastic

Pin - 316 Stainless steel

Knob - Black Thermoplastic

WDS No.	A	B	C	D	H	L	Weight (kg)
960-606020	6	6.88	8.1	20	18	20	0.01
960-606030	6	6.88	8.1	20	18	30	0.02
960-606040	6	6.88	8.1	20	18	40	0.02
960-606060	6	6.88	8.1	20	18	60	0.02
960-608030	8	9.35	8.3	25	22.5	40	0.03
960-608040	8	9.35	8.3	25	22.5	40	0.03
960-608050	8	9.35	8.3	25	22.5	50	0.04
960-608060	8	9.35	8.3	25	22.5	60	0.04
960-608070	8	9.35	8.3	25	22.5	70	0.04
960-610040	10	11.58	9.8	32	29	40	0.07
960-610060	10	11.58	9.8	32	29	60	0.07
960-610080	10	11.58	9.8	32	29	80	0.08

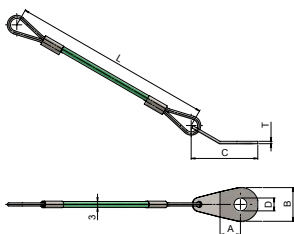
316



WDS 960 Threaded Detent Pins - 316 Stainless Steel

316 Stainless steel

WDS No.	A	B	C	D	H	L	Weight (kg)
960-0620M5	6	6.88	8.1	M5	6	20	0.01
960-0630M5	6	6.88	8.1	M5	6	30	0.01
960-0640M5	6	6.88	8.1	M5	6	40	0.01
960-0660M5	6	6.88	8.1	M5	6	60	0.02
960-0830M6	8	9.35	8.3	M6	10	30	0.02
960-0840M6	8	9.35	8.3	M6	10	40	0.02
960-0850M6	8	9.35	8.3	M6	10	50	0.03
960-0860M6	8	9.35	8.3	M6	10	60	0.03
960-0870M6	8	9.35	8.3	M6	10	70	0.03
960-1040M8	10	11.58	9.8	M8	10	40	0.03
960-1060M8	10	11.58	9.8	M8	10	60	0.05
960-1080M8	10	11.58	9.8	M8	10	80	0.06

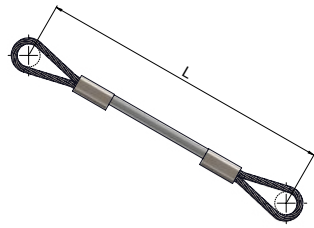


Stainless Steel Lanyards with Round Tab WDS 250

Lanyard & Tab - 303 Stainless Steel, Available with Clear, Black or Green Nylon Jacket

Green	Black	Clear	A	B	C	D	L	T	Weight (kg)
250-890054P	-	-	10	17	33	3.3	102	1.2	0.01
250-890054Q	250-790054Q	250-690054Q	10	17	33	4.9	102	1.2	0.01
250-890054R	250-790054R	250-690054R	10	17	33	6.5	102	1.2	0.01
250-890054T	250-790054T	250-690054T	10	17	33	8.1	102	1.2	0.01
250-890054V	-	-	10	17	33	10.3	102	1.2	0.01
250-890054W	250-790054W	250-690054W	11	30	40	12.3	102	1.5	0.01
250-890054Y	250-790054Y	250-690054Y	11	30	40	16.3	102	1.5	0.01
250-890056P	-	-	10	17	33	3.3	152	1.2	0.01
250-890056Q	250-790056Q	250-690056Q	10	17	33	4.9	152	1.2	0.01
250-890056R	250-790056R	250-690056R	10	17	33	6.5	152	1.2	0.01
250-890056T	250-790056T	250-690056T	10	17	33	8.1	152	1.2	0.01
250-890056V	-	-	10	17	33	10.3	152	1.2	0.01
250-890056W	250-790056W	250-690056W	11	30	40	12.3	152	1.5	0.01
250-890056Y	250-790056Y	250-690056Y	11	30	40	16.3	152	1.5	0.01
250-890058P	-	-	10	17	33	3.3	203	1.2	0.02
250-890058Q	250-790058Q	250-690058Q	10	17	33	4.9	203	1.2	0.01
250-890058R	250-790058R	250-690058R	10	17	33	6.5	203	1.2	0.02
250-890058T	250-790058T	250-690058T	10	17	33	8.1	203	1.2	0.01
250-890058V	-	-	10	17	33	10.3	203	1.2	0.02
250-890058W	250-790058W	250-690058W	11	30	40	12.3	203	1.5	0.01
250-890058Y	250-790058Y	250-690058Y	11	30	40	16.3	203	1.5	0.01
250-890060P	-	-	10	17	33	3.3	254	1.2	0.01
250-890060Q	250-790060Q	250-690060Q	10	17	33	4.9	254	1.2	0.01
250-890060R	250-790060R	250-690060R	10	17	33	6.5	254	1.2	0.01
250-890060T	250-790060T	250-690060T	10	17	33	8.1	254	1.2	0.01
250-890060V	-	-	10	17	33	10.3	254	1.2	0.02
250-890060W	250-790060W	250-690060W	11	30	40	12.3	254	1.5	0.01
250-890060Y	250-790060Y	250-690060Y	11	30	40	16.3	254	1.5	0.01
250-890062P	-	-	10	17	33	3.3	305	1.2	0.02
250-890062Q	250-790062Q	250-690062Q	10	17	33	4.9	305	1.2	0.01
250-890062R	250-790062R	250-690062R	10	17	33	6.5	305	1.2	0.02
250-890062T	250-790062T	250-690062T	10	17	33	8.1	305	1.2	0.02
250-890062V	-	-	10	17	33	10.3	305	1.2	0.02
250-890062W	250-790062W	250-690062W	11	30	40	12.3	305	1.5	0.01
250-890062Y	250-790062Y	250-690062Y	11	30	40	16.3	305	1.5	0.01
250-890066P	-	-	10	17	33	3.3	406	1.2	0.02
250-890066Q	-	-	10	17	33	4.9	406	1.2	0.02
250-890066R	-	-	10	17	33	6.5	406	1.2	0.02
250-890066T	-	-	10	17	33	8.1	406	1.2	0.02
250-890066V	-	-	10	17	33	10.3	406	1.2	0.01
250-890070P	-	-	10	17	33	3.3	508	1.2	0.02
250-890070Q	-	-	10	17	33	4.9	508	1.2	0.02
250-890070R	-	-	10	17	33	6.5	508	1.2	0.02
250-890070T	-	-	10	17	33	8.1	508	1.2	0.02
250-890070V	-	-	10	17	33	10.3	508	1.2	0.02
250-890074P	-	-	10	17	33	3.3	610	1.2	0.02
250-890074Q	-	-	10	17	33	4.9	610	1.2	0.02
250-890074R	-	-	10	17	33	6.5	610	1.2	0.02
250-890074T	-	-	10	17	33	8.1	610	1.2	0.02
250-890074V	-	-	10	17	33	10.3	610	1.2	0.02

303

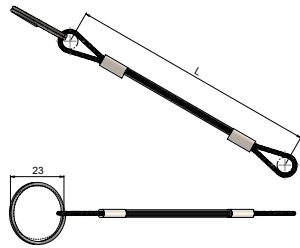
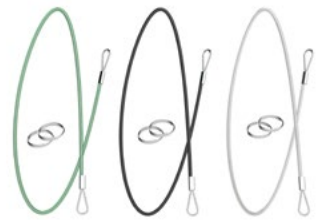


WDS 250 Stainless Steel Lanyards

Lanyard - 303 Stainless Steel, Available with Clear, Black or Green Nylon Jacket

Green	Black	Clear	L	Weight (kg)
250-890204	250-790204	250-690204	102	0.01
250-890206	250-790206	250-690204	152	0.01
250-890208	250-790208	250-690208	203	0.01
250-890210	250-790210	250-690210	254	0.01
250-890212	250-790212	250-690212	305	0.01
250-890216	-	-	406	0.01
250-890220	-	-	508	0.02
250-890224	250-790224	-	610	0.03

303

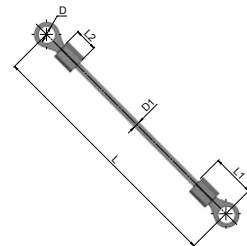


WDS 256 Stainless Steel Lanyards with Keyrings

Lanyard - 303 Stainless Steel, Available with Clear, Black or Green Nylon Jacket

Green	Black	Clear	L	Weight (kg)
256-890204	256-790204	256-690204	102	0.01
256-890206	256-790206	256-690206	152	0.01
256-890208	256-790208	256-690208	203	0.01
256-890210	256-790210	256-690210	254	0.01
256-890212	256-790212	256-690212	305	0.01
256-890216	-	-	406	0.01
256-890220	-	-	508	0.02
256-890224	256-790224	-	610	0.03

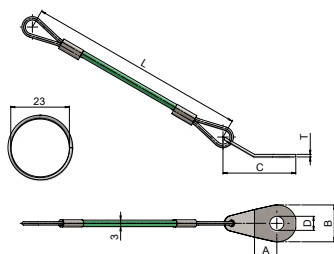
304



WDS 250 Stainless Steel Retaining Cable

Wire & Crimp - 304 Stainless Steel, Available with Clear or Black PVC Coating
Wire diameter 3mm (approximately) including nylon jacket

Clear	Black	D	D1	L	L1	L2	Weight (kg)
250-6100C	250-7100C	6.5	3	100	17	9	0.01
250-6150C	250-7150C	6.5	3	150	17	9	0.01
250-6200C	250-7200C	6.5	3	200	17	9	0.01
250-6300C	250-7300C	6.5	3	300	17	9	0.01

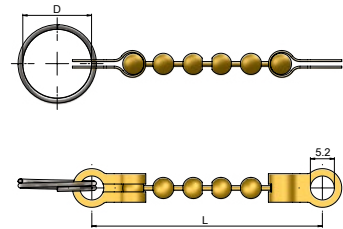


Stainless Steel Lanyards with Round Tab and Key Ring WDS 250

Lanyard & Tab - 303 Stainless Steel, Available with Clear, Black or Green Nylon Jacket

Green	Black	Clear	A	B	C	D	L	T	Weight (kg)
250-890054P	-	-	10	17	33	3.3	102	1.2	0.01
250-890054Q	250-790054Q	250-690054Q	10	17	33	4.9	102	1.2	0.01
250-890054R	250-790054R	250-690054R	10	17	33	6.5	102	1.2	0.01
250-890054T	250-790054T	250-690054T	10	17	33	8.1	102	1.2	0.01
250-890054V	-	-	10	17	33	10.3	102	1.2	0.01
250-890054W	250-790054W	250-690054W	11	30	40	12.3	102	1.5	0.01
250-890054Y	250-790054Y	250-690054Y	11	30	40	16.3	102	1.5	0.01
250-890056P	-	-	10	17	33	3.3	152	1.2	0.01
250-890056Q	250-790056Q	250-690056Q	10	17	33	4.9	152	1.2	0.01
250-890056R	250-790056R	250-690056R	10	17	33	6.5	152	1.2	0.01
250-890056T	250-790056T	250-690056T	10	17	33	8.1	152	1.2	0.01
250-890056V	-	-	10	17	33	10.3	152	1.2	0.01
250-890056W	250-790056W	250-690056W	11	30	40	12.3	152	1.5	0.01
250-890056Y	250-790056Y	250-690056Y	11	30	40	16.3	152	1.5	0.01
250-890058P	-	-	10	17	33	3.3	203	1.2	0.02
250-890058Q	250-790058Q	250-690058Q	10	17	33	4.9	203	1.2	0.01
250-890058R	250-790058R	250-690058R	10	17	33	6.5	203	1.2	0.02
250-890058T	250-790058T	250-690058T	10	17	33	8.1	203	1.2	0.01
250-890058V	-	-	10	17	33	10.3	203	1.2	0.02
250-890058W	250-790058W	250-690058W	11	30	40	12.3	203	1.5	0.01
250-890058Y	250-790058Y	250-690058Y	11	30	40	16.3	203	1.5	0.01
250-890060P	-	-	10	17	33	3.3	254	1.2	0.01
250-890060Q	250-790060Q	250-690060Q	10	17	33	4.9	254	1.2	0.01
250-890060R	250-790060R	250-690060R	10	17	33	6.5	254	1.2	0.01
250-890060T	250-790060T	250-690060T	10	17	33	8.1	254	1.2	0.01
250-890060V	-	-	10	17	33	10.3	254	1.2	0.02
250-890060W	250-790060W	250-690060W	11	30	40	12.3	254	1.5	0.01
250-890060Y	250-790060Y	250-690060Y	11	30	40	16.3	254	1.5	0.01
250-890062P	-	-	10	17	33	3.3	305	1.2	0.02
250-890062Q	250-790062Q	250-690062Q	10	17	33	4.9	305	1.2	0.01
250-890062R	250-790062R	250-690062R	10	17	33	6.5	305	1.2	0.02
250-890062T	250-790062T	250-690062T	10	17	33	8.1	305	1.2	0.02
250-890062V	-	-	10	17	33	10.3	305	1.2	0.02
250-890062W	250-790062W	250-690062W	11	30	40	12.3	305	1.5	0.01
250-890062Y	250-790062Y	250-690062Y	11	30	40	16.3	305	1.5	0.01
250-890066P	-	-	10	17	33	3.3	406	1.2	0.02
250-890066Q	-	-	10	17	33	4.9	406	1.2	0.02
250-890066R	-	-	10	17	33	6.5	406	1.2	0.02
250-890066T	-	-	10	17	33	8.1	406	1.2	0.02
250-890066V	-	-	10	17	33	10.3	406	1.2	0.01
250-890070P	-	-	10	17	33	3.3	508	1.2	0.02
250-890070Q	-	-	10	17	33	4.9	508	1.2	0.02
250-890070R	-	-	10	17	33	6.5	508	1.2	0.02
250-890070T	-	-	10	17	33	8.1	508	1.2	0.02
250-890070V	-	-	10	17	33	10.3	508	1.2	0.02
250-890074P	-	-	10	17	33	3.3	610	1.2	0.02
250-890074Q	-	-	10	17	33	4.9	610	1.2	0.02
250-890074R	-	-	10	17	33	6.5	610	1.2	0.02
250-890074T	-	-	10	17	33	8.1	610	1.2	0.02
250-890074V	-	-	10	17	33	10.3	610	1.2	0.02

BR

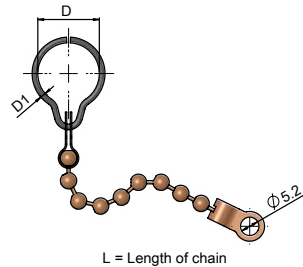


WDS 510 Retaining Chain and Key Ring

Chain - Brass, Keyring - 316 Stainless Steel

WDS No.	D	L	Weight (kg)
510-3150150	15	150	0.01
510-3150300	15	300	0.01
510-3150500	15	500	0.02
510-3190150	19	150	0.01
510-3190300	19	300	0.01
510-3190500	19	500	0.02
510-3230150	23	150	0.01
510-3230300	23	300	0.01
510-3230500	23	500	0.02
510-3280150	28	150	0.01
510-3280300	28	300	0.02
510-3280500	28	500	0.02

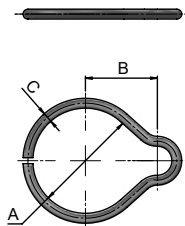
BR



WDS 510 Retaining Clip & Chain

Chain - Brass, Clip Spring - Steel, Chemical black finish

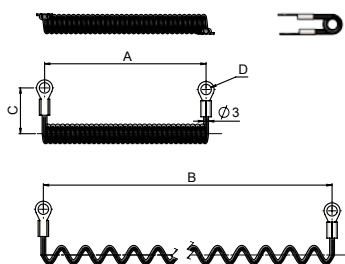
WDS No.	D	D1	L	Weight (kg)
510-201150	8.5	0.9	150	0.01
510-201300	8.5	0.9	300	0.01
510-201500	8.5	0.9	500	0.02
510-202150	11.5	1.2	150	0.01
510-202300	11.5	1.2	300	0.01
510-202500	11.5	1.2	500	0.02
510-203150	14.5	1.6	150	0.01
510-203300	14.5	1.6	300	0.01
510-203500	14.5	1.6	500	0.02
510-204150	17.5	1.6	150	0.01
510-204300	17.5	1.6	300	0.02
510-204500	17.5	1.6	500	0.02
510-205150	20.5	2	150	0.01
510-205300	20.5	2	300	0.02
510-205500	20.5	2	500	0.02
510-206150	23.5	2	150	0.01
510-206300	23.5	2	300	0.02
510-206500	23.5	2	500	0.02
510-207150	29.5	2.6	150	0.01
510-207300	29.5	2.6	300	0.02
510-207500	29.5	2.6	500	0.03
510-208150	35.5	2.6	150	0.01
510-208300	35.5	2.6	300	0.02
510-208500	35.5	2.6	500	0.03



Retaining Clip WDS 510

Clip Spring - Steel, Chemical black finish

WDS No.	A	B	C	Pack Quantity	Weight (kg)
510-301	8.5	7.1	1.0	10	0.02
510-302	11.5	8.7	1.2	10	0.02
510-303	14.5	10.3	1.6	10	0.02
510-304	17.5	11.9	1.6	10	0.02
510-305	20.5	13.5	2.0	10	0.02
510-306	23.5	15.1	2.0	10	0.02
510-307	29.5	18.3	2.6	10	0.02
510-308	35.5	21.4	2.6	10	0.02

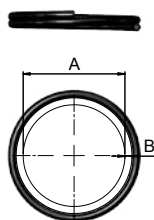


Expanding Lanyards and Safety Cable WDS 958

Cable -1mm Stainless wire, Polyurethane coated

End fittings - Stainless Steel

WDS No.	A	B	C	D	Weight (kg)
958-100	100	500	28	6.5	0.02
958-200	200	1000	28	6.5	0.03

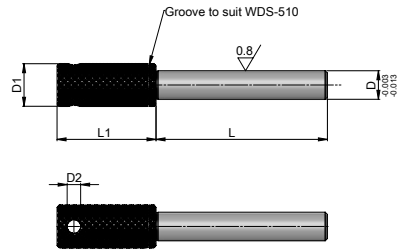


316

Keyring for Lanyards and Retainers WDS 959

316 Stainless Steel

WDS No.	A	B	Weight (kg)
959-215	13	1	0.01
959-219	19	1	0.01
959-223	23	1.2	0.01
959-228	28	1.7	0.01

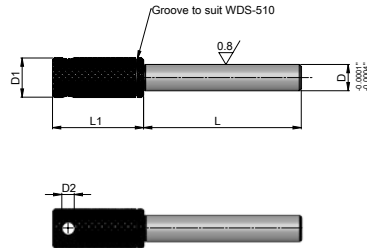


WDS 507 Removable Location Pin without Cross Pin - Metric

Steel BS 970 Gr 212A42 Hardened
Chemical black finish

WDS No.	D	D1	D2	L	L1	L2	Weight (kg)
507-200320	3	10	5	20	32	45	0.02
507-200340	3	10	5	40	32	45	0.02
507-200420	4	10	5	20	32	45	0.02
507-200440	4	10	5	40	32	45	0.03
507-20135	5	10	5	35	32	45	0.03
507-20150	5	10	5	50	32	45	0.03
507-20235	6	13	5	35	40	60	0.05
507-20275	6	13	5	75	40	60	0.06
507-20335	8	13	6	35	40	70	0.05
507-20375	8	13	6	75	40	70	0.07
507-204100	10	16	6	100	40	70	0.12
507-20450	10	16	6	50	40	70	0.09
507-205125	12	20	6	125	45	70	0.21
507-20575	12	20	6	75	45	70	0.17

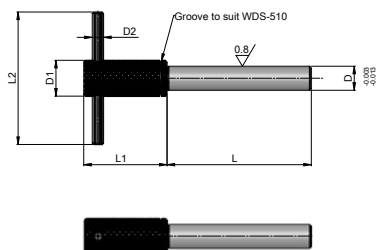
IN"



WDS 507 Removable Location Pin without Cross Pin - Inch

Steel BS 970 Gr 212A42 Hardened
Chemical black finish

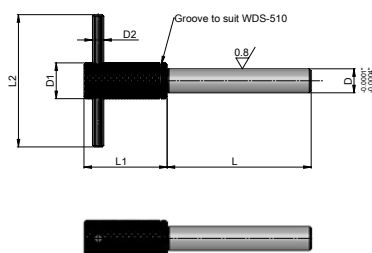
WDS No.	D	D1	D2	L	L1	L2	Chain No.	Weight (kg)
507-21112	1/8 inch	10	5	1 - 1/2 inch	32	45	510-201	0.02
507-23112	3/16 inch	10	5	1-1/2 inch	32	45	510-201	0.02
507-25112	1/4 inch	13	5	1-1/2 inch	38	60	510-202	0.04
507-253	1/4 inch	13	5	3 inch	38	60	510-202	0.05
507-27112	5/16 inch	13	5	1-1/2 inch	38	60	510-202	0.05
507-273	5/16 inch	13	5	3 inch	38	60	510-202	0.07
507-292	3/8 inch	16	6.0	2 inch	38	70	510-203	0.08
507-294	3/8 inch	16	6.0	4 inch	38	70	510-203	0.11
507-312	7/16 inch	19	6.0	2 inch	44	70	510-204	0.13
507-333	1/2 inch	19	6.0	3 inch	44	70	510-204	0.17
507-335	1/2 inch	19	6.0	5 inch	44	70	510-204	0.22



Removable Location Pin with Pull Bar- Metric **WDS 509**

Steel BS 970 Gr 212A42 Hardened
Chemical black finish

WDS No.	D	D1	D2	L	L1	L2	Weight (kg)
509-200320	3	10	5	20	32	45	0.02
509-200340	3	10	5	40	32	45	0.03
509-200420	4	10	5	20	32	45	0.03
509-200440	4	10	5	40	32	45	0.03
509-20135	5	10	5	35	32	45	0.03
509-20150	5	10	5	50	32	45	0.03
509-20235	6	13	5	35	40	60	0.05
509-20275	6	13	5	75	40	60	0.06
509-20335	8	13	6	35	40	70	0.07
509-20375	8	13	6	75	40	70	0.09
509-204100	10	16	6	100	40	70	0.14
509-20450	10	16	6	50	40	70	0.1
509-205125	12	20	6	125	45	70	0.23
509-20575	12	20	6	75	45	70	0.19



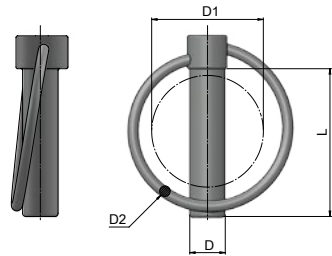
IN"

Removable Location Pin with Pull Bar - Inch **WDS 509**

Steel BS 970 Gr 212A42 Hardened
Chemical black finish

WDS No.	D	D1	D2	L	L1	L2	Weight (kg)
509-25112	1/8	10	5	1 1/2	32	45	0.02
509-27112	3/16	10	5	1 1/2	32	45	0.03
509-29112	1/4	13	5	1 1/2	38	60	0.05
509-293	1/4	13	5	3	38	60	0.06
509-31112	5/16	13	5	1 1/2	38	60	0.06
509-313	5/16	13	5	3	38	60	0.07
509-332	3/8	16	6	2	38	70	0.1
509-334	3/8	16	6	4	38	70	0.12
509-352	7/16	19	6	2	44	70	0.15
509-373	1/2	19	6	3	44	70	0.18
509-375	1/2	19	6	5	44	70	0.23

ZP

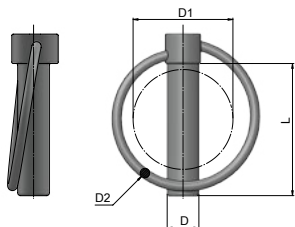


WDS 961 Linch Pin - Steel Zinc Plated

Carbon steel with hard drawn spring wire
Zinc plated Steel

WDS No.	D	D1	D2	L	Weight (kg)
961-204540	4.5	34	2.5	40	0.01
961-206040	6.3	34	3.2	40	0.02
961-208040	8	34	3.5	40	0.03
961-209045	9	34	3.0	45	0.05
961-210045	10	34	3.0	45	0.05
961-211045	11	34	3.2	45	0.06

304



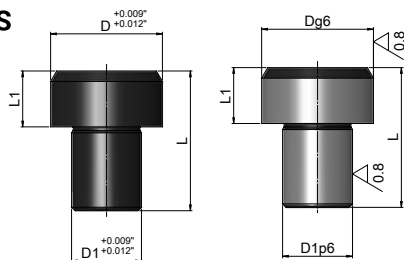
WDS 961 Linch Pin - Stainless Steel

304 Stainless Steel

WDS No.	D	D1	D2	L	Weight (kg)
961-604540	4.5	34	3.0	40	0.01
961-606040	6	34	3.2	40	0.02
961-608040	8	34	3.2	40	0.03
961-610045	10	34	3.0	45	0.05



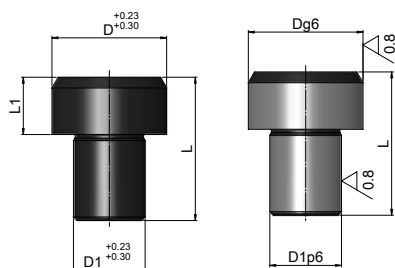
IN"



Location Pin - Inch Round Head WDS 504

Steel BS 970 Gr 212A42 Hardened

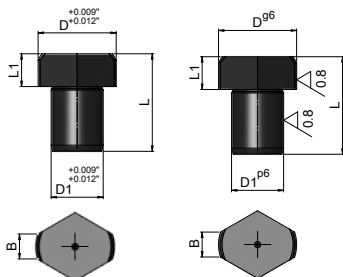
Black Finish	Ground Finish	D	D1	L	L1	Weight (kg)
504-01	504-51	5/16 inch	1/4 inch	15.9	8	0.01
504-02	504-52	3/8 inch	1/4 inch	15.9	8	0.01
504-03	504-53	7/16 inch	1/4 inch	15.9	8	0.01
504-04	504-54	1/2 inch	5/16 inch	17.5	8	0.01
504-06	504-56	5/8 inch	3/8 inch	20.6	8	0.02
504-08	504-58	3/4 inch	1/2 inch	23.8	8	0.03



Location Pin - Metric Round Head WDS 504

Steel BS 970 Gr 212A42 Hardened

Black Finish	Ground Finish	D	D1	L	L1	Weight (kg)
504-201	504-251	8	6	16	8	0.01
504-202	504-252	10	6	16	8	0.01
504-203	504-253	12	8	18	8	0.01
504-204	504-254	14	8	18	8	0.01
504-205	504-255	15	10	20	8	0.02
504-206	504-256	16	10	20	8	0.02
504-207	504-257	18	10	20	8	0.03
504-208	504-258	20	12	24	8	0.04
504-209	504-259	22	12	24	8	0.04
504-211	504-261	25	12	24	8	0.04

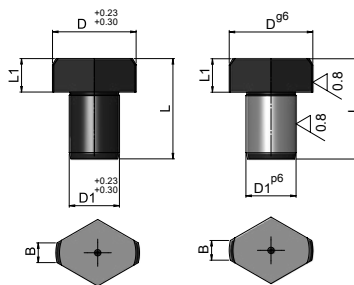


IN"

Location Pin - Inch Diamond Head WDS 505

Steel BS 970 Gr 220M07

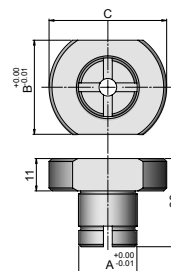
Black Finish	Ground Finish	B	D	D1	L	L1	Weight (kg)
505-01	505-51	2	5/16 inch	1/4 inch	15.9	8	0.01
505-02	505-52	2.4	3/8 inch	1/4 inch	15.9	8	0.01
505-03	505-53	2.8	7/16 inch	1/4 inch	15.9	8	0.01
505-04	505-54	3.2	1/2 inch	5/16 inch	17.5	8	0.01
505-06	505-56	4	5/8 inch	3/8 inch	20.6	8	0.02
505-08	505-58	4.8	3/4 inch	1/2 inch	23.8	8	0.03



WDS 505 Location Pin - Metric Diamond Head

Steel BS 970 Gr 220M07

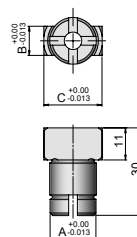
Black Finish	Ground Finish	B	D	D1	L	L1	Weight (kg)
505-201	505-251	2	8	6	16	8	0.06
505-202	505-252	3	10	6	16	8	0.01
505-203	505-253	3	12	8	18	8	0.01
505-204	505-254	4	14	8	18	8	0.01
505-205	505-255	4	15	10	20	8	0.02
505-206	505-256	4	16	10	20	8	0.02
505-207	505-257	5	18	10	20	8	0.02
505-208	505-258	5	20	12	24	8	0.03
505-209	505-259	6	22	12	24	8	0.03
505-211	505-261	6	25	12	24	8	0.04



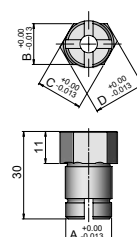
WDS 511 Fixture Keys - Sine Metric

AISI 4140 (BS 708 A42) High Tensile Steel

WDS No.	C	Shank Size A	Slot Size B	Weight (kg)
511-102	25	16	14	0.05
511-103	25	16	16	0.05
511-105	29	16	20	0.06
511-106	29	16	22	0.06
511-107	35	20	24	0.07
511-108	35	20	28	0.11
511-109	40	20	32	0.13



511-201 & 511-202

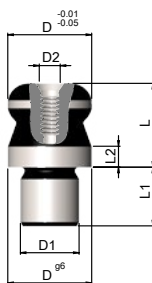


511-203 & 511-204

WDS 511 Fixture Keys - Sine Multi Sized

AISI 4140 (BS 708 A42) High Tensile Steel

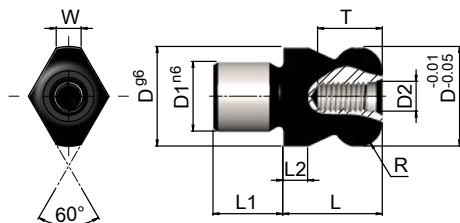
WDS No.	A	B	C	D	Weight (kg)
511-201	16	10	20	-	0.03
511-202	16	12	22	-	0.04
511-203	16	14	16	18	0.04
511-204	20	24	28	32	0.07



Location Pin WDS 512

Tool Steel Hardened and ground
303 Stainless Steel

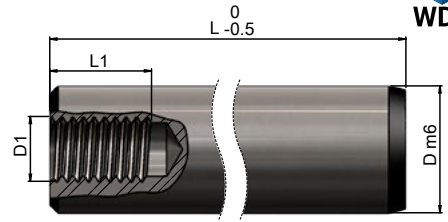
Steel	Stainless Steel	D	D1	D2	L	L1	L2	R	T	Weight (kg)
512-201	512-601	8	8	M3	8	10	2	2	6	0.01
512-202	512-602	10	10	M3	10	13	2.5	2.5	6	0.01
512-203	512-603	12	12	M4	12	15	3	3	8	0.02
512-204	512-604	16	16	M5	16	20	4	4	10	0.05
512-205	512-605	20	20	M5	20	25	5	5	10	0.1
512-207	-	25	25	M5	25	25	6	6	10	0.18
512-208	-	30	30	M6	30	30	8	8	12	0.31
512-209	-	40	40	M6	40	40	10	10	12	0.73
512-210	-	50	50	M6	50	50	12	12	12	1.42
512-212	512-612	10	7	M3	10	7	2.5	2.5	6	0.01
512-213	512-613	12	8	M4	12	8	3	3	8	0.01
512-214	512-614	16	12	M5	16	12	4	4	10	0.03
512-215	512-615	20	14	M5	20	14	5	5	10	0.06
512-216	-	22	16	M5	22	16	5.5	5.5	10	0.08
512-217	-	25	18	M5	25	18	6	6	10	0.12



Location Pin - Diamond WDS 513

Tool Steel Hardened and ground
303 Stainless Steel

Steel	Stainless Steel	D	D1	D2	L	L1	L2	R	T	W	Weight (kg)
513-201	513-601	8	8	M3	8	10	2	2	6	1.9	0.01
513-202	513-602	10	10	M3	10	13	2.5	2.5	6	2.5	0.01
513-203	513-603	12	12	M4	12	15	3	3	8	2.5	0.02
513-204	513-604	16	16	M5	16	20	4	4	10	4.3	0.04
513-205	513-605	20	20	M5	20	25	5	5	10	5	0.09
513-207	-	25	25	M5	25	25	6	6	10	5.6	0.15
513-208	-	30	30	M6	30	30	8	8	12	8.8	0.27
513-209	-	40	40	M6	40	40	10	10	12	12.8	0.65
513-210	-	50	50	M6	50	50	12	12	12	16.7	1.29
513-212	513-612	10	7	M3	10	7	2.5	2.5	6	2.5	0.01
513-213	513-613	12	8	M4	12	8	3	3	8	2.5	0.01
513-214	513-614	16	12	M5	16	12	4	4	10	4.3	0.02
513-215	513-615	20	14	M5	20	14	5	5	10	5	0.05
513-216	-	22	16	M5	22	16	5.5	5.5	10	5	0.06
513-217	-	25	18	M5	25	18	6	6	10	5.6	0.09



WDS 662 Dowel Pin - Metric Extractable

Steel BS 970 Gr 230M07
Hardened and Ground DIN 7979

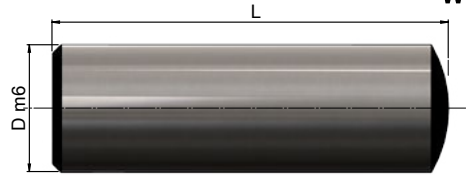
WDS No.	D	L	D1	L1	Weight (kg)
662-501	6	16	M3	4.5	0.01
662-502	6	20	M3	4.5	0.01
662-503	6	24	M3	4.5	0.01
662-504	6	28	M3	4.5	0.01
662-505	6	32	M3	4.5	0.01
662-507	6	40	M3	4.5	0.01
662-508	6	45	M3	4.5	0.01
662-509	6	50	M3	4.5	0.01
662-510	6	60	M3	4.5	0.01
662-511	8	16	M4	6	0.01
662-512	8	20	M4	6	0.01
662-513	8	24	M4	6	0.01
662-514	8	28	M4	6	0.01
662-515	8	32	M4	6	0.01
662-516	8	36	M4	6	0.01
662-517	8	40	M4	6	0.01
662-518	8	45	M4	6	0.02
662-519	8	50	M4	6	0.02
662-520	8	60	M4	6	0.02
662-521	10	20	M6	6	0.01
662-522	10	24	M6	6	0.01
662-523	10	28	M6	6	0.02
662-524	10	32	M6	6	0.02
662-525	10	36	M6	6	0.02
662-526	10	40	M6	6	0.02
662-527	10	45	M6	6	0.03
662-528	10	50	M6	6	0.03
662-529	10	60	M6	6	0.04
662-530	10	70	M6	6	0.04
662-531	10	80	M6	6	0.05
662-532	12	24	M6	6	0.02
662-533	12	28	M6	6	0.02
662-534	12	32	M6	6	0.02
662-536	12	40	M6	6	0.03
662-537	12	45	M6	6	0.04
662-538	12	50	M6	6	0.04
662-539	12	60	M6	6	0.05
662-540	12	70	M6	6	0.06
662-541	12	80	M6	6	0.07
662-542	16	32	M8	12	0.04
662-543	16	36	M8	12	0.05
662-544	16	40	M8	12	0.05
662-545	16	45	M8	12	0.06
662-546	16	50	M8	12	0.07
662-547	16	60	M8	12	0.09
662-548	16	70	M8	12	0.11

WDS No.	D	L	D1	L1	Weight (kg)
662-549	16	80	M8	12	0.12
662-550	16	90	M8	12	0.13
662-551	16	100	M8	12	0.15
662-552	20	40	M10	16	0.08
662-553	20	50	M10	16	0.11
662-554	20	60	M10	16	0.13
662-555	20	70	M10	16	0.16
662-556	20	80	M10	16	0.18
662-557	20	90	M10	16	0.21
662-558	20	100	M10	16	0.23
662-505010M3	5	10	M3	4.5	0.05
662-505012M3	5	12	M3	4.5	0.05
662-505016M3	5	16	M3	4.5	0.05
662-505018M3	5	18	M3	4.5	0.01
662-505020M3	5	20	M3	4.5	0.01
662-505024M3	5	24	M3	4.5	0.01
662-505028M3	5	28	M3	4.5	0.01
662-505030M3	5	30	M3	4.5	0.01
662-505032M3	5	32	M3	4.5	0.05
662-505036M3	5	36	M3	4.5	0.01
662-505040M3	5	40	M3	4.5	0.01
662-505045M3	5	45	M3	4.5	0.01
662-505050M3	5	50	M3	4.5	0.01
662-505060M3	5	60	M3	4.5	0.01
662-506012M4	6	12	M4	6	0.05
662-506014M4	6	14	M4	6	0.05
662-506016M4	6	16	M4	6	0.05
662-506018M4	6	18	M4	6	0.05
662-506020M4	6	20	M4	6	0.01
662-506024M4	6	24	M4	6	0.01
662-506028M4	6	28	M4	6	0.01
662-506030M4	6	30	M4	6	0.01
662-506032M4	6	32	M4	6	0.05
662-506036M4	6	36	M4	6	0.01
662-506040M4	6	40	M4	6	0.01
662-506045M4	6	45	M4	6	0.01
662-506050M4	6	50	M4	6	0.01
662-506055M4	6	55	M4	6	0.01
662-506060M4	6	60	M4	6	0.01
662-506070M4	6	70	M4	6	0.01
662-506080M4	6	80	M4	6	0.02
662-508016M5	8	16	M5	8	0.05
662-508020M5	8	20	M5	8	0.01
662-508024M5	8	24	M5	8	0.01
662-508028M5	8	28	M5	8	0.01
662-508030M5	8	30	M5	8	0.01



WDS No.	D	L	D1	L1	Weight (kg)
662-508032M5	8	32	M5	8	0.01
662-508036M5	8	36	M5	8	0.01
662-508040M5	8	40	M5	8	0.01
662-508045M5	8	45	M5	8	0.02
662-508050M5	8	50	M5	8	0.02
662-508055M5	8	55	M5	8	0.02
662-508060M5	8	60	M5	8	0.02
662-508070M5	8	70	M5	8	0.02
662-508080M5	8	80	M5	8	0.03
662-508090M5	8	90	M5	8	0.03
662-508100M5	8	100	M5	8	0.03
662-508120M5	8	120	M5	8	0.04
662-510016M6	10	16	M6	10	0.05
662-510030M6	10	30	M6	10	0.01
662-510055M6	10	55	M6	10	0.03
662-510090M6	10	90	M6	10	0.05
662-510100M6	10	100	M6	10	0.05
662-510120M6	10	120	M6	10	0.06
662-510140M6	10	140	M6	10	0.08
662-512020M6	12	20	M6	10	0.02
662-512030M6	12	30	M6	10	0.02
662-512036M6	12	36	M6	10	0.03
662-512055M6	12	55	M6	10	0.04
662-512090M6	12	90	M6	10	0.07
662-512100M6	12	100	M6	10	0.08
662-512120M6	12	120	M6	10	0.09
662-512140M6	12	140	M6	10	0.11
662-512150M6	12	150	M6	10	0.12
662-512160M6	12	160	M6	10	0.05
662-514028M8	14	28	M8	12	0.03
662-514030M8	14	30	M8	12	0.03
662-514032M8	14	32	M8	12	0.03
662-514036M8	14	36	M8	12	0.04
662-514040M8	14	40	M8	12	0.04
662-514045M8	14	45	M8	12	0.05

WDS No.	D	L	D1	L1	Weight (kg)
662-514050M8	14	50	M8	12	0.05
662-514055M8	14	55	M8	12	0.06
662-514060M8	14	60	M8	12	0.06
662-514070M8	14	70	M8	12	0.07
662-514080M8	14	80	M8	12	0.08
662-514090M8	14	90	M8	12	0.1
662-514100M8	14	100	M8	12	0.11
662-514120M8	14	120	M8	12	0.13
662-514140M8	14	140	M8	12	0.15
662-514160M8	14	160	M8	12	0.17
662-516028M8	16	28	M8	12	0.04
662-516030M8	16	30	M8	12	0.04
662-516055M8	16	55	M8	12	0.08
662-516120M8	16	120	M8	12	0.17
662-516130M8	16	130	M8	12	0.18
662-516140M8	16	140	M8	12	0.19
662-516150M8	16	150	M8	12	0.21
662-516160M8	16	160	M8	12	0.22
662-518045M10	18	40	M10	16	0.07
662-518045M10	18	45	M10	16	0.08
662-518050M10	18	50	M10	16	0.09
662-518060M10	18	60	M10	16	0.1
662-518070M10	18	70	M10	16	0.12
662-518080M10	18	80	M10	16	0.14
662-518090M10	18	90	M10	16	0.16
662-518100M10	18	100	M10	16	0.17
662-518120M10	18	120	M10	16	0.21
662-518130M10	18	130	M10	16	0.23
662-518140M10	18	140	M10	16	0.24
662-518150M10	18	150	M10	16	0.26
662-518160M10	18	160	M10	16	0.28
662-520032M10	20	32	M10	16	0.07
662-520036M10	20	36	M10	16	0.08
662-520045M10	20	45	M10	16	0.09
662-520055M10	20	55	M10	16	0.12



WDS 662 Dowel Pin - Metric

Steel BS 970 Gr 230M07
Hardened and Ground DIN 7979

WDS No.	D	L	Weight (kg)
662-200304	1.5	4	0.01
662-200305	1.5	5	0.01
662-200306	1.5	6	0.01
662-200308	1.5	8	0.01
662-200310	1.5	10	0.01
662-200312	1.5	12	0.01
662-200314	1.5	14	0.01
662-200506	2	6	0.01
662-200508	2	8	0.01
662-200510	2	10	0.01
662-200512	2	12	0.01
662-200514	2	14	0.01
662-200706	2.5	6	0.01
662-200708	2.5	8	0.01
662-200710	2.5	10	0.01
662-200712	2.5	12	0.01
662-200714	2.5	14	0.01
662-200716	2.5	16	0.01
662-200718	2.5	18	0.01
662-200720	2.5	20	0.01
662-200724	2.5	24	0.01
662-20108	3	8	0.01
662-20110	3	10	0.01
662-20112	3	12	0.01
662-20114	3	14	0.01
662-20116	3	16	0.01
662-20118	3	18	0.01
662-20120	3	20	0.01
662-20124	3	24	0.01
662-20128	3	28	0.01
662-20130	3	30	0.01
662-20132	3	32	0.01
662-20136	3	36	0.01
662-20140	3	40	0.01
662-20208	4	8	0.01
662-20210	4	10	0.01
662-20212	4	12	0.01
662-20214	4	14	0.01
662-20216	4	16	0.01
662-20220	4	20	0.01
662-20224	4	24	0.01
662-20228	4	28	0.01
662-20230	4	30	0.01
662-20232	4	32	0.01
662-20236	4	36	0.01
662-20240	4	40	0.01

WDS No.	D	L	Weight (kg)
662-20245	4	45	0.01
662-20250	4	50	0.01
662-20310	5	10	0.01
662-20312	5	12	0.01
662-20314	5	14	0.01
662-20316	5	16	0.01
662-20318	5	18	0.01
662-20320	5	20	0.01
662-20324	5	24	0.01
662-20328	5	28	0.01
662-20330	5	30	0.01
662-20332	5	32	0.01
662-20336	5	36	0.01
662-20340	5	40	0.01
662-20345	5	45	0.01
662-20350	5	50	0.01
662-20360	5	60	0.01
662-20412	6	12	0.01
662-20414	6	14	0.01
662-20416	6	16	0.01
662-20418	6	18	0.01
662-20420	6	20	0.01
662-20424	6	24	0.01
662-20428	6	28	0.01
662-20430	6	30	0.01
662-20432	6	32	0.01
662-20436	6	36	0.01
662-20440	6	40	0.01
662-20445	6	45	0.01
662-20450	6	50	0.01
662-20460	6	60	0.01
662-20512	8	12	0.01
662-20514	8	14	0.01
662-20516	8	16	0.01
662-20518	8	18	0.01
662-20520	8	20	0.01
662-20524	8	24	0.01
662-20528	8	28	0.01
662-20530	8	30	0.01
662-20532	8	32	0.01
662-20536	8	36	0.01
662-20540	8	40	0.02
662-20545	8	45	0.02
662-20550	8	50	0.02
662-20560	8	60	0.02
662-20570	8	70	0.03

WDS No.	D	L	Weight (kg)
662-20580	8	80	0.03
662-206100	10	100	0.06
662-20620	10	20	0.01
662-20624	10	24	0.01
662-20628	10	28	0.02
662-20630	10	30	0.02
662-20632	10	32	0.02
662-20635	10	35	0.02
662-20640	10	40	0.02
662-20645	10	45	0.03
662-20650	10	50	0.03
662-20660	10	60	0.04
662-20670	10	70	0.04
662-20680	10	80	0.05
662-207100	12	100	0.06
662-20724	12	24	0.02
662-20728	12	28	0.02
662-20730	12	30	0.03
662-20732	12	32	0.03

WDS No.	D	L	Weight (kg)
662-20736	12	36	0.03
662-20740	12	40	0.03
662-20745	12	45	0.04
662-20750	12	50	0.04
662-20760	12	60	0.05
662-20770	12	70	0.06
662-20780	12	80	0.07
662-208100	16	100	0.08
662-20832	16	32	0.05
662-20840	16	40	0.06
662-20850	16	50	0.08
662-20855	16	55	0.09
662-20860	16	60	0.09
662-20870	16	70	0.11
662-20880	16	80	0.13
662-20890	16	90	0.14
662-20940	20	40	0.1
662-20950	20	50	0.12
662-20960	20	60	0.14



IN"

Dowel Pin - Inch WDS 662

Steel BS 970 Gr 230M07
Hardened and Ground DIN 7979

WDS No.	D	L	Weight (kg)
662-031	1/8 inch	1 inch	0.01
662-03112	1/8 inch	11/2 inch	0.01
662-0312	1/8 inch	1/2 inch	0.01
662-0334	1/8 inch	3/4 inch	0.01
662-051	3/16 inch	1 inch	0.01
662-05112	3/16 inch	11/2 inch	0.01
662-0512	3/16 inch	1/2 inch	0.01
662-0534	3/16 inch	3/4 inch	0.01
662-071	1/4 inch	1 inch	0.01
662-07112	1/4 inch	11/2 inch	0.01
662-07114	1/4 inch	11/4 inch	0.01
662-0712	1/4 inch	1/2 inch	0.01
662-072	1/4 inch	2 inch	0.01
662-073	1/4 inch	3 inch	0.02
662-0734	1/4 inch	3/4 inch	0.01
662-081	5/16 inch	1 inch	0.01
662-08112	5/16 inch	11/2 inch	0.02

WDS No.	D	L	Weight (kg)
662-08114	5/16 inch	11/4 inch	0.01
662-082	5/16 inch	2 inch	0.02
662-0834	5/16 inch	3/4 inch	0.01
662-091	3/8 inch	1 inch	0.01
662-09112	3/8 inch	11/2 inch	0.02
662-09114	3/8 inch	11/4 inch	0.02
662-092	3/8 inch	2 inch	0.03
662-09212	3/8 inch	21/2 inch	0.04
662-093	3/8 inch	3 inch	0.04
662-0934	3/8 inch	3/4 inch	0.01
662-094	3/8 inch	4 inch	0.06
662-111	1/2 inch	1 inch	0.02
662-11112	1/2 inch	11/2 inch	0.04
662-11114	1/2 inch	11/4 inch	0.03
662-112	1/2 inch	2 inch	0.05
662-11212	1/2 inch	21/2 inch	0.06
662-113	1/2 inch	3 inch	0.07

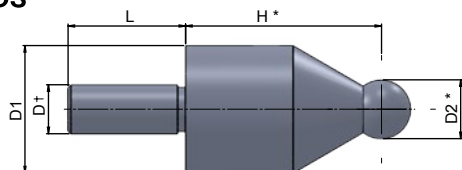


WDS 662 Dowel Pin - Metric Silver Steel

Silver Steel BS1407

WDS No.	D	L	Weight (kg)
662-401	4	10	0.01
662-402	4	15	0.01
662-403	4	20	0.01
662-404	4	25	0.01
662-405	4	30	0.01
662-406	4	35	0.01
662-407	4	40	0.01
662-408	5	10	0.01
662-409	5	15	0.01
662-410	5	20	0.01
662-411	5	25	0.01
662-412	5	30	0.01
662-413	5	35	0.01
662-414	5	40	0.01
662-415	6	15	0.01
662-416	6	20	0.01
662-417	6	25	0.01
662-418	6	30	0.01
662-419	6	35	0.01
662-420	6	40	0.01
662-421	6	45	0.01
662-422	6	50	0.01
662-423	8	20	0.01
662-424	8	25	0.01
662-425	8	30	0.01
662-426	8	35	0.01
662-427	8	40	0.02
662-428	8	45	0.02
662-429	8	50	0.02
662-430	8	60	0.02

WDS No.	D	L	Weight (kg)
662-431	8	70	0.03
662-432	10	20	0.01
662-433	10	25	0.02
662-434	10	30	0.02
662-435	10	35	0.02
662-436	10	40	0.02
662-437	10	45	0.03
662-438	10	50	0.03
662-439	10	60	0.04
662-440	10	70	0.04
662-441	10	80	0.05
662-442	12	25	0.01
662-443	12	30	0.03
662-444	12	35	0.03
662-445	12	40	0.04
662-446	12	50	0.04
662-447	12	60	0.05
662-448	12	70	0.06
662-449	12	80	0.07
662-450	12	90	0.08
662-451	12	100	0.09
662-452	16	30	0.05
662-453	16	40	0.06
662-454	16	50	0.08
662-455	16	60	0.09
662-456	16	70	0.11
662-457	16	80	0.13
662-458	16	90	0.14
662-459	16	100	0.16

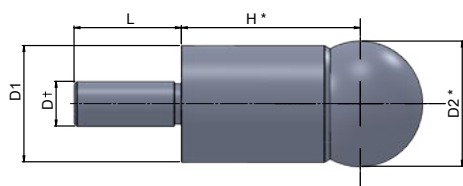


Ball Reference Pin - Tapered Face WDS 3501

Steel Hardened and Ground BS.970 Gr. 220M07

† Tolerance - 0.005 (-0.0002"), * Tolerance ± 0.0025 (0.0001")

WDS No.	D	D1	D2*	H*	L	Weight (kg)
3501-201	5	13	6	20	12	0.02
3501-202	6	13	6	20	12	0.02
3501-204	8	13	6	20	12	0.02
3501-213	5	13	6	25	12	0.02
3501-214	6	13	6	25	12	0.02
3501-216	8	13	6	25	12	0.02



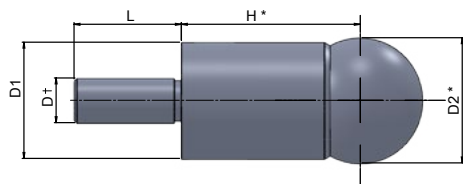
IN"

Tooling Ball Reference Pin with Plain Body - Inch WDS 3502

Steel Hardened and Ground BS.970 Gr. 220M07

† Tolerance - 0.005 (-0.0002"), * Tolerance ± 0.0025 (0.0001")

WDS No.	D	D1	D2*	H*	L	Weight (kg)
3502-03	0.2500 inch	7/16 inch	0.5000 inch	1.0000 inch	1/2 inch	0.04
3502-05	0.3125 inch	7/16 inch	0.5000 inch	1.0000 inch	1/2 inch	0.04

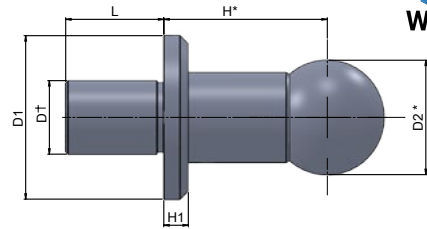


Tooling Ball Reference Pin with Plain Body - Metric WDS 3502

Steel Hardened and Ground BS.970 Gr. 220M07

† Tolerance - 0.005 (-0.0002"), * Tolerance ± 0.0025 (0.0001")

WDS No.	D	D1	D2*	H*	L	Weight (kg)
3502-201	5	13	14	25	12	0.03
3502-202	6	13	14	25	12	0.03
3502-203	7	13	14	25	12	0.03
3502-204	8	13	14	25	12	0.03

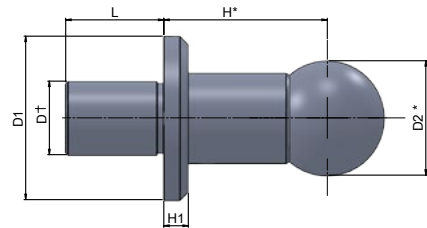


WDS 3505 Tooling Ball Reference Pin (Ickey Balls) with Collar

Steel Hardened and Ground BS.970 Gr. 220M07
† Tolerance - 0.005 (-0.0002"), * Tolerance ± 0.0025 (0.0001")

WDS No.	D†	D1	D2*	H*	H1	L	Weight (kg)
3505-201	9	20	14	16	3	12	0.03
3505-202	10	20	14	16	3	12	0.03
3505-204	12	20	14	16	3	12	0.04
3505-217	10	20	14	20	3	12	0.04
3505-219	12	20	14	20	3	12	0.04

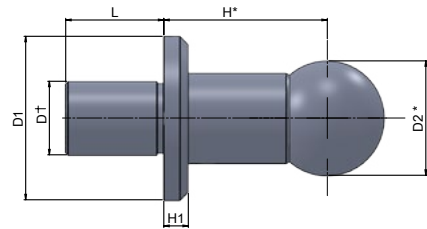
IN"



WDS 3506 Tooling Ball Reference Pin (Ickey Balls) with Collar - Inch

Steel Hardened and Ground BS.970 Gr. 220M07
† Tolerance - 0.005 (-0.0002"), * Tolerance ± 0.0025 (0.0001")

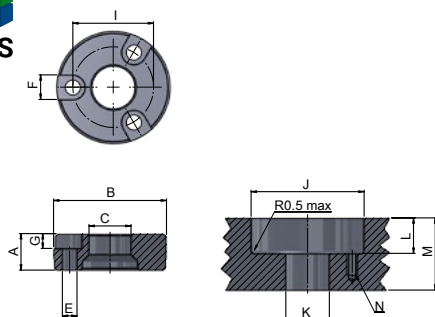
WDS No.	D†	D1	D2*	H*	H1	L	Weight (kg)
3506-02	0.3750 inch	20	0.5000 inch	1.0000 inch	3	15.9	0.05
3506-06	0.5000 inch	20	0.5000 inch	1.0000 inch	3	19.1	0.06



WDS 3506 Tooling Ball Reference Pin (Ickey Balls) with Collar - Metric

Steel Hardened and Ground BS.970 Gr. 220M07
† Tolerance - 0.005 (-0.0002"), * Tolerance ± 0.0025 (0.0001")

WDS No.	D†	D1	D2*	H*	H1	L	Weight (kg)
3506-202	10	20	14	25	3	12	0.04
3506-204	12	20	14	25	3	12	0.05

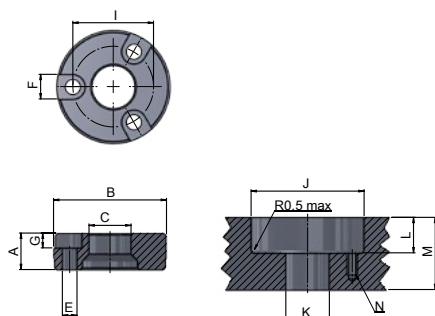


Stainless Steel Bolt-in Recessed Bush WDS 7120

17-4 PH Stainless Steel, Heat Treat - Rc 40-45

Note - Installed bushings should be approximately 0.30mm below the surface of the subplate
C = Shank Dia, I = P.C.D., J = -0.01/-0.02, L +/- 0.025, M = Min subplate thickness, N = 3 places

WDS No.	A	B	C	E	F	G	I	J	K	L	M	N	Weight (kg)
7120-49556SS	11.56	35	13	4.4	7.6	4.5	25	35	13.5	11.91	20	M4 x 0.7 x 7	0.26
7120-49557SS	11.56	37	16	4.4	7.6	4.5	29	37	21	11.91	20	M4 x 0.7 x 7	0.26
7120-49551SS	15.82	45	20	5.4	9.5	6	35	45	21	16.21	25	M5 x 0.8 x 9	0.26
7120-49552SS	19.94	55	25	6.4	11	7	42	55	25.5	20.32	30	M6 x 1.0 x 10	0.26
7120-49553SS	21.77	60	30	6.4	11	7	48	60	30.5	22.15	35	M6 x 1.0 x 11	0.26
7120-49554SS	22.61	70	35	8.4	14	9	56	70	40	22.99	40	M8 x 1.25 x 17	0.26
7120-49555SS	31.12	92	50	10.4	17	11	75	92	55	31.5	50	M10 x 1.5 x 18	0.26

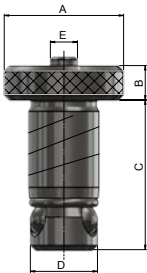


Bolt-in Recessed Bush WDS 7120

Steel - hardened, Black oxide finish, Note - Installed bushings should be approximately 0.30mm below the surface of the subplate
C = Shank Dia, I = P.C.D., J = -0.01/-0.02, L +/- 0.025, M = Min subplate thickness, N = 3 places

WDS No.	A	B	C	E	F	G	I	J	K	L	M	N	Weight (kg)
7120-49556	11.56	35	13	4.4	7.6	4.5	25	35	13.5	11.91	20	M4 x 0.7 x 7	0.06
7120-49557	11.56	37	16	4.4	7.6	4.5	29	37	21	11.91	20	M4 x 0.7 x 7	0.064
7120-49551	15.82	45	20	5.4	9.5	6	35	45	21	16.21	25	M5 x 0.8 x 9	0.13
7120-49552	19.94	55	25	6.4	11	7	42	55	25.5	20.32	30	M6 x 1.0 x 10	0.245
7120-49553	21.77	60	30	6.4	11	7	48	60	30.5	22.15	35	M6 x 1.0 x 11	0.304
7120-49554	22.61	70	35	8.4	14	9	56	70	40	22.99	40	M8 x 1.25 x 17	0.432
7120-49555	31.12	92	50	10.4	17	11	75	92	55	31.5	50	M10 x 1.5 x 18	0.966

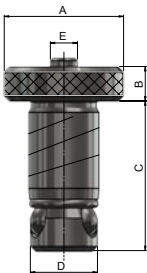
17-4



WDS 7120 Stainless Steel Ball Lock Shank

17-4 PH Stainless Steel
Heat Treat - RC 40-45

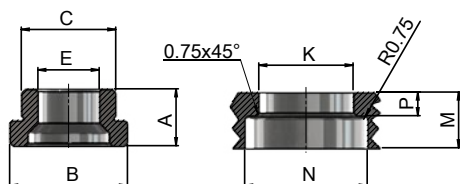
WDS No.	A	B	C	D	E	Fixture Plate Thickness ±0.05	Max Screw Torque kg.m	Max Workholding Load Kgs	Weight (kg)
7120-49655SS	22	6	27.6	13	M5	13	0.16	300	0.16
7120-49656SS	22	6	34.6	13	M5	20	0.16	300	0.16
7120-49657SS	32	8	36.5	16	M6	20	0.41	540	0.41
7120-49658SS	32	8	41.5	16	M6	25	0.41	540	0.41
7120-49651SS	40	10	39.5	20	M6	20	0.55	1300	0.55
7120-49652SS	40	10	44.5	20	M6	25	0.55	1300	0.55
7120-49661SS	45	10	44	25	M8	20	1.24	3100	1.24
7120-49662SS	45	10	49	25	M8	25	1.24	3100	1.24
7120-49681SS	60	16	51	35	M12	20	3.46	7000	3.46
7120-49682SS	60	16	56	35	M12	25	3.46	7000	3.46
7120-49683SS	60	16	71	35	M12	40	3.46	7000	3.46
7120-49684SS	60	16	81	35	M12	50	3.46	7000	3.46



WDS 7120 Ball Lock Shank

Steel - hardened, Black oxide finish
Operating Temperature range -30°C to 200°C, Shanks, RC 50-54

WDS No.	A	B	C	D	E	Fixture Plate Thickness ±0.05	Max Screw Torque kg.m	Max Workholding Load Kgs	Weight (kg)
7120-49655	22	6	27.6	13	M5	13	0.16	300	0.16
7120-49656	22	6	34.6	13	M5	20	0.16	300	0.16
7120-49657	32	8	36.5	16	M6	20	0.41	540	0.41
7120-49658	32	8	41.5	16	M6	25	0.41	540	0.41
7120-49651	40	10	39.5	20	M6	20	0.55	1300	0.55
7120-49652	40	10	44.5	20	M6	25	0.55	1300	0.55
7120-49661	45	10	44	25	M8	20	1.24	3100	1.24
7120-49662	45	10	49	25	M8	25	1.24	3100	1.24
7120-49671	50	12	49	30	M10	20	2.07	4500	2.07
7120-49672	50	12	54	30	M10	25	2.07	4500	2.07
7120-49681	60	16	51	35	M12	20	3.46	7000	3.46
7120-49682	60	16	56	35	M12	25	3.46	7000	3.46
7120-49683	60	16	71	35	M12	40	3.46	7000	3.46
7120-49684	60	16	81	35	M12	50	3.46	7000	3.46
7120-49691	75	20	64	50	M16	20	6.91	9000	6.91
7120-49692	75	20	69	50	M16	25	6.91	9000	6.91
7120-49693	75	20	84	50	M16	40	6.91	9000	6.91
7120-49694	75	20	94	50	M16	50	6.91	9000	6.91



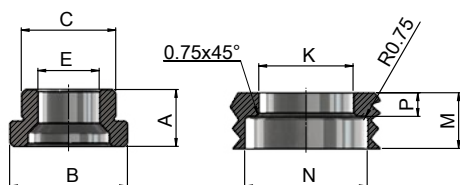
Reverse Mount Bush WDS 7120

Steel - hardened, Black oxide finish

Operating Temperature range -30°C to 200°C, Bushings, RC 50-54

C = O.D. +.04 +.03, E = Shank Dia, K = Bore +.025 +.015, M = Min Subplate Thick, N = C-Bore, P = Depth A± 0.025

WDS No.	A	B	C	E	K	M	N	P	Weight (kg)
7120-49566	12.1	25	20.04/20.03	13	20.025/20.015	20	26	6.92	0.01
7120-49567	12.1	28.6	22.04/22.03	16	22.025/22.015	20	29	7.24	0.03
7120-49561	17.1	32.2	28.04/28.03	20	28.025/28.015	25	33	8.74	0.06
7120-49562	21	40.2	35.04/35.03	25	35.025/34.015	25	41	10.54	0.05
7120-49563	21.8	48.2	42.04/42.03	30	42.025/42.015	30	49	10.95	0.08
7120-49564	25.1	54.2	48.04/48.03	35	48.025/48.015	35	55	12.5	0.11
7120-49565	31.1	75.2	67.04/67.03	50	67.025/67.015	45	76	15.75	0.18



17-4

Stainless Steel Reverse Mount Bush WDS 7120

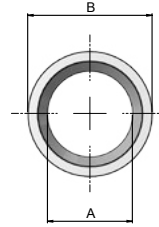
17-4 PH Stainless Steel

Heat Treat - RC 40-45

C = O.D. +.04 +.03, E = Shank Dia, K = Bore +.025 +.015, M = Min Subplate Thick, N = C-Bore, P = Depth A± 0.025

WDS No.	A	B	C	E	K	M	N	P	Weight (kg)
7120-49566SS	12.1	25	20.04/20.03	13	20.025/20.015	20	26	6.92	0.05
7120-49567SS	12.1	28.6	22.04/22.03	16	22.025/22.015	20	29	7.24	0.04
7120-49561SS	17.1	32.2	28.04/28.03	20	28.025/28.015	25	33	8.74	0.07
7120-49562SS	21	40.2	35.04/35.03	25	35.025/34.015	25	41	10.54	0.12
7120-49563SS	21.8	48.2	42.04/42.03	30	42.025/42.015	30	49	10.95	0.16
7120-49564SS	25.1	54.2	48.04/48.03	35	48.025/48.015	35	55	12.5	0.23
7120-49565SS	31.1	75.2	67.04/67.03	50	67.025/67.015	45	76	15.75	0.46

17-4



WDS 7120 Stainless Steel Liner Bushes - Ball Lock

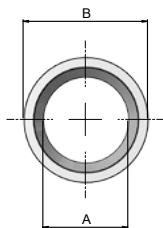
17-4 PH Stainless Steel

Heat Treat - RC 40-45

Primary liner I.D is nominal +0.005/+0.018, Secondary liner I.D is nominal +0.025/+0.050

A = Nom.I.D.*, B = +.000/-0.008, C = -0.25/-0.50

WDS No.	A	B	C	Fixture Plate Hole Size	Liner	Weight (kg)
7120-49755SS	13	19.04	13	19.016/19.026	Primary	0.05
7120-49756SS	13	19.04	20	19.016/19.026	Primary	0.06
7120-49757SS	16	25.042	20	25.016/25.026	Primary	0.01
7120-49758SS	16	25.042	25	25.016/25.026	Primary	0.01
7120-49751SS	20	35.042	20	35.018/35.028	Primary	0.02
7120-49752SS	20	35.042	25	35.018/35.028	Primary	0.03
7120-49761SS	25	35.042	20	35.018/35.028	Primary	0.04
7120-49762SS	25	35.042	25	35.018/35.028	Primary	0.05
7120-49771SS	30	45.042	20	45.018/45.028	Primary	0.07
7120-49772SS	30	45.042	25	45.018/45.028	Primary	0.08
7120-49781SS	35	45.042	20	45.018/45.028	Primary	0.05
7120-49782SS	35	45.042	25	45.018/45.028	Primary	0.06
7120-49784SS	35	45.042	50	45.018/45.028	Primary	0.11
7120-49792SS	50	63.546	25	63.521/63.531	Primary	0.12
7120-49793SS	50	63.546	40	63.521/63.531	Primary	0.18
7120-49794SS	50	63.546	50	63.521/63.531	Primary	0.23
7120-49855SS	13	19.04	13	19.016/19.026	Secondary	0.05
7120-49856SS	13	19.04	20	19.016/19.026	Secondary	0.06
7120-49858SS	16	25.042	25	25.016/25.026	Secondary	0.01
7120-49851SS	20	35.042	20	35.018/35.028	Secondary	0.02
7120-49852SS	20	35.042	25	35.018/35.028	Secondary	0.03
7120-49861SS	25	35.042	20	35.018/35.028	Secondary	0.04
7120-49862SS	25	35.042	25	35.018/35.028	Secondary	0.05
7120-49871SS	30	45.042	20	45.018/45.028	Secondary	0.07
7120-49872SS	30	45.042	25	45.018/45.028	Secondary	0.08
7120-49881SS	35	45.042	20	45.018/45.028	Secondary	0.05
7120-49882SS	35	45.042	25	45.018/45.028	Secondary	0.06
7120-49883SS	35	45.042	40	45.018/45.028	Secondary	0.09
7120-49884SS	35	45.042	50	45.018/45.028	Secondary	0.11
7120-49891SS	50	63.546	20	63.521/63.531	Secondary	0.09
7120-49892SS	50	63.546	25	63.521/63.531	Secondary	0.12
7120-49893SS	50	63.546	40	63.521/63.531	Secondary	0.18
7120-49894SS	50	63.546	50	63.521/63.531	Secondary	0.23



Liner Bushes - Ball Lock WDS 7120

Steel - hardened, Black oxide finish

Operating Temperature range -30°C to 200°C, Bushings, RC 50-54

Primary liner I.D is nominal +0.005/+0.018, Secondary liner I.D is nominal +0.025/+0.050

A = Nom.I.D.*, B = +.000/-0.008, C = -0.25/-0.50

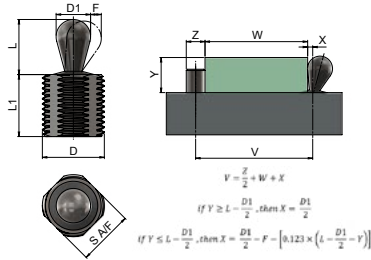
WDS No.	A	B	C	Fixture Plate Hole Size	Liner	Weight (kg)
7120-49755	13	19.04	13	19.016/19.026	Primary	0.05
7120-49756	13	19.04	20	19.016/19.026	Primary	0.06
7120-49757	16	25.042	20	25.016/25.026	Primary	0.01
7120-49758	16	25.042	25	25.016/25.026	Primary	0.01
7120-49751	20	35.042	20	35.018/35.028	Primary	0.02
7120-49752	20	35.042	25	35.018/35.028	Primary	0.03
7120-49761	25	35.042	20	35.018/35.028	Primary	0.04
7120-49762	25	35.042	25	35.018/35.028	Primary	0.05
7120-49771	30	45.042	20	45.018/45.028	Primary	0.07
7120-49772	30	45.042	25	45.018/45.028	Primary	0.08
7120-49781	35	45.042	20	45.018/45.028	Primary	0.05
7120-49782	35	45.042	25	45.018/45.028	Primary	0.06
7120-49783	35	45.042	40	45.018/45.028	Primary	0.09
7120-49784	35	45.042	50	45.018/45.028	Primary	0.11
7120-49791	50	63.546	20	63.521/63.531	Primary	0.09
7120-49792	50	63.546	25	63.521/63.531	Primary	0.12
7120-49793	50	63.546	40	63.521/63.531	Primary	0.18
7120-49794	50	63.546	50	63.521/63.531	Primary	0.23
7120-49855	13	19.04	13	19.016/19.026	Secondary	0.05
7120-49856	13	19.04	20	19.016/19.026	Secondary	0.06
7120-49857	16	25.042	20	25.016/25.026	Secondary	0.01
7120-49858	16	25.042	25	25.016/25.026	Secondary	0.01
7120-49851	20	35.042	20	35.018/35.028	Secondary	0.02
7120-49852	20	35.042	25	35.018/35.028	Secondary	0.03
7120-49861	25	35.042	20	35.018/35.028	Secondary	0.04
7120-49862	25	35.042	25	35.018/35.028	Secondary	0.05
7120-49871	30	45.042	20	45.018/45.028	Secondary	0.07
7120-49872	30	45.042	25	45.018/45.028	Secondary	0.08
7120-49881	35	45.042	20	45.018/45.028	Secondary	0.05
7120-49882	35	45.042	25	45.018/45.028	Secondary	0.06
7120-49883	35	45.042	40	45.018/45.028	Secondary	0.09
7120-49884	35	45.042	50	45.018/45.028	Secondary	0.11
7120-49891	50	63.546	20	63.521/63.531	Secondary	0.09
7120-49892	50	63.546	25	63.521/63.531	Secondary	0.12
7120-49893	50	63.546	40	63.521/63.531	Secondary	0.18
7120-49894	50	63.546	50	63.521/63.531	Secondary	0.23



WDS 7120 Ball Lock Shanks Repair Kit

Contains - Replacement Balls, O-Ring, Screw

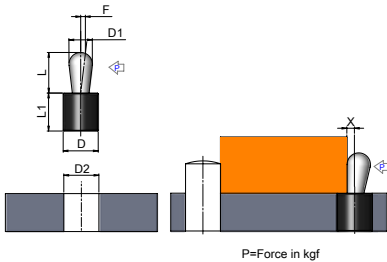
WDS No.	Shank Dia	Fixture Plate Thick +/- .05	Head Dia	Head Thickness	Length Under Head	Repair Kit for WDS Part No.	Weight (kg)
7120-49951	20	20	40	10	39.5	7120-49651	0.22
7120-49952	20	25	40	10	44.5	7120-49652	0.23
7120-49955	13	13	22	6	27.6	7120-49655	0.01
7120-49956	13	20	22	6	34.6	7120-49656	0.01
7120-49957	16	20	32	8	36.5	7120-49657	0.01
7120-49958	16	25	32	8	41.5	7120-49658	0.01
7120-49961	25	20	45	10	44	7120-49661	0.27
7120-49962	25	25	45	10	49	7120-49662	0.03
7120-49971	30	20	50	12	49	7120-49671	0.02
7120-49972	30	25	50	12	54	7120-49672	0.06
7120-49981	35	20	60	16	51	7120-49681	0.03
7120-49982	35	25	60	16	56	7120-49682	0.03
7120-49983	35	40	60	16	71	7120-49683	0.05
7120-49984	35	50	60	16	81	7120-49684	0.09
7120-49991	50	20	75	20	64	7120-49691	0.07
7120-49992	50	25	75	20	69	7120-49692	0.08
7120-49993	50	40	75	20	84	7120-49693	0.08
7120-49994	50	50	75	20	94	7120-49694	0.09



Threaded Lateral Spring Retainer Pin with Seal WDS 290

Body - Zinc Plated Steel by Galvanization with seal
To be used to position a part whilst applying pressure

Steel Pin	Plastic Pin	D	D1	F	L	L1	S	Load (kg)	Weight (kg)
290-31212020	290-51212020	M12	5	1.6	6.4	11.5	10	2	0.01
290-31212040	290-51212040	M12	6	2	10.4	11.5	10	4.1	0.01
290-31212050	-	M12	5	1.6	6.4	11.5	10	5.1	0.01
290-31212075	-	M12	6	2	10.4	11.5	10	7.6	0.01
290-31212100	-	M12	5	1.6	6.4	11.5	10	10.2	0.01
290-31219020	290-51219020	M12	5	1.6	6.4	19	10	1	0.01
290-31219040	290-51219040	M12	6	2	10.4	19	10	4.1	0.01
290-31219050	-	M12	5	1.6	6.4	19	10	5.1	0.01
290-31219075	-	M12	6	2	10.4	19	10	7.6	0.01
290-31219100	-	M12	5	1.6	6.4	19	10	10.2	0.01
290-31227020	290-51227020	M12	5	1.6	6.4	26.5	10	2	0.01
290-31227040	290-51227040	M12	6	2	10.4	26.5	10	4.1	0.01
290-31227050	-	M12	5	1.6	6.4	26.5	10	5.1	0.01
290-31227075	-	M12	6	2	10.4	26.5	10	7.6	0.01
290-31227100	-	M12	5	1.6	6.4	26.5	10	10.2	0.01
290-31818100	290-51818100	M18 x 1.5	10	3.2	16.9	18	16	10.2	0.02
290-31818150	-	M18 x 1.5	10	3.2	16.9	18	16	15.3	0.02
290-31818200	-	M18 x 1.5	10	3.2	16.9	18	16	20.4	0.02
290-31832100	290-51832100	M18 x 1.5	10	3.2	16.9	31.5	16	10.2	0.03
290-31832150	-	M18 x 1.5	10	3.2	16.9	31.5	16	15.3	0.03
290-31832200	-	M18 x 1.5	10	3.2	16.9	31.5	16	20.4	0.03
290-31845100	290-51845100	M18 x 1.5	10	3.2	16.9	45	16	10.2	0.04
290-31845150	-	M18 x 1.5	10	3.2	16.9	45	16	15.3	0.04
290-31845200	-	M18 x 1.5	10	3.2	16.9	45	16	20.4	0.04

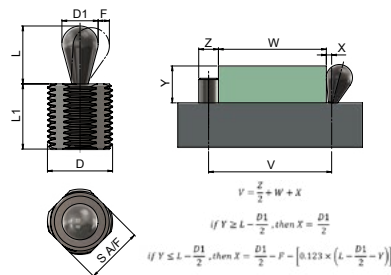


Lateral Spring Retainer Steel Pin without Seal WDS 290

Sleeve - Aluminium, Spring - Steel
Pressure pin - Steel

WDS No.	D	D1	D2 +0.1	F Max	L	L1 - 1.0	P Max	X	Weight (kg)
290-201	6	3	6	0.5	4	7	2	0.9	0.01
290-203	10	5	10	0.8	6.7	11	5	1.6	0.01
290-205	10	6	10	1	10.7	11	7.5	1.8	0.01
290-207	12	8	12	1.3	13.9	13	10	2.6	0.01
290-209	16	10	16	1.6	16.7	17	20	3.2	0.01

ZP



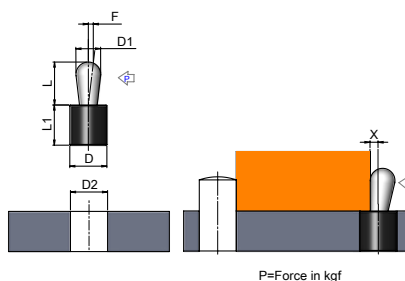
WDS 290 Threaded Lateral Spring Retainer Pin without Seal

Body - Zinc Plated Steel by Galvanization without seal

To be used to position a part whilst applying pressure

Steel Pin	Plastic Pin	D	D1	F	L	L1	S	Load (kg)	Weight (kg)
290-21212020	290-41212020	M12	5	1.6	6.4	11.5	10	2	0.01
-	290-41212040	M12	6	2	10.4	11.5	10	4.1	0.01
290-21212050	-	M12	5	1.6	6.4	11.5	10	5.1	0.01
290-21212075	-	M12	6	2	10.4	11.5	10	7.6	0.01
290-21212100	-	M12	5	1.6	6.4	11.5	10	10.2	0.01
290-21219020	290-41219020	M12	5	1.6	6.4	19	10	2	0.01
290-21219040	290-41219040	M12	6	2	10.4	19	10	4.1	0.01
290-21219050	-	M12	5	1.6	6.4	19	10	5.1	0.01
290-21219075	-	M12	6	2	10.4	19	10	7.6	0.01
290-21219100	-	M12	5	1.6	6.4	19	10	10.2	0.01
290-21227020	290-41227020	M12	5	1.6	6.4	26.5	10	2	0.01
290-21227040	290-41227040	M12	6	2	10.4	26.5	10	4.1	0.01
290-21227050	-	M12	5	1.6	6.4	26.5	10	5.1	0.01
290-21227075	-	M12	6	2	10.4	26.5	10	7.6	0.01
290-21227100	-	M12	5	1.6	6.4	26.5	10	10.2	0.01
290-21818100	290-41818100	M18 x 1.5	10	3.2	16.9	18	16	10.2	0.02
290-21818150	-	M18 x 1.5	10	3.2	16.9	18	16	15.3	0.02
290-21832100	290-41832100	M18 x 1.5	10	3.2	16.9	18	16	20.4	0.02
290-21832150	-	M18 x 1.5	10	3.2	16.9	31.5	16	15.3	0.03
290-21832200	-	M18 x 1.5	10	3.2	16.9	31.5	16	20.4	0.03
290-21845100	290-41845100	M18 x 1.5	10	3.2	16.9	45	16	10.2	0.04
290-21845150	-	M18 x 1.5	10	3.2	16.9	45	16	15.3	0.04
290-21845200	-	M18 x 1.5	10	3.2	16.9	45	16	20.4	0.04

AL

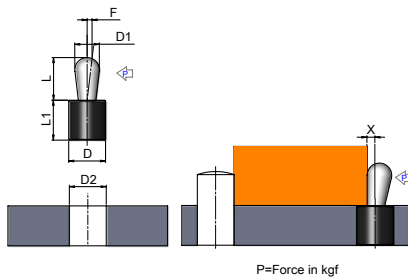


WDS 290 Lateral Spring Retainer Plastic Pin without Seal

Sleeve - Aluminium, Spring - Steel

Pressure pin - Plastic

WDS No.	D	D1	D2 +0.1	F Max	L	L1 - 1.0	P Max	X	Weight (kg)
290-401	6	3	6	0.5	4	7	1	0.9	0.01
290-403	10	5	10	0.8	6	11	2	1.6	0.01
290-405	10	6	10	1	10	11	4	1.8	0.01
290-407	12	8	12	1.3	13	13	5	2.6	0.01
290-409	16	10	16	1.6	16	17	10	3.2	0.01



P=Force in kgf

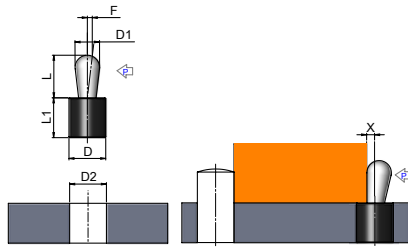


AL

Lateral Spring Retainer Steel Pin with Seal WDS 290

Sleeve - Aluminium, Spring - Steel
Pressure pin - Steel

WDS No.	D	D1	D2 +0.1	F Max	L	L1 - 1.0	P Max	X	Weight (kg)
290-301	6	3	6	0.5	4	7	2	0.9	0.01
290-303	10	5	10	0.8	6	12	5	1.6	0.01
290-305	10	6	10	1	10	12	7.5	1.8	0.01
290-307	12	8	12	1.3	13	14	10	2.6	0.01
290-309	16	10	16	1.6	16	18	20	3.2	0.02



P=Force in kgf

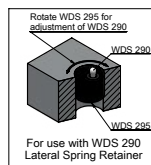
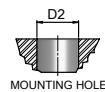
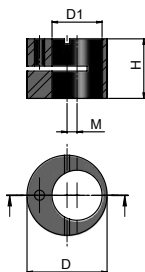


AL

Lateral Spring Retainer Plastic Pin with Seal WDS 290

Sleeve - Aluminium, Spring - Steel
Pressure pin - Plastic

WDS No.	D	D1	D2 +0.1	F Max	L	L1 - 1.0	P Max	X	Weight (kg)
290-501	6	3	6	0.5	4	7	1	0.9	0.01
290-503	10	5	10	0.8	6	12	2	1.6	0.01
290-505	10	6	10	1	10	12	4	1.8	0.01
290-507	12	8	12	1.3	13	14	5	2.6	0.01
290-509	16	10	16	1.6	16	18	10	3.2	0.01

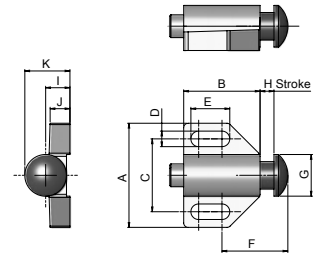


Eccentric Bush for Lateral Spring Retainer WDS 295

Steel, Chemical black finish

WDS No.	D	D h6	D1	D2 h7	L	M	Weight (kg)
295-201	6	12	6	12	9.9	2	0.01
295-203	10	16	10	16	11.9	2	0.01
295-205	12	18	12	18	13.9	2	0.01
295-207	16	25	16	25	17.9	3	0.03

IN"

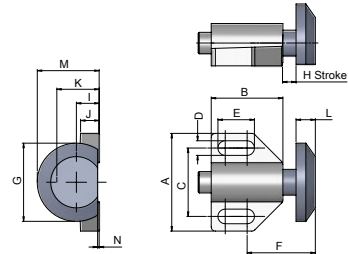


WDS 657 Spring Stops Button Type - Inch

Body - 319 Aluminium Alloy, Plunger - Case Hardened Low Carbon Steel, Heat treated - Plunger Case Hardened 74-77 R30N
End Force (Half-Depressed)
WDS 657-101 - 10lbs/4.54kg
WDS 657-102 - 14lbs/6.35kg
WDS 657-103 - 32lbs/14.5kg

WDS No.	A	B	C	D	E	F	G	H	I	J	K	Weight (g)	Weight (kg)
657-101	15/16	11/16	21/32	0.14	0.35	19/32	3/8	1/8	7/32	3/16	13/32	7	0.01
657-102	1 1/2	1	1 1/8	0.20	0.56	27/32	9/16	3/16	5/16	1/4	5/8	35	0.04
657-103	2	1 3/8	1 1/2	0.26	0.70	1 7/32	13/16	1/4	7/16	1/4	7/8	77	0.08

IN"

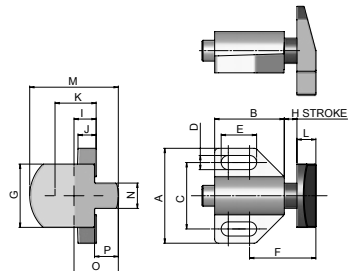


WDS 657 Spring Stops Flat Button Type - Inch

Body - 319 Aluminium Alloy, Plunger - Case Hardened Low Carbon Steel, Heat treated - Plunger Case Hardened 74-77 R30N
End Force (Half-Depressed)
WDS 657-201 - 10lbs/4.54kg
WDS 657-202 - 14lbs/6.35kg
WDS 657-203 - 32lbs/14.5kg

WDS No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Weight (kg)
657-201	15/16	11/16	21/32	0.14	0.35	21/32	5/8	1/8	7/32	3/16	13/32	3/16	19/32	1/64	0.02
657-202	1 1/2	1	1 1/8	0.20	0.56	29/32	7/8	3/16	5/16	1/4	5/8	1/4	55/64	1/64	0.07
657-203	2	1 3/8	1 1/2	0.26	0.70	1 5/16	1 1/4	1/4	1/4	1/4	7/8	3/8	1 3/16	1/64	0.08

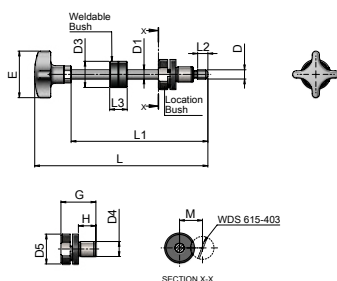
IN"



WDS 657 Spring Stops Tang Type - Inch

Body - 319 Aluminium Alloy, Plunger - Case Hardened Low Carbon Steel, Heat treated - Plunger Case Hardened 74-77 R30N
End Force (Half-Depressed)
WDS 657-301 - 10lbs/4.54kg
WDS 657-302 - 14lbs/6.35kg
WDS 657-303 - 32lbs/14.5kg

WDS No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Weight (kg)
657-301	15/16	11/16	21/32	0.14	0.35	21/32	5/8	1/8	7/32	3/16	13/32	3/16	7/8	1/4	7/16	15/16	0.01
657-302	1 1/2	1	1 1/8	0.20	0.56	29/32	7/8	3/16	5/16	1/4	5/8	1/4	1 1/8	3/8	9/16	17/64	0.04
657-303	2	1 3/8	1 1/2	0.26	0.70	1 5/16	1 1/4	1/4	7/16	1/4	7/8	3/8	1 1/2	1/2	3/4	21/64	0.08



CI

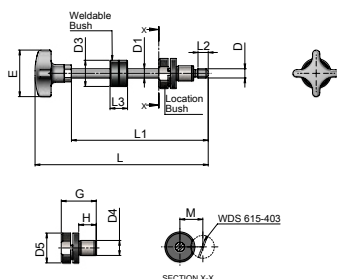
IN"

Clamping Pin (Captive) - Cast Iron Hand Knob - Inch WDS 165

Steel spindle & bushes

Cast Iron Hand Grip

WDS No.	D	D1	D3	D4	D5	E	G	H	L	L1	L2	L3	M	Weight (kg)
165-104A	1/4-20 UNC	6.35	18	10.348/10.337	20.5	32	24	12	119	94	7	12	15.75	0.15
165-105A	"5/16"-18 UNC"	8	18	12.729/12.718	20.5	40	24	12	124	94	8	12	15.75	0.15
165-106A	"3/8"-16 UNC"	10	20	15.904/15.893	20.5	50	24	12	146	108	10	16	15.75	0.25
165-110A	"1/2"-13 UNC"	12.7	20	19.085/19.072	26	50	24	12	156	118	13	16	19.05	0.3



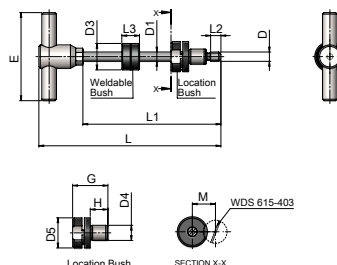
CI

Clamping Pin (Captive) - Cast Iron Hand Knob - Metric WDS 165

Steel spindle & bushes

Cast Iron Hand Grip

WDS No.	D	D1	D3	D4	D5	E	G	H	L	L1	L2	L3	M	Weight (kg)
165-206A	M6 x 1	6.35	18	10.029/10.018	20.5	32	24	12	120	95	7	12	16	0.15
165-208A	M8 x 1.25	8	18	13.029/13.018	20.5	40	24	12	124	94	8	12	16	0.15
165-210A	M10 x 1.5	10	20	16.029/16.018	20.5	50	24	12	146	108	10	16	16	0.25
165-212A	M12 x 1.75	12.7	20	20.035/20.022	26	50	24	12	156	118	13	16	18	0.3



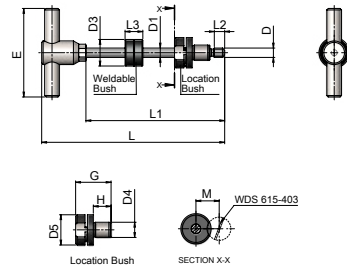
IN"

Clamping Pin (Captive) - Steel Tommy bar - Inch WDS 165

Steel Spindle & Bushes

Steel Tommy Bar

WDS No.	D	D1	D3	D4	D5	E	G	H	L	L1	L2	L3	M	Weight (kg)
165-104B	1/4-20 UNC	6.35	18	10.348/10.337	20.5	32	24	12	124	94	7	12	15.75	0.16
165-105B	"5/16"-18 UNC"	8	18	12.729/12.718	20.5	40	24	12	128	94	8	12	15.75	0.17
165-106B	"3/8"-16 UNC"	10	20	15.904/15.893	20.5	50	24	12	149	108	10	16	15.75	0.29
165-110B	"1/2"-13 UNC"	12.7	20	19.085/19.072	26	50	24	12	159	118	13	16	19.05	0.34

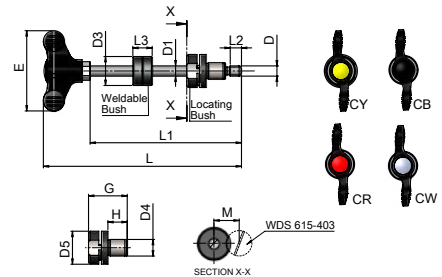


WDS 165 Clamping Pin (Captive) - Steel Tommy bar - Metric

Steel Spindle & Bushes

Steel Tommy Bar

WDS No.	D	D1	D3	D4	D5	E	G	H	L	L1	L2	L3	M	Weight (kg)
165-206B	M6 x 1	6.35	18	10.029/10.018	20.5	32	24	12	125	95	7	12	16	0.16
165-208B	M8 x 1.25	8	18	13.029/13.018	20.5	40	24	12	128	94	8	12	16	0.17
165-210B	M10 x 1.5	10	20	16.029/16.018	20.5	50	24	12	149	108	10	16	16	0.29
165-212B	M12 x 1.75	12.7	20	20.035/20.022	26	50	24	12	159	118	13	16	18	0.34

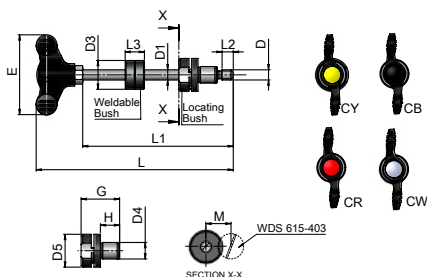


WDS 165 Clamping Pin (Captive) - Thermoplastic Wing Grip - Inch

Steel spindle & bushes

Wing Grip - Thermoplastic black body with choice of coloured caps

WDS No.	D	D1	D3	D4	D5	E	G	H	L	L1	L2	L3	M	Colour	Weight (kg)
165-104CB	1/4-20 UNC	6.35	18	10.348/10.337	20.5	32	24	12	123	94	7	12	15.75	Black	0.11
165-104CR	1/4-20 UNC	6.35	18	10.348/10.337	20.5	32	24	12	123	94	7	12	15.75	Red	0.11
165-104CW	1/4-20 UNC	6.35	18	10.348/10.337	20.5	32	24	12	123	94	7	12	15.75	Pale Grey	0.11
165-104CY	1/4-20 UNC	6.35	18	10.348/10.337	20.5	32	24	12	123	94	7	12	15.75	Yellow	0.11
165-105CB	"5/16"-18 UNC	8	18	12.729/12.718	20.5	40	24	12	134	94	8	12	15.75	Black	0.12
165-105CR	"5/16"-18 UNC	8	18	12.729/12.718	20.5	40	24	12	134	94	8	12	15.75	Red	0.12
165-105CW	"5/16"-18 UNC	8	18	12.729/12.718	20.5	40	24	12	134	94	8	12	15.75	Pale Grey	0.12
165-105CY	"5/16"-18 UNC	8	18	12.729/12.718	20.5	40	24	12	134	94	8	12	15.75	Yellow	0.12
165-106CB	"3/8"-16 UNC	10	20	15.904/15.893	20.5	50	24	12	149	108	10	16	15.75	Black	0.17
165-106CR	"3/8"-16 UNC	10	20	15.904/15.893	20.5	50	24	12	149	108	10	16	15.75	Red	0.17
165-106CW	"3/8"-16 UNC	10	20	15.904/15.893	20.5	50	24	12	149	108	10	16	15.75	Pale Grey	0.17
165-106CY	"3/8"-16 UNC	10	20	15.904/15.893	20.5	50	24	12	149	108	10	16	15.75	Yellow	0.17
165-110CB	"1/2"-13 UNC	12.7	20	19.085/19.072	26	50	24	12	159	118	13	16	19.05	Black	0.21
165-110CR	"1/2"-13 UNC	12.7	20	19.085/19.072	26	50	24	12	159	118	13	16	19.05	Red	0.21
165-110CW	"1/2"-13 UNC	12.7	20	19.085/19.072	26	50	24	12	159	118	13	16	19.05	Pale Grey	0.21
165-110CY	"1/2"-13 UNC	12.7	20	19.085/19.072	26	50	24	12	159	118	13	16	19.05	Yellow	0.21



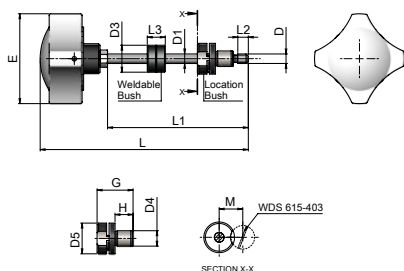
TP

Clamping Pin (Captive) - Thermoplastic Wing Grip - Metric WDS 165

Steel spindle & bushes

Wing Grip - Thermoplastic black body with choice of coloured caps

WDS No.	D	D1	D3	D4	D5	E	G	H	L	L1	L2	L3	M	Colour	Weight (kg)
165-206CB	M6 x 1	6.35	18	10.029/10.018	20.5	32	24	12	123	95	7	12	16	Black	0.11
165-206CR	M6 x 1	6.35	18	10.029/10.018	20.5	32	24	12	123	95	7	12	16	Red	0.11
165-206CW	M6 x 1	6.35	18	10.029/10.018	20.5	32	24	12	123	95	7	12	16	Pale Grey	0.11
165-206CY	M6 x 1	6.35	18	10.029/10.018	20.5	32	24	12	123	95	7	12	16	Yellow	0.11
165-208CB	M8 x 1.25	8	18	13.029/13.018	20.5	40	24	12	134	94	8	12	16	Black	0.12
165-208CR	M8 x 1.25	8	18	13.029/13.018	20.5	40	24	12	134	94	8	12	16	Red	0.12
165-208CW	M8 x 1.25	8	18	13.029/13.018	20.5	40	24	12	134	94	8	12	16	Pale Grey	0.12
165-208CY	M8 x 1.25	8	18	13.029/13.018	20.5	40	24	12	134	94	8	12	16	Yellow	0.12
165-210CB	M10 x 1.5	10	20	16.029/16.018	20.5	50	24	12	149	108	10	16	16	Black	0.17
165-210CR	M10 x 1.5	10	20	16.029/16.018	20.5	50	24	12	149	108	10	16	16	Red	0.17
165-210CW	M10 x 1.5	10	20	16.029/16.018	20.5	50	24	12	149	108	10	16	16	Pale Grey	0.17
165-210CY	M10 x 1.5	10	20	16.029/16.018	20.5	50	24	12	149	108	10	16	16	Yellow	0.17
165-212CB	M12 x 1.75	12.7	20	20.035/20.022	26	50	24	12	159	118	13	16	18	Black	0.21
165-212CR	M12 x 1.75	12.7	20	20.035/20.022	26	50	24	12	159	118	13	16	18	Red	0.21
165-212CW	M12 x 1.75	12.7	20	20.035/20.022	26	50	24	12	159	118	13	16	18	Pale Grey	0.21
165-212CY	M12 x 1.75	12.7	20	20.035/20.022	26	50	24	12	159	118	13	16	18	Yellow	0.21



CI

IN"

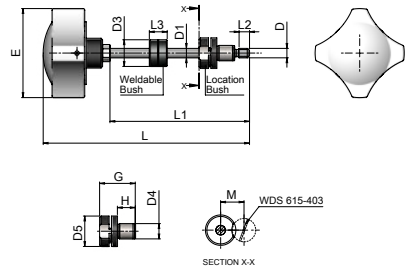
Clamping Pin (Captive) - Cast Iron Torque Hand Grip - Inch WDS 165

Steel spindle & bushes

Cast Iron Torque Hand Grip

WDS No.	D	D1	D3	D4	D5	E	G	H	L	L1	L2	L3	M	Weight (kg)
165-104D	1/4-20 UNC	6.35	18	10.348/10.337	20.5	60	24	12	134	94	7	12	15.75	0.41
165-105D	5/16"-18 UNC	8	18	12.729/12.718	20.5	60	24	12	134	94	8	12	15.75	0.42
165-106D	3/8"-16 UNC	10	20	15.904/15.893	20.5	60	24	12	148	108	10	16	15.75	0.47
165-110D	1/2"-13 UNC	12.7	20	19.085/19.072	26	60	24	12	158	118	13	16	19.05	0.57

CI



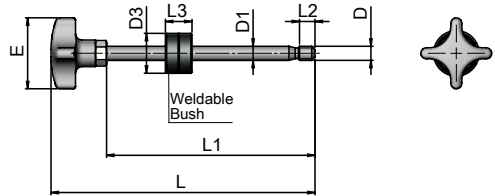
WDS 165 Clamping Pin (Captive) - Cast Iron Torque Hand Grip - Metric

Steel spindle & bushes
Cast Iron Torque Hand Grip

WDS No.	D	D1	D3	D4	D5	E	G	H	L	L1	L2	L3	Weight (kg)
165-206D	M6 x 1	6.35	18	10.029/10.018	20.5	60	24	12	135	95	7	12	0.41
165-208D	M8 x 1.25	8	18	13.029/13.018	20.5	60	24	12	134	94	8	12	0.42
165-210D	M10 x 1.5	10	20	16.029/16.018	20.5	60	24	12	148	108	10	16	0.47
165-212D	M12 x 1.75	12.7	20	20.035/20.022	26	60	24	12	158	118	13	16	0.57

CI

IN"

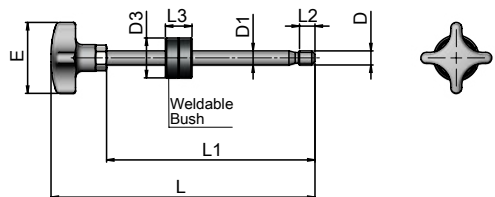


WDS 165 Clamping Pin (Captive) No Bush - Cast Iron Hand Knob - Inch

Steel spindle & bushes
Cast Iron Torque Hand Grip

WDS No.	D	D1	D3	E	L	L1	L2	L3	Weight (kg)
165-104AG	1/4-20 UNC	6.35	18	32	119	94	7	12	0.14
165-105AG	"5/16"-18 UNC	8	18	40	124	94	8	12	0.15
165-106AG	"3/8"-16 UNC	10	20	50	146	108	10	16	0.24
165-110AG	"1/2"-13 UNC	12.7	20	50	156	118	13	16	0.29

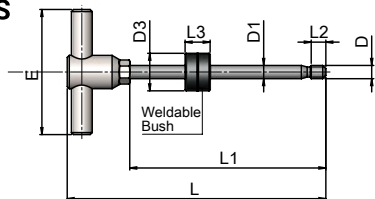
CI



WDS 165 Clamping Pin (Captive) No Bush - Cast Iron Hand Knob - Metric

Steel spindle & bushes
Cast Iron Torque Hand Grip

WDS No.	D	D1	D3	E	L	L1	L2	L3	Weight (kg)
165-206AG	M6 x 1	6.35	18	32	120	95	7	12	0.14
165-208AG	M8 x 1.25	8	18	40	124	94	8	12	0.15
165-210AG	M10 x 1.5	10	20	50	146	108	10	16	0.24
165-212AG	M12 x 1.75	12.7	20	50	156	118	13	16	0.29

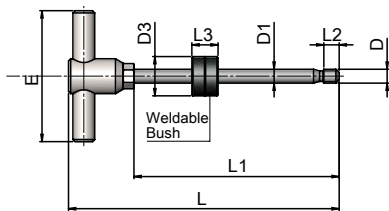


Clamping Pin (Captive) No Bush - Steel Tommy bar - Inch **WDS 165**

Steel spindle & bushes

Steel Tommy bar

WDS No.	D	D1	D3	E	L	L1	L2	L3	Weight (kg)
165-104BG	1/4-20 UNC	6.35	18	32	124	94	7	12	0.16
165-105BG	"5/16"-18 UNC"	8	18	40	128	94	8	12	0.16
165-106BG	"3/8"-16 UNC"	10	20	50	149	108	10	16	0.28
165-110BG	"1/2"-13 UNC"	12.7	20	50	159	118	13	16	0.34



Clamping Pin (Captive) No Bush - Steel Tommy bar - Metric **WDS 165**

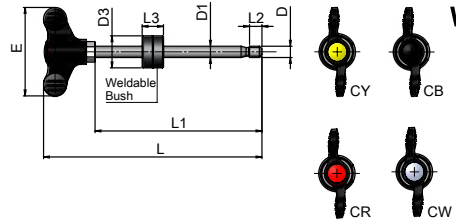
Steel spindle & bushes

Steel Tommy bar

WDS No.	D	D1	D3	E	L	L1	L2	L3	Weight (kg)
165-206BG	M6 x 1	6.35	18	32	125	95	7	12	0.16
165-208BG	M8 x 1.25	8	18	40	128	94	8	12	0.16
165-210BG	M10 x 1.5	10	20	50	149	108	10	16	0.28
165-212BG	M12 x 1.75	12.7	20	50	159	118	13	16	0.34

TP

IN"



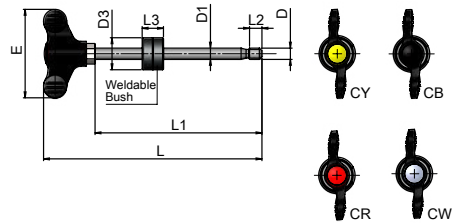
WDS 165 Clamping Pin (Captive) No Bush - Thermoplastic Wing Grip - Inch

Steel spindle & bushes

Wing Grip - Thermoplastic Black body with choice of coloured caps

WDS No.	D	D1	D3	E	L	L1	L2	L3	Colour	Weight (kg)
165-104CBG	1/4-20 UNC	6.35	18	32	123	94	7	12	Black	0.1
165-104CRG	1/4-20 UNC	6.35	18	32	123	94	7	12	Red	0.1
165-104CWG	1/4-20 UNC	6.35	18	32	123	94	7	12	Pale Grey	0.1
165-104CYG	1/4-20 UNC	6.35	18	32	123	94	7	12	Yellow	0.1
165-105CBG	"5/16"-18 UNC"	8	18	40	134	94	8	12	Black	0.12
165-105CRG	"5/16"-18 UNC"	8	18	40	134	94	8	12	Red	0.12
165-105CWG	"5/16"-18 UNC"	8	18	40	134	94	8	12	Pale Grey	0.12
165-105CYG	"5/16"-18 UNC"	8	18	40	134	94	8	12	Yellow	0.12
165-106CBG	"3/8"-16 UNC"	10	20	50	149	108	10	16	Black	0.16
165-106CRG	"3/8"-16 UNC"	10	20	50	149	108	10	16	Red	0.16
165-106CWG	"3/8"-16 UNC"	10	20	50	149	108	10	16	Pale Grey	0.16
165-106CYG	"3/8"-16 UNC"	10	20	50	149	108	10	16	Yellow	0.16
165-110CBG	"1/2"-13 UNC"	12.7	20	50	159	118	13	16	Black	0.2
165-110CRG	"1/2"-13 UNC"	12.7	20	50	159	118	13	R	Red	0.2
165-110CWG	"1/2"-13 UNC"	12.7	20	50	159	118	13	16	Pale Grey	0.2
165-110CYG	"1/2"-13 UNC"	12.7	20	50	159	118	13	16	Yellow	0.2

TP

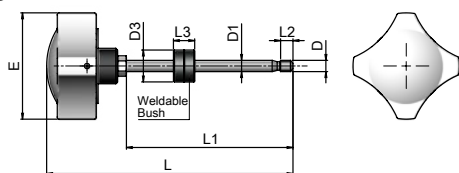


WDS 165 Clamping Pin (Captive) No Bush - Thermoplastic Wing Grip - Metric

Steel spindle & bushes

Wing Grip - Thermoplastic Black body with choice of coloured caps

WDS No.	D	D1	D3	E	L	L1	L2	L3	Colour	Weight (kg)
165-206CBG	M6x1	6.35	18	32	123	95	7	12	Black	0.1
165-206CRG	M6x1	6.35	18	32	123	95	7	12	Red	0.1
165-206CWG	M6x1	6.35	18	32	123	95	7	12	Pale Grey	0.1
165-206CYG	M6x1	6.35	18	32	123	95	7	12	Yellow	0.1
165-208CBG	M8x1.25	8	18	40	134	94	8	12	Black	0.12
165-208CRG	M8x1.25	8	18	40	134	94	8	12	Red	0.12
165-208CWG	M8x1.25	8	18	40	134	94	8	12	Pale Grey	0.12
165-208CYG	M8x1.25	8	18	40	134	94	8	12	Yellow	0.12
165-210CBG	M10x1.5	10	20	50	149	108	10	16	Black	0.16
165-210CRG	M10x1.5	10	20	50	149	108	10	16	Red	0.16
165-210CWG	M10x1.5	10	20	50	149	108	10	16	Pale Grey	0.16
165-210CYG	M10x1.5	10	20	50	149	108	10	16	Yellow	0.16
165-212CBG	M12x1.75	12.7	20	50	159	118	13	16	Black	0.2
165-212CRG	M12x1.75	12.7	20	50	159	118	13	16	Red	0.2
165-212CWG	M12x1.75	12.7	20	50	159	118	13	16	Pale Grey	0.2
165-212CYG	M12x1.75	12.7	20	50	159	118	13	16	Yellow	0.2



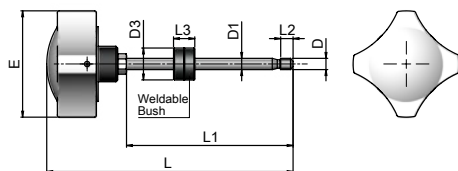
CI

IN"

Clamping Pin (Captive) No Bush - Cast Iron Torque Hand Grip - Inch WDS 165

Steel spindle & bushes
Cast Iron Torque Hand Grip

WDS No.	D	D1	D3	E	L	L1	L2	L3	Weight (kg)
165-104DG	1/4-20 UNC	6.35	18	60	134	94	7	12	0.4
165-105DG	"5/16"-18 UNC"	8	18	60	134	94	8	12	0.41
165-106DG	"3/8"-16 UNC"	10	20	60	148	108	10	16	0.47
165-110DG	"1/2"-13 UNC"	12.7	20	60	158	118	13	16	0.55

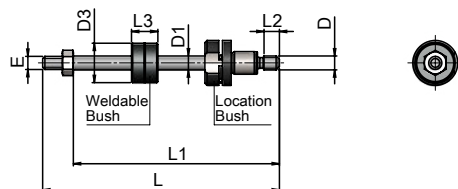


CI

Clamping Pin (Captive) No Bush - Cast Iron Torque Hand Grip - Metric WDS 165

Steel spindle & bushes
Cast Iron Torque Hand Grip

WDS No.	D	D1	D3	E	L	L1	L2	L3	Weight (kg)
165-206DG	M6 x 1	6.35	18	60	135	95	7	12	0.4
165-208DG	M8 x 1.25	8	18	60	134	94	8	12	0.41
165-210DG	M10 x 1.5	10	20	60	148	108	10	16	0.47
165-212DG	M12 x 1.75	12.7	20	60	158	118	13	16	0.55

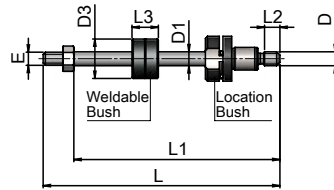


IN"

Clamping Pin (Captive) with Bush - No Handle - Inch WDS 165

Steel spindle & bushes
No Handle

WDS No.	D	D1	D3	D4	D5	E	G	H	L	L1	L2	L3	M	Weight (kg)
165-104X	1/4-20 UNC	6.35	18	10.348/10.337	20.5	M6	24	12	108	94	7	12	15.75	0.07
165-105X	"5/16"-18 UNC"	8	18	12.729/12.718	20.5	M8	24	12	111	94	8	12	15.75	0.08
165-106X	"3/8"-16 UNC"	10	20	15.904/15.893	20.5	M10	24	12	128	108	10	16	15.75	0.14
165-110X	"1/2"-13 UNC"	12.7	20	19.085/19.072	26	M10	24	12	138	118	13	16	19.05	0.24

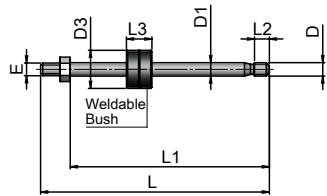


WDS 165 Clamping Pin (Captive) with Bush - No Handle - Metric

Steel spindle & bushes
No Handle

WDS No.	D	D1	D3	D4	D5	E	G	H	L	L1	L2	L3	M	Weight (kg)
165-206X	M6x1	6.35	18	10.029/10.018	20.5	32	24	12	108	95	7	12	16	0.07
165-208X	M8x1.25	8	18	13.029/13.018	20.5	40	24	12	111	94	8	12	16	0.08
165-210X	M10x1.5	10	20	16.029/16.018	20.5	50	24	12	128	108	10	16	16	0.14
165-212X	M12x1.75	12.7	20	20.035/20.022	26	50	24	12	138	118	13	16	18	0.24

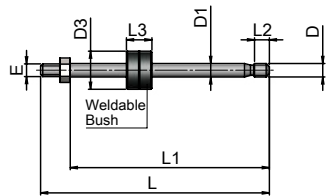
IN"



WDS 165 Clamping Pin (Captive) No Bush No Handle - Inch

Steel spindle & bushes
No Handle

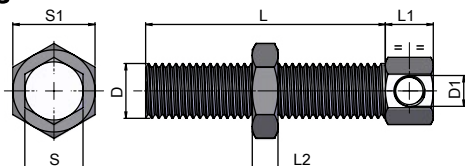
WDS No.	D	D1	D3	E	L	L1	L2	L3	Weight (kg)
165-104XG	1/4-20 UNC	6.35	18	M6	108	94	7	12	0.04
165-105XG	"5/16"-18 UNC"	8	18	M8	111	94	8	12	0.05
165-106XG	"3/8"-16 UNC"	10	20	M10	128	108	10	16	0.1
165-110XG	"1/2"-13 UNC"	12.7	20	M10	138	118	13	16	0.19



WDS 165 Clamping Pin (Captive) No Bush No Handle - Metric

Steel spindle & bushes
No Handle

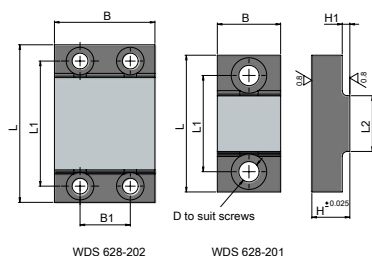
WDS No.	D	D1	D3	E	L	L1	L2	L3	Weight (kg)
165-206XG	M6 x 1	6.35	18	M6	108	95	7	12	0.04
165-208XG	M8 x 1.25	8	18	M8	111	94	8	12	0.05
165-210XG	M10 x 1.5	10	20	M10	128	108	10	16	0.1
165-212XG	M12 x 1.75	12.7	20	M10	138	118	13	16	0.19



Adjustable Locator WDS 502

Steel BS 970 Gr 230M07
Chemical black finish

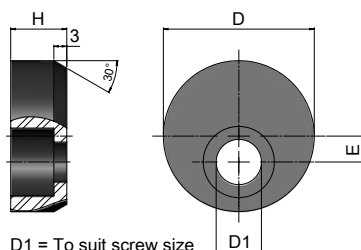
WDS No.	D	D1	L	L1	L2	S	S1	Weight (kg)
502-201	M6	M4	30	8	3	8	10	0.01
502-203	M6	M4	50	8	3	8	10	0.02
502-205	M8	M4	40	8	5	10	13	0.02
502-207	M8	M4	65	8	5	10	13	0.03
502-209	M10	M6	50	10	5.8	13	17	0.05
502-211	M10	M6	85	10	5.8	13	17	0.07
502-213	M12	M6	60	10	6.5	13	19	0.07
502-215	M12	M6	110	10	6.5	13	19	0.12
502-217	M16	M8	70	14	7.5	17	24	0.15
502-219	M16	M8	130	14	7.5	17	24	0.24



Rest Block WDS 628

Steel BS 970 Gr 080M15 Case Hardened and Ground
Chemical black finish

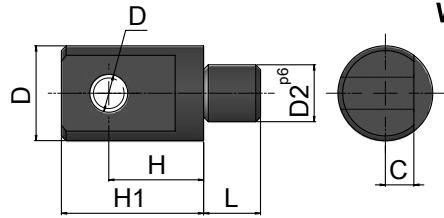
WDS No.	B	B1	D	H	H1	L	L1	L2	Weight (kg)
628-201	25	-	M8	15	3	54	38	22	0.14
628-202	51	25.5	M8	15	3	80	63.5	47	0.42



Eccentric Jig Button WDS 629

Steel BS 970 Gr 080M15 Case Hardened
Chemical black finish

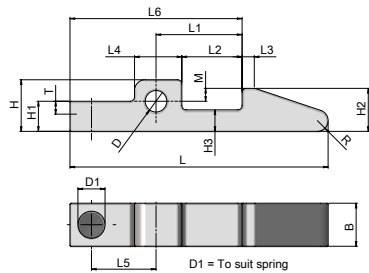
WDS No.	D	D1	D1 Inch	E	H	Weight (kg)
629-201	16	M6	1/4	1.5	13	0.02
629-202	19	M6	5/16	2.5	13	0.02
629-203	25	M8	5/16	3	13	0.04
629-204	32	M8	-	5	13	0.07
629-205	35	M10	1/4	6	13	0.08



WDS 632 Jig Pillar

Steel BS 970 Gr 230M07
Chemical black finish

WDS No.	C	D	D1	D2 p6	H	H1	L	Weight (kg)
632-211	6	M6	20	12	10	18	12	0.05
632-212	6	M6	20	12	15	24	12	0.06
632-213	6	M8	20	12	20	30	12	0.07
632-214	6	M8	20	12	25	35	12	0.08
632-215	8	M10	22	15	30	42	15	0.12
632-216	8	M10	22	15	40	52	15	0.16
632-217	8	M10	22	15	50	62	15	0.19



WDS 691 Spring Loaded Catch

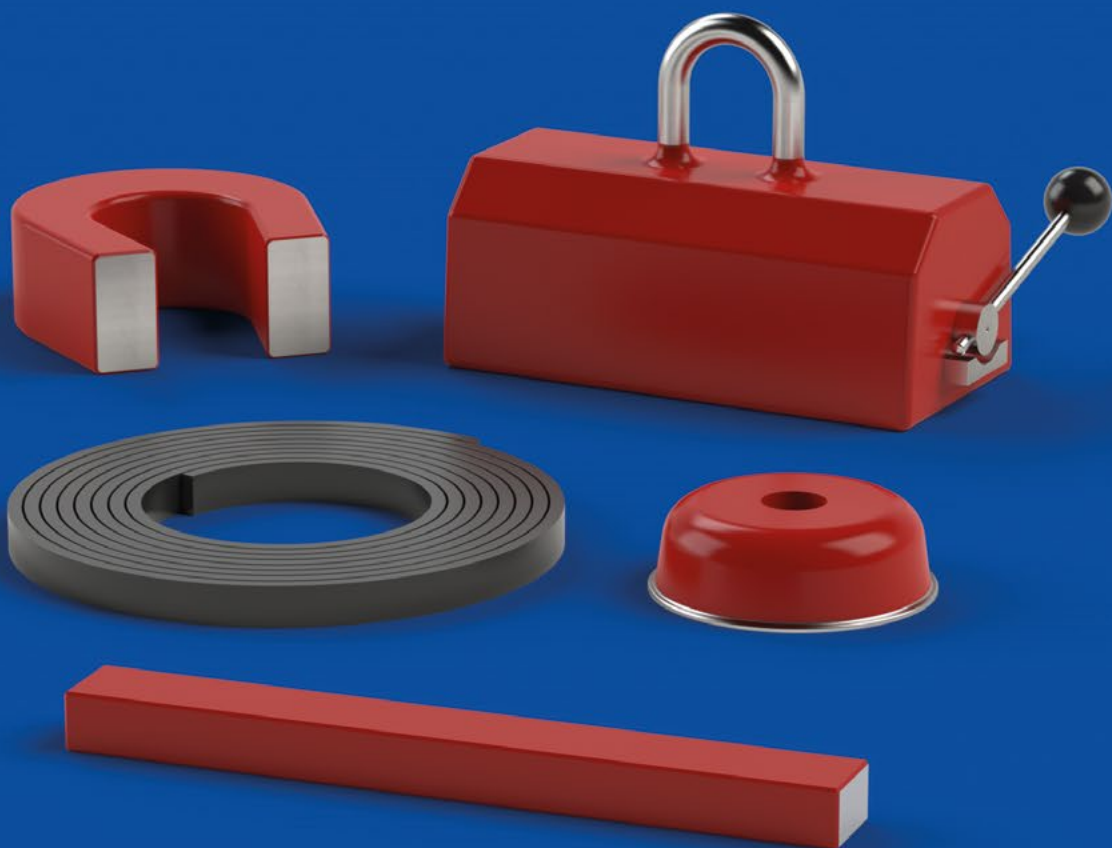
Steel BS 970 Gr 230M07
Chemical black finish, Heat treated Steel

WDS No.	B	D1	H	H1	H2	H3	L	L1	L2	L3	L4	L5	L6	M	R	T	DE9	Weight (kg)
691-445	8	5	9.5	5.5	8	4	45	15	10	2	9	11	30	2.5	1.6	1.5	4	0.02
691-460	10	6.3	12	7	10	5	60	20	14	3	11	15	40	3	2.5	3	5	0.03
691-480	14	8	15	9	14	7	80	30	22	5	14	23	60	5	4	5	6	0.08



DIGITAL POSITION INDICATORS

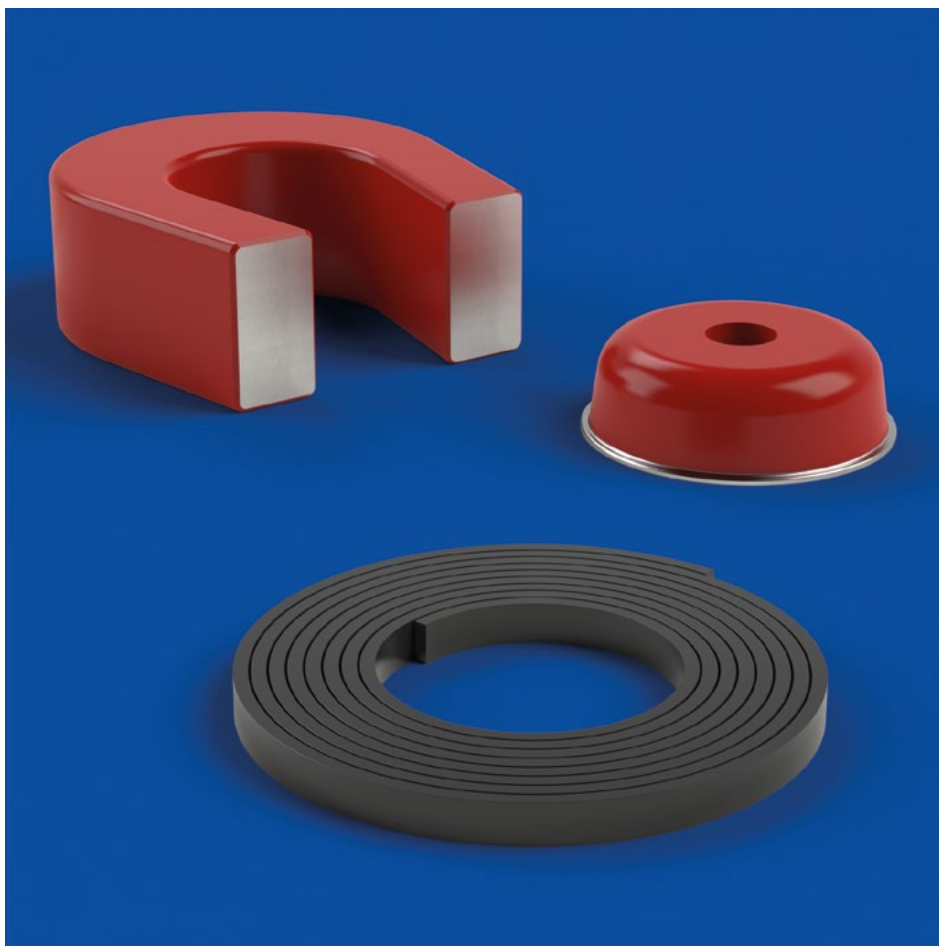
For the full range of Digital Position Indicators please see pages **249-254**



MAGNETS & MAGNETICS

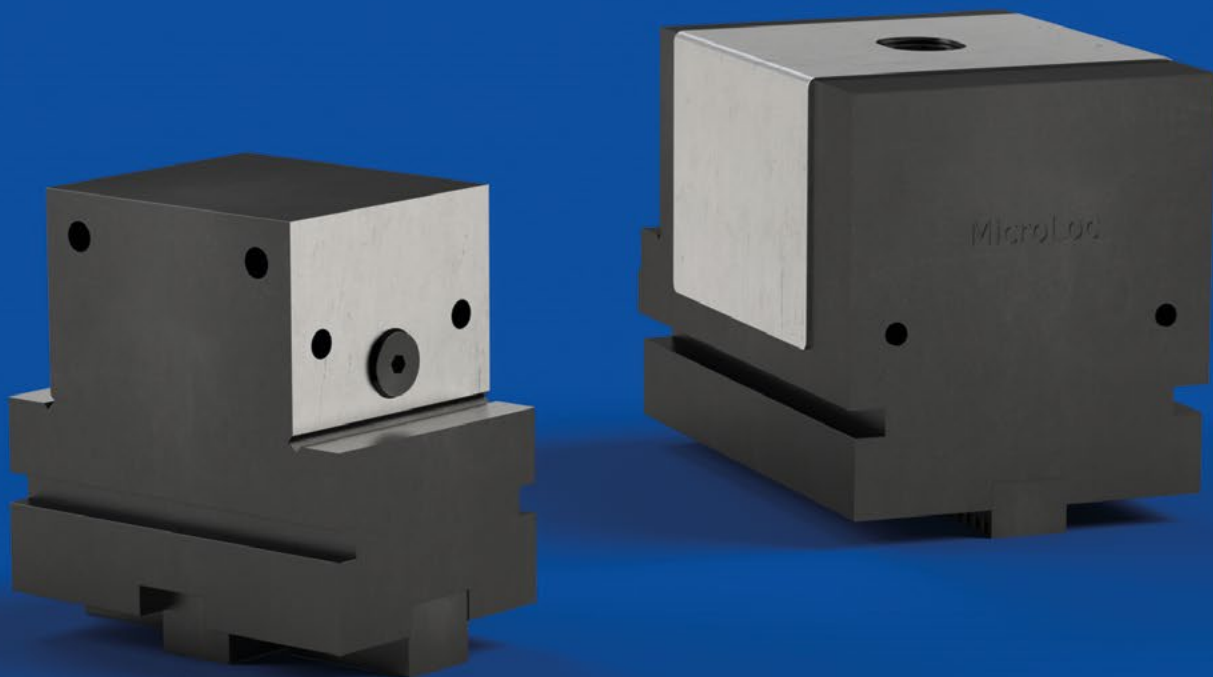
The WDS range of high quality, competitively priced Magnets and magnetic products includes Magnetic Chucks and a selection of other industrial magnets.





MAGNETS & MAGNETICS

For the full range of Magnets & Magnetics please visit [WDSCOMPONENTS.COM](https://www.wdscapabilities.com)



MICROLOC WORKHOLDING

WDS MicroLoc Workholding System is a versatile and expandable means of clamping square, rectangular or round parts relative to known datum positions.





MICROLOC WORKHOLDING

For the full range of MicroLoc Workholding please visit WDSCOMPONENTS.COM



MITEE-BITE WORK HOLDING

P 825-844

Mitee Bite is a modular workholding system that can be customised to suit any application. The range includes standard and machinable fixture clamps, edge clamps, expansion clamps and toe clamps.



MITEE-BITE EDGE CLAMPS

WDS Mitee-Bite Edge clamps are ideal for use as fixture clamps. Designs include flat edge and round edge clamping points.

P 825-835



MITEE-BITE T SLOTTED SECTION

Mitee-Bite sub plates are manufactured in aluminium with several T slots to allow the user to attach Mitee-Bite clamps and fixture elements.

P 836



MITEE-BITE EXPANSION (ID XPANSION) CLAMPS

Mitee-Bite ID xpansion clamps are low profile clamps. They are an ideal way to hold parts on an inside diameter for multiple machining on a vertical machining centre.

P 837



MITEE-BITE TEE SLOTTED VICE PALLETS

Mitee-Bite vice pallet is a fixture pallet with T slots allowing a fixture to be clamped into a machine vice. This tee slotted pallet can help reduce set up time and increase production on smaller run jobs.

P 838

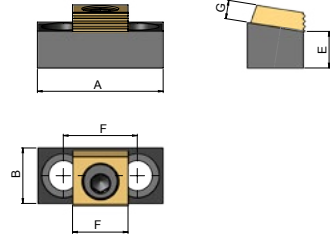
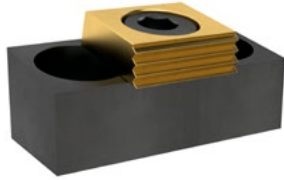


MITEE-BITE SPARE PARTS

Mitee-Bite Spare and replacement parts include screws, washers & nuts.

P 839-843

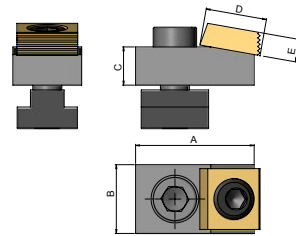




WDS 590 Compact Edge Clamps Mitee-Bite

This cam action fixture clamp provides positive down force while using very little space on a fixture. Work pieces can be clamped in series by using the back surface of a clamp to locate the next work piece. The hardened steel clamping element has both a smooth surface for machined work pieces and a serrated clamping surface for rougher work. The height of the clamp can be adjusted by milling the slot deeper in the fixture plate.

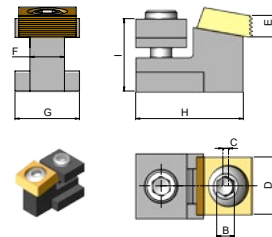
WDS No.	A	B	C	D	E	F	G	Cam Screw	Mounting Screw	Total Distance of Movement	Weight (kg)
590-54110	43.2	19.0	12.7	25.4	2.3	19.0	6.4	M10	M8	1.6	0.08
590-54112	54.0	25.4	11.4	33.5	2.8	25.4	9.7	M12	M10	2.0	0.12
590-54116	75.0	38.1	25.2	50.8	3.3	38.1	12.7	M16	M12	2.5	0.55



WDS 590 T-Slot Edge Clamps Mitee-Bite

This clamp is like the Compact Toe Clamp, only it is designed to be used in the T-slots of machine tables. It provides positive down force while maintaining a low profile. The hardened steel clamping element has both a smooth surface for machined work pieces and a serrated clamping surface for rougher work.

WDS No.	A	B	C	D	E	T-Slot Size	Weight (kg)
590-54000	50	28.5	15.7	25.4	9.6	No T-Nut	0.07
590-54014	50	28.5	15.7	25.4	9.6	14	0.13
590-54016	50	28.5	15.7	25.4	9.6	16	0.13
590-54018	50	28.5	15.7	25.4	9.6	18	0.13

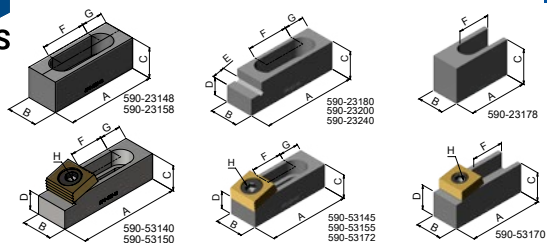


WDS 590 Advant-Edge Clamps Mitee-Bite

The new WDS Mitee-Bite Advant-Edge Clamp provides additional clamping force and improved table grip.

- Tilted clamping element creates a positive downward force.
- Hardened clamping element has both a smooth surface for machined work pieces and a serrated clamping surface for rougher work.
- Improved locking mechanism secures clamp to machine table.
- Packaged individually (590-52224) or as kit of two (590-52424)

WDS No.	B	C	D	E	F	G	H	I	Cam Screw	Description	T-Slot Size	Weight (kg)
590-52224	8	2.5	25.4	9.5	16	28.5	48	28	M12	Individual Clamp	16	0.3
590-52424	8	2.5	25.4	9.5	16	28.5	48	28	M12	Kit of 2 Clamps	16	0.6



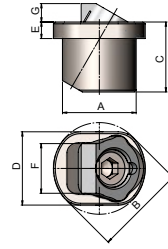
Multi-Fixture Clamps and Stops Mitee-Bite WDS 590

The WDS Mitee-Bite Multi-Fixture Clamp offers increased versatility through its unique riser clamp design

- Provides flexible set ups for hard to hold parts
- Works in both plates with tapped hole layouts or T-slot configurations
 - Can be mounted vertically or horizontally
- Stops locate workpiece for repeat positioning
- Larger sizes are ideal for mould shop applications
- Tapered mounting slot prevents movement when clamping pressure is applied
 - Steps, as well as end faces of flat stops, are precision ground

WDS Mitee-Bite also offers a model without a rest pad. These are designed for contacting a part at a higher point when the workpiece is resting on the table.

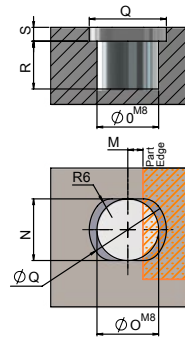
WDS No.	A	B	C	D	E	F	G	Cam Screw	Item	Mounting Screw	Slot	Weight (kg)
590-23148	55.9	19.1	19.1	11.6	N/A	28.2	13.5	N/A	STOP	M8	Closed	0.25
590-23158	83.5	28.5	22.1	12.1	N/A	42.7	12.7	N/A	STOP	M12	Closed	0.08
590-23178	83.8	38.1	50.8	35	N/A	46.2	N/A	N/A	STOP	M16	Open	0.95
590-23180	63.5	19.1	19.1	11.68	8	28.2	13.5	N/A	STOP	M8	Closed	0.25
590-23200	95.3	28.5	22.1	12.19	9.4	42.7	12.7	N/A	STOP	M12	Closed	0.9
590-23240	107	38.1	50.8	35	9.4	46.2	N/A	N/A	STOP	M16	Open	0.8
590-53140	63.5	19.1	15.8	11.68	8	21.1	13.5	M10	CLAMP	M8	Closed	0.08
590-53145	54.9	19.1	15.8	11.6	N/A	21.1	13.5	M10	CLAMP	M8	Closed	0.08
590-53150	95.3	28.5	15.8	12.19	9.4	42.7	12.7	M12	CLAMP	M12	Closed	0.24
590-53155	85.6	28.5	15.8	12.1	N/A	42.7	12.7	M12	CLAMP	M12	Closed	0.8
590-53170	107	38.1	41.2	35	9.4	46.2	N/A	M16	CLAMP	M16	Open	0.9
590-53172	96.5	38.1	41.2	35	N/A	46.2	N/A	M16	CLAMP	M16	Open	0.25



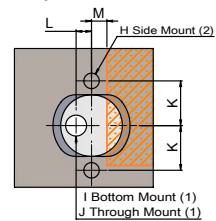
WDS 590 Dyna-Force Clamps Mitee-Bite

The majority of the WDS Mitee-Bite Dyna-Force Clamp is below the surface of the fixture which provides excellent clamp support and makes for a very low profile. The clamp jaw, which is relief cut for maximum contact with the workpiece, slides on an angle for positive downforce. The clamp jaw is available with smooth or serrated faces.

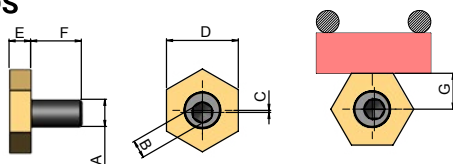
WDS No.	A	B	C	D	E	F	Clamp Jaw & Hardness	Clamp Travel	Drive Screw	Key Size	Max G	Min G	Optimum G	Weight (kg)
590-28314	20	24.9	19	19.9	4.5	13.5	Smooth 34RC	2	6 mm	5 mm	6.75	3.25	5	0.05
590-28318	20	24.9	19	19.9	4.5	13.5	Serrated 44RC	2	6 mm	5 mm	6.75	3.25	5	0.05
590-28320	20	29.9	24	24.9	5	15	Smooth 34RC	2.2	8 mm	6 mm	8.35	4.5	6.5	0.09
590-28322	20	29.9	24	24.9	5	15	Serrated 44RC	2.2	8 mm	6 mm	8.35	4.5	6.5	0.09
590-28324	20	37.9	29	29.9	7	20	Smooth 34RC	3.8	10 mm	8 mm	10.75	4.5	7.5	0.16
590-28328	20	37.9	29	29.9	7	20	Serrated 44RC	3.8	10 mm	8 mm	10.75	4.5	7.5	0.16



1. Determine location of part
2. Decide on fixing method
3. Fixing methods are
 - "H" - Side mount (use BHCS)
 - "I" - Bottom mount (use SHCS)
 - "J" - Through hole (use SHCS)
4. Only required to use hole centres relative to fixing method



WDS No.	H	I	J	K	L	M	N	O	P	Q	R	S *
590-28314	M6	M6	M5	14.5	5.0	4.92	20	20	6.0	25.0	15.5	4.5
590-28318	M6	M6	M5	14.5	5.0	4.92	20	20	6.0	25.0	15.5	4.5
590-28320	M6	M8	M6	16.0	6.0	5.64	25	25	6.5	30.0	20.0	5.0
590-28322	M6	M8	M6	16.0	6.0	5.64	25	25	6.5	30.0	20.0	5.0
590-28324	M6	M10	M8	20.0	7.5	7.20	30	30	8.0	38.0	23.0	7.0
590-28328	M6	M10	M8	20.0	7.5	7.20	30	30	8.0	38.0	23.0	7.0



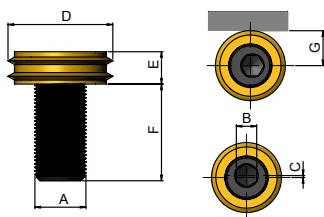
Fixture Clamps Mitee-Bite WDS 590

The Cam Action WDS Mitee-Bite Fixture Clamp is made up of two simple components: a hardened steel socket cap screw with an offset head and a hexagonal washer.

- Low profile makes computer programming easier
- Cam action provides fast, strong clamping
- Small size allows more parts per load
- Simple design keeps cost low

Note - Clockwise rotation is recommended
Workpiece stop should be on the right of clamp

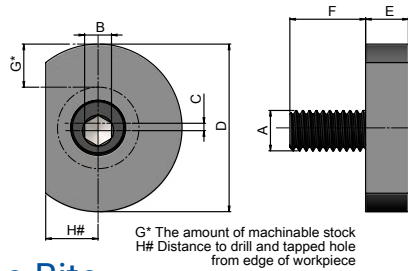
WDS No.	A	B	C	D	E	F	G	Stainless Steel	Weight (kg)
590-50204	M4	3M	0.76	7.93	2.8	9.6	3.8	No	0.6
590-50205	M6	4M	1.01	15.86	4.75	11.2	7.8	Yes	0.3
590-50206	M6	4M	1.01	15.86	4.75	11.2	7.8	No	1.1
590-50207	M8	5M	1.01	20.6	4.75	15	10.3	Yes	0.84
590-50208	M8	5M	1.01	20.6	4.75	15	10.2	No	2.52
590-50210	M10	7M	1.52	20.6	6.35	19	10.2	No	0.28
590-50212	M12	8M	2.03	25.4	9.52	22.8	12.7	No	3.28
590-50216	M16	12M	2.54	30.13	12.7	28.5	15	No	2.04



Knife Edge Clamps Mitee-Bite WDS 590

WDS Knife Edge Clamps can be used instead of the original brass hex clamps for clamping rough cut stock, castings and any material that requires a hardened clamping element.

WDS No.	A	B	C	D	E	F	G	Maximum Holding Force (N)	Pack Quantity	Tightening Torque (Nm)	Weight (kg)
590-82584	M10	7	1.52	20.6	6.35	19	10.15	8900	8	28	1.66
590-82588	M12	8	2.03	25.4	9.52	22.8	12.7	17800	8	88	1.6
590-82592	M16	12	2.54	30.15	12.7	28.5	15	26700	4	135	1.2



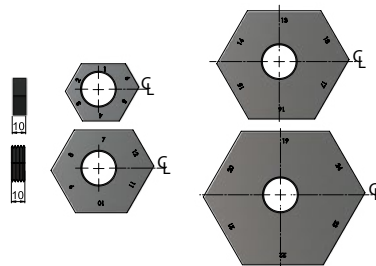
WDS 590 Machinable Fixture Clamps Mitee-Bite

These clamps with the machinable steel washers provide more flexibility for holding round or unusual shape parts. Parts can be held directly to the fixture plate surface or elevated for through drilling. A special screw is provided with each package to hold the washer in the proper place during machining. The flat edge is the same location as our original fixture clamp. It can be used where a stronger clamping surface is required.

- Low Profile
- Made of mild steel for machinability

Note - Every package includes one machining screw

WDS No.	A	B	C	D	E	F	G*	H	Weight (kg)
590-50506	M6	4	1.01	24.9	6.4	11.9	6.4	7.8 MM	0.11
590-50510	M10	7	1.52	31.2	8.9	18	7	10.2 MM	0.2
590-50512	M12	8	2.03	37.6	11.4	22.9	7.6	12.7 MM	0.4
590-50516	M16	12	2.54	43.9	14	28.6	8.91	15.0 MM	0.65



WDS 590 Series-9 Clamp Mitee-Bite

This adjustable low profile, cam action clamp provides clamping of different size work pieces merely by rotating the clamp to one of its other edges. The clamps are 10mm high and use an M12 cam screw. Each of the six clamping surfaces is a different distance from the centreline by 1mm as shown in the chart. Therefore, one Series-9 Clamp can hold parts that vary up to 7mm simply by rotating the clamp to a different clamping surface.

- Serrated or smooth edges
- Heat treated and plated

Please refer to WDS 590-50371(sold as a set of 8) for Replacement Screws

WDS No.	Edge	Face Number	Face Distance from C/L	Weight (kg)
590-95110	Smooth	1-6	12, 13, 14, 15, 16, 17	0.08
590-95115	Serrated	1-6	12, 13, 14, 15, 16, 17	0.08
590-95120	Smooth	7-12	18, 19, 20, 21, 22, 23	0.32
590-95125	Serrated	7-12	18, 19, 20, 21, 22, 23	0.13
590-95130	Smooth	13-18	24, 25, 26, 27, 28, 29	0.2
590-95135	Serrated	13-18	24, 25, 26, 27, 28, 29	0.2
590-95140	Smooth	19-24	30, 31, 32, 33, 34, 35	0.24
590-95145	Serrated	19-24	30, 31, 32, 33, 34, 35	0.24



T-Slot and Advant-Edge Clamps Mitee-Bite WDS 590

The WDS Mitee-Bite Kit Contains

4 WDS Mitee-Bite T-Nuts

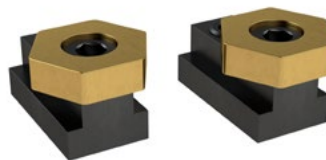
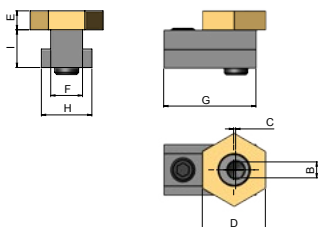
6 WDS Mitee-Bite Fixture Clamps

2 Hex Keys The original WDS Mitee-Bite

T-Slot Clamp combines our unique cam action clamping element with a T-nut

- Locks in machine T-slot for low profile clamping
- Makes fast set-ups possible right on the machine table
- Brass hex follows contour of unusual shaped parts
- Packaged in pairs or complete kits

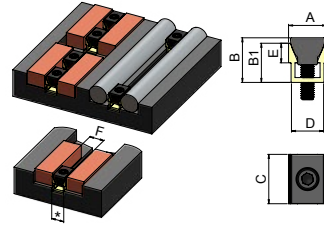
WDS No.	B	C	D	E	F	G	H	I	Cam Screw	T-Slot Size	Weight (kg)
590-50642	5 mm	1.01	15.86	4.75	8	23.2	12.7	9.5	M6 x 1.00	8 mm	0.33
590-50644	5 mm	1.01	15.86	4.75	10	23.2	14.2	14.2	M6 x 1.00	10 mm	0.43
590-50646	5 mm	1.01	20.62	4.75	12	27.9	15.9	15.9	M8 x 1.25	12 mm	0.53
590-50648	7 mm	1.52	20.62	6.35	14	30.5	22.4	22.2	M10 x 1.50	14 mm	0.63
590-50650	8 mm	2.03	25.40	9.53	16	30.9	25.4	22.2	M12 x 1.75	16 mm	0.55
590-50652	8 mm	2.03	25.40	9.53	18	34.7	28.6	28.6	M12 x 1.75	18 mm	0.85
590-50654	12 mm	2.54	30.15	12.70	20	39.2	31.8	31.8	M16 x 2.00	20 mm	0.96
590-50656	12 mm	2.54	30.15	12.70	22	44.3	34.9	41.3	M16 x 2.00	22 mm	1.05



T-Slot Clamps Mitee-Bite WDS 590

2 Clamps are included in each package

WDS No.	B	C	D	E	F	G	H	I	Cam Screw	T-Slot Size	Weight (kg)
590-50422	5 mm	1.01	15.86	4.75	8	23.2	12.7	9.5	M6 x 1.00	8 mm	0.05
590-50424	5 mm	1.01	15.86	4.75	10	23.2	14.2	14.2	M6 x 1.00	10 mm	0.07
590-50426	5 mm	1.01	20.62	4.75	12	27.9	15.9	15.9	M8 x 1.25	12 mm	0.12
590-50428	7 mm	1.52	20.62	6.35	14	30.5	22.4	22.2	M10 x 1.50	14 mm	0.23
590-50430	8 mm	2.03	25.40	9.53	16	30.9	25.4	22.2	M12 x 1.75	16 mm	0.3
590-50432	8 mm	2.03	25.40	9.53	18	34.7	28.6	28.6	M12 x 1.75	18 mm	0.45
590-50434	12 mm	2.54	30.15	12.70	20	39.2	31.8	31.8	M16 x 2.00	20 mm	0.63
590-50436	12 mm	2.54	30.15	12.70	22	44.3	34.9	41.3	M16 x 2.00	22 mm	0.99



WDS 590 Uniforce Clamps Mitee-Bite

- Increases production
- Minimises tool changes
- Holds two parts with equilateral clamping action
- Ideal for clamping flat or round work pieces
- Reduces wasted space

The compact, economical WDS Mitee-Bite Uniforce Clamp enables you to fixture more parts on the machine table.

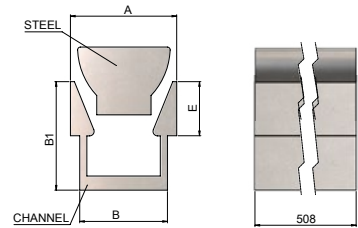
The specially designed steel wedge spreads the clamping force uniformly on both sides of the 7075-T6 aluminium channel.

D* - A milled slot wider than D dimension will insure clamp remains in line with workpiece.

Clamp sides should not come in contact with slot walls during expansion.

F† - The distance needed between workpieces for clamp clearance. Drill and tap mounting hole on the centre of F dimension.

WDS No.	A	B	B1	C	D*	E	F†	Key Size	Max Holding Force (N)	Max Spread	Pack Quantity	Thread	Weight (kg)
590-80250	6.1	6.9	6.4	8.1	5.3	3.6	6.4	1.5	880	6.7	6	M2	0.11
590-80375	9.1	9.7	9.5	11.9	7.9	4.7	9.5	2	1350	10.0	6	M2.5	0.6
590-80500	12.3	14.5	12.70	15.9	10.4	5.6	12.7	3	2224	13.2	8	M4	1.2
590-80750	18.6	19.0	19.05	23.8	16.1	9.5	19.0	5	6670	20.3	6	M6	1.2
590-81000	24.8	25.9	25.40	31.7	20.8	12.7	25.4	6	8895	26.9	4	M8	1
590-81500	37.3	38.6	38.10	47.6	30.8	19.0	38.1	10	15565	39.9	2	M12	0.6
590-82000	49.7	51.5	50.80	63.5	41.2	25.4	50.8	14	26690	53.0	2	M16	0.8



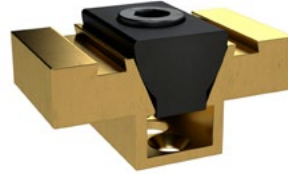
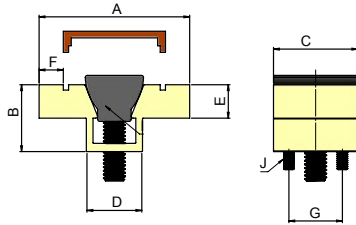
WDS 590 Long Length Uniforce Channel & Steel Material Mitee-Bite

This channel is available in 508mm lengths so clamps can be fabricated in different lengths to suit any requirement.

Please note this does not include plating or drilled holes.

This part is used with WDS 590 Uniforce Clamps.

WDS No.	A	B	B1	C	D	E	Max Holding Force (N)	Max Spread	Model	Weight (kg)
590-62010	6.1	6.9	6.4	508	5.3	3.6	880	6.7	Channel	0.01
590-62020	9.1	9.7	9.5	508	7.9	4.7	1350	10.0	Channel	0.02
590-62120	12.3	14.5	12.7	508	10.4	5.6	2224	13.2	Channel	0.03
590-62220	18.6	19.0	19.05	508	16.1	9.5	6670	20.3	Channel	0.06
590-62320	24.8	25.9	25.4	508	20.8	12.7	8895	26.9	Channel	0.15
590-62420	37.3	38.6	38.1	508	30.8	19.0	15565	39.9	Channel	0.27
590-62520	49.7	51.5	50.8	508	41.2	25.4	26690	53.0	Channel	0.48
590-63010	6.1	6.9	6.4	508	5.3	3.6	880	-	Steel	0.1
590-63020	9.1	9.7	9.5	508	7.9	4.7	1350	-	Steel	0.15
590-63120	12.3	14.5	12.7	508	10.4	5.6	2224	-	Steel	0.23
590-63220	18.6	19.0	19.05	508	16.1	9.5	6670	-	Steel	0.64
590-63320	24.8	25.9	25.4	508	20.8	12.7	8895	-	Steel	1.1
590-63420	37.3	38.6	38.1	508	30.8	19.0	15565	-	Steel	2.7
590-63520	49.7	51.5	50.8	508	41.2	25.4	26690	-	Steel	4.8



Machinable Uniforce Clamps Mitee-Bite WDS 590

The compact WDS Mitee-Bite Uniforce Clamp is available with extra material on the clamping jaws so it can be machined to conform to the shape of your workpiece enabling you to fixture unusual applications easily. The specially designed steel wedge spreads the clamping force uniformly on both sides of the 7075-T6 aluminium channel. A unique locking plate is provided to make the clamp rigid while machining the jaws to your specifications, without vibration. Available in five sizes. Now you can hold those round and unusual shape parts with ease. This compact method of workholding will allow more parts per load at a lower price than vice soft jaws.

Note: Locking plate is used only to machine jaws, remove to clamp workpiece.

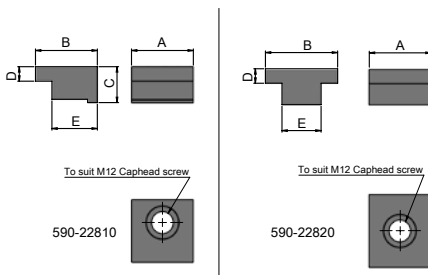
A* - The distance needed between workpieces for clamp clearance, drill and tap mounting holes on the centre of "A" dimension.

F† - The amount of machinable stock on jaws.

H** - Mounting Screws included.

Patent # 6,126,159

WDS No.	A*	B	C	D	E	F†	G	H**	I	Description	Weight (kg)
590-80050	28.6	12.7	15.7	10.67	6.3	4.6	10.16	M2	M4	1 Clamp Assembly with Locking Plate	0.03
590-80055	28.6	12.7	15.7	10.67	6.3	4.6	10.16	M2	M4	1 Clamp Assembly without a Locking Plate	0.05
590-80075	38.1	19.1	23.9	16.05	9.4	6.6	15.87	M4	M6	1 Clamp Assembly with Locking Plate	0.06
590-80080	38.1	19.1	23.9	16.05	9.4	6.6	15.87	M4	M6	1 Clamp Assembly without a Locking Plate	0.08
590-80100	50.8	25.4	31.8	20.83	12.7	9.9	20.62	M4	M8	1 Clamp Assembly with Locking Plate	0.14
590-80105	50.8	25.4	31.8	20.83	12.7	9.9	20.62	M4	M8	1 Clamp Assembly without a Locking Plate	0.15
590-80150	76.2	38.1	47.5	30.86	19.1	15.7	30.48	M5	M12	1 Clamp Assembly with Locking Plate	0.2
590-80155	76.2	38.1	47.5	30.86	19.1	15.7	30.48	M5	M12	1 Clamp Assembly without a Locking Plate	0.25
590-80200	101.6	50.8	63.5	41.28	25.4	20.3	41.28	M6	M16	1 Clamp Assembly with Locking Plate	0.45
590-80205	101.6	50.8	63.5	41.28	25.4	20.3	41.28	M6	M16	1 Clamp Assembly without a Locking Plate	0.45



Mounting Clamps Mitee-Bite WDS 590

Low carbon steel heat treated

Clamps are designed for mounting WDS Mitee-Bite Aluminium Sub Plates, many types of machine vices.

WDS No.	A	B	C	D	E	Screw Size	Weight (kg)
590-22810	31.8	38.1	22.1	8.9	28.0	M12	0.15
590-22820	31.8	44.5	22.1	8.9	24.1	M12	0.13



WDS 590 Universal Riser Kit Mitee-Bite

Contents - 4 Clamp base assemblies, 1 locating rail with stop plus 3 hex keys

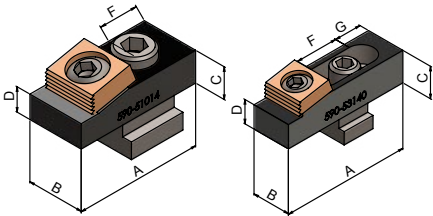
WDS No.	To Suit T-Slot Size	Weight (kg)
590-51088	10	1
590-51288	12	1.2
590-51488	14	1.3
590-51688	16	1.4
590-51888	18	1.5



WDS 590 Mini-Riser Kit Mitee-Bite

Contents - 4 Clamp base assemblies plus 2 hex keys

WDS No.	To Suit T-Slot Size	Weight (kg)
590-51250	12	0.5
590-51450	14	0.6
590-51650	16	0.7
590-51850	18	0.8



WDS 590 Clamp Base Units Mitee-Bite

Contents - Base Unit with T-Nut and Screw

WDS No.	A	B	C	D	E	F	Clamp Base	To Suit T-Slot Size	Weight (kg)
590-51030	63.5	19.05	15.75	11.684	7.88	21.08	590-53140	10	0.2
590-51230	63.5	19.05	15.75	11.684	7.88	21.08	590-53140	12	0.2
590-51430	63.5	28.45	15.75	12.192	6.35	19.81	590-51014	14	0.2
590-51630	63.5	28.45	15.75	12.192	6.35	19.81	590-51014	16	0.2
590-51830	63.5	28.45	15.75	12.192	6.35	19.81	590-51014	18	0.2

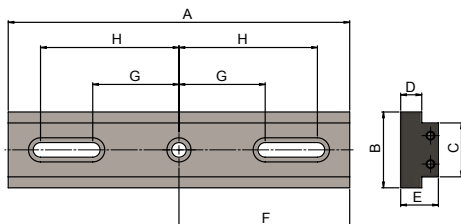


Riser Rail Kit Mitee-Bite WDS 590

Contents: Riser Rail and all T-Nuts and screws for mounting

- Ideal for mill-through and drill-through operations
- Allows quick set-up directly on machine table and sub plates
 - Available for different size T-slots

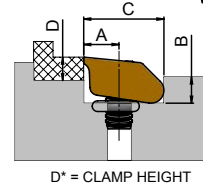
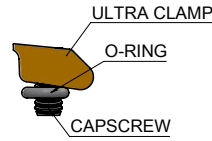
WDS No.	Rail Length	Rail No	To Suit T-Slot Size	Weight (kg)
590-51436	127	590-23110	10	0.5
590-51438	127	590-23110	12	0.5
590-51442	198	590-51440	14	0.5
590-51444	198	590-51440	16	0.5
590-51446	198	590-51440	18	0.5



Riser Rails Mitee-Bite WDS 590

Steel

WDS No.	A	B	C	D +0.0000 -0.0005	E	F	G	H	End Stop for Rail	Sliding Stop for Rail	Use with Clamp Base
590-23100	127	31.5	18.3	11.684	18.8	63.5	24.9	50.3	N/A	590-53220	590-53140
590-51440	198	43.94	31.24	12.192	21.84	99.0	50.0	80.0	590-51034	590-53440	590-51014



WDS 590 Ultra Clamp Fixture Mitee-Bite

ULTRA CLAMPS are all new low-profile fixture clamps that will change the way you work. Employ ULTRA CLAMPS and machine with confidence and with increased productivity and profits.

As engineers and machinists, you're sure to appreciate the simple, sturdy design of this clamp that employs a standard cap screw and oil resistant o-ring. The ULTRA CLAMP is available in five sizes and three styles; a tool steel with both a knife-edge for aggressive stock removal and a flatter edge for general purpose machining. A brass clamp is offered to help prevent marring on finished work and soft material.

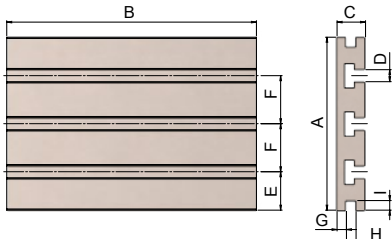
Unique feature of ULTRA CLAMPS

- Extremely low bite
- Positive down force
- High resistance to rip-out
- Simple, sturdy, high quality design and components
- Take a bite out of production costs
- Gain maximum tool access to your work
- Employ fewer clamps per fixture
- Virtually eliminate lost work

Creating Fixtures is Easy, Simply:

1. Machine a slot for the WDS Ultra Clamp
2. Drill and tap a hole for the cap screw
3. Assemble the clamp as shown in diagram
4. Position clamp as shown in diagram and loosely screw to fixture
5. Insert workpiece and tighten cap screw

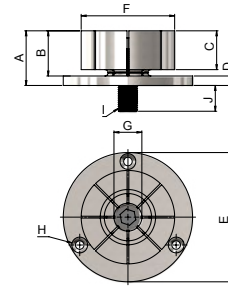
WDS No.	A	B	C	D*	Clamp Width	Description	Max Holding Force (N)	Pack Quantity	Screw Size	Torque (N.m)	Total Throw	Weight (kg)
590-56000	3.81	3.55	9.52	1.9	9.52	Tool Steel Knife Edge	2800	8	M2.5	1.8	0.19	0.26
590-56010	3.81	3.55	9.52	1.9	9.52	Tool Steel Blunt Edge	2800	8	M2.5	1.8	0.19	0.26
590-56015	3.81	3.55	9.52	1.9	9.52	Brass Blunt Edge	875	8	M2.5	5.6	0.19	0.26
590-56020	5.08	4.75	12.7	2.54	12.7	Tool Steel Knife Edge	6600	8	M4	5.6	0.406	0.48
590-56030	5.08	4.75	12.7	2.54	12.7	Tool Steel Blunt Edge	6600	8	M4	5.6	0.406	0.48
590-56040	5.08	4.75	12.7	2.54	12.7	Brass Blunt Edge	1750	8	M4	2.8	0.406	0.48
590-56050	7.62	7.11	19.05	3.81	19.05	Tool Steel Knife Edge	16000	6	M6	22.5	0.61	0.6
590-56060	7.62	7.11	19.05	3.81	19.05	Tool Steel Blunt Edge	16000	6	M6	22.5	0.61	0.6
590-56065	7.62	7.11	19.05	3.81	19.05	Brass Blunt Edge	4200	6	M6	5.6	0.61	0.6
590-56070	10.16	11.43	25.4	6.35	25.4	Tool Steel Knife Edge	26000	4	M10	40.6	1.27	0.6
590-56075	10.16	11.43	25.4	6.35	25.4	Tool Steel Blunt Edge	26000	4	M10	40.6	1.27	0.28
590-56080	15.24	16.26	38.1	9.52	38.1	Tool Steel Knife Edge	37500	2	M12	200	1.9	0.3
590-56085	15.24	16.26	38.1	9.52	38.1	Tool Steel Blunt Edge	37500	2	M12	200	1.9	0.6



Aluminium Sub Plates Mitee-Bite WDS 590

WDS Extruded Aluminium Sub Plates are available in standard sizes in stock, as well as in custom lengths to order. Standard sizes are premachined to .13 flatness and parallelism per 300mm.

WDS No.	D	E	F	G	H	I	A X B X C	T-Slots	Weight (kg)
590-22913	16	50.8	63.5	12.7	12.7	12.7	228 x 330 x 38	3	7
590-22918	16	50.8	63.5	12.7	12.7	12.7	228 x 457 x 38	3	9.7
590-22924	16	50.8	63.5	12.7	12.7	12.7	228 x 610 x 38	3	13



WDS 590 ID Xpansion Clamp Mitee-Bite

- Low Profile
- Ideal for Secondary Operations on Lathe Parts
- Easily Machined to Size on Lathe or Mill
- Allows More Parts Per Workcube or Fixture Plates
- Excellent for Palletised Setups
- Screw Coated to Prevent Seizing for Increased Accuracy
- Clamp Body Made of Mild Steel for Machinability
- Tighten with Hex Key or Hydraulic Pull Cylinders (Screw protrudes from bottom of base)

The WDS ID Xpansion™ clamp is the ideal way to hold parts on an inside diameter for multiple machining on a vertical machining centre or a horizontal machining centre. These machinable clamps are produced in 10 sizes and can hold internal diameters from 4.1mm to over 103mm. The clamps use a heat treated tapered screw for expansion.

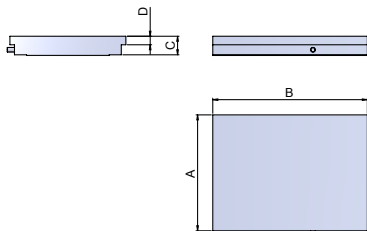
The larger diameter of the clamp is held to a close tolerance for precision locating in a machined pocket on work cubes and fixture plates.

The customer machines the mild steel clamp to match the bore of the part ensuring proper fit. Often times the clamps can be remachined for different size jobs. One of the benefits of these low profile clamps is holding many lathe parts, for secondary machining, on one compact set up. They are quickly tightened with a hex key, torque driver or can be mated to hydraulic pull cylinders for automation.

Machining and Installation

- Expand clamp approximately 0.1mm over relaxed diameter and machine to fit workpiece bore, either on lathe or mill.
- If machining the clamp on a lathe use the nut provided, on the back of the clamp, to tighten the tapered screw. This nut is used only to machine the clamp.
- Machine a pocket, in the fixture, for the close Tolerance "E" dimension and drill and tap mounting holes per "H" column. Drill and tap a hole from the "I" column in the centre of the pocket for the tapered screw.
- A recessed dowel pin may be installed into the flange for additional rigidity if required.

WDS No.	A	B	C	D	E-0.05	F	G†	H*	I	J	WDS Spare Screws (4pk)	Weight (kg)
590-38000	10.7	7.6	6.1	3.0	1	7.4	4.1	M2 on 13.7 BHC	M2	4.1	590-38001	0.01
590-38050	21.8	16.0	15.0	5.9	1	12.4	8.0	M3 on 20.95 BHC	M4	7.2	590-38002	0.05
590-38100	24.9	19.0	15.0	5.9	1	14.2	12.2	M3 on 23.1 BHC	M6	11.2	590-38010	0.06
590-38150	24.9	19.0	15.0	5.9	2	20.0	13.5	M3 on 29.0 BHC	M8	13.2	590-38020	0.11
590-38200	28.6	22.2	17.5	6.4	3	27.0	18.0	M4 on 39.4 BHC	M10	16.3	590-38032	0.2
590-38250	31.8	25.4	20.6	6.4	1	35.3	23.0	M4 on 45.5 BHC	M12	20.3	590-38042	0.32
590-38300	39.6	31.8	27.0	7.9	1	42.0	29.3	M5 on 55.9 BHC	M16	21.4	590-38052	0.59
590-38350	39.6	31.8	27.0	7.9	1	51.5	29.3	M5 on 63.9 BHC	M16	21.4	590-38052	0.8
590-38400	45.5	37.6	32.3	7.9	1	77.7	29.3	M6 on 92.6 BHC	M16	19.3	590-38072	1.97
590-38450	45.5	37.6	32.3	7.9	1	103.0	29.3	M6 on 118.06 BHC	M16	19.3	590-38072	3.5



Vice Pallet Mitee-Bite WDS 590

Reduce set up times and increase production on those small production jobs. The pallets can be reused for those repeat jobs.

- Now you can run those fixture jobs without removing your vises.
 - These Vice Pallets are designed to fit in all 150mm vises.
- The Blank Pallets are ideal for multiple small parts using the WDS Mitee-Bite Fixture Clamps or WDS Uniforce Clamps.
 - The T-Slot Pallets can be used with our T-Slot Clamps or the versatile 10mm Riser Kit (Part Number 590-51088) for non-dedicated applications.
- The Vice Pallets are qualified in 2 places so they can rest on parallels or on the top of the jaws.

How to use

The WDS Mitee-Bite Vice Pallet has a locating pin that makes contact with left side of the solid jaw for repeat location of pallet.

Simply slide pallet to the right of the vise and clamp in place. Pallets can be machined and tapped as required.

The T-Slot Pallets add versatility when using the riser kit to hold the parts.

Indicate the rail in the centre of the pallet and adjust the clamps along the t-slots for the specified work piece.
T-slot Vice Pallet (Part Number 590-24150 and Riser Kit (Part Number 590-51088) combined for clamping small quantity production jobs.

WDS No.	A	B	C	D	Description	T-Slot Size	T-Slot Spacing	Weight (kg)
590-24100	152	203	24.4	11.2	Individual Pallet	0	0	1.9
590-24120	152	254	24.4	11.2	Individual Pallet	0	0	2.4



WDS 590 Cam Screws Mitee-Bite

Hardened Steel

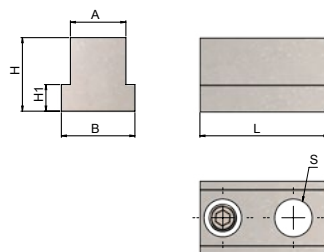
WDS No.	For	Pack Quantity	Thread	Weight (kg)
590-50363	590-50204	10	M4	0.04
590-50365	590-50206 / 590-50642 / 590-50644	10	M6	0.04
590-50366	590-50207	4	M8	0.04
590-50367	590-50208 / 590-50646	10	M8	0.04
590-50368	590-53140 / 590-53145 / 590-54110	4	M10	0.04
590-50369	590-51210 / 590-82584 / 590-50648	10	M10	0.04
590-50371	590-50212 / 590-50516/ 590-82588 / 590-50650 / 590-50652	8	M12	0.04
590-50372	590-54112	4	M12	0.04
590-50373	590-50216/ 590-82592 / 590-50654/ 590-50656	4	M14	0.04
590-50374	590-54116	4	M14	0.04



WDS 590 Machinable Screws Mitee-Bite

Steel

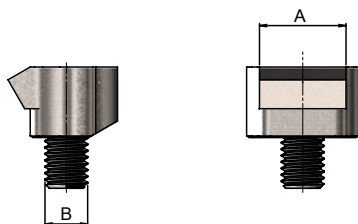
WDS No.	To Suit	Weight (kg)
590-50806	590-80050 / 590-80055 Clamp Assembly	0.01
590-50810	590-80075 / 590-80080 Clamp Assembly	0.01
590-50812	590-80150 / 590-80155 Clamp Assembly	0.01
590-50816	590-80200 / 590-80205 Clamp Assembly	0.01



WDS 590 T-Nuts with Set Screws Mitee-Bite

Steel

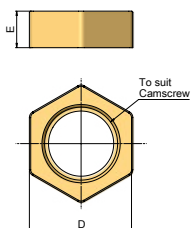
WDS No.	A	B	H	H1	L	S	Pack Quantity	To Suit Screw	T-Slot Size	Weight (kg)
590-50708	8	12.7	9.5	4.6	23.2	M6x1	2	590-50365	8 mm	0.05
590-50710	10	14.2	14.2	4.3	23.2	M6x1	2	590-50365	10 mm	0.08
590-50712	12	15.9	15.9	6.4	27.9	M8x1.25	2	590-50367	12 mm	0.1
590-50714	14	22.4	22.2	8.5	30.5	M10x1.5	2	590-50369	14 mm	0.13
590-50716	16	25.4	22.2	9.2	30.9	M12x1.75	2	590-50371	16 mm	0.15
590-50718	18	28.6	28.6	10.5	34.7	M12x1.75	2	590-50371	18 mm	0.18
590-50720	20	31.8	31.8	12.6	39.2	M16x2	2	590-50373	20 mm	0.2
590-50722	22	34.9	41.3	12.5	44.3	M16x2	2	590-50373	22 mm	0.23



Dyna-Force Mitee-Bite WDS 590

Stainless Steel

WDS No.	A	B	Description	To Suit	Weight (kg)
590-28480	13.5	M6	20mm Smooth Insert	590-28314	0.08
590-28482	13.5	M6	20mm Serrated Insert	590-28318	0.05
590-28484	15.0	M8	25mm Smooth Insert	590-28320	0.13
590-28486	15.0	M8	25mm Serrated Insert	590-28322	0.1
590-28488	20.0	M10	30mm Smooth Insert	590-28328	0.18
590-28490	20.0	M10	30mm Serrated Insert	590-28324	0.15



Hex Washers Mitee-Bite WDS 590

Brass / Stainless Steel

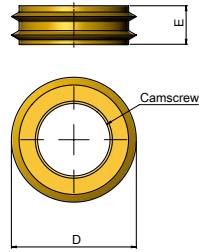
WDS No.	D	E	Pack Quantity	Screw Size	To Suit	Weight (kg)
590-10580	7.93	2.8	10	M4	590-50204	0.03
590-10582	15.86	4.75	10	M6	590-50642 / 590-50644 / 590-50206	0.03
590-10584	20.6	4.75	10	M8	590-50646 / 590-50208	0.03
590-10585	20.6	4.75	4	M8 - Stainless Steel	590-50207	0.03
590-10586	20.6	6.35	10	M10	590-50648 / 590-50210	0.03
590-10590	25.4	9.52	8	M12	590-50650 / 590-50652 / 590-50212	0.03
590-10592	30.13	12.7	4	M16	590-50654 / 590-50656 / 590-50216	0.03



Square Washers Mitee-Bite WDS 590

Hardened Steel

WDS No.	Screw Size	Weight (kg)
590-21006	10 MM	0.01
590-21026	16 MM	0.01
590-51016	12 MM	0.01



WDS 590 Knife Edge Washers Mitee-Bite

Hardened Steel

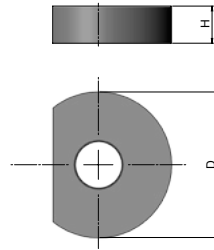
WDS No.	D	E	Pack Quantity	To Suit	Weight (kg)
590-12584	20.6	6.35	8	590-82584	0.01
590-12592	25.4	9.52	4	590-82592	0.01
590-52588	30.15	12.70	8	590-82588	0.01



WDS 590 Slot Washer Mitee-Bite

Steel

WDS No.	To Suit	To Suit Screw Size	Weight (kg)
590-20014	590-53150 / 590-23200	M12	0.01
590-20016	590-53170 / 590-23240	M16	0.01



WDS 590 Machinable Washers Mitee-Bite

Steel

WDS No.	D	H	Weight (kg)
590-10604	24.9	6.4	0.01
590-10606	31.2	8.9	0.01
590-10610	37.6	11.4	0.01
590-10612	43.9	14.0	0.01



Uniforce® Wedge - Slug Mitee-Bite WDS 590

Steel

WDS No.	Pack Quantity	To Suit	Weight (kg)
590-60305	6	590-80250	0.01
590-60307	6	590-80375	0.02
590-60310	8	590-80500	0.05
590-60320	6	590-80750	0.12
590-60330	4	590-81000	0.35
590-60340	2	590-81500	0.4
590-60350	2	590-82000	1



AL

Uniforce® Channel - Aluminium Mitee-Bite WDS 590

Aluminium

WDS No.	Pack Quantity	To Suit	Weight (kg)
590-60205	6	590-80250	0.01
590-60207	6	590-80375	0.01
590-60210	8	590-80500	0.03
590-60220	6	590-80750	0.06
590-60230	4	590-81000	0.06
590-60240	2	590-81500	0.2
590-60245	2	590-82000	0.5



AL

Machinable Uniforce Channel Mitee-Bite WDS 590

Aluminium

WDS No.	To Suit	Weight (kg)
590-60125	590-80075 / 590-80080 Clamp Assembly	0.05
590-60135	590-80100 / 590-80105 Clamp Assembly	0.08
590-60140	590-80050 / 590-80055 Clamp Assembly	0.03
590-60160	590-80150 / 590-80155 Clamp Assembly	0.1
590-60180	590-80200 / 590-80205 Clamp Assembly	0.13

AL



WDS 590 Machinable Uniforce Locking Plate Mitee-Bite

Aluminium

WDS No.	Model	To Suit	Weight (kg)
590-60143	500	590-80050 / 590-80055	0.01
590-60145	750	590-80075 / 590-80080	0.01
590-60155	1000	590-80100 / 590-80105	0.01
590-60165	1500	590-80150 / 590-80155	0.01
590-60185	2000	590-80200 / 590-80205	0.01





SET COLLARS & SHAFT COLLARS

P 847-851

Set collars or shaft collars as they are also known, allow the user to position tools and attachments to a shaft. Using an adjustable screw, the set collar can be tightened securely and released freely.



SHAFT COLLARS

Shaft collars with set screw are commonly used on machinery and transmission applications such as gear boxes and motors. The simple design allows the collar to be set in position using a set screw or grub screw. The screw can be adjusted using a screw driver tightening or loosening the grip to allow the collar to be moved up and down a shaft.

P 847-848



SEMI SPLIT SHAFT COLLARS

Semi split shaft collars work in a similar manor to the standard shaft collars with the added benefit of side clamping into position using a cap screw. Having a side clamping adjusting screw ensures no damage to the shaft and gives easy access to adjust the clamp up and down the shaft.

P 849



DOUBLE SPLIT SHAFT COLLARS

Double split shaft collars are great for rapid assembly and quick fitting applications

P 850

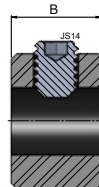
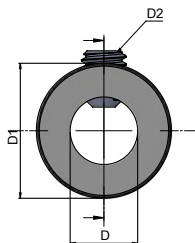


THREADED SHAFT COLLARS

Threaded shaft collars offer the benefits of a standard set collar with the added feature of a threaded centre to allow the user to adjust the collar to a locking position using a greater axial force than a standard collar.

P 851



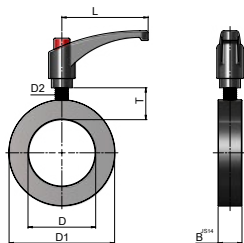


WDS 650/827 Set Shaft Collars

Steel, Chemical black finish

304 Stainless Steel

Steel	Stainless Steel	B	D	D1	D2	Weight (kg)
650-100	827-100	5	4	8	M2.5x3	0.01
650-101	827-101	6	5	10	M3x4	0.01
650-103	827-103	8	6	12	M4x5	0.01
650-104	827-104	8	7	12	M4x5	0.01
650-105	827-105	8	8	16	M4x6	0.01
650-106	827-106	10	9	18	M5x8	0.01
650-107	827-107	10	10	20	M5x8	0.02
650-108	827-108	10	11	20	M5x8	0.02
650-109	827-109	12	12	22	M6x8	0.03
650-110	827-110	12	14	25	M6x8	0.03
650-111	827-111	12	15	25	M6x8	0.03
650-113	827-113	12	16	28	M6x8	0.04
650-115	827-115	14	20	32	M6x8	0.05
650-117	827-117	14	22	36	M6x10	0.07
650-119	827-119	16	24	40	M8x10	0.04
650-121	827-121	16	25	40	M8x10	0.1
650-122	-	16	28	45	M8x12	0.12
650-123	827-123	16	30	45	M8x10	0.11
650-125	827-125	16	32	50	M8x12	0.15
650-127	827-127	16	35	56	M8x12	0.18
650-128	-	16	36	56	M8x12	0.16
650-129	827-129	16	38	56	M8x12	0.17
650-131	827-131	18	40	63	M10x16	0.26
650-133	827-133	18	45	70	M10x16	0.32
650-135	827-135	18	50	80	M10x16	0.43
650-137	-	18	55	80	M10x16	0.36
650-139	-	20	60	90	M10x16	0.55
650-141	-	20	65	100	M10x20	0.71
650-143	-	20	70	100	M10x20	0.61
650-145	-	22	75	110	M10x20	0.87



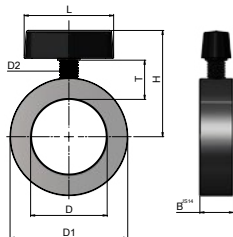
Quick Release Shaft Collar with Indexing Clamping Lever WDS 650/827

Collar - Steel, Chemical black finish/304 Stainless Steel

Handle - Plastic - PA6 with Brass Insert

Locking Screw - Stainless Steel (A2)

Steel	Stainless Steel	B	D	D1	D2	H	L	T	Weight (kg)
650-107A	827-107A	10	10	20	M5	45	45	7	0.03
650-108A	-	10	11	20	M5	46	45	7	0.03
650-109A	827-109A	12	12	22	M6	46	45	7	0.04
650-110A	-	12	14	25	M6	47	45	7	0.04
650-111A	827-111A	12	15	25	M6	48	45	7	0.05
650-113A	827-113A	12	16	28	M6	52	45	11	0.05
650-115A	827-115A	14	20	32	M6	54	45	11	0.07
650-117A	827-117A	14	22	36	M6	55	45	11	0.09
650-121A	827-121A	16	25	40	M8	60	45	14	0.11
650-122A	-	16	28	45	M8	61	45	14	0.13
650-123A	827-123A	16	30	45	M8	62	45	14	0.13
650-127A	827-127A	16	35	56	M8	78	45	18	0.22
650-131A	827-131A	18	40	63	M10	84	45	21	0.3
650-133A	-	18	45	70	M10	87	45	21	0.32
650-135A	827-135A	18	50	80	M10	92	65	24	0.47



Quick Release Shaft Collar with Clamping Wing Screw WDS 650/827

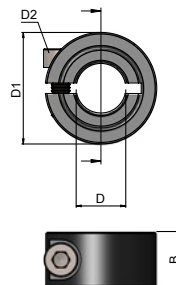
Collar - Steel, Chemical black finish/304 Stainless Steel

Handle - Plastic - PA6 with Brass Insert

Locking Screw - Stainless Steel (A2)

Steel	Stainless Steel	B	D	D1	D2	H	L	T	Weight (kg)
650-107B	827-107B	10	10	20	M5	31	32	10	0.03
650-108B	-	10	11	20	M5	31	32	10	0.02
650-109B	827-109B	12	12	22	M6	32	32	10	0.04
650-110B	-	12	14	25	M6	33	32	10	0.04
650-111B	827-111B	12	16	25	M6	33	32	10	0.04
650-113B	827-113B	12	16	28	M6	34	32	10	0.05
650-115B	827-115B	14	20	32	M6	36	32	10	0.07
650-117B	827-117B	14	22	36	M6	41	32	14	0.09
650-121B	827-121B	16	25	40	M8	43	48	15	0.12
650-122B	-	16	28	45	M8	45	48	15	0.13
650-123B	827-123B	16	30	45	M8	46	48	15	0.13
650-127B	827-127B	16	35	56	M8	48	48	15	0.21
650-131B	827-131B	18	40	63	M10	59	48	23	0.3
650-133B	-	18	45	70	M10	62	48	23	0.34
650-135B	827-135B	18	50	80	M10	67	48	26	0.47

304

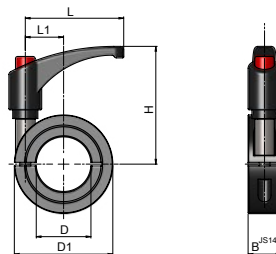


WDS 650/827 Split Shaft Collars

Steel, Chemical black finish
304 Stainless Steel

Steel	Stainless Steel	B (js14)	D (H8)	D1	D2	Weight (kg)
650-304	827-304	9	4	16	M3	0.01
650-305	827-305	9	5	16	M3	0.01
650-306	827-306	9	6	16	M3	0.01
650-308	827-308	9	8	18	M3	0.02
650-310	827-310	9	10	24	M3	0.03
650-312	827-312	11	12	28	M4	0.04
650-314	827-314	11	14	30	M4	0.07
650-315	827-315	13	15	34	M5	0.08
650-316	827-316	13	16	34	M5	0.07
650-318	827-318	13	18	36	M5	0.1
650-320	827-320	15	20	40	M5	0.11
650-322	827-322	15	22	42	M5	0.12
650-325	827-325	15	25	45	M5	0.13
650-328	-	15	28	48	M6	0.18
650-330	-	15	30	54	M6	0.19
650-332	-	15	32	54	M6	0.18
650-335	-	15	35	57	M6	0.19
650-340	-	15	40	60	M6	0.19
650-350	827-350	19	50	78	M6	0.42

304



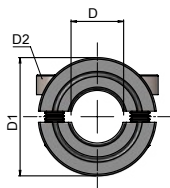
WDS 650/827 Quick Release Split Shaft Collar with Indexing Lever

Collar - Steel, Chemical black finish/304 Stainless Steel

Handle - Plastic - PA6 with Brass Insert

Locking Screw - Stainless Steel (A2)

Steel	Stainless Steel	B	D	D1	D2	H	L1	L2	Weight (kg)
650-310A	827-310A	9	10	24	M3	46	8.5	45	0.04
650-312A	827-312A	11	12	28	M4	48	10	45	0.06
650-315A	-	13	15	34	M5	51	12.25	45	0.1
650-316A	827-316A	13	16	34	M5	51	12.5	45	0.1
650-320A	827-320A	15	20	40	M5	53	15	45	0.14
650-322A	827-322A	15	22	42	M5	53	16	45	0.15
650-325A	827-325A	15	25	45	M5	54	17.5	45	0.16
650-330A	-	15	30	54	M6	58	21	45	0.23
650-335A	-	15	35	57	M6	59	23	45	0.24
650-340A	-	15	40	60	M6	60	25	45	0.24
650-350A	-	19	50	78	M6	76	32	65	0.48

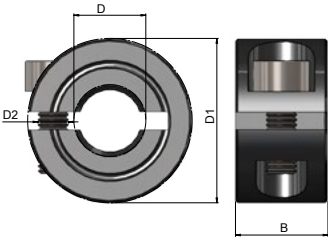


Double Split Shaft Collars **WDS 650**

Steel, Chemical black finish

304 Stainless Steel

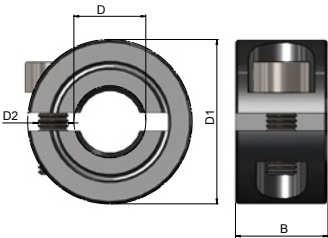
Steel	Stainless Steel	B (js14)	D (H8)	D1	D2	Weight (kg)
650-504	827-504	9	4	16	M3	0.01
650-505	827-505	9	5	16	M3	0.01
650-506	827-506	9	6	16	M3	0.01
650-508	827-508	9	8	18	M3	0.02
650-510	827-510	9	10	24	M3	0.03
650-512	827-512	11	12	28	M4	0.04
650-514	827-514	11	14	30	M4	0.07
650-515	827-515	13	15	34	M5	0.08
650-516	827-516	13	16	34	M5	0.07
650-518	827-518	13	18	36	M5	0.09
650-520	827-520	15	20	40	M5	0.11
650-522	827-522	15	22	42	M5	0.12
650-525	827-525	15	25	45	M5	0.13
650-528	-	15	28	48	M6	0.18
650-530	-	15	30	54	M6	0.19
650-532	-	15	32	54	M6	0.19
650-535	-	15	35	57	M6	0.19
650-540	-	15	40	60	M6	0.19
650-550	827-550	19	50	78	M6	0.42



WDS 650 Threaded Split Shaft Collars - Fine Pitch

Steel, Chemical black finish

WDS No.	B (js14)	D	D1	D2	Weight (kg)
650-308F	9	M8x1.00	18	M3 X 8	0.02
650-310F	9	M10x1.00	24	M3 X 8	0.03
650-312F	11	M12x1.50	28	M4 X 10	0.04
650-316F	13	M16x1.5	34	M5 X 12	0.07
650-320F	15	M20x1.5	40	M5 X 12	0.11



WDS 650 Threaded Split Shaft Collars - Coarse Pitch

Steel, Chemical black finish

WDS No.	B (js14)	D	D1	D2	Weight (kg)
650-306C	9	M6x1.0	16	M3 X 8	0.01
650-308C	9	M8x1.25	18	M3 X 8	0.02
650-310C	9	M10x1.5	24	M3 X 8	0.03
650-312C	11	M12x1.75	28	M4 X 10	0.04
650-316C	13	M16x2.0	34	M5 X 12	0.07
650-320C	15	M20x2.5	40	M5 X 12	0.11



HAND LEVERS

For the full range of Hand Levers please see pages 171-212



T NUTS AND T BOLTS

P 855-862

As well as the standard and extended metric and imperial sized T nut WDS also offers rhomboidal, blank and stainless steel T nuts.



T NUTS

T nuts are typically used on jig and fixture applications when using a fixture plate or machine tables with tee slots. The T nut simply slides into the T slot giving the user a threaded hole to attach clamps or support elements.

P 855



TEE BOLTS

T bolts are similar to T nuts in operation but offer a male threaded extrusion for attaching modular elements to a fixture or application.

P 856-858



T-NUT MITEE-BITE REPLACEMENT PARTS

Part of the Mitee-bite range these T nuts come complete with set screws

P 859



T SLOT COVERS

T slot covers are used to protect T slots from oil and dirt. The cover simply slides into the T slot covering the gap. Made from aluminium profile and can be simply cut to the required length.

P 860

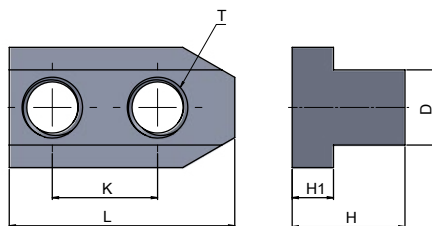


TENONS

The tenon range includes standard fixed slot tenons and low slot tenons. These can be used for locating fixtures and clamping elements on to machine tables.

P 861-862





WDS 10100 Chuck T Nuts

Steel BS. 970 Gr.817M40

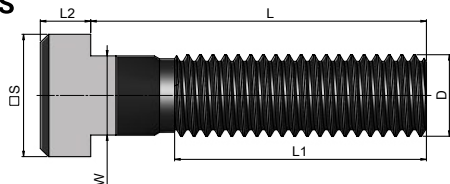
Chemical Black Finish

WDS No.	D	H	H1	K	L	T	Weight (kg)
10100-201	8	13.5	4.5	15	18	M6	0.28
10100-203	10	15	5.5	14	20	M8	0.04
10100-205	10	18	5.5	18	22	M8	0.05
10100-207	11	16.5	6.5	16	20	M8	0.05
10100-209	12	17	7	*	20	M8	0.04
10100-211	12	21	7	20	25	M10	0.08
10100-213	12	18.5	7.5	20	25	M10	0.07
10100-215	14	23	8	25	30	M12	0.12
10100-217	14	20.5	8.2	25	25	M12	0.11
10100-219	16	26.5	8.5	25	35	M12	0.16
10100-221	16	23	8	30	30	M12	0.16
10100-223	16	21.5	8.5	30	30	M12	0.15
10100-225	17	23	9	*	30	M12	0.09
10100-227	17	23	9	22	30	M12	0.14
10100-229	18	27.5	9.5	30	35	M14	0.21
10100-231	18	33	13.5	30	45	M14	0.27
10100-233	21	27	11	*	35	M16	0.16
10100-235	21	27	11	28	35	M16	0.25
10100-237	21	28	11.5	30	35	M16	0.27
10100-239	22	45.5	16.5	43	55	M20	0.58



T NUTS

For the full range of T Nuts please see pages **436-442**

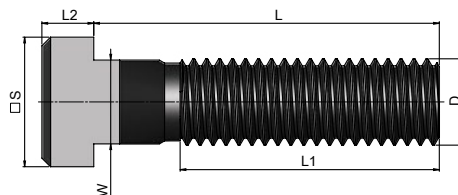
**WDS**

T Bolt - High Tensile Steel 12.9 WDS 410

Forged Steel - Tempered To strength class 12.9

Rolled threads, Chemical black finish

WDS No.	D	L	L1	L2	S	W	Weight (kg)
410-201	M10	40	30	6	15	9.7	0.04
410-202	M10	50	35	6	15	9.7	0.04
410-203	M10	80	50	6	15	9.7	0.06
410-204	M10	100	60	6	15	9.7	0.07
410-205	M12	50	35	7	18	11.7	0.07
410-206	M12	63	40	7	18	11.7	0.08
410-207	M12	80	55	7	18	11.7	0.09
410-208	M12	100	65	7	18	11.7	0.09
410-209	M12	125	75	7	18	11.7	0.12
410-210	M12	200	120	7	18	11.7	0.18
410-211	M12	50	35	8	22	13.7	0.08
410-212	M12	63	45	8	22	13.7	0.09
410-213	M12	80	55	8	22	13.7	0.11
410-214	M12	100	65	8	22	13.7	0.12
410-215	M12	125	75	8	22	13.7	0.14
410-216	M12	200	120	8	22	13.7	0.2
410-217	M16	63	45	9	25	15.7	0.15
410-218	M16	100	65	9	25	15.7	0.2
410-219	M16	160	100	9	25	15.7	0.28
410-220	M16	250	150	9	25	15.7	0.41
410-221	M16	63	45	10	28	17.7	0.18
410-222	M16	80	55	10	28	17.7	0.2
410-223	M16	100	65	10	28	17.7	0.23
410-224	M16	125	85	10	28	17.7	0.26
410-225	M16	160	100	10	28	17.7	0.31
410-226	M16	250	150	10	28	17.7	0.43
410-227	M20	80	55	12	32	19.7	0.3
410-228	M20	125	85	12	32	19.7	0.4
410-229	M20	200	125	12	32	19.7	0.56
410-230	M20	315	190	12	32	19.7	0.81
410-231	M20	80	55	14	35	21.7	0.36
410-232	M20	125	85	14	35	21.7	0.46
410-233	M20	200	125	14	35	21.7	0.55
410-234	M20	315	190	14	35	21.7	0.87
410-235	M24	100	70	16	40	23.7	0.58
410-236	M24	160	110	16	40	23.7	0.77
410-237	M24	250	150	16	40	23.7	1.05
410-238	M24	400	240	16	40	23.7	1.51
410-239	M24	100	70	18	44	27.7	0.7
410-240	M24	160	110	18	44	27.7	0.89
410-241	M24	250	150	18	44	27.7	1.17
410-242	M24	400	240	18	44	27.7	1.63



WDS 410 Medium Tensile T-Bolts

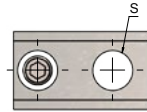
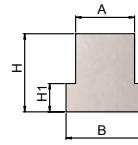
Forged Steel - Tempered, Up to M12 Class 10.9

M16 upwards Class 8.8, Chemical black finish

WDS No.	D	L	L1	L2	S	W	Class	Slot	Weight (kg)
410-0808032	M8	32	22	6	13	7.7	10.9	8	0.02
410-0808050	M8	50	35	6	13	7.7	10.9	8	0.02
410-0808080	M8	80	50	6	13	7.7	10.9	8	0.05
410-1010040	M10	40	30	6	15	9.7	10.9	10	0.03
410-1010063	M10	50	35	6	15	9.7	10.9	10	0.05
410-1010080	M10	80	50	6	15	9.7	10.9	10	0.06
410-1010100	M10	100	60	6	15	9.7	10.9	10	0.07
410-1212050	M12	50	35	7	18	11.7	10.9	12	0.06
410-1212063	M12	63	40	7	18	11.7	10.9	12	0.07
410-1212080	M12	80	55	7	18	11.7	10.9	12	0.08
410-1212100	M12	100	65	7	18	11.7	10.9	12	0.09
410-1212125	M12	125	75	7	18	11.7	10.9	12	0.12
410-1212200	M12	200	120	7	18	11.7	10.9	12	0.16
410-1214050	M12	50	35	8	22	13.7	10.9	14	0.08
410-1214063	M12	63	45	8	22	13.7	10.9	14	0.08
410-1214080	M12	80	55	8	22	13.7	10.9	14	0.1
410-1214100	M12	100	65	8	22	13.7	10.9	14	0.11
410-1214125	M12	125	75	8	22	13.7	10.9	14	0.12
410-1214160	M12	160	100	8	22	13.7	10.9	14	0.15
410-1214200	M12	200	120	8	22	13.7	10.9	14	0.18
410-1616080	M16	80	55	9	25	15.7	8.8	16	0.14
410-1616100	M16	100	65	9	25	15.7	8.8	16	0.19
410-1616125	M16	125	85	9	25	15.7	8.8	16	0.23
410-1616160	M16	160	100	9	25	15.7	8.8	16	0.27
410-1616200	M16	200	125	9	25	15.7	8.8	16	0.31
410-1616250	M16	250	150	9	25	15.7	8.8	16	0.4
410-1618063	M16	63	45	10	28	17.7	8.8	18	0.16
410-1618080	M16	80	55	10	28	17.7	8.8	18	0.19
410-1618100	M16	100	65	10	28	17.7	8.8	18	0.2
410-1618125	M16	125	85	10	28	17.7	8.8	18	0.25
410-1618160	M16	160	100	10	28	17.7	8.8	18	0.3
410-1618200	M16	200	125	10	28	17.7	8.8	18	0.33
410-1618250	M16	250	150	10	28	17.7	8.8	18	0.4
410-2020080	M20	80	55	12	32	19.7	8.8	20	0.29
410-2020100	M20	100	65	12	32	19.7	8.8	20	0.32
410-2020125	M20	125	85	12	32	19.7	8.8	20	0.38
410-2020160	M20	160	110	12	32	19.7	8.8	20	0.32
410-2020200	M20	200	125	12	32	19.7	8.8	20	0.52
410-2020250	M20	250	150	12	32	19.7	8.8	20	0.62
410-2020315	M20	315	190	12	32	19.7	8.8	20	0.8
410-2022080	M20	80	55	14	35	21.7	8.8	22	0.32
410-2022100	M20	100	65	14	35	21.7	8.8	22	0.37
410-2022125	M20	125	85	14	35	21.7	8.8	22	0.43
410-2022160	M20	160	110	14	35	21.7	8.8	22	0.5
410-2022200	M20	200	125	14	35	21.7	8.8	22	0.56
410-2022250	M20	250	150	14	35	21.7	8.8	22	0.68



WDS No.	D	L	L1	L2	S	W	Class	Slot	Weight (kg)
410-2022315	M20	315	190	14	35	21.7	8.8	22	0.85
410-2424100	M24	100	70	16	40	23.7	8.8	24	0.54
410-2424125	M24	125	85	16	40	23.7	8.8	24	0.59
410-2424160	M24	160	110	16	40	23.7	8.8	24	0.7
410-2424200	M24	200	125	16	40	23.7	8.8	24	0.81
410-2424250	M24	250	150	16	40	23.7	8.8	24	0.96
410-2424315	M24	315	190	16	40	23.7	8.8	24	1.16
410-2424400	M24	400	240	16	40	23.7	8.8	24	1.41
410-2428100	M24	100	70	18	44	27.7	8.8	28	0.61
410-2428125	M24	125	85	18	44	27.7	8.8	28	0.7
410-2428160	M24	160	110	18	44	27.7	8.8	28	0.8
410-2428200	M24	200	125	18	44	27.7	8.8	28	0.9
410-2428250	M24	250	150	18	44	27.7	8.8	28	1.07
410-2428315	M24	315	190	18	44	27.7	8.8	28	1.25
410-2428400	M24	400	240	18	44	27.7	8.8	28	1.5
410-3036125	M30	125	80	22	54	35.6	8.8	36	1.18
410-3036160	M30	160	110	22	54	35.6	8.8	36	1.33
410-3036200	M30	200	135	22	54	35.6	8.8	36	1.52
410-3036250	M30	250	150	22	54	35.6	8.8	36	1.76
410-3036315	M30	315	200	22	54	35.6	8.8	36	2.07



WDS 590 T-Nuts with Set Screws Mitee-Bite

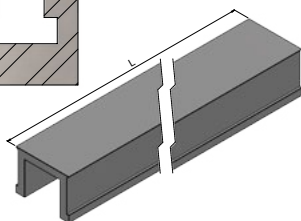
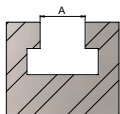
Steel

WDS No.	A	B	H	H1	L	S	Pack Quantity	To Suit Screw	T-Slot Size	Weight (kg)
590-50708	8	12.7	9.5	4.6	23.2	M6x1	2	590-50365	8 mm	0.05
590-50710	10	14.2	14.2	4.3	23.2	M6x1	2	590-50365	10 mm	0.08
590-50712	12	15.9	15.9	6.4	27.9	M8x1.25	2	590-50367	12 mm	0.1
590-50714	14	22.4	22.2	8.5	30.5	M10x1.5	2	590-50369	14 mm	0.13
590-50716	16	25.4	22.2	9.2	30.9	M12x1.75	2	590-50371	16 mm	0.15
590-50718	18	28.6	28.6	10.5	34.7	M12x1.75	2	590-50371	18 mm	0.18
590-50720	20	31.8	31.8	12.6	39.2	M16x2	2	590-50373	20 mm	0.2
590-50722	22	34.9	41.3	12.5	44.3	M16x2	2	590-50373	22 mm	0.23



MITEE-BITE WORK HOLDING

For the full range of Mitee-Bite please see pages **825-844**

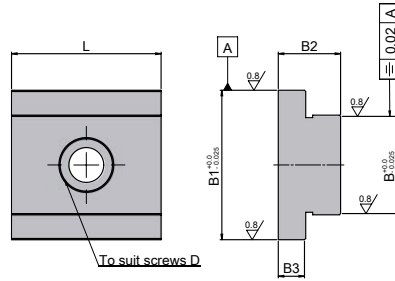


T-Slot Cover - Aluminium **WDS 353**

Profiled Aluminium
Easily sawn to length

WDS No.	A	L	Weight (kg)
353-201	12	1000	0.09
353-202	14	1000	0.1
353-203	16	1000	0.12
353-204	18	1000	0.14
353-205	20	1000	0.15
353-206	22	1000	0.17
353-207	28	1000	0.2
353-208	36	1000	0.22

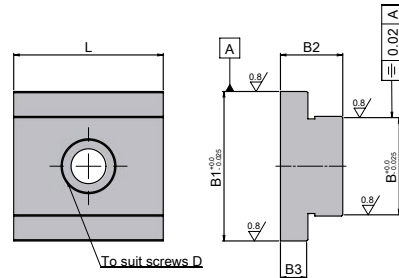
IN"



WDS 634 Tenon - Inch

Steel BS 970 Gr 070M20, Case Hardened and Ground

WDS No.	B	B1	B2	B3	D	L	Weight (kg)
634-01	1/2 inch	7/8 inch	12.5	5.5	1/4 inch	25	0.04
634-03	5/8 inch	7/8 inch	12.5	5.5	1/4 inch	25	0.04
634-04	11/16 inch	7/8 inch	12.5	5.5	1/4 inch	25	0.04
634-09	9/16 inch	1 inch	12.5	5.5	1/4 inch	25	0.04
634-10	5/8 inch	1 inch	12.5	5.5	1/4 inch	25	0.04
634-11	11/16 inch	1 inch	12.5	5.5	1/4 inch	25	0.05
634-12	3/4 inch	1 inch	12.5	5.5	1/4 inch	25	0.05
634-13	13/16 inch	1 inch	12.5	5.5	1/4 inch	25	0.05
634-14	7/8 inch	1 inch	12.5	5.5	1/4 inch	25	0.05
634-15	1 inch	1 inch	12.5	5.5	1/4 inch	25	0.06



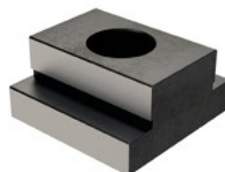
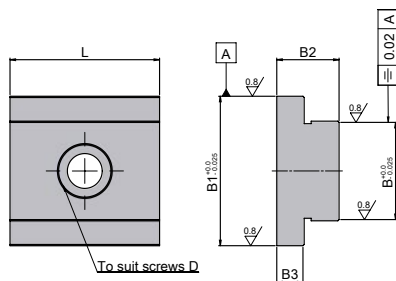
WDS 634 Short Tenon - Metric

Steel BS 970 Gr 070M20, Case Hardened and Ground

WDS No.	B	B1	B2	B3	D	L	Weight (kg)
634-201	12	25	12.5	5.5	M6	25	0.04
634-202	14	25	12.5	5.5	M6	25	0.05
634-203	16	25	12.5	5.5	M6	25	0.05
634-204	18	25	12.5	5.5	M6	25	0.05
634-205	22	25	12.5	5.5	M6	25	0.05
634-206	25	25	12.5	5.5	M6	25	0.06

WDS 634 Long Tenon - Metric

WDS No.	B	B1	B2	B3	D	L	Weight (kg)
634-231	12	30	12.5	5.5	M6	30	0.06
634-232	14	30	12.5	5.5	M6	30	0.06
634-233	16	30	12.5	5.5	M6	30	0.06
634-234	18	30	12.5	5.5	M6	30	0.07
634-235	20	30	12.5	5.5	M6	30	0.07
634-236	22	30	12.5	5.5	M6	30	0.08
634-237	24	30	12.5	5.5	M6	30	0.08
634-238	28	30	12.5	5.5	M6	30	0.08



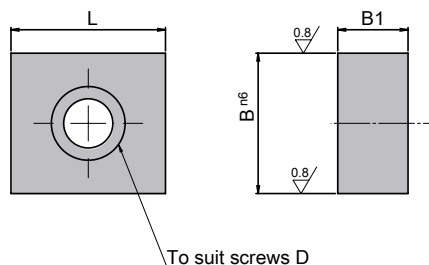
Tenon - Inch/Metric (25 x 25) WDS 634

Steel BS 970 Gr 070M20, Case Hardened and Ground

WDS No.	B	B1	B2	B3	D	L	Weight (kg)
634-212	9/16 inch	25	12.5	5.5	M6	25	0.04
634-213	5/8 inch	25	12.5	5.5	M6	25	0.05
634-214	11/16 inch	25	12.5	5.5	M6	25	0.05
634-216	13/16 inch	25	12.5	5.5	M6	25	0.05

Tenon - Inch/Metric WDS 634

WDS No.	B	B1	B2	B3	D	L	Weight (kg)
634-244	11/16 inch	30	12.5	5.5	M6	30	0.06
634-245	3/4 inch	30	12.5	5.5	M6	30	0.07
634-246	13/16 inch	30	12.5	5.5	M6	30	0.07
634-248	1 inch	30	12.5	5.5	M6	30	0.08



Low Slot Tenon WDS 634

Steel BS 970 Gr 070M20, Case Hardened and Ground

WDS No.	B	B1	D	L	Weight (kg)
634-510	10	8	M4	20	0.01
634-512	12	8	M5	20	0.01
634-514	14	10	M6	22	0.02
634-516	16	10	M6	22	0.02
634-518	18	10	M6	22	0.03
634-520	20	10	M6	22	0.03
634-522	22	12	M6	30	0.06
634-524	24	12	M6	30	0.06



TOGGLE CLAMPS & LATCHES

P 866-908

This selection of toggle clamps includes vertical toggle clamps, heavy duty toggle clamps & clamps with adjustable spindles. Other designs include: hook toggle clamps, horizontal toggle clamp, push-pull toggle clamps. Accessories include: pads / covers for toggle clamps, extension towers and spindles.



VERTICAL TOGGLE CLAMPS

Vertical toggle clamps are manual clamping devices with a toggle action that allow a workpiece to be securely fastened down. These types of clamp can be fastened to a fixture or work bench in a vertical position offering a quick action manual release. Designs include: fixed arm or adjustable arm in mild steel, zinc plated and stainless steel.

P 866-878



HORIZONTAL TOGGLE CLAMPS

Horizontal toggle clamps are manual toggle action clamping devices that allow a workpiece to be securely fastened down. These types of clamp can be fastened to a fixture or work bench in a horizontal position offering a quick action manual release. Designs include: fixed arm and adjustable arm in mild steel zinc plated and stainless steel.

P 879-885



LATCH TOGGLE CLAMPS

Toggle latch clamps or toggle hook latch clamps as they are also known, are available in both vertical and horizontal fastening positions

P 886-889



HOOK TOGGLE CLAMPS

Hook toggle clamps are a manual clamp that can be used in both vertical or horizontal applications.

Typically used for clamping enclosure units shut, these clamps are very versatile and can be used on almost any job where a manual clamp is required.

Using a “J” shaped hook, the clamp fastens securely to a catch plate.

Materials include: mild steel zinc plated and stainless steel.

P 890



PUSH/PULL TOGGLE CLAMPS

Push Pull Clamps are a very versatile alternative toggle clamp allowing the user to manually apply pressure to a horizontal or vertical workpiece and quickly release using a toggle pull action.

P 891-899

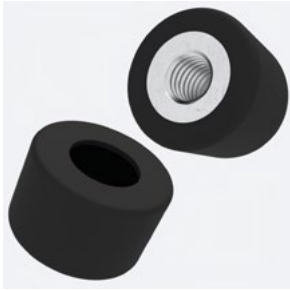




SPINDLES FOR TOGGLE CLAMPS

Spindles allow the user to adjust a toggle clamp's contact position with a workpiece. Options include a standard hex head fitting, swivel end Adjustable spindles and neoprene (rubber) capped adjustable spindles.

P 900-902



PADS & COVERS FOR TOGGLE CLAMPS

Pads and covers help protect a work piece when using a toggle clamp with a spindle helping to prevent any damage and marks.

P 903-904



RISER BRACKETS & EXTENSION TOWERS FOR TOGGLE CLAMPS

Used mainly on plate fitting toggle clamps, riser brackets allow the user to extend or adjust the height of a toggle clamp.

P 905



TOGGLE PRESSES

Toggle presses comprise of an iron frame with a toggle clamping body. Using the attached heavy duty push pull toggle clamp the user can easily apply a substantial manual force to a workpiece

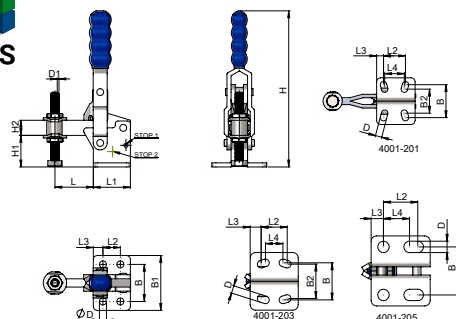
P 906



PLIER CLAMPS

Plier clamps are a hand operated squeeze action clamps. Ideal for the temporary securing of a workpiece, they allow the user to quickly release the clamp in one action.

P 907-908



Toggle Clamp - Vertical with Fixed Spindle **WDS 4001**

Zinc Plated Steel

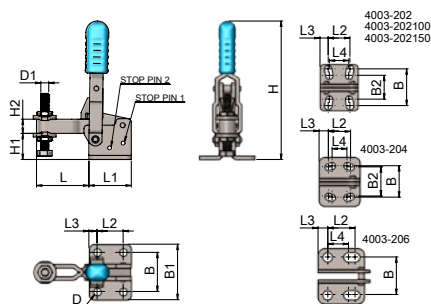
Flanged base, Fixed spindle position

P1= Arm Opens stop pin Position 1

P2= Arm opens stop pin Position 2

P3= Arm Opens Stop Pin Removed

WDS No.	B	B1	B2	D	D1	H	H1	H2	L	L1	L2	L3	L4	P1	P2	P3	Holding Capacity (kg)	Weight (kg)
4001-201	24	34	17.5	4.7	M5	108	22	11	31	28	17	6	14.3	-	90 °	185 °	100	0.11
4001-202	27	40	-	6	M6	130	21	12	26	26	13	6	-	90 °	160 °	160 °	150	0.17
4001-203	27	42	24	5.5	M6	138	31	13	39	35	20	8	12.5	-	90 °	175 °	200	0.22
4001-204	32	45	-	7.1	M8	173	32	17.5	45	35	19	8	-	90 °	120 °	160 °	250	0.38
4001-205	35	52	-	8.3	M8	180	39	20	67	43	26	9	18	-	110 °	160 °	300	0.48
4001-206	45	64	-	8.3	M10	210	47	19	74	50	32	8	-	90 °	120 °	160 °	350	0.8
4001-207	45	64	-	8.7	M12	225	48	22	72	51	33	10	-	90 °	120 °	160 °	450	1.3
4001-208	70	95	-	12.3	M16	315	78	32	110	76	52	13	-	90 °	120 °	160 °	550	2.4



Toggle Clamps - Vertical with Adjustable Spindle **WDS 4003**

Zinc Plated Steel

Flanged base, Adjustable spindle position

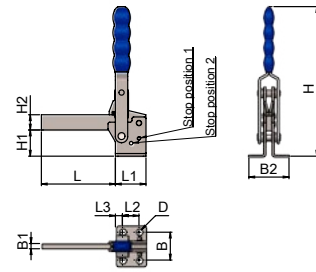
P1= Arm Opens stop pin Position 1

P2= Arm opens stop pin Position 2

P3= Arm Opens Stop Pin Removed

WDS No.	B	B1	B2	D	D1	H	H1	H2	L	L1	L2	L3	L4	P1	P2	P3	Holding Capacity (kg)	Weight (kg)
4003-201	24	34	-	4.4	M5	88	15	9	28	26	17	5	-	120 °	160 °	-	75	0.07
4003-202	24	34	17.5	4.7	M5	95	22	10	33	29	16	6	14.3	-	90 °	185 °	100	0.11
4003-202100	24	34	17.5	4.7	M5	95	22	10	108	28	16	6	14.3	-	90 °	185 °	100	0.13
4003-202150	24	34	175	4.7	M5	95	22	10	158	28	16	6	14.3	-	90 °	185 °	100	0.15
4003-203	27	41	-	5.5	M6	130	22	12	40	26	12.5	6	-	-	90 °	160 °	150	0.17
4003-204	27	42	25	5.5	M6	142	29	13	42	35	19	8	12.7	-	120 °	160 °	200	0.22
4003-205	32	45	-	7	M8	180	30	18	75	35	19	8	-	90 °	120 °	160 °	250	0.38
4003-206	35	53	-	8.1	M8	180	39	19	96	43	25	9	19	-	105 °	170 °	300	0.48
4003-207	45	65	-	8.4	M10	213	45	20	89	48	32	9	-	-	110 °	170 °	350	0.67
4003-208	45	65	-	8.7	M12	230	50	22	112	51	32	9.5	-	-	110 °	-	450	1.3
4003-209	66	91	-	12.3	M16	318	82	32	134	76	51	12.7	-	90 °	120 °	160 °	550	2.4

ZP



WDS 4005 Toggle Clamp - Vertical with Solid Arm

Zinc Plated Steel, Flanged base, Solid arm

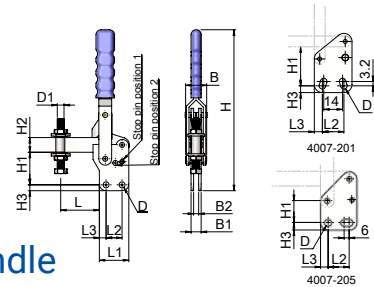
P1= Arm Opens stop pin Position 1

P2= Arm opens stop pin Position 2

P3= Arm Opens Stop Pin Removed

WDS No.	B	B1	B2	D	H	H1	H2	L	L1	L2	L3	P1	P2	P3	S	Holding Capacity (kg)	Weight (kg)
4005-201	32	6	46	7.1	175	30	18	85	35	19	8	90 °	120 °	160 °	M8	250	0.35
4005-202	45	8	63	8.3	215	43	20	90	50	32	9	90 °	120 °	160 °	M10	350	0.6
4005-203	45	10	64	8.7	225	48	22	127	53	32	9	90 °	120 °	160 °	M12	450	1.2
4005-204	70	10	95	12.3	308	82	32	159	76	51	12.7	90 °	120 °	160 °	M16	550	2.3

ZP



WDS 4007 Toggle Clamp - Vertical with Fixed Spindle

Zinc Plated Steel, Vertical base, Fixed spindle position

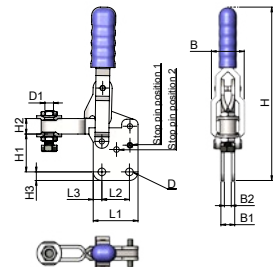
P1= Arm Opens stop pin Position 1

P2= Arm opens stop pin Position 2

P3= Arm Opens Stop Pin Removed

WDS No.	B	B1	B2	D	D1	H	H1	H2	H3	L	L1	L2	L3	P1	P2	P3	Holding Capacity (kg)	Weight (kg)
4007-201	19	5	-	4.8	M5	120	30	10	5	32	27	16	6	90 °	-	-	100	0.11
4007-204	28	12	6	7.1	M8	189	39	17	7	45	36	20	8	90 °	120 °	160 °	250	0.38
4007-205	26	12.6	6.3	8	M8	198	42	19	9	65	43	25	9	110 °	-	-	300	0.45

ZP



WDS 4009 Toggle Clamp - Vertical with Adjustable Spindle

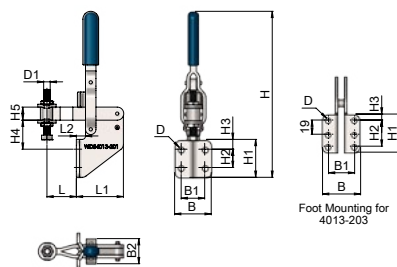
Zinc Plated Steel, Vertical base, Adjustable spindle position

P1= Arm Opens stop pin Position 1

P2= Arm opens stop pin Position 2

P3= Arm Opens Stop Pin Removed

WDS No.	B	B1	B2	D	D1	H	H1	H2	H3	L	L1	L2	L3	P1	P2	P3	Holding Capacity (kg)	Weight (kg)
4009-201	16	8	4	4.4	M5	100	22	9	5	30	26	16	5	-	120 °	160 °	75	0.07
4009-203	22	12	6	5.1	M6	135	28	11	5.4	38	25	12.7	7	90 °	120 °	160 °	150	0.17
4009-205	31	12	6	7.1	M8	188	40	17.5	7	74	35	19	8	90 °	120 °	160 °	250	0.38
4009-207	38	16	8	8.3	M10	232	54	20	10	102	48	32	8	90 °	120 °	160 °	350	0.66

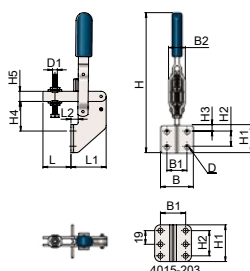


Toggle Clamp - Vertical with Fixed Spindle WDS 4013

Zinc Plated Steel, Vertical base, Adjustable spindle position

P1= Arm Opens

WDS No.	B	B1	B2	D	D1	H	H1	H2	H3	H4	H5	L	L1	L2	P1	Holding Capacity (kg)	Weight (kg)
4013-201	28	18	19	4.1	M5	130	29	14	7.5	21	10	36	22.5	7	90 °	100	0.13
4013-202	42	26	21	5.5	M6	175	35	19	8	37	12	45	28	10	90 °	200	0.26
4013-203	50	35	23	6.8	M8	210	50	35	8	39	19	55	60	7	90°	300	0.54

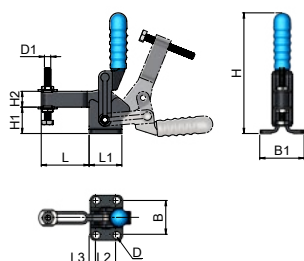


Toggle Clamp - Vertical with Adjustable Spindle WDS 4015

Zinc Plated Steel, Front base, Adjustable spindle position

P1= Arm Opens

WDS No.	B	B1	B2	D	D1	H	H1	H2	H3	H4	H5	L	L1	L2	P1	Holding Capacity (kg)	Weight (kg)
4015-201	28	17.5	19	4.5	M5	130	29	14	7.5	22.5	10	30	36	7	90 °	100	0.13
4015-201100	28	17.5	19	4.5	M5	130	29	14	7.5	22.5	10	95	36	7	90 °	100	0.16
4015-201150	28	17.5	19	4.5	M5	130	29	14	7.5	22.5	10	145	36	7	90 °	100	0.19
4015-202	42	26	21	5.5	M6	175	35	19	8	37	12	35	45	10	90 °	200	0.26
4015-203	50	35	26	6.8	M8	215	50	35	8	39	19	93	55	7	90 °	300	0.54

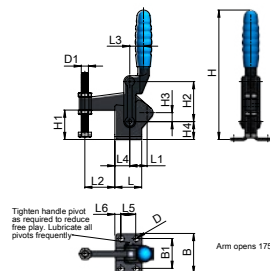


Toggle Clamp - Heavy Duty Vertical Clamp with Adjustable Spindle WDS 4016

Steel, Chemical black finish, Front base, Adjustable spindle position

P1= Arm Opens

WDS No.	B	B1	D	D1	H	H1	H2	L	L1	L2	L3	P1	Holding Capacity (kg)	Weight (kg)
4016-201	32	42	6.5	M6	119	25	15	45	31	19	6	112 °	300	0.3

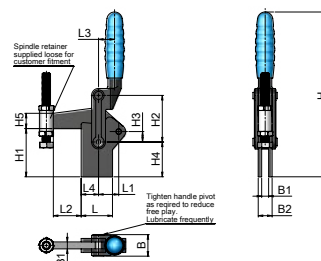


WDS 4017 Toggle Clamp - Heavy Duty Vertical with Fixed Spindle

Steel, Chemical black finish

Flanged base, Fixed spindle position

WDS No.	B	B1	D	D1	H	H1	H2	H3	H4	L	L1	L2	L3	L4	L5	L6	Holding Capacity (kg)	Weight (kg)
4017-201	67	50	8.3	M12	215	52	67	15	30	45	29	50	23	25	25	10	700	1.1
4017-202	88	60	8.3	M12	250	60	82	19	36	50	36	60	25	25	30	10	1200	1.8
4017-203	100	75	10.3	M16	295	75	105	23	46	63	44	75	35	40	40	12	2400	3.9

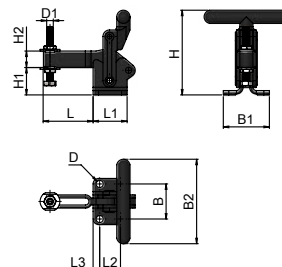


WDS 4019 Toggle Clamp - Heavy Duty with Solid Arm

Steel, Chemical black finish, Vertical base, Solid arm

P1 = Arm Opens

WDS No.	B	B1	B2	H	H1	H2	H3	H4	H5	L	L1	L2	L3	L4	P1	S	Holding Capacity (kg)	Weight (kg)
4019-201	40	10	20	235	70	67	15	50	22	45	29	40	23	25	175 °	M12	700	1.1
4019-202	48	12	24	280	86	82	19	63	25	50	36	50	25	25	175 °	M12	1200	1.8
4019-203	62	16	32	320	105	105	23	76	32	63	44	60	35	35	175 °	M12	2400	3.9

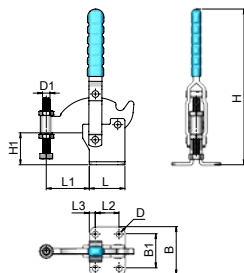


WDS 4020 Toggle Clamp - Heavy Duty Vertical Clamp with Adjustable Spindle

Steel, Chemical black finish, Flanged base, Adjustable spindle position

P1 = Arm Opens

WDS No.	B	B1	B2	D	D1	H	H1	H2	L	L1	L2	L3	P1	Holding Capacity (kg)	Weight (kg)
4020-201	32	42	77	6.5	M6	77	25	15	45	31	19	6	112 °	300	0.29

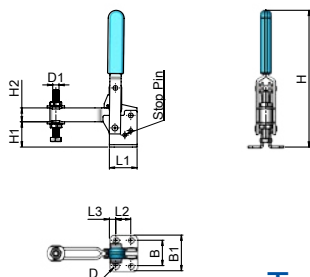


Toggle Clamp - Vertical Cam Clamp - Flanged Base WDS 4021

Zinc Plated Steel

P1= Arm Opens

WDS No.	B	B1	D	D1	H	H1	L	L1	L2	L3	P1	Holding Capacity (kg)	Total Cam Travel	Weight (kg)
4021-201	34	25	4.4	M5	98	12	25	22	16	4.5	90 °	75	2	0.11
4021-202	46	32	7.1	M8	170	30	35	32	19	8	90 °	250	2.4	0.54
4021-203	62	45	8.3	M10	210	43	47	58	32	8	90 °	350	2.8	1.25



304

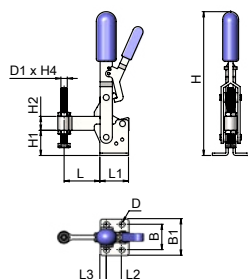
Toggle Clamp - Vertical Adjustable Spindle WDS 4070

Stainless Steel BS 304 S15, Flanged base, Adjustable spindle position

P1= Arm opens stop pin fitted

P2= Arm opens stop pin removed

WDS No.	B	B1	D	D1	H	H1	H2	L	L1	L2	L3	P1	P2	Holding Capacity (kg)	Weight (kg)
4070-201	24	34	4.4	M5	85	16	9	30	26	16	5	120 °	160 °	75	0.07
4070-203	27	38	6.1	M6	107	23	11	40	26	12.7	7	120 °	160 °	150	0.17
4070-205	32	45	7.1	M8	173	32	17.5	74	35	19	8	120 °	160 °	250	0.38



ZP

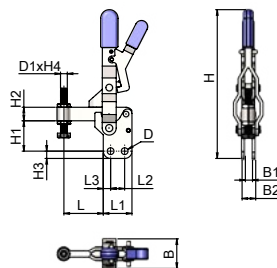
Locking Toggle Clamp - Vertical Fixed Spindle - Flanged Base WDS 4071

Zinc Plated Steel, Fixed spindle position

P1= Arm opens stop pin fitted

WDS No.	B	B1	D	D1	H	H1	H2	H4	L	L1	L2	L3	P1	Holding Capacity (kg)	Weight (kg)
4071-205	32	46	6.5	M8	181	31.7	17.5	60	45	36	19	8	125 °	245	0.38

ZP



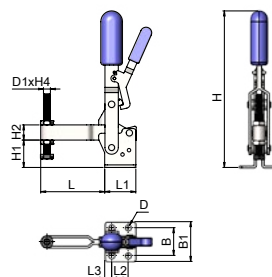
WDS 4072 Locking Toggle Clamp - Vertical Fixed Spindle - Vertical Base

Zinc Plated Steel, Fixed spindle position

P1 = Arm Opens

WDS No.	B	B1	B2	D	D1	H	H1	H2	H3	H4	L	L1	L2	L3	P1	Holding Capacity (kg)	Weight (kg)
4072-201	20	6	12	5.5	M6	132	29	12	6.5	40	35	25.5	12.5	6.5	100 °	113	0.2
4072-207	30	8	16	8.5	M10	231	54.2	20	9.9	80	68	48.3	32.2	8	108 °	350	0.69

ZP



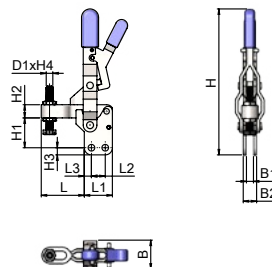
WDS 4073 Locking Toggle Clamp - Vertical Adjustable Spindle - Flanged Base

Zinc Plated Steel, Adjustable spindle position

P1 = Arm Opens

WDS No.	B	B1	D	D1	H	H1	H2	H4	L	L1	L2	L3	P1	Holding Capacity (kg)	Weight (kg)
4073-205	32	46	6.5	M8	181	31.7	17.5	60	74	36	19	8	125 °	245	0.38

ZP

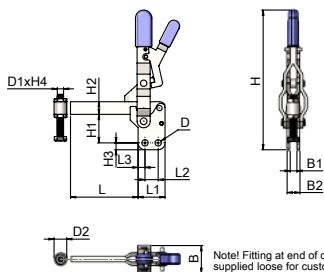


WDS 4074 Locking Toggle Clamp - Vertical Adjustable Spindle - Vertical Base

Zinc Plated Steel, Adjustable spindle position

P1 = Arm Opens

WDS No.	B	B1	B2	D	D1	H	H1	H2	H3	H4	L	L1	L2	L3	P1	Holding Capacity (kg)	Weight (kg)
4074-201	20	6	12	5.5	M6	132	27	12	6.5	40	39	25.5	12.5	6.5	100 °	113	0.2
4074-207	30	8	16	8.5	M10	231	54.2	20	9.9	80	107	48.3	32.2	8	108 °	350	0.69



Note! Fitting at end of clamp is supplied loose for customer to fit

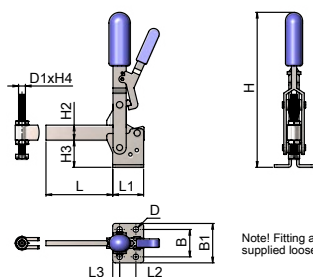


Locking Toggle Clamp - Vertical Solid Arm **WDS 4075**

Zinc Plated Steel, Solid arm

P1= Arm Opens

WDS No.	B	B1	B2	D	D1	D2	H	H1	H2	H3	H4	L	L1	L2	L3	P1	Holding Capacity (kg)	Weight (kg)
4075-201	20	6	12	5.5	M6	12	132	27	12	6.5	40	64	25.5	12.5	6.5	100 °	113	0.2
4075-207	30	8	16	8.5	M10	17	231	54.2	20	9.9	80	96	48.3	32.2	8	108 °	350	0.69



Note! Fitting at end of clamp is supplied loose for customer to fit

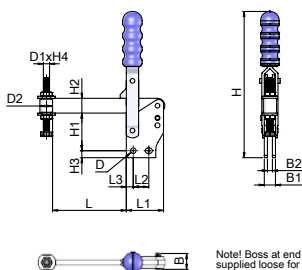


Locking Toggle Clamp - Vertical Solid Arm **WDS 4076**

Zinc Plated Steel, Solid arm

P1= Arm Opens

WDS No.	B	B1	D	D1	H	H1	H2	H4	L	L1	L2	L3	P1	Holding Capacity (kg)	Weight (kg)
4076-205	32	46	6.5	M8	181	31.7	17.5	60	78	36	19	8	125 °	245	0.38



Note! Boss at end of clamp is supplied loose for customer to fit



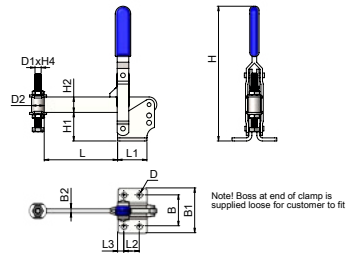
Toggle Clamp - Vertical Solid Arm **WDS 4077**

Zinc Plated Steel, Solid arm

P1= Arm Opens

WDS No.	B	B1	B2	D	D1	D2	H	H1	H2	H3	H4	L	L1	L2	L3	P1	Holding Capacity (kg)	Weight (kg)
4077-203	32	12	6	6.5	M8	17	185	48	20	9	80	95	38	20	9	100 °	250	0.5
4077-203150	32	12	6	6.5	M8	17	185	48	20	9	80	150	38	20	9	100 °	250	0.6

ZP

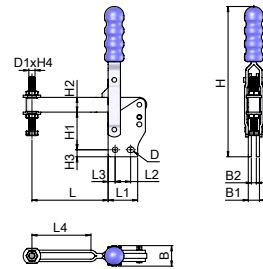


WDS 4078 Toggle Clamp - Vertical Solid Arm - Flanged Base

Zinc Plated Steel, Solid arm
L3= Arm Opens

WDS No.	B	B1	B2	D	D1	D2	H	H1	H2	H4	L	L1	L2	L3	Holding Capacity (kg)	Weight (kg)
4078-203	40	57	6	6.5	M8	17	167	38	20	80	95	38	20	100 °	250	0.5
4078-203150	40	57	6	6.5	M8	17	167	38	20	80	150	38	20	100 °	250	0.6

ZP

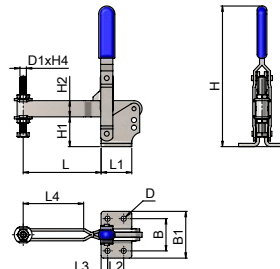


WDS 4079 Toggle Clamp - Vertical Adjustable Spindle - Straight Base

Zinc Plated Steel, Adjustable spindle position
P1= Arm Opens

WDS No.	B	B1	B2	D	D1	H	H1	H2	H3	H4	L	L1	L2	L3	L4	P1	Holding Capacity (kg)	Weight (kg)
4079-203	32	12	6	6.5	M8	185	48	20	9	70	97	38	20	9	74	100 °	250	0.5
4079-203125	32	12	6	6.5	M8	185	48	20	9	70	187	38	20	9	70	100 °	250	0.5
4079-203175	32	12	6	6.5	M8	185	48	20	9	70	237	38	20	9	70	100 °	250	0.6
4079-20375	32	12	6	6.5	M8	185	48	20	9	70	137	38	20	9	70	100 °	250	0.5

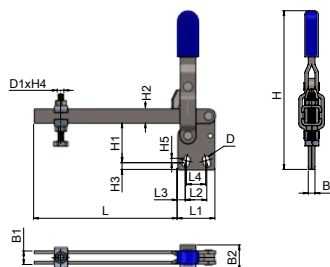
ZP



WDS 4080 Toggle Clamp - Vertical Adjustable Spindle

Zinc Plated Steel, Adjustable spindle position
P1= Arm Opens

WDS No.	B	B1	D	D1	H	H1	H2	H4	L	L1	L2	L3	L4	P1	Holding Capacity (kg)	Weight (kg)
4080-203	40	57	6.5	M8	167	38	20	70	97	38	20	9	74	100 °	250	0.5
4080-203125	40	57	6.5	M8	167	37	20	70	187	38	20	9	70	100 °	250	0.6
4080-203175	40	57	6.5	M8	167	37	20	70	237	38	20	9	70	100 °	250	0.6
4080-20375	40	57	6.5	M8	167	37	20	70	137	38	20	9	70	100 °	250	0.6

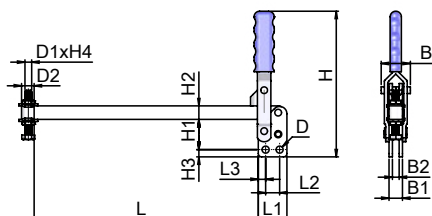


Toggle Clamp - Vertical with Adjustable Spindle WDS 4081

Zinc Plated Steel, Adjustable spindle position

P1 = Arm Opens

WDS No.	B	B1	B2	D	D1	H	H1	H2	H3	H4	H5	L	L1	L2	L3	L4	P1	Holding Capacity (kg)	Weight (kg)
4081-202100	5	10	22	4.8	M5	119	30.3	10.8	5	35	3.25	105	28	16	6	14.3	90 °	113	0.17
4081-202150	5	10	22	4.8	M5	119	30.3	10.8	5	35	3.25	150	28	16	6	14.3	90 °	113	0.18

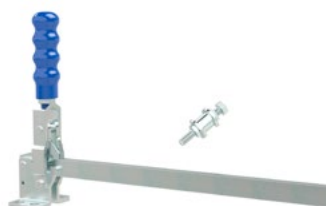
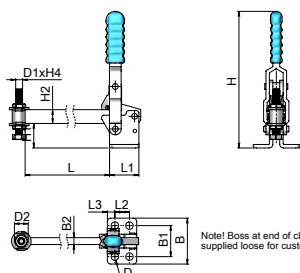


Toggle Clamp - Vertical with Extended Solid Arm WDS 4082

Zinc Plated Steel, Solid arm

P1 = Arm Opens

WDS No.	B	B1	B2	D	D1	D2	H	H1	H2	H3	H4	L	L1	L2	L3	P1	Holding Capacity (kg)	Weight (Kg)
4082-201200	22.2	12	6	6.5	M6	12	130	27	12	6.5	40	200	25.5	12.5	6.5	90 °	113	0.29



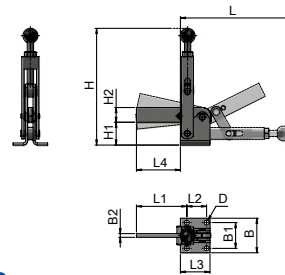
Toggle Clamp - Vertical with Extended Solid Arm WDS 4084

Zinc Plated Steel, Solid arm

P1 = Arm Opens

WDS No.	B	B1	B2	D	D1	D2	H	H1	H2	H4	L	L1	L2	L3	P1	Holding Capacity (kg)	Weight (Kg)
4084-201200	40	27	6	6.5	M6	12	118	21.3	12	40	200	25.5	12.5	6.5	90 °	113	0.29

ZP

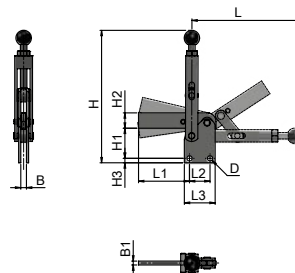


WDS 4151 High Speed Adjustable Toggle Clamp

Zinc Plated Steel, Adjustable spindle position

WDS No.	B	B1	B2	D	H	H1	H2	L	L1	L2	L3	L4	Holding Capacity (kg)	Weight (kg)
4151-101	44.5	33.3	4.8	6.5	153	29.4	19	145	65	25.4	38.1	56.7	175	0.34
4151-102	44.5	33.3	4.8	6.5	153	29.4	19	145	122	25.4	38.1	115.7	150	0.35
4151-301	57.2	34.9	4.8	7.0	185	26.6	25.4	176	65	50.8	70	55.6	233	0.56
4151-302	57.2	34.9	4.8	7.0	185	26.6	25.4	176	122	50.8	112.6	208	208	0.57

ZP

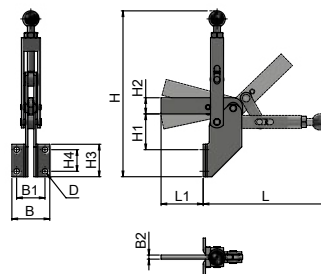


WDS 4152 High Speed Adjustable Toggle Clamp

Zinc Plated Steel, Adjustable spindle position

WDS No.	B	B1	D	H	H1	H2	H3	L	L1	L2	L3	Holding Capacity (kg)	Weight (kg)
4152-101	6.35	4.8	6.5	166.5	37.3	19	5.5	145	65	25.4	38.1	175	0.34
4152-102	6.35	4.8	6.5	166.5	37.3	19	5.5	145	122	25.4	38.1	150	0.35
4152-301	6.35	4.8	7.0	204	36.5	25.4	11.1	176	65	50.8	70	233	0.5
4152-302	6.35	4.8	7.0	204	36.5	25.4	11.1	176	122	50.8	70	208	0.5

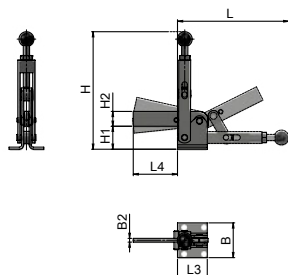
ZP



WDS 4153 High Speed Adjustable Toggle Clamp

Zinc Plated Steel, Adjustable spindle position

WDS No.	B	B1	B2	D	H	H1	H2	H3	H4	L	L1	Holding Capacity (kg)	Weight (kg)
4153-101	44.5	33.3	4.8	6.5	191	35.7	19	38.1	25.4	153	51.5	175	0.38
4153-102	44.5	33.3	4.8	6.5	191	35.7	19	38.1	25.4	153	108.5	150	0.39
4153-301	57.2	34.9	4.8	7.0	261.5	44.5	25.4	70	50.8	186	47.6	233	0.5
4153-302	57.2	34.9	4.8	7.0	261.5	44.5	25.4	70	50.8	186	104.6	208	0.5

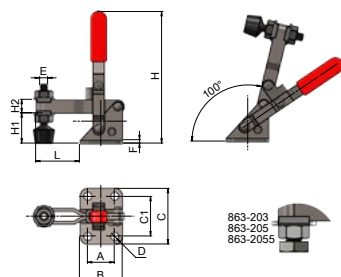


ZP

High Speed Adjustable Toggle Clamp - Heavy Duty WDS 4154

Zinc Plated Steel, Adjustable spindle position

WDS No.	B	B2	H	H1	H2	L	L3	L4	Holding Capacity (kg)	Weight (kg)
4154-101	76.2	9.5	279.5	49.2	31.7	266.7	63.5	101.6	450	1.82



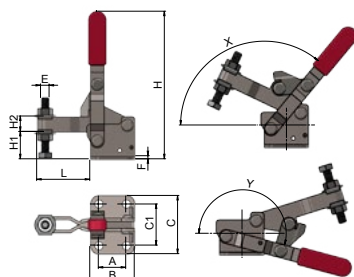
ZP

Vertical Toggle Clamp with Adjustable Spindle (100 degree) WDS 863

Body - Zinc Plated Steel to resist corrosion

Hand Grip - Oil resistant red vinyl

WDS No.	A	B	C	C1	D	E	F	H	H1	H2	L	Clamp Opens	Holding Capacity (kg)	Weight (kg)
863-201	15.9	25.4	33	23.5	4.4	M5	2	78	18	8	26	100 °	50	0.07
863-203	12.7	25.4	39.8	27/30	5.2	M6	3	100	22.5	9.8	33	100 °	170	0.16
863-205	19	35	46	31.8	7.2	M8	3	143	31.8	16	71	100 °	227	0.35
863-2055	19	35	46	31.8	7.2	M8	3	143	31.8	16	94	100 °	227	0.38
863-208	31.8	49.2	64	45.3	8.7	M10	3	204	43	19	93	105 °	340	0.66



ZP

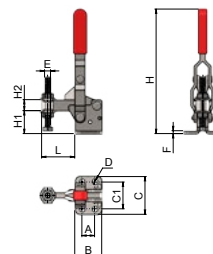
Toggle Clamps - Vertical Toggle Clamp Adjustable Spindle WDS 863

Body - Zinc Plated Steel to resist corrosion

Hand Grip - Oil resistant red vinyl

WDS No.	A	B	C	C1	D	E	F	H	H1	H2	L	Clamp Opens	Holding Capacity (kg)	Weight (kg)
863-202	16	26	34	24	4.4	M5	2	86.5	16	9	31	130 - 195 °	75	0.09
863-204	12.7	27	37.8	26.8	5.1	M6	3	123	23	11	43	95 - 185 °	150	0.19
863-206	19	35	47	32	7.1	M8	3	175	32	17.5	75	90 - 150 °	250	0.42

ZP



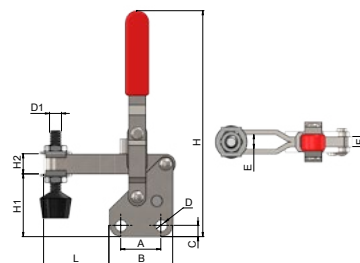
WDS 864 Toggle Clamp - Vertical with Fixed Spindle - Flanged Base

Body - Zinc Plated Steel to resist corrosion

Hand Grip - Oil resistant red vinyl

WDS No.	A	B	C	C1	D	E	F	H	H1	H2	L	Clamp Opens	Holding Capacity (kg)	Weight (kg)
864-203	12.7	25.4	39.7	27	5.1	M6	3	101	23	10	33	100°	90	0.16
864-204	12.7	27	37.8	26.8	5.1	M6	3	123	23	11	33	95 - 185 °	150	0.19
864-206	19	35	47	32	7.1	M8	3	175	32	17.5	53	90 - 150 °	250	0.39

ZP



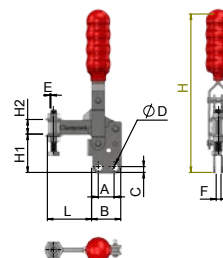
WDS 865 Toggle Clamp - Vertical with Adjustable Spindle - Straight Base

Body - Zinc Plated Steel to resist corrosion

Hand Grip - Oil resistant red vinyl

WDS No.	A	B	C	D	E	F	H	H1	H2	L	Clamp Opens	Holding Capacity (kg)	Weight (kg)
865-201	16	25.4	4.8	4.4	5	4	90	30	8	26	100 °	50	0.07
865-202	16	26	5	4.4	5.5	4	98	28	9	31	130 - 195 °	75	0.09
865-204	12.7	27	5.4	5.1	6.2	5.8	135	33.4	11	43	95 - 185 °	150	0.19
865-206	19	35	7	7.1	8.9	6	190	46	17.5	75	90 - 150 °	250	0.40

ZP

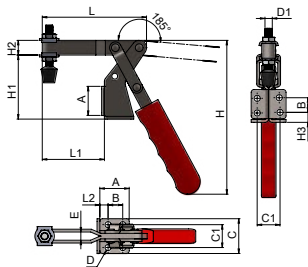


WDS 866 Toggle Clamp - Vertical with Fixed Spindle - Straight Base

Body - Zinc Plated Steel to resist corrosion

Hand Grip - Oil resistant red vinyl

WDS No.	A	B	C	D	E	F	H	H1	H2	L	Clamp Opens	Holding Capacity (kg)	Weight (kg)
866-204	12.7	27	5.4	5.1	M6	5.8	135	33.4	11	33	95 - 185 °	150	0.19
866-206	19	35	7	7.1	M8	6	190	46	17.5	53	90 - 150 °	250	0.39



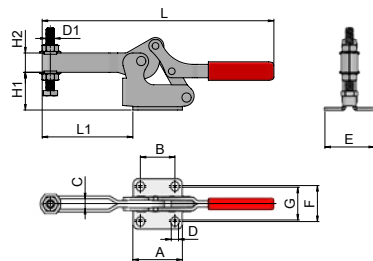
Reverse Handle Vertical Toggle Clamp with Adjustable Spindle **WDS 884**

Body - Zinc Plated Steel to resist corrosion

Hand Grip - Oil resistant red vinyl

WDS No.	A	B	C	C1	D	D1	E	H	H1	H2	H3	L	L1	L2	Clamp Opens	Holding Capacity (kg)	Weight (kg)
884-205	32	16	38	25	6.7	M8	9	168	70	16	10.9	113	67	9	185°	100	0.44

ZP



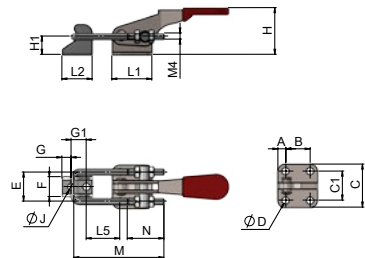
WDS 867 Toggle Clamp - Horizontal Toggle with Adjustable Spindle - Flanged Base

Body - Zinc Plated Steel to resist corrosion

Hand Grip - Oil resistant red vinyl

WDS No.	A	B	C	D	D1	E	F	G	H1	H2	L	L1	Clamp Opens	Holding Capacity (kg)	Weight (kg)
867-201	25	13.2	5.8	5.2	M5x30	27	16.8	-	19	9.5	109	37	94 °	75	0.09
867-202	38	26	6.2	5.5	M6x40	40	28	22	25	14	171	61	94 °	150	0.22
867-203	42	26	9	6.6	M8x50	47	31	26	34	17.5	219	79	94 °	250	0.42
867-204	59	41.2	11.4	8.7	M10x75	59	42.9	39	45	23	274	108	94 °	350	0.86
867-205	66	41.2	13.2	8.7	M12x100	66	41.3	-	59	26	303	128	94 °	450	1.42

ZP



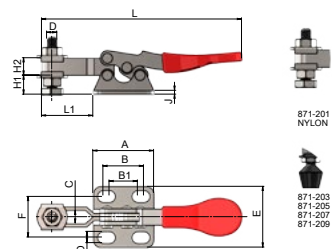
WDS 869 Lightweight Horizontal Hook Toggle Clamp - Flanged Base

Body - Zinc Plated Steel to resist corrosion

Hand Grip - Oil resistant red vinyl

WDS No.	A	B	C	C1	D	E	F	G	G1	H	H1	J	L	L1	L2	M	N	Holding Capacity (kg)	Weight (kg)
869-202	5.2	15.9	28	19	4.4	19	20	5	10	30	12	4.4	124	26.2	20	55	24	163	0.06

ZP

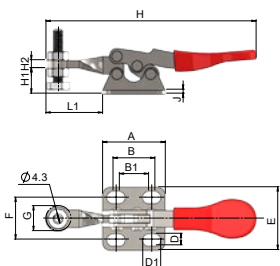
871-201
NYLON871-203
871-205
871-207
871-209

WDS 871 Horizontal Toggle Clamp with Adjustable Stop - Flanged Base

Body - Zinc Plated Steel to resist corrosion

Hand Grip - Oil resistant red vinyl

WDS No.	A	B	B1	C	D	D1	E	F	H1	H2	J	L	L1	Clamp Opens	Holding Capacity (kg)	Weight (kg)
871-201	23.8	15.9	11.1	5	4.4	M4 X 20	23.8	15.9	6.8	7.5	1.5	78	20.1	90 °	27	0.03
871-203	39.7	27		6.4	5.2	M6 X 44	34.9	22.2	12.7	25.4	2	137	57.4	80 °	68	0.14
871-205	37	27	25.4	7.4	5.2	M6 X 44	36	22	12.7	25.4	2	142	56.2	85 °	90	0.13
871-207	38	25.4	20.8	8.7	6.7	M8 X 63	35	22.2	12.7	34.9	3	175	71	90 °	227	0.14
871-209	57	41.3		11	8.2	M10X63	56	40	19	44.5	4	293	106	85 °	340	0.66

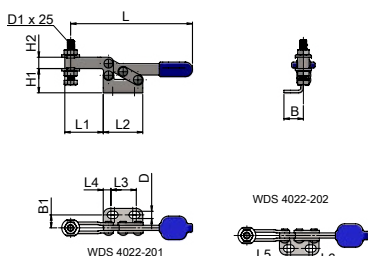


Horizontal Toggle Clamp with Fixed Nylon Spindle - Flanged Base WDS 874

Body - Zinc Plated Steel to resist corrosion, Spindle - Nylon

P1 = Arm Opens

WDS No.	A	B	B1	D	D1	E	F	G	H	H1	H2	J	L1	P1	Holding Capacity (kg)	Weight (kg)
874-201	23.8	15.9	11.1	4.4	6.8	23.8	15.9	9.5	80	10	3	1.5	23	90 °	27	0.03

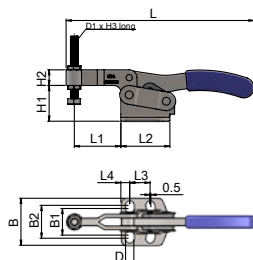


Toggle Clamps - Horizontal with Adjustable Spindle WDS 4022

Zinc Plated Steel, Flanged base, Adjustable spindle position

P1 = Arm Opens

WDS No.	B	B1	D	D1	H1	H2	L	L1	L2	L3	L4	L5	L6	P1	Holding Capacity (kg)	Weight (kg)
4022-201	12	8	4.5	M4	15	7	75	24	24	15.7	4.2	2.2	2.2	85 °	50	0.03
4022-202	12	8	4.5	M4	15	7	75	24	24	15.7	4.2	2.2	2.2	85 °	50	0.03



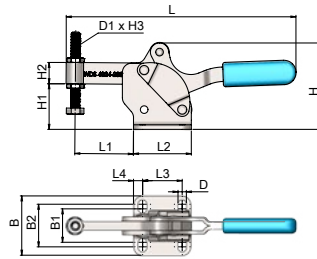
Toggle Clamp - Horizontal with Fixed Spindle WDS 4024

Zinc Plated Steel, Flanged base, Fixed spindle position

P1 = Arm Opens

WDS No.	B	B1	B2	D	D1	H1	H2	H3	L	L1	L2	L3	L4	P1	Holding Capacity (kg)	Weight (kg)
4024-202	30	16	21	5.2	M5	20	10	40	120	30	34	13	5.6	90 °	75	0.12

ZP

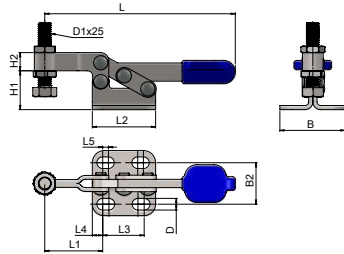


WDS 4024 Toggle Clamp - Horizontal Clamp with Fixed Spindle

Zinc Plated Steel, Flanged base, Fixed spindle position
P1 = Arm Opens

WDS No.	B	B1	B2	D	D1	H	H1	H2	H3	L	L1	L2	L3	L4	P1	Holding Capacity (kg)	Weight (kg)
4024-203	39	23	27	5.5	M6	56	26	14	50	153	38	38	26	6	90 °	150	0.2

ZP

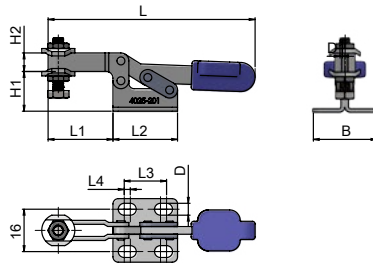


WDS 4024 Toggle Clamp - Horizontal Clamp with Fixed Spindle Thumb Operated

Zinc Plated Steel, Flanged base, Fixed spindle position
P1 = Arm Opens

WDS No.	B	B2	D	D1	H1	H2	L	L1	L2	L3	L4	L5	P1	Holding Capacity (kg)	Weight (kg)
4024-201	24	16	4.5	M5	11	7	70	21	24	16	4	2.4	90 °	50	0.03

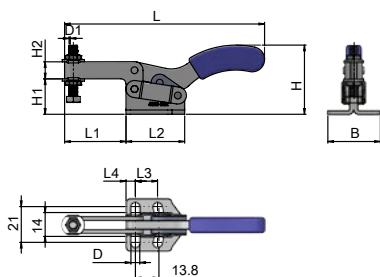
ZP



WDS 4025 Toggle Clamp - Horizontal with Adjustable Spindle and Thumb Handle

Zinc Plated Steel, Flanged base, Adjustable spindle position
P1 = Arm Opens

WDS No.	B	B1	D	D1	H	H1	H2	L	L1	L2	L3	L4	P1	Holding Capacity (kg)	Weight (Kg)
4025-201	24	16	4.1	M4	22	15	7	75	24	25	16	4	86 °	50	0.03



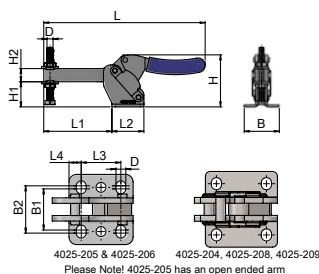
ZP

Toggle Clamp - Horizontal Clamp with Adjustable Spindle WDS 4025

Zinc Plated Steel, Flanged base, Adjustable spindle position

P1 = Arm Opens

WDS No.	B	B1	B2	D	D1	H	H1	H2	L	L1	L2	L3	L4	P1	Holding Capacity (kg)	Weight (Kg)
4025-202	30	21	17	5.2	M5	40	20	10	110	36	34	13	5.5	90 °	75	0.06



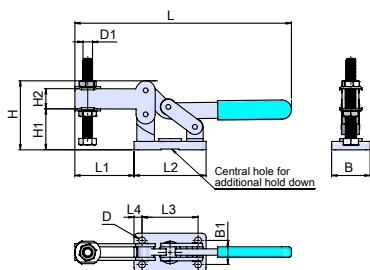
ZP

Toggle Clamps - Horizontal Clamp with Adjustable Spindle WDS 4025

Zinc Plated Steel, Flanged base, Adjustable spindle position

P1 = Arm Opens

WDS No.	B	B1	B2	D	D1	H	H1	H2	L	L1	L2	L3	L4	P1	Holding Capacity (kg)	Weight (kg)
4025-204	38	22	28	5.5	M6	56	28	14	167	72	38	26	6	90 °	150	0.26
4025-205	38	25	-	7	M6	41	27	13	140	45	40	26	7	90 °	200	0.17
4025-206	47	28	32.5	6.5	M8	70	32	17	211	90	42	26	8	90 °	250	0.4
4025-208	62	40	43	8.6	M10	92	45	20	255	105	59	41	9	90 °	350	0.9
4025-209	68	40	43	8.6	M12	110	57	25	305	130	63	41.3	12.7	90 °	450	1.5



ZP

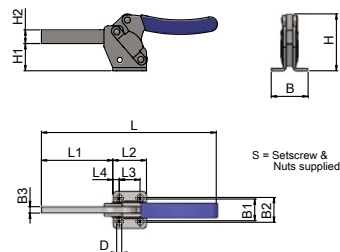
Toggle Clamps - Horizontal with Cast Iron Base and Adjustable Spindle WDS 4025

Zinc Plated Steel, Cast Iron Base, Adjustable spindle position

P1 = Arm Opens

WDS No.	B	B1	D	D1	H	H1	H2	L	L1	L2	L3	L4	P1	Holding Capacity (kg)	Weight (kg)
4025-210	48	30	8.4	M12	84	52	25	270	78	90	70	10	90 °	700	1.15

ZP



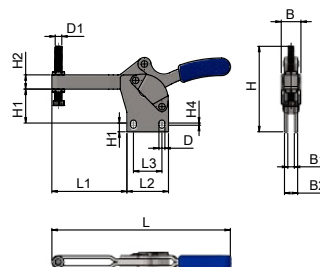
WDS 4026 Toggle Clamp - Horizontal Clamp with Solid Arm

Zinc Plated Steel, Flanged base, Solid arm

P1 = Arm Opens

WDS No.	B	B1	B2	B3	D	H	H1	H2	L	L1	L2	L3	L4	S	P1	Holding Capacity (kg)	Weight (kg)
4026-201	46	27	31	8	6.3	71	34	17	218	89	42	26	8	M8x70	95 °	250	0.5
4026-202	62	40	43	10	8.7	105	45	20	255	110	59	41.2	9	M10x80	90 °	350	0.9

ZP



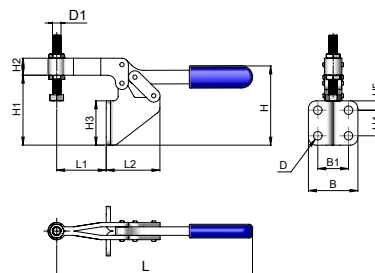
WDS 4027 Toggle Clamp - Horizontal Clamp with Adjustable Spindle

Zinc Plated Steel, Vertical base, Adjustable spindle position

P1 = Arm Opens

WDS No.	B	B1	B2	D	D1	H	H1	H2	H3	H4	L	L1	L2	L3	P1	Holding Capacity (kg)	Weight (kg)
4027-203	19	6	12	5.5	M6	68	40	13	9	2	185	70	39	26	90 °	150	0.09
4027-204	25	8	15.2	6.5	M8	79	48	17	11	2	219	90	42	26	90 °	250	0.38
4027-206	27	10	20	8.5	M10	108	63	20	9	0	245	108	59	41	90 °	350	0.9

ZP

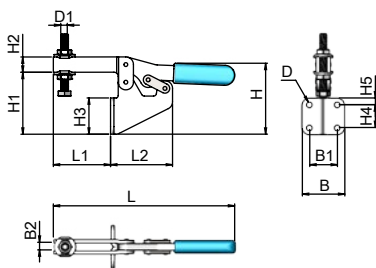


WDS 4029 Toggle Clamp - Horizontal with Fixed Spindle

Zinc Plated Steel, Front base, Fixed spindle position

P1 = Arm Opens

WDS No.	B	B1	D	D1	H	H1	H2	H3	H4	H5	L	L1	L2	P1	Holding Capacity (kg)	Weight (kg)
4029-201	30	20	5	M5	51	41	10	25	15	5.5	120	29	31	95 °	250	0.09

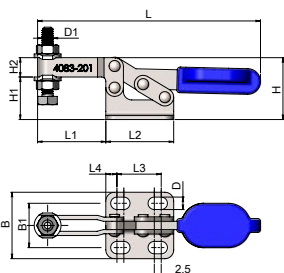


Toggle Clamp - Horizontal with Adjustable Spindle **WDS 4031**

Body - Zinc Plated Steel to resist corrosion

P1 = Arm Opens

WDS No.	B	B1	B2	D	D1	H	H1	H2	H3	H4	H5	L	L1	L2	P1	Holding Capacity (kg)	Weight (kg)
4031-201	30	20	5	5	M5	51	41	10	25	15	5.5	120	29	31	90 °	100	0.09
4031-202	39	26	6	5	M6	54	49	13	31.5	21	5	140	38	46	90 °	200	0.17
4031-203	44.5	29	8	6	M8	75	65	16	38	24	7	195	60	64	90 °	300	0.34



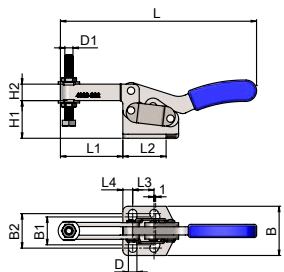
304

Toggle Clamp - Horizontal Thumb Handle with Adjustable Spindle **WDS 4083**

Stainless Steel BS 304 S15, Flanged base, Adjustable spindle position

P1 = Arm Opens

WDS No.	B	B1	D	D1	H	H1	H2	L	L1	L2	L3	L4	P1	Holding Capacity (kg)	Weight (kg)
4083-201	24	16	4.5	M4	22	15	7	75	24	25	16	4	85 °	50	0.03



304

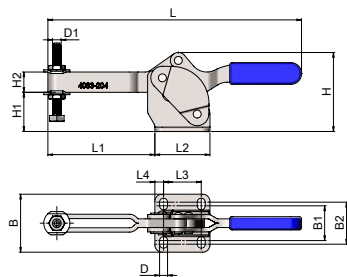
Toggle Clamp - Open Ended Horizontal Clamp with Adjustable Spindle **WDS 4083**

Stainless Steel BS 304 S15, Flanged base, Adjustable spindle position

P1 = Arm Opens

WDS No.	B	B1	B2	D	D1	H	H1	H2	L	L1	L2	L3	L4	P1	Holding Capacity (kg)	Weight (kg)
4083-202	30	17	21	5.2	M5	30	23	10	120	37	27	13	6	90 °	75	0.06

304

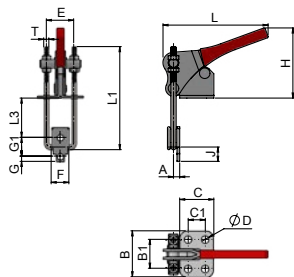


WDS

WDS 4083 Stainless Steel Toggle Clamp - Horizontal Clamp with Adjustable Spindle

Stainless Steel BS 304 S15, Flanged base, Adjustable spindle position
P1 = Arm Opens

WDS No.	B	B1	B2	D	D1	H	H1	H2	L	L1	L2	L3	L4	P1	Holding Capacity (kg)	Weight (kg)
4083-204	40	24	29	5.5	M6	56	27	14	173	72	38	26	6	90 °	150	0.2

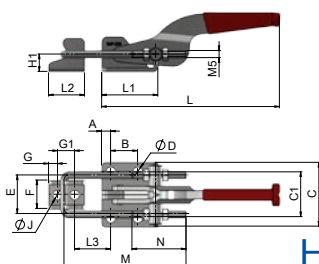


Vertical Toggle Latch - Flanged Base WDS 868

Body - Zinc Plated Steel to resist corrosion

Hand Grip - Oil resistant red vinyl

WDS No.	A	B	B1	C	C1	D	E	F	G	G1	H	J	L	L1	L2	T	Holding Capacity (kg)	Weight (kg)
868-201	4.7	35	22	26	13	5.3	20.8	10.5	4	14.3	53.6	10.9	79	78.5	26.5	M4	225	0.1
868-205	12.7	53	36.5	47.6	32	8.6	44.5	30	9	27	89	18	130	50	60	M8	900	663

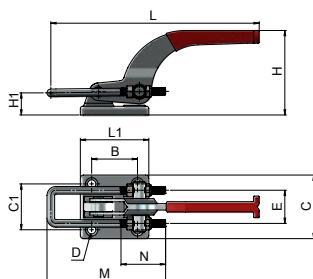


Horizontal Latch Clamp - Flanged Base WDS 869

Body - Zinc Plated Steel to resist corrosion

Hand Grip - Oil resistant red vinyl

WDS No.	A	B	C	C1	D	E	F	G	G1	H	H1	J	L	L1	L2	M	N	Holding Capacity (kg)	Weight (kg)
869-203	6.4	19	44.4	31.5	6.7	27.2	20	6.8	12	41.3	12.2	6.3	124	39.7	25.4	87	38	318	0.21



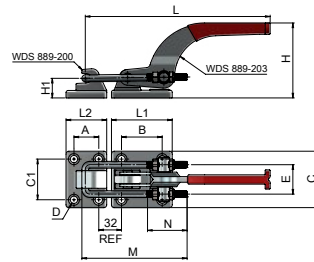
Latch Clamp - Medium Duty WDS 889

Handle and Latch - Zinc Plated Steel

Base - Forged Alloy, Zinc Plated

WDS No.	A	B	C	C1	D	E	H	H1	L	L1	L2	M	N	P	Weight (kg)
889-203	34.9	57.2	79.4	57.2	10.3	41.4	105	27.6	260	85.5	57.2	148	56	1800	1.32

ZP

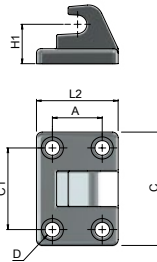


WDS 889 Latch Clamp and Hook Plate Set - Medium Duty - Flanged Base

Handle and Latch - Zinc Plated Steel
Base, Hook and Handle - Forged Alloy, Zinc plated

WDS No.	A	B	C	C1	D	E	H	H1	L	L1	L2	M	N	P	Weight (kg)
889-213	34.9	57.2	79.4	57.2	10.3	41.4	105	27.6	260	85.5	57.2	148	56	1800	1.8

ZP

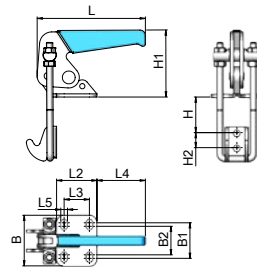


WDS 889 Latch Clamp Hook - Medium Duty

Base - Forged Alloy, Zinc Plated

WDS No.	A	C	C1	D	H1	L2	P	Weight (kg)
889-200	34.9	79.4	57.2	10.3	27.6	57.2	1800	0.49

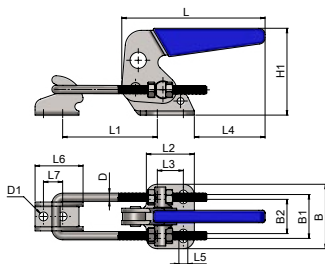
ZP



WDS 4045 Vertical Toggle Latch

Zinc Plated Steel
F = Clamping Force (kg)
F1 = Hand Force (kg)

WDS No.	B	B1	B2	F	F1	H Max	H Min	H1	L	L2	L3	L4	L5	Weight (kg)
4045-201	36	24	19	180	10	28	5	42	69	26	13	30	5.2	0.11
4045-202	47	32	25	270	15	35	7	63	103	35	19	50	6.5	0.28
4045-203	64	45	36	450	20	45	9	84	137	51	32	62	8.5	0.68



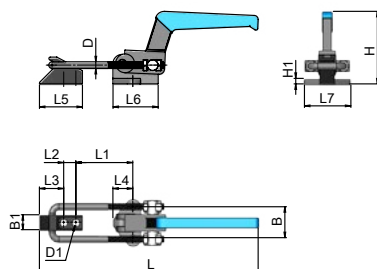
Horizontal Latch Clamp WDS 4047

Zinc Plated Steel

F = Clamping Force (kg)

F1 = Hand Force (kg)

WDS No.	B	B1	B2	D	D1	F	F1	H1	L	L1 Max	L1 Min	L2	L3	L4	L5	L6	L7	Weight (kg)
4047-201	36	24	19	4	5.2	180	10	42	69	70	38	26	13	30	5.2	24	11	0.13
4047-202	47	32	25	6	6.5	270	15	63	103	90	48	35	19	50	6.5	32	14	0.28
4047-203	64	45	36	8	8.5	450	20	84	137	120	65	51	32	62	8.5	40	19	0.68



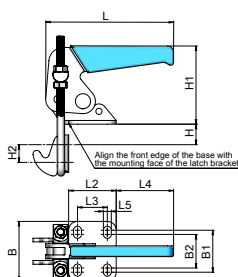
Horizontal Latch Clamp WDS 4048

Steel, Chemical black finish

F = Clamping Force (kg)

F1 = Hand Force (kg)

WDS No.	B	B1	D	D1	F	F1	H	H1	L2	L3	L4	L5	L6	L7	Weight (kg)
4048-201	50	28	10	10.3	1650	60	115	10	18	37	24	65	60	74	1.4
4048-202	56	34	12	12.4	1900	60	132	12	22	44	36	78	82	84	2.6



304

Vertical Latch Clamp WDS 4093

Stainless Steel BS 304 S15

F = Clamping Force (kg)

F1 = Hand Force (kg)

WDS No.	B	B1	B2	F	F1	H Max	H Min	H1	H2	L	L2	L3	L4	L5	Size	Weight (kg)
4093-201	36	24	19	180	10	28	5	42	11	69	26	13	30	5.2	1	0.11
4093-202	47	32	25	270	15	35	7	63	14	103	35	19	50	6.5	2	0.28
4093-203	64	45	36	450	20	45	9	84	19	137	51	32	62	8.5	3	0.68

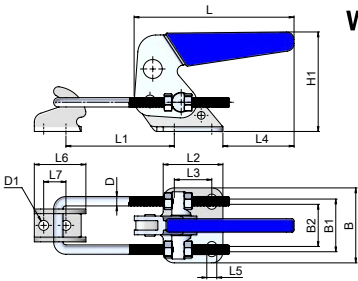


WDS 4095 Horizontal Toggle Latch Clamp

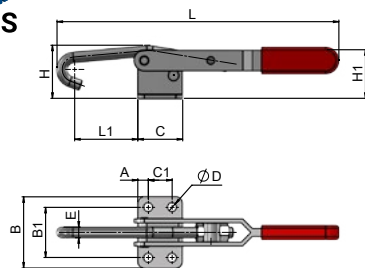
Stainless Steel BS 304 S15

F = Clamping Force (kg)

F1 = Hand Force (kg)



WDS No.	B	B1	B2	D	D1	F	F1	H1	L	L1 Max	L1 Min	L2	L3	L4	L5	L6	L7	Weight (kg)
4095-201	36	24	19	4	5.2	180	10	42	69	70	38	26	13	30	5.2	24	11	0.12
4095-202	47	32	25	6	6.5	270	15	63	103	90	48	35	19	50	6.5	32	14	0.28
4095-203	64	45	36	8	8.5	450	20	84	137	120	65	51	32	62	8.5	40	19	0.68

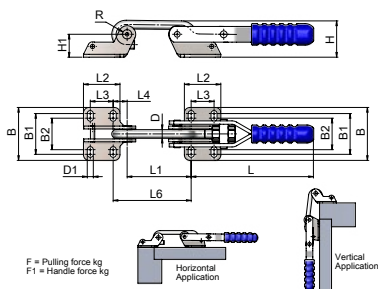


Horizontal Hook Clamp WDS 870

Body - Zinc Plated Steel to resist corrosion

Hand Grip - Oil resistant red vinyl

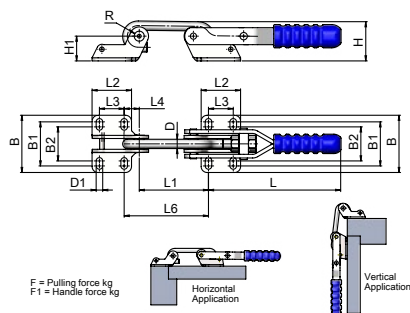
WDS No.	A	B	B1	C	C1	D	E	L	L1	Holding Capacity (kg)	Weight (kg)
870-201	12.7	49.2	34.9	38.1	19	5.6	8	211	58.4	170	0.26
870-203	7.9	65.7	49.2	47.6	31.8	8.7	9.5	288	79.4	340	0.68
870-205	12.7	85.7	60.3	54	28.6	10.3	12.7	336	76.2	450	1.14



Hook Clamp WDS 4049

Zinc Plated Steel

WDS No.	B	B1	B2	D	D1	F	F1	H	H1	L	L1	L2	L3	L4	L6	R	Weight (kg)
4049-201	41	30	21	6	5.2	150	10	32	16	97	45	26	13	13	58	6	0.14
4049-202	51	37	26	8	6.3	300	15	37	23	135	68	35	19	16	75	6.5	0.33
4049-203	76	60	44	12	8.5	400	20	48	29	170	88	51	32	20	109	9	0.93

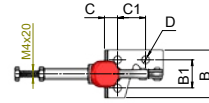
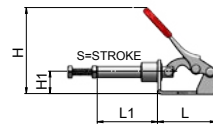


Stainless Steel Hook Clamp WDS 4097

Stainless Steel BS 304 S15

WDS No.	B	B1	B2	D	D1	F	F1	H	H1	L	L1	L2	L3	L4	L6	R	Weight (kg)
4097-201	41	30	21	6	5.2	150	10	32	16	97	45	26	13	13	58	6	0.14
4097-202	51	37	26	8	6.3	300	15	37	23	135	68	35	19	16	75	6.5	0.33
4097-203	76	60	44	12	8.5	400	20	48	29	170	88	51	32	20	109	9	0.93

ZP

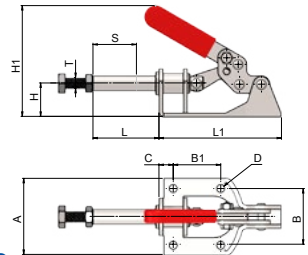


WDS 860 Push Pull Toggle Clamp - Lightweight

Body - Zinc Plated Steel to resist corrosion, Hand Grip - Oil resistant red vinyl
S = Stroke

WDS No.	B	B1	C	C1	D	H	H1	L	L1	S	Holding Capacity (kg)	Weight (kg)
860-201	27	15.9	7.4	15.9	4.4	41	12.7	33.3	34.7	16.7	45	0.04

ZP

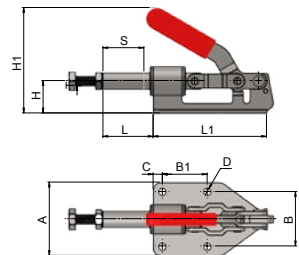


WDS 861 Medium-Lightweight Push Pull Toggle Clamp

Body - Zinc Plated Steel to resist corrosion, Hand Grip - Oil resistant red vinyl
S = Stroke

WDS No.	A	B	B1	C	D	H	H1	L	L1	S	T	Holding Capacity (kg)	Weight (kg)
861-2005	56	41	35	10.5	5.5	24.6	80.5	50	139.8	32	M8	135	0.3

ZP

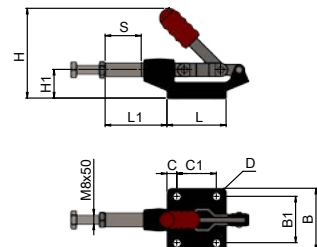


WDS 861 Push Pull Toggle Clamp

Body - Zinc Plated Steel to resist corrosion, Hand Grip - Oil resistant red vinyl
S = Stroke

WDS No.	A	B	B1	C	D	H	H1	L	L1	S	T	Holding Capacity (kg)	Weight (kg)
861-201	55.6	41.3	34	7	5.2	24.6	80	38.1	86	32	M8	180	0.36

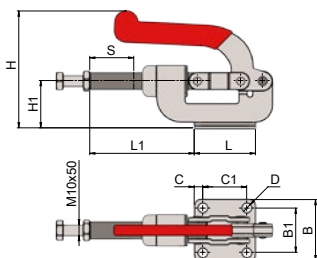
ZP



WDS 862 Push Pull Toggle Clamp with Black Cast Base

Body - Zinc Plated Steel to resist corrosion, Hand Grip - Oil resistant red vinyl
Note - Handle must open 180° to achieve full stroke
S = Stroke

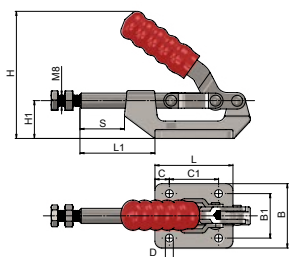
WDS No.	B	B1	C	C1	D	H	H1	L	L1	S	Holding Capacity (kg)	Weight (kg)
862-2005	56	41.1	8.7	35	6.7	75	25.4	52.4	54.8	32	225	0.36



Push Pull Toggle Clamp with Steel Flanged Base WDS 862

Body - Zinc Plated Steel to resist corrosion, Hand Grip - Oil resistant red vinyl
S = Stroke

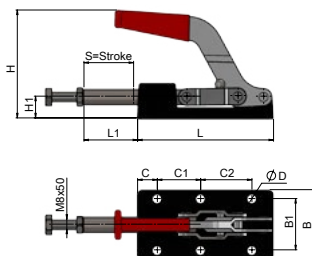
WDS No.	B	B1	C	C1	D	H	H1	L	L1	S	Holding Capacity (kg)	Weight (kg)
862-203	57.5	41.5	8	41.3	8.7	110	44.4	57.5	98	41.3	364	0.81



Push Pull Toggle Clamp with Alloy Steel Base WDS 862

Body - Zinc Plated Steel to resist corrosion, Hand Grip - Oil resistant red vinyl
Note - Handle must open 180° to achieve full stroke
S = Stroke

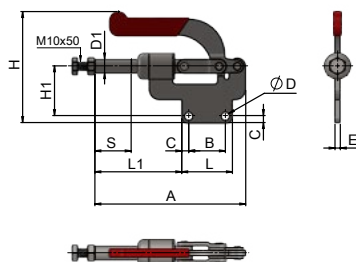
WDS No.	B	B1	C	C1	D	H1	L	L1	S	H Max	Holding Capacity (kg)	Weight (kg)
862-2007	47.6	33.3	10.5	36.5	5.6	24.6	58	54.4	31.8	84	272	0.42



Push Pull Toggle Clamp with Cast Base WDS 862

Body - Zinc Plated Steel to resist corrosion, Hand Grip - Oil resistant red vinyl
S = Stroke

WDS No.	B	B1	C	C1	C2	D	H	H1	L	L1	S	Holding Capacity (kg)	Weight (kg)
862-201	55.6	41.3	15.9	34.9	41.3	7.1	83	17.5	110	43.7	41.3	316	0.67

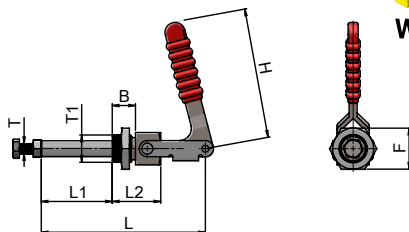


Push Pull Toggle Clamp WDS 882

Body - Zinc Plated Steel to resist corrosion, Hand Grip - Oil resistant red vinyl
S = Stroke

WDS No.	A	B	C	D	D1	E	H	H1	L	L1	S	Holding Capacity (kg)	Weight (kg)
882-203	171	41.3	7.9	8.7	15.5	6	127	56.1	57.5	98	40.9	360	0.74

ZP



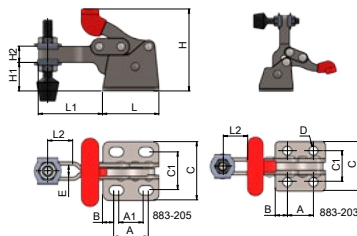
WDS 880 Push/Pull Toggle Clamp

Body - Zinc Plated Steel to resist corrosion

Hand Grip - Oil resistant red vinyl

WDS No.	B	F	H	L	L1	L2	T	T1	Holding Capacity (kg)	Stroke	Weight (kg)
880-201	12	24	67	63	21	21	M6	M16x1.5	91	20	0.13
880-203	16	30	90	104.3	39.7	33.6	M8	M20x1.5	136	39	0.29
880-205	22.3	41	137	162.5	70.3	48	M10	M27 x 2.0	318	66	0.77

ZP



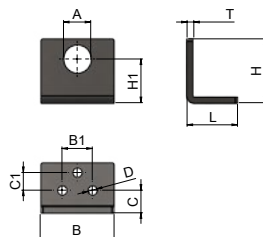
WDS 883 Vertical Push Pull Toggle Clamp with T handle - Flanged Base

Body - Zinc Plated Steel to resist corrosion

Hand Grip - Oil resistant red vinyl

WDS No.	A	A1	B	C	C1	D	E	H	H1	H2	L	L1	L2	Holding Capacity (kg)	Weight (kg)
883-203	13.5	N/A	26.4	25.4	15.9	4.4	5	40	12.7	7.9	26.2	30.8	12.7	68	0.06
883-205	19	27	44	45.4	29.4	7	9.7	64	22.2	12.7	44	50.1	19.5	150	0.25

ZP

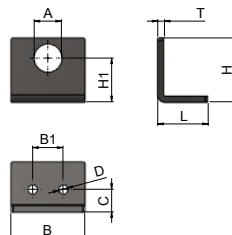


WDS 877 Steel Bracket 16 Dia for Toggle Clamps

Zinc Plated Steel

WDS No.	A	B	B1	C	C1	D	H	H1	L	T	Weight (kg)
877-201	16	44	18	13.5	10.5	5.2	38	26	30	4	0.07

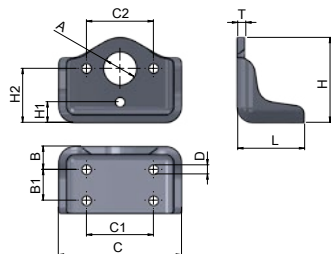
304



WDS 877 Stainless Bracket 16 Dia for Toggle Clamps

304 Stainless Steel

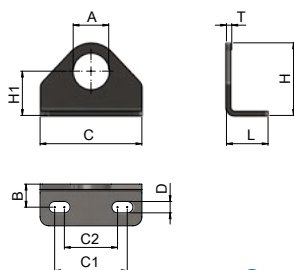
WDS No.	A	B	B1	C	D	H	H1	L	T	Weight (kg)
877-201	16	44	18	13.5	5.2	38	26	30	2	0.05



Steel Bracket 20 Dia for Toggle Clamps WDS 878

Zinc Plated Steel

WDS No.	A	B	B1	C	C1	C2	D	H	H1	L	T	Weight (kg)
878-201	20	14.4	19	76	41	41	5.6	52.4	12.7	41.3	5	0.24

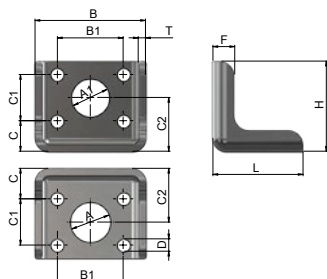


304

Stainless Bracket 20 Dia for Toggle Clamps WDS 878

304 Stainless Steel

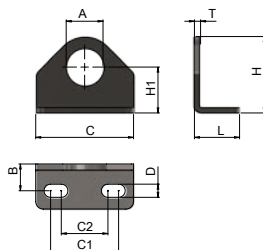
WDS No.	A	B	C	C1	C2	D	H	H1	L	T	Weight (kg)
878-601	20.1	13	57.5	41	30	6.4	41	25	23.5	3	0.06



Steel Bracket for Toggle Clamps WDS 879

Zinc Plated Steel

WDS No.	A	A1	B	B1	C	C1	C2	D	F	H	L	T	Weight (kg)
879-201	25.5	27	76	45.2	21	31.8	37	8.5	15	62	62	5	0.33



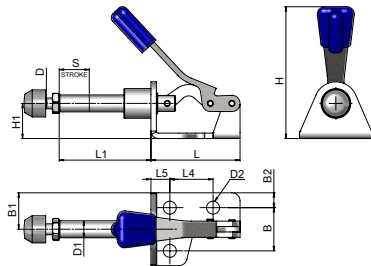
304

Stainless Bracket for Toggle Clamps WDS 879

304 Stainless Steel

WDS No.	A	B	C	C1	C2	D	H	H1	L	T	Weight (kg)
879-601	24	17.5	64	44	31	8.6	50	30	29.5	5	0.05

ZP

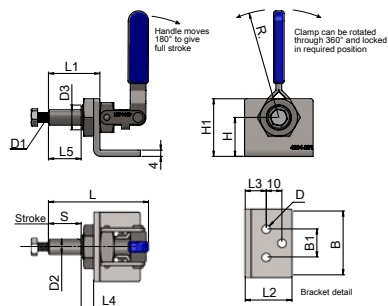


WDS 4033 Push Pull Toggle Clamp - Light Duty

Zinc Plated Steel

WDS No.	B	B1	B2	D	D1	D2	H	H1	L	L1	L4	L5	S	Holding Capacity (kg)	Weight (kg)
4033-201	16	13.5	5.5	M4 x 12	6.4	4.8	48	13	33	34	16	7	16	50	0.05

ZP

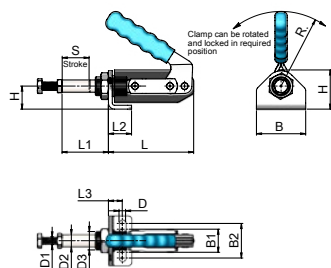


WDS 4034 Push/Pull Toggle Clamp - Light Duty

Zinc Plated Steel

WDS No.	B	B1	D	D1	D2	D3	H	H1	L	L1	L2	L3	L4	R	S	Holding Capacity (kg)	Weight (kg)
4034-201	44	18	5.2	M6x15	10	M16x1.5	26	38	68	33	30	13.5	10	68	21	100	0.15

ZP

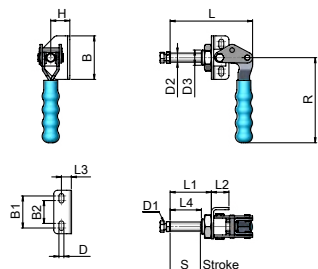


WDS 4035 Push/Pull Toggle Clamp - Light Duty

Zinc Plated Steel

WDS No.	B	B1	B2	D	D1	D2	D3	H	L	L1	L2	L3	R	S	Holding Capacity (kg)	Weight (kg)
4035-201	57	30	42	6.5	M6x12	11.1	M20x1.5	25	82	53	24	14	60	32	250	0.35
4035-202	64	30	45	8.5	M10x20	15.9	M24x1.5	30	112	64	30	18	82	38	450	0.76

ZP



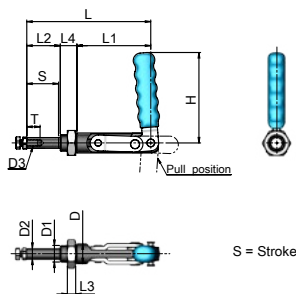
WDS 4036 Push/Pull Toggle Clamp - Medium Duty

Zinc Plated, Heavy Gauge Steel, Chemical black Plunger
Clamping pressure 120daN

WDS No.	B	B1	B2	D	D1	D2	D3	H	L	L1	L2	L3	L4	R	S	Holding Capacity (kg)	Weight (kg)
4036-201	57	42	30	6.5	M8x25	12	M20x1.5	25	110	54	23	13	41	112	40	200	0.35



ZP

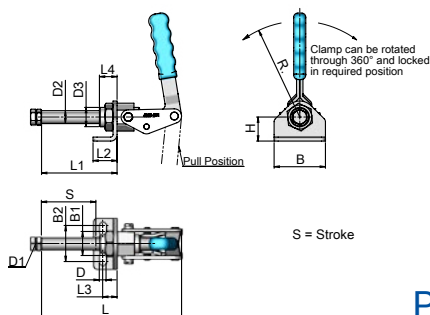


Push/Pull Toggle Clamp - Heavy Duty WDS 4037

Body and Piston - Steel, Chemical black finish

Link and handle - Zinc Plated Steel

WDS No.	D	D1	D2	D3	H	L	L1	L2	L3	L4	S	T	Holding Capacity (kg)	Weight (kg)
4037-201	19	M16x1.5	10	M6	95	116	67	33	8	16	25	14	354	0.25
4037-202	24	M20x1.5	13	M8	110	148	89	38	10	20	38	16	606	0.4
4037-203	28	M24x1.5	16	M10	130	223	131	70	12	23	66	18	758	1

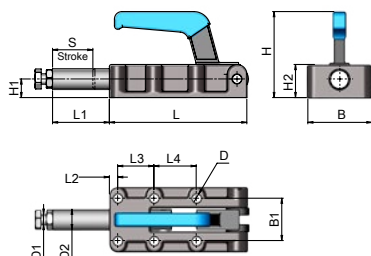


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Push/Pull Toggle Clamp - Heavy Duty WDS 4038

Zinc Plated Steel

WDS No.	B	B1	B2	D	D1	D2	D3	H	L	L1	L2	L3	L4	R	S	Holding Capacity (kg)	Weight (kg)
4038-201	64	45	30	8.5	M10x35	16	M24x1.5	30	175	93	30	18	22	120	68	400	0.8

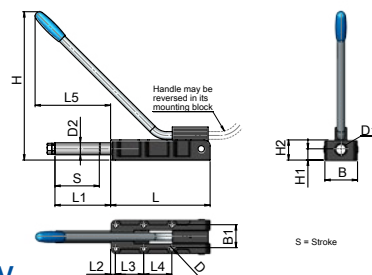


Push/Pull Toggle Clamp - Heavy Duty WDS 4039

Piston - Steel, Body and handle - Malleable Iron

Hardened Pins & Bushes

WDS No.	B	B1	D	D1	D2	H	H1	H2	L	L1	L2	L3	L4	S	Holding Capacity (kg)	Weight (kg)
4039-201	47	33.3	5.5	M8x30	14	64	12	22	89	38	25	36.5	-	32	600	0.56
4039-202	62	41	8.6	M10x40	20	85	18	32	133	55	8	35	41	50	1200	1.5
4039-203	80	54	10.3	M12x60	25	105	22	40	193	102	12	45	45	75	2500	3.77
4039-204	84	57	10.3	M16x60	30	125	28	50	247	138	12	70	70	100	5000	6.2



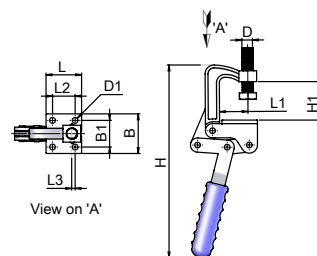
WDS 4041 Push/Pull Toggle Clamp - Heavy Duty

Piston and Handle - Steel, Body - Malleable iron

Hardened Pins & Bushes, Clamping pressure

WDS No.	B	B1	D	D1	D2	H	H1	H2	L	L1	L2	L3	L4	L5	S	Holding Capacity (kg)	Weight (kg)
4041-201	47	33.3	5.5	M8x30	14	140	12	22	89	38	25	36.5	-	70	32	600	0.6
4041-202	62	41	8.6	M10x40	20	235	18	32	133	55	8	35	41	100	50	1200	1.7
4041-203	80	54	10.3	M12x60	25	285	22	40	193	102	12	45	45	130	75	2500	4.2
4041-204	84	57	10.3	M16x60	30	380	28	50	247	138	12	70	70	180	100	5000	7.2

ZP

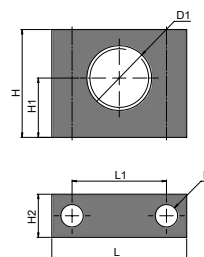


WDS 4051 Pull Down Toggle Clamp

Zinc Plated Steel

P1 = Arm Opens

WDS No.	B	B1	D UNC	D1	H	H1	L	L1	L2	L3	P1	Holding Capacity (kg)	Weight (kg)
4051-201	44	30	1/2	6.5	216	41	40	32	25.4	3.8	90 °	360	0.53



WDS 4061 Mounting Bracket for Push/Pull Toggle Clamps

Steel, Chemical black finish

Note to suit the following products:

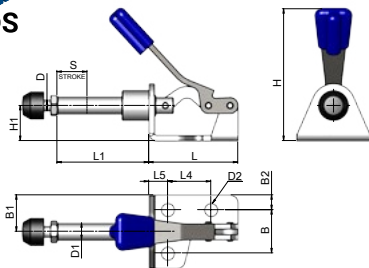
4061-201 fits 4037-201

4061-202 fits 4037-202

4061-203 fits 4037-203

WDS No.	D	D1	H	H1	H2	L	L1	Weight (kg)
4061-201	6.3	M16 x 1.5	30	18	12	35	25	0.03
4061-202	8.3	M20 x 1.5	35	20	16	45	32	0.04
4061-203	8.3	M24 x 1.5	40	22	16	50	35	0.05

304

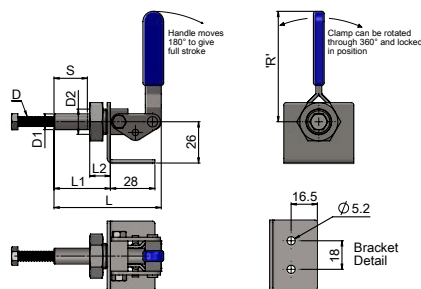


Push/Pull Toggle Clamp - Light Duty WDS 4085

Stainless Steel BS.304 S15

S = Stroke

WDS No.	B	B1	B2	D	D1	D2	H	H1	H2	L	L1	L2	L3	L4	L5	S	Holding Capacity (kg)	Weight (kg)
4085-201	16	15.5	7.5	M4x12	6.4	4.8	42	13	7.5	33	34	11	8	16	7	16	50	0.05



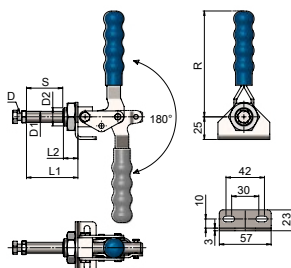
304

Push/Pull Toggle Clamp - Light Duty WDS 4087

Stainless Steel BS.304 S15

S = Stroke

WDS No.	D	D1	D2	L	L1	L2	R	S	Holding Capacity (kg)	Weight (kg)
4087-201	M6x15	10	M16x1.5	68	33	10	68	21	100	0.15



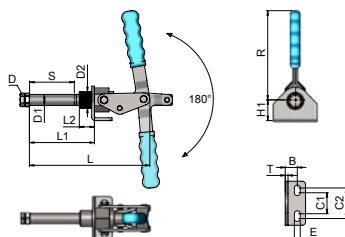
304

Push/Pull Toggle Clamp - Medium Duty WDS 4089

Stainless Steel BS.304 S15

S = Stroke

WDS No.	D	D1	D2	L	L1	L2	R	S	Holding Capacity (kg)	Weight (kg)
4089-201	M8x25	12	M20x1.5	110	54	41	112	40	200	0.35



304

Push/Pull Toggle Clamp - Heavy Duty WDS 4091

Stainless Steel BS.304 S15

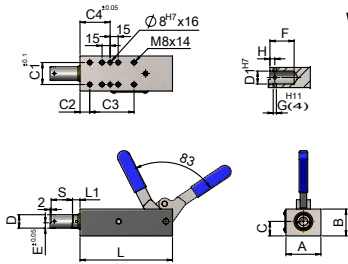
S = Stroke

WDS No.	D	D1	D2	L	L1	L2	R	S	Holding Capacity (kg)	Weight (kg)
4091-201	M10x35	16	M24x1.5	175	93	22	120	68	400	0.8



WDS 4092 Push/Pull Precision Guided Clamp

Zinc Plated Steel
S = Stroke

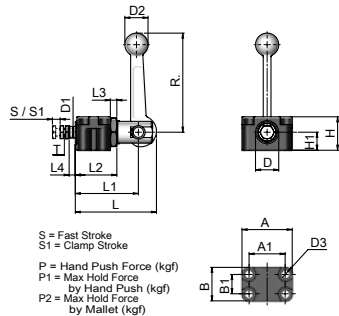


WDS No.	A	B	C	C1	C2	C3	C4	D	D1	E	F	G	H	L	L1	S	Weight (kg)
4092-201	65	50	27	41	18	82.5	56	25	16	10	30	4	6	172	14	40	5.5



WDS 4103 Cam Push Clamp

Steel, Chemical black finish
All wearing parts hardened

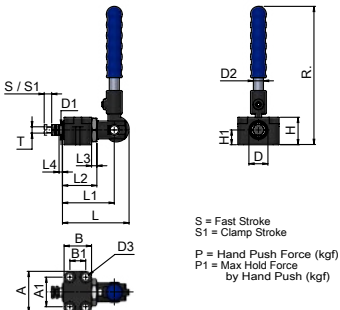


WDS No.	A	A1	B	B1	D	D1	D2	D3	H	H1	L	L1	L2	L3	L4	P	P1	P2	R	S	S1	T	Weight (kg)
4103-201	39	28	26	15	M18x1.5	9	19	6.3	26	14	64	50	32	5	2	36	600	1500	77	5.2	2.2	M6	0.27
4103-202	50	36	34	20	M24x1.5	12	25	8.3	33	18	85	68	41	7	3	38	650	2000	103	7.0	3.0	M8	0.6
4103-203	68	50	43	25	M33x2.0	16	32	10.3	45	25	109	86	54	9.5	4	43	650	3000	140	11.0	4.0	M12	1.5

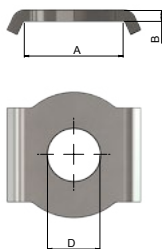


WDS 4104 Cam Push Clamp

Steel, Chemical black finish
All wearing parts hardened



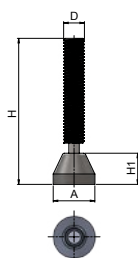
WDS No.	A	A1	B	B1	D	D1	D2	D3	H	H1	L	L1	L2	L3	L4	P	P1	R	S	S1	T	Weight (kg)
4104-201	39	28	26	15	M18x1.5	9	10	6.3	26	14	64	50	32	5	2	36	1500	172	5.2	2.2	M6	0.35
4104-202	50	36	34	20	M24x1.5	12	10	8.3	33	18	85	68	41	7	3	38	1700	228	7.0	3.0	M8	0.75
4104-203	68	50	43	25	M33x2.0	16	16	10.3	45	25	109	86	54	9.5	4	43	2000	312	11	4.0	M12	2



Washer for Adjustable Spindles WDS 856

Zinc Plated Steel

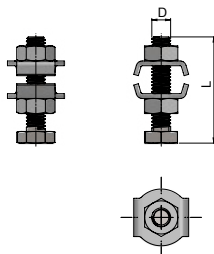
WDS No.	A	B	D	Weight (kg)
856-201	8	1.0	M4	0.01
856-202	9.4	1.0	M5	0.01
856-204	12.4	1.4	M6	0.01
856-205	15.4	2.0	M8	0.01
856-206	18.9	2.0	M10	0.01
856-207	24.5	2.8	M12	0.04



Swivel End Adjustable Spindle WDS 857

Zinc Plated Steel

WDS No.	A	D	H	H1	Weight (kg)
857-202	12	M6	50.0	10.0	0.02
857-203	20	M8	65.0	12.8	0.05
857-204	20	M10	85.0	14.5	0.08

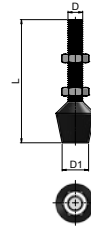


Adjustable Spindle Assembly WDS 858

Zinc Plated Steel

WDS No.	D	L	Weight (kg)
858-202	M4	20	0.01
858-206	M5	30	0.01
858-207	M6	40	0.02
858-208	M6	50	0.02
858-209	M8	30	0.04
858-210	M8	50	0.04
858-213	M10	75	0.09
858-215	M12	50	0.1

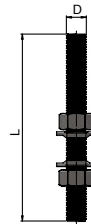
ZP



WDS 859 Adjustable Spindle Neoprene Capped - Metric

Steel Plated, Neoprene Cap

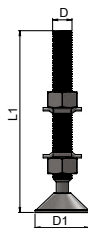
WDS No.	D	D1	L	L1	Weight (kg)
859-202	M4	10.5	25	13	0.01
859-204	M6	10.5	44	30	0.02
859-205	M6	10.5	51	37	0.02
859-206	M8	11.5	63	43	0.05
859-208	M10	15	85	60	0.08
859-209	M12	21.5	100	66.5	0.13



WDS 4053 Spindles for Toggle Clamps

Steel, Chemical black finish

WDS No.	D	L	To suit clamps	Weight (kg)
4053-201	M5	25	4025-201, 4001-201, 4003-201, 4003-202, 4007-201, 4009-201, 4009-202, 4013-201, 4015-201, 4021-201, 4025-202, 4027-202, 4029-201	0.01
4053-202	M5	35	4001-201, 4003-201, 4003-202, 4007-201, 4009-201, 4009-202, 4013-201, 4015-201, 4021-201, 4025-202, 4027-202, 4029-201, 4031-201	0.01
4053-203	M6	50	4001-202, 4001-203, 4003-203, 4003-204, 4007-202, 4007-203, 4009-203, 4009-204, 4013-202, 4015-202, 4025-204, 4025-205, 4027-203	0.02
4053-204	M8	65	4001-204, 4001-205, 4003-205, 4003-206, 4007-204, 4007-205, 4009-205, 4009-206, 4013-203, 4015-203, 4021-202, 4025-206, 4027-204	0.04
4053-205	M10	85	4001-206, 4003-207, 4009-207, 4021-203, 4025-208, 4027-206	0.08
4053-206	M12	100	4001-207, 4003-208, 4017-201, 4017-202, 4025-209, 4025-210	0.13
4053-207	M16	150	4001-208, 4003-209, 4017-203	0.29



Swivel Spindle for Toggle Clamps **WDS 4055**

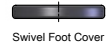
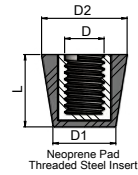
Steel, Chemical black finish

WDS No.	D	D1	L	To suit clamps	Weight (kg)
4055-202	M5	12	35	4001-201, 4003-201, 4003-202, 4007-201, 4009-201, 4009-202, 4013-201, 4015-201, 4021-201, 4025-202, 4027-202, 4029-201, 4031-201	0.01
4055-203	M6	12	50	4001-202, 4001-203, 4003-203, 4003-204, 4007-202, 4007-203, 4009-203, 4009-204, 4013-202, 4015-202, 4025-204, 4025-205, 4027-203	0.02
4055-204	M8	20	65	4001-204, 4001-205, 4003-205, 4003-206, 4007-204, 4007-205, 4009-205, 4009-206, 4013-203, 4015-203, 4021-202, 4025-206, 4027-204	0.06
4055-205	M10	20	85	4001-206, 4003-207, 4009-207, 4021-203, 4025-208, 4027-206	0.09
4055-206	M12	25	100	4001-207, 4003-208, 4017-201, 4017-202, 4025-209, 4025-210	0.15
4055-207	M16	45	150	4001-208, 4003-209, 4017-203	0.44



TOGGLE LATCHES

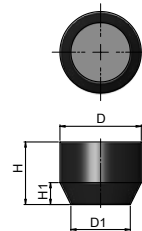
For the full range of Toggle Latches please see pages **406-409**



WDS 4057 Spindle Pad

Neoprene, black

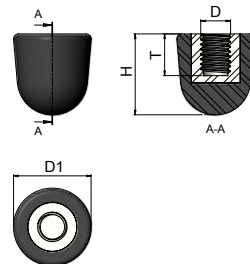
WDS No.	D	D1	D2	L	To suit spindle	Type	Weight (kg)
4057-201	5	13	-	10	4053-201, 4053-202	Neoprene Pad	0.01
4057-202	M6	11	15	13	4053-203	Neoprene Pad	0.01
4057-203	M8	13	19	18	4053-204	Neoprene Pad	0.01
4057-204	M10	17	23	21	4053-205	Neoprene Pad	0.02
4057-205	M12	19	26	22	4053-206	Neoprene Pad	0.02
4057-210	-	-	-	-	4055-202, 4055-203	Swivel Foot Cover	0.01
4057-211	-	-	-	-	4055-204, 4055-205	Swivel Foot Cover	0.01
4057-212	-	-	-	-	4055-206	Swivel Foot Cover	0.01



WDS 4063 Setscrew Cover

Neoprene, black

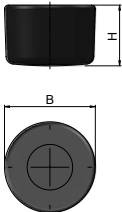
WDS No.	D	D1	H	H1	Fits Setscrew	Weight (kg)
4063-202	13	8	10	4	M5	0.01
4063-203	15	11	12	4	M6	0.01
4063-204	19	13	15	6	M8	0.01
4063-205	23	16	18	7	M10	0.01
4063-206	26	19	20	7	M12	0.01



WDS 4086 Screw Cover

Neoprene, black

WDS No.	D	D1	H	T	Weight (kg)
4086-206	M6	16	16.5	8.5	0.01
4086-208	M8	20	17	11	0.01
4086-210	M10	25	21	14	0.02



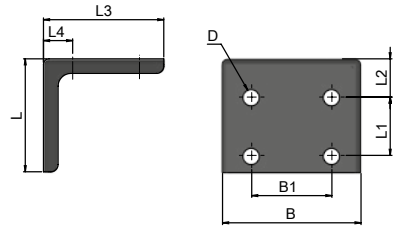
D = TO SUIT BOLT SIZE



Adjustable Bolt Cover **WDS 855**
Neoprene, black

WDS No.	B	D	H	Weight (kg)
855-120	28.8	M12 (1/2 Inch)	15.0	0.01
855-140	12.0	M6 (1/4 inch)	8.0	0.01
855-380	21.0	M10 (3/8 Inch)	13.7	0.01
855-516	18.8	M8 (5/16 Inch)	12.0	0.01

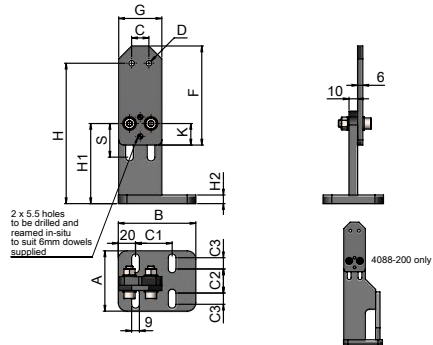
ZP



WDS 4059 Mounting Bracket for Toggle Clamps

Zinc Plated Steel

WDS No.	B	B1	D	L	L1	L2	L3	L4	To suit clamps	Weight (kg)
4059-201	43	18	5.1	37	15	14	30	8	4001-202, 4003-201, 4003-203, 4025-202	0.01
4059-202	54	25.4	5.5	42	19	13	45	11	4001-204, 4003-205, 4025-204, 4025-206	0.01
4059-203	76	44	8.6	62	32	21	66	16	4001-206, 4001-207, 4003-207, 4003-208, 4025-209	0.03

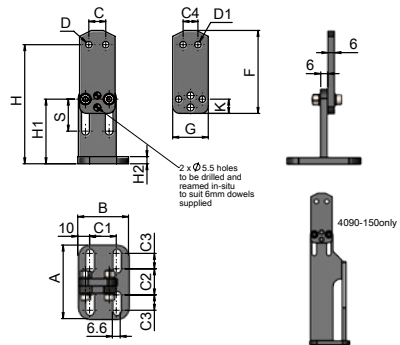


WDS 4088 Toggle Clamp Extension Tower - Large Base

Steel, Chemical black finish

For use with 4077 & 4079 Toggle Clamps

WDS No.	A	B	C	C1	C2	C3	D	F	G	H1	H2	K	S	Weight (kg)
4088-060	70	90	20	42.5	28	13	6.5	115	50	68	10	25	32	0.95
4088-100	70	90	20	42.5	28	13	6.5	115	50	93	10	25	39	1.05
4088-150	70	90	20	42.5	28	13	6.5	115	50	143	10	25	39	1.25
4088-200	70	90	20	42.5	28	13	6.5	115	50	193	10	25	39	1.8

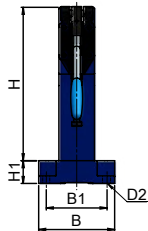


WDS 4090 Toggle Clamp Extension Tower - Small Base

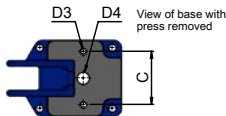
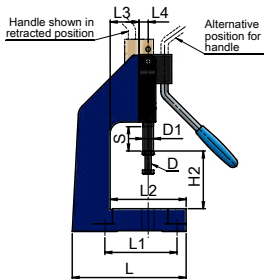
Steel, Chemical black finish

For use with 4072, 4075, 4081 and 4082 Toggle Clamps

WDS No.	A	B	C	C1	C2	C3	C4	D	D1	F	G	H Max	H Min	H1	H2	K	S	Weight (kg)
4090-060	62	42.8	12.5	22.5	22	13	14.3	5.5	4.5	70	30	100	74	54.5	6	12	27	0.28
4090-100	62	42.8	12.5	22.5	22	13	14.3	5.5	4.5	70	30	150	90	104.5	6	12	27	0.35
4090-150	62	55.5	12.5	22.5	22	13	14.3	5.5	4.5	70	30	200	174	154.5	6	12	27	0.6



S = Stroke
L3 = Approx distance to cast face



Manual Toggle Press Clamp **WDS 4043**

Frame - S.G. Iron

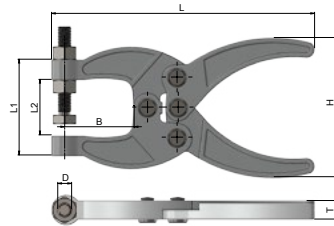
Clamp Body - Mall. Iron

Piston and Handle - Steel

For details of Heavy Duty Push/Pull Clamps used on these presses.
See WDS No 4041 for dimensions of Heavy Duty Push/Pull Clamp

WDS No.	B	B1	C	D	D1	D2	D3	D4	H	H1	H2	L	L1	L2	L3	L4	S	Holding Capacity (kg)	Weight (kg)
4043-201	100	80	70	M8 x 30	14	9	M8	15.5	202	30	79	150	95	100	30	12	32	600	3.5
4043-202	120	95	80	M10 x 40	20	11	M10	20	290	40	100	192	115	120	42	18	50	1200	8
4043-203	150	125	90	M12 x 60	25	11	M10	30	418	50	120	238	145	150	53	22	75	2500	15.8

ZP



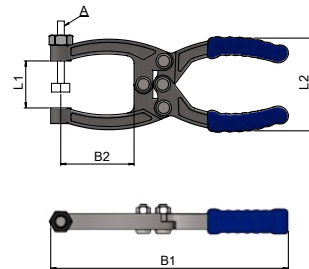
WDS 888 Plier Clamp

Handle - Forged Steel

Spindle - Steel Zinc Plated

WDS No.	B	D	H	L	L1	L2	T	Holding Capacity (kg)	Weight (kg)
888-235	30	1/4 UNC	60	114	44	26	8	80	0.17
888-238	69.8	3/8 UNC	73	214	75.5	43	9	318	0.68

ZP



WDS 4317 Plier Clamp with Adjusting Bolt

Heavy gauge steel, hardened pins and bushes

Finishing - Zinc plated

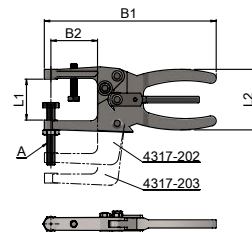
Holding pressure: 150daN

Clamping pressure: 80daN

Medium duty plier clamp

WDS No.	A	B1	B2	L1	L2	Weight (kg)
4317-101	6x40mm	150	47	30	60	0.27

ZP



WDS 4317 Plier Clamp with 2 Adjusting Bolts

Heavy gauge steel, hardened pins and bushes

Finishing - Zinc plated

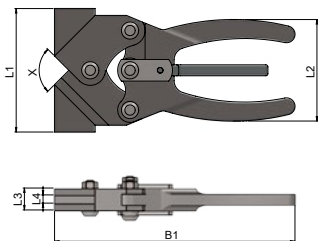
Holding pressure: 545daN

Clamping pressure: 250daN

Heavy duty plier clamps. Operates in double shear for long life

Fitted with triggers for quick release. 3 jaws widths

WDS No.	A	B1	B2	L1	L2	Weight (kg)
4317-201	10X70mm	203	57	50	75	0.9
4317-202	10X70mm	203	57	90	75	1
4317-203	10X70mm	203	57	115	75	1.1



Weldable Plier Clamp **WDS 4317**

Heavy gauge steel, hardened pins and bushes

Finishing - Zinc plated

Holding pressure: 545daN

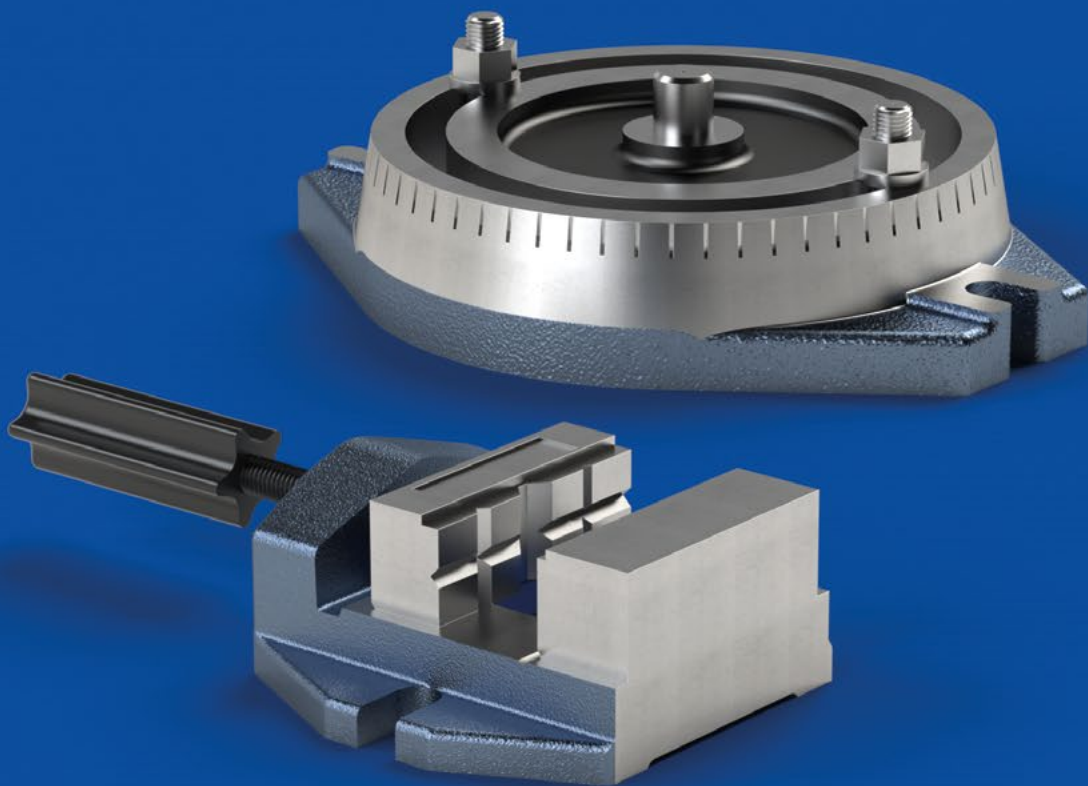
Clamping pressure: 100-200daN dependent on jaw length

Designed for easy fitting of customised jaws (not supplied). Heavy duty plier clamp

Operates in double shear for long life

Fitted with trigger for quick release

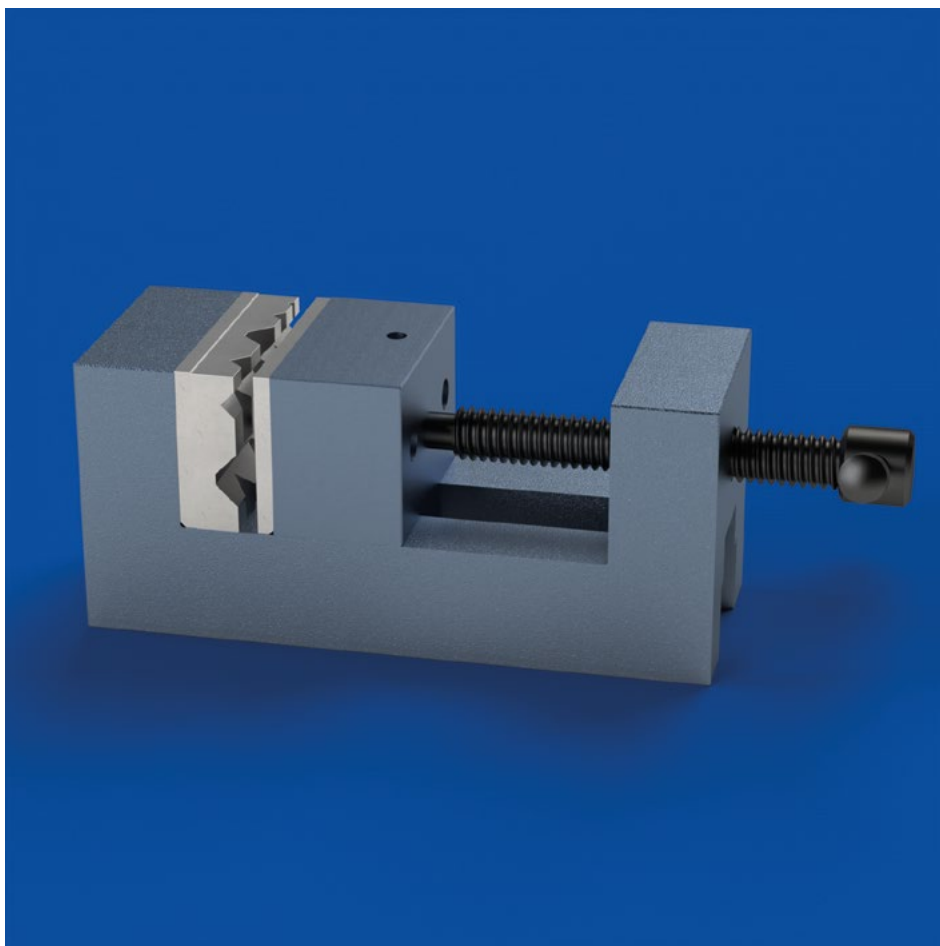
WDS No.	B1	L1	L2	L3	L4	X	Weight (kg)
4317-301	175	90	76	16	6	90	0.56



VICES

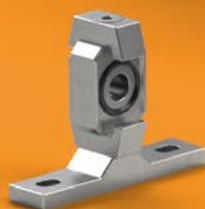
WDS offers a selection of vices from stock. The range includes heavier duty machine vices to light duty toolmakers vices. These high quality engineers vices are ideal for metalworking applications.





VICES

For the full range of Vices please visit [WDSCOMPONENTS.COM](https://www.wdscapabilities.com)



HYDRAULICS & PNEUMATICS

BOOSTERS AND HYDRAULIC POWER SOURCES	Page 914
HYDRACLAMP	Page 926
HYDRAULIC CLAMPS AND CYLINDERS	Page 938
HYDRAULIC RAM HEADS	Page 944
PNEUMATICS & AIR PREPARATION EQUIPMENT	Page 952



BOOSTERS AND HYDRAULIC POWER SOURCES

P 915-924

WDS offers a range of hydraulic power sources ranging from low intensification minibosters to high volume boosters. Hydraulic power sources are excellent for high production environments where a controlled and constant pressure or ratio is required.



HYDRAULIC BOOSTERS

WDS Spencer Franklin hydraulic boosters are simple and robust pressure intensifiers. Using a simple factory pressure air supply and correct booster model the user can intensify the pressure output from 10 times to over a 1000 times.

Boosters can be mounted either vertically or horizontally due to the robust design. Each booster has a unique oil piston allowing higher ratios in each design. Spencer Franklin boosters offer instant and sustained pressure over other hydraulic sources.

P 915-919



SEAL KITS & O-RINGS FOR HYDRAULIC BOOSTERS

Spencer Franklin seal kits are replacement seal kits for SF hydraulic boosters. Tell tale signs of rubber seal kit failure would be the loss of pressure in your booster system. These low cost, high quality seals are easily fitted keeping your production line going.

P 920



HYDRAULIC BOOSTER ACCESSORIES

Hydraulic Booster accessories include: quick exhaust valves, PowRlock manifolds, rotating couplings and PowRlock self bleed booster reservoir assemblies.

P 921-922

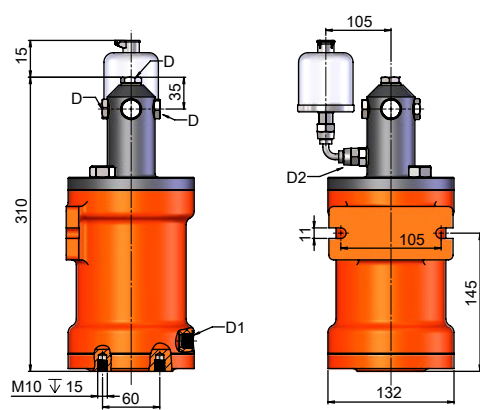


HYDRAULIC PUMPS

The SF range of manual hydraulic pumps includes hand operated pumps, a capstan pump design as well as screw and foot operated pumps.

P 923-924





SF-23 PowRock Mini Air-Oil Booster

Low Volume Air-Oil Intensifier

D = Oil Output 1/4" BSP

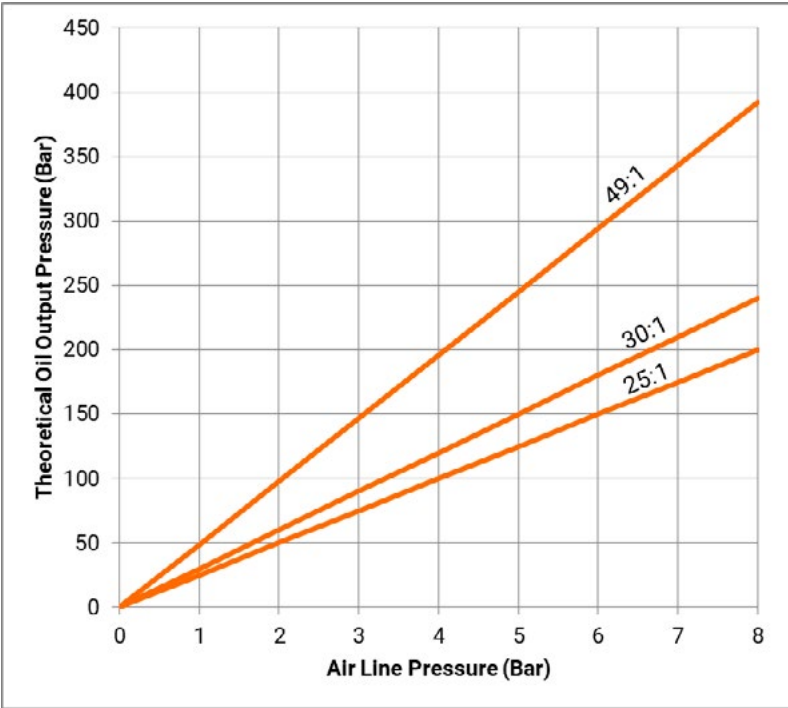
D1 = Air Input 1/4" BSP

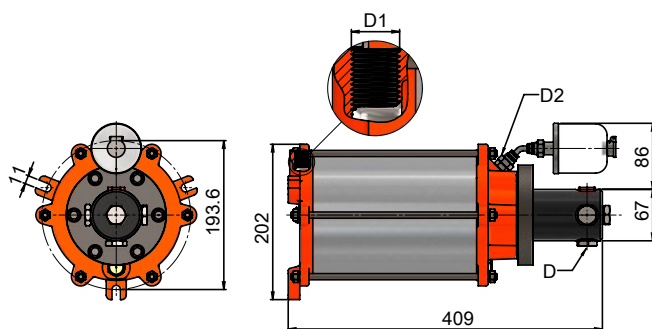
D2 = Oil Input 1/4" BSP

Maximum Stroke = 110mm

Air Consumed at 5.5 bar per 25mm stroke = 1600cm³

WDS No.	Max Air Inlet Pressure (Bar)	Max Oil Output Pressure (Bar)	Max Oil Output Volume (cm ³)	Ratio	Seal Kit
SF-2300	8.2	205	31.4	25:1	SF-23009
SF-2350	8.2	246	25.4	30:1	SF-23509
SF-2380	8.2	401	16	49:1	SF-23809





PowRlock Air-Oil Booster SF-26

Low Volume Air-Oil Intensifier

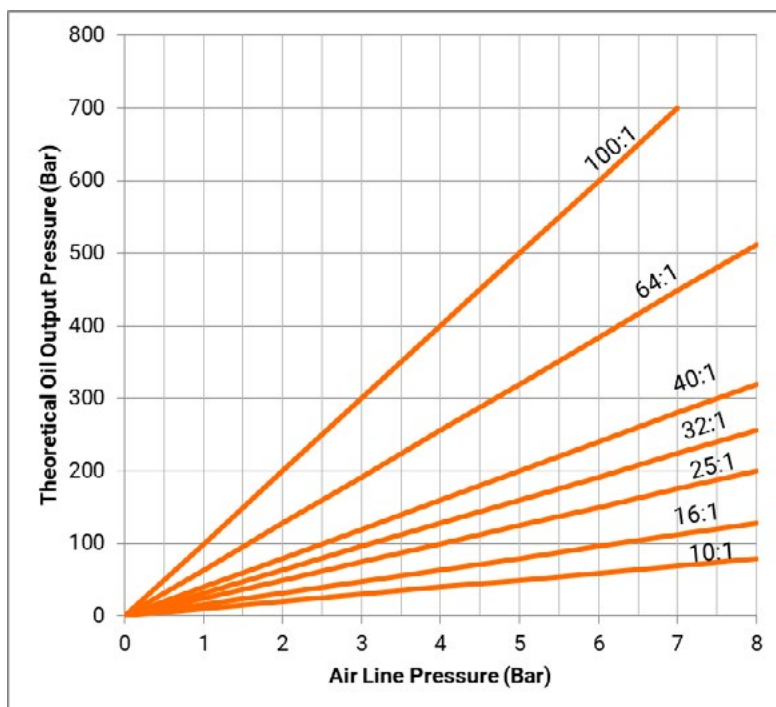
D = Oil Output 3/8" BSP, Top Port 1/2" BSP

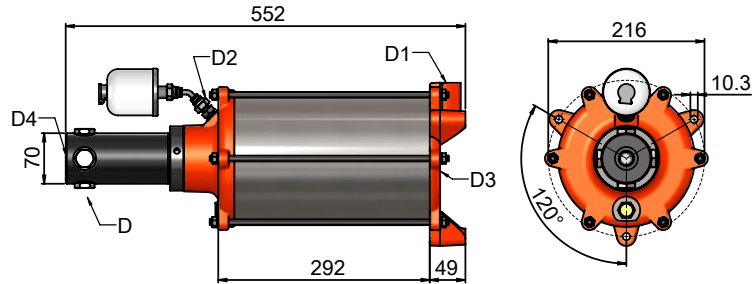
D1 = Air Input 3/8" BSP

D2 = Oil Input 3/8" BSP

Air Consumed at 5.5 bar per 25mm stroke = 3400cm³

WDS No.	Max Air Inlet Pressure (Bar)	Max Oil Output Pressure (Bar)	Max Oil Output Volume (cm ³)	Ratio	Seal Kit
SF-2600	7.8	78	215.98	10:1	SF-26009
SF-2610	7.8	125	138.23	16:1	SF-26109
SF-2620	7.8	196	88.46	25:1	SF-26209
SF-2630	7.8	251	67.73	32:1	SF-26309
SF-2640	7.8	313	53.99	40:1	SF-26409
SF-2650	7.8	502	34.55	64:1	SF-26509
SF-2660	6.9	686	22.11	100:1	SF-26609





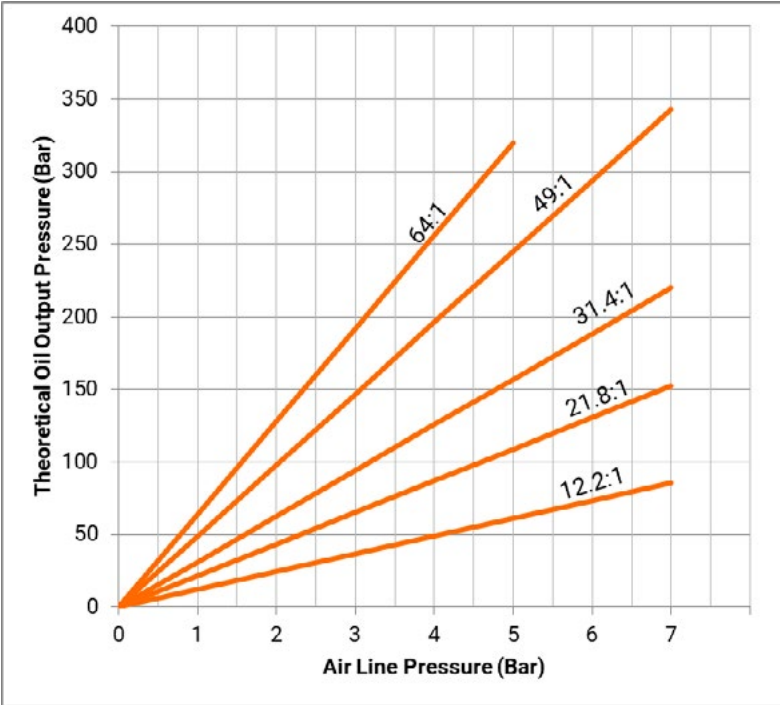
SF-76 PowRlock Zoom-ATC Air-Oil Booster

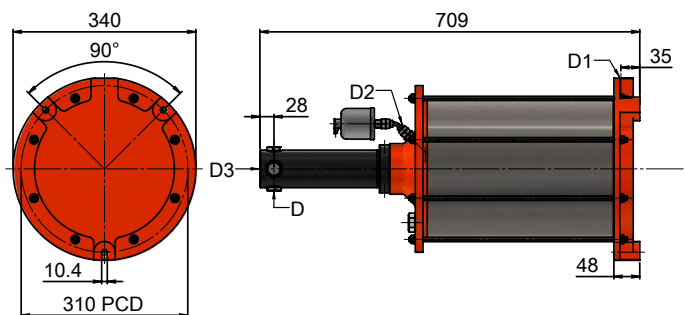
Low Volume Air-Oil Intensifier

- D = Oil Output 3/8" BSP
- D1 = Air Input 1/2" BSP
- D2 = Oil Input 3/8" BSP
- D3 = Alternate Air Input 1/2" BSP
- D4 = Oil Output 1/2" BSP

Maximum Stroke = 152.4mm
Air Consumed at 5.5 bar per 25mm stroke = 4000cm³

WDS No.	Max Air Inlet Pressure (Bar)	Max Oil Output Pressure (Bar)	Max Oil Output Volume (cm³)	Ratio	Seal Kit
SF-7635A	5.5	352	59	64.0:1	SF-76359
SF-7640A	7	343	77	49.0:1	SF-76409
SF-7650A	7	219	120	31.4:1	SF-76509
SF-7660A	7	152	174	21.8:1	SF-76609
SF-7680A	7	85	308	12.2:1	SF-76809





HyForce Air-Oil Booster SF-78

Low Volume Air-Oil Intensifier

D = Oil Output 3/8" BSP

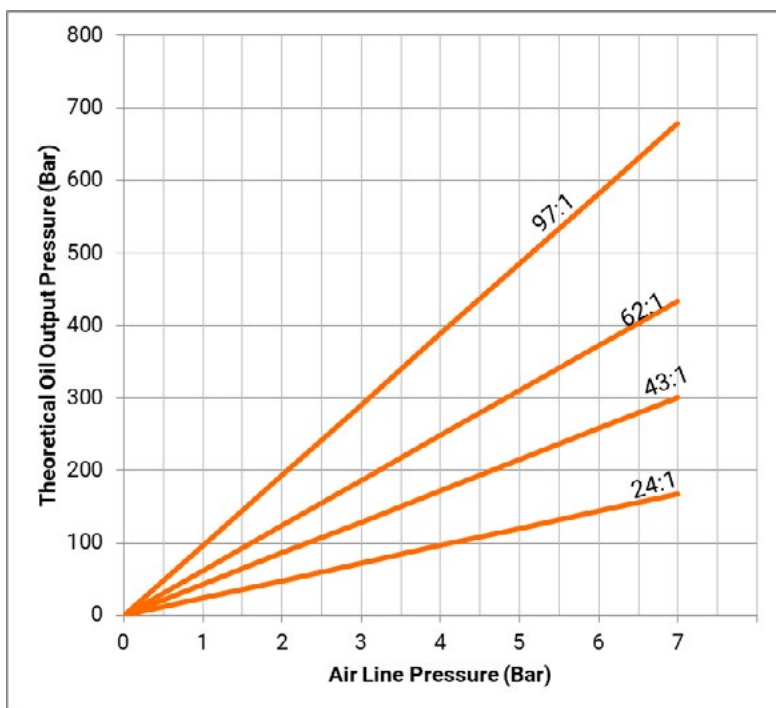
D1 = Air Input 1/2" BSP

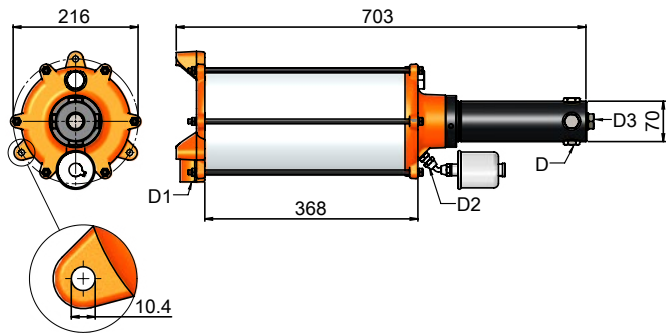
D2 = Oil Input 3/8" BSP

D3 = Oil Output 1/2" BSP

Maximum Stroke = 228.6mm

WDS No.	Max Air Inlet Pressure (Bar)	Max Oil Output Pressure (Bar)	Max Oil Output Volume (cm³)	Ratio	Seal Kit
SF-7820	7	679	116	97:1	SF-78209
SF-7825	7	434	181	62:1	SF-78259
SF-7830	7	301	260	43:1	SF-78309
SF-7835	7	168	463	24:1	SF-78359





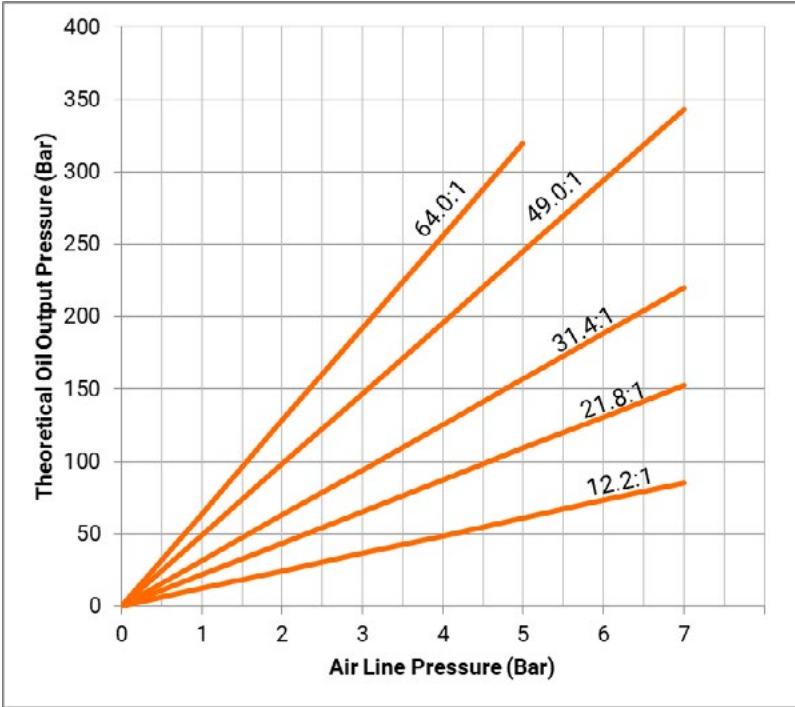
SF-79 PowRlock Zoom-ATC High Volume Air-Oil Booster

High Volume Air-Oil Intensifier

- D = Oil Output 3/8" BSP
- D1 = Air Input 1/2" BSP
- D2 = Oil Input 3/8" BSP
- D3 = Oil Output 1/2" BSP

Maximum Stroke = 228.6mm

WDS No.	Max Air Inlet Pressure (Bar)	Max Oil Output Pressure (Bar)	Max Oil Output Volume (cm³)	Ratio	Seal Kit
SF-7935	5.5	352	88	64.0:1	SF-79359
SF-7940	7	343	116	49.0:1	SF-79409
SF-7950	7	1538	181	31.4:1	SF-79509
SF-7960	7	152	260	21.8:1	SF-79609
SF-7980	7	85	463	12.2:1	SF-79809




SF-23

SF-26/76

SF-78

Booster Seal Kits

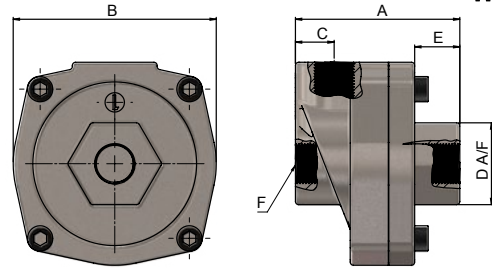
WDS No.	To Suit
SF-23009 - (SF-23)	SF-2300
SF-23509 - (SF-23)	SF-2350
SF-23809 - (SF-23)	SF-2380
SF-26009 - (SF-26)	SF-2600
SF-26109 - (SF-26)	SF-2610
SF-26209 - (SF-26)	SF-2620
SF-26309 - (SF-26)	SF-2630
SF-26409 - (SF-26)	SF-2640
SF-26509 - (SF-26)	SF-2650
SF-26609 - (SF-26)	SF-2660
SF-76359 - (SF-76)	SF-7635A
SF-76409 - (SF-76)	SF-7640A
SF-76509 - (SF-76)	SF-7650A
SF-76609 - (SF-76)	SF-7660A
SF-76809 - (SF-76)	SF-7680A
SF-78209 - (SF-78)	SF-7820
SF-78259 - (SF-78)	SF-7825
SF-78309 - (SF-78)	SF-7830
SF-78359 - (SF-78)	SF-7835



As standard, Spencer Franklin parts are painted orange.

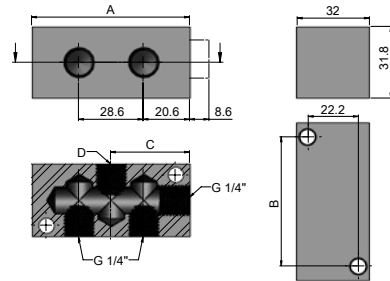
Alternative colours or unpainted parts are available.

Contact us over the phone or email sales@wdscomponents.com



SF-40 Quick Exhaust Valve

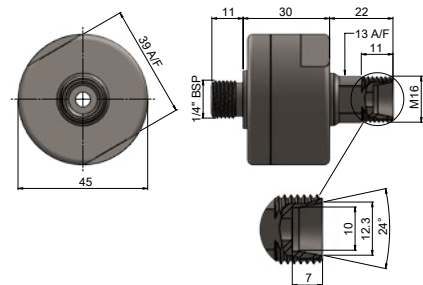
WDS No.	A	B	C	D	E	F	Weight (kg)
SF-4053	53	63	12	25.4	14	1/4" BSP	0.19
SF-4058	53	63	12	25.4	14	3/8" BSP	0.18
SF-4069	73	85	18	38	25	1/2" BSP	0.45



SF-407 PowRlock Manifolds

220M07, Blackodize

WDS No.	A	B	C	D	Ports	Weight (kg)
SF-4071	70	57.2	35	G1/4"	2	0.46
SF-4072	127	114.3	64	G1/2"	4	0.82
SF-4073	184	171.5	92	G1/2"	6	1.21
SF-4074	241	228.6	120	G1/2"	8	1.57



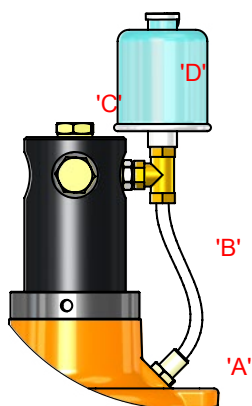
SF-4620 Rotating Coupling

WDS No.	Maximum Speed	Operating Pressure	Test Pressure	Weight (kg)
SF-4620	30 RPM	250 BAR maximum	350 BAR	3.44



PowRlock Self Bleed Booster Reservoir Assembly SF-4957

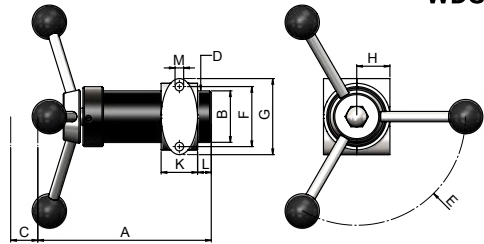
WDS No.	Description	Weight (kg)
SF-4957	Self Bleed Booster Reservoir Assembly	0.35



Fitting Instructions

1. Fitting bleed valve as shown, using the existing bonded washers, Use 1/4" x 3/8" BSP adaptor for intensifiers with 1/4" BSP outlet
2. Remove fitting at 'A' and replace with adaptor supplied (Note! The adaptor has been fitted into top of tee piece for ease of packaging)
3. Fit nylon tube 'B' (cut to suit)
4. Fill intensifier with oil through 'C' and refit plug
5. Fill reservoir 'D' 3/4 full and operate the system
6. The oil level in reservoir 'D' will drop as air in the system escapes
7. When the reservoir level stabilises, fill to 3/4 full
8. The intensifier is now ready to use but the remainder of the system should be bled as well

NOTE! Fit to side port of all SF-2600 and SF-7000 series boosters by fitting the 3/8" BSP Tee directly into booster outlet port. When fitting into the 1/4" BSP port of the SF-2300 and SF2350 boosters a standard SF-4108 male/female adaptor must be fitted to the Tee first

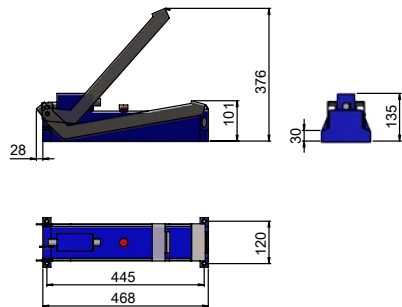


SF-OE00411 & SF-OE00412 Capstan Pumps

Maximum operating Pressure 175 BAR (2500psi)
Supplied with mounting clamp

WDS No.	A	B	C	D	E	F	G	H	J	K	L	M	Clamp Only
SF-OE00411	150.8	50.8	25.4	1/8" BSP	85.7	60.3	82.5	31.75	63.5	44.5	12.7	10.3	SF-OE50010
SF-OE00412	200	60	65	1/4" BSP	131	71.5	91	40	75	45	15	10.3	SF-OE50011

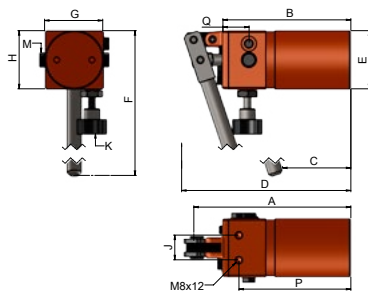
WDS No.	Oil Output for full travel cm³	Output for one turn of Hand Wheel cm³	Weight (kg)
SF-OE00411	25.84	1.84	2.00
SF-OE00412	127.6	2.95	3.74



SF-OE00510 Hydraulic Foot Pump

Oil: Mineral oil type HM ISO VG32
Reservoir must be horizontally mounted
Reservoir capacity 1.5 litres usable
Output per complete cycle 68 cm³

WDS No.	Pressure generated by 300N on pedal (BAR)	Pressure Relief Valve (BAR)	Weight (kg)
SF-OE00510	100	175	2



PowRock Lever Hydraulic Pump SF-OE00690 & SF-OE00691

All ports 1/8" BSP (Seal with copper washer)

K - Release Knob (anti-clockwise to release)

Must be installed with lever mechanism and plunger at the top

Maximum tilt from vertical 30°

Internal relief valve pre-set to 175 kg/cm² - it is adjustable

WDS No.	A	B	C	D	E	F	G	H	J	N	P	Q
SF-OE00690	167.4	135.73	51.15	317.5	64.76	298.45	63.5	63.5	26.98	12.7	117.5	29.4
SF-OE00691	237.49	205.74	127	307.35	64.76	298.45	63.5	63.5	26.98	12.7	187.2	29.4

WDS No.	Displacement per cycle cm ³	Max Pressure kg/cm ²	Normal Operating Pressure kg/cm ²	Oil Capacity cm ³	Seal Kit	Weight kg
SF-OE00690	4.91	175	141	163.87	SF-4405	3.17
SF-OE00691	4.91	175	141	327.74	SF-4405	3.40



HYDRACLAMPS & ACCESSORIES

P 927-936

Hydraclamps are a unique but popular 360 degree work bench clamp. The range includes 10 different styles each with a different clamping action and load capacity.



HYDRACLAMPS

The WDS Hydraclamp is a 360 degree clamping device. Ideal for wood carving, woodworking, tool making, dental training, jewellery making, assembly and repair applications or electrical / circuit board assembly. Each Hydraclamp is unique with models ranging from 6Kg to 750Kg load capacities.

P 927-933



HYDRACLAMP PLATES & ACCESSORIES

WDS offer a selection of accessories for the Hydraclamp range. Steel and aluminium face plates are available for SF-1200M, SF-1310M, SF-1400M & SF-1401M hydraclamps models.

P 934-935

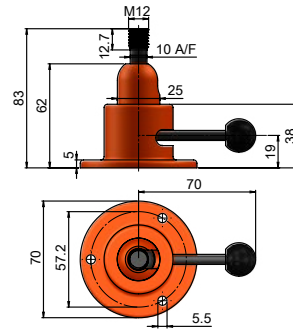


SEAL KITS & O-RINGS FOR HYDRACLAMPS

Maintenance of the hydraclamp is the key ensuring longevity of a unit. Replacement seal kits for SF Hydraclamps are available from stock.

P 936

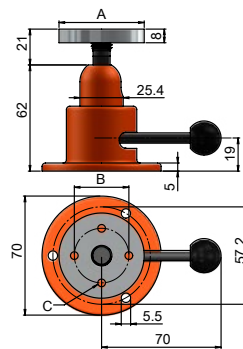




SF-1130 Microclamp

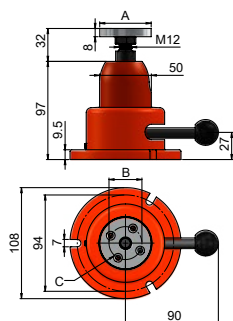
These robust little mechanical clamps have a capacity ample for the light work for which they are intended and are perfect for a variety of duties including -
Small woodworking projects
Electronics
Jewellery

WDS No.	Load Capacity	Weight (kg)
SF-1130	4Nm - 4kg @ 100mm from ball centre	0.34



SF-1130A Microclamp with Face Plate

WDS No.	A	B	C	Load Capacity	Weight (kg)
SF-1130A	50	32	4 off to Suit 4mm Wood Screw	4Nm - 4kg @ 100mm from ball centre	0.38
SF-1130B	75	55	4 off to Suit 4mm Wood Screw	4Nm - 4kg @ 100mm from ball centre	0.43



USE THE HOLES PROVIDED TO
RELEASE OR TIGHTEN THE CLAMP



Woodworking Hydraclamp Miniclamp with Face Plate SF-1200

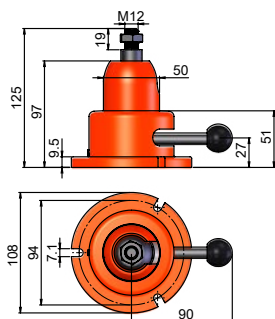
Maximum loading 6kg 300mm from Ball Centre at 45 degrees

The SF-1200 range of Hydraclamp range is by far the best for light wood working and wood carving clamp

One motion of the operating lever locks the work in any desired position.

To reset preload, or adjust handle position, it is only necessary to slacken the adjustment lock screw in the side of the body, reposition the nut plate and lock in required new position.

WDS No.	A	B	C	Weight (kg)
SF-1200A	50	32	4 off to suit 4mm wood screw	1.2
SF-1200B	75	55	4 off to suit 4mm wood screw	1.2
SF-1200C	100	80	4 off to suit 4mm wood screw	1.2
SF-1200D	120	89	6 off to suit #10 wood screw	1.2



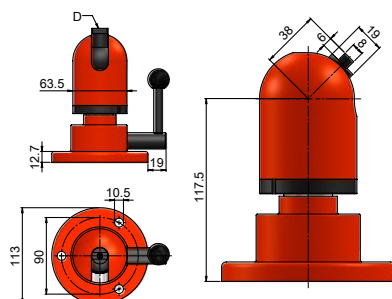
Hydraclamps Miniclamp Woodworking SF-1200M

Maximum loading 6kg 300mm from Ball Centre at 45 degrees

One motion of the operating lever locks the work in any desired position.

To reset preload, or adjust handle position, it is only necessary to slacken the adjustment lock screw in the side of the body, reposition the nut plate and lock in required new position.

WDS No.	Weight (kg)
SF-1200M	1.1

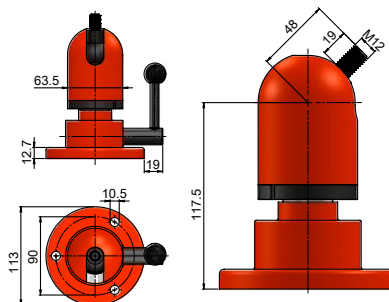


PowRlock Hydraclamps - Short Arm SF-1300M

Maximum loading 13kg 300mm from Ball Centre at 45 degrees

One motion of the operating lever locks the work in any desired position.

WDS No.	D	Weight (kg)
SF-1300M	M6 x 16	3.31



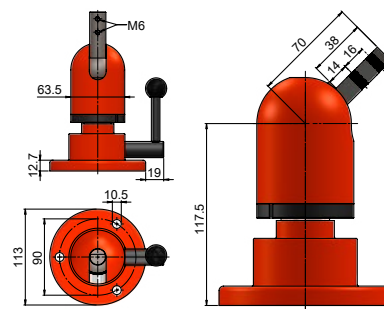
SF-1310M PowRlock Hydraclamps - M12 Short Arm

Maximum loading 13kg 300mm from Ball Centre at 45 degrees

The SF-1310 Hydra Clamp accepts the same faceplate as the SF-1200 range, ideal for the person who is migrating from the SF-1200 range.

One motion of the operating lever locks the work in any desired position.

WDS No.	Weight (kg)
SF-1310M	3.31

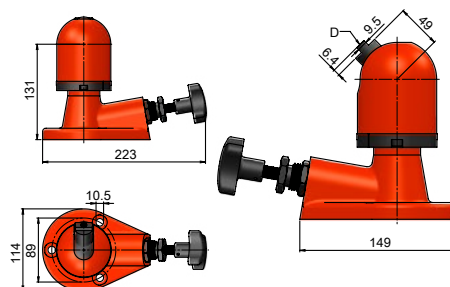


SF-1320M PowRlock Hydraclamps - Long Arm

Maximum loading 13kg 300mm from Ball Centre at 45 degrees

One motion of the operating lever locks the work in any desired position.

WDS No.	Weight (kg)
SF-1320M	3.5

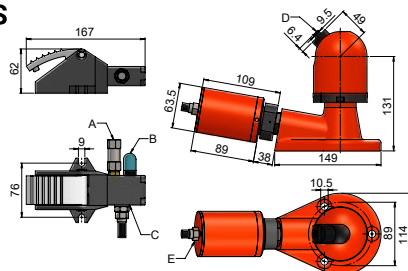


SF-1400M Hydraclamp - Short Arm - Senior Type Hydraulic Operation

Maximum loading 45kg 300mm from Ball Centre at 45 degrees

Pre-load the clamping arm using the locknut and pre-load sleeve.

WDS No.	D	Weight (kg)
SF-1400M	M8 x 1.25	5.5



Hydraclamp Senior Type with Foot Pedal - Short Ball Arm SF-1401M

Hydraulic Operation - Foot operated to allow both hands free to manipulate the workpiece mounted on the Senior Hydraclamp

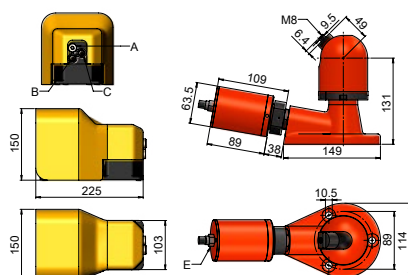
Air-hydraulic booster fitted

Maximum loading 45kg 300mm from Ball Centre at 45 degrees

Pre-load the clamping arm using the locknut and pre-load sleeve

Maximum air input pressure 5.5 BAR

WDS No.	A	B	C	D	E	Weight (kg)
SF-1401M	1/4" BSP Air Output to Hydraclamp	1/4" BSP Silencer	1/4" BSP Air Line Input	M8	1/4" BSP Air Input	5.5



Hydraclamp Senior Type with Safety Pedal - Short Ball Arm SF-1402M

Hydraulic Operation - Foot operated to allow both hands free to manipulate the workpiece mounted on the Senior Hydraclamp

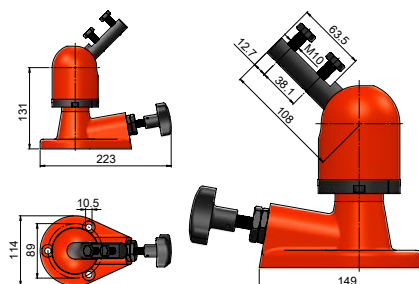
Air-hydraulic booster fitted

Maximum loading 45kg 300mm from Ball Centre at 45 degrees

Pre-load the clamping arm using the locknut and pre-load sleeve

Maximum air input pressure 5.5 BAR

WDS No.	A	B	C	Weight (kg)
SF-1402M	Air Inlet (Use non return valve supplied)	Exhaust	To Hydraclamp	10.5



Hydraclamps - Long Arm - Senior Type Hydraulic Operation SF-1420M

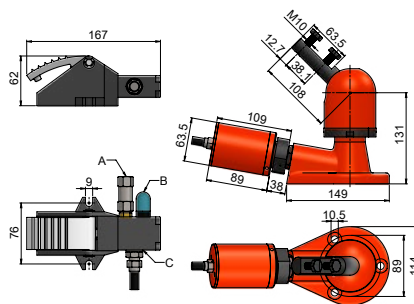
Hydraulic Operation

Maximum loading 45kg 300mm from Ball Centre at 45 degrees

Pre-load the clamping arm using the locknut and pre-load sleeve

For heavier loading see SF-1440M

WDS No.	Weight (kg)
SF-1420M	5.75



SF-1421M Hydraclamp Senior Type with Foot Pedal - Long Ball Arm

Hydraulic Operation - Foot operated to allow both hands free to manipulate the workpiece mounted on the Senior Hydraclamp

Air-hydraulic booster fitted

Maximum loading 45kg 300mm from Ball Centre at 45 degrees

Pre-load the clamping arm using the locknut and pre-load sleeve

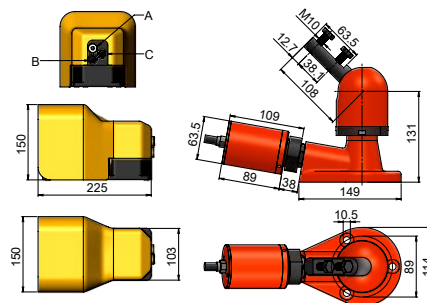
Maximum air input pressure 5.5 BAR

WDS No.

SF-1421M

Weight (kg)

8.6



SF-1422M Hydraclamp Senior Type with Safety Pedal - Long Ball Arm

Hydraulic Operation - Foot operated to allow both hands free to manipulate the workpiece mounted on the Senior Hydraclamp

Air-hydraulic booster fitted

Maximum loading 45kg 300mm from Ball Centre at 45 degrees

Pre-load the clamping arm using the locknut and pre-load sleeve

Maximum air input pressure 5.5 BAR

WDS No.

SF-1422M

A

Air Inlet (Use non return valve supplied)

B

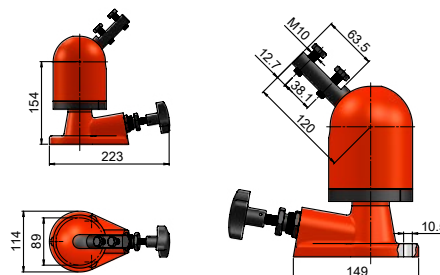
Exhaust

C

To Hydraclamp

Weight (kg)

10.5



SF-1440M PowRlock Hydraclamp - Super Senior Type

Hydraulic Operation

Maximum loading 150kg 300mm from Ball Centre at 45 degrees

Pre-load the clamping arm using the locknut and pre-load sleeve

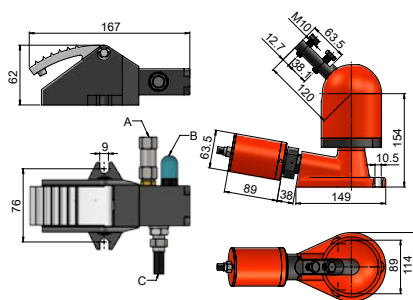
Ideal replacement for the SF-1420M when more strength is required, the base and arm have the same mounting holes

WDS No.

SF-1440M

Weight (kg)

9.7

Hydraclamp Senior Type with Foot Pedal - Long Ball Arm - 150kg Max Loading **SF-1441M**

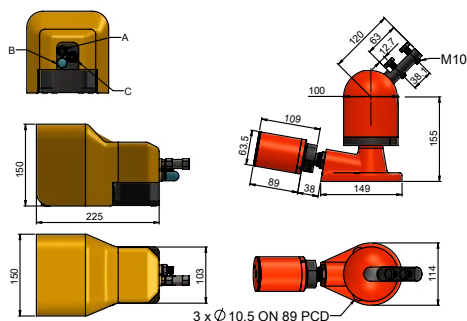
Hydraulic Operation - Foot operated to allow both hands free to manipulate the workpiece mounted on the Senior Hydraclamp

Maximum loading 150kg 300mm from Ball Centre at 45 degrees

Pre-load the clamping arm using the locknut and pre-load sleeve

Maximum air input pressure 5.5 BAR

WDS No.	Weight (kg)
SF-1441M	9.7



Hydraclamp Senior Type with Safety Pedal - Long Ball Arm SF-1442M

Hydraulic Operation - Foot operated to allow both hands free to manipulate the workpiece mounted on the Senior Hydraclamp

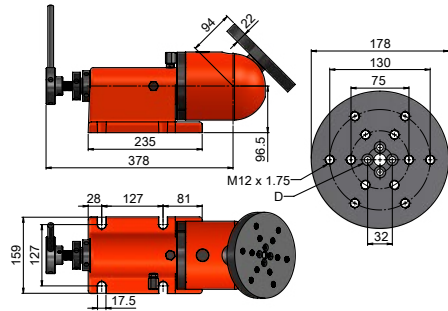
Air-hydraulic booster fitted

Maximum loading 150kg 300mm from Ball Centre at 45 degrees

Pre-load the clamping arm using the locknut and pre-load sleeve

Maximum air input pressure 5.5 BAR

WDS No.	A	B	C	Weight (kg)
SF-1442M	Air Inlet (Use non return valve supplied)	Exhaust	To Hydraclamp	16



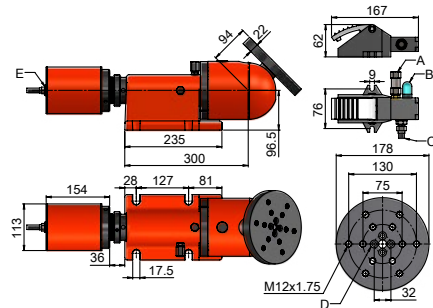
SF-1500M Hydraclamp Major Type

Hydraulic Operation

Maximum loading 325kg 300mm from Ball Centre at 45 degrees

Pre-load the clamping arm using the locknut and pre-load sleeve

WDS No.	D	Weight (kg)
SF-1500M	8.5 Through, 15 C'Bore, 12 Deep	38



SF-1501M Major Hydraclamp Foot Operation

Hydraulic Operation - Foot operated to allow both hands free to manipulate the workpiece mounted on the Senior Hydraclamp

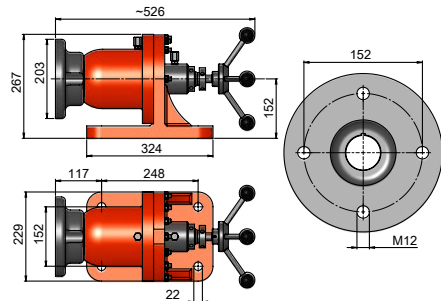
Maximum loading 325kg 300mm from Ball Centre at 45 degrees

Pre-load the clamping arm using the locknut and pre-load sleeve

Air Hydraulic Booster fitted

Maximum air input pressure 5.5 BAR

WDS No.	Weight (kg)
SF-1501M	45



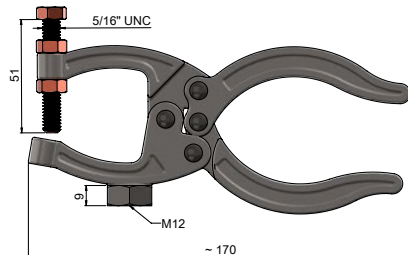
SF-1600M PowRlock Hydraclamp Super Major Type

Maximum loading - 750kg 300mm from Ball Centre at 45 degrees

Pre-load the clamping arm using the locknut and pre-load sleeve

Rotates 360° - No swivel action

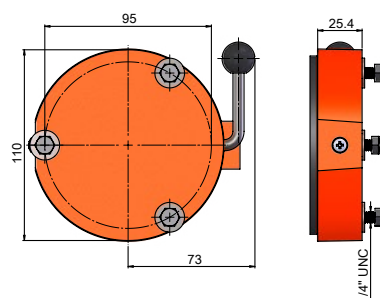
WDS No.	Weight (kg)
SF-1600M	68



Lock Grip Pliers SF-1208M

Instantaneous self-locking pliers making a convenient light vice for small assemblies.
Suitable for SF-1130 & SF-1200

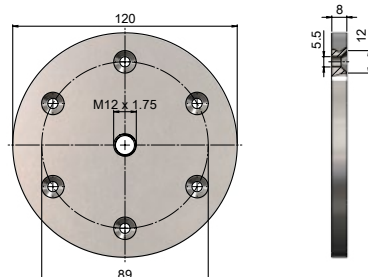
WDS No.	Weight (kg)
SF-1208M	0.32



PowRlock Suction Pad Base SF-1242

Allows the Miniclamp to be fixed rigidly wherever required without drilling and to be moved instantly to any position. Height 29mm
Suitable for SF-1200

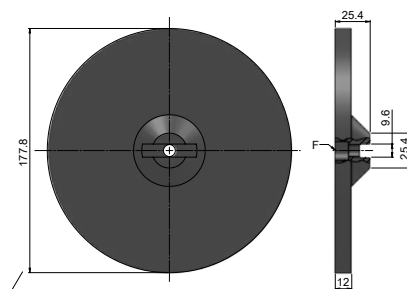
WDS No.	Weight (kg)
SF-1242	0.45



Face Plate for SF-1200M SF-1310M SF-1276

220M07 Chemical Black Finish
Ideal for Woodworking applications

WDS No.	Weight (kg)
SF-1242	0.69

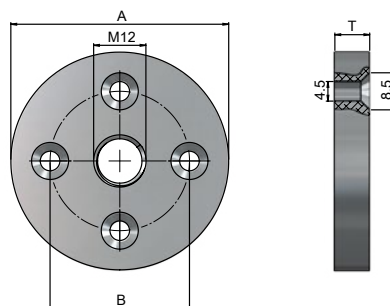


SF-1405M Face Plate for SF-1400M & SF-1401M

178mm DIA FACE PLATE Type SF1405M

This is the most useful general purpose adaptor for the use either as a direct holder for work or as a suitable base on which to mount an existing fixture.

WDS No.	F	To Suit Hydraclamp	Weight (kg)
SF-1405M	To suit M8 capscrew	SF-1400M & SF-1401M	2.55

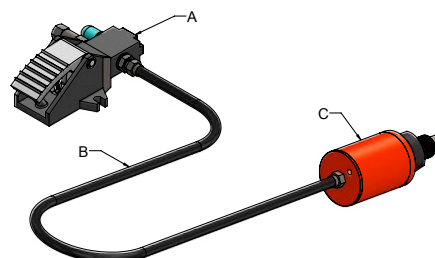


SF-1279 Face Plate for SF-1200M SF-1310M - Aluminium

Aluminium

Ideal for Woodworking applications

WDS No.	A	B	T	Weight (kg)
SF-1279A	50	32	8	0.04
SF-1279B	75	55	8	0.09
SF-1279C	100	80	8	0.17



SF-4801 Foot Operation Conversion Kit for SF-1400M SF-1420M SF-1440M

Conversion kit to convert manual operated hydraclamps to foot operated

SF-1400M to SF-1401M

SF-1420M to SF-1421M

SF-1440M to SF-1441M

WDS No.	A	B	C	Weight (kg)
SF-4801	Foot Pedal	Hydraulic Hose	Booster to fit Hydraclamps	3



SF-4776



SF-4777



SF-4778

Hydraclamp Seal Kits

WDS No.	To Suit
SF-4776	SF-1400M
SF-4776	SF-1420M
SF-4776	SF-1440M
SF-4776	SF-1401M
SF-4776	SF-1421M
SF-4776	SF-1441M
SF-4777	SF-1490
SF-4778	SF-1500M



As standard, Spencer Franklin parts are painted orange.
 Alternative colours or unpainted parts are available.
 Contact us over the phone or email sales@wdscomponents.com



HYDRAULIC CLAMPS AND CYLINDERS

P 939-942

Spencer Franklin hydraulic clamps and clamping cylinders are excellent for actuated clamping systems where repeated yet controlled clamping, punching and piercing actions are required.



SINGLE & DOUBLE ACTING HYDRAULIC CYLINDERS

Hydraulic double acting cylinders use oil pressure to apply a clamping force to a workpiece requiring a booster to actuate the application of pressure. Single acting hydraulic cylinders use a spring return action to release the clamping force.

P 939



HYDRAULIC SWING LINEAR & SLIDE CLAMPS

The WDS Spencer Franklin range includes hydraulic clamps with swing, linear & hydraulic slide clamping variants.

A Spencer Franklin swing clamp can be adjusted to either clockwise or anti-clockwise movement. The arm automatically swings to clamping position when pressure is applied to the inlet port and automatically returns once pressure is released.

P 940-941

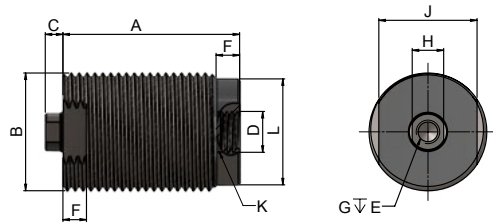


HYDRAULIC HOLLOW CYLINDERS

WDS open ram heads available with bore sizes from 8mm to 31mm, in both single and double acting.

P 942



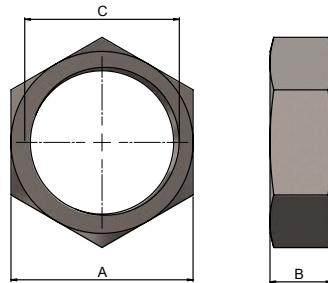


SF-53 Threaded Clamping Cylinders - Single Acting

The ram end is designed to take a removable contact bolt, to give allow customer to customise end fitting
 Caution! Do Not Exceed Maximum Stroke

WDS No.	A	B	C	D (BSP)	E	F	G	H a/f	J a/f	K a/f	L	Max Stroke	Ram Dia	Weight (kg)
SF-5300A	47	M20x1.5	10	1/8"	10	5	M6x1.0	10	17	17	-	5	13.8	0.15
SF-5350	95	M24X2.0	12	1/8"	10	5	M6x1.0	13	22	22	-	15	16	0.35
SF-536230	94	M30x2.0	5	3/8"	12	6	M8x1.25	9	25	25	27	30	12	0.41
SF-536340	118	M45x3.0	7	3/8"	20	8	M12x1.75	16	40	40	41	40	20	1.08
SF-536430	125	M64x4.0	10	1/2"	30	10	M20x1.5	25	58	56	58	30	32	1.95
SF-536455	172	M64x4.0	10	1/2"	30	10	M20x1.5	25	58	56	58	55	32	2.85
SF-536545	209	M100x4.0	10	1/2"	40	10	M30x2.0	38	92	92	95	45	50	8.05
SF-536570	282	M100x4.0	10	1/2"	40	10	M30x2.0	38	92	92	95	70	50	11.2

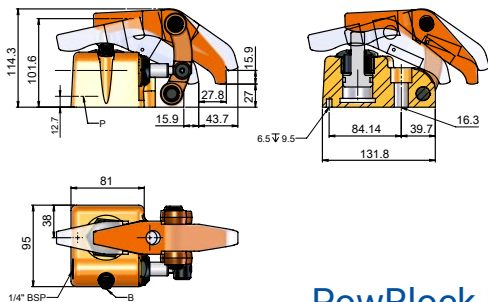
WDS No.	Clamping force @ 275 BAR kN	Effective Area cm ²	Swept Volume cm ³
SF-5300A	4.2	1.53	0.78
SF-5350	5.5	2.00	3.00
SF-536230	8.5	3.14	9.42
SF-536340	22	8.04	32.16
SF-536430	54	19.63	58.89
SF-536455	54	19.63	107.99
SF-536545	138	50.26	226.17
SF-536570	138	50.26	351.82



SF-L Nut for Single Acting Threaded Clamping Cylinders

Steel

WDS No.	A	B	C	Weight (kg)
SF-LRM45300	63 DIA	18	M45x3.0	0.45



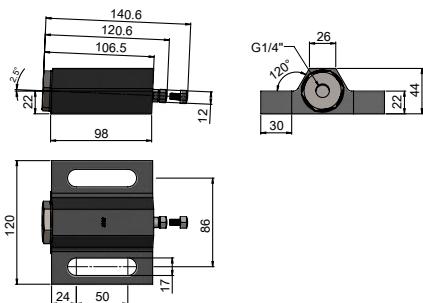
PowRlock Hydraulic PowRslide Clamps **SF-3850A**

B = Bleed Screw

P = Position of second port on SF-3960 only 1/4" BSP

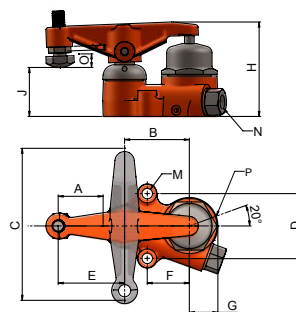
Maximum working oil pressure 210 Bar

WDS No.	Effective Area cm ²	Ports	Swept Volume cm ³	Vertical Stroke	Seal Kit	Weight (kg)
SF-3850A	9.55	Single	23	15.88	SF-3899	5.1
SF-3960A	9.55	Twin	23	15.88	SF-3899	5.2



PowRlock Hydraulic Low Line Clamps **SF-5389**

WDS No.	Effective Area cm ²	Max Operating Pressure BAR	Return Spring Rate kgf/mm	Spring Load as fitted	Swept Volume cm ³	Thrust at 510 BAR	Seal Kit	Weight (kg)
SF-5389	4.9	510	0.52	9.88 kg	9.8	25kN	SF-53899	2.2



SF-58 PowRlock Hydraulic Swing Clamps - 4kN Clamping Force

The swing clamps can be adjusted to swing either clockwise or anti-clockwise. It is supplied to swing clockwise

Arm automatically swings into clamping position when pressure is applied at the input port

A minimum working pressure of 90 BAR is required to operate the lamp after the arm is positioned

P = Position of second port on SF-5850 only -1/4" BSP

WDS No.	A	B	C	D	E	F	G	H	J	K	L	M	N	Weight (kg)
SF-5800	40.5	63.5	149.34	63.5	63.5	41.3	28.5	95	50.8	20.6	1/2"-20-UNF	10.32	1/4" BSP	2.5
SF-5850	40.5	63.5	149.34	63.5	63.5	41.3	28.5	95	50.8	20.6	1/2"-20-UNF	10.32	1/4" BSP	2.4

WDS No.	Vertical Clamp	Swept Volume cm ³	Clamp Force at 138 BAR	Max Oil Input Pressure BAR	Minimum Pressure BAR	Seal Kit
SF-5800	6.35	3.93	4.0kN	170	90	SF-4325
SF-5850	6.35	3.93	4.0kN	170	90	SF-4325

SF-59 PowRlock Hydraulic Swing Clamps - 15kN Clamping Force

The swing clamps can be adjusted to swing either clockwise or anti-clockwise. It is supplied to swing clockwise

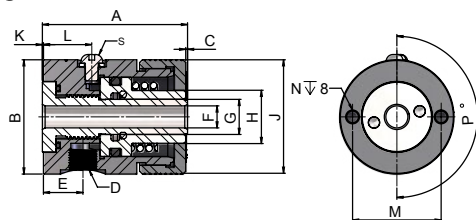
Arm automatically swings into clamping position when pressure is applied at the input port

A minimum working pressure of 90 BAR is required to operate the lamp after the arm is positioned

P = Position of second port on SF-5950 only -1/4" BSP

WDS No.	A	B	C	D	E	F	G	H	J	K	L	M	N	O	Weight (kg)
SF-5900	57.15	88.9	203.2	88.9	88.9	63.5	46	138.11	71.05	38.1	1/2"-20-UNF	16.7	1/4" BSP	11	7.3
SF-5950	57.15	88.9	203.2	88.9	88.9	63.5	46	138.11	71.05	38.1	1/2"-20-UNF	16.7	1/4" BSP	11	7.3

WDS No.	Vertical Clamp	Swept Volume cm ³	Clamp Force at 138 BAR	Max Oil Input Pressure BAR	Minimum Pressure BAR	Seal Kit
SF-5900	11	20	15kN	170	90	SF-4326
SF-5950	11	20	15kN	170	90	SF-4326



Single Acting or Spring Return Hollow Cylinders SF-340

Max Operating Pressure = 275 BAR (4000 P.S.I.)

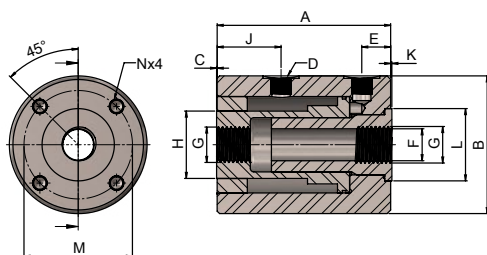
Theoretical Thrust (N) = Oil Pressure (bar) x Effective Area (cm²)

External Stop must be used with spring return version

P = Position of bleed screw

WDS No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Weight (kg)
SF-3401	52.4	41.15	0.76	1/8 BSP	14.27	8.33	12.7	19.1	41.66	0.25	15.62	32	M5x0.8	180°	0.43
SF-3402	82.6	63.5	0.76	1/4 BSP	22	17.45	25.4	38.1	66.7	0.25	24.4	50	M6x1.0	180°	1.11
SF-3403	55.6	63.5	0.76	1/4 BSP	12	17.45	25.4	38.1	66.7	0.25	15.0	50	M6x1.0	45°	1.65
SF-3404	127.7	63.5	0.76	1/4 BSP	22	17.45	25.4	38.1	66.7	0.25	22.0	50	M6x1.0	180°	2.61
SF-3405	127.7	63.5	0.76	1/4 BSP	11	17.45	25.4	38.1	66.7	0.25	15.8	44.5	M6x1.0	180°	2.51
SF-3406	97.8	79.38	0.76	1/4 BSP	25	25.78	36.5	50.8	92.1	0.25	30.5	65	M6x1.0	180°	3.18
SF-3407	96.2	88.9	0.76	1/4 BSP	25	25.78	36.5	60.3	101.6	0.25	30.5	65	M6x1.0	180°	3.86
SF-3408	143	100	-	3/8 BSP	24	31.00	45.0	60.3	115.0	-	-	70	M6x1.0	N/A	8.65

WDS No.	Effective Area cm ²	Stroke with Spring	Stroke without Spring	Swept volume with Spring cm ³	Swept Volume without Spring cm ³	Weight with Spring (kg)	Weight without Spring (kg)
SF-3401	5.16	6.35	15.49	3.28	8.0	0.43	0.4
SF-3402	12.7	15.75	31.24	20.5	40.0	1.5	1.45
SF-3403	12.7	7.87	18.03	10.5	22.9	0.91	0.86
SF-3404	12.7	38.1	63.5	48.7	81.1	2.6	2.5
SF-3405	12.7	39.4	82.5	50.3	105.0	3.91	3.75
SF-3406	21.1	17.02	31.75	33.4	67.3	3.18	3.13
SF-3407	31.4	13.46	39.97	42.3	94.4	3.86	3.74
SF-3408	34.3	19.00	60.00	54.9	206.0	8.65	8.48



Double Acting Hollow Cylinders SF-342

Max Operating Pressure = 275 BAR

Theoretical Thrust (N) = Oil Pressure (bar) x Effective Area (cm²)

Other strokes are available on request

WDS No.	A	B	C	D	E	F	G	H	J	K	L	M	N	Stroke	Weight (kg)
SF-3421	63	47	0.5	1/8 BSP	11	6.8	M8x1.25x15	16	27	1	18 f7	32	M5x0.8x10	8	0.75
SF-3422	85	65	0.5	1/4 BSP	13	10.2	M12x1.75x18	25	34	1	33 f7	50	M10x1.5x15	15	1.88
SF-3523	94	80	0.5	1/4 BSP	14	17.5	M20x12.5x18	35	36	1	40 f7	56	M10x1.5x15	20	3.04
SF-3424	110	95	0.5	3/8 BSP	17	21.0	M24X3.0x25	45	40	1	50 f7	78	M12x1.75x20	25	0
SF-3425	144	114.3	0.5	3/8 BSG	20	26.5	M30x3.5x28	56	53	1	60 f7	90	M12x1.75x20	50	0



HYDRAULIC RAM HEADS

P 945-950

WDS offers an extensive range of hydraulic rams and ram heads as part of its Spencer Franklin PowRlock brand.

Models include standard hydraulic rams, extended rams and open and hollow rams.



HYDRAULIC MINI RAM HEADS

Hydraulic mini ram heads offer the user actuated clamping control on a smaller scale than the larger standard hydraulic rams.

P 945



HYDRAULIC OPEN HOLLOW RAM HEADS

Spencer Franklin hydraulic open ram heads or hollow ram heads as they are also known are available from stock.

P 946-948

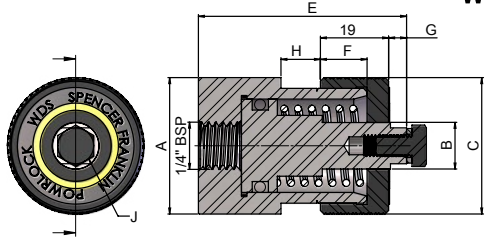


POWRAM HYDRAULIC RAM HEADS

WDS offer an exclusive range of hydraulic rams and ram heads in the form of the PowRlock and PowRam brand. The range includes button head rams and extended ram heads available from stock.

P 949-950

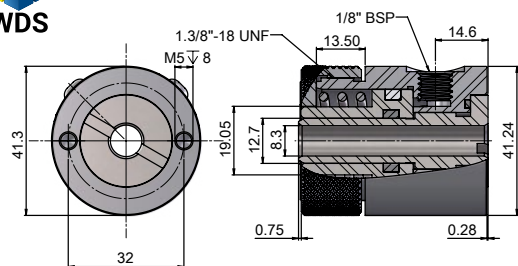




SF-5000A PowRlock Mini Ram Heads

*Caution - Do not exceed Maximum Stroke.

WDS No.	A	B	C	D	E	F	G	H	J	Effective Area cm ²	Stroke	Swept volume cm ³	Seal Kit	Weight (kg)
SF-5000A	38	13	38	32	58	13	5	11	M6x1.0	5.31	12.5	6.64	SF-5099	0.36
SF-5100A	38	13	38	32	83	13	5	36	M6x1.0	5.31	25	13.28	SF-5099	0.45

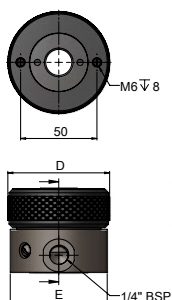


PowRlock OpenRam Midget Head SF-3000MF

*Caution - Do not exceed Maximum Stroke

Mounting - To include these heads in a fixture it is only necessary to mount them over 8mm diam. studs or bolts via the hole through the centre of each head.

WDS No.	Effective Area cm ²	Stroke with Spring	Stroke without Spring	Swept volume with Spring cm ³	Swept volume without Spring cm ³	Seal Kit	Weight with Spring (kg)	Weight without Spring (kg)
SF-3000MF	5.16	6.35	15.49	3.28	8.03	SF-3099	0.43	0.4



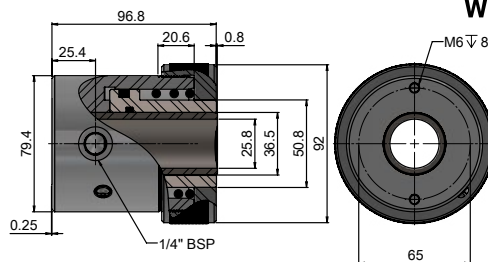
PowRlock OpenRam Head SF-3100MF

*Caution - Do not exceed Maximum Stroke

Mounting - To include these heads in a fixture it is only necessary to mount them over 16mm dia. studs or bolts via the hold through the centre of each head.

WDS No.	A	B	C	D	E	F	G	H	J	K
SF-3100MF	17.46	25.4	38.1	66.68	63.5	11.11	55.56	0.25	1.76	19.84
SF-3200MF	17.46	25.4	38.1	66.68	63.5	22.23	82.55	0.25	1.76	19.84
SF-3300MF	17.46	25.4	38.1	66.68	63.5	19.05	127.8	0.25	1.76	17.46

WDS No.	Effective Area cm ²	Stroke with Spring	Stroke without Spring	Swept volume with Spring cm ³	Swept volume without Spring cm ³	Seal Kit	Weight with Spring (kg)	Weight without Spring (kg)
SF-3100MF	12.77	7.87	18.03	10.49	22.94	SF-3199	0.91	0.86
SF-3200MF	12.77	15.75	31.24	20.48	39.98	SF-3199	1.5	1.45
SF-3300MF	12.77	38.1	63.5	48.68	81.12	SF-3199	2.61	2.5

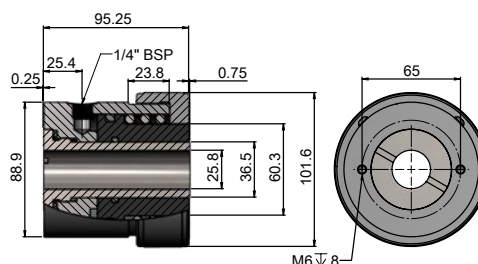


SF-5500 PowRlock OpenRam Five-Ton Head

* Caution - Do not exceed Maximum Stroke.

Mounting - To include these heads in a fixture, it is only necessary to mount them over 25mm dia. studs or bolts via the hole through the centre of each head.

WDS No.	Effective Area cm ²	Stroke with Spring	Stroke without Spring	Swept volume with Spring cm ³	Swept volume without Spring cm ³	Seal Kit	Weight with Spring (kg)	Weight without Spring (kg)
SF-5500	21.23	17.02	31.75	33.44	67.35	SF-5599	3.18	3.13

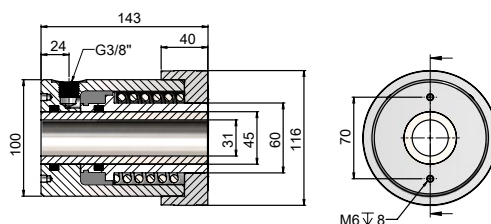


SF-5700 PowRlock OpenRam Seven-Ton Head

* Caution - Do not exceed Maximum Stroke.

Mounting - To include these heads in a fixture, it is only necessary to mount them over 25mm dia. studs or bolts via the hole through the centre of each head.

WDS No.	Effective Area cm ²	Stroke with Spring	Stroke without Spring	Swept volume with Spring cm ³	Swept volume without Spring cm ³	Seal Kit	Weight with Spring (kg)	Weight without Spring (kg)
SF-5700	31.42	13.46	29.97	42.29	94.39	SF-5799	3.86	3.74

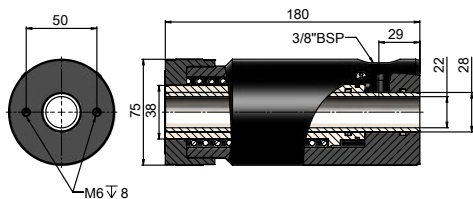


SF-6080A PowRlock OpenRam Heads

* Caution - Do not exceed Maximum Stroke.

Mounting - To include these heads in a fixture, it is only necessary to mount them over 30mm dia. studs or bolts via the hole through the centre of each head.

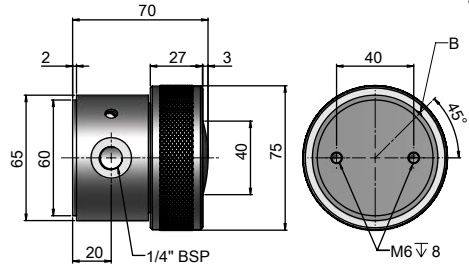
WDS No.	Effective Area cm ²	Stroke with Spring	Stroke without Spring	Swept volume with Spring cm ³	Swept volume without Spring cm ³	Seal Kit	Weight with Spring (kg)	Weight without Spring (kg)
SF-6080A	35.36	16	60	54.97	206.2	SF-4376	8.65	8.48



PowRlock OpenRam Superstroke Head SF-6120A

Mounting - To include these heads in a fixture it is only necessary to mount them over 20mm diam. studs or bolts via the hole through the centre of each head.

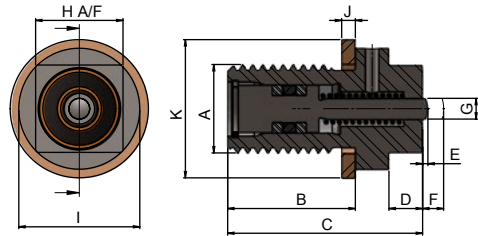
WDS No.	Effective Area cm ²	Stroke with Spring	Stroke without Spring	Swept volume with Spring cm ³	Swept volume without Spring cm ³	Seal Kit	Weight (kg)
SF-6120A	13.47	44	100	59.27	134.7	SF-4377	4.84



SF-3520 PowRlock PowRam Head

*Caution - Do not exceed Maximum Stroke
Mounting - To include these heads in a fixture it is only necessary to retain them in position by the 2 tapped holes in the rear location, allowing the back face of each head to react against a rigid face.
B = Bleed Screw

WDS No.	Effective Area cm²	Stroke	Swept Volume cm³	Seal Kit	Weight (kg)
SF-3520	19.64	15	29.46	SF-4413	1.6

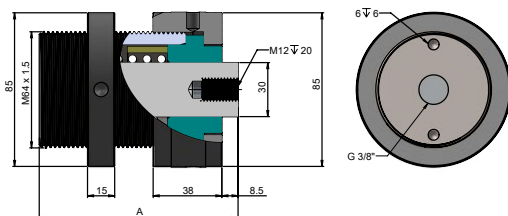


SF-537 PowRlock Button Heads

MAXIMUM OPERATING PRESSURE 350 BAR
*Caution - Do not exceed Maximum Stroke

WDS No.	A	B	C	D	E	F	G	H	I	J	K	Seal Kit	Weight (Kg)
SF-5370	G 1/4"	19	29	4	0.6	3.6	3.1	13	18	2.03	20.57	SF-53709	0.03
SF-5371	M16x1.5	23	33	5	0.7	4.7	4	17	21.5	2.03	23.8	SF-53719	0.03
SF-5372	G 3/8"	23	33	5	0.7	4.7	4	17	21.5	2.03	23.8	SF-53729	0.05
SF-5373	M20x1.5	23	36	6	0.39	6.9	6	19	25.4	2.34	28.58	SF-43739	0.05
SF-5374	G 1/2"	23	36	6	0.9	6.9	6	19	25.4	2.34	28.58	SF-53749	0.06
SF-5375	M24x1.5	27	40	6	1	9	8	22	28.8	2	33	SF-53759	0.125
SF-5376	G 1"	32	50	9	1.3	11.3	10	32	39.4	3.25	42.8	SF-53769	0.13
SF-5377	M36x1.5	41	59	9	1.6	13.6	12	32	42	2.5	48	SF-53779	0.42

WDS No.	Clamping Fore at 300 BAR kN	Effective Area cm²	Max Stroke	Swept volume cm³
SF-5370	1.2	0.4	3	0.12
SF-5371	1.9	0.63	4	0.25
SF-5372	1.9	0.63	4	0.25
SF-5373	4.6	1.54	6	0.92
SF-5374	4.6	1.54	6	0.92
SF-5375	6.8	2.27	8	1.81
SF-5376	11.4	3.8	10	3.8
SF-5377	14.7	4.9	12	5.88



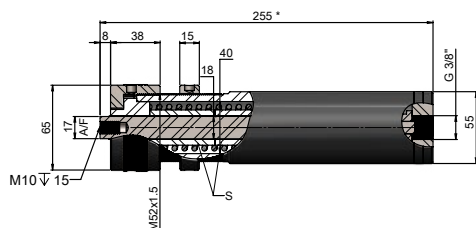
PowRlock PowRam Head SF-66

MAXIMUM OPERATING PRESSURE 350 BAR

*Caution - Do not exceed Maximum Stroke.

Please note for SF-6680A - Overall closed length = 160mm

WDS No.	'A' Closed Length	Effective Area cm²	Max Stroke with Spring	Stroke without Spring	Swept volume with Spring cm³	Swept volume without Spring cm³	Seal Kit	Weight with Spring (kg)	Weight without Spring (kg)
SF-6600A	110	19.6	10	30	19.6	58.8	SF-4379	3.12	2.89
SF-6680A	160	19.6	30	80	58.8	156.8	SF-4379	3.87	3.46

Extended PowRlock PowerRam Head **SF-6960A**

MAXIMUM OPERATING PRESSURE 350 BAR

*Caution - Do not exceed Maximum Stroke.

Please note - If this unit is to be used without Return Spring, at least one Spacer must remain fitted.

WDS No.	Effective Area cm ²	Max Stroke with Spring	Stroke without Spring	Swept volume with Spring cm ³	Swept volume without Spring cm ³	Seal Kit	Weight with Spring (kg)	Weight without Spring (kg)
SF-6960A	12.57	70	120	89.25	153	SF-4378	3.8	3.52



PNEUMATICS & AIR PREPARATION EQUIPMENT

P 953-964

The high performance yet cost effective range of pneumatic and air preparation equipment includes: Filter Regulators & Lubricator Units, Pneumatic Valves, Pneumatic Fittings, Pneumatic Tube and Mounting Brackets



FILTERS REGULATORS & LUBRICATOR UNITS

The filter regulator lubricator units are flexible, modular compressed air preparation kits also known as FRL Units. These units remove dust & debris, control the pressure & flow and add an oil mist to the supply of air.

P 953-954



PNEUMATIC VALVES & CONTROL VALVES

Pneumatic valves are a simple method of controlling the flow of system pressure. This makes them an essential component of any pneumatic system.

P 955-957



PNEUMATIC CONNECTORS & TUBE FITTINGS

Pneumatic tube fittings and connectors range includes plastic and steel zinc plated push fit connectors and threaded plugs and adapters.

P 958-962



PNEUMATIC TUBE & TUBING

The WDS PU blue pneumatic tubing is available from stock at 10, 20 and 40 metre lengths. Other longer lengths are available upon request

P 963

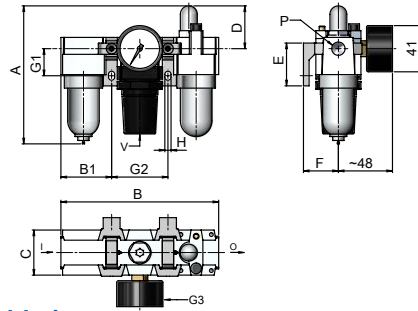


FRL MOUNTING BRACKETS

This range of brackets is ideal for mounting filter, regulator and lubricator units to any application.

P 964

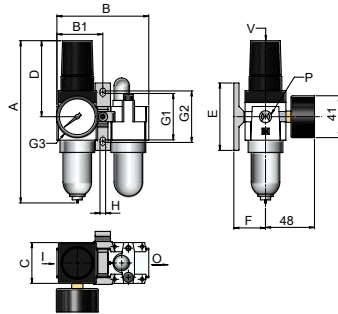




SF-15000 Air Filter Regulator & Lubricator Units

0.05-0.85 Mpa
Operating Temp: 5-60°C
G3 = Pressure Gauge, I = Input, O = Output, V = Adjusting Valve

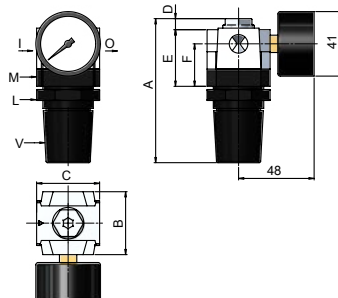
WDS No	A	B	B1	C	D	E	F	G1	G2	H	P	Weight (kg)
SF-15000-0202105	123	140	45	40	38	37.5	30	24	50	6	G 1/4"	0.64



SF-15000 Compact Air Filter Regulator and Lubricator Unit (FRL)

0.05 - 0.85 Mpa
Operating Temp: 5-60°C
G3 = Pressure Gauge, I = Input, O = Output, V = Adjusting Valve

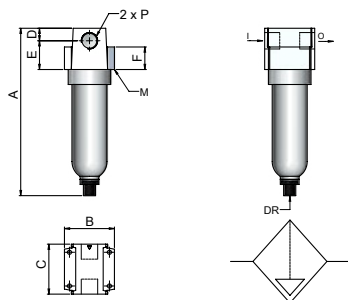
WDS No.	A	B	B1	C	D	E	F	G1	G2	H	P	Weight (kg)
15000-0202110	91.5	90	45	40	74.5	65	30	45.5	50.5	6	G 1/4"	0.54



SF-15000 Pneumatic Air Regulators

0.05 - 0.85 Mpa
Operating Temp: 5-60°C
I = Input, L = Locking Nut, O = Output, M = Mounting Face, V = Adjusting Valve
Bracket = SF-15010-100, Supplied

WDS No.	A	B	C	D	E	F	P	Weight (kg)
SF-15000-0202115	91.5	40	40	7	36	27	G 1/4"	0.7



Pneumatic Air Prep Filter **SF-15000**

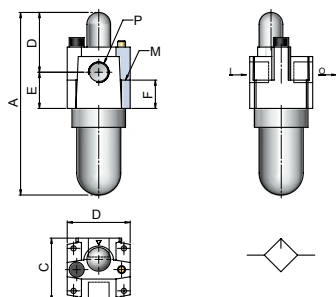
0.05 - 0.85 Mpa

Operating Temp: 5-60°C

DR = Drain, I = Input, M = Bracket Mounting Face, O = Output

Bracket = SF-15010-105 Available separately

WDS No.	A	B	C	D	E	F	P	Weight (kg)
SF-15000-0202120	134	40	40	10	23	18	G 1/4"	0.19



Pneumatic Lubricator **SF-15000**

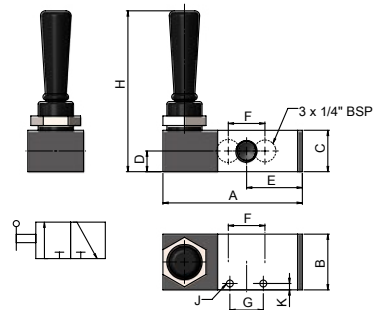
0.05 - 0.85 Mpa

Operating Temp: 5-60°C

I = Input, M = Bracket Mounting Face, O = Output

Bracket = SF-15010-105 Available separately

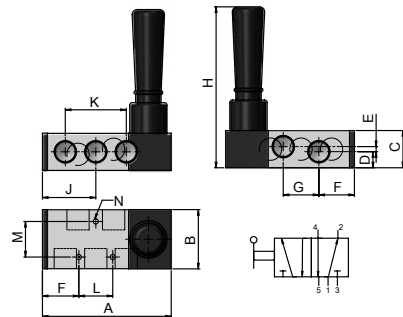
WDS No.	A	B	C	D	E	F	P	Weight (kg)
SF-15000-0202125	116	40	40	38	23	18	G 1/4"	0.16



SF-15030 Hand Valve 3-2 Without Spring

0.0-1.0MPa

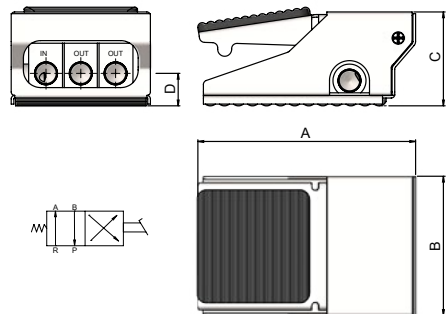
WDS No.	A	B	C	D	E	F	G	H	J	K	Weight (kg)
SF-15030-0202205	87.5	35	26	13	35	23	21	101	4.3	4	0.22



SF-15030 Hand Valve 5-2 With Spring

0.0-1.0MPa

WDS No.	A	B	C	D	E	F	G	H	J	K	L	M	N	Weight (kg)
SF-15030-0202210	76	35	22	9.5	3	21	21	95	31.5	36	20	21	21	0.18

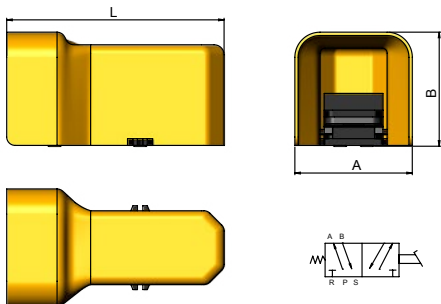


SF-15040 Foot Valve

2 Position/4 Way

1/4\"

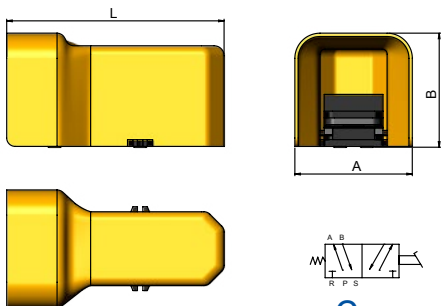
WDS No.	A	B	C	D	Weight (kg)
SF-15040-02100	125	54	80	19	0.7



Covered Foot Valve **SF-15040**

2 Position/5 Way
1/4" BSP
Non locking type

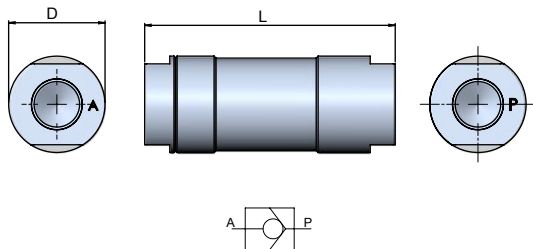
WDS No.	A	B	L	Weight (kg)
SF-15040-02115	140	136	260	0.9



Covered With Safety Catch Foot Valve **SF-15040**

2 Position/5 Way
1/4" BSP
Locking type

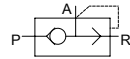
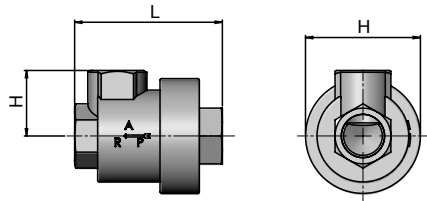
WDS No.	A	B	L	Weight (kg)
SF-15040-02115	140	136	260	0.9



Check Valve - One Way Valve **SF-15050**

Restricts flow to one direction only
1/4 BSP

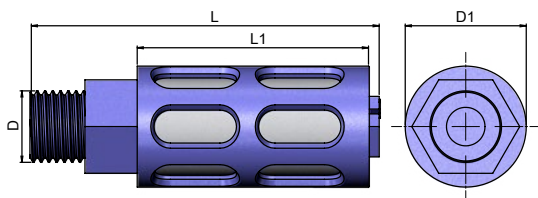
WDS No.	D	L	Weight (kg)
SF-15050-02100	25	65	0.06



SF-15050 Pneumatic Quick Exhaust

1/4 BSP
Recommend use of silencer SF-15050-02200 with this product

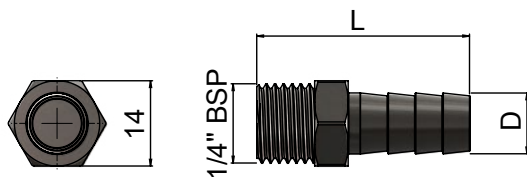
WDS No.	D	H	L	Weight (kg)
SF-15050-02250	35	20	45	0.1



Silencer SF-15050

1/4" BSP

WDS No.	D	D1	L	L1	Weight (kg)
SF-15050-02200	1/4" BSP	22	63	42	0.01

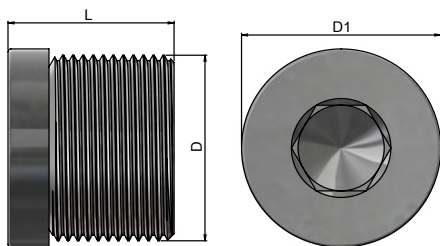


ZP

Barb Fitting SF-15050

Steel - Zinc Plated
To suit 10mm pipe

WDS No.	D	L	Weight (kg)
SF-15050-02300	10	35	0.01

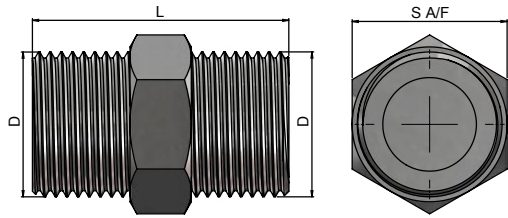


ZP

Blanking Plug SF-15060

Steel - Zinc Plated
To suit 10mm pipe

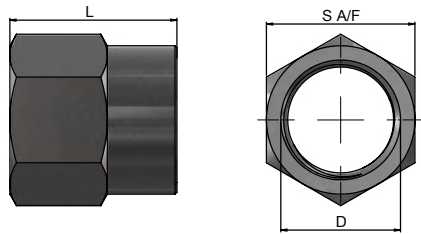
WDS No.	D	D1	L	Weight (kg)
SF-15060-0100155	1/4" BSP	14	12	0.01



SF-15060 Male-Male Pneumatics Connectors

1/4 BSP

WDS No.	D	L	S A/F	Weight (kg)
SF-15060-0202145	1/4" BSP	23	14	0.01

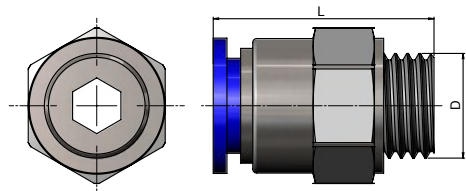


SF-15060 Female-Female Pneumatic Connectors

1/4 BSP

WDS No.	D	L	S A/F	Weight (kg)
SF-15060-0202150	1/4" BSP	18	17	0.02

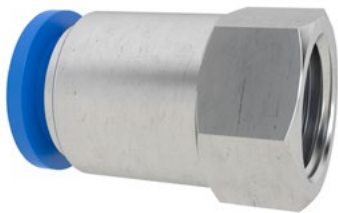
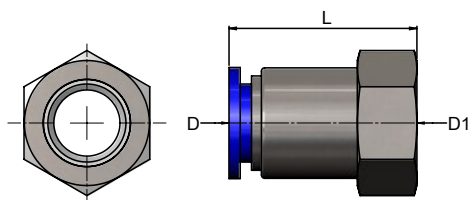
ZP



SF-15060 Straight Connector 1/4 BSP 10MM Tube - Male Threaded

Steel - Zinc Plated
To suit 1/4" BSP and 10mm tube

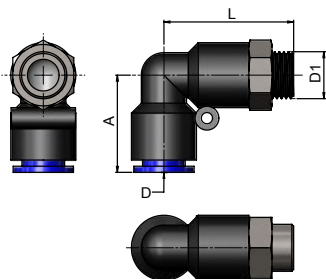
WDS No.	D	L	Weight (kg)
SF-15060-0210130	1/4" BSP	27.5	0.02



Straight Connectors 1/4 BSP 10MM Tube - Female Thread **SF-15060**

Steel - Zinc Plated
To suit 1/4" BSP and 10mm tube

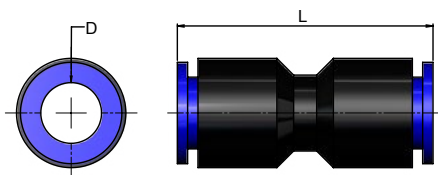
WDS No.	D	D1	L	Weight (kg)
SF-15060-0210135	10	1/4" BSP	28.5	0.03



Elbow Connector 1/4" BSP 10MM Tube **SF-15060**

Plastic
To suit 10mm tube

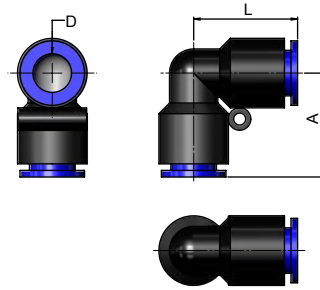
WDS No.	A	D	D1	L	Weight (kg)
SF-15060-0210140	27	10	1/4" BSP	36	0.03



Straight Connector 10MM Tube **SF-15060**

Plastic
To suit 10mm tube

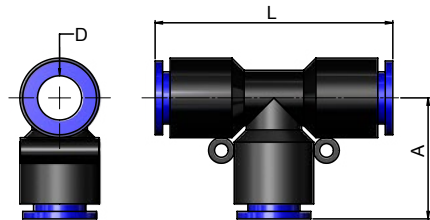
WDS No.	D	L	Weight (kg)
SF-15060-1010100	10	42	0.01



SF-15060 Plastic Elbow Connector 10MM Tube

Plastic
To suit 10mm tube

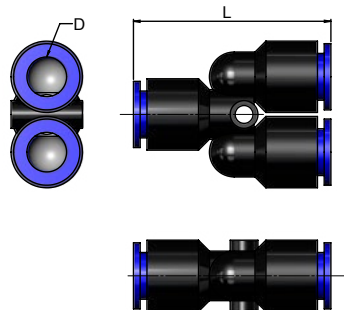
WDS No.	A	D	L	Weight (kg)
SF-15060-1010105	27	10	27	0.01



SF-15060 Tee Plastic Connector 10MM Tube

Plastic
To suit 10mm tube

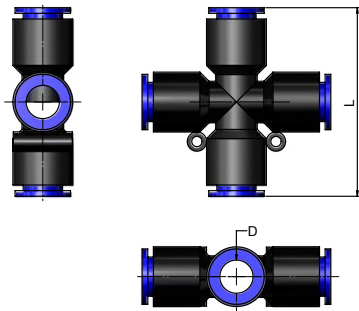
WDS No.	A	D	L	Weight (kg)
SF-15060-1010110	27.5	10	54	0.02



SF-15060 3 Way Connector 10MM Tube

Plastic
To suit 10mm tube

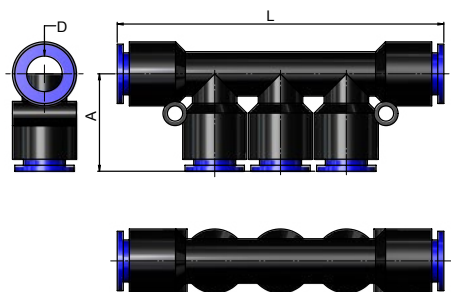
WDS No.	D	L	Weight (kg)
SF-15060-1010115	10	50	0.02



4 Way Connector 10MM Tube **SF-15060**

Plastic
To suit 10mm tube

WDS No.	D	L	Weight (kg)
SF-15060-1010120	10	57	0.03



5 Way Connector 10MM Tube **SF-15060**

Plastic
To suit 10mm tube

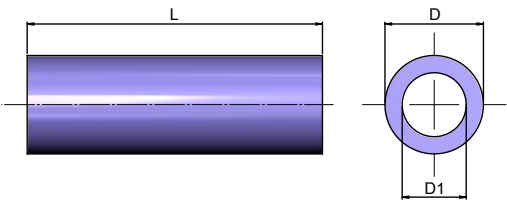
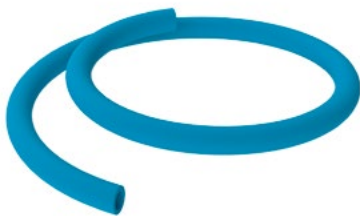
WDS No.	A	D	L	Weight (kg)
SF-15060-1010125	27.5	10	93	0.04



SF-15090 Tube Cutter

Blue pneumatic tube cutter - suitable to cut SF-15100 tubing
Plastic

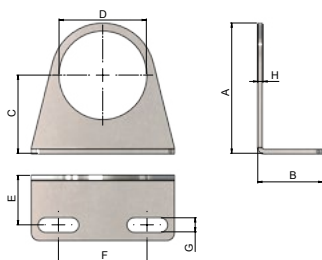
WDS No.	Weight (kg)
SF-15090-100	0.04



SF-15100 Pneumatic & Air Prep Tube

Tube, 10mm OD x 6.5mmID
PU Blue

WDS No.	D (mm)	D1 (mm)	L (m)	Weight (kg)
SF-15100-10010	10	6.5	10	0.1
SF-15100-10020	10	6.5	20	0.1
SF-15100-10040	10	6.5	40	0.2

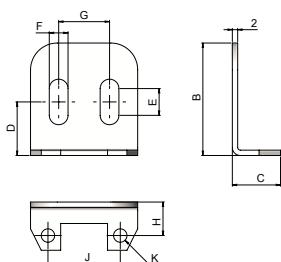


ZP

Bracket SF-15010

Mild Steel-Zinc plated

WDS No.	A	B	C	D	E	F	G	H	Weight (kg)
SF-15010-100	50	25	30	33.5	19	34	5.4	2	0.03

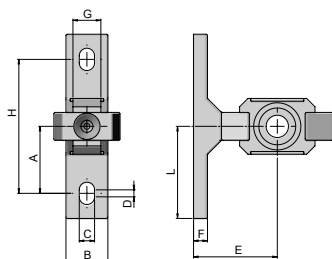


ZP

Bracket For Regulator Unit SF-15010

Mild Steel-Zinc plated

WDS No.	A	B	C	D	E	F	G	H	J	K	Weight (kg)
SF-15010-105	40	42	18	20	10	7	19	12.5	27	5	0.03

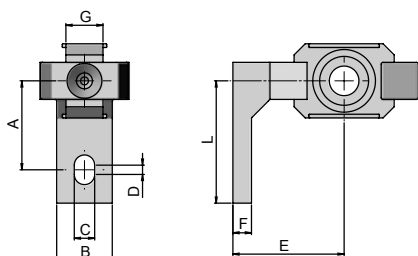


ZP

T Bracket & Spacer SF-15020

Mild Steel-Zinc plated

WDS No.	A	B	C	D	E	F	G	H	L	Weight (kg)
SF-15020-100	24	15	5.5	3	30	5	10	47	33	0.04



ZP

L Bracket & Spacer SF-15020

Mild Steel-Zinc plated

WDS No.	A	B	C	D	E	F	G	L	Weight (kg)
SF-15020-105	24	15	5.5	3	30	5	10	33	0.05



PRODUCTION & BROACHING

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BROACHING & BROACHES

P 969-996

WDS is the home of Marloco Broaches, broaching equipment and tools. The range includes keyway broaches, square broaches, hexagon broaches and notch broaches. Originally W.H. Marley & Co Ltd the Marloco brand of broaching is high quality and is well respected in the industry.

WDS can provide a number of individual broaches and broaching kits as well as heavy duty broaching presses.



KEYWAY BROACHES

WDS Marloco keyway broaches are teeth cutting push broaches. Available in two styles, Litecut and Hevicut in imperial (inch) and metric sizes. This range of broaches is available as boxed sets or individual items.

P 969-990



NOTCH BROACHING

Notch broaching equipment allows the user to cut a perfect "V" or "U" shaped notches into metal or plastic bar. Using a fixture, broach and a suitable press these simple and accurate tools allow the user to produce simple and accurate Izod and Charpy notches.

This notch broaching equipment is used for tensile testing of ferrous and non-ferrous materials such as plastics.

P 992



SQUARE & HEXAGON BROACHES

The Marloco range of square push broaches are ideal for cutting accurate square forms in metal products simply using a pilot hole and required broach. Hexagon broaches allow the user to cut accurate hex shape forms into metal products. The hexagon shape can be used on hand wheels to allow accurate locating.

P 993-995



BROACHING OIL & ACCESSORIES

WDS supply broaching oil in handy one litre containers.

P 996





Part	Size	Part No.	Quantity supplied
	2	6021-202	1
	3	6021-203	1
	4	6021-204	1
	6	6031-206	1
	7	6031-207	1
	8	6031-208	1
	10	6031-210	1
	12	6031-212	1
	0.25	6041-2025	1
	0.50	6041-2050	1
	0.75	6041-2075	2

WDS 6001 Marlco Keyway Broach Sets - Lite Cut - Metric

This broach set is supplied in a box and consists of - 3 broaches, 5 guides, 4 shims.

This broach set is available for Parallel Keyways.

For individual broaches, guides and shims, see WDS 6021 to WDS 6041.

WDS No.	Description	Weight (kg)
6001	Marlco Keyway Broach Sets - Lite Cut - Metric Version	0.92



Part	Size	Part No.	Quantity supplied
	4	6022-204	1
	5	6022-205	1
	6	6022-206	1
	8	6022-208	1
	12	6032-212	1
	14	6032-214	1
	16	6032-216	1
	18	6032-218	1
	20	6032-220	1
	22	6032-222	1
	25	6032-225	1
	28	6032-228	1
	30	6032-230	1
	0.25	6042-2025	1
	0.50	6042-2050	1
	0.75	6042-2075	4

WDS 6002 Marlco Keyway Broach Sets - Lite Cut - Metric

This broach set is supplied in a box and consists of - 4 broaches, 9 guides, 6 shims.

This broach set is available for Parallel Keyways.

For individual broaches, guides and shims, see WDS 6022 to WDS 6042.

WDS No.	Description	Weight (kg)
6002	Marlco Keyway Broach Sets - Lite Cut - Metric Version	3

Part	Size	Part No.	Quantity supplied
	8	6023-208	1
	10	6032-210	1
	12	6032-212	1
	14	6032-214	1
	30	6033-230	1
	32	6033-232	1
	35	6033-235	1
	38	6033-238	1
	40	6033-240	1
	45	6033-245	1
	48	6033-248	1
	50	6033-250	1
	0.25	6043-2025	1
	0.50	6043-2050	1
	0.75	6043-2075	1
	1.25	6043-2125	4
	-	6093-01	1



Marlco Keyway Broach Sets - Lite Cut - Metric WDS 6003

This broach set is supplied in a box and consists of - 4 broaches, 8 guides, 7 shims and an extension shank.

This broach set is available for Parallel Keyways.

For individual broaches, guides and shims, see WDS 6023 to WDS 6043.

WDS No.	Description	Weight (kg)
6003	Marlco Keyway Broach Sets - Lite Cut - Metric Version	12.8

Part	Size	Part No.	Quantity supplied
	16	6024-216	1
	18	6024-218	1
	52	6034-252	1
	55	6034-255	1
	58	6034-258	1
	60	6034-260	1
	62	6034-262	1
	65	6034-265	1
	0.50	6044-2050	2
	0.75	6044-2075	1
	1.25	6044-2125	3
	-	6094-01	1



Marlco Keyway Broach Sets - Lite Cut - Metric WDS 6004

This broach set is supplied in a box and consists of - 2 broaches, 6 guides, 6 shims and an extension shank.

This broach set is available for Parallel Keyways.

For individual broaches, guides and shims, see WDS 6024 to WDS 6044.

WDS No.	Description	Weight (kg)
6004	Marlco Keyway Broach Sets - Lite Cut - Metric Version	17.3



Part	Size	Part No.	Quantity supplied
	20	6025-220	1
	25	6025-225	1
	70	6035-270	1
	75	6035-275	1
	90	6035-290	1
	95	6035-295	1
	0.50	6045-2050	2
	0.75	6045-2075	9
	Backing	6045-BS	1
	-	6094-01	1

WDS 6005 Marlo Keyway Broach Sets - Lite Cut - Metric

This broach set is supplied in a box and consists of - 2 broaches, 4 guides, 12 shims and an extension shank.

The backing shim supplied is used on all passes.

The other shims are placed behind this to protect them from high frictional loads.

This broach set is available for Parallel Keyways.

For individual broaches, guides and shims, see WDS 6025 to WDS 6045.

WDS No.	Description	Weight (kg)
6005	Marlo Keyway Broach Sets - Lite Cut - Metric Version	35



Part	Size	Part No.	Quantity supplied
	1/16"	6061-01	1
	3/32"	6061-015	1
	1/8"	6061-02	1
	1/4"	6071-04	1
	5/16"	6071-05	1
	3/8"	6071-06	1
	7/16"	6071-07	1
	1/2"	6071-08	1
	0.010"	6081-01	1
	0.020"	6081-02	1
	0.030"	6081-03	1

WDS 6011 Marlo Keyway Broach Sets - Lite Cut - Inch

This broach set is supplied in a box and consists of - 3 broaches, 5 guides, 3 shims.

This broach set is available for Parallel Keyways.

For individual broaches, guides and shims, see WDS 6061 to WDS 6081.

WDS No.	Description	Weight (kg)
6011	Marlo Keyway Broach Sets - Lite Cut - Inch Version	0.92

Part	Size	Part No.	Quantity supplied
	1/8"	6062-02	1
	3/16"	6062-03	1
	1/4"	6062-04	1
	5/16"	6072-05	1
	1/2"	6072-8	1
	5/8"	6072-10	1
	3/4"	6072-12	1
	7/8"	6072-14	1
	1"	6072-16	1
	1.1/8"	6072-18	1
	1.1/4"	6072-20	1
	0.010"	6082-01	1
	0.020"	6082-02	1
	0.030"	6083-03	1



Marlco Keyway Broach Sets - Lite Cut - Inch **WDS 6012**

This broach set is supplied in a box and consists of - 4 broaches, 7 guides, 7 shims.

This broach set is available for Parallel Keyways.

For individual broaches, guides and shims, see WDS 6062 to WDS 6082.

WDS No.	Description	Weight (kg)
6012	Marlco Keyway Broach Sets - Lite Cut - Inch Version	3

Part	Size	Part No.	Quantity supplied
	5/16"	6063-05	1
	3/8"	6063-06	1
	7/16"	6063-07	1
	1/2"	6063-08	1
	1.1/8"	6073-18	1
	1.1/4"	6073-20	1
	1.3/8"	6073-22	1
	1.1/2"	6073-24	1
	1.5/8"	6073-26	1
	1.3/4"	6073-28	1
	1.7/8"	6073-30	1
	2"	6073-32	1
	0.010"	6083-01	1
	0.020"	6083-02	1
	0.030"	6083-03	1
	0.050"	6083-05	4
	-	6093-01	1



Marlco Keyway Broach Sets - Lite Cut - Inch **WDS 6013**

This broach set is supplied in a box and consists of - 4 broaches, 8 guides, 7 shims and an extension shank.

This broach set is available for Parallel Keyways.

For individual broaches, guides and shims, see WDS 6063 to WDS 6083.

WDS No.	Description	Weight (kg)
6013	Marlco Keyway Broach Sets - Lite Cut - Inch Version	12.8



Part	Size	Part No.	Quantity supplied
	5/8"	6064-10	1
	3/4"	6064-12	1
	2.1/8"	6074-34	1
	2.1/4"	6074-36	1
	2.3/8"	6074-38	1
	2.1/2"	6074-40	1
	2.3/4"	6074-44	1
	3"	6074-48	1
	0.020"	6084-02	1
	0.030"	6084-03	2
	0.050"	6084-05	7
	-	6094-01	1

WDS 6014 Marlco Keyway Broach Sets - Lite Cut - Inch

This broach set is supplied in a box and consists of - 2 broaches, 6 guides, 10 shims and an extension shank.

This broach set is available for Parallel Keyways.

For individual broaches, guides and shims, see WDS 6064 to WDS 6084.

WDS No.	Description	Weight (kg)
6014	Marlco Keyway Broach Sets - Lite Cut - Inch Version	17.3



Part	Size	Part No.	Quantity supplied
	7/8"	6065-14	1
	1"	6065-16	1
	3.1/4"	6075-52	1
	3.1/2"	6075-56	1
	3.3/4"	6075-60	1
	4"	6075-64	1
	0.020"	6085-02	2
	0.030"	6085-03	15
	Backing	6082-BS	1
	-	6094-01	1

WDS 6015 Marlco Keyway Broach Sets - Lite Cut - Inch

This broach set is supplied in a box and consists of - 2 broaches, 4 guides, 18 shims and an extension shank.

The backing shim supplied is used on all passes. The other shims are placed behind this

to protect them from high frictional loads.

This broach set is available for Parallel Keyways.

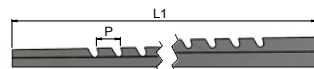
For individual broaches, guides and shims, see WDS 6065 to WDS 6082.

WDS No.	Description	Weight (kg)
6015	Marlco Keyway Broach Sets - Lite Cut - Inch Version	35



HEVICUT BROACH SETS

For the full range of Hevicut Broach Sets please see pages **981-986**



B1 = Nominal size of broach

B2 = Keyway width/tolerance

B3 = Keyway broach body width

F = Approx. load per tooth cutting mild steel

L1 = O/all length of broach

L2 = Length of cut

P = Pitch of teeth

R = No. of passes

S = No. of shims x thickness

T = Depth of keyway on centre line

Litecut Broaches supplied with T Shape Shim

WDS 6021 Marlo Keyway Broaches - Litecut Metric L0M Broach Style

M2 grade HSS

Broaches are supplied complete with the necessary shims to cut keyways to standard depth.

Metric	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6021-202S	2	2.000/2.012	4.2	45	152	25.5	10.2	5.1	1	-	1.05	0.02
6021-203S	3	3.000/3.012	4.2	55	152	25.5	10.2	5.1	2	1 x 0.75	1.45	0.02
6021-204S	4	4.000/4.015	4.2	60	152	25.5	10.2	5.1	3	2 x 0.75	1.85	0.03

WDS 6061 Marlo Keyway Broaches - Litecut Inch L0 Broach Style

Inch	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6061-015S	3/32	0.095/0.097	5/32	54	6	0.40	1.00	0.20	2	1 x 0.02	0.060	0.02
6061-01S	1/16	0.063/0.065	5/32	36	6	0.40	1.00	0.20	1	-	0.045	0.02
6061-025S	5/32	0.156/0.157	5/32	86	6	0.40	1.00	0.20	3	1 x 0.03 1 x 0.01	0.075	0.03
6061-02S	1/8	0.126/0.128	5/32	70	6	0.40	1.00	0.20	3	1 x 0.03 1 x 0.01	0.075	0.03

WDS 6022 Marlo Keyway Broaches - Litecut Metric L1M Broach Style

M2 grade HSS

Broaches are supplied complete with the necessary shims to cut keyways to standard depth.

* For broaches WDS 6022-203S and WDS 6022-204S, use both shims for the first pass of broach.

Metric	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6022-203S	3	3.000/3.012	8.25	65	203	54	18.2	9.1	3	1 x 0.25 2 x 0.75 *	1.85	0.1
6022-204S	4	4.000/4.015	8.25	85	203	54	18.2	9.1	3	1 x 0.25 2 x 0.75 *	1.85	0.11
6022-205S	5	5.000/5.015	8.25	90	203	54	18.2	9.1	4	3 x 0.75	2.35	0.11
6022-206S	6	6.000/6.015	8.25	130	203	54	18.2	9.1	5	3 x 0.75 1 x 0.50	2.85	0.11
6022-207S	7	7.000/7.018	8.25	150	203	54	18.2	9.1	6	4 x 0.75 1 x 0.25	3.4	0.12
6022-208S	8	8.000/8.018	8.25	170	203	54	18.2	9.1	6	4 x 0.75 1 x 0.25	3.4	0.12

WDS 6062 Marlo Keyway Broaches - Litecut Inch L1 Broach Style

Inch	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6062-025S	5/32	0.156/0.157	5/16	86	8	2.13	0.72	0.36	4	3 x 0.03	0.091	0.1
6062-02S	1/8	0.125/0.126	5/16	68	8	2.13	0.72	0.36	3	2 x 0.03	0.063	0.1
6062-03S	3/16	0.188/0.189	5/16	105	8	2.13	0.72	0.36	4	3 x 0.03	0.091	0.1
6062-04S	1/4	0.250/0.251	5/16	135	8	2.13	0.72	0.36	5	4 x 0.03	0.118	0.11
6062-05S	5/16	0.312/0.313	5/16	170	8	2.13	0.72	0.36	6	5 x 0.03	0.145	0.12



Marlco Keyway Broaches - Litecut Metric L2M Broach Style **WDS 6023**

M2 grade HSS

Broaches are supplied complete with the necessary shims to cut keyways to standard depth.
This Broach style requires the use of an extension shank which should be ordered separately. See WDS 6093-01

Metric	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6023-206S	6	6.000/6.015	14.3	150	305	104	31.8	15.9	4	2 x 1.25 1 x 0.75	3.4	0.7
6023-208S	8	8.000/8.018	14.3	200	305	104	31.8	15.9	4	2 x 1.25 1 x 0.75	3.4	0.7
6023-210S	10	10.000/10.018	14.3	250	305	104	31.8	15.9	4	2 x 1.25 1 x 0.75	3.4	0.74
6023-212S	12	12.000/12.021	14.3	300	305	104	31.8	15.9	4	2 x 1.25 1 x 0.75	3.4	0.76
6023-214S	14	14.000/14.021	14.3	350	305	104	31.8	15.9	4	3 x 1.25	3.9	0.76

Marlco Keyway Broaches - Litecut Inch L2 Broach Style **WDS 6063**

Inch	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6063-05S	5/16	0.312/0.313	9/16	200	12	4.13	1.25	0.63	4	2 x 0.05 1 x 0.03	0.145	0.72
6063-06S	3/8	0.375/0.376	9/16	240	12	4.13	1.25	0.63	4	3 x 0.05	0.172	0.72
6063-07S	7/16	0.438/0.439	9/16	280	12	4.13	1.25	0.63	5	3 x 0.05 1 x 0.03	0.200	0.75
6063-08S	1/2	0.500/0.501	9/16	320	12	4.13	1.25	0.63	6	4 x 0.05 1 x 0.02	0.227	0.75

Marlco Keyway Broaches - Litecut Metric L3M Broach Style **WDS 6024**

M2 grade HSS *Use both shims together.

Broaches are supplied complete with the necessary shims to cut keyways to standard depth.
This Broach style requires the use of an extension shank which should be ordered separately. See WDS 6094-01

Metric	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6024-216S	16	16.000/16.021	19.05	400	305	104	31.8	15.9	5	3 x 1.25 2 x 0.50 *	4.4	1.25
6024-218S	18	18.000/18.021	19.05	450	305	104	31.8	15.9	5	3 x 1.25 2 x 0.50 *	4.5	1.25

Marlco Keyway Broaches - Litecut Inch L3 Broach Style **WDS 6064**

Inch	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6064-10S	5/8	0.625/0.626	3/4	400	12	4.13	1.25	0.63	7	5 x 0.05 2 x 0.02 *	0.281	1.25
6064-12S	3/4	0.750/0.751	3/4	475	12	4.13	1.25	0.63	8	7 x 0.05	0.336	1.75

Marlco Keyway Broaches - Litecut Metric L4M Broach Style **WDS 6025**

M2 grade HSS

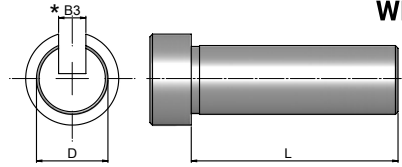
Broaches are supplied complete with the necessary shims to cut keyways to standard depth.
This Broach style requires the use of an extension shank which should be ordered separately. See WDS 6095-01.
A backing shim is also required and should be ordered separately - see WDS 6045-BS.
The backing shim is placed in front of the other shims to protect them from high frictional loads.

Metric	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6025-220S	20	20.000/20.026	25.4	360	380	152	38	19	10	7 x 0.75 2 x 0.50	5.0	2.25
6025-222S	22	22.000/22.026	25.4	390	380	152	38	19	10	9 x 0.75	5.5	2.25
6025-224S	24	24.000/24.026	25.4	430	380	152	38	19	10	9 x 0.75	5.5	2.25
6025-225S	25	25.000/25.026	25.4	450	380	152	38	19	10	9 x 0.75	5.5	2.25

Marlco Keyway Broaches - Litecut Inch L4 Broach Style **WDS 6065**

A backing shim is also required and should be ordered separately - see WDS 6085-BS.
The backing shim is placed in front of the other shims to protect them from high frictional loads.

Inch	B	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6065-14S	7/8	0.875/0.876	1	400	15	6.00	1.50	0.75	16	13 x 0.03 2 x 0.02	0.390	2.5
6065-16S	1	1.000/1.001	1	450	15	6.00	1.50	0.75	18	15 x 0.03 2 x 0.02	0.445	2.5



★ See relevant broach for B3 dimension

Steel (220MO7), Machined finish
All guides are headed
Guides listed are for parallel keyways

WDS 6031 Marlco Keyway Broaching Guides - Litecut Metric to suit L0M Broach Style

Metric	B3	D	L	Weight (kg)
6031-206	4.2	6	32	0.01
6031-207	4.2	7	32	0.01
6031-208	4.2	8	32	0.01
6031-209	4.2	9	32	0.02
6031-210	4.2	10	32	0.02
6031-211	4.2	11	32	0.03
6031-212	4.2	12	32	0.03

WDS 6071 Marlco Keyway Broaching Guides - Litecut Inch to suit L0 Broach Style

Inch	B3	D	L	Weight (kg)
6071-04	5/32	1/4	1 1/4	0.01
6071-05	5/32	5/16	1 1/4	0.01
6071-06	5/32	3/8	1 1/4	0.02
6071-07	5/32	7/16	1 1/4	0.03
6071-08	5/32	1/2	1 1/4	0.03

WDS 6032 Marlco Keyway Broaching Guides - Litecut Metric to suit L1M Broach Style

Metric	B3	D	L	Weight (kg)
6032-212	8.25	12	32	0.03
6032-214	8.25	14	57	0.03
6032-216	8.25	16	57	0.05
6032-218	8.25	18	57	0.07
6032-220	8.25	20	57	0.1
6032-222	8.25	22	57	0.14
6032-225	8.25	25	57	0.22
6032-228	8.25	28	57	0.28
6032-230	8.25	30	57	0.34

WDS 6072 Marlco Keyway Broaching Guides - Litecut Inch to suit L1 Broach Style

Inch	B3	D	L	Weight (kg)
6072-08	5/16	1/2	2 1/4	0.02
6072-09	5/16	9/16	2 1/4	0.03
6072-10	5/16	5/8	2 1/4	0.05
6072-12	5/16	3/4	2 1/4	0.09
6072-14	5/16	7/8	2 1/4	0.15
6072-16	5/16	1	2 1/4	0.22
6072-18	5/16	1 1/8	2 1/4	0.25
6072-20	5/16	1 1/4	2 1/4	0.36



Marlco Keyway Broaching Guides - Litecut Metric to suit L2M Broach Style **WDS 6033**

Metric	B3	D	L	Weight (kg)
6033-228	14.3	28	108	0.16
6033-230	14.3	30	108	0.21
6033-232	14.3	32	108	0.28
6033-235	14.3	35	108	0.41
6033-238	14.3	38	108	0.56
6033-240	14.3	40	108	0.65
6033-242	14.3	42	108	0.8
6033-245	14.3	45	108	1.25
6033-248	14.3	48	108	1.41
6033-250	14.3	50	108	1.5

Marlco Keyway Broaching Guides - Litecut Inch to suit L2 Broach Style **WDS 6073**

Inch	B3	D	L	Weight (kg)
6073-18	9/16	1 1/8	4 1/4	0.17
6073-20	9/16	1 1/4	4 1/4	0.21
6073-22	9/16	1 3/8	4 1/4	0.41
6073-24	9/16	1 1/2	4 1/4	0.57
6073-26	9/16	1 5/8	4 1/4	0.76
6073-28	9/16	1 3/4	4 1/4	1
6073-30	9/16	1 7/8	4 1/4	1.25
6073-32	9/16	2	4 1/4	1.5

Marlco Keyway Broaching Guides - Litecut Metric to suit L3M Broach Style **WDS 6034**

Metric	B3	D	L	Weight (kg)
6034-252	19.05	52	108	1.5
6034-255	19.05	55	108	1.75
6034-258	19.05	58	108	2
6034-260	19.05	60	108	2
6034-262	19.05	62	108	2.25
6034-265	19.05	65	108	2.5

Marlco Keyway Broaching Guides - Litecut Inch to suit L3 Broach Style **WDS 6074**

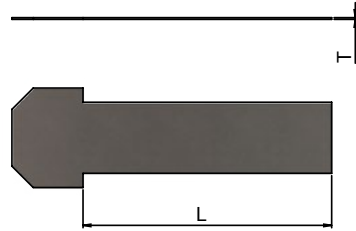
Inch	B3	D	L	Weight (kg)
6074-34	3/4	2 1/8	4 1/4	1.5
6074-36	3/4	2 1/4	4 1/4	2
6074-38	3/4	2 3/8	4 1/4	2
6074-40	3/4	2 1/2	4 1/4	2.5
6074-44	3/4	2 3/4	4 1/4	3
6074-48	3/4	3	4 1/4	3.5

Marlco Keyway Broaching Guides - Litecut Metric to suit L4M Broach Style **WDS 6035**

Metric	B3	D	L	Weight (kg)
6035-270	25.4	70	158	4
6035-275	25.4	75	158	4.5
6035-280	25.4	80	158	5.5
6035-285	25.4	85	158	6.5
6035-290	25.4	90	158	7
6035-295	25.4	95	158	10

Marlco Keyway Broaching Guides - Litecut Inch to suit L4 Broach Style **WDS 6075**

Inch	B3	D	L	Weight (kg)
6075-52	1	3 1/4	6 1/4	6
6075-56	1	3 1/2	6 1/4	7
6075-60	1	3 3/4	6 1/4	8.5
6075-64	1	4	6 1/4	9.5



Steel

WDS 6041 Shims - Litecut Metric to suit L0M Broach Style

Metric	L	T	Weight (kg)
6041-2025	38	0.25	0.01
6041-2050	38	0.50	0.01
6041-2075	38	0.75	0.01

WDS 6081 Shims - Litecut Inch to suit L0 Broach Style

Inch	L	T	Weight (kg)
6081-01	1 1/2	0.01	0.01
6081-02	1 1/2	0.02	0.01
6081-03	1 1/2	0.03	0.01

WDS 6042 Shims - Litecut Metric to suit L1M Broach Style

Metric	L	T	Weight (kg)
6042-2025	63	0.25	0.01
6042-2050	63	0.50	0.01
6042-2075	63	0.75	0.01

WDS 6082 Shims - Litecut Inch to suit L1 Broach Style

Inch	L	T	Weight (kg)
6082-01	2 1/2	0.01	0.01
6082-02	2 1/2	0.02	0.01
6082-03	2 1/2	0.03	0.01

WDS 6043 Shims - Litecut Metric to suit L2M Broach Style

Metric	L	T	Weight (kg)
6043-2025	112	0.25	0.01
6043-2050	112	0.50	0.01
6043-2075	112	0.75	0.01
6043-2125	112	1.25	0.02

WDS 6083 Shims - Litecut Inch to suit L2 Broach Style

Inch	L	T	Weight (kg)
6083-01	4 1/2	0.01	0.01
6083-02	4 1/2	0.02	0.01
6083-03	4 1/2	0.03	0.01
6083-05	4 1/2	0.05	0.02



Shims - Litecut Metric to suit L3M Broach Style **WDS 6044**

Metric	L	T	Weight (kg)
6044-2050	112	0.50	0.01
6044-2075	112	0.75	0.01
6044-2125	112	1.25	0.02

Shims - Litecut Inch to suit L3 Broach Style **WDS 6084**

Inch	L	T	Weight (kg)
6084-02	4 1/2	0.02	0.01
6084-03	4 1/2	0.03	0.01
6084-05	4 1/2	0.05	0.02

Shims - Litecut Metric to suit L4M Broach Style **WDS 6045**

Metric	L	T	Weight (kg)
6045-2050	165	0.50	0.02
6045-2075	165	0.75	0.03
6045-BS	165	Backing	0.14

Shims - Litecut Inch to suit L4 Broach Style **WDS 6085**

Inch	L	T	Weight (kg)
6085-02	6 1/2	0.02	0.01
6085-03	6 1/2	0.03	0.02
6085-BS	6 1/2	Backing	0.01



Part	Size	Part No.	Quantity supplied
	2	6121-202	1
	3	6121-203	1
	6	6131-206	1
	7	6131-207	1
	8	6131-208	1
	9	6131-209	1
	10	6131-210	1
	0.78	6042-2025	1

WDS 6101 Keyway Broach Sets - Hevicut Metric H1M Broach Style

This broach set is supplied in a box and consists of - 2 broaches, 5 guides, 1 shim.
For individual broaches, guides and shims see WDS No 6121 to 6145.

WDS No.	Description	Weight (kg)
6101	Marlco Keyway Broach Sets - Hevicut Cut - Metric Version	0.2



Part	Size	Part No.	Quantity supplied
	4	6122-204	1
	5	6122-205	1
	6	6123-206	1
	8	6123-208	1
	12	6132-212	1
	14	6132-214	1
	16	6132-216	1
	18	6133-218	1
	20	6133-220	1
	22	6133-222	1
	25	6133-225	1
	28	6133-228	1
	30	6133-230	1
	0.97	6142-2097	1
	1.27	6142-2127	1
	1.45	6143-2145	1
	1.88	6143-2188	1

WDS 6102 Keyway Broach Sets - Hevicut Metric H2M H3M Broach Style

This broach set is supplied in a box and consists of - 4 broaches, 9 guides, 4 shims.
For individual broaches, guides and shims see WDS No 6121 to 6145.

WDS No.	Description	Weight (kg)
6102	Marlco Keyway Broach Sets - Hevicut Cut - Metric Version	3.3

Part	Size	Part No.	Quantity supplied
	10	6124-210	1
	12	6124-212	1
	14	6124-214	1
	32	6134-232	1
	35	6134-235	1
	38	6134-238	1
	40	6134-240	1
	42	6134-242	1
	45	6134-245	1
	48	6134-248	1
	50	6134-250	1
	1.42	6144-2142	2
	1.52	6144-2152	2
	1.78	6144-2178	2



Keyway Broach Sets - Hevicut Metric H4M Broach Style **WDS 6103**

This broach set is supplied in a box and consists of - 3 broaches, 8 guides, 6 shims.
 This Broach style requires the use of an extension shank which should be ordered separately. See WDS 6093-01
 For individual broaches, guides and shims see WDS No 6121 to 6145.

WDS No.	Description	Weight (kg)
6103	Marlco Keyway Broach Sets - Hevicut Cut - Metric Version	12.8

Part	Size	Part No.	Quantity supplied
	16	6125-216	1
	18	6125-218	1
	52	6135-252	1
	55	6135-255	1
	58	6135-258	1
	60	6135-260	1
	62	6135-262	1
	65	6135-265	1
	1.55	6145-2155	3
	1.59	6145-2159	3



Keyway Broach Sets - Hevicut Metric H5M Broach Style **WDS 6104**

This broach set is supplied in a box and consists of - 2 broaches, 6 guides, 6 shims.
 This Broach style requires the use of an extension shank which should be ordered separately. See WDS 6093-01
 For individual broaches, guides and shims see WDS No 6121 to 6145.

WDS No.	Description	Weight (kg)
6104	Marlco Keyway Broach Sets - Hevicut Cut - Metric Version	32



Part	Size	Part No.	Quantity supplied
	1/16"	6161-01	1
	3/32"	6161-015	1
	1/8"	6161-02	1
	1/4"	6171-04	1
	5/16"	6171-05	1
	3/8"	6171-06	1
	7/16"	6171-07	1
	1/2"	6171-08	1
	0.025"	6181-025	1
	0.033"	6181-033	1
	0.042"	6181-042	1

WDS 6111 Keyway Broach Sets - Hevicut Inch H1 Broach Set

This broach set is supplied in a box and consists of - 3 broaches, 5 guides, 3 shims.
For individual broaches, guides and shims see WDS No 6161 to 6185.

WDS No.	Description	Weight (kg)
6111	Marlco Keyway Broach Sets - Hevicut Cut - Inch Version	0.2



Part	Size	Part No.	Quantity supplied
	1/8"	6163-02	1
	3/16"	6163-03	1
	1/4"	6163-04	1
	3/8"	6163-06	1
	1/2"	6172-08	1
	5/8"	6172-10	1
	3/4"	6172-12	1
	7/8"	6172-14	1
	1"	6172-16	1
	1.1/8"	6172-18	1
	1.1/4"	6172-20	1
	1.3/8"	6172-22	1
	1.1/2"	6172-24	1
	0.031"	6182-031	1
	0.050"	6182-050	1
	0.062"	6183-062	2

WDS 6112 Keyway Broaching Sets - Hevicut Inch H2 H3 Broach Style

This broach set is supplied in a box and consists of - 4 broaches, 9 guides, 4 shims.
For individual broaches, guides and shims see WDS No 6161 to 6185.

WDS No.	Description	Weight (kg)
6112	Marlco Keyway Broach Sets - Hevicut Cut - Inch Version	3.5

Part	Size	Part No.	Quantity supplied
	3/8"	6164-06	1
	7/16"	6164-07	1
	1/2"	6164-08	1
	1.1/2"	6174-24	1
	1.5/16"	6174-26	1
	1.3/4"	6174-28	1
	1.7/8"	6174-30	1
	2"	6174-32	1
	0.062"	6184-062	3
	0.075"	6184-075	2



Keyway Broach Sets - Hevicut Inch H4 Broach Style **WDS 6113**

This broach set is supplied in a box and consists of - 3 broaches, 5 guides, 5 shims.
 This Broach style requires the use of an extension shank which should be ordered separately. See WDS 6095-01
 For individual broaches, guides and shims see WDS No 6161 to 6185.

WDS No.	Description	Weight (kg)
6113	Marlco Keyway Broach Sets - Hevicut Cut - Inch Version	13

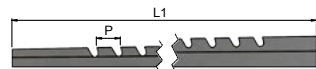
Part	Size	Part No.	Quantity supplied
	5/8"	6165-10	1
	3/4"	6165-12	1
	2.3/8"	6175-38	1
	2.1/2"	6175-40	1
	2.5/8"	6175-42	1
	2.3/4"	6175-44	1
	2.7/8"	6175-44	1
	3"	6175-48	1
	0.062"	6185-062	5



Keyway Broach Sets - Hevicut Inch H5 Broach Style **WDS 6114**

This broach set is supplied in a box and consists of - 2 broaches, 6 guides, 5 shims.
 This Broach style requires the use of an extension shank which should be ordered separately. See WDS 6095-01
 For individual broaches, guides and shims see WDS No 6161 to 6185.

WDS No.	Description	Weight (kg)
6114	Marlco Keyway Broach Sets - Hevicut Cut - Inch Version	40



B1 = Nominal size of broach
B2 = Keyway width/tolerance
B3 = Keyway broach body width
F = Approx. load per tooth cutting mild steel
L1 = O/all length of broach

L2 = Length of cut
P = Pitch of teeth
R = No. of passes
S = No. of shims x thickness
T = Depth of keyway on centre line

Hevicut Broaches supplied with Hook Shim

Broach styles H4 and H5 require the use of an extension shank which is not supplied.

WDS 6121 Marlo Keyway Broaches - Hevicut Metric H1M Broach Style

M2 grade HSS

Broaches are supplied complete with the necessary shims to cut keyways to standard depth.

Metric	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6121-202	2	2.000/2.012	3.2	43	133	28.5	10.2	5.1	1	-	1.05	0.02
6121-203	3	3.000/3.012	3.2	34	133	28.5	10.2	5.1	2	1 x 0.78	1.45	0.02

WDS 6161 Marlo Keyway Broaches - Hevicut Inch H1 Broach Style

Inch	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6161-01	1/16	0.063/0.065	1/8	23	5 1/4	1.12	0.40	0.20	2	1 x 0.025	0.045	0.02
6161-015	3/32	0.095/0.097	1/8	52	5 1/4	1.12	0.40	0.20	2	1 x 0.033	0.060	0.02
6161-02	1/8	0.126/0.128	1/8	52	5 1/4	1.12	0.40	0.20	2	1 x 0.042	0.075	0.02

WDS 6122 Marlo Keyway Broaches - Hevicut Metric H2M Broach Style

M2 grade HSS

Broaches are supplied complete with the necessary shims to cut keyways to standard depth.

Metric	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6122-204	4	4.000/4.015	6.35	100	178	42.8	15.2	7.6	2	1 x 0.97	1.85	0.09
6122-205	5	5.000/5.015	6.35	125	178	42.8	15.2	7.6	2	1 x 1.27	2.35	0.1

WDS 6162 Marlo Keyway Broaches - Hevicut Inch H2 Broach Style

Inch	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6162-015	3/32	0.094/0.095	3/16	60	7	1.68	0.60	0.30	1	-	0.047	0.04
6162-02	1/8	0.125/0.126	3/16	56	7	1.68	0.60	0.30	2	1 x 0.031	0.063	0.05
6162-03	3/16	0.188/0.189	3/16	130	7	1.68	0.60	0.30	2	1 x 0.050	0.091	0.07



Marlco Keyway Broaches - Hevicut Metric H3M Broach Style **WDS 6123**

M2 grade HSS

Broaches are supplied complete with the necessary shims to cut keyways to standard depth.

Metric	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6123-205	5	5.000/5.015	9.5	110	302	63.5	20.4	10.2	2	1 x 1.20	2.35	0.2
6123-206	6	6.000/6.015	9.5	130	302	63.5	20.4	10.2	2	1 x 1.45	2.85	0.22
6123-208	8	8.000/8.018	9.5	230	302	63.5	20.4	10.2	2	1 x 1.88	3.4	0.25

Marlco Keyway Broaches - Hevicut Inch H3 Broach Style **WDS 6163**

Inch	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6163-03	3/16	0.1877/0.1887	3/8	130	11 7/8	2.50	0.80	0.40	2	1 X 0.050	0.091	0.25
6163-04	1/4	0.2502/0.2512	3/8	145	11 7/8	2.50	0.80	0.40	2	1 X 0.062	0.118	0.3
6163-05	5/16	0.3127/0.3137	3/8	225	11 7/8	2.50	0.80	0.40	2	1 X 0.078	0.145	0.35
6163-06	3/8	0.3755/0.3765	3/8	200	11 7/8	2.50	0.80	0.40	3	2 X 0.062	0.172	0.4

Marlco Keyway Broaches - Hevicut Metric H4M Broach Style **WDS 6124**

M2 grade HSS

Broaches are supplied complete with the necessary shims to cut keyways to standard depth.

Metric	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6124-210	10	10.000/10.018	14.3	220	340	140	28.6	14.3	3	2 x 1.42	3.4	0.9
6124-212	12	12.000/12.021	14.3	345	340	140	28.6	14.3	3	2 x 1.52	3.4	0.93
6124-214	14	14.000/14.021	14.3	450	340	140	28.6	14.3	3	2 x 1.78	3.9	0.96

Marlco Keyway Broaches - Hevicut Inch H4 Broach Style **WDS 6164**

Inch	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6164-05	5/16	0.312/0.313	9/16	310	13 3/8	5.50	1.12	0.56	2	1 x 0.078	0.145	0.8
6164-06	3/8	0.375/0.376	9/16	270	13 3/8	5.50	1.12	0.56	3	2 x 0.062	0.172	0.83
6164-07	7/16	0.438/0.439	9/16	360	13 3/8	5.50	1.12	0.56	3	2 x 0.075	0.200	0.87
6164-08	1/2	0.500/0.501	9/16	380	13 3/8	5.50	1.12	0.56	4	3 x 0.062	0.227	0.9

Marlco Keyway Broaches - Hevicut Metric H5M Broach Style **WDS 6125**

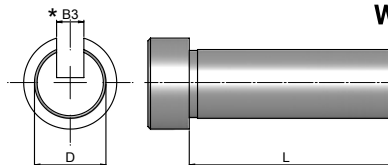
M2 grade HSS

Broaches are supplied complete with the necessary shims to cut keyways to standard depth.

Metric	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6125-216	16	16.000/16.021	19.05	450	387	140	28.6	14.3	4	3 x 1.55	4.4	1.4
6125-218	18	18.000/18.021	19.05	500	387	140	28.6	14.3	4	3 x 1.59	4.5	1.5

Marlco Keyway Broaches - Hevicut Inch H5 Broach Style **WDS 6165**

Inch	B1	B2	B3	F (kg)	L1	L2 Max	L2 Min	P	R	S	T	Weight (kg)
6165-10	5/8	0.625/0.626	3/4	400	15 1/4	5.50	1.12	0.56	5	4 x 0.062	0.281	1.39
6165-12	3/4	0.750/0.751	3/4	410	15 1/4	5.50	1.12	0.56	6	5 x 0.062	0.336	1.47



★ See relevant broach for B3 dimension

Steel (220M07), Machined finish

Guides listed are for parallel keyways

H1/H1M, H2/H2M, H3/H3M - Headed Guide

H4/H4M, H5/H5M - Plain Guide

WDS 6131 Keyway Broaching Guides - Hevicut Metric to suit H1M Broach Style

Metric	B3	D	L	Weight (kg)
6131-206	3.2	6	24	0.01
6131-207	3.2	7	24	0.01
6131-208	3.2	8	24	0.01
6131-209	3.2	9	24	0.02
6131-210	3.2	10	24	0.02

WDS 6171 Keyway Broaching Guides - Hevicut Inch to suit H1 Broach Style

Inch	B3	D	L	Weight (kg)
6171-04	1/8	1/4	15/16	0.01
6171-05	1/8	5/16	15/16	0.01
6171-06	1/8	3/8	15/16	0.02
6171-07	1/8	7/16	15/16	0.03
6171-08	1/8	1/2	15/16	0.03

WDS 6132 Keyway Broaching Guides - Hevicut Metric to suit H2M Broach Style

Metric	B3	D	L	Weight (kg)
6132-211	6.35	11	38	0.03
6132-212	6.35	12	38	0.03
6132-214	6.35	14	38	0.04
6132-216	6.35	16	38	0.04

WDS 6172 Keyway Broaching Guides - Hevicut Inch to suit H2 Broach Style

Inch	B3	D	L	Weight (kg)
6172-08	3/16	1/2	1 1/2	0.03
6172-09	3/16	9/16	1 1/2	0.04
6172-10	3/16	5/8	1 1/2	0.04
6172-12	3/16	3/4	1 1/2	0.05



Keyway Broaching Guides - Hevicut Metric to suit H3M Broach Style **WDS 6133**

Metric	B3	D	L	Weight (kg)
6133-218	9.5	18	57	0.08
6133-220	9.5	20	57	0.09
6133-222	9.5	22	57	0.15
6133-225	9.5	25	57	0.22
6133-228	9.5	28	57	0.25
6133-230	9.5	30	57	0.3

Keyway Broaching Guides - Hevicut Inch to suit H3 Broach Style **WDS 6173**

Inch	B3	D	L	Weight (kg)
6173-12	3/8	3/4	2 1/4	0.09
6173-14	3/8	7/8	2 1/4	0.15
6173-16	3/8	1	2 1/4	0.22
6173-18	3/8	1 1/8	2 1/4	0.25
6173-20	3/8	1 1/4	2 1/4	0.27
6173-22	3/8	1 3/8	2 1/4	0.3
6173-24	3/8	1 1/2	2 1/4	0.33

Keyway Broaching Guides - Hevicut Metric to suit H4M Broach Style **WDS 6134**

Metric	B3	D	L	Weight (kg)
6134-232	14.3	32	102	0.37
6134-235	14.3	35	102	0.45
6134-238	14.3	38	102	0.63
6134-240	14.3	40	102	0.7
6134-242	14.3	42	102	0.75
6134-245	14.3	45	127	0.96
6134-248	14.3	48	127	1.25
6134-250	14.3	50	127	1.6

Keyway Broaching Guides - Hevicut Inch to suit H4 Broach Style **WDS 6174**

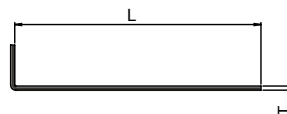
Inch	B3	D	L	Weight (kg)
6174-24	9/16	1 1/2	4	0.63
6174-26	9/16	1 5/8	4	0.7
6174-28	9/16	1 3/4	4	0.85
6174-30	9/16	1 7/8	5	1.25
6174-32	9/16	2	5	1.6

Keyway Broaching Guides - Hevicut Metric to suit H5M Broach Style **WDS 6135**

Metric	B3	D	L	Weight (kg)
6135-252	19.05	52	127	1.8
6135-255	19.05	55	127	1.95
6135-258	19.05	58	127	2.16
6135-260	19.05	60	153	2.83
6135-262	19.05	62	153	3.1
6135-265	19.05	65	153	3.4

Keyway Broaching Guides - Hevicut Inch to suit H5 Broach Style **WDS 6175**

Inch	B3	D	L	Weight (kg)
6175-38	3/4	2 3/8	6	2.83
6175-40	3/4	2 1/2	6	3.2
6175-42	3/4	2 5/8	6	3.45
6175-44	3/4	2 3/4	6	3.75
6175-46	3/4	2 7/8	6	3.95
6175-48	3/4	3	6	4.25



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WDS 6141 Shims - Hevicut Metric to suit H1M Broach Style

Metric	L	T	Weight (kg)
6141-2078	32	0.78	0.03

WDS 6181 Shims - Hevicut Inch to suit H1 Broach Style

Inch	L	T	Weight (kg)
6181-025	1 1/4	0.025	0.03
6181-033	1 1/4	0.033	0.03
6181-042	1 1/4	0.042	0.04

WDS 6142 Shims - Hevicut Metric to suit H2M Broach Style

Metric	L	T	Weight (kg)
6142-2097	45	0.97	0.05
6142-2127	45	1.27	0.07

WDS 6182 Shims - Hevicut Inch to suit H2 Broach Style

Inch	L	T	Weight (kg)
6182-031	1 3/4	0.031	0.04
6182-050	1 3/4	0.05	0.07



Shims - Hevicut Metric to suit H3M Broach Style **WDS 6143**

Metric	L	T	Weight (kg)
6143-2120	67	1.2	0.01
6143-2145	67	1.45	0.01
6143-2188	67	1.88	0.02

Shims - Hevicut Inch to suit H3 Broach Style **WDS 6183**

Inch	L	T	Weight (kg)
6183-050	2 5/8	0.05	0.1
6183-062	2 5/8	0.062	0.13
6183-078	2 5/8	0.078	0.15

Shims - Hevicut Metric to suit H4M Broach Style **WDS 6144**

Metric	L	T	Weight (kg)
6144-2142	158	1.42	0.03
6144-2152	158	1.52	0.03
6144-2178	158	1.78	0.04

Shims - Hevicut Inch to suit H4 Broach Style **WDS 6184**

Inch	L	T	Weight (kg)
6184-062	6 1/4	0.062	0.31
6184-075	6 1/4	0.075	0.35
6184-078	6 1/4	0.078	0.36

Shims - Hevicut Metric to suit H5M Broach Style **WDS 6145**

Metric	L	T	Weight (kg)
6145-2155	172	1.55	0.04
6145-2159	172	1.59	0.04

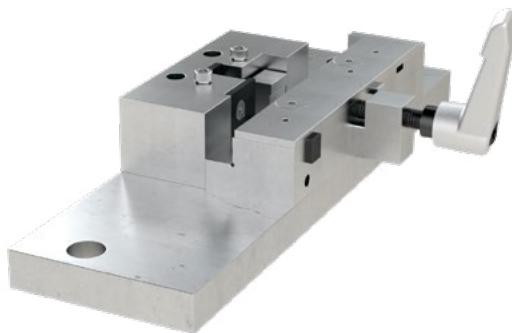
Shims - Hevicut Inch to suit H5 Broach Style **WDS 6185**

Inch	L	T	Weight (kg)
6185-062	6 3/4	0.062	0.38



TWO SPEED BROACHING HAND PRESSES

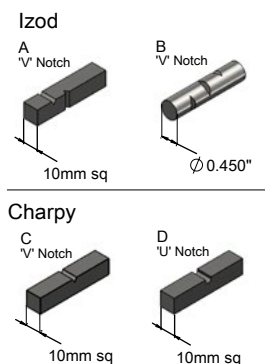
For the full range of Broaching Hand Presses please see pages **1001-1002**



Marco Izod and Charpy Notch Broaching Equipment WDS 6481

For the production of 'V' and 'U' notches in IZOD and CHARPY impact test pieces.

WDS No.	Description	Fixture WDS No	Weight (kg)
6481	Universal Fixture for Marco Izod and Charpy Notch Broaches	6481	4



Marco Izod and Charpy Notch Broaching Equipment WDS 6482

Material - PM-M4 Hss

Notches produced with this equipment conform to BS.131 pt.1, DIN 50115, EN10 045-1 and most recognised standards.

The simplest accurate method for the production of Izod and Charpy notches.

All you need is the fixture, an appropriate broach, a suitable press and a couple of minutes.

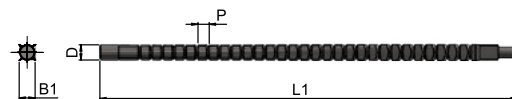
- Suitable for ferrous and non-ferrous materials
- Common fixture accommodates 7 interchangeable broaches
- Can be used on any suitable arbor press. Marco Press 6501 is ideal
- Load requirement is only 180kg (400lb) on material with UTS of 1.2 kN/sq. mm (75 tons/sq. in.)
- Broach regrind service available
- Always use a suitable cutting oil for broaching
- Fixture Weight = 4kg

* The cut per tooth on broach number 6482-203B is higher than average due to the required notch depth.

If problems are experienced when notching higher tensile materials, then a set of 2 broaches is available as an alternative.

Broach set 6482-204B comprising first stage 6482-2041B and second stage 6482-2042B.

WDS No.	Fixture WDS No.	Notch Depth	Notch Form	O/all Length of Broach	Test	Test Piece	Weight (kg)
6482-201B	6481	2mm	V	356mm	Izod	A	0.75
6482-201B	6481	0.13"	V	356mm	Izod	B	0.75
6482-201B	6481	2mm	V	356mm	Charpy	C	0.75
6482-202B	6481	2mm	V	241mm	Izod	A	0.50
6482-202B	6481	2mm	V	241mm	Charpy	C	0.50
6482-203B	6481	5mm	U	394mm	*Charpy	D	0.82
Set 6482-204B	6481	5mm	U	394mm	*Charpy	D	1.62
6482-205B	6481	3mm	U	394mm	DVM	D	0.81
6482-206B	6481	2mm	U	311mm	Mesnager	D	0.62
6482-207B	6481	2.5mm	U	311mm	VSM	D	0.62



Broaching Instructions



- Form 'A'
1. Drill pilot hole as shown in column B1
 2. Use set of 2 broaches (single broach for 3/16")

B1 = Nominal size A/F & pilot dia. for Form 'A'

B2 = Tolerance A/F

D = Pilot Diameter for form 'B'

F = Approx load per tooth, cutting mild steel

L1 = Overall length of broach

L2 = Length of cut

P = Pitch of teeth

R = No of broaches in set for Form 'A'

WDS 6421 Marco Square Push Broaches - Metric Set Form A

M2 grade HSS

For Form 'A' a set of 2 broaches is required

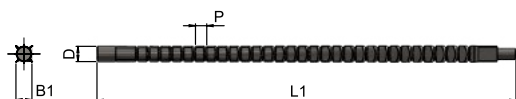
Metric	B1	B2	D	F (kg)	L1	L2 Max	L2 Min	P	R	Weight (kg)
6421-204	4	4.000/4.018	4.25	62	105	15	8	4	2	0.02
6421-205	5	5.000/5.018	5.25	72	134	17	9.2	4.6	2	0.04
6421-206	6	6.000/6.018	6.6	82	134	25	9.2	4.6	2	0.07
6421-207	7	7.000/7.022	7.7	105	146	25	9.2	4.6	2	0.1
6421-208	8	8.000/8.022	8.8	145	160	27	9.2	4.6	2	0.13
6421-209	9	9.000/9.022	9.8	170	172	27	9.2	4.6	2	0.17
6421-210	10	10.000/10.027	10.8	200	184	30	9.2	4.6	2	0.21
6421-211	11	11.000/11.027	11.8	230	184	30	9.2	4.6	2	0.26
6421-212	12	12.000/12.027	12.8	260	235	35	12.2	6.1	2	0.39
6421-213	13	13.000/13.027	14	340	240	35	12.2	6.1	2	0.47
6421-214	14	14.000/14.027	15	360	248	35	12.2	6.1	2	0.52
6421-215	15	15.000/15.027	16.5	370	260	41	12.2	6.1	2	0.7
6421-216	16	16.000/16.027	17.5	385	267	41	12.2	6.1	2	0.86
6421-217	17	17.000/17.027	18.5	390	292	44	12.2	6.1	2	1
6421-218	18	18.000/18.033	19.5	400	343	44	12.2	6.1	2	1.23
6421-219	19	19.000/19.033	20.5	420	343	44	12.2	6.1	2	1.43

WDS 6431 Marco Square Push Broaches - Inch Set Form A

M2 grade HSS

For Form 'A' a set of 2 broaches is required (except 3/16)

Inch	B1	B2	D	F (kg)	L1	L2 Max	L2 Min	P	R	Weight (kg)
6431-03	3/16	0.1885/0.1895	n/a	80	5 1/4	5/8	5/16	0.16	1	0.02
6431-04	1/4	0.2510/0.2520	9/32	110	5 3/8	1	23/64	0.18	2	0.08
6431-05	5/16	0.3135/0.3145	11/32	145	6 3/8	1 3/16	23/64	0.18	2	0.13
6431-06	3/8	0.3760/0.3770	13/32	180	7	1 3/16	23/64	0.18	2	0.2
6431-07	7/16	0.4385/0.4395	15/32	240	7 5/8	1 3/8	23/64	0.18	2	0.27
6431-08	1/2	0.5010/0.5020	17/32	340	9 1/2	1 3/8	31/64	0.24	2	0.42
6431-09	9/16	0.5645/0.5655	19/32	360	9 3/4	1 3/8	31/64	0.24	2	0.56
6431-10	5/8	0.6270/0.6280	11/16	370	10 3/8	1 5/8	31/64	0.24	2	0.83
6431-12	3/4	0.7525/0.7535	13/16	420	13 5/8	1 3/4	31/64	0.24	2	1.46



Broaching Instructions



- Form 'B'
1. Drill pilot hole as shown in column D
 2. Use broach number 2 from from 2 broach set



L1 = O/all length of broach

L2 = Length of cut

P = Pitch of teeth

R = No of broaches in set for Form 'A'

B1 = Nominal size A/F & pilot dia. for Form 'A'

B2 = Tolerance A/F

D = Pilot Diameter for form 'B'

F = Approx load per tooth, cutting mild steel

Marlco Square Push Broaches - Metric Set Form B WDS 6421

M2 grade HSS

For Form 'B' a single Broach can be used which is, in fact, the 2nd stage broach from the set of 2. To order a 1st or 2nd stage broach from a 2 stage set add suffix /1 or /2 to the set No. Figures given in the weight column refer to single broach only

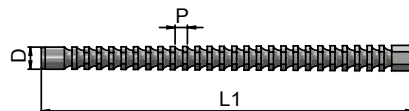
Metric	B1	B2	D	F (kg)	L1	L2 Max	L2 Min	P	R	Weight (kg)
6421-204/2	4	4.000/4.018	4.25	62	105	15	8.0	4	1	0.01
6421-205/2	5	5.000/5.018	5.25	72	134	17	9.2	4.6	1	0.02
6421-206/2	6	6.000/6.018	6.6	82	134	25	9.2	4.6	1	0.04
6421-207/2	7	7.000/7.022	7.7	105	146	25	9.2	4.6	1	0.06
6421-208/2	8	8.000/8.022	8.8	145	160	27	9.2	4.6	1	0.07
6421-209/2	9	9.000/9.022	9.8	170	172	27	9.2	4.6	1	0.1
6421-210/2	10	10.000/10.027	10.8	200	184	30	9.2	4.6	1	0.13
6421-211/2	11	11.000/11.027	11.8	230	184	30	9.2	4.6	1	0.16
6421-212/2	12	12.000/12.027	12.8	260	235	35	12.2	6.1	1	0.23
6421-213/2	13	13.000/13.027	14	340	240	35	12.2	6.1	1	0.28
6421-214/2	14	14.000/14.027	15	360	248	35	12.2	6.1	1	0.31
6421-215/2	15	15.000/15.027	16.5	370	260	41	12.2	6.1	1	0.35
6421-216/2	16	16.000/16.027	17.5	385	267	41	12.2	6.1	1	0.46
6421-217/2	17	17.000/17.027	18.5	390	292	44	12.2	6.1	1	0.55
6421-218/2	18	18.000/18.033	19.5	400	343	44	12.2	6.1	1	0.73
6421-219/2	19	19.000/19.033	20.5	420	343	44	12.2	6.1	1	0.83

Marlco Square Push Broaches - Inch Set Form B WDS 6431

M2 grade HSS

For Form 'B' a single Broach can be used which is, in fact, the 2nd stage broach from the set of 2. To order a 1st or 2nd stage broach from a 2 stage set add suffix /1 or /2 to the set No. Figures given in the weight column refer to single broach only

Inch	B1	B2	D	F (kg)	L1	L2 Max	L2 Min	P	R	Weight (kg)
6431-04/2	1/4	0.2510/0.2520	9/32	110	5 3/8	1	23/64	0.18	2	0.05
6431-05/2	5/16	0.3135/0.3145	11/32	145	6 3/8	11/16	23/64	0.18	2	0.2
6431-06/2	3/8	0.3760/0.3770	13/32	180	7	13/16	23/64	0.18	2	0.12
6431-07/2	7/16	0.4385/0.4395	15/32	240	7 5/8	13/16	23/64	0.18	2	0.16
6431-08/2	1/2	0.5010/0.5020	17/32	340	9 1/2	1 3/8	31/64	0.24	2	0.26
6431-09/2	9/16	0.5645/0.5655	19/32	360	9 3/4	1 3/8	31/64	0.24	2	0.34
6431-10/2	5/8	0.6270/0.6280	11/16	370	10 3/8	1 5/8	31/64	0.24	2	0.45
6431-12/2	3/4	0.7525/0.7535	13/16	420	13 5/8	1 3/4	31/64	0.24	2	0.9



B1 = Nominal size A/F & pilot dia.

B2 = Tolerance A/F

F = Approx. load per tooth cutting mild steel

L1 = O/all length of broach

L2 = Length of cut

P = Pitch of teeth

WDS 6441 Marloco Hexagon Push Broaches - Metric

M2 grade HSS

Metric	B1	B2	F (kg)	L1	L2 Max	L2 Min	P	Weight (kg)
6441-205	5	5.013/5.038	55	127	16	8	4	0.02
6441-206	6	6.013/6.038	85	146	22	9.5	4.8	0.03
6441-207	7	7.013/7.038	100	152	22	9.5	4.8	0.05
6441-208	8	8.013/8.038	120	172	25	10	5.1	0.07
6441-209	9	9.013/9.038	130	190	32	11	5.6	0.1
6441-210	10	10.013/10.038	150	197	32	11	5.6	0.11
6441-211	11	11.026/11.051	165	254	38	12.7	6.4	0.18
6441-212	12	12.026/12.051	200	267	38	12.7	6.4	0.23
6441-213	13	13.026/13.051	230	267	38	12.7	6.4	0.22
6441-214	14	14.026/14.051	245	310	42	14	7.1	0.36
6441-215	15	15.026/15.051	275	330	42	14	7.1	0.45
6441-216	16	16.026/16.051	300	350	45	15	7.6	0.55
6441-217	17	17.026/17.051	330	350	45	15	7.6	0.61
6441-218	18	18.026/18.051	370	375	57	16	8.1	0.71
6441-219	19	19.038/19.064	400	380	57	16	8.1	0.81

WDS 6451 Marloco Hexagon Push Broaches - Inch

M2 grade HSS

Inch	B1	B2	F (kg)	L1	L2 Max	L2 Min	P	Weight (kg)
6451-03	3/16	0.1880/0.1890	60	4 1/2	5/8	5/16	0.16	0.02
6451-04	1/4	0.2505/0.2515	85	5 3/4	7/8	3/8	0.19	0.04
6451-05	5/16	0.3130/0.3140	120	6 3/4	1	25/64	0.20	0.07
6451-06	3/8	0.3755/0.3765	150	7 3/4	1 1/4	7/16	0.22	0.11
6451-07	7/16	0.4385/0.4395	170	10	1 1/2	1/2	0.25	0.19
6451-08	1/2	0.5010/0.5020	220	10 1/2	1 1/2	1/2	0.25	0.26
6451-09	9/16	0.5635/0.5645	250	12 1/4	1 5/8	9/16	0.28	0.38
6451-10	5/8	0.6260/0.6270	340	13 3/4	1 3/4	19/32	0.30	0.54
6451-11	11/16	0.6885/0.6895	360	13 3/4	1 3/4	19/32	0.30	0.67
6451-12	3/4	0.7515/0.7525	440	15	2 1/4	41/64	0.32	0.82



Extension Shanks **WDS 6093-6095**

Steel

WDS No.	L	To suit broach style	Weight (kg)
6093-01	4 1/2	L2	0.01
6094-01	4 1/2	L3	0.01
6095-01	6 1/2	L4	0.04



Broaching Oil **WDS 6110**

Broaching Oil - 1 Litre

WDS No.	Description	Weight (kg)
6110-201	Broaching Oil - 1 Litre	1.1



MANUAL PRESSES

P 999-1002

These hand operated presses can be used with broaching equipment or on projects where accurate assembly is required. The range includes: heavy duty hand presses, arbor presses and mandrel presses.



MANUAL TOGGLE PRESSES

Manual toggle presses are designed for light to medium work. Excellent for repetitive jobs such as pressing, piercing and assembly.

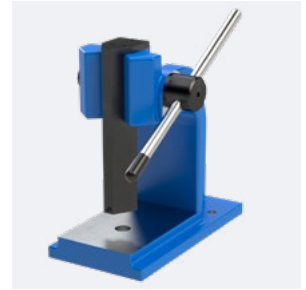
P 999



ARBOR PRESSES

Arbor presses are a manual hand operated press designed to perform jobs such as riveting, press fitting, punch work, product assembly plus many more applications. These presses can be mounted on a work bench or on an assembly line. They are lever operated which creates a downward pressure of between 275 to 460 kg (depending on model).

P 999



MANDREL PRESSES

Mandrel presses are for heavier duty jobs and applications. Using the manual, hand operated action of the press you have the flexibility to press, punch and drive products into a workpiece.

P 1000

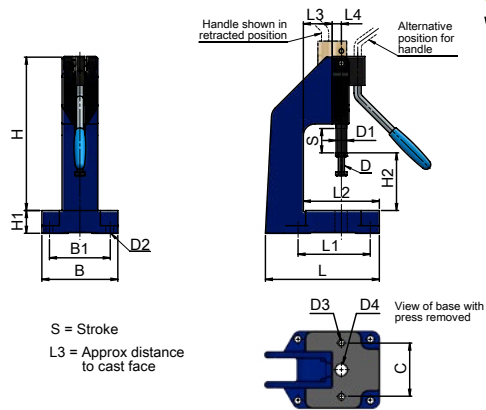


HEAVY DUTY HAND PRESSES

These heavy duty presses are designed primarily to act as a push broaching press. However, due to their excellent construction, capacity and precision, these manual presses are ideal for a wide range of workshop applications.

P 1001-1002





S = Stroke
L3 = Approx distance
to cast face

WDS 4043 Manual Toggle Press Clamp

Frame - S.G. Iron
Clamp Body - Mall. Iron
Piston and Handle - Steel
For details of Heavy Duty Push/Pull Clamps used on these presses.
See WDS No 4041 for dimensions of Heavy Duty Push/Pull Clamp

WDS No.	B	B1	C	D	D1	D2	D3	D4	H	H1	H2	L	L1	L2	L3	L4	S	Holding Capacity (kg)	Weight (kg)
4043-201	100	80	70	M8 x 30	14	9	M8	15.5	202	30	79	150	95	100	30	12	32	600	3.5
4043-202	120	95	80	M10 x 40	20	11	M10	20	290	40	100	192	115	120	42	18	50	1200	8
4043-203	150	125	90	M12 x 60	25	11	M10	30	418	50	120	238	145	150	53	22	75	2500	15.8



WDS 6564 Manual Arbor Presses

Manufactured to a high degree of accuracy, these precision manual arbor presses are particularly suitable for accurate assembly and light press work.
Designed to give lasting trouble-free service, the frame is machined from high grade cast-iron.
The ram and pinion are of high strength steel with machine cut teeth to ensure accurate engagement.
Other design features include a ground table surface with central hole positioned in line with the hole in the nose of the ram.
Presses 6564-201 and 6564-202 have a spring return action on the ram and all models have an adjustable depth stop for stroke setting.

WDS No.	Approximate leverage ratio	Hole in nose of ram	Hole in table	Max pressure	Maximum daylight	Minimum shut height	Net Weight	Size of base	Table surface	Throat Depth	Weight (kg)
6564-201	16:1	9.53	10	275 kg	85	15	5.1 kg	100 x 185	75 x 103	56	5.1
6564-202	19:1	15.88	16	365 kg	130	25	16 kg	155 x 280	130 x 163	84	16
6564-203	16:1	19.05	25	460 kg	175	40	37 kg	180 x 340	160 x 210	110	44



Manual Mandrel Presses **WDS 6559**

Long leverage plus gearing for maximum power.

Heat treated, machine cut gears.

Work can be pressed off mandrel without removing carrier.

Ideal for inserting or extracting bushes or bearings.

A tubular guard is fitted on the top surface of the casting for operator safety and protection of the ram.

WDS No.	Admits	Approx pressure (30kg.f applied)	Approximate leverage ratio	Arbors	Centre of ram to column face	Diameter	Height overall	Net Weight	Ram diameter	Stroke and daylight	Weight (kg)
6559-202	38	720kg	165	38	165	263	749	52	24:1	749	52
6559-203	50	810kg	200	44.5	200	380	1020	80	27:1	1020	80



WDS 6501 Marlco Two Speed Hand Broaching Presses

Two Speed Presses

1.5 Tonne

Powerful and Versatile

420mm or 610mm Vertical Capacity

- Robust Construction
- Heat Treated Gears
- Choice of 6 Table Slots
- Choice of 2 Reductions
- Continuous Motion through Star-Wheel

- Fully Enclosed Gearbox
 - Distance between columns 365mm
 - Table gaps 19, 25.4, 38, 51, 63.5mm
 - Gap in base 76mm
 - Ram diameter 50.8mm
 - Overall size of base 572mm x 230mm
 - Reduction Ratios 16:1 and 50:1
- Cabinet WDS 6505 is designed for use with this range.

WDS No.	Daylight	Distance between columns	Gap in base	Overall size of base	Ram diameter	Reduction ratios	Stroke	Table Gaps	Weight (kg)
6501	420	365	25.4	51	38	63.5	420	19	76.5
6502	610	365	25.4	51	38	63.5	420	19	78
6503	610	365	25.4	51	38	63.5	610	19	79



WDS 6505 Cabinet - For use with Marlco Two Speed Presses

These robust steel cabinets have been specially designed for use with the Two Speed Hand Presses.

They provide an excellent working area of 915mm x 610mm and have cupboard space on three sides

The height of the cabinet is 685mm.

The assembled unit can be conveniently positioned within a production or service area to provide a self-contained work station with generous surface and storage space for broaches, tooling etc.

WDS No.	Application	Weight (kg)
6505	For use with the Two Speed Presses WDS 6501 6502 and 6503	64



Marlco Heavy Duty Two Speed Broaching Hand Presses **WDS 6551**

- Fully Enclosed Gearbox
 - Table gaps 20, 30, 40, 55, 70mm
 - Gap in base 90mm
 - Ram diameter 50.8mm
 - Overall size of base 722mm x 270mm
 - Reduction Ratios 50:1 and 100:1
- Cabinet WDS 6555 is designed for use with the above press.

- Heavy Duty Two Speed Press
3 Tonne
- Exceptional Capacity from a Hand Press
508mm Vertical Capacity
- Robust Construction
 - Heat Treated Gears
 - Choice of 6 Table Slots
 - Choice of 2 Reductions
- Continuous Motion through Star-Wheel

WDS No.	Daylight	Distance between columns	Gap in base	Overall size of base	Ram diameter	Reduction ratios	Stroke	Table Gaps	Weight (kg)
6551	508	510	90	722 x 270	50.8	50:1 and 100:1	508	20, 30, 40, 55, 70	105



Cabinet - For use with Marlco Heavy Duty Two Speed Press **WDS 6555**

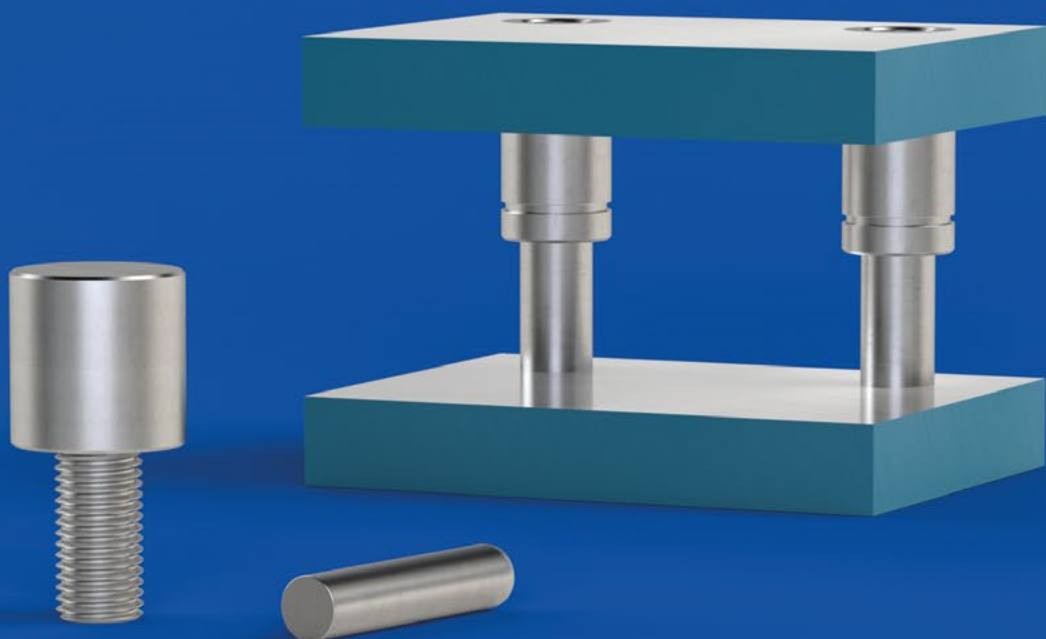
These robust steel cabinets have been specially designed for use with the Two Speed Hand Presses. They provide an excellent working area of 915mm x 610mm and have cupboard space on three sides.

The height of the cabinet is 685mm

The assembled unit can be conveniently positioned within a production or service area to provide a self-contained work station with generous surface and storage space for broaches, tooling etc..

For use with Heavy Duty Two Speed Press WDS No 6551.

WDS No.	Application	Weight (kg)
6555	For use with Heavy Duty Two Speed Press WDS No 6551	64



DIE SETS GUIDE BUSHES & PILLARS

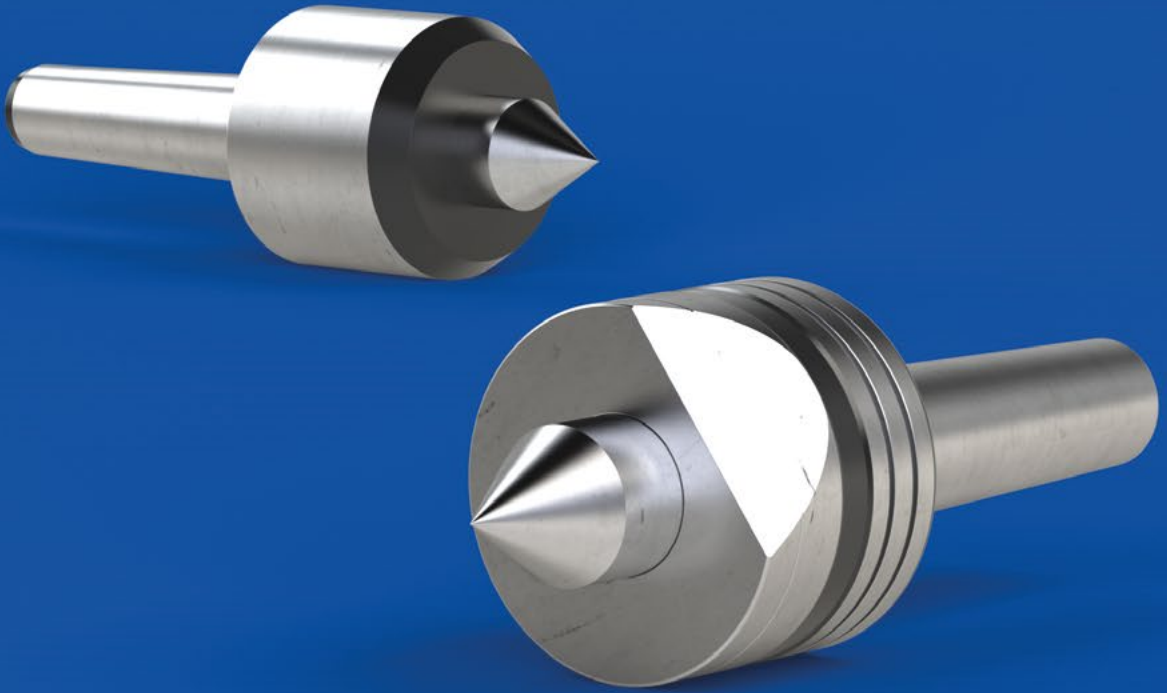
Die sets are Precision Press Tools used for punching, piercing and forming applications. Ideal for both high and low volume production environments, these Die Set Tools are excellent for manual or automatic processes.





DIE SETS GUIDE BUSHES & PILLARS

For the full range of Die Sets Guide Bushes & Pillars please visit WDSCOMPONENTS.COM



ROTATING LATHE CENTRES

WDS offers a range of Rotating Lathe Centres and Tube Centres. These Centres are available in various capacities with options of standard, high speed and high duty.





ROTATING LATHE CENTRES

For the full range of Rotating Lathe Centres please visit [WDSCOMPONENTS.COM](https://www.wdscapabilities.com)



PRODUCTION EQUIPMENT

The WDS Production Equipment range consists of essential machine shop tools such as grinding tools, grinding carriers and wheel dressers. Also in the range are precision mandrels and knurling tools.





PRODUCTION EQUIPMENT

For the full range of Production Equipment please visit WDSCOMPONENTS.COM

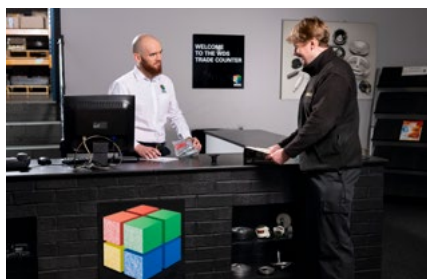
TECHNICAL ADVICE

Not sure whether a product is right for your application? Need some advice before making your purchase? WDS offer comprehensive pre and post-sales technical support, our technical service department are our engineers and designers. With many years of experience they will gladly help and advise you.

Technical Support Line: +44 (0) 113 290 5822

Email: tech@wdscomponents.com

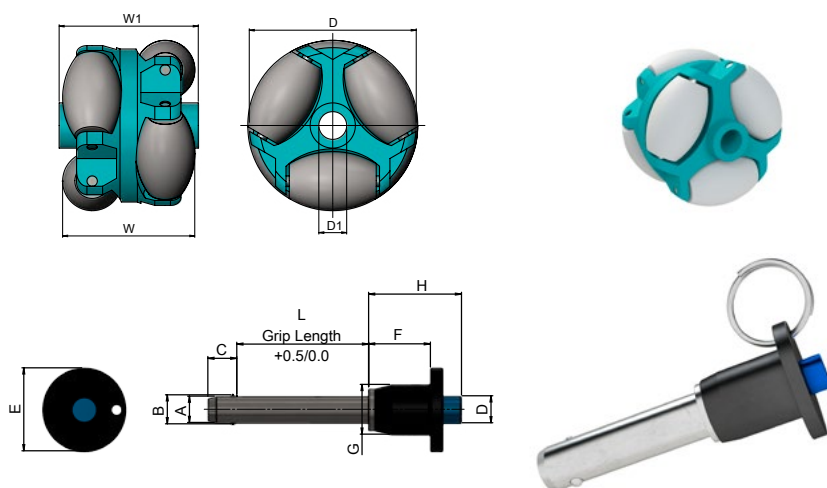
WDS products are REACH, RoHS and Weee Compliant, for more details please visit WDSCOMPONENTS.COM





2D AND 3D CAD

The range of 25,000+ products available from WDS is highly accessible thanks to our range of catalogues and website, both of which allow for easy identification and specification. Designers and engineers can also find free 2D and 3D CAD downloads on the website **WDSCOMPONENTS.COM**. Available in all popular formats, using WDS products in your design has never been easier.



COMPATIBLE SOFTWARE

AutoCAD	Solid Edge
Solidworks	Solid Designer
CATIA V4/V5	Unigraphics
Inventor	ME10

CAST IRON

CI

Cast sections and base plates are supplied with unmachined surfaces painted, and are machined to the following tolerances: Material used to manufacture Hand Knobs, Hand Wheels, Knobs and Castor wheel centres. Cast Iron is a ferrous alloy.

Parallelism	0.02/100mm (0.0025"/12")
Flatness	± 1/6000
Squareness	± 1 minute
General Dimensions	Diameter, Depth and Width ± 0.4mm Thickness ± 1/100 of Nominal

The ends of all cut cast iron section are supplied sawn such that they will clean up to the lengths stated in this catalogue.

ALUMINIUM

AL

Material used to manufacture Handles, Hand Wheels and Section. Aluminium has a low density and is corrosion resistant ideal for aerospace, structural and machine applications.

The ends of all cut aluminium section are supplied sawn such that they will clean up to the lengths stated in this catalogue.

STEEL

ZP

(Zinc Plated)

All steel parts are treated with a chemical black finish (unless otherwise stated) which gives adequate protection against rusting under normal workshop conditions.

Where stated as being surface hardened these parts have a wear resistant hardness in the range 50-60 HRC. Metric threads are to ISO Coarse series except where otherwise stated.

Our products are constantly reviewed on a fitness for purpose basis and we reserve the right to change specifications, finishes etc. without prior notice.

Zinc plating is a process of coating a material which could be susceptible to corrosion.

The zinc coating helps protect the base material.

PLASTIC

BK

(Bakelite)

TP

(Thermoplastic)

Selected WDS plastic products are available in various colours these include:

Jet Black



Pure Orange



Black Grey



Traffic Red



Pale Grey



Signal Green



Cadmium Yellow



Traffic Blue



BAKELITE

Specific weight	1,4 g/cm ³
Maximum temperature	160°C up to 2 hours, 140°C 5000 hours, 120°C 25000 hours
Mechanical pressure resistance	200 N/mm ²
Fire resistance	V 1 - ul 94
Elasticity	6 - 8 KN/mm ²
Di-electrical rigidity	50 - 100 KV/cm

THERMOPLASTIC

Specific weight	1,13 g/cm ³
Water absorption	1,8% after 24 hours
Resistance to torsion	1050 Kg/cm ²
Resistance to compression	620 Kg/cm ²
Hardness Rockwell	R 119
Maximum heat	135° Celsius

GLASS FIBRE REINFORCED PLASTIC

Specific weight	1,44 g/cm ³
Water absorption	1,6% after 24 hours
Resistance to torsion	293 MPa
Hardness Rockwell	R 93
Maximum heat	145° Celsius

STAINLESS STEEL

WDS have a varied range of Stainless Steel products. This detailed catalogue displays the current product offering available in a range of Stainless Steel grades in particular 303, 304 and 316. The products in this catalogue are ideal for use in a range of environments such as Marine, Pharmaceutical, Chemical, Medical, Wash Down and Food Preparation.

BS970 Grade 301S21

Used to manufacture Springs for the Spring Plunger range (WDS823 + WDS838)
Good corrosion resistance and elevated carbon to allow for cold working to a variety of temperatures.

303 BS970 Grade 303S31

Used to manufacture many machined products within the WDS range
Suitable for machinery, vats, bowls, pipework and occasional wash down Good resistance to mildly corrosive atmospheres.

304 BS970 Grade 304S11

Used to manufacture many fabricated products within the WDS range
Suitable for machinery, vats, bowls, pipework and occasional wash down Good resistance to mildly corrosive atmospheres

304 BS970 Grade 304S15

Used to manufacture Stainless Steel Toggle Clamps within the WDS range
Stainless Steel Strip Material
Good resistance to mildly corrosive atmospheres

316 BS970 Grade 316S11

The FOOD grade Stainless Steel
Used to manufacture many products within the WDS range Generally associated with FOOD and MARINE industries
Suitable for machinery, vats, bowls, pipework and frequent wash down Very High corrosion resistance

316 BS970 Grade 316S42

Used to manufacture Springs (WDS812) Stainless Steel Spring Wire

BS970 Grade 321S12

Used in the manufacturer of Spring Loaded Index Bolts (WDS826) and Clamping Handles (WDS8320 & 8325) Similar to the 304 grades with improved heat resistance due to the addition of Titanium

BS970 Grade 420S45

Used to manufacture Stainless Steel Ball Bearings within the WDS range
Ball Bearings used in the assembly of Spring Plungers (WDS823) and Ball Spring Plungers (WDS838)

BS970 Grade 420S45

Used to manufacture Stainless Steel Ball Bearings within the WDS range
Ball Bearings used in the assembly of Spring Plungers (WDS823) and Ball Spring Plungers (WDS838)

S3100:1997:316C16F

Used to manufacture products made from castings within the WDS range Casting Grade 316 Stainless Steel

17-4 Type 17-4 (SAE AMS 5643)

Used in the manufacture of Quick Release Pins within the WDS range Hardened Stainless Steel

Chemical Specification for Stainless Steel*

Grade	EN Number	C	Si	Mn	P	S	N	Cr	Mo	Ni	Other
301S21	1.431	0.05-0.15	2.0 max	2.0 max	0.045 max	0.015 max	0.11 max	16.0- 19.0	0.8 max	6.0-9.5	-
303S31	1.4305	0.10 max	1.0 max	2.0 max	0.045 max	0.15-0.35	0.11 max	17.0- 19.0	-	8.0-10.0	-
304S11	1.4306	0.03 max	1.0 max	2.0 max	0.045 max	0.015 max	0.11 max	18.0-20.0	-	10.0-12.0	-
304S15	1.4301	0.07 max	1.0 max	2.0 max	0.045 max	0.015 max	0.11 max	17.5- 19.5	-	8.0-10.5	-
316S11	1.4404	0.03 max	1.0 max	2.0 max	0.045 max	0.015 max	0.11 max	16.5- 18.5	2.0- 2.5	10.0/13.0	-
316S42	1.4401	0.07 max	1.0 max	2.0 max	0.045 max	0.03 max	0.11 max	16.0- 18.5	2.0- 2.5	9.5/13.5	-
321S12	1.4541	0.08 max	1.0 max	2.0 max	0.045 max	0.015 max	-	17.0- 20.0	-	9.0- 12.0	Ti 0.7 max
420S45	1.4025	0.26-0.35	1.0 max	1.5 max	0.040 max	0.015 max	-	12.0- 14.0	-	-	-

TOLERANCES

HOLES				
Above	Up to & including	H6	H7	H8
-	3	+ 0.006 0	+ 0.010 0	+ 0.014 0
3	6	+ 0.008 0	+ 0.012 0	+ 0.018 0
6	10	+ 0.009 0	+ 0.015 0	+ 0.022 0
10	18	+ 0.011 0	+ 0.018 0	+ 0.027 0
18	30	+ 0.013 0	+ 0.021 0	+ 0.033 0
30	50	+ 0.016 0	+ 0.025 0	+ 0.039 0
50	80	+ 0.019 0	+ 0.030 0	+ 0.046 0
80	120	+ 0.022 0	+ 0.035 0	+ 0.054 0
120	180	+ 0.025 0	+ 0.040 0	+ 0.063 0
180	250	+ 0.029 0	+ 0.046 0	+ 0.072 0
250	315	+ 0.032 0	+ 0.052 0	+ 0.081 0
315	400	+ 0.036 0	+ 0.057 0	+ 0.089 0
400	500	+ 0.040 0	+ 0.063 0	+ 0.097 0

SHAFTS								
Above	Up to & including	h6	h7 (Slide Fit)	h8	m6 (Light Drive)	n6 (Semi-med Drive)	p6 (Medium Drive)	g6 (Close Running)
-	3	0 - 0.006	0 - 0.010	0 - 0.014	+ 0.008 + 0.002	+ 0.010 + 0.004	+ 0.012 + 0.006	- 0.002 - 0.008
3	6	0 - 0.008	0 - 0.012	0 - 0.018	+ 0.012 + 0.004	+ 0.016 + 0.008	+ 0.020 + 0.012	- 0.004 - 0.012
6	10	0 - 0.009	0 - 0.015	0 - 0.022	+ 0.015 + 0.006	+ 0.019 + 0.010	+ 0.024 + 0.015	- 0.005 - 0.014
10	18	0 - 0.011	0 - 0.018	0 - 0.027	+ 0.018 + 0.007	+ 0.023 + 0.012	+ 0.029 + 0.018	- 0.006 - 0.017
18	30	0 - 0.013	0 - 0.021	0 - 0.033	+ 0.021 + 0.008	+ 0.028 + 0.015	+ 0.035 + 0.022	- 0.007 - 0.020
30	50	0 - 0.016	0 - 0.025	0 - 0.039	+ 0.025 + 0.009	+ 0.033 + 0.017	+ 0.042 + 0.026	- 0.009 - 0.025
50	80	0 - 0.019	0 - 0.030	0 - 0.046	+ 0.030 + 0.011	+ 0.039 + 0.020	+ 0.051 + 0.032	- 0.010 - 0.029
80	120	0 - 0.022	0 - 0.035	0 - 0.054	+ 0.035 + 0.013	+ 0.045 + 0.023	+ 0.059 + 0.037	- 0.012 - 0.034
120	180	0 - 0.025	0 - 0.040	0 - 0.063	+ 0.040 + 0.015	+ 0.052 + 0.027	+ 0.068 + 0.043	- 0.014 - 0.039
180	250	0 - 0.029	0 - 0.046	0 - 0.072	+ 0.046 + 0.017	+ 0.060 + 0.031	+ 0.079 + 0.050	- 0.015 - 0.044
250	315	0 - 0.032	0 - 0.052	0 - 0.081	+ 0.052 + 0.020	+ 0.066 + 0.034	+ 0.088 + 0.056	- 0.017 - 0.049
315	400	0 - 0.036	0 - 0.057	0 - 0.089	+ 0.057 + 0.021	+ 0.073 + 0.037	+ 0.096 + 0.062	- 0.018 - 0.054
400	500	0 - 0.040	0 - 0.063	0 - 0.097	+ 0.063 + 0.023	+ 0.080 + 0.040	+ 0.108 + 0.068	- 0.020 - 0.060

CONVERSION TABLES

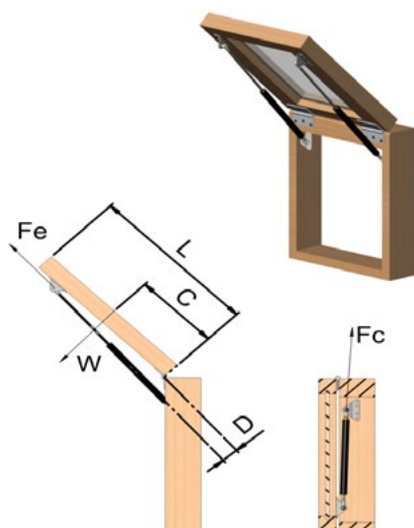
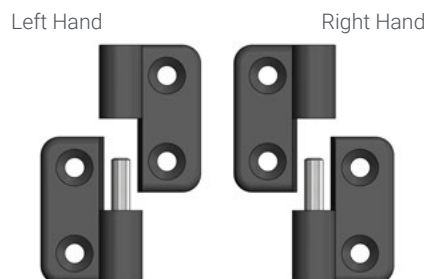
LENGTH			
mm to in		in to mm	
10	0.394	1	25.4
20	0.787	2	50.8
30	1.181	3	76.2
40	1.575	4	101.6
50	1.969	5	127
60	2.362	6	152.4
70	2.756	7	177.8
80	3.150	8	203.2
90	3.543	9	228.6
100	3.937	10	254

MASS				
lb to kg		kg/g to lb		
1	0.454	1	1000	2.205
2	0.907	2	2000	4.409
3	1.361	3	3000	6.614
4	1.814	4	4000	8.819
5	2.268	5	5000	11.023
6	2.722	6	6000	13.228
7	3.175	7	7000	15.432
8	3.629	8	8000	17.637
9	4.082	9	9000	19.842
10	4.536	10	10000	22.046

Please Note - Data columns headed with g or kg refer to the approximate weight of each product.
All dimensions in metric unless otherwise shown.

CALCULATIONS FOR HINGES

For the full range of Hinges please see pages **295-323**



CALCULATION OF GAS STRUT FORCES

For the full range of Gas Struts please see pages **53-76**

$$F_e = \frac{\text{Load} \times 9.81 \times C \times 1.1}{D \times N}$$

$$F_c = \frac{\text{LOAD} \times 9.81 \times C \times 0.9}{D \times N}$$

L = Length of door (mm)

C = Distance from Centre of Gravity to Hinge (mm)

D = Distance from Gas Strut to Hinge (mm)

N = Number of struts

Fe = Strut Force (Extended) in Newtons

Fc = Strut Force (Compressed) in Newtons

Load = Weight of door (kg)

WDS 950 / 952 / 953 /954 / 955 SERIES

For the full range of Quick Release Pins please see pages 759-772

SPECIFICATIONS AND MATERIALS

Quick Release Pin - Inch Specifications

Pin Diameter (inches)	Double Shear (lbf) Steel	Double Shear (lbf) Stainless	Recommended Hole Diameter Max	Recommended Hole Diameter Min
3/16	4,600	5,150	0.1940	0.1900
1/4	8,200	9,200	0.2540	0.2500
5/16	12,800	14,400	0.3165	0.3125
3/8	18,400	20,600	0.3790	0.3750
7/16	25,000	28,000	0.4425	0.4375
1/2	32,800	36,800	0.5050	0.5000
9/16	41,200	46,000	0.5675	0.5625
5/8	51,200	57,500	0.6300	0.6250
3/4	73,600	82,500	0.7570	0.7500
7/8	100,000	112,500	0.8820	0.8750
1	131,000	147,000	1.0100	1.000

Quick Release Pin - Metric Specifications

Pin Diameter (mm)	Double Shear (N) Steel	Double Shear (N) Stainless	Recommended Hole Diameter Max	Recommended Hole Diameter Min
5	21,720	24,440	5.1	5
6	31,690	35,650	6.1	6
8	56,700	63,790	8.1	8
10	88,940	100,060	10.1	10
12	128,460	144,520	12.1	12
16	229,150	257,800	16.1	16
20	358,790	403,640	20.15	20
25	561,440	631,620	25.15	25

Quick Release Pins are designed and manufactured to meet or exceed these standards and specifications

- Stainless Steel - Body/spindle 17-4PH
- Spindle Heat Treatment - Condition H-900 Rockwell C40 min
- Aluminium Alloy Parts - Anodized, Class 2 or chemical film, Class 11A. Handles are black.
- Tested to -40°C (-40°F)

Unless otherwise stated

English units are inches (in) and pounds (lbs)

Metric units are millimetres (mm) and kilograms (kg)

SPENCER FRANKLIN PRODUCT RANGE

Available for the past 60 years the range is particularly suitable for simple clamping and presswork applications. Using mainly single acting spring return cylinders the range offers a simple and economical solution to clamping and presswork problems.

Air/Oil boosters and pumps are usually part of the above systems - so the only service required is an air supply. A unique product in the range is the 'Hydraclamp', providing an activated clamp either mechanically or hydraulically operated particularly suitable for hand finishing or assembly work. They are used extensively in the Aerospace Industry for Turbine Blade Finishing.

CLAMPING FORCE

Clamping Force

Clamping force exerted by piston is dependent on two factors.

a) Oil Input Pressure P

b) Effective Area of Piston A

Expressed in equation Force = Pressure x Area

Where force is in kilograms, pressure is in kgf/cm² or bar area is in cm²

Example: A hollow cylinder to produce a force of 2000kgs is required a stroke of 6mm and an oil input pressure of 175 bar.

$$\text{Using this equation: } A = \frac{F}{P} = \frac{2000}{175} = 11.43\text{cm}^2$$

The PowRlock Openram Junior Head SF-3100MF has an effective area of 12.77 so would give a force of 12.77 x 175 = 2235kg.

SELECTION OF PRESSURE SOURCE

Selection of Pressure Source

For most applications PowRlock Air/Oil Boosters are the fastest and most economical pressure source for PowRlock cylinders.

Different models or boosters are available and these vary in only two essential details namely:

Pressure Ratio and Oil volume displaced

Pressure Ratio

The ratio between the air input pressure and the oil output pressure.

To determine the oil pressure available from any booster use the following formula:

Oil Pressure P = Air Input Pressure p x Ratio of booster R

Example: To determine the oil pressure available from a type SF2630 Booster with a pressure ratio of 32:1 and with an airline pressure of 5.5 bar:

$$5.5 \times 32 = 176\text{kgf/cm}^2$$

Actual working pressure can be up to 10% less than theoretical due to system losses. Once booster oil outlet pressure is known we can determine the theoretical working force on any cylinder using the formula:

Force = Pressure x Area

Example: To determine the piston force exerted by a junior head SF-3100MF with an effective piston area of 12.77cm² and assuming an oil inlet pressure of 175kgf/cm²:

$$F = 175 (P) \times 12.77 (A) = 2235\text{kgf}$$

The actual force applied will be slightly less than this amount by the spring force of the SF 3100MF head i.e approximately 18kgs.

OIL DISPLACEMENT

This is the volume of oil available from a particular booster and determines how many small cylinders or indeed how large a cylinder can be operated from the single booster.

Oil volume required = Piston Area (Total) x Stroke (s)

Example: To determine the volume of oil required to achieve a stroke of 6mm on a junior head SF-3100MF with a piston area of 12.77cm². Volume of oil required = 12.77 x 0.6 = 7.7cm³

If 4 PowRlock heads are needed a booster with a minimum oil displacement of 4 x 7.7 = 30.8cm³ is required the SF2640 Booster with oil displacement of 53.99cm³ would suffice.

Note:

1) On booster/cylinder systems when using flexible hoses in the hydraulic pipework approximately 2cm³ volume of oil is lost to the cylinder due to the hose expansion at 200kgf/cm² per 30cm section.

2) The number of cylinders per booster has no effect on the piston force per cylinder when the full volume is available.

SYSTEM DESIGN

Do not use the Booster or Cylinder return springs as dead stops.

Take care not to subject the linear cylinders to any significant side loading as this can damage the seals.

Calculate the total oil volume per cylinder to complete the stroke required - then select a booster with a capacity of 15-20% above the calculated figure, to allow for expansion etc.

Always use the bonded washers when sealing parallel BSP threads.

For general clamping applications $\frac{1}{4}$ bore hoses and $\frac{1}{4}$ BSP air valves are suitable. For maximum speed of operation, i.e. on presswork use $\frac{3}{8}$ or $\frac{1}{2}$ bore pipework and air valves. The shorter the flexible hoses the less the expansion losses. Whilst the Booster will operate effectively when sited below the cylinders, the bleeding of the system and maintenance are much easier if the Booster is placed at the highest point of the system. The use of a self-bleed reservoir SF-4957 will make air removal easier.

BLEEDING THE HYDRAULIC SYSTEM

The bleeding of a PowRlock circuit is exactly the same principal as the automobile hydraulic braking systems, except normally the automobile is on level ground and it is recommended to commence bleeding from the farthest point of the hydraulic energy source. The PowRlock system is simpler in effect as it is recommended to bleed from the highest point of the circuit and if it also be the hydraulic energy source (i.e. Booster, Lever or Hand Pump) so much the better. If the circuit to be bled is an existing one and has air bubbles entrained, consider at this point the necessity for seal and fluid renewal.

Slacken off connectors (finger tight) and introduce fluid at the highest port connection, filler plug or hose, which shall be referred to as the 'high point' for convenience. Starting from the lowest point, slacken connection to allow a flow of oil to escape from the system (wasted fluid should be prevented from contaminating floors by using a drip tray). When flow becomes continuous and free from air bubbles - tighten connection, top up system with fluid at high point - continuously during bleeding.

Repeat procedure at every clamping head or ram working upwards towards high point.

Should the high point be in the middle of the circuit, start as above from one end working upwards to high point and then repeat from other end of circuit. Having secured all connections including high point, cycle unit several times and then switch off.

Remove high point connection and top up with fluid if necessary, repeat until system is fully primed.

On Presswork applications the use of a Booster reservoir assembly type ref. 4957 will greatly assist in the bleeding of the circuit and prove most useful as a permanent feature of the hydraulic circuit.

If in doubt contact the Technical Department, who will be pleased to advise you.

RECOMMENDED HYDRAULIC OIL

S.A.E 10w HYDRAULIC

DO NOT USE AUTOMOBILE HYDRAULIC FLUIDS OF ANY DESCRIPTION.

CONVERSION FACTORS

PRESSURE	
1 psi	0.069 bar
1 bar	14.50 psi
1 bar	1kg/cm ²
1 MPa	145 psi

WEIGHT	
1 lb	0.4536kg
1 kg	2.205lbs
1 metric Tonne	2205lbs/1000kgs

VOLUME	
1 in ³	16.387cm ³
1 cm ³	0.061in ³
1 litre	61.02in ³ = 0.264 gal
1 gallon	4.546 litres

OTHERS	
1 in	25.4mm
1 mm	0.039in
1 in ²	6.452cm ²
1 cm ²	0.155in
1 lbf	4.448N

Symbol	Unit	Definition
St	mm	Maximum stroke in millimetres
F	N	Clamping force in Newtons
A _p	cm ²	Internal surface area of the piston (effective area in catalogue tables)
A _{out}	cm ²	Output surface area of the ram or the output surface area of the fixture attached
P _{oil}	Bar	Oil pressure in bar
P _{out}	Bar	Output clamping pressure in bar
P _{air}	Bar	Air input pressure for booster in bar
R	N/A	Ratio of booster
V _o	cm ³	Volume of oil required for maximum stroke

Actual pressures can be up to 10% less than theoretical due to system losses.
When using the calculations please use the units given in the table

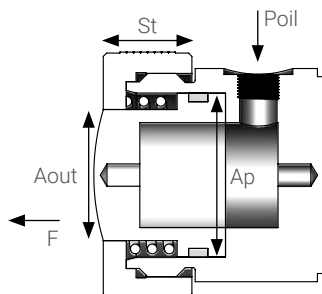
RAM INFORMATION

$$P_{out} = \frac{A_P \times P_{oil}}{A_{out}}$$

$$V_o = A_o \times S_t \times 10$$

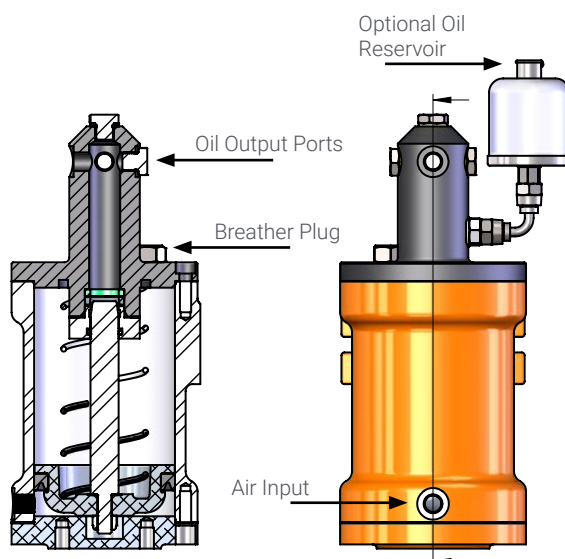
*Select a booster 15-20% greater than the calculated volume, to allow for expansion

$$F_{newtons} = A_P \times P_{oil} \times 9.81$$



BOOSTER INFORMATION

$$P_{oil} = P_{air} \times R$$



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205	654	363	192	510	783-784
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209	618	365	194	512	790
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214	618	367	195	520	135-136
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230	612	407	429	555	573
233	612	408	433	557	65, 576-577
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884	878	4009	867	4091	898
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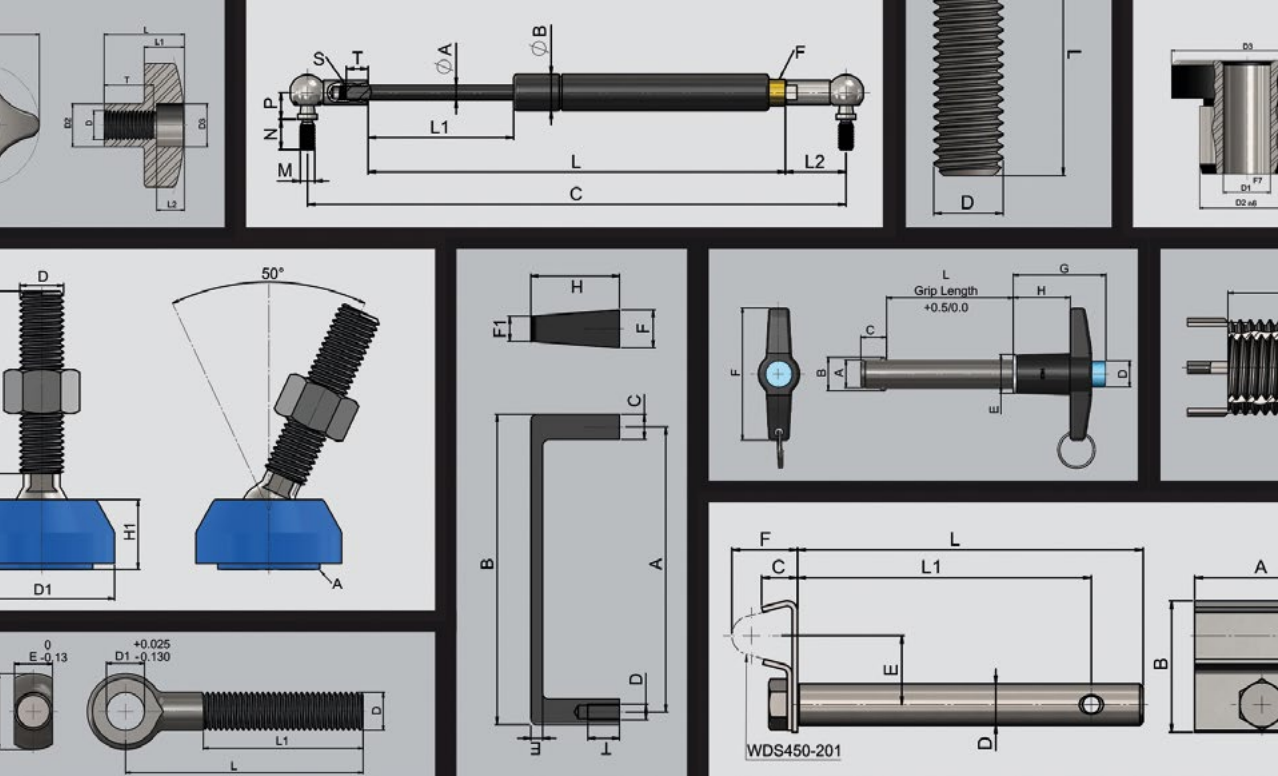
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METALS

303 Stainless Steel	303	Aluminium	AL
304 Stainless Steel	304	Cast Iron	CI
316 Stainless Steel	316	Chrome	CR
Heat Treated Stainless Steel	17-4	Brass	BR
Zinc Plated Steel	ZP	Copper	CU

PLASTICS

Nylon	NYL
Thermoplastic	TP
Rubber	RUB
Bakelite	BK

OTHER

Inch Dimension	IN"
Maximum Load	MAX LOAD KG
Heat Resistance	



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