


















Disc Springs to DIN 2093

								15% Defl.	30% Defl.	45% Defl.	60% Defl.	75% Defl.	90% Defl.						
																			
Code No.	Outer Dia. (De) mm	Inner Dia. (Di) mm	Thick. (t) mm	Cone Ht. (ho) mm	Overall Ht. (lo) mm	Cone Ht. Thick. Ratio	Weight per 1000 pcs.	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N		
								Stress δ_{II} N/mm ²	Stress δ_{III} N/mm ²	Stress δ_{II} N/mm ²	Stress δ_{III} N/mm ²	Stress δ_{II} N/mm ²	Stress δ_{III} N/mm ²	Stress δ_{II} N/mm ²	Stress δ_{III} N/mm ²	Stress δ_{II} N/mm ²	Stress δ_{III} N/mm ²	Stress δ_{II} N/mm ²	Stress δ_{III} N/mm ²
D63203	6.0	3.2	.30	.15	.45	.50	.05	.02 198	27 273	.05 420	53 531	.07 664	76 774	.09 930	98 1,002	.11 1,220	119 1,215	.14 1,532	140 1,414
D83202	8.0	3.2	.20	.20	.40	1.00	.07	.03 37	8 144	.06 97	14 276	.09 179	19 396	.12 283	23 504	.15 409	26 600	.18 558	28 684
D83203	8.0	3.2	.30	.25	.55	.83	.10	.04 113	29 247	.08 261	53 475	.11 443	73 684	.15 660	90 875	.19 912	104 1,046	.23 1,198	117 1,199
D83204	8.0	3.2	.40	.20	.60	.50	.13	.03 212	43 214	.06 446	82 416	.09 702	119 605	.12 981	153 783	.15 1,281	186 949	.18 1,604	217 1,102
D83205	8.0	3.2	.50	.20	.70	.40	.17	.03 299	79 249	.06 620	153 485	.09 964	223 710	.12 1,329	291 922	.15 1,717	357 1,123	.18 2,128	422 1,311
D84202	8.0	4.2	.20	.25	.45	1.25	.06	.04 -7	14 253	.08 21	24 483	.11 85	32 690	.15 185	36 873	.19 319	39 1,034	.23 489	41 1,172
D84203	8.0	4.2	.30	.25	.55	.83	.09	.04 99	33 308	.08 233	60 594	.11 402	83 856	.15 607	102 1,095	.19 847	118 1,312	.23 1,123	133 1,505
D84204	8.0	4.2	.40	.20	.60	.50	.11	.03 198	48 268	.06 419	93 522	.09 663	134 761	.12 929	173 985	.15 1,218	210 1,194	.18 1,530	245 1,389
D103203	10.0	3.2	.30	.35	.65	1.17	.17	.05 39	34 234	.11 124	59 447	.16 254	77 638	.21 430	90 808	.26 652	98 957	.32 919	105 1,085
D103204	10.0	3.2	.40	.30	.70	.75	.22	.05 160	48 214	.09 353	88 412	.14 579	123 595	.18 840	153 762	.23 1,134	179 913	.27 1,461	204 1,048
D103205	10.0	3.2	.50	.25	.75	.50	.28	.04 238	64 189	.08 500	123 368	.11 784	178 535	.15 1,092	229 692	.19 1,424	279 838	.23 1,779	326 972
D104204	10.0	4.2	.40	.30	.70	.75	.20	.05 134	50 249	.09 300	93 480	.14 497	129 693	.18 727	161 888	.23 988	189 1,066	.27 1,282	215 1,225
D104205	10.0	4.2	.50	.25	.75	.50	.25	.04 208	68 221	.08 438	130 430	.11 690	188 626	.15 964	242 810	.19 1,260	294 981	.23 1,578	344 1,140
D104206	10.0	4.2	.60	.25	.85	.42	.30	.04 277	111 250	.08 575	216 487	.11 896	315 712	.15 1,239	410 925	.19 1,604	502 1,125	.23 1,991	592 1,313
D1052025	10.0	5.2	.25	.30	.55	1.20	.11	.05 2	20 235	.09 37	35 449	.14 104	45 642	.18 203	53 814	.23 336	58 965	.27 500	61 1,095
D105204	10.0	5.2	.40	.30	.70	.75	.18	.05 124	56 298	.09 280	103 575	.14 468	143 832	.18 690	178 1,067	.23 943	209 1,281	.27 1,230	238 1,474
D105205	10.0	5.2	.50	.25	.75	.50	.22	.04 198	75 266	.08 419	144 517	.11 663	208 753	.15 929	268 975	.19 1,218	325 1,182	.23 1,529	381 1,375
D124204	12.0	4.2	.40	.40	.80	1.00	.31	.06 76	55 238	.12 193	98 455	.18 350	132 653	.24 548	158 830	.30 786	178 988	.36 1,064	195 1,125
D124205	12.0	4.2	.50	.35	.85	.70	.39	.05 165	73 219	.11 361	136 423	.16 589	191 612	.21 847	240 785	.26 1,136	284 943	.32 1,456	325 1,086
D124206	12.0	4.2	.60	.40	1.00	.67	.47	.06 239	141 295	.12 519	263 569	.18 839	372 824	.24 1,199	468 1,058	.30 1,600	557 1,273	.36 2,041	640 1,467
D125205	12.0	5.2	.50	.40	.90	.80	.36	.06 137	96 303	.12 314	176 584	.18 530	243 842	.24 785	300 1,078	.30 1,080	350 1,291	.36 1,414	395 1,482
D125206	12.0	5.2	.60	.35	.95	.58	.43	.05 213	122 279	.11 456	231 540	.16 730	330 785	.21 1,033	421 1,012	.26 1,367	506 1,222	.32 1,730	588 1,415
D126205	12.0	6.2	.50	.35	.85	.70	.33	.05 139	84 291	.11 308	157 563	.16 509	220 815	.21 740	276 1,047	.26 1,001	326 1,259	.32 1,294	374 1,452
D126206	12.0	6.2	.60	.35	.95	.58	.39	.05 204	133 325	.11 440	252 631	.16 706	360 916	.21 1,002	459 1,182	.26 1,329	552 1,429	.32 1,687	640 1,655
D1255205	12.5	5.2	.50	.35	.85	.70	.40	.05 138	70 224	.11 304	131 432	.16 497	183 625	.21 718	230 803	.26 967	272 965	.32 1,244	312 1,112
D12562035	12.5	6.2	.35	.45	.80	1.29	.25	.07 -14	55 314	.14 18	95 598	.20 97	123 854	.27 222	141 1,080	.34 393	151 1,278	.41 611	157 1,446

Disc Springs to DIN 2093

								15% Defl.	30% Defl.	45% Defl.	60% Defl.	75% Defl.	90% Defl.						
																			
Code No.	Outer Dia. (De) mm	Inner Dia. (Di) mm	Thick. (t) mm	Cone Ht. (ho) mm	Overall Ht. (lo) mm	Cone Ht. Thick. Ratio	Weight per 1000 pcs.	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N		
								Stress δ_{II} N/mm ²	Stress δ_{III} N/mm ²	Stress δ_{II} N/mm ²	Stress δ_{III} N/mm ²	Stress δ_{II} N/mm ²	Stress δ_{III} N/mm ²	Stress δ_{II} N/mm ²	Stress δ_{III} N/mm ²	Stress δ_{II} N/mm ²	Stress δ_{III} N/mm ²	Stress δ_{II} N/mm ²	Stress δ_{III} N/mm ²
D1256205	12.5	6.2	.50	.35	.85	.70	.36	.05 129	76 258	.11 286	141 498	.16 471	198 721	.21 684	248 926	.26 925	293 1,114	.32 1,194	336 1,284
D1256206	12.5	6.2	.60	.35	.95	.58	.44	.05 189	119 288	.11 407	227 558	.16 652	324 811	.21 926	413 1,046	.26 1,227	496 1,264	.32 1,557	576 1,464
D1256207	12.5	6.2	.70	.30	1.00	.43	.51	.05 235	147 259	.09 491	284 505	.14 767	415 739	.18 1,064	539 959	.23 1,382	660 1,167	.27 1,720	777 1,361
D125621	12.5	6.2	1.00	.20	1.20	.20	.73	.03 289	257 206	.06 586	510 407	.09 893	760 602	.12 1,209	1,008 791	.15 1,534	1,254 975	.18 1,868	1,499 1,152
D1472035	14.0	7.2	.35	.45	.80	1.29	.31	.07 -13	45 259	.14 12	78 494	.20 74	100 705	.27 173	115 892	.34 309	123 1,055	.41 482	128 1,195
D147205	14.0	7.2	.50	.40	.90	.80	.44	.06 94	76 258	.12 217	140 497	.18 370	194 717	.24 553	239 919	.30 764	279 1,101	.36 1,005	315 1,265
D147208	14.0	7.2	.80	.30	1.10	.38	.71	.05 228	173 235	.09 473	338 460	.14 735	496 674	.18 1,013	648 878	.23 1,308	797 1,071	.27 1,619	943 1,253
D155204	15.0	5.2	.40	.55	.95	1.38	.49	.08 -15	67 249	.17 19	115 473	.25 103	147 674	.33 235	166 850	.41 417	176 1,002	.50 647	180 1,130
D155205	15.0	5.2	.50	.50	1.00	1.00	.61	.08 77	86 236	.15 195	154 453	.23 353	206 650	.30 551	246 826	.38 790	278 983	.45 1,070	305 1,119
D155206	15.0	5.2	.60	.45	1.05	.75	.73	.07 151	108 222	.14 334	200 428	.20 551	278 618	.27 800	347 792	.34 1,082	407 949	.41 1,397	463 1,090
D155207	15.0	5.2	.70	.40	1.10	.57	.85	.06 206	133 206	.12 439	252 399	.18 697	361 579	.24 981	461 746	.30 1,291	555 901	.36 1,627	645 1,043
D156205	15.0	6.2	.50	.50	1.00	1.00	.58	.08 64	89 262	.15 168	160 501	.23 311	214 719	.30 494	256 915	.38 716	289 1,089	.45 977	317 1,242
D156206	15.0	6.2	.60	.45	1.05	.75	.69	.07 135	112 246	.14 302	208 475	.20 501	290 685	.27 732	360 878	.34 994	424 1,054	.41 1,289	482 1,212
D156207	15.0	6.2	.70	.40	1.10	.57	.81	.06 189	138 228	.12 402	262 443	.18 642	376 643	.24 906	480 829	.30 1,195	578 1,002	.36 1,510	671 1,160
D158205	15.0	8.2	.50	.50	1.00	1.00	.49	.08 51	103 334	.15 142	184 640	.23 275	247 919	.30 448	295 1,171	.38 662	334 1,396	.45 917	365 1,593
D158207	15.0	8.2	.70	.40	1.10	.57	.68	.06 178	159 293	.12 382	303 569	.18 612	433 827	.24 868	553 1,067	.30 1,150	666 1,291	.36 1,459	774 1,496
D158208	15.0	8.2	.80	.40	1.20	.50	.78	.06 226	226 320	.12 478	434 622	.18 757	628 906	.24 1,061	809 1,173	.30 1,392	982 1,423	.36 1,749	1,150 1,655
D168204	16.0	8.2	.40	.50	.90	1.25	.47	.08 -6	55 247	.15 23	96 471	.23 88	124 673	.30 187	143 852	.38 322	154 1,009	.45 491	162 1,143
D168206	16.0	8.2	.60	.45	1.05	.75	.70	.07 109	109 258	.14 246	201 498	.20 412	280 720	.27 607	349 924	.34 830	410 1,109	.41 1,081	466 1,276
D168207	16.0	8.2	.70	.45	1.15	.64	.81	.07 156	159 283	.14 341	298 547	.20 555	422 793	.27 796	534 1,021	.34 1,067	637 1,230	.41 1,366	735 1,422
D168208	16.0	8.2	.80	.40	1.20	.50	.93	.06 199	190 262	.12 420	365 509	.18 663	527 742	.24 929	680 960	.30 1,218	825 1,164	.36 1,529	966 1,354
D168209	16.0	8.2	.90	.35	1.25	.39	1.05	.05 226	221 238	.11 469	431 465	.16 729	632 681	.21 1,006	825 886	.26 1,301	1,013 1,080	.32 1,613	1,197 1,263
D186204	18.0	6.2	.40	.60	1.00	1.50	.70	.09 -32	57 198	.18 -23	96 376	.27 26	121 534	.36 116	134 673	.45 247	139 791	.54 418	138 890
D186205	18.0	6.2	.50	.60	1.10	1.20	.88	.09 23	85 217	.18 86	149 414	.27 190	194 591	.36 335	225 748	.45 520	245 885	.54 746	259 1,003
D186206	18.0	6.2	.60	.60	1.20	1.00	1.06	.09 78	124 236	.18 196	221 452	.27 354	296 647	.36 554	355 823	.45 794	400 980	.54 1,074	438 1,116
D186207	18.0	6.2	.70	.55	1.25	.79	1.23	.08 140	150 224	.17 315	276 431	.25 523	382 622	.33 766	473 795	.41 1,043	553 953	.50 1,354	625 1,093

Disc Springs to DIN 2093







								15% Defl.	30% Defl.	45% Defl.	60% Defl.	75% Defl.	90% Defl.				
																	
Code No.	Outer Dia. (De) mm	Inner Dia. (Di) mm	Thick. (t) mm	Cone Ht. (ho) mm	Overall Ht. (lo) mm	Cone Ht. Thick. Ratio	Weight per 1000 pcs.	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N
								Stress δ_{II} δ_{III} N/mm ²		Stress δ_{II} δ_{III} N/mm ²		Stress δ_{II} δ_{III} N/mm ²		Stress δ_{II} δ_{III} N/mm ²		Stress δ_{II} δ_{III} N/mm ²	
D186208	18.0	6.2	.80	.50	1.30	.63	1.41	.08 179 190 211	.15 337 409 408	.23 479 656 591	.30 607 931 760	.38 726 1,235 916	.45 838 1,566 1,057				
D188205	18.0	8.2	.50	.60	1.10	1.20	.79	.09 92 9 258	.18 161 56 492	.27 209 144 703	.36 243 270 891	.45 265 436 1,056	.54 280 641 1,197				
D188207	18.0	8.2	.70	.55	1.25	.79	1.11	.08 161 118 267	.17 297 270 515	.25 412 454 743	.33 510 672 952	.41 596 922 1,141	.50 674 1,206 1,310				
D188208	18.0	8.2	.80	.50	1.30	.63	1.27	.08 193 166 252	.15 364 360 488	.23 516 581 708	.30 655 829 911	.38 783 1,104 1,098	.45 904 1,407 1,270				
D18821	18.0	8.2	1.00	.40	1.40	.40	1.58	.06 260 227 216	.12 505 471 422	.18 739 733 617	.24 963 1,012 803	.30 1,181 1,309 977	.36 1,395 1,623 1,142				
D1892045	18.0	9.2	.45	.60	1.05	1.33	.66	.09 80 -22 272	.18 138 -3 519	.27 176 55 740	.36 200 153 936	.45 214 291 1,106	.54 220 470 1,251				
D189207	18.0	9.2	.70	.50	1.20	.71	1.03	.08 147 120 258	.15 274 268 499	.23 383 444 722	.30 480 648 927	.38 566 879 1,114	.45 647 1,138 1,284				
D18921	18.0	9.2	1.00	.40	1.40	.40	1.48	.06 276 223 240	.12 536 465 469	.18 784 724 687	.24 1,023 1,001 893	.30 1,254 1,295 1,088	.36 1,481 1,607 1,271				
D208206	20.0	8.2	.60	.70	1.30	1.17	1.2	.11 141 23 267	.21 246 89 510	.32 322 199 729	.42 375 353 924	.53 412 550 1,095	.63 438 790 1,242				
D208207	20.0	8.2	.70	.65	1.35	.93	1.4	.10 168 84 257	.20 303 206 492	.29 411 365 708	.39 498 561 902	.49 569 795 1,076	.59 630 1,067 1,229				
D208208	20.0	8.2	.80	.60	1.40	.75	1.6	.09 199 136 245	.18 369 303 472	.27 514 503 682	.36 639 734 874	.45 751 998 1,048	.54 854 1,293 1,205				
D208209	20.0	8.2	.90	.55	1.45	.61	1.8	.08 233 177 232	.17 441 382 449	.25 627 613 651	.33 796 871 838	.41 954 1,156 1,011	.50 1,103 1,467 1,169				
D20821	20.0	8.2	1.00	.55	1.55	.55	2.1	.08 306 216 247	.17 583 458 480	.25 837 727 698	.33 1,073 1,023 901	.41 1,294 1,346 1,089	.50 1,508 1,696 1,262				
D2010204	20.0	10.2	.40	.50	.90	1.25	.7	.08 35 -4 157	.15 61 15 300	.23 79 56 428	.30 91 120 543	.38 99 206 642	.45 103 315 728				
D2010205	20.0	10.2	.50	.65	1.15	1.30	.9	.10 94 -15 261	.20 161 8 498	.29 208 69 711	.39 237 168 899	.49 254 305 1,063	.59 264 479 1,203				
D2010208	20.0	10.2	.80	.55	1.35	.69	1.5	.08 191 129 258	.17 357 285 499	.25 502 469 723	.33 631 679 929	.41 748 917 1,118	.50 858 1,182 1,289				
D2010209	20.0	10.2	.90	.55	1.45	.61	1.6	.08 257 166 277	.17 485 359 537	.25 690 580 780	.33 877 828 1,005	.41 1,050 1,102 1,212	.50 1,215 1,405 1,403				
D201021	20.0	10.2	1.00	.55	1.55	.55	1.8	.08 337 203 296	.17 642 434 575	.25 922 691 836	.33 1,181 976 1,080	.41 1,425 1,288 1,307	.50 1,660 1,627 1,516				
D2010211	20.0	10.2	1.10	.45	1.55	.41	2.0	.07 335 222 242	.14 652 461 472	.20 953 719 691	.27 1,241 995 898	.34 1,521 1,290 1,093	.41 1,795 1,602 1,277				
D20102125	20.0	10.2	1.25	.50	1.75	.40	2.3	.08 544 283 303	.15 1,059 588 592	.23 1,549 916 867	.30 2,020 1,266 1,127	.38 2,477 1,639 1,373	.45 2,925 2,034 1,605				
D2010215	20.0	10.2	1.50	.30	1.80	.20	2.7	.05 517 254 187	.09 1,026 515 368	.14 1,529 785 544	.18 2,027 1,063 715	.23 2,521 1,349 881	.27 3,013 1,643 1,042				
D22511206	22.5	11.2	.60	.80	1.40	1.33	1.4	.12 160 -23 302	.24 274 -1 576	.36 351 66 821	.48 399 178 1,038	.60 425 336 1,227	.72 439 538 1,387				
D22511208	22.5	11.2	.80	.65	1.45	.81	1.9	.10 195 93 253	.20 357 215 488	.29 493 368 704	.39 608 550 901	.49 707 762 1,079	.59 798 1,004 1,239				
D2251121	22.5	11.2	1.00	.65	1.65	.65	2.3	.10 334 162 288	.20 627 354 557	.29 887 575 807	.39 1,121 827 1,039	.49 1,335 1,108 1,251	.59 1,538 1,419 1,445				
D225112125	22.5	11.2	1.25	.50	1.75	.40	2.9	.08 424 224 234	.15 824 465 457	.23 1,206 724 669	.30 1,573 1,001 869	.38 1,929 1,296 1,059	.45 2,278 1,608 1,237				
D238207	23.0	8.2	.70	.80	1.50	1.14	2.0	.12 183 37 245	.24 321 119 469	.36 422 244 670	.48 493 413 850	.60 544 626 1,007	.72 581 882 1,143				

Disc Springs to DIN 2093								15% Defl.		30% Defl.		45% Defl.		60% Defl.		75% Defl.		90% Defl.	
								Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N
Code No.	Outer Dia. (De) mm	Inner Dia. (Di) mm	Thick. (t) mm	Cone Ht. (ho) mm	Overall Ht. (lo) mm	Cone Ht. Thick. Ratio	Weight per 1000 pcs.	Stress N/mm ²		Stress N/mm ²		Stress N/mm ²		Stress N/mm ²		Stress N/mm ²			
								δII	δIII	δII	δIII	δII	δIII	δII	δIII	δII	δIII	δII	δIII
D238208	23.0	8.2	.80	.75	1.55	.94	2.3	.11 214	.23 385	.34 521	.45 630	.56 719	.68 795						
D238209	23.0	8.2	.90	.70	1.60	.78	2.6	.11 248	.21 457	.32 634	.42 785	.53 919	.63 1,041						
D23821	23.0	8.2	1.00	.70	1.70	.70	2.8	.11 319	.21 595	.32 835	.42 1,048	.53 1,240	.63 1,419						
D2310209	23.0	10.2	.90	.75	1.65	.83	2.4	.11 295	.23 539	.34 742	.45 912	.56 1,058	.68 1,189						
D231021	23.0	10.2	1.00	.70	1.70	.70	2.6	.11 339	.21 631	.32 886	.42 1,112	.53 1,315	.63 1,506						
D23102125	23.0	10.2	1.25	.65	1.90	.52	3.3	.10 537	.20 1,029	.29 1,483	.39 1,907	.49 2,310	.59 2,699						
D231221	23.0	12.2	1.00	.60	1.60	.60	2.3	.09 296	.18 560	.27 797	.36 1,015	.45 1,217	.54 1,410						
D23122125	23.0	12.2	1.25	.60	1.85	.48	2.9	.09 532	.18 1,023	.27 1,483	.36 1,916	.45 2,331	.54 2,734						
D2312215	23.0	12.2	1.50	.50	2.00	.33	3.5	.08 705	.15 1,382	.23 2,036	.30 2,673	.38 3,297	.45 3,912						
D251021	25.0	10.2	1.00	.75	1.75	.75	3.2	.11 311	.23 575	.34 801	.45 997	.56 1,172	.68 1,333						
D2512207	25.0	12.2	.70	.90	1.60	1.29	2.1	.14 219	.27 378	.41 487	.54 558	.68 600	.81 624						
D2512209	25.0	12.2	.90	.70	1.60	.78	2.6	.11 233	.21 429	.32 595	.42 737	.53 862	.63 977						
D251221	25.0	12.2	1.00	.80	1.80	.80	2.9	.12 371	.24 682	.36 943	.48 1,165	.60 1,359	.72 1,534						
D25122125	25.0	12.2	1.25	.70	1.95	.56	3.7	.11 526	.21 1,002	.32 1,436	.42 1,837	.53 2,214	.63 2,577						
D2512215	25.0	12.2	1.50	.55	2.05	.37	4.4	.08 634	.17 1,238	.25 1,818	.33 2,379	.41 2,926	.50 3,464						
D2810208	28.0	10.2	.80	.95	1.75	1.19	3.4	.14 229	.29 399	.43 521	.57 605	.71 662	.86 701						
D281021	28.0	10.2	1.00	.90	1.90	.90	4.2	.14 328	.27 595	.41 810	.54 984	.68 1,130	.81 1,257						
D28102125	28.0	10.2	1.25	.80	2.05	.64	5.2	.12 460	.24 866	.36 1,227	.48 1,553	.60 1,853	.72 2,137						
D2810215	28.0	10.2	1.50	.70	2.20	.47	6.3	.11 617	.21 1,190	.32 1,726	.42 2,235	.53 2,723	.63 3,197						
D281221	28.0	12.2	1.00	.95	1.95	.95	3.9	.14 380	.29 683	.43 923	.57 1,114	.71 1,268	.86 1,400						
D28122125	28.0	12.2	1.25	.85	2.10	.68	4.9	.13 530	.26 991	.38 1,395	.51 1,755	.64 2,083	.77 2,390						
D2812215	28.0	12.2	1.50	.75	2.25	.50	5.9	.11 709	.23 1,361	.34 1,966	.45 2,535	.56 3,077	.68 3,603						
D2814208	28.0	14.2	.80	1.00	1.80	1.25	2.9	.15 287	.30 497	.45 644	.60 741	.75 801	.90 839						
D281421	28.0	14.2	1.00	.80	1.80	.80	3.6	.12 303	.24 556	.36 769	.48 949	.60 1,107	.72 1,250						
D28142125	28.0	14.2	1.25	.85	2.10	.68	4.5	.13 570	.26 1,065	.38 1,500	.51 1,887	.64 2,240	.77 2,570						
D2814215	28.0	14.2	1.50	.65	2.15	.43	5.4	.10 633	.20 1,227	.29 1,789	.39 2,324	.49 2,841	.59 3,346						







Disc Springs to DIN 2093

								15% Defl.	30% Defl.	45% Defl.	60% Defl.	75% Defl.	90% Defl.				
								Defl. Force mm N	Defl. Force mm N	Defl. Force mm N	Defl. Force mm N	Defl. Force mm N	Defl. Force mm N				
Code No.	Outer Dia. (De) mm	Inner Dia. (Di) mm	Thick. (t) mm	Cone Ht. (ho) mm	Overall Ht. (lo) mm	Cone Ht. Thick. Ratio	Weight per 1000 pcs.	Stress		Stress		Stress		Stress		Stress	
								δ_{II}	δ_{III}	δ_{II}	δ_{III}	δ_{II}	δ_{III}	δ_{II}	δ_{III}	δ_{II}	δ_{III}
D315122125	31.5	12.2	1.25	.95	2.20	.76	6.5	.14	481	.29	890	.43	1,238	.57	1,539	.71	1,805
								137	237	307	457	509	659	744	844	1,011	1,012
D31512215	31.5	12.2	1.50	.85	2.35	.57	7.8	.13	641	.26	1,219	.38	1,746	.51	2,232	.64	2,688
								202	225	430	437	684	635	964	819	1,270	989
D31516308	31.5	16.3	.80	1.05	1.85	1.31	3.6	.16	255	.32	438	.47	563	.63	642	.79	687
								-19	278	3	529	64	755	166	955	308	1,130
D315163125	31.5	16.3	1.25	.90	2.15	.72	5.6	.14	498	.27	926	.41	1,296	.54	1,621	.68	1,913
								124	275	278	532	462	769	675	988	917	1,187
D31516315	31.5	16.3	1.50	.90	2.40	.60	6.7	.14	785	.27	1,485	.41	2,116	.54	2,693	.68	3,230
								186	307	401	595	646	864	920	1,115	1,223	1,346
D315163175	31.5	16.3	1.75	.70	2.45	.40	7.8	.11	850	.21	1,655	.32	2,421	.42	3,157	.53	3,871
								223	243	465	475	724	695	1,001	904	1,296	1,102
D3151632	31.5	16.3	2.00	.75	2.75	.38	9.0	.11	1,342	.23	2,618	.34	3,841	.45	5,022	.56	6,173
								282	292	585	572	908	838	1,251	1,091	1,615	1,331
D341221	34.0	12.2	1.00	1.25	2.25	1.25	6.2	.19	420	.38	727	.56	942	.75	1,084	.94	1,172
								12	265	73	505	183	720	341	910	549	1,076
D34122125	34.0	12.2	1.25	1.10	2.35	.88	7.8	.17	521	.33	946	.50	1,292	.66	1,576	.83	1,815
								111	242	261	464	448	667	673	852	936	1,017
D3412215	34.0	12.2	1.50	1.00	2.50	.67	9.3	.15	687	.30	1,287	.45	1,816	.60	2,288	.75	2,721
								183	232	398	449	644	650	921	835	1,230	1,004
D34142125	34.0	14.2	1.25	1.15	2.40	.92	7.4	.17	585	.35	1,056	.52	1,434	.69	1,738	.86	1,989
								93	283	227	543	401	780	615	995	870	1,187
D3414215	34.0	14.2	1.50	1.05	2.55	.70	8.8	.16	768	.32	1,432	.47	2,010	.63	2,521	.79	2,984
								167	273	369	527	603	763	872	979	1,175	1,177
D3416315	34.0	16.3	1.50	1.05	2.55	.70	8.2	.16	812	.32	1,514	.47	2,126	.63	2,666	.79	3,155
								158	304	351	587	577	850	837	1,092	1,131	1,313
D341632	34.0	16.3	2.00	.85	2.85	.43	11.0	.13	1,284	.26	2,491	.38	3,634	.51	4,727	.64	5,783
								260	274	541	534	846	781	1,172	1,014	1,520	1,234
D35518309	35.5	18.3	.90	1.15	2.05	1.28	5.1	.17	303	.35	523	.52	675	.69	773	.86	832
								-12	264	15	504	79	720	181	911	320	1,078
D355183125	35.5	18.3	1.25	1.00	2.25	.80	7.1	.15	464	.30	853	.45	1,179	.60	1,457	.75	1,699
								91	251	211	484	360	699	537	895	743	1,073
D3551832	35.5	18.3	2.00	.80	2.80	.40	11.4	.12	1,139	.24	2,217	.36	3,243	.48	4,230	.60	5,187
								230	249	478	487	744	712	1,029	926	1,332	1,128
D40142125	40.0	14.2	1.25	1.40	2.65	1.12	11	.21	590	.42	1,038	.63	1,369	.84	1,607	1.05	1,778
								45	250	134	478	267	684	445	868	667	1,029
D4014215	40.0	14.2	1.50	1.25	2.75	.83	13	.19	709	.38	1,296	.56	1,783	.75	2,191	.94	2,542
								123	231	281	443	475	638	704	816	969	975
D401422	40.0	14.2	2.00	1.05	3.05	.53	17	.16	1,111	.32	2,126	.47	3,062	.63	3,935	.79	4,763
								228	213	482	413	760	601	1,063	777	1,391	939
D4016315	40.0	16.3	1.50	1.05	2.55	.70	12	.16	551	.32	1,027	.47	1,442	.63	1,808	.79	2,140
								122	194	269	375	441	542	636	696	857	836
D401632	40.0	16.3	2.00	1.10	3.10	.55	16	.17	1,222	.33	2,329	.50	3,343	.66	4,283	.83	5,169
								216	246	459	478	729	695	1,026	897	1,349	1,084
D401832	40.0	18.3	2.00	1.15	3.15	.58	16	.17	1,355	.35	2,574	.52	3,682	.69	4,701	.86	5,656
								209	285	447	553	715	803	1,012	1,036	1,338	1,252
D402041	40.0	20.4	1.00	1.30	2.30	1.30	7	.20	375	.39	645	.59	830	.78	948	.98	1,017
								-15	261	8	498	69	711	168	899	305	1,063
D4020415	40.0	20.4	1.50	1.15	2.65	.77	11	.17	702	.35	1,296	.52	1,801	.69	2,237	.86	2,621
								108	265	245	511	412	739	608	947	835	1,136
D402042	40.0	20.4	2.00	1.10	3.10	.55	15	.17	1,348	.33	2,569	.50	3,687	.66	4,724	.83	5,701
								203	296	434	575	691	836	976	1,080	1,288	1,307

Disc Springs to DIN 2093







Disc Springs to DIN 2093								15% Defl.		30% Defl.		45% Defl.		60% Defl.		75% Defl.		90% Defl.	
																			
								Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N
Code No.	Outer Dia. (De) mm	Inner Dia. (Di) mm	Thick. (t) mm	Cone Ht. (ho) mm	Overall Ht. (lo) mm	Cone Ht. Thick. Ratio	Weight per 1000 pcs.	Stress		Stress		Stress		Stress		Stress			
								δ_{II} N/mm ²	δ_{III} N/mm ²	δ_{II} N/mm ²	δ_{III} N/mm ²	δ_{II} N/mm ²	δ_{III} N/mm ²	δ_{II} N/mm ²	δ_{III} N/mm ²	δ_{II} N/mm ²	δ_{III} N/mm ²		
D40204225	40.0	20.4	2.25	.90	3.15	.40	16	.14 229	1,428 246	.27 476	2,778 480	.41 742	4,064 702	.54 1,026	5,301 913	.68 1,328	6,500 1,112	.81 1,648	7,677 1,300
D4020425	40.0	20.4	2.50	.95	3.45	.38	18	.14 275	2,045 284	.29 571	3,989 555	.43 887	5,849 813	.57 1,223	7,643 1,058	.71 1,579	9,390 1,290	.86 1,956	11,106 1,510
D45224125	45.0	22.4	1.25	1.60	2.85	1.28	12	.24 -13	689 307	.48 20	1,189 586	.72 98	1,534 837	.96 221	1,757 1,060	1.20 389	1,891 1,253	1.44 602	1,969 1,419
D45224175	45.0	22.4	1.75	1.30	3.05	.74	16	.20 119	963 266	.39 267	1,783 514	.59 446	2,488 742	.78 654	3,100 952	.98 892	3,646 1,144	1.17 1,160	4,150 1,316
D4522425	45.0	22.4	2.50	1.00	3.50	.40	23	.15 224	1,695 234	.30 465	3,298 457	.45 724	4,825 669	.60 1,001	6,292 869	.75 1,296	7,716 1,059	.90 1,608	9,113 1,237
D50183125	50.0	18.3	1.25	1.60	2.85	1.28	17	.24 3	500 201	.48 42	864 382	.72 118	1,114 545	.96 232	1,276 689	1.20 382	1,373 814	1.44 569	1,430 920
D5018315	50.0	18.3	1.50	1.80	3.30	1.20	20	.27 23	906 261	.54 92	1,578 498	.81 208	2,058 711	1.08 371	2,386 900	1.35 581	2,603 1,066	1.62 837	2,752 1,208
D501832	50.0	18.3	2.00	1.50	3.50	.75	27	.23 145	1,211 229	.45 323	2,241 441	.68 533	3,123 636	.90 776	3,887 815	1.13 1,051	4,567 977	1.35 1,358	5,193 1,123
D5018325	50.0	18.3	2.50	1.60	4.10	.64	33	.24 233	2,312 285	.48 503	4,351 551	.72 809	6,163 798	.96 1,153	7,799 1,026	1.20 1,533	9,305 1,236	1.44 1,951	10,731 1,426
D501833	50.0	18.3	3.00	1.40	4.40	.47	40	.21 309	3,097 266	.42 647	5,975 518	.63 1,013	8,670 755	.84 1,407	11,224 977	1.05 1,829	13,673 1,186	1.26 2,280	16,058 1,379
D502042	50.0	20.4	2.00	1.50	3.50	.75	26	.23 136	1,243 244	.45 304	2,300 470	.68 504	3,205 679	.90 736	3,990 871	1.13 1,000	4,687 1,045	1.35 1,295	5,330 1,201
D5020425	50.0	20.4	2.50	1.35	3.85	.54	32	.20 215	1,862 240	.41 456	3,555 467	.61 723	5,109 679	.81 1,015	6,554 876	1.01 1,334	7,919 1,060	1.22 1,678	9,234 1,229
D502242	50.0	22.4	2.00	1.60	3.60	.80	25	.24 125	1,427 286	.48 285	2,622 552	.72 482	3,625 796	.96 715	4,478 1,018	1.20 985	5,222 1,220	1.44 1,290	5,897 1,401
D5022425	50.0	22.4	2.50	1.40	3.90	.56	31	.21 209	2,023 270	.42 447	3,850 525	.63 711	5,518 763	.84 1,004	7,060 984	1.05 1,324	8,510 1,190	1.26 1,672	9,903 1,379
D50254125	50.0	25.4	1.25	1.60	2.85	1.28	14	.24 -11	565 254	.48 15	975 484	.72 77	1,258 691	.96 176	1,440 875	1.20 312	1,550 1,035	1.44 485	1,615 1,172
D5025415	50.0	25.4	1.50	1.60	3.10	1.07	17	.24 32	808 276	.48 101	1,431 528	.72 207	1,900 757	.96 349	2,250 963	1.20 528	2,512 1,145	1.44 744	2,719 1,304
D502542	50.0	25.4	2.00	1.40	3.40	.70	23	.21 128	1,226 264	.42 285	2,285 510	.63 470	3,208 738	.84 682	4,024 948	1.05 923	4,762 1,140	1.26 1,193	5,451 1,315
D50254225	50.0	25.4	2.25	1.50	3.75	.67	26	.23 165	1,821 312	.45 362	3,413 603	.68 591	4,816 874	.90 853	6,070 1,124	1.13 1,147	7,217 1,353	1.35 1,473	8,296 1,562
D5025425	50.0	25.4	2.50	1.40	3.90	.56	29	.21 204	2,154 302	.42 436	4,101 587	.63 696	5,877 853	.84 984	7,519 1,102	1.05 1,301	9,063 1,332	1.26 1,646	10,546 1,545
D502543	50.0	25.4	3.00	1.10	4.10	.37	34	.17 249	2,594 249	.33 515	5,067 487	.50 798	7,441 714	.66 1,099	9,737 930	.83 1,418	11,976 1,135	.99 1,753	14,180 1,328
D5628515	56.0	28.5	1.50	1.95	3.45	1.30	21	.29 -17	966 299	.59 9	1,664 571	.88 79	2,141 814	1.17 193	2,445 1,030	1.46 350	2,622 1,218	1.76 551	2,721 1,379
D562852	56.0	28.5	2.00	1.60	3.60	.80	29	.24 94	1,213 255	.48 218	2,228 492	.72 371	3,081 710	.96 553	3,806 909	1.20 765	4,438 1,090	1.44 1,006	5,012 1,251
D5628525	56.0	28.5	2.50	1.70	4.20	.68	36	.26 161	2,283 316	.51 356	4,270 611	.77 583	6,014 885	1.02 844	7,565 1,138	1.28 1,138	8,978 1,369	1.53 1,464	10,303 1,580
D562853	56.0	28.5	3.00	1.30	4.30	.43	43	.20 216	2,539 247	.39 451	4,920 481	.59 706	7,170 703	.78 980	9,316 913	.98 1,274	11,388 1,110	1.17 1,586	13,414 1,296
D602042	60.0	20.4	2.00	2.10	4.10	1.05	39	.32 69	1,505 252	.63 184	2,671 483	.95 343	3,556 692	1.26 547	4,221 878	1.58 796	4,727 1,044	1.89 1,090	5,132 1,187
D6020425	60.0	20.4	2.50	1.80	4.30	.72	49	.27 168	1,900 225	.54 368	3,533 434	.81 602	4,945 627	1.08 868	6,184 804	1.35 1,168	7,297 965	1.62 1,501	8,331 1,110

Disc Springs to DIN 2093







								15% Defl.	30% Defl.	45% Defl.	60% Defl.	75% Defl.	90% Defl.				
																	
Code No.	Outer Dia. (De) mm	Inner Dia. (Di) mm	Thick. (t) mm	Cone Ht. (ho) mm	Overall Ht. (lo) mm	Cone Ht. Thick. Ratio	Weight per 1000 pcs.	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N
								Stress δ_{II} δ_{III} N/mm ²		Stress δ_{II} δ_{III} N/mm ²		Stress δ_{II} δ_{III} N/mm ²		Stress δ_{II} δ_{III} N/mm ²		Stress δ_{II} δ_{III} N/mm ²	
D602043	60.0	20.4	3.00	1.70	4.70	.57	59	.26 2,760 239 231	.51 5,248 508 448	.77 7,515 806 651	1.02 9,605 1,133 839	1.28 11,569 1,490 1,013	1.53 13,453 1,876 1,173				
D6025425	60.0	25.4	2.50	1.90	4.40	.76	46	.29 2,178 144 277	.57 4,025 323 533	.86 5,599 538 770	1.14 6,959 788 987	1.43 8,164 1,074 1,184	1.71 9,271 1,395 1,361				
D602543	60.0	25.4	3.00	1.65	4.65	.55	55	.25 2,782 213 253	.50 5,304 452 491	.74 7,611 719 713	.99 9,751 1,012 921	1.24 11,768 1,332 1,114	1.49 13,709 1,678 1,291				
D6030525	60.0	30.5	2.50	1.80	4.30	.72	41	.27 2,172 138 298	.54 4,039 308 576	.81 5,653 510 833	1.08 7,070 745 1,070	1.35 8,342 1,012 1,285	1.62 9,524 1,311 1,481				
D60305275	60.0	30.5	2.75	2.00	4.75	.73	45	.30 3,232 166 366	.60 6,002 372 707	.90 8,391 617 1,022	1.20 10,482 903 1,312	1.50 12,356 1,228 1,576	1.80 14,093 1,594 1,815				
D603053	60.0	30.5	3.00	1.70	4.70	.57	49	.26 3,155 204 307	.51 6,000 437 596	.77 8,591 699 867	1.02 10,981 990 1,119	1.28 13,226 1,309 1,353	1.53 15,380 1,658 1,569				
D6030535	60.0	30.5	3.50	1.50	5.00	.43	58	.23 4,039 255 288	.45 7,830 532 562	.68 11,417 832 821	.90 14,843 1,154 1,066	1.13 18,153 1,499 1,297	1.35 21,389 1,866 1,514				
D633118	63.0	31.0	1.80	2.35	4.15	1.31	33	.35 1,566 -19 332	.71 2,697 12 633	1.06 3,467 92 903	1.41 3,955 222 1,142	1.76 4,238 402 1,351	2.12 4,393 631 1,528				
D633125	63.0	31.0	2.50	1.75	4.25	.70	46	.26 1,850 127 252	.53 3,450 282 487	.79 4,843 464 704	1.05 6,075 674 905	1.31 7,189 912 1,088	1.58 8,229 1,176 1,254				
D63313	63.0	31.0	3.00	1.80	4.80	.60	56	.27 3,046 187 292	.54 5,764 403 566	.81 8,214 648 822	1.08 10,452 923 1,060	1.35 12,536 1,226 1,280	1.62 14,525 1,559 1,481				
D633135	63.0	31.0	3.50	1.40	4.90	.40	65	.21 3,301 224 231	.42 6,422 466 452	.63 9,395 725 661	.84 12,253 1,002 860	1.05 15,025 1,296 1,047	1.26 17,746 1,608 1,224				
D702552	70.0	25.5	2.00	2.50	4.50	1.25	52	.38 1,590 10 252	.75 2,753 67 480	1.13 3,565 169 685	1.50 4,101 318 866	1.88 4,437 512 1,024	2.25 4,647 753 1,159				
D7030525	70.0	30.5	2.50	2.40	4.90	.96	61	.36 2,421 78 293	.72 4,348 198 562	1.08 5,866 359 807	1.44 7,065 562 1,028	1.80 8,031 806 1,225	2.16 8,851 1,092 1,399				
D703053	70.0	30.5	3.00	2.10	5.10	.70	73	.32 2,941 155 266	.63 5,483 342 513	.95 7,698 560 742	1.26 9,656 810 953	1.58 11,426 1,093 1,145	1.89 13,080 1,407 1,320				
D703553	70.0	35.5	3.00	2.10	5.10	.70	67	.32 3,162 147 302	.63 5,897 327 584	.95 8,278 539 846	1.26 10,384 784 1,087	1.58 12,287 1,060 1,307	1.89 14,065 1,369 1,507				
D703554	70.0	35.5	4.00	1.80	5.80	.45	90	.27 5,376 250 294	.54 10,393 523 573	.81 15,115 821 837	1.08 19,604 1,142 1,085	1.35 23,923 1,486 1,319	1.62 28,137 1,855 1,537				
D704054	70.0	40.5	4.00	1.60	5.60	.40	80	.24 5,130 240 294	.48 9,980 500 574	.72 14,601 780 841	.96 19,042 1,079 1,094	1.20 23,351 1,399 1,333	1.44 27,579 1,737 1,558				
D704055	70.0	40.5	5.00	1.20	6.20	.24	100	.18 6,977 271 244	.36 13,806 553 480	.54 20,515 846 709	.72 27,128 1,150 929	.90 33,672 1,465 1,142	1.08 40,173 1,792 1,348				
D71362	71.0	36.0	2.00	2.60	4.60	1.30	46	.39 1,895 -19 330	.78 3,265 11 629	1.17 4,201 88 897	1.56 4,796 214 1,135	1.95 5,144 388 1,342	2.34 5,337 610 1,519				
D713625	71.0	36.0	2.50	2.00	4.50	.80	58	.30 1,838 92 247	.60 3,377 212 476	.90 4,669 361 687	1.20 5,768 538 880	1.50 6,725 744 1,055	1.80 7,595 978 1,212				
D71364	71.0	36.0	4.00	1.60	5.60	.40	92	.24 4,511 230 245	.48 8,776 478 478	.72 12,840 744 700	.96 16,745 1,029 911	1.20 20,535 1,332 1,109	1.44 24,252 1,653 1,296				
D803125	80.0	31.0	2.50	2.80	5.30	1.12	84	.42 2,404 39 263	.84 4,228 121 502	1.26 5,573 247 718	1.68 6,543 417 911	2.10 7,239 631 1,081	2.52 7,764 888 1,227				
D80313	80.0	31.0	3.00	2.50	5.50	.83	101	.38 2,887 115 242	.75 5,279 266 466	1.13 7,261 451 671	1.50 8,923 671 857	1.88 10,352 926 1,025	2.25 11,634 1,215 1,175				
D80314	80.0	31.0	4.00	2.10	6.10	.53	134	.32 4,525 218 224	.63 8,657 461 435	.95 12,467 729 632	1.26 16,023 1,021 817	1.58 19,394 1,338 989	1.89 22,651 1,679 1,147				
D80363	80.0	36.0	3.00	2.70	5.70	.90	94	.41 3,464 95 300	.81 6,271 231 577	1.22 8,540 407 830	1.62 10,383 623 1,060	2.03 11,919 879 1,265	2.43 13,261 1,176 1,448				
D80364	80.0	36.0	4.00	2.20	6.20	.55	126	.33 5,059 208 265	.66 9,645 444 514	.99 13,841 705 747	1.32 17,732 994 965	1.65 21,400 1,310 1,167	1.98 24,929 1,652 1,353				

Disc Springs to DIN 2093									15% Defl.		30% Defl.		45% Defl.		60% Defl.		75% Defl.		90% Defl.	
									Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N
Code No.	Outer Dia. (De) mm	Inner Dia. (Di) mm	Thick. (t) mm	Reduced Thick. (t') mm	Cone Ht. (ho) mm	Overall Ht. (lo) mm	Cone Ht. Thick. Ratio	Weight per 1000 pcs.	Stress		Stress		Stress		Stress		Stress			
									δ_{II}	δ_{III}	δ_{II}	δ_{III}	δ_{II}	δ_{III}	δ_{II}	δ_{III}	δ_{II}	δ_{III}	δ_{II}	δ_{III}
									N/mm ²		N/mm ²		N/mm ²		N/mm ²		N/mm ²			
D8041225	80.0	41.0	2.25		2.95	5.20	1.31	65	.44	2,452	.89	4,218	1.33	5,419	1.77	6,177	2.21	6,613	2.66	6,846
D80413	80.0	41.0	3.00		2.30	5.30	.77	87	.35	2,817	.69	5,201	1.04	7,228	1.38	8,975	1.73	10,518	2.07	11,933
D80414	80.0	41.0	4.00		2.20	6.20	.55	116	.33	5,407	.66	10,309	.99	14,795	1.32	18,953	1.65	22,874	1.98	26,646
D904625	90.0	46.0	2.50		3.20	5.70	1.28	92	.48	2,800	.96	4,833	1.44	6,234	1.92	7,140	2.40	7,684	2.88	8,003
D904635	90.0	46.0	3.50		2.50	6.00	.71	129	.38	3,675	.75	6,839	1.13	9,581	1.50	11,991	1.88	14,161	2.25	16,180
D90465	90.0	46.0	5.00		2.00	7.00	.40	184	.30	6,888	.60	13,401	.90	19,605	1.20	25,568	1.50	31,354	1.80	37,031
D100414	100.0	41.0	4.00		3.20	7.20	.80	205	.48	5,535	.96	10,168	1.44	14,059	1.92	17,367	2.40	20,251	2.88	22,870
D100415	100.0	41.0	5.00		2.75	7.75	.55	256	.41	7,650	.83	14,585	1.24	20,931	1.65	26,814	2.06	32,361	2.48	37,698
D1005127	100.0	51.0	2.70		3.50	6.20	1.30	123	.53	3,165	1.05	5,454	1.58	7,021	2.10	8,021	2.63	8,609	3.15	8,938
D1005135	100.0	51.0	3.50		2.80	6.30	.80	160	.42	3,572	.84	6,563	1.26	9,074	1.68	11,209	2.10	13,070	2.52	14,760
D100514	100.0	51.0	4.00		3.00	7.00	.75	182	.45	5,482	.90	10,145	1.35	14,136	1.80	17,597	2.25	20,674	2.70	23,510
D100515	100.0	51.0	5.00		2.80	7.80	.56	228	.42	8,637	.84	16,442	1.26	23,563	1.68	30,147	2.10	36,339	2.52	42,287
D100516	100.0	51.0	6.00		2.20	8.20	.37	274	.33	10,401	.66	20,318	.99	29,837	1.32	39,043	1.65	48,022	1.98	56,858
D100517	100.0	51.0	7.00	6.55	2.65	9.20	.31	319	.330	13,882	.660	27,110	.990	39,775	1.320	51,972	1.650	63,793	1.980	75,331
D112573	112.0	57.0	3.00		3.90	6.90	1.30	172	.59	3,865	1.17	6,657	1.76	8,565	2.34	9,779	2.93	10,489	3.51	10,883
D112574	112.0	57.0	4.00		3.20	7.20	.80	229	.48	4,852	.96	8,914	1.44	12,325	1.92	15,224	2.40	17,752	2.88	20,048
D112576	112.0	57.0	6.00		2.50	8.50	.42	344	.38	9,672	.75	18,779	1.13	27,421	1.50	35,697	1.88	43,707	2.25	51,551
D125414	125.0	41.0	4.00		4.20	8.20	1.05	344	.63	5,525	1.26	9,801	1.89	13,050	2.52	15,492	3.15	17,346	3.78	18,833
D125514	125.0	51.0	4.00		4.50	8.50	1.13	321	.68	6,602	1.35	11,602	2.03	15,283	2.70	17,927	3.38	19,817	4.05	21,236
D125515	125.0	51.0	5.00		3.90	8.90	.78	401	.59	8,281	1.17	15,258	1.76	21,161	2.34	26,222	2.93	30,669	3.51	34,732
D125516	125.0	51.0	6.00		3.40	9.40	.57	482	.51	10,568	1.02	20,101	1.53	28,779	2.04	36,787	2.55	44,307	3.06	51,523
D125615	125.0	61.0	5.00		4.00	9.00	.80	367	.60	9,283	1.20	17,054	1.80	23,581	2.40	29,129	3.00	33,965	3.60	38,358
D125616	125.0	61.0	6.00		3.60	9.60	.60	440	.54	12,323	1.08	23,323	1.62	33,234	2.16	42,289	2.70	50,722	3.24	58,766
D125618	125.0	61.0	8.00	7.50	3.40	10.90	.36	587	.435	21,142	.870	40,862	1.305	59,369	1.740	76,871	2.175	93,577	2.610	109,695
D1256435	125.0	64.0	3.50		4.50	8.00	1.29	249	.68	5,635	1.35	9,721	2.03	12,530	2.70	14,338	3.38	15,416	4.05	16,038
D125645	125.0	64.0	5.00		3.50	8.50	.70	355	.53	7,697	1.05	14,352	1.58	20,150	2.10	25,274	2.63	29,908	3.15	34,236

Disc Springs to DIN 2093

									15% Defl.	30% Defl.	45% Defl.	60% Defl.	75% Defl.	90% Defl.						
																				
Code No.	Outer Dia. (De) mm	Inner Dia. (Di) mm	Thick. (t) mm	Reduced Thick. (t') mm	Cone Ht. (ho) mm	Overall Ht. (lo) mm	Cone Ht. Thick. Ratio	Weight per 1000 pcs.	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N		
									Stress		Stress		Stress		Stress		Stress		Stress	
									δ_{II}	δ_{III}	δ_{II}	δ_{III}	δ_{II}	δ_{III}	δ_{II}	δ_{III}	δ_{II}	δ_{III}		
									N/mm ²		N/mm ²		N/mm ²		N/mm ²		N/mm ²			
D125646	125.0	64.0	6.00		3.60	9.60	.60	426	.54	12,671	1.08	23,982	1.62	34,172	2.16	43,484	2.70	52,155	3.24	60,426
D125647	125.0	64.0	7.00	6.55	3.45	10.00	.43	498	.450	15,783	.900	30,190	1.350	43,427	1.800	55,700	2.250	67,216	2.700	78,182
D125648	125.0	64.0	8.00	7.50	3.10	10.60	.33	569	.390	19,037	.780	36,993	1.170	54,023	1.560	70,281	1.950	85,926	2.340	101,111
D125716	125.0	71.0	6.00		3.30	9.30	.55	392	.50	12,107	.99	23,083	1.49	33,127	1.98	42,438	2.48	51,217	2.97	59,663
D125718	125.0	71.0	8.00	7.40	3.00	10.40	.30	522	.360	18,866	.720	36,709	1.080	53,668	1.440	69,883	1.800	85,494	2.160	100,639
D1257110	125.0	71.0	10.00	9.20	2.60	11.80	.18	653	.270	26,003	.540	51,340	.810	76,087	1.080	100,323	1.350	124,124	1.620	147,567
D1407238	140.0	72.0	3.80		4.90	8.70	1.29	338	.74	6,299	1.47	10,861	2.21	13,994	2.94	16,003	3.68	17,195	4.41	17,877
D140725	140.0	72.0	5.00		4.00	9.00	.80	444	.60	7,631	1.20	14,019	1.80	19,384	2.40	23,944	3.00	27,920	3.60	31,530
D140728	140.0	72.0	8.00	7.50	3.70	11.20	.40	711	.480	19,662	.960	37,789	1.440	54,611	1.920	70,355	2.400	85,251	2.880	99,527
D150615	150.0	61.0	5.00		5.30	10.30	1.06	579	.80	9,947	1.59	17,623	2.39	23,431	3.18	27,770	3.98	31,041	4.77	33,645
D150616	150.0	61.0	6.00		4.80	10.80	.80	695	.72	12,424	1.44	22,824	2.16	31,558	2.88	38,983	3.60	45,456	4.32	51,334
D150716	150.0	71.0	6.00		4.80	10.80	.80	646	.72	13,161	1.44	24,179	2.16	33,432	2.88	41,298	3.60	48,155	4.32	54,382
D150718	150.0	71.0	8.00	7.50	4.50	12.00	.50	861	.600	21,981	1.200	41,592	1.800	59,198	2.400	75,163	3.000	89,851	3.600	103,628
D150818	150.0	81.0	8.00	7.50	4.20	11.70	.46	786	.555	21,412	1.110	40,756	1.665	58,348	2.220	74,501	2.775	89,532	3.330	103,754
D1508110	150.0	81.0	10.00	9.30	3.70	13.00	.30	983	.450	30,598	.900	59,586	1.350	87,189	1.800	113,629	2.250	139,128	2.700	163,909
D1608243	160.0	82.0	4.30		5.60	9.90	1.30	500	.84	8,058	1.68	13,877	2.52	17,850	3.36	20,373	4.20	21,843	5.04	22,653
D160826	160.0	82.0	6.00		4.50	10.50	.75	698	.68	10,873	1.35	20,124	2.03	28,040	2.70	34,905	3.38	41,008	4.05	46,633
D1608210	160.0	82.0	10.00	9.40	4.10	13.50	.35	1,164	.525	30,988	1.050	60,029	1.575	87,409	2.100	113,414	2.625	138,331	3.150	162,444
D1809248	180.0	92.0	4.80		6.20	11.00	1.29	708	.93	9,698	1.86	16,718	2.79	21,534	3.72	24,618	4.65	26,442	5.58	27,479
D180916	180.0	91.0	6.00		5.10	11.10	.85	892	.77	10,498	1.53	19,145	2.30	26,269	3.06	32,196	3.83	37,252	4.59	41,764
D1809210	180.0	92.0	10.00	9.40	4.60	14.00	.40	1,476	.600	28,864	1.200	55,504	1.800	80,254	2.400	103,447	3.000	125,417	3.600	146,498
D1809213	180.0	92.0	13.00	12.10	4.40	16.50	.27	1,918	.525	51,515	1.050	100,753	1.575	148,021	2.100	193,628	2.625	237,883	3.150	281,094
D200828	200.0	82.0	8.00	7.50	6.70	14.20	.78	1,641	.930	22,758	1.860	41,253	2.790	56,173	3.720	68,204	4.650	78,034	5.580	86,350
D2008210	200.0	82.0	10.00	9.40	6.10	15.50	.55	2,052	.825	32,576	1.650	61,189	2.475	86,458	3.300	109,003	4.125	129,445	4.950	148,403
D2008212	200.0	82.0	12.00	11.25	5.35	16.60	.38	2,462	.690	41,757	1.380	80,456	2.070	116,551	2.760	150,494	3.450	182,737	4.140	213,734
D2009210	200.0	92.0	10.00	9.40	6.20	15.60	.56	1,944	.840	34,868	1.680	65,390	2.520	92,246	3.360	116,118	4.200	137,688	5.040	157,635

Disc Springs to DIN 2093

									15% Defl.	30% Defl.	45% Defl.	60% Defl.	75% Defl.	90% Defl.						
																				
Code No.	Outer Dia. (De) mm	Inner Dia. (Di) mm	Thick. (t) mm	Reduced Thick. (t') mm	Cone Ht. (ho) mm	Overall Ht. (lo) mm	Cone Ht. Thick. Ratio	Weight per 1000 pcs.	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N	Defl. mm	Force N
									Stress δ_{II} δ_{III} N/mm ²		Stress δ_{II} δ_{III} N/mm ²		Stress δ_{II} δ_{III} N/mm ²		Stress δ_{II} δ_{III} N/mm ²		Stress δ_{II} δ_{III} N/mm ²		Stress δ_{II} δ_{III} N/mm ²	
D2009212	200.0	92.0	12.00	11.25	5.55	16.80	.40	2,333	.720 45,959 223 283	1.440 88,331 470 553	2.160 127,650 741 808	2.880 164,451 1,035 1,049	3.600 199,269 1,354 1,276	4.320 232,639 1,696 1,488						
D2009214	200.0	92.0	14.00	13.10	5.00	18.10	.29	2,722	.615 58,344 261 262	1.230 113,839 540 513	1.845 166,885 836 754	2.460 217,881 1,150 984	3.075 267,227 1,481 1,204	3.690 315,322 1,830 1,413						
D20010255	200.0	102.0	5.50		7.00	12.50	1.27	1,004	1.05 13,104 -12 306	2.10 22,637 20 583	3.15 29,229 96 833	4.20 33,510 216 1,054	5.25 36,111 381 1,247	6.30 37,662 589 1,412						
D2001028	200.0	102.0	8.00	7.50	6.10	13.60	.70	1,460	.840 21,220 86 291	1.680 38,903 203 563	2.520 53,614 352 813	3.360 65,917 534 1,044	4.200 76,378 747 1,254	5.040 85,561 992 1,443						
D20010210	200.0	102.0	10.00	9.40	6.20	15.60	.56	1,825	.840 36,810 158 335	1.680 69,032 348 649	2.520 97,384 570 943	3.360 122,586 824 1,216	4.200 145,357 1,111 1,468	5.040 166,415 1,430 1,700						
D20010212	200.0	102.0	12.00	11.25	4.95	16.20	.35	2,190	.630 41,077 208 263	1.260 79,535 435 514	1.890 115,757 680 753	2.520 150,125 944 981	3.150 183,020 1,227 1,196	3.780 214,824 1,528 1,400						
D20010214	200.0	102.0	14.00	13.10	5.10	18.20	.30	2,555	.630 63,356 261 296	1.260 123,500 541 581	1.890 180,883 839 854	2.520 235,959 1,156 1,114	3.150 289,181 1,492 1,363	3.780 341,001 1,847 1,600						
D20011212	200.0	112.0	12.00	11.10	5.10	16.20	.35	2,031	.630 44,382 201 298	1.260 85,728 421 584	1.890 124,466 661 855	2.520 161,024 921 1,113	3.150 195,830 1,201 1,358	3.780 229,311 1,501 1,589						
D20011214	200.0	112.0	14.00	12.90	4.60	17.50	.25	2,370	.525 55,407 228 271	1.050 108,486 469 532	1.575 159,538 725 784	2.100 208,862 994 1,026	2.625 256,758 1,278 1,259	3.150 303,527 1,575 1,483						
D20011216	200.0	112.0	16.00	14.80	4.00	18.80	.18	2,708	.420 63,667 234 231	.840 125,835 477 457	1.260 186,679 729 676	1.680 246,375 990 889	2.100 305,100 1,260 1,096	2.520 363,030 1,539 1,297						
D22511265	225.0	112.0	6.50	6.20	6.80	13.00	1.00	1,526	.975 13,079 14 242	1.950 23,081 61 463	2.925 30,521 140 664	3.900 35,914 251 845	4.875 39,775 394 1,006	5.850 42,618 569 1,147						
D2251128	225.0	112.0	8.00	7.50	7.00	14.50	.81	1,878	.975 21,136 51 277	1.950 38,104 136 533	2.925 51,580 254 768	3.900 62,236 406 983	4.875 70,749 591 1,176	5.850 77,791 810 1,348						
D22511212	225.0	112.0	12.00	11.25	5.75	17.00	.42	2,817	.750 39,817 176 253	1.500 76,333 372 493	2.250 110,040 589 721	3.000 141,437 826 935	3.750 171,016 1,084 1,137	4.500 199,275 1,363 1,326						
D25010210	250.0	102.0	10.00	9.40	8.60	18.00	.80	3,212	1.200 37,336 82 293	2.400 67,476 205 563	3.600 91,587 368 811	4.800 110,835 572 1,037	6.000 126,387 817 1,241	7.200 139,411 1,102 1,422						
D25010212	250.0	102.0	12.00	11.25	7.75	19.00	.58	3,854	1.050 47,155 155 273	2.100 88,047 342 529	3.150 123,658 560 767	4.200 154,969 811 987	5.250 182,962 1,093 1,190	6.300 208,618 1,407 1,376						
D2501277	250.0	127.0	7.00	6.70	8.10	14.80	1.11	2,001	1.170 17,689 -7 271	2.340 30,808 24 518	3.510 40,130 92 741	4.680 46,425 197 940	5.850 50,466 340 1,116	7.020 53,023 519 1,268						
D25012710	250.0	127.0	10.00	9.40	7.60	17.00	.70	2,859	1.050 28,005 94 265	2.100 51,720 216 512	3.150 71,833 367 741	4.200 89,032 546 952	5.250 104,004 752 1,146	6.300 117,438 987 1,321						
D25012712	250.0	127.0	12.00	11.25	8.05	19.30	.61	3,431	1.195 55,205 139 345	2.190 102,670 313 668	3.285 143,612 522 968	4.380 179,251 766 1,246	5.475 210,806 1,045 1,502	6.570 239,494 1,359 1,736						
D25012714	250.0	127.0	14.00	13.10	6.50	19.60	.40	4,003	.840 57,478 190 271	1.680 110,428 401 529	2.520 159,521 633 773	3.360 205,431 886 1,004	4.200 248,828 1,160 1,221	5.040 290,385 1,455 1,425						
D25012716	250.0	127.0	16.00	15.00	6.80	21.80	.36	4,574	.870 86,536 241 311	1.740 167,252 504 609	2.610 243,002 789 891	3.480 314,639 1,098 1,160	4.350 383,017 1,429 1,414	5.220 448,990 1,782 1,653						