













# Stainless Disc Springs

Material: X12CrNi 17 7 (DIN 1.4310)

								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 $\delta_{II}$ N/mm <sup>2</sup>	Stress $\delta_{III}$ N/mm <sup>2</sup>	Stress $\delta_{II}$ N/mm <sup>2</sup>	Stress $\delta_{III}$ N/mm <sup>2</sup>	Stress $\delta_{II}$ N/mm <sup>2</sup>	Stress $\delta_{III}$ N/mm <sup>2</sup>	Stress $\delta_{II}$ N/mm <sup>2</sup>	Stress $\delta_{III}$ N/mm <sup>2</sup>	Stress $\delta_{II}$ N/mm <sup>2</sup>	Stress $\delta_{III}$ N/mm <sup>2</sup>	Stress $\delta_{II}$ N/mm <sup>2</sup>	Stress $\delta_{III}$ N/mm <sup>2</sup>
S63203	6.0	3.2	.30	.15	.45	.50	.05	.02 183	25 252	.05 387	49 490	.07 612	70 714	.09 858	91 924	.11 1,125	110 1,121	.14 1,413	129 1,304
S83205	8.0	3.2	.50	.20	.70	.40	.17	.03 276	72 229	.06 572	141 448	.09 889	206 655	.12 1,226	269 851	.15 1,584	330 1,036	.18 1,962	389 1,210
S84202	8.0	4.2	.20	.25	.45	1.25	.06	.04 -6	13 233	.08 20	22 445	.11 79	29 636	.15 170	33 806	.19 294	36 954	.23 451	38 1,081
S84203	8.0	4.2	.30	.25	.55	.83	.09	.04 91	30 284	.08 215	55 548	.11 371	76 789	.15 560	94 1,010	.19 782	109 1,210	.23 1,036	122 1,388
S84204	8.0	4.2	.40	.20	.60	.50	.11	.03 183	45 247	.06 387	85 481	.09 612	124 702	.12 857	159 908	.15 1,124	193 1,102	.18 1,411	226 1,281
S1052025	10.0	5.2	.25	.30	.55	1.20	.11	.05 2	18 217	.09 34	32 414	.14 96	42 592	.18 188	49 751	.23 309	53 890	.27 461	56 1,010
S105204	10.0	5.2	.40	.30	.70	.75	.18	.05 114	51 275	.09 258	95 531	.14 432	132 767	.18 636	164 984	.23 870	193 1,181	.27 1,134	220 1,359
S105205	10.0	5.2	.50	.25	.75	.50	.22	.04 183	69 245	.08 387	133 477	.11 612	192 695	.15 857	247 899	.19 1,123	300 1,090	.23 1,411	351 1,268
S124204	12.0	4.2	.40	.40	.80	1.00	.31	.06 70	51 219	.12 178	91 420	.18 323	122 602	.24 505	146 766	.30 725	165 911	.36 982	180 1,038
S124205	12.0	4.2	.50	.30	.80	.60	.39	.05 152	53 163	.09 325	101 315	.14 520	144 457	.18 735	184 588	.23 971	220 710	.27 1,228	255 820
S126205	12.0	6.2	.50	.35	.85	.70	.33	.05 128	77 269	.11 284	144 519	.16 469	203 751	.21 682	254 965	.26 923	301 1,161	.32 1,193	345 1,339
S12562035	12.5	6.2	.35	.45	.80	1.29	.25	.07 -13	51 289	.14 17	88 552	.20 89	113 787	.27 205	130 996	.34 363	140 1,178	.41 563	145 1,334
S1256205	12.5	6.2	.50	.35	.85	.70	.36	.05 119	70 238	.11 264	130 459	.16 435	182 665	.21 631	229 854	.26 853	271 1,027	.32 1,102	310 1,184
S1256207	12.5	6.2	.70	.25	.95	.36	.51	.04 197	108 189	.08 407	212 370	.11 631	312 542	.15 867	408 706	.19 1,117	503 862	.23 1,380	596 1,010
S1472035	14.0	7.2	.35	.45	.80	1.29	.31	.07 -12	42 239	.14 11	72 455	.20 68	92 650	.27 159	106 823	.34 285	114 973	.41 445	118 1,102
S147205	14.0	7.2	.50	.40	.90	.80	.44	.06 87	70 238	.12 201	129 458	.18 342	179 662	.24 510	221 847	.30 705	258 1,016	.36 927	291 1,167
S147208	14.0	7.2	.80	.30	1.10	.38	.71	.05 211	160 217	.09 437	312 424	.14 678	457 622	.18 934	598 810	.23 1,206	735 988	.27 1,493	870 1,156
S158208	15.0	8.2	.80	.45	1.25	.56	.78	.07 214	245 346	.14 458	466 671	.20 733	668 975	.27 1,038	854 1,260	.34 1,374	1,029 1,524	.41 1,740	1,198 1,767
S168204	16.0	8.2	.40	.50	.90	1.25	.47	.08 -6	51 228	.15 21	88 434	.23 81	114 621	.30 172	132 786	.38 297	142 930	.45 453	149 1,054
S168206	16.0	8.2	.60	.45	1.05	.75	.70	.07 101	100 238	.14 227	186 460	.20 380	259 664	.27 560	322 852	.34 765	378 1,023	.41 997	430 1,177
S168209	16.0	8.2	.90	.35	1.25	.39	1.05	.05 208	204 220	.11 432	398 429	.16 672	583 628	.21 928	761 818	.26 1,200	934 996	.32 1,488	1,104 1,165
S1892045	18.0	9.2	.45	.60	1.05	1.33	.66	.09 -20	74 251	.18 -3	127 479	.27 51	163 683	.36 141	185 863	.45 269	197 1,020	.54 433	203 1,154
S189207	18.0	9.2	.70	.50	1.20	.71	1.03	.08 111	136 238	.15 247	252 460	.23 410	353 666	.30 597	442 855	.38 811	522 1,028	.45 1,049	597 1,184
S18921	18.0	9.2	1.00	.40	1.40	.40	1.48	.06 207	265 236	.12 430	515 462	.18 670	754 676	.24 927	983 879	.30 1,200	1,205 1,071	.36 1,491	1,423 1,252
S188102025	18.8	10.2	.25	.40	.65	1.60	.38	.06 -23	10 101	.12 -32	17 192	.18 -24	21 273	.24 -2	23 344	.30 36	24 405	.36 89	23 455
S208205	20.0	8.2	.50	.65	1.15	1.30	1.03	.10 -5	78 203	.20 24	135 386	.29 87	174 550	.39 186	198 696	.49 318	213 822	.59 486	221 930







# Stainless Disc Springs

Material: X12CrNi 17 7 (DIN 1.4310)

								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 $\delta_{II}$ N/mm <sup>2</sup>	Stress $\delta_{III}$ N/mm <sup>2</sup>	Stress $\delta_{II}$ N/mm <sup>2</sup>	Stress $\delta_{III}$ N/mm <sup>2</sup>	Stress $\delta_{II}$ N/mm <sup>2</sup>	Stress $\delta_{III}$ N/mm <sup>2</sup>	Stress $\delta_{II}$ N/mm <sup>2</sup>	Stress $\delta_{III}$ N/mm <sup>2</sup>	Stress $\delta_{II}$ N/mm <sup>2</sup>	Stress $\delta_{III}$ N/mm <sup>2</sup>
S2010205	20.0	10.2	.50	.65	1.15	1.30	.91	.10 86 -14 241	.20 149 7 459	.29 191 64 656	.39 219 155 829	.49 234 281 981	.59 243 442 1,110				
S2010206	20.0	10.2	.60	.60	1.20	1.00	1.09	.09 106 40 232	.18 189 110 444	.27 253 209 638	.36 303 339 812	.45 342 498 968	.54 374 687 1,104				
S2010208	20.0	10.2	.80	.55	1.35	.69	1.46	.08 176 119 238	.17 329 263 460	.25 463 432 667	.33 582 627 857	.41 690 846 1,031	.50 791 1,090 1,189				
S2010209	20.0	10.2	.90	.50	1.40	.56	1.64	.08 207 152 224	.15 394 325 435	.23 565 518 633	.30 723 733 818	.38 872 968 989	.45 1,015 1,223 1,147				
S201021	20.0	10.2	1.00	.55	1.55	.55	1.82	.08 311 187 273	.17 592 400 530	.25 850 638 771	.33 1,089 900 996	.41 1,315 1,188 1,206	.50 1,531 1,501 1,399				
S2010211	20.0	10.2	1.10	.45	1.55	.41	2.01	.07 309 204 223	.14 601 425 435	.20 879 663 637	.27 1,145 918 828	.34 1,403 1,190 1,008	.41 1,655 1,478 1,178				
S22511206	22.5	11.2	.60	.80	1.40	1.33	1.41	.12 147 -21 279	.24 253 -1 531	.36 324 61 758	.48 368 164 958	.60 392 310 1,132	.72 405 497 1,280				
S22511208	22.5	11.2	.80	.65	1.45	.81	1.88	.10 180 86 234	.20 330 199 450	.29 455 339 649	.39 561 507 831	.49 653 703 995	.59 736 926 1,143				
S225112125	22.5	11.2	1.25	.40	1.65	.32	2.93	.06 300 181 163	.12 589 373 319	.18 870 575 468	.24 1,143 787 611	.30 1,411 1,010 747	.36 1,676 1,244 877				
S2512207	25.0	12.2	.70	.90	1.60	1.29	2.05	.14 202 -12 285	.27 349 18 543	.41 450 91 776	.54 514 207 981	.68 553 365 1,161	.81 575 566 1,314				
S2512209	25.0	12.2	.90	.70	1.60	.78	2.64	.11 214 92 221	.21 395 209 425	.32 548 352 614	.42 680 521 787	.53 795 716 944	.63 901 936 1,085				
S2512215	25.0	12.2	1.50	.40	1.90	.27	4.40	.06 406 187 149	.12 801 382 292	.18 1,188 585 430	.24 1,569 797 563	.30 1,944 1,018 691	.36 2,316 1,247 813				
S2814208	28.0	14.2	.80	1.00	1.80	1.25	2.87	.15 265 -7 294	.30 459 29 562	.45 594 107 802	.60 683 227 1,016	.75 739 389 1,203	.90 774 593 1,363				
S281421	28.0	14.2	1.00	.80	1.80	.80	3.59	.12 279 87 235	.24 513 201 452	.36 709 342 652	.48 876 510 835	.60 1,021 706 1,001	.72 1,153 928 1,150				
S2814215	28.0	14.2	1.50	.50	2.00	.33	5.39	.08 426 173 162	.15 835 356 317	.23 1,231 550 466	.30 1,615 755 608	.38 1,992 970 743	.45 2,364 1,195 872				
S31516308	31.5	16.3	.80	1.05	1.85	1.31	3.58	.16 235 -17 256	.32 404 3 488	.47 519 59 697	.63 592 153 881	.79 634 284 1,042	.95 656 451 1,179				
S315163125	31.5	16.3	1.25	.75	2.00	.60	5.60	.11 349 119 197	.23 661 257 381	.34 941 413 554	.45 1,198 589 714	.56 1,437 783 862	.68 1,664 997 998				
S315163175	31.5	16.3	1.75	.55	2.30	.31	7.84	.08 590 179 165	.17 1,159 368 324	.25 1,711 567 476	.33 2,250 777 622	.41 2,779 997 761	.50 3,302 1,226 894				
S35518309	35.5	18.3	.90	1.15	2.05	1.28	5.13	.17 279 -11 244	.35 482 13 465	.52 622 73 664	.69 713 167 840	.86 767 295 994	1.04 800 459 1,126				
S355183125	35.5	18.3	1.25	1.00	2.25	.80	7.13	.15 428 84 232	.30 787 195 447	.45 1,088 332 645	.60 1,344 495 826	.75 1,567 685 990	.90 1,769 901 1,137				
S402041	40.0	20.4	1.00	1.30	2.30	1.30	7.30	.20 345 -14 241	.39 595 7 459	.59 766 64 656	.78 874 155 829	.98 938 281 981	1.17 973 442 1,110				
S4020415	40.0	20.4	1.50	.95	2.45	.63	10.95	.14 481 106 187	.29 906 231 361	.43 1,285 375 524	.57 1,628 537 675	.71 1,944 718 814	.86 2,244 918 940				
S45224125	45.0	22.4	1.25	1.60	2.85	1.28	11.74	.24 635 -14 241	.48 1,097 7 459	.72 1,415 64 656	.96 1,620 204 977	1.20 1,744 359 1,156	1.44 1,816 556 1,309				

# Stainless Disc Springs

Material: X7CrNiAl 17 7 (DIN 1.4568)

								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 δII N/mm²	Stress δIII N/mm²	Stress δII N/mm²	Stress δIII N/mm²	Stress δII N/mm²	Stress δIII N/mm²	Stress δII N/mm²	Stress δIII N/mm²	Stress δII N/mm²	Stress δIII N/mm²	Stress δII N/mm²	Stress δIII N/mm²
S3551832	35.5	18.3	2.00	.65	2.65	.33	11.41	.10 198	865 186	.20 408	1,697 364	.29 629	2,503 535	.39 862	3,288 698	.49 1,107	4,058 854	.59 1,364	4,818 1,002
S402042	40.0	20.4	2.00	.80	2.80	.40	14.60	.12 176	865 188	.24 366	1,684 368	.36 569	2,464 539	.48 787	3,213 700	.60 1,018	3,940 853	.72 1,264	4,653 997
S40204225	40.0	20.4	2.25	.70	2.95	.31	16.42	.11 192	1,031 174	.21 394	2,026 340	.32 608	2,992 500	.42 832	3,935 653	.53 1,066	4,861 799	.63 1,311	5,777 939
S45224175	45.0	22.4	1.75	1.05	2.80	.60	16.43	.16 121	675 191	.32 261	1,278 371	.47 419	1,822 538	.63 597	2,318 694	.79 793	2,780 838	.95 1,009	3,221 970
S4522425	45.0	22.4	2.50	.80	3.30	.32	23.48	.12 191	1,263 171	.24 392	2,481 335	.36 605	3,661 493	.48 829	4,811 643	.60 1,063	5,940 787	.72 1,309	7,056 923
S5025415	50.0	25.4	1.50	1.60	3.10	1.07	17.15	.24 31	785 268	.48 98	1,389 513	.72 201	1,845 735	.96 339	2,184 935	1.20 513	2,439 1,112	1.44 722	2,640 1,266
S502542	50.0	25.4	2.00	1.15	3.15	.58	22.87	.17 127	889 195	.35 273	1,689 378	.52 437	2,415 549	.69 619	3,083 709	.86 820	3,710 856	1.04 1,039	4,310 992
S5025425	50.0	25.4	2.50	1.00	3.50	.40	28.59	.15 176	1,349 188	.30 366	2,625 367	.45 569	3,840 537	.60 787	5,008 698	.75 1,018	6,141 850	.90 1,264	7,253 993
S502543	50.0	25.4	3.00	.85	3.85	.28	34.31	.13 205	1,871 175	.26 420	3,688 344	.38 645	5,461 506	.51 880	7,198 662	.64 1,125	8,911 812	.77 1,381	10,607 955
S562852	56.0	28.5	2.00	1.40	3.40	.70	28.65	.21 99	950 205	.42 220	1,771 395	.63 363	2,846 572	.84 528	3,118 735	1.05 715	3,690 884	1.26 923	4,224 1,019
S562853	56.0	28.5	3.00	1.05	4.05	.35	42.98	.16 187	1,902 182	.32 387	3,723 356	.47 599	5,477 523	.63 823	7,179 681	.79 1,060	8,842 832	.95 1,308	10,481 975
S63312	63.0	31.0	2.00	1.55	3.55	.78	37.09	.23 75	866 181	.47 171	1,596 349	.70 288	2,216 504	.93 426	2,748 646	1.16 585	3,216 775	1.40 765	3,645 891
S633125	63.0	31.0	2.50	1.45	3.95	.58	46.36	.22 126	1,359 188	.44 270	2,579 365	.65 432	3,685 530	.87 613	4,702 684	1.09 812	5,654 826	1.31 1,030	6,565 957
S713625	71.0	36.0	2.50	1.75	4.25	.70	57.72	.26 97	1,439 198	.53 214	2,683 383	.79 353	3,767 554	1.05 514	4,725 712	1.31 695	5,591 856	1.58 897	6,401 987
S80413	80.0	41.0	3.00	1.90	4.90	.63	87.28	.29 112	2,033 197	.57 243	3,828 382	.86 394	5,428 554	1.14 565	6,875 714	1.43 756	8,210 861	1.71 966	9,476 995
S904625	90.0	46.0	2.50	2.55	5.05	1.02	92.23	.38 33	1,721 216	.77 95	3,065 414	1.15 184	4,099 594	1.53 301	4,890 756	1.91 447	5,503 900	2.30 620	6,005 1,026
S112573	112.0	57.0	3.00	2.90	5.90	.97	171.92	.44 37	2,078 184	.87 98	3,728 354	1.31 182	5,026 508	1.74 290	6,046 648	2.18 421	6,865 772	2.61 575	7,558 882