SMQ 杉優企業有限公司
SAM Q ENTERPRISE CO., LTD
TEL:886-2-22183803 FAX:886-2-22183805

Stainless Disc Springs

Material: X12CrNi 17 7 (DIN 1.4310)

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.	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
								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
S63203	6.0	3.2	.30	.15	.45	.50	.05	.02	25	.05	49	.07	70	.09	91	.11	110	.14	129
								183	252	387	490	612	714	858	924	1,125	1,121	1,413	1,304
S83205	8.0	3.2	.50	.20	.70	.40	.17	.03	72	.06	141	.09	206	.12	269	.15	330	.18	389
								276	229	572	448	889	655	1,226	851	1,584	1,036	1,962	1,210
S84202	8.0	4.2	.20	.25	.45	1.25	.06	.04	13	.08	22	.11	29	.15	33	.19	36	.23	38
								-6	233	20	445	79	636	170	806	294	954	451	1,081
S84203	8.0	4.2	.30	.25	.55	.83	.09	.04	30	.08	55	.11	76	.15	94	.19	109	.23	122
								91	284	215	548	371	789	560	1,010	782	1,210	1,036	1,388
S84204	8.0	4.2	.40	.20	.60	.50	.11	.03	45	.06	85	.09	124	.12	159	.15	193	.18	226
								183	247	387	481	612	702	857	908	1,124	1,102	1,411	1,281
S1052025	10.0	5.2	.25	.30	.55	1.20	.11	.05	18	.09	32	.14	42	.18	49	.23	53	.27	56
								2	217	34	414	96	592	188	751	309	890	461	1,010
S105204	10.0	5.2	.40	.30	.70	.75	.18	.05	51	.09	95	.14	132	.18	164	.23	193	.27	220
								114	275	258	531	432	767	636	984	870	1,181	1,134	1,359
S105205	10.0	5.2	.50	.25	.75	.50	.22	.04	69	.08	133	.11	192	.15	247	.19	300	.23	351
								183	245	387	477	612	695	857	899	1,123	1,090	1,411	1,268
S124204	12.0	4.2	.40	.40	.80	1.00	.31	.06	51	.12	91	.18	122	.24	146	.30	165	.36	180
								70	219	178	420	323	602	505	766	725	911	982	1,038
S124205	12.0	4.2	.50	.30	.80	.60	.39	.05	53	.09	101	.14	144	.18	184	.23	220	.27	255
								152	163	325	315	520	457	735	588	971	710	1,228	820
S126205	12.0	6.2	.50	.35	.85	.70	.33	.05	77	.11	144	.16	203	.21	254	.26	301	.32	345
								128	269	284	519	469	751	682	965	923	1,161	1,193	1,339
S12562035	12.5	6.2	.35	.45	.80	1.29	.25	.07	51	.14	88	.20	113	.27	130	.34	140	.41	145
								-13	289	17	552	89	787	205	996	363	1,178	563	1,334
S1256205	12.5	6.2	.50	.35	.85	.70	.36	.05	70	.11	130	.16	182	.21	229	.26	271	.32	310
								119	238	264	459	435	665	631	854	853	1,027	1,102	1,184
S1256207	12.5	6.2	.70	.25	.95	.36	.51	.04	108	.08	212	.11	312	.15	408	.19	503	.23	596
								197	189	407	370	631	542	867	706	1,117	862	1,380	1,010
S1472035	14.0	7.2	.35	.45	.80	1.29	.31	.07	42	.14	72	.20	92	.27	106	.34	114	.41	118
								-12	239	11	455	68	650	159	823	285	973	445	1,102
S147205	14.0	7.2	.50	.40	.90	.80	.44	.06	70	.12	129	.18	179	.24	221	.30	258	.36	291
								87	238	201	458	342	662	510	847	705	1,016	927	1,167
S147208	14.0	7.2	.80	.30	1.10	.38	.71	.05	160	.09	312	.14	457	.18	598	.23	735	.27	870
								211	217	437	424	678	622	934	810	1,206	988	1,493	1,156
S158208	15.0	8.2	.80	.45	1.25	.56	.78	.07	245	.14	466	.20	668	.27	854	.34	1,029	.41	1,198
								214	346	458	671	733	975	1,038	1,260	1,374	1,524	1,740	1,767
S168204	16.0	8.2	.40	.50	.90	1.25	.47	.08	51	.15	88	.23	114	.30	132	.38	142	.45	149
								-6	228	21	434	81	621	172	786	297	930	453	1,054
S168206	16.0	8.2	.60	.45	1.05	.75	.70	.07	100	.14	186	.20	259	.27	322	.34	378	.41	430
								101	238	227	460	380	664	560	852	765	1.023	997	1,177
S168209	16.0	8.2	.90	.35	1.25	.39	1.05	.05	204	.11	398	.16	583	.21	761	.26	934	.32	1,104
								208	220	432	429	672	628	928	818	1,200	996	1,488	1,165
S1892045	18.0	9.2	.45	.60	1.05	1.33	.66	.09	74	.18	127	.27	163	.36	185	.45	197	.54	203
								-20	251	-3	479	51	683	141	863	269	1,020	433	1,154
S189207	18.0	9.2	.70	.50	1.20	.71	1.03	.08	136	.15	252	.23	353	.30	442	.38	522	.45	597
								111	238	247	460	410	666	597	855	811	1,028	1,049	1,184
S18921	18.0	9.2	1.00	.40	1.40	.40	1.48	.06	265	.12	515	.18	754	.24	983	.30	1,205	.36	1,423
								207	236	430	462	670	676	927	879	1,200	1,071	1,491	1,252
S188102025	18.8	10.2	.25	.40	.65	1.60	.38	.06	10	.12	17	.18	21	.24	23	.30	24	.36	23
								-23	101	-32	192	-24	273	-2	344	36	405	89	455
S208205	20.0	8.2	.50	.65	1.15	1.30	1.03	.10	78	.20	135	.29	174	.39	198	.49	213	.59	221
								-5	203	24	386	87	550	186	696	318	822	486	930

Stainless Disc Springs

Material: X12CrNi 17 7 (DIN 1.4310)

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

Stainless Disc Springs

Material: X7CrNiAl 17 7 (DIN 1.4568)

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