



SCHNORR®

SPECIALIST MANUFACTURER OF DISC SPRINGS

ISO/TS 16949: 2002 certified

K-SPRINGS

Inch Edition

Disc Springs



(734) 677-2683

www.schnorr.com

SCHNORR® “K” Disc Springs

Explanation of the table

The “K” Disc Spring Sizes listed in the following table comply with the ball bearing series EL, R, 62 and 63 which are most frequently used. Springs can also be supplied to other series of ball bearings.

In the table are shown all the springs of our standard production. The loads and deflections given are at spring deflection of 75% of free height h_0 , which is the recommended preload.

How to order “K” Disc Springs

When ordering “K” Disc Springs to preload the outer ring of the bearing it is sufficient to quote the bearing size. In all other cases please give application details.

► SCHNORR® “K” Disc Springs English

Article No.	Bolt Size inch	Order Reference mm			Size inch						Force at 75% deflection		Ball-Bearing Type		Ball-Bearing Dimension			
		D _e	D _i	t	D _e	D _i	t	l ₀	h ₀	h ₀ /t	inch	lb			outer dia.		inner dia.	
		D _e	D _i	t	D _e	D _i	t	l ₀	h ₀	h ₀ /t	s	F			mm	inch	mm	inch
241100	1/8"	9,3	5,8	0,2	.366	.228	.0079	.0158	.0079	1.0	.0059	5.7	English	R 2	9,53	.375	3,18	.125
241300	3/16"	12,5	8,1	0,25	.492	.319	.0098	.0196	.0098	1.0	.0074	8.2	English	R 3	12,70	.500	4,76	.1875
241500	1/4"	15,7	10,3	0,25	.618	.406	.0098	.0216	.0118	1.2	.0089	6.5	English	R 4	15,88	.625	6,35	.250
242000	3/8"	21,9	13,7	0,5	.862	.539	.0138	.0295	.0157	1.14	.0118	11.4	English	R 6	22,23	.875	9,53	.375
242400	1/2"	28,2	18,4	0,4	1.110	.724	.0158	.0433	.0275	1.74	.0207	23.2	English	R 8	28,58	1.125	12,70	.500
242700	5/8"	34,5	25,4	0,5	1.358	1.000	.0197	.0473	.0276	1.4	.0207	34.6	English	R 10	34,93	1.375	15,88	.625

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Explanation of the table

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How to order "K" Disc Springs

When ordering "K" Disc Springs to preload the outer ring of the bearing it is sufficient to quote the bearing size. In all other cases please give application details.

Article No.	Order Reference mm			Size inch							Force at 75% deflection		Ball-Bearing Type			Ball-Bearing Dimension			
	D _e	D _i	t	D _e	D _i	t	l ₀	h ₀	h ₀ /t	s	F			outer dia.	inner dia.				
241200	9,8	6,2	0,2	.386	.244	.008	.016	.008	1,00	.006	5	623(EL3)		.394	.118	-	-		
241400	12,8	7,2	0,25	.504	.283	.010	.020	.010	1,00	.007	7	624(EL4)		.512	.157	-	-		
241600	15,8	8,2	0,25	.622	.323	.010	.022	.012	1,20	.009	5	625(EL5)	634	.630	.197	.157	-		
241700	18,8	9,2	0,3	.740	.362	.012	.026	.014	1,17	.010	7	626(EL6)	635	.630	.236	.197	-		
241800	18,8	10,2	0,35	.740	.402	.014	.028	.014	1,00	.010	11	607(EL7)		.748	.276	-	-		
241900	21,8	12,3	0,35	.858	.484	.014	.030	.016	1,14	.012	10	608(EL8)	627	.866	.315	.276	-		
242100	23,7	14,3	0,4	.933	.563	.016	.035	.020	1,25	.015	18	609(EL9)		.945	.354	-	-		
242200	25,7	14,3	0,4	1.012	.563	.016	.035	.020	1,25	.015	14	6000	629	1.024	.394	.354	-		
242300	27,7	17,3	0,4	1.091	.681	.016	.039	.024	1,50	.018	18	6001		1.102	.472	-	-		
242500	29,7	17,4	0,4	1.169	.685	.016	.043	.028	1,75	.021	19		6200	1.181	-	.394	-		
242600	31,7	20,4	0,4	1.248	.803	.016	.043	.028	1,75	.021	18	6002	6201	1.260	.591	.472	-		
242800	34,6	20,4	0,4	1.362	.803	.016	.043	.028	1,75	.021	14		6300	1.378	-	-	.394		
242900	34,6	22,4	0,5	1.362	.882	.020	.047	.028	1,40	.021	27	6003	6202	1.378	.669	.591	-		
243000	36,6	20,4	0,5	1.441	.803	.020	.051	.031	1,60	.024	25		6301	1.457	-	-	.472		
243100	39,6	25,5	0,5	1.559	1.004	.020	.051	.031	1,60	.024	25		6203	1.575	-	.669	-		
243200	41,6	25,5	0,5	1.638	1.004	.020	.055	.035	1,80	.027	25	6004	6302	1.654	.787	-	.591		
243300	46,5	30,5	0,6	1.831	1.201	.024	.059	.035	1,50	.027	34	6005	6204	1.850	.984	.787	.669		
243400	51,5	35,5	0,6	2.028	1.398	.024	.059	.035	1,50	.027	30		6205	6304	2.047	-	.984	.787	
243500	54,5	40,5	0,6	2.146	1.594	.024	.059	.035	1,50	.027	32	6006		2.165	1.181	-	-		
243600	61,5	40,5	0,7	2.421	1.594	.028	.071	.043	1,57	.033	40	6007	6206	6305	2.441	1.378	1.181	.984	
243700	67,5	50,5	0,7	2.657	1.988	.028	.067	.039	1,43	.030	36	6008		2.677	1.575	-	-		
243800	71,5	45,5	0,7	2.815	1.791	.028	.083	.055	2,00	.041	42		6306	2.835	-	-	1.181		
243900	71,5	50,5	0,7	2.815	1.988	.028	.083	.055	2,00	.041	49		6207	2.835	-	1.378	-		
244000	74,5	55,5	0,8	2.933	2.185	.031	.075	.043	1,38	.033	47	6009		2.953	1.772	-	-		
244100	79,5	50,5	0,8	3.130	1.988	.031	.091	.059	1,88	.044	51		6307	3.150	-	-	1.378		
244200	79,5	55,5	0,8	3.130	2.185	.031	.091	.059	1,88	.044	59	6010	6208	3.150	1.969	1.575	-		
244300	84,5	60,5	0,9	3.327	2.382	.035	.098	.063	1,78	.047	81		6209	3.346	-	1.772	-		
244400	89,5	60,5	0,9	3.524	2.382	.035	.098	.063	1,78	.047	65		6308	3.543	-	-	1.575		
244500	89,5	65,5	0,9	3.524	2.579	.035	.098	.063	1,78	.047	75	6011	6210	3.543	2.165	1.969	-		
244600	94,5	75,5	1	3.720	2.972	.039	.087	.047	1,20	.035	73	6012		3.740	2.362	-	-		
244700	99	65,5	1	3.898	2.579	.039	.102	.063	1,60	.047	66		6309	3.937	-	-	1.772		
244800	99	70,5	1	3.898	2.776	.039	.102	.063	1,60	.047	75	6013	6211	3.937	2.559	2.165	-		
244900	109	70,5	1,25	4.291	2.776	.049	.106	.057	1,16	.043	80		6310	4.331	-	-	1.969		
245000	109	75,5	1,25	4.291	2.972	.049	.106	.057	1,16	.043	89	6014	6212	4.331	2.756	2.362	-		
245100	114	90,5	1,25	4.488	3.563	.049	.096	.047	0,96	.035	89	6015		4.528	2.953	-	-		
245200	119	75,5	1,25	4.685	2.972	.049	.110	.061	1,24	.046	72		6311	4.724	-	-	2.165		
245300	119	85,5	1,25	4.685	3.366	.049	.110	.061	1,24	.046	88		6213	4.724	-	2.559	-		
245400	124	90,5	1,25	4.882	3.563	.049	.118	.069	1,40	.052	100	6016	6214	4.921	3.150	2.756	-		
245500	129	85,5	1,25	5.079	3.366	.049	.126	.077	1,56	.057	91		6312	5.118	-	-	2.362		
245600	129	95,5	1,25	5.079	3.760	.049	.126	.077	1,56	.057	112	6017	6215	5.118	3.346	2.953	-		
245700	139	90,5	1,25	5.472	3.563	.049	.128	.079	1,60	.059	80		6313	5.512	-	-	2.559		
245800	139	101	1,25	5.472	3.976	.049	.128	.079	1,60	.059	96	6018	6216	5.512	3.543	3.150	-		
245900	149	95,5	1,5	5.866	3.760	.059	.126	.067	1,13	.050	85		6314	5.906	-	-	2.756		
246000	149	106	1,5	5.866	4.173	.059	.126	.067	1,13	.050	101	6020	6217	5.906	3.937	3.346	-		
246100	159	101	1,5	6.260	3.976	.059	.138	.079	1,33	.059	93		6315	6.299	-	-	2.953		
246200	159	111	1,5	6.260	4.370	.059	.138	.079	1,33	.059	107	6021	6218	6.299	4.134	3.543	-		
246300	169	111	1,5	6.654	4.370	.059	.150	.091	1,53	.068	106		6316	6.693	-	-	3.150		
246400	169	121	1,5	6.654	4.764	.059	.150	.091	1,53	.068	123	6022	6219	6.693	4.331	3.740	-		
246500	179	121	2	7.047	4.764	.079	.165	.087	1,10	.065	194		6317	7.087	-	-	3.346		

Article No.	Order Reference mm			Size inch						Force at 75% deflection		Ball-Bearing Type		Ball-Bearing Dimension			
	D _e	D _i	t	D _e	D _i	t	l _o	h _o	h _o /t	s	F			outer dia.	inner dia.		
246600	179	126	2	7.047	4.961	.079	.165	.087	1,10	.065	209	6024	6220	7.087	4.724	3.937	-
246700	189	121	2	7.441	4.764	.079	.169	.091	1,15	.068	171		6318	7.480	-	-	3.543
246800	189	131	2	7.441	5.157	.079	.169	.091	1,15	.068	193		6221	7.480	-	4.134	-
246900	198	131	2	7.795	5.157	.079	.177	.098	1,25	.074	183		6319	7.874	-	-	3.740
247000	198	141	2	7.795	5.551	.079	.177	.098	1,25	.074	207	6026	6222	7.874	5.118	4.331	-
247100	213	151	2,25	8.386	5.945	.089	.177	.089	1,00	.067	212		6224 6320	8.465	-	4.724	3.937
247200	223	161	2,25	8.780	6.339	.089	.181	.093	1,04	.069	212	6030	6321	8.858	5.906	-	4.134
247300	228	161	2,25	8.976	6.339	.089	.195	.106	1,20	.080	233		6226	9.055	-	5.118	-
247400	238	161	2,25	9.370	6.339	.089	.207	.118	1,33	.089	230	6032	6322	9.449	6.299	-	4.331
247500	248	171	2,5	9.764	6.732	.098	.197	.098	1,00	.074	226		6228	9.843	-	5.512	-
247600	258	171	2,5	10.157	6.732	.098	.217	.118	1,20	.089	249	6034	6324	10.236	6.693	-	4.724
247700	268	181	2,5	10.551	7.126	.098	.224	.126	1,28	.094	260		6230	10.630	-	5.906	-
247800	278	181	2,5	10.945	7.126	.098	.236	.138	1,40	.104	260	6036	6326	11.024	7.087	-	5.118
247900	288	191	2,75	11.339	7.520	.108	.226	.118	1,09	.089	257	6038	6232	11.417	7.480	6.299	-
248000	298	191	2,75	11.732	7.520	.108	.250	.142	1,31	.106	294		6328	11.811	-	-	5.512
248100	308	202	3	12.126	7.953	.118	.240	.122	1,03	.092	292	6040	6234	12.205	7.874	6.693	-
248200	318	212	3	12.520	8.346	.118	.244	.126	1,07	.094	293		6236 6330	12.598	-	7.087	5.906
248300	338	232	3	13.307	9.134	.118	.260	.142	1,20	.106	318	6044	6238 6332	13.386	8.661	7.480	6.299
248400	358	242	3	14.094	9.528	.118	.276	.157	1,33	.118	320	6048	6240 6334	14.173	9.449	7.874	6.693

Also available:
Slotted Disc Springs

The inclusion of slots on either the inner or outer diameter creates a lever which works on the unslotted portion of the spring. This has the effect of reducing the spring load and increasing the

deflection. The resulting spring has a softer characteristic with a large deflection and in proportion to the outside diameter smaller spring loads. It is most important with this type of spring that

the permissible stresses in the annular portion are not exceeded and, if necessary, the outside diameter must be increased to compensate.





SPECIALIST MANUFACTURER OF DISC SPRINGS
ISO/TS 16949: 2002 certified

For further information contact

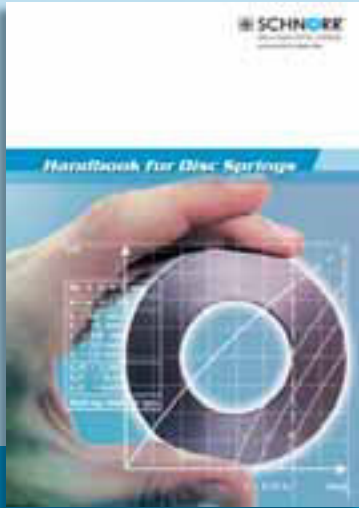
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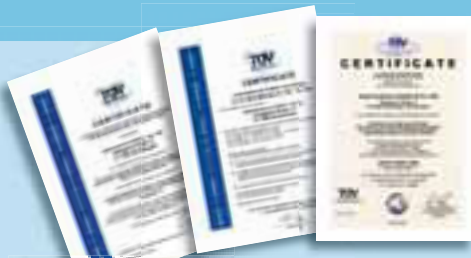
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Handbook for Disc Springs
150 page engineering handbook
available upon request.



Additional information
and current quality certifications
on our website



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