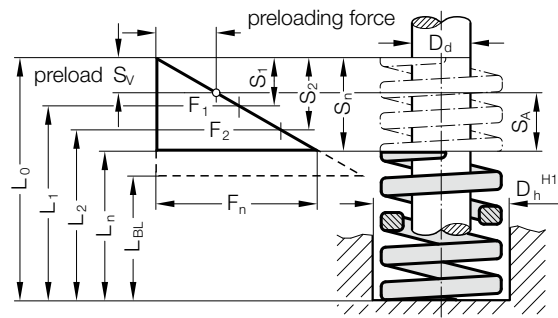


HIGH PERFORMANCE COMPRESSION SPRING, LF, COLOUR RED, DIN ISO 10243

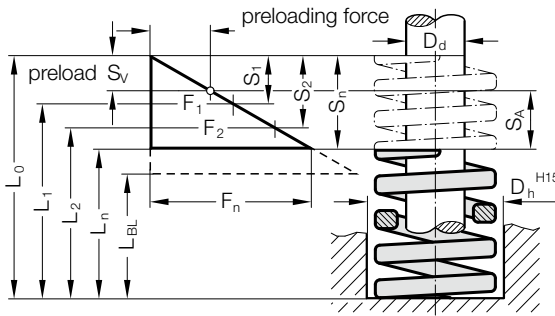


- D_h = diameter of guide sleeve
- D_d = diameter of guide pin
- L_0 = free length of spring
- $L_1...L_n$ = length of loaded spring (mm) as related to spring forces $F_1...F_n$
- L_{BL} = length of compacted spring (i.e. wire-to-wire)
- $F_1...F_n$ = forces (N) as related to length of spring $L_1...L_n$
- $S_{V1}...S_{V7}$ = recommend. preload. compression, as relat. to compress. $S_1...S_7$
- $S_1...S_n$ = compr. as related to spring forces $F_1...F_n$
- R = spring rate (N/mm)
- $S_{A1}...S_{A7}$ = working stroke (mm)

241.16. High performance compression spring, LF, Colour Red, DIN ISO 10243

Order No	D_h	D_d	L_0	R	45%			62%			80%			100%				
					S_1	S_{V1}	S_{A1}	F_1	S_2	S_{V2}	S_{A2}	F_2	S_3	S_{V3}	S_{A3}	F_3	S_n	F_n
241.16.10.025	10	5	25	23	4.2	1.2	3	97	5.8	2.8	3	134	7.5	5.5	2.1	173	9.4	216
241.16.10.032	10	5	32	17.5	5.4	1.6	3.8	94	7.4	3.6	3.8	130	9.6	7	2.6	168	12	210
241.16.10.038	10	5	38	14.8	6.4	1.9	4.6	95	8.9	4.3	4.6	131	11.4	8.3	3.1	169	14.3	212
241.16.10.044	10	5	44	13	7.4	2.1	5.3	97	10.2	5	5.3	133	13.2	9.6	3.6	172	16.5	214
241.16.10.051	10	5	51	11.2	8.6	2.5	6.1	96	11.8	5.7	6.1	133	15.3	11.1	4.2	171	19.1	214
241.16.10.064	10	5	64	9.2	10.8	3.1	7.7	99	14.9	7.2	7.7	137	19.2	13.9	5.3	177	24	221
241.16.10.076	10	5	76	7.5	12.8	3.7	9.1	96	17.7	8.6	9.1	133	22.8	16.5	6.3	171	28.5	214
241.16.10.305	10	5	305	1.9	51.5	14.9	36.6	98	70.9	34.3	36.6	135	91.5	66.4	25.2	174	114.4	217
241.16.13.025	12.5	6.3	25	42.1	4.2	1.2	3	178	5.8	2.8	3	245	7.5	5.5	2.1	317	9.4	396
241.16.13.032	12.5	6.3	32	33.2	5.4	1.6	3.8	179	7.4	3.6	3.8	247	9.6	7	2.6	319	12	398
241.16.13.038	12.5	6.3	38	29.3	6.4	1.9	4.6	189	8.9	4.3	4.6	260	11.4	8.3	3.1	335	14.3	419
241.16.13.044	12.5	6.3	44	24.6	7.4	2.1	5.3	183	10.2	5	5.3	252	13.2	9.6	3.6	325	16.5	406
241.16.13.051	12.5	6.3	51	19.6	8.6	2.5	6.1	168	11.8	5.7	6.1	232	15.3	11.1	4.2	299	19.1	374
241.16.13.064	12.5	6.3	64	15	10.8	3.1	7.7	162	14.9	7.2	7.7	223	19.2	13.9	5.3	288	24	360
241.16.13.076	12.5	6.3	76	13.2	12.8	3.7	9.1	169	17.7	8.6	9.1	233	22.8	16.5	6.3	301	28.5	376
241.16.13.089	12.5	6.3	89	11.4	15	4.3	10.7	171	20.7	10	10.7	236	26.7	19.4	7.3	305	33.4	381
241.16.13.305	12.5	6.3	305	3.2	51.5	14.9	36.6	165	70.9	34.3	36.6	227	91.5	66.4	25.2	293	114.4	366
241.16.16.025	16	8	25	75.7	4.2	1.2	3	320	5.8	2.8	3	441	7.5	5.5	2.1	569	9.4	712
241.16.16.032	16	8	32	60.2	5.4	1.6	3.8	325	7.4	3.6	3.8	448	9.6	7	2.6	578	12	722
241.16.16.038	16	8	38	50.8	6.4	1.9	4.6	327	8.9	4.3	4.6	450	11.4	8.3	3.1	581	14.3	726
241.16.16.044	16	8	44	42.8	7.4	2.1	5.3	318	10.2	5	5.3	438	13.2	9.6	3.6	565	16.5	706
241.16.16.051	16	8	51	37.1	8.6	2.5	6.1	319	11.8	5.7	6.1	439	15.3	11.1	4.2	567	19.1	709
241.16.16.064	16	8	64	30.3	10.8	3.1	7.7	327	14.9	7.2	7.7	451	19.2	13.9	5.3	582	24	727
241.16.16.076	16	8	76	25.7	12.8	3.7	9.1	330	17.7	8.6	9.1	454	22.8	16.5	6.3	586	28.5	732
241.16.16.089	16	8	89	21.7	15	4.3	10.7	326	20.7	10	10.7	449	26.7	19.4	7.3	580	33.4	725
241.16.16.102	16	8	102	18.9	17.2	5	12.3	326	23.7	11.5	12.3	449	30.6	22.2	8.4	579	38.3	724
241.16.16.305	16	8	305	6.3	51.5	14.9	36.6	324	70.9	34.3	36.6	447	91.5	66.4	25.2	577	114.4	721
241.16.20.025	20	10	25	216	4.2	1.2	3	914	5.8	2.8	3	1259	7.5	5.5	2.1	1624	9.4	2030
241.16.20.032	20	10	32	168	5.4	1.6	3.8	907	7.4	3.6	3.8	1250	9.6	7	2.6	1613	12	2016
241.16.20.038	20	10	38	129	6.4	1.9	4.6	830	8.9	4.3	4.6	1144	11.4	8.3	3.1	1476	14.3	1845
241.16.20.044	20	10	44	112	7.4	2.1	5.3	832	10.2	5	5.3	1146	13.2	9.6	3.6	1478	16.5	1848
241.16.20.051	20	10	51	94	8.6	2.5	6.1	808	11.8	5.7	6.1	1113	15.3	11.1	4.2	1436	19.1	1795
241.16.20.064	20	10	64	72.1	10.8	3.1	7.7	779	14.9	7.2	7.7	1073	19.2	13.9	5.3	1384	24	1730
241.16.20.076	20	10	76	59.7	12.8	3.7	9.1	766	17.7	8.6	9.1	1055	22.8	16.5	6.3	1361	28.5	1701
241.16.20.089	20	10	89	50.5	15	4.3	10.7	759	20.7	10	10.7	1046	26.7	19.4	7.3	1349	33.4	1687
241.16.20.102	20	10	102	44.2	17.2	5	12.3	762	23.7	11.5	12.3	1050	30.6	22.2	8.4	1354	38.3	1693
241.16.20.115	20	10	115	38.4	19.4	5.6	13.8	745	26.7	12.9	13.8	1026	34.5	25	9.5	1324	43.1	1655
241.16.20.127	20	10	127	34.1	21.4	6.2	15.2	730	29.5	14.3	15.2	1006	38.1	27.6	10.5	1299	47.6	1623
241.16.20.139	20	10	139	31	23.4	6.8	16.7	727	32.3	15.6	16.7	1001	41.7	30.2	11.5	1292	52.1	1615
241.16.20.152	20	10	152	28.2	25.6	7.4	18.2	723	35.3	17.1	18.2	997	45.6	33.1	12.5	1286	57	1607
241.16.20.305	20	10	305	14	51.5	14.9	36.6	721	70.9	34.3	36.6	993	91.5	66.4	25.2	1281	114.4	1602
241.16.25.025	25	12.5	25	375	4.2	1.2	3	1586	5.8	2.8	3	2186	7.5	5.5	2.1	2820	9.4	3525
241.16.25.032	25	12.5	32	297	5.4	1.6	3.8	1604	7.4	3.6	3.8	2210	9.6	7	2.6	2851	12	3564
241.16.25.038	25	12.5	38	219	6.4	1.9	4.6	1409	8.9	4.3	4.6	1942	11.4	8.3	3.1	2505	14.3	3132
241.16.25.044	25	12.5	44	187	7.4	2.1	5.3	1388	10.2	5	5.3	1913	13.2	9.6	3.6	2468	16.5	3086
241.16.25.051	25	12.5	51	156	8.6	2.5	6.1	1341	11.8	5.7	6.1	1847	15.3	11.1	4.2	2384	19.1	2980
241.16.25.064	25	12.5	64	123	10.8	3.1	7.7	1328	14.9	7.2	7.7	1830	19.2	13.9	5.3	2362	24	2952
241.16.25.076	25	12.5	76	99	11.9	3.4	8.5	1181	16.4	8	8.5	1627	21.2	15.4	5.8	2099	26.5	2624
241.16.25.089	25	12.5	89	84	15	4.3	10.7	1263	20.7	10	10.7	1739	26.7	19.4	7.3	2244	33.4	2806
241.16.25.102	25	12.5	102	73	17.2	5	12.3	1258	23.7	11.5	12.3	1733	30.6	22.2	8.4	2237	38.3	2796
241.16.25.115	25	12.5	115	65	19.4	5.6	13.8	1261	26.7	12.9	13.8	1737	34.5	25	9.5	2241	43.1	2802
241.16.25.127	25	12.5	127	57.7	21.4	6.2	15.2	1236	29.5	14.3	15.2	1703	38.1	27.6	10.5	2197	47.6	2747
241.16.25.139	25	12.5	139	52.7	23.4	6.8	16.7	1236	32.3	15.6	16.7	1702	41.7	30.2	11.5	2197	52.1	2746
241.16.25.152	25	12.5	152	47.8	25.6	7.4	18.2	1226	35.3	17.1	18.2	1689	45.6	33.1	12.5	2180	57	2725
241.16.25.178	25	12.5	178	41	30.1	8.7	21.4	1232	41.4	20	21.4	1698	53.4	38.7	14.7	2191	66.8	2739
241.16.25.203	25	12.5	203	35.8	34.2	9.9	24.4	1226	47.2	22.8	24.4	1689	60.9	44.1	16.7	2180	76.1	2724
241.16.25.305	25	12.5	305	22.9	51.5	14.9	36.6	1179	70.9	34.3	36.6	1624	91.5	66.4	25.2	2096	114.4	2620

HIGH PERFORMANCE COMPRESSION SPRING, LF, COLOUR RED, DIN ISO 10243



- D_h = diameter of guide sleeve
- D_d = diameter of guide pin
- L_0 = free length of spring
- $L_1...L_n$ = length of loaded spring (mm) as related to spring forces $F_1...F_n$
- L_{BL} = length of compacted spring (i.e. wire-to-wire)
- $F_1...F_n$ = forces (N) as related to length of spring $L_1...L_n$
- $S_{V1}...S_{V7}$ = recommend. preload. compression, as relat. to compress. $S_1...S_7$
- $S_1...S_n$ = compr. as related to spring forces $F_1...F_n$
- R = spring rate (N/mm)
- $S_{A1}...S_{A7}$ = working stroke (mm)



241.16. High performance compression spring, LF, Colour Red, DIN ISO 10243

Order No	D_h	D_d	L_0	R	45%			62%			80%			100%				
					S_1	S_{V1}	S_{A1}	F_1	S_2	S_{V2}	S_{A2}	F_2	S_3	S_{V3}	S_{A3}	F_3	S_n	F_n
241.16.32.038	32	16	38	388	6.4	1.9	4.6	2497	8.9	4.3	4.6	3440	11.4	8.3	3.1	4439	14.3	5548
241.16.32.044	32	16	44	324	7.4	2.1	5.3	2406	10.2	5	5.3	3315	13.2	9.6	3.6	4277	16.5	5346
241.16.32.051	32	16	51	272	8.6	2.5	6.1	2338	11.8	5.7	6.1	3221	15.3	11.1	4.2	4156	19.1	5195
241.16.32.064	32	16	64	212	10.8	3.1	7.7	2290	14.9	7.2	7.7	3155	19.2	13.9	5.3	4070	24	5088
241.16.32.076	32	16	76	172	12.8	3.7	9.1	2206	17.7	8.6	9.1	3039	22.8	16.5	6.3	3922	28.5	4902
241.16.32.089	32	16	89	141	15	4.3	10.7	2119	20.7	10	10.7	2920	26.7	19.4	7.3	3768	33.4	4709
241.16.32.102	32	16	102	122	17.2	5	12.3	2103	23.7	11.5	12.3	2897	30.6	22.2	8.4	3738	38.3	4673
241.16.32.115	32	16	115	107	19.4	5.6	13.8	2075	26.7	12.9	13.8	2859	34.5	25	9.5	3689	43.1	4612
241.16.32.127	32	16	127	93	21.4	6.2	15.2	1992	29.5	14.3	15.2	2745	38.1	27.6	10.5	3541	47.6	4427
241.16.32.139	32	16	139	86	23.4	6.8	16.7	2016	32.3	15.6	16.7	2778	41.7	30.2	11.5	3584	52.1	4481
241.16.32.152	32	16	152	78	25.6	7.4	18.2	2001	35.3	17.1	18.2	2757	45.6	33.1	12.5	3557	57	4446
241.16.32.178	32	16	178	67.2	30.1	8.7	21.4	2020	41.4	20	21.4	2783	53.4	38.7	14.7	3591	66.8	4489
241.16.32.203	32	16	203	59.1	34.2	9.9	24.4	2024	47.2	22.8	24.4	2788	60.9	44.1	16.7	3598	76.1	4498
241.16.32.254	32	16	254	46.6	42.9	12.4	30.5	1998	59.1	28.6	30.5	2753	76.2	55.3	21	3553	95.3	4441
241.16.32.305	32	16	305	38	51.5	14.9	36.6	1956	70.9	34.3	36.6	2695	91.5	66.4	25.2	3478	114.4	4347
241.16.40.051	40	20	51	350	8.6	2.5	6.1	3008	11.8	5.7	6.1	4145	15.3	11.1	4.2	5348	19.1	6685
241.16.40.064	40	20	64	269	10.8	3.1	7.7	2905	14.9	7.2	7.7	4003	19.2	13.9	5.3	5165	24	6456
241.16.40.076	40	20	76	219	12.8	3.7	9.1	2809	17.7	8.6	9.1	3870	22.8	16.5	6.3	4993	28.5	6242
241.16.40.089	40	20	89	190	15	4.3	10.7	2856	20.7	10	10.7	3935	26.7	19.4	7.3	5077	33.4	6346
241.16.40.102	40	20	102	163	17.2	5	12.3	2809	23.7	11.5	12.3	3871	30.6	22.2	8.4	4994	38.3	6243
241.16.40.115	40	20	115	142	19.4	5.6	13.8	2754	26.7	12.9	13.8	3795	34.5	25	9.5	4896	43.1	6120
241.16.40.127	40	20	127	128	21.4	6.2	15.2	2742	29.5	14.3	15.2	3778	38.1	27.6	10.5	4874	47.6	6093
241.16.40.139	40	20	139	115	23.4	6.8	16.7	2696	32.3	15.6	16.7	3715	41.7	30.2	11.5	4793	52.1	5992
241.16.40.152	40	20	152	105	25.6	7.4	18.2	2693	35.3	17.1	18.2	3711	45.6	33.1	12.5	4788	57	5985
241.16.40.178	40	20	178	89	30.1	8.7	21.4	2675	41.4	20	21.4	3686	53.4	38.7	14.7	4756	66.8	5945
241.16.40.203	40	20	203	77	34.2	9.9	24.4	2637	47.2	22.8	24.4	3633	60.9	44.1	16.7	4688	76.1	5860
241.16.40.254	40	20	254	61	42.9	12.4	30.5	2616	59.1	28.6	30.5	3604	76.2	55.3	21	4651	95.3	5813
241.16.40.305	40	20	305	51	51.5	14.9	36.6	2625	70.9	34.3	36.6	3617	91.5	66.4	25.2	4668	114.4	5834
241.16.50.064	50	25	64	413	10.8	3.1	7.7	4460	14.9	7.2	7.7	6145	19.2	13.9	5.3	7930	24	9912
241.16.50.076	50	25	76	339	12.8	3.7	9.1	4348	17.7	8.6	9.1	5990	22.8	16.5	6.3	7729	28.5	9662
241.16.50.089	50	25	89	288	15	4.3	10.7	4329	20.7	10	10.7	5964	26.7	19.4	7.3	7695	33.4	9619
241.16.50.102	50	25	102	245	17.2	5	12.3	4223	23.7	11.5	12.3	5818	30.6	22.2	8.4	7507	38.3	9384
241.16.50.115	50	25	115	215	19.4	5.6	13.8	4170	26.7	12.9	13.8	5745	34.5	25	9.5	7413	43.1	9266
241.16.50.127	50	25	127	192	21.4	6.2	15.2	4113	29.5	14.3	15.2	5666	38.1	27.6	10.5	7311	47.6	9139
241.16.50.139	50	25	139	168	23.4	6.8	16.7	3939	32.3	15.6	16.7	5427	41.7	30.2	11.5	7002	52.1	8753
241.16.50.152	50	25	152	154	25.6	7.4	18.2	3950	35.3	17.1	18.2	5442	45.6	33.1	12.5	7022	57	8778
241.16.50.178	50	25	178	134	30.1	8.7	21.4	4028	41.4	20	21.4	5550	53.4	38.7	14.7	7161	66.8	8951
241.16.50.203	50	25	203	117	34.2	9.9	24.4	4007	47.2	22.8	24.4	5520	60.9	44.1	16.7	7123	76.1	8904
241.16.50.254	50	25	254	89	42.9	12.4	30.5	3817	59.1	28.6	30.5	5259	76.2	55.3	21	6785	95.3	8482
241.16.50.305	50	25	305	73	51.5	14.9	36.6	3758	70.9	34.3	36.6	5178	91.5	66.4	25.2	6681	114.4	8351
241.16.63.076	63	38	76	618	13	3.7	9.2	8009	17.9	8.6	9.2	11035	23	16.7	6.3	14239	28.8	17798
241.16.63.089	63	38	89	515	15.2	4.4	10.8	7833	21	10.1	10.8	10792	27	19.6	7.4	13926	33.8	17407
241.16.63.102	63	38	102	438	17.5	5	12.4	7647	24.1	11.6	12.4	10537	31	22.5	8.5	13596	38.8	16994
241.16.63.115	63	38	115	370	19.7	5.7	14	7293	27.2	13.1	14	10048	35	25.4	9.6	12965	43.8	16206
241.16.63.127	63	38	127	333	21.4	6.2	15.2	7118	29.4	14.2	15.2	9807	38	27.6	10.4	12654	47.5	15818
241.16.63.152	63	38	152	269	25.9	7.5	18.4	6960	35.6	17.2	18.4	9590	46	33.4	12.6	12374	57.5	15468
241.16.63.178	63	38	178	226	29.8	8.6	21.2	6743	41.1	19.9	21.2	9290	53	38.5	14.6	11987	66.3	14984
241.16.63.203	63	38	203	198	34.3	9.9	24.4	6798	47.3	22.9	24.4	9367	61	44.3	16.8	12086	76.3	15107
241.16.63.254	63	38	254	155	42.8	12.4	30.4	6626	58.9	28.5	30.4	9130	76	55.1	20.9	11780	95	14725
241.16.63.305	63	38	305	128	51.2	14.8	36.4	6555	70.6	34.1	36.4	9031	91	66	25	11653	113.8	14566