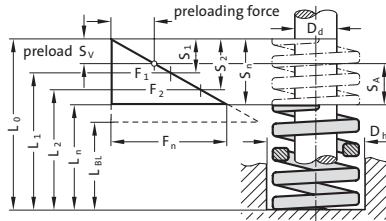


High performance compression spring, XSF, Colour "Violet"

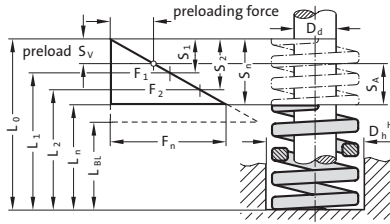


- D_h = dia. of guide sleeve
- D_d = diameter of guide pin
- L_0 = free length of spring
- $L_1 \dots L_n$ = length of loaded spring (mm) as related to spring forces $F_1 \dots F_n$
- l_{BL} = length of compacted spring (i.e. wire-to-wire)
- $F_1 \dots F_n$ = forces (N) as related to length of spring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

241.13. High performance compression spring, XSF, Colour "Violet"

Order No	D_h	D_d	L_0	R	45%			62%			80%			100%			F_n			
					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		
241.13.20.025	20	10	25	32.1	6.3	1.8	4.5	202	8.7	4.2	4.5	279	11.2	8.1	3.1	360	14	449		
241.13.20.032	20	10	32	24.7	8.1	2.3	5.8	200	11.2	5.4	5.8	276	14.4	10.4	4	356	18	445		
241.13.20.038	20	10	38	20.7	9.9	2.9	7	205	13.6	6.6	7	282	17.6	12.8	4.8	364	22	455		
241.13.20.044	20	10	44	17.8	11.7	3.4	8.3	208	16.1	7.8	8.3	287	20.8	15.1	5.7	370	26	463		
241.13.20.051	20	10	51	15.3	13.5	3.9	9.6	207	18.6	9	9.6	285	24	17.4	6.6	367	30	459		
241.13.20.064	20	10	64	12.1	17.1	4.9	12.2	207	23.6	11.4	12.2	285	30.4	22	8.4	368	38	460		
241.13.20.076	20	10	76	10.2	20.2	5.9	14.4	207	27.9	13.5	14.4	285	36	26.1	9.9	367	45	459		
241.13.20.089	20	10	89	8.6	23.9	6.9	17	205	32.9	15.9	17	283	42.4	30.7	11.7	365	53	456		
241.13.20.102	20	10	102	7.5	27.9	8.1	19.8	209	38.4	18.6	19.8	288	49.6	36	13.6	372	62	465		
241.13.20.115	20	10	115	6.7	31.5	9.1	22.4	211	43.4	21	22.4	291	56	40.6	15.4	375	70	469		
241.13.20.127	20	10	127	6.1	34.6	10	24.6	211	47.7	23.1	24.6	291	61.6	44.7	16.9	376	77	470		
241.13.20.139	20	10	139	5.5	38.2	11	27.2	210	52.7	25.5	27.2	290	68	49.3	18.7	374	85	468		
241.13.20.152	20	10	152	5.1	41.9	12.1	29.8	213	57.7	27.9	29.8	294	74.4	53.9	20.5	379	93	474		
241.13.20.305	20	10	305	2.5	84.6	24.4	60.2	212	116.6	56.4	60.2	291	150.4	109	41.4	376	188	470		
241.13.25.025	25	12.5	25	52.7	6.3	1.8	4.5	332	8.7	4.2	4.5	457	11.2	8.1	3.1	590	14	738		
241.13.25.032	25	12.5	32	40	8.1	2.3	5.8	324	11.2	5.4	5.8	446	14.4	10.4	4	576	18	720		
241.13.25.038	25	12.5	38	33.3	9.9	2.9	7	330	13.6	6.6	7	454	17.6	12.8	4.8	586	22	733		
241.13.25.044	25	12.5	44	28.6	11.2	3.2	8	322	15.5	7.5	8	443	20	14.5	5.5	572	25	715		
241.13.25.051	25	12.5	51	24.7	13.5	3.9	9.6	333	18.6	9	9.6	459	24	17.4	6.6	593	30	741		
241.13.25.064	25	12.5	64	19.4	17.1	4.9	12.2	332	23.6	11.4	12.2	457	30.4	22	8.4	590	38	737		
241.13.25.076	25	12.5	76	16.3	20.2	5.9	14.4	330	27.9	13.5	14.4	455	36	26.1	9.9	587	45	734		
241.13.25.089	25	12.5	89	15.9	23.9	6.9	17	379	32.9	15.9	17	522	42.4	30.7	11.7	674	53	843		
241.13.25.102	25	12.5	102	15.2	10.2	12.1	27.4	7.9	19.5	332	37.8	18.3	19.5	458	48.8	35.4	13.4	590	61	738
241.13.25.115	25	12.5	115	10.8	31.5	9.1	22.4	340	43.4	21	22.4	469	56	40.6	15.4	605	70	756		
241.13.25.127	25	12.5	127	9.8	34.6	10	24.6	340	47.7	23.1	24.6	468	61.6	44.7	16.9	604	77	755		
241.13.25.139	25	12.5	139	8.9	38.2	11	27.2	340	52.7	25.5	27.2	469	68	49.3	18.7	605	85	756		
241.13.25.152	25	12.5	152	8.1	41.9	12.1	29.8	339	57.7	27.9	29.8	467	74.4	53.9	20.5	603	93	753		
241.13.25.178	25	12.5	178	6.9	49.1	14.2	34.9	338	67.6	32.7	34.9	466	87.2	63.2	24	602	109	752		
241.13.25.203	25	12.5	203	6.1	55.8	16.1	39.7	340	76.9	37.2	39.7	469	99.2	71.9	27.3	605	124	756		
241.13.25.305	25	12.5	305	4	84.6	24.4	60.2	338	116.6	56.4	60.2	466	150.4	109	41.4	602	188	752		
241.13.32.038	32	16	38	43.8	9.9	2.9	7	434	13.6	6.6	7	597	17.6	12.8	4.8	771	22	964		
241.13.32.044	32	16	44	37.5	11.7	3.4	8.3	439	16.1	7.8	8.3	604	20.8	15.1	5.7	780	26	975		
241.13.32.051	32	16	51	32.3	13.9	4	9.9	451	19.2	9.3	9.9	621	24.8	18	6.8	801	31	1001		
241.13.32.064	32	16	64	25.4	17.6	5.1	12.5	446	24.2	11.7	12.5	614	31.2	22.6	8.6	792	39	991		
241.13.32.076	32	16	76	21.3	21.1	6.1	15	450	29.1	14.1	15	621	37.6	27.3	10.3	801	47	1001		
241.13.32.089	32	16	89	18.1	25.2	7.3	17.9	456	34.7	16.8	17.9	628	44.8	32.5	12.3	811	56	1014		
241.13.32.102	32	16	102	15.8	28.8	8.3	20.5	455	39.7	19.2	20.5	627	51.2	37.1	14.1	809	64	1011		
241.13.32.115	32	16	115	13.9	32.9	9.5	23.4	457	45.3	21.9	23.4	629	58.4	42.3	16.1	812	73	1015		
241.13.32.127	32	16	127	12.6	36.5	10.5	25.9	459	50.2	24.3	25.9	633	64.8	47	17.8	816	81	1021		
241.13.32.139	32	16	139	11.4	40	11.6	28.5	457	55.2	26.7	28.5	629	71.2	51.6	19.6	812	89	1015		
241.13.32.152	32	16	152	10.5	43.6	12.6	31	458	60.1	29.1	31	631	77.6	56.3	21.3	815	97	1018		
241.13.32.178	32	16	178	8.9	51.3	14.8	36.5	457	70.7	34.2	36.5	629	91.2	66.1	25.1	812	114	1015		
241.13.32.203	32	16	203	7.8	59	17	41.9	460	81.2	39.3	41.9	634	104.8	76	28.8	817	131	1022		
241.13.32.254	32	16	254	6.2	73.3	21.2	52.2	455	101.1	48.9	52.2	627	130.4	94.5	35.9	808	163	1011		
241.13.32.305	32	16	305	5.2	88.7	25.6	63	461	122.1	59.1	63	635	157.6	114.3	43.3	820	197	1024		

High performance compression spring, XSF, Colour "Violet"



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



241.13. High performance compression spring, XSF, Colour "Violet"

Order No	D_h	D_d	L_0	R	45%			62%			80%			100%			F_n	
					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
241.13.40.051	40	20	51	50.8	11.7	3.4	8.3	594	16.1	7.8	8.3	819	20.8	15.1	5.7	1057	26	1321
241.13.40.064	40	20	64	39.7	15.3	4.4	10.9	607	21.1	10.2	10.9	837	27.2	19.7	7.5	1080	34	1350
241.13.40.076	40	20	76	33.1	18	5.2	12.8	596	24.8	12	12.8	821	32	23.2	8.8	1059	40	1324
241.13.40.089	40	20	89	28.1	21.6	6.2	15.4	607	29.8	14.4	15.4	836	38.4	27.8	10.6	1079	48	1349
241.13.40.102	40	20	102	24.5	24.8	7.2	17.6	606	34.1	16.5	17.6	835	44	31.9	12.1	1078	55	1348
241.13.40.115	40	20	115	21.6	28.4	8.2	20.2	612	39.1	18.9	20.2	844	50.4	36.5	13.9	1089	63	1361
241.13.40.127	40	20	127	19.5	31.5	9.1	22.4	614	43.4	21	22.4	846	56	40.6	15.4	1092	70	1365
241.13.40.139	40	20	139	17.8	34.2	9.9	24.3	609	47.1	22.8	24.3	839	60.8	44.1	16.7	1082	76	1353
241.13.40.152	40	20	152	16.3	37.8	10.9	26.9	616	52.1	25.2	26.9	849	67.2	48.7	18.5	1095	84	1369
241.13.40.178	40	20	178	13.8	44.5	12.9	31.7	615	61.4	29.7	31.7	847	79.2	57.4	21.8	1093	99	1366
241.13.40.203	40	20	203	12.1	50.8	14.7	36.2	615	70.1	33.9	36.2	848	90.4	65.5	24.9	1094	113	1367
241.13.40.254	40	20	254	9.7	63.9	18.5	45.4	620	88	42.6	45.4	854	113.6	82.4	31.2	1102	142	1377
241.13.40.305	40	20	305	8	77	22.2	54.7	616	106	51.3	54.7	848	136.8	99.2	37.6	1094	171	1368
241.13.50.064	50	25	64	80.2	16.6	4.8	11.8	1335	22.9	11.1	11.8	1840	29.6	21.5	8.1	2374	37	2967
241.13.50.076	50	25	76	66.9	20.2	5.9	14.4	1355	27.9	13.5	14.4	1867	36	26.1	9.9	2408	45	3011
241.13.50.089	50	25	89	56.6	23.9	6.9	17	1350	32.9	15.9	17	1860	42.4	30.7	11.7	2400	53	3000
241.13.50.102	50	25	102	40.3	27.9	8.1	19.8	1124	38.4	18.6	19.8	1549	49.6	36	13.6	1999	62	2499
241.13.50.115	50	25	115	43.5	31.5	9.1	22.4	1370	43.4	21	22.4	1888	56	40.6	15.4	2436	70	3045
241.13.50.127	50	25	127	39.3	35.1	10.1	25	1379	48.4	23.4	25	1901	62.4	45.2	17.2	2452	78	3065
241.13.50.139	50	25	139	35.8	38.2	11	27.2	1369	52.7	25.5	27.2	1887	68	49.3	18.7	2434	85	3043
241.13.50.152	50	25	152	32.8	42.3	12.2	30.1	1387	58.3	28.2	30.1	1912	75.2	54.5	20.7	2467	94	3083
241.13.50.178	50	25	178	27.8	49.5	14.3	35.2	1376	68.2	33	35.2	1896	88	63.8	24.2	2446	110	3058
241.13.50.203	50	25	203	24.2	56.7	16.4	40.3	1372	78.1	37.8	40.3	1891	100.8	73.1	27.7	2439	126	3049
241.13.50.254	50	25	254	19.2	71.5	20.7	50.9	1374	98.6	47.7	50.9	1893	127.2	92.2	35	2442	159	3053
241.13.50.305	50	25	305	16	86.4	25	61.4	1382	119	57.6	61.4	1905	153.6	111.4	42.2	2458	192	3072