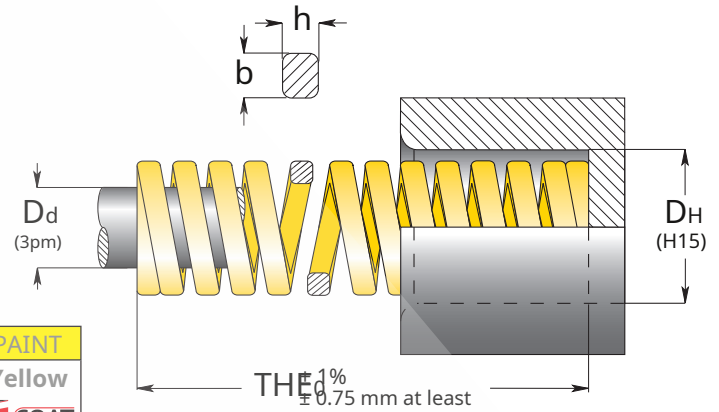
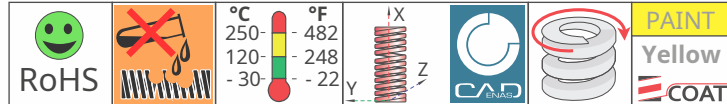















IT Extra-strong load springs Extra-
EN strong load springs Federn für
FR höchste Spannung Ressorts
FR extra-strong charge Muelles
ES extra-strong load Molas extra-
PT strong load



Code	D _H	D _d	THER		TO		B		C		D		AND	
	Hole Diameter	Hole Diameter	Free Length	Spring Rate	 17%THE ₀	 20%THE ₀	 22.5%THE ₀	 25%THE ₀		 approx. do not use				
	b x h			± 10%	+ 3,000,000	~ 1,500,000	300 - 500,000	100 - 200,000						
	mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm	Pcs
G 10 - 025	10	5	25	36.8	4.3	158.2	5.0	184.0	5.6	206.1	6.2	228.2	7.7	50
G 10 - 032			32	27.9	5.4	150.7	6.4	178.6	7.2	200.9	8.0	223.2	10.6	50
G 10 - 038			38	23.7	6.5	154.1	7.6	180.1	8.6	203.8	9.5	225.2	12.6	50
G 10 - 044			44	19.2	7.5	144.0	8.8	169.0	9.9	190.1	11.0	211.2	13.8	50
G 10 - 051			51	16.5	8.7	143.6	10.2	168.3	11.5	189.8	12.7	209.6	16.2	25
G 10 - 064			64	13.2	10.9	143.9	12.8	169.0	14.4	190.1	16.0	211.2	20.4	25
G 10 - 076	1.9 x 1.6		76	10.9	12.9	140.6	15.2	165.7	17.1	186.4	19.0	207.1	25.2	25
G 10 - 305			305	2.6	51.9	134.9	61.0	158.6	68.6	178.4	76.3	198.4	111.0	10
G 13 - 025	12.5	6.3	25	58.5	4.3	251.6	5.0	292.5	5.6	327.6	6.2	362.7	8.1	50
G 13 - 032			32	43.9	5.4	237.1	6.4	281.0	7.2	316.1	8.0	351.2	9.9	50
G 13 - 038			38	36.0	6.5	234.0	7.6	273.6	8.6	309.6	9.5	342.0	12.9	50
G 13 - 044			44	30.3	7.5	227.3	8.8	266.6	9.9	300.0	11.0	333.3	14.1	25
G 13 - 051			51	26.2	8.7	227.9	10.2	267.2	11.5	301.3	12.7	332.7	17.4	25
G 13 - 064			64	21.2	10.9	231.1	12.8	271.4	14.4	305.3	16.0	339.2	21.0	25
G 13 - 076	2.6 x 2.0		76	17.1	12.9	220.6	15.2	259.9	17.1	292.4	19.0	324.9	26.4	25
G 13 - 089			89	14.5	15.1	219.0	17.8	258.1	20.0	290.0	22.2	321.9	31.5	20
G 13 - 102			102	12.7	17.3	219.7	20.4	259.1	23.0	292.1	25.5	323.9	36.0	10
G 13 - 305			305	4.3	51.9	223.2	61.0	262.3	68.6	295.0	76.3	328.1	111.0	10
G 16 - 025	16	8	25	118.0	4.3	507.4	5.0	590.0	5.6	660.8	6.2	731.6	8.5	50
G 16 - 032			32	89.0	5.4	480.6	6.4	569.6	7.2	640.8	8.0	712.0	11.0	50
G 16 - 038			38	72.1	6.5	468.7	7.6	548.0	8.6	620.1	9.5	685.0	13.2	25
G 16 - 044			44	60.9	7.5	456.8	8.8	535.9	9.9	602.9	11.0	669.9	14.7	25
G 16 - 051			51	52.3	8.7	455.0	10.2	533.5	11.5	601.5	12.7	664.2	17.7	25
G 16 - 064			64	41.2	10.9	449.1	12.8	527.4	14.4	593.3	16.0	659.2	21.9	25
G 16 - 076	3.2 x 2.9		76	34.1	12.9	439.9	15.2	518.3	17.1	583.1	19.0	647.9	27.8	20
G 16 - 089			89	29.5	15.1	445.5	17.8	525.1	20.0	590.0	22.2	654.9	31.2	20
G 16 - 102			102	25.6	17.3	442.9	20.4	522.2	23.0	588.8	25.5	652.8	37.9	20
G 16 - 115			115	22.4	19.6	439.0	23.0	515.2	25.9	580.2	28.7	642.9	44.5	10
G 16 - 305			305	8.4	51.9	436.0	61.0	512.4	68.6	576.2	76.3	640.9	113.0	10
G 20 - 025	20	10	25	293.0	4.3	1260	5.0	1465	5.6	1641	6.2	1817	6.9	50
G 20 - 032			32	224.0	5.4	1210	6.4	1434	7.2	1613	8.0	1792	9.4	50
G 20 - 038			38	177.0	6.5	1151	7.6	1345	8.6	1522	9.5	1682	12.0	25
G 20 - 044			44	149.0	7.5	1118	8.8	1311	9.9	1475	11.0	1639	13.5	25
G 20 - 051			51	128.0	8.7	1114	10.2	1306	11.5	1472	12.7	1626	16.2	25
G 20 - 064			64	99.0	10.9	1079	12.8	1267	14.4	1426	16.0	1584	21.2	25
G 20 - 076	4.1 x 3.8		76	81.7	12.9	1054	15.2	1242	17.1	1397	19.0	1552	24.7	25
G 20 - 089			89	69.5	15.1	1049	17.8	1237	20.0	1390	22.2	1543	28.8	20
G 20 - 102			102	60.6	17.3	1048	20.4	1236	23.0	1394	25.5	1545	34.8	20
G 20 - 115			115	53.0	19.6	1039	23.0	1219	25.9	1373	28.7	1521	39.0	10
G 20 - 127			127	47.5	21.6	1026	25.4	1207	28.6	1359	31.7	1506	43.0	10
G 20 - 139			139	43.0	23.6	1015	27.8	1195	31.3	1346	34.7	1492	45.3	10
G 20 - 152			152	39.0	25.8	1006	30.4	1186	34.2	1334	38.0	1482	50.4	10
G 20 - 305			305	20.0	51.9	1038	61.0	1220	68.6	1372	76.3	1526	103.0	10
G 25 - 025	25	12.5	25	459.0	4.3	1974	5.0	2295	5.6	2570	6.3	2892	6.7	50
G 25 - 032			32	374.0	5.4	2020	6.4	2394	7.2	2693	8.0	2992	10.7	25
G 25 - 038			38	300.0	6.5	1950	7.6	2280	8.6	2580	9.5	2850	12.0	25
G 25 - 044			44	244.0	7.5	1830	8.8	2147	9.9	2416	11.0	2684	14.4	25

Code	D _H	D _d	THER		TO		B		C		D		AND	
	Hole Diameter	Rod Diameter	Free Length	Spring Rate	 17%THE ₀	 20%THE ₀	 22.5%THE ₀	 25%THE ₀	 approx. do not use					
	b x h			± 10%	+ 3,000,000		~ 1,500,000		300 - 500,000		100 - 200,000			
	mm	mm	mm	N/mm	mm	N	mm	N	mm	N	mm	N	mm	Pcs
G 25 - 051	25	12.5	51	208.0	8.7	1810	10.2	2122	11.5	2392	12.8	2662	17.4	25
G 25 - 064			64	161.0	10.9	1755	12.8	2061	14.4	2318	16.0	2576	21.4	25
G 25 - 076			76	131.0	12.9	1690	15.2	1991	17.1	2240	19.0	2489	26.9	20
G 25 - 089			89	111.0	15.1	1676	17.8	1976	20.0	2220	22.3	2475	30.9	20
G 25 - 102			102	96.3	17.3	1666	20.4	1965	23.0	2210	25.5	2456	36.7	20
G 25 - 115			115	85.7	19.6	1680	23.0	1971	25.9	2217	28.8	2468	40.3	10
G 25 - 127			127	76.3	21.6	1648	25.4	1938	28.6	2180	31.8	2426	45.1	10
G 25 - 139			139	66.0	23.6	1558	27.8	1835	31.3	2066	34.8	2297	47.6	10
G 25 - 152			152	63.5	25.8	1638	30.4	1930	34.2	2172	38.0	2413	53.5	10
G 25 - 178			178	53.9	30.3	1633	35.6	1919	40.1	2159	44.5	2399	63.9	10
G 25 - 203	5.4 x 4.6		203	47.0	34.5	1622	40.6	1908	45.7	2147	50.8	2388	70.2	10
G 25 - 305			305	30.9	51.9	1604	61.0	1885	68.6	2121	76.3	2358	110	5
G 32 - 038	32	16	38	480.0	6.5	3120	7.6	3648	8.6	4128	9.5	4560	11.4	20
G 32 - 044			44	390.0	7.5	2925	8.8	3432	9.9	3861	11.0	4290	13.7	20
G 32 - 051			51	336.0	8.7	2923	10.2	3427	11.5	3864	12.7	4267	15.6	20
G 32 - 064			64	269.0	10.9	2932	12.8	3443	14.4	3874	16.0	4304	20.0	20
G 32 - 076			76	219.0	12.9	2825	15.2	3329	17.1	3745	19.0	4161	24.4	20
G 32 - 089			89	180.0	15.1	2718	17.8	3204	20.0	3600	22.2	3996	29.7	10
G 32 - 102			102	155.0	17.3	2682	20.4	3162	23.0	3565	25.5	3953	35.1	10
G 32 - 115			115	140.0	19.6	2744	23.0	3220	25.9	3626	28.7	4018	39.0	10
G 32 - 127			127	124.0	21.6	2678	25.4	3150	28.6	3546	31.7	3931	42.8	10
G 32 - 139			139	112.0	23.6	2643	27.8	3114	31.3	3506	34.7	3886	48.0	10
G 32 - 152	7.3 x 5.9		152	102.0	25.8	2632	30.4	3101	34.2	3488	38.0	3876	52.4	10
G 32 - 178			178	88.2	30.3	2672	35.6	3140	40.1	3537	44.5	3925	60.9	5
G 32 - 203			203	76.0	34.5	2622	40.6	3086	45.7	3473	50.7	3853	69.2	5
G 32 - 254			254	60.8	43.2	2627	50.8	3089	57.2	3478	64.0	3861	88.1	5
G 32 - 305			305	49.0	51.9	2543	61.0	2989	68.6	3361	76.3	3739	104.0	5
G 40 - 051	40	20	51	628.0	8.7	5464	10.2	6406	11.5	7222	12.7	7976	15.0	20
G 40 - 064			64	487.0	10.9	5308	12.8	6234	14.4	7013	16.0	7792	19.5	10
G 40 - 076			76	379.0	12.9	4889	15.2	5761	17.1	6481	19.0	7201	23.3	10
G 40 - 089			89	321.0	15.1	4847	17.8	5714	20.0	6420	22.2	7126	26.7	10
G 40 - 102			102	281.0	17.3	4861	20.4	5732	23.0	6463	25.5	7165	33.8	10
G 40 - 115			115	245.0	19.6	4802	23.0	5635	25.9	6346	28.7	7032	36.2	10
G 40 - 127			127	221.0	21.6	4774	25.4	5613	28.6	6321	31.7	7006	40.7	5
G 40 - 139			139	185.0	23.6	4366	27.8	5143	31.3	5791	34.7	6420	42.0	5
G 40 - 152			152	168.0	25.8	4334	30.4	5107	34.2	5746	38.0	6384	49.6	5
G 40 - 178			178	150.0	30.3	4545	35.6	5340	40.1	6015	44.5	6675	56.5	5
G 40 - 203	8.4 x 7.5		203	132.0	34.5	4554	40.6	5359	45.7	6032	50.7	6692	67.1	5
G 40 - 254			254	107.0	43.2	4622	50.8	5436	57.2	6120	64.0	6848	86.3	2
G 40 - 305			305	87.8	51.9	4557	61.0	5356	68.6	6023	76.3	6699	104.0	2
G 50 - 064	50	25	64	709.0	10.9	7728	12.8	9075	14.4	10210	16.0	11344	19.3	5
G 50 - 076			76	572.0	12.9	7379	15.2	8694	17.1	9781	19.0	10868	24.2	5
G 50 - 089			89	475.0	15.1	7173	17.8	8455	20.0	9500	22.2	10545	28.0	5
G 50 - 102			102	405.0	17.3	7007	20.4	8262	23.0	9315	25.5	10328	33.5	5
G 50 - 115			115	352.0	19.6	6899	23.0	8096	25.9	9117	28.7	10102	38.6	5
G 50 - 127			127	316.0	21.6	6826	25.4	8026	28.6	9038	31.7	10017	41.4	5
G 50 - 139			139	289.0	23.6	6820	27.8	8034	31.3	9046	34.7	10028	47.3	5
G 50 - 152			152	255.0	25.8	6579	30.4	7752	34.2	8721	38.0	9690	50.2	2
G 50 - 178			178	215.0	30.3	6515	35.6	7654	40.1	8622	44.5	9568	61.1	2
G 50 - 203			203	187.0	34.5	6452	40.6	7592	45.7	8546	50.7	9481	67.7	2
G 50 - 254	11.5 x 9.0		254	153.0	43.2	6610	50.8	7772	57.2	8752	64.0	9792	87.0	2
G 50 - 305			305	127.0	51.9	6591	61.0	7747	68.6	8712	76.3	9690	104.0	2
G 63 - 076	63	38	76	952.0	12.9	12281	15.2	14470	-	-	-	-	15.5	5
G 63 - 089			89	819.0	15.1	12367	17.8	14578	-	-	-	-	20.0	5
G 63 - 102			102	700.0	17.3	12110	20.4	14280	23.0	16100	25.5	17850	30.7	5
G 63 - 115			115	620.0	19.6	12152	23.0	14260	25.9	16058	28.7	17860	34.9	5
G 63 - 127			127	565.0	21.6	12204	25.4	14351	28.6	16159	31.7	17967	38.0	2
G 63 - 152			152	458.0	25.8	11816	30.4	13923	34.2	15664	38.0	17404	47.2	2
G 63 - 178			178	384.0	30.3	11635	35.6	13670	40.1	15398	44.5	17088	55.8	2
G 63 - 203			203	337.0	34.5	11627	40.6	13682	45.7	15401	50.7	17120	64.8	2
G 63 - 254			254	263.0	43.2	11362	50.8	13360	57.2	15044	63.5	16701	86.7	2
G 63 - 305			305	218.0	51.9	11314	61.0	13298	68.6	14955	76.3	16633	106.0	2
G 63 - 315	11.6 x 14.9	400	315	199.0	54.0	10656.5	63.0	12537	71.0	14104.1	79.0	15671.3	81.0	2
G 63 - 350			350	180.0	60.0	10710.0	70.0	12600	79.0	14175.0	88.0	15750.0	90.0	2
G 63 - 400														

Estimated life 100,000 cycles