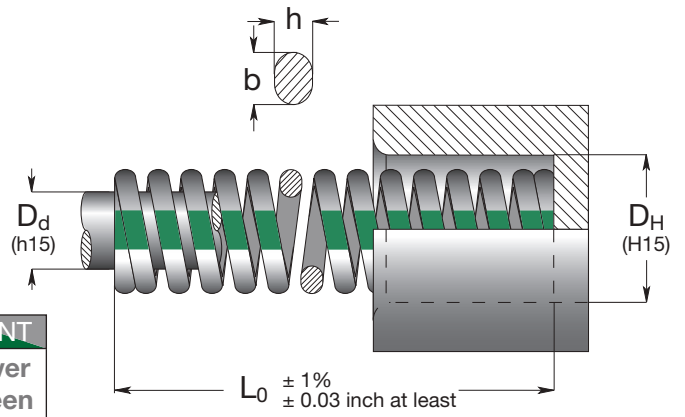








**EN** Extra-heavy load springs  
Silver-green color

**ES** Muelles carga extra-fuerte  
Color plateado-verde

**FR** Ressorts charge extra-forte  
Couleur argent-verte



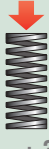






Code	D <sub>H</sub>		L <sub>0</sub>	R	A		B		C		D		E	Pcs
	Hole Diameter	Rod Diameter			Free Length	Spring Constant	15% L <sub>0</sub>	20% L <sub>0</sub>	22.5% L <sub>0</sub>	25% L <sub>0</sub>	do not use			
	b x h			± 10%	+ 3.000.000	~ 1.500.000	300 - 500.000	100 - 200.000	approx.		do not use			
	inch	inch	inch	lbs/0.1 in.	inch	lbs	inch	lbs	inch	lbs	inch	lbs	inch	
XHG 10 - 025	3/8	3/16	1	22.0	0.15	33	0.20	44	0.23	50	0.25	55	0.31	50
XHG 10 - 032			1 1/4	17.0	0.19	32	0.25	43	0.28	48	0.31	53	0.43	50
XHG 10 - 038			1 1/2	14.5	0.23	33	0.30	44	0.34	49	0.38	55	0.53	50
XHG 10 - 044			1 3/4	11.5	0.26	30	0.35	40	0.39	45	0.44	51	0.54	50
XHG 10 - 051			2	10.0	0.30	30	0.40	40	0.45	45	0.50	50	0.66	25
XHG 10 - 064			2 1/2	8.0	0.38	30	0.50	40	0.56	45	0.63	50	0.80	25
XHG 10 - 076			3	6.5	0.45	29	0.60	39	0.68	44	0.75	49	1.02	25
XHG 10 - 305			0.08 x 0.06	12	1.5	1.80	27	2.40	36	2.70	41	3.00	45	4.47
XHG 13 - 025	1/2	9/32	1	32.0	0.15	48	0.20	64	0.23	72	0.25	80	0.33	50
XHG 13 - 032			1 1/4	24.0	0.19	46	0.25	60	0.28	68	0.31	74	0.41	50
XHG 13 - 038			1 1/2	20.0	0.23	46	0.30	60	0.34	68	0.38	76	0.50	50
XHG 13 - 044			1 3/4	17.0	0.26	44	0.35	60	0.39	67	0.44	75	0.55	25
XHG 13 - 051			2	14.0	0.30	42	0.40	56	0.45	63	0.50	70	0.63	25
XHG 13 - 064			2 1/2	11.5	0.38	44	0.50	58	0.56	65	0.63	72	0.83	25
XHG 13 - 076			3	9.0	0.45	41	0.60	54	0.68	61	0.75	68	0.96	25
XHG 13 - 089			3 1/2	8.0	0.53	42	0.70	56	0.79	63	0.88	70	1.18	20
XHG 13 - 102	4	6.2	0.60	37	0.80	50	0.90	56	1.00	62	1.40	10		
XHG 13 - 305	0.10 x 0.08	12	2.5	1.80	45	2.40	60	2.70	68	3.00	75	4.12	10	
XHG 16 - 025	5/8	11/32	1	63.0	0.15	95	0.20	126	0.23	142	0.25	158	0.31	50
XHG 16 - 032			1 1/4	47.0	0.19	89	0.25	118	0.28	132	0.31	146	0.40	50
XHG 16 - 038			1 1/2	38.1	0.23	88	0.30	114	0.34	129	0.38	145	0.48	25
XHG 16 - 044			1 3/4	32.0	0.26	83	0.35	112	0.39	126	0.44	141	0.55	25
XHG 16 - 051			2	29.0	0.30	87	0.40	116	0.45	131	0.50	145	0.65	25
XHG 16 - 064			2 1/2	22.0	0.38	84	0.50	110	0.56	124	0.63	139	0.77	25
XHG 16 - 076			3	18.0	0.45	81	0.60	108	0.68	122	0.75	135	1.02	20
XHG 16 - 089			3 1/2	16.0	0.53	85	0.70	112	0.79	126	0.88	141	1.16	20
XHG 16 - 102	4	13.5	0.60	81	0.80	108	0.90	122	1.00	135	1.33	20		
XHG 16 - 115	4 1/2	11.8	0.68	80	0.90	106	1.01	119	1.13	133	1.51	10		
XHG 16 - 305	0.12 x 0.11	12	4.5	1.80	81	2.40	108	2.70	122	3.00	135	3.54	10	
XHG 19 - 025	3/4	3/8	1	117.5	0.15	176	0.20	235	0.23	263	0.25	294	0.28	50
XHG 19 - 032			1 1/4	95.2	0.19	181	0.25	238	0.28	268	0.31	295	0.37	50
XHG 19 - 038			1 1/2	75.6	0.23	174	0.30	227	0.34	255	0.38	287	0.46	25
XHG 19 - 044			1 3/4	67.2	0.26	175	0.35	235	0.39	265	0.44	296	0.55	25
XHG 19 - 051			2	56.0	0.30	168	0.40	224	0.45	252	0.50	280	0.64	25
XHG 19 - 064			2 1/2	47.6	0.38	181	0.50	238	0.56	268	0.63	300	0.85	25
XHG 19 - 076			3	39.2	0.45	176	0.60	235	0.68	265	0.75	294	0.98	25
XHG 19 - 089			3 1/2	31.3	0.53	166	0.70	219	0.79	246	0.88	275	1.20	20
XHG 19 - 102	4	27.5	0.60	165	0.80	220	0.90	248	1.00	275	1.37	20		
XHG 19 - 115	4 1/2	23.5	0.68	160	0.90	212	1.01	238	1.13	266	1.65	10		
XHG 19 - 127	5	21.8	0.75	164	1.00	218	1.13	245	1.25	273	1.83	10		
XHG 19 - 140	5 1/2	19.0	0.83	158	1.10	209	1.24	235	1.38	262	1.93	10		
XHG 19 - 152	6	17.9	0.90	161	1.20	215	1.35	242	1.50	269	2.11	10		
XHG 19 - 305	0.16 x 0.14	12	9.4	1.80	169	2.40	226	2.70	254	3.00	282	4.53	10	



# US standard Oval Wire

# SERIES XHG

Inch

Code	D <sub>H</sub>	D <sub>d</sub>	L <sub>0</sub>	R	 15% L <sub>0</sub> + 3.000.000	 20% L <sub>0</sub> ~ 1.500.000	 22.5% L <sub>0</sub> 300 - 500.000	 25% L <sub>0</sub> 100 - 200.000	 do not use	 approx.	 Pcs								
	Hole Diameter	Rod Diameter	Free Length	Spring Constant								inch	lbs	inch	lbs	inch	lbs	inch	lbs
	b x h		± 10%									inch	lbs	inch	lbs	inch	lbs	inch	lbs
	inch	inch	inch	lbs/0.1 in.	inch	lbs	inch	lbs	inch	lbs	inch	lbs	Pcs						
XHG 26 - 025	1	1/2	1	252.0	0.15	378	0.20	504	0.23	567	0.25	630	0.26	50					
XHG 26 - 032			1 1/4	196.0	0.19	372	0.25	490	0.28	551	0.31	608	0.37	25					
XHG 26 - 038			1 1/2	184.8	0.23	425	0.30	554	0.34	624	0.38	702	0.46	25					
XHG 26 - 044			1 3/4	151.2	0.26	393	0.35	529	0.39	595	0.44	665	0.56	25					
XHG 26 - 051			2	114.8	0.30	344	0.40	459	0.45	517	0.50	574	0.67	25					
XHG 26 - 064			2 1/2	89.6	0.38	340	0.50	448	0.56	504	0.63	564	0.83	25					
XHG 26 - 076			3	72.8	0.45	328	0.60	437	0.68	491	0.75	546	0.98	20					
XHG 26 - 089			3 1/2	61.6	0.53	326	0.70	431	0.79	485	0.88	542	1.18	20					
XHG 26 - 102			4	54.9	0.60	329	0.80	439	0.90	494	1.00	549	1.33	20					
XHG 26 - 115			4 1/2	48.1	0.68	327	0.90	433	1.01	487	1.13	544	1.54	10					
XHG 26 - 127			5	43.1	0.75	323	1.00	431	1.13	485	1.25	539	1.66	10					
XHG 26 - 140			5 1/2	36.4	0.83	302	1.10	400	1.24	450	1.38	502	1.88	10					
XHG 26 - 152	6	35.9	0.90	323	1.20	431	1.35	485	1.50	539	2.01	10							
XHG 26 - 178	7	30.8	1.05	323	1.40	431	1.58	485	1.75	539	2.44	10							
XHG 26 - 203	8	26.3	1.20	316	1.60	421	1.8	473	2.00	526	2.76	10							
XHG 26 - 305	0.22 x 0.18	12	19.0	1.80	342	2.40	456	2.7	513	3.00	570	4.15	5						
XHG 32 - 038	1 1/4	5/8	1 1/2	268.8	0.23	618	0.30	806	0.34	907	0.38	1021	0.40	20					
XHG 32 - 044			1 3/4	220.4	0.26	582	0.35	784	0.39	868	0.44	986	0.51	20					
XHG 32 - 051			2	190.4	0.30	571	0.40	762	0.45	857	0.50	952	0.60	20					
XHG 32 - 064			2 1/2	151.2	0.38	575	0.50	756	0.56	851	0.63	953	0.80	20					
XHG 32 - 076			3	123.2	0.45	554	0.60	739	0.68	832	0.75	924	0.91	20					
XHG 32 - 089			3 1/2	95.2	0.53	505	0.70	666	0.79	750	0.88	838	1.11	10					
XHG 32 - 102			4	84.0	0.60	504	0.80	672	0.90	756	1.00	840	1.31	10					
XHG 32 - 115			4 1/2	78.4	0.68	533	0.90	706	1.01	794	1.13	886	1.52	10					
XHG 32 - 127			5	72.8	0.75	546	1.00	728	1.13	819	1.25	910	1.63	10					
XHG 32 - 140			5 1/2	64.4	0.83	535	1.10	708	1.24	797	1.38	889	1.77	10					
XHG 32 - 152			6	58.8	0.90	529	1.20	706	1.35	794	1.50	882	1.96	10					
XHG 32 - 178			7	52.6	1.05	552	1.40	736	1.58	828	1.75	921	2.29	5					
XHG 32 - 203	8	43.1	1.20	517	1.60	690	1.8	776	2.00	862	2.60	5							
XHG 32 - 254	10	34.7	1.50	521	2.00	694	2.25	781	2.50	868	3.26	5							
XHG 32 - 305	0.29 x 0.24	12	28.0	1.80	504	2.40	672	2.7	756	3.00	840	3.92	5						
XHG 38 - 051	1 1/2	3/4	2	308.0	0.30	924	0.40	1232	0.45	1386	0.50	1540	0.54	20					
XHG 38 - 064			2 1/2	263.2	0.38	1000	0.50	1316	0.56	1481	0.63	1658	0.78	10					
XHG 38 - 076			3	201.6	0.45	907	0.60	1210	0.68	1361	0.75	1512	0.90	10					
XHG 38 - 089			3 1/2	168.0	0.53	890	0.70	1176	0.79	1323	0.88	1478	1.10	10					
XHG 38 - 102			4	145.6	0.60	874	0.80	1165	0.90	1310	1.00	1456	1.26	10					
XHG 38 - 115			4 1/2	128.8	0.68	876	0.90	1159	1.01	1304	1.13	1455	1.43	10					
XHG 38 - 127			5	114.8	0.75	861	1.00	1148	1.13	1292	1.25	1435	1.61	5					
XHG 38 - 140			5 1/2	106.4	0.83	883	1.10	1170	1.24	1317	1.38	1468	1.78	5					
XHG 38 - 152			6	95.2	0.90	857	1.20	1142	1.35	1285	1.50	1428	1.98	5					
XHG 38 - 178			7	84.0	1.05	882	1.40	1176	1.58	1323	1.75	1470	2.27	5					
XHG 38 - 203			8	72.8	1.20	874	1.60	1165	1.8	1310	2.00	1456	2.70	5					
XHG 38 - 254			10	56.0	1.50	840	2.00	1120	2.25	1260	2.50	1400	3.32	2					
XHG 38 - 305	0.33 x 0.29	12	47.6	1.80	857	2.40	1142	2.7	1285	3.00	1428	4.15	2						
XHG 51 - 064	2	1	2 1/2	368.5	0.38	1400	0.50	1843	0.56	2073	0.63	2322	0.65	5					
XHG 51 - 076			3	316.4	0.45	1424	0.60	1898	0.68	2136	0.75	2373	0.82	5					
XHG 51 - 089			3 1/2	257.6	0.53	1365	0.70	1803	0.79	2029	0.88	2267	0.94	5					
XHG 51 - 102			4	229.6	0.60	1378	0.80	1837	0.90	2066	1.00	2296	1.15	5					
XHG 51 - 115			4 1/2	196.0	0.68	1333	0.90	1764	1.01	1985	1.13	2215	1.27	5					
XHG 51 - 127			5	179.2	0.75	1344	1.00	1792	1.13	2016	1.25	2240	1.44	5					
XHG 51 - 140			5 1/2	162.4	0.83	1348	1.10	1786	1.24	2010	1.38	2241	1.60	5					
XHG 51 - 152			6	151.2	0.90	1361	1.20	1814	1.35	2041	1.50	2268	1.74	2					
XHG 51 - 178			7	128.8	1.05	1352	1.40	1803	1.58	2029	1.75	2254	2.03	2					
XHG 51 - 203			8	110.6	1.20	1327	1.60	1770	1.8	1991	2.00	2212	2.27	2					
XHG 51 - 254			10	87.4	1.50	1311	2.00	1748	2.25	1967	2.50	2185	2.89	2					
XHG 51 - 305			0.45 x 0.37	12	83.4	1.80	1501	2.40	2002	2.7	2252	3.00	2502	3.51	2				

