Stainless Steel Spring Wire

Stainless steel is extremely versatile and is selected for its use primarily due to its corrosion and heat resistant properties. This makes it the ideal material for springs operating in low maintenance environments or where replacement is difficult.

Quality

All BS Stainless spring wires are manufactured to the highest quality to achieve consistent spring forming capabilities. The precision cold drawing production of the wire ensures a high tensile strength with excellent cast and helix characteristics, and high elasticity and fatigue resistance.

We offer an increasing stock range of spring wire in various sizes and all our spring wire is manufactured to EN10270-3 specification.

Coatings

To ensure maximum performance and efficiency when machining, our spring wire is supplied with a consistent soap coating that enables the spring forming machines to run efficiently at high speeds with excellent spring coiling characteristics. For smaller diameters between 0.20mm and 1.60mm, a nickel-coated wire can be supplied which offers a special coating specifically designed for fine wires. For certain applications where no soap coating is required we also offer a bright finish.

Grades and Specifications

EN 10270-3

Chemical composition % by mass MAX unless otherwise stated

Type	Name	Number	C	Si	Mn	P	S	N	Cr	Cu	Mo	Ni	Others
302	X10CrNi18-8	1.4310	0.05/0.15	2.0	2.0	0.045	0.015	0.11	16.00/19.00	-	0.8	6.00/9.50	N:≤0.11
304	X5CrNi18-10	1.4301	0.07	1.0	2.0	0.045	0.030	0.11	17.5/19.50	-	-	8.00/10.50	-
316	X5CrNiMo17-12-2	1.4401	0.07	1.0	2.0	0.045	0.015	0.11	16.50/18.50	-	2.00/2.50	10.00/13.00	N:≤0.11
316L	X2CrNiMo17-12-2	1.4404	0.030	1.00	2.00	0.045	0.015	0.11	16.5/18.5	-	2.00/2.50	10.0/13.0	-
17/7PH	X7CrNiAl17-7	1.4568	0.09	0.7	1.0	0.04	0.015		16.00/18.00	-	-	6.50/7.80	Al:0.70/1.50

Diameter Range

EN Specification	Min Dia	Max Dia
EN 10270-3	0.20mm	10.00mm

EN 10270-3 Spring Wire Tensiles

Tensile Strength (Mpa/N/mm²) to EN10270-3											
	1.4310				1.4401		1.4568		1.4301		
Nominal Diameter mm	Normal Tensile (NS)		High Tensile (HS)						Normal Tensile (NS)	High Tensile (HS)	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Min	Max
≤ 0.20	2200	2530	2350	2710	1725	1990	1975	2280	2000	2150	2300
0.20 ≤ 0.30	2150	2480	2300	2650	1700	1960	1950	2250	1975	2050	2280
0.30 ≤ 0.40	2100	2420	2250	2590	1675	1930	1925	2220	1925	2050	2220
0.40 ≤ 0.50	2050	2360	2200	2530	1650	1900	1900	2190	1900	1950	2190
0.50 ≤ 0.65	2000	2300	2150	2480	1625	1870	1850	2130	1850	1950	2130
0.65 ≤ 0.80	1950	2250	2100	2420	1600	1840	1825	2100	1800	1850	2070
0.80 ≤ 1.00	1900	2190	2050	2360	1575	1820	1800	2070	1775	1850	2050
1.00 ≤ 1.25	1850	2130	2000	2300	1550	1790	1750	2020	1725	1750	1990
1.25 ≤ 1.50	1800	2070	1950	2250	1500	1730	1700	1960	1675	1750	1930
1.50 ≤ 1.75	1750	2020	1900	2190	1450	1670	1650	1900	1625	1650	1870
1.75 ≤ 2.00	1700	1960	1850	2130	1400	1610	1600	1840	1575	1650	1820
2.00 ≤ 2.50	1650	1900	1750	2020	1350	1560	1550	1790	1525	1550	1760
2.50 ≤ 3.00	1600	1840	1700	1960	1300	1500	1500	1730	1475	1550	1700
3.00 ≤ 3.50	1550	1790	1650	1900	1250	1440	1450	1670	1425	1450	1640
3.50 ≤ 4.25	1500	1730	1600	1840	1225	1410	1400	1610	1400	1450	1610
4.25 ≤ 5.00	1450	1670	1550	1790	1200	1380	1350	1560	1350	1350	1560
5.00 ≤ 6.00	1400	1610	1500	1730	1150	1330	1300	1500	1300	1350	1500
6.00 ≤ 7.00	1350	1560	1450	1670	1125	1330	1250	1440	1250	1300	1440
7.00 ≤ 8.50	1300	1500	1400	1610	1075	1240	1250	1440	1200	1300	1380
8.50 ≤ 10.00	1250	1440	1350	1560	1050	1210	1250	1440	1175	1250	1360

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