



Stainless Steel Spring Wire



Characteristics

- Uniform spring coiling is possible through :
 - World's BEST Cast & Helix Quality
 - Minimized diameter tolerance, T/S and Y/S variation for uniform pitch and free length of spring.
 - Special Coating with Superior Adhesion
- Can be supplied in mass unit weight with various packing types. (Spool, Carrier, Coil)
- Strict diameter tolerance and ovality management.
- KOS stainless steel spring wire is recognised as the best quality product especially for precision and high speed spring manufacturing.
- KOS supplies all kinds of surfaces, such as BR, Ni-Br, Cu-Br, S-co, Ni-Co, etc.

Chemical Composition

(%)

Grade	Range	C	Si	Mn	P	S	Ni	Cr	Mo	Others
EN 10270-3	1.4310	Min.	0.050	-	-	-	6.000	16.000	-	N -
		Max.	0.150	2.000	2.000	0.045	0.015	9.500	19.000	0.800
ASTM A313	302	Min.	-	-	-	-	8.000	17.000	-	N -
		Max.	0.120	1.000	2.000	0.045	0.030	10.000	19.000	-
EN 10270-3	1.4301	Min.	-	-	-	-	8.000	17.500	-	N -
		Max.	0.070	1.000	2.000	0.045	0.015	10.500	19.500	-
ASTM A313	304	Min.	-	-	-	-	8.000	18.000	-	N -
		Max.	0.080	1.000	2.000	0.045	0.030	10.500	20.000	-
EN 10270-3	1.4401	Min.	-	-	-	-	10.000	16.500	2.000	N -
		Max.	0.070	1.000	2.000	0.045	0.015	13.000	18.500	2.500
ASTM A313	316	Min.	-	-	-	-	10.500	16.500	2.000	N -
		Max.	0.070	1.000	2.000	0.045	0.030	13.500	18.000	2.500
EN 10270-3	1.4568	Min.	-	-	-	-	6.500	16.000	-	Al 0.70
		Max.	0.090	0.700	1.000	0.040	0.015	7.800	18.000	-
ASTM A313	631J1	Min.	-	-	-	-	6.500	16.000	-	Al 0.75
		Max.	0.090	1.000	1.000	0.040	0.030	7.800	18.000	-
EN 10270-3	1.4462	Min.	-	-	-	-	4.500	21.000	2.500	N 0.10
		Max.	0.003	1.000	2.000	0.035	0.015	6.500	23.000	3.500

Tensile Strength Table

Dia (mm)	Tensile Strength (N/mm ²)									
	ASTM A313			EN 10270-3, ISO 6931-1				JIS G 4314, KS D 3535		
	Type A	Type B	Type C	Type A	Type B	High T/S	Type C	Type A	Type B	Type C
- 0.200				1725-1990	2200-2530	2350-2710	1975-2280	1650-1900	2150-2400	1950-2200
0.201 - 0.230	1690-1895	2240-2450	1932-2137	1700-1960	2150-2480	2300-2650	1950-2250	1600-1850	2050-2300	1930-2180
0.231 - 0.250		2205-2415								
0.251 - 0.280	2190-2400									
0.281 - 0.300	2180-2385									
0.301 - 0.330	1655-1860	2165-2370	1897-2102	1675-1930	2100-2420	2250-2590	1925-2220	1600-1850	1950-2200	1850-2100
0.331 - 0.360		2150-2360								
0.361 - 0.380		2135-2345								
0.381 - 0.400		2125-2330	1862-2067	1625-1870	2000-2300	2150-2480	1850-2130	1600-1850	1950-2200	1850-2100
0.401 - 0.410		2110-2315								
0.411 - 0.430		2095-2300								
0.431 - 0.460		2070-2275								
0.461 - 0.500		2040-2250	1792-1997	1600-1850	1950-2250	2100-2420	1825-2100	1600-1850	1950-2200	1850-2100
0.501 - 0.510		2015-2220								
0.511 - 0.560	1620-1825	2005-2205								
0.561 - 0.600		1995-2190								
0.601 - 0.610		1995-2190	1722-1927	1550-1790	1850-2130	2000-2300	1750-2020	1600-1850	1700-1950	
0.611 - 0.650		1945-2135								
0.651 - 0.660		1930-2125								
0.661 - 0.700		1895-2095								
0.701 - 0.710		1875-2070	1667-1872	1500-1730	1800-2070	1950-2250	1700-1980	1450-1700	1750-2000	1800-2050
0.711 - 0.740	1585-1790	1840-2035								
0.741 - 0.790		1825-2020								
0.791 - 0.800		1780-1965								
0.801 - 0.860	1550-1760	1735-1935	1587-1792	1450-1670	1750-2020	1900-2190	1650-1900	1400-1650	1650-1900	1600-1850
0.861 - 0.940										
0.941 - 1.000		1725-1915								
1.001 - 1.040		1695-1895								
1.041 - 1.140	1515-1725	1670-1870	1567-1772	1400-1610	1700-1960	1850-2130	1600-1840	1400-1650	1650-1900	1600-1850
1.141 - 1.190										
1.191 - 1.250		1600-1805								
1.251 - 1.270		1600-1805								
1.271 - 1.300	1480-1690	1600-1805	1537-1742	1300-1500	1600-1840	1700-1960	1500-1730	1400-1610	1450-1700	1400-1650
1.301 - 1.370										
1.371 - 1.400		1565-1770								
1.401 - 1.470		1530-1745								
1.471 - 1.500	1450-1655	1530-1745	1522-1727	1250-1440	1550-1790	1650-1900	1450-1670	1230-1480	1450-1700	1400-1650
1.501 - 1.550										
1.551 - 1.570		1482-1687								
1.571 - 1.600		1450-1660								
1.601 - 1.750	1415-1620	1415-1620	1457-1662	1225-1410	1500-1730	1600-1840	1400-1610	1230-1480	1450-1700	1400-1650
1.751 - 1.780										
1.781 - 1.800		1365-1570								
1.801 - 1.830		1365-1570								
1.831 - 1.900	1380-1585	1365-1570	1442-1647	1200-1380	1450-1670	1550-1790	1350-1560	1100-1350	1350-1600	1300-1550
1.901 - 2.000										
2.001 - 2.030		1345-1550								
2.031 - 2.180		1295-1515								
2.181 - 2.210	1345-1550	1345-1550	1427-1632	1150-1330	1400-1610	1500-1730	1300-1500	1100-1350	1350-1600	1300-1550
2.211 - 2.290										
2.291 - 2.340		1345-1550								
2.341 - 2.410		1345-1550								
2.411 - 2.500	1275-1480	1345-1550	1442-1647	1200-1380	1450-1670	1550-1790	1350-1560	1100-1350	1350-1600	1300-1550
2.501 - 2.540										
2.541 - 2.600		1345-1550								
2.601 - 2.670		1345-1550								
2.671 - 2.690	1240-1450	1345-1550	1442-1647	1200-1380	1450-1670	1550-1790	1350-1560	1100-1350	1350-1600	1300-1550
2.691 - 2.800										
2.801 - 2.920		1345-1550								
2.921 - 3.000		1345-1550								
3.001 - 3.050	1170-1380	1345-1550	1442-1647	1200-1380	1450-1670	1550-1790	1350-1560	1100-1350	1350-1600	1300-1550
3.051 - 3.170										
3.171 - 3.300		1345-1550								
3.301 - 3.430		1345-1550								
3.431 - 3.500	1105-1310	1345-1550	1442-1647	1200-1380	1450-1670	1550-1790	1350-1560	1100-1350	1350-1600	1300-1550
3.501 - 3.710										
3.711 - 3.760		1345-1550								
3.761 - 4.000		1345-1550								
4.001 - 4.110	1070-1275	1345-1550	1442-1647	1200-1380	1450-1670	1550-1790	1350-1560	1100-1350	1350-1600	1300-1550
4.111 - 4.220										
4.221 - 4.250		1345-1550								
4.251 - 4.500		1345-1550								
4.501 - 4.570	1035-1240	1345-1550	1442-1647	1200-1380	1450-1670	1550-1790	1350-1560	1100-1350	1350-1600	1300-1550
4.571 - 4.880										
4.881 - 5.000		1345-1550								
5.001 - 5.260		1345-1550								
5.261 - 5.720		1345-1550	1387-1572	1150-1330	1400-1610	1500-1730	1300-1500	1100-1350	1350-1600	1300-1550
5.721 - 6.000		1345-1550								



Product Categories

Surface	Remark	Grade	Diameter (mm)	Application					
				General Spring & Forming	Precision Spring & Forming	Bright	High T/S	Heat Resistance	Medical Needles
S-CO	WPA	302, 304, 316	0.14 - 6.50	○					
	WPB	302, 304	0.14 - 6.50	○					
	WPC	631J1	0.18 - 6.50	○			○	○	
NI-CO	WPA	302, 304, 316	0.14 - 6.50		○				
	WPB	302, 304	0.14 - 6.50		○				
	WPC	631J1	0.18 - 6.50		○		○	○	
BRIGHT	WPA	302, 304, 316	0.07 - 6.50	○		○			
	WPB	302, 304	0.07 - 6.50	○		○			
NI-BR	WPA	302, 304, 316	0.07 - 6.50		○	○			
	WPB	302, 304	0.07 - 6.50		○	○			
CU-BR	WPA	302, 304, 316	0.07 - 6.50	○		○			
	WPB	302, 304	0.07 - 6.50	○		○			
STRAIGHT BRIGHT	WPDS/ WPBS	302,304	0.15 - 0.60		○	○	○		○

Packaging

■ Coil & Carrier

Unit : Kgs

Surface	Diameter (mm)	Coil																Carrier					
		Coil inch																					
		4"	unit	6"	unit	8"	unit	10"	unit	12"	unit	16"	unit	18"	unit	20"	unit	unit	unit	unit	unit	unit	unit
S-CO SS-CO NI-CO SNI-CO NB-CO BAT	0.140-0.180			○	5																		
	0.181-0.210			○	6																		
	0.211-0.270					○	10																
	0.271-0.370							○	20														
	0.371-0.480									○	25												
	0.481-0.600									○	30	○	50										
	0.601-0.700									○	40	○	50										
	0.701-1.199											○	50										
	1.200-1.300											○	70	○	70								
	1.301-1.499											○	70	○	70	○	70						
	1.500-1.599											○	70	○	70	○	100						
	1.600-1.750												○	70	○	100	○	100					
	1.751-1.800																○	100	○	100			
1.801-1.999																○	100	○	100	○	500	○	800
2.000-																	○	100	○	500	○	800	
BR NI-BR CU-BR	0.070-0.110	○	1																				
	0.111-0.130	○	1	○	2																		
	0.131-0.150			○	2																		
	0.151-0.160			○	3																		
	0.161-0.180			○	4																		
	0.181-0.230			○	6																		
	0.231-0.270					○	8																
	0.271-0.320					○	10																
	0.321-0.379							○	20														
	0.380-0.650									○	25												
	0.651-0.899									○	30												
	0.900-0.999									○	30	○	50										
	1.000-1.799										○	50											
1.800-																	○	100					

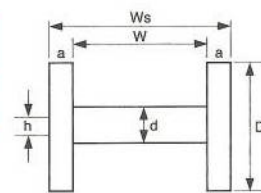
■ Spool

Unit : Kgs

Surface	Diameter (mm)	Spool																	
		Plastic								Wood				Steel					
		DIN160	unit	DIN200	unit	DIN250	unit	DIN355	unit	SH460	unit	560	unit	560	unit	760N	unit	7600	unit
S-CO SS-CO NI-CO SNI-CO NB-CO BAT	0.140-0.180			○	12	○	20												
	0.181-0.210			○	12	○	20	○	30										
	0.211-0.270			○	12	○	20	○	30										
	0.271-0.370			○	12	○	20	○	30	○	35	○	100	○	100				
	0.371-0.480									○	35	○	100	○	150	○	150	○	200
	0.481-0.600									○	35	○	100	○	150	○	250	○	350
	0.601-0.700									○	35	○	100	○	150	○	300	○	350
	0.701-1.199											○	100	○	150	○	300	○	350
	1.200-1.300											○	100	○	150	○	300	○	350
	1.301-1.499											○	100	○	150	○	300	○	350
	1.500-1.599											○	100	○	150	○	300	○	350
	1.600-1.750											○	100	○	150	○	300	○	350
	1.751-1.800											○	100	○	150	○	300	○	350
	1.800-1.999															○	300	○	350
	2.000-2.300															○	300	○	350
2.301-																			
BR NI-BR CU-BR	0.070-0.110	○	3	○	3														
	0.111-0.130	○	4	○	4	○	4												
	0.131-0.150	○	6	○	8	○	8												
	0.151-0.160	○	6	○	8	○	8												
	0.161-0.190	○	6	○	12	○	12	○	15										
	0.191-0.230	○	6	○	12	○	12	○	15										
	0.231-0.270			○	12	○	12	○	20	○	20								
	0.271-0.320			○	12	○	12	○	20	○	30								
	0.321-0.379					○	12	○	30	○	30								
	0.380-0.650							○	35	○	35	○	100	○	100				
	0.651-0.899											○	150	○	150	○	350	○	350
	0.900-0.999											○	150	○	150	○	350	○	400
	1.000-1.799											○	150	○	150	○	350	○	400
	1.800-															○	350	○	400
	1.800-															○	300	○	350

■ Spool Types

Name	Material	Measurement (mm)						Unit Weight (KGS)
		D (Flange)	d (barrel)	W (inner)	Ws (Outer)	h (Bore)	a (Thickness)	
DIN 160	ABS	160	100	128	160	22	16	5
DIN 200	ABS	200	125	160	200	22	20	10
DIN 250	ABS	250	160	160	200	22	20	10
DIN 355	ABS	355	224	160	200	38	20	25
SH 460	ABS	460	319	91	-	305	-	35
560	Steel	560	360	233	273	33.3	-	150
560	Wood	560	355	240	280	38	20	100
760(O)	Steel	760	430	330	380	58	-	400
760(N)	Steel	760	430	241	290	38	-	350



KOS EUROPE GmbH

E-mail : kosgd@koswire.com Tel : (49)173-383-7183 Fax : (49)211-573-049

www.koswire.com