Raw Materials

Description	Material Grade	Material No.	Standard DIN	Working Temperature	Tensile
Spring Steel					
High Carbon Steel	C67S	1.1231	EN 10132 - 4	–20 / +100	1150–1750
	C75S	1.1248	EN 10132 - 4	–20 / +100	1200–1800
Chrome Vanadium Steel allowing increase relaxation resistance to the spring	51CrV4	1.8159	EN 10132 - 4	–20 / +100	1200–1800
	51CrMoV4	1.7701	17221	–50 / +200	1200–1800
Corrosion Resistance Steel					
Work-Hardenable Stainless Steel 300 Series upto thickness 6 mm	X 10 CrNi 18 8 (SS301)	1.4310	EN 10151	–200 / +200	1150–1500
	X 5 CrNiMo 17 12 2 (SS316)	1.4401	EN 10151	–200 / +200	1000–1500
	X 5 CrNi 18-10 (SS304)	1.4301	EN 10151	–200 / +200	1000–1500
Precipitated age-Hardened Stainless Steel	X 7 CrNiAl 17 7 (17-7 Ph)	1.4568	EN 10151	–90 / +300	1150–1700
Heat Resistant Steel					
High Temperature Spring Steel moderately corrosion resistant	X 22 CrMoV 12-1	1.4923	EN 10269	–50 / +500	1200–1400
	X 39 CrMo 17-1	1.4122	EN 10088-2	–50 / +400	1200–1400
Nickel and Cobalt Alloys,High Strength & Heat Resistance, Outstanding Fatigue Properties & Corrosion Resistance					
High Strength & Heat Resistance, Outstanding Fatigue Properties, Corrosion Resistance, Non Magnetic & Age Hardenable	NiCr 20 Co 18 Ti (Nimonic® 90)	2.4632 / 2.4969	DIN 17754 / DIN 59745	–200 / +700	≥ 1100
	NiCr 15 Fe 7 TiAl (Inconel® X 750)	2.4669	EN 10269	–200 / +600	≥ 1170
	NiCr 19 NbMo (Inconel® 718)	2.4668	EN 10302	–200 / +600	≥ 1240
	Duratherm 600	-	-	–200 / +550	1150–1550
Copper Alloys - Good Electric Conductivity					
Favorable Values of Strength & Elasticity for copper based Material	CuSn 8	2.1030	EN 1654	–50 / +100	590–690
	CuBe 2	2.1247	EN 1654	–260 / +200	1270–1450
High Temperature work Tool Steel					
High Temperature Tool Steel	X40CrMoV5-1 (H13)	1.2344	EN ISO 4957	–20 / +350	1290–1550
	X30WCrV9 (H21)	1.2581	DIN 2581	–20 / +350	1290–1550
	Cold Drawn Carbon Steel Wire (Wire Garde A, B, C & D)		DIN 17223 Part 1	–80 / +150	Grade A- 1060 to 1970 Grade B - 1020 to 2650 Grade C - 1160 to 2200 Grade D- 1160 to 3100
	Hot Rolled Steel Wire		DIN 17221		
Chrome Vanadium Steel allowing increase relaxation resistance to the spring	1. 50CrV4	1.8159		–20 / +100	1370 to 1670
	2. 51CrMoV4	1.7701		–50 / +200	
Chrome Silicon Steel	**Carbon Steel Wire** SAE 9254(54SiCr6)	1.7102	DIN EN 10089	–20 / +200	1450 to 1750
High Carbon Spring Steel	**Cold Drawn Unalloyed Steel Wire** (Wire Garde SL, SM, SH,DM,DH)		IS 4454 Part 1	–80 / +150	SL- 1060 to 1970 SM- 1020 to 2650 SH - 1160 to 2940 DM - 1020 to 3100 DH - 1160 to 3520
	Cold Drawn Unalloyed Steel Wire (Wire Garde SL, SM, SH, DM, DH)		EN10270-1	–80 / +150	SL- 1060 to 1970 SM- 1020 to 2650 SH - 1160 to 2940 DM - 1020 to 2650 DH - 1160 to 3520
Oil hardened and tempered alloy steel	**Oil hardened and tempered Alloy spring steel wire (High Tensile Strength)**		EN10270-2	–20 / +200	FDC- 1250 to 2100 FDCrV- 1400 to 2200 FDSiCr - 1550 to 2300 VDC & TDC - 1390 to 2000 VDCrV & TDCrV - 1390 to 2060 VDSiCr & TDSiCr -1670 to 2230
	FDC, FDCrV, FDSiCr, TDSiCr, VDC, VDCr, VDSiCr, TDC, TDCrV, TDSiCr				
	Stainless Steel Wire		IS 4454 Part 4		
Hard Drawn Stainless Steel 300 Series	1. Grade 1 - X07Cr18Ni9 (SS301)	1.4310		–200 / +200	1250 to 2200
	2. Grade 2 - X04Cr19Ni9 (SS316)	1.4401		–200 / +200	1350 to 2350
Precipitated age-Hardened Stainless Steel	3. Grade 3 - X04Cr17Ni12Mo2 (17-7 Ph)	1.4568		–200 / +200	1050 to 1720
Hard Drawn Stainless Steel 300 Series	(SS304)	1.4301		–90 / +300	1175 to 2000
	Stainless Steel Wire		EN10270-3		
Hard Drawn Stainless Steel 300 Series	1. X10Cr18Ni18-8 (SS301)	1.4310		–200 / +200	1250 to 2350
	2. X5CrNiMo17-12-2 (SS316)	1.4401		–200 / +200	1050 to 1725
Precipitated age-Hardened Stainless Steel	3. X7CrNiAl17-7 (17-7 Ph)	1.4568		–90 / +300	1250 to 1975
	Stainless Steel Wire				
Hard Drawn Stainless Steel 300 Series	SS304	1.4301	ASTM A 313/A 313 M	–200 / +200	895 to 2450
	SS302	1.4319		–200 / +200	