

STAINLESS STEEL WIRE



**VINCO**

VIZCAINA DE INDUSTRIA Y COMERCIO

**Vizcaína de Industria y Comercio, S.A.**

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## • CHEMICAL COMPOSITION




APPROXIMATE EQUIVALENCE			CHEMICAL COMPOSITION							
EN		AISI	C %	Si % max	Mn %	Cr ≤%	Mo %	Ni %	others %	
Designation (Includes DIN standard)	Standard									
<b>Ferritic Stainless Steel</b>										
X6Cr17	1.4016	EN 10088-3	430	≤0.08	1.00	≤1.00	16.00-18.00	-	-	-
<b>Martensitic Stainless Steel</b>										
X20Cr13	1.4021	EN 10088-3	420	0.16-0.25	1.00	≤1.50	12.00-14.00	-	-	-
<b>Austenitic Stainless Steel</b>										
X2CrNi18-9	1.4307	EN 10088-3	304 L	≤0.030	1.00	≤2.00	17.50-18.50	-	8.00-10.00	-
X3CrNiCu18-9-4	1.4567	EN 10088-3	304 Cu	≤0.040	1.00	≤2.00	17.00-19.00	-	8.50-10.50	Cu:3.00-4.00
X5CrNi18-10	1.4301	EN 10088-3	304	≤0.07	1.00	≤2.00	17.00-19.50	-	8.00-10.50	N≤0.11
X5CrNiMo17-12-2	1.4401	EN 10270-3(*)	316	≤0.07	1.00	≤2.00	16.50-18.50	2.00-2.50	10.00-13.00	N≤0.11
X6CrNiMoTi17-12-2	1.4571	EN 10088-3	316 Ti	≤0.08	1.00	≤2.00	16.50-18.50	2.00-2.50	10.50-13.50	Ti:5XC-0.70
X7CrNiAl17-7	1.4568	EN 10270-3(*)	631	≤0.09	0.70	≤1.00	16.00-18.00	-	6.50-7.80	Al:0.70-1.50
X8CrNiS18-9	1.4305	EN 10088-3	303	≤0.10	1.00	≤2.00	17.00-19.00	-	8.00-10.00	N≤0.11;Cu≤1.00
X10CrNi18-8(NS)	1.4310	EN 10270-3(*)	302	0.05-0.15	2.00	≤2.00	16.00-19.00	≤0.80	6.00-9.50	N≤0.11
X10CrNi18-8(HS)	1.4310	EN 10270-3(*)	302 HLS	0.05-0.15	2.00	≤2.00	16.00-19.00	≤0.80	6.00-9.50	N≤0.11
X8CrMnCuNb17-8-3	1.4597	EN 10088-3	204 Cu	≤0.10	2.00	6.50-8.50	16.00-18.00	≤1.00	≤2.00	Cu:2.50-3.50
<b>Stainless Steel for Welding</b>										
X2CrNi19-9	1.4316	DIN 17145	308 L-Si	≤0.020	1.40	≤1.90	18.20-20.80	-	9.20-10.80	-
X2CrNiMo19-12	1.4430	DIN 17145	316 L-Si	≤0.020	1.40	≤1.90	17.20-19.80	2.50-3.00	10.70-13.30	-
<b>Heat-resistant Stainless Steel</b>										
X15CrNiSi25-21	1.4841	EN 10095	314	≤0.020	1.50-2.50	≤2.00	24.00-26.00	-	19.00-22.00	N≤0.11

(\*): Grades as per EN 10270-3 are also to be found in the EN 10088-3 standard. These grades are specifically for springs.

## • COATINGS

Inorganic
Copper coating
Niquel plated
PET

## • POSSIBILITIES OF SUPPLY (SECTION)

	Round	0.10 - 12 mm
	Square	0.5 x 0.5 - 10 x 10 mm
	Rectangular	as per customer's requirements
	Special / Profile	as per customer's requirements

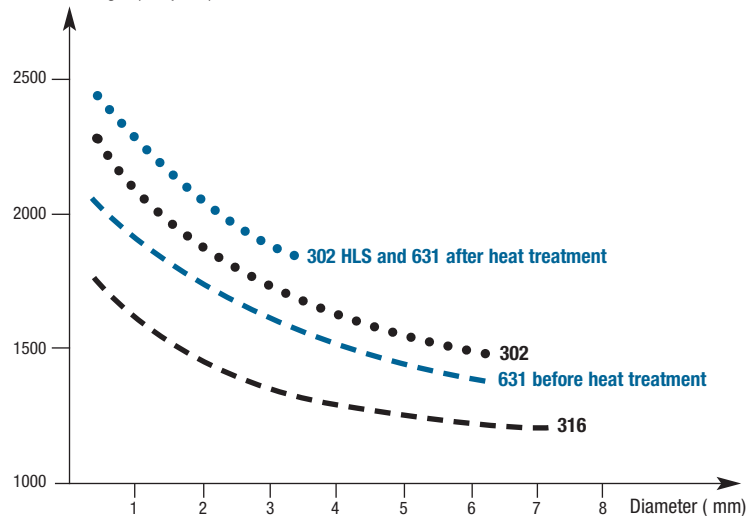
## • FINISHED

Polished
Bright

## • MECHANICAL SPECIFICATIONS

### Generic chart

Tensile strength (N/sq mm)



## STEEL FOR SPRINGS IN DRAWN CONDITIONS (EN 10270-3)

DIAMETER		MINIMUM TENSILE STRENGTH Rm (N/sq mm)			
NOMINAL (mm)	TOLERANCE (mm)	1.4310 NS X10CrNi18-10	1.4310 HS X10CrNi18-10	1.4401 X5CrNiMo17-12-2	1.4568 X7CrNiAl17-7
		302	302 HLS	316	631
∅ ≤ 0.20	±0.005	2200	2350	1725	1975
0.20 < ∅ ≤ 0.25		2150	2300	1700	1950
0.25 < ∅ ≤ 0.30					
0.30 < ∅ ≤ 0.40	±0.008				
0.40 < ∅ ≤ 0.50		2050	2200	1650	1900
0.50 < ∅ ≤ 0.65		2000	2150	1625	1850
0.65 < ∅ ≤ 0.80	±0.010	1950	2100	1600	1825
0.80 < ∅ ≤ 1.00		1900	2050	1575	1800
1.00 < ∅ ≤ 1.25		1850	2000	1550	1750
1.25 < ∅ ≤ 1.50	±0.015	1800	1950	1500	1700
1.50 < ∅ ≤ 1.75		1750	1900	1450	1650
1.75 < ∅ ≤ 2.00		1700	1850	1400	1600
2.00 < ∅ ≤ 2.25	±0.020	1650	1750	1350	1550
2.25 < ∅ ≤ 2.50		1600	1700	1300	1500
2.50 < ∅ ≤ 3.00		1550	1650	1250	1450
3.00 < ∅ ≤ 3.50	±0.025	1500	1600	1225	1400
3.50 < ∅ ≤ 4.00		1450	1550	1200	1350
4.00 < ∅ ≤ 4.25		1400	1500	1150	1300
4.25 < ∅ ≤ 5.00	±0.030	1350	1450	1125	1250
5.00 < ∅ ≤ 6.00		1300	1400	1075	1250
6.00 < ∅ ≤ 6.25		1250	1350	1050	1250
6.25 < ∅ ≤ 7.00	±0.035	1200	1300	1025	1225
7.00 < ∅ ≤ 8.00		1150	1250	1000	1200
8.00 < ∅ ≤ 9.00		1100	1200	975	1175
9.00 < ∅ ≤ 10.00		1050	1150	950	1125

a) Tensile strength calculated on the actual diameter.

b) Tensile strength tolerance is equal to +15% of the minimum value.

c) After straightening, tensile strength may be diminished by up to 10%.

d) Wire supplied in a cold-drawn state. Heat treatment may have a considerable impact on finished springs.

## STEEL FOR VARIOUS USES

EN	AISI	TENSILE STRENGTH [N/sq mm]		
		Annealed condition	Half-hard condition	
X7CrNiS18-9	1.4305	303	≤ 640	650-900
X5CrNi18-10	1.4301	304	≤ 640	650-900
X2CrNi18-9	1.4307	304 L	≤ 640	650-900
X3CrNiCu18-9-4	1.4567	304 Cu	≤ 590	600-700
X6Cr17	1.4016	430	≤ 600	600-700

Further wire grades, coatings and range of diameters are available through the Sales Department.