

• TOLERANCES

THICKNESS TOLERANCES

NOMINAL THICKNESS (t) (mm)		Nominal width (W) (mm)										600<W≤1000		1000<W<1300	
		EN 10258									EN 10259				
		W<125			125≤W<250			250≤W<600							
		A	B	C	A	B	C	A	B	C					
≥	<	Normal	Fine	Precision	Normal	Fine	Precision	Normal	Fine	Precision					
0.05	0.10	±0.10t	±0.06t	±0.04t	±0.12t	±0.010t	±0.08t	±0.15t	±0.10t	±0.08t					
0.10	0.15	±0.010	±0.008	±0.006	±0.015	±0.012	±0.008	±0.020	±0.015	±0.010					
0.15	0.20	±0.015	±0.010	±0.008	±0.020	±0.012	±0.010	±0.025	±0.015	±0.012	±0.030				
0.20	0.25	±0.015	±0.012	±0.008	±0.020	±0.015	±0.010	±0.025	±0.020	±0.012					
0.25	0.30	±0.017	±0.012	±0.009	±0.025	±0.015	±0.012	±0.030	±0.020	±0.015					
0.30	0.40	±0.020	±0.015	±0.010	±0.025	±0.020	±0.012	±0.030	±0.025	±0.015	±0.040	±0.040			
0.40	0.50	±0.025	±0.020	±0.012	±0.030	±0.020	±0.015	±0.035	±0.025	±0.018					
0.50	0.60	±0.030	±0.020	±0.014	±0.030	±0.025	±0.015	±0.040	±0.030	±0.020	±0.045	±0.050			
0.60	0.80	±0.030	±0.025	±0.015	±0.035	±0.030	±0.018	±0.040	±0.035	±0.025	±0.050	±0.050			
0.80	1.00	±0.030	±0.025	±0.018	±0.040	±0.030	±0.020	±0.050	±0.035	±0.025	±0.055	±0.060			
1.00	1.20	±0.035	±0.030	±0.020	±0.045	±0.035	±0.025	±0.050	±0.040	±0.030	±0.060	±0.070			
1.20	1.50	±0.040	±0.030	±0.020	±0.050	±0.035	±0.025	±0.060	±0.045	±0.030	±0.070	±0.080			
1.50	2.00	±0.050	±0.035	±0.025	±0.060	±0.040	±0.030	±0.070	±0.050	±0.035	±0.080	±0.090			
2.00	2.50	±0.050	±0.035	±0.025	±0.070	±0.045	±0.030	±0.080	±0.060	±0.040	±0.090	±0.100			
2.50	3.00	±0.060	±0.045	±0.030	±0.070	±0.050	±0.035	±0.090	±0.070	±0.045	±0.110	±0.120			

COMMENT: Unless otherwise stated the strips for springs are supplied according to tolerances as per EN 10258. The rest according to EN 10259.

WIDTH TOLERANCES

NOMINAL THICKNESS (t) (mm)		Nominal width (w) (mm)											
		EN 10258											
		W<40			40≤W<125			125≤W<250			W≤250		
		A	B	C	A	B	C	A	B	C	A	B	C
≥	<												
0.25		+0.17	+0.13	+0.10	+0.20	+0.15	+0.12	+0.25	+0.20	+0.15	+0.50	+0.50	+0.40
		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0
0.25	0.40	+0.20	+0.15	+0.12	+0.25	+0.20	+0.15	+0.30	+0.22	+0.17	+0.60	+0.50	+0.40
		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0
0.40	0.50	+0.20	+0.15	+0.12	+0.25	+0.20	+0.15	+0.30	+0.22	+0.17	+0.60	+0.50	+0.40
		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0
0.50	1.00	+0.25	+0.20	+0.15	+0.25	+0.22	+0.17	+0.40	+0.25	+0.20	+0.70	+0.60	+0.50
		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0
1.00	1.50	+0.25	+0.22	+0.15	+0.30	+0.25	+0.17	+0.50	+0.30	+0.22	+1.00	+0.70	+0.60
		-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0	-0
1.50	2.50	-	-	-	+0.40	+0.25	+0.20	+0.60	+0.40	+0.25	+1.00	+0.80	+0.60
		-	-	-	-0	-0	-0	-0	-0	-0	-0	-0	-0
2.50	3.00	-	-	-	+0.50	+0.30	+0.25	+0.60	+0.40	+0.25	+1.20	+1.00	+0.80
		-	-	-	-0	-0	-0	-0	-0	-0	-0	-0	-0

STRAIGHTNESS TOLERANCES

NOMINAL WIDTH (W)	Maximum Deviation	
	2000 mm	
	Width (t)	
	t≤120mm	t<120mm
3 ≤ W < 6	10.00	15.00
6 ≤ W < 10	8.00	12.00
10 ≤ W < 20	4.00	6.00
20 ≤ W < 350	2.00	4.00

Other grades and specifications of strips available through the Sales Department.



VINCO

VIZCAINA DE INDUSTRIA Y COMERCIO

Vizcaína de Industria y Comercio, S.A.

Polígono Sarrikola Telf.- +34 94 412 33 99
 c/ Bizkargi, 6 Fax - +34 94 486 83 01
 E-48195 Larrabetzu - Bizkaia e-mail: info@vinco.es

SPAIN | www.vinco.es



STAINLESS STEEL STRIP

The data herein is merely for information purposes and do not imply contractual terms of supply. Unless there is an error or omission.



VINCO

VIZCAINA DE INDUSTRIA Y COMERCIO

• **CHEMICAL COMPOSITION**

APPROXIMATE EQUIVALENCE			CHEMICAL COMPOSITION						
EN		AISI	C %	Si % max.	Mn % max.	Cr %	Mo %	Ni %	Others %
DESIG. <small>(Includes DIN standard)</small>	STANDARD								

Martensitic Stainless Steel

X30Cr13	1.4028	EN 10151(†)	420	0.26-0.35	1.00	1.50	12.0-14.0	-	-	-
---------	--------	-------------	-----	-----------	------	------	-----------	---	---	---

X46Cr13	1.4034	EN 10088-2	-	0.43-0.50	1.00	1.00	12.5-14.5	-	-	-
---------	--------	------------	---	-----------	------	------	-----------	---	---	---

Ferritic Stainless Steel

X2CrTi12	1.4512	EN 10088-2	409	≤ 0.03	1.00	1.00	10.5-12.5	-	-	Ti:6x(C+N)-0.65
----------	--------	------------	-----	--------	------	------	-----------	---	---	-----------------

X6Cr17	1.4017	EN 10151(†)	430	≤ 0.08	1.00	1.00	16.00-18.00	-	-	-
--------	--------	-------------	-----	--------	------	------	-------------	---	---	---

Austenitic Stainless Steel

X2CrNi18-9	1.4307	EN 10088-2	304 L	≤ 0.03	1.00	2.00	17.50-19.50	-	8.00-10.00	-
------------	--------	------------	-------	--------	------	------	-------------	---	------------	---

X2CrNiMo17-12-2	1.4404	EN 10088-2	316 L	≤ 0.03	1.00	2.00	16.50-18.50	2.00-2.50	10.00-13.00	-
-----------------	--------	------------	-------	--------	------	------	-------------	-----------	-------------	---

X5CrNi18-10	1.4301	EN 10151(†)	304	≤ 0.07	1.00	2.00	17.00-19.50	-	6.00-10.50	-
-------------	--------	-------------	-----	--------	------	------	-------------	---	------------	---

X5CrNiMo17-12-2	1.4401	EN 10151(†)	316	≤ 0.07	1.00	2.00	16.50-18.50	2.00-2.50	10.00-13.00	-
-----------------	--------	-------------	-----	--------	------	------	-------------	-----------	-------------	---

X6CrNiMoTi17-12-2	1.4571	EN 10088-2	316 Ti	≤ 0.08	1.00	2.00	16.50-18.50	2.00-2.50	10.50-13.50	Ti:5xC-0.70
-------------------	--------	------------	--------	--------	------	------	-------------	-----------	-------------	-------------

X6CrNiTi18-10	1.4541	EN 10088-2	321	≤ 0.08	1.00	2.00	17.00-19.00	-	9.00-12.00	Ti:5xC-0.70
---------------	--------	------------	-----	--------	------	------	-------------	---	------------	-------------

X7CrNiAl17-7	1.4568	EN 10151(†)	631	≤ 0.09	0.70	1.00	16.00-18.00	-	6.50-7.80	Al:0.70-1.50
--------------	--------	-------------	-----	--------	------	------	-------------	---	-----------	--------------

X10CrNi18-8	1.4310	EN 10151(†)	301	0.05-0.15	2.00	2.00	16.00-19.00	-	6.00-9.50	-
-------------	--------	-------------	-----	-----------	------	------	-------------	---	-----------	---

X10CrNi18-8	1.4310	EN 10151(†)	301	0.05-0.15	2.00	2.00	16.00-19.00	≤ 0.80	6.00-9.50	-
-------------	--------	-------------	-----	-----------	------	------	-------------	--------	-----------	---

Heat-Resistant Stainless Steel

X8CrNi25-21	1.4845	EN 10095	310S	≤ 0.10	1.50	2.00	24.00-26.00	-	19.00-22.00	-
-------------	--------	----------	------	--------	------	------	-------------	---	-------------	---

(†) Grades according to EN 10151 are also found in the EN 10088-2 standard

• **SURFACE FINISHES**

EN	AISI	APPEARANCE
2H	TR	Hardened, bright
2D	2D	Normal, smooth
2B	2B	Skin-passed
2R	BA	Bright annealed; smooth, bright, reflective

• **SUPPLY DIMENSIONS**

HARDENED		ANNEALED	
Thicknesses	Widths	Thicknesses	Widths
0.10-1.20 mm	3-760 mm	0.10-2.00 mm	3-1250 mm
1.20-2.50 mm	10-620 mm	2.00-5.00 mm	10-1250 mm

• **EDGES**

Slit	Rounded	Round
Special		

• **MECHANICAL CHARACTERISTICS**

STEEL GRADE		STATUS	HARDNESS	YIELD POINT R _{po.2}	TENSILE STRENGTH R _m	ELONGATION (MIN)
EN	AISI			N/mm²	N/mm²	A ₉₀

Martensitic Stainless Steel

X30Cr13	420	Annealed	≤ 235 HV	≤ 740	15%
		Hardened (†)	+C700 +C850 1/4 hard	270-320 HV 850-1000	

X46Cr13	-	Annealed	≤ 245 HV	≤ 780	12%
---------	---	----------	----------	-------	-----

Ferritic Stainless Steel

X2CrTi12	409	Annealed	≥ 210	380-560	25%
----------	-----	----------	-------	---------	-----

X6Cr17	430	Annealed	≤ 260	450-600	20%
		Hardened (†)	+C700 +C850 1/4 hard	200-300 HV 850-1000	2% 1%

Austenitic Stainless Steel

X2CrNi18-9	304L	Annealed	≥ 220	520-670	45%
------------	------	----------	-------	---------	-----

X2CrNiMo17-12-2	316L	Annealed	≥ 240	530-680	40%
		Hardened (†)	≥ 230	540-750	45%

X5CrNi18-10	304	Hardened (†)	+C700	700-850	25%
			+C850 1/4 hard	850-1000	12%
			+C1000 1/2 hard	1000-1150	5%
			+C1150 3/4 hard	1150-1300	3%
			+C1300 4/4 hard	1300-1500	1%

X5CrNiMo17-12-2	316	Hardened (†)	+C700	700-850	20%
			+C850 1/4 hard	850-1000	10%
			+C1000 1/2 hard	1000-1150	4%
			+C1150 3/4 hard	1150-1300	1%
			+C1300 4/4 hard	1300-1500	

X6CrNiMoTi17-12-2	316Ti	Annealed	≥ 240	540-690	40%
-------------------	-------	----------	-------	---------	-----

X6CrNiTi18-10	321	Annealed	≥ 220	520-720	40%
---------------	-----	----------	-------	---------	-----

X7CrNiAl17-7	631	Ecrouisé (†)	+C1000 1/2 hard	1000-1150	
			+C1150 3/4 hard	1150-1300	
			+C1300 4/4 hard	1300-1500	
			+C1500 5/4 hard	1500-1700	
			+C1700 K1	1700-1900	

X10CrNi18-8	301	Hardened (†)	+C850 1/4 hard	850-1000	25%
			+C1000 1/2 hard	1000-1150	20%
			+C1150 3/4 hard	1150-1300	15%
			+C1300 4/4 hard	1300-1500	10%
			+C1500 5/4 hard	1500-1700	5%
			+C1700 K1	1700-1900	2%
			+C1900 K2	1900-2200	1%
			+C2100	2050-2350	

X8CrNi25-21	310S	Annealed	≤ 192 HB	≥ 210	500-700	33%
-------------	------	----------	----------	-------	---------	-----

X7CrNiAl17-7	631	Ecrouisé (†)	+C1000 1/2 hard	1000-1150	
			+C1150 3/4 hard	1150-1300	
			+C1300 4/4 hard	1300-1500	
			+C1500 5/4 hard	1500-1700	
			+C1700 K1	1700-1900	

X10CrNi18-8	301	Hardened (†)	+C850 1/4 hard	850-1000	25%
			+C1000 1/2 hard	1000-1150	20%
			+C1150 3/4 hard	1150-1300	15%
			+C1300 4/4 hard	1300-1500	10%
			+C1500 5/4 hard	1500-1700	5%
			+C1700 K1	1700-1900	2%
			+C1900 K2	1900-2200	1%
			+C2100	2050-2350	

X6CrNiMoTi17-12-2	316Ti	Annealed	≥ 240	540-690	40%
-------------------	-------	----------	-------	---------	-----

X6CrNiTi18-10	321	Annealed	≥ 220	520-720	40%
---------------	-----	----------	-------	---------	-----

X7CrNiAl17-7	631	Ecrouisé (†)	+C1000 1/2 hard	1000-1150	
			+C1150 3/4 hard	1150-1300	
			+C1300 4/4 hard	1300-1500	
			+C1500 5/4 hard	1500-1700	
			+C1700 K1	1700-1900	

X10CrNi18-8	301	Hardened (†)	+C850 1/4 hard	850-1000	25%
			+C1000 1/2 hard	1000-1150	20%
			+C1150 3/4 hard	1150-1300	15%
			+C1300 4/4 hard	1300-1500	10%
			+C1500 5/4 hard	1500-1700	5%
			+C1700 K1	1700-1900	2%
			+C1900 K2	1900-2200	1%
			+C2100	2050-2350	

X8CrNi25-21	310S	Annealed	≤ 192 HB	≥ 210	500-700	33%
-------------	------	----------	----------	-------	---------	-----

X7CrNiAl17-7	631	Ecrouisé (†)	+C1000 1/2 hard	1000-1150	
			+C1150 3/4 hard	1150-1300	
			+C1300 4/4 hard	1300-1500	
			+C1500 5/4 hard	1500-1700	
			+C1700 K1	1700-1900	

X10CrNi18-8	301	Hardened (†)	+C850 1/4 hard	850-1000	25%
			+C1000 1/2 hard	1000-1150	20%
			+C1150 3/4 hard	1150-1300	15%
			+C1300 4/4 hard	1300-1500	10%
			+C1500 5/4 hard	1500-1700	5%
			+C1700 K1	1700-1900	2%
			+C1900 K2	1900-2200	1%
			+C2100	2050-2350	

X6CrNiMoTi17-12-2	316Ti	Annealed	≥ 240	540-690	40%
-------------------	-------	----------	-------	---------	-----

X6CrNiTi18-10	321	Annealed	≥ 220	520-720	40%
---------------	-----	----------	-------	---------	-----

X7CrNiAl17-7	631	Ecrouisé (†)	+C1000 1/2 hard	1000-1150	
			+C1150 3/4 hard	1150-1300	
			+C1300 4/4 hard	1300-1500	
			+C1500 5/4 hard	1500-1700	
			+C1700 K1	1700-1900	

X10CrNi18-8	301	Hardened (†)	+C850 1/4 hard	850-1000	25%
			+C1000 1/2 hard	1000-1150	20%
			+C1150 3/4 hard	1150-1300	15%
			+C1300 4/4 hard	1300-1500	10%
			+C1500 5/4 hard	1500-1700	5%
			+C1700 K1	1700-1900	2%
			+C1900 K2	1900-2200	1%
			+C2100	2050-2350	

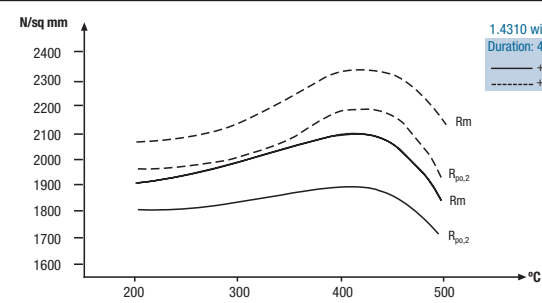
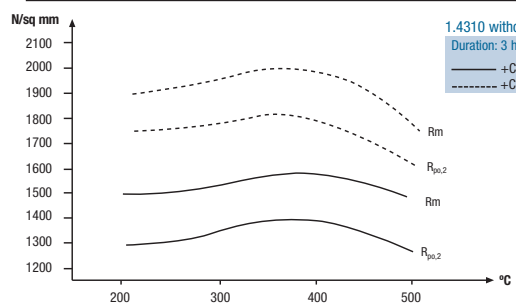
X8CrNi25-21	310S	Annealed	≤ 192 HB	≥ 210	500-700	33%
-------------	------	----------	----------	-------	---------	-----

Heat-resistant Stainless Steel

X8CrNi25-21	310S	Annealed	≤ 192 HB	≥ 210	500-700	33%
-------------	------	----------	----------	-------	---------	-----

(†) Hardened by cold rolling.

• **TEMPERING CONDITIONS**



• **APPROXIMATE STRENGTH-HARDNESS EQUIVALENCE**

Tensile strength N/sq mm	Vickers	Rockwell			Rockwell Surface		
		Diamond			15N	30N	45N
	HRB	HRC	HRA				
2145	640	-	57.3	79.8	89.0	75.1	63.5
2105	630	-	56.8	79.5	88.8	74.6	63.0
2070	620	-	56.3	79.2	88.5	74.2	62.4
2030	610	-	55.7	78.9	88.2	73.7	61.7
1995	600	-	55.2	78.6	88.0	73.2	61.2
1955	590	-	54.7	78.4	87.8	72.7	60.5
1920	580	-	54.1	78.0	87.5	72.1	59.9
1880	570	-	53.6	77.8	87.6	71.7	59.3
1845	560	-	53.0	77.4	86.9	71.2	58.6
1810	550	-	52.3	77.0	86.6	70.5	57.8
1775	540	-	51.7	76.7	86.3	70.0	57.0
1740	530	-	51.1	76.4	86.0	69.5	56.2
1700	520	-	50.5	76.1	85.7	69.0	55.6
1665	510	-	4				