

• 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

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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.



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

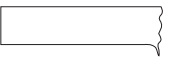

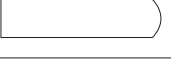
**SURFACE FINISHES**

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	
Special	Round	

**MECHANICAL CHARACTERISTICS**

STEEL GRADE		STATUS	HARDNESS	YIELD POINT R <sub>po.2</sub>	TENSILE STRENGTH R <sub>m</sub>	ELONGATION (MIN)
EN	AISI			N/mm²	N/mm²	A <sub>50</sub>

**Martensitic Stainless Steel**

X30Cr13	420	Annealed		≤ 235 HV	≤ 740	15%
		Hardened (†)	+C700	270-320 HV	700-850	
			+C850	1/4 hard	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	200-300 HV	700-850	2%
			+C850	1/4 hard	850-1000	1%

**Austenitic Stainless Steel**

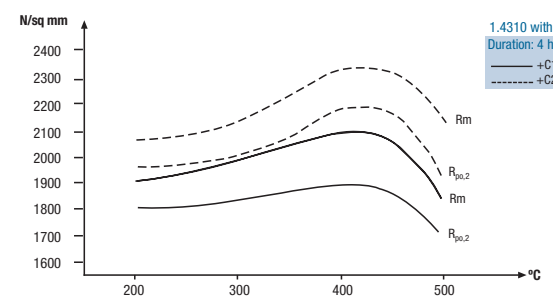
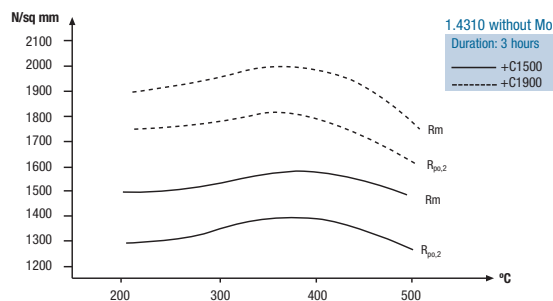
X2CrNi18-9	304L	Annealed		≥ 220	520-670	45%
X2CrNiMo17-12-2	316L	Annealed		≥ 240	530-680	40%
		Annealed		≥ 230	540-750	45%
X5CrNi18-10	304	Hardened (†)	+C700		700-850	25%
			+C850	1/4 hard	850-1000	12%
			+C1000	1/2 hard	1000-1150	5%
			+C1150	3/4 hard	1150-1300	3%
			+C1300	4/4 hard	1300-1500	1%
X5CrNiMo17-12-2	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	
					≤ 1030	19%
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	
					≥ 250	40%

**Heat-resistant Stainless Steel**

X8CrNi25-21	310S	Annealed		≤ 192 HB	≥ 210	500-700	33%
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(†) Hardened by cold rolling.

**TEMPERING CONDITIONS**



**APPROXIMATE STRENGTH-HARDNESS EQUIVALENCE**

Tensile strength N/sq mm	Vickers	Rockwell			Rockwell Surface		
	Hardness No.	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	-	49.8	75.7	85.4	68.3	54.7
1630	500	-	49.1	75.3	85.0	67.7	53.9
1595	490	-	48.4	74.9	84.7	67.1	53.1
1555	480	-	47.7	74.5	84.3	66.4	52.2
1520	470	-	46.9	74.1	86.9	65.7	51.3
1485	460	-	46.1	73.6	83.6	64.9	50.4
1455	450	-	45.3	73.3	83.2	64.3	49.4
1420	440	-	44.5	72.8	82.8	63.5	48.4
1385	430	-	43.7	72.3	82.3	62.7	47.4
1350	420	-	42.7	71.8	81.8	61.9	46.4
1320	410	-	41.8	71.4	81.4	61.1	45.3
1290	400	-	40.8	70.8	80.8	60.2	44.1
1255	390	-	39.8	70.3	80.3	59.3	42.9
1220	380	-	38.8	69.8	79.8	58.4	41.7
1190	370	-	37.7	69.2	79.2	57.4	40.4
1155	360	-	36.6	68.7	78.6	56.4	39.1
1125	350	-	35.5	68.1	78.0	55.4	37.8
1095	340	-	34.4	67.6	77.4	54.4	36.5
1060	330	-	33.3	67.0	76.8	53.6	35.2
1030	320	-	32.2	66.4	76.2	52.3	33.9
995	310	-	31.0	65.8	75.6	51.3	32.5
965	300	-	29.8	65.2	74.9	50.2	31.1
930	290	-	28.5	64.5	74.2	49.0	29.5
900	280	-	27.1	63.8	73.4	47.8	27.9
865	270	-	25.6	63.1	72.6	46.4	26.2
835	260	-	24.0	62.4	71.6	45.0	24.3
800	250	99.5	22.2	61.6	70.6	43.4	22.2
770	240	98.1	20.3	60.7	69.6	41.7	19.9
740	230	96.7	-	-	-	-	-
705	220	95.0	-	-	-	-	-
675	210	93.5	-	-	-	-	-
640	200	91.5	-	-	-	-	-
610	190	89.5	-	-	-	-	-
575	180	87.1	-	-	-	-	-
545	170	85.0	-	-	-	-	-
510	160	81.7	-	-	-	-	-
480	150	78.1	-	-	-	-	-
450	140	75.0	-	-	-	-	-
415	130	71.2	-	-	-	-	-
385	120	66.7	-	-	-	-	-

• Brinell hardness can be calculated as HB = 0.95 HV