

Stainless precision steel strip.

With the best features.



WAEZHZOLZ

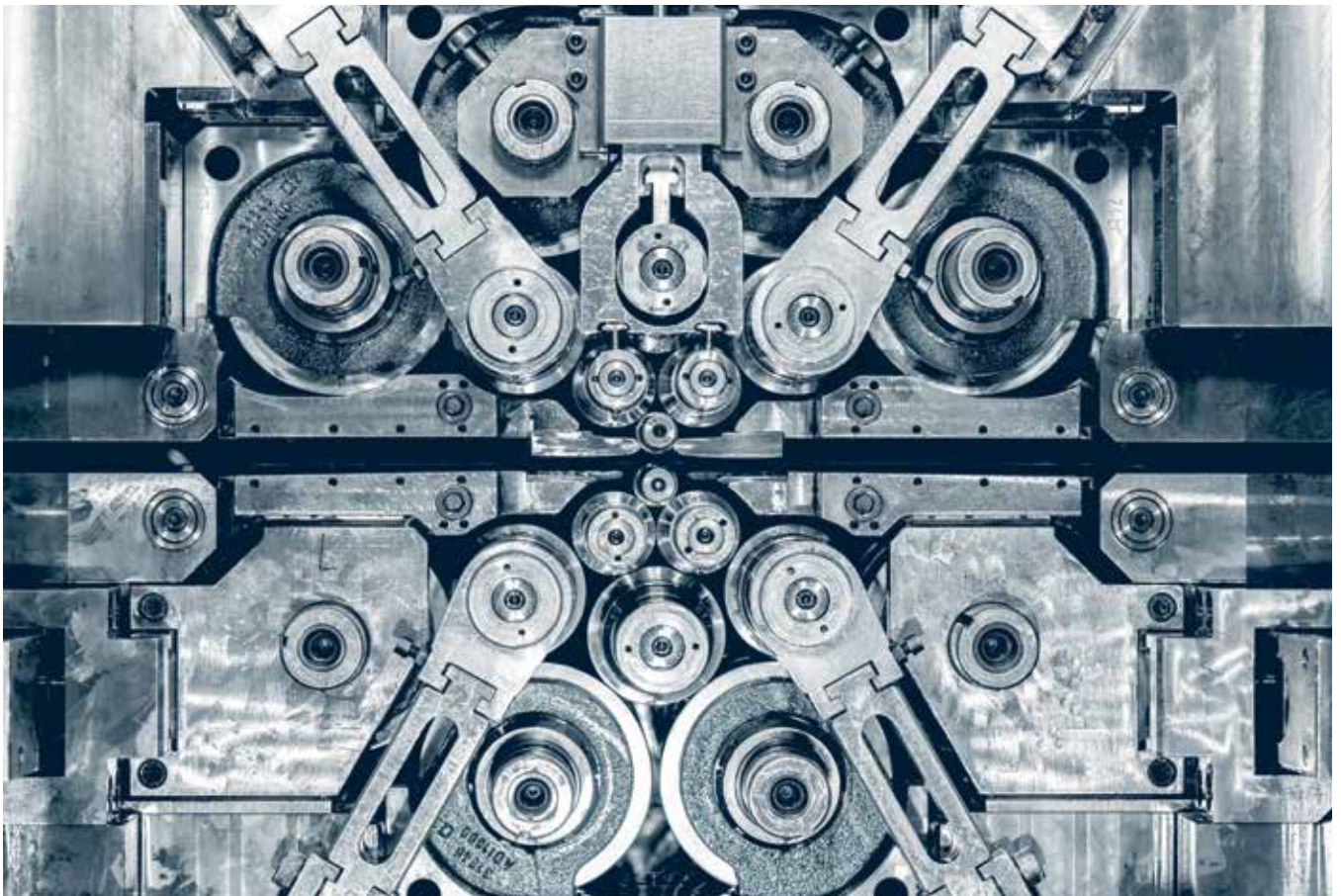
Chemical Composition

The currently deliverable rust, acid and heat-resistant stainless steels.

Plant designation	Abbreviated designation EN 10088-2 EN 10095	Material no.	Comparable standards		Mass share in %							
			DIN / EN	ASTM / AISI	C _{max}	Si _{max}	Mn _{max}	Cr	Ni	Mo _{max}	N2 _{max}	other
Austenitic chrome nickel steels												
	X5CrNi 18-10	1.4301	1.4301	304	0.07	1.0	2.0	17.5-19.5	8-10.5	-	0.10	-
	X2CrNi 18-9	1.4307	1.4307	304L	0.03	1.0	2.0	17.5-19.5	8-10.5	-	0.10	-
	X2CrNi 19-11	1.4306	1.4306	304L	0.03	1.0	2.0	18-20	10-12	-	0.10	-
	X4CrNi 18-12	1.4303	1.4303	305	0.07	1.0	2.0	17-19	11-13	-	-	-
	X6CrNiTi 18-10	1.4541	1.4541	321	0.08	1.0	2.0	17-19	9-12	-	-	Ti = 5x%C (max 0.7)
	X12CrNiN 17-7-5	1.4372	1.4372	-	0.15	1.0	5.5-7.5	16.0-18.0	3.5-5.5	-	0.05-0.25	-
1.4310.2	X10CrNi 18-8	1.4310	1.4310	301	0.15	1.0	2.0	16-19	7-8	0.40	0.10	-
1.4310.4	X10CrNi 18-8	1.4310	1.4310	301	0.15	1.5	2.0	16-19	6-7	0.80	0.10	-
1.4310.7	X10CrNi 18-8	1.4310	1.4310	301	0.15	1.5	2.0	16-19	6-7	0.40	0.10	-
1.4310.8	X10CrNi 18-8	1.4310	1.4310	301	0.15	1.0	2.0	16-19	6-7	0.40	0.10	-
	X15CrNiSi 20-12	1.4828	1.4828	309	0.20	1.5-2.5	2.0	19-21	11-13	-	0.11	-
	X8CrNi 25-21	1.4845	1.4845	3105	0.10	1.5-2.5	2.0	24-26	19-22	-	0.11	-
Austenitic chrome nickel molybdenum steels												
	X5CrNiMo 17-12-2	1.4401	1.4401	316	0.07	1.0	2.0	16.5-18.5	10.5-13.5	2.0-2.5	-	-
	X2CrNiMo 17-12-2	1.4404	1.4404	316L	0.03	1.0	2.0	16.5-18.5	10.5-13.5	2.0-2.5	-	-
	X2CrNiMo 18-14-3	1.4435	1.4435	316L	0.03	1.0	2.0	17-18.5	12.5-15	2.5-3.0	-	-
	X6CrNiMoTi 17-12-2	1.4571	1.4571	316Ti	0.08	1.0	2.0	16.5-18.5	10.5-13.5	2.0-2.5	-	Ti = 5x%C (max 0.7)

Plant designation	Abbreviated designation EN 10088-2 EN 10095	Material no.	Comparable standards		Mass share in %							
			DIN / EN	ASTM / AISI	C _{max}	Si _{max}	Mn _{max}	Cr	Ni	Mo _{max}	NZ _{max}	other
Ferritic chrome steels												
1.4016.1	X6Cr 17	1.4016	1.4016	430	0.08	1.0	1.0	16-18	-	-	-	-
1.4016.2	X3Cr 17	1.4016	1.4016	430	0.03	1.0	1.0	16-18	-	-	-	-
	X6CrMo 17-1	1.4113	1.4113	-	0.08	1.0	1.0	16-18	-	-	-	-
	X3CrTi 17	1.4510	1.4510	-	0.05	1.0	1.0	16-18	-	-	-	Ti = 5x(C+N) +0.15 max 0.80
	X2CrTi 12	1.4512	1.4512	-	0.03	1.0	1.0	10.5-12.5	-	-	-	Ti = 6x(C+N) max 0.65
	X2CrTi 17	1.4520	1.4520	430LTi	0.022	0.5	0.5	16-18	-	-	-	Ti = 4x(C+N) +0.15 max 0.80
Martensitic steels												
	X20Cr 13	1.4021	1.4021	420	0.17-0.25		1.0	1.5	12-14	-	-	-
	X30Cr 13	1.4028	1.4028	420	0.28-0.35		1.0	1.5	12-14	-	-	-
	X46Cr 13	1.4034	1.4034	420	0.43	0.50	1.0	1.0	12.5-14.5	-	-	-
	X38CrMo 14	1.4419	1.4419	-	0.36	0.42	1.0	1.0	13-14.5	0.6-1.0	-	-

Plant designation	Abbreviated designation EN 10088-2 EN 10095	Annealed / formed			Mechanical properties									
		R _m - MPa	R _{p0.2} MPa	A ₈₀ %	Strain hardened (R _m in MPa)									
					TH700	TH850	TH1000	TH1150	TH1300	TH1500	TH1700	TH1900	TH2000	
Martensitic steels														
	X20Cr13	<700	-	>13	700-900	800-1000	-	-	-	-	-	-	-	
	X30Cr13	<730	-	>13	700-900	800-1000	1000-1200	-	-	-	-	-	-	
	X46Cr13	-	-	-	-	800-1000	1000-1200	1200-1400	-	-	-	-	-	
	X38CrMo 14	<700	-	>13	-	-	-	-	-	-	-	-	-	
Austenitic special grades														
Special version	-	650-950	>270	>40	700-900	800-1000	1000-1150	1150-1300	1300-1500	1550-1700	-	-	-	



Dimensions and tolerances

The currently deliverable rust, acid and heat-resistant stainless steels.

Dimensional ranges	Thickness	Width
	0.05 - 1.5 ^a mm	3 - 650 mm

^a Strip thicknesses of up to 2 mm, rolled to tensile strength, are available upon request.

Limit dimensions of nominal thickness according to DIN EN ISO 9445-1									
Nominal thickness t	Limit dimensions of nominal thickness for a nominal width in mm of								
	w < 125			125 ≤ w < 250			250 ≤ w < 600		
	Normal	Fine (F)	Precision (P)	Normal	Fine (F)	Precision (P)	Normal	Fine (F)	Precision (P)
0.05 ^a ≤ t < 0.10	± 0.10 · t	± 0.06 · t	± 0.04 · t	± 0.12 · t	± 0.10 · t	± 0.08 · t	± 0.15 · t	± 0.10 · t	± 0.08 · t
0.10 ≤ t < 0.15	± 0.010	± 0.008	± 0.006	± 0.015	± 0.012	± 0.008	± 0.020	± 0.015	± 0.010
0.15 ≤ t < 0.20	± 0.015	± 0.010	± 0.008	± 0.020	± 0.012	± 0.010	± 0.025	± 0.015	± 0.012
0.20 ≤ t < 0.25	± 0.015	± 0.012	± 0.008	± 0.020	± 0.015	± 0.010	± 0.025	± 0.020	± 0.012
0.25 ≤ t < 0.30	± 0.017	± 0.012	± 0.009	± 0.025	± 0.015	± 0.012	± 0.030	± 0.020	± 0.015
0.30 ≤ t < 0.40	± 0.020	± 0.015	± 0.010	± 0.025	± 0.020	± 0.012	± 0.030	± 0.025	± 0.015
0.40 ≤ t < 0.50	± 0.025	± 0.020	± 0.012	± 0.030	± 0.020	± 0.015	± 0.035	± 0.025	± 0.018
0.50 ≤ t < 0.60	± 0.030	± 0.020	± 0.014	± 0.030	± 0.025	± 0.015	± 0.040	± 0.030	± 0.020
0.60 ≤ t < 0.80	± 0.030	± 0.025	± 0.015	± 0.035	± 0.030	± 0.018	± 0.040	± 0.035	± 0.025
0.80 ≤ t < 1.00	± 0.030	± 0.025	± 0.018	± 0.040	± 0.030	± 0.020	± 0.050	± 0.035	± 0.025
1.00 ≤ t < 1.20	± 0.035	± 0.030	± 0.020	± 0.045	± 0.035	± 0.025	± 0.050	± 0.040	± 0.030
1.20 ≤ t < 1.50	± 0.040	± 0.030	± 0.020	± 0.050	± 0.035	± 0.025	± 0.060	± 0.045	± 0.030
1.50 ≤ t < 2.00	± 0.050	± 0.035	± 0.025	± 0.060	± 0.040	± 0.030	± 0.070	± 0.050	± 0.035
2.00 ≤ t < 2.50	± 0.050	± 0.035	± 0.025	± 0.070	± 0.045	± 0.030	± 0.080	± 0.060	± 0.040
2.50 ≤ t < 3.00	± 0.060	± 0.045	± 0.030	± 0.070	± 0.050	± 0.035	± 0.090	± 0.070	± 0.045

Note: Positive, negative or asymmetrical limit dimensions may be arranged. In all cases, the entire area of the limit dimension from the table must be complied with.

^a For thicknesses < 0.05 mm, the values for the limit dimension must be arranged upon request and ordering.

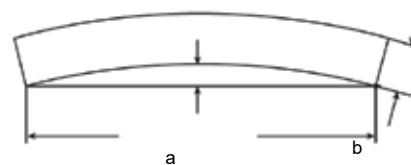
Naturally, our promise holds not only for the width specified according to DIN EN 10258 up to a max. of 600 mm, rather it still holds for our full rolling width, i.e. up to 650 mm; Closer special tolerances upon consultation.

Limit dimensions of the nominal width according to DIN EN ISO 9445-1												
Nominal thickness t	Nominal width in mm											
	w ≤ 40			40 ≤ w < 125			125 ≤ w < 250			250 ≤ w < 600		
	Normal	Fine (F)	Precision (P)	Normal	Fine (F)	Precision (P)	Normal	Fine (F)	Precision (P)	Normal	Fine (F)	Precision (P)
t < 0.25	+0.17 0	+0.13 0	+0.10 0	+0.20 0	+0.15 0	+0.12 0	+0.25 0	+0.20 0	+0.15 0	+0.50 0	+0.50 0	+0.40 0
0.25 ≤ t < 0.50	+0.20 0	+0.15 0	+0.12 0	+0.25 0	+0.20 0	+0.15 0	+0.30 0	+0.22 0	+0.17 0	+0.60 0	+0.50 0	+0.40 0
0.50 ≤ t < 1.00	+0.25 0	+0.22 0	+0.15 0	+0.25 0	+0.22 0	+0.17 0	+0.40 0	+0.25 0	+0.20 0	+0.70 0	+0.60 0	+0.50 0
1.00 ≤ t < 1.50	+0.25 0	+0.22 0	+0.15 0	+0.30 0	+0.25 0	+0.17 0	+0.50 0	+0.30 0	+0.22 0	+1.00 0	+0.70 0	+0.60 0
1.50 ≤ t < 2.50	-	-	-	+0.40 0	+0.25 0	+0.20 0	+0.60 0	+0.40 0	+0.25 0	+1.00 0	+0.80 0	+0.60 0
2.50 ≤ t < 3.00	-	-	-	+0.50 0	+0.30 0	+0.25 0	+0.60 0	+0.40 0	+0.25 0	+1.20 0	+1.00 0	+0.80 0

Note: Alternatively, ± or - limit dimensions may be arranged. In both cases, the entire area of the limit dimension from the table must be complied with.

Limit dimensions of the nominal width according to DIN EN ISO 9445-1

Nominal width w	Lateral straightness ^a in mm for measuring lengths of			
	1000		2000	
	Normal	Restricted (R)	Normal	Restricted (R)
10 ≤ w < 25	4	16	1.5	6
25 ≤ w < 40	3	12	1.25	5
40 ≤ w < 125	2	8	1.0	4
125 ≤ w < 600	2	8	1.0	4



Measuring lengths (1000 or 2000 mm)

^a If possible, both measuring lengths must be used.

Delivery types

The currently deliverable rust, acid and heat-resistant stainless steels.

Edge designs					
Edge designation	Abbreviation			Brief description	Edge cross-section
	DIN	BS	AFNOR		
Natural edges	NK	ME	RB	Unprocessed edges without special form requirement	
Cut edges	GK	No. 3	CIS	Edges with burrs	
Deburred edges	EK	No. 5	EB	Burrs removed through subsequent processing	
Rounded or chase-threaded edges	SK 1-7	No. 1	ARR/USI	Rounded edges	

Surface designs according to EN 10088		
EN 10088	Design type	Surface finish
2 H	Strain hardened, potentially with stretching-bending-levelling (SBR)	Reflective, polished, matt
2 R	Strain hardened, bright-annealed (lightly rolled)	Reflective
2 F	Cold rolled, heat-treated, lightly rolled with roughened rolling	Bright matt
2 Q	Cold rolled, hardened, tempered	-

The work process, forming, may be replaced by stretching/bending/levelling for soft strips.

Delivery forms		
	Coils wound in single layer	Oscillating wound coils
Inside diameter (mm)	100-500	300/400
Max. outside diameter (mm)	1850 standing 1300 laying	- 850
Max. weight (kg)	13000	1500
Max. traversing width (mm)	-	400
Inflow paper	with/without	without
Inside sleeve	with/without	with/without

