



WAEZHOLZ

Stainless precision steel strip

Expertise in austenitic, ferritic, and martensitic materials

STAINLESS PRECISION STEEL STRIP – PRECISELY CUSTOMIZED FOR YOUR COMPLEX REQUIREMENTS

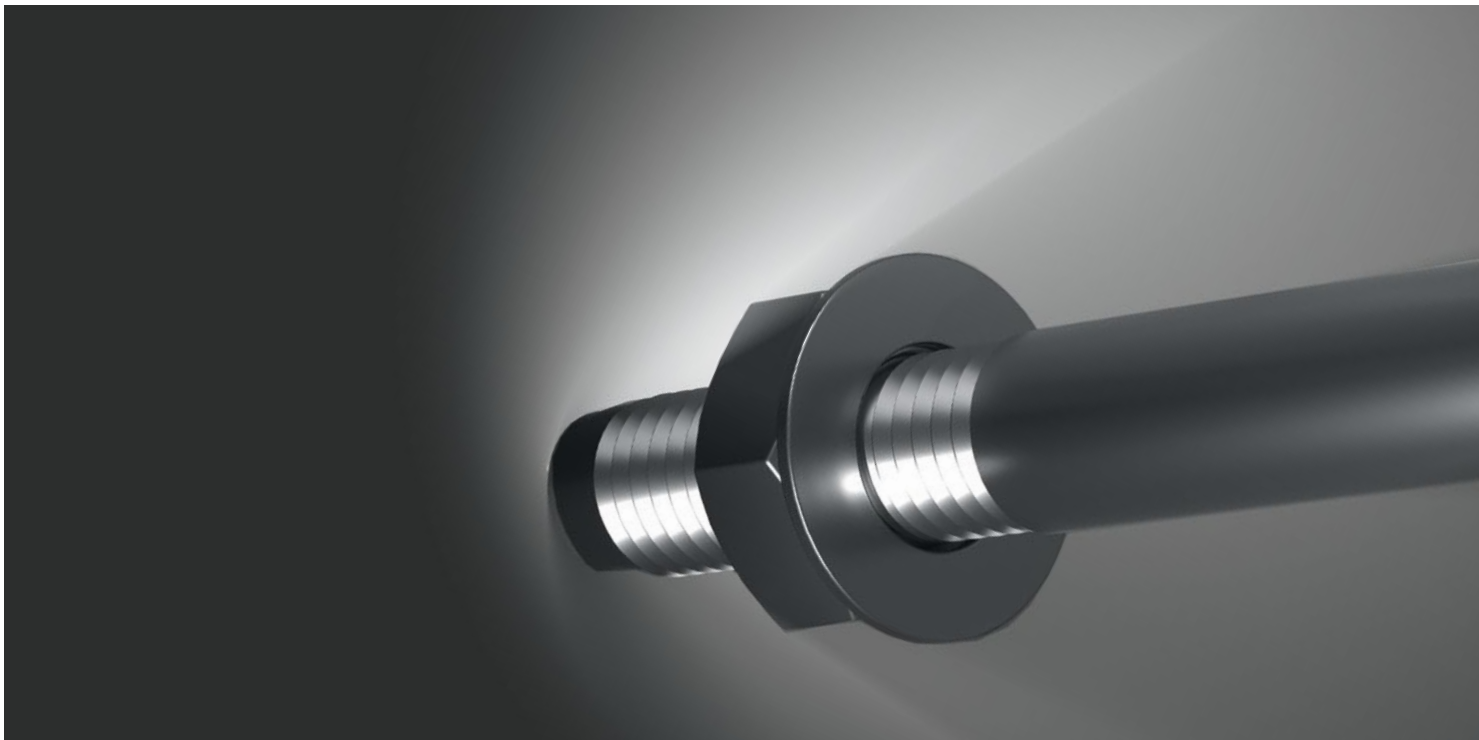
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Well-engineered material solutions deliver reliable performance even under complex conditions. Our stainless precision steel strip with an austenitic, ferritic, or martensitic microstructure is a prime example – offering solutions for applications with sophisticated technical requirements.

Do you need a material concept that combines resistance to corrosion, acid, and heat with excellent forming properties? Together with high tensile strength? Then get in touch with us to discuss your requirements.

Our stainless precision steel strip grades combine the special material characteristics of stainless steels with, for example, exceptionally good forming properties or special performance characteristics such as precise spring properties. This is made possible thanks to our specially coordinated annealing and rolling processes, which allow us to tailor the austenitic, ferritic or martensitic microstructure perfectly to the requirements of subsequent processing and the final application.

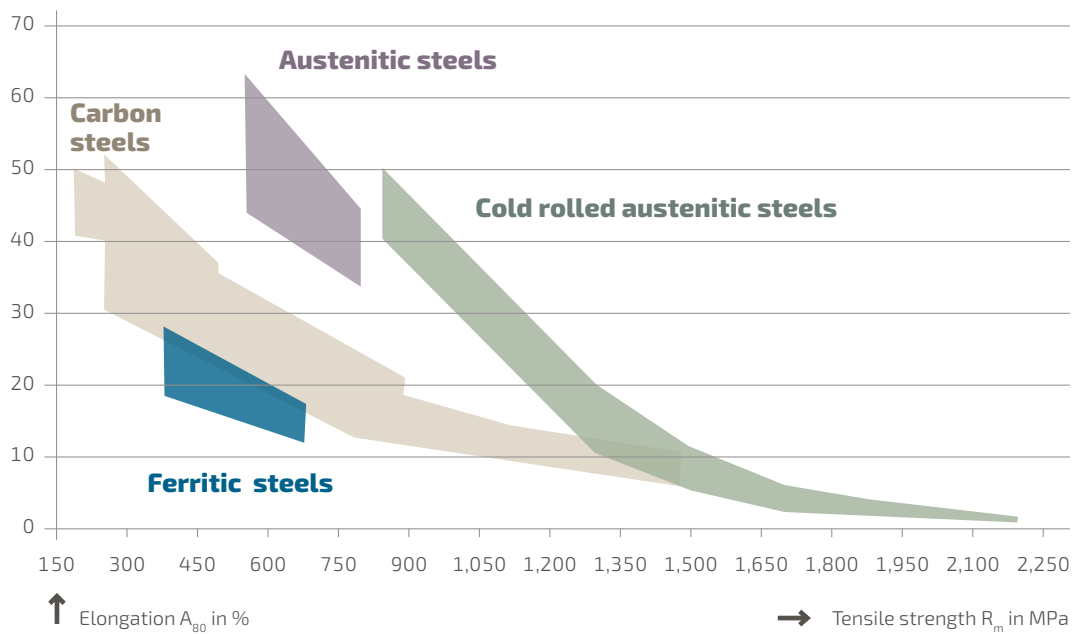
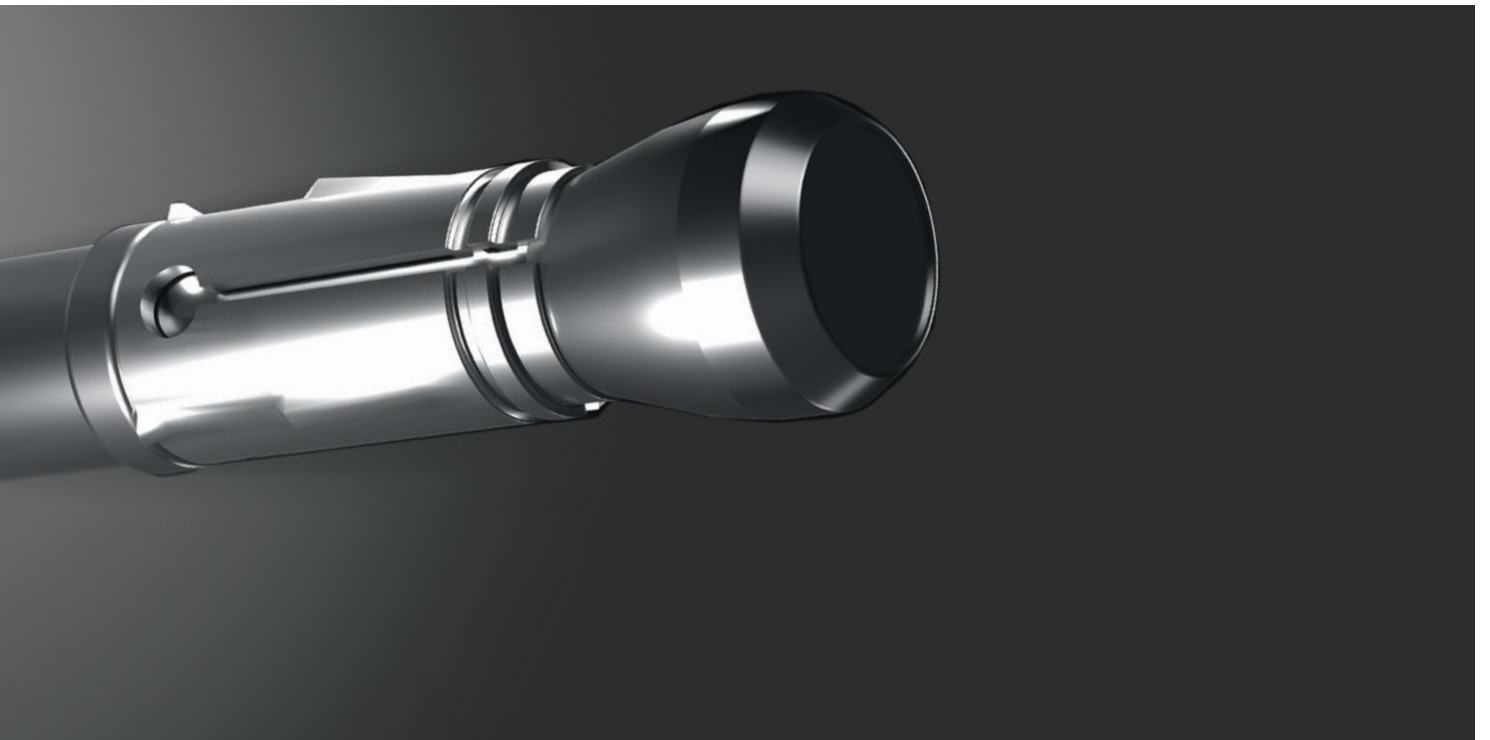
Our stainless precision steel strip has proven itself in use for many years, particularly in technically demanding fields such as medical technology and safety-related applications in automotive and electrical engineering. Another clear indication of our materials' outstanding performance characteristics is their use in the production of bipolar plates for fuel cells. For this purpose, we supply extremely low nominal thicknesses ranging from 50 to 200 µm.



INDIVIDUALLY CUSTOMIZED MICROSTRUCTURE AND PROPERTIES

Simply tell us your requirements and we'll customize the microstructure to perfectly meet your needs – using precisely coordinated rolling and annealing processes, we can reliably define the grain size and achieve an extremely homogeneous microstructure. This ensures that you receive materials with consistent properties within the tightest tolerances across numerous delivery batches. You benefit from outstanding further processing properties and exact reproducibility on your own production lines.

The main alloying elements chromium and nickel ensure that our precision steel strip is highly resistant to corrosion, acid, and heat. We can optimize this resistance as needed with additives such as molybdenum, niobium, or titanium. These allow us to give the material additional technological properties such as deep-drawing, bending, or punching properties, as well as spring properties optimized for the specific application.



01 Safety-relevant

Bolt anchor expansion sleeves made of stainless precision steel strip ensure the bolts are securely anchored for years to come – even in cracked concrete.

02 Range of stainless precision steel strip grades

Compared to traditional cold rolled steel strip, our stainless steels offer significantly greater variety in terms of elongation and tensile strength. For you as a customer, this ultimately means that you receive a material whose mechanical properties perfectly match your requirements.

Austenitic stainless steel strip

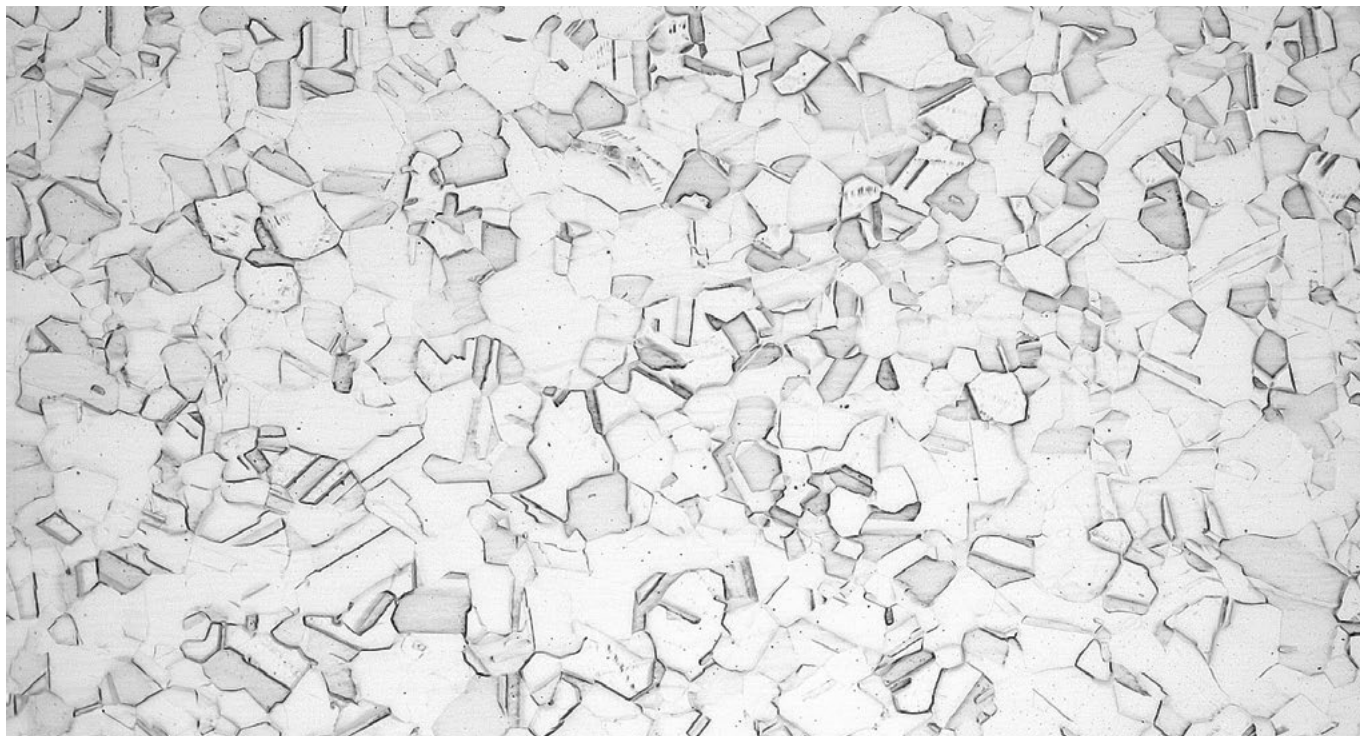
Deep drawability and spring properties

Thanks to its excellent formability, our annealed stainless precision steel strip with an austenitic microstructure is particularly suitable for deep drawing and stretch forming processes. Precisely coordinated rolling and annealing processes result in a homogeneous microstructure with high isotropy and low earing for direction-independent forming behavior and uniform flow during deep drawing and stretch forming.

In comparison, the cold-worked versions offer impressive tensile strengths of up to 2,200 MPa in the standard range. A specially parameterized tempering process even allows us to achieve higher tensile strengths. In addition, we use precisely tailored alloy variations to match strength properties and elongation values to your specific application requirements.

Chemical Composition

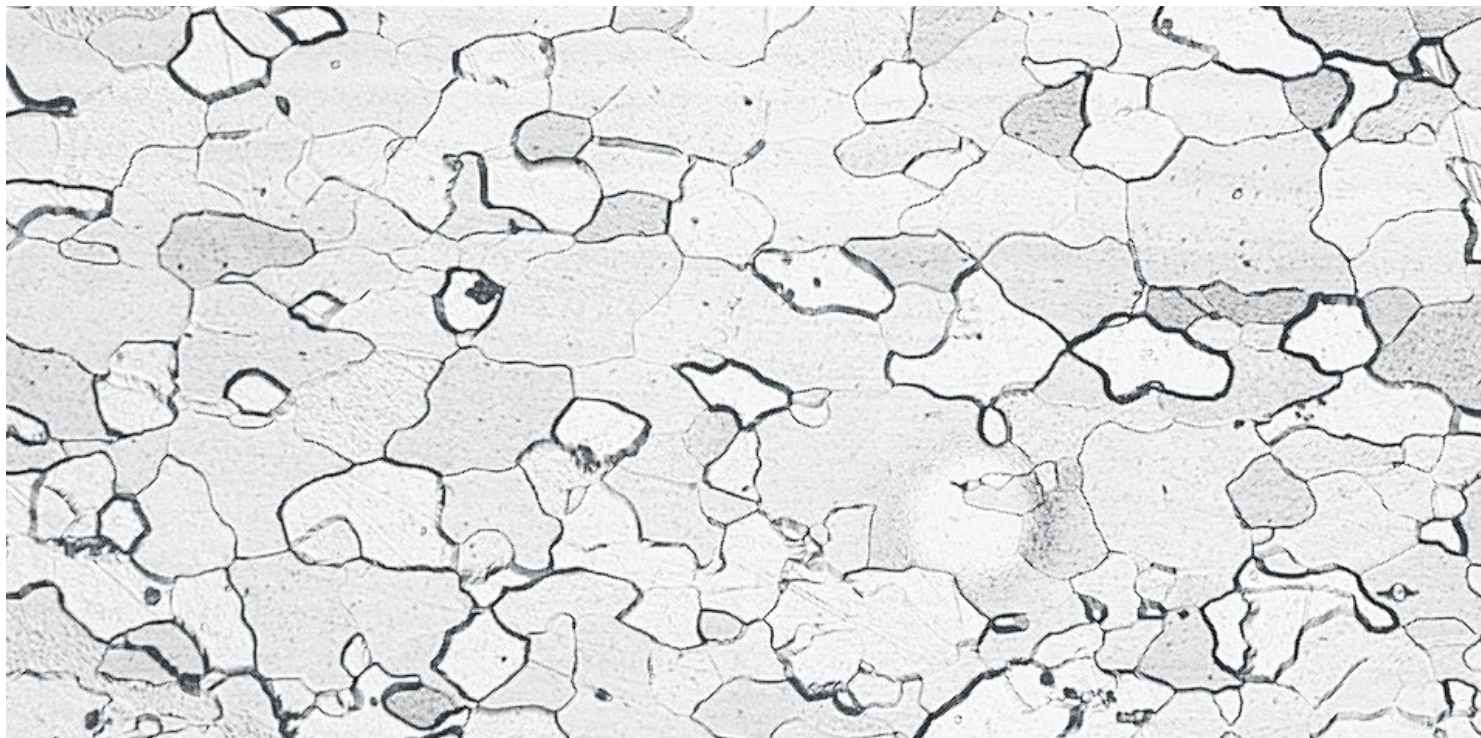
Abbreviated designation	Material no.	Comparable standards		Mass share in %							
		DIN/EN	ASTM/AISI	C _{max.}	Si _{max.}	Mn _{max.}	Cr	Ni	Mo	N ₂ _{max.}	Ti
DIN EN 10088-2 DIN EN 10095											
Austenitic chrome nickel steels											
X5CrNi18-10	1.4301	1.4301	304	0.07	1.0	2.0	17.5-19.5	8.0-10.5	-	0.10	-
X2CrNi18-9	1.4307	1.4307	304L	0.03	1.0	2.0	17.5-19.5	8.0-10.5	-	0.10	-
X2CrNi19-11	1.4306	1.4306	304L	0.03	1.0	2.0	18.0-20.0	10.0-12.0	-	0.10	-
X4CrNi18-12	1.4303	1.4303	305	0.06	1.0	2.0	17.0-19.0	11.0-13.0	-	0.10	-
X6CrNiTi18-10	1.4541	1.4541	321	0.08	1.0	2.0	17.0-19.0	9.0-12.0	-	-	5 x C up to 0.70
X12CrMnNiN17-7-5	1.4372	1.4372	-	0.15	1.0	5.5-7.5	16.0-18.0	3.5-5.5	-	0.05-0.25	-
X10CrNi18-8	1.4310.2	1.4310	301	0.15	1.0	2.0	16.0-19.0	7.0-8.0	0.4	0.10	-
X10CrNi18-8	1.4310.4	1.4310	301	0.15	1.5	2.0	16.0-19.0	6.0-7.0	0.8	0.10	-
X10CrNi18-8	1.4310.7	1.4310	301	0.15	1.5	2.0	16.0-19.0	6.0-7.0	0.4	0.10	-
X10CrNi18-8	1.4310.8	1.4310	301	0.15	1.0	2.0	16.0-19.0	6.0-7.0	0.4	0.10	-
X15CrNiSi20-12	1.4828	1.4828	309	0.20	1.5-2.5	2.0	19.0-21.0	11.0-13.0	-	0.11	-
X8CrNi25-21	1.4845	1.4845	310S	0.10	1.5	2.0	24.0-26.0	19.0-22.0	-	0.11	-
Austenitic chrome nickel molybdenum steels											
X5CrNiMo17-12-2	1.4401	1.4401	316	0.07	1.0	2.0	16.5-18.5	10.0-13.0	2.0-2.5	0.10	-
X2CrNiMo17-12-2	1.4404	1.4404	316L	0.03	1.0	2.0	16.5-18.5	10.0-13.0	2.0-2.5	0.10	-
X2CrNiMo18-14-3	1.4435	1.4435	316L	0.03	1.0	2.0	17.0-19.0	12.5-15.0	2.5-3.0	0.10	-
X6CrNiMoTi17-12-2	1.4571	1.4571	316Ti	0.08	1.0	2.0	16.5-18.5	10.5-13.5	2.0-2.5	-	5 x C up to 0.70



Mechanical Properties

Abbreviated designation	Material no.	Annealed / formed / tension leveled			Strain hardened (R _m in MPa) according to DIN EN 10151							
		R _m in MPa	R _{p0.2} in MPa	A _{B0} in %	+C700	+C850	+C1000	+C1150	+C1300	+C1500	+C1700	+C1900
Austenitic chrome nickel steels												
X5CrNi18-10	1.4301	≤720	≥230	≥45	700-850	850-1000	1000-1150	1150-1300	1300-1500	-	-	-
X5CrNi18-10	1.4301	≤680	≥220	≥47	700-850	850-1000	1000-1150	-	-	-	-	-
X2CrNi19-11	1.4306	≤650	≥200	≥45	-	-	-	-	-	-	-	-
X4CrNi18-12	1.4303	≤600	≥200	≥40	-	-	-	-	-	-	-	-
X6CrNiTi18-10	1.4541	≤700	≥230	≥40	-	-	-	-	-	-	-	-
X12CrMnNiN17-7-5	1.4372	≤900	≥300	≥45	700-850	850-1000	1000-1150	1150-1300	1300-1500	1500-1700	-	-
X10CrNi18-8	1.4310.2	≤900	≥300	≥45	-	850-1000	1000-1150	1150-1300	1300-1500	1500-1700	-	-
X10CrNi18-8	1.4310.4	≤1000	≥300	≥40	-	-	1000-1150	1150-1300	1300-1500	1500-1700	1700-1900	1900-2200
X10CrNi18-8	1.4310.7	≤1100	≥300	≥40	-	-	-	1150-1300	1300-1500	1500-1700	1700-1900	1900-2200
X10CrNi18-8	1.4310.8	≤750	≥300	≥30	-	-	-	1150-1300	1300-1500	1500-1700	1700-1900	1900-2200
X15CrNiSi20-12	1.4828	≤720	≥350	≥35	-	-	-	-	-	-	-	-
X8CrNi25-21	1.4845	≤700	≥210	≥35	-	-	-	-	-	-	-	-
Austenitic chrome nickel molybdenum steels												
X5CrNiMo17-12-2	1.4401	≤730	≥230	≥42	700-850	850-1000	1000-1150	-	-	-	-	-
X2CrNiMo17-12-2	1.4404	≤650	≥210	≥40	700-850	850-1000	-	-	-	-	-	-
X2CrNiMo18-14-3	1.4435	≤700	≥220	≥40	-	-	-	-	-	-	-	-
X6CrNiMoTi17-12-2	1.4571	≤690	≥240	≥35	-	-	-	-	-	-	-	-
Austenitic special grade												
X8CrMnCuNi16-9	1.4616	650-950	≥270	≥40	700-900	800-1000	1000-1150	1150-1300	1300-1500	1550-1700	-	-

Overlapping R_m ranges within the standardized tensile strength classes are also possible. Limited R_m ranges available upon request. Condition greater than +C1900 possible upon request.

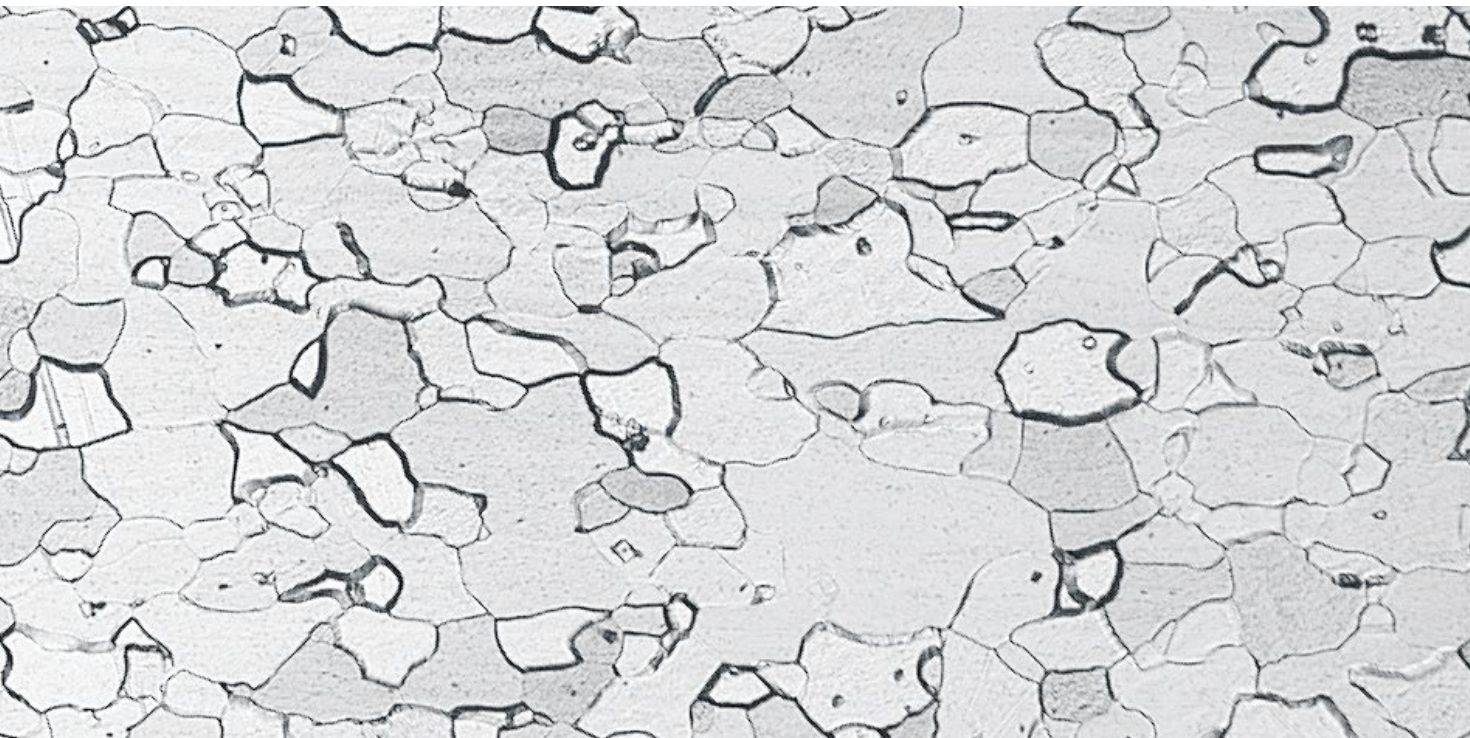


Ferritic stainless chromium steels

Highly formable and corrosion resistant

We offer you ferritic stainless chromium steels spheroidize-annealed (2R) with excellent formability or strain hardened (2H) with tensile strengths of over 1,000 MPa. We achieve the excellent formability of the spheroidize-annealed versions by adjusting the grain size precisely to the requirements of your forming operation. In addition, we adapt the surface topography of the material to the lubricant you use – for even more efficient forming operations.

Thanks to our state-of-the-art production technology, we also achieve an exceptional thickness range of 0.05 to 4 mm. Both the very low and high thicknesses clearly exceed the typically available thickness ranges.



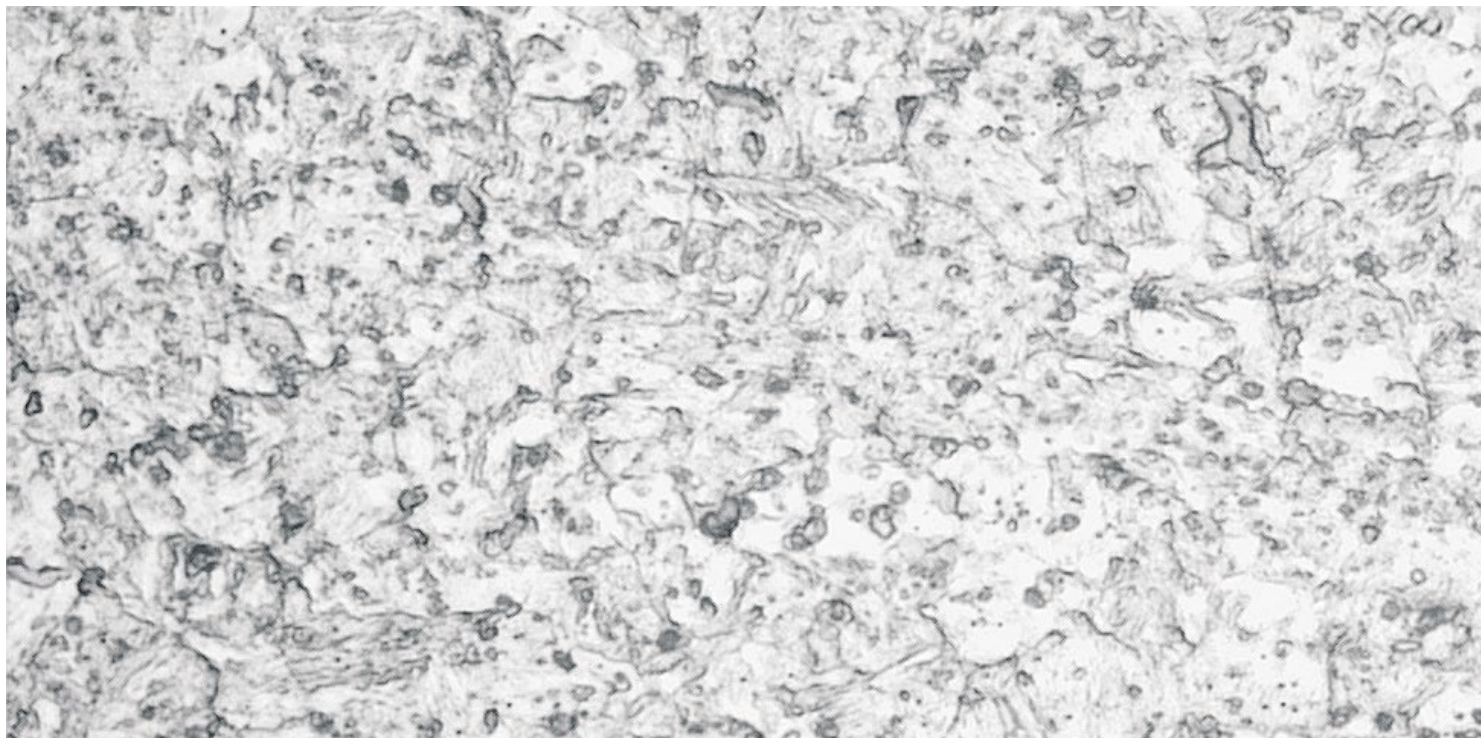
Chemical Composition

Abbreviated designation DIN EN 10088-2 DIN EN 10095	Material no.	Comparable standards		Mass share in %								
		DIN/EN	ASTM/AISI	C _{max.}	Si _{max.}	Mn _{max.}	Cr	Ni	Mo	N _{max.}	Nb	Ti
X6Cr17	1.4016.1	1.4016	430	0.080	1.0	1.0	16.0-18.0	-	-	-	-	-
X6Cr17	1.4016.2	1.4016	430	0.030	1.0	1.0	16.0-18.0	-	-	-	-	-
X2CrTiNb18	1.4509	1.4509	-	0.030	1.0	1.0	17.5-18.5	-	-	-	[3 × C + 0.30] up to 1.00	0.1-0.6
X2CrTi12	1.4512	1.4512	-	0.030	1.0	1.0	10.5-12.5	-	-	-	-	[6 × (C + N)] up to 0.65
X2CrMoTi18-2	1.4521	1.4521	444	0.025	1.0	1.0	17.0-20.0	-	1.75-2.50	0.03	-	[4 × (C + N) + 0.15] up to 0.80

Mechanical Properties

Abbreviated designation DIN EN 10088-2 DIN EN 10095	Material no.	Annealed / formed / tension leveled			Strain hardened (R _m in MPa) according to DIN EN 10151							
		R _m in MPa	R _{p0.2} in MPa	A ₈₀ in %	+C700	+C850	+C1000	+C1150	+C1300	+C1500	+C1700	+C1900
X6Cr17	1.4016.1	≤600	≥260	≥20	700 - 850	850 - 1000	upon request	-	-	-	-	-
X6Cr17	1.4016.2	≤500	≥200	≥22	700 - 850	-	-	-	-	-	-	-
X2CrTiNb18	1.4509	≤630	≥230	≥18	-	-	-	-	-	-	-	-
X2CrTi12	1.4512	≤560	≥210	≥25	-	-	-	-	-	-	-	-
X2CrMoTi18-2	1.4521	≤640	≥300	≥20	-	-	-	-	-	-	-	-

Overlapping R_m ranges within the standardized tensile strength classes are also possible. Limited R_m ranges available upon request.



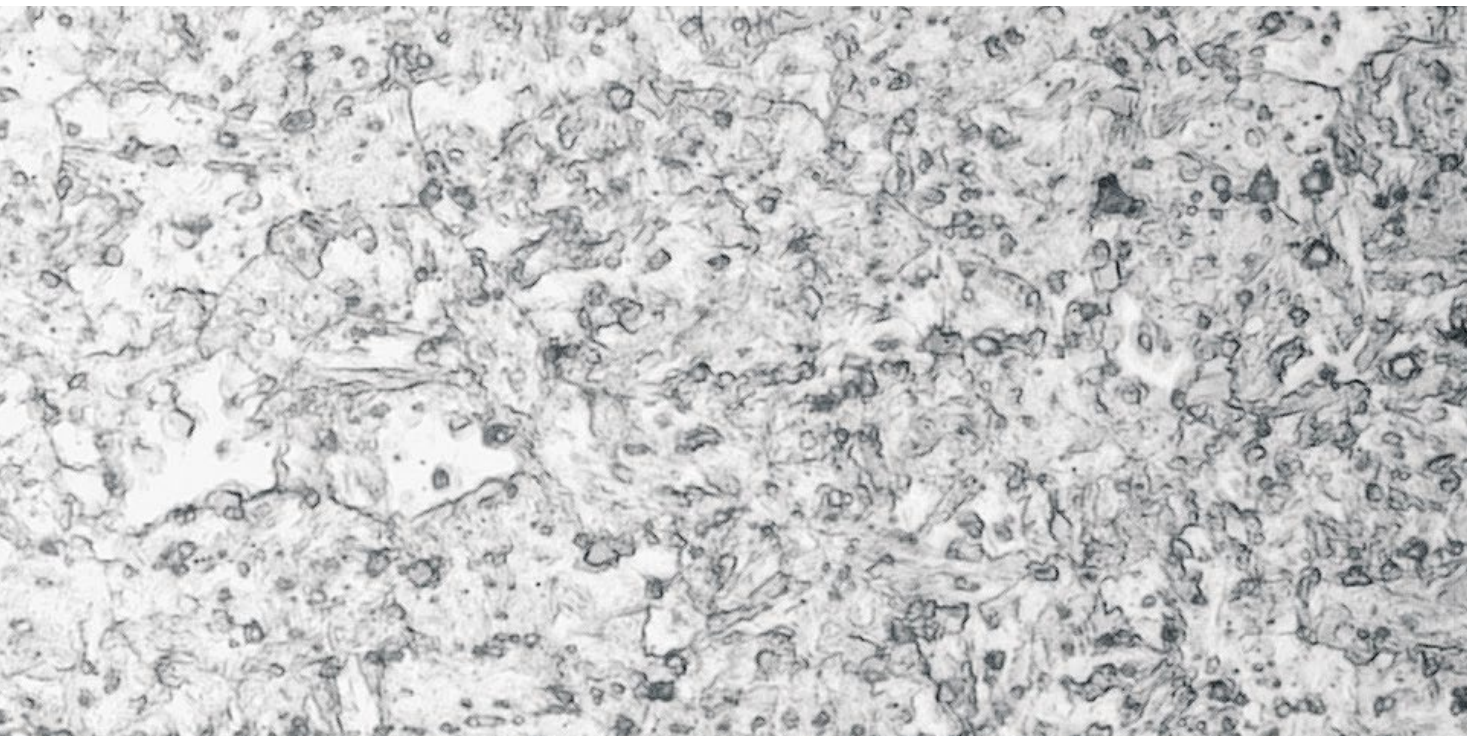
Martensitic stainless cold rolled steel strip

Spheroidize annealed or strip tempered

High ductility, hardness, and corrosion resistance form the core material specifications for end applications such as cutlery, tools, and structural housing components. For these applications, we supply non-tempered and martensitically hardened and tempered stainless steel grades tailored to your manufacturing process.

The non-tempered versions intended for subsequent piece hardening are available cold-rolled to strength or spheroidize-annealed (2R) for improved formability. Our range also includes particularly soft versions with high plasticity for complex 3D molding.

In the case of the martensitically hardened and tempered version, our hardening process enables us to martensitically harden and temper steel strip with thicknesses from 0.1 mm to 4 mm. This means that you can choose from an exceptionally wide range of thicknesses of our corrosion-resistant and wear-resistant grades for your projects.



Chemical Composition

Abbreviated designation DIN EN 10088-2 DIN EN 10095	Material no.	Comparable standards		Mass share in %								
		DIN/EN	ASTM/AISI	C _{max.}	Si _{max.}	Mn _{max.}	Cr	Ni	Mo	N _{max.}	Ti	Other
X20Cr13	1.4021	1.4021	420	0.16-0.25	1.0	1.5	12.0-14.0	-	-	-	-	-
X30Cr13	1.4028	1.4028	420	0.26-0.35	1.0	1.5	12.0-14.0	-	-	-	-	-
X46Cr13	1.4034	1.4034	420	0.43-0.50	1.0	1.0	12.5-14.5	-	-	-	-	-
X38CrMo14	1.4419	1.4419	-	0.36-0.42	1.0	1.0	13.0-14.5	-	0.6-1.0	-	-	-
X55CrMo14	1.4110	1.4110	-	0.45-0.60	1.0	1.0	13.0-15.0	-	0.5-0.8	-	-	V: 0.15

Mechanical Properties

Abbreviated designation DIN EN 10088-2 DIN EN 10095	Material no.	Annealed / formed / tension leveled			Strain hardened (R _m in MPa) based on DIN EN 10151					+QT	
		R _m in MPa	R _{p0.2} in MPa	A ₈₀ in %	+C700	+C850	+C1000	+C1150	+C1300	HRC	HV
X20Cr13	1.4021	≤700	-	≥13	700-900	800-1000	-	-	-	44-50	440-530
X30Cr13	1.4028	≤730	-	≥13	700-900	800-1000	1000-1200	-	-	45-51	450-550
X46Cr13	1.4034	-	-	-	-	800-1000	1000-1200	1200-1400	-	49-55	510-610
X38CrMo14	1.4419	≤700	-	≥13	-	800-1000	1000-1200	1200-1400	-	46-52	450-560
X55CrMo14	1.4110	-	-	-	upon request					50-56	530-640

Overlapping R_m ranges within the standardized tensile strength classes are also possible. Limited R_m ranges available upon request.

Stainless precision steel strip for bipolar plates

Bipolar plates, such as those used in electrolyzers and fuel cells, perform a variety of functions: they channel hydrogen and oxygen through fine gas channels, support cooling by dissipating heat, and contribute to the mechanical stability of the bipolar plate stacks. Our stainless precision steel strip is the ideal material for bipolar plates in all industries and areas of application. Available in extremely thin and thicker versions for a wide range of wall thicknesses, they offer the perfect properties for use in fuel cells and electrolyzers.

All our stainless precision steel strip grades offer excellent formability, enabling even the complex geometry of a bipolar plate to be produced to perfection. Dimensional stability in the application-specific strength range as well as the highest degrees of purity complement our portfolio of properties and ensure that the material can be perfectly processed in subsequent stages of the value chain – across the entire thickness range.

In addition, we can adapt the surface topology precisely to your individual specifications. For example, we specifically adjust the roughness of the material surface to create optimal conditions for the subsequent forming and coating process.

This increases the performance of the bipolar plate and therefore also that of the subsequent final application.

Overview of primary materials and forms of delivery for bipolar plates in mobile fuel cell systems

Condition	Microstructure	Thickness range	Tolerance class according to DIN EN ISO 9445-1	Bendability ²⁾	Formability ³⁾
Standard	Austenite	0.05 mm – 0.20 mm	Precision	Bending angle $\alpha = 180^\circ$	9.2
Waelzholz BPP steel grades ¹⁾			≤ Precision	Bending radius $r = 0$	10.2

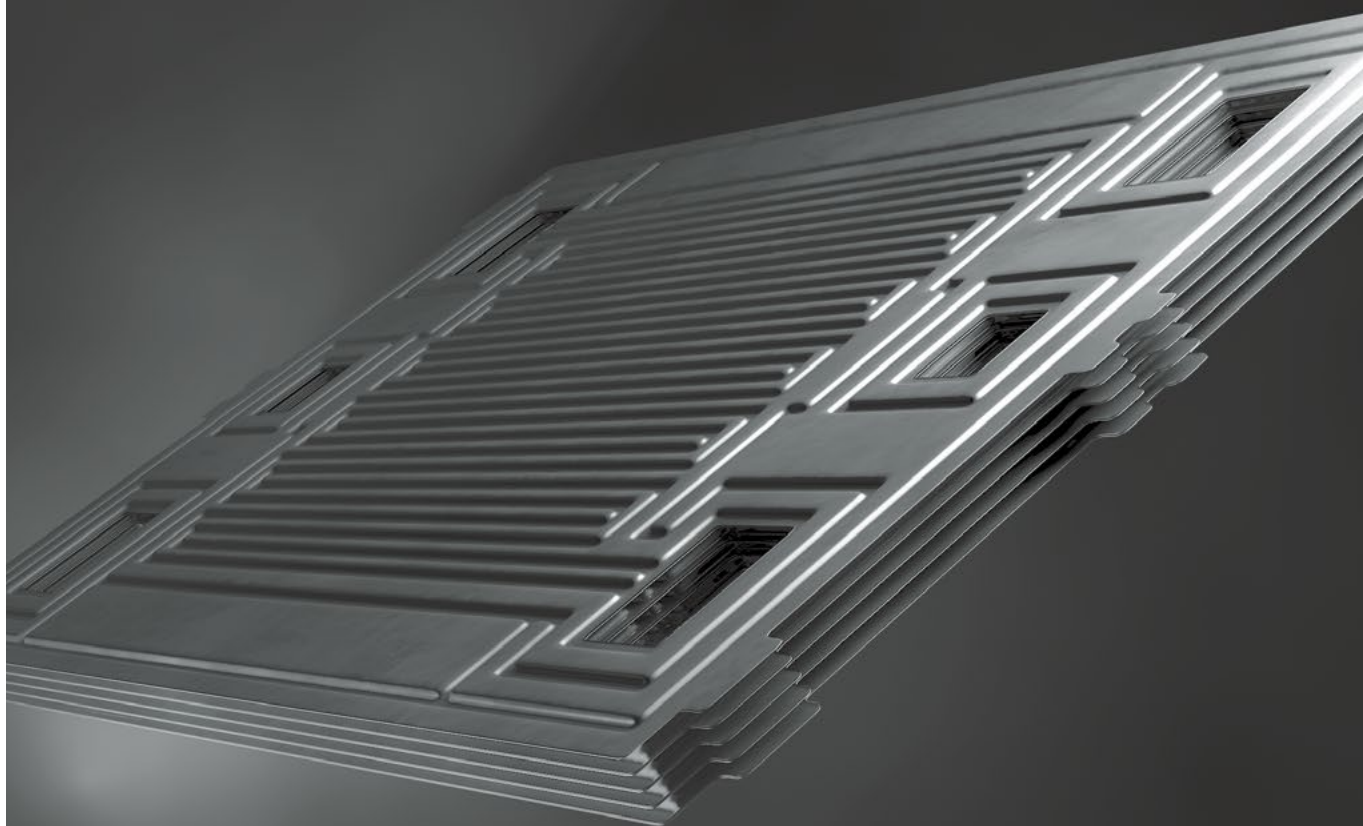
¹⁾ BPP steel grades = Bipolar plate steel

²⁾ Mandrel axis longitudinal and transverse to the rolling direction

³⁾ Erichsen cupping value (IE) [mm], at strip thickness = 0.075 mm, based on DIN EN ISO 20482

Overview of primary materials and forms of delivery for bipolar plates in electrolyzers

Condition	Microstructure	Thickness range	Tolerance class according to DIN EN ISO 9445-1	Length of sheets
Coil	Austenite	0.20 mm – 1.50 mm	≤ Precision upon request	–
Cut-to-length sheets		1.00 mm – 1.50 mm		400 – 4,000 mm



Bipolar plates have a complex shape because of the required flow fields (i.e., the fine gas channels). Our stainless precision steel strip makes it possible to carry out the necessary forming processes, even with extremely thin strip thicknesses of 50 to 200 μm .

Wide range of dimensions – tightest tolerances

Our expertise is your advantage – we supply stainless precision steel strip with austenitic, ferritic, or martensitic microstructures, manufactured to the tightest tolerances with defined material properties, and offering exceptional consistency across multiple delivery batches. This guarantees exact reproducibility in all downstream processing operations, as well as reliable component properties.

Our stainless grades are available in thicknesses from 0.05 mm to 4 mm (depending on the microstructure) and in widths from 3 mm to 650 mm. In addition, a wide range of surface finishes and edge treatments are available. The stainless steel microstructures austenite, ferrite, and martensite are also available in profile form.

Dimensional ranges

Thickness	in mm	0.05 - 4.00 ¹⁾
Width	in mm	3 - 650

¹⁾ Thickness greater than 4 mm upon request.

Tolerances of nominal thickness according to DIN EN ISO 9445-1

Nominal thickness (t) in mm	Tolerances 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 ¹⁾ ≤ 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

¹⁾ For thicknesses < 0.05 mm, the values for the limit dimension must be arranged upon request and ordering.

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. The thickness range of 3–4 mm is available according to the tolerance class Normal for nominal thickness of 2.5–3 mm upon request.

Tolerances of nominal width according to DIN EN ISO 9445-1

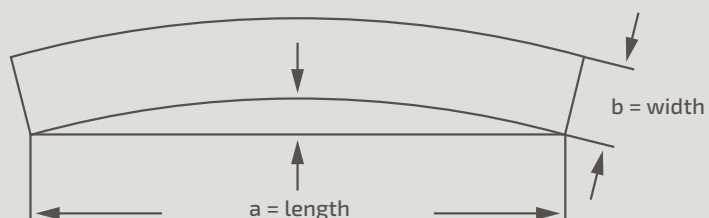
Nominal thickness (t) in mm	Nominal width in mm											
	w ≤ 40			40 ≤ w < 125			40 ≤ w < 125			125 ≤ w < 250		
	Normal	Fine (F)	Precision (P)	Normal	Fine (F)	Precision (P)	Normal	Fine (F)	Precision (P)	Normal	Fine (F)	Precision (P)
t < 0.25	+ 0.170	+ 0.130	+ 0.100	+ 0.200	+ 0.150	+ 0.120	+ 0.250	+ 0.200	+ 0.150	+ 0.500	+ 0.500	+ 0.400
0.25 ≤ t < 0.50	+ 0.200	+ 0.150	+ 0.120	+ 0.250	+ 0.200	+ 0.150	+ 0.300	+ 0.220	+ 0.170	+ 0.600	+ 0.500	+ 0.400
0.50 ≤ t < 1.00	+ 0.250	+ 0.220	+ 0.150	+ 0.250	+ 0.220	+ 0.170	+ 0.400	+ 0.250	+ 0.200	+ 0.700	+ 0.600	+ 0.500
1.00 ≤ t < 1.50	+ 0.250	+ 0.220	+ 0.150	+ 0.300	+ 0.250	+ 0.170	+ 0.500	+ 0.300	+ 0.220	+ 1.000	+ 0.700	+ 0.600
1.50 ≤ t < 2.50	–	–	–	+ 0.400	+ 0.250	+ 0.200	+ 0.600	+ 0.400	+ 0.250	+ 1.000	+ 0.800	+ 0.600
2.50 ≤ t < 3.00	–	–	–	+ 0.500	+ 0.300	+ 0.250	+ 0.600	+ 0.400	+ 0.250	+ 1.200	+ 1.000	+ 0.800

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.

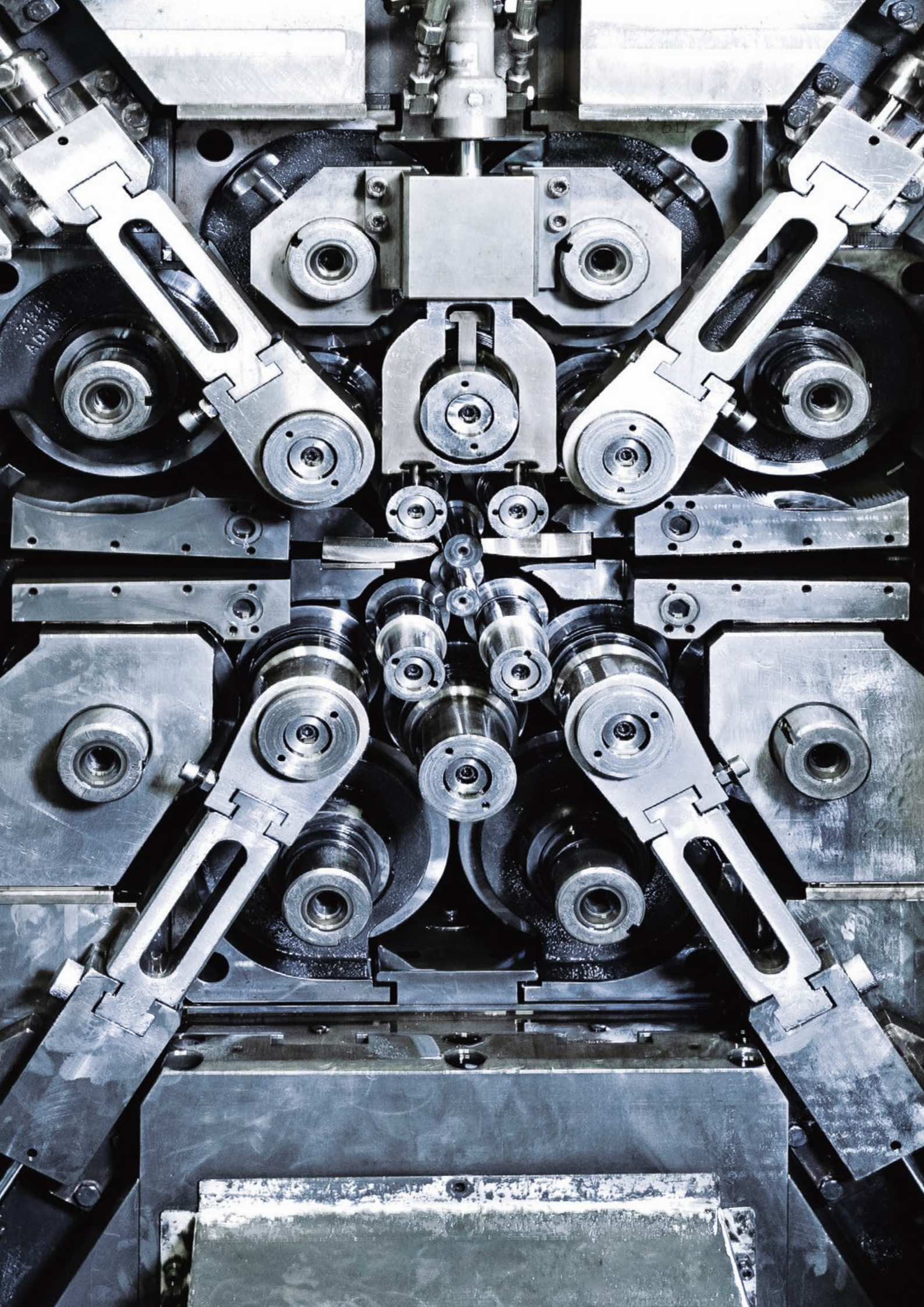
Limit dimensions of the nominal width according to DIN EN ISO 9445-1

Nominal width (w) in mm	Lateral straightness ¹⁾ in mm for measuring lengths of			
	Normal		Restricted (R)	
	1,000 mm	2,000 mm	1,000 mm	2,000 mm
10 ≤ w < 25	4	16	1.50	6
25 ≤ w < 40	3	12	1.25	5
40 ≤ w < 125	2	8	1.00	4
125 ≤ w < 600	2	8	1.00	4

¹⁾ If possible, both measuring lengths must be used.



Measuring lengths
(a = 1,000 or 2,000 mm)



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 DIN EN 10088

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

Design type QT (Surface finish: bright, reflective, polished, dull) upon request.

Delivery types

		Coils wound in single layer	Oscillate-wound coils	Endless coils
Inside diameter	in mm	100 - 500	300/400	300 - 500
Max. outside diameter	in mm	1,850 standing 1,450 laying	- 850	1,450
Max. weight	in kg	1,300	1,500	3,000
Max. traversing width	in mm	-	400	30 (material width)
Inflow paper		with/without	without	without
Inside sleeve		with/without	with/without	without



MORE THAN STAINLESS PRECISION STEEL STRIP

**Discover our wide range of tailor-made steel materials
and our worldwide services.**

High-quality stainless precision steel strip from Waelzholz forms the basis of many of our customers' sophisticated products. Our goal has been and continues to be the provision of customized steel materials in this sector. If nothing else, we achieve this through our comprehensive expertise in the development and production of our wide range of materials for highly diverse applications.

As a technology leader for sophisticated steel strip solutions, we rely on uncompromising premium quality. Solution-oriented engineering and services for all phases of the value-added chain make us a reliable partner worldwide.



For further information visit
waelzholz.com/company

OUR MATERIALS AT A GLANCE

PRODUCT GROUP	VARIATIONS	CUSTOMER BENEFIT
Cold rolled steel strip	DC-grade steel , micro-alloyed steel, case-hardening steel, steel for hardening and tempering, spring steel or fine blanking grades: alloyed or as standard grades	Unparalleled dimensional accuracy, good formability, suitable for heat treatment, high elasticity, optimal combination of tensile strength and formability
Hardened and tempered steel strip	Martensite, bainite, sorbite	Hardness, homogeneity, spring properties, high resistance to wear, substitution of piece hardening
High-strength steel strip	High-strength, micro-alloyed fine grained steel	High resistance to wear and good formability at the same time
Surface-coated steel strip	With a phosphate layer refined case-hardening or DC-grade steel	Implementation of complex, multi-stage forming operations, prolonged service life of the forming tool
Profiles	Over 250 different profile shapes made of steel strip or wire	Tailored geometries, cross-sections tailored to customer products and processes
Electrical steel strip	NO grades, HF grades, HS grades, HP grades, DIN EN 10106, DIN EN 10303, bonding varnish, fast-bonding varnish or insulating varnish	Thermal conductivity, low core losses, high magnetic polarization, high mechanical durability at high speeds, undisturbed magnetic flux due to elimination of imperfections, improved insulation resistance
Flat wire products	Wide range of materials from spring steel to hardened and tempered steel strip	Prolonged service life thanks to a mill edge, high tensile strength and even bending properties
Stainless precision steel strip	Corrosion-resistant steel, upon request with special alloys	Resistance to corrosion, acids, or heat

Customized materials for your industry

Our customers develop future-oriented products in the key industries of today and tomorrow. Here, innovative material solutions are an essential foundation. We know and understand our customers' industries and their requirements – from mobility to energy to multifaceted industrial applications..



We combine this industry expertise with our excellent engineering competence and fine-tuned production processes. Our extensive range of production lines in combination with state-of-the-art and intelligently networked measuring and control technology allows us to produce materials with outstanding properties and to reliably achieve reproducible quality in all areas. This is how we develop and produce one thing in particular for our customers: Unparalleled quality..

↗ For further information visit
waelzholz.com/steel-materials

An international orientation has characterized the successful development of our company since the very start. Today 2,300 employees in Europe, North and South America, and Asia produce more than 780,000 tons of high-quality steel strip and profiles annually.

First choice when it comes to the future of cold rolled steel strip. Worldwide.

Personal relationships, the digital networking of our production sites and consistently high process standards are what counts when it comes to providing our customers with engineering, production and supply chain management expertise in unparalleled high-quality. Regardless of time and place, anywhere in the world.

This is how we pursue our long-term strategy: continuing consequently our journey as a medium-sized, independent, family-owned company with the development of customized material solutions. So that in the tradition of long-term partnerships we will remain our customers' first choice when it comes to the future of cold rolled steel strip.

➤ For further information visit
waelzholz.com/contact-partner

WELL POSITIONED



Locations worldwide	13 locations in Europe, North and South America, and Asia
Employees worldwide	2,300
Sales volume steel materials	780,000 tons/year
Share of production outside of Europe	33 %
International share of sales	65 %

