

AISI304 (W1.4301), AISI316 (W1.4401), AISI431(W1.4057)

Standard parameters

Steel grade	X5CrNi18-10 / X5CrNi18-9 (W1.4301) X5CrNiMo17-12-2 / X5CrNiMo1810 (W1.4401) X17CrNi16-2(W1.4057)
Diameter range (metric)	8 - 80 mm
Diameter range (imperial)	1/2" - 3"
Tolerance	ISO f7 (upon request: h7) (EN ISO 286-2)
Roundness	IT / 2
Standard length	5700 - 6200 mm (upon request: special lengths)
Surface roughness	Ra max. 0.20 µm (statistic average: 0.05 - 0.15 µm) (EN ISO 4287)
Chrome layer thickness	< Ø20 mm: min. 15 µm ≥ Ø20 mm: min. 20 µm
Chrome layer hardness	min. 900 HV(0.1)
Straightness	≤ Ø16 mm: max. 0.3 mm : 1000 mm > Ø16 mm: max. 0.2 mm : 1000 mm

Steel grade correspondence

AISI	Werkstoff Nr.
304	1.4301
316	1.4401
431	1.4057

Corrosion resistance properties NSS

AISI	BACI in standard execution
304, 316	Rating 9 after 1000 h
431	Rating 9 after 500 h

The corrosion resistance is tested in our own internal salt spray laboratory according to ISO 10289 / ISO 9227.

Chemical composition (% of weight)

	C	Si max	Mn max	P max	S max	Cr	Mo	Ni	N
XCrNi18-10 / X5CrNi18-9 (W1.4301)	0.07	1.00	2.00	0.045	0.015	17.5 - 19.5	-	8.0 - 10.5	0.11
X5CrNiMo17-12-2 / X5CrNiMo1810 (W1.4401)	0.07	1.00	2.00	0.045	0.015	16.5 - 18.5	2.0 - 2.5	10.0 - 13.0	0.11
X17CrNi16-2 (W1.4057)	0.12 - 0.22	1.00	1.50	0.040	0.015	15.0 - 17.0	-	1.5 - 2.5	-

Mechanical properties acc. to Werkstoff

	Rm Tensile strength (N/mm ²)	Rp0.2 Yield point (N/mm ²)	A5 Elongation (%)
XCrNi18-10 / X5CrNi18-9 (W1.4301) annealed	500 - 700	min 190	min 35
X5CrNiMo17-12-2 / X5CrNiMo1810 (W1.4401) annealed	500 - 700	min 200	min 30
X17CrNi16-2 (W1.4057) QT	800 - 950	min 600	min 12

1 MPa = 1 N/mm²
1 KSI = 6.8947 N/mm²

ISO tolerances for diameter range

Ø	> 6 mm ≤ 10 mm	> 10 mm ≤ 18 mm	> 18 mm ≤ 30 mm	> 30 mm ≤ 50 mm	> 50 mm ≤ 80 mm
f7	-13 µm -28 µm	-16 µm -34 µm	-20 µm -41 µm	-25 µm -50 µm	-30 µm -60 µm
h7	0 µm -15 µm	0 µm -18 µm	0 µm -21 µm	0 µm -25 µm	0 µm -30 µm

Diameter range

Ø (mm)	Ø (inch)	weight (Kg/m)	Ø (mm)	Ø (inch)	weight (Kg/m)	Ø (mm)	Ø (inch)	weight (Kg/m)
8		0.39	25		3.85	45		12.48
10		0.62	25.4	1"	3.98	50		15.41
12		0.89	28		4.93	50.8	2"	15.90
12.7	1/2"	0.99	28.575	1" 1/8	5.03	55		18.64
13		1.04	30		5.55	56		19.32
14		1.21	31.75	1" 1/4	6.21	57.15	2" 1/4	20.13
15		1.39	32		6.31	60		22.18
15.88	5/8"	1.55	34.925	1" 3/8	7.52	63		24.46
16		1.58	35		7.55	63.5	2" 1/2	24.85
18		2.00	36		7.99	65		26.03
19.05	3/4"	2.24	38		8.90	69.85	2" 3/4	30.06
20		2.46	38.1	1" 1/2	8.94	70		30.19
22		2.98	40		9.86	75		34.66
22.225		3.04	42		10.87	76.2	3"	35.78
24	7/8"	3.55	44.45	1" 3/4	12.17	80		39.44

More diameters can be supplied upon request.

Packaging options

Each bar is individually packed in high-quality plastic extrusion sleeve (food industry grade polyethylene). The plastic sleeve is marked for full traceability with the following information:

- Cromsteel trademark
- product code
- outside diameter
- tolerance
- heat number
- date of production
- shift and operator code

The bars are then packed together in bundles and/or in wooden boxes.

Other packaging options are available, like:

- pallets for cut and machined parts
- plastic rings (instead of plastic extrusion sleeve)
- cardboard tubes (instead of plastic extrusion sleeve)
- aluminium vacuum bags (for sea freight)
- special protection oiling