

NIMET

WHERE
INNOVATION
LIVES



CBX

CHROME PLATED STAINLESS STEEL BARS

CHROME PLATED STAINLESS STEEL BARS



NIMAX CBX - W1.4021 (AISI 420) / W1.4057 (AISI 431)
NIMAX CBX - W1.4301 (AISI 304) / W1.4401 (AISI 316)
NIMAX CBX - W1.4542 (AISI 630)

STEEL GRADES CORRESPONDENTS

Werkstoff	EN	DIN	B.S.	UNI	JIS	GOST	AISI / SAE / ASTM
1.4021	X20Cr13	X20Cr13	420S37	X20Cr13	SUS420F	20Ch13	420
1.4057	X17CrNi16-2	X17CrNi16-2	431S29	X16CrNi16	SUS431	20Ch17N2	431
1.4301	X5CrNi18-10	X5CrNi18-10	304S17	X5CrNi18-10	SUS304	08Ch18N10	304
1.4401	X5CrNiMo17-12-2	X5CrNiMo17-12-2	316S19	X5CrNiMo17-12-2	SUS316	08X17H13M2	316
1.4542	X5CrNiCuNb16-4	X5CrNiCuNb16-4	17Cr4Ni	-	SCS 25 SUS630	-	630

CHEMICAL COMPOSITION - IN % BY WEIGHT

Steel grade	C	Si max.	Mn max.	P max.	S max.	Cr	Mo	Ni	N	Cu
W1.4021	0.16 ÷ 0.25	1.00	1.50	0.040	0.03	12.00 ÷ 14.00	-	-	-	-
W1.4057	0.12 ÷ 0.22	1.00	1.50	0.040	0.03	15.00 ÷ 17.00	-	1.50 ÷ 2.50	-	-
W1.4301	max. 0.07	1.00	2.00	0.045	0.03	17.50 ÷ 19.50	-	8.00 ÷ 10.50	max. 0.10	-
W1.4401	max. 0.07	1.00	2.00	0.045	0.03	16.50 ÷ 18.50	2.00 ÷ 2.50	10.00 ÷ 13.00	max. 0.10	-
W1.4542	max. 0.07	0.70	1.50	0.040	0.03	15.00 ÷ 17.00	max. 0.60	3.00 ÷ 5.00	-	3.00 ÷ 5.00

MECHANICAL PROPERTIES

Steel grade	Delivery condition	Diameter Ø mm	Tensile strength R _m		Yield point R _{p0.2} N/mm ²	Elongation* A ₅ %	Hardness Brinell N/mm ²	Norm
			N/mm ²	N/mm ²				
W1.4021	A	6 ≤ Ø ≤ 80	-	max. 760 **	-	-	max. 230 **	EN 10088-3
	QT700	Ø ≤ 100	min. 700	max. 850	min. 500	min. 13	-	
	QT800	Ø ≤ 100	min. 800	max. 950	min. 600	min. 12	-	
W1.4057	A	6 ≤ Ø ≤ 80	-	max. 950 **	-	-	max. 295 **	EN 10088-3
	QT800	Ø ≤ 60	min. 800	max. 950	min. 600	min. 14	-	
	QT900	60 < Ø ≤ 100	min. 800	max. 950	min. 600	min. 12	-	
		60 < Ø ≤ 100	min. 900	max. 1050	min. 700	min. 12	-	
		60 < Ø ≤ 100	min. 900	max. 1050	min. 700	min. 10	-	
W1.4301	A	Ø ≤ 100	min. 500	max. 700 ***	min. 190	min. 40 ***	max. 215 ***	EN 10088-3
W1.4401	A	Ø ≤ 100	min. 500	max. 700 ***	min. 200	min. 40 ***	max. 215 ***	EN 10088-3
W1.4542	AT	Ø ≤ 100	-	max. 1200	-	-	max. 360 **	EN 10088-3
	P800	Ø ≤ 100	min. 800	max. 950	min. 520	min. 18	-	
	P930	Ø ≤ 100	min. 930	max. 1100	min. 720	min. 16	-	
	P960	Ø ≤ 100	min. 960	max. 1160	min. 790	min. 12	-	
	P1070	Ø ≤ 100	min. 1070	max. 1270	min. 1000	min. 10	-	

A = Annealed

QT = Quenched and tempered

* Longitudinal

** The maximum HB values may be raised with 60 HB or the maximum tensile strength with 150 N/mm² for bars up to 35 mm, having undergone final cold working

*** The maximum HB values may be raised with 100 HB or the tensile strength with 200 N/mm² and the minimum elongation value be lowered to 20% for bars up to 35 mm, having undergone final cold working

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Dimensions	Ø6 - 100 mm / Ø1/4" - 4"
Diameter tolerance	ISO f7 / other, on request
Roundness	max. 1/2 from diameter tolerance
Standard lengths	3.000 - 6.000 mm
Special lengths	On request we can offer cut to fix lengths pieces
Surface roughness	Ra: max. 0.20 µm
Chrome layer thickness	Ø < 20 mm: min. 15 µm Ø ≥ 20 mm: min. 20 µm
Chrome layer microhardness	min. 900 HV0.1
Straightness	Ø ≤ 16 mm: max. 0.3 mm/1000 mm Ø > 16 mm: max. 0.2 mm/1000 mm

TABLE OF DIMENSIONS TOLERANCE

Diameter mm	ISO f7 µm
Ø = 6	-10 / -22
6 < Ø ≤ 10	-13 / -28
10 < Ø ≤ 18	-16 / -34
18 < Ø ≤ 30	-20 / -41
30 < Ø ≤ 50	-25 / -50
50 < Ø ≤ 80	-30 / -60
80 < Ø ≤ 100	-36 / -71

CORROSION RESISTANCE LEVELS

Diameter mm	NIMAX CBX W1.4021 (AISI 420) NSS	NIMAX CBX W1.4057 (AISI 431) NSS	NIMAX CBX W1.4301 (AISI 304) NSS	NIMAX CBX W1.4542 (AISI 630) NSS	NIMAX CBX W1.4401 (AISI 316) NSS
Ø6 - 100	rating 9 after 200 h	rating 9 after 500 h	rating 9 after 1200 h	rating 9 after 1000 h	rating 9 after 1450 h

Tested in our own laboratory according to ISO 9227, evaluated according to ISO 10289.

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CHROME PLATED STAINLESS STEEL BARS

Obtained through a chrome plating process over a stainless steel base material, this product not only satisfies certain oxidation resistance requirements, given by the used type of stainless steel, but also different mechanical demands.

Granting higher corrosion resistance, generally used in automotive, food and pharmaceutical industries, the stainless steel grades with higher Nickel content provide a good impact resistance even at lower temperatures (-20°C).

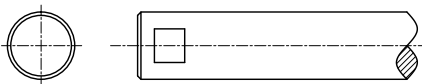
CHROME PLATED STAINLESS
STEEL BARS

CBX

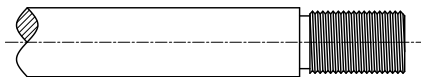
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CUSTOMIZED MACHINING

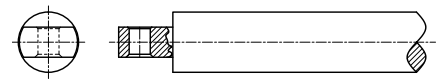
CROSSWISE GROOVE



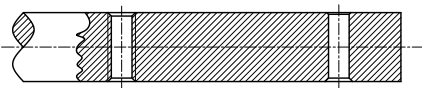
OUTSIDE DIAMETER THREAD



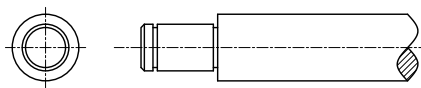
END FOR MOUNT WITH CLEVIS
CLAMP



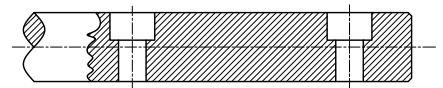
TAPPED OR DRILLED HOLES
RADIALLY THROUGH SHAFT



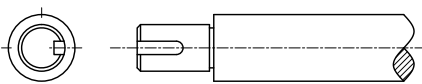
GROOVES FOR SNAP RING



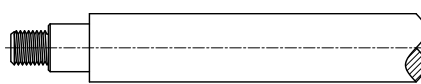
RADIAL DRILLING HOLES, BORED



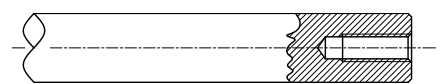
REDUCED DIAMETER WITH/
WITHOUT FEATHER KEYWAY



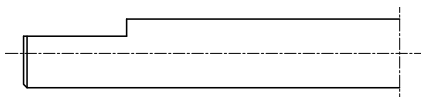
REDUCED DIAMETER WITH
THREADED END



AXIAL DRILLED AND THREADED
TO ENDS



D-CUT SHAPE



STORAGE AND HANDLING RECOMMENDATIONS

- Keep the products stored in dry and covered spaces.
- Do not expose for a long time the bars or tubes to the sunlight or to very low temperatures.
- For storage, preferable to use rubber supports or wood lined supports; direct contact with the floor and steel supports that are not lined with soft materials must be avoided.
- Whenever possible, please use the crane to load or unload the bundles; when you use the fork lifts please avoid the direct contact of the forks with the products.
- Always lift the bundles using textile slings. Don't use metal slings during handling of bundles.
- Always keep dry the cardboard tubes that protect the chromed products.



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