

# NiKrom 500

## Ready-to-use bars which eliminate the risk for corrosion of piston rods

NiKrom 500 is the optimum choice in critical applications or whenever corrosion threatens to drastically reduce the useful life of piston rods.



### APPLICATIONS AREAS

#### Industry

- Mining
- Production of chemicals
- Oil and gas
- Transport
- Civil engineering
- Agriculture

#### Strategic sector

- Military
- Aerospace
- Nuclear
- Power generation

#### Aggressive environments

- Marine and offshore
- Extreme climates
- Corrosive chemicals

### NiKrom 500 Standard metric programme (\*)

Dia., mm	kg/m
20	2.47
22	2.98
25	3.85
28	4.83
30	5.55
32	6.31
35	7.55
36	7.99
40	9.86
42	10.88
45	12.48
50	15.41
55	18.65
56	19.33
60	22.19
63	24.47
65	26.05
70	30.21
75	34.68
80	39.46
85	44.54
90	49.94
100	61.65
110	74.60
120	88.78
125	96.33
130	104.19
140	120.83
150	138.72
160	157.82

\* Imperial sizes are available. The standard range for such is 0.875-6 inch and imperial bars will normally be manufactured to order.

## Chemical analysis of 280X steel (20MnV6 improved)

C %	Si %	Mn %	P %	S %	V %	C.E. % (*)
0.18	0.35	1.55	≤0.020	0.025	0.11	0.55 max

## Mechanical properties

Size $\phi$ mm	Yield stress $R_{eH}$ , N/mm <sup>2</sup>	Tensile stress $R_m$ , N/mm <sup>2</sup>	Elongation $A_5$ , %	Hardness HB	Toughness KV, Joule
20-90	≥520	650-800	≥19	200-240	≥27 at -20°C
>90-125	≥440	550-700	≥19	180-230	≥27 at -20°C
>125	≥350	500-700	≥19	180-230	≥27 at -20°C

## Other grades

Other steel grades can be offered with NiKrom surface treatment. Further, it is possible to combine the outstanding corrosion resistance of NiKrom with an induction-hardened or a tubular execution.

## Surface layer and surface finish

Nickel layer	Chrome layer	Surface roughness
Thickness ≥30 $\mu$ m	Thickness ≥20 $\mu$ m	Ra ≤0.2 $\mu$ m
Hardness ca 300 HV <sub>0.1</sub>	Hardness ≥850 HV <sub>0.1</sub>	Rt ≤1.6 $\mu$ m

## Dimensional tolerances

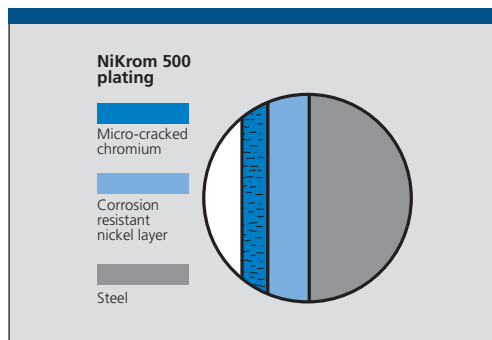
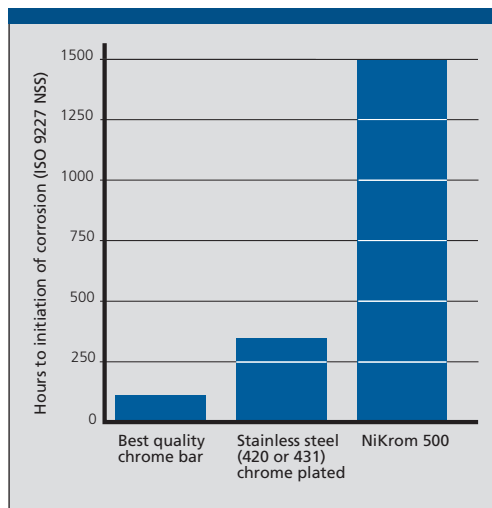
Diameter tolerance	Straightness	Ovality
ISO f7	0.1 mm/m	50% of f7

## Bar lengths

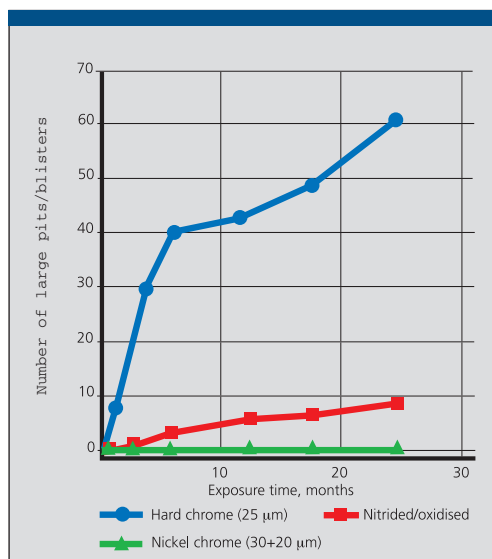
Standard bar lengths are 6 100 +100/-0 mm. Other lengths can be supplied but the maximum is 6 500 +100/-0 mm. For diameters ≥130 mm, the maximum length possible is 6 100 +100/-0 mm.

## Certified corrosion resistance

	ISO 9227 NSS	ISO 9227 AASS
	ASTM B117	ASTM B287
	Neutral salt spray	Acetic acid salt spray
Duration	>1500 hours	>500 hours
Rating according to ISO 10289	10 (no corrosion)	10 (no corrosion)



## Long-time exposure test of piston rods in marine environment



Data source: Swedish Institute for Production Engineering Report No 90811



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