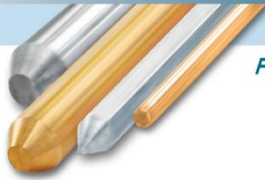


L. KLEIN SA

ACIERS FINS ET MÉTAUX

EDELSTÄHLE UND METALLE

FINE STEEL AND METALS



CHRONIFER M-4108

martensitic

Hardenable Stainless Steel

Material No.	DIN Abbreviation	AFNOR	AISI/SAE/ASTM	ISO	Euro Standard EN	Others
1.4108	X30CrMoN15-1 (X65CrMoN17-3)	X30CrMoN15-1 (former Z 40 CDV 16.02)	AISI 440A ASTM F899/ ASTM A276		X65CrMo17	AMS 5898 UNS S44002

Distinctive feature & main attribute: a highly competitive temperable stainless chromium steel alloy added with nitrogen, precedingly refined by an electroslag remelting process (ESR), charac-terized by its high hardness and good impact bending energy, offering an improved corrosion resistance and compressive strenght.

Use & application range: this alloy meets the requirement of high duty service components and construction parts with high strength and stability against corrosion such as ball screw gearing shafts, plastic extrusion, screwdriver, knives, drills and fastener.

CHEMICAL COMPOSITION IN VOLUME PERCENTAGE	C	Si	Mn	P	S	Cr	Mo	Ni	N	Fe
	0.25 0.35	max. 1.00	max. 1.00	max. 0.03	max. 0.025	14.00 16.00	max. 0.50	0.85 1.10	0.30 0.50	balance

EXECUTION DELIVERY FORM STANDARD SIZES AVAILABILITY	<ul style="list-style-type: none">• Execution in 3 m round bars• Standard size in stock: see Product range• Other sizes on request
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TOLERANCES	<ul style="list-style-type: none">• $\varnothing < 25.00$ mm; ISO h6• $\varnothing \geq 25.00$ mm; ISO h6• Tighter tolerances on request
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MECHANICAL PROPERTIES	At delivery status: <ul style="list-style-type: none">• Tensile strength (R_m): $\varnothing \leq 16$ mm ~ 850 MPa $\varnothing > 16$ mm max. 245 HB• Hardness after tempering: 58 – 60 HRC
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HEAT TREATMENT	<ul style="list-style-type: none">• Soft annealing: 780 – 820 °C, slow cooling in air• Tempering: 1000 – 1030 °C, cooling in oil or in air (Annealing as required see chart)
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CUTTING RATES	$v_c \sim 20 - 25$ m/min, value depending on the lubrication oil, cutting tools and shape of parts. <ul style="list-style-type: none">• Cutting oil: e.g. ORTHO NFX of Motorex
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Modifications will not be adjusted automatically

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Volume no. 1

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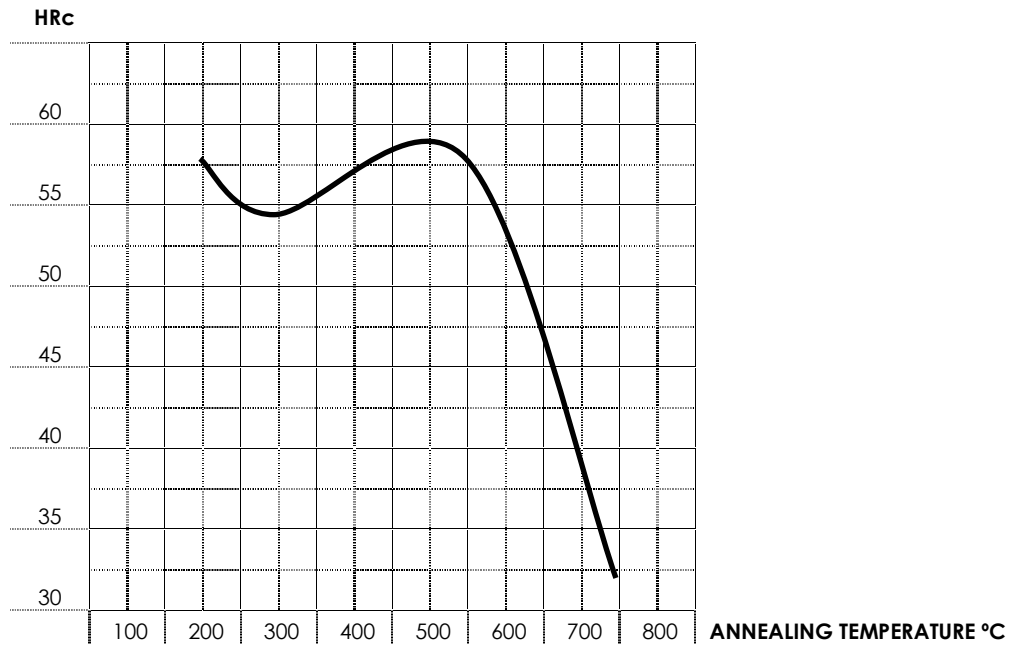
CHRONIFER

M-4108

1.4108

ANNEALING CURVE

depending on the requested hardness



TEMPERATURE 1010 °C, tempering in oil
(size approximately 10 mm)

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