

ACCIAI DA UTENSILI PER LAVORAZIONE A FREDDO

Granulometria disponibile

 Prodotti lunghi*

 Lamiere

*) Presented data refer exclusively to long products. Please observe the detailed explanations at the end of the data sheet (pdf).

Descrizione del prodotto

Acciaio resistente agli urti caratterizzato da eccellente tenacità e resistenza all'usura.

Percorso di fusione

 Airmelted

Proprietà

- > Durezza e duttilità : molto alto
- > Resistenza alla compressione : alto
- > Stabilità dimensionale : buono

Applicazioni

- > Stampaggio a freddo
- > Parti standard (stampi, piastre, perni, punzoni)
- > Pressatura delle polveri

Dati tecnici

Corrispondenze	
~1.2550	SEL
~60WCrV7	EN
~60WCrV8	
~S1	AISI

Analisi chimica

C	Si	Mn	Cr	V	W
0,63	0,60	0,30	1,10	0,18	2,00

Proprietà del materiale

	Resistenza alla compressione	Stabilità dimensionale durante il trattamento termico	Tenacità	Abrasivo resistente all'usura
BÖHLER K455	★★★	★	★★★★★	★
BÖHLER K245	★★	★	★★★★★	★
BÖHLER K460	★★★★	★	★★★★	★★
BÖHLER K720	★★	★	★★★★	★

Condizioni di consegna

Ricotto

Durezza (HB)	max. 225
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Trattamento termico

Annealing

Temperatura	710 a 750 °C	Slow controlled cooling in furnace at a rate of 50 to 68°F/hr (10 to 20°C/hr) down to approx. 1112°F (600°C), further cooling in air.
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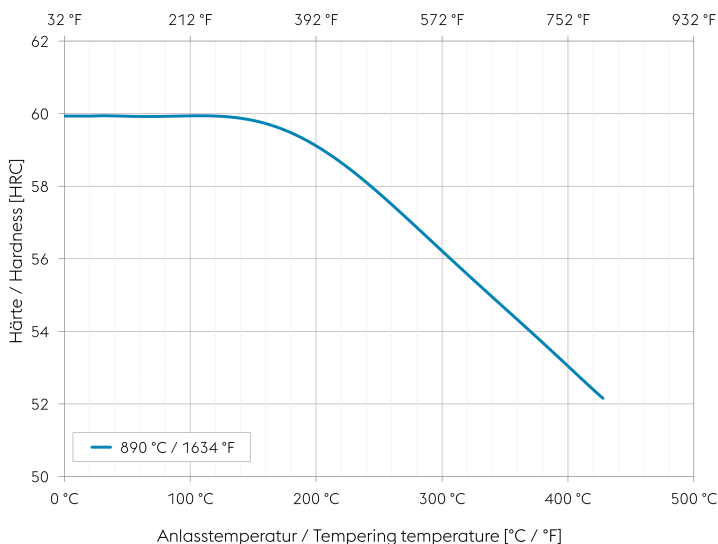
Alleviare lo stress

Temperatura	650 °C	Slow cooling in furnace. Intended to relieve stresses set up by extensive machining, or in complex shapes. After through heating, hold in neutral atmosphere for 1-2 hours
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Tempra e rinvenimento

Temperatura	870 a 900 °C	Oil, Holding time after temperature equalization: 15 to 30 minutes. After hardening, tempering to the desired working hardness, see tempering chart.
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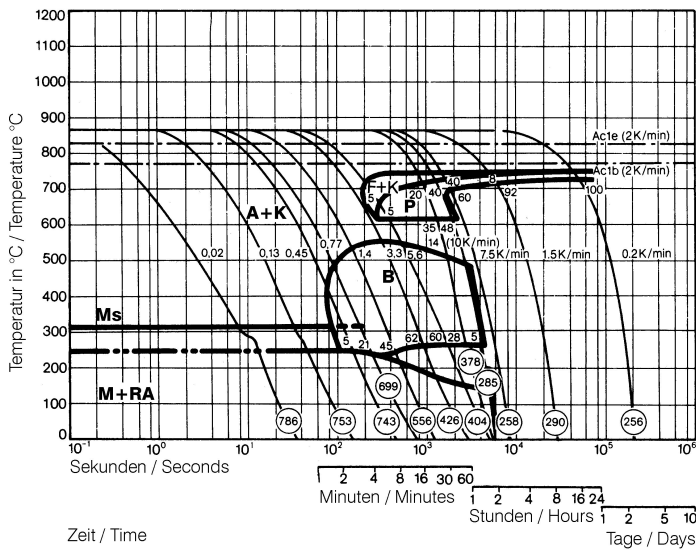
Tempering chart



Tempering:

Hardening temperature:
890°C / 1634°F
Specimen size: square 20mm

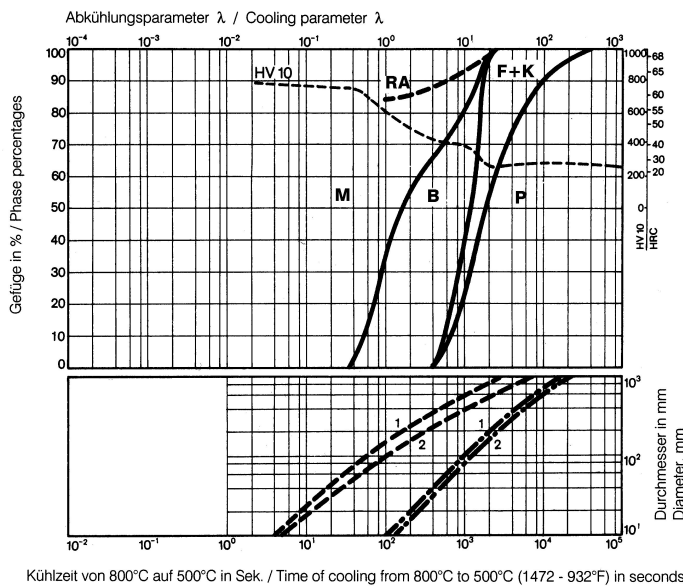
Continuous cooling CCT curves



Austenitising temperature: 880°C / 1616°F
Holding time: 15 minutes

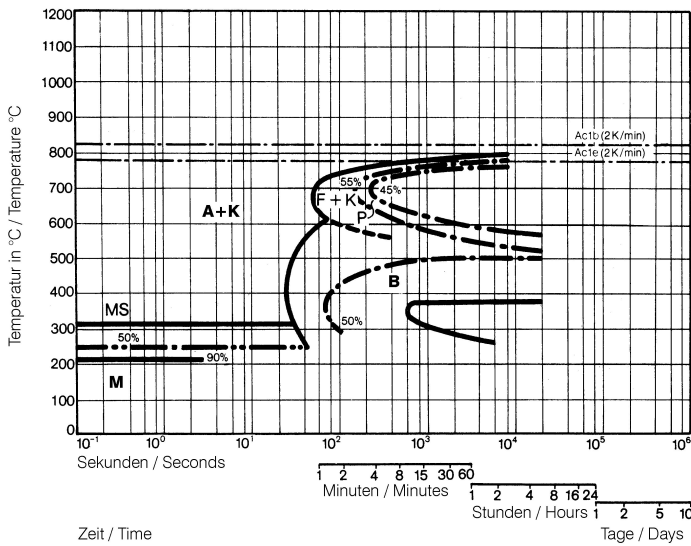
O Vickers hardness
5...35 phase percentages
0.02...14 cooling parameter, i.e. duration of cooling from 800°C to 500°C (1472°F to 932°F) in $s \times 10^{-2}$
10...0.2K/min cooling rate in K/min in the 800°C to 500°C (1472°F to 932°F) range

Quantitative phase diagram



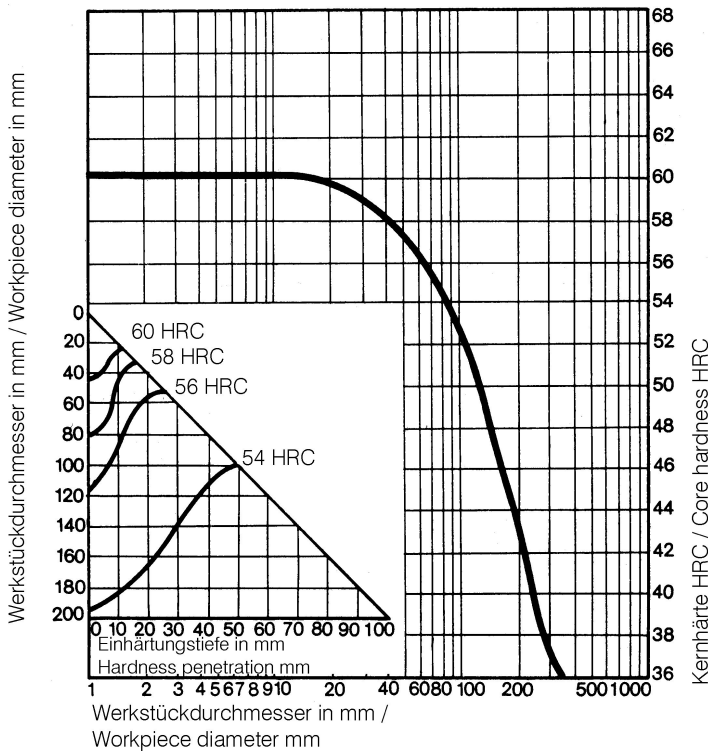
A... Austenite
B... Bainite
K... Carbide
M... Martensite
P... Pearlite
RA... Retained austenite
- - - - Oil cooling
- - - Air cooling
1... Edge or face
2... Core

Isothermal TTT curves



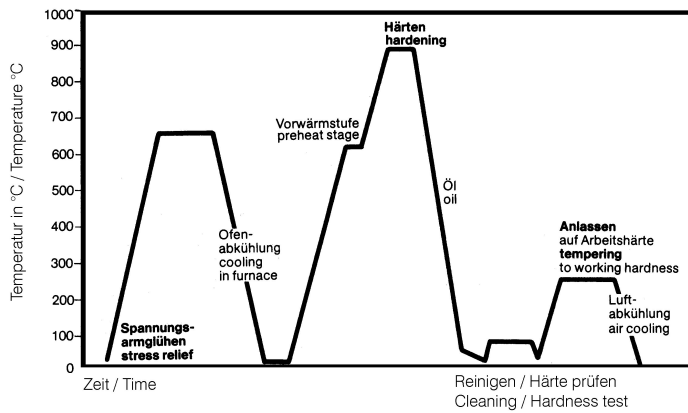
Austenitising temperature: 880°C / 1616°F
Holding time: 15 minutes

Influence of work diameter on core hardness and hardness penetration



Quenched from: 890°C / 1634°F
Agent: Oil

Heat treatment sequence



Proprietà fisiche

Temperatura (°C)	20
Densità (kg/dm ³)	8
Conducibilità termica (W/(m.K))	25
Capacità termica specifica (kJ/kg K)	0,46
Resistenza elettrica specifica (Ohm.mm ² /m)	0,3
Modulo di elasticità (10 ³ N/mm ²)	210

Espansioni termiche

Temperatura (°C)	100	200	300	400	500
Espansione termica (10 ⁻⁶ m/(m.K))	11	12,5	13	13,5	14

Long Products: For additional specifications and technical requirements, please contact our regional voestalpine BÖHLER sales companies.

Sheet & Plates: Product Variant may differ in terms of melting process, technical data, delivery, and surface condition as well as available product dimensions. Please contact voestalpine BÖHLER Bleche GmbH & Co KG.

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