

YÜKSEK HIZ ÇELİKLERİ

Mevcut Ürün Şekilleri

Uzun Ürünler

Ürün Tanımı

BÖHLER S404 – "The discounter"

This very economical class is primarily used for spiral drill bits and has a nearly unbeatable ratio of price to performance.

Erime rotası

Airmelted

Özellikler

- > Tokluk ve Süneklik : yüksek
- > Aşınma Direnci : iyi
- > Basınç Dayanımı : iyi
- > Kenar Stabilitesi : iyi
- > Öğütülebilirlik : yüksek
- > Sıcak Sertlik (kırmızı sertlik) : iyi

Uygulamalar

- > Twist Drills and Taps

Teknik veriler

Malzeme Tanımı		Standartlar	
1.3326	SEL	4957	EN ISO
HS1-4-2	EN	A600	ASTM
M52	AISI		

Kimyasal Bileşim

C	Si	Mn	Cr	Mo	V	W
0,89	0,3	0,3	3,8	4,3	1,8	1

Malzeme özellikleri

	Basınç Dayanımı	Öğütülebilirlik	Sıcak sertlik	Sertlik	Aşınma direnci	Kesilme direnci
BÖHLER S404	★★	★★★	★★	★★★	★★	★★
BÖHLER S200	★★★	★★	★★★	★★	★★★	★★
BÖHLER S400	★★★	★★★	★★★	★★★	★★	★★
BÖHLER S401	★★	★★★	★★	★★★	★★	★★★
BÖHLER S405	★★★	★★★	★★	★★★	★★	★★
BÖHLER S430	★★	★★★	★★	★★★	★★	★★
BÖHLER S500	★★★★	★★★	★★★★	★★	★★★	★★★
BÖHLER S600	★★★	★★★	★★★	★★	★★	★★★
BÖHLER S607	★★★	★★★	★★★	★★	★★★	★★★
BÖHLER S630	★★★	★★★	★★★	★★	★★	★★★
BÖHLER S705	★★★	★★★	★★★★	★★	★★	★★★★
BÖHLER S730	★★★	★★★	★★★★	★★	★★	★★★★

Teslimat durumu

Annealed

Sertlik (HB)	maks. 280
Çekme mukavemeti (MPa)	maks. 950

Isıl işlem

Annealing

Sıcaklık	770 kadar 840 °C	Controlled slow cooling in furnace (10 - 20°C / h (50 - 68°F / h) to approx. 600°C (1110°F), air cooling.
----------	------------------	---

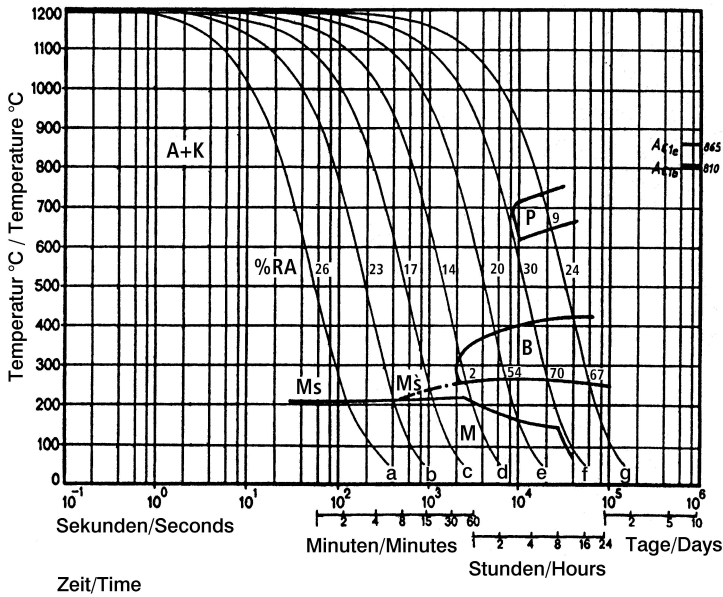
Stress relieving

Sıcaklık	600 kadar 650 °C	Slow cooling furnace. To relieve stresses set up by extensive machining or in tools of intricate shape. After through heating, hold in neutral atmosphere for 1 to 2 hours.
----------	------------------	---

Sertleştirme ve Temperleme

Sıcaklık	1.140 kadar 1.180 °C	Salt bath, vacuum Preheating: 1st stage ~ 500 °C, 2nd stage ~ 850 °C, 3rd stage ~1050 °C Austenitising: 1140 - 1180 °C, holding time after complete heating 80 seconds, maximum 150 seconds, to avoid material damage due to overheating. Quenching: oil, warm bath (500 - 550 °C), gas
Sıcaklık	550 kadar 570 °C	Slow heating to tempering temperature immediately after austenitising. Dwell time in the furnace 1 hour per 20 mm material thickness (at least 1 hour) Slow cooling to room temperature 3 tempering cycles recommended Hardness see tempering chart

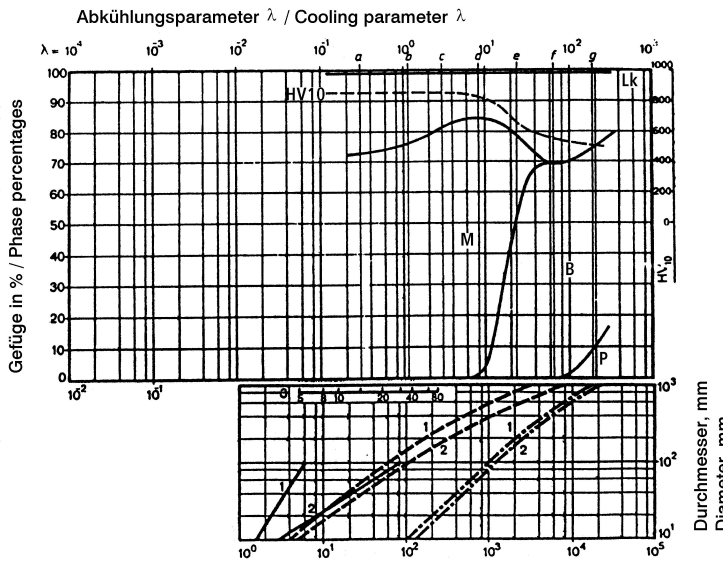
Continuous cooling CCT curves



Austenitising temperature: 1190°C (2174°F)
Holding time: 180 seconds

- A....Austenite
- B....Bainite
- K....Carbide
- P....Pearlite
- M....Martensite
- RA...Retained Austenite

Quantitative phase diagram

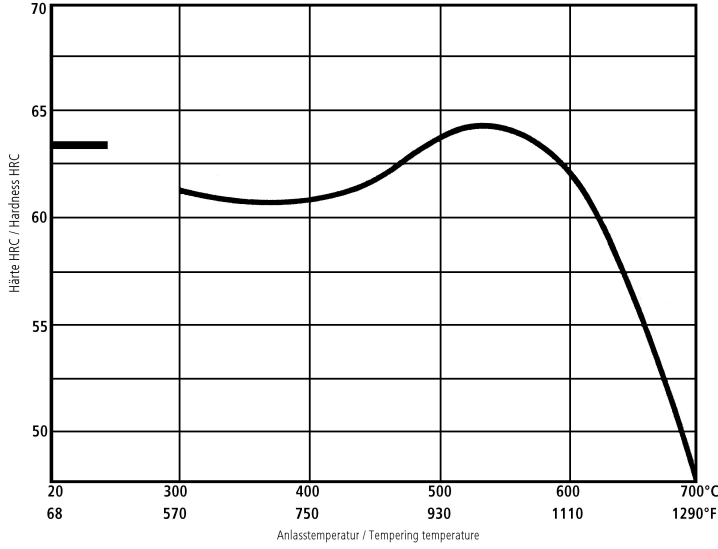


- A....Austenite
- B....Bainite
- K....Carbide
- P....Pearlite
- M....Martensite
- RA...Retained Austenite

- 1....Edge or Face
- 2....Core
- 3....Jominy test: distance from quenched end

Kühlzeit von 800°C auf 500°C in Sek. / Time of cooling from 800°C to 500°C (1472 - 932°F) in seconds

Tempering Chart



Fiziksel özellikler

Sıcaklık (°C)	20
Yoğunluk (kg/dm ³)	7,9
Termal iletkenlik (W/(m.K))	19
Özgül ısı kapasitesi (kJ/kg K)	0,46
Spes. elektrik direnci (Ohm.mm ² /m)	0,5
Elastikiyet modülü (10 ³ N/mm ²)	217

Termal genleşmeler

Sıcaklık (°C)	100	200	300	400	500	600	700
Termal genleşme (10 ⁻⁶ m/(m.K))	11,5	11,7	12,2	12,4	12,7	13	13

Für weitere Spezifikationen und technische Anforderungen kontaktieren Sie bitte unsere regionalen voestalpine BÖHLER Vertriebsgesellschaften.

Die in dieser Broschüre enthaltenen Angaben dienen lediglich der allgemeinen Information und sind daher für das Unternehmen nicht verbindlich. Eine Bindung kann nur durch einen Vertrag erfolgen, in dem diese Angaben ausdrücklich als verbindlich bezeichnet werden. Messdaten sind Laborwerte und können von praxisnahen Analysen abweichen. Bei der Herstellung unserer Produkte werden keine gesundheitsschädlichen oder ozonschichtschädigenden Stoffe verwendet.