

# KOUDVERVORMSTAAL

## Beschikbare uitvoeringen

Stafstaal\*

Plaat

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

## Product omschrijving

K353 is een universeel gereedschapsstaal voor toepassingen van koudervormen. Het munt uit door zijn hoge hardheid, hoge slijtweerstand en buitengewone taaiheid. K353 is een conventioneel vervaardigd 8%-chromstaal met goede bewerkbaarheid, vonkverspanbaarheid en maatvastheid.

## Smeltroute

Airmelted

## Eigenschappen

> Dimensionale stabiliteit : goed

## Toepassingen

> Machinale messen (voor fabrikanten)  
> Dieptrekken / warmvormprocedé

> Cold Forming  
> Hot-runners (nl)

> Fijn stanswerk / ponsen / stampen

## Chemische samenstelling

C	Si	Mn	Cr	Mo	V	Al
0,82	0,70	0,40	8,00	1,60	0,60	+

**Materiaaleigenschappen**

	Drukbelastingcapaciteit	Dimensionale stabiliteit tijdens warmtebehandeling	Taatheid	Slijtvast abrasief	Slijtvaste lijm
<b>BÖHLER K353</b>	★★	★★★	★★	★★	★★
<b>BÖHLER K100</b>	★★	★★	★	★★★	★★
<b>BÖHLER K105</b>	★★	★★	★	★★	★★
<b>BÖHLER K107</b>	★★	★★	★	★★★	★★
<b>BÖHLER K110</b>	★★	★★★	★	★★★	★★
<b>BÖHLER K190</b> <b>MICROCLEAN®</b>	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
<b>BÖHLER K294</b> <b>MICROCLEAN®</b>	★★★★★	★★★★★	★★★	★★★★★	★★★★★
<b>BÖHLER K340</b> <b>ECOSTAR®</b>	★★★	★★★	★★	★★	★★
<b>BÖHLER K340</b> <b>ISODUR®</b>	★★★	★★★★	★★★	★★★	★★★★
<b>BÖHLER K346</b>	★★★	★★★	★★★	★★★★	★★
<b>BÖHLER K360</b> <b>ISODUR®</b>	★★★	★★★★	★★★	★★★★	★★★★
<b>BÖHLER K390</b> <b>MICROCLEAN®</b>	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
<b>BÖHLER K490</b> <b>MICROCLEAN®</b>	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
<b>BÖHLER K497</b> <b>MICROCLEAN®</b>	★★★★★	★★★★★	★★★	★★★★★	★★★★★
<b>BÖHLER K888</b> <b>MATRIX</b>	★★★★★	★★★★★	★★★★★	★★	★★
<b>BÖHLER K890</b> <b>MICROCLEAN®</b>	★★★★★	★★★★★	★★★★★	★★★	★★★

**Leveringsconditie**
**gegloeid**

Hardheid (HB)	max. 240
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**Warmtebehandeling**
**Annealing**

Temperatuur	800 naar 850 °C	Slow controlled cooling in furnace at a rate of 10 to 20 °C/hr (50 - 68 °F) down to approx. 600 °C (1100 °F), further cooling in air.
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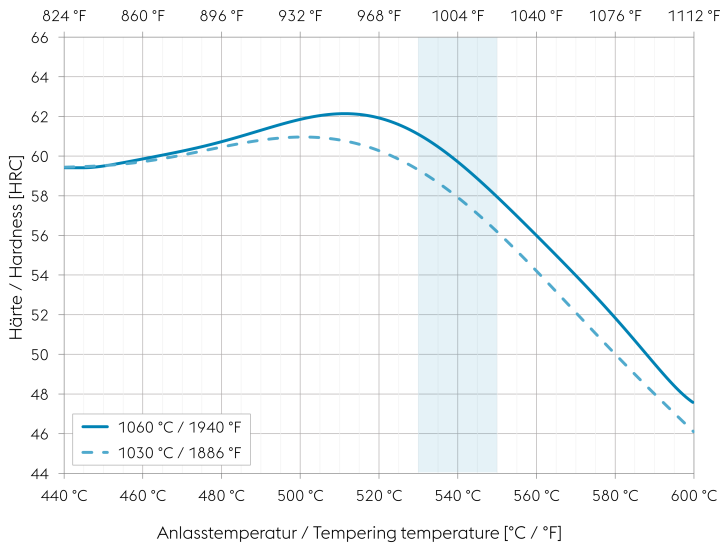
**Stress relieving**

Temperatuur	650 °C	After through-heating, hold in neutral atmosphere for 1 - 2 hours. Slow cooling in furnace; intended to relieve stresses set up by extensive machining, or in complex shapes.
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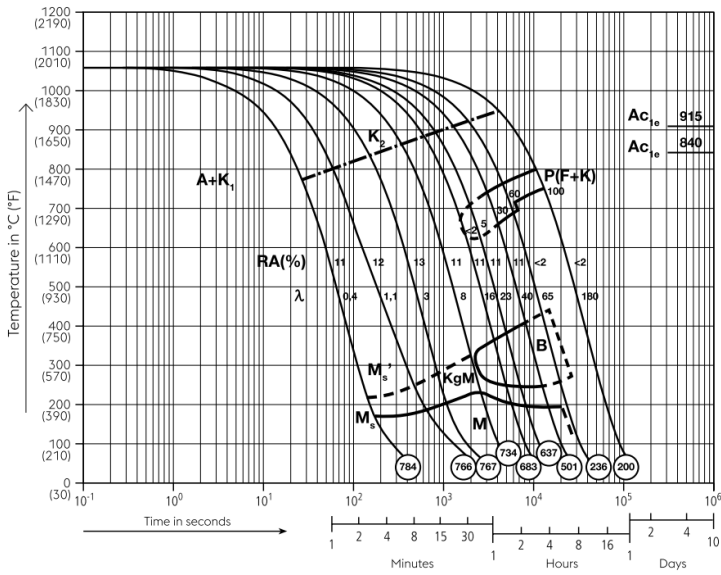
**Harden en ontlaten**

Temperatuur	1.030 naar 1.060 °C	Oil, salt bath, vacuum After through-heating, hold for 15 to 30 minutes. After hardening, tempering to the desired working hardness, see tempering chart.
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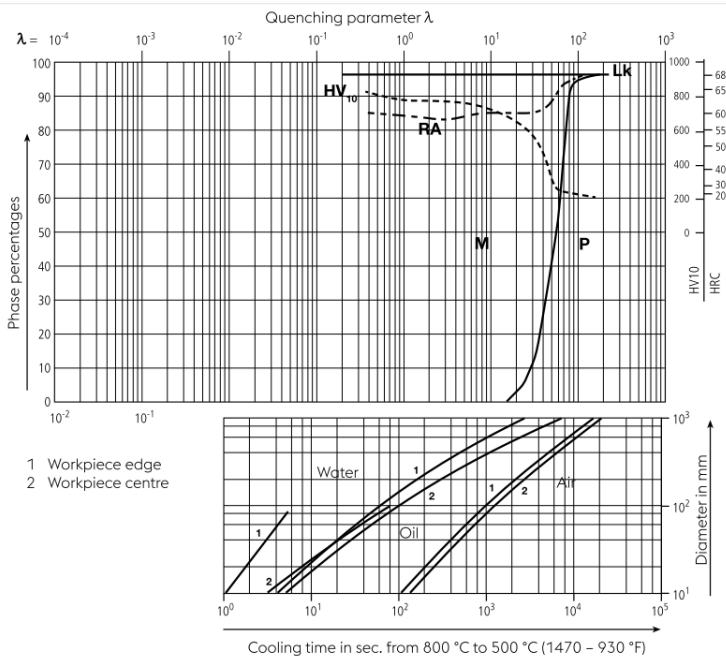
**Tempering chart**



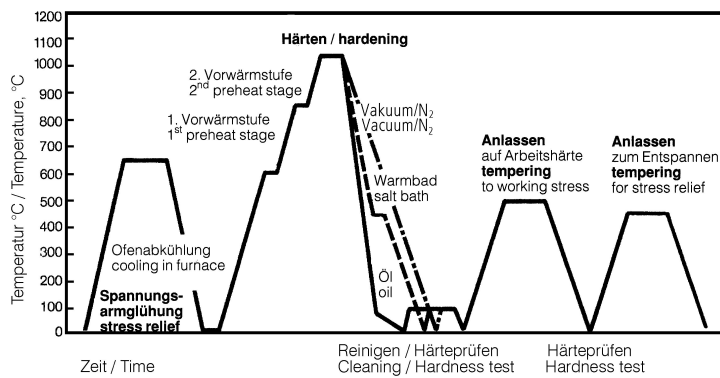
**Continuous cooling CCT curves**



### Quantitative phase diagram



### Heat treatment sequence



### Fysische eigenschappen

Temperatuur (°C)	20
Soortelijk gewicht (kg/dm <sup>3</sup> )	7,7
Thermische conductiviteit (W/(m.K))	21,9
Soortelijke warmte (kJ/kg K)	0,47
Specifieke elektrische weerstand (Ohm.mm <sup>2</sup> /m)	-
Elasticiteitsmodus (10 <sup>3</sup> N/mm <sup>2</sup> )	212

## Thermische expansie

Temperatuur (°C)	100	200	300	400	500
Thermische expansie (10 <sup>-6</sup> m/(m.K))	11	11,3	11,6	12	12,4

**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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