



TOOL STEELS AND
HIGH SPEED STEELS



YOUR ONE-STOP SHOP

voestalpine BÖHLER Bleche is able to meet the most challenging requirements! Optimum customer solutions are made possible by integrated manufacturing from melting to desired surface condition with most modern facilities.

This results in tool steels, high speed steels and powder-metallurgy steels with outstanding properties. Low distortion and dimensional stability are the most important properties. The technology behind is the cross-rolling.

An isotropic microstructure ensures isotropic mechanical-technological and physical properties in the longitudinal and transverse directions as well as minimal dimensional change during heat treatment. In the case of our ledeburitic cold work tool steel, these advantages are summarized in the brand name REGULIT.

For materials of highest cleanness the most modern vacuum melting or remelting (VIM, VAR) and protective atmosphere pressure ESR facilities are available.

Band saw



Laser cutting unit



Water jet cutting unit



Heat treatment

OUR STRENGTH - TAILOR-MADE SOLUTIONS

Whether shot-blasted or pre-machined, sheared or cold-sawn, laser cut, plasma cut under water or water jet cut, we deliver the dimension and surface condition you need, together with minimal machining allowances – and with a minimum order quantity of only 800 kg [1,763 lbs].

A COMPREHENSIVE RANGE
OF DELIVERY CONDITIONS
MAKES UNCOMPROMISING
SOLUTIONS POSSIBLE, GIVING
OUR CUSTOMERS A CLEAR
COMPETITIVE EDGE.



PRODUCTS WITHOUT COMPROMISES

**You manufacture tools
and need a starting material free of decarburization?**

We produce pre-machined plates with a

Width $\leq 1,100$ mm
[≤ 43.31 inch]

Length $\leq 4,000$ mm
[≤ 157.48 inch]

Thickness thickness 10 – 110 mm
[0.39 – 4.33 inch]

We deliver pre-machined plates with

machining allowance max. 0.50 mm
[max. 0.02 inch]

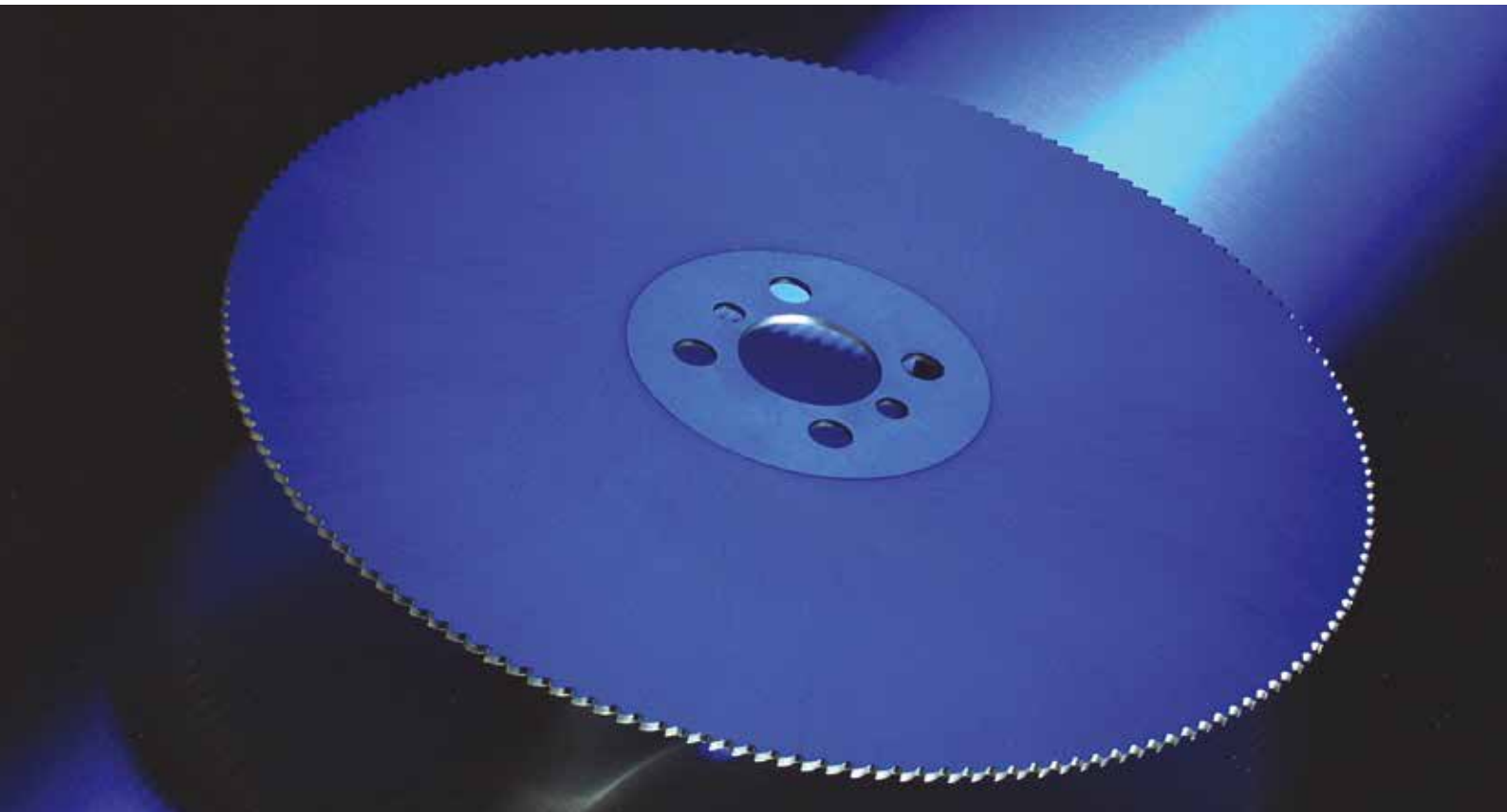
thickness tolerance max. 0.50 mm
[max. 0.02 inch]

Choose the appropriate surface finish

max. 2.00 $\mu\text{m Ra}$
max. 100 RMS

max. 2.50 $\mu\text{m Ra}$
max. 125 RMS

max. 5.00 $\mu\text{m Ra}$
max. 250 RMS



HIGH SPEED STEELS



high performance materials for high performance tools

Our high speed steels are subject to continuous development. State-of-the-art rolling and heat treatment facilities give us the position to produce high-quality products with tightest tolerances.

The advantage for our customers means lower machining allowances and therefore cost savings during further processing.

Rapid availability means that our customers can react quickly to new challenges, giving the words “high speed steel” a whole new profitable meaning.

BÖHLER grade	Chemical composition in %						Standards			
	C	Cr	Mo	V	W	Co	Mat. no.	DIN / EN / ISO	AISI	JIS
BÖHLER S200	0.76	4.10	-	1.10	18.00	-	< 1.3355 >	HS18-0-1	T 1	SKH 2
BÖHLER S500	1.10	3.90	9.20	1.00	1.40	7.80	< 1.3247 >	HS2-9-1-8	M 42	SKH 59
BÖHLER S600	0.90	4.10	5.00	1.80	6.20	-	< 1.3343 >	HS6-5-2C	~ M 2	-
BÖHLER S630	0.95	4.00	4.00	4.00	2.00	-	< 1.3330 >	HS4-4-2	-	-
BÖHLER S705	0.92	4.10	5.00	1.90	6.20	4.80	< 1.3243 >	HS6-5-2-5	~ M 41	SKH 55
BÖHLER S730	0.92	4.10	4.15	1.95	4.25	4.75	< 1.3230 >	HS4-4-2-5	-	-

Other grades on request.

BÖHLER Grade	Chemical Composition %									Standards		
	C	Si	Mn	Cr	Mo	Ni	V	W	Others	Mat. No.	DIN / EN	AISI
BÖHLER K100 REGULIT	2.00	0.25	0.35	11.50	-	-	-	-	-	< 1.2080 >	X210Cr12	~ D3
BÖHLER K105 REGULIT	1.60	0.35	0.30	11.50	0.60	-	0.30	0.50	-	< 1.2601 >	X165CrMoV12	~ D2
BÖHLER K107 REGULIT	2.10	0.35	0.40	11.50	-	-	-	0.70	-	< 1.2436 >	X210CrW12	~ D6
BÖHLER K110 REGULIT	1.55	0.30	0.30	11.80	0.75	-	0.75	-	-	< 1.2379 >	X153CrMoV12	D2
BÖHLER K305	1.00	0.30	0.55	5.20	1.10	-	0.25	-	-	< 1.2363 >	X100CrMoV5-1	A2
BÖHLER K320	0.50	0.30	0.60	3.25	1.45	-	0.25	-	-	-	-	S7
BÖHLER K329	0.52	0.95	0.40	8.00	1.40	-	0.45	-	-	-	-	-
BÖHLER K340 ECOSTAR	1.10	0.70	0.40	8.20	2.10	-	0.50	-	Al, Nb	-	-	-
BÖHLER K340 ISODUR	1.10	0.90	0.40	8.30	2.10	-	0.50	-	Al, Nb	-	-	-
BÖHLER K353	0.82	0.70	0.40	8.00	1.60	-	0.60	-	+Al	-	-	-
BÖHLER K360-ESR	1.26	0.90	0.35	8.80	2.70	-	1.20	-	Al, Nb	-	-	-
BÖHLER K460	0.95	0.25	1.10	0.55	-	-	0.10	0.55	-	< 1.2510 >	100MnCrW4	01
BÖHLER K600	0.48	0.25	0.40	1.30	0.25	4.00	-	-	-	< 1.2767 >	X45NiCrMo6	-
BÖHLER K720	0.90	0.25	2.00	0.35	-	-	0.10	-	-	< 1.2842 >	90MnCrV8	~ 02
BÖHLER W300 ¹⁾	0.38	1.10	0.40	5.00	1.20	-	0.40	-	-	< 1.2343 >	X37CrMoV5-1	H11
BÖHLER W302 ¹⁾	0.39	1.10	0.40	5.20	1.30	-	0.95	-	-	< 1.2344 >	X40CrMoV5-1	H13
BÖHLER W360-ESR	0.50	0.20	0.25	4.50	3.00	-	0.55	-	-	-	-	-

¹⁾ also available in ESR quality
Other grades on request

TOOL STEELS



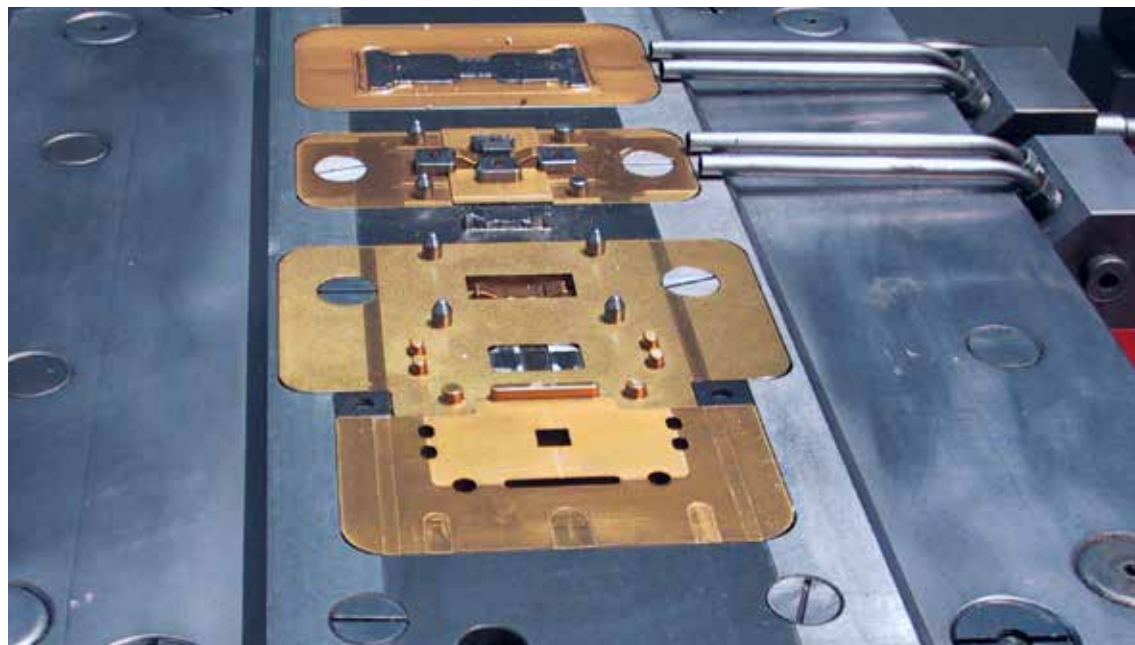
for perfect tools

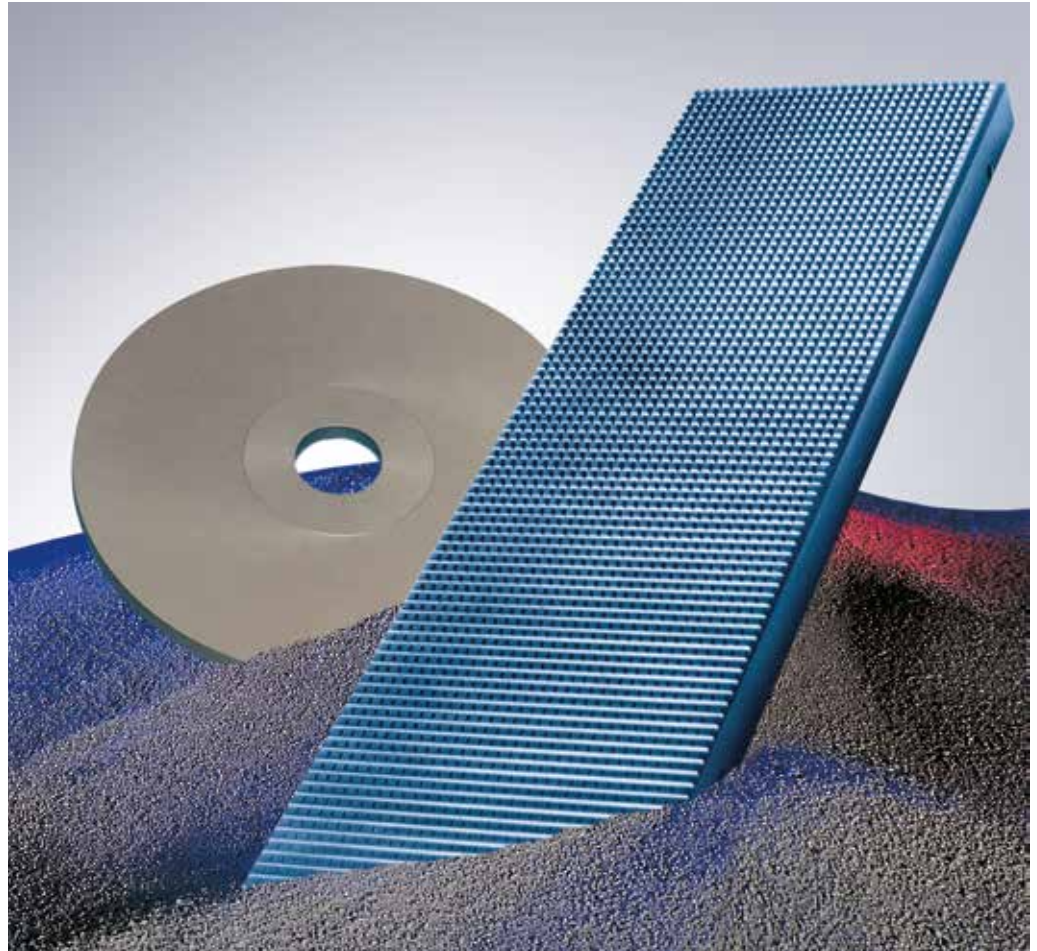
A product which virtually pays for itself. This goal is achieved through excellent flatness, edges free of decarburization and an optimal surface finish.

Outstanding properties such as

- » uniform microstructure
- » minimal dimensional change during hardening
- » uniform mechanical properties

are achieved using the voestalpine BÖHLER Bleche cross-rolling technology. Advantages which make an impact on your tooling costs.





BÖHLER Grade	Chemical Composition %						Standards			
	C	Cr	Mo	V	W	Co	Mat. No.	DIN / EN / ISO	AISI	
BÖHLER S290 MICROCLEAN®	2.01	3.80	2.50	5.10	14.30	11.00	-	-	-	
BÖHLER S390 MICROCLEAN®	1.64	4.80	2.00	4.80	10.40	8.00	-	-	~T15	
BÖHLER S393 MICROCLEAN®	1.64	4.00	-	4.75	12.10	5.00	-	-	-	
BÖHLER S590 MICROCLEAN®	1.29	4.20	5.00	3.00	6.30	8.40	< 1.3244 >	~HS6-5-3-8	-	
BÖHLER S693 MICROCLEAN®	1.35	4.00	5,25	4.00	5.75	-	~1.3351	~HS6-5-4	~M 4	
BÖHLER S790 MICROCLEAN®	1.29	4.20	5.00	3.00	6.30	-	< 1.3345 >	~HS6-5-3	M 3 Cl.2	
BÖHLER K294 MICROCLEAN®	2.45	5.10	1.30	9.80	-	-	-	-	A11	
BÖHLER K390 MICROCLEAN®	2.47	4.20	3.80	9.00	1.00	2.00	-	-	-	
BÖHLER K490 MICROCLEAN®	1.40	6.40	1.50	3.70	3.50	-	+Nb	-	-	
BÖHLER K890 MICROCLEAN®	0.85	4.35	2.80	2.10	2.55	4.50	-	-	-	
BÖHLER M390 MICROCLEAN®	1.91	20.00	1.00	4.00	0.60	-	-	-	-	

Other grades on request

POWDER-METALLURGY STEELS

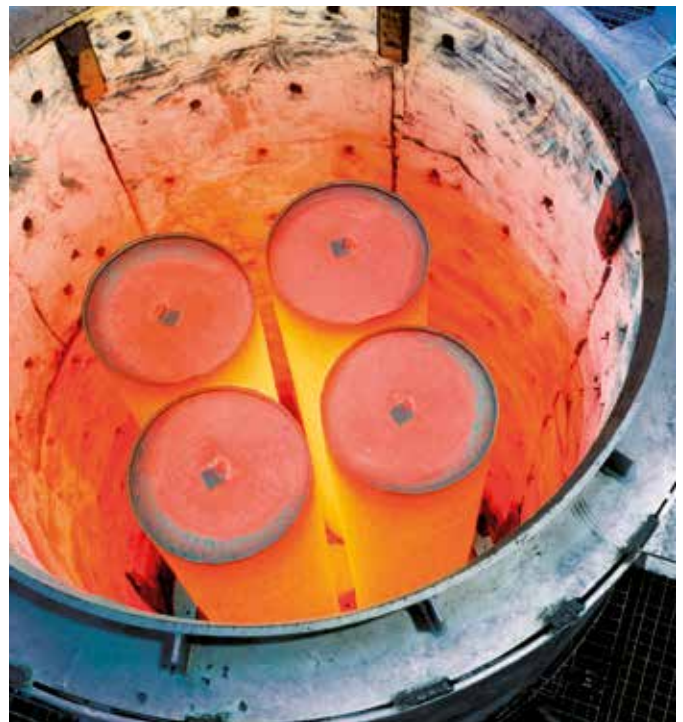
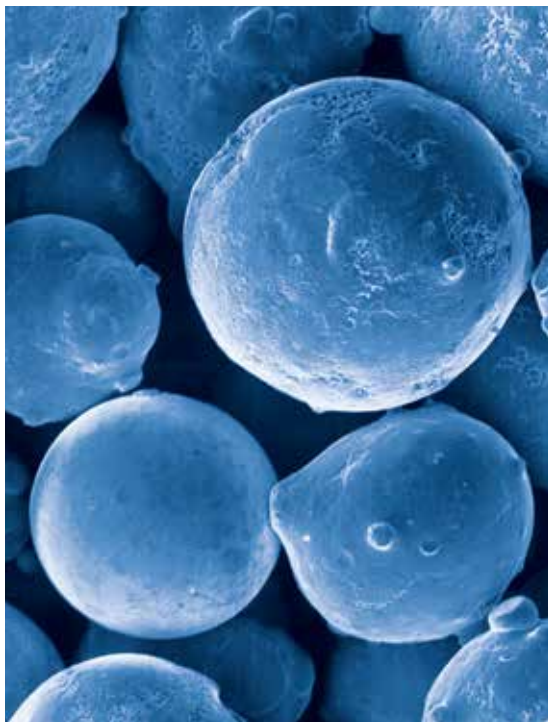


POWDER
METALLURGY

materials for highest performance

Steels produced by powder-metallurgy show impressive performance properties: excellent toughness, extremely high wear resistance, uniform mechanical-technological properties in both the longitudinal and transverse directions and very low dimensional changes during heat treatment.

The extensive range of cold work tool steels, high speed steels and plastic mould steels helps our customers to stay ahead in the face of severe competition.





BÖHLER Grade	Chemical Composition %										Standards		
	C	Si	Mn	Cr	Mo	Ni	V	W	Others	Mat. No.	DIN / EN	AISI	
BÖHLER M200	0.40	0.40	1.50	1.90	0.20					+S0.080	1.2312	40CrMnMoS8-6	~ P20
BÖHLER M201	0.40	0.40	1.50	1.90	0.20						1.2311	40CrMnMo8-6	~ P20
BÖHLER M238	0.38	0.30	1.50	2.00	0.20	1.10					1.2738	40CrMn-NiMo8-6-4	
BÖHLER M300	0,38	0.35	0.80	16.00	0.95	0.80					1.2316		
BÖHLER M303	¹⁾ 0.27	0.30	0.65	14.50	1.0	0.85				+N	~ 1.2316		
BÖHLER M310	¹⁾ 0.40	0.70	0.45	14.30	0.60	-	0.20	-	-	-	~ 1.2083	~ X42Cr13	~ 420
BÖHLER M314	0.32	0.35	1.20	16.00		0.60				S0.08	1.2085		
BÖHLER M315	0.05	0.20	0.90	12.80						+S0.12+Ni			
BÖHLER M333-ESR	0.28	0.30	0.30	13.50	-	-	-	-	-	N	-	-	-
BÖHLER M340-ESR	0.54	0.45	0.40	17.30	1.10	-	0.10	-	-	N	-	-	-
BÖHLER M461	0.13	0.30	2.00	0.35	-	3.50	-	-	-	Cu, Al	-	-	-

¹⁾ also available in ESR quality
Other grades on request

PLASTIC MOULD STEELS



PLASTIC
MOULD STEEL

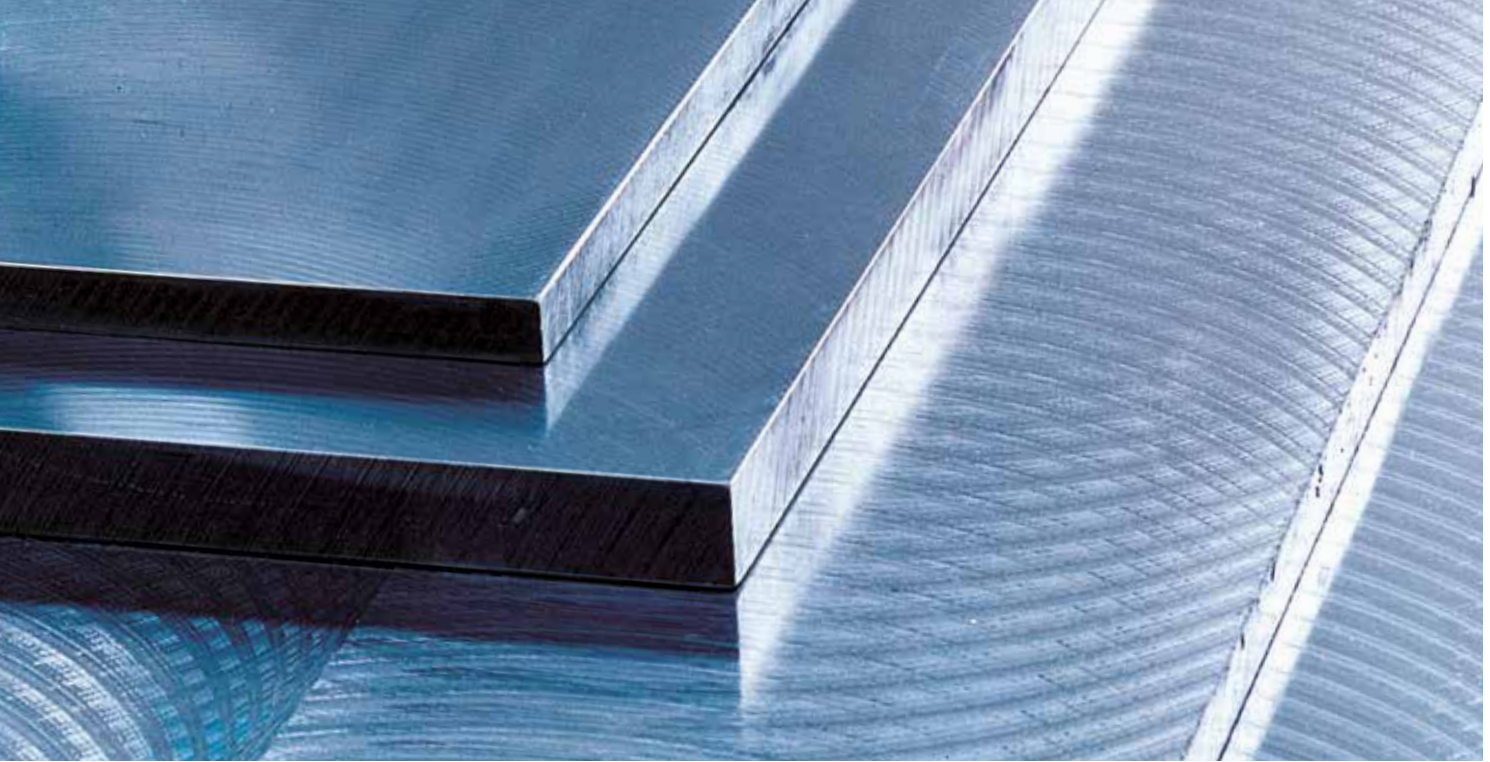
plates for high numbers

The plastic mould steels we offer are equipped with properties like

- » high wear resistance
- » good polishability
- » easy to erode
- » required corrosion resistance
- » good machinability

Depending on your need we have standard as well as customized special steel plates for any application.





HIGH SPEED
STEEL

HIGH SPEED STEELS

Dimensions	mm	inch
Thickness	0.8 – 65	0.03 – 2.56
Width	max. 1,100	max. 43.31
Length	max. 4,000	max. 157.48



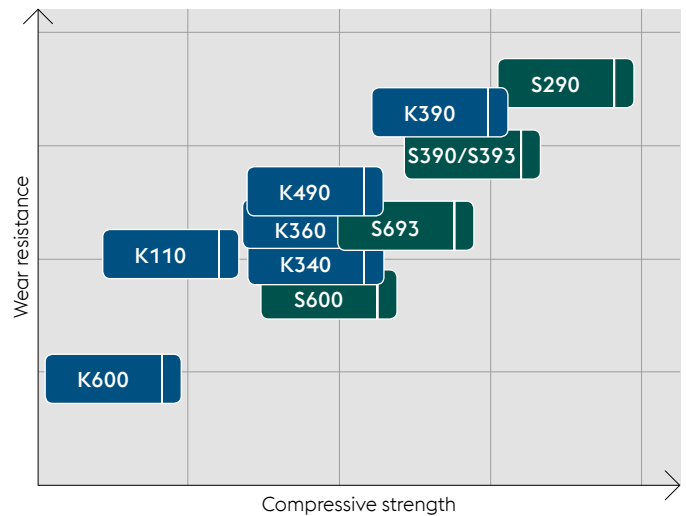
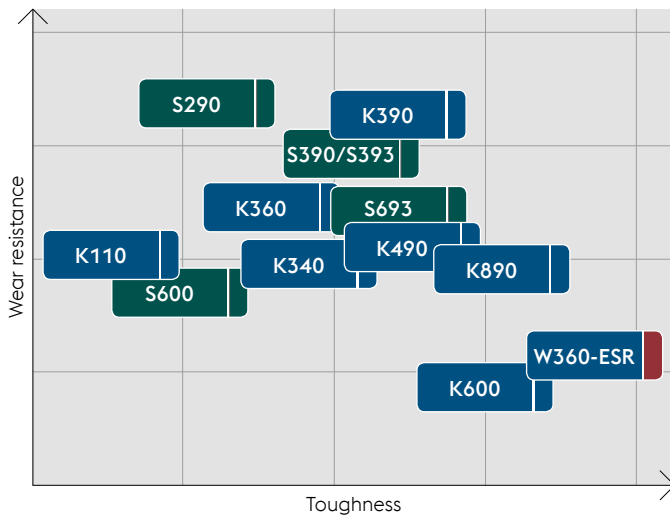
TOOL STEEL

TOOL STEELS

Dimensions	mm	inch
Thickness	0.8 – 110	0.03 – 4.33
Width	max. 2,000*	max. 78.74*
Length	max. 6,000	max. 236.22

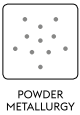
*Maximum width depends on grade.

Requirements in the cold forming industry



PRODUCTS FOR EFFICIENCY

The efficiency of tools mainly depends on the tool material's wear resistance, red hardness, corrosion resistance, toughness and compressive strength.
Take your choice. We have the right material for your application!



POWDER-METALLURGY STEELS

Dimensions *	mm	inch
Thickness	0.8 – 110	0.03 – 2.56
Width	max. 1,100	max. 43.31
Length	max. 4,000	max. 157.48

* Other sizes on request.

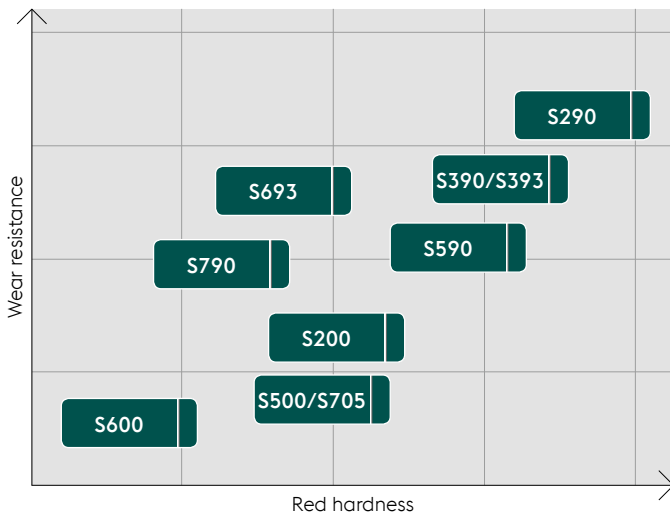


PLASTIC MOULD STEELS

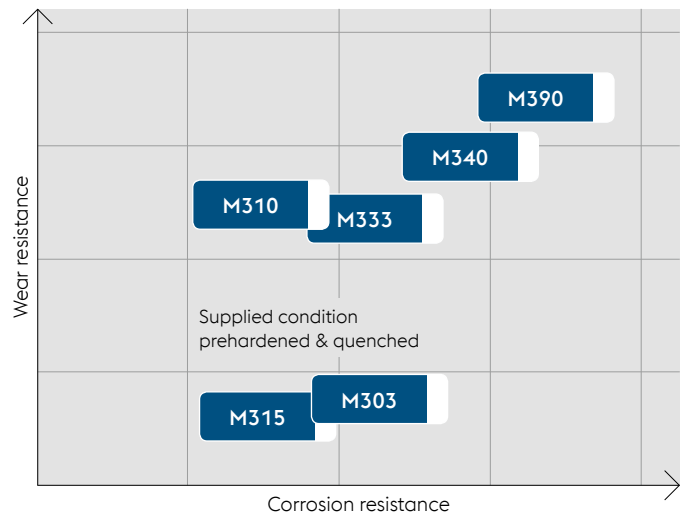
Dimensions *	mm	mm	inch	inch
Thickness	20 – 75	76 – 105	0.79 – 2.95	2.99 – 3.94
Width	2,000	1,500	78.74	59.06
Length	4,000	3,500	157.48	118.11

* Other sizes on request.

Requirements in the machining industry



Requirements in the plastic processing industry





The data contained in this brochure shall not be binding and shall, in case of a contract conclusion, not be regarded as warranted. These data shall merely constitute average values that become binding only if explicitly specified in a contract concluded with us. The manufacture of our products does not involve the use of substances detrimental to health or to the ozone layer. Copyright © 2018 by voestalpine BÖHLER Bleche GmbH & Co KG. All rights reserved. This publication or parts of it may not be reproduced, copied or otherwise used without the prior written permission of voestalpine BÖHLER Bleche GmbH & Co KG. Printed on chlorine-free bleached paper having no pollution effects.



GUARANTEED QUALITY AND SERVICE

PERFECT LOGISTICS – PERFECT PRODUCTS

We have the right grade for any application.

A well stocked warehouse with a wide product range and individual technical support demonstrate to our customers that they have a strong partner at their side.

With our worldwide distribution network we deliver the right quality in the desired dimension and condition anywhere in the world, even at short notice.

All of our production steps from melting to delivery are subject to our Quality Management System based on the ISO 9100. Each production lot is tested for the required metallurgical and mechanical properties.

INFORMATION & TECHNICAL SUPPORT

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ONE STEP AHEAD.