

BÖHLER
SPECIAL MATERIAL
PLATES



FROM START TO FINISH

YOUR ADVANTAGE – OUR SKILLS, THE WHOLE PRODUCTION CHAIN IS IN OUR HANDS.

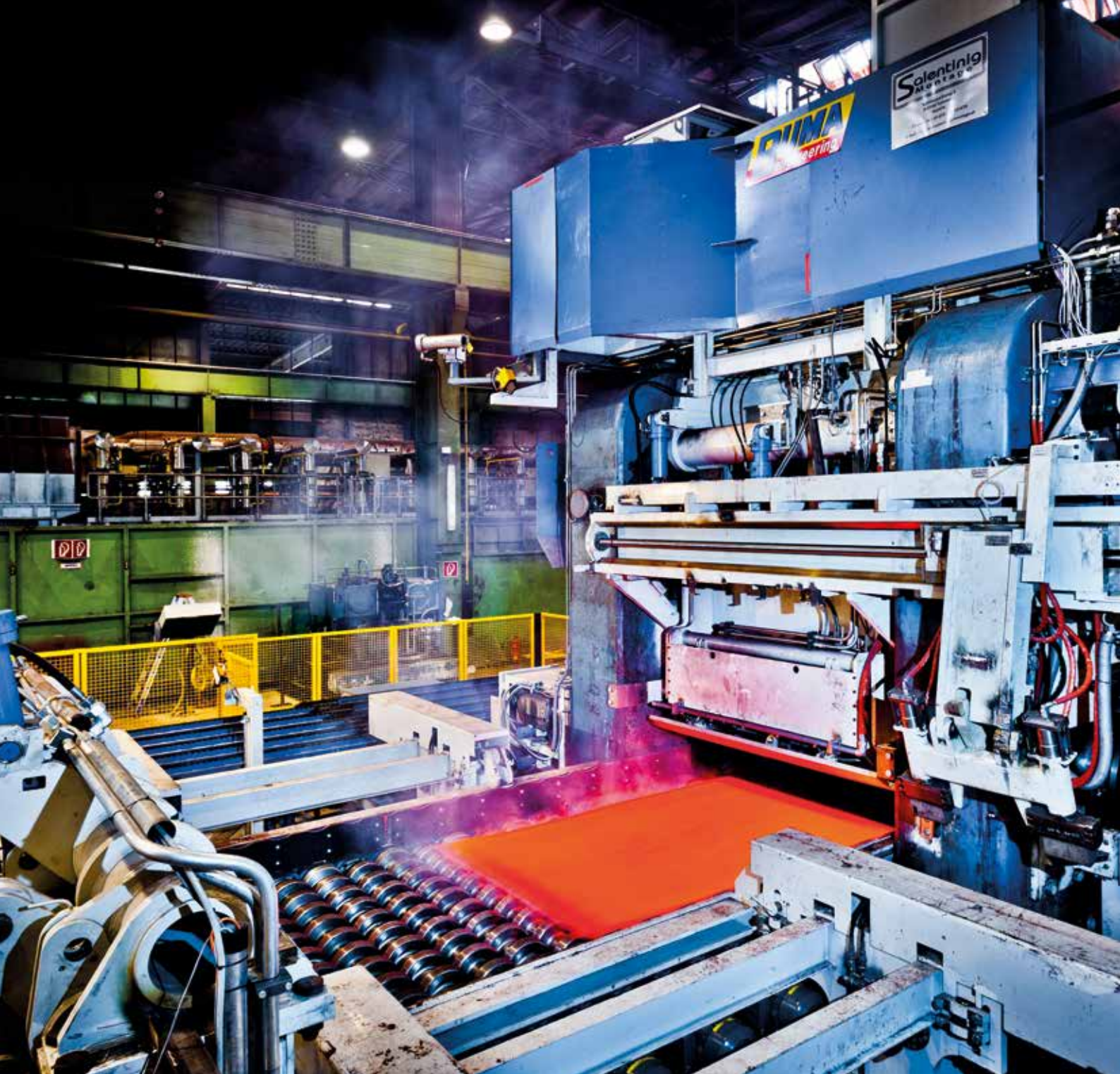
We cover all technical melting and remelting processes
with state of the art equipment, e.g.

- » EAF / VOD
- » VID / VIM
- » VAR / P-ESR / ESR

for complex alloys.

In combination with our cross-rolling technology we are specialized
in producing sheets and plates of Chromium-, Superduplex-, Superaustenitic-,
Nickel-Base- as well as other Special Alloys.

The optimum combination of our possibilities enables us to support you
with a homogeneous product having excellent material properties.



Two high mill



Plasma cutting unit



Laser cutting unit



Water jet cutting unit

TAILOR MADE FOR YOUR NEEDS

Dimensions hot rolled

| | |
|-----------|----------------------|
| Width | max. 2,000 mm |
| Length | max. 7,000 mm |
| Thickness | 2.0 mm up to 90.0 mm |
| Weight | max. 3,000 kg |

Dimensions cold rolled

| | |
|-----------|---------------------|
| Width | max. 1,350 mm |
| Length | max. 5,000 mm |
| Thickness | 1.0 mm up to 6.0 mm |

Edge finish

| |
|---------------|
| Shear cut |
| Laser cut |
| Cold sawn |
| Plasma cut |
| Water jet cut |

Surface finish

| |
|--------------|
| As rolled |
| Shot blasted |
| Pickled |
| Ground |
| Milled |

Stated figures are guide values,
special requirements on request.

Minimum order quantities

Standard alloys (output of one slab)

| | |
|----------------|----------------|
| Steel | 800 – 3,000 kg |
| Ni-base-alloys | 800 – 2,200 kg |
| Titanium | 600 – 1,100 kg |

Special alloys (output of one melt)

| | |
|-------------------------|--------------|
| VID | 6 – 8 to |
| EAF-VOD | 25 – 35 to |
| VIM (Ni-base-alloys) | 5 alt. 10 to |

Minimum order quantities for other melting routes
on request.

CORROSION RESISTANT ALLOYS



MORE THAN JUST CORROSION RESISTANT

We rely on our state of the art technology and expertise to produce premium materials.

Excellent corrosion resistance, best workability due to our cross-rolling technology, closest tolerances and premium surface finishes decrease your costs and increase security in service.

| Type of alloy | BÖHLER grade | PRE _N | Common name | DIN / EN | UNS | Standards | Main application |
|--------------------|---------------|------------------|-----------------------------|------------------|----------------------------|--|--|
| Martensite | BÖHLER N100 | | AISI 410 | 1.4006 | | ASTM A240 EN 10088-2 | Engineering Equipment, Turbines |
| | BÖHLER N400 | | | 1.4313 | | EN 10088-2 | Engineering Equipment |
| | BÖHLER N700 | | 17-4 PH AISI 630 | 1.4542 | S17400 | ASTM A693 EN 10088-2 | Offshore Industry |
| Superduplex | BÖHLER A911SA | 41 | | 1.4501 | S32760 | ASTM A240 Norsok MDS D55 Shell-Spez. ES/247 | Offshore Industry Water Treatment |
| | BÖHLER A913 | 40 | | 1.4410 | S32750 | | |
| | BÖHLER A924 | 40 | | ~1.4507 | S32550 S32520 | ASTM A240 | Offshore Industry |
| Super Austenite | BÖHLER A610 | | | 1.4361 | S30600 | ASTM A240 Bayer WN 950 EN 10088-2 | Nitric Acid Production, Storage |
| | BÖHLER A611 | | | — | S30601 | ASTM A240 VdTÜV 534 | Sulfuric Acid Production, Storage |
| | BÖHLER A614 | | | ~1.4469 | S32615 | ASTM A240 VdTÜV 535 | Sulfuric Acid Production, Storage |
| | BÖHLER A657 | | | 1.4335 | S31002 S31008 | ASTM A240 VdTÜV 468 | Nitric Acid Production, Storage |
| | BÖHLER A965SA | 43 | 6-Mo | 1.4547 | S31254 | ASTM A240 Norsok MDS R15 Shell-Spez. ES/247 | Offshore Industry Chemical Industry |
| | BÖHLER A952 | | Alloy 31 | 1.4562 | N08031 | ASTM B625 VdTÜV 509 | Chemical and Petrochemical Industry |
| | BÖHLER A970 | 42 | | 1.4529 | N08926 N08367 | ASTM B625 | Offshore Industry |
| | BÖHLER H500 | | Alloy 800/800H/ 800HT | 1.4876 | N08800 N08810 N08811 | ASTM B409 EN 10095 SEW 470 | Petrochemical Industry |
| | Nickel-Base | BÖHLER L022 | | Alloy C22 | 2.4602 | N06022 | ASTM B575 VdTÜV 479 |
| BÖHLER L276 | | | Alloy C276 | 2.4819 | N10276 | ASTM B575 VdTÜV 400 | Chemical Industry, Pharmacy |
| BÖHLER L625 | | | Alloy 625 | 2.4856 | N06625 | ASTM B443 EN 10095 | Offshore-Industry |
| BÖHLER L004 | | | Alloy C4 | 2.4610 | N06455 | ASTM B575 VdTÜV 424 | Chemical Industry |
| BÖHLER L825 | | | Alloy 825 | 2.4858 | N08825 | ASTM B244 DIN 17744 | Chemical Industry |
| BÖHLER L059 | | | Alloy 59 | 2.4605 | N06059 | ASTM B575 DIN 17744 | Chemical Industry, Pharmacy |
| Nickel-Copper | BÖHLER L400 | | Alloy 400 | 2.4360 | N04400 | ASTM B127 DIN 17750 BS 3072 | Chemical Industry |
| Pure Nickel | BÖHLER L200 | | Alloy 200 Alloy 201 | 2.4066 2.4068 | N02200 N02201 | ASTM B162 DIN 17750 BS 3072 | Chemical Industry |

Other grades upon request.

HEAT RESISTANT ALLOYS



NOTHING IS TOO HOT FOR US

Confidence is not enough in critical spheres.

Only hard facts count.

Excellent material properties like strength, toughness and creep resistance give long lasting solutions especially for critical areas.

Let us prove our reliability!

| Type of alloy | BÖHLER grade | Common name | DIN / EN | UNS | Standards | Main application |
|---------------|--------------|--------------------------|----------------------------|----------------------------|------------------------------------|---|
| Ferrite | BÖHLER H100 | | 1.4762 | | SEW 470 EN 10095 | Industrial Furnaces |
| | BÖHLER H160 | | 1.4713 | | | |
| Martensite | BÖHLER T550 | | 1.4922 1.4923 1.4926 | | EN 10302 | Turbines |
| | BÖHLER T567 | | 1.4903 | | EN 10302 | Turbines |
| Duplex | BÖHLER H300 | | 1.4821 | | SEW 470 EN 10095 | Industrial Furnaces |
| Austenite | BÖHLER H500 | Alloy 800/800H/ 800HT | 1.4876 | N08800 N08810 N08811 | ASTM B409 SEW 470 EN 10095 | Industrial, Process Furnaces |
| | BÖHLER H520 | ~Alloy DS | ~1.4864 | ~N08832 | ASTM B536 EN 10095 | Industrial Furnaces |
| | BÖHLER H521 | Alloy 330 | | N08330 | ASTM B536 | Industrial Furnaces |
| | BÖHLER H525 | Alloy 314 | 1.4841 | S31400 | SEW 470 EN 10095 | Industrial Furnaces |
| | BÖHLER T200 | Alloy 286 | 1.4943 1.4944 1.4980 | S66286 | EN 10302 | Turbines |
| | BÖHLER T240 | | ~1.4962 | | EN 10302 | Turbines |
| | BÖHLER T275 | | 1.4961 | | EN 10028-7 EN 10302 | Turbines |
| Nickel-Base | BÖHLER L075 | Alloy 75 | 2.4951 2.4630 | N06075 | EN 10095 | Turbines, Engines |
| | BÖHLER L090 | Alloy 90 | 2.4969 2.4632 | N07090 | EN 10302 | Turbines, Engines |
| | BÖHLER L263 | Alloy 263 | 2.4650 | N07263 | AMS 5872 EN 10302 | Turbines, Engines |
| | BÖHLER L602 | | 2.4633 | N06025 | ASTM B168 DIN 17744 EN 10302 | Industrial Furnaces |
| | BÖHLER L617 | Alloy 617 | 2.4663 | N06617 | ASTM B168 EN 10302 | Turbines, Engines |
| | BÖHLER L625 | Alloy 625 | 2.4856 | N06625 | ASTM B443 EN 10095 | Turbines, Engines, Industrial Furnaces |
| | BÖHLER L718 | Alloy 718 | 2.4668 | N07718 | ASTM B4670 EN 10302 | Turbines, Engines |

Other grades upon request.

SPECIAL ALLOYS AND TITANIUM



NO PROBLEM WITHOUT ANY SOLUTION

Are you in need of materials with good machinability, stable non-magnetic properties, a defined thermal expansion coefficient or other special solutions?

We supply the tailored products of the highest quality.

Rely on our expertise!

| Properties | Type of alloy | BÖHLER grade | PRE _N | Common name | DIN / EN | UNS | Standards | Main application |
|-----------------------|---------------|--------------|------------------|-------------|-----------|------------------|-------------------------|------------------------------------|
| Machinability | Austenite | BÖHLER A101 | | ~AISI 316+S | ~1.4436+S | | | Screen Plates Screen Drums |
| | | BÖHLER A506 | | AISI 303 | 1.4305 | S30300 | ASTM A895 EN 10088-3 | Screen Plates Screen Drums |
| Nonmagnetic | Austenite | BÖHLER P500 | 38 | | ~1.4565 | ~S20910 | ASTM A240 SEW 400 | Ship Building |
| | | BÖHLER P501 | 35 | | 1.3964 | ~S20910 - | ASTM A240 SEW 390 | Ship Building |
| | | BÖHLER P503 | 40 | | 1.3974 | - | SEW 390 | Offshore Industry |
| | | BÖHLER P512 | 43 | | 1.4565 | S34565 | ASTM A240 EN 10088-2 | Combustion Gas Desulphurisation |
| | | BÖHLER P530 | | | ~1.3949 | | SEW 390 | Electric Equipment |
| Expansion Coefficient | Austenite | BÖHLER P802 | | Ni 36 | 1.3912 | K93600 K93603 | SEW 385 | Laminate Moulds |
| | | BÖHLER P810 | | NiCo 29-18 | 1.3981 | K94610 | ASTM F15 SEW 385 | Electronic Industry |

The materials described are just some examples for special applications.
We will be pleased to find tailor made solutions to fulfill also your particular needs.
Other grades upon request.

| Type of alloy | BÖHLER grade | Common name | UNS | Material number | Standards | Main application |
|----------------------------|---------------|-------------|--------|-----------------|--------------------------------------|-----------------------|
| Commercially Pure Titanium | BÖHLER L511 | Grade 1 | R50250 | 3.7025 | ASTM B265 VdTÜV 230 | Industry |
| | BÖHLER L512 | Grade 2 | R50400 | 3.7035 | ASTM B265 VdTÜV 230 | Industry |
| | BÖHLER L513 | Grade 3 | R50550 | 3.7055 | ASTM B265 | Industry |
| | BÖHLER L514 | Grade 4 | R50700 | 3.7065 | ASTM B265 ASTM F67 ISO 5832-2 | Industry Medicine |
| Alloyed Titanium | BÖHLER L531EB | Grade 5 | R56400 | 3.7165 | ASTM B265 | Industry |
| | BÖHLER L531 | Grade 5 | R56400 | 3.7165 | ASTM B265 AMS 4911 | Industry Aerospace |
| | BÖHLER L519 | Grade 9 | R56620 | 3.7194 | ASTM B265 | Industry |
| | BÖHLER L533 | Grade 23 | R56407 | 3.7165 | ASTM B265 ASTM F136 ISO 5832-3 | Medicine Aerospace |

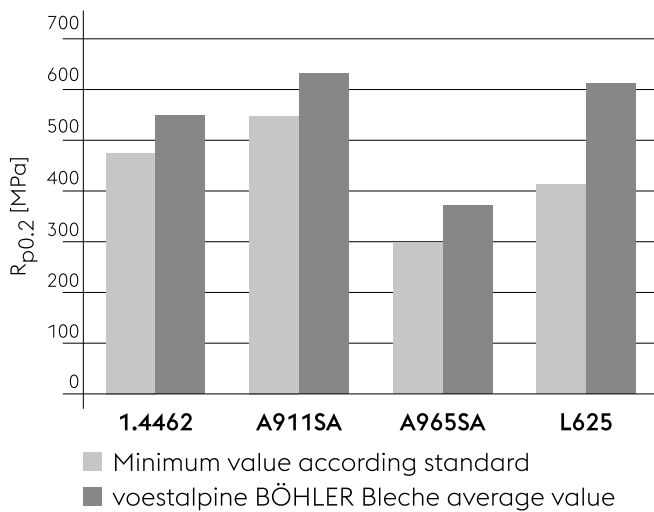
Other grades upon request.

HARD FACTS

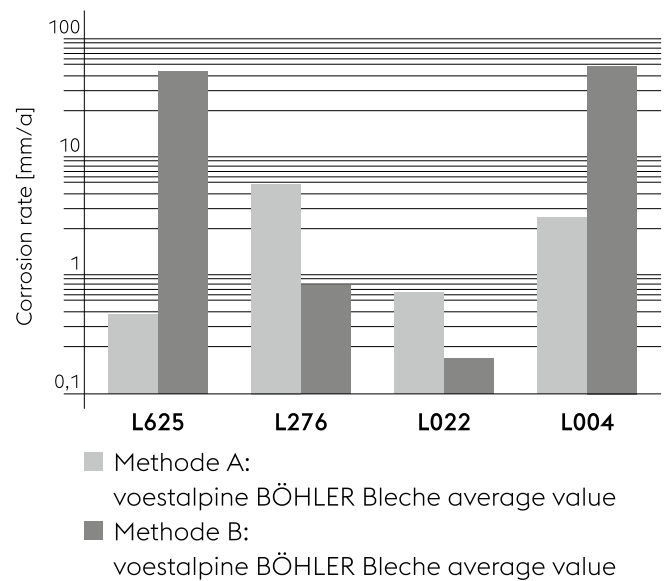


CORROSION RESISTANT ALLOYS

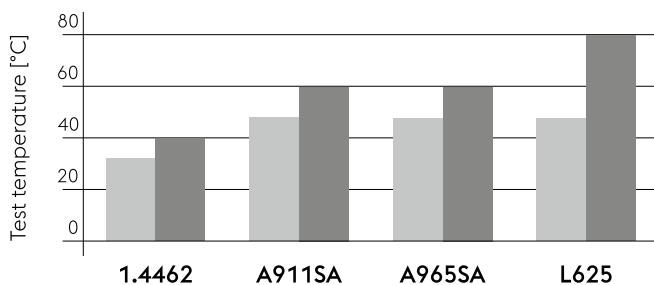
Yield Strength



ASTM G28



ASTM G48 Methode A

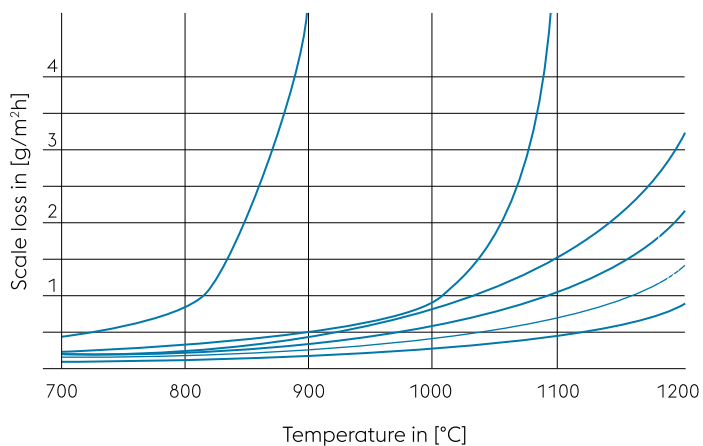


Value according standard
 Potential of our material

Note: values for orientation only.

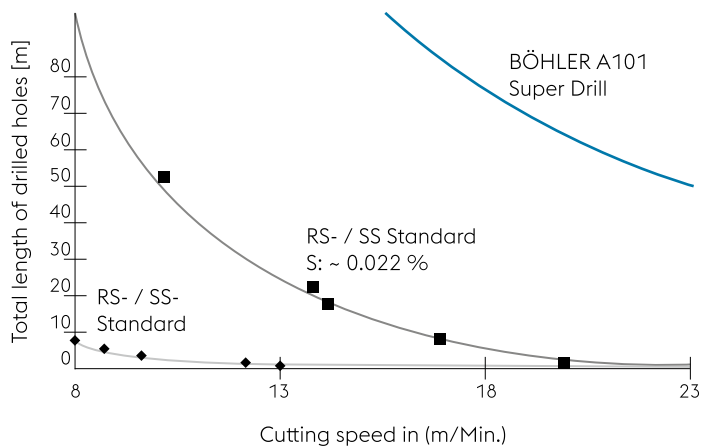


HEAT RESISTANT ALLOYS



Scale loss of different heat resistant alloys tested in air. The limit for technical usage is $> 1 \text{ g/m}^2\text{h}$ scale loss.

SPECIAL ALLOYS



Total length of drilled holes to cutting speed for usual maintenance of cutting edge of HSS-drillers.



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

All of our production steps from melting to delivery are subject to our Quality Management System based on the ISO 9001:2015 and EN 9100:2016. Each production lot is tested for the required metallurgical and mechanical values.

INFORMATION & TECHNICAL SUPPORT

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PERFECT LOGISTICS – PERFECT PRODUCTS

Competent technical support, tailor made solutions and our worldwide delivery service secure the basis for long-term business relationship.

Your satisfaction is our goal!



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ONE STEP AHEAD.