

# CORROSIONS-RESISTANT STEELS - AUSTENITIC STEELS AND NON MAGNETIC STEELS

## Application Segments

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Oil & Gas/CPI

## Available Product Variants

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Long Products\*

Semi-Finished Products / Billet

Plates

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

## Product Description

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BÖHLER A965SA is an austenitic stainless steel alloy with 6% molybdenum and nitrogen. It has very high resistance to crevice and surface corrosion and was specially developed for the requirements of the chemical industry, the pulp and paper industry and the oil/gas industry. Due to its PREN value of over 40, the material is particularly resistant to seawater and is therefore often used in offshore technology. Furthermore, BÖHLER A965SA is resistant to intergranular corrosion up to 400°C. The required surface finish is pickled, scale-free heat treated or machined.

For applications in highly corrosive environments due to chemically aggressive media, e.g. for equipment and installations cooled with seawater and parts for offshore installations. In the chemical industry, where resistance to attack by pure acids as well as chloride ion-containing acids (especially sulphuric acid), organic acids and mixed acids in the higher pressure and temperature range is required. The increased resistance to crevice corrosion also allows the use where incrustations must be expected and / or where the formation of crevices cannot be avoided by constructive measures.

## Process Melting

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Airmelted

## Applications

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- > Components for Chemical plants (incl. LNG, FGD, Urea, LDPE, etc.)
- > Tubular Products, Flanges, Fittings
- > Well Logging Tools
- > Heat Exchanger
- > CPI (incl. LNG, Urea)
- > Valves and Actuators
- > Wellhead, X-mas trees and Manifolds (incl. Tubing hangers), BOPs
- > Other Oil and Gas + CPI components
- > Well Completion Tools
- > Chemical industry - general

Technical data

Material designation		Standards	
F44	Market grade	10088-3	EN ISO
254SMO		A182/A182M	ASTM
1.4547	SEL	A276/A276M	
X1CrNiMoCuN20-18-7	EN	A479/A479M	
S31254	UNS	MDS R17	NORSOK

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Cu	N
max. 0.020	max. 0.80	max. 1.00	max. 0.030	max. 0.010	19.5 to 20.5	6.0 to 6.5	17.5 to 18.5	0.50 to 1.00	0.18 to 0.25

Refers to ASTM A479 S31254.

Delivery condition

Solution Annealed + Quenched	
Tensile Strength (MPa)	min. 655
Yield Strength (MPa)	min. 300

Round Bars and Wire Rod (if any)

Diameter mm	
<b>ROLLED</b>	
12.50	130.00
<b>FORGED</b>	
130.10	200.00

More information regarding MOQ, lengths and tolerances upon request. Flat bars on request.

If other available product variants are listed in addition to long products, please note that these may differ in terms of melting process, technical data, delivery and surface condition as well as available product dimensions. For mandatory technical specifications, other requirements and dimensions, please contact our regional voestalpine BÖHLER sales companies. The data contained in this brochure is merely for general information and therefore shall not be binding on the company. We may be bound only through a contract explicitly stipulating such data as binding. Measurement data are laboratory values and can deviate from practical analyses. The manufacture of our products does not involve the use of substances detrimental to health or to the ozone layer.

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