

# CORROSION RESISTANT STEELS - MARTENSITIC PRECIPITATION HARDENING (PH ) STEELS

## Application Segments

Engineering

## Available Product Variants

Long Products

## Product Description

BÖHLER N709 is a corrosion-resistant steel for engineering applications in the form of bars, wire, and forgings with diameters/thicknesses up to 65 mm in the solution-annealed condition, as well as pre-forging stock of any size. It is a martensitic, precipitation-hardenable chromium-nickel-molybdenum-aluminum steel with high strength and toughness. These products are typically used for parts requiring corrosion resistance, stress corrosion resistance, and high strength up to 316 °C, with good ductility and transverse strength at large cross-sectional dimensions. However, their use is not limited to such applications.

Certain processing methods and operating conditions can make these products susceptible to stress corrosion cracking.

## Process Melting

VIM + VAR

## Applications

- > Civil and mechanical engineering
- > Fasteners, Bolts, Nuts
- > Mechanical Engineering
- > Shafts
- > Medical
- > Medical Industry

## Technical data

Material designation		Standards	
13-8 Mo	Market grade	A564	ASTM
XM-13		F899	
1.4534	SEL		
X3CrNiMoAl13-8-2	EN		
S13800	UNS		

## Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Al	N
max. 0.05	max. 0.10	max. 0.10	max. 0.010	max. 0.008	12.25 to 13.25	2.00 to 2.50	7.50 to 8.50	0.90 to 1.35	max. 0.010

Related to ASTM B564 XM-13

## Delivery condition

### Solution annealed

Hardness (HB)	max. 363   Bars, hot or cold finished, forgings
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### Solution annealed

Hardness (HRC)	max. 38
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## Round Bars and Wire Rod (if any)

Diameter* mm		
ROLLED		
5.00	-	13.50
15.00	-	65.00

\* Diameter 5.00 - 13.50 mm available as Wire Rod.

Diameter 15 - 65 mm round bars.

More information regarding MOQ, lengths and tolerances upon 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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ONE STEP AHEAD.