

# ENGINEERING STEELS - CASE HARDENING STEELS

## Application Segments

Aerospace

Automotive

## Available Product Variants

Long Products\*

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

## Product Description

BÖHLER E108 is a 4%-Nickel-chromium-molybdenum steel in VAR quality for applications requiring high core strength, high toughness and for bigger dimensions. Hardness in carburized layer above 58 HRC. Service temperature max. 200°C. Non corrosion resistant. Compared to Airmelt and ESR quality the content of non-metallic inclusions and segregation is lower, the toughness properties and the fatigue properties transverse to grain flow direction are better.

## Process Melting

Airmelted + VAR

## Applications

- > Structural parts (Aerospace)
- > Automotive
- > Aerospace
- > Motorsport industry
- > Other Aerospace Components

## Technical data

Material designation		Standards	
S156	Market grade	S156	BS

## Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni
0.14 to 0.18	0.10 to 0.35	0.25 to 0.55	max. 0.015	max. 0.012	1 to 1.4	0.2 to 0.30	3.8 to 4.3

Related to BS S156

## Delivery condition

### Annealed

Hardness (HB)	max. 277   S156A, forging stock bars for subsequent working
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### Normalized, Tempered

Hardness (HB)	max. 277   S156D, bright bars for machining
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### Normalized, Tempered

Hardness (HB)	max. 277   S156B, bars for machining
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### Round Bars and Wire Rod (if any)

Diameter mm			MOQ ex mill kg	Length m			Tolerance
ROLLED							
12.50	-	55.00	1,300	3.00	-	4.00	IT h/k 11
55.01	-	120.00	2,500	3.00	-	4.00	IT h/k 11
120.01	-	140.00	2,500	3.00	-	5.00	IT h/k 14
FORGED							
140.01	-	203.20	2,200	2.00	-	5.00	IT h/k 11

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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