

# ENGINEERING STEELS - HEAT TREATABLE AND NITRIDING STEELS

## Application Segments

Aerospace

## Available Product Variants

Long Products

## Product Description

BÖHLER V141 is a premium aircraft-quality, low-alloy Ni-Cr-Mo steel in the form of bars, forgings and forging stock requiring high tensile and toughness values, particular in large cross sections in the hardened and tempered condition. The molybdenum addition prevents the steel from being susceptible to temper brittleness.

These products have been used typically for parts requiring a through-hardening capability up to 6 inches (152,4 mm) in nominal thickness at time of heat treatment but usage is not limited to such applications.

## Process Melting

Airmelted

## Applications

> Structural parts (Aerospace)

> Other Aerospace Components

## Technical data

Material designation	Standards
S97 Market grade	S97
	S140 BS
	S154

## Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Al
0.27 to 0.35	0.15 to 0.35	0.45 to 0.7	max. 0.025	max. 0.015	0.5 to 0.8	0.45 to 0.65	2.3 to 2.8	0.015 to 0.050

Related to BS S97

Delivery condition

<b>Annealed</b>	
Hardness (HB)	max. 277   S97A billets and bars for forging

<b>Hardened and Tempered</b>	
Hardness (HB)	293 to 341   S97 B and D bright bars for further processing, S97C forgings
Tensile Strength (MPa)	1,004 to 1,158
Yield Strength (MPa)	min. 850

<b>Round Bars and Wire Rod (if any)</b>							
Diameter mm			MOQ ex mill kg	Length m			Tolerance
<b>ROLLED</b>							
5.01	-	12.49	750	3.00	-	4.00	IT h/k 11
12.50	-	55.00	900	3.00	-	4.00	IT h/k 11
55.01	-	69.00	1,200	3.00	-	4.00	IT h/k 11
69.01	-	72.00	1,000	3.00	-	4.00	IT h/k 11
72.01	-	82.00	1,150	3.00	-	4.00	IT h/k 11
82.01	-	120.00	1,400	3.00	-	4.00	IT h/k 11
120.01	-	145.00	1,400	3.00	-	5.00	IT h/k 14

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.