

ENGINEERING STEELS - HEAT TREATABLE AND NITRIDING STEELS

Application Segments

Aerospace

Available Product Variants

Long Products*

Open Die Forgings

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

Product Description

BÖHLER V124SC 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.

These products have been used typically for parts requiring a through-hardening capability up to 3.5 inches (89 mm) in nominal thickness at time of heat treatment but usage is not limited to such applications. E.g. highly stressed components and parts for the aircraft industry, Tracks, helicopter shafts, bolts and screws.

Process Melting

Airmelted + VAR

Applications

> Structural parts (Aerospace)

> Other Aerospace Components

> Aerospace

Technical data

Material designation		Standards	
4340	Market grade	6414	AMS
	AISI		
G43400	UNS		

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Cu
0.38 to 0.43	0.15 to 0.35	0.65 to 0.90	max. 0.010	max. 0.010	0.70 to 0.90	0.20 to 0.30	1.65 to 2.00	max. 0.35

Releatrd to AMS 6414

Delivery condition

Annealed

Hardness (HB)	max. 235 Hot finished and annealed, above 12.7 mm diameter
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Annealed

Tensile Strength (MPa)	max. 862 Cold finished and annealed, max 12.7 mm diameter
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Annealed

Hardness (HB)	max. 255 Cold finished and annealed, above 12.7 mm diameter
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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	1,250	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 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.