

HEAT TREATABLE STEELS AND PRECIPITATION HARDENING 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 (Aerosp)

> Other Aerospace Comps.

Technical data

Material designation	Standards
4340 Market grade AISI	6414 AMS
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 ksi)	max. 862 126 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		MOQ ex mill		Length		Tolerance
mm	inch	kg	lbs	m	ft	
ROLLED						
12.50	- 55.00	0.492	- 2.165	1,250	2,756	3.00 - 4.00 9.84 - 13.12 IT h/k 11
55.01	- 120.00	2.166	- 4.724	2,500	5,512	3.00 - 4.00 9.84 - 13.12 IT h/k 11
120.01	- 140.00	4.725	- 5.512	2,500	5,512	3.00 - 5.00 9.84 - 16.40 IT h/k 14
FORGED						
140.01	- 203.20	5.512	- 8.000	2,200	4,850	2.00 - 5.00 6.56 - 16.40 IT h/k 14

Long Products: For additional specifications, technical requirements, and other dimensions, please contact our regional voestalpine BÖHLER sales companies.

Open Die Forgings: Product Variant may differ in terms of melting process, technical data, delivery, and surface condition as well as available product dimensions. Please contact the business unit Open Die Forgings of voestalpine BÖHLER Edelstahl GmbH & Co KG.

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.