

AUSTENITIC STEELS

Application Segments

Engineering

Available Product Variants

Long Products

Product Description

BÖHLER P504 is a wrought nitrogen strengthened 21chromium—10nickel—3manganese—2.5molybdenum stainless steel for surgical implants. It is a highly corrosion resistant non-magnetisable stainless austenitic steel - nitrogen alloyed - resistant to intergranular corrosion. Compared to standard Cr-Ni-Mo steel, it offers increased strength and thus also better fatigue properties. The steel is produced as remelt grade and thus fulfils the usual requirements for steel purity as specified for implant material.

Process Melting

Airmelted + ESR

Applications

> Medical

> Medical Instruments & Implants

> Medical Industry

Technical data

Material designation		Standards	
REX 734	Market grade	F1586	ASTM
S31675	UNS	ISO 5832-9	Others

Chemical composition (wt. %)

C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Nb	N
max. 0.08	max. 0.75	2.00 to 4.25	max. 0.025	max. 0.01	19.5 to 22.0	2.0 to 3.0	9.0 to 11.0	max. 0.25	0.25 to 0.80	0.25 to 0.50

Related to ASTM F1586

Delivery condition

Solution Annealed + Quenched

Tensile Strength (MPa ksi)	min. 740 108
Yield Strength (MPa ksi)	min. 430 63

Round Bars and Wire Rod (if any)

mm		Diameter*	inch		
ROLLED					
5.00	-	13.50	0.197	-	0.531

* Diameter 5.00 - 13.50 mm available as Wire Rod.
 More information regarding MOQ and tolerances upon request.

For additional specifications and other sizes please contact BÖHLER Edelstahl - Special Materials Engineering

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