VULCAN
Engineering Steels

304 STAINLESS STEEL

304 is a chromium-nickel austenitic stainless steel with good strength and very good corrosion resistance. 304 has very good corrosion resistance to most oxidizing agents. 304 cannot be hardened by thermal treatment, but strength and hardness can be improved by cold drawing with subsequent reduction in ductility. This is a non-magnetic grade, however it can become mildly magnetic following cold working. Annealing is required to rectify if necessary.

Stocked Sizes	-	Rounds	4.76 mm – 203.2 mm Ø
Bar Finishes	-	Peeled, Turned & Polished, Cold Drawn & Centreless Ground	

Related Specifications		
Germany	W. Nr 1.4301 X5CrNi 18 10	
Japan	JIS G4303 SUS 304	
United Kingdom	BS 970 Pt 3 1991 304S15/304S31	
USA	ASTM A276-98b 304 SAE 30304 AISI 304 UNS30400	
Chemical Composition*		
	Min. %	**Max %**
Carbon	0	0.08
Silicon	0	1.00
Manganese	0	2.00
Nickel	8.00	10.50
Chromium	18.00	20.00
Phosphorous	0	0.045
Sulphur	0	0.03
***Molybdenum content up to 1.00% is optional**		

Typical Mechanical Properties (For Ref Only)	**Cold Drawn**	**Other**
Tensile Strength Mpa	680	590
0.20% Proof Stress (Yield) Mpa	500	240
Elongation on %	42	55
Hardness Brinell HB	195	155

Annealing

Heat uniformly to 1020-1100 Deg C. Hold until temperature is uniform throughout section. Soak as required (as a guide 30 minutes per 25mm of section) Quench in water to optimize corrosion resistance.