

303 Free machining stainless steel

Typical Analysis (Ave. values %)	C	Si	Mn	Cr	Ni	S	P
	0.08	0.50	1.80	17.3	8.3	0.25	0.025
NEAREST STANDARD	AS		DIN		SIS		AISI
	303		1.4305 X8CrNiS18-9		2346		303

DESCRIPTION	ASSAB 303 Austenitic stainless steel offers the best machinability for stainless steels. It is mainly used when production involves extensive machining in automatics. The improved machinability comes from the added Sulphur content which slightly reduces the toughness.
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APPLICATIONS	Free-cutting steel for components subjected to corrosion in mechanical and plant engineering, mass produced items such as screws, bolts, and nuts.
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MECHANICAL PROPERTIES ≤ 160 mm	Tensile Strength MPa	Yield Strength MPa	Elong %
	500-750	190	35

HEAT TREATMENT	Quench temperature (Annealing)	1000-1100 Water, air.
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PHYSICAL PROPERTIES	Density (kg/dm ³)	7.90
	Modulus of elasticity 10 ³ N/mm ²	200
	Thermal conductivity W/(m.K)	15
	Electric resistivity Ohm.mm ² /m	0.73
	Specific heat capacity J/(kg.K)	500
	Thermal expansion 10 ⁶ m/(m.K)	16

WELDING	Not recommended, but if unavoidable use Bohler FOX EAS2A or alt FOX CN29/9A. Welds must be annealed for maximum corrosion resistance.
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SIZE RANGE	Round	6.00 to 19.05 mm Drawn 22.23 to 80.00 mm Peeled & polished
	Hexagon	25.40 mm

<u>LOCATIONS</u>					
Bohler Uddeholm Australia Pty Ltd ABN 15000013052					
Sydney	129-135 McCredie Rd Guildford	2161	Ph (02) 8724 5554	Fax (02) 8724 5555	
Newcastle	3 Pavilion Pl Cardiff	2285	Ph (02) 4954 6611	Fax (02) 4956 5773	
Albury	1 Eames St Albury	2640	Ph (02) 6041 3399	Fax (02) 6041 1820	
Wollongong	40 Doyle Ave Unanderra	2526	Ph (02) 4272 6544	Fax (02) 4272 7563	
Marayong	1/21 Binney Rd Marayong	2148	Ph (02) 9831 4431	Fax (02) 9671 1682	
Melbourne	282-290 Greens Rd Dandenong	3175	Ph (03) 9767 5554	Fax (03) 9767 5555	
Bayswater	4 Amsted Rd Bayswater	3153	Ph (03) 9739 8022	Fax (03) 9739 8033	
Adelaide	1 Williams Cir Pooraka	5095	Ph (08) 8368 4554	Fax (08) 8368 4555	
Brisbane	12-18 Limestone St Darra	4076	Ph (07) 3712 9554	Fax (07) 3712 9555	
Townsville	9-11 Caldwell St Garbutt	4814	Ph (07) 4479 4800	Fax (07) 4725 1316	
Perth	29-33 Gauge Cir Canningvale	6155	Ph (08) 9455 8672	Fax (08) 9455 8673	
Kewdale	5 Beete St Welshpool	6106	Ph (08) 9350 9582	Fax (08) 9350 9683	
Launceston	20 Murphy St Invermay	7248	Ph (03) 6334 3542	Fax (03) 6331 4001	
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