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**PRODUCT
DATA
SHEET**

**Stainless Steel Bar Specifications
Grades 304 & 316**

**Stainless
Steels**

1. Stainless steel bar supplied by Austral Wright Metals complies with ASTM A276, Standard Specification for Stainless Steel Bars and Shapes, with most dimensions meeting ASTM A484, Standard Specification for General Requirements for Stainless Steel Bars, Billets and Forgings. Diameters are to ISO 683/13 Heat-treated Steels, Alloy Steels and Free-cutting Steels – Part XIII: Wrought Stainless Steels.
2. Test Certificates showing compliance with ASTM A276 are available for all material supplied.
3. The requirements of AS2837-1986 Wrought Alloy Steels – Stainless Steel Bars and Semi-Finished Products are compared to those of ASTM A276 and ISO 683/13 in the following tables.
4. All stainless steel bar supplied by Austral Wright Metals meets the requirements of AS2837-1986.

Table 1: Chemical Requirements

		C	Mn	P	S	Si	Cr	Ni	Mo	N
304	ASTM A276	0.08	2.00	0.045	0.030	1.00	18.00-20.00	8.00-10.50	-	0.10
	AS2837	0.08	2.00	0.045	0.030	1.00	18.0-20.0	8.0-10.5	-	-
316	ASTM A276	0.08	2.00	0.045	0.030	1.00	16.00-18.00	10.00-14.00	2.00-3.00	0.10
	AS2837	0.08	2.00	0.045	0.030	1.00	16.00-18.00	10.00-14.00	2.00-3.00	-

**Table 2: Mechanical Properties of Annealed Cold Finished Bar,
Grades 304 & 316**

	Diameter	Yield Strength (min) MPa	Tensile Strength (min) MPa	Elongation (min) %	Reduction of Area (min) %	Hardness (max) HB
ASTM A276	<=12.7	310	620	30	40	
	>12.7	205	515	30	40	
AS2837	all	205	520	40	-	183

Table 3: ASTM A484 Tolerances on Diameter of Cold Finished Round Bars

Specified Size mm	Over	Under
1.50 to 7.99	0.03	0.03
8.00 to 12.99	0.04	0.04
13.00 to 24.99	0.05	0.05
25.00 to 37.99	0.06	0.06
38.00 to 100.00	0.08	0.08

Table 4: ISO687/13 Tolerances on Diameter of Round Bars (mm).

Diameter mm	h9	h11
< 3.00	0.025	0.040
3.0 – 5.99	0.030	0.048
6.0 – 9.9	0.036	0.058
10.0 – 17.9	0.043	0.070
18.0 – 29.9	0.052	0.084
30.0 – 49.9	0.062	0.100
50.0 – 79.9	0.074	0.120
80.0 – 99.9	0.087	0.140
100.0 – 180.0	0.100	0.250

Austral Wright Metals supply cold finished bar to h9 diameter tolerance up to 50.8 mm. Larger diameters are peeled to h11.

ISO h tolerances are plus zero, minus the value in the table.

Table 4: AS 2837 Tolerances on Diameter of Annealed Cold Finished Round Bars (mm).

Specified Diameter		Tolerance – plus nil, minus
Over	Up to and including	
-	25	0.08
25	50	0.10
50	70	0.13

Table 5: ASTM A484 Tolerances on Straightness of Machine Straightened Cold Finished Round Bars over 12.7 mm diameter.

Tolerance 1	Tolerance 2
1.5 mm in any 1.5m	But may not exceed 1.5 x length in metres divided by 1.50

Table 6: AS 2837 Tolerances on Straightness of Cold Sized Bars

Specified Size	Straightness Tolerance (max) mm
All	1 in 500