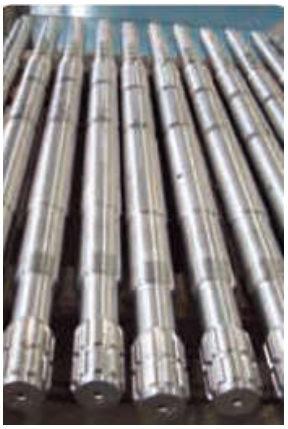
Engineering Steel Bar



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Bright Mild Steel Bar

Bright steel bars are carbon steel which has had the surface condition improved over the hot rolled finish supplied by the steel mill. Advantages achieved include improved machinability, enhancement of physical and mechanical properties and improved dimensional tolerances and straightness.

Cold finished steels are covered by Australian Standard AS1443 or similar overseas alternatives.

Types of Cold Finished Bars

Cold drawn bars are widely used in mass production of parts due to their excellent mechanical and dimensional properties, with machinability in excess of the hot rolled condition. Round, hexagonal and square bars can be produced by cold drawing.

Turned and polished round bars have similar mechanical properties to those of equivalent hot rolled bar, but exhibit a smooth, bright surface finish and improved dimensional accuracy. They are widely used where a surface free of decarburisation is required, for example in induction hardening and when the surface must be free from surface defects, such as for use in cold forming.

Cold drawn and precision ground or **turned and precision ground round** bars, where very close dimensional tolerances and finishes are required e.g. plating.

Cold rolled sizes up to 100mm wide and 7mm thick inclusive are produced by cold rolling to produce flat and some special shape sections to suitable tolerances and surface finishes.

Carbon Steel Groups

10xx	Plain carbon steels
11xx	Sulphurised free cutting carbon steels. (Free machining steels)
12xx	Phosphorised and sulphurised free cutting carbon steels. (Free machining steels)
xxLxx	Lead bearing free machining carbon steels

Steel Making Practice

Old Prefix	New Prefix	Practice	Example of Old Prefix	Example of New Prefix
R	U	Steel with unspecified deoxidation (no minimum % Si specified)	R1008	U1004
S	U		S1010	U1010
CS	M	Merchant quality. Similar to “U” with wider composition range	CS1020	M1020
K	No Prefix	As per relevant table in Standard	K1045	1045
X	X	A major deviation in chemical composition from AISI-SAE grades	XK1320	X1320

Chemical Composition (specified % limits as per AS 1443)

Grade 1018 is not in AS 1443. Composition limits listed are according to ASTM A29.

Grade		C	Si	Mn	P	S	Pb
1018	Min	0.15	-	0.60	-	-	-
	Max	0.20	0.35	0.90	0.040	0.050	-
M1020	Min	0.15	-	0.30	-	-	-
	Max	0.25	0.35	0.90	0.050	0.050	-
M1030	Min	0.25	-	0.30	-	-	-
	Max	0.35	0.35	0.90	0.050	0.050	-
1045	Min	0.43	0.10	0.60	-	-	-
	Max	0.50	0.35	0.90	0.040	0.040	-
1214	Min	-	-	0.80	0.04	0.25	-
	Max	0.15	0.10	1.20	0.09	0.35	-
12L14	Min	-	-	0.80	0.04	0.25	0.15
	Max	0.15	0.10	1.20	0.09	0.35	0.35

Typical minimum tensile properties (not guaranteed as these grades are not tensile tested)

Grade	Cold Drawn Condition Tensile Strength (MPa)		
	Up to 16mm incl.	Over 16mm to 38mm incl.	Over 38mm to 63.5mm incl.
1018/M1020	480 min	460 min	430 min
M1030	560 min	540 min	520 min
1045	690 min	650 min	640 min
1214	480 min	430 min	400 min
12L14	480 min	430 min	400 min

Grade	Turned and Polished Condition Tensile Strength (MPa)
	All sizes up to 250mm incl.
1018/M1020	410 min
M1030	500 min
1045	600 min
1214	370 min
12L14	370 min

Note that alternative grades with guaranteed mechanical properties are available subject to special order.

Shape and section measurements

Round bar: measured across the diameter.

Square bar: measured across the flats (AF).

Hexagonal bar: measured across the flats (AF).

Product and Stock Range for Bright Mild Steel

Production Method	Shape	Size (mm)		Standard Nominal Lengths (m)
		Min.	Max.	
Cold drawn	Round	3.17	63.5	3.5 or 6
	Hexagon	4.76	73.02	3.5
	Square	3	50.8	3.5
Turned and polished	Round	10	260	3.5 or 6

Dimensional Tolerances for Bright Mild Steel

Form and Condition					
Round			Square	Hexagonal	Flat
Precision ground	Cold drawn	Turned and polished			
h8	h10	h11	h11	h11	h11

Nominal bar size (mm)	Tolerance Number								
	6*	7*	8	9	10	11	12	13	14*
Up to 3	0.006	0.010	0.014	0.025	0.040	0.060	0.10	0.14	0.25
over 3 to 6	0.008	0.012	0.018	0.030	0.048	0.075	0.12	0.18	0.30
over 6 to 10	0.009	0.015	0.022	0.036	0.058	0.090	0.15	0.22	0.36
over 10 to 18	0.011	0.018	0.027	0.043	0.070	0.110	0.18	0.27	0.43
over 18 to 30	0.013	0.021	0.033	0.052	0.084	0.130	0.21	0.33	0.52
over 30 to 50	0.016	0.025	0.039	0.062	0.100	0.160	0.25	0.39	0.62
over 50 to 80	0.019	0.030	0.046	0.074	0.120	0.1490	0.30	0.476	0.74
over 80 to 120	0.022	0.035	0.054	0.087	0.140	0.220	0.35	0.54	0.87
over 120 to 180	0.025	0.040	0.063	0.100	0.160	0.250	0.40	0.63	1.00
over 180 to 250	0.029	0.046	0.072	0.115	0.185	0.290	0.46	0.72	1.15
over 250 to 315	0.032	0.052	0.081	0.130	0.210	0.320	0.52	0.81	1.30
over 315 to 400	0.036	0.057	0.089	0.140	0.230	0.360	0.57	0.89	1.40
over 400 to 500	0.040	0.063	0.097	0.155	0.250	0.400	0.63	0.97	1.55

Notes
Units are millimetres

h = all minus, k = all plus

* This table shows h tolerances across all tolerance classes.
k tolerances are in accordance with this table for tolerance classes k8 to k13 only.
k tolerances are not standardized for k14 and above.

Examples
25.40mm diameter bright drawn bar to h9 tolerance = +nil, -0.052mm
90mm diameter peeled bar to k12 tolerance = +0.35, -nil

Bright Mild Steel Cold Finished Round Bar

Product Range and Theoretical Weights								
Diameter		Weight (kg/m)	Diameter		Weight (kg/m)	Diameter		Weight (kg/m)
mm	inches		mm	inches		mm	inches	
6.00	0.236	0.22	20.64	0.812	2.63	45.00	1.772	12.48
6.35	0.250	0.25	21.00	0.827	2.72	46.00	1.811	13.04
7.00	0.276	0.30	22.00	0.866	2.98	47.62	1.875	13.98
7.94	0.313	0.39	22.22	0.875	3.04	50.00	1.969	15.41
8.00	0.315	0.39	23.81	0.937	3.49	50.80	2.000	15.91
9.00	0.354	0.50	24.00	0.945	3.55	52.07	2.050	16.71
9.52	0.375	0.56	25.00	0.984	3.85	53.67	2.113	17.76
10.00	0.394	0.62	25.40	1.000	3.98	55.00	2.165	18.65
11.11	0.437	0.76	26.00	1.024	4.17	57.15	2.250	20.14
12.00	0.472	0.89	27.00	1.063	4.49	60.00	2.362	22.19
12.70	0.500	0.99	28.57	1.125	5.03	63.50	2.500	24.86
13.00	0.512	1.04	30.00	1.181	5.55	65.00	2.559	26.05
14.00	0.551	1.21	31.75	1.250	6.21	70.00	2.756	30.21
14.29	0.563	1.26	32.00	1.260	6.31	75.00	2.953	34.68
14.55	0.572	1.30	33.00	1.300	6.72	76.20	3.000	35.80
15.00	0.591	1.39	34.92	1.375	7.52	80.00	3.150	39.46
15.87	0.625	1.55	35.00	1.378	7.55	82.55	3.250	42.01
16.00	0.630	1.58	36.00	1.417	7.99	88.90	3.500	48.72
17.00	0.669	1.78	38.10	1.500	8.95	90.00	3.543	49.94
17.46	0.687	1.88	39.00	1.535	9.38	95.00	3.740	55.64
18.00	0.709	2.00	40.00	1.575	9.86	95.25	3.750	56.01
19.00	0.748	2.23	41.27	1.625	10.50	100.00	3.937	61.65
19.05	0.750	2.24	42.42	1.670	11.09	101.60	4.000	63.64
20.00	0.787	2.47	44.45	1.750	12.18			

Grades: 1018/M1020, M1030, 1045, 1214, 12L14

Bright Mild Steel Cold Finished Hexagonal Bar

Product Range and Theoretical Weights		
A/F		Weight (kg/m)
mm	inches	
9.52	0.375	0.62
11.11	0.437	0.84
12.70	0.500	1.10
14.29	0.563	1.39
15.88	0.625	1.71
17.46	0.687	2.07
19.05	0.750	2.47
20.64	0.812	2.90
22.22	0.875	3.36
23.81	0.937	3.85
25.40	1.000	4.39
26.98	1.024	4.59
28.57	1.125	5.55
31.75	1.250	6.85
34.92	1.375	8.29
38.10	1.500	9.87
44.45	1.750	13.43

Grades: 1045, 1214, 12L14

Other sizes available up to 100mm mill sourced generally.

Carbon Steel Round Bar 1045

Related Specifications

AS 1442 – 1045
JIS G4051 – S45C

Chemical Composition (% by weight – nominal values)

Grade	C	Mn	Si	P	S
1045	0.45	0.7	0.2	0.02	0.02

Grade 1045 is fully killed medium carbon steel supplied in the hot rolled or hot forged condition and may be subsequently normalised (subject to the diameter). The tensile strength is not guaranteed and not usually tested, but is typically in the range of 550 – 700 MPa.

Applications

The steel machines readily and is ideal for applications including:

- Axles
- Bolts
- Hydraulic rams
- Pins
- Rolls
- Shafts
- Sprockets
- Machined parts requiring better strength than mild steel

The steel is also well suited to induction and flame hardening.

Welding can be carried out but requires considerable care. WTIA Technical Note 1 is a useful reference.

Dimensional Tolerances

The following tolerances apply to bar supplied to AS 1442.
Similar but not identical tolerances apply for other related specifications.

Nominal Diameter (mm)	Diameter Tolerance (mm)	Out-of-round Tolerance (mm)
Up to 25	±0.25	0.40
Over 25 to 30	±0.30	0.45
Over 30 to 40	±0.40	0.60
Over 40 to 50	±0.50	0.75
Over 50 to 60	±0.60	0.90
Over 60 to 70	±0.70	1.05
Over 70 to 80	±0.80	1.20
Over 80 to 100	±0.90	1.35
Over 100 to 125	+3.20 / -nil	3.20
Over 125 to 170	+4.80 / -nil	4.80
Over 170 to 215	+6.40 / -nil	6.40

Product range and theoretical weights					
Diameter		Weight	Diameter		Weight
mm	inches	kg/m	mm	inches	kg/m
16	0.630	1.6	200	7.874	247
20	0.787	2.5	210	8.268	272
24	0.945	3.6	220	8.661	299
27	1.063	4.5	230	9.055	326
30	1.181	5.6	240	9.449	355
33	1.299	6.7	250	9.843	385
36	1.417	8.0	260	10.236	417
39	1.535	9.4	270	10.630	449
42	1.654	10.9	280	11.024	483
45	1.772	12.5	290	11.417	518
50	1.969	15.4	300	11.811	555
55	2.165	18.7	310	12.205	592
56	2.205	19.3	320	12.598	631
60	2.362	22.2	330	12.992	671
65	2.559	26.1	340	13.386	713
70	2.756	30.2	350	13.780	755
73	2.874	32.9	360	14.173	799
75	2.953	34.7	380	14.961	890
80	3.150	39.5	400	15.748	986
85	3.346	44.5	410	16.142	1036
90	3.543	49.9	415	16.339	1062
95	3.740	55.6	420	16.535	1088
100	3.937	61.7	440	17.323	1194
105	4.134	68.0	450	17.717	1248
110	4.331	74.6	460	18.110	1305
120	4.724	88.8	480	18.898	1420
130	5.118	104	500	19.685	1541
140	5.512	121	525	20.669	1699
150	5.906	139	550	21.654	1865
160	6.299	158	590	23.228	2146
170	6.693	178	610	24.016	2294
180	7.087	200	650	25.591	2605
190	7.480	223			

Available in random 5.0m – 6.0m lengths

Alloy Constructional and Case Hardening Steel Bar

Low Alloy Steels

For applications requiring higher tensile strengths and toughness than the carbon steels there is a range of low alloy steels. These are categorised as high tensile or constructional steels and case hardening steels. The high tensile strength steels have sufficient alloying additions enabling through hardening (by quench and temper treatment) to section sizes that depend on their alloying additions.

Case Hardening (Carburising) Steels

Case hardening steels are a group of alloy steels in which a high hardness surface zone (hence the term 'case hardened') is developed during heat treatment by absorption and diffusion of carbon. The high hardness zone is supported by the unaffected underlying core zone, which is lower hardness and higher toughness.

Plain carbon steels that can be used for case hardening are restricted. Where plain carbon steels are used, the rapid quenching necessary to develop satisfactory hardness within the case can cause distortion and the strength that can be developed in the core is very limited. Alloy case hardening steels allow the flexibility of slower quenching methods to minimise distortion and high core strengths can be developed.

Nitriding Steels

Nitriding steels can have higher surface hardness developed by absorption of nitrogen, when exposed to a nitriding atmosphere at temperatures in the range of 510-530^{O}C, after hardening and tempering.

High tensile steels suitable for nitriding are: 4130, 4140, X4150, 4340, En25, En26.

Chemical Composition (% by weight – nominal values)

Grade	Alternative Designation	C	Si	Mn	Cr	Mo	S	Ni
High Tensile								
4140	-	0.40	-	0.80	0.90	0.20	-	-
4340	-	0.40	-	0.70	0.80	0.25	-	1.8
En26	X9940	0.40	-	0.60	0.65	0.55	-	2.50

Mechanical Property Specifications

The following specifications are typical stock; inspection certificates for each batch should be checked if properties are critical for the application.

Grade	Specification
4140	Up to 100mm AS 1444, Condition T. Over 100mm ASTM A434, Class BD.
4340	Up to 100mm AS 1444, Condition U. Above 100mm ASTM A434, 4340, Class BD.
En26	AS 1444 or BS 970: Part 3, 826M40, Condition W.

Note 1: Specified hardenability grades are available on request.

Note 2: The actual specification of the product ordered will depend upon the product's origin – for deviations from the above specification refer to the Atlas Service Centre.

Note 3: Alloy bar can be sourced in alternative conditions, i.e. annealed or other hardened and tempered conditions.

Designation of Tensile Strengths

AS 1444/BS 970 Tensile Strength Designation		ASTM A434 Class BD Tensile Strength	
Tensile Strength Designator	Tensile Strength (MPa)	Diameter (mm)	Tensile Strength min. (MPa)
R	700-850	38.1 and under	1070
S	770-930	Over 38.1 to 63.5 inclusive	1030
T	850-1000	over 63.5 to 114 inclusive	960
U	930-1080	Over 114 to 178 inclusive	930
V	1000-1150	Over 178 to 241.3 inclusive	900
W	1080-1230		
X	1150-1300		
Y	1230-1380		
Z	1550 min.		

Yield (proof) stress and elongation limits also apply – refer to AS 1444, BS 970 or ASTM A434.

Typical Applications

Grade	Description
High Tensile	
4140	General-purpose high tensile, used for axles, shafts, high tensile studs and bolts, gears and drill rods. The steel is also suitable for flame and induction hardening.
4340	Suitable for the most severe duties where freedom from temper-brittleness is necessary. It has high strength and toughness in large sections. Used in highly stressed shafts in the larger sizes, heavy truck and tractor axles and transmission shafts.
En26	Characterised by high strength and toughness in very large sections, similar to En25 but with a higher carbon content. En26 is used extensively in most industry sectors for applications requiring higher tensile and yield strength than 4140, 4340 or En25 can provide.

Product Range and Theoretical Weights											
Diameter		Weight (kg/m)	Diameter		Weight (kg/m)	Diameter		Weight (kg/m)	Diameter		Weight (kg/m)
mm	inches		mm	inches		mm	inches		mm	inches	
10.00	0.394	0.62	39.00	1.535	9.38	75.00	2.953	34.68	170.00	6.693	178.17
12.00	0.472	0.89	40.00	1.575	9.86	76.00	2.992	35.61	172.00	6.772	182.38
12.70	0.500	0.99	40.50	1.594	10.11	76.20	3.000	35.80	175.00	6.890	188.80
13.00	0.512	1.04	41.28	1.625	10.51	78.00	3.071	37.51	180.00	7.087	199.75
14.00	0.551	1.21	42.00	1.654	10.87	80.00	3.150	39.47	182.00	7.165	204.21
15.88	0.625	1.55	42.50	1.673	11.14	82.00	3.228	41.45	185.00	7.283	211.00
16.00	0.630	1.58	42.65	1.679	11.21	82.55	3.250	42.01	190.00	7.480	222.56
18.00	0.709	2.00	43.50	1.713	11.67	84.00	3.307	43.50	192.00	7.559	227.26
19.00	0.748	2.23	44.45	1.750	12.18	87.00	3.425	46.66	195.00	7.677	234.42
19.05	0.750	2.24	45.00	1.772	12.48	88.90	3.500	48.72	200.00	7.874	246.60
20.00	0.787	2.47	46.20	1.819	13.16	90.00	3.543	49.94	205.00	8.071	259.08
22.00	0.866	2.98	47.50	1.870	13.91	92.00	3.622	52.18	210.00	8.268	271.88
22.22	0.875	3.04	47.62	1.875	13.98	96.00	3.780	56.82	220.00	8.661	298.39
24.00	0.945	3.55	48.00	1.890	14.20	97.00	3.819	58.01	230.00	9.055	326.13
25.00	0.984	3.85	50.00	1.969	15.41	100.00	3.937	61.65	240.00	9.449	355.10
25.40	1.000	3.98	50.80	2.000	15.91	101.60	4.016	64.14	250.00	9.843	385.31
26.00	1.024	4.17	51.50	2.028	16.35	102.00	4.016	64.14	260.00	10.236	416.75
27.00	1.063	4.49	52.00	2.047	16.67	106.00	4.173	69.27	270.00	10.630	449.42
27.45	1.081	4.64	54.00	2.126	17.98	110.00	4.331	74.60	280.00	11.024	483.34
28.00	1.102	4.83	55.00	2.165	18.65	116.00	4.567	82.96	290.00	11.417	518.48
28.57	1.125	5.03	55.50	2.187	19.03	120.00	4.724	88.78	300.00	11.811	554.85
29.00	1.142	5.18	56.00	2.205	19.33	125.00	4.921	96.33	310.00	12.205	592.46
29.50	1.161	5.36	57.15	2.250	20.14	127.00	5.000	99.43	320.00	12.598	631.30
30.00	1.181	5.55	58.00	2.283	20.74	130.00	5.118	104.19	330.00	12.992	671.37
31.50	1.240	6.12	60.00	2.362	22.19	136.00	5.354	114.03	340.00	13.386	712.67
31.75	1.250	6.21	62.00	2.441	23.70	140.00	5.512	120.83	350.00	13.780	755.21
32.00	1.260	6.31	63.00	2.480	24.47	142.00	5.591	124.31	360.00	14.173	798.98
32.50	1.280	6.51	63.50	2.500	24.86	145.00	5.709	129.62	370.00	14.567	843.98
33.00	1.299	6.71	63.80	2.512	25.09	146.00	5.748	131.41	380.00	14.961	890.23
34.50	1.358	7.34	64.00	2.520	25.25	150.00	5.906	138.72	390.00	15.354	937.70
34.92	1.374	7.52	65.00	2.559	26.05	152.00	5.984	142.44	400.00	15.748	986.40
35.00	1.378	7.55	66.00	2.598	26.85	155.00	6.102	148.11	450.00	17.717	1248.41
36.00	1.417	7.99	68.00	2.677	28.51	158.00	6.220	153.90	500.00	19.685	1541.25
37.50	1.476	8.67	69.85	2.750	30.08	160.00	6.299	157.82			
38.00	1.496	8.90	70.00	2.756	30.21	162.00	6.378	161.79			
38.10	1.500	8.95	72.00	2.835	31.96	165.00	6.496	167.84			

Carbon Steel Hollow Bar

Hollow bar, otherwise known as seamless mechanical tubing, is a tubular product made with characteristics and properties suitable for subsequent transformation into a great variety of hollow products and cylindrical components for general engineering purposes. Carbon and alloy steel hollow bars are normally supplied as circular sections although other shapes are possible.

Selection of the most suitable raw material for production of circular hollow components, whether the component is a plain bush or a complex precision part, should take into consideration the advantages in using hollow bar as feedstock. It is important to remember when comparing hollow bar and solid bar that the raw material cost is dependent on the length of material used to produce the component. Since the purchase price of raw material is based on weight, the price per length is an important factor.

Hollow bar is preferred by many users because of significant savings on raw material cost and machining time. In many instances it is possible to choose a hollow bar with outside diameter and wall thickness very close to the finished dimensions of the component to be manufactured. The need for preliminary operations such as turning and boring is therefore substantially reduced or eliminated. Benefits are gained from reduction in setting-up time and machine cycle times, lower labour and overhead costs for each component, reduced tool costs, lower lubricant usage and machinery maintenance costs. Swarf handling problems are also simplified.

Carbon Steel Hollow Bar

Products are sourced under internationally recognised specifications including ASTM A519M, EN 10294-1 and ISO 2938, as well as a variety of proprietary grades which comply with the requirements of appropriate specifications.

The typical grades of carbon steel hollow bar stocked by Atlas Steels are:

- 20MnV6
- St52

Seamless carbon steel hollow bar is normally supplied in the as-rolled condition and is suitable for a wide range of thermal treatments such as normalising, surface hardening and hardening and tempering.

Low Alloy Steel Hollow Bar

Atlas Steels can supply grade 4140 alloy steel hollow bar, compliant with ASTM A519M or similar specification and supplied in various conditions, usually hardened and tempered, but also annealed or as-rolled conditions subject to the specific application.

Further enquiries should be made on any specific requirements.

A Comparison – Hollow Bar vs Solid Bar

Boring from Hollow Bar	Drilling from Solid Bar
No drilling is necessary and a shorter time cycle for the manufacture of each component is made possible.	Time is required for drilling from solid bar and the boring operation may still be required.
Boring from hollow bar creates less swarf resulting in low material wastage and less-frequent machine cleaning.	Drilling from solid bar creates an excessive amount of swarf resulting in high wastage and frequent machine cleaning.
Coolant may not be needed.	Coolant most likely required.

Hollow Bar – Theoretical Weights

OD (mm)	ID (mm)	Weight (kg/m)	OD (mm)	ID (mm)	Weight (kg/m)	OD (mm)	ID (mm)	Weight (kg/m)
32	16	4.7	95	75	20.8	172.3	121.3	91.7
32	20	3.8	100	56	42.0	180	100	137.2
36	16	6.4	100	63	36.9	180	112	121.6
36	20	5.5	100	71	30.4	180	125	102.8
36	25	4.1	100	75	26.8	180	140	78.4
40	20	7.4	100	80	22.1	180	150	60.6
40	25	6.0	106	56	49.6	190	109	148.4
40	28	5.0	106	63	44.5	190	132	114.4
45	20	10.0	106	71	38.0	190	150	83.3
45	28	7.6	106	80	29.6	190	160	64.3
45	32	6.1	106	85	24.6	200	112	168
50	25	11.5	112	63	52.5	200	140	125
50	32	9.0	112	71	46.0	200	160	88
50	36	7.4	112	80	37.6	212	125	180
56	28	14.4	112	90	27.2	212	150	137
56	32	12.9	118	63	61.0	212	170	98
56	36	11.3	118	71	54.4	224	132	201
56	40	9.4	118	80	46.1	224	160	151
63	32	18.0	118	85	41.0	224	180	109
63	36	16.4	118	90	35.7	236	140	221
63	40	14.5	118	95	30.0	236	170	164
63	45	11.9	125	71	64.8	236	190	120
63	50	9.0	125	80	56.5	250	150	245
71	36	22.9	125	90	46.1	250	180	184
71	40	21.1	125	95	40.4	250	200	138
71	45	18.5	125	100	34.5	254	154	250
71	50	15.6	132	80	67.5	254	170	218
71	56	11.7	132	71	75.9	273	173	273
75	40	24.7	132	80	67.5	273	193	228
75	45	22.1	132	90	57.1	273	201	209
75	50	19.1	132	98	47.9	273	213	179
75	56	15.2	132	106	37.9	273	223	152
75	60	12.4	140	90	70.5	298	198	304
80	40	29.4	140	100	58.8	298	218	253
80	45	26.8	140	106	51.2	298	238	197
80	50	23.9	140	112	43.2	298	248	167
80	56	20.0	150	80	98.6	298	258	136
80	63	14.9	150	85	93.6	324	224	336
85	45	31.9	150	95	82.5	324	244	278
85	50	28.9	150	106	69.0	324	274	183
85	55	25.7	150	118	52.5	356	236	435
85	67	16.8	150	125	42.1	356	256	375
90	45	37.2	160	90	107.2	356	276	310
90	50	34.3	160	100	95.6	406	286	509
90	56	30.4	160	112	80.0	406	306	436
90	63	25.3	160	122	65.6	406	334	326
90	67	22.1	160	132	50.1	406	356	233
90	71	18.7	162.1	79.7	122.1	457	327	624
95	50	40.0	162.1	111.3	85.1	457	357	499
95	60	33.2	170	100	115.8	508	368	751
95	56	36.1	170	118	91.7	508	408	561
95	63	31.0	170	130	73.5	610	510	686
95	67	27.8	170	140	57.0			

Bandsaw Processing Equipment

Within our Service Centres we operate automated bandsaw facilities offering a complete cutting service for your bar requirements. The local markets and regional centres are supported by the nearest capital city when required.

Maximum cutting diameter is 800mm.

For more details regarding our processing service please contact your nearest Atlas Steels Service Centre.

For contact details refer to the Atlas website.