

voestalpine High Performance Metals (Australia) Pty Ltd

Hollow Bar

Euro-Norm Hollow Bar Guaranteed Clean Turned Size *

Euro-Norm Size CTS	Approx Delivered Size	Approx Weight Kg/Metre	Euro-Norm Size CTS	Delivered Size	Approx Weight Kg/Metre
30/15	31.8/12.2	5.46	125/70	126.7/66.3	73.79
30/20	31.8/17.6	4.44	125/80	126.7/76.7	64.38
35/25	36.5/17.1	6.58	125/90	126.7/87.3	53.37
40/20	36.5/22.5	5.23	125/95	126.7/92.1	47.92
40/25	41.3/16.7	9.03	125/100	126.7/97.5	41.44
40/30	41.3/22.1	7.71	130/65	131.7/59	87.76
40/35	41.3/27.5	6.01	130/75	131.7/71.1	77.79
45/25	46.3/19.9	11.06	130/80	131.7/76.5	72.75
45/30	46.3/27.1	8.92	130/90	131.7/86.9	61.99
45/35	46.3/32.5	6.88	130/100	131.7/97.1	50.11
50/25	51.2/22.7	13.00	130/105	131.7/102.5	43.29
50/30	51.2/27.7	12.15	140/80	141.8/76	90.72
50/35	51.2/32.1	10.14	140/90	141.8/86.4	80.03
50/40	51.2/37.5	7.76	140/100	141.8/97	67.72
55/30	57.1/26.1	16.33	140/105	141.8/102.2	61.16
55/35	57.1/31.9	14.20	140/115	141.8/112.4	47.31
55/40	57.1/37.1	11.93	150/75	151.8/69	115.15
65/35	66.5/30.9	21.95	150/85	151.8/80.6	104.74
65/40	66.5/36.3	19.65	150/95	151.8/91.2	93.21
65/45	66.5/41.7	16.99	150/105	151.8/101.6	80.52
65/50	66.5/47.1	13.95	150/120	151.8/117.2	58.92
65/55	66.5/52.5	10.55	150/125	151.8/122.4	51.03
70/40	71.3/35.7	24.11	160/90	161.9/65.5	119.65
70/45	71.3/41.1	21.49	160/100	161.9/75.9	107.70
70/50	71.3/46.7	18.37	160/115	161.9/91.7	86.94
70/55	71.3/52.1	15.00	160/125	161.9/107.3	71.24
70/60	71.3/57.5	11.25	160/135	161.9/122.9	54.79
75/45	76.3/40.7	26.37	170/100	171.9/65.3	129.56
75/50	76.3/46.1	23.40	170/110	171.9/75.9	116.06
75/55	76.3/51.7	19.93	170/120	171.9/86.5	101.14
75/60	76.3/57.1	16.21	170/130	171.9/97.1	85.11
75/65	76.3/62.5	12.12	170/140	171.9/107.7	68.07
80/40	81.5/36.9	33.43	180/75	181.8/68	179.94
80/45	81.5/42.3	30.72	180/85	181.8/79.1	169.84
80/50	81.5/47.7	28.00	180/100	181.8/94.9	152.44
80/55	81.5/53.1	24.60	180/125	181.8/121.1	116.61
80/60	81.5/58.5	20.97	180/140	181.8/147.1	90.81
85/45	86.5/41.9	36.25	190/105	192.4/99.6	171.53
85/50	86.5/47.3	33.20	190/135	192.4/131.2	125.36
85/55	86.5/52.7	30.18	190/150	192.4/146.8	97.91
85/60	86.5/58.1	26.43	190/160	192.4/157	78.29
85/65	86.5/63.5	22.48	200/115	202.5/109.5	183.67
90/50	91.5/46.9	39.07	200/130	202.5/125.3	160.19
90/55	91.5/52.3	35.95	200/140	202.5/135.9	142.66
90/60	91.5/57.7	32.36	200/160	202.5/156.9	103.74
90/65	91.5/63.1	28.27	200/170	202.5/167.1	82.82
90/70	91.5/68.5	23.98	210/130	214.1/117.7	202.47
95/50	96.5/46.7	45.14	210/155	214.1/145.5	156.15
95/55	96.5/52.1	41.90	210/165	214.1/156.7	134.73
95/60	96.5/57.5	38.54	210/175	214.1/167.7	112.14
95/65	96.5/62.9	35.11	210/185	214.1/178.9	87.57
100/55	101.6/51.8	48.36	220/140	222.7/127.9	210.39
100/60	101.6/57.2	44.78	220/150	222.7/139.1	191.46
100/70	101.6/67.2	36.76	220/160	222.7/150.1	171.32
100/75	101.6/72.6	31.98	220/180	222.7/172.3	126.02
100/80	101.6/77.8	27.03	230/135	234.9/120.9	256.75
105/55	106.6/51.4	55.21	230/145	234.9/132.1	238.82
105/60	106.6/56.8	51.51	230/170	234.9/159.9	187.43
105/70	106.6/67.2	43.35	230/190	234.9/182.1	139.37
105/80	106.6/77.6	33.81	250/140	252.9/124.3	307.06
105/85	106.6/82.8	28.53	250/160	252.9/160	269.00
110/60	111.6/65.4	58.70	250/180	252.9/168.7	224.71
110/70	111.6/70.8	50.42	250/200	252.9/190.9	174.17
110/75	111.6/76.2	45.84	Euro-Norm EN 10294 Carbon Hollow Note:- Guaranteed clean turn sizes, by O.D chucking, for sizes 65 O.D and below the O.D and I.D will clean up to the ordered size over a length of 3 times the O.D. For sizes above 65 O.D the ordered O.D and I.D will clean up to a length of 200mm.		
110/80	111.6/81.6	41.11			
110/85	111.6/87.0	35.86			
110/90	111.6/92.4	30.04			
120/65	121.7/62.2	69.26			
120/70	121.7/67.6	65.76			
120/80	121.7/77.1	56.12			
120/85	121.7/82.5	50.88			
120/90	121.7/87.1	45.73			
120/95	121.7/92.5	39.59			

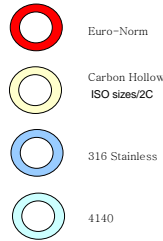
2C Hollow Bar

T316 Hollow Bar

4140 Hollow Bar

Nominal Size Stocked	Approx Weight Kg/Metre	Nominal Size Stocked	Approx Weight Kg/Metre	Nominal Size Stocked	Approx Weight Kg/Metre
254/204	145.00	32/16	5.10	50/32	9.41
254/182	205.00	36/25	4.60	50/25	11.55
254/174	220.00	36/20	6.00	50/20	11.71
254/154	266.00	40/28	5.50	63/40	15.05
267/187	230.00	40/20	7.90	63/32	18.68
273/248	85.00	45/32	6.70	71/56	12.18
273/223	158.00	45/28	8.20	71/36	23.72
273/213	185.00	45/20	10.60	75/40	25.54
273/209	208.00	50/36	8.10	75/50	19.87
273/201	223.00	50/32	9.80	80/50	24.77
273/193	237.00	50/25	12.20	80/40	30.42
273/183	268.00	56/40	10.30	85/45	32.96
273/173	283.00	56/36	12.10	85/67	17.50
292/165	368.00	56/28	15.30	90/63	26.23
295/250	160.00	63/50	10.00	90/50	35.49
298/258	141.00	63/40	15.60	90/40	41.12
298/248	174.00	63/36	17.50	95/75	21.67
298/242	197.00	63/32	19.10	95/63	32.08
298/238	205.00	71/56	12.90	95/60	34.40
298/218	262.00	71/45	15.40	95/50	41.31
298/198	315.00	71/36	24.30	100/80	23.06
318/255	243.00	75/40	26.10	100/71	31.51
323/263	224.00	80/63	19.10	100/63	38.28
323/243	287.00	80/50	25.50	100/56	43.52
323/223	346.00	80/40	31.10	106/71	39.34
324/274	189.00	85/45	33.70	106/63	46.10
324/264	224.00	90/71	20.80	106/56	51.34
324/244	288.00	90/63	27.40	112/80	39.04
324/224	348.00	90/50	36.40	112/63	54.37
340/215	440.00	95/50	42.30	118/90	37.12
356/306	210.00	100/80	23.80	118/80	47.79
356/296	248.00	100/71	32.90	118/63	63.09
356/286	292.00	100/56	44.60	125/100	36.68
356/276	319.00	106/80	32.50	125/80	58.57
356/256	388.00	106/71	40.80	125/71	67.12
356/236	449.00	106/56	52.50	132/106	39.65
368/268	403.00	112/90	30.40	132/90	59.23
368/258	437.00	112/80	40.80	132/80	69.95
368/248	467.00	112/63	55.70	132/71	78.48
371/301	307.00	118/90	39.20	140/100	61.01
406/356	242.00	118/80	49.60	140/90	73.01
406/346	286.00	118/63	64.50	140/80	83.71
406/326	371.00	125/100	38.40	150/114	60.55
406/316	420.00	125/90	50.10	150/106	71.57
406/306	451.00	125/80	60.50	150/80	102.05
406/286	527.00	125/71	68.80	160/132	56.46
419/319	467.00	132/100	42.30	160/112	82.96
419/309	508.00	132/90	61.60	160/90	110.97
419/299	547.00	132/71	80.30	170/118	95.14
419/279	619.00	140/112	48.20	170/100	119.90
430/310	564.00	140/100	63.80	180/125	106.57
457/407	274.00	140/80	85.90	200/140	130.62
457/377	422.00	150/125	47.80	200/140	207.30
457/357	516.00	150/106	74.70		
457/327	645.00	150/80	104.40		
457/317	686.00	160/132	56.60		
508/408	581.00	160/112	86.50		
508/388	682.00	170/140	64.30		
508/368	776.00	170/118	99.10		
510/410	583.00	180/125	111.00		
557/434	773.00	180/140	86.60		
585/401	1,148.00	180/150	64.40		
610/510	710.00	190/132	123.60		
610/490	835.00	190/160	73.40		
		200/140	135.10		
		200/160	96.30		
		212/130	183.30		
		222/170	109.70		
		224/140	200.10		
		224/180	121.60		
		236/150	217.60		
		236/190	134.10		
		250/200	153.70		

Colour Codes



Euro-Norm Hollow Bar

According to EN10294 DIN 1.0538

E470 is carbon manganese, fine grained, low alloy steel. Offering good machinability and weldability. Careful selection and control of the chemical analysis and manufacturing process has resulted in high mechanical properties giving the design engineer greater flexibility and reduced weight. E470 can be case hardened and welded using Bohler Fox OHV electrodes or EMKG IG MIG Wire.

C	Mn	Si	P	S	V
0.16 - 0.22	1.3 - 1.7	0.1 - 0.5	0.08 - 0.15		

Yield Strength (ReH)	Tensile Strength (Rm)
470 Mpa min	650 Mpa min
<16 - 25 mm	480 Mpa min
>25 - 40 mm	430 Mpa min
>40 - 80 mm	430 Mpa min
>80 - 80 mm	400 Mpa min

T316 Stainless Steel Hollow Bar

Improved machine quality, austenitic chromium, nickel, molybdenum steel. This steel offers better resistance to acids such as diluted sulphuric and hydrochloric acids and to media causing pitting, crevice corrosion and stress corrosion cracking. Welding use Avesta 316L, 2D, 3D or 4D or 316L/SKR Mig wire.

C	Cr	Mo	Ni
<0.03	17.00	2.20	11.50

Hardness BHN (L=50 %min)	Yield Strength 0.2% N/mm²	Tensile Strength N/mm²	Elongation
120-180	~ 190	490-690	40

2C Hollow Bar

20Mn V6 Improved carbon steel grade in close tolerance hollow bar sizes. All forms of mechanical equipment, such as hydraulic cylinders, gear wheels, shafts, axles, stuffing boxes, locknuts, spindles, drill jigs, rolls etc. Bars over 50mm wall thickness are normalised 20Mn V6. Can be case hardened and welded using Bohler Fox OHV electrodes or EMKG-IG Mig wire.

C	Mn	Si	V	S	P
0.16-0.22	1.30-1.70	0.10-0.50	0.08-0.18	0.04	0.04

Hardness BHN (180-240 HB)	Yield Strength 0.2% N/mm²	Tensile Strength N/mm²	Elongation A% min 5.65 /So
180-240 HB	400-470	600/800	16-17% (U) 7-19%

u = untreated m= normalised

4140 Hardened & Tempered Hollow Bar

Supplied Hardened & Tempered to 850-1100 N/mm². A High Tensile steel for applications requiring high