

## 750 Carbon Hollow Bar

Produced to EURO NORM EN10294-1 standard

**Sizes** (32 to 250 mm OD)

Typical Analysis (values %)	C	Mn	Si	V	S	P
	0.16 - 0.22	1.30 – 1.70	0.10 – 0.50	0.08 - 0.15	0.015 - .050	0.03
NEAREST STANDARD	DIN		UNS		ASTM	
	1.5217 20MnV6		K03013		A381	

DESCRIPTION	<b>750 Carbon</b> Hollow Bar high yield strength aluminium treated fine grained, low alloy calcium treated steel, with improved machinability and welding characteristics.
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APPLICATIONS	Universally used due to reduced machining requirements. All forms of mechanical equipment, such as hydraulic cylinders, gear wheels, shafts, axles, stuffing boxes, lock nuts , spindles, drill jigs, rolls etc.
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MECHANICAL PROPERTIES (as supplied)	Wall thickness	Yield Strength	Tensile Strength
	Nominal wall thickness	Mpa	Mpa
	≤16 mm	470	650
	≤25 mm	460	620
	≤40 mm	430	600
	≤50 mm	430	550
	≤65 mm	400	550
Elongation %		Long – 17%	Tran - 15%
Hardness		200-240 HB	

TOLERANCES	Outside Diameter	<75 mm +1.00 mm -0 75-100 + 1.20 mm -0 >100 mm + 1.40 mm -0
	Wall	Minimum thickness not more than 5% below nominal thickness
	Straightness	1 in 1000 mm measured in total length.

PHYSICAL PROPERTIES	Density (kg/dm <sup>3</sup> )	7.85
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<b>HEAT TREATMENT</b>	Normalize	880-900°C. Air cool.
	Anneal	650-700°C. Cool slowly in controlled furnace.
	Carburize	900-950°C. Furnace or Air cool
	Core Refine	840°C. Water quench.
	Harden	800°C Water quench.
	Temper	180-210°C air cool

<b>WELDING</b>	Parts should be welded before Carburizing and Hardening. Preheat to 250-350°C. Filler metals:-Bohler FOX OHV electrodes.EMK-6 IG Wire
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<b>SIZE RANGE</b>	<b>750 Carbon Hollow Bar</b>	32 mm OD x 16 mm ID to 250 mm OD x 150 mm ID
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30x20	80x45	105x85	150x75	200x160
35x25	80x50	110x60	150x85	200x170
40x20	80x55	110x70	150x95	210x130
40x25	80x60	110x75	150x105	210x155
40x30	85x45	110x80	150x120	210x165
45x25	85x50	110x85	150x125	210x175
45x30	85x55	110x90	160x90	210x185
45x35	85x60	120x65	160x100	220x140
50x30	85x65	120x70	160x115	220x150
50x35	90x50	120x80	160x125	220x160
50x40	90x55	120x85	160x135	220x180
55x30	90x60	120x90	170x100	230x135
55x35	90x65	120x95	170x110	230x145
65x35	90x70	125x70	170x120	230x170
65x40	95x50	125x80	170x130	230x190
65x45	95x55	125x90	170x140	250x140
65x50	95x60	125x95	180x75	250x160
65x55	95x65	125x100	180x85	250x180
70x40	95x70	130x65	180x100	250x200
70x45	95x75	130x75	180x125	
70x50	100x55	130x80	180x140	
70x55	100x60	130x90	180x150	

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70x60	100x70	130x100	190x105	
75x45	100x75	130x105	190x135	
75x50	100x80	140x80	190x150	
75x55	105x55	140x90	190x160	
75x60	105x60	140x100	200x115	
75x65	105x70	140x105	200x130	
80x40	105x80	140x115	200x140	

**Sizes normally stocked in Australia. Some branches may not hold the entire range.**  
 Other sizes available on request.

<p><b>Every care has been taken in listing this information, particularly specifications. Böhler Uddeholm Australia Pty Ltd will not accept responsibility for any loss or other damage caused to any person or Company as a result of the use of information contained herein</b></p>
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