

HOLLOW STRUCTURAL SECTIONS



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Chemical Composition

	Grade A, B & D Max	Grade C Max
Carbon	0.26	0.27
Manganese	1.40	1.40
Phosphorus	0.045	0.045
Sulphur	0.045	0.045

Mechanical Properties

	Grade A Min	Grade B Min	Grade C Min	Grade D Min
Tensile	310 MPa	400 MPa	425 MPa	400 MPa
Yield	270 MPa	315 MPa	345 MPa	250 MPa
Elongation	25%	23%	21%	21%

ATSM A500 Grade A, B, C & D

Outer Diameter		Wall Thickness (Mass per meter/Lbs per FT)													
		0.065" (1.651)		0.12" (3.048)		0.125" (3.175)		0.188" (4.775)		0.25" (6.35)		0.313" (7.95)		0.375" (9.525)	
inch	mm	kg/m	lb/ft	kg/m	lb/ft	kg/m	lb/ft	kg/m	lb/ft	kg/m	lb/ft	kg/m	lb/ft	kg/m	lb/ft
1/2" x 1/2"	12.7 x 12.7	0.574	0.385												
1" x 1"	25.4 x 25.4	1.232	0.827	2.141	1.437	2.217	1.488								
1.25" x 1.25"	31.8 x 31.8	1.562	1.048	2.751	1.846	2.849	1.912	3.586	2.410						
1.5" x 1.5"	38.1 x 38.1	1.892	1.270	3.355	2.252	3.274	2.200	4.524	3.040	6.333	4.250				
2" x 2"	50.8 x 50.8	2.551	1.712	4.571	3.068	4.559	3.060	6.429	4.320	8.051	5.410				
2.5" x 2.5"	63.5 x 63.5			5.811	3.900	5.804	3.900	8.319	5.590	10.581	7.110				
3" x 3"	76.2 x 76.2			7.078	4.750	7.069	4.750	10.224	6.870	13.111	8.810	15.745	10.580	18.111	12.170
3.5" x 3.5"	88.9 x 88.9			8.225	5.520	8.349	5.610	12.129	8.150	15.641	10.510	18.900	12.700	21.906	14.720
4" x 4"	101.6 x 101.6			9.432	6.330	9.614	6.460	14.019	9.420	18.171	12.210	22.069	14.830	25.701	17.270
5" x 5"	127 x 127					12.143	8.160	17.813	11.970	23.245	15.620	28.394	19.080	33.290	22.370
6" x 6"	152.4 x 152.4							21.623	14.530	28.305	19.020	34.789	23.348	40.895	27.480

TOLERANCE

OD	65 mm or under : ± 0.02 in (0.5 mm)
	65 - 90 mm : ± 0.025 in (0.6 mm)
	Over 90 - 140 mm : ± 0.03 in (0.8 mm)
	Over 140 mm : 0.01 times large flat dimension
WT	$\pm 10\%$
Weight	N/A

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ATSM A500 GRADE A, B, C & D

Outer Diameter		Wall Thickness (Mass per meter/Lbs per FT)											
		0.065" (1.651)		0.12" (3.048)		0.125" (3.175)		0.188" (4.775)		0.25" (6.35)		0.375" (9.525)	
inch	mm	kg/m	lb/ft	kg/m	lb/ft	kg/m	lb/ft	kg/m	lb/ft	kg/m	lb/ft	kg/m	lb/ft
2" x 1"	50.8 x 25.4	1.892	1.270	3.278	2.200	3.355	2.252						
3" x 1.5"	76.2 x 38.1			5.179	3.476	5.185	3.480	7.390	4.960				
3" x 2"	76.2 x 50.8			5.811	3.900	5.85	1.78	8.329	5.590	10.594	7.110		
4" x 2"	101.6 x 50.8			7.078	4.750	7.078	4.750	10.236	6.870	13.127	8.810	18.111	12.170
4" x 3"	101.6 x 76.2			8.225	5.520	8.359	5.610	12.144	8.150	15.660	10.510	21.906	14.720
5" x 2"	127 x 50.8			8.225	5.520	8.359	5.610	12.144	8.150	15.660	10.510	21.906	14.720
5" x 3"	127 x 76.2			9.432	6.330	9.625	6.460	14.036	9.420	18.193	12.210	25.701	17.270
6" x 2"	152.4 x 50.8			9.432	6.330	9.625	6.460	14.036	9.420	18.193	12.210	25.701	17.270
6" x 3"	152.4 x 76.2					10.892	7.310	15.943	10.700	20.726	13.910	29.495	19.820
6" x 4"	152.4 x 101.6					12.158	8.160	17.835	11.970	23.274	15.620	33.290	22.370
8" x 4"	203.2 x 101.6							21.650	14.530	28.340	19.020	40.895	27.480

TOLERANCE

OD	65 mm or under : ± 0.02 in (0.5 mm) 65 - 90 mm : ± 0.025 in (0.6 mm) Over 90 - 140 mm : ± 0.03 in (0.8 mm) Over 140 mm : 0.01 times large flat dimension
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