



**SPECIFICATION FOR STANDARD SIZES
AS1163:2009 RECTANGULAR HOLLOW SECTIONS**

RECTANGULAR HOLLOW SECTIONS													
Nominal Sizes		Wall Thickness		Weight		Pieces/ bdls	Nominal Sizes		Wall Thickness		Weight		Pieces/bdls
Inch	NB(MM))	Inch	MM	Kg/Mtr	lb/Ft		Inch	NB(MM)	Inch	MM	Kg/Mtr	lb/Ft	
2 X 3/4	50 X 20	0.063	1.6	1.63	1.095	100	5 x 3	125 X75	0.118	3.0	8.96	6.022	24
		0.079	2.0	1.99	1.337	100			0.157	4.0	11.60	7.796	20
		0.098	2.5	2.42	1.626	64			0.197	5.0	14.2	9.543	16
		0.118	3.0	2.83	1.902	64			0.157	4.0	14.8	9.95	16
2 x 1	50 x 25	0.063	1.6	1.75	1.176	100	6 x 4	150 X 100	0.197	5.0	18.2	12.23	12
		0.079	2.0	2.15	1.445	100			0.236	6.0	21.4	14.38	12
		0.098	2.5	2.62	1.761	64			0.157	4.0	17.9	12.03	12
		0.118	3.0	3.07	2.063	64			0.197	5.0	22.1	14.85	9
29/16 x 13/8	65 x 35	0.079	2.0	2.93	1.969	64	8 X 4	200 x 100	0.236	6.0	26.20	17.61	9
		0.098	2.5	3.60	2.419	49			0.354	9.0	37.70	25.34	6
		0.118	3.0	4.25	2.856	49			0.197	5.0	29.90	20.09	6
3 x 1	75 x 25	0.063	1.6	2.38	1.599	64	10 X 6	250 X 150	0.236	6.0	35.60	23.92	4
		0.079	2.0	2.93	1.969	64			0.354	9.0	51.8	34.81	4
		0.098	2.5	3.60	2.419	49							
3 x 2	75 x 50	0.079	2.0	3.72	2.500	49							
		0.098	2.5	4.58	3.078	36							
		0.118	3.0	5.42	3.642	36							
		0.157	4.0	6.92	4.651	25							
4 x 2	100 X 50	0.079	2.0	4.50	3.024	36							
		0.098	2.5	5.56	3.737	30							
		0.118	3.0	6.60	4.435	25							
		0.138	3.5	7.53	5.060	25							
		0.157	4.0	8.49	5.706	25							
		0.197	5.0	10.30	6.922	20							
		0.236	6.0	12.00	8.065	20							

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TOLERANCES :-	
CHARACTERISTIC	RECTANGULAR HOLLOW SECTIONS
EXTERNAL DIMENSIONS (d & b)	Tolerance
	± 1%, with a min. +/-0.5mm
THICKNESS	± 10%
CONCAVITY/CANVEXITY	Max. 0.8% with a min. of 0.5mm ,Whichever is greater.
SQUARENESS OF SIDES	900 ± 10
EXTERNAL CORNER PROFILE	Perimeter (mm) Equivalent to 50X50 or less : 1.6T to 3.0T Equivalent to greater than 50X50 : 1.8 T to 3.0T
TWIST	2.0+ 0.5mm/m length
STRAIGHTNESS	0.15% of total length.
MASS PER UNIT LENGTH	Not less than 0.96 times the specified mass on individual Length

CHEMICAL COMPOSITION

GRADE	Chemical composition % max.												Microalloying Elements	CE
	C	Si	Mn	P	S	Cr	Mo	Al	Ni	Cu	Ti			
C 250, C250Lo	0.12	0.05	0.50	0.03	0.03	0.15	0.10	0.10	0.25	0.25	0.04	0.03(Note-1)	0.25	
C 350, C350Lo	0.20	0.45	1.60	0.03	0.03	0.30	0.10	0.10	0.25	0.25	0.04	0.15(Note-2)	0.43	

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C 450, C450L	0.20	0.45	1.70	0.03	0.03	0.50	0.35	0.10	0.25	0.25	0.04	0.15(Note-2)	0.43
Note-1) Nb-0.010 Max						Note-2)- V-0.10 Max.							

Carbon Equivalent : Carbon equivalent shall be calculated from the following

$$\text{formula.CEV} = C + (\text{Mn} / 6) + (\text{Cr} + \text{Mo} + \text{V}) / 5 + (\text{Ni} + \text{Cu}) / 15$$

MECHANICAL PROPERTIES

GRADE	Min. Yield Strength Reh(Mpa)	Tensile Strength Rm(Mpa)	Elongation	Test Temp.	Min. Impact Energy(J)					
					Size of Test piece					
					10 X 10 mm		10 X 7.5 mm		10 X 5.0 mm	
					Average of 3 tests	Individual Test	Average of 3 tests	Individual Test	Average of 3 tests	Individual Test
C 250/C250Lo	250	320	18	0 ⁰ C	27	20	22	16	18	13
C 350/C350Lo	350	430	16							
C 350/C350Lo	450	500	14							

WORKMANSHIP-Free from overlap, Lamination,tool/roll marks,pin holes,open seam & other harmful defect.

MARKING : We can do on line stenciling as per this stanadrd & as per customer needs at one meter interval

PACKING-Box Type

MILL TEST CERTIFICATE-We can issue a MTC, Certifying that the tubes supplied comply with this standard.