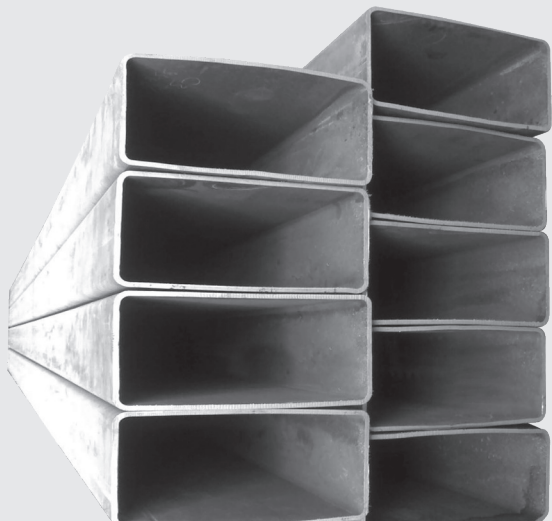


# RECTANGULAR HOLLOW SECTIONS



## RECTANGULAR HOLLOW SECTIONS

EN 10219 - 1 & 2 : 2006

Size	Thickness	Mass
H x B mm	T mm	M kg/m
40 x 20	1.2	1.06
	1.5	1.30
	1.8	1.53
	2.0	1.68
	2.5	2.03
	3.0	2.36
50 x 25	1.5	1.65
	1.8	1.95
	2.0	2.15
	2.5	3.07
	3.0	3.88
	4.0	
50 x 30	2.5	2.89
	3.0	3.41
	3.2	3.61
	4.0	4.39
	4.9	5.20
	5.0	5.28
60 x 30	1.5	2.00
	1.8	2.38
	2.0	2.62
	2.5	3.21
	3.0	3.77
	4.0	4.83
60 x 40	2.5	3.68
	3.0	4.35
	3.2	4.62
	4.0	5.64
	4.9	6.74

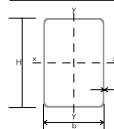
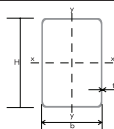
Size	Thickness	Mass
H x B mm	T mm	M kg/m
	5.0	6.85
	6.0	7.99
	6.3	8.31
65 x 35	2.0	2.93
	2.5	3.60
	3.0	4.25
75 x 50	1.5	2.83
	1.8	3.37
	2.0	3.72
	2.5	4.58
	3.0	5.42
	4.0	7.02
	5.0	8.52
6.0	9.92	
80 x 40	3.0	5.29
	3.2	5.62
	4.0	6.90
	4.9	8.28
	5.0	8.42
	6.0	9.87
	6.3	10.3
8.0	12.5	

## RECTANGULAR HOLLOW SECTIONS

EN 10219 - 1 & 2 : 2006

Size	Thickness	Mass
H x B mm	T mm	M kg/m
90 x 50	3.0	6.24
	3.2	6.63
	3.6	7.40
	4.0	8.15
	4.9	9.81
	5.0	9.99
	5.6	11.1
	6.0	11.8
	6.3	12.3
	7.1	13.6
8.0	15.0	
100x50	3.2	7.13
	3.6	7.96
	4.0	8.78
	4.9	10.6
	5.0	10.8
	6.0	12.7
	6.3	13.3
	7.1	14.7
	8.0	16.3
100x60	3.0	7.18
	3.2	7.63
	3.6	8.53
	4.0	9.41
	4.9	11.4
	5.0	11.6
	5.6	12.8
	6.0	13.6
	6.3	14.2
	7.1	15.8

Size	Thickness	Mass
H x B mm	T mm	M kg/m
120 x 60	8.0	17.5
	3.6	9.7
	4.0	10.7
	4.9	12.9
	5.0	13.1
	5.6	14.6
	6.0	15.5
6.3	16.2	
7.1	18.1	
8.0	20.1	
120 x 80	3.6	10.8
	4.0	11.9
	4.9	14.4
	5.0	14.7
	5.6	16.3
	6.0	17.4
	6.3	18.2
	7.1	20.3
	8.0	22.6
	10.0	27.4
125 x 75	2.5	7.53
	3.0	8.96
	4.0	11.70
	4.5	13.08
	5.0	14.40
	5.5	15.71
	6.0	17.00



**RECTANGULAR HOLLOW SECTIONS**

EN 10219 - 1 & 2 : 2006

Size	Thickness	Mass
H x B mm	T mm	M kg/m
150 x 75	2.0	6.86
	2.5	8.51
	3.0	10.13
	4.0	13.30
	4.5	14.85
	5.0	16.37
	5.5	17.87
	6.0	19.09
	8.0	21.53
150 x 100	4.0	15.1
	4.9	18.3
	5.0	18.6
	5.6	20.7
	6.0	22.1
	6.3	23.1
	7.1	25.9
	8.0	28.9
	8.8	31.5
	10.0	35.3
	12.0	41.4
	12.5	42.8
	160 x 80	4.0
4.9		17.5
5.0		17.8
5.6		19.9
6.0		21.2
6.3		22.2
7.1		24.7
8.0		27.6
8.8		30.1
10.0		33.7

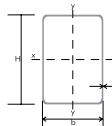
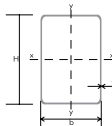
Size	Thickness	Mass
H x B mm	T mm	M kg/m
	12.0	39.5
	12.5	40.9
180 x 100	5.0	21.0
	5.6	23.4
	6.0	24.9
	6.3	26.1
	7.1	29.2
	8.0	32.6
	8.8	35.6
	10.0	40.0
	12.0	47.0
	12.5	48.7
200 x 100	5.0	22.6
	5.6	25.1
	6.0	26.8
	6.3	28.1
	7.1	31.4
	8.0	35.1
	8.8	38.4
	10.0	43.1
	12.0	50.8
	12.5	52.7
	14.2	58.9
	16.0††	65.2
200 x 120	5.0	24.1
	5.6	26.9
	6.0	28.7
	6.3	30.1
	7.1	33.7
	8.0	37.6

**RECTANGULAR HOLLOW SECTIONS**

EN 10219 - 1 & 2 : 2006

Size	Thickness	Mass
H x B mm	T mm	M kg/m
	8.8	41.1
	10.0	46.3
	12.0	54.6
	12.5	56.6
	14.2	63.3
	16.0	70.2
200 x 150	5.0	26.5
	5.6	29.5
	6.0	31.5
	6.3	33.0
	7.1	37.0
	8.0	41.4
	8.8	45.3
	10.0	51.0
	12.0	60.2
	12.5	62.5
250 x 100	5.0	26.5
	5.6	29.5
	6.0	31.5
	6.3	33.0
	7.1	37.0
	8.0	41.4
	8.8	45.3
	10.0	51.0
	12.0	60.2
	12.5	62.5
	14.2	70.0
	16.0	77.7

Size	Thickness	Mass	
H x B mm	T mm	M kg/m	
250 x 150	5.0	30.4	
	5.6	33.9	
	6.0	36.2	
	6.3	38.0	
	7.1	42.6	
	8.0	47.7	
	8.8	52.2	
	10.0	58.8	
	12.0	69.6	
	12.5	72.3	
260 x 140	14.2	81.1	
	16.0	90.3	
	260 x 140	5.0	30.4
		5.6	33.9
		6.0	36.2
		6.3	38.0
7.1		42.6	
8.0		47.7	
8.8		52.2	
10.0		58.8	
300 x 100	12.0	69.6	
	12.5	72.3	
	14.2	81.1	
	16.0	90.3	
	300 x 100	5.0	30.4
		5.6	33.9
6.0		36.2	
6.3		38.0	
7.1		42.6	
8.0		47.7	



## RECTANGULAR HOLLOW SECTIONS

EN 10219 - I & 2 : 2006

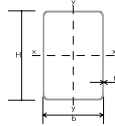
Size	Thickness	Mass
H x B mm	T mm	M kg/m
300 x 200	5.0	38.3
	5.6	42.7
	6.0	45.7
	6.3	47.9
	7.1	53.7
	8.0	60.3
	8.8	66.0
	10.0	74.5
	12.0	88.5
	12.5	91.9
	14.2	103
	16.0	115
400 x 200	6.0	55.1
	6.3	57.8
	7.1	64.9
	8.0	72.8
	8.8	79.8
	10.0	90.2
	12.0	107
	16.0	141
450 x 250	8.0	85.4
	10.0	106
	12.0	126
	14.2	146
	16.0	166

Size	Thickness	Mass
H x B mm	T mm	M kg/m
400 x 300	8.0	85.4
	8.8	93.6
	10.0	106
	12.0	126
	12.5	131
	14.2	148
16.0	166	
500 x 300	8.0	97.0
	12.0	145.6
	16.0	194.7



### SPECIFICATION FOR STANDARD SIZES EN 10219-1 & 2:2006 RECTANGULAR HOLLOW SECTIONS

Tolerances :	Rectangular Hollow Sections	
	Characteristic	Tolerance
Out. Side Dimensions ( B & H )	Side Length (mm)	$\pm 1\%$ with a min. $\pm 0.5\text{mm}$ $\pm 0.8\%$ $\pm 0.6\%$
	H:B < 100	
	100 < H, B < 200 H:B > 200	
Thickness	$\pm 10\%$ for thickness	5.0mm & $\pm 0.5\text{mm}$ for Thickness > 5.0mm
Concavity/Convexity		Max. 0.8% with a min. of 0.5mm
Squareness Of Side		$90^\circ \pm 1^\circ$
External Corner Profile		$1-56.0\text{mm} - 1.6T$ to $2.4T$ , $6.0 < 1.5(10.0\text{mm} - 2.0T$ to $3.0T$ , $\sqrt{r} > 10.0\text{mm} - 2.4T$ to $3.6T$
Twist		2.0 mm + 0.5mm/m length
STRAIGHTNESS		0.15% of total length and 3.0 mm over any 1m length
MASS PER UNIT LENGTH		$\pm 6\%$ on individual delivered length





## SPECIFICATION FOR STANDARD SIZES EN 10219-1 & 2:2006 RECTANGULAR HOLLOW SECTIONS

Chemical Composition		Chemical composition % max.						
		C	Si	Mn	P	S	N	Carbon Equivalent (CEV)
S235JRH		0.17	--	1.40	0.040	0.040	0.009	0.35
S275J0H		0.20	--	1.50	0.035	0.035	0.009	0.40
S275J2H		0.20	--	1.50	0.030	0.030	--	0.40
S355J0H		0.22	0.55	1.60	0.035	0.035	0.009	0.45
S355J2H		0.22	0.55	1.60	0.030	0.030	--	0.45

**Carbon Equivalent :** Max carbon equivalent shall be  
 $CEV = C + (Mn / 6) + (Cr + Mo + V) / 5 + (Ni + Cu) / 15$

### MECHANICAL PROPERTIES

Grade	Yield Strength Ren (Mpa)		Tensile Strength Rm (MPa)		Elongation % Min.		Min. Impact Energy(J)	
	Min.	Thk<3 mm	Thk<3 mm	Th 1.3 mm	-20°C	0°C	20°C	
S235JRH	235	360-510	360-510	360-510	24	--	--	
S275J0H	275	430-580	430-580	410-560	20	--	27	
S275J2H	275	430-580	430-580	410-560	20	27	--	
S355J0H	355	510-680	510-680	470-630	20	--	27	
S355J2H	355	510-680	510-680	470-630	20	27	--	

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

**PACKING**-Box Type

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