

PRODUCT CATALOGUE

Certificate

Standard **ISO 9001:2008**

Certificate Registr. No. 01 100 127781

TÜV Rheinland Cert GmbH certifies:

Certificate Holder:

**Al Ras Group:
Al Ras Building Material Sanitaryware & Electrical Co.
L.L.C.,**

P.O. Box – 7834,
Dubai, U.A.E.

Al Ras Steel Trading FZCO,
P.O. Box – 18477,
Dubai, U.A.E.

Scope:

Trading of Structural Steel, Pipes & Fittings, Building Metal
Products and Reinforcement Steel Bars

An audit was performed, Report No. 127781. Proof has been
furnished that the requirements according to ISO 9001:2008
are fulfilled.

The due date for all future audits is 23-08 (dd.mm).

Validity:

The certificate is valid from 2012-08-31 until 2015-08-30.
First certification 2012

2012-08-31

TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln



DGA-ZM-58-95-00

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 **TÜVRheinland®**
Precisely Right.

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ABOUT OUR GROUP

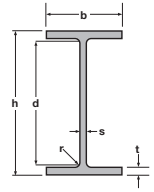
The Al Ras Group comprises of two companies: Al Ras Building Materials and Al Ras Steel Trading FZCO.

Al Ras Building Material & Sanitary Ware & Electrical Co., LLC was established in 1988 with its head office located in Dubai. The company has warehouses and yards located at Al Aweer (Ras Al Khor Industrial area). The company was co-founded by Mr. Ranjit Udham Shewakramani (Managing Director) and Late Mr. Udham Ramchand Shewakramani. Over the years, Al Ras has transformed itself into a 21st century company based pioneering use of technology and logistics management. For the past two decades the company has maintained the highest value and reliability rankings among its customers; today, Al Ras is a leader in the supply of quality structural steel products in the U.A.E & G.C.C. Countries. Al Ras provides a comprehensive product range covering multiple product categories in structural steel to a wide spectrum of end-users including Oil and Gas Companies, Offshore companies, Ship Building companies, Fabricators and Construction companies, the company imports structural steel from various countries which include South Africa, Russia, Ukraine, China, India, Thailand, Malaysia, Poland, Korea and so on. Strict standards of quality are ensured when importing all products.

The success of Al Ras Building Materials and the motivation for growth led to the establishment of Al Ras Steel Trading FZCO in the year 2004. Mr. Ranjit Udham Shewakramani and Mr. Varun Ranjit Shewakramani constitute the shareholders of the company. With a total storage capacity of 200,000 sq. ft in the Jebal Ali free zone, it is the ideal location for importing, stocking and serving our clients effectively in the U.A.E and the rest of the G.C.C. Several successful years have allowed us to plan positively for the future.

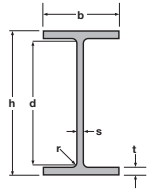
After the introduction of Al Ras Steel Trading FZCO in the Jebel Ali Free Zone we were able to attain staggering heights in the steel market by concentrating all our exports to the G.C.C. markets through this company, mainly due to easy facilitation of the export documentation procedure. This company played a significant role in the upward trend in our sales turnover from the year 2005 onwards largely due to smoother and faster processing of material from our yard to meet any needs of our esteemed clients on time.

UNIVERSAL BEAMS



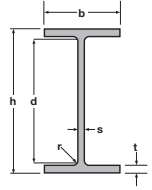
Designation	Mass per Metre	Depth of Section	Width of Section	Thickness Web	Thickness Flange	Root Radius	Depth between fillets
		h	b	s	f	r	d
	kg/m	mm	mm	mm	mm	mm	mm
127 x 76	13	127	76	4	7.6	7.6	96.6
152 x 89	16	152.4	88.7	4.5	7.7	7.6	121.8
178 x 102	19	177.8	101.2	4.8	7.9	7.6	146.8
203 x 102	23	203.2	101.8	5.4	9.3	7.6	169.4
203 x 133	25	203.2	133.2	5.7	7.8	7.6	172.4
	30	206.8	133.9	6.4	9.6	7.6	172.4
254 x 102	22	254	101.6	5.7	6.8	7.6	225.2
	25	257.2	101.9	6	8.4	7.6	225.2
	28	260.4	102.2	6.3	10	7.6	225.2
254 x 146	31	251.4	146.1	6	8.6	7.6	219
	37	256	146.4	6.3	10.9	7.6	219
	43	259.6	147.3	7.2	12.9	7.6	219
305 x 102	25	305.1	101.6	5.8	7	7.6	275.9
	28	308.7	101.8	6	8.8	7.6	275.9
	33	312.7	102.4	6.6	10.8	7.6	275.9
305 x 127	37	304.4	123.3	7.1	10.7	8.9	265.2
	42	307.2	124.3	8	12.1	8.9	265.2
	48	311	125.3	9	14	8.9	265.2
305 x 165	40	303.4	165	6	10.2	8.9	265.2
	46	306.6	165.7	6.7	11.8	8.9	265.2
	54	310.4	166.9	7.9	13.7	8.9	265.2

UNIVERSAL BEAMS



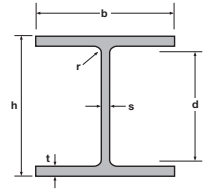
Designation	Mass per Metre	Depth of Section	Width of Section	Thickness Web	Thickness Flange	Root Radius	Depth between fillets
		h	b	s	f	r	d
	kg/m	mm	mm	mm	mm	mm	mm
356 x 127	33	349	125.4	6	8.5	10.2	311.6
	39	353.4	126	6.6	10.7	10.2	311.6
356 x 171	45	351.4	171.1	7	9.7	10.2	311.6
	51	355	171.5	7.4	11.5	10.2	311.6
	57	358	172.2	8.1	13	10.2	311.6
	67	363.4	173.2	9.1	15.7	10.2	311.6
406 x 140	39	398	141.8	6.4	8.6	10.2	360.4
	46	403.2	142.2	6.8	11.2	102.2	360.4
406 x 178	54	402.6	177.7	7.7	10.9	102.2	360.4
	60	406.4	177.9	7.9	12.8	10.2	360.4
	67	409.4	178.8	8.8	14.3	10.2	360.4
	74	412.8	179.5	9.5	16.0	10.2	360.4
457 x 152	52	449.8	152.4	7.6	10.9	10.2	407.6
	60	454.6	152.9	8.1	13.3	10.2	407.6
	67	458.0	153.8	9.0	15.0	10.2	407.6
	74	462.0	154.4	9.6	17.0	10.2	407.6
	82	465.8	155.3	10.5	18.9	10.2	407.6
457 x 191	67	453.4	189.9	8.5	12.7	10.2	407.6
	74	457.0	190.4	9.0	14.5	10.2	407.6
	82	460.0	191.3	9.9	16.0	10.2	407.6
	89	463.4	191.9	10.5	17.7	10.2	407.6
	98	467.2	192.8	11.4	19.6	10.2	407.6

UNIVERSAL BEAMS



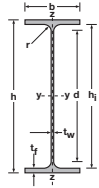
Designation	Mass per Metre	Depth of Section	Width of Section	Thickness Web	Thickness Flange	Root Radius	Depth between fillets
		h	b	s	f	r	d
	kg/m	mm	mm	mm	mm	mm	mm
533 x 210	82	528.3	208.8	9.6	13.2	12.7	476.5
	92	533.1	209.3	10.1	15.6	12.7	476.5
	101	536.7	210	10.8	17.4	12.7	476.5
	109	539.5	210.8	11.6	18.8	12.7	476.5
	122	544.5	211.9	12.7	21.3	12.7	476.5
610 x 229	101	602.6	227.6	10.5	14.8	12.7	547.6
	113	607.6	228.2	11.1	17.3	12.7	547.6
	125	612.2	229	11.9	19.6	12.7	547.6
	140	617.2	230.2	13.1	22.1	12.7	547.6
610 X 305	149	612.4	304.8	11.8	19.7	16.5	540
	179	620.2	307.1	14.1	23.6	16.5	540
	238	635.8	311.4	18.4	31.4	16.5	540
686 x 254	125	677.9	253	11.7	16.2	15.2	615.1
	140	683.5	253.7	12.4	19	15.2	615.1
	152	687.5	254.5	13.2	21	15.2	615.1
	170	692.9	255.8	14.5	23.7	15.2	615.1
762 x 267	134	750	264.4	12	15.5	16.5	686
	147	754	265.2	12.8	17.5	16.5	686
	173	762.2	266.7	14.3	21.6	16.5	686
	197	769.8	268	15.6	25.4	16.5	686
838 x 292	176	834.9	291.7	14	18.8	17.8	761.7
	194	840.7	292.4	14.7	21.7	17.8	761.7
	226	850.9	293.8	16.1	26.8	17.8	761.7

UNIVERSAL COLUMNS



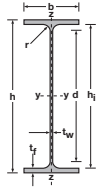
Designation	Mass per Metre	Depth of Section	Width of Section	Thickness Web	Thickness Flange	Root Radius	Depth between fillets
		h	b	s	f	r	d
	kg/m	mm	mm	mm	mm	mm	mm
152 x 152	23	152.4	152.2	5.8	6.8	7.6	123.6
	30	157.6	152.9	6.5	9.4	7.6	123.6
	37	161.8	154.4	8	11.4	7.6	123.6
203 x 203	46	203.2	203.6	7.2	11	10.2	160.8
	52	206.2	204.3	7.9	12.5	10.2	160.8
	60	209.6	205.8	9.4	14.2	10.2	160.8
	71	215.8	206.4	10	17.3	10.2	160.8
	86	222.2	209.1	12.7	20.5	10.2	160.8
254 x 254	73	254.1	254.6	8.6	14.2	12.7	200.3
	89	260.3	256.3	10.3	17.3	12.7	200.3
	107	266.7	258.8	12.8	20.5	12.7	200.3
	132	276.3	261.3	15.3	25.3	12.7	200.3
	167	289.1	265.2	19.2	31.7	12.7	200.3
305 x 305	97	307.9	305.3	9.9	15.4	15.2	246.7
	118	314.5	307.4	12	18.7	15.2	246.7
	137	320.5	309.2	13.8	21.7	15.2	246.7
	157	327.1	311.2	15.8	250.0	15.2	246.7
	198	339.9	314.5	19.1	31.4	15.2	246.7
	240	352.5	318.4	23.0	37.7	15.2	246.7
356 x 368	129	355.6	368.6	10.4	17.5	15.2	290.2
	153	362.0	370.5	12.3	20.7	15.2	290.2
	177	368.2	372.6	14.4	23.8	15.2	290.2
	202	374.6	374.7	16.5	27.0	15.2	290.2
356 x 406	235	381.0	394.8	18.4	30.2	15.2	290.2
	287	393.6	399.0	22.6	36.5	15.2	290.2
	340	406.4	403.0	26.6	42.9	15.2	290.2

EUROPEAN SPECIFICATION BEAMS WITH PARALLEL FLANGES



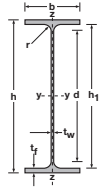
Designation	Weight per Metre	Depth of Section	Width of Section	Thickness of Web	Thickness Flange	Radius of the root fillet	Area of Section	Inner Depth between flanges	Depth of straight portion of Web
	G	h	b	t _w	t _f	r	A	h ₁	d
	Kg/m	mm	mm	mm	mm	mm	cm ²	mm	mm
HE 100 A	16.7	96	100	5	8	12	21.2	80	56
HE 100 B	20.4	100	100	6	10	12	26	80	56
HE 120 A	19.9	114	120	5	8	12	25.3	98	74
HE 120 B	26.7	120	120	6.5	11	12	34	98	74
HE 140 A	24.7	133	140	5.5	8.5	12	31.4	116	92
HE 140 B	33.7	140	140	7	12	12	43	116	92
HE 160 A	30.4	152	160	6	9	15	38.8	134	104
HE 160 B	42.6	160	160	8	13	15	54.3	134	104
HE 180 A	35.5	171	180	6	9.5	15	45.3	152	122
HE 180 B	51.2	180	180	8.5	14	15	65.3	152	122
HE 200 A	42.3	190	200	6.5	10	18	53.8	170	134
HE 200 B	61.3	200	200	9	15	18	78.1	170	134
HE 220 A	50.5	210	220	7	11	18	64.3	188	152
HE 220 B	71.5	220	220	9.5	16	18	91	188	152
HE 240 A	60.3	230	240	7.5	12	21	76.8	206	164
HE 240 B	83.2	240	240	10	17	21	106	206	164
HE 260 A	68.2	250	260	7.5	12.5	24	86.8	225	117
HE 260 B	93	260	260	10	17.5	24	118	225	117

EUROPEAN SPECIFICATION BEAMS WITH PARALLEL FLANGES



Designation	Weight per Metre	Depth of Section	Width of Section	Thickness of Web	Thickness of Flange	Radius of the root fillet	Area of Section	Inner Depth between flanges	Depth of straight portion of Web
	G	h	b	t _w	t _f	r	A	h _j	d
	Kg/m	mm	mm	mm	mm	mm	cm ²	mm	mm
HE 280 A	76.4	270	280	8	13	24	97.3	244	196
HE 280 B	103	280	280	10.5	18	24	131	244	196
HE 300 A	88.3	290	300	8.5	14	27	113	262	208
HE 300 B	117	300	300	11	19	27	149	262	208
HE 320 A	97.6	310	300	9	15.5	27	124	279	225
HE 320 B	127	320	300	11.5	20.5	27	161	279	225
HE 340 A	105	330	300	9.5	16.5	27	133	297	243
HE 340 B	134	340	300	12	21.5	27	171	297	243
HE 360 A	112	350	300	10	17.5	27	143	315	261
HE 360 B	142	360	300	12.5	22.5	27	181	315	261
HE 400 A	125	390	300	11	19	27	159	352	298
HE 400 B	155	400	300	13.5	24	27	198	352	298
HE 450 A	140	440	300	11.5	21	27	178	398	344
HE 450 B	171	450	300	14	26	27	218	398	344
HE 500 A	155	490	300	12	23	27	198	444	390
HE 500 B	187	500	300	14.5	28	27	239	444	390
HE 600 A	178	590	300	13.0	25	27	226	540	486
HE 600 B	212	600	300	15.5	30	27	270	540	468

EUROPEAN SPECIFICATION BEAMS WITH PARALLEL FLANGES



Designation	G	h	b	tw	tf	r	A	hj	d
	kg/m	mm	mm	mm	mm	mm	cm ²	mm	mm
IPE 100	8.1	100	55	4.1	5.7	7	10.3	88.6	74.6
IPE 120	10.4	120	64	4.4	6.3	7	13.2	107.4	93.4
IPE 140	12.9	140	73	4.7	6.9	7	16.4	126.2	112.2
IPE 160	15.8	160	82	5	7.4	9	20.1	145.2	127.2
IPE 180	18.8	180	91	5.3	8	9	23.9	164	146
IPE 200	22.4	200	100	5.6	8.5	12	28.5	183	159
IPE 220	26.2	220	110	5.9	9.2	12	33.4	201.6	177.6
IPE 240	30.7	240	120	6.2	9.8	15	39.1	220.4	190.4
IPE 270	36.1	270	135	6.6	10.2	15	45.9	249.6	219.6
IPE 300	42.2	300	150	7.1	10.7	15	53.8	278.6	248.6
IPE 330	49.1	330	160	7.5	11.5	18	62.6	307	271
IPE 360	57.1	360	170	8	12.7	18	72.7	334.6	298.6
IPE 400	66.3	400	180	8.6	13.5	21	84.5	373	331
IPE 450	77.6	450	190	9.4	14.6	21	98.8	420.8	378.8
IPE 500	90.7	500	200	10.2	16	21	116	468	426
IPE 600	122	600	220	12.0	19.0	24	156	562	514

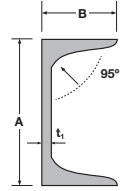
MS CHEQUERED SHEETS

Thickness	Width	Length
1.8mm to 10.0	1219	2438
3.0mm to 10.0mm	1500	6000

Grades Available:
SS400 / A36



CHANNELS



SIZE A x B x t1	WEIGHT Kg/m
50 X 25	2.53
75 x 40	5.3
75 x 40	6.92
100 x 50	7.30
	9.36
	10.60
120 x 55	13.4
125 x 65	11.66
	13.4
127 x 64	14.90
140 x 60	16.7
150 x 75	14.66
	18.6
	24
152 x 76	17.90
160 x 65	19.75
180 x 70	23
180 x 75	21.4
180 x 90	27.1
200 x 73	23.72
200 x 75	25.78
200 x 80	24.6
200 x 90	30.3

SIZE A x B x t1	WEIGHT Kg/m
250 x 78	27.41
250 x 80	31.35
250 x 90	34.6
300 x 85	34.46
300 x 87	39.17
300 x 90	38.1
300 x 90	43.8
380 x 100	54.5
380 x 100	62

Grades Available:
S275JR / ASTM A36 / SS400

HOT ROLLED SHEETS AND PLATES

THICKNESS mm	WEIGHT Kg/m ²	THICKNESS mm	WEIGHT Kg/m ²
3.0	23.5	38	298.60
3.2	25.12	40	314.00
4.0	31.40	45	353.25
5.0	39.25	50	392.50
6.0	47.10	55	431.75
8.0	62.80	60	471.00
10.0	78.50	65	510.25
12.0	94.20	70	549.50
15.0	117.75	75	588.75
16.0	125.60	80	628.00
20.0	157.00	90	706.50
22.5	176.62	100	785.00
25.0	196.25	110	863.50
30.0	235.50	120	942.00
32.0	251.20	130	1020.50
35.0	274.75	150	1177.50

Available in widths:

1219mm 1500mm 2000mm 2500mm 3000mm 3050mm

Available in lengths:

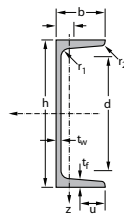
2438mm 6000mm 12000mm

Available in Grades :

SS400, A36, ST37-2, ABS Grade A, S275JR, S275JR+N, S355JR, S355JR+N, S355JO, S355K2+N, S355J2+N, EH-36, SA516 Gr.70N

EUROPEAN STANDARD CHANNELS (UPN)

Designation	G	Dimensions					
		h	b	tw	tf	r1	r2
	Kg/m	mm	mm	mm	mm	mm	mm
UPN 80	8.64	80	45	6.0	8.0	8.0	4.00
UPN 100	10.6	100	50	6.0	8.5	8.5	4.50
UPN 120	13.4	120	55	7.0	9.0	9.0	4.50
UPN 140	16	140	60	7.0	10.0	10.0	5.00
UPN 160	18.8	160	65	7.5	10.5	10.5	5.50
UPN 180	22.00	180	70	8.0	11.0	11.0	5.50
UPN 200	25.3	200	75	8.5	11.5	11.5	6.00
UPN 220	29.4	220	80	9.0	12.5	12.5	6.50
UPN 240	33.2	240	85	9.5	13.0	13.0	6.50
UPN 260	37.9	260	90	10.0	14.0	14.0	7.00
UPN 280	41.8	280	95	10.0	15.0	15.0	7.50
UPN 300	46.2	300	100	10.0	16.0	16.0	8.00
UPN 320	59.5	320	100	14.0	17.5	17.5	8.75
UPN 380	63.1	380	102	13.5	16.0	16.0	8.00
UPN 400	71.8	400	110	14.0	18.0	18.0	9.00

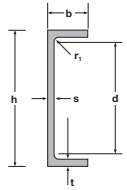


	Dimensions for detailing					Surface	
	A	d	0	emin	emax	AL	Ag
	cm ²	mm		mm	mm	m ² /m	m ² /t
11.0	46	-	-	-	-	0.312	36.13
13.5	64	M10	31	34		0.372	35.1
17.0	82	M10	32	39		0.434	32.52
20.4	98	M12	37	41		0.489	30.54
24.0	115	M16	38	38		0.546	28.98
28.0	133	M16	38	43		0.611	27.8
32.2	151	M16	39	48		0.661	26.15
37.4	167	M20	44	47		0.718	24.46
42.3	184	M20	45	52		0.775	23.34
48.3	200	M24	51	51		0.834	22
53.3	216	M24	52	56		0.890	21.27
58.8	232	M24	53	61		0.950	20.58
75.8	246	M24	59	61		0.982	16.5
80.4	313	M24	57	63		1.110	17.59
91.5	324	M27	59	65		1.182	16.46

**Grades Available:
S275JR / S355JO**

PARALLEL FLANGE CHANNELS (PFC)

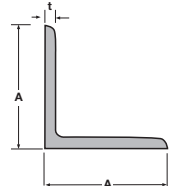
Designation	Mass per metre	Depth of Section	Width of Section	Thickness	
				Web	Flange
	Kg/ mtr	h	b	s	t
	Kg/ mtr	mm	mm	mm	mm
100 x 50 x 10	10.2	100	50	5.0	8.5
125 x 65 x 15	14.8	125	65	5.5	9.5
150 x 75 x 18	17.9	150	75	5.5	10.0
150 x 90 x 24	23.9	150	90	6.5	12.0
180 x 75 x 20	20.3	180	75	6.0	10.5
180 x 90 x 26	26.1	180	90	6.5	12.5
200 x 75 x 23	23.4	200	75	6.0	12.5
200 x 90 x 30	29.7	200	90	7.0	14.0
230 x 75 x 26	25.7	230	75	6.5	12.5
230 x 90 x 32	32.2	230	90	7.5	14.0
250 x 90 x 35	35.5	250	90	8.0	15.0
260 x 75 x 28	27.6	230	75	7.0	12.0
260 x 90 x 35	34.8	260	90	8.0	14.0
300 x 90 x 41	41.4	300	90	9.0	15.5
300 x 100 x 46	45.5	300	100	9.0	16.5
380 x 100 x 54	54	380	100	9.5	17.5
430 x 100 x 64	64.4	430	100	11.0	19.0



Distance of of	Radius		Depth between Filletts	Ratios for local Buckling		Second Moment of Area	
	Root			Flange	Web	Axis x - x	Axis y - y
Cy	r_1	d	b/t	d/s			
cm	mm	mm			cm ⁴	cm ⁴	
1.73	9	65	5.88	13.0	208	32.3	
2.25	12	82	6.84	14.9	483	80.0	
2.58	12	106	7.50	19.3	861	131	
3.30	12	102	7.50	15.7	1162	253	
2.41	12	153	7.14	22.5	1370	146	
3.17	12	131	7.20	20.2	1817	277	
2.48	12	151	6.00	25.2	1963	170	
3.12	12	148	6.43	21.1	2523	314	
2.30	12	181	6.00	27.8	2748	181	
2.92	12	178	6.43	23.7	3518	334	
2.10	12	212	6.25	30.3	3619	185	
2.74	12	208	6.43	26.0	2728	353	
2.60	12	245	5.81	27.2	7218	404	
3.05	15	237	6.06	26.3	8229	568	
2.79	15	315	5.71	33.2	15030	643	
2.62	15	362	5.26	32.9	21940	722	

**Grades Available:
S275JR / S355JO**

EQUAL ANGLES



Designation		Mass per metre
Size	Thickness	
A	t	
mm	mm	kg

25 x 25	2.7	1.01
	3	1.12
	4	1.46
	5	1.77

30 x 30	2.5	1.14
	3	1.36
	4	1.78
	5	2.18

38 x 38	2.5	1.46
	2.7	1.57
	3	1.74
	3.7	2.12
	4.6	2.60
	5	2.80

40 x 40	2.7	1.66
	3.0	1.84
	3.7	2.25
	4	2.42
	4.7	2.81
	5	2.97
	6	3.52

Designation		Mass per metre
Size	Thickness	
A	t	
mm	mm	kg

50 x 50	3.0	2.34
	3.7	2.84
	4.0	3.07
	4.7	3.56
	5	3.77
	5.5	4.12
	6	4.47
	8	5.82

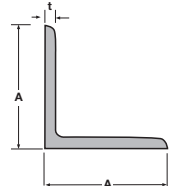
60 x 60	5	4.58
	6	5.42
	8	7.09

63 x 63	5	4.81
	6	5.77

65 x 65	5	4.97
	6	5.92
	8	7.67

70 x 70	5	5.37
	6	6.38
	7	7.38
	8	8.40

EQUAL ANGLES



Designation		Mass per metre
Size	Thickness	
A	t	
mm	mm	kg

75 x 75	5	5.80
	5.5	6.30
	6	6.87
	8	9.03
	9.0	9.96
	10	11.07
	12	13.1

80 x 80	6	7.34
	8	9.63
	10	11.9

90 x 90	6	8.33
	7	9.61
	8	10.9
	9	12.2
	10	13.4
	12	15.9

100 x 100	6	9.20
	7	10.73
	8	12.2
	10	15
	12	17.8
	15	21.9

Designation		Mass per metre
Size	Thickness	
A	t	
mm	mm	kg

120 x 120	8	14.7
	10	18.2
	12	21.6
	15	25
	16	26.6

125 x 125	10	18.80
	12	22.50

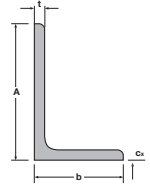
130 x 130	9	17.90
	10	19.89
	12	23.60

150 x 150	10	23
	12	27.3
	15	33.8
	18	40.1
	20	44.2

200 x 200	16	48.5
	18	54.2
	20	60.0
	24	71.1

Grades Available:
S275JR / ASTM A36 / SS400

UNEQUAL ANGLES



Designation		
Size	Thickness	Mass
A x B	t	per
mm	mm	meter

65 x 50	5	4.35
	6	5.16
	8	6.75

75 x 50	5	4.87
	6	5.65
	8	7.40
	10	9.07

100 x 50	6	6.94
	8	8.99
	10	11.1

100 x 65	7	8.77
	8	9.94
	10	12.3

100 x 75	6	8.05
	7	9.32
	8	10.6
	9	11.80
	10	13
	12	15.4

120 x 80	8	12.2
	10	15
	12	17.8
	14	20.5

Designation		
Size	Thickness	Mass
A x B	t	per
mm	mm	meter

125 x 75	7	10.73
	8	12.2
	9	13.60
	10	15
	12	17.8

150 x 75	10	17
	12	20.2
	15	24.8

150 x 90	9	16.50
	10	18.2
	12	21.6
	15	26.6

150 x 100	10	19
	12	22.75
	14	26.1
	15	27.8

Grades Available:
S275JR / ASTM A36 / SS400

MILD STEEL FLAT BARS

Metric Size (mm)	kg/ m
---------------------	-------

20 x 3	0.471
20 x 5	0.785
20 x 6	0.94
20 x 10	1.57

25 x 3	0.589
25 x 5	0.981
25 x 6	1.18
25 x 8	1.57
25 x 10	1.96
25 x 12	2.355

30 x 3	0.707
30 x 5	1.18
30 x 6	1.41
30 x 8	1.884
30 x 10	2.355
30 x 12	2.826
30 x 20	4.71

35 x 6	1.65
35 x 10	2.75
35 x 12	3.3
35 x 20	5.5

40 x 3	0.942
40 x 5	1.57
40 x 6	1.884
40 x 8	2.512
40 x 10	3.14
40 x 12	3.768

50 x 3	1.18
--------	------

Metric Size (mm)	kg/ m
---------------------	-------

50 x 5	1.96
50 x 6	2.36
50 x 8	3.14
50 x 10	3.93
50 x 12	4.71
50 x 15	5.89
50 x 20	7.85
50 x 25	9.81

60 x 8	3.77
60 x 10	4.71
60 x 12	5.65
60 x 15	7.07

65 x 5	2.55
65 x 6	3.06
65 x 8	4.05
65 x 10	5.1
65 x 12	6.12
65 x 15	7.65
65 x 20	10.2

70 x 8	4.4
70 x 10	5.5
70 x 12	6.59

75 x 6	3.54
75 x 8	4.71
75 x 10	5.9
75 x 12	7.07
75 x 15	8.84
75 x 20	11.78

80 x 6	3.77
--------	------

MILD STEEL FLAT BARS

Metric Size (mm)	kg/ m
---------------------	-------

80 x 8	5.02
80 x 10	6.28
80 x 12	7.54
80 x 15	9.42

90 x 6	4.24
90 x 10	7.07
90 x 12	8.48
90 x 15	10.60

100 x 5	3.93
100 x 6	4.71
100 x 8	6.28
100 x 10	7.85
100 x 12	9.42
100 x 15	11.8
100 x 20	15.7
100 x 25	19.6

120 x 6	5.65
120 x 10	9.42
120 x 12	11.3
120 x 15	14.1
120 x 20	18.8
120 x 25	23.6

130 x 6	6.1
130 x 8	8.16
130 x 10	10.2
130 x 12	12.20
130 x 15	15.30
130 x 20	20.40
130 x 25	25.50

Metric Size (mm)	kg/ m
---------------------	-------

150 x 6	7.06
150 x 8	9.42
150 x 10	11.8
150 x 12	14.1
150 x 15	17.7
150 x 20	23.6
150 x 25	29.4

200 x 6	9.9
200 x 10	15.7
200 x 12	18.8
200 x 15	23.6
200 x 20	31.4
200 x 25	39.2
200 x 30	47.2

250 x 10	19.6
250 x 12	23.6
250 x 15	29.4
250 x 20	39.2
250 x 25	49.10

300 x 10	23.55
300 x 12	28.30
300 x 15	35.30
300 x 20	47.10
300 x 24	58.80

Grades available:
SS400 / S275JR / ASTM A36

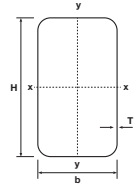
MILD STEEL ROUNDS

Metric Size (mm)	kg/ m
6	0.22
8	0.39
10	0.62
12	0.89
16	1.58
20	2.47
25	3.85
32	6.31
40	9.86
45	12.5
50	15.4
60	22.2
65	26
75	34.7
90	49.9
100	61.6

SQUARE BARS

Metric Size (mm)	kg/ m
8	0.5
10	0.79
12.5	1.22
16	2.01
20	3.14
25	4.91
30	7.07
32	8.04
40	12.6
45	15.9
50	19.6
60	28.3
75	44.2
90	63.6
100	78.5

RECTANGULAR HOLLOW SECTIONS

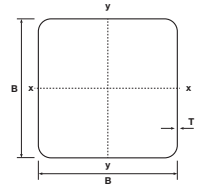


Size	Thickness	Mass
mm	mm	kg/ m
H x b	t	
60 x 40	2.5	3.68
	3	4.35
	3.2	4.62
	4	5.64
80 x 40	3	5.29
	3.2	5.62
	4	6.9
	4.9	8.28
	5	8.42
100 x 50	3	6.71
	3.2	7.13
	3.6	7.96
	4	8.78
	4.9	10.6
	5	10.8
120 x 60	3.6	9.7
	4	10.7
	4.9	12.9
	5	13.1
	5.6	14.6
	6	15.5
120 x 80	3.6	10.8
	4	11.9
	4.9	14.4
	5	14.7
	5.6	16.3
	6	17.4
125 X 75	3.5	10.68
	4.0	11.70
	4.5	13.09
	5.0	15.50
	6.0	17.00
150 x 100	4	15.1
	4.9	18.3
	5	18.6

Size	Thickness	Mass
mm	mm	kg/ m
H x b	t	
	5.6	20.7
	6	22.1
	6.3	23.1
	7.1	25.9
	8	28.9
	10	35.3
160 x 80	5	17.8
	5.6	19.9
	6	21.2
	6.3	22.2
	7.1	24.7
200 x 100	8	27.6
	4.0	18.02
	6	26.8
	8	35.1
200 x 150	9	38.20
	10	43.1
	12	50.8
	6	31.5
200 x 150	8	41.4
	10	51
	12	60.2
	6	36.2
250 x 150	8	47.7
	10	58.8
	12	69.6
	10.0	65.49
300 X 150	6	45.7
	8	60.30
	10	74.50
	12	88.50
	16	115
400 x 200	8	72.8
	10	90.2
	12	107
	16	141

Grades Available:
ASTM A500 Grade A / S355J2H

SQUARE HOLLOW SECTIONS



Size	Thickness	Mass
B x B	T	M
mm	mm	kg/ m

40 x 40	2.5	2.89
	3	3.41
	3.2	3.61
	4	4.39
	4.9	5.2
	5	5.28

50 x 50	2.0	2.94
	2.5	3.68
	3	4.35
	3.2	4.62
	4	5.64
	4.9	6.74
	5	6.85
	6	7.99
6.3	8.31	

60 x 60	3	5.29
	3.2	5.62
	4	6.9
	4.9	8.28
	5	8.42
	6	9.87

75 x 75	2.0	4.51
	2.5	5.57
	2.8	6.19
	3.0	6.61
	4.0	8.60
	5.0	10.49
	6.0	12.34

80 x 80	3.2	7.63
	3.6	8.53
	4	9.41
	4.9	11.4

Size	Thickness	Mass
B x B	T	M
mm	mm	kg/ m

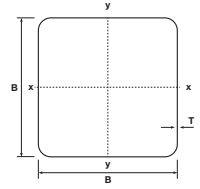
90 x 90	5	11.6
	5.6	12.8
	6	13.6
	6.3	14.2
	7.1	15.8
	8	17.5

90 x 90	3.6	9.66
	4	10.7
	4.9	12.9
	5	13.1
	5.6	14.6
	6	15.5

100 x 100	3.0	8.96
	3.6	10.8
	4	11.9
	4.9	14.4
	5	14.7
	5.6	16.3
	6	17.4
	6.3	18.2
	7.1	20.3
	8	22.6
10	27.4	

120 x 120	4	14.4
	4.9	17.5
	5	17.8
	5.6	19.9
	6	21.2
	8	27.6

SQUARE HOLLOW SECTIONS



Size	Thickness	Mass
B x B	T	M
mm	mm	kg/ m

150 x 150	5	22.6
	6	26.8
	8	35.1
	10	43.1
	12	50.8

200 x 200	5	30.4
	6	36.2
	8	47.7
	10	58.8
	12	69.6

Size	Thickness	Mass
B x B	T	M
mm	mm	kg/ m

250 x 250	6	45.7
	8	60.3
	10	74.5
	12	88.5

300 x 300	8.0	72.07
	10.0	88.34
	12.0	105.61
	16.0	137.54

Grades Available:
ASTM A500 Grade A / S355J2H



GRATING

Load Bearing Bar (mm)	Pitch Size (mm)	Mass kg/ m ²
25 x 3 mm	30 x 100	22.8
	40 x 100	17.55
30 x 3 mm	30 x 100	26.85
	40 x 100	20.5
30 x 5 mm	30 x 100	42.87
	40 x 100	32.27
32 x 3 mm	30 x 100	28.45
	40 x 100	21.67
32 x 5 mm	30 x 100	45.54
	40 x 100	34.24
35 x 3 mm	30 x 100	30.85
	40 x 100	23.43
40 x 3 mm	30 x 100	34.9
	40 x 100	26.4
40 x 5 mm	30 x 100	56.2
	40 x 100	42.1

Grades Available:
ASTM / A36 / GR43A

JIS BEAMS - H BEAMS

Size	Kg / Mtr	Web thk	Flange thk	Corner radius
100 x 100	17.20	6	8	10
125 x 125	23.80	7	9	10
150 x 150	31.50	7	10	11
175 x 175	40.20	7.5	11	12
200 x 200	49.90	8	12	13
250 x 250	72.40	9	14	16
300 x 300	94.00	10	15	18

Grades Available:

S275JR / ASTM A 36 / SS400

JIS BEAMS - I BEAMS

Size	Kg / Mtr	Web thk	Flange thk	Corner radius
100 x 50	9.30	5	7	8
150 x 75	14.00	5	7	8
200 x 100	18.20	5	7	11
200 x 100	21.30	6	8	11
250 x 125	25.70	5	8	12
250 x 125	29.60	6	9	12
300 x 150	32.00	6	8	13
300 x 150	36.70	7	9	13
350 x 175	41.40	6	9	14
350 x 175	49.60	7	11	14
400 x 200	56.60	7	11	16
400 x 200	66.00	8	13	16
500 x 200	89.60	10	16	20

Grades Available:

S275JR / ASTM A36 / SS400

STEEL GRADES

EN 10025				Impact Energy	
Grade	Tensile (Mpa)	Yield (Mpa)	Thk (max)	Temp	Joules
S235JR	340-470	235	25	+20	27
S235JRG1	340-470	235	25	+20	27
S235JRG2	340-470	235	25	+20	27
S275JR	410-560	275	250	+20	27
S275JO	410-560	275	250	0	27
S355JR	490-630	355	250	+20	27
S355JO	490-630	355	250	0	27
S355J2+N	490-630	355	250	-20	27
S355K2+N	490-630	355	250	-20	40

BS 4360				Impact Energy	
Grade	Tensile (Mpa)	Yield (Mpa)	Thk (max)	Temp	Joules
40B	340-500	235	150	+20	27
40C	340-500	235	150	0	27

DIN1700				Impact Energy	
Grade	Tensile (Mpa)	Yield (Mpa)	Thk (max)	Temp	Joules
ST 37.2U	340-470	235			

ASTM				Impact Energy	
Grade	Tensile (Mpa)	Yield (Mpa)	Thk (max)	Temp	Joules
A36	400	248	250		
A572 Gr.50	450	345	150		
SA516 Gr.60	414	221	150		
SA516 Gr.70	483	262	150		
ASTM A131M EH-36	490-355	355	50	-40	34L / 24C
			51-70	-40	41L / 27C
			71-100	-40	50L / 34C

CONVERSION FACTOR TABLE

LENGTH

Inches	Feet	Yards	Miles	Millimeters	Meters
1	0.08333333	0.02777778	0.000157828	25.4	0.0254
12	1	0.3333333	0.0001893939	304.8	0.3048
36	3	1	0.0005681818	914.4	0.9144
63360	5280	1760	1	1,609,344	1,609.344
0.03937008	0.003280840	0.001093613	0.000006213712	1	0.001
39.37008	3.280840	1.093613	0.0006213712	1,000	1

AREA

Sq. Inches	Sq. Feet	Sq. yards	Acres	Sq. Miles	Sq. Cm	Sq. Meters	Hectares
1	0.006944444	0.000771605	-	-	-	0.00064516	-
144	1	0.1111111	0.0000229568	-	6.4516	0.09290304	-
1269	9	1	0.0002066116	0.000003228	929.01304	0.8361274	-
6272640	43560	4840	1	0.0015625	8361.2736	4046.856	0.4046856
4014489600	27878400	3097600	640	1	40468564.2	2,589,988.11	258.9988
0.1550003	0.001076391	0.000119599	-	-	-	0.0001	-
1550.003	10.76391	1.195990	0.0002471054	0.00000386102	1	1	0.0001
15500031.0	107639.1	11959.90	2.471054	0.003861022	10,000	10,000	1

CAPACITY - VOLUME

Cu. Inches	Cu. Feet	Cu. Yards	Litres	Cu. Meters	U.S. Gals	Imp. Gals	Barrel
1	0.0005787037	0.00002143347	0.01638661	0.00001638706	0.004329004	0.03604675	-
1728	1	0.03703704	28.31605	0.02831684	7.480520	6.228878	0.1781076
46656	27	1	764.5335	0.7645549	201.9740	168.1797	40808905
61.025545	0.03531566	0.001307987	1	0.001000028	0.2641794	0.2199769	-
61023.74	35.31467	1.307951	999.9720	1	264.1721	219.9708	6.289811
231	0.1336806	0.004951132	3.785306	0.003785412	1	0.8326799	-
277.4175	0.1605426	0.005946021	4.545932	0.004546059	1.200942	1	-
9702	5.614583	0.2079475	158.9828	0.1589873	42	34.97255	1

WEIGHT

Ounces	Pounds	Short Tons	Long Tons	Kilograms	Metric Tons	Newtons
1	0.0625	0.00003125	0.0000279018	0.02834952	0.00002834952	0.278014
16	1	0.0005	0.0004464286	0.4535924	0.0004535924	4.448222
32000	2000	1	0.8928571	907.1847	0.9071847	8896.444
35840	2240	1.12	1	1016.047	1.016047	9964.017
35.27396	2.204623	0.001102311	0.0009842065	1	0.001	9.806650
35273.96	2204.623	1.102311	0.9842065	1000	1	9806.650
3.596941	0.224809	0.0001124	0.0001004	0.101972	0.0001020	1

WEIGHT PER UNIT OF AREA

Lbs./Sq. Ft.	Lbs./ Sq. In.	Kg./Sq.Cm.	Kg./Sq. M.	Short Ton/ Sq. Ft	Pascals	Kilopascals
1	0.006944444	0.0004882428	4.882428	.0005	47.88026	0.047880
144	1	0.07030696	703.0696	0.072	6894.757	6.89476
2048.161	14.22334	1	10.000	1.024081	98066.50	98.06650
0.2048161	0.001422334	0.0001	1	0.0001024081	9.806650	0.0098067
2000	13.88889	0.9764855	9764.855	1	95760.52	95.76052
0.020885	0.00014504	0.0000102	0.1019716	0.00001044	1	0.001
20.88543	0.145038	0.010197	101.9716	0.0104427	1000	1

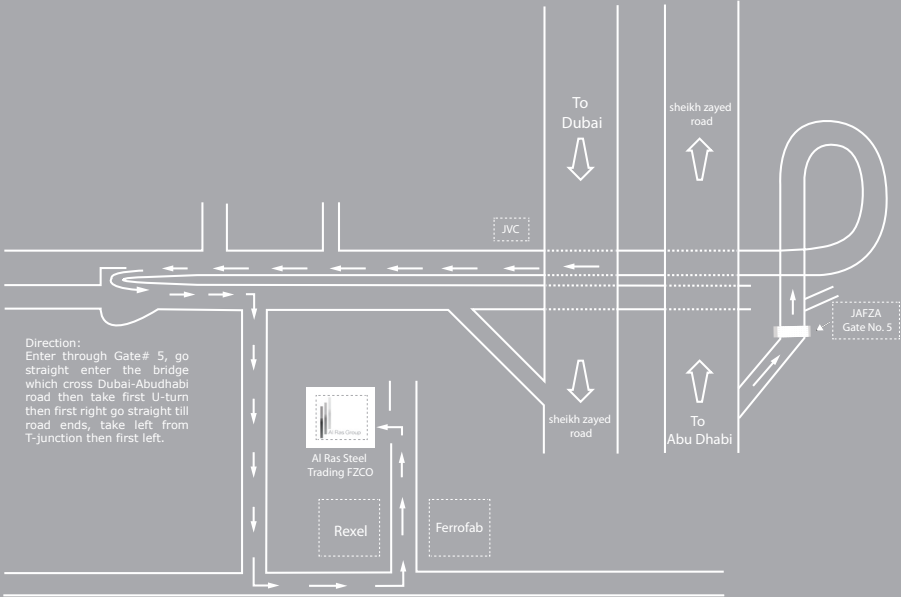
FORCE PER UNIT OF AREA, PRESSURE

Kg./Sq.Cm	Oz./Sq. In.	Lbs./Sq.In.	Mm. Mercury (0° C)	In. Mercury (0° C)	In. Water (4° C)	Kilopascals	Bar
1	227.5735	14.22334	735.5592	28.95902	393.7118	98.06650	0.980665
0.004394185	1	0.0625	3.232183	0.1272513	1.730042	0.430922	0.004309
0.07030696	16	1	51.71493	2.036021	27.68068	6.894757	0.068948
0.0013595098	0.3093884	0.01933677	1	0.03937008	0.5352550	0.133322	0.001333
0.03453155	7.858465	0.4911541	25.4	1	13.59548	3.38638	0.033864
0.002539929	0.5780205	0.03612628	1.868268	0.07355387	1	0.249082	0.002491
0.0101972	2.320606	0.1450377	7.500638	0.295301	4.014742	1	0.01
1.019716	232.06056	14.50368	750.06376	29.530059	401.47421	100	1

FORCE PER UNIT AREA, STRESS

Lbs./ Sq. In.	Kips./ Sq. In.	Kg./ Sq. Mm.	Megapascals
1	0.001	0.00070307	0.00689476
1000	1	0.703070	6.894757
1422.33	1.42233	1	9.80665
145.03768	0.1450377	0.101972	1

Location Map



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