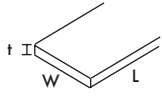


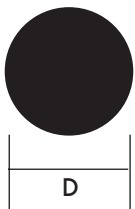
STEEL, VALVE & PIPE FITTING



Mild Steel Flat Bars		
Section Size Thickness x Width	Unit Weight	
	Kg/m	Kg/6m
3mm x 12mm	0.283	1.698
3mm x 13mm	0.306	1.836
3mm x 16mm	0.377	2.262
3mm x 18mm	0.424	2.544
3mm x 19mm	0.447	2.682
3mm x 25mm	0.589	3.534
3mm x 30mm	0.710	4.260
3mm x 32mm	0.754	4.524
3mm x 38mm	0.895	5.370
3mm x 44mm	1.040	6.240
3mm x 50mm	1.180	7.080
3mm x 65mm	1.530	9.180
3mm x 75mm	1.766	10.596
4.5mm x 12mm	0.424	2.544
4.5mm x 13mm	0.459	2.754
4.5mm x 15mm	0.530	3.180
4.5mm x 16mm	0.565	3.390
4.5mm x 18mm	0.636	3.816
4.5mm x 19mm	0.670	4.020
4.5mm x 25mm	0.880	5.280
4.5mm x 30mm	1.060	6.360
4.5mm x 32mm	1.130	6.780
4.5mm x 38mm	1.340	8.040
4.5mm x 44mm	1.550	9.300
4.5mm x 50mm	1.770	10.620
4.5mm x 65mm	2.300	13.800
4.5mm x 75mm	2.600	15.600
4.5mm x 100mm	3.550	21.300
5mm x 25mm	0.980	5.880
5mm x 38mm	1.492	8.952
5mm x 50mm	1.960	11.760
5mm x 65mm	1.960	11.760
6mm x 12mm	0.570	3.420
6mm x 15mm	0.707	4.242
6mm x 16mm	0.754	4.524
6mm x 18mm	0.848	5.088
6mm x 19mm	0.895	5.370
6mm x 25mm	1.130	6.780
6mm x 30mm	1.410	8.460
6mm x 32mm	1.510	9.060
6mm x 38mm	1.790	10.740
6mm x 44mm	2.070	12.420
6mm x 50mm	2.360	14.160
6mm x 65mm	3.060	18.360
6mm x 75mm	3.530	21.180

Mild Steel Flat Bars		
Section Size Thickness x Width	Unit Weight	
	Kg/m	Kg/6m
6mm x 90mm	4.240	25.440
6mm x 100mm	4.710	28.260
6mm x 125mm	5.890	35.340
6mm x 150mm	7.050	42.300
6mm x 200mm	9.420	56.520
6mm x 250mm	11.780	70.680
6mm x 300mm	14.130	84.780
8mm x 25mm	1.570	9.420
8mm x 30mm	1.880	11.280
8mm x 32mm	2.010	12.060
8mm x 38mm	2.390	14.340
8mm x 44mm	2.760	16.560
8mm x 50mm	3.140	18.840
8mm x 65mm	5.650	33.900
8mm x 75mm	4.710	28.260
8mm x 90mm	5.650	33.900
8mm x 100mm	6.280	37.680
8mm x 125mm	7.850	47.100
8mm x 150mm	9.420	56.520
9mm x 18mm	1.272	7.632
9mm x 19mm	1.340	8.040
9mm x 25mm	1.770	10.620
9mm x 30mm	2.120	12.720
9mm x 32mm	2.260	13.560
9mm x 35mm	2.470	14.820
9mm x 38mm	2.680	16.080
9mm x 44mm	3.110	18.660
9mm x 50mm	3.530	21.180
9mm x 65mm	4.590	27.540
9mm x 75mm	5.300	31.800
9mm x 90mm	6.360	38.160
9mm x 100mm	7.060	42.360
9mm x 125mm	8.830	52.980
9mm x 150mm	10.600	63.600
9mm x 200mm	14.100	84.600
9mm x 250mm	17.700	106.200
9mm x 300mm	21.200	127.200
12mm x 25mm	2.360	14.160
12mm x 30mm	2.826	16.956
12mm x 32mm	3.010	18.060
12mm x 35mm	3.310	19.860
12mm x 38mm	3.580	21.480
12mm x 44mm	4.140	24.840
12mm x 50mm	4.710	28.260
12mm x 65mm	6.120	36.720

Mild Steel Flat Bars		
Section Size Thickness x Width	Unit Weight	
	Kg/m	Kg/6m
12mm x 75mm	7.060	42.360
12mm x 90mm	8.480	50.880
12mm x 100mm	9.420	56.520
12mm x 125mm	11.800	70.800
12mm x 150mm	14.100	84.600
12mm x 200mm	18.800	112.800
12mm x 250mm	23.600	141.600
12mm x 300mm	28.300	169.800
16mm x 25mm	3.140	18.840
16mm x 32mm	4.020	24.120
16mm x 38mm	4.770	28.620
16mm x 44mm	5.530	33.180
16mm x 50mm	6.280	37.680
16mm x 65mm	8.160	48.960
16mm x 75mm	9.420	56.520
16mm x 90mm	11.300	67.800
16mm x 100mm	12.600	75.600
16mm x 125mm	15.700	94.200
16mm x 150mm	18.800	112.800
16mm x 200mm	25.100	150.600
16mm x 250mm	31.400	188.400
16mm x 300mm	37.700	226.200
19mm x 32mm	4.770	28.620
19mm x 38mm	5.670	34.020
19mm x 44mm	6.560	39.360
19mm x 50mm	7.460	44.760
19mm x 65mm	9.690	58.140
19mm x 75mm	11.200	67.200
19mm x 90mm	13.400	80.400
19mm x 100mm	14.900	89.400
19mm x 125mm	18.600	111.600
19mm x 150mm	22.400	134.400
19mm x 200mm	29.800	178.800
19mm x 250mm	37.300	223.800
25mm x 50mm	9.810	58.860
25mm x 65mm	12.800	76.800
25mm x 75mm	14.700	88.200
25mm x 90mm	17.700	106.200
25mm x 100mm	19.600	117.600
25mm x 125mm	24.500	147.000
25mm x 150mm	29.400	176.400
25mm x 200mm	39.200	235.200
25mm x 250mm	49.100	294.600
25mm x 300mm	58.900	353.400



Mild Steel Rounds Bars			
Diameter		Unit Weight	
mm	inch	Kg/m	Kg/6m
6mm	0.236	0.222	1.332
8mm	0.315	0.395	2.370
9mm	0.354	0.499	2.994
10mm	0.394	0.617	3.702
12mm	0.472	0.888	5.328
13mm	0.512	1.040	6.240
15mm	0.591	1.390	8.340
16mm	0.630	1.580	9.480
18mm	0.709	2.000	12.000
19mm	0.748	2.230	13.380
20mm	0.787	2.470	14.820
22mm	0.866	2.980	17.880
25mm	0.984	3.850	23.100

Mild Steel Rounds Bars			
Diameter		Unit Weight	
mm	inch	Kg/m	Kg/6m
28mm	1.102	4.830	29.980
30mm	1.181	5.550	33.300
32mm	1.260	6.310	37.860
38mm	1.496	8.900	53.400
40mm	1.575	9.870	59.220
44mm	1.732	11.900	71.400
45mm	1.772	12.500	75.000
50mm	1.968	15.400	92.400
55mm	2.165	18.700	112.200
60mm	2.362	22.200	133.200
65mm	2.559	26.000	156.000
70mm	2.756	30.200	181.200
75mm	2.953	34.700	208.200

Mild Steel Rounds Bars			
Diameter		Unit Weight	
mm	inch	Kg/m	Kg/6m
80mm	3.150	39.500	237.000
90mm	3.543	49.900	299.400
100mm	3.937	61.700	370.200
115mm	4.524	81.600	489.600
120mm	4.724	88.800	532.800
125mm	4.921	96.300	577.800
130mm	5.118	104.000	624.000
140mm	5.512	121.000	726.000
150mm	5.906	139.000	834.000
200mm	7.874	247.000	1482.000
250mm	9.843	385.000	2310.000
300mm	11.810	555.000	3330.000

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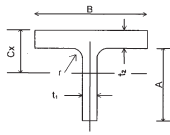
STEEL, VALVE & PIPE FITTING



Mild Steel Square Bars			
Diameter		Unit Weight	
mm	inch	Kg/m	Kg/6m
6mm	0.236	0.283	1.698
8mm	0.315	0.502	3.012
9mm	0.354	0.636	3.816
10mm	0.394	0.785	4.710
12mm	0.472	1.130	6.780
13mm	0.512	1.330	7.980
15mm	0.591	1.770	10.620
16mm	0.630	2.010	12.060
18mm	0.709	2.540	15.240
19mm	0.748	2.830	16.980
20mm	0.787	3.140	18.840
22mm	0.866	3.800	22.800

Mild Steel Square Bars			
Diameter		Unit Weight	
mm	inch	Kg/m	Kg/6m
25mm	0.984	4.910	29.460
28mm	1.102	6.150	36.900
30mm	1.181	7.060	42.360
32mm	1.260	8.040	48.240
35mm	1.378	9.620	57.720
38mm	1.496	11.300	67.800
40mm	1.575	12.600	75.600
44mm	1.732	15.200	91.200
45mm	1.772	15.896	95.376
50mm	1.968	19.600	117.600
55mm	2.165	23.700	142.200
60mm	2.362	28.300	169.800

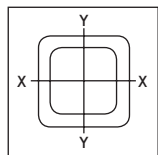
Mild Steel Square Bars			
Diameter		Unit Weight	
mm	inch	Kg/m	Kg/6m
65mm	2.559	33.200	199.200
70mm	2.756	38.500	231.000
75mm	2.953	44.200	265.200
80mm	3.150	50.200	301.200
90mm	3.543	63.600	381.600
100mm	3.937	78.500	471.000
110mm	4.331	95.000	570.000
120mm	4.724	113.000	678.000
130mm	5.118	133.000	798.000
140mm	5.512	154.000	924.000
150mm	5.906	177.000	1062.000



Mild Steel Tee Bars		
Diameter	Unit Weight	Kg/m
1" x 1"	1/8"	1.221
1" x 1"	3/16"	1.742
1 1/4" x 1 1/4"	1/8"	1.534
1 1/4" x 1 1/4"	3/16"	2.218
1 3/4" x 1 3/4"	1/4"	4.153

Mild Steel Tee Bars		
Diameter	Unit Weight	Kg/m
2" x 2"	5/16"	5.076
2" x 2"	1/4"	4.794
2" x 2"	5/16"	5.880
2" x 2"	3/8"	6.907
2 1/2" x 2 1/2"	1/4"	6.059

Mild Steel Tee Bars		
Diameter	Unit Weight	Kg/m
2 1/2" x 2 1/2"	5/16"	7.458
2 1/2" x 2 1/2"	3/8"	8.813
3" x 3"	3/8"	10.732
4" x 4"	3/8"	14.544
4" x 4"	1/2"	19.055



Mild Steel Square Hollow Section								
Sizes		Wall Thickness		Unit Weight				
inches	mm	inches	mm	lbs/ft	lbs/20ft	kg/ft	kg/m	kg/6m
1/2 x 1/2	12.7 x 12.7	0.047	1.2	0.272	5.440	0.123	0.404	2.424
		0.063	1.6	0.364	7.200	0.165	0.541	3.246
5/8 x 5/8	15.9 x 15.9	0.047	1.2	0.353	7.060	0.160	0.525	3.150
		0.063	1.6	0.472	9.440	0.214	0.702	4.212
3/4 x 3/4	19.1 x 19.1	0.047	1.2	0.434	8.680	0.197	0.646	3.876
		0.063	1.6	0.580	11.600	0.263	0.863	5.178
1 x 1	25.4 x 25.4	0.095	2.4	0.817	16.340	0.371	1.230	7.380
		0.047	1.2	0.593	11.860	0.269	0.883	5.296
1 x 1	25.4 x 25.4	0.063	1.6	0.770	15.400	0.350	1.150	6.900
		0.091	2.3	1.050	21.000	0.470	1.540	9.240
1 x 1	25.4 x 25.4	0.095	2.4	1.100	22.000	0.500	1.640	9.840
		0.120	3.0	1.296	25.920	0.588	1.929	11.574
1-1/4 x 1-1/4	31.8 x 31.8	0.047	1.2	0.754	15.080	0.342	1.122	6.733
		0.063	1.6	0.983	19.660	0.446	1.463	8.778
1-1/4 x 1-1/4	31.8 x 31.8	0.091	2.3	1.357	27.140	0.616	2.020	12.120
		0.095	2.4	1.420	28.400	0.642	2.110	12.660
1-1/4 x 1-1/4	31.8 x 31.8	0.120	3.0	1.698	33.960	0.770	2.527	15.162
		0.047	1.2	0.915	18.300	0.415	1.362	8.172
1-1/2 x 1-1/2	38.1 x 38.1	0.063	1.6	1.200	24.000	0.544	1.785	10.710
		0.091	2.3	1.666	33.320	0.756	2.480	14.880
1-1/2 x 1-1/2	38.1 x 38.1	0.095	2.4	1.740	34.800	0.790	2.592	15.552
		0.120	3.0	2.100	42.000	0.953	3.125	18.750

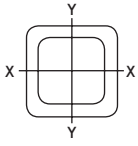
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STEEL, VALVE & PIPE FITTING



Mild Steel Square Hollow Sections										
Normal Sizes	Wall Thickness	Weight		Area	Monment of Inertia		Section Modulus		Radius of Gyration	
		kg/ft	lb/ft		in. ²	Ix in. ⁴	Iy in. ⁴	Zx in. ³	Zy in. ³	ix in.
2 x 2	0.1200	1.33	2.94	0.8653	0.498	0.498	0.498	0.498	0.759	0.759
	0.1250	1.38	3.05	0.8973	0.513	0.513	0.513	0.513	0.756	0.756
	0.1800	1.89	4.17	1.2270	0.653	0.653	0.653	0.653	0.729	0.729
	0.1875	1.96	4.31	1.2690	0.668	0.668	0.668	0.668	0.726	0.726
	0.2500	2.45	5.40	1.5890	0.766	0.766	0.766	0.766	0.694	0.694
2-1/2 x 2-1/2	0.1200	1.70	3.76	1.1050	1.030	1.030	0.820	0.820	0.963	0.963
	0.1250	1.77	3.90	1.1470	1.060	1.060	0.847	0.847	0.961	0.961
	0.1800	2.45	5.40	1.5870	1.380	1.380	1.110	1.110	0.934	0.934
	0.1875	2.53	5.59	1.6440	1.420	1.420	1.140	1.140	0.930	0.930
	0.2500	3.22	7.10	2.0890	1.690	1.690	1.350	1.350	0.899	0.899
3 x 3	0.1200	2.07	4.57	1.3450	1.830	1.830	1.220	1.220	1.170	1.170
	0.1250	2.15	4.75	1.3970	1.900	1.900	1.260	1.260	1.160	1.160
	0.1800	3.00	6.62	1.9470	2.520	2.520	1.680	1.680	1.140	1.140
	0.1875	3.11	6.86	2.0190	2.600	2.600	1.730	1.730	1.130	1.130
	0.2500	3.99	8.80	2.5890	3.160	3.160	2.100	2.100	1.100	1.100
3-1/2 x 3-1/2	0.1200	2.44	5.39	1.5850	2.980	2.980	1.700	1.700	1.370	1.370
	0.1250	2.54	5.60	1.6470	3.090	3.090	1.760	1.760	1.370	1.370
	0.1800	3.56	7.84	2.3070	4.160	4.160	2.380	2.380	1.340	1.340
	0.1875	3.69	8.14	2.3940	4.290	4.290	2.450	2.450	1.340	1.340
	0.2500	4.76	10.50	3.0890	5.290	5.290	3.020	3.020	1.310	1.310
4 x 4	0.1200	2.81	6.21	1.8250	4.530	4.530	2.270	2.270	1.580	1.580
	0.1250	2.93	6.45	1.8970	4.700	4.700	2.350	2.350	1.570	1.570
	0.1800	4.11	9.07	2.6670	6.380	6.380	3.190	3.190	1.550	1.550
	0.1875	4.27	9.41	2.7690	6.590	6.590	3.300	3.300	1.540	1.540
	0.2500	5.53	12.20	3.5890	8.220	8.220	4.100	4.110	1.510	1.510
	0.3125	6.72	14.80	4.3580	9.580	9.580	4.790	4.790	1.480	1.480
	0.3750	7.83	17.30	5.0750	10.700	10.700	5.350	5.350	1.450	1.450
5 x 5	0.1200	3.55	7.84	2.3050	9.080	9.080	3.630	3.630	1.980	1.980
	0.1250	3.70	8.15	2.3970	9.410	9.410	3.770	3.770	1.980	1.980
	0.1800	5.22	11.50	3.3870	12.900	12.900	5.180	5.180	1.960	1.960
	0.1875	5.43	12.00	3.5190	13.400	13.400	5.360	5.360	1.950	1.950
	0.2500	7.08	15.60	4.5890	16.900	16.900	6.780	6.780	1.920	1.920
	0.3125	8.65	19.10	5.6080	20.100	20.100	8.020	8.020	1.890	1.890
	0.3750	10.10	22.40	6.5750	22.800	22.800	9.110	9.110	1.860	1.860
6 x 6	0.1800	6.33	14.00	4.1070	22.900	22.900	7.650	7.650	2.360	2.360
	0.1875	6.58	14.50	4.2690	23.800	23.800	7.930	7.930	2.360	2.360
	0.2500	8.62	19.00	5.5890	30.300	30.300	10.100	10.100	2.330	2.330
	0.3125	10.60	23.30	6.8580	36.300	36.300	12.100	12.100	2.300	2.300
	0.3750	12.50	27.50	8.0750	41.600	41.600	13.900	13.900	2.270	2.270
	0.5000	16.00	35.20	10.3600	50.500	50.500	16.800	16.800	2.210	2.210
8 x 8	0.1800	8.55	18.90	5.5470	56.100	56.100	14.000	14.000	3.180	3.180
	0.1875	8.90	19.60	5.7690	58.200	58.200	14.600	14.600	3.180	3.180
	0.2500	11.70	25.80	7.5890	75.100	75.100	18.800	18.800	3.150	3.150
	0.3125	14.40	31.80	9.3580	90.900	90.900	22.700	22.700	3.120	3.120
	0.3750	17.10	37.70	11.0800	106.000	106.000	26.400	26.400	3.090	3.090
	0.5000	22.10	48.80	14.3600	131.000	131.000	32.900	32.900	3.030	3.030

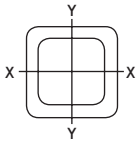
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STEEL, VALVE & PIPE FITTING



Mild Steel Square Hallow Sections

Normal Sizes	Wall Thickness	Weight	Area	Monment of Inertia		Section Modulus		Radius of Gyration	
mm	mm	kg/m	cm. ²	Ix cm. ⁴	Iy cm. ⁴	Zx cm. ³	Zy cm. ³	ix cm.	iy cm.
50 x 50	1.6	2.38	3.032	11.7	11.7	4.68	4.68	1.96	1.96
	2.3	3.34	4.252	15.9	15.9	6.34	6.34	1.93	1.93
	3.2	4.50	5.727	20.4	20.4	8.16	8.16	1.89	1.89
60 x 60	1.6	2.88	3.672	20.7	20.7	6.89	6.89	2.37	2.37
	2.3	4.06	5.172	28.3	28.3	9.44	9.44	2.34	2.34
	3.2	5.50	7.007	36.9	36.9	12.3	12.3	2.30	2.30
75 x 75	2.3	5.14	6.552	57.1	57.1	15.2	15.2	2.95	2.95
	3.2	7.01	8.927	75.5	75.5	20.1	20.1	2.97	2.91
100 x 100	2.3	6.95	8.852	140	140	27.9	27.9	3.97	3.97
	3.2	9.52	12.13	187	187	37.5	37.5	3.93	3.93
	4.5	13.1	16.67	249	249	49.9	49.9	3.87	3.87
	6.0	17.0	21.63	311	311	62.3	62.3	3.79	3.79
125 X 125	3.2	12.0	15.33	376	376	60.1	60.1	4.95	4.95
	4.5	16.6	21.17	506	506	80.9	80.9	4.89	4.89
	6.0	21.7	27.63	641	641	103	103	4.82	4.82
150 X 150	4.5	20.1	25.67	896	896	120	120	5.91	5.91
	6.0	26.4	33.63	1150	1150	153	153	5.84	5.84
175 X 175	6.0	31.1	39.63	1860	1860	213	213	6.86	6.86
200 X 200	6.0	35.8	45.63	2830	2830	283	283	7.88	7.88
	8.0	46.9	59.79	3620	3620	362	362	7.78	7.78
	9.0	52.3	66.67	3990	3990	399	399	7.73	7.73
	12.0	67.9	86.53	4980	4980	498	498	7.59	7.59
250 X 250	6.0	45.2	57.63	5670	5670	454	454	9.92	9.92
	9.0	66.5	84.67	8090	8090	647	647	9.78	9.78
	12.0	86.8	110.5	10300	10300	820	820	9.63	9.63
300 X 300	6.0	54.7	69.63	9960	9960	664	664	12.0	12.0
	9.0	80.6	102.7	14300	14300	956	956	11.8	11.8
	12.0	106	134.5	18300	18300	1220	1220	11.7	11.7
350 X 350	9.0	94.7	120.7	23200	23200	1320	1320	13.9	13.9
	12.0	124	158.5	29800	29800	1700	1700	13.7	13.7

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