

STEEL & PIPES

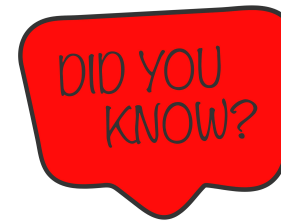
YOUR "ONE STOP" COMPREHENSIVE STEEL SHOP!





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DID YOU KNOW?

- 1) Steel Is More Elastic Than Rubber
- 2) Steel Is 1,000 Times Stronger Than Iron.
- 3) Steel Is One of the World's Most Recycled Material
- 4) There are More Than 3,500 Different Grades of Steel

Did You Know?

Steel and Pipes Eastern Cape deliver for FREE

We have three branches in the Eastern Cape: East London, Mthatha and Queenstown

Need to contact us? Here is how!

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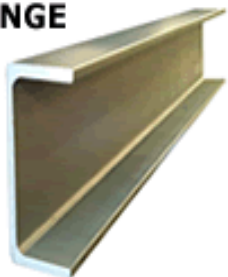


CHANNELS TAPER FLANGE			
Size (mm)	KG'S/ Metre	Flange Thickness (mm)	Web Thickness (mm)
57x51	6.84	6.1	6.1
76x38	5.70	6.8	5.1
76x38	6.70	6.8	5.1
100x50	8.90	7.0	5.0
100x50	10.60	8.5	6.0
120x55	13.4	9.0	7.0
127x64	14.90	9.2	6.4
140x60	16.00	10.0	7.0
152x76	17.90	9.0	6.4
160x65	18.80	10.5	7.5
178x54	14.51	8.3	5.8
180x70	22.00	11.0	8.0
200x75	25.30	11.5	8.5

CHANNELS PARALLEL FLANGE			
Size (mm)	KG'S/ Metre	Flange Thickness (mm)	Web Thickness (mm)
100x50	10.10	8.4	5.0
180x70	21.10	10.9	7.0
200x75	24.30	11.4	7.5
230x90	32.20	14.0	7.5
260x90	34.80	14.0	8.0
300x100	45.40	16.5	9.0

FLANGE

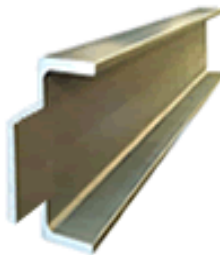
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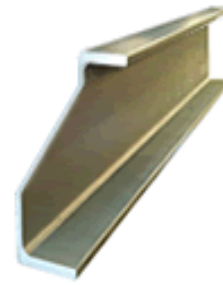
Typical PFC Section



Cleat Connection



Notched End



Tapered End

- Roll-formed, mild steel and are formed by bending a piece of steel so it forms an “L”-shape, with a 90°, perpendicular angle
- The legs of an equal angle's “L” are equal in size
- Used for reinforcing, mostly.

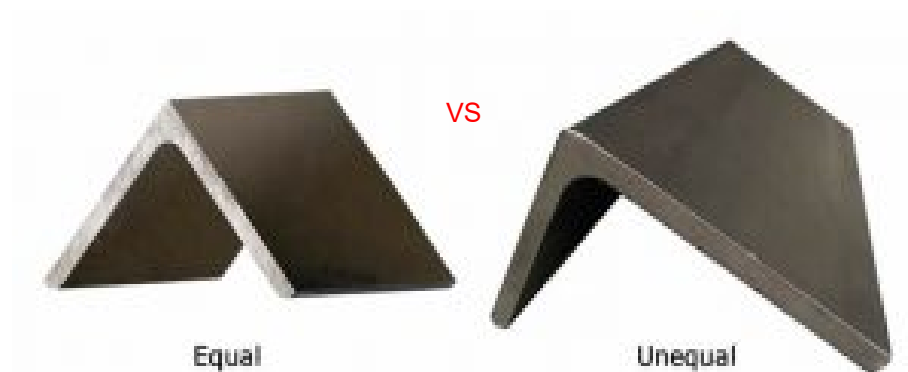


EQUAL ANGLES															
Thickness (mm)	Stock Grades	Stock Lengths	KG'S/ Metre												
			2	2.5	3	4	5	6	8	10	12	15	16	18	20
25x25	CQ	6m	0.77	0.95	1.11		1.77								
30x30	CQ	6m	0.95		1.36		2.18								
40x40	CQ	6m	1.29	1.58	1.87	2.42	2.97	3.52							
45x45	CQ	6m			2.13		3.38								
50x50	CQ	6+13m			2.37	3.06	3.77	4.47	5.82						
60x60	CQ + S355 JR	6+13m				3.70	4.57	5.42	7.09	8.69					
70x70	CQ + S355 JR	6+13m						6.38	8.36	10.27					
80x80	CQ + S355 JR	6+13m						7.34	9.63	11.86	14.03				
90x90	S355 JR	13m						8.30	10.90	13.45	15.93				
100x100	CQ + S355 JR	6+13m							12.18	15.04	17.83				
120x120	S355 JR	13m							14.71	18.20	21.62	26.64			
150x150	S355 JR									22.98	27.35	33.77		40.06	
200x200	S355 JR												48.50	54.20	59.90



- Made from roll – formed mild steel
- Have one side of the 'L' that is longer than the other
- Typically used in framing and reinforcing
- The larger the angle, the more weight it can bear
- Usually used for brackets

UNEQUAL ANGLES							
Thickness (mm)	Stock Grades	Stock Lengths	KG'S/ Metre				
			6	8	10	12	15
65x50	S355 JR	6+13m	5.16	6.75			
75x50	S355 JR	13m	5.65	7.39			
80x60	S355 JR		6.37	8.34			
90x65	S355 JR	13m	7.07	9.29	11.40		
100x65	S355 JR			9.94	12.30		
100x75	S355 JR	13m	8.04	10.57	13.04		
125x75	S355 JR			12.16	15.02	17.81	
150x75	S355 JR				16.98	20.17	
150x90	S355 JR				18.18	21.60	26.62



- Easy to work with. Can weld, cut, machine and form
- Used for braces, straps, plates and support

FLAT BAR												
Thickness (mm)	2.5	3.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0	25.0	30.0	40.0
Width (mm)	KG's/Metre											
12	0.241	0.306	-	-	-	-	-	-	-	-	-	-
16	0.322	0.386										
20	0.402	0.482	0.790	0.940	1.260	1.570	-	-	-	-	-	-
25	0.502	0.603	0.980	1.180	1.570	1.960	2.360	-	-	-	-	-
30	0.603	0.724	1.180	1.410	1.880	2.360	2.830	-	-	-	-	-
40	-	0.965	1.570	1.880	2.510	3.140	3.770	5.020	6.280	7.850	-	-
50	-	1.206	1.960	2.360	3.140	3.930	4.710	6.280	7.850	9.810	-	-
60	-	-	-	2.830	3.770	4.710	5.650	7.540	9.420	-	14.130	-
70	-	-	-	3.300	4.400	5.500	6.590	8.790	10.990	-	-	-
80	-	-	-	3.770	5.020	6.280	7.540	10.050	12.560	15.700	18.840	25.120
90	-	-	-	4.240	5.650	7.070	8.480	-	14.130	17.660	-	-
100	-	-	-	4.710	6.280	7.850	9.420	12.560	15.700	19.630	23.550	31.400
110	-	-	-	5.180	6.910	8.640	10.360	-	-	-	-	-
130	-	-	-	-	9.420	11.780	12.250	16.330	20.410	25.510	-	-
150	-	-	-	-	9.420	11.780	14.130	18.840	23.550	29.440	35.330	-
180	-	-	-	-	-	14.130	16.960	22.610	28.260	35.330	-	-
200	-	-	-	-	-	15.700	18.840	25.120	31.400	39.250	-	-
250	-	-	-	-	19.600	23.600	31.400	39.250	49.060	58.880	-	-
300	-	-	-	-	-	23.600	28.300	-	-	-	-	-

GRADE 55C FLAT BAR		
Size (mm)	Stock Lengths	6.0
100x12	-	9.42
100x16	13m	12.56
100x20		15.70
130x12		12.25
130x16		16.33
130x20		20.41



•Commonly used for fences, gates, balustrades and trusses

ROUND BAR			
Size (mm)	Stock Grades	Stock Lengths	KG'S/ Metre
6	CQ	6m	0.22
8	CQ	6m	0.40
10	CQ	6m	0.62
12	CQ	6m	0.89
16	CQ	6m	1.58
20	CQ	6m	2.47
22	CQ	6m	2.98
24	CQ	6m	3.55
25	CQ	6m	3.85
30	CQ	6m	5.55
32	CQ	6m	6.31
35	CQ	6m	7.55
36	CQ	6m	7.99
38	CQ	6m	8.90
40	CQ	6m	9.87
45	CQ	6m	12.49
50	CQ	6m	15.41



•Commonly used for ornamental iron work, gates and burglar bars

SQAURE BAR			
Size (mm)	Stock Grades	Stock Lengths	KG'S/ Metre
10x10	CQ	6m	0.79
12x12	CQ	6m	1.13
16x16	CQ	6m	2.01
20x20	CQ	6m	3.14
25x25	CQ	6m	4.91
30x30	CQ	6m	7.07
35x35	CQ	6m	9.62
40x40	CQ	6m	12.60
50x50	CQ	6m	19.65
60x60	S355 JR	6m	28.38
70x70	S355 JR	6m	38.50
75x75	S355 JR	6m	44.20



•Used as a tension device in reinforced concrete ad masonry structures to strengthen.

REINFORCING BAR			
Size (mm)	Stock Grades	Stock Lengths	KG'S/ Metre
6	BS4449/SANS 920	6+12+13m	0.22
8	BS4449/SANS 920	6+12+13m	0.40
10	BS4449/SANS 920	6+12+13m	0.62
12	BS4449/SANS 920	6+12+13m	0.89
16	BS4449/SANS 920	6+12+13m	1.58
20	BS4449 SANS 920	6+12+13m	2.47
25	BS4449/SANS 920	6+12+13m	3.85
32	BS4449/SANS 920	6+12+13m	6.31
40	BS4449/SANS 920	6+12+13m	9.87



- Length of steel that has a cross section in the shape of an I
- Also known as an I-Beam
- Typically used in construction and civil engineering projects to add support to buildings



IPE STANDARD							
Nominal Size (mm)	KG'S/ Metre	Stock Grade	Stock Lengths	Actual Dimensions (mm)			
				Height	Width	Flange	Web
100x55	8.10	S355 JR	13m	100	55	4.1	5.7
120x64	10.37	S355 JR	13m	120	64	4.4	6.3
140x73	12.89	S355 JR	13m	140	73	4.7	6.9
160x82	15.77	S355 JR	13m	160	82	5	7.4
180x91	18.80	S355 JR	13m	180	91	5.3	8
200x100	22.36	S355 JR	13m	200	100	5.6	8.5

IPE - AA							
Nominal Size (mm)	KG'S/ Metre	Stock Grade	Stock Lengths	Actual Dimensions (mm)			
				Height	Width	Flange	Web
100x55	6.72	S355 JR	13m	97.6	55	3.6	4.5
120x64	8.36	S355 JR	13m	117	64	3.8	4.8
140x73	10.05	S355 JR	13m	136.6	73	3.8	5.2
160x82	12.32	S355 JR	13m	156.4	82	4	5.6
180x91	14.94	S355 JR	13m	176.4	91	4.3	6.2
200x100	17.95	S355 JR	13m	196.4	100	4.5	6.7





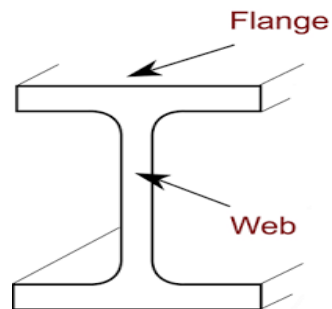
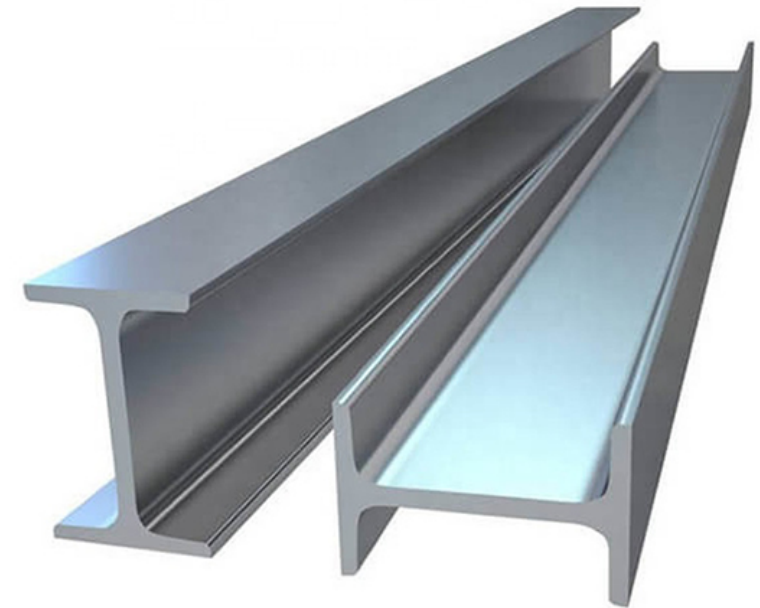
UNIVERSAL BEAMS							
Nominal Size (mm)	KG'S/ Metre	Stock Grades	Stock Lengths	Actual Dimensions			
				Height	Width	Flange	Web
203x133	25.1	S355 JR	9+11+13m	203.2	133.2	7.8	5.7
	30.0	S355 JR	11+13m	206.8	133.9	9.6	6.4
254x146	31.1	S355 JR	9+11+13m	251.4	146.1	8.6	6.0
	37.0	S355 JR	13m	256.0	146.4	10.9	6.3
	43.0	S355 JR	13m	259.6	147.3	12.7	7.2
305x102	24.8	S355 JR	9+11+13m	305.1	101.6	7.0	5.8
	28.2	S355 JR	13m	308.7	101.8	8.8	6.0
	32.8	S355 JR	13m	312.7	102.0	10.8	6.6
305x165	40.3	S355 JR	9+11+13m	303.4	165.0	10.2	6.0
	46.1	S355 JR	13m	306.6	165.7	11.8	6.7
	54.0	S355 JR	13m	310.4	166.9	13.7	7.9
356x171	45.0	S355 JR	9+13m	351.4	171.1	9.7	7.0
	51.0	S355 JR	13m	355.0	171.5	11.5	7.4
	57.0	S355 JR	13m	358.0	172.2	13.0	8.1
	67.1	S355 JR		363.4	173.2	15.7	9.1
	39.0	S355 JR	11+13m	398.0	141.8	8.6	6.4
406x140	46.0	S355 JR	9+13m	403.2	142.2	11.2	6.8
	54.1	S355 JR	9+11+13m	402.6	177.7	10.9	7.7

UNIVERSAL BEAMS							
Nominal Size (mm)	KG'S/ Metre	Stock Grades	Stock Lengths	Actual Dimensions			
				Depth	Width	Flange	Web
406x178	60.1	S355 JR		406.4	177.9	12.8	7.9
406x178	67.1	S355 JR	13m	409.4	178.8	14.3	8.8
406x178	74.2	S355 JR		412.8	179.5	16.0	9.5
457x191	67.1	S355 JR	9+11+13m	453.4	189.9	12.7	8.5
457x191	74.3	S355 JR	9+13m	457.0	190.4	14.5	9.0
457x191	82.0	S355 JR	13m	460.0	191.3	16.0	9.9
457x191	89.3	S355 JR		463.4	191.9	17.7	10.5
457x191	98.3	S355 JR		467.2	192.8	19.6	11.4
533x210	82.2	S355 JR	13m	528.3	208.8	13.2	9.6
533x210	92.1	S355 JR	13m	533.1	209.3	15.6	10.1
533x210	101.0	S355 JR		536.7	210.0	17.4	10.8
533x210	109.0	S355 JR		539.5	210.8	18.8	11.6
533x210	122.0	S355 JR		544.5	211.9	21.3	12.7

- Length of Structural Steel that has a cross section in the shape of an I or H.
- Universal beams can handle a wide variety of loads when used horizontally, and the same can be said for universal columns as vertical supports

- Known as I-Beam and H-Beam with a spared cross-section
- The horizontal element of the I is known as flanges
- Vertical element is known as the web
- The flange and web are similar in length

UNIVERSAL COLUMNS							
Nominal Size (mm)	KG'S/ Metre	Stock Grades	Stock Lengths	Actual Dimensions			
				Depth	Width	Flange	Web
152x152	23.00	S355 JR	9+13m	152.4	152.2	6.8	5.8
152x152	30.00	S355 JR	9+13m	157.6	152.9	9.4	6.5
152x152	37.00	S355 JR	13m	161.8	154.4	11.5	8.0
203x203	46.10	S355 JR	9+13m	203.2	203.6	11.0	7.2
203x203	52.00	S355 JR	13m	206.2	204.3	12.5	7.9
203x203	60.00	S355 JR		209.6	205.8	14.2	9.4
203x203	71.00	S355 JR		215.8	206.4	17.3	10.0
203x203	86.10	S355 JR		222.2	209.1	20.5	12.7
254x254	73.10	S355 JR	13m	254.1	254.6	14.2	8.6
254x254	88.90	S355 JR	13m	260.3	256.3	117.3	10.3
254x254	107.10	S355 JR		266.7	258.8	20.5	12.8
254x254	132.00	S355 JR		276.3	261.3	25.3	15.3
254x254	167.10	S355 JR		289.1	265.2	31.7	19.2
305x305	96.90	S355 JR	13m	307.9	305.3	15.4	9.9
305x305	117.90	S355 JR		314.5	307.4	18.7	12.0
305x305	136.90	S355 JR		320.5	309.2	21.7	13.8
305x305	158.10	S355 JR		327.1	311.2	25.0	15.8
305x305	198.10	S355 JR		339.9	314.5	31.4	19.1
305x305	240.00	S355 JR		352.5	318.4	37.7	23.0



COLD ROLLED DRY SHEETS													
Length	Width	KG'S @											
		4.5	5	6	8	10	12	16	20	25	30	40	50
2500	1200	105.98	117.75					376.80	471.00	588.80	706.50	942.00	1177.50
4000	2000							1004.8	1256.00	1570.00	1884.00	2512.00	3140.00
10000	2400		942.00	1130.20	1507.20	1884.00	2260.80	3014.40	3768.00	4710.00	5652.00	7536.00	9420.00
12000	3000			1695.60	2260.80	2826.00	3391.20	4521.60	5652.00				

GALVANISED Z275 CQ SHEETS									
Length	Width	Stock Grade	KG'S @						
			4.5	5	6	8	10	12	
2500	1200	CQ/S355JR	105.98	117.75	141.30	188.40	235.50	282.60	
3000	1500	CQ	158.96	176.63	211.95	282.60	353.25	423.90	
4000	2000	CQ/S355JR	282.60	314.00	376.80	502.40	628.00	753.60	

COLD ROLLED DRY SHEETS										
Length	Width	KG'S @								
		0.5	0.6	0.7	0.8	0.9	1.0	1.2	1.6	2.0
2450	1225	12.06	14.48	16.89	19.30	21.71	24.13	28.95	38.60	48.25

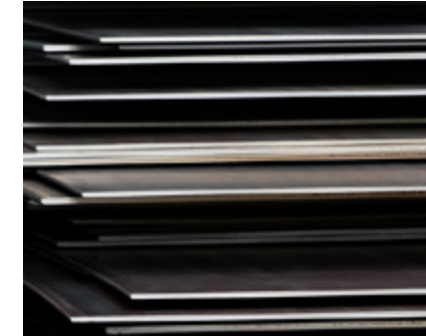
GALVANISED Z275 CQ SHEETS									
Length	Width	KG'S @							
		0.5	0.58	0.80	1.0	1.2	1.6	2.0	3.0
2450	1225	12.06	13.99	19.30	24.13	28.95	38.60	48.25	72.38

What is the difference between hot rolled and cold rolled sheet?

- Hot rolled steel comes with a scaly surface, slightly rounded edges and corners and the surface is non-oily.
- Cold rolled steel has an oily or greasy finish, very smooth surface, and very sharp edges



HOT ROLLED DRY SHEETS							
Length	Width	KG'S @					
		1.6	2.0	2.5	3.0	3.5	4.0
2450	1225	38.60	48.25	60.32	72.38	84.44	96.51



HOT ROLLED PICKLED & OILED SHEETS							
Length	Width	KG'S @					
		1.6	2.0	2.5	3.0	3.5	4.0
2450	1225	38.60	48.25	60.32	72.38	84.44	96.51

VASTRAP/CHEQUER PLATE					
Length	Width	Stock Grade	Thick	Tear Height	KG @
2500	1200	CQ	3.0	4.6	77.994
2500	1200	CQ	4.5	6.1	113.34
2500	1200	CQ	6.0	7.6	148.65
2500	1200	CQ			

What is pickled and oiled sheets?

Steel pickling and oiling is a metal surface treatment finishing process used to remove surface impurities such as rust and carbon scale from hot rolled carbon steel. The steel is submersed in a bath of pickle liquor, a solution of Hydrogen Chloride acid, to remove the impurities from the surface of the steel.

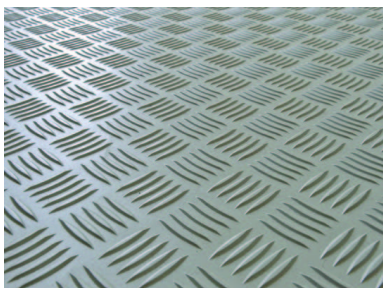
Will pickled and oiled steel rust?

Hot rolled pickled and oiled steel, is steel that has been processed to remove surface impurities. When traditional hot rolled steel is pickled and oiled, it becomes more durable and rust-resistant

Hot Rolled Pickled and Oiled steel is ideal for welding finishes and reinforcements.

Vastrap Plate

- Hot rolled steel floor plate
- It is patterned to render a non – slip surface



WEAR RESISTANT & HIGH STRENGTH STEELS								
	Typical Hardness		Typical Tensile Strength	Typical Yield Strength	Typical Impact Strength	Max Operating Temp	Typical Elongation	Thickness Range
	BHN	HRC	MPa	MPa	J	(°C)	%	mm
Wear Plate 200 Bennox	220	20	600	450	-	-	-	3-50
NM400	410	42	1400	1050	35 @ 0°C	300	14	4-100
NM450	460	44	1500	1150	35 @ 0°C	300	14	4-100
NM500	510	52	1700	1350	35 @ 0°C	300	14	4-80
NM700	270	25	840	760	80 @ -50°C	500	24	6-150
700MC	270	22	850	760	80 @ -50°C	500	14	2-12
Mild Steel	130	-	400	250	-	-	23	2-100

COLD FORMED SECTION - LIPPED CHANNEL				
Size (mm)	Stock Lengths	KG'S/ Metre		
		2.0	2.5	3.0
75x50x20		3.12	3.83	4.5
100x50x20		3.52	4.32	5.09
100x75x20		4.31	5.31	6.27
125x50x20		3.91	4.81	5.68
125x65x20		4.39	5.4	6.39
125x75x20		4.7	5.8	6.86
150x50x20		4.31	5.31	6.27
150x65x20		4.78	5.9	6.98
150x75x20		5.09	6.29	7.45
175x50x20		4.7	5.8	6.86
175x65x20		5.17	6.39	7.57
175x75x20		5.49	6.78	8.04
200x50x20		5.09	6.29	7.45
200x65x20		5.53	6.88	8.16
200x75x20		5.88	7.27	8.63
225x50x20		5.49	6.78	8.04

COLD FORMED SECTION - LIPPED CHANNEL				
Size (mm)	Stock Lengths	KG'S/ Metre		
		2.0	2.5	3.0
225x65x20		5.96	7.37	8.75
225x75x20		6.27	7.76	9.22
250x50x20		5.88	7.27	8.63
250x65x20		6.35	7.86	9.34
250x75x20		6.67	8.25	9.81
300x50x20		6.67	8.25	9.81
300x65x20		7.14	8.84	10.52
300x75x20		7.45	9.24	10.99

COLD FORMED SECTION - LIPPED ANGLE				
Size (mm)	Stock Lengths	KG'S/ Metre		
		2.0	2.5	3.0
75x50x20		2.41	2.95	3.47
100x75x20		3.19	3.93	4.65

Lipped Channel:

- A Structural component for constructing buildings and structures
- Often referred to as purlins

Lipped angle

- Can be primed and coated, hot dip galvanized, cut to size and pre-punched
- Commonly used for trusses, carport and industrial girts for steel framed buildings

Standard lengths kept in stock: 6m, 9.145m, 12m.
All other sizes available on request.



HOW TO BUILD A CARPORT

STEEL & PIPES

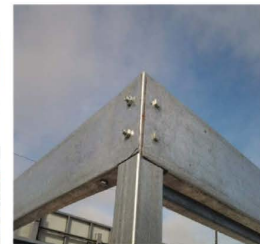
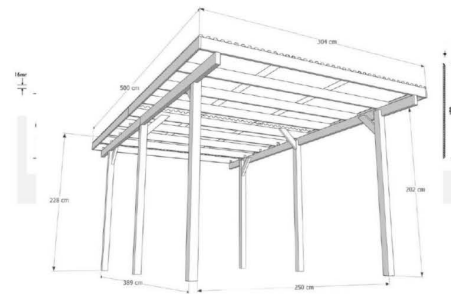
Your One Stop Comprehensive Steel Shop



A STANDARD CARPORT USUALLY CONSISTS OF:

(This can vary due to the size and shape of your requirements)

- IBR or Corrugated Roof sheeting 0.47 or 0.5mm thickness
 - 150 x 50 x 20 x 2mm Lip Channel - Outer steel Frame
 - 100 x 50 x 20 x 2mm Lip Channel - Inner frame (where your IBR is resting on to give the carport a nice "fascia" finish)
 - 76 x 76mm Square tube columns which are concreted securely into the ground (Or mounted with base plates and chemical anchors).
- The standard height for a carport is usually 2.2 meters for cars, 2.4 and 2.6 meters for minibuses and caravans



•Commonly used for bridges, box girders, cranes, roof trusses, trailers, towers, tow bars, columns, agriculture equipment, bridges or mine props

HOT ROLLED SQUARE TUBING												
Thickness (mm)		Stock Grades	Stock Lengths	Wall Thickness mm & KG's per metre								
				1.6	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0
D1	D2											
12	12			0.56								
16	16			0.68	0.85							
19	19	CQ	6m	0.90	1.10							
25	25	CQ	6m	1.21	1.50	1.80	2.13					
32	32	CQ	6m	1.53	1.90	2.31	2.74					
38	38	CQ	6m	1.85	2.29	2.83	3.36	3.86	4.37			
50	50	CQ	6m	2.49	3.09	3.76	4.56	5.18	5.87	6.55		
60	60	CQ	6m	2.94	3.66	4.55	5.42	6.28	7.12	7.96		
63	63	CQ	6m	3.09	3.85	4.78	5.70	6.60	7.50	8.38		
76	76	CQ	6m	3.69	4.69	5.70	6.96	7.90	8.98	10.04	11.10	
80	80	CQ	6m	3.95	4.91	6.11	7.30	8.47	9.63	10.78	11.91	
90	90	CQ	6m	4.45	5.54	6.89	8.24	9.57	10.88	12.19	13.48	16.03
100	100	CQ	6m		6.17	7.68	9.20	10.66	12.14	13.60	15.05	17.91
120	120	CQ	6m				11.06	12.85	14.64	16.41	18.18	21.67
152	152	CQ	6m					16.42		21.00		27.78



All other sizes available on request.

•Round tubes are solid and rigid, and their strength is distributed evenly in all directions.

HOT ROLLED ROUND STRUCTURAL TUBING											
OD(mm)	Stock Grades	Stock Lengths	Wall Thickness (mm) & KG's per metre								
			1.6	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0
15.8	CQ	6m	0.56								
19.1	CQ	6m	0.69	0.84							
21.4	CQ	6m	0.78	0.96	1.17						
25.4	CQ	6m	0.94	1.15	1.41						
26.9	CQ	6m	1.00	1.23	1.50	1.77					
32	CQ	6m	1.20	1.48	1.82	2.15					
34.1	CQ	6m	1.28	1.58	1.95	2.30	2.64	2.97			
38.1	CQ	6m	1.44	1.78	2.19	2.60	2.99	3.36			
42.8	CQ	6m	1.63	2.01	2.48	2.94	3.39	3.83			
48.5	CQ	6m	1.85	2.29	2.84	3.37	3.88	4.39	4.88		
50.8	CQ	6m	1.94	2.41	2.98	3.54	4.08	4.62	5.14		
57.1	CQ	6m	2.19	2.72	3.37	4.00	4.63	5.24	5.84		
60.3	CQ	6m	2.32	2.88	3.56	4.24	4.90	5.55	6.19		
63.5	CQ	6m	2.44	3.03	3.76	4.48	5.18	5.87	6.55		
76.2	CQ	6m	2.94	3.66	4.54	5.42	6.27	7.12	7.96	8.78	21.67
88.9	CQ	6m	3.44	4.29	5.33	6.35	7.37	8.37	9.37	10.34	12.27



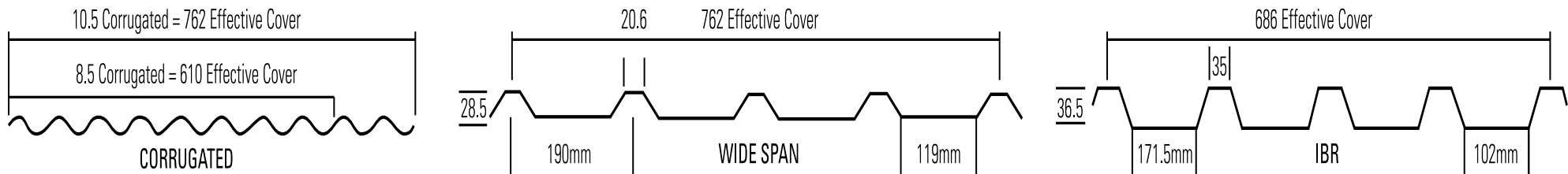
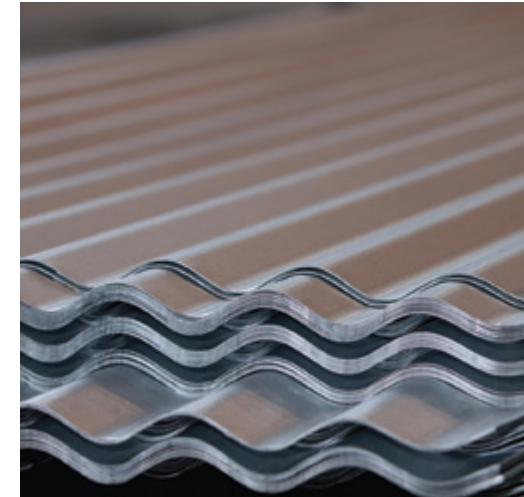
HOT ROLLED ROUND STRUCTURAL TUBING											
OD mm	Stock Grades	Stock Lengths	Wall Thickness mm & KG's per metre								
			1.6	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0
101.6	CQ	6m	3.95	4.91	6.11	7.29	8.47	9.63	10.78	11.91	14.14
114.3	CQ	6m		5.54	6.89	8.23	9.56	10.88	12.18	13.48	16.02
127	CQ	6m		6.17	7.68	9.17	10.66	12.13	13.59	15.04	17.90
139.7	CQ	6m				10.11	11.76	13.39	15.00	16.61	19.78
152.4	CQ	6m				11.05	12.85	14.64	16.41	18.17	21.66
165.1	CQ	6m				11.99	13.95	15.89	17.82	19.74	23.54
177.8	CQ	6m				12.93	15.04	17.14	19.23	21.31	25.42
193.70	CQ	6m					16.42		21.00		27.77
219.1	CQ	6m					18.61		23.81		31.53

•Commonly used for structural purposes such as mast towers, roof trusses, irrigation, structures, tow bars, roll bars, racking and shelving, steel bridges and handrails.

HOT ROLLED RECTANGULAR TUBING													
Thickness (mm)		Stock Grades	Stock Lengths	Wall Thickness mm & KG's per metre									
				1.6	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	
D1	D2												
25	12	CQ	6m	0.939									
32	19	CQ	6m	1.182	1.47								
38	19	CQ	6m	1.44	1.78	1.84	2.47	2.83	3.19				
38	25	CQ	6m	1.52	1.88	2.09	2.76						
50	25	CQ	6m	1.85	2.24	2.33	3.36	3.88	4.38				
50	38	CQ	6m	2.19	2.72	2.83	4.01	4.57	5.17				
63	25	CQ	6m	2.19	2.72	3.37	4.01	4.57	5.17				
76	25	CQ	6m	2.19	3.03	3.37	4.48	5.18	5.87				
60	40	CQ	6m	2.44	3.03	3.76	4.48	5.18	5.87	6.55			
76	38	CQ	6m	2.82	3.50	3.76	5.18	6.00	6.81	7.60			
76	50	CQ	6m	3.12	3.66	4.35	5.70	6.60	7.50	8.38			
80	40	CQ	6m	3.09	3.66	4.78	5.42	6.28	7.12	7.96			
100	50	CQ	6m	3.70	4.61	4.55	6.81	7.90	8.98	10.04	11.10	16.03	
120	60	CQ	6m	3.69	5.54	5.70	8.24	9.57	10.88	12.19	13.48	17.91	
120	80	CQ	6m		6.17	6.89	9.18	10.66	12.14	13.60	15.05	21.67	
160	80	CQ	6m			7.68	11.06	12.85	14.64	16.41	18.18		
200	100	CQ	6m				14.13		18.75	21.03	23.30	27.82	



ROOF SHEETS							
ZN Grams/SQM	Thickness	Steel Grade	KG's Per Metre				COLOUR COATED
			8.5 Corrugated	10.5 Corrugated	Widespan	IBR	
			610mm coverage	762mm coverage	762mm coverage	686mm coverage	
Z100	0.25	ISQ550 FH	1.530	1.836	1.836	1.836	
Z100	0.27	ISQ550 FH	1.653	1.983	1.983	1.983	
Z100	0.30	ISQ550 FH	1.837	2.204	2.204	2.204	
Z100/Z150	0.40	ISQ550 FH		2.974	2.974	2.974	2.974
Z150/Z275	0.47	ISQ550 FH		3.494	3.494	3.494	3.494
Z150/Z275	0.50	ISQ550 FH		3.718	3.718	3.718	3.718
Z275	0.58	ISQ300 FH		4.312	4.312	4.312	4.312
Z275	0.80	ISQ230 FH		5.949	5.949	5.949	5.949



- Available in Galvanised, Zincal, Aluzinc and colour coated material.
- Roofing sheets can be rolled to any length from 1 to 13 metres.
- If the KG per metre box is populated, it is available in the profile at the head of the column.
- We also provide bull nosing, cranking/curving of roof sheets and other accessories such as flashing, translucent sheeting etc.

WELDED REINFORCING MESH					
FABRIC	APERTURES		WIRE DIAMETER	M ²	SUPPLIED IN
STANDARD REF	MAIN (mm)	CROSS (mm)	MAIN (mm)	KG	
888	200	200	12,00	8,88	Sheets
617	200	200	10,00	6,17	Sheets
500	200	200	9,00	5,00	Sheets
395	200	200	8,00	3,95	Sheets
311	200	200	7,10	3,11	Sheets
245	200	200	6,30	2,45	Sheets
193	200	200	5,60	1,93	Sheets & rolls
100	200	200	4,00	1,00	Sheets & rolls
NON - STANDARDS	MAIN (mm)	CROSS (mm)	MAIN (mm)	KG	SUPPLIED IN
156	100	100	3,55	1,56	Sheets & rolls
226	100	300	5,60	2,26	Sheets
200	100	100	4,00	2,00	Sheets & rolls
289	100	200	5,60	2,89	Sheets
278	100	300	6,30	2,78	Sheets
341	100	200	6,30	3,41	Sheets
433	100	200	7,10	4,33	Sheets
517	100	200	8,00	5,17	Sheets
746	200	200	11,00	7,46	Sheets
BRITISH STANDARDS	MAIN (mm)	CROSS (mm)	MAIN (mm)	KG	SUPPLIED IN
A393	200	200	10,00	6,17	Sheets
A252	200	200	8,00	3,95	Sheets
A193	200	200	7,00	3,02	Sheets
A142	200	200	6,00	2,22	Sheets & rolls
A98	200	200	5,00	1,54	Sheets & rolls
CONFORCE	MAIN (mm)	CROSS (mm)	MAIN (mm)	KG	SUPPLIED IN
257	150	150	5,00	2,06	Sheets & rolls
56	150	150	3,55	1,04	Sheets & rolls

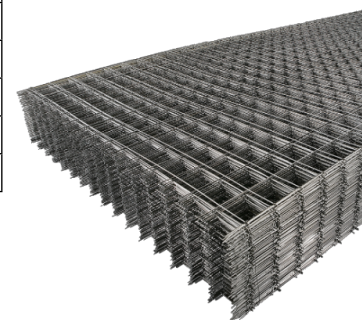
STANDARD MESH SIZE: SHEETS 6M X 2.4M & ROLLS 60M X 2.4M

WIRE

- Plain Galv Wire - per 50kg roll 1.6mm
- Plain Galv Wire - per 50kg roll 2.0mm
- Plain Galv Wire - per 50kg roll 2.5mm
- Plain Galv Wire - per 50kg roll 3.15mm
- Plain Galv Wire - per 50kg roll 4.0mm
- Hoop Iron - 32mm x 1.6mm

MANUFACTURED TO: SANS 1024/2012 BRICK FORCE & BLACK BAILING WIRE

- Brick Force 75,110 & 150 x 2mm wire x 20m Rolls
- Brick Force 75 & 150 x 2.8mm wire x 20m Rolls (NHBRC)
- Brick Force 230 x 2.8mm wire x 20m Rolls
- Galvanized Brick Force 75 & 150 x 20m Rolls
- Black Bailing Wire - 1.6, 2, 2.5, 3.15 & 4mm, 50kg Rolls
- Black Bailing Wire - 1.6 - 5kg Rolls



Steel and Pipes for Africa now stocks an extensive range of perimeter security solutions for high security applications; lifestyle centres; commercial sites as well as recreation and sport facilities. Also catering to the needs of the residential market with the range extending to D-I-Y applications.

>10 year anti-corrosion guarantee on the PVC coated fencing systems is a first for South Africa and sets us apart from the competition Meeting the demand for increased visibility and security

Fabricated from 3mm, 4mm or 5.6mm wire with apertures of 12.7mm x 75mm, making it extremely unlikely to be breached – providing maximum time delay for intrusion detection and reaction.

>Tough

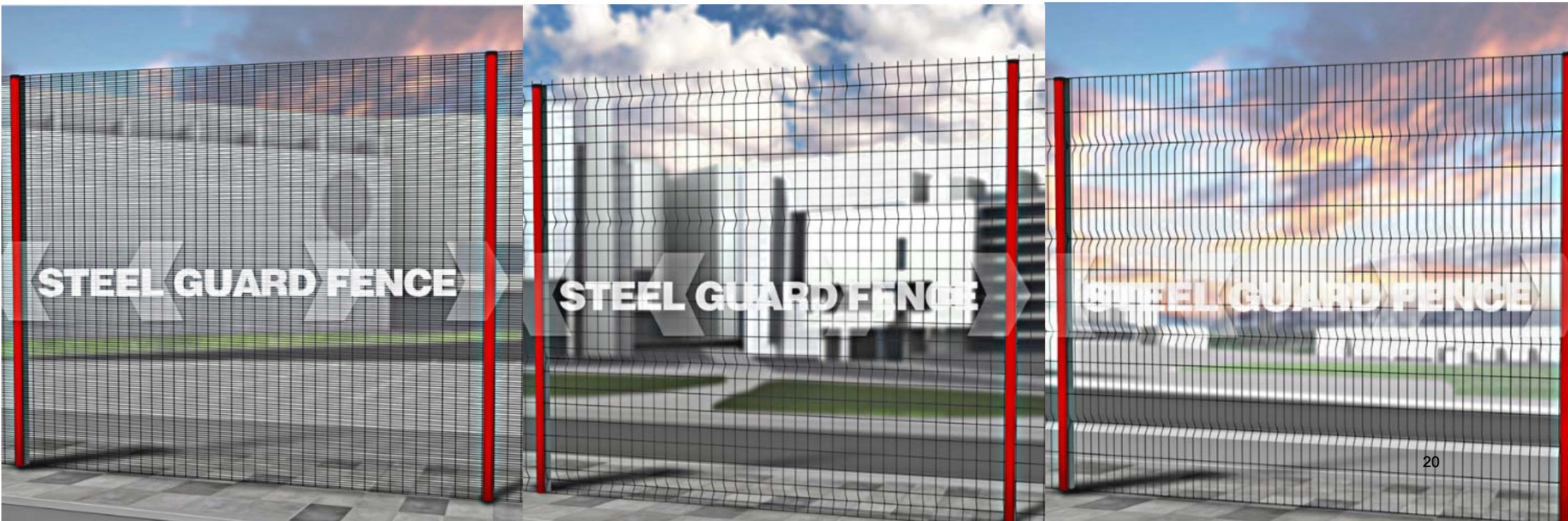
>Anti-Cut

>Anti-Climb

>Increased Visibility

>Safe

>Economical



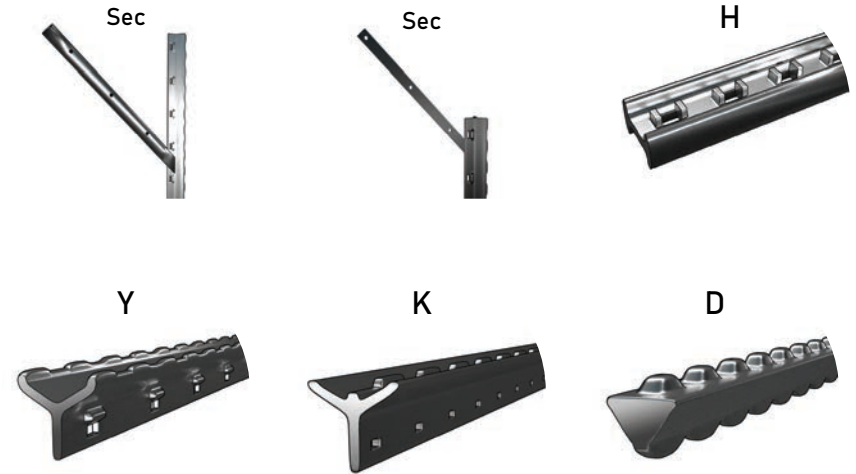
PRODUCT CODE	SIZE	MASS - EACH
"I" BEAM STANDARDS	1850mm	5.5kg
	2450mm	7.35kg

"Y" STANDARDS	1850mm	3.70kg
	2450mm	4.90kg
	3050mm	7.02kg
	3600mm	8.28kg

"K" STANDARDS	1850mm	3.51kg
	2450mm	4.65kg

SECURITY STANDARDS "Y" TYPE PLUS 450mm Overhang	2450mm	5.3kg
	3050mm	7.42kg

DROPPERS	950mm	
	1250mm	
	1400mm	
	1850mm	
	2450mm	
	3050mm	



Y Standards

Y standards are the most widely used type of steel standard.

K Standards

K standards differ from Y standards in shape and weight. K Standards are lighter and cheaper.

Security Standards

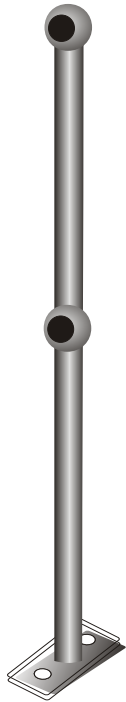
Security standards can be manufactured from either Y standards or K standards. The overhang of 450mm can be made from flat bar, tube or from the same section as the standard itself.

Steel Standards

Steel standards and droppers are coated with black bitumen.

Droppers

- Generally used in constructing barbed wire fence and game fences.
- Have ridges in order to keep line of barbed wire separated.
- Not designed to go into the ground.



MILD STEEL STANCHIONS

Ball type tubular welded construction.
Forged (Solid).

FINISHES AVAILABLE

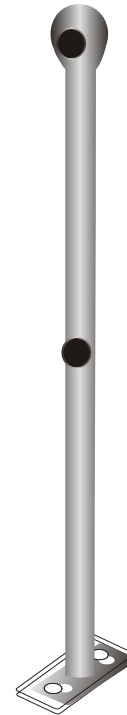
Uncoated, zinc chromate primed or galvanized to SABS 1461 requirements.
Other paint specifications on application.

SPECIFICATIONS

	TUBULAR	FORGED
STANCHION	42,9mm O.D	32mm Ø
BENDS	34,1mm O.D	25mm Ø
HANDRAIL TUBING	34,1mm O.D 2,5mm thick 6000mm long	25mm Ø 6000mm long

RECOMMENDED STANCHION CENTRES ARE:

ON STAIRS: 1000 mm
PLATFORM AREAS: 1500mm
MAINTENANCE WALKWAYS: up to 1800mm
PUBLIC OR SPECTATOR AREAS - not more than 1000mm

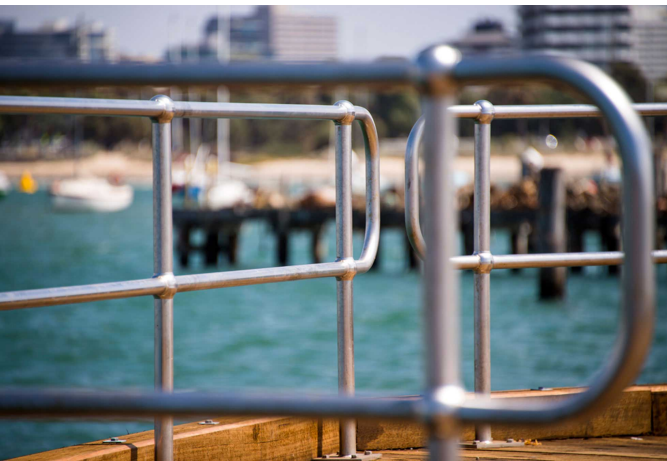


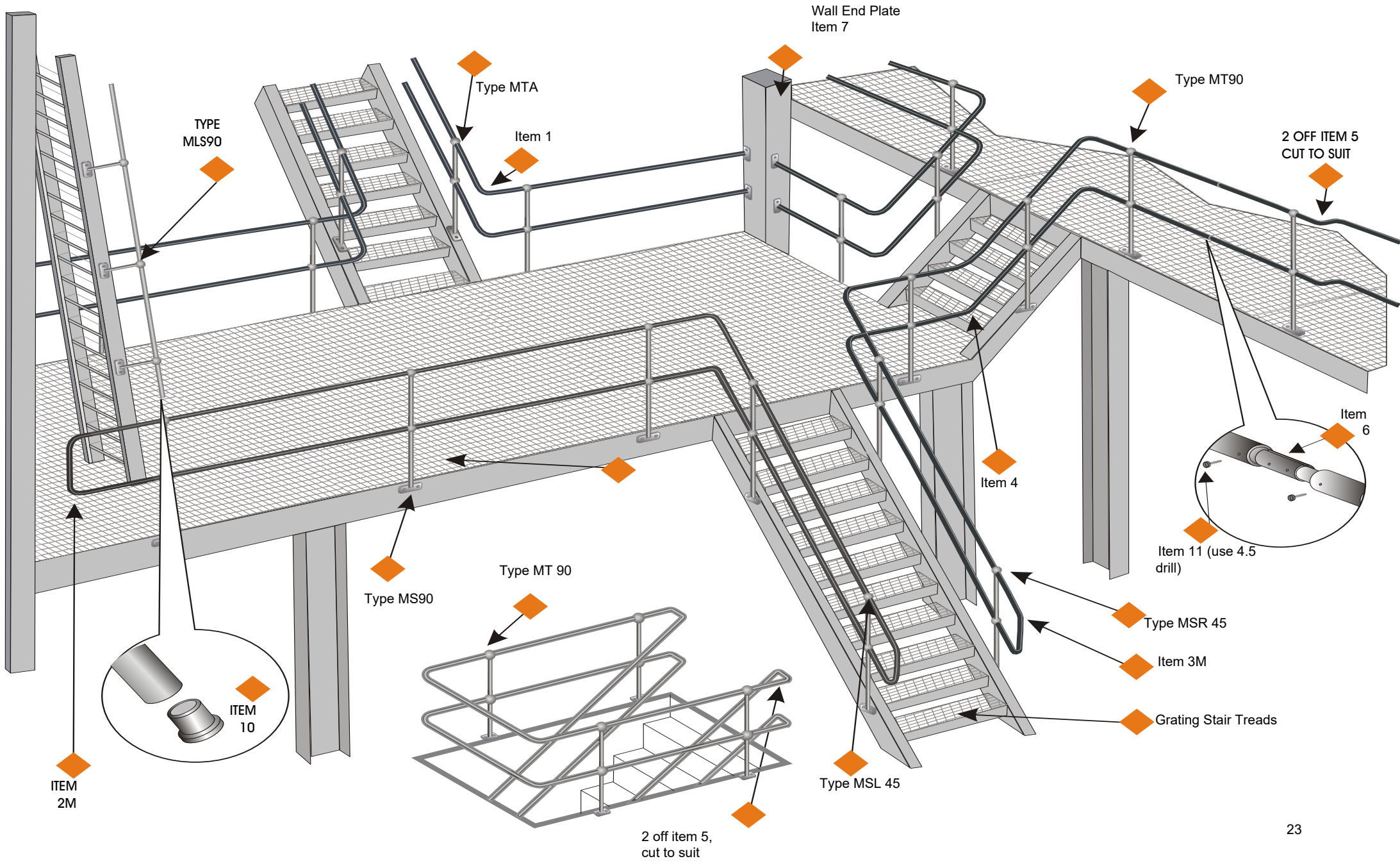
STAINLESS STEEL STANCHIONS

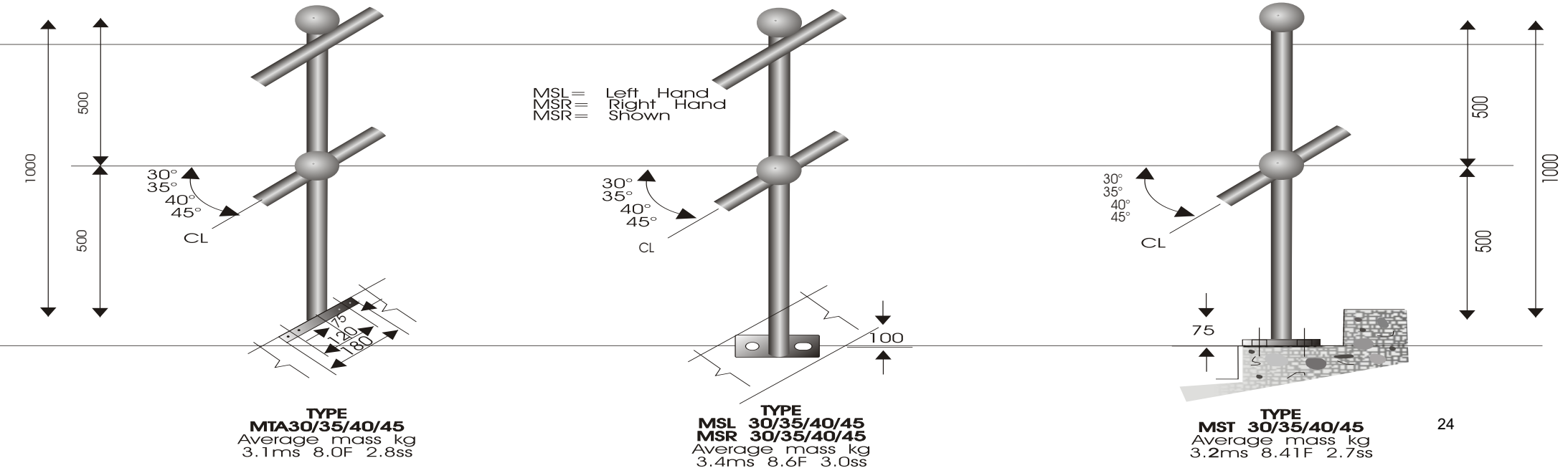
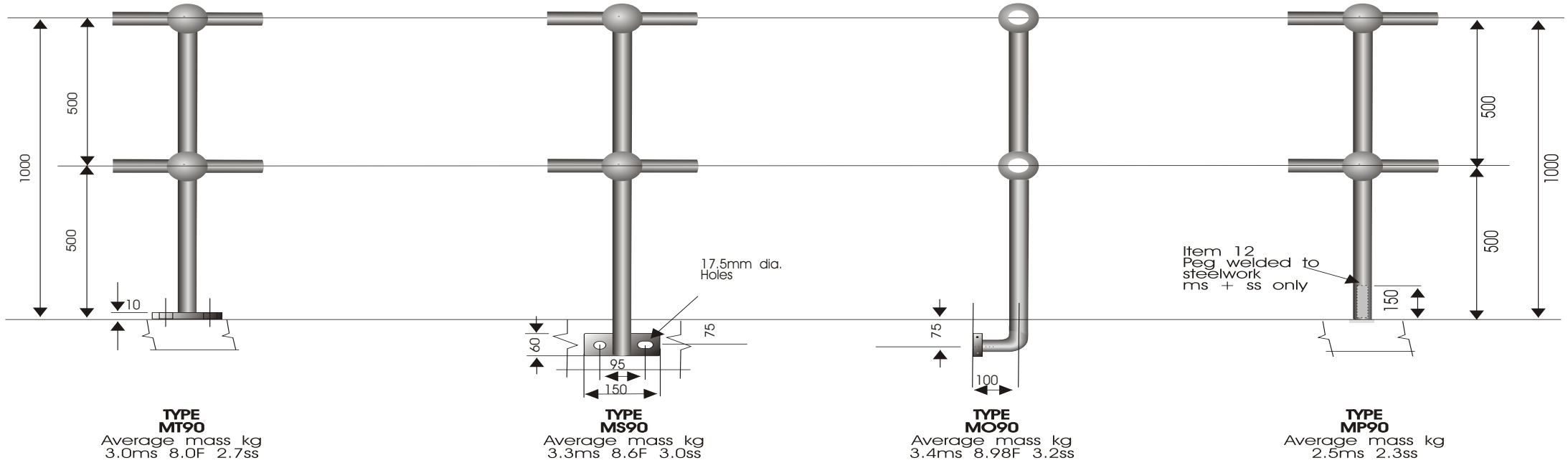
Grade 304 and 3CR12
Unique, aesthetic design

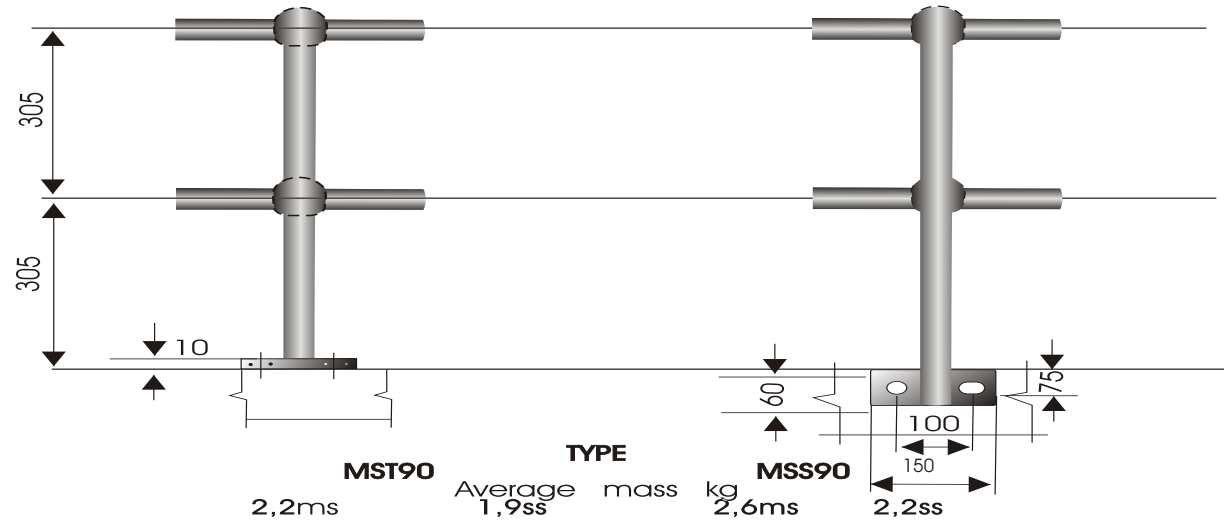
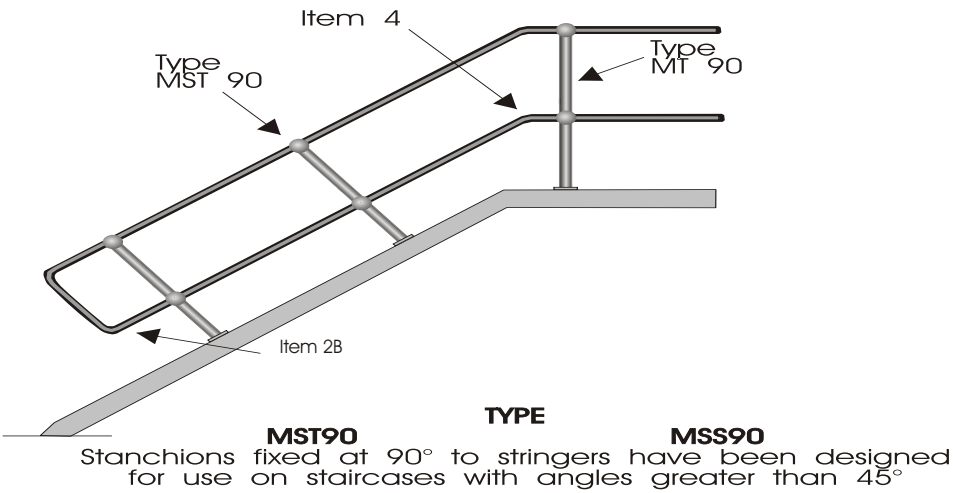
SPECIFICATIONS

STANCHION TUBE	45,0mm O.D
BENDS	31,8mm O.D
HANDRAIL TUBING	31,8mm O.D 1,5mm thick 6100mm long

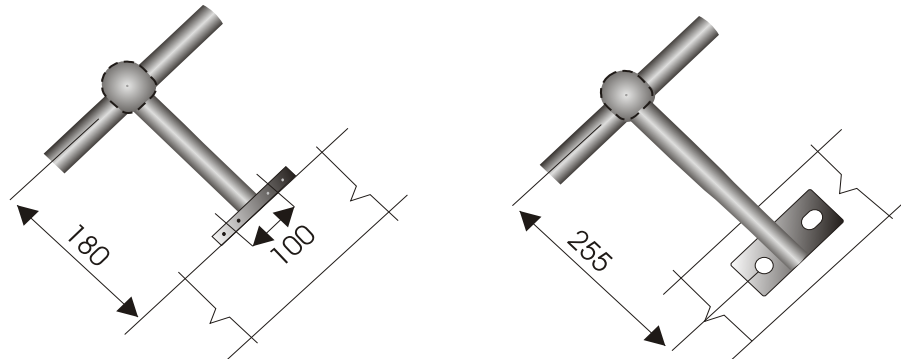








FOR USE ON LADDERS BETWEEN 70° AND 90° INCLINES

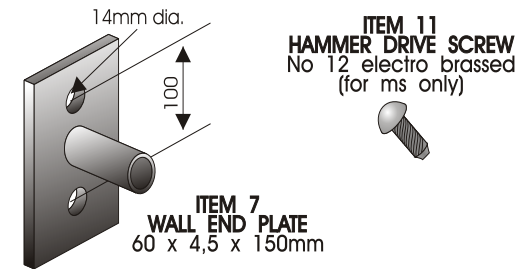
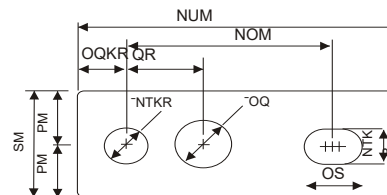
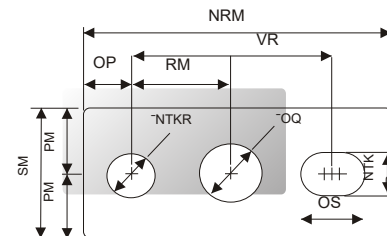


TYPE	Average mass kg
MLT90	1,1ms
MLS90	1,3ss

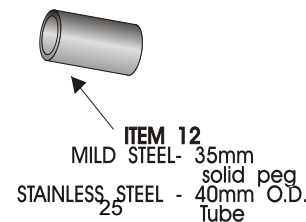
Accessories

Base Plate

BASE PLATE HOLE CONFIGURATION



ITEM 11
HAMMER DRIVE SCREW
No 12 electro brasses
(for ms only)



Guage No.	SWG/INCHES	SWG/MM
0	0.324	8.230
1	0.300	7.620
2	0.276	7.010
3	0.252	6.401
4	0.232	5.893
5	0.212	5.385
6	0.192	4.877
7	0.176	4.470
8	0.160	4.064
9	0.144	3.658
10	0.128	3.251
11	0.116	2.946
12	0.104	2.642
13	0.92	2.337
14	0.80	2.032
15	0.72	1.829
16	0.64	1.626

Guage No.	SWG/INCHES	SWG/MM
17	0.056	1.422
18	0.048	1.219
19	0.040	1.016
20	0.036	0.914
21	0.032	0.813
22	0.028	0.711
23	0.024	0.610
24	0.022	0.559
25	0.020	0.508
26	0.018	0.457
27	0.0164	0.4166
28	0.0148	0.3759
29	0.0136	0.3454
30	0.124	0.3150
31	0.0116	0.2946
32	0.0108	0.2743
33	0.0100	0.254

Guage No.	SWG/INCHES	SWG/MM
34	0.0092	0.2369
35	0.0084	0.2134
36	0.0076	0.1930

QUALITY	CHEMICAL COMPOSITION % (LARGE ANALYSIS)												TENSILE STRENGTH (MIN) MPA	YIELD STRENGTH (MIN) MPA	ELONGATION % (MIN) IN GAUGE LENGTH		CHARPY V NOTCH	
	C	Mn	P	S	SI	V	Al	NI	Cr	Cu	B	Nb			200mm	5,56	TEMP C	AVE (J)
Mild Steel Commercial Quality	0,25 Max		0,04 Max	0,04 Max									NOT SPECIFIED					
BS4360 43A	0,25 Max	1,60 Max	0,05 Max	0,05 Max	0,05 Max								430/AR580	275 (t<16)	20	22		
43C	0,18 Max	1,50 Max	0,05 Max	0,05 Max	0,05 Max								430/AR580	275 (t<16)	20	22	0	
43D	0,16 Max	1,50 Max	0,04 Max	0,04 Max	0,10/0,50								430/AR580	275 (t<16)	20	22	-20	27
SANS 1431 300WA	0,22 Max	1,60 Max	0,04 Max	0,04 Max	0,05 Max								430/AR580	300 (t<40)	20	22		
300WC	0,22 Max	1,60 Max	0,04 Max	0,04 Max	0,05 Max								430/AR580	300 (t<40)	20	22	0	27
300WDD	0,22 Max	1,60 Max	0,04 Max	0,04 Max	0,05 Max								430/AR580	300 (t<40)	20	22	-30	27
Higher Strength BS4360 50B	0,23 Max	1,60 Max	0,05 Max	0,05 Max	0,05 Max	0,003/0,10						0,003/0,10	450/AR580	355 (t<16)	18	20	20	27
50C	0,20 Max	1,50 Max	0,05 Max	0,05 Max	0,05 Max							0,003/0,10	490/AR580	355 (t<16)	18	20	0	27
SANS 1431 350WA	0,22 Max	1,60 Max	0,04 Max	0,04 Max	0,05 Max								480/AR580	350 (t<40)	18	20		
350WC	0,22 Max	1,60 Max	0,04 Max	0,04 Max	0,04 Max								430/AR580	350 (t<40)	18	20	0	27
350WDD	0,22 Max	1,60 Max	0,04 Max	0,04 Max	0,04 Max								430/AR580	350 (t<40)	18	20	-30	27
Corrosion Resistant Corten A	0,12 Max	0,20/0,50	0,07/0,15	0,05 Max	0,25/0,75				0,65 Max	0,30/1,25	0,25/1,55		430/AR580	345 (t<12.7)	18 (t<12.7)	22 (50mm)		
Corten B	0,19 Max	0,80/1,25	0,04 Max	0,05 Max	0,30/0,65	0,02/0,10	0,015/0,06		0,40 Max	0,40/0,65	0,25/0,40		430/AR580	345 (t<100)	18 (t<100)	21 (50mm)		
Corten C	0,19 Max	0,80/1,35	0,04 Max	0,05 Max	0,30/0,65	0,04/0,10	0,015/0,06		0,40 Max	0,40/0,70	0,25/0,40		430/AR580	415 (t<25)	16 (t<25)	21 (50mm)		
Wear Resistant S10/200	0,44/0,55	0,60/1,00	0,06 Max	0,06 Max	0,10/0,35		0,03						Sold to Chemical Analysis Only					
Pressure Vessel BS1501/151/430A	0,25 Max	0,60/1,40	0,03 Max	0,0045 Max	0,35 Max			0,10 Max	0,30 Max	0,25 Max	0,30 Max		430/550	240 (16<t<40)		23		
BS1501/151/430A	0,25 Max	0,60/1,40	0,03 Max	0,03 Max	0,10/0,35			0,10 Max	0,30 Max	0,25 Max	0,30 Max			230 (40<t<63)		23		

1. MASS OF A SHEET < 4.5mm

$$\frac{\text{Length} \times \text{Width} \times \text{Thickness} \times 8.039}{1000 \quad 1000}$$

2. MASS OF A PLATE > 4.5mm

$$\frac{\text{Length} \times \text{Width} \times \text{Thickness} \times 7.85}{1000 \quad 1000}$$

3. INSIDE DIAMETER

O.D minus 2 x wall thickness

4. MASS OF ROUND TUBE

O.D minus Wall x Wall x 0.02466

Sample - 50.8 x 2.0 Round

Calculation: $50.8 - 2.0 = 48.8 \times 2 = 97.6 \times 0.02466 = 2.40\text{kg/metre}$

5. To calculate the mass of a square or rectangular tube, first work out the round 'input' size and then the mass of the round tube. Round 'input' size for square or rectangular tube.

$$\frac{\text{Side A} + \text{Side B} \times 2}{3.142}$$

Sample - 50.8 x 25.4 Rectangular

Calculation: $50.8 + 25.4 = 76.2$

$76.2 \times 2 = 152.4$

$$\frac{152.4}{3.142} = 48.5$$

6. Rands per Ton

$$\frac{\text{Price per Unit} \times 1000}{\text{Mass}}$$

7. Round Bar: $D \times D \times 0.00616 = \text{kg/metre}$

8. Hexagonal Bar: $D \times D \times 0.0068 = \text{kg/metre}$

9. Square Bar: $D \times D \times 0.00787$

10. Flat Bar: $D \times T \times 0.00786$

CONVERSION FACTORS

Inches	x	25.4	Millimetres
Millimetres	x	0.03937	Inches
Feet	x	0.3048	Metres
Yards	x	0.9144	Metres
Metres	x	39.37	Inches
Metres	x	3.2808	Feet
Metres	x	1.0936	Yards
Square Centimetres	x	0.1550	Square Inches
Square Inches	x	6.4516	Square Centimetres
Square Metres	x	10.7639	Square Feet
Square Metres	x	1.1960	Square Yards
Square Yards	x	0.8361	Square Metres
Square Feet	x	0.0929	Square Metres
Cubic Centimetres	x	0.0610	Cubic Inches
Cubic Inches	x	16.3871	Cubic Centimetres
Cubic Metres	x	35.3147	Cubic Feet
Cubic Feet	x	0.0283	Cubic Metres
Grams	x	15.432	Grams
Kilograms	x	2.2046	Pounds
Pounds	x	0.45359	Kilograms
Metric Tons (1000 kg)	x	0.9842	Tons
Tons	x	1.016	Metric Tons (1000 kg)

KILOGRAMS PER SQUARE METRE	x	0.248	= POUNDS PER SQUARE FOOT
POUNDS PER SQUARE FOOT	x	4.882	= KILOGRAMS PER SQUARE METRE
GRAMS PER SQUARE METRE	x	0.02949	= OUNCES PER SQUARE YARD
OUNCES PER SQUARE YARD	x	33.9056	= GRAMS PER SQUARE METRE
KILOGRAMS PER SQUARE CENTIMETRE	x	14.223	= POUNDS PER SQUARE INCH
POUNDS PER SQUARE INCH	x	0.0703	= KILOGRAMS PER SQUARE CENTIMETRE
TONS PER SQUARE INCH	x	1.5749	= KILOGRAMS PER SQUARE MILLIMETRE
KILOGRAMS PER CUBIC CENTIMETRE	x	36.1273	POUNDS PER CUBIC INCH
KILOGRAMS PER CUBIC METRE	x	0.06243	POUNDS PER CUBIC FOOT
KILOGRAMS PER CUBIC METRE	x	1.68555	POUNDS PER CUBIC YARD
POUNDS PER CUBIC INCH	x	0.0277	KILOGRAMS PER CUBIC CENTIMETRE
POUNDS PER CUBIC FOOT	x	16.019	KILOGRAMS PER CUBIC METRE
POUNDS PER CUBIC YARD	x	0.5933	KILOGRAMS PER CUBIC METRE

