



“Building the
Relation like **Steel**”



Technical Guide
Version 5.0



Hitting the Target Each time and Every time

Company Profile

Many factors combine to achieve the success of a trading business i.e the right product mix, a broad knowledge of products & their application, good business relationships, logistics & financials expertise, proximity to the customer and last but not the least the appropriate range of support service. At Eckhardt, all these have been combined to create a new dimension.

Formed by a group of young professional Eckhardt is one of the leading Manufacturer, Exporter & Supplier of Stainless Steel, Carbon Steel, Alloy Steel, Nickel Alloys, Aluminum, Copper, Cupro Nickel, Brass, Phosphorus Bronze, Lead, Zinc Monel, Inconel, Hastalloy & other Ferrous and Non Ferrous Metals in form of:

Pipes & Tubes , Line Pipes: in Seamless and Welded in all Grades (IBR & NON IBR), OCTG & Drill Pipes

Buttwelded Pipe Fittings, Socket welded, Screwed Fittings: Such as Elbow, Return Bend, Straight and Reducing Tee, Crosses, Lap Joint Stubend, Reducers, Unions, Caps, Bush, Plug, Nipples, Couplings, Thredolets, Weldolets Elbowlets etc.

Flanges & Forging: Such WNRF, SORF, SOFF, BLRF, SWRF, LAP JOINT, WNRTJ, BLRTJ, SPECTACLE BLIND, SPADE etc.

Tube fittings & Ferrules fittings; Hose Assembly & Hydraulic Fittings

Long Radius Bends : ½"NB TO 32"NB in 5 mm to 50 mm Thk RADIUS 2.5 D / 3 D / 5D / 10 D UPTO 22D For Pig Launching Steam & general Purpose Fittings.

Plate/Sheet/Coils/Round Bars : CromeMoly (SA387 Gr.11/22/91/5) Nickel & Nickel Alloys/ Mild Steel/ Boiler Quality / Corton/ Hardox/ Dillidur 400v / Sailma/ Ship Building with class approval etc.

Copper / Cupro Nickel (CuNi) / Brass/ Bronze/ Admiralty brass Products for Ship Building

Fasteners & Gaskets: Such as nuts, bolts, studs, washers etc.

We are approved suppliers to various Govt. Department & public sector all over the country & abroad regulary supplying to them for a long time. We have got ready stock of the above items in various sizes as per National/International standards and specification and the same shall be supplied as per your requirements at very reasonable rates. We can arrange any third party inspection agency like LRS, DNV, GL, ABS, IRS, IBR, TUV, BVQI, RINA, MECON, TCS, etc.

As we are very much interested to do business with you on a long term basis, we request you to please enlist our name in your approved vendor list and send us your valued purchase inquires from time to time so as to enable us to quote our most competitive rates and terms.

Quality Policy



“We at ECKHARDT STEEL & ALLOYS, Manufacturers, Exporter & Supplier of Ferrous and Non Ferrous metals in the Form of Pipes, Tubes, Pipe Fittings, Flanges, Sheets, Plates & Rods are Committed to Increase our market share by Satisfying Our customers Requirements through offering Products at Best Prices, on timely Delivery and Better Support. We shall Continually Improve in knowing our customer needs and Proactively acting on things required to satisfy the same.”

The quality assurance system assures every product to go through the following Quality systems.

- Material Control System
- Process Control System
- Machining & Dimensional Control
- Certification & Supplementary Test
- Finishing & Marking & Packing

Pipes, Tubes, Line Pipes, OCTG Pipes



Types: Round, Square, Rectangular.
Stainless Steel: ASTM A/SA312/SA213/SA269/SA249/SA358 Grade TP 304/ 304L/ 304H/ 316/ 316L/ 317L/ 321/310/ 347/ 904L / Duplex & Super Duplex etc.
Carbon Steel: ASTM A53 GR. B/ A106 GR. B/ API 5L PSL1/2 GRADE B/ API 5L GR.X42/46/52/56/ 60/65/70/ A333 GR. 3/ GR. 6 etc.
Alloy Steel: ASTM A335 / A213 GR. P1/ P5/ P9/ P11/ P12/ P22/ P91 etc.
Casing : API 5CT, Casing, Tubing, Conductor API 5D / API SPEC.7 & API RP7G, DRILL PIPE
Others: Monel, Nickel, Inconel, Hastalloy, Copper, Brass, Bronze, Titanium, Tantalum, Bismuth, Aluminium, High Speed Steel, Zinc, Lead, etc.
Size: 1/4" NB to 24" NB. (Seamless)& Welded, upto 120"
Wall Thickness: Sch. 5S to Sch. XXS

Butt Weld Fittings



Types: Elbow, Tee, Reducer, Return Bends, Stub-Ends, Cap, Collar, Cross, Insert etc.
Size: 1/4" NB TO 24" NB. (Seamless) & Welded UP to 120" NB
Wall Thickness: Sch. 5S To Sch. XXS, as per client required
Carbon Steel: ASTM A234 WPB / A420 WPL3/ A420 WPL6/ MSS-SP-75, WPHY 42/46/52 /56/60/65/70 NACE NR0175
Stainless Steel: ASTM A403 WP 304/ 304L/ 304H/316/ 316L/ 317/ 317L/ 321/ 310/ 347/ 904L etc.
Alloy Steel: ASTM A234 WP1/ WP5/ WP9/ WP11/ WP22/WP91 etc.
Others: Monel, Nickel, Inconel, Hastalloy, Copper, Brass, Bronze, Titanium, Tantalum, Bismuth, Aluminium, High Speed Steel, Zinc, Lead, etc.

Screwed & Forged Fittings



Types: Elbow, Tee, Union, Cross, Coupling, Cap, Bushing, Plug, Swage Nipple, Welding Boss, Hexagon Nipple, Barrel Nipple, Welding Nipple, Hexagon Nut, Hose Nipple, Bend, Adapter, Insert, Weldolet, Elbowlet, Socketlet, Thredolet, Nipolet, Letrolet, etc.
Size: 1/4" NB TO 4" NB. (Socketweld & Threaded)
Class: 3000#, 6000#, 9000#.
Carbon Steel: ASTM A105 / A694 F42/46/ 52/56/ 60/ 65/70 /A350 LF2.
Stainless Steel: ASTM A182 F304/ 304L/ 304H/ 316/ 316L/ 317/ 317L/ 321/310/ 347/ 904L etc.
Alloy Steel: ASTM A182 F1/ F5/ F9/ F11/ F22/ F91 etc.
Others: Monel, Nickel, Inconel, Hastalloy, Copper, Brass, Bronze, Titanium, Tantalum, Bismuth, Aluminium, High Speed Steel, Zinc, Lead, etc.

Flanges & Forging



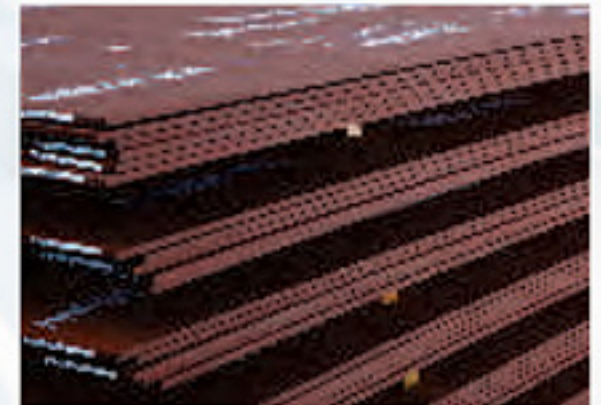
Types: Weldneck, Slipon, Blind, Socket Weld, Lap Joint, Spectacles, Ring Joint, Long Weldneck, Deck Flange etc.
Size: 1/2" NB TO 120" NB.
Class: 150#, 300#, 400#, 600#, 900#, 1500# & 2500# & AWWA Class, Series A & B
Carbon Steel: ASTM A105/A694/F42/46/ 52/56/60/65/70/A350 LF2 etc.
Stainless Steel: ASTM A182 F304/304L/ 304H/ 316/ 316L/ 317/ 317L/ 321/ 310/ 347/ 904L etc.
Alloy Steel: ASTM A182 F1/ F5/ F9/ F11/ F22/ F91 etc.
Others: Monel, Nickel, Inconel, Hastalloy, Copper, Brass, Bronze, Titanium, Tantalum, Bismuth, Aluminium, etc.

Ferrule Fittings & Fasteners



Ferrule Types : Nipples, Adaptors, Crosses, Union Ball Joints, Reducing Bushing, Reducers, Pipe Caps, Couplings, Pipe Plug, Hollow Hex Plug, Elbow, Reducing Union Elbow Etc. Extender, Union Elbow, Union Tee, Female Connector, Male Connector, Manifold Tee, Locator Union, Extended Run Leg Union Tee, Reducing Tee, Tribow, Etc.
Fastener Types: of fastner Bolts, Nuts, Washers, Anchor Fasteners, Stud Bolts, Eye Bolt, Threaded Rod, Cotter Pin, Socket Screw, Fine Fasteners & Spares, Foundation Fasteners, etc.
Carbon Steel : Bare Condition, Galvanized, Phosphetised, Cadium Plated, Hot Deep Galvanized, Bloodied, Nickel Chrome Plated, etc.
Non Ferrous Metal : Copper, Brass, Aluminium, Titanium, Nichrome, Al. Bronze Phosphorous Bronze, etc.
Stainless Steel: AISI 302, 304, 304L, 316, 316L, 310, 317, 317L, 321, 347, 410, 420, 904L etc.
Alloy Steel : 4.6, 5.6, 6.6, 8.8, 10.9 & 12.9 / 'R', 'S', 'T' Conditions.

Sheets, Plates, Coil, Round Bars



Types: Sheet, Plates, Strips, Round Bars, Wires, Channel, Angle, Beam, etc.
Material Grade: Stainless Steel, Nickel Alloys, Carbon Steel, Alloy Steel, Crome Moly (SA387 Gr. 11/22/91) Nickel & Nickel Alloys / Mild Steel / Boiler Quality / Corton / Hardox / Dillidur 400v / Sailma / Ship Building with class approve etc. With IBR Approvals.

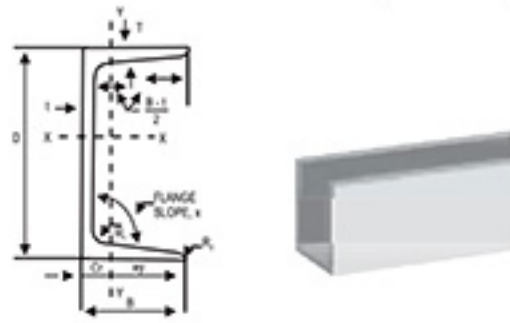
Drawing Based Fittings and Fabrication as per clients requirements All our Products are as per the National & International Standards.

Email : esa@esteel.co.in / sales@eckhardtsteel.com • Website : www.esteel.co.in / www.eckhardtsteel.com

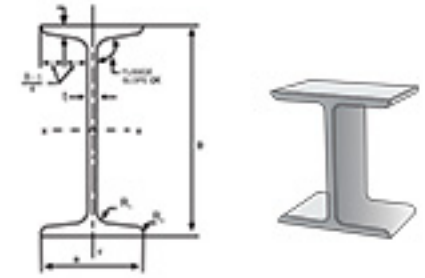
STEEL SECTIONS

DIMENSIONS & WEIGHT FOR STEEL, BEAM, CHANNEL & ANGLE SECTIONS AS PER IS 808:1999

CHANNELS SECTIONS



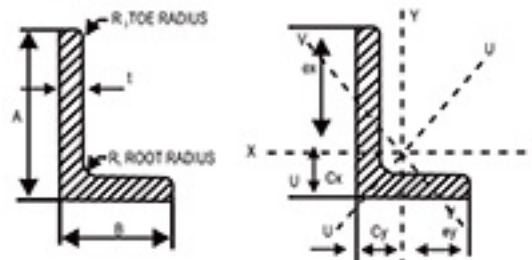
BEAMS SECTIONS



DESIGNATION	SIZE	WEIGHT KG/M
ISMC 75	75 X 40 X 4.8	7.14
ISMC 100	100 X 50 X 5.0	9.56
ISMC 125	125 X 65 X 5.3	13.1
ISMC 150	150 X 75 X 5.7	16.8
ISMC 175	175 X 75 X 6.0	19.6
ISMC 200	200 X 75 X 6.2	22.3
ISMC 225	225 X 80 X 6.5	26.1
ISMC 250	250 X 80 X 7.2	30.6
ISMC 300	300 X 90 X 7.8	36.3
ISMC 350	350 X 100 X 8.3	42.7
ISMC 400	400 X 100 X 8.8	50.1

DESIGNATION	SIZE	WEIGHT KG/M
ISMB 100	100 X 50 X 4.7	8.90
ISMB 125	125 X 70 X 5.0	13.3
ISMB 150	150 X 75 X 5.0	15.0
ISMB 175	175 X 85 X 5.8	19.6
ISMB 200	200 X 100 X 5.7	24.2
ISMB 225	225 X 110 X 6.5	31.1
ISMB 250	250 X 125 X 6.9	37.3
ISMB 300	300 X 140 X 7.7	46.0
ISMB 350	350 X 140 X 8.1	52.4
ISMB 400	400 X 140 X 8.9	61.5
ISMB 450	450 X 150 X 9.4	72.4
ISMB 500	500 X 180 X 10.2	86.9
ISMB 550	550 X 190 X 11.2	104
ISMB 600	600 X 210 X 12.0	123

EQUAL ANGLES

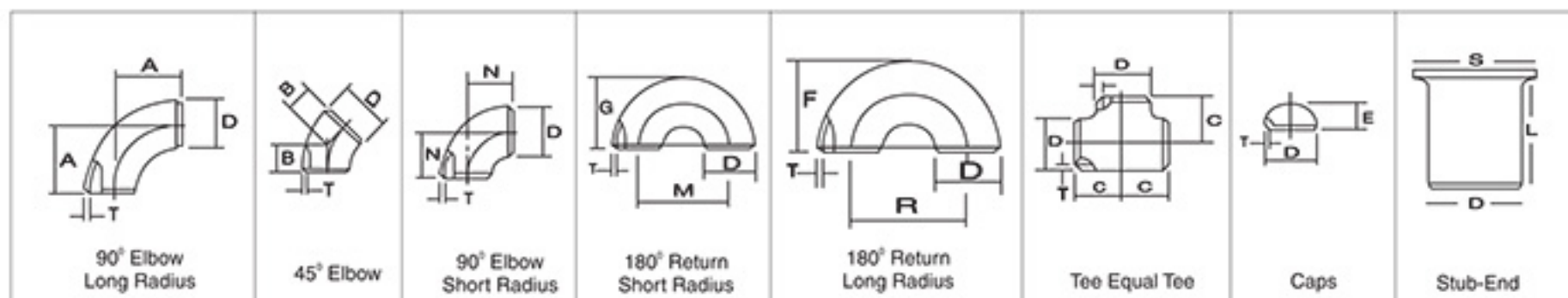


UNEQUAL ANGLES

Size in mm	Weight Kg/M
Angles (equal)	
50 x 50 x 6	4.5
65 X 65 X 6	5.8
65 X 65 X 8	7.7
65 X 65 X 10	9.4
75 X 75 X 6	6.8
75 X 75 X 8	8.9
75 X 75 X 10	11.0
80 X 80 X 6	7.3
80 X 80 X 8	9.6
80 X 80 X 10	11.8
90 X 90 X 6	8.2
90 X 90 X 8	10.8
90 X 90 X 10	13.4
100 X 100 X 8	12.1
100 X 100 X 10	14.9
100 X 100 X 12	17.7
110 X 110 X 10	16.6
110 X 110 X 12	19.7
130 X 130 X 10	19.7
130 X 130 X 12	23.5
150 X 150 X 16	35.8
150 X 150 X 20	44.1
200 X 200 X 16	48.5
200 X 200 X 20	60.0

Sides in	Thickness											
	m	3	4	5	6	8	10	12	15	16	18	20
Equivalent												
20 x 20 mm	0.9	1.1										
25 x 25 mm	1.1	1.4	1.8									
30 x 30 mm	1.4	1.8	2.2									
35 x 35 mm	1.6	2.1	2.6	3.0								
40 x 40 mm	1.8	2.4	3.0	3.5								
45 x 45 mm	2.1	2.7	3.4	4.0								
50 x 50 mm	2.3	3.0	3.8	4.5								
55 x 55 mm		3.3	4.1	4.9	6.4	7.9						
60 x 60 mm		3.70	4.5	5.4	7.0	8.6						
65 x 65 mm		4.0	4.9	5.8	7.7	9.4						
70 x 70 mm			5.3	6.3	8.3	10.2						
75 x 75 mm			5.7	6.8	8.9	11.0						
45 x 30 mm	1.7	2.2	2.8	3.3								
75 x 50 mm			4.7	5.6	7.4	9.0						
90 x 60 mm				6.8	8.9	11.0	13.0					
100 x 75 mm				8.0	10.5	13.0	15.4					
125 x 75 mm				9.2	12.1	14.9						
125 x 95 mm				10.1	13.4	16.5	19.6					
150 x 75 mm					13.7	17.0	20.2					
150 x 115 mm					16.3	20.1	34.0	31.4	31.4			
200 X 100 mm						22.9	27.3		35.8			
200 X 150 mm						26.9	32.1		42.2			52.0

DIMENSIONS OF BUTT-WELDING FITTING ANSI B 16.9 / 16.28 SP-75

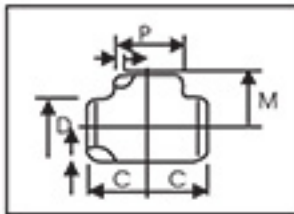


Nominal Pipe Size		Outside Diameter D	Center to Face				Back to Face			Center to Center			Length 'L' MSS SP 43 B16.9	
INCH	MM		A R=1.5D	B	C	N R=1D	E	F	G	R	M	S	Short L	Long L
1/2	15	21.3	38.00	16.0	25.0	-	25.0	48.0	-	76.0		35.0	50.8	76.2
3/4	20	26.7	29.00	11.0	29.50	-	25.0	43.0	-	57.0		43.0	50.8	76.2
1	25	33.4	38.00	22.0	38.0	25.0	38.0	56.0	41.0	76.0	51.0	51.0	50.8	101.6
1.1/4	32	42.2	48.00	25.0	48.0	32.0	38.0	70.0	52.0	95.0	64.0	64.0	50.8	101.6
1.1/2	40	48.3	57.15	29.0	57.0	38.0	38.0	83.0	62.0	114.0	76.0	73.0	50.8	101.6
2	50	60.3	76.00	35.0	64.0	51.0	38.0	106.0	81.0	152.0	102.0	93.0	63.5	152.4
2.1/2	65	73.0	95.25	44.0	76.0	64.0	38.0	132.0	100.0	191.0	127.0	105.0	63.5	152.4
3	80	88.9	114.30	51.0	86.0	76.0	51.0	159.0	121.0	229.0	152.0	127.0	63.5	152.4
3.1/2	90	101.6	133.35	57.0	95.0	89.0	64.0	184.0	140.0	267.0	178.0	140.0	76.2	152.4
4	100	114.3	152.0	63.0	105.0	102.0	64.0	210.0	159.0	305.0	203.0	157.0	76.2	152.4
5	125	141.3	190.0	79.0	123.0	127.0	76.0	262.0	197.0	381.0	254.0	186.0	76.2	203.2
6	150	168.3	229.0	95.0	143.0	152.0	89.0	313.0	237.0	457.0	305.0	216.0	88.9	203.2
8	200	219.1	305.0	127.0	178.0	203.0	102.0	414.0	313.0	610.0	406.0	270.0	101.6	203.2
10	250	273.1	381.0	159.0	216.0	254.0	127.0	515.0	391.0	762.0	508.0	324.0	127.0	254.0
12	300	323.9	457.0	190.0	254.0	303.0	152.0	619.0	467.0	914.0	610.0	381.0	152.4	254.0
14	350	355.6	533.0	222.0	279.0	356.0	165.0	711.0	533.0	1067.0	711.0	413.0	152.4	305.0
16	400	406.4	610.0	254.0	305.0	406.0	178.0	813.0	610.0	1219.0	813.0	470.0	152.4	305.0
18	450	457.2	686.0	286.0	343.0	457.0	203.0	914.0	686.0	1372.0	914.0	533.0	152.4	305.0
20	500	508.0	762.0	318.0	381.0	508.0	229.0	1016.0	762.0	1524.0	1016.0	584.0	152.4	305.0
22	550	559.0	838.0	343.0	419.0	559.0	254.0	1118.0	838.0	1676.0	1118.0	614.4	152.4	305.0
24	600	610.0	914.0	381.0	432.0	610.0	267.0	1219.0	914.0	1829.0	1219.0	692.0	152.4	305.0
26	650	660.0	991.0	406.0	495.0	660.0	267.0							
28	700	711.0	1067.0	438.0	521.0	771.0	267.0							
30	750	762.0	1143.0	470.0	589.0	762.0	267.0							
32	800	813.0	1219.0	502.0	597.0	813.0	267.0							
34	850	864.0	1295.0	533.0	635.0	864.0	267.0							
36	900	914.0	1372.0	565.0	673.0	914.0	267.0							

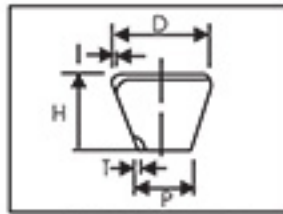


All Dimensions in Millimeters

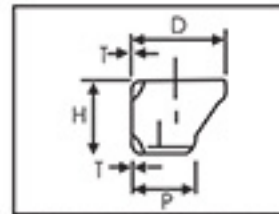
DIMENSIONS OF BUTT-WELDING FITTING ANSI B 16.9 / 16.28 SP-75



REDUCING TEES



CONCENTRIC REDUCERS



ECCENTRIC REDUCERS

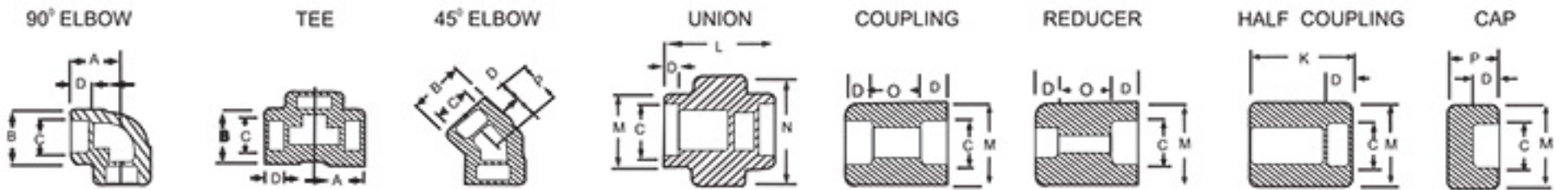


Nominal Pipe Size		Outside Diameter		Center to End		Length
Inch	mm	D	P	C	M	H
1/2 x 3/8	15 x 10	21.3	17.1	25	25	-
1/2 x 1/4	15 x 8	21.3	13.7	25	25	-
3/4 x 1/2	20 x 15	33.4	21.3	29	29	38
3/4 x 3/8	20 x 10	33.4	17.1	29	29	38
1 x 3/4	25 x 20	26.7	26.7	38	38	51
1 x 1/2	25 x 15	26.7	21.3	38	38	51
1 1/4 x 1	32 x 25	42.2	33.4	48	48	51
1 1/4 x 3/4	32 x 20	42.2	26.7	48	48	51
1 1/4 x 1/2	32 x 15	42.2	21.3	48	48	51
1 1/2 x 1 1/4	40 x 32	48.3	42.2	57	57	64
1 1/2 x 1	40 x 25	48.3	33.4	57	57	64
1 1/2 x 3/4	40 x 20	48.3	26.7	57	57	64
1 1/2 x 1/2	40 x 15	48.3	21.3	57	57	64
2 x 1 1/2	50 x 40	60.3	48.2	64	60	76
2 x 1 1/4	50 x 32	60.3	42.2	64	57	76
2 x 1	50 x 25	60.3	33.4	64	51	76
2 x 3/4	50 x 20	60.3	26.7	64	44	76
2 1/2 x 2	65 x 50	73.0	60.3	76	70	89
2 1/2 x 1 1/2	65 x 40	73.0	48.2	76	67	89
2 1/2 x 1 1/4	65 x 32	73.0	42.2	76	64	89
2 1/2 x 1	65 x 25	73.0	33.4	76	57	89
3 x 2 1/2	80 x 65	88.9	73.0	86	83	89
3 x 2	80 x 50	88.9	60.3	86	76	89
3 x 1 1/2	80 x 40	88.9	48.3	86	73	89
3 x 1 1/4	80 x 32	88.9	42.2	86	70	89
4 x 3 1/2	100 x 90	114.3	101.6	105	102	102
4 x 3	100 x 80	114.3	88.9	105	98	102
4 x 2 1/2	100 x 65	114.3	73.0	105	95	102
4 x 2	100 x 50	114.3	60.3	105	89	102
4 x 1 1/2	100 x 40	114.3	48.3	105	86	102
5 x 4	125 x 100	141.3	114.3	124	117	127
5 x 3 1/2	125 x 90	141.3	101.6	124	114	127
5 x 3	125 x 80	141.3	88.9	124	111	127
5 x 2 1/2	125 x 65	141.3	73.0	124	108	127
5 x 2	125 x 50	141.3	60.3	124	105	127
6 x 5	150 x 125	168.3	141.3	143	137	140
6 x 4	150 x 100	168.3	114.3	143	130	140
6 x 3 1/2	150 x 90	168.3	101.6	143	127	140
6 x 3	150 x 80	168.3	88.9	143	124	140
6 x 2 1/2	150 x 65	168.3	73.0	143	121	140

Nominal Pipe Size		Outside Diameter		Center to End		Length
Inch	mm	D	P	C	M	H
8 x 6	200 x 150	219.1	168.3	178	168	152
8 x 5	200 x 125	219.1	141.3	178	162	152
8 x 4	200 x 100	219.1	114.3	178	156	152
8 x 3 1/2	200 x 90	219.1	101.6	178	152	152
10 x 8	250 x 200	273.1	219.1	216	203	178
10 x 6	250 x 150	273.1	168.1	216	194	178
10 x 5	250 x 125	273.1	141.3	216	191	178
10 x 4	250 x 100	273.1	114.3	216	184	178
12 x 10	300 x 250	323.9	273.1	254	241	203
12 x 8	300 x 200	323.9	219.1	254	229	203
12 x 6	300 x 150	323.9	168.3	254	219	203
12 x 5	300 x 125	323.9	141.3	254	216	203
14 x 12	350 x 300	355.6	323.9	279	270	330
14 x 10	350 x 250	355.6	273.1	279	257	330
14 x 8	350 x 200	355.6	219.1	279	248	330
14 x 6	350 x 150	355.6	168.3	279	238	330
16 x 14	400 x 350	406.4	355.6	305	305	356
16 x 12	400 x 300	406.4	323.9	305	295	356
16 x 10	400 x 250	406.4	273.1	305	283	356
16 x 8	400 x 200	406.4	219.1	305	273	356
16 x 6	400 x 150	406.4	168.3	305	264	-
18 x 16	450 x 400	457.0	406.4	343	330	381
18 x 14	450 x 350	457.0	355.6	343	330	381
18 x 12	450 x 300	457.0	323.9	343	321	381
18 x 10	450 x 250	457.0	273.1	343	308	381
18 x 8	450 x 200	457.0	219.1	343	298	-
20 x 18	500 x 450	508.0	457.0	381	368	508
20 x 16	500 x 400	508.0	406.4	381	356	508
20 x 14	500 x 350	508.0	355.6	381	356	508
20 x 12	500 x 300	508.0	323.9	381	346	508
20 x 10	500 x 250	508.0	273.1	381	333	-
20 x 8	500 x 200	508.0	219.1	381	324	-
24 x 22	600 x 550	610.0	559.0	432	432	508
24 x 20	600 x 500	610.0	508.0	432	432	508
24 x 18	600 x 450	610.0	457.0	432	419	508
24 x 16	600 x 400	610.0	406.4	432	406	508
24 x 14	600 x 350	610.0	355.6	432	406	-
24 x 12	600 x 300	610.0	323.9	432	397	-
24 x 10	600 x 250	610.0	273.1	432	384	-

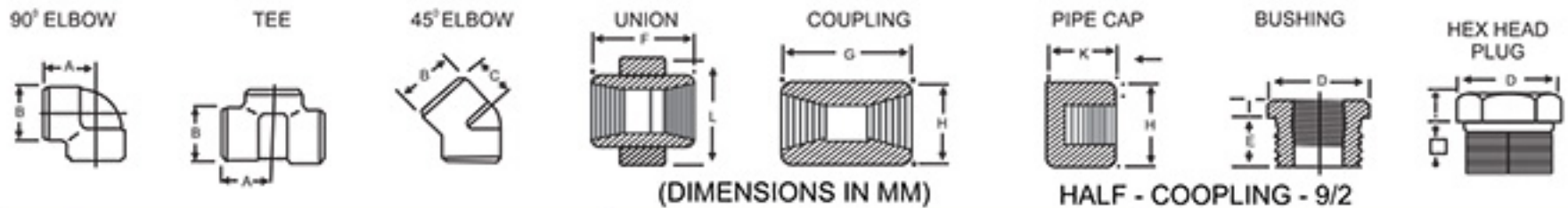
All Dimensions in Millimeters

FORGED SOCKET WELD FITTING TO ANSI B-16.11 3000/6000 LBS.



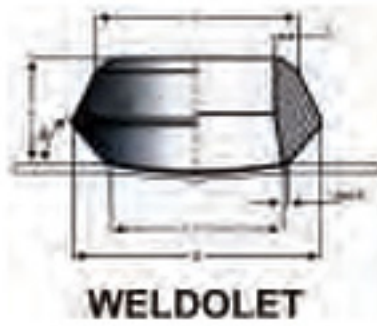
NOM BORE	PIPE O.D.	3000 LBS.									COMMON FACTORS				6000 LBS.				
		A max.	B max.	K	J	L	M	N	P	Q	C min.	D min.	O min.	O max.	A	B	M	K	N
1/8"	10.3	22	18.5	26	16	40	17.3	32	17.5	10	10.7	10	5	8	22	22	20	25	46
1/4"	13.7	22	22	26	18	43	21.2	32	17.5	10	14.1	10	5	8	27	25	24	25	51
3/8"	17.2	25	25	26	19	48	25.4	36	19	10	17.6	10	3	9	27	28	28	26	60
1/2"	21.3	27	32	30	21	51	31	43	22	10	21.7	10	6	13	31	34	34	31	72
3/4"	26.7	34	38	36	24	57	37	50	25	13	27	13	6	13	37	42	41	35	80
1"	33.4	37	46	40	25	64	45.2	60	27	13	33.8	13	9	17	42	50	50	40	94
1 1/4"	42.2	42	56	40	29	70	55	70	30	13	42.6	13	9	17	47	59	58	41	100
1 1/2"	48.3	47	62	40	30	79	61.4	78	32	13	48.7	13	9	17	53	67	66	43	122
2"	60.3	56	75	52	37	89	75	95	38	13	61.2	16	15	23	59	84	83	55	
2 1/2"	73.02	60	92	52	48	114	91.3	125	38	16	73.8	16	14	24		102		56	
3"	89.00	76	110	52	51	127	108.8	140	44	16	89.8	16	14	24		121		58	
4"	114.50	88	137	58		150	136.9		48	19	115.5	19	14	24		152		64	

FORGED SCREWED FITTING TO ANSI B-16.11 3000/6000 LBS. THREADED TO ASA B 2.1



NOM BORE	PIPE O.D.	3000 LBS							COMMON FACTORS						6000 LBS					
		A	B	C	G	H	K	D	E	F	I	J	L	A	B	C	G	H	K	
1/8"	10.3	21	22	17	32	16	19	11	10	40	-	6	-	25	25	19	32	22	-	
1/4"	13.7	25	25	19	35	19	25	16	11	43	3	6	32	29	33	22	35	25	27	
3/8"	17.2	29	33	22	38	22	25	17.5	13	48	4	8	38	33	38	25	38	32	27	
1/2"	21.3	33	38	25	48	29	32	22	15	51	5	8	46	38	46	29	48	38	33	
3/4"	26.7	38	46	29	51	35	37	27	16	57	6	10	51	44	56	33	51	44	38	
1"	33.4	44	56	33	60	44	41	35	19	64	6	10	60	51	62	35	60	57	43	
1 1/4"	42.2	51	62	35	67	57	44	44.5	21	70	7	14	72	60	75	43	67	64	46	
1 1/2"	48.3	60	75	43	79	64	44	51	21	79	8	16	80	64	84	44	79	76	48	
2"	60.3	64	84	45	86	76	48	63.5	22	88	9	17	94	83	102	52	86	92	51	
2 1/2"	73.02	83	102	52	92	92	60	76	27	118	10	21	122	95	121	64	92	108	64	
3"	89.0	95	121	64	108	108	65	89	29	121	10	65	140	106	146	79	108	127	68	
4"	114.5	114	152	79	121	140	68	117.5	32	150	13	25	180	114	152	79	121	159	75	

DIMENSIONS AND OTHERS SPECIFICATIONS AS PER CUSTOMERS REQUIREMENTS ARE AVAILABLE ON REQUEST



(In mm)

WELDOLET

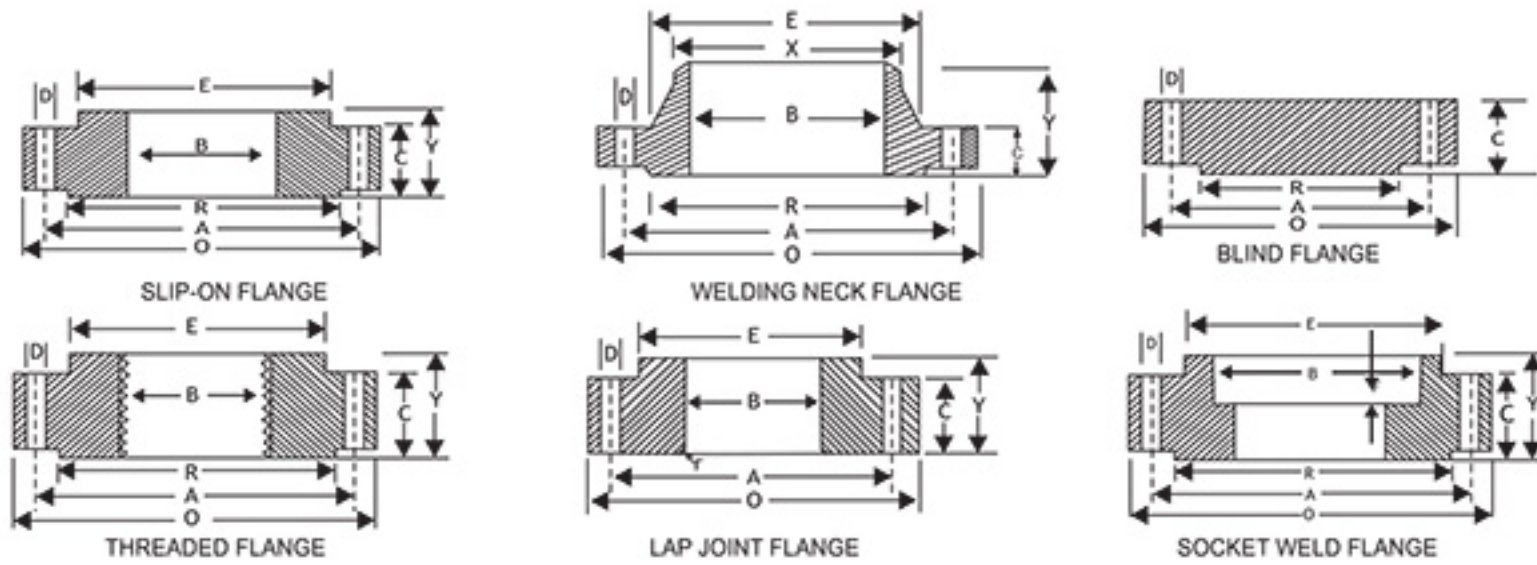
OUTLET NOMINAL SIZE	A	C			L			D			Weight Kg		
		S40 STD	S80 XS	XXS S160	S40 STD	S80 XS	XXS S160	S40 STD	S80 XS	XXS S160	S40 STD	S80 XS	XXS S160
1/2	21.3	23.8	23.8	14.3	19.1	19.1	28.6	34.9	34.7	34.9	0.08	0.09	0.11
3/4	26.7	30.2	30.2	19.1	22.2	22.2	31.8	44.5	44.5	44.5	0.11	0.14	0.32
1	33.5	36.5	36.5	25.4	27.0	27.0	38.1	54.0	54.0	50.8	0.23	0.21	0.38
1 1/4	42.2	44.5	44.5	33.3	31.8	31.8	44.5	65.1	65.1	61.9	0.36	0.41	0.57
1 1/2	48.3	50.8	50.8	38.1	33.3	33.3	50.8	73.0	73.0	69.9	0.45	0.50	0.79
2	60.5	65.1	65.1	42.9	38.1	38.1	55.6	88.9	88.9	81.0	0.79	0.79	0.97
2 1/2	73.2	76.2	76.2	54.0	41.3	41.3	61.9	103.2	103.2	96.8	1.13	1.18	1.53
3	88.9	93.7	93.7	73.0	44.5	44.5	73.0	122.2	122.2	120.7	1.81	1.86	2.87
3 1/2	101.6	101.6	101.6		47.0	47.6		142.9	136.5		2.49	2.54	
4	114.3	120.7	120.7	98.4	50.8	50.8	84.1	152.4	152.4	152.4	2.86	2.90	4.76
5	141.2	141.3	141.3	122.2	57.2	57.2	93.7	179.4	179.4	187.3	4.65	4.72	6.46
6	168.3	169.9	169.9	146.1	60.3	77.8	104.8	215.9	225.4	220.7	5.44	10.43	12.70

SOCKOLET

OUTLET SIZE	A	B	Class 3000 #						Class 6000 #					
			C	D	E	F	L	(kg) W.T.	C	D	E	F	L	(kg) W.T.
1/2"	33	21.7-22	21.1±0.5	15.0-16.6	23.8	34.9	25.4	0.14	13.5 ± 0.5	11.0 -12.6	10.1	44.5	31.8	0.23
3/4"	39	27.1-27.3	13.5±0.5	20.2-21.7	30.2	44.5	27	0.15	15.5 ± 0.5	14.8-16.3	25.4	50.8	36.5	0.36
1"	47.3	33.8-34	15.2±0.8	25.9-27.4	34.5	54	33.3	0.27	17.0±0.8	19.9-21.5	33.3	61.9	39.7	0.39
1 1/4"	57	42.5-42.8	17.4±0.8	34.3-35.8	44.5	65.1	33.3	0.39	19.0±0.8	28.7-30.2	38.1	69.9	41.3	0.73
1 1/2"	63.4	48.6-48.9	18.8±0.8	40.1-41.7	60.8	73	34.9	0.47	21.0±0.8	33.2-34.7	49.2	82.6	42.9	0.91
2"	77	61.1-61.4	21.8±0.8	51.7-53.3	65.1	88.9	38.1	0.73	23.0±0.8	42.1-43.6	69.9	103.2	52.4	2.33
2 1/2"	96.6	73.8-74.2	25.8±1.5	61.2-64.2	76.2	103.2	39.7	1.25						
3"	114	89.8-90.2	29.1±1.5	76.4-79.5	93.7	122.2	44.5	1.72						
3 1/2"	127	102.6-103.0	29.1±1.5	88.7-91.7	101.6	133.4	54	1.95						
4"	138.9	115.4-115.8	35.4±1.5	100.7-103.7	120.7	152.4	47.6	3.29						

THREADLOT

OUTLET SIZE	A	B	Class 3000 #				Class 6000 #					
			E	F	L	(kg) Weight	A	B	E	F	L	(kg) Weight
1/2"	33	NPT 1/2"	23.8	34.9	25.4	0.11	43	NPT 1/2"	19.1	44.5	31.8	0.2
3/4"	39	NPT 3/4"	30.2	44.5	27	0.16	49	NPT 3/4"	25.4	50.8	36.5	0.34
1"	47.3	NPT 1"	36.5	54	33.3	0.28	59	NPT 1"	33.3	61.9	39.7	0.56
1 1/4"	57	NPT 1 1/4"	44.5	65.1	33.3	0.41	69	NPT 1 1/4"	38.1	69.9	41.3	0.71
1 1/2"	63.4	NPT 1 1/2"	50.8	73	34.9	0.45	77	NPT 1 1/2"	49.2	82.6	42.9	0.89
2"	77	NPT 2"	65.1	88.9	38.1	0.79	91	NPT 2"	69.9	103.2	52.4	2.3
2 1/2"	96.6	NPT 2 1/2"	76.2	103.2	46	1.36		-				
3"	114	NPT 3"	93.7	122.2	50.8	1.97		-				
3 1/2"	122.2	NPT 3 1/2"	101.6	133.4	54	2.61		-				
4"	138.9	NPT 4"	120.7	152.4	57.2	3.22		-				



DIMENSIONS OF CLASS 900 FLANGES AS PER B 16.5														
Nominal Pipe Size	Flange Dia O	Dia of Bolt Circle A	Dia of Bolt Holes D	No. Of Holes	Thk of Flange C	Dia of Hub E	Length through Hub			Dia Bore		Dia of R/F R	Depth of Socket F	Pipe Dia X
							S/O & S/W Y	W/N Y	LJ Y	S/O & S/W B	LJ B			
15	120.6	82.5	22.2	4	22.2	38.1	31.7	60.3	31.7	22.3	22.8	34.9	9.5	21.33
20	130.2	88.9	22.2	4	25.4	44.4	34.9	69.8	35.0	27.7	28.1	42.9	11.1	26.67
25	149.2	101.6	25.4	4	28.6	52.4	41.3	73.0	41.1	34.5	35.0	50.8	12.7	33.40
32	158.7	111.1	25.4	4	28.6	63.5	41.3	73.0	41.1	43.2	43.6	63.5	14.2	42.16
40	177.8	123.8	28.6	4	31.8	69.8	44.4	82.5	44.4	49.5	50.0	73.0	15.8	48.26
50	215.9	165.1	25.4	8	38.1	104.8	57.1	101.6	57.1	62.0	62.4	92.1	17.4	60.31
65	244.5	190.5	28.6	8	41.3	123.8	63.5	104.8	63.5	74.7	75.4	104.8	19.0	73.02
80	241.3	190.5	25.4	8	38.1	127.0	53.9	101.6	53.8	90.7	91.4	127.0	-	88.90
100	292.1	234.9	31.7	8	44.4	158.7	69.8	114.3	69.8	116.0	116.8	157.1	-	114.30
125	349.2	279.4	35.0	8	50.8	190.5	79.3	127.0	79.2	143.7	114.5	185.7	-	141.30
150	381.0	317.5	31.7	12	55.6	234.9	85.8	139.7	85.8	170.6	171.4	215.9	-	168.27
200	469.9	393.7	38.1	12	63.5	298.4	101.6	162.0	114.3	221.4	222.2	269.8	-	219.07
250	546.1	469.9	38.1	16	69.8	368.3	107.9	184.1	127.0	276.3	277.3	323.8	-	273.05
300	609.6	533.4	38.1	20	79.3	419.1	117.4	200.0	142.7	327.1	328.1	381.0	-	323.85

DIMENSIONS OF CLASS 1500 FLANGES AS PER B16.5														
Nominal Pipe Size	Flange Dia O	Dia of Bolt Circle A	Dia of Bolt Holes D	No. Of Holes	Thk of Flange C	Dia of Hub E	Length through Hub			Dia Bore		Dia of R/F R	Depth of Socket F	Pipe Dia X
							S/O & S/W Y	W/N Y	LJ Y	S/O & S/W B	LJ B			
15	120.6	82.5	22.2	4	22.2	38.1	31.7	60.3	31.7	22.3	22.8	34.9	9.5	21.33
20	130.2	88.9	22.2	4	25.4	44.4	34.9	69.8	34.9	27.7	28.1	42.9	11.1	26.67
25	149.2	101.6	25.4	4	28.6	52.4	41.3	73.0	41.3	34.5	35.0	50.8	12.7	33.40
32	158.7	111.1	25.4	4	28.6	63.5	41.3	73.0	41.3	43.2	43.6	63.5	14.2	42.16
40	177.8	123.8	28.6	4	31.8	69.8	44.4	82.5	44.4	49.5	50.0	73.0	15.8	48.26
50	215.9	165.1	25.4	8	38.1	104.8	57.1	101.6	57.1	62.0	62.0	92.1	17.4	60.31
65	244.5	190.5	28.6	8	41.3	123.8	63.5	104.8	63.5	74.7	75.4	104.8	19.0	73.02
80	266.7	203.2	31.7	8	47.6	133.3	73.0	117.5	73.0	90.7	91.4	127.0	-	88.90
100	311.1	241.3	34.9	8	54.0	161.9	90.5	123.0	90.4	116.1	116.8	157.2	-	114.30
125	374.6	292.1	41.3	8	73.0	196.8	104.8	155.6	104.8	143.8	144.5	185.7	-	141.30
150	393.7	317.5	38.1	12	82.6	228.6	119.1	171.4	119.1	170.7	171.4	215.9	-	168.27
200	482.6	393.7	44.4	12	92.1	292.1	142.9	212.7	142.8	221.5	222.2	269.9	-	219.07
250	584.2	482.6	50.8	12	107.9	368.3	158.7	254.0	177.8	276.3	277.3	323.8	-	273.05
300	673.1	571.5	54.0	16	123.8	450.8	181.0	282.6	218.9	327.1	328.1	381.0	-	323.85

DIMENSIONS OF CLASS 2500 FLANGES AS PER B16.5														
Nominal Pipe Size	Flange Dia O	Dia of Bolt Circle A	Dia of Bolt Holes D	No. Of Holes	Thk of Flange C	Dia of Hub E	Length through Hub			Dia Bore		Dia of R/F R	Depth of Socket F	Pipe Dia X
							S/O & S/W Y	W/N Y	LJ Y	S/O & S/W B	LJ B			
15	133.3	88.9	22.2	4	30.2	42.9	39.7	73.0	39.7	22.3	22.3	34.9	-	21.33
20	139.7	95.2	22.2	4	31.7	50.8	42.9	79.4	42.9	27.7	27.7	42.9	-	26.67
25	158.7	107.9	25.4	4	34.9	57.1	47.7	88.9	47.7	34.5	34.5	50.8	-	33.40
32	184.1	130.2	28.6	4	38.1	73.0	52.4	95.2	52.4	43.2	43.2	63.5	-	42.16
40	203.2	146.0	31.7	4	44.4	79.4	60.3	111.1	60.3	49.5	49.5	73.0	-	48.26
50	234.9	171.4	28.6	8	50.8	95.2	69.8	127.0	69.8	62.4	62.0	92.1	-	60.31
65	266.7	196.8	31.7	8	57.1	114.3	79.4	142.9	79.4	74.7	74.7	104.8	-	73.02
80	304.8	228.6	34.9	8	66.7	133.3	92.1	168.3	92.1	90.7	90.7	127.0	-	88.90
100	355.6	273.0	41.3	8	76.2	165.1	107.9	190.5	107.9	116.1	116.1	157.2	-	114.30
125	419.1	323.8	47.6	8	92.1	203.2	130.0	228.6	130.0	143.8	143.8	185.7	-	141.30
150	482.6	368.3	54.0	8	107.9	234.9	152.4	273.0	152.4	170.7	170.7	215.9	-	168.27
200	552.4	438.1	54.0	12	127.0	304.8	177.8	317.5	177.8	221.5	221.5	269.9	-	219.07
250	673.1	539.7	66.7	12	165.1	374.6	228.6	419.1	228.6	276.3	276.3	323.8	-	273.05
300	762.0	619.1	73.0	12	184.1	441.3	254.0	463.5	254.0	327.1	327.1	381.0	-	323.85

FORMULAE OF CALCULATING WEIGHT

- WEIGHT OF STAINLESS STEEL / CARBON STEEL PIPES & TUBES
OD (mm) - W.T. (mm) X W.T. (mm) X 0.02466 = KG/MTR
- WEIGHT OF COPPER PIPES & TUBES
O.D. (mm) - W.T. (mm) X W.T. (mm) X 0.0285 = KG/MTR
- WEIGHT OF ALUMINIUM PIPES & TUBES
O.D. (mm) - W.T. (mm) X W.T. (mm) X 0.0082 = KG/MTR
- WEIGHT OF LEAD PIPES & TUBES
O.D. (mm) - W.T. (mm) X W.T. (mm) X 0.0345 = KG/MTR
- SHEET WIDTH REQD FOR ROLLED & WELDED PIPES
O.D. (mm) - Thk. (mm) X 3.14 = SHEET WIDTH (mm)
- WEIGHT FOR SQUARE / RECTANGLE PIPES
Length From 4 Angle (OD)/3.14-Thk. (mm) x Thk. (mm) x 0.00756 = KG/ PER FEET
- WEIGHT OF STAINLESS STEEL CIRCLE & BLANKS
O.D. (mm) X O.D (mm) X Thk (mm) /160/1000 = KG/PCS.
- WEIGHT OF STAINLESS STEEL SHEETS & PLATES
Length (mtr) x Width (mtr) X Thk. (mm) X 8 = KG/SHEET
- WEIGHT OF CARBON STEEL SHEETS & PLATES
Length (mtr) x Width (mtr) X Thk. (mm) X 7.85 = KG/SHEET
- WEIGHT OF ALUMINIUM SHEETS & PLATES
Length (mtr) X Width (mtr) X Thk. (mm) X 2.66 = KG/SHEET
- WEIGHT OF LEAD SHEETS & PLATES
Length (mtr.) X Width (mtr.) X Thk (mm) X 11.2 = KG/SHEET
- WEIGHT OF STAINLESS STEEL ROUNDS / ROUND BAR
Dia. (mm) X Dia. (mm) X 0.00623 = KG/MTR
- WEIGHT OF STAINLESS STEEL HEXAGONAL RODS
Dia. (mm) X Dia. (mm) X 0.00679 = KG/MTR
- WEIGHT OF STAINLESS STEEL SQUARE RODS
Dia. (mm) X Dia. (mm) X 0.00787 = KG/MTR



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