Shree Chandraji
Metal Corporation

FERROUS & NON FERROUS METALS

G-1, Manicon Complex, Main Road, Below Union Bank,
B/H. Udhna Bus 349210, Chena Ramji
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Shree Chandraji
Metal Corporation

MFRS., IMPORTER, EXPORTERS & STOCKISTS OF :

- PIPES & TUBES
- SHEET, PLATE, COILS & RODS
- FLANGES
- FASTENERS
- BUTWELD FITTINGS
- FORGED FITTINGS
- TUBE FITTINGS
- VALVES

Company Profile

Company Profile

We are a reliable & an established name in the Mumbai Steel Market, for our range of products are stock.

We have a large amount of ready stock available in M.S., Stainless Steel & C.S. Pipes, Plates, Sheets, Rods, Bars, Strips, Angles, Channel, Beam, Wires, Coil, Nut Bolts etc.

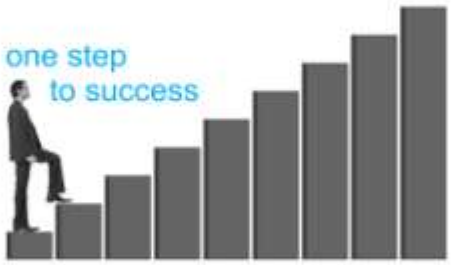
The advantage of Dealing with us lies in our sheet range of products in various grades & sizes, ready availability, excellent quality & most importantly 'price'.

All our materials shall carry test certificates, except those of Non-Ferrous Metals and the testing shall be done in Govt. Approved laboratory. We can also supply under Third Party Inspections.

Now we are regularly supplying the materials to various clients across industries like Refineries, Petrochemicals, Chemical, Pharmaceutical, Sugar, Nuclear, Thermal Pipe Plants, Engineering, Paper.

So, Keeping in mind our vast experience and expertise on the supply line, we plead that we should be given a chance to work with your esteemed organization to enable us to prove ourselves up and become your most trustworthy supplier.

We are able to supply above materials along with **Modvat Invoice so that you can avail Modwat Benefit**



Pipes & Tubes

Pipes & Tubes

Stainless Steel: ASTMA312,A213,A249,A269,A358,A240

Type: 202, 304, 304L, 304H, 316, 316L, 316Ti, 321, 321H, 317, 317L, 310, 310S, 409, 410, 420, 430 etc.

Carbon Steel: ASTM A 106, A 53, API A 5L Gr A, B, C, ASTM A 333, Gr 1 to 6 (IBR & NON IBR)

Alloy Steel: ASTM A 335, GR P1, P2, P5, P9, P11, P22, P91

Nickel Alloys: Hastalloy, 904, Titanium etc.

Copper Alloys: Aluminium, Copper, Brass & Gunmetal

Types : Round, Square Rectangular.

Size:

Seamless: Upto24"NB

Welded: 1/2" NB to 60" NB

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ANSI B 36.19 Stainless Steel Pipe Dimension in MM & Weight Per Kg.

Nominal Pipe size		Outside Diameter	Schedule 5 S		Schedule 10 S		Schedule 20 S		Schedule 40 S		Schedule 80 S		Schedule 160 S		XXS	
mm	inch	mm	Wt. mm	WEIGHT(KG/M)	WT. mm	WEIGHT(KG/M)	WT. mm	WEIGHT(KG/M)	WT. mm	WEIGHT(KG/M)	WT. mm	WEIGHT(KG/M)	WT. mm	WEIGHT(KG/M)	WT. mm	WEIGHT(KG/M)
3	1/8	10.3	1.2	0.26	1.24	0.28	1.5	0.33	1.73	0.37	2.41	0.47	-	-	-	-
6	1/4	13.7	1.2	0.37	1.65	0.49	2.00	0.58	2.24	0.630	3.02	0.80	-	-	-	-
10	3/8	17.1	1.2	0.47	1.65	0.63	2.00	0.74	2.31	0.840	3.20	1.10	-	-	-	-
15	1/2	21.3	1.65	0.80	2.11	1.00	2.30	1.07	2.77	1.27	3.73	1.62	4.78	1.94	7.47	2.55
20	3/4	26.7	1.65	1.02	2.11	1.28	2.55	1.52	2.87	1.69	3.91	2.20	5.56	2.90	7.82	3.64
25	1	33.4	1.65	1.30	2.77	2.09	2.55	1.94	3.38	2.50	4.55	3.24	6.35	4.24	9.09	5.45
32	1 1/4	42.2	1.65	1.65	2.77	2.70	3.00	2.90	3.56	3.39	4.85	4.47	6.35	5.61	9.70	7.77
40	1 1/2	48.3	1.65	1.90	2.77	3.11	3.00	3.35	3.68	4.05	5.08	5.41	7.14	7.25	10.15	9.55
50	2	60.3	1.65	2.39	2.77	3.93	3.00	4.24	3.91	5.44	5.54	7.48	8.74	11.11	11.07	13.44
65	2 1/2	73.0	2.11	3.69	3.05	5.26	4.00	6.81	5.16	8.63	7.01	11.41	9.53	14.91	14.02	20.39
80	3	88.9	2.11	4.51	3.05	6.45	4.00	8.37	5.49	11.29	7.62	15.27	11.1	21.30	15.24	27.68
100	4	114.3	2.11	5.84	3.05	8.36	4.50	12.18	6.02	16.07	8.56	22.32	13.49	33.54	17.12	41.03
125	5	141.3	2.77	9.47	3.40	11.57	5.00	16.80	6.55	21.8	9.53	30.97	15.88	49.11	19.05	57.43
150	6	168.3	2.77	11.32	3.40	13.82	6.35	25.36	7.11	28.26	10.97	42.56	18.25	67.53	21.95	79.22
200	8	219.1	2.77	14.78	3.76	19.96	6.35	33.31	8.18	42.55	12.7	64.64	23.01	111.27	22.23	107.92
250	10	273.1	3.40	22.61	4.19	27.78	6.35	41.77	9.27	60.31	12.7	81.55	28.58	172.33	25.40	155.15
300	12	323.8	3.96	31.24	4.57	36.00	6.35	49.7	9.53	73.85	12.7	97.43	33.32	238.68	25.40	186.90
350	14	355.6	3.96	34.34	4.78	41.3	7.92	67.90	11.13	94.54						
400	16	406.4	4.19	41.56	4.78	47.34	7.92	77.82	12.7	123.30						
450	18	457.2	4.19	46.81	4.78	53.32	7.92	87.74	14.27	155.86						
500	20	508.0	4.78	59.31	5.54	68.64	9.53	117.14	15.09	183.42						
600	24	610.0	5.54	82.57	6.35	94.52	9.53	141.11	17.48	255.41						

ASTM A 312 TP 304

ASTM A 312 TP 316L

ASTM A 312 TP 317L

Formula - Pipe Weight Kg / Mtr OD - Thick x Thick x 0.02466 = Kg Per Mtr.

Chemical Composition & Mechanical Properties of S.S. Pipe as per ASTM A 312

Chemical Composition %										Mechanical Properties, min						
												Elongation %(G.L.: 2in or 1mm)			Hardness Test Max	
Grade	C Max	Si Max	Mn Max	P Max	S Max	Ni	Cr	Mo	Other	Tensile Strength min. Ksi (Mpa)	Yeld Point Ksi (Mpa)	Full Section	Strip Specimen	Round Specimen	Brinell	Rockwell
304	0.08	1.00	2.00	0.045	0.030	8.00-11.0	18.0-20.0	-	-	75(515)	30(205)	35	35 56T + 17.50	28	192	B 90
304L	0.035	1.00	2.00	0.045	0.030	8.00-13.0	18.0-20.0	-	-	70(485)	25(170)	35	35 56T + 17.50	28	192	B 90
304H	0.04-0.10	1.00	2.00	0.045	0.030	8.00-11.0	18.0-20.0	-	-	75(515)	30(205)	35	35 56T + 17.50	28	192	B 90
316	0.08	1.00	2.00	0.045	0.030	11.0-14.0	16.0-18.0	2.0/3.0	-	75(515)	30(205)	35	35 56T + 17.50	28	192	B 90
316L	0.035	1.00	2.00	0.045	0.030	10.0-14.0	16.0-18.0	2.0/3.0	-	70(485)	25(170)	35	35 56T + 17.50	28	192	B 90
316H	0.04-0.10	1.00	2.00	0.045	0.030	11.0-14.0	16.0-18.0	2.0/3.0	-	75(515)	30(205)	35	35 56T + 17.50	28	192	B 90
316TI	0.08	0.75	2.00	0.045	0.030	10.0-12.0	16.0-18.0	2.0/3.0	Ti5xC% <0.70	75(515)	30(205)	35	35 56T + 17.50	28	192	B 90
317L	0.035	1.00	2.00	0.045	0.030	11.0-15.0	18.0-20.0	3.0/4.0	-	75(515)	30(205)	35	35 56T + 17.50	28	192	B 90
309S	0.08	1.00	2.00	0.045	0.030	12.0-15.0	22.0-24.0	0.75		75(515)	30(205)	35	35 56T + 17.50	28	192	B 90
310S	0.08	1.00	2.00	0.045	0.030	19.0-22.0	24.0-26.0	0.75		75(515)	30(205)	35	35 56T + 17.50	28	192	B 90
310H	0.04-0.10	1.00	2.00	0.045	0.030	19.0-22.0	24.0-26.0	-		75(515)	30(205)	35	35 56T + 17.50	28	192	B 90
321	0.08	1.00	2.00	0.045	0.030	9.0-12.0	17.0-19.0	-	Ti5xC% <0.70	75(515)	30(205)	35	35 56T + 17.50	28	192	B 90
312H	0.04-0.10	1.00	2.00	0.045	0.030	9.0-12.0	17.0-19.0	-	Ti4xC% <0.60	75(515)	30(205)	35	35.56T +	28 17.50	192	B 90
347	0.08	1.00	2.00	0.045	0.030	9.0-13.0	17.0-19.0	-	Nb/Ta: 10xC%<1%	75(515)	30(205)	35	35.56T +	28 17.50	192	B 90
347H	0.04-0.10	1.00	2.00	0.045	0.030	9.0-13.0	17.0-19.0	-	Nb/Ta: 8xC%<10%	75(515)	30(205)	35	35.56T +	28 17.50	192	B 90

Chemical Composition & Mechanical Properties of Pipes

SUMMARY OF THE MAIN ASTM STANDARDS GENERALLY USED FOR PIPING

ASTM	Grade	C Max	Mn Max	P Max	S Max	Si Max	Ni	Cr.	Mo	Cu	Others	Tensile Strength	Yield Strength Mini-Mpa/Psi Mini-MPa/Psi	Elong mini %	Impact test at C	Impact test at F
A 53	A	0.25	0.95	0.05	0.06		0.40 max	0.40 max	0.15 max	0.40-max	0.08 max	300-48000	205-30000	36		
	B	0.30	1.20	0.05	0.06		0.40 max	0.40 max	0.15 max	0.40 max	0.08 max	415-60000	240-35000	29.5		
A 106	A	0.25	0.27-0.93	0.025	0.025	0.10 mini	0.40 max	0.40 max	0.15 max	0.40 max	0.08 max	330-48000	205-30000	L35-T25		
	B	0.30	0.29-1.06	0.025	0.025	0.10 mini	0.40 max	0.40 max	0.15 max	0.40 max	0.08 max	415-60000	240-35000	L30-T16.5		
	C	0.35	0.29-0.06	0.025	0.025	0.10 mini	0.40 max	0.40 max	0.15 max	0.40 max	0.08 max	485-70000	275-40000	L30-T16.5		
A 333	1	0.25	0.27-0.93	0.025	0.025							380-55000	205-30000	L35-T25	-45	-50
	3	0.19	0.31-0.64	0.025	0.025	0.18-0.37	3.18-3.82					450-65000	240-35000	L30-T20	-100	-150
	4	0.12	0.50-1.05	0.025	0.025	0.18-0.37	0.47-0.98	0.44-1.01		0.40-0.75	Al:0.40-0.30%	415-60000	240-35000	L30-T16	-100	-150
	6	0.30	0.29-1.06	0.025	0.025	0.10 mini						415-60000	240-35000	L30-T16	-45	-50
	9	0.20	0.40-1.06	0.025	0.025		1.60-2.24			0.75-1.25		435-63000	315-46000	L28	-75	-100
A 335	P1	0.10-0.20	0.30-0.80	0.025	0.025	0.10-0.50			0.44-0.65			380-55000	205-30000	L30-T20		
	P5	0.15	0.30-0.60	0.025	0.025	0.50		4.00-6.00	0.45-0.65			415-60000	205-30000	L30-T20		
	P9	0.15	0.30-0.60	0.025	0.025	0.25-1.00		8.00-10.0	0.90-1.10			415-60000	205-30000	L30-T20		
	P11	0.05-0.15	0.30-0.60	0.025	0.025	0.50-1.00		1.00-1.50	0.44-0.65			415-60000	205-30000	L30-T20		
	P12	0.05-0.15	0.30-0.61	0.025	0.025	0.50		0.80-1.25	0.44-0.65			415-60000	220-32000	L30-T20		
	P21	0.05-0.15	0.30-0.60	0.025	0.025	0.50		2.65-3.35	0.80-1.06			415-60000	205-30000	L30-T20		
	P22	0.05-0.15	0.30-0.60	0.025	0.025	0.50		1.90-2.60	0.87-1.13			415-60000	205-30000	L30-T20		
	P91	0.08-0.12	0.30-0.60	0.020	0.010	0.20-0.50	0.40 max	8.00-9.50	0.85-1.05		Vo-0.18-0.25%	585-85000	415-65000	L20		
A 358	TP 304	0.08	2.00	0.045	0.030	0.75	8.0-10.50	18.0-20.0	-				Class 1 : Double welded pipes & full			
	TP 310S	0.08	2.00	0.45	0.030	1.50	19.0-22.0	24.0-26.0	-				Radiography			
	TP 316	0.08	2.00	0.045	0.030	0.75	10.0-14.0	16.0-18.0	2.0-3.0				Class 2 : Double welded no Radiography			
	TP 316L	0.030	2.00	0.045	0.030	0.75	10.4-14.0	16.0-18.0	2.0-3.0				Class 3 : Single welded full Radiography			
	TP 317L	0.035	2.00	0.045	0.030	0.75	11.0-15.0	18.0-20.0	3.0-4.0				Class 4 : Single welded full Radiography			
	TP 321	0.08	2.00	0.045	0.030	0.75	9.0-12.0	17.0-20.0	-			Ti5xC<0.70%	not pass without addition of filler metal			
	TP 347	0.08	2.00	0.045	0.030	0.75	9.0-13.0	17.0-20.0	-			Cb10xC<1.00%	Class 5 : Double Welded sport Radiography			

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Shree Chandraji Metal Corporation

ANSI B 36.10 Carbon Steel, Seamless Pipe Weight Per Kg/mtr.

Nominal Pipe size		O/D	Schedule 10		Schedule 20		Schedule 30		Schedule STD		Schedule 40		Schedule 60		Schedule Extra Strong (XS)		Schedule 80		Schedule 100		Schedule 120		Schedule 140		Schedule 160		Schedule Double Extra Strong	
mm	inch	mm	mm	kg/m	mm	kg/m	mm	kg/m	wall	wt.	wall	wt.	wall	wt.	wall	wt.	wall	wt.	wall	wt.	wall	wt.	wall	wt.	wall	wt.	wall	wt.
3	1/8	10.3	-	-	-	-	-	-	1.73	0.37	1.73	0.37	-	-	2.41	0.47	2.41	0.47	-	-	-	-	-	-	-	-	-	-
6	1/4	13.7	-	-	-	-	-	-	2.24	0.63	2.24	0.63	-	-	3.02	0.80	3.02	0.80	-	-	-	-	-	-	-	-	-	-
10	3/8	17.1	-	-	-	-	-	-	2.31	0.84	2.31	0.84	-	-	3.20	1.10	3.20	1.10	-	-	-	-	-	-	-	-	-	-
15	1/2	21.3	-	-	-	-	-	-	2.77	1.27	2.77	1.27	-	-	3.73	1.62	3.73	1.62	-	-	-	-	-	-	4.78	1.95	7.5	2.55
20	3/4	26.7	-	-	-	-	-	-	2.87	1.69	2.87	1.69	-	-	3.91	2.20	3.91	2.20	-	-	-	-	-	-	5.56	2.90	7.82	3.64
25	1	33.4	-	-	-	-	-	-	3.38	2.50	3.38	2.50	-	-	4.55	3.24	4.55	3.24	-	-	-	-	-	-	6.35	4.24	9.1	5.45
32	1¼	42.2	-	-	-	-	-	-	3.56	3.39	3.56	3.39	-	-	4.85	4.47	4.85	4.47	-	-	-	-	-	-	6.35	5.61	9.7	7.77
40	1½	48.3	-	-	-	-	-	-	3.68	4.05	3.68	4.05	-	-	5.08	5.41	5.08	5.41	-	-	-	-	-	-	7.14	7.25	10.2	9.56
50	2	60.3	-	-	-	-	-	-	3.91	5.44	3.91	5.44	-	-	5.54	7.48	5.54	7.48	-	-	-	-	-	-	8.74	11.11	11.1	13.4
65	2½	73.0	-	-	-	-	-	-	5.16	8.63	5.16	8.63	-	-	7.01	11.41	7.01	11.41	-	-	-	-	-	-	9.53	14.92	14.0	20.4
80	3	88.9	-	-	-	-	-	-	5.49	11.3	5.49	11.3	-	-	7.62	15.3	7.62	15.3	-	-	-	-	-	-	11.13	21.35	15.24	27.7
90	3½	101.6	-	-	-	-	-	-	5.74	13.57	5.74	13.57	-	-	8.08	18.63	8.08	18.63	-	-	-	-	-	-	-	-	-	-
100	4	114.3	-	-	-	-	-	-	6.02	16.07	6.02	16.07	-	-	8.56	22.3	8.56	22.3	-	-	11.13	28.32	-	-	13.5	33.5	17.12	41.03
125	5	141.3	-	-	-	-	-	-	6.55	21.77	6.55	21.77	-	-	9.53	30.9	9.53	30.9	-	-	12.7	40.2	-	-	15.9	49.11	19.0	57.4
150	6	168.3	-	-	-	-	-	-	7.11	28.26	7.11	28.26	-	-	10.97	42.5	10.97	42.5	-	-	14.3	54.2	-	-	18.3	67.5	21.95	79.22
200	8	219.1	-	-	6.35	33.3	7.0	36.8	8.18	42.5	8.18	42.5	10.31	53.1	12.7	64.6	12.7	64.5	15.1	75.92	18.3	90.4	20.6	100.9	23.0	111.27	22.23	108.0
250	10	273.0	-	-	6.35	41.7	7.8	51.3	9.27	60.3	9.27	60.3	12.7	81.5	12.7	81.5	15.1	96.0	18.3	114.7	21.44	133.0	25.4	155	28.6	172.3	25.4	155.0
300	12	323.8	-	-	6.35	49.7	8.4	65.2	9.53	73.8	10.31	79.7	14.27	109.0	12.7	97.4	17.5	132.0	21.4	160.0	25.4	187.0	28.6	208	33.3	238.7	25.4	187.0
350	14	355.6	6.35	54.7	7.92	68.1	9.53	81.3	9.53	81.3	11.13	94.6	15.09	126.0	12.7	107.0	19.0	158.0	23.8	195.0	27.8	224.0	31.8	253.5	35.7	281	-	-
400	16	406.4	6.35	62.6	7.92	77.9	9.53	93.3	9.53	93.3	12.7	123.0	16.66	160.0	12.7	123.0	21.44	203.0	26.2	245.0	30.9	286.0	36.53	333	40.5	366.0	-	-
450	18	457.2	6.35	70.6	7.92	87.7	11.13	122.0	9.53	105.0	14.20	156.0	19.05	206.0	12.7	139.0	23.8	254.6	29.36	310.0	34.0	363.0	39.7	408.3	45.2	459.0	-	-
500	20	508.0	6.35	78.5	9.53	117.2	12.7	155.1	9.53	117.2	15.09	183.0	20.62	248.0	12.7	155.1	26.2	311.0	32.5	381.0	38.1	441.0	44.4	508	50.0	564.0	-	-
550	22	558.8	6.35	86.6	9.53	129.0	12.7	171.0	9.53	129.0	-		22.2	294.0	12.7	171.0	28.6	373.0	34.9	451.0	41.3	527.0	47.6	600	54.0	672.0	-	-
600	24	610.0	6.35	94.5	9.53	141.0	14.3	210.0	9.53	141.0	17.48	255.0	24.61	355.0	12.7	187.0	30.9	442.08	38.8	547.7	46.0	640.0	52.4	720.15	59.5	808.22	-	-
650	26	660.0	7.92	127.3	12.7	203.0	-	-	9.53	153.0	-	-	-	-	12.7	202												
700	28	711.0	7.92	137.4	12.7	218.0	15.88	272.0	9.53	165.0	-	-	-	-	12.7	218												
750	30	762.0	7.92	147.9	12.7	234.6	15.88	292.18	9.53	176.0	-	-	-	-	12.7	235												
800	32	812.8	7.92	157.9	12.7	250.6	15.88	312.0	9.53	188.2	17.48	342.0	-	-	12.7	251												
850	34	863.6	7.92	167.9	12.7	266.5	15.88	331.7	9.53	200.0	17.48	364.9	-	-	12.7	266												
900	36	914.4	7.92	176.9	12.7	282.4	15.88	352.2	9.53	212.0	19.05	420.6	-	-	12.7	282												

Formula - Pipe Weight Kg/Mtr. (OD - Thick x Thick x 0.02466 = Kg Per Mtr.)

We also supply pipes A 335 P 5, A 106 Gr B, API - 5L - GrB, A 333 Gr 6

Tolerance Dimensional Variation as per ASTM Specifications for Tubes

Tube Specification ASTM	Out Side Diameter (mm)	Permissible variations in Outside Diameter (mm)				Permissible variations in Wall Thickness (mm)												Under All THK HFS/ CFS/ WLD
		Over		Under		Over												
						2.4 Wt.			>2.4 to 3.8 Ind.			>3.8-4.6 Ind.			>4.6			
		HF Seamless	CFS and Welded	HFS	CFS and Welded	HFS	CFS	WLD	HFS	CFS	WLD	HFS	CFS	WLD	HFS	CFS	WLD	
A-213 Seamless Ferritic& Austinitic Tube	Under 25.4		0.10		0.10		20%			20%			20%			20%		
	25.4 to 38.1 Incl.		0.15		0.15													
A 249 Welded Heat Ex. & Condenser Tube	Over 38.1 to 50.8 Excl.		0.20		0.20	40%		18%	35%		18%	33%		18%	28%		18%	○
	Over 50.8 to 63.5 Excl.	0.4	0.25	0.8	0.25													
	Over 63.5 to 76.2 Excl.		0.30		0.30		22%			22%			22%			22%		
A 269 Seamless & Welded Austinitic S. S. Tubes	Over 76.2 to 101.6 Incl.		0.38		0.38													
	Over 101.6 to 190.5 Incl.		0.38	1.2	0.64													

Dimensional Variation as per ASTM Specifications for Pipes

Tubes Specification ASMT	Nominal Pipe Size(mm)	Permissible variations in Outisde Diameter (mm)		Permissible variations in THK	Permissible variations in Length (mm)		Straight tolerance
		Over	Under		Over	Under	Max. curvature in any meter Length
A 106 CS Seamless Pipe for High Temp.	3 to 40 Incl.	0.4	0.8	-12.5%	6	0	Up to 125 mm O/D & 12 mm THK Pipe -0.76 mm
	Over 40 to 100 Incl.	0.8	0.8				
A 312 Seamless & Welded Austinitic SS Pipes	Over 100 to 200 Incl.	1.6	0.8	Except for Welded pipe will filler Metal Added			Over 125 mm O/D to 200 mm O/D Incl. -1.15 mm
	Over 200 to 450 Incl.	2.4	0.8				
A333 Seamless & Welded Pipe for LT Service	Over 450 to 650 Incl.	3.2	0.8				Over 200 mm O/D to 324 mm O/D inclusive -1.52 mm
A335 Seamless Ferritic Alloy Steel Pipe for High Temp. Service	Over 650 to 850 Incl.	4.0	0.8				
	Over 850 to 1200	4.8	0.8				
A 358 ERW Austinitic Cr-NiAs Pipe for High Temp. serv.	All Sizes (upto 200 NB)	+0.5% (Based on Circum-ferencial Measurement)	-0.5%	-0.3 mm			3 mm 3/metres
A409 ERW Large Dia Austinitic Steel Pipes	450 to 750 (SCH 5 S & 10 S)	+0.2% +0.4% Based on Circumferential Measurement	+0.2% (For T<4.8mm) -0.4% (For T 4.8mm)	-0.46 mm			4.8mm/3 metres

MILD STEEL PIPES CONFIRMING TO IS : 1239 (Part 1) - 1979

Nominal Bore		Outside Diameter		Light		Medium		Heady	
				Thickness	Weight	Thickness	Weight	Thickness	Weight
Inch	In mm	In	mm	mm	kg/mtr	mm	kg/mtr	mm	kg/mtr
1/8"	3 mm	0.406	10.32	1.80	0.361	2.00	0.407	2.65	0.493
1/4"	6 mm	0.532	13.49	1.80	0.517	2.35	0.650	2.90	0.769
3/8"	10 mm	0.872	17.10	1.80	0.674	2.35	0.852	2.90	1.02
1/2"	15 mm	0.844	21.43	2.00	0.952	2.65	1.122	3.25	1.45
3/4"	20 mm	1.094	27.20	2.35	1.410	2.65	1.580	3.25	1.90
1"	25 mm	1.312	33.80	2.65	2.010	3.25	2.440	4.05	2.97
1.1/4"	32 mm	1.656	42.90	2.65	2.580	3.25	3.140	4.05	3.84
1.1/2"	40 mm	1.906	48.40	2.90	3.250	3.25	3.610	4.05	4.43
2"	50 mm	2.375	60.30	2.90	4.110	3.65	5.100	4.47	6.17
2.1/2"	65 mm	3.004	76.20	2.25	5.840	3.65	6.610	4.47	7.90
3"	80 mm	3.500	88.90	3.25	6.810	4.05	8.470	4.85	10.1
4"	100 mm	4.500	114.30	3.65	9.890	4.50	12.10	5.40	14.4
5"	125 mm	5.500	139.70	-	-	4.85	16.20	5.40	17.8
6"	150 mm	6.500	165.10	-	-	4.85	19.20	5.40	21.2

BIG DIAMETER ERW PIPES CONFIRMING TO IS 3589

Wall Thickness in mm	Nominal Bore 7" NB 193.7 mm OD	Nominal Bore 8" NB 219.1 mm OD	Nominal Bore 10" NB 273 mm OD	Nominal Bore 12" NB 323.7 mm OD	Nominal Bore 14" NB 355.6 mm OD	Nominal Bore 16" NB 406.4 mm OD	Nominal Bore 18" NB 457 mm OD	Nominal Bore 20" NB 508 mm OD
kg/mtr	kg/mtr	kg/mtr	kg/mtr	kg/mtr	kg/mtr	kg/mtr	kg/mtr	kg/mtr
4.85	22.59	25.62	32.07	38.13	-	-	-	-
5.20	24.17	27.43	34.34	40.85	-	-	-	-
5.60	26.00	29.28	36.93	43.93	48.11	-	-	-
6.00	27.88	31.53	39.50	47.02	51.49	61.00	69.00	-
6.35	29.34	33.28	41.73	49.67	54.43	62.35	70.50	78.50
7.01	32.27	36.76	46.43	55.45	61.82	69.04	-	-
7.94	-	41.00	50.95	61.85	67.98	77.92	87.80	-
8.18	-	42.56	53.42	65.12	-	-	-	-
9.53	-	51.50	60.24	73.75	81.21	93.13	105.00	117.00
12.70	-	-	-	-	107.28	123.30	139.00	155.00

Tolerance on Thickness and Weight : as per IS 1239

The following manufacturing tolerance shall be permitted on the tubes and sockets.

(a) Thickness

(1) Butt welded Light tubes +Not limited -8 percent

Medium and Heavy tubes +Not Limited -8 percent

(2) Seamless +Not Limited -12.5 percent

(b) Weight :

(1) Single tube (light series) +10 percent - 8 percent

(2)Single tube (medium and heavy series) +10 pernt

MAXIMUM PERMISSIBLE PRESSURE AND TEMPERATURE FOR TUBES WITH STEEL COUPLINGS OR SCREWED AND SOCKETED JOINTS

Nominal Bore mm	Maximum Permissible Presure N/mm^2	$Kg./cm^2$	Maximum Permissible Temperature °C
Upto and including 25 mm	1.20	12.24	260
Over 25 mm upto and including 40 mm	1.03	10.50	260
Over 40 mm upto and including 80 mm	0.86	8.77	260
Over 80 mm upto and including 100 mm	0.69	7.04	260
	0.83	8.47	177
Over 100 mm upto and including 125 mm	0.69	7.04	171
Over 125 mm upto and includi 150 mm	0.50	5.10	160

For tubes fitted with appropriate fittings of suitably butt welded together, the Max. permissible press shall be 21.00 Kg/cm2 and Max. Permissible temp. 260°C

COPPER & BRASS

Our Range of Products

COPPER PRODUCTS

1. Copper Tube for general engineering purpose
   Mfg. range: O.D. - 3mm to 150mm
   W.t. -upto to any thickness, subject to outside diameter
   Grade - ETP, DLP, DHP
2. MEX Flow Tube
   Half Hard Nitrogenised Seamless Copper Tube for Gas and Plumbing application as per BS:EN1057 (BS 2871 Part I Table X)
   Mfg. range : 6mm to 159 mm outside diameter
   Grade - DHP
3. Refrigeration Quality Copper Tube
   Mfg. range : 3/16" & 3/4" diameter upto 27 swg in 15 & 30 mts. coil.
   Grade - DHP
4. High Conductivity Copper Rods
   Mfg. range : 6mm to 100mm diameter in straight lengths.
   Grade - ETP
5. Copper Rods for general engineering purpose / Earth Rods
   Mfg. range : 6mm to 100 mm diameter
   Barth Rods : 14.2 / 14.8 / 16mm
   Grade : DHP
6. Copper Bus Bars & Strips / Tapes
   Mfg. range : 10mm to 20mm diameter in any thickness are manufactured in straight length Coil from and also Tinned Coated
   Grade - ETP, DHP, ETP+Ag
7. Copper Sheets / Earthing Sheets
   Mfg. range : 4 x 4 feet, 5mm to 10mm and 8x4 feet and sizes as per customer's need.
   Grade - ETP, DHP

INTERNAL FIN TUBES

Specialised in Intergrally Fin-Tubes INternal & External in all types of Copper based alloys.
(First complete manufacturer in india)

1. Copper Fin Tubes
   Mfg. range : 3/4", 5/8" Fin : 19 Fin, 26 Fin.
   26 intregues : 40 Fin, Tubro B, F, Tube

COPPER ALLOY PRODUCTS

1. Cupro Nickel Tube : 90/10,70/30
   Mfg. range : O.D.-3mm to 100 mm
   Up to any thickness, subject to outside diameter
2. Brass Tube 70:30 / 63:37 / 85:15 / Admirality / AL Brass
   Mfg. range : O.D- 6 mm to 100 mm
   W.T. - Up to any thickness, subject to outside diameter
3. Brass Rod
   Mfg. range : O.D. - 6 mm to 100 mm Dia.
4. Brass Flat / Strips
   Mfg. range : 10mm to 200mm Dia. in any thickness
5. Brass Sheets
   Mfg. range : 4 x 4 feet, 5mm to 10mm &
   8 x 4 feet & Sizes as per your requirements.

We undertakes manufacturing of tailor-made Copper-based Alloy Semis, as per the customer's specification and ensure delivery of gods to our client, even at every short notice.

ALUMINIUM ALLOY : CHEMICAL COMPOSITION STD. (Per Cent)

Alloy (ISS) Old	Equivalent alloy (A.A.)		Copper		Magnesium		Silicon		Iron	Manganese		*Other (total)	Remark
	New	U.S.A.	Min.	Max.	Min.	Max.	Min.	Max.					
1B	19500	1050	---	0.05	---	---	---	0.30	0.4	---	0.05	0.1	Aluminium 99.5% Min.
1E	19501	1050(EC)	---	0.04	---	---	---	0.15	0.35	---	---	0.1	Aluminium 99.5% Min.
	19700	1070	---	0.03	---	---	---	0.20	0.25	---	0.03	0.1	Aluminium 99.7% Min.
1A	19800	1080	---	0.03	---	---	---	0.15	0.15	---	0.03	0.1	Aluminium 99.8% Min.
1C	19900	1100	---	0.1	---	0.2	---	0.50	0.7	---	0.1	0.2	Aluminium 99.0% Min.
---	---	2011	5.0	6.0	---	0.1	---	0.4	0.7	---	0.1	0.4	Also lead & bismuth - 0.2 - 0.6% each
H15	24345	2014	3.8	5.0	0.2	0.8	0.5	1.2	0.7	0.3	1.2	0.5	---
H14	24534	2017	3.5	4.7	0.4	1.2	0.2	0.7	0.7	0.4	1.2	0.5	---
N3	31000	3003	---	0.1	---	0.1	---	0.6	0.7	0.8	1.5	0.4	---
N21	43000	4043	---	0.1	---	0.2	4.5	6.0	0.6	---	0.5	0.5	---
N2	46000	4047	---	0.1	---	0.2	10.0	13.0	0.6	--	0.5	0.5	---
N4	52000	5052	---	0.1	1.7	2.6	---	0.6	0.7	---	0.5	0.4	---
N5	53000	5086	---	0.1	2.8	4.0	---	0.6	0.7	---	0.5	0.5	---
N6	55000	5056	---	0.1	4.5	5.0	---	0.6	0.7	---	1.01	0.4	Chromium upto 0.25
N8	54300	5083	---	0.1	4.0	4.9	---	0.4	0.7	0.5	1.0	0.4	Chromium upto 0.25
N20	65032	6061	0.15	0.4	0.8	1.2	0.4	0.8	0.7	0.2	0.8	0.4	Chromium (0.15-0.35)
													Either Mno, Cr Shall be present.
H9	63400	6063	---	0.1	0.4	0.9	0.3	0.7	0.6	---	0.3	0.4	Chromium upto 0.10
---	---	6066	0.7	1.2	0.8	1.4	0.9	1.8	0.7	0.6	1.1	0.4	
---	64423	---	0.5	1.0	0.5	1.3	0.7	1.3	0.8	1.0	---	---	
91E	63401	6101	---	0.1	0.35	0.8	0.3	0.7	0.5	---	0.03	0.1	
---	64401	6201	---	0.1	0.6	0.9	0.5	0.9	0.5	---	0.03	0.1	
H30	64430	6351	---	0.1	0.4	1.2	0.6	1.3	0.6	0.4	1.0	0.3	Chromium upto 0.25
---	74530	7039	---	0.2	1.0	1.5	---	0.4	0.7	0.2	0.7	0.4	Zinc (4-5%)
---	---	7075	1.20	2.0	2.1	2.9	---	0.4	0.5	---	0.3	0.5	Zinc (5.1-6.4) & Chromium (0.1-0.25)

NICKEL BASE ALLOYS

NOMINAL CHEMICAL COMPOSITION, % (not for specification purposes)

Nickel	NI	C	Mn	Fe	S	Si	Cu	Cr	Co	Mo	Al	Ti	Other
Nickel 200	99.2	0.10	0.3	0.4	0.005	0.18	0.10	-	0.25	-	-	-	-
Nickel 201	99.0	0.02	0.35	0.4	0.005	0.18	0.25	-	0.25	-	-	-	-
Nickel 205	99.6	0.02	0.3	0.2	0.004	0.08	0.05	-	0.1	-	-	0.03 Mg	0.05
Nickel 212	97.7	0.010	2.0	0.05	0.005	0.05	0.03	-	-	-	-	-	
Nickel 222	99.5	0.01	0.02	0.04	0.0025	0.01	0.01	0.01	0.06	0.01	0.01	Mg0.08	
Nickel 270	99.98	0.01	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	Mg<0.001	
	NI	C	Mn	Fe	S	Si	Cu	Cr	Co	Mo	Al	Ti	Other
K.MONEL alloy 400	63.0 min	0.15	1.25 max	2.5max	0.025max	0.05 max	31.0	-	-	-	-	-	-
K.MONEL alloy 500	63.0 min	0.25	1.5 max	2.0max	0.010max	0.5	30.0	-	-	-	2.9	0.6	-
Cast MONEL alloy	6.30 min	0.07	0.75	2.5ma	0.02 max	0.04max	30.0	0.10max	-	0.20max	0.05max	0.01max	-
Cast MONEL alloy	63.0 min	0.03 max	0.020 max	2.5max	0.02 max	0.04max	30.0	0.10	-	0.20max	0.05max	0.01max	-
K.MONEL aloy 600	72.0 min	0.025 max	1.0 max	8.0	0.05 max	0.05max	0.05 max	14 - 17	-	-	-	-	No +
INCONEL alloy 625	Bal	0.025 max	0.25	3.0 max	0.015max	0.5 max	-	21 - 23	-	8 - 10	0.25	0.25	3.65
INCOLOY alloy 800	32 - 34	0.25max	1.5 max	Bal.	0.015max	-	0.75 max	20 - 22	0.5 max	-	0.15 - 0.40	0.35 - 0.60	Al + Ti max. 1.0
INCOLOY alloy 825	38 - 46	0.025 max	1.0 max	Bal.	0.03 max	0.5max	2.25	19.5-23.5	1.5 - 3	2.5 - 3.5	0.20max	0.9	Ti 0.6 - 1.2
INCOLOY alloy 904	32.5	0.025	0.025	Bal.	0.015	0.25	0.25	-	14.5	-	0.1	1.6	-
INCOLOY alloy DS	37.0	0.10 max	0.21 max	Bal.	-	2.3 max	2.3 max	18.0	-	-	-	-	
Hastalloy C22	Bal	0.010 max	-	2 - 6	-	0.8 max	-	20 - 22.5	2.5 max	12.5-14.5	2.50	Co	W-2.50 3.50
Hastalloy C-276	Bal	0.010 max	1.00	5.50	-	-	-	15 - 16.5	15 - 16.5	15 - 17	-	-	W-3.75uV.1-0.3 Si-0.02 Co-2.50
Hastalloy C-4	Bal	0.09 max	1.00	3.00	0.7		-	14.5 17.5	5.575	14.00 17.00	-	0.70	Co-2.00 Si-0.05 P-0.04

PHYSICAL AND MECHANICAL PROPERTIES

	Density Kg/dm³	Melting Range °C	Specific heat at 20°C J/KgC	Thermal Conductivity at 20°C VW/mC	Thermal Expansion 10-6°C 20-95 C	Eletrical resistivity at 20°C microohm cm	Tensile strenght N/mm²	Hardness HV
Nickel 200	8.89	14.35-1445	456	74.9	13.3	9.5	380-550	90-120
Nickel 201	8.89	1435-1445	456	79.2	13.3	7.6	340-410	75-100
Nickel 205	8.89	1435-1445	456	74.9	13.3	9.5	340	77
Nickel 212	8.86	1435-1445	430	44.1	-	10.9	476	144
Nickel 222	8.89	1435-1445	456	74.9	13.3	88.8	340	77
Nickel 270	8.89	1455	460	85.7	13.3	7.5	340	80
Monel alloy 400	8.83	1300-1350	419	21.7	14.1	51.0	480-620	111-151
Monel alloy k-500	8.46	1315-1350	419	17.4	13.7	61.4	620-760	141-189
Inconel alloy 600	8.42	1370-142	461	14.8	13.3	103	550-690	121-173
Inconel alloy 625	8.44	1290-1350	410	9.8	12.8	129	830-1040	146-247
Incoloy alloy 800	7.95	1355-1385	502	11.7	14.2	99	520-700	121-188
Incoloy alloy 825	8.14	1370-1400	441	10.9	14.0	113	580-730	121-183
Incoloy alloy 904	8.12	-	442	14.9	4.6	72	923	-
Incoloy alloy DS	7.92	1330-1400	452	12.0	14.1	108	680	208

Shree Chandraji Metal Corporation

CHEMICAL COMPOSITION OF ALLOY STEELS

Steel Type	Quality	AISI	C	Si	Mn	Cr	W	V	Co	Mo	Ni
High Speed Steel	18 % W 18% W + 5 % Co 18% W + 10 % Co 6/5/2	T1 T4 T5 M2	0.75 0.80 0.75 0.80	0.40 0.40 0.40 0.40	0.40 0.40 0.40 0.40	4.30 4.30 4.30 4.30	18.0 18.0 18.0 6.5	1.00 1.60 1.60 2.00	--- 5.0 9.5 ---	--- 0.80 0.80 5.00	--- --- --- ---
Hot Work Steel	9 % W 5 % Cr	H21 H11	0.30 0.36	0.20 1.00	0.30 0.40	2.60 5.00	8.5 ---	0.40 0.40	--- ---	--- 0.10	--- ---
Non Shrinking Die Steel	HCHC " OHNS " "	D3 D2 01 02 E0300	2.0 1.70 0.95 0.90 1.00	0.30 0.30 --- 0.20 0.40	0.30 0.30 1.00 1.90 1.00	12.00 12.00 0.50 0.30 1.00	--- 0.5 0.5 --- ---	--- 0.10 0.10 0.10 0.10	--- --- --- --- ---	--- 0.60 --- --- 0.10	--- --- --- --- ---
Pnemumatic Steel		S2	0.48	0.90	0.30	1.10	1.90	0.20	---	---	---
Shock Resisting Steel	V6N		0.90	---	---	---	---	0.20	---	---	0.70
Stainless Steel	Magnetic Non-Magnetic	410 304	0.10 0.08	0.75 1.00	1.00 2.00	13.00 18.00	--- ---	--- ---	--- ---	--- ---	0.60 10.00
Carbon Tool Steel		1095	0.90	0.20	0.40	---	---	---	---	---	---
Constructional Steel	EN-8	1040	0.36/ 0.45	0.10/ 0.35	0.60/ 0.90	---	S&P	each (MAX)	0.06		
Constructional Steel	EN-9	1055	0.45/ 0.60	0.10/ 0.35	0.50/ 0.80	---	S&P	each (MAX)	0.06		
	EN-19	4140	0.35/ 0.45	0.10/ 0.35	0.50/ 0.80	0.90/ 1.50	S&P	each (MAX)	0.05	0.20/ 0.40	
	EN-24	4340	0.35/ 0.45	0.10/ 0.35	0.45/ 0.70	0.90/ 1.40	S&P	each (MAX)	0.05	0.20/ 0.35	1.30/ 1.80
	EN-30 B		0.26/ 0.34	0.10/ 0.35	0.40 0.60	1.10/ 1.40	S&P	each (MAX)	0.05	0.20/ 0.40	3.90/ 4.30
	EN-31	52100	0.95/ 1.20	0.10/ 3.35	0.30 0.75	1.00/ 1.60	S&P	each (MAX)	0.025		
	EN-36	3310	0.15/	0.10/ 0.35	0.30 0.60	0.60/ 1.10	S&P	each (MAX)	0.05		3.00 3.75
Sprining Steel	EN-45 EN-47	9255 6150	0.50/ 0.60 0.45/ 0.55	1.50/ 2.00 0.50	0.70 1.00 0.50 0.80	 0.80/ 1.20	S&P	each (MAX)	0.05 S&P	 each (MAX)	 0.05
Case Hardening Steel	SAE	8620	0.18/ 6.23	0.20 0.35	0.70 0.90	0.40 0.60	S&P	each (MAX)	0.04	0.15/ 0.26	0.40/ 0.70
	16 M/N Cr5 20 M/N Cr5	---	0.14-0.19 0.17-0.22	0.17-0.37 1.17-0.37	1.00-1.30 1.10-1.40	0.80-1.10 1.00-1.30	S&P S&P	---	0.035 0.035	---	---

Notes : O = Oil; CA = Compressed Air,; M = Martempring bath; W = Water; A = Wir

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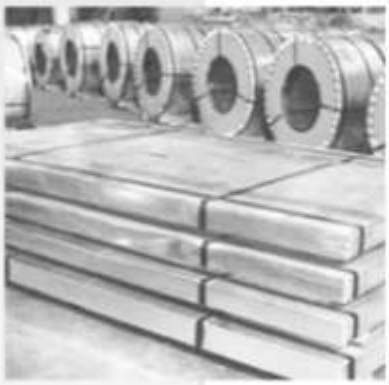
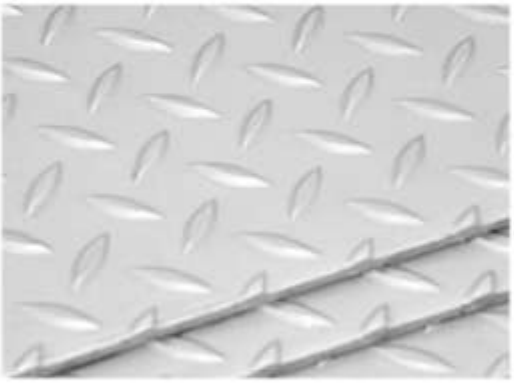
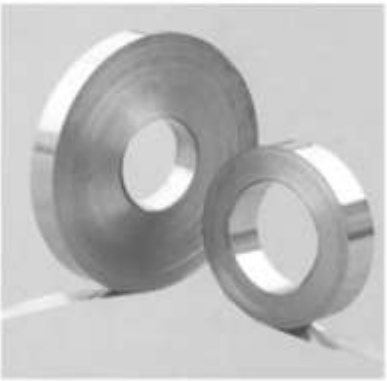
Sheets, Plates & Coils

JINDAL STAINLESS | ACERINOX | OUTO KUMPU

ACRONI | UKRAINE FOR B.Q.PLATES | Daekyung Corp (DKC) Korea

We are specialized in Sheets in Grade of 304, 304L, 310, 310S, 316, 316L, 316Ti
Imported & JSL Make

STAINLESS & DUPLEX STEEL

RANGE : 0.3 MM TO 100 MM THK IN 1000 MM TO 3000 MM WIDTH x 2500 MM / 5000 MM / 10000 MM / COIL.

Stainless Steel : ASTM / ASME SA 240 304 , 304L , 304H, 309S , 309H, 310S , 310H , 316 , 316H , 316L , 316 TI , 317 , 317L , 321H , 347 , 347 H , 409 , 410 , 410S , 430

Duplex Steel : ASTM / ASME SA 240 UNS NO. S 31803 , S 32205 , S 32550 , S 32750 , S 32760.

Carbon Steel : ASTM / ASME A 516 / 517 GR. 60 / 70 , IS 2062 , IS 2002

Alloy Steel : ASTM / ASME A 387 GR F 5, F 9 , F 11 , F 12 , F 22 , F 91.

Nickel Alloy : ASTM / ASME SB 162 UNS 2200 (NICKEL 200) / UNS 2201 (NICKEL 201) ASTM / ASME SB 127UNS 4400 (MONEL 400) ASTM / ASME SB 424 UNS 8825 (INCONEL 825) ASTM / ASME SB 168UNS 6600 (INCONEL 600) / UNS 6601 (INCONEL 601) ASTM / ASME SB 443 UNS 6625 (INCONEL 625) ASTM / ASME SB 574 UNS 10276 (HASTELLOY C 276) ASTM / ASME SB 462 UNS 8020 (ALLOY 20 / 20 CB 3

Physical & Chemical Properties of S.S., A.S., & B.Q Plates

ASTM	Grade	Chemical requirements percent (%)										Mechanical requirements						
		C max	Mn max	P max	S max	Si max	Ni	Cr.	Mo	Cu	Others	Tensile Strength mini-MPa		Yeild Strength mini-MPa		Elong mini %	Hardness Brinell	Hardness Rockwell
A240	304	0.08	2.00	0.045	0.030	0.75	8.0-10.5	18.00-20.0				515		205		40	201	92
	304L	0.03	2.00	0.045	0.030	0.75	8.00-12.0	18.00-20.0				485		170		40	201	92
	310	0.08	2.00	0.045	0.030	1.50	19.0-22.0	24.0-26.0				515		205		40	217	95
	316	0.08	2.00	0.045	0.030	0.75	10.0-14.0	16.0-18.0	2.00-3.00			515		205		40	217	95
	316L	0.03	2.00	0.045	0.030	0.75	10.0-14.0	16.0-18.0	2.00-3.00			485		170		40	217	95
	317L	0.03	2.00	0.045	0.030	0.75	11.0-15.0	18.0-20.0	3.00-4.00			515		205		40	217	95
	321	0.08	2.00	0.045	0.030	0.75	9.00-12.0	17.0-19.0			Ti>5xC<0.70	515		205		40	217	95
	347	0.08	2.00	0.045	0.030	0.75	9.00-13.0	17.0-19.0			Cb+Ta>10xC<1.10	515		205		40	201	92
A 387 Class1 Class2												Class 1	Class 2	Class 1	Class 2			
	2	005-0.21	0.55-0.80	0.035	0.040	0.15-0.40		0.50-0.80	0.45-0.60			380	486	230	310	22	max201HB	max92HRB
	5	0.15	0.30-0.60	0.04	0.030	0.050		4.00-6.00	0.45-0.65			415	515	205	310	18	max202HB	max92HRB
	7	0.15	0.30-0.60	0.030	0.030	1.00		6.00-8.00	0.45-0.65			415	515	205	310	18	max217HB	max95HRB
	9	0.15	0.30-0.60	0.030	0.030	1.00		8.00-10.0	0.90-1.10			415	515	205	310	18	max217HB	max95HRB
	11	0.04-0.17	0.40-0.65	0.035	0.04	0.50-0.80		1.00-1.50	0.45-0.65			415	515	240	310	22	max217HB	max95HRB
	12	0.04-0.15	0.40-0.65	0.035	0.04	0.15-0.40		0.80-1.15	0.45-0.60			380	450	230	275	22	max217HB	max95HRB
	21	0.04-0.17	0.30-0.60	0.035	0.035	0.50		2.75-3.25	0.90-1.10			415	515	205	310	18	max201HB	max92HRB
	22	0.05-0.17	0.30-0.60	0.035	0.035	0.50		2.00-2.50	0.90-1.10			415	515	205	310	18	max201HB	max92HRB
A 515	55	0.22	0.90	0.035	0.04	0.15-0.40						380-515		205		27		
	60	0.27	0.90	0.035	0.04	0.15-0.40						415-550		220		25		
	65	0.31	0.90	0.035	0.04	0.15-0.40						450-585		240		23		
	70	0.33	1.20	0.035	0.04	0.15-0.40						485-620		260		21		
A 516	55	0.20	0.60-1.20	0.035	0.04	0.15-0.40						380-515		205		27		
	60	0.23	0.85-1.20	0.035	0.04	0.15-0.40						415-550		202		25		
	65	0.26	085-1.20	0.035	0.04	0.15-0.40						450-585		240		23		
	70	0.28	0.85-1.20	0.035	0.04	0.15-0.40						485-620		260		21		
A 537	Class 1	0.24	0.70-1.35	0.035	0.040	0.15-0.40	0.25 max	0.80 max	0.35 max			485-620		345		22		
	Class 2	0.24	0.70-1.35	0.035	0.040	0.15-0.40	0.25 max	0.80 max	0.35 max			550-690		415		22		

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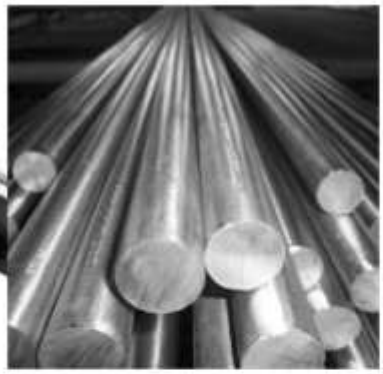
Rods

Rods



WEIGHT OF RODS IN KILOGRAMS PER LINER FOOT

Size			Brass			Aluminium			Stainless Steel / Alloy Steel		
Inch	Fraction of inch	mm	Round	Hex	Sq.	Round	Hex	Sq.	Round	Hex	Sq.
1/8"	0.125	3.173	0.020	0.023	0.026	--	--	--	--	--	--
3/16"	0.187	4.762	0.046	0.051	0.059	0.015	0.017	0.020	0.043	0.047	0.054
1/4"	0.250	6.350	0.082	0.091	0.104	0.030	0.035	0.037	0.076	0.084	0.097
5/16"	0.312	7.937	0.129	0.142	0.164	0.042	0.047	0.054	0.119	0.132	0.151
3/8"	0.375	9.52	0.185	0.224	0.235	0.061	0.068	0.078	0.171	0.188	0.218
7/16"	0.437	11.112	0.252	0.278	0.321	0.083	0.092	0.106	0.233	0.257	0.296
1/2"	0.500	12.700	0.329	0.363	0.419	0.109	0.120	0.138	0.305	0.336	0.386
9/16"	0.562	14.287	0.416	0.461	0.529	0.138	0.152	0.175	0.384	0.424	0.490
5/8"	0.625	15.875	0.516	0.566	0.652	0.170	0.188	0.217	0.473	0.520	0.604
11/16"	0.687	17.462	0.621	0.684	0.789	0.206	0.227	0.262	0.587	0.647	0.760
3/4"	0.750	19.050	0.739	0.817	0.940	0.245	0.270	0.312	0.687	0.736	0.870
13/16"	0.812	20.637	0.867	0.958	1.104	0.287	0.317	0.366	0.800	0.882	1.021
7/8"	0.875	22.225	1.008	1.109	1.282	0.333	0.368	0.424	0.931	1.038	1.184
15/16"	0.937	23.812	1.154	1.273	1.474	0.383	0.422	0.486	1.067	1.176	1.359
1"	1.00	25.400	1.314	1.451	1.675	0.436	0.481	0.555	1.223	1.350	1.546
1.1/8"	1.125	28.575	1.665	1.834	2.122	0.553	0.608	0.705	1.569	1.730	1.950
1.1/4"	1.250	31.750	2.053	2.268	2.619	0.680	0.748	0.867	1.888	2.080	2.415
1.3/8"	1.375	34.925	2.487	2.742	3.167	0.980	1.082	1.248	2.760	3.042	3.478
1.1/2"	1.500	38.100	2.961	3.262	3.167	0.821	0.907	1.082	2.318	2.554	2.922
1.5/8"	1.625	41.275	3.742	3.833	4.426	1.152	1.272	1.466	3.205	3.540	4.072
1.3/4"	1.750	44.450	4.029	4.444	5.129	1.352	1.474	1.720	3.738	4.120	4.756
1.7/8"	1.875	47.625	4.627	5.101	5.890	1.529	1.692	1.942	4.300	4.740	5.475
2"	2.000	50.800	5.266	5.804	6.703	1.742	1.919	2.220	4.905	5.415	6.224
2.1/4"	2.250	57.150	6.662	7.346	8.482	2.204	2.433	2.802	6.210	6.850	7.910
2.1/2"	2.500	63.500	8.225	9.067	10.472	2.722	3.005	3.462	7.614	8.400	9.700
2.3/4"	2.750	69.850	10.199	11.225	12.955	3.003	3.315	3.820	9.282	10.20	11.820
3"	3.000	76.200	12.454	13.267	15.341	3.919	4.327	4..990	10.996	12.210	14.000
3.1/2"	3.500	88.900	16.364	18.040	20.824	5.408	5.970	6.884	14.946	16.500	19.020
4"	4.000	101.600	21.477	23.210	27.358	6.968	7.693	8.870	19.619	21.620	25.000

Flanges

FLANGES :

Stainless Steel : ASTMA182,A240

Grade: F 304, 304L, 304H, 316, 316L, 316Ti, 310, 310S, 321, 321H, 317, 347,347H

Carbon Steel: ASTM A 105, ASTM A 181

Alloy Steel: ASTM A 182, GR F1, F11, F22, F5, F9, F91

Nickel Alloys: Monel 400 & 500, Inconel 600 & 625, Incolloy 800, 825, Hastalloy 904

Copper Alloys: Aluminium, Copper, Brass & Gunmetal

Types : Weld neck, Slip-on, Blind, Socket Weld, Lap Joint, Spectacles, Ring joint, Orifcase, Long Weldneck,DeckFlange,etc.

Size: 1/8"NBTO48"NB.

Class : 150#, 300#,400 #,600#,900#, 1500# & 2500 #.

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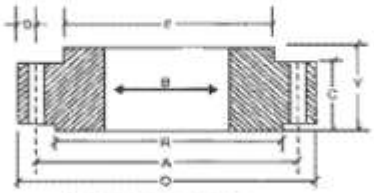
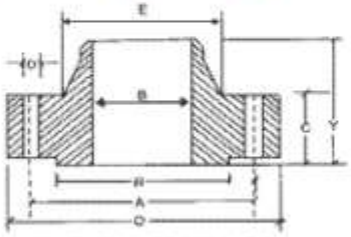
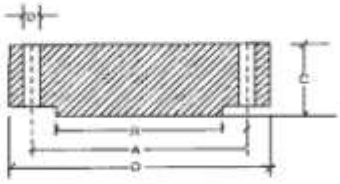
Dimensions of Forged Flanges ANSI B 16.5



SLIP-ON FLANGE



WELDING NECK FLANGE



BLIND FLANGE

Dimensions of Class 150 Flanges as per ANSI B 16.5

Nominal Pipe Size		Flange Dia	Dia of Bolt Circle	Dia of Bolt Holes	No. of Holes	Thk of Flange	Dia of Hub	Length through Hub			Dia of Bore		Dia of R/F	Depth of Socket	Pipe Dia
								S/O & S/W	W/N	L/J	S/O & S/W	L/J			
(MM)	(INCH.)	O	A	D		C	E	Y	Y	Y	B	B	R	F	X
15	1/2	88.9	60.3	15.9	4	11.1	30.2	15.9	47.6	15.9	22.3	22.9	34.9	9.5	21.33
20	3/4	98.4	69.8	15.9	4	12.7	38.1	15.9	52.4	15.9	27.7	28.2	42.9	11.1	26.67
25	1	107.9	79.4	15.9	4	14.3	49.2	17.5	55.6	17.5	34.5	35.0	50.8	12.7	33.40
32	1 1/4	117.5	88.9	15.9	4	15.9	58.7	20.6	57.1	20.6	43.2	43.7	63.5	14.3	42.16
40	1 1/2	127.0	98.4	15.9	4	17.5	65.1	22.2	61.9	22.2	49.5	50.0	73.0	15.9	48.26
50	2	152.4	120.6	19.0	4	19.0	77.8	25.4	63.5	25.4	62.0	62.5	92.1	17.5	60.31
65	2 1/2	177.8	139.7	19.0	4	22.2	90.5	28.6	69.8	28.6	74.7	75.4	104.8	19.0	73.02
80	3	190.5	152.4	19.0	4	23.8	107.9	30.2	69.8	30.2	90.7	91.4	127.0	20.6	88.90
100	4	228.6	190.5	19.0	8	23.8	134.9	33.3	76.2	33.3	116.1	116.8	157.2	23.8	114.30
125	5	254.0	215.9	22.2	8	23.8	163.5	36.5	88.9	36.5	143.8	144.5	185.7	23.8	141.30
150	6	279.4	241.3	22.2	8	25.4	192.1	39.7	88.9	39.7	170.7	171.4	215.9	27.0	168.27
200	8	342.9	298.4	22.2	8	28.6	246.1	44.4	101.6	44.4	221.5	222.2	269.9	31.7	219.07
250	10	406.4	361.9	25.4	12	30.2	304.8	49.2	101.6	49.2	276.3	277.4	323.8	33.3	273.05
300	12	482.6	431.8	25.4	12	31.8	365.1	55.6	114.3	55.6	327.1	328.2	381.0	39.7	323.85
350	14	533.4	476.2	28.6	12	34.9	400.0	57.1	127.0	79.4	359.1	360.2	412.7	41.3	355.60
400	16	596.9	539.7	28.6	16	36.5	457.2	63.5	127.0	87.3	410.5	411.2	469.9	44.4	406.40
450	18	635.0	577.8	31.7	16	39.7	504.8	68.3	139.7	96.8	461.8	462.3	533.4	49.2	457.20
500	20	698.5	635.0	31.7	20	42.9	558.8	73.0	144.5	103.2	513.1	514.3	584.2	54.0	508.00
600	24	812.8	749.3	34.9	20	47.6	663.6	82.5	152.4	111.1	615.9	615.9	692.1	63.5	609.60

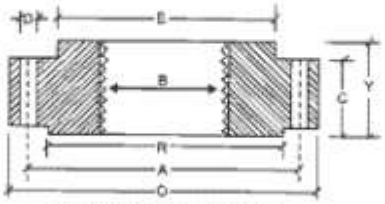
All Dimensions are in Millimeters • Flanges except Lap Joint wil be furnished with (1.6mm) Raised Face, which is included in Thickness (C) and Length through Hub(Y).

Dimensions of Class 300 Flanges as per ANSI B 16.5

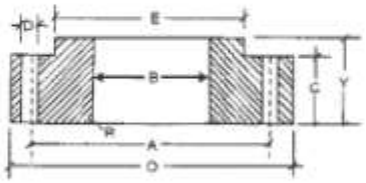
Nominal Pipe Size		Flange Dia	Dia of Bolt Circle	Dia of Bolt Holes	No. of Holes	Thk of Flange	Dia of Hub	Length through Hub			Dia of Bore		Dia of R/F	Depth of Socket	Pipe Dia
								S/O & S/W	W/N	L/J	S/O & S/W	L/J			
(MM)	(INCH.)	O	A	D		C	E	Y	Y	Y	B	B	R	F	X
15	1/2	95.2	66.7	15.9	4	14.3	38.1	22.2	52.4	22.2	22.3	22.9	34.9	9.5	21.33
20	3/4	117.5	82.5	19.0	4	15.9	47.6	25.4	57.1	25.4	27.7	28.2	42.9	11.1	26.67
25	1	123.8	88.9	19.0	4	17.5	54.0	27.0	61.9	27.0	34.5	35.0	50.8	12.7	33.40
32	1 1/4	133.3	98.4	19.0	4	19.0	63.5	27.0	65.1	27.0	43.2	43.7	63.5	14.3	42.16
40	1 1/2	155.6	114.3	22.2	4	20.6	69.8	30.2	68.3	30.2	49.5	50.0	73.0	15.9	48.26
50	2	165.1	127.0	19.0	8	22.2	84.1	33.3	69.8	33.3	62.0	62.5	92.1	17.5	60.31
65	2 1/2	190.5	149.2	22.2	8	25.4	100.0	38.1	76.2	38.1	74.7	75.4	104.8	19.0	73.02
80	3	209.5	168.3	22.2	8	28.6	117.5	42.9	79.4	42.9	90.7	91.4	127.0	20.6	88.90
100	4	254.0	200.0	22.2	8	31.8	146.0	47.6	85.7	47.6	116.1	116.8	157.2	23.8	114.30
125	5	279.4	234.9	22.2	8	34.9	177.8	50.8	98.4	50.8	143.8	144.5	185.7	-	141.30
150	6	317.5	269.9	22.2	12	36.5	206.4	52.4	98.4	52.4	170.7	171.4	215.9	-	168.27
200	8	381.0	330.2	25.4	12	41.3	260.3	61.9	111.1	61.9	221.5	222.2	269.9	-	219.07
250	10	444.5	387.3	28.6	16	47.6	320.7	66.7	117.5	95.2	276.3	277.4	323.8	-	273.05
300	12	520.7	450.8	31.7	16	50.8	374.6	73.0	130.2	101.6	327.1	328.2	381.0	-	323.85
350	14	584.2	514.3	31.7	20	54.0	425.4	76.2	142.9	111.1	359.1	360.2	412.7	-	355.60
400	16	647.7	571.5	34.9	20	57.2	482.6	82.5	146.0	120.6	410.5	411.2	469.9	-	406.40
450	18	711.2	628.5	34.9	24	60.3	533.4	88.9	158.7	130.2	461.8	482.3	533.4	-	457.20
500	20	774.7	685.8	34.9	24	63.5	587.4	95.2	161.9	139.7	513.1	514.3	584.2	-	508.00
600	24	914.4	812.8	41.3	24	69.8	701.7	106.4	188.3	152.4	615.9	615.9	692.1	-	609.60

All Dimensions are in Millimeters • Flanges except Lap Joint wil be furnished with (1.6mm) Raised Face, which is included in Thickness (C) and Length through Hub(Y).

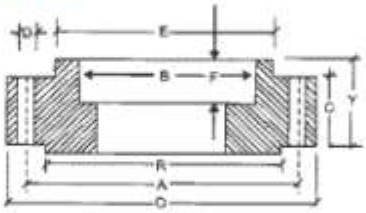
Dimensions of Forged Flanges ANSI B 16.5



THREADED FLANGES



LAP JOINT FLANGES



SOCKET WELD FLANGES

Dimensions of Class 600 Flanges as per ANSI B 16.5

Nominal Pipe Size	Flange Dia	Dia of Bolt Circle	Dia of Bolt Holes	No. of Holes	Thk of Flange	Dia of Hub	Length through Hub			Dia of Bore		Dia of R/R	Depth of Socket	Pipe Dia
							S/O & S/W	W/N	L/J	S/O & S/W	L/J			
(MM)	O	A	D		C	E	Y	Y	Y	B	B	R	F	X
15	95.2	66.7	15.9	4	14.3	38.1	22.2	52.4	22.3	22.3	22.8	34.9	9.5	21.33
20	117.5	82.5	19.0	4	15.9	47.6	25.4	57.1	25.4	27.7	28.1	42.9	11.1	26.67
25	123.8	88.9	19.0	4	17.5	54.0	27.0	61.9	26.9	34.5	35.0	50.8	12.7	33.40
32	133.3	98.4	19.0	4	20.6	63.5	28.6	66.7	28.4	43.2	43.6	63.5	14.2	42.16
40	155.6	114.3	22.2	4	22.2	69.8	31.7	69.8	31.7	49.5	50.0	73.0	15.8	48.26
50	165.1	127.0	19.0	8	25.4	84.1	36.5	73.0	36.5	62.0	62.4	92.1	17.4	60.31
65	190.5	149.2	22.2	8	28.6	100.0	41.3	79.4	41.1	74.7	75.4	104.8	19.0	73.02
80	209.5	168.3	22.2	8	31.8	117.5	46.0	82.5	45.9	90.7	91.4	127.0	-	88.90
100	273.0	215.9	25.4	8	38.1	152.4	54.0	101.6	53.8	116.1	116.8	157.2	-	114.30
125	330.2	266.7	28.6	8	44.4	188.9	60.3	114.3	60.4	143.8	144.5	185.7	-	141.30
150	355.6	292.1	28.6	12	47.6	222.2	66.7	117.5	66.4	170.7	171.4	215.9	-	168.27
200	419.1	349.2	31.7	12	55.6	273.0	76.2	133.3	76.2	221.5	222.2	269.9	-	219.07
250	508.0	431.8	34.9	16	63.5	342.9	85.7	152.4	111.2	276.3	277.4	323.8	-	273.05
300	558.8	488.9	34.9	20	66.7	400.0	92.1	155.6	117.3	327.1	328.2	381.0	-	323.85
350	603.2	527.0	38.1	20	69.9	431.8	93.7	165.1	127.0	359.1	360.1	412.7	-	355.60
400	685.8	603.2	41.3	20	76.2	495.3	106.4	177.8	139.7	410.5	411.2	469.9	-	406.40
450	742.9	654.0	44.4	20	82.6	546.1	117.5	184.1	152.4	461.8	462.3	533.4	-	457.20
500	812.8	723.9	44.4	24	88.9	609.9	127.0	190.5	165.1	513.1	514.3	584.2	-	508.00
600	939.8	838.2	50.8	24	101.6	717.5	139.7	203.2	184.1	615.9	615.9	692.1	-	609.60

All Dimensions are in Millimeters • Flanges except Lap Joint wil be furnished with (6.35mm) Raised Face, which is not included in Thickness (C) and Length through Hub(Y).

Dimensions of Class 900 Flanges as per ANSI B 16.5

Nominal Pipe Size	Flange Dia	Dia of Bolt Circle	Dia of Bolt Holes	No. of Holes	Thk of Flange	Dia of Hub	Length through Hub			Dia of Bore		Dia of R/R	Depth of Socket	Pipe Dia
							S/O & S/W	W/N	L/J	S/O & S/W	L/J			
(MM)	O	A	D		C	E	Y	Y	Y	B	B	R	F	X
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	157.2	-	114.30
125	349.2	279.4	35.0	8	50.8	190.5	79.3	127.0	79.2	143.7	144.5	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	269.9	-	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

All Dimensions are in Millimeters • Flanges except Lap Joint wil be furnished with (6.35mm) Raised Face, which is not included in Thickness (C) and Length through Hub(Y).