

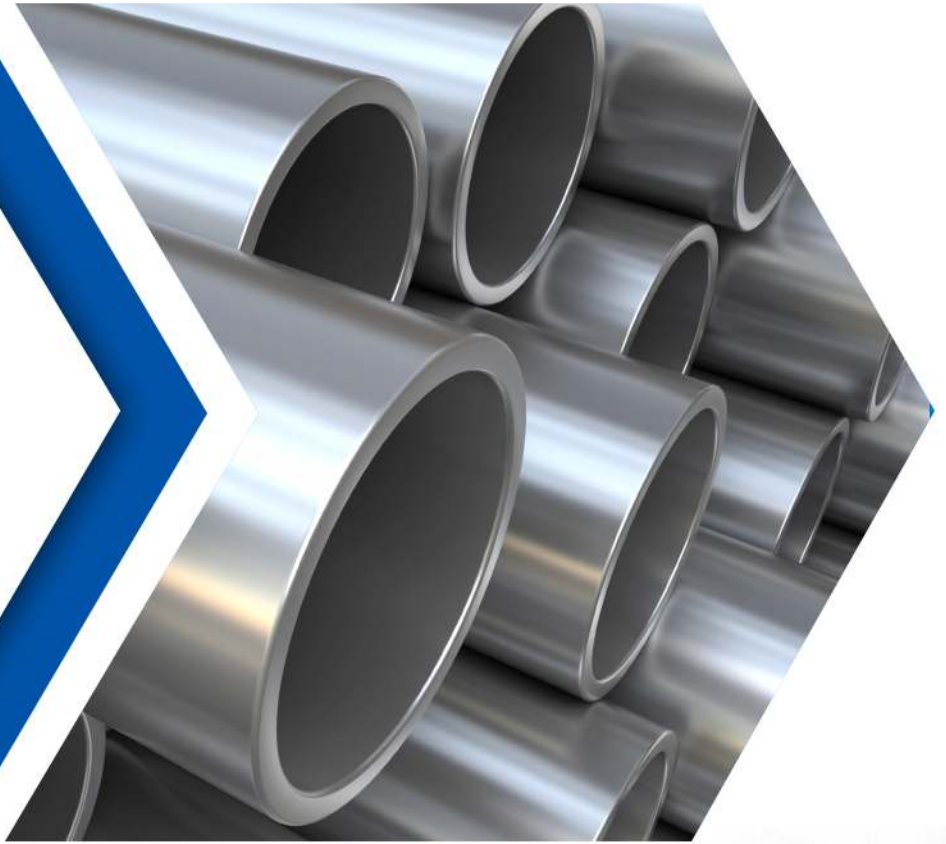


MSME
सूक्ष्म लघु एवं मध्यम उद्यम
MICRO SMALL & MEDIUM ENTERPRISES



PRATAP STEEL INDUSTRIES

Manufacturers, Stockists, Suppliers & Exporter of :
Ferrous & Non Ferrous Metals & All Types of Industrial Raw Materials





We are a professionally managed company started by a team of dynamic young entrepreneurs. **Pratap Steel Industries** Established more than two decade ago, Pratap Steel Industries is one the established name in the Domestic as well as in the International Market, We are one of the leading Exporters, Importers & Stockholders of all kind of Ferrous & Non-Ferrous Metals like Stainless Steel, Carbon Steel, Alloy Steel, Aluminium, Coppers ,Brass, Nickel, Alloys etc. Widely used in various care Industries.

Pratap Steel Industries is also approved by all the global industries and has contract with various mills all over the world. Today with our excellent contacts with manufacturers would over, we can import any type of steel materials from various countries according to customers requirements. **Pratap Steel Industries** has never left no stone unturned in widening its horizons, keeping in mind the increasing demand of raw materials it has laid special emphasis on exporting its products. our commitment is always Quality Products.... for Quality Projects...



Product Range

PIPES

Stainless Steel : ASTM A312 TP 304 /304L / 304H /316 /316L / 317 / 317L / 321 / 310 / 347 / 904L etc.

Carbon Steel : ASTM A53 Gr. B / A 106 Gr. B / API 5L Grade B / API 5L Gr. X42 / 46 / 52 / 56 / 60 / 65 / 70 / Low Temperature, Carbon Steel : A333 Gr.3 / Gr. 6 etc.

Nickel Alloys : ASTM A335 Gr. P1 / P5 / P9 / P11 / P22 / P91 etc.

Nickel Alloys : Monel, Nickel, Inconel, Hastalloy, Titanium, Bismuth, Aluminium, High Speed Steel, Non-Ferrous Metal, Copper, Brass, Bronze, Lead etc.

Types : Round, Square, Rectangular.

Size : Upto 24" NB (Seamless & welded)

Wall Thickness : Sch. 5S to Sch. XXS



BUTTWELD FITTING

Stainless Steel : ASTM A403 WP 304 / 304L / 304H / 316 / 316L / 317 / 317L / 321 / 310 / 347 / 904L etc.

Carbon Steel : ASTM A234 WPB / A420 / WPL3 / A420 WPL6 / MSS-SP-75 WPHY 42 / 46 / 52 / 56 / 60 / 65 / 70.

Alloy Steel : ASTM A234 WP 1 / WP 5 / WP 9 / WP 11 / WP 22 / WP 91 etc.

Others : Monel, Nickel, Inconel, Hastalloy, Copper, Brass, Bronze, Titanium, Tantalum, Bismuth, Aluminium, High Speed Steel, Zinc, Lead etc

SCREWED FITTINGS

Stainless Steel : ASTM A182 F304/ 304L/ 304H/ 316/ 316L/ 317/ 317L/ 321/ 310/ 347/ 904L etc.

Carbon Steel : ASTM A105/ A694 F42/46/ 52/56/ 60/ 65/70/ A350 LF3/ A350 LF2.

Alloy Steel : ASTM A182 F1/ F5/ F9/ F11/ F22/ F91 etc.

Others : Monel, Nickel, Inconel, Hastelloy, Copper, Brass, Bronze, Titanium, Tantalum, Bismuth, Aluminium, High Speed Steel, Zinc, Lead, etc.

Types : Elbow, Tee, Union, Cross, Coup, Bushing , Plug, Swage Nipple, Welding Boss, Hexagon Nipple, Barrel Nipple, Welding Nipple, Parraler Nipple, Street Elbow, Hexagon Nut, Hose Nipple, Bend, Adapter, Insert, Weldolet, Elbowlet, Sockolet, Thredolet, Nipolet, Letrolet, etc.

Size : 1/4" NB TO 4" NB. (Socketweld & Threaded)

Class : 3000#, 6000#, 9000#.





Introduction

We take great pleasure in presenting ourselves as one of the leading stockists cum suppliers & exporters for Stainless Steel, Carbon Steel & Alloy Steel Industrial Raw Material. Here we Present, this catalogue in which we have tried to cover all the required technical specification and product applications meant for Engineering, Petrochemical, Power, Paper, Cement, Fertilizers and Textiles Industries.

STAINLESS STEEL

PIPE FITTINGS, PIPE & TUBES, FLATS & ROUND BARS, SHEETS, PLATE, CIRCLE, COIL & ANGLE IN QUALITIES OF 202, 304, 304L, 316, 316L, 316TI, 321, 310S, 904L & 410 ETC.

PIPES & TUBES (ERW & SEAMLESS) IBR & NON-IBR

CARBON STEEL

ALLOY STEEL

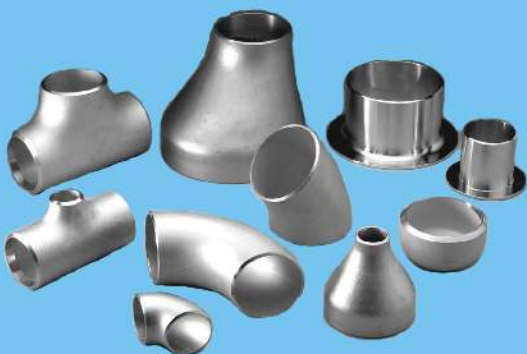
SEAMLESS PIPE IN ASTM A 335 GRADE : P1, P2, P5, P9, P11, P12, & P22 PLATE IN ASTM A 387 GRADE : P11, P12, & P22 CLASS 1 & 2.

COPPER , BRASS , ALUMINIUM , PHOSPHOR , BRONZE , MONEL & INCONEL , METALS , TITANIUM , NICKEL, HASTELLOY, INGOTS, ZINC ETC. IN ALL SECTIONS.

NON-FERROUS METALS

MANUFACTURER

S.S. PIPE FITTING (316L/316/304/304L) S.S. ELBOW, LONG STUBEND, TEE, REDUCER, NIPPLE, SHORT STUBEND, COUPLING, FLANGES ETC.



You will be pleased to know that we are in this field for more than 5 years. We have factory at Bhayander (E) and have a vast experience in the field of supplying these Materials to Government, Semi-Government, Public and Multinational undertaking companies throughout Country.

This catalogue has been designed to help Plant Engineering, Purchase Managers and Plant Designers in gathering all the required information / data and useful facts, which will make buying decision much easier for them.

We assure you our best services and quality materials at all times.



CHEMICAL COMPOSITION OF STAINLESS STEEL

Stainless Steel is essentially a low carbon steel which contains chromium at 10% or more by weight. It is this addition of chromium that gives the steel its unique stainless corrosion resisting Properties. The corrosion resistance and other useful properties of the steel are enhanced by increased chromium content and the addition of other elements such as molybdenum, nickel and nitrogen

Chemical Composition of Stainless Steel											Nearest Equivalent Specification		
UNS NO.	EN	BS	AISI Grade	C Max	Mn Max	P Max	S Max	Si Max	Cr	Ni	Mo	Cu	I.S.

Austenitic

S30100	-	301S21	301	0.15	2.0max	0.045	0.040	1.0	16.0/18.0	6.0/8.0	-	-	10Cr17Ni7
S30200	-	-	302	0.15	2.0	0.045	0.030	1.0	17.0/19.0	8.0/10.0	-	-	07Cr18Ni9
S30300	-	303S31	303	0.15	2.0	0.045	0.15min	1.0	17.0/19.0	8.0/10.0	-	-	15Cr18
S30400	1.4301	-	304	0.08	2.0	0.045	0.030	1.0	18.0/20.0	8.0/10.0	-	-	04Cr18Ni10
S30403	1.4307	304S11	304L	0.030	2.0	0.045	0.030	1.0	18.0/20.0	8.0/12.0	-	-	02Cr18Ni11
S30453	1.4306	304S61	304LN	0.030	2.0	0.045	0.030	0.75	18.0/20.0	8.0/11.0	-	-	-
S30409	-	-	304H	0.05	2.0	0.045	0.03	1	18.0/20.0	8.5/9.5	-	-	-
S30900	-	309S16	309	0.20	2.0	0.045	0.030	1.0	22.0/24.0	12.0/15.0	-	-	20Cr24Ni12
S30908	1.4833	-	309S	0.08	2.0	0.045	0.030	1.0	22.0/24.0	12.0/15.0	-	-	-
S31009	-	-	310H	0.25	2.0	0.045	0.030	1.50	24.0/26.0	19.0/22.0	-	-	10Cr25Ni12
S31008	1.4845	-	310S	0.08	2.0	0.045	0.030	1.50	24.0/26.0	19.0/22.0	-	-	-
S31600	-	316S31	316	0.08	2.0	0.045	0.030	1.0	16.0/18.0	10.0/14.0	2.0/3.0	-	04Cr17Ni12Mo2
S31603	1.4404	316S11	316L	0.030	2.0	0.045	0.030	1.0	16.0/18.0	10.0/14.0	2.0/3.0	-	03Cr17Ni12Mo2
S31653	-	316S61	316LN	0.030	2.0	0.045	0.030	0.75	16.0/18.0	10.0/14.0	2.0/3.0	-	-
S31635	1.4571	320S31	316Ti	0.080	2.0	0.045	0.030	1.0	16.0/18.0	10.0/14.0	2.0/3.0	-	-
S31700	-	-	317	0.08	2.0	0.045	0.030	1.0	18.0/2.0	11.0/15.0	3.0/4.0	-	-
S31703	-	317S12	317L	0.030	2.0	0.045	0.030	1.0	18.0/20.0	11.0/15.0	3.0/4.0	-	-
S31753	-	-	317LN	0.03	2.0	0.045	0.03	1	18.0/2.0	11.0/15.0	3.0/4.0	-	-
S32100	1.4541	321S31	321	0.08	2.0	0.045	0.030	1.0	17.0/19.0	9.0/12.0	-	-	04Cr18Ni10Ti20
S34700	-	347S31	347	0.08	2.0	0.045	0.030	1.0	17.0/19.0	9.0/12.0	-	-	04Cr18Ni10Nb-40
N08904	1.4539	-	904L	0.02	2.0	0.045	0.035	1	19.0/23.0	23.0/28.0	4.0-5.0	-	-

Ferritic

S41100	-	410S21	410	0.15	1.00	0.040	0.030	1.0	11.50-13.50	0.75	...	...	...
S41008	1.4000	403S17	410S	0.08	1.00	0.040	0.030	1.0	11.50-13.50	0.60	...	...	...
S42900	-	-	429 ^o	0.12	1.00	0.040	0.030	1.0	14.00-16.00	...	...	...	...
S43000	1.4016	430S17	430	0.12	1.00	0.040	0.030	1.0	16.00-18.00	0.75	...	...	...
S43035	-	-	439	0.07	1.00	0.040	0.030	1.0	17.00-19.00	0.050	...	0.04	...
S44400	-	-	444	0.025	1.00	0.040	0.030	1.0	17.5-19.5	1.00	1.75-2.50	0.035	...
			446	0.20	1.50	0.040	0.030	0.50	11.40/13.00	-			...
	-	-	409L	≤ 0.030	≤ 1.00	≤ 1.00	-	-	-	10.50-11.75	-	-	-

Duplex & Super Duplex

S31803	1.4462	-	-	0.030	2.0	0.030	0.020	1.0	21.0-23.0	4.5-6.5	2.5-3.5	-	0.08-0.20
S32250	-	-	255 ^o	0.040	1.50	0.040	0.030	1.0	24.0-27.0	4.5-6.5	2.9-3.9	1.50-2.50	0.10-0.25
S32750	1.441	-	2507	0.030	1.20	0.035	0.020	0.8	24.0-26.0	6.0-8.0	3.0-5.0	0.50	0.24-0.32
S32760	-	-	-	0.030	1.0	0.030	0.010	1.0	24.0-26.0	6.0-8.0	3.0-4.0	0.50-1.00	0.20-0.30



**STAINLESS STEEL PIPE
DIMENSION & WEIGHT-KG. PER MTR. (ANSI B36.19)**

Nominal Bore		Outside Diameter	Schedule 5S		Schedule 10S		Schedule 40S		Schedule 80S		Schedule 160S		Schedule XXS	
mm	INCH	mm	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)	Wt mm	Weight (Kg/mt)
3	1/8	10.3	1.24	0.276	1.24	0.28	1.73	0.37	2.41	0.47	-	-	-	-
6	1/4	13.7	1.24	0.390	1.65	0.49	2.24	0.631	3.02	0.80	-	-	-	-
10	3/8	17.1	1.24	0.490	1.65	0.63	2.31	0.845	3.20	1.10	-	-	-	-
15	1/2	21.3	1.65	0.800	2.11	1.00	2.77	1.27	3.75	1.62	4.75	1.94	7.47	2.55
20	3/4	26.7	1.65	1.03	2.11	1.28	2.87	1.68	3.91	2.20	5.54	2.89	7.82	3.63
25	1	33.4	1.65	1.30	2.77	2.09	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	3.56	3.38	4.85	4.47	6.35	5.61	9.70	7.77
40	1 1/2	48.3	1.65	1.91	2.77	3.11	3.68	4.05	5.08	5.41	7.14	7.25	10.16	9.54
50	2	60.3	1.65	2.40	2.77	3.93	3.91	5.44	5.54	7.48	8.74	11.1	11.07	13.44
65	2 1/2	73.0	2.11	3.69	3.05	5.26	5.16	8.63	7.01	11.4	9.53	14.9	14.2	20.39
80	3	88.9	2.11	4.51	3.05	6.45	5.49	11.30	7.62	15.2	11.1	21.3	15.24	27.65
100	4	114.3	2.11	5.84	3.05	8.36	6.02	16.07	8.56	22.3	13.49	33.54	17.12	41.03
125	5	141.3	2.77	9.47	3.40	11.57	6.55	21.8	9.53	31.97	15.88	49.11	19.05	57.43
150	6	168.3	2.77	11.32	3.40	13.84	7.11	28.3	10.97	42.7	18.2	67.56	21.95	79.22
200	8	219.1	2.77	14.79	3.76	19.96	8.18	42.6	12.07	64.6	23.0	111.2	22.23	107.8
250	10	273.1	3.40	22.63	4.19	27.78	9.27	60.5	15.08	96.0	28.6	172.4	25.40	155.15
300	12	323.9	3.96	31.25	4.57	36.00	9.52	73.88	17.45	132.0	33.32	238.76	25.40	186.97
350	14	355.6	3.96	34.36	4.78	41.3	11.13	94.59	19.05	158.08	35.71	281.70	-	-
400	16	406.4	4.19	41.56	4.78	47.29	12.7	123.30	21.41	203.33	40.46	365.11	-	-
450	18	457.2	4.19	46.80	4.78	53.42	14.27	155.80	23.8	254.36	45.71	466.40	-	-
500	20	508.0	4.78	59.25	5.54	68.71	15.09	183.42	26.19	311.2	49.99	564.68	-	-
600	24	609.6	5.54	82.47	6.35	94.45	17.48	255.41	30.96	442.08	59.54	808.22	-	-

WEIGHT & THICKNESS OF S.S. GAUGE PIPES

DIMENSION		10 SWG (3.2 MM)	12 SWG (2.6 MM)	14 SWG (2.1 MM)	16 SWG (1.65 MM)	18 SWG (1.2 MM)	19 SWG (1.0 MM)
Size	OD	Weight / MTR	Weight / MTR	Weight / MTR	Weight / MTR	Weight / MTR	Weight / MTR
1/2"	12.7	0.754	0.651	0.552	0.452	0.342	0.290
5/8"	15.875	1.006	0.856	0.718	0.582	0.437	0.369
3/4"	19.05	1.258	1.061	0.883	0.712	0.531	0.448
1"	25.4	1.762	1.470	1.214	0.972	0.720	0.605
1 1/4"	31.75	2.266	1.880	1.544	1.232	0.909	0.763
1 1/2"	38.1	2.770	2.289	1.875	1.492	1.098	0.920
2"	50.8	3.778	3.108	2.537	2.012	1.476	1.235
2 1/2"	63.5	4.786	3.928	3.198	2.531	1.854	1.550
3"	76.2	5.794	4.747	3.860	3.051	2.232	1.865
3 1/2"	88.9	6.802	5.566	4.521	3.571	2.610	2.180
4"	101.6	7.810	6.385	5.183	4.091	2.988	2.495

CARBON STEEL & ALLOY STEEL PIPE DIMENSIONS ANSI B 36.10



CARBON STEEL & ALLOY STEEL PIPE DIMENSIONS ANSI B 36.10

Nominal Pipe size	O/D	Schedule 10		Schedule 20		Schedule 30		Schedule STD		Schedule 40		Schedule 60		Schedule XS		Schedule 80		Schedule 100		Schedule 120		Schedule 140		Schedule 160		Schedule XXS										
		MM	INCH	W.T.	KG/M	W.T.	KG/M	W.T.	KG/M	W.T.	KG/M	W.T.	KG/M	W.T.	KG/M	W.T.	KG/M	W.T.	KG/M	W.T.	KG/M	W.T.	KG/M	W.T.	KG/M	W.T.	KG/M	W.T.	KG/M							
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	1 1/4	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	1 1/2	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	2 1/2	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	3 1/2	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	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						8.18	42.5	8.18	42.5			12.7	64.6	12.7	64.6							18.3	90.4	20.6	100.9	23.0	111.27	22.23	108.0					
250	10	273.0						9.27	60.3	9.27	60.3			12.7	81.5	12.7	81.5							21.44	133.0	25.4	155	28.6	172.3	25.4	155.0					
300	12	323.8						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						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						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						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						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						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						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						9.53	153.0					12.7	202																					
700	28	711.0						9.53	165.0					12.7	218																					
750	30	762.0						9.53	176.0					12.7	235																					
800	32	812.8						9.53	188.2	17.48	342.0			12.7	251																					
850	34	863.6						9.53	200.0	17.48	364.9			12.7	266																					
900	36	914.4						9.53	212.0	19.05	420.6			12.7	282																					

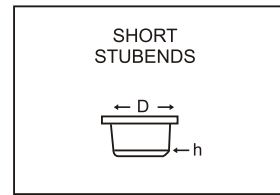
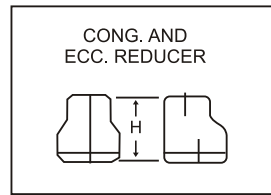
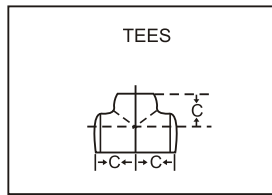
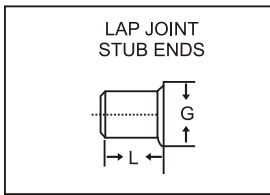
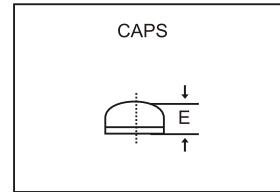
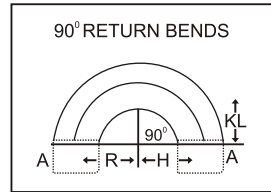
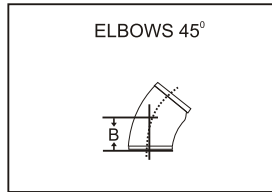
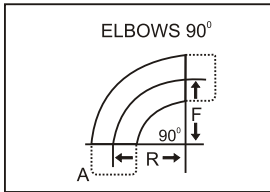


All Dimensions in millimeters. W.T. = Wall Thickness. KG/M = Kilograms per Meter.



**DIMENSIONS IN M.M.
BUTT WELDING FITTINGS TO ANSI B16.9**

STAINLESS STEEL ASTM A 403 / CARBON STEEL ASTM A 234



NOM. BORE	PIPE O.D.	WALL THICKNESS				RADIUS				A	B	C	E	G	L		H	D	h
		5S	10S	40S	80S	1D	1.5D	2D	3D						SHORT	LONG			
1/2"	21.34	1.65	2.11	2.77	3.73	12.7	19.05	25.4	38.1	12.7	15.9	25.4	25.4	34.9	50.8	76.2	50.8	45	8
3/4"	26.67	1.65	2.11	2.87	3.91	19.05	28.57	38.10	57.15	19.05	11.1	28.6	25.4	42.8	50.8	76.2	50.8	50	8
1"	33.40	1.65	2.77	3.38	4.55	25.4	38.1	50.8	76.2	25.4	22.2	38.1	38.1	50.8	50.8	101.6	50.8	60	10
1 1/4"	42.16	1.65	2.77	3.56	4.85	31.75	47.6	63.5	95.25	31.75	25.0	47.6	28.1	63.5	50.8	101.6	50.8	70	12
1 1/2"	48.26	1.65	2.77	3.68	5.08	38.1	57.15	76.2	114.3	38.10	28.6	57.2	38.1	73.0	50.8	101.6	63.5	80	12
2"	60.32	1.65	2.77	3.91	5.54	50.8	76.2	101.6	152.4	50.8	34.0	63.5	38.1	92.0	63.5	152.4	76.2	94	16
2 1/2"	73.02	2.11	3.05	5.16	7.01	63.5	95.25	127.0	190.5	63.5	63.5	38.1	92.0	63.5	63.5	152.4	88.9	110	16
3"	88.90	2.11	3.05	5.49	7.62	76.2	114.30	152.4	228.6	76.2	50.8	85.7	50.8	127.0	63.5	152.4	88.9	130	18
3 1/2"	101.60	2.11	3.05	5.74	8.08	88.9	133.35	177.8	266.7	88.9	57.2	95.3	63.5	139.7	76.2	152.4	101.6	140	18
4"	114.30	2.11	3.05	6.02	8.56	101.6	152.4	203.2	304.8	101.6	63.5	104.8	63.5	157.2	76.2	152.4	101.6	158	20
5"	141.30	2.77	3.40	6.55	9.52	127.0	190.5	254.0	381.0	127.0	82.6	123.8	76.2	185.7	76.2	203.2	127.0	188	25
6"	168.27	2.77	3.40	7.11	10.97	152.4	228.6	304.8	457.2	152.4	95.3	158.7	88.9	203.2	139.7	212	25		
8"	219.07	2.77	3.76	8.18	12.7	203.2	304.8	406.4	609.6	203.2	127.0	190.5	101.6	270.0	101.6	203.2	152.4	268	30
10"	273.05	3.40	4.19	9.27	12.7	254.0	381.0	508.0	762.0	254.0	158.7	215.9	127.0	324.0	127.0	254.0	177.8	330	35
12"	323.85	3.96	4.57	9.52	12.7	304.0	457.2	609.6	914.4	304.0	190.5	254.0	152.4	381.0	152.4	254.0	203.2	400	40
14"	355.60	3.96	4.76	9.52	12.7	355.6	533.4	711.2	1066.8	355.6	22.2	280.0	165.1	412.8	152.4	305.0	330.2		
16"	406.40	4.19	4.76	9.52	12.7	406.4	609.6	812.8	1219.2	496.2	254.0	304.8	177.8	470.0	152.4	305.0	355.6		
18"	457.20	4.19	4.76	9.52	12.7	457.2	685.8	914.4	1371.6	457.1	285.7	343.0	203.2	533.4	152.4	152.40	305.0		
20"	508.00	4.76	5.54	9.52	12.7	508.0	762.0	101.6	1524.0	508.0	317.6	381.0	228.6	584.2	152.4	305.0	508.0		

STANDARDS : All dimensions are in mm and confirm to ABSI B 16.9 and MSS SP-43 Where applicable - Dimensional tolerance are in accordance with ANSI B 16.9 M.S.S. SP 43 Where applicable.

RADIUS : Radius of Short Radius Elbow is 1 times nominal pipe diameter, Radius of Long Radius Elbows is 11/2 time nominal pipe diameter



DIMENSION IN MM OF FORGED SCREWED & SOCKET WELD

90° ELBOWS

TEE

45° ELBOW

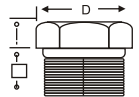
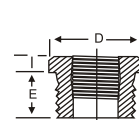
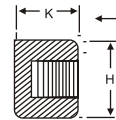
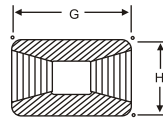
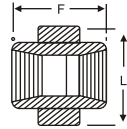
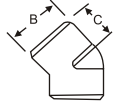
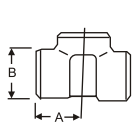
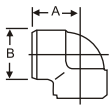
UNION

COUPLING

PIPE CAP

BUSHING

HEX HEAD PLUG



DIMENSION IN MM OF FORGED SCREWED FITTINGS TO ANSI B-16.11 THREADED TO ASA B 2.1

NOM BORE	PIPE O.D.	3000 L.B.S.						COMMON FACTORS						6000 L.B.S					
		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	25	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

90° ELBOWS

TEE

45° ELBOW

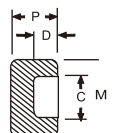
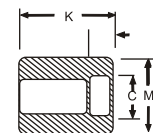
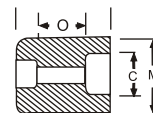
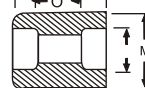
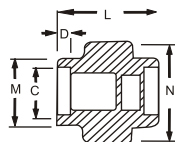
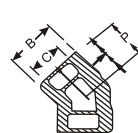
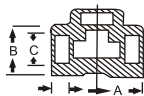
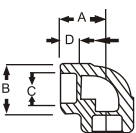
UNION

COUPLING

REDUCER

HALF COUPLING

CAP



SOCKET WELD FITTING TO ANSI B-16.11

NOM BORE	PIPE O.D.	3000 L.B.S.						COMMON FACTORS						6000 L.B.S					
		A	B	K	J	L	M	N	P	Q	C	D	O	O	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	

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



DIMENSION OF PIPE FLANGES AS PER TABLE BS - 10

Table D
Table D: For Working Steam Pressure upto 50 lbs per sq. inch

Nominal Pipe size	O.D of Pipe	Dia. of Flange	Dia. of Bolt Circle	No. of Bolt	Dia. of Bolt	Thickness
1/2"	21.3	95.3	66.7	4	12.7	4.8
3/4"	26.7	101.6	73.0	4	12.7	4.8
1"	33.4	114.3	82.6	4	12.7	4.8
1 1/4"	42.2	120.7	87.6	4	12.7	6.4
1 1/2"	48.3	133.4	98.4	4	12.7	6.4
2"	60.3	152.4	114.3	4	15.9	7.9
2 1/2"	73.0	165.1	127.0	4	15.9	7.9
3"	88.9	184.2	146.1	4	15.9	9.5
3 1/2"	101.6	203.2	165.1	4	15.9	9.5
4"	114.3	215.9	177.8	4	15.9	9.5
5"	141.3	254.0	209.6	8	15.9	12.7
6"	168.3	279.4	228.6	8	15.9	12.7
7"	190.5	304.8	260.4	8	15.9	12.7
8"	219.1	336.6	292.1	8	15.9	12.7
9"	244.5	368.3	323.9	8	15.9	15.9
10"	273.0	406.4	355.6	8	19.1	15.9
12"	323.9	457.2	406.4	12	19.1	15.9
14"	355.6	527.1	469.9	12	22.2	19.1
16"	406.4	577.9	520.7	12	22.2	19.1
18"	457.2	641.4	584.2	12	22.2	22.2
20"	508.0	704.9	641.4	16	22.5	25.4
24"	609.6	825.5	755.7	16	25.4	28.6

Table E
Table E : For Working Steam Pressure 50 lbs upto 100 lbs per sq. inch

Nominal Pipe Size	Dia. of Flange	Dia. of Bolt Circle	No. of Bolt	Dia. of Bolt	Thickness
1/2"	95.3	66.7	4	12.7	6.4
3/4"	101.6	73.0	4	12.7	6.4
1"	114.3	82.6	4	12.7	7.1
1 1/4"	120.7	87.3	4	12.7	7.9
1 1/2"	133.4	98.4	4	12.7	8.7
2"	152.4	114.3	4	15.9	9.5
2 1/2"	165.1	127.0	4	15.9	10.3
3"	184.2	146.1	4	15.9	11.1
3 1/2"	203.2	165.1	8	15.9	11.9
4"	215.9	177.8	8	15.9	12.7
5"	254.0	209.6	8	15.9	14.3
6"	279.4	228.6	8	19.1	17.5
7"	304.8	260.4	8	19.1	19.1
8"	336.6	292.1	8	19.1	19.1
9"	368.3	323.9	12	19.1	20.6
10"	406.4	355.6	12	19.1	22.2
12"	457.2	406.4	12	22.2	25.4
14"	527.2	469.9	12	22.2	25.4
16"	577.9	520.7	12	22.2	25.4
18"	641.4	584.2	16	22.2	28.6
20"	704.9	647.4	16	22.2	31.8
24"	825.5	755.7	16	25.4	38.1

Table F
Table F: For Working Steam Pressure above 100 lbs and upto 150 lbs per sq. inch

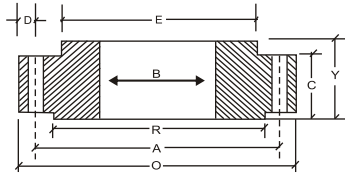
Nominal Pipe Size	O.D. of Pipe	Dia of Flange	Dia of Bolt Circle	No. of Bolt	Dia. of Bolt	Thickness
1/2"	21.3	95.3	66.7	4	12.7	9.5
3/4"	26.7	101.6	73.0	4	12.7	9.5
1"	33.4	120.7	87.3	4	15.9	9.5
1 1/4"	42.2	133.4	98.4	4	15.9	12.7
1 1/2"	48.3	139.7	104.8	4	15.9	12.7
2"	60.3	165.1	127.0	4	15.9	15.9
2 1/2"	73.0	184.2	146.1	8	15.9	15.9
3"	88.9	203.2	165.1	8	15.9	15.9
3 1/2"	101.6	215.9	177.8	8	15.9	19.1
4"	114.3	228.6	190.5	8	15.9	19.1
5"	141.3	279.4	235.0	8	19.1	22.2
6"	168.3	304.8	260.4	12	19.1	22.2
7"	190.3	336.6	292.1	12	19.1	22.2
8"	219.1	368.3	323.9	12	19.1	25.4
9"	244.5	406.4	355.6	12	22.2	25.4
10"	273.0	431.8	381.0	12	22.2	25.4
12"	323.0	489.0	438.2	16	22.2	28.6
14"	355.6	552.5	495.3	16	25.4	31.8
16"	406.4	609.6	552.5	20	25.4	31.8
18"	457.2	673.1	609.6	20	28.6	34.9
20"	508.0	736.6	673.1	24	28.6	38.1
24"	609.6	850.9	781.1	24	31.8	41.3

Table H
Table H : For Working Steam Pressure above 150 lbs and upto 250 lbs per sq. inch

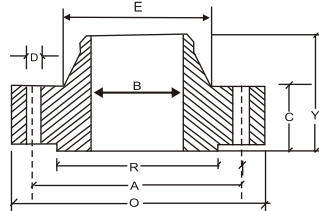
Nominal Pipe size	Dia of Flange	Dia. of Bolt Circle	No. of Bolt	Dia. of Bolt	Thickness
1/2"	114.3	82.6	4	15.9	12.7
3/4"	114.3	82.6	4	15.9	12.7
1"	120.78	87.3	4	15.9	14.3
1 1/4"	133.4	98.4	4	15.9	17.5
1 1/2"	139.7	104.8	4	15.9	17.5
2"	165.1	127.0	4	15.9	19.1
2 1/2"	184.2	146.1	8	15.9	19.1
3"	203.2	165.1	8	15.9	22.2
3 1/2"	215.9	177.8	8	15.9	22.2
4"	228.6	190.5	8	15.9	25.4
5"	279.4	235.0	8	19.1	28.6
6"	304.8	260.4	12	19.1	28.6
7"	336.6	292.1	12	19.1	31.8
8"	368.3	323.9	12	19.1	31.8
9"	406.4	355.6	12	22.2	34.9
10"	431.8	381.0	12	22.2	34.9
12"	489.0	438.2	16	22.2	38.1
14"	552.5	495.3	16	25.4	41.3
16"	609.6	552.5	20	25.4	44.5
18"	673.1	609.6	20	28.6	47.6
20"	736.6	673.1	24	28.6	50.8
24"	850.9	781.1	25	31.8	57.2



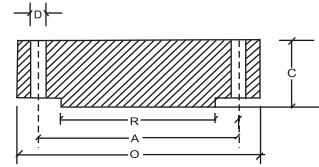
DIMENSION OF FORGED FLANGES ANSI B 16.5



SLIP-ON FLANGE



WELDING NECK FLANGE



BLIND FLANGE

CLASS 150 LBS

Nominal Pipe Size (mm) (inch)	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				
	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	259.1	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

CLASS 300 LBS

Nominal Pipe Size (mm) (inch)	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				
	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	49.2	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	79.2	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	79.2	142.9	111.1	259.1	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	462.3	533.4	-	457.20
500	20	774.7	685.8	34.9	24	63.5	587.4	98.2	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	168.3	152.4	615.9	615.9	692.1	-	609.60

CLASS 600 LBS

Nominal Pipe Size (mm)	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			
	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	22.8	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	26.87
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	73.32
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	66.5	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	111.2	276.3	277.4	323.8	-	273.05	
300	558.8	488.9	34.9	20	66.7	400.0	92.1	55.6	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	380.1	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	44.5	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

CLASS 900 LBS

Nominal Pipe Size (mm)	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			
	O	A	D	C	E	Y	Y	Y	B	B	R	F	X	
15	120.3	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	50.5	73.0	15.8	48.26
50	215.9	165.1	25.4	8	38.1	104.8	57.1	101.8	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



N D - 10

Nominal Pipe Size (in mm)	Flange Diameter mm	Flange thickness	Raiced Face		number of holes	diameter of holes mm	p.c.d. mm
			diameter mm	height mm			
15	95	14	45	2	4	14	65
20	105	16	58	2	4	14	75
25	115	16	68	2	4	14	85
32	140	18	78	2	4	16	100
40	150	18	88	3	4	18	110
50	165	20	102	3	4	18	125
65	185	20	122	3	4	18	145
80	200	22	138	3	4	18	160
100	220	22	158	3	8	18	180
125	250	24	188	3	8	18	210
150	285	24	212	3	8	23	240
200	340	26	268	3	8	23	295
250	395	28	320	3	12	23	350
300	445	28	370	4	12	23	400

N D - 16

Nominal Pipe Size (in mm)	Flange Diameter mm	Flange thickness steel mm.	Raiced Face (cast iron only)		number of holes	diamter of holes mm	p.c.d. mm
			diameter mm	height mm			
15	95	14	45	2	4	14	65
20	105	16	58	2	4	14	75
25	115	16	68	2	4	14	85
32	140	18	78	2	4	16	100
40	150	18	88	3	4	18	110
50	165	20	102	3	4	18	125
65	185	20	122	3	4	18	145
80	200	22	138	3	4	18	160
100	220	22	158	3	8	18	180
125	250	24	188	3	8	18	210
150	285	24	212	3	8	23	240
200	340	26	268	3	8	23	295
250	395	28	320	3	12	23	350
300	445	28	370	4	12	23	410

N D - 40

Nominal Pipe Size (in mm)	Flange Diameter mm	Flange thickness steel mm.	Raiced Face (cast iron only)		number of holes	diameter of holes mm	p.c.d. mm
			diameter mm	height mm			
15	95	14	45	2	4	14	65
20	105	16	58	2	4	14	75
25	115	16	68	2	4	14	85
32	140	18	78	2	4	16	100
40	150	18	88	3	4	18	110
50	165	20	102	3	4	18	125
65	185	22	122	3	4	18	145
80	200	24	138	3	8	18	160
100	235	24	162	3	8	18	180
125	270	26	188	3	8	27	220
150	300	28	218	3	8	27	250
200	375	34	285	3	12	30	320
250	450	38	346	3	12	33	385
300	515	42	370	4	16	33	450

IS - 1538

Nominal Pipe Size (in mm) mm	Diameter of Flange mm	P.C.D. mm	Holes		Thickness mm
			Number mm	Diameter mm	
80	200	160	4	19	21
100	220	180	8	19	22
125	250	210	8	19	22.5
150	285	240	8	23	23
200	340	295	8	23	24.5
250	395	350	12	23	26
300	445	400	12	23	27.5



DIMENSION OF TOLERANCE IN INSPECTION

BUTT-WELD FITTINGS TO ANSI 16.9 AND 16.28

All Dimension are in inch

ALL FITTINGS						90° and 45° Elbow and Tees	Reducer F	180° Returns			Caps
Nominal Pipe Size	Outside Diameter of Bevel	Inside Diameter of End	Wall Thickness T	ANGULARITY		Centre to End Dimension A.B.C	Over all Length H	Centre to Centre Dimension O	Back Face Dimension K	Alignment of Ends U	Over all Length E
				Off Angle Q	Off Plane P						
1/2 to 2 1/2	+1/16-1/32	± 1/32	Not Less than 87.5% of Normal Thickness	1/32	1/16	± 1/16	± 1/16	± 1/4	± 1/4	± 1/32	± 1/8
3 to 3 1/2	± 1/16	± 1/16		1/32	1/16	± 1/16	± 1/16	± 1/4	± 1/4	± 1/32	± 1/8
4	± 1/16	± 1/16		1/32	1/16	± 1/16	± 1/16	± 1/4	± 1/4	± 1/32	± 1/8
5 to 8	± 3/32-1/16	± 1/16		1/16	1/8	± 1/16	± 1/16	± 1/4	± 1/4	± 1/32	± 1/4
10 to 12	± 5/32 - 1/8	± 1/8		3/32	3/16	± 1/32	± 3/32	± 3/8	± 1/4	± 1/16	± 1/4
14 to 16	± 5/32-1/8	± 1/8		3/32	1/4	± 1/32	± 3/32	± 3/8	± 1/4	± 1/16	± 1/4
18	± 5/32-1/8	± 1/8		1/8	1/4	± 1/32	± 3/32	± 3/8	± 1/4	± 1/16	± 1/4
20 to 24	± 1/4-3/16	± 3/16		1/8	3/8	± 3/32	± 3/32	± 3/8	± 1/4	± 1/16	± 1/4
30	± 1/4-3/16	± 3/16				± 1/8	± 3/16				± 3/8
36	± 1/4-3/16	± 3/16				± 3/16	± 3/16				± 3/8

SOCKET WELD FITTING TO ASA B16.11 AND BS 3799

Nominal Bore	Elbows, tees crosses	Coupling	Half Coupling	All Fitting				
	Centre to bottom of socket	Bottom to Bottom of Socket	Bottom to socket to opposite face	Bore diameter of socket	Bore diameter of fitting	Fitting wall thickness	Concentricity of bores	Coincidence of axes
1/4 & 3/8	± 0.03	± 0.06	± 0.03			Not Less than nominal pipe wall Thickness	Socket and fitting bores within ± 0.030	0.062 in
1/2 & 3/4	± 0.06	± 0.12	± 0.6					12 inch
				± 0.10	± 0.015			
1 to 2	± 0.08	± 0.16	± 0.8					

SCREWED FITTINGS TO ASA B16.11 AND BS 3799

Nominal Bore	Elbows, tees crosses		Street Elbows		Coupling half coupling		Bushing - plugs				Unions		
	Centre to End	Diameter of bead	Centre to female end	Diameter of bead	Centre to male end	Overall Length	Diameter	Height of head	Length under head	Across flat	Overall Length	Overall Length	Across flat
1/2 & 3/4		+ 0.062	± 0.031	± 0.062			± 0.062			+ 0			+ 0
	± 0.031	- 0.031		- 0.031	± 0.062	± 0.062	- 0	± 0.031	± 0.062	- 0.031	± 0.062	± 0.062	- 0.031
1 to 3		± 0.093		± 0.093			± 0.093			+ 0			+ 0
	± 0.062	- 0.062	± 0.062	- 0.062	± 0.093	± 0.125	- 0	+ 0.062	± 0.093	- 0.062	± 0.093	± 0.125	- 0.062



PRATAP STEEL INDUSTRIES



PRODUCT





FORMULAE OF CALCULATING WEIGHT

1) WEIGHT OF STAINLESS STEEL PIPES & TUBES

$OD \text{ (mm)} - W.T. \text{ (mm)} \times W.T. \text{ (mm)} \times 0.02466 = \text{Kg. per Mtr.}$

2) SHEET WIDTH REQUIRED FOR ROLLED AND WELDED PIPES

$O.D \text{ (mm)} - THK \text{ (mm)} \times 3.14 = \text{Sheet Width}$

3) WEIGHT OF STAINLESS STEEL SHEETS

$\text{Length (mtr.)} \times \text{Width (mtr.)} \times \text{Yhk (mm)} \times 8 = \text{Kg Per Sheet}$

4) WEIGHT OF STAINLESS STEEL CIRCLE & BLANKS

$O.D.(mm) \times O.D.(mm) \times \text{Thk (mm)} / 160 / 1000 = \text{Kg Per Pcs.}$

5) WEIGHT OF STAINLESS STEEL ROUNDS

$\text{Dia. (mm)} \times \text{Dia. (mm)} \times 0.00623 = \text{Per Mtr.}$

6) WEIGHT OF STAINLESS STEEL HEXAGONAL RODS

$\text{Dia. (mm)} \times \text{Dia. (mm)} \times 0.00879 = \text{Per Mtr.}$

7) WEIGHT OF STAINLESS STEEL SQUARE BARS

$\text{Dia. (mm)} \times \text{Dia. (mm)} \times 0.00787 = \text{Kg Per Mtr.}$

8) WEIGHT OF CARBON STEEL PIPES & TUBES

$O.D. \text{ (mm)} \times W.T.(mm) \times W.T. \text{ (mm)} \times 0.02466 = \text{Kg. Per Mtr.}$

9) WEIGHT OF CARBON STEEL SHEETS - PLATES

$\text{Length (mtr.)} \times \text{Width (mtr.)} \times \text{Thk (mm)} \times 7.85 = \text{Kg. Per Sheet}$

10) WEIGHT OF COPPER PIPES

$O.D. \text{ (mm)} - W.T.(mm) \times W.T. \text{ (mm)} \times 0.0256 = \text{Per Mtr.}$

11) WEIGHT OF LEAD PIPES (appro.)

$O.D.(mm) - W.T.(mm) \times W.T. \text{ (mm)} \times 0.0345 = \text{Per Mtr.}$

12) WEIGHT OF LEAD SHEETS (appro.)

$\text{Length (mtr.)} \times \text{Width (mtr.)} \times \text{Thk (mm)} \times 11.2 = \text{Kg Per Sheet}$

13) WEIGHT OF ALUMINIUM PIPES (appro.)

$O.D. \text{ (mm)} - W.T. \text{ (mm)} \times W.T. \text{ (mm)} \times 0.0082 = \text{Kg Per Sheet}$

14) WEIGHT OF ALUMINIUM SHEETS

$\text{Length (mtr.)} \times \text{Width (mtr.)} \times \text{Thk (mm)} \times 2.66 = \text{Kg Per Sheet}$



PRATAP STEEL INDUSTRIES



Application

Industries



Oil & Gas

Cement Plants

Pharmaceuticals

Sugar Industries

Textile

Power Plants

Machineries

Engineering

Paper & Pulp Industries

Automobile

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PRATAP STEEL INDUSTRIES

Manufacturers, Stockists, Suppliers & Exporter of :
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