



ASIAN METAL & ENGINEERING CO.

AN ISO 9001 : 2015 CERTIFIED CO.

STAINLESS STEEL | CARBON STEEL | ALLOY STEEL | NICKEL ALLOYS

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Temple, 4th Kumbharwada, Mumbai - 400004. • Tel.: 022 6636 2863 / 022 6749 6028
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Website : www.asianmetalengg.com

Specialists In : Pipe Fittings & Flanges



Company Profile



We are **Stockiest and Suppliers of Stainless Steel Seamless & Welded (ERW) Pipes, Square Pipe, Plate, Round Bar, Sheet, Coil, Flat, Fastener in 304, 304L, 310, 310S, 321, 347, 316, 316L, 316 Ti, 317L & other qualities.** Which are required by your Industries, in all aspects of Projects Implementation, Maintenance, Modernizations, Expansion and Shut down Application etc.

Asian Metal & Engg Co. is a company promoted by Highly experienced Technical personnel who are in field of stocking & supplying Industrial raw material for more than 10 years.

Asian Metal & Engg Co. participates in the timely supply of raw-material to clients. We provide remedies in the critical time of troubleshooting so that the wheels of the customers industry keep moving and do not come to grinding halt.

At **Asian Metal & Engg Co.** Quality of a product is always maintained, as quality is never an accident; it is outcome of High intention, sincere efforts, Intelligent direction & skillful execution; it represents the wise choice of many alternatives.

We will provide you material at Most Competitive Prices Right Time Right Quality with EXCELLENT SERVICE and most important Market Information and latest trend to facilitate you to take right Purchase decision.

Our company has responded to all & every need of industry as one of Top and the most reputed **Importers/Exporter & Stockiest of Stainless Steel Sheets, Plates, Coils, Strips, Pipes, Tubes, Pipe Fittings, Round Bar, Fasteners & Flange Fittings.**

Our Competitive Prices and full logical support will insure satisfaction to our customers .

Quality Policy



OUR EXCELLENCE...

Quality is our prime concern. We are able to maintain high quality standards through our committed personnel and sound infrastructure. We ensure that finest quality material is used for our products. For ensure the quality of each material, we are providing Materials Test Certificate along with supply. Our team of experts maintain a vigil on the quality of the products. Every single piece is attached with test certificates and reports. We are continually improving our quality to serve our clients better.



OUR FACILITIES...

We have a sound infrastructure. Our spacious warehouse has the capacity to store large quantities of products. We possess a team of experts who are sourcing products of international standard to keep abreast with the global markets. Our quality professionals have served as a beacon not only for us but also for the entire industry in establishing top-notch quality standards.



"Our Philosophy is long-term, since we believe that the key to lasting success is the formatting of long-term RELATIONSHIP with our clients."





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PIPES & TUBES



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

Carbon Steel : ASTM A53 GR. B / A106 GR. B / API 5L GR. B / API 5L GR. X42 / 46 / 52 / 56 / 60 / 65 / 70 / A333 GR. 3 / GR. 6 etc.

Mild Steel : IS 1239 / IS 3589

Alloy Steel : ASTM A335 GR. P1 / P5 / P9 / P11 / P22 / P91 etc.

Others : Duplex, Super Duplex, Inconel, Monel, Hastelloy, Nickel, Alloy 20, 254 SMO, Copper, Brass, Bronze, Titanium, Tantalum, Bismuth, Aluminium, High Speed Steel, Zinc, Lead, etc.

Types : Round, Square, Rectangular. | **Wall Thickness** : Sch. 5S to Sch. XXS

Size : Upto 24" NB. (Seamless & Welded)

SHEETS / PLATES / COILS / STRIPS

Stainless Steel Coils, Sheets & Plates as per ASTM A 240 Gr. TP 304, 304L, 304LN, 309, 309S, 309H, 310S, 310H, 316, 316L, 316H, 316LN, 316Ti, 317, 317L, 321, 321H, 347, 347H, 348, 348H, 409, 410, 420, 430

Alloy Steel Plates as per ASTM A 387 Gr. 2, 5, 9, 11, 12 & 22 in class 1 & 2, ASTM A 204, Gr. A & B, DIN 17175 Gr. 15Mo3 & 16Mo3 with IBR Test Certificate.

NM/ABRAX PLATE- NM 400/ABRAX 400/ROCK STAR/ROCK HARD 400/JFE400

Carbon Steel / Boiler Quality Plates as per IS 2062 Gr. A, B & C, IS 2002 Gr. 1 & 2, ASTM A516 Gr. 60 & 70 ASTM A515 Gr. 70.

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

Duplex, Super Duplex Steel & SMO Plate : UNS S31803, UNS S32750, UNS S32760, 904L / SMO 254, Alloy 20

Types : Sheet, Plates, Coils, Strips, etc.



ROUND BARS



Stainless Steel Bar : ASTM A-479, A 182 F 304/304H/304L, 316/316L/316Ti, 309, 310, 317L, 321, 347, 409, 410, 420, 430, 440 (A, B, C) 446, 904L, etc.

Duplex Steel Bar : A 182 F51, F53, F55

EN Series Bar : EN8, EN9, EN 19, EN24,

Carbon Steel Bar : A 105, LF2, 4140 MOD, 4340 MOD

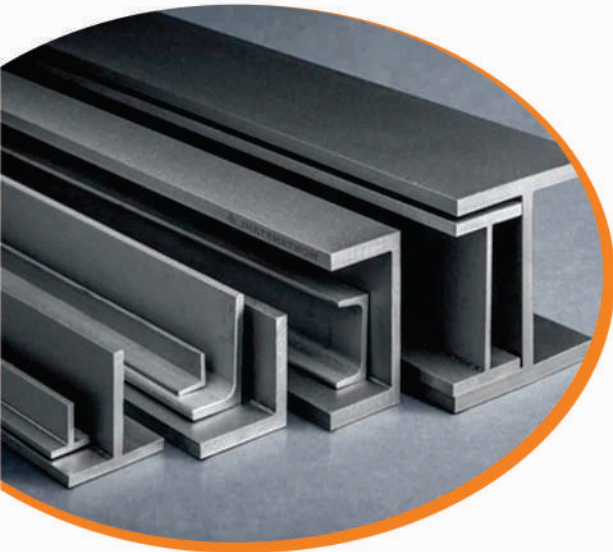
Alloy Steel Bar : ASTM A -182 F11, F12, F22, FF5, F9, F91

Cu-Ni Bar : C70660 (90:10) C71500 (70:30), C71640

Nickel Bar / Monel Bar : UNS N02200, N02201, UNS N04400, N05500

Inconel Bar : UNS N06600, N06601, N06625, N08800, N08810, UNS N08825, UNSN09925, UNS N07718

Types : Round, Square, Hex (A/F), Rectangle



ANGLE / CHANNEL / FLAT BAR

Stainless Steel : 304/304L, 316/316L/316Ti, 321, 310/310S, 317/317L, 347, 17-4Ph, 15-5Ph, 904L, 410, 420, 430, 431, 430F, 416, 440C etc.
Copper, Brass, Aluminium, Hast Alloy, Titanium, Monel, Inconel, Nickel, etc.
Duplex Steel : UNS 31803, UNS32205, UNS 32750, UNS 32760
Alloy Steel : F5, F9, F11, F22, F91.
Carbon Steel, Mild Steel, (EN Series)
Specification : ASTM, AISI, ASME, DIN, UNS etc.

Sizes of Angles : 20mm to 150mm, in Thk = 3mm to 12mm

Sizes of Channels : 20mm to 500mm, in Thk = 3mm to 50mm

FASTENERS

Stainless Steel : AISI 302, 304, 304L, 316, 316L, 310, 317, 317L, 321, 347, 410, 420, 904L etc.

Carbon Steel : 4.6, 5.6, 6.6

High Tensile / Alloy Steel : 8.8, 10.9 & 12.9 / 'R', 'S', 'T' Conditions.

Non Ferrous Metal : Copper, Brass, Aluminium, Titanium, Nichrome, Al. Bronze Phosphorous Bronze, etc.

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

Types : Bolts, Nuts, Washers, Anchor Fasteners, Stud Bolts, Eye Bolt, Stud, Threaded Rod, Cotter Pin, Socket Screw, Fine Fasteners & Spares, Foundation Fasteners, Vane Condition, Galvanized, Phosphetised, Cadum Plated, Hot Deep Galvanized, Bloodied, Nickel Chrome Plated etc.



WELDING FILLER WIRES & ELECTRODES

Stainless Steel : 309MoL, 385 (904L), 310, 312, 317L, 318, 347, 310, 430, 410NiMo, Etc.

Mild Steel : ER70S2, ER80SB2, ER80SB6, ER80B8, ER80SNI-1, ER80SNI-2, ER90SB3, ER90SB9 Etc.

Duplex & Super Duplex : 2209, 2594

Titanium Base : Grade 1, Grade 2, Grade 5, Grade 7, Grade 12 Etc.

Nickel Base Alloys : 600, 625, C276, C22, Monel 400. Ni-1, NiCrFe-2, NiCrFe-3, NiCrMo-1, NiCu7, CuNi Etc.

Stellite Cobalt Base : Rods Grade 1, Grade 6, Grade 12, Grade 21, Grade 25 Etc.

Copper, Aluminium & Bronze : ERCu, ERCu-A1, ERCuAl-A2, ERCuSi-A, ERCuSn-A, ERCuNiAl



BUTT-WELD FITTINGS

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

Mild Steel : IS 1239 Part 2 / IS 3589

Alloy Steel : ASTM A234 WP1/ WP5/ WP9/ WP11/ WP22/ WP91 etc.

Duplex & Super Duplex Steel : UNS S31803, UNS S32750, UNS S32760, 904L, Alloy 20

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

Types : Elbow, Tee, Reducer, Return Bends, Stub-Ends, Cap, Collar, Cross, Insert etc.

Size : 1/4" NB TO 32" NB. (Seamless & Welded)

Wall Thickness : Sch. 5S To Sch. XXS.

SOCKET-WELD 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.

Types : Elbow, Tee, Union, Cross, Coupling, Cap, Bushing , Plug, Swage Nipple, Welding Boss, Hexagon Nipple, Barrel Nipple, Welding Nipple, Parraler Nipple, Street Elbow, Hexagon Nut, Hose Nipple, Bend, Adapter, Insert, Weldolet, Elbolet, Sockolet, Thredolet, Nipolet, Letrolet, NPT Fittings,

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

Class : 3000#, 6000#, 9000#.



FERRULE 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.

Duplex & Super Duplex Steel : UNS S31803, UNS S32750, UNS S32760, 904L, Alloy 20

Other : Stainless Steel, Nickel Alloys, Carbon Steel, Alloy Steel, Monel, Nickel, Inconel, Hastelloy, Copper, Etc.

Types : Nipples, Adaptors, Crosses, Union Ball Joints, Reducing Bushing, Reducers, Pipe Caps, Couplings, Pipe Plug, Hollow Hex Plug, Elbow, Reducing Union, 90 Deg. Union Elbow, Reducing 90 Deg. Union Elbow Etc. Extender Leg 90 Deg. Union Elbow, 45 Deg. Union Elbow, Union Tee, Female Connector, Male Connector, Manifold Tee, Reducing Tee, Tribow, Tube Socket weld To Pipe Butt Weld, Tube Butt Weld To Tube Socket Weld, Port Connector, Etc.





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DAIRY & SANITARY TUBE FITTINGS

USED FOR DAIRY, BIO-PHARMA & FOOD INDUSTRY (WELDED ENDS / EXPANDED ENDS) BEND, TEE, CROSS, REDUCER, UNION, VALVE CLAMP WITH FERRULE, CLAMP (PIPE HOLDING) WITH COUPLING, NIPPLE & BASE PLATE

RANGE : 1/2" (15 MM) OD to 12" (300 MM) THK OD 16swg, 14swg, 12swg

GRADE : AISI 304, 316, 316L

STANDARD : SMS, IDF, DIN, ISO, ASME BPE etc.

FINISH : ELECTRO POLISHED / MIRROR / MATT FINISH

FLANGES

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 LF2/ A350LF3, etc.

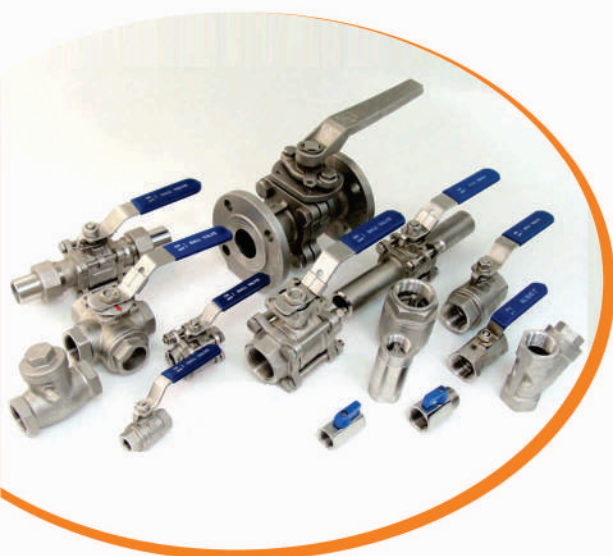
Alloy Steel : ASTM A182 F1/ F5/ F9/ F11/ F22/ F91 etc.

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

Types : Weldneck, Slipon, Blind, Socket Weld, Lap Joint, Spectacles, Ring Joint, Oriface, Long Weldneck, Deck Flange, etc.

Size : 1/2" NB TO 24" NB.

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



VALVES

Material : Stainless Steel / Duplex / Super Duplex / Nickel Alloy / Carbon Steel / Alloy Steel

Standard : ASTM / ASME / ANSI / AISI / DIN

Grade : WCB, WC1, WC6, WC9, LCB, LCC, LC3, C5, C12, CF8, CF8M, CF3, CF3M, CF8C, CN7M, CD4MCu, Hastelloy, Inconel, 304L, 316L, 2205, 2507 etc.

Types : Gate Valve, Ball Valve, Globe Valve, Butterfly Valve, Check Valve, Cryogenic Valve

Size : 1/2" to 60"

Class : 150#, 300#, 600#, 800#, 900#, 1500# & 2500#.



Stainless Steel Pipe Dimension as per ASTM and weight per Mtr (ANSI B 36.19-1965)

Nomical Bore		Outside Diameter	Schedule 5S		Schedule 10S		Schedule 40S		Schedule 80S		Schedule 160S		Schedule XXS	
MM	INCH	MM	Wt MM	Weight (Kg/m)	Wt MM	Wight (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	1.24	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	12.7	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	12.7	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	12.7	132.0	33.32	238.76	25.40	186.97
350	14	355.6	3.96	34.69	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	24.41	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	-	-



STAINLESS STEEL PLATES CHEMICAL

Chemical Composition							
Grade	ASTM A240	C max	Si max	Mn max	P max	S max	Ni
Austenitic Grade	TP302	0.15	0.75	2.00	0.045	0.030	8.00/10.00
	TP304	0.08	0.75	2.00	0.045	0.030	8.00/10.50
	TP304L	0.035	0.75	2.00	0.045	0.030	8.00/12.00
	TP305	0.12	0.75	2.00	0.045	0.030	10.50/13.00
	TP309S	0.08	0.75	2.00	0.045	0.030	12.00/15.00
	TP310S	0.08	0.75	2.00	0.045	0.030	19.00/22.00
	TP316	0.08	0.75	2.00	0.045	0.030	10.00/14.00
	TP316L	0.035	0.075	2.00	0.045	0.030	10.00/14.00
	TP316LN	0.035	0.75	2.00	0.045	0.030	10.00/14.00
	TP316Ti	0.08	0.75	2.00	0.045	0.030	10.00/14.00
	TP317	0.08	0.75	2.00	0.045	0.030	11.00/15.00
	TP317L	0.035	0.075	2.00	0.045	0.030	11.00/15.00
	TP321	0.08	0.75	2.00	0.045	0.030	9.00/12.00
	TP347	0.08	0.075	2.00	0.045	0.030	9.00/13.00
	TP405	0.08	1.00	1.00	0.040	0.030	0.60
	TP430	0.12	1.00	1.00	0.040	0.030	0.75
	TP403	0.15	0.50	1.00	0.040	0.030	-
	TP410	0.15	1.00	1.00	0.040	0.030	0.75
	TP410S	0.0	1.00	1.00	0.040	0.030	0.60
	TP410S-HT	0.030	1.00	1.00	0.040	0.030	0.30/0.60



COMPOSITION & PHYSICAL PROPERTIES

			Tensile Test					Hardnes Test		Bend Test	
Cr	Mo	others	Tensile Strength min		Yield Strength min		Elongation	HB max	H _R B max	Degree Inside Radius	
			ksi	ks/mm2	ksi	ks/mm2	min %				
17.00/19.00	-	N≤0.10	75	(53)	30	(21)	40	22	92	NR	NR
18.00/20.00	-	N≤0.10	75	(53)	30	(21)	40	202	92	NR	NR
18.00/20.00	-	N≤0.10	70	(49)	25	(18)	40	183	88	NR	NR
17.00/19.00	-	-	75	(49)	30	(18)	40	183	88	NR	NR
22.00/24.00	-	-	75	(53)	30	(21)	40	217	95	NR	NR
24.00/26.00	-	-	75	(53)	30	(21)	40	217	95	NR	NR
16.00/18.00	2.00/3.00	N≤0.10	75	(53)	30	(21)	40	217	95	NR	NR
16.00/18.00	2.00/3.00	N≤0.10	70	(49)	25	(18)	40	217	95	NR	NR
16.00/18.00	2.00/3.00	N 0.10/0.16	75	(56)	30	(25)	40	217	95	NR	NR
16.00/18.00	2.00/3.00	N≤0.10 Ti5X(C+N)min/0.7	75	-	30	-	40	217	95	NR	NR
18.00/20.00	3.00/4.00	N≤0.10	75	(53)	30	(21)	35	217	95	NR	NR
18.00/20.00	3.00/4.00	N≤0.10	75	(49)	30	(18)	40	217	95	NR	NR
17.00/19.00	-	N≤0.10 Ti5X(C+N)/0.70	75	(53)	30	(21)	40	217	95	NR	NR
17.00/19.00	-	Cb-Ta 10xC/1.10	75	(53)	30	(21)	40	202	92	NR	NR
11.50/14.50	-	Al-0.10/0.30	60	(42)	25	(18)	20	183	88	180° T/2 for T≤3/8" T for T≤3/8"≤"	
16.00/18.00	-	-	65	(46)	30	(21)	22	183	88	180° T/2 for T≤3/8" T for T≤3/8"≤"	
11.50/13.00	-	-	-	(45)		(21)	20	200	93	180°	
11.50/13.50	-	-	65	(45)	30	(21)	20	217	95	180° T/2 for T≤3/8" T for T≤3/8"≤"	
11.50/13.50	-	-	60	(42)	30	(21)	22	183	88	180° T/2 for T≤3/8" T for T≤3/8"≤"	
11.50/13.00	-	-						180/235			



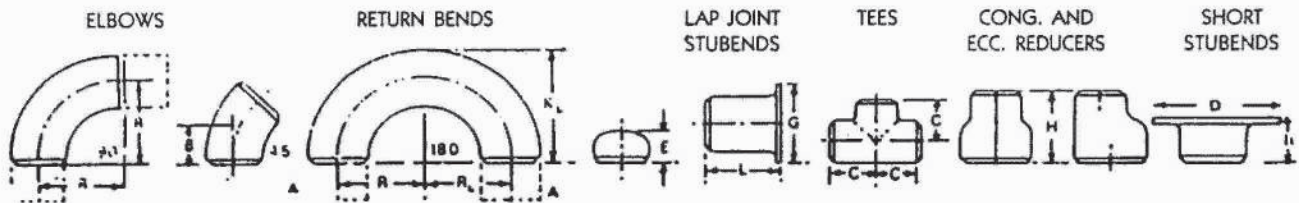
CARBON STEEL SEAMLESS PIPE DIAMENSION & WELDED (ANSI B 36.10)

Nominal pipe size	OD	Schedule 10		Schedule 20		Schedule 30		Schedule Standard		Schedule 40		Schedule 60		Schedule XS		Schedule 80		Schedule 100		Schedule 120		Schedule 140		Schedule 160		Schedule XXS	
		mm	Inch	Wall kg/m	Wall mm	Wall kg/m	Wall mm	Wall kg/m	Wall mm	Wall kg/m	Wall mm	Wall kg/m	Wall mm	Wall kg/m	Wall mm	Wall kg/m	Wall mm	Wall kg/m	Wall mm	Wall kg/m	Wall mm	Wall kg/m	Wall mm	Wall kg/m	Wall mm	Wall kg/m	Wall mm
3	1/8	10.3							1.7	0.357	1.7	0.357			2.4	0.470	2.4	0.470									
6	1/4	13.7							2.2	0.625	2.2	0.625			3.0	0.804	3.0	0.804									
10	3/8	17.1							2.8	1.26	2.8	1.26			3.7	1.10	3.2	1.10									
15	1/2	21.3							2.8	1.26	2.8	1.26			3.7	1.62	3.7	1.62									
20	3/4	26.7							2.9	1.68	2.9	1.68			3.9	2.19	3.9	2.19									
25	1	33.4							3.4	2.50	3.4	2.50			4.5	3.23	4.5	3.23									
32	1 1/4	42.2							3.6	3.38	3.6	3.38			4.8	4.47	4.9	4.46									
40	1 1/2	48.3							3.7	4.05	3.7	4.05			5.1	5.40	5.1	5.40									
50	2	60.3							3.9	5.43	3.9	5.43			5.5	7.47	5.5	7.47									
65	2 1/2	73.0							5.2	8.62	5.2	8.62			7.0	11.4	7.0	11.4									
80	3	88.9							5.5	11.3	5.5	11.3			7.6	15.3	7.6	15.3									
90	3 1/2	101.6							5.7	13.6	5.7	13.6			8.1	18.6	8.1	18.6									
100	4	114.3							6.0	16.1	6.0	16.1			8.6	22.3	8.6	22.3									
125	5	141.3							6.6	21.8	6.6	21.8			9.5	30.9	9.5	30.9									
150	6	168.3							7.1	28.2	7.1	28.2			11.0	42.5	11.0	42.5									
200	8	219.1							8.2	42.5	8.2	42.5			12.7	64.6	12.7	64.6									
250	10	273.0							9.3	60.2	9.3	60.2			12.7	81.5	12.7	81.5									
300	12	323.8							9.5	73.8	10.3	79.7			12.7	97.4	17.4	132.0									
350	14	355.6							9.5	81.2	11.1	94.6			12.7	107.0	19.0	158.0									
400	16	406.4							9.5	93.3	12.7	123.0			12.7	123.0	21.4	203.0									
450	18	457.2							9.5	105.0	14.3	156.0			12.7	139.0	23.8	254.0									
500	20	508.0							9.5	117.0	15.1	183.0			12.7	155.0	26.2	311.0									
550	22	558.8							9.5	129.0					12.7	171.0	28.6	373.0									
600	24	609.6							9.5	141.0	17.4	255.0			12.7	187.0	30.9	441.0									
650	26	660.4							9.5	153.0					12.7	203.0											
700	28	711.2							9.5	165.0					12.7	219.0											
750	30	762.0							9.5	176.0					12.7	234.6											
800	32	812.8							9.5	188.2					12.7	250.6											
850	34	863.6							9.5	200.0					12.7	266.5											
900	36	914.4							9.5	212.0					12.7	281.4											



BUTT WELDING FITTINGS TO ANSI B16.9

STAINLESS STEEL ASTM A 403/CARBON STEEL STEEL ASTM A 234



NOM	PIPE	WALL THICKNESS				RADIUS				R					L					H	D	h
BORE Inch	O. D. mm	5S	10S	40S	80S	1D	1.5D	2D	3D	A	B	C	E	G		LONG						
½	21.34	1.65	2.11	2.77	3.73	12.7	19.06	25.4	38.1	12.7	15.9	25.4	25.4	34.9	50.8	76.2	50.8	42	8			
¾	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	52	8			
1	33.40	1.365	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	62	10			
1¼	42.16	1.65	2.77	3.56	4.85	31.75	47.6	63.5	95.25	31.75	25.0	47.6	38.1	63.5	50.8	101.6	50.8	72	12			
1½	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	82	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	98	16			
2½	73.02	2.11	3.05	5.16	7.01	63.5	95.25	127.0	190.5	63.5	44.0	76.2	38.1	104.8	63.5	152.4	88.9	118	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	62.5	152.4	88.9	130	18			
3½	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	168	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	142.7	88.9	215.9	88.9	203.2	139.7	215	25			
8	219.07	2.77	3.76	8.18	12.7	203.2	304.8	406.4	609.2	203.2	127.0	177.5	101.6	270.0	101.6	203.2	152.4	270	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	304.8	457.2	609.6	914.4	304.8	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	355.6	222.2	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	406.4	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	1372	457.2	285.7	343.0	203.2	533.4	152.4	305.0	381.0	-	-			
20	508.00	4.76	5.54	9.52	12.7	508.0	762.0	1016	1524	508.0	317.6	381.0	228.6	584.2	152.4	305.0	508.0	-	-			
24	609.60	5.54	6.35	9.52	12.7	609.6	914.4	1219	1829	-	381.00	431.8	266.7	698.5	152.4	305.0	508.0	-	-			

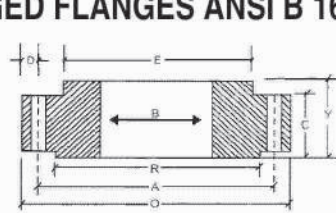
STANDARDS : All Dimensions are in mm and confirm to ANSI B 16.9 and MSS SP-43.

Radius : Radius of Short Radius Elbows in 1 time nominal pipe diameter, Radius of Long Radius Elbows is 1 1/2 time pipe diameter.

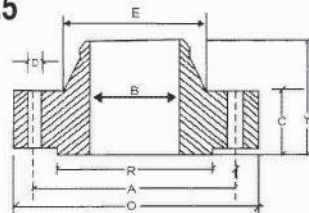
Material of Construction : S.S. 304/304L/316/316L/321 Carbon Steel and Alloy Steel



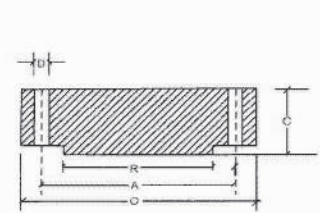
DIMENSIONS OF FORGED FLANGES ANSI B 16.5



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 A	Dia of Bolt Holes D	Dia of Holes	Thk of Flange C	Dia of Hub E	Length through Hub			Dia of Bore		Dia of R/F	Depth of Socket F	Pipe Dia X
							S/O & S/W Y	W/N Y	L/J Y	S/O & S/W B	L/J Y			
(MM)	(INCH.)	O										R		
15	1/2	88.9	60.3	15.9	4	11.1	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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 will 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 A	Dia of Bolt Holes D	Dia of Holes	Thk of Flange C	Dia of Hub E	Length through Hub			Dia of Bore		Dia of R/F	Depth of Socket F	Pipe Dia X
							S/O & S/W Y	W/N Y	L/J Y	S/O & S/W B	L/J Y			
(MM)	(INCH.)	O										R		
15	1/2	95.2	66.7	15.9	4	14.3	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	106.4	168.3	152.4	615.9	615.9	692.1	-	609.60

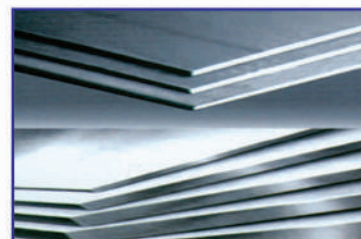
All Dimensions are in Millimeters • Flanges except Lap Joint will be furnished with (1.6mm) Raised Face, which is included in Thickness(C) and Length through Hub(Y).



BUSINESS FORMULA

COMPETITIVE PRICE + SPECIFIED MATERIAL + TIME BOUND DELIVERY = INCREASING BUSINESS

- 1) **WEIGHT OF S. S. PIPE**
 $\text{O.D. (mm)} - \text{W. Thick (mm)} \times \text{W. Thick (mm)} \times 0.0248 = \text{Wt. Per Mtr.}$
 $\text{O.D. (mm)} - \text{W. Thick (mm)} \times \text{W. Thick (mm)} \times 0.00756 = \text{Wt. Per Feet}$
- 2) **WEIGHT OF S. S. ROUND BAR**
 $\text{DIA (mm)} \times \text{DIA (mm)} \times 0.00623 = \text{Wt. Per Mtr.}$
 $\text{DIA (mm)} \times \text{DIA (mm)} \times 0.0019 = \text{Wt. Per Feet}$
- 3) **WEIGHT OF S. S. SQUARE BAR**
 $\text{DIA (mm)} \times \text{DIA (mm)} \times 0.00788 = \text{Wt. Per Mtr.}$
 $\text{DIA (mm)} \times \text{DIA (mm)} \times 0.0024 = \text{Wt. Per Feet}$
- 4) **WEIGHT OF S. S. HEXAGONAL BAR**
 $\text{DIA (mm)} \times \text{DIA (mm)} \times 0.00680 = \text{Wt. Per Mtr.}$
 $\text{DIA (mm)} \times \text{DIA (mm)} \times 0.002072 = \text{Wt. Per Feet}$
- 5) **WEIGHT OF S. S. FLAT BAR**
 $\text{Width (mm)} \times \text{Thick (mm)} \times 0.00798 = \text{Wt. Per Mtr.}$
 $\text{Width (mm)} \times \text{Thick (mm)} \times 0.00243 = \text{Wt. Per Feet}$
- 6) **WEIGHT OF S. S. SHEETS & PLATES**
 $\text{Length (Mtrs)} \times \text{Width (Mtrs)} \times \text{Thick (mm)} \times 8 = \text{Wt. Per PC}$
 $\text{Length (Fit)} \times \text{Width (Fit)} \times \text{Thick (mm)} \times 3/4 = \text{Wt. Per PC}$
- 7) **WEIGHT OF S. S. CIRCLE**
 $\text{DIA (mm)} \times \text{DIA (mm)} \times \text{Thick (mm)} \div 160 = \text{Gms. PC}$
 $\text{DIA (mm)} \times \text{DIA (mm)} \times \text{Thick (mm)} \times 0.0000063 = \text{Kg. Per PC}$
- 8) **WEIGHT OF BRASS PIPE / COPPER PIPE**
 $\text{O.D. (mm)} - \text{Thick (mm)} \times \text{Thick (mm)} \times 0.0260 = \text{Wt. Per Mtr.}$
- 9) **WEIGHT OF LEAD PIPE**
 $\text{O. D. (mm)} - \text{Wt. (mm)} \times \text{Wt. (mm)} \times 0.0345 = \text{Wt. Per Mtr.}$
- 10) **WEIGHT OF ALUMINIUM PIPE**
 $\text{O. D. (mm)} - \text{Thick (mm)} \times \text{Thick (mm)} \times 0.0083 = \text{Wt. Per Mtr.}$
- 11) **WEIGHT OF ALUMINIUM SHEET**
 $\text{Length (Mtr.)} \times \text{Width (Mtr.)} \times \text{Thick (mm)} \times 2.69 = \text{Wt. Per PC}$
- 12) **WEIGHT OF CONVERSION OF MTR. TO FEET**
 $\text{Wt. of Mtr.} \div 3.2808 = \text{Wt. Per Feet.}$





APPLICATION INDUSTRIES

- | | | |
|---|---|---|
| ☐ Oil & Gas Industries | ☐ Multi Parking Systems | ☐ Machine Tool Application |
| ☐ Steel Plant & Rolling Mills Mfg. | ☐ Military | ☐ Industrial Mining Equipments |
| ☐ Automobile & Heavy Mobile Vehicle | ☐ Power Generations Systems | ☐ Food & Beverage Equipments |
| ☐ Material Handling Stores | ☐ Cement Industry Machinery | ☐ Marine Project |
| ☐ Agriculture Machinery Equipments | ☐ Motion & Control Tech. Equipment | ☐ Oil Mill Plants |
| ☐ Refineries | ☐ Hydrostatic Drive Systems | ☐ Aerospace & Aircraft System |
| ☐ Analyzer-lab & Testing Equipments | ☐ Hydrostatic Press & Power Packs | ☐ Pollution Control Equipments |
| ☐ Paint Industries | ☐ Cooling & Heating Systems | ☐ Offshore Engineering |
| ☐ Car Care Systems | ☐ Packaging Equipments | ☐ Plastic / Rubber Processing Machines |
| ☐ Life Sciences | ☐ Engines & Railways | ☐ Chemical Machinery |
| ☐ Super Market Storage & Rack System | ☐ Pulp Paper Machinery | ☐ Fire & Safety Industries |
| ☐ Automation Machinery | ☐ Fuel Cells Components | |



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