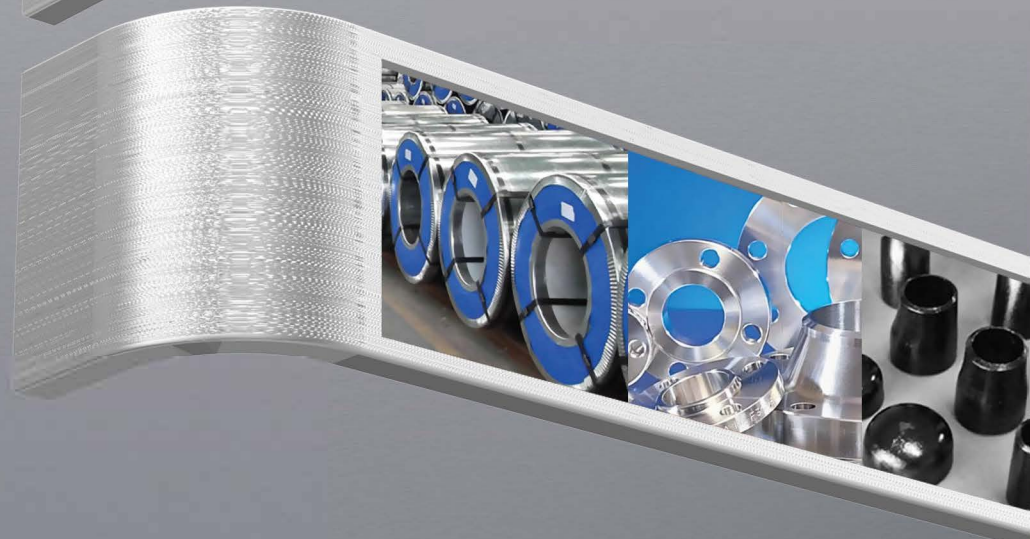
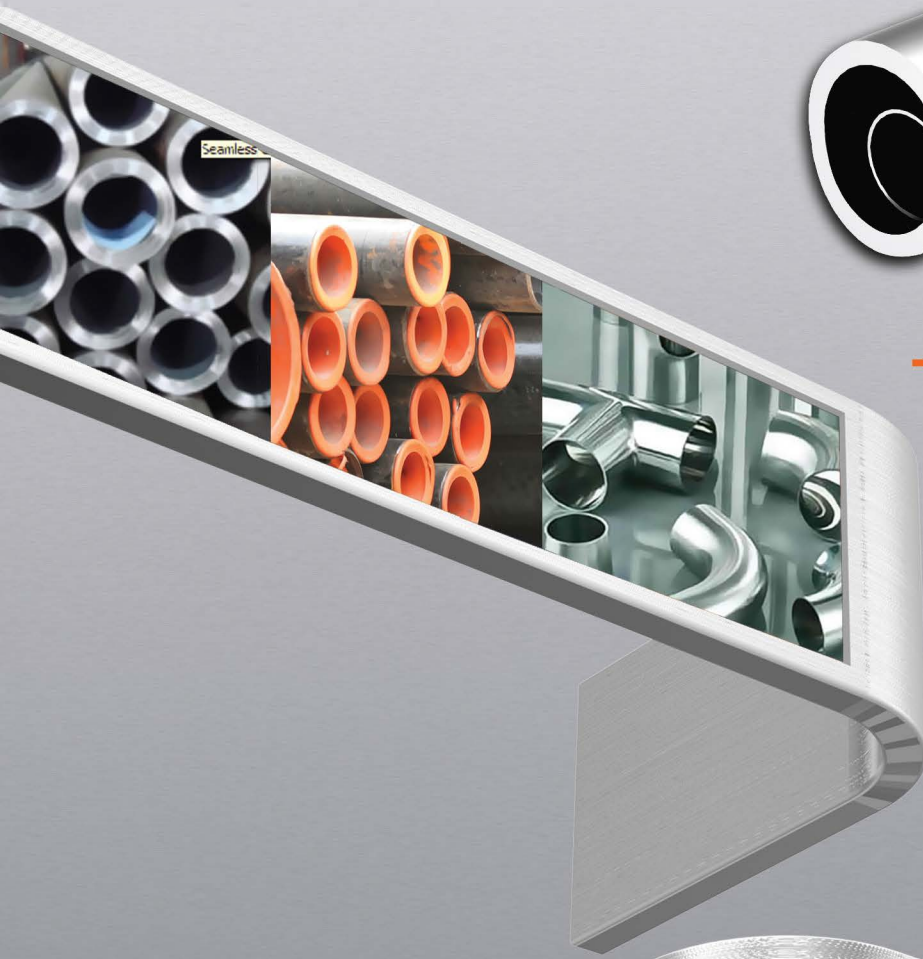


MCP

MCP COMPANY LIMITED



MCP COMPANY LIMITED
PRODUCTS FOR
STEEL PIPE,
FITTING, FLANGE



www.mcptrader.com

OUR COMPANY PROFILE

MCP COMPANY LIMITED

STEEL PIPE, FITTING, FLANGE



MCP Co., Ltd.

is the distributor and importer of all kinds of standard steel pipe i.e. Black Steel Pipes, Seamless Steel Pipes, Galvanized Steel Pipes, etc. including the accessories from the leading standardize manufacture both in Thailand and from Overseas.

The company was established in 2003 by the professional management team. We emphasize on the quality and international standard the products to meet the requirements of the market, with the most efficient system serve our customers by the well-trained sale people and marketing team.

PIPES / CARBON STEEL PIPE, GALVANIZED STEEL, STAINLESS STEEL PIPE

CARBON STEEL PIPE

- ERW
- SMLS
- SAW
- ASTM A53 GR.A/B - ASTM A106 GR.A/B
- API5L GR.B - ASTM A333 GR.1/6/3
- ASTM A335 P5/P11/P22
- WALL THICKNESS SCH.20/SCH.160

STAINLESS STEEL PIPE

- WELDED
- SEAMLESS
- ASTM A312 TP304 / 304L / 316 / 316L
- WALL THICKNESS SCH.5/SCH.160

GALVANIZED STEEL PIPE

- BS 1387-1985
- BS-S - BS-M - BS-H - TIS 276/277



IF YOU REQUIRE MORE DETAIL,
WE 'RE PROVIDE PRODUCT

STEEL PIPE, FITTING, FLANGE

MCP SYSTEM

The leader standardize manufacture
both in Thailand and from overseas



Most efficient system serve our customers



C O N T E N T S

05 MCP STEEL PIPE

- Specifications Steel Pipe
- Carbon Steel Pipes for Ordinary Piping

15 MCP FITTINGS

- Brand Steel Buttwelding Fittings

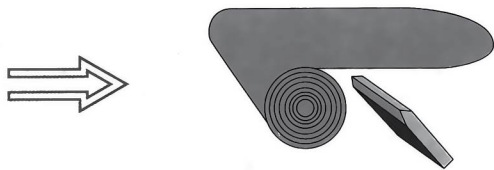
19 MCP FLANGES

- Plate Flanges for JIS 5K
- Plate Flanges for JIS 10K
- Plate Flanges for JIS 20K
- Plate Flanges for DIN PN10
- Plate Flanges for DIN PN16
- Plate Flanges for ANSI 150Lbs
- Plate Flanges for ANSI 300Lbs

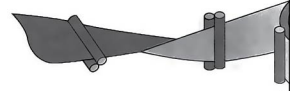
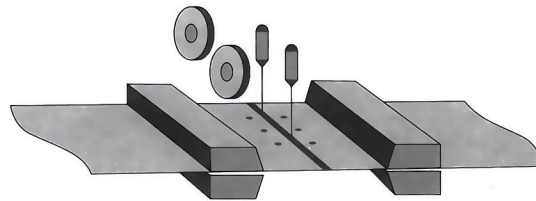
MCP STEEL PIPE

PROCESS FLOW

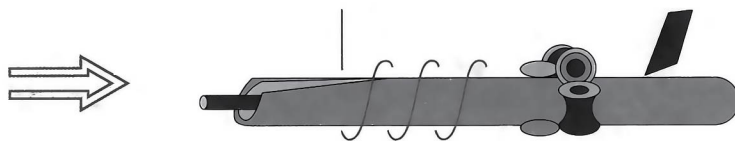
Open volume



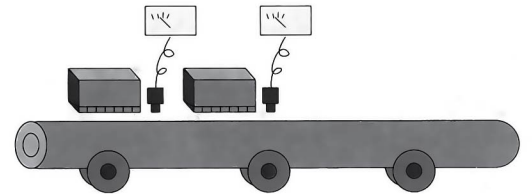
Correction The first cut Welded



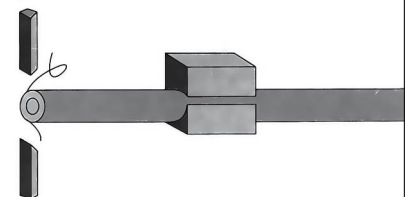
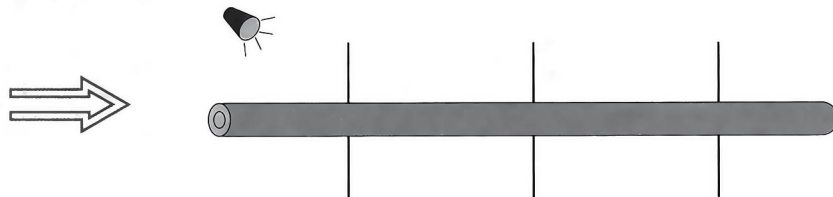
Welding Remove inside and outside burr



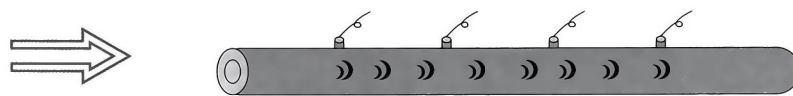
Welding seam heat treatment



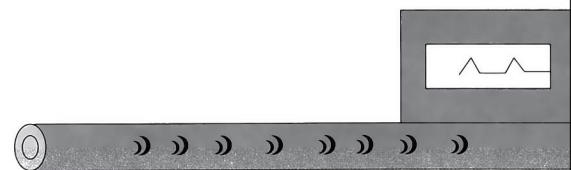
Exterior inspection Marking



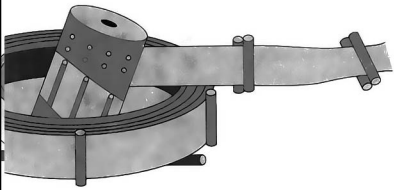
Ultrasonic inspection



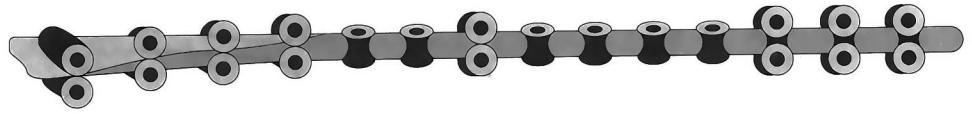
Pipe end ultrasonic inspection



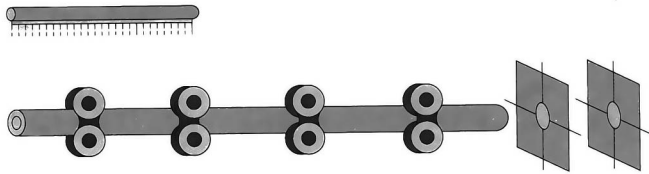
Loop storage



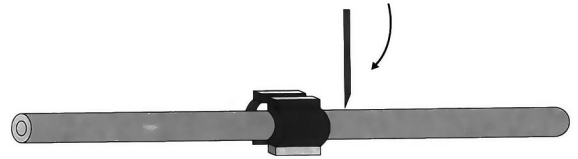
Figuration system



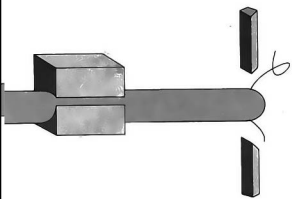
Air - cooled Water - cooled Established in diameter Correction



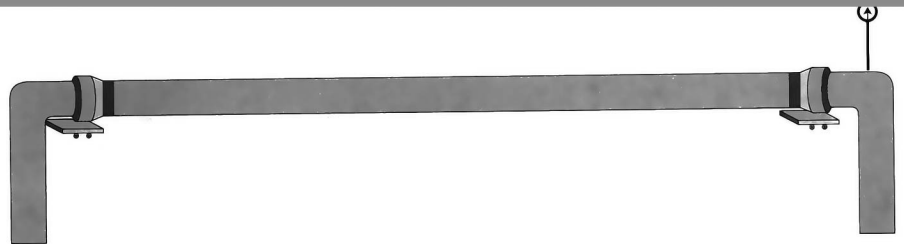
Flying saw cut



Plain end and bevel end



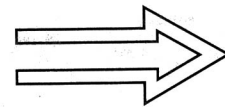
Hydraulic test



Weighting Record



Put in storage



SPECIFICATIONS

MCP STEEL PIPE

Specification		ASTM A53		ASTM A500				ASTM A513											
		A	B	A		B		MT 1010	MT 1015	MTX 1015	MT 1020	MTX 1020	1025	1026	1030	1035	4130	8630	
Classification		Ordinary piping		General structural purposes				Machine structural purposes											
Chemical composition (%)	C(Max.)	0.25	0.3	Heat 0.26	Product 0.30	Heat 0.26	Product 0.30	0.05-0.15	0.10-0.20	0.10-0.20	0.15-0.25	0.15-0.25	0.22-0.28	0.22-0.28	0.27-0.34	0.31-0.38	0.28-0.33	0.28-0.33	
	Si(Max.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15-0.35	0.15-0.35	
	Mn(Max.)	0.95	1.2	-	-	-	-	0.30-0.60	0.30-0.60	0.60-0.90	0.30-0.60	0.70-1.00	0.30-0.60	0.60-0.90	0.60-0.90	0.60-0.90	0.40-0.60	0.40-0.60	
	P(Max.)	0.05	0.05	0.035	0.045	0.035	0.045	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035
	S(Max.)	0.045	0.045	0.035	0.045	0.035	0.045	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.040	0.040	
	Other	-	-	Cu 0.20 (Min.)	Cu 0.18 (Min.)	Cu 0.20 (Min.)	Cu 0.18 (Min.)	-	-	-	-	-	-	-	-	-	-	-	
Mechanical Properties	Tensile strength	PSI	48000	60000	R 45000	S 45000	R 58000	S 58000	Type	Grade	Tensile strength Min. (PSI)	Yield point Min. (PSI)	Elongation Min (%)						
	(Min.)	MPa	330	415	310	310	400	400	AS-welded	1010 1015 1020 1025 1030 1035	45000 48000 52000 56000 62000 66000	32000 35000 38000 40000 45000 50000	15 12 12 12 10 10						
	(Min.)	kgf/mm²	33.8	42.2	31.6	31.6	40.8	40.8	Normalized	1010 1015 1020 1025 1030 1035	40000 45000 50000 55000 60000 65000	25000 30000 35000 37000 40000 45000	30 30 25 25 25 20						
	Yield point	PSI	30000	35000	33000	39000	42000	46000	Sink-drawn	1010 1015 1020 1025 1030 1035	50000 55000 60000 65000 70000 80000	40000 45000 50000 55000 62000 70000	8 8 8 7 7 7						
	(Min.)	MPa	205	240	228	269	290	317	Mandrel-drawn	1010 1015 1020 1025 1030 1035	60000 65000 70000 75000 85000 90000	50000 55000 60000 65000 75000 80000	5 5 5 5 5 5						
	(Min.)	kgf/mm²	21.1	24.6	23.3	27.4	29.6	32.3	Mandrel-drawn stress-relieved	1010 1015 1020 1025 1030 1035	50000 60000 65000 70000 80000 85000	45000 50000 55000 60000 70000 75000	12 12 10 10 10 10						
	Elongation (Min.)		e = 625.000 A ^{0.2} / U ^{0.9}		25 (56t+ 17.5)		23 (61t+ 12)												
	Flattening test	H : Distance between Flattening	NPS2 over																
		H : Inside disance between flattening	Weld H = 2/3D		Weld H = 2/3D				Welded part H = 2/3D										
	D : Outside diameter of the pipe (mm)	D : Inside diameter of the pipe (mm)	Base metal H = 1/3D		Base metal H = 1/3D				Base metal H = 1/3D										
T : Wall thickness of the pipe (mm)		H = 1/3D		Soundness Test H = Contact				Welded part is located at 90 degree											
Bending test	Bending angel X Inside radius	90°x 12D																	
	(D : Outside diameter of the pipe)	close coiling																	
Hydrostatic test	P : Test pressure (PSI, MPa)	NPS2 below																	
	D : Outside diameter diameter (mm)	180°x 8D																	
Others	P : Test pressure (PSI, MPa)	$\frac{P-2St}{D}$						$\frac{P-2St}{D}$											
	D : Outside diameter diameter (mm)							S = allowable fiber stress of 14000PSI or 96 5MPa											
Others	T : Thickness (mm)																		
	NDT (Non-Destructive Test)	Ultrasonic Test						Eddy - Current Test or											
Others	Weight of zinc coating	Or						Ultrasonic Test or Flux leakage Test											
	Average :	Eddy current test																	
Others	Individual :																		
	Min. 550 g/m²																		
Others	Individual :																		
	Min. 490 g/m²																		
Others	Flaring Test																		
	ID' = 1.15D' (60° tool)																		
Others	D' : Inside diameter																		
	ID' = Enlarged inside diameter																		

SPECIFICATIONS

MCP STEEL PIPE

Specification		ASTM A589				BS 1387	BS 3601			BS 3602		BS 1775			
Classification	Application	TYPE 1	TYPE 2	TYPE 3	TYPE 4	(L) Light (M) Medium (H) Heavy	ERW 320	ERW 360	ERW 430	ERW 360	ERW 410	ERW 11	ERW 16	ERW 20	ERW 23
		Drive Pipe (Grade A)	WaterWell Reamed and Dried Pipe (Grade A)	DrivenWell Pipe (Grade A)	WaterWell Casing Pipe (Grade A)	Ordinary piping	Pressure services			High-pressure services		Machine structural purposes, General structural purposes			
Chemical composition (%)	C(Max.)	-	-	-	-	0.20	0.16	0.17	0.21	0.17	0.21	-	-	-	-
	Si(Max.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Mn(Max.)	-	-	-	-	1.20	0.30-0.70	0.40-0.80	0.40-1.20	0.40-0.80	0.40-1.20	-	-	-	-
	P(Max.)	0.050	0.050	0.050	0.050	0.045	0.040	0.040	0.040	0.045	0.045	0.060	0.060	0.060	0.060
	S(Max.)	0.060	0.060	0.060	0.060	0.045	0.040	0.040	0.040	0.045	0.045	0.060	0.060	0.060	0.060
	Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mechanical Properties	Tensile strength	PSI	48000	60000	48000	-	-	-	-	-	-	-	-	-	-
		MPa	331	413	331	320-460	320-460	360-500	430-570	360-500	410-550	309	386	463	494
	(Min.)	kgf/mm ²	33.8	42.1	33.8	32.7-46.9	32.7-46.9	36.7-51.0	43.9-58.2	36.7-51.0	41.8-56.1	31.5	39.4	47.2	50.4
	Yield point	PSI	30000	35000	30000	-	-	-	-	-	-	-	-	-	-
		MPa	207	241	207	195	195	235	275	215	245	170	247	309	355
	(Min.)	kgf/mm ²	21.1	24.6	21.1	19.9	19.9	24.0	28.1	21.9	25.0	17.3	25.2	31.5	36.2
	Elongation(Min.)	e = 625.000 (A02 / U0.9)					20	25	25	22	24	22	600/TS(700/TS) TS : Ton/in ² Kg/mm ²		
Flattening test	H : Distance between Flattening plates					DN Over 50	H = $\frac{(1+e)t}{e+tD}$			H = $\frac{(1+e)t}{e+tD}$		H' = 3t or H' = 1/2D'	H' = 6t or H' = 3/4D'	H' = 8t or H' = 7/8D'	H' = 6t or H' = 3/4D'
	H : Inside disance between flattening plates					Welded part H = 0.75D	Constant					whichever is the smaller	whichever is the smaller	whichever is the smaller	whichever is the smaller
	D : Outside diameter of the pipe					Base metal H = 0.60D	Class	Welded part: Base metal							
	D : Inside diameter of the pipe (mm)					Welded part is located at 90 degree	320	0.029	0.10			e = 0.10	e = 0.08		
T : Wall thickness of the pipe						360	0.026	0.09							
						460	0.023	0.08							
Bending test	Bending angel X					DN 50 below									
	Inside radius (D : Outside diameter t : Wall thickness)					Black pipes 180 X 6D Galvanized pipes 90° X 8D				Outside diameter of bar is 4t					
Hydrostatic test	P : Test pressure	Prescribed according to dimension and grade				51	P = $\frac{20st}{D}$ (bar)			P = $\frac{20st}{D}$ (bar)					
	S : Fiber stress, PSI (mPa)					(50 bar)	S : 80% of the specified minimum yield stregh			S : 80% of the specified minimum yield stregh					
	D : Outside diameter (mm)									Max 143Kg/cm ² (140 bar)					
	T : Thickness (mm)														
NDT (Non-Destructive Test)					Eddy Current Test (substitute with hydrostatic test)	Eddy Current Test (Applied to pipes with Outside diameter of 180 mm or less as substitution for hydrostatic test)			Ultrasonic Test						
Others					Bore Test (hotdip zinc coated tubes)				The Charpy V-notch Impact test		Drift Expanding Test				
											1D = 1.125D'	1D = 1.125D'	1D = 1.125D'	1D = 1.125D'	

ASTM A53

NPS Designator	Outside diameter		Wall thickness		Nominal weight						Weight class	Schedule No.	Test pressure								
					Plain end			threads & couplings					Plain end				threads & couplings				
					lb/ft	kg/ft	kg/m	lb/ft	kg/ft	kg/m			Grade A		Grade B		Grade A		Grade B		
													psi	kpa	psi	kpa	psi	kpa	psi	kpa	
5	5.563	141.3	0.156	3.96	9.01	4.09	13.41	-	-	-	-	-	1010	6960	1180	8140	-	-	-	-	
			0.188	4.78	10.79	4.90	16.09	-	-	-	-	-	-	1220	8410	1420	9790	-	-	-	-
			0.219	5.56	12.50	5.67	18.61	-	-	-	-	-	-	1420	9790	1650	11380	-	-	-	-
			0.258	6.55	14.62	6.64	21.77	14.81	6.73	22.07	STD	40	1670	11510	1950	13440	1700	11720	1900	13100	
			0.281	7.14	15.85	7.20	23.62	-	-	-	-	-	-	1820	12550	2120	14620	-	-	-	-
			0.312	7.92	17.50	7.94	26.05	-	-	-	-	-	-	2020	13930	2360	16270	-	-	-	-
			0.344	8.74	19.17	8.71	28.57	-	-	-	-	-	-	2230	15380	2600	17930	-	-	-	-
			0.375	9.52	20.78	9.43	30.94	21.09	9.58	31.42	XS	80	2430	16750	2800	19310	2400	16550	2800	19310	
			0.500	12.70	27.04	12.28	40.28	-	-	-	-	-	120	2800	19310	2800	19310	-	-	-	-
			0.625	15.88	32.96	14.97	49.11	-	-	-	-	-	160	2800	19310	2800	19310	-	-	-	-
6	6.250	168.3	0.188	4.78	12.92	5.87	19.27	-	-	-	-	-	1020	7030	1190	8200	-	-	-	-	
			0.219	5.56	14.98	6.80	22.31	-	-	-	-	-	1190	8200	1390	9580	-	-	-	-	
			0.25	6.35	17.03	7.73	25.36	-	-	-	-	-	1360	9380	1580	10890	-	-	-	-	
			0.280	7.11	18.97	8.61	28.26	19.18	8.71	28.58	STD	40	1520	10480	1780	12270	1500	10340	1800	12410	
			0.312	7.92	21.04	9.55	31.32	-	-	-	-	-	1700	11720	1980	13650	-	-	-	-	
			0.344	8.74	23.08	10.48	34.39	-	-	-	-	-	1870	12890	2180	15030	-	-	-	-	
			0.375	9.52	25.03	11.36	37.28	-	-	-	-	-	2040	14070	2380	16410	-	-	-	-	
			0.432	10.97	28.57	12.97	42.56	28.89	13.12	43.05	XS	80	2350	16200	2740	18890	2300	15860	2700	18620	
			0.562	14.27	36.39	16.52	54.20	-	-	-	-	-	120	2800	19310	2800	19310	-	-	-	-
			0.719	18.26	45.35	20.59	67.56	-	-	-	-	-	160	2800	19310	2800	19310	-	-	-	-
8	8.625	219.1	0.188	4.78	16.94	7.70	25.26	-	-	-	-	-	780	5380	920	6340	-	-	-	-	
			0.203	5.16	18.26	8.30	27.22	-	-	-	-	-	850	5860	1000	6890	-	-	-	-	
			0.219	5.56	19.66	8.92	29.28	-	-	-	-	-	910	6270	1070	7380	-	-	-	-	
			0.250	6.35	22.36	10.15	33.31	-	-	-	-	-	20	1040	7170	1220	8410	-	-	-	-
			0.277	7.04	24.70	11.07	36.31	25.55	11.60	38.07	-	30	1160	7800	1350	9310	1200	8270	1300	8960	
			0.312	7.92	27.70	12.57	41.24	-	-	-	-	-	1300	8960	1520	10480	-	-	-	-	
			0.322	8.18	28.55	12.97	42.55	29.35	13.33	43.73	STD	40	1340	9240	1570	10820	1300	8960	1600	11030	
			0.344	8.74	30.42	13.82	45.34	-	-	-	-	-	1440	9930	1680	11580	-	-	-	-	
			0.375	9.52	33.04	15.00	49.20	-	-	-	-	-	1570	10820	1830	12620	-	-	-	-	
			0.406	10.31	35.64	16.18	53.08	-	-	-	-	-	60	1700	11720	2000	13790	-	-	-	-
			0.438	11.13	38.30	17.40	57.08	-	-	-	-	-	1830	12620	2130	14690	-	-	-	-	
			0.500	12.70	43.39	19.70	64.64	43.90	19.94	65.41	XS	80	2090	14410	2430	16750	2100	14480	2400	16550	
			0.594	15.09	50.95	23.14	75.92	-	-	-	-	-	100	2500	17240	2800	19310	-	-	-	-
			0.719	18.26	60.71	27.57	90.44	-	-	-	-	-	120	2800	19310	2800	19310	-	-	-	-
0.182	20.62	67.76	30.76	100.92	-	-	-	-	-	140	2800	19310	2800	19310	-	-	-	-			
10	10.750	273.0	0.188	4.78	21.21	9.64	31.62	-	-	-	-	-	630	4340	730	5030	-	-	-	-	
			0.203	5.16	22.87	10.39	34.08	-	-	-	-	-	680	4690	800	5520	-	-	-	-	
			0.219	5.56	24.63	11.18	36.67	-	-	-	-	-	730	5030	860	5930	-	-	-	-	
			0.250	6.35	28.04	12.73	41.75	-	-	-	-	-	20	840	5790	980	6760	-	-	-	-
			0.279	7.09	31.20	14.17	46.49	32.75	14.87	48.80	-	-	930	6410	1090	7520	950	6550	1100	7580	
			0.307	7.80	34.24	15.55	51.01	35.75	16.24	53.27	-	30	1030	7100	1200	8270	1000	6890	1200	8270	
			0.344	8.74	38.23	17.36	56.96	-	-	-	-	-	1150	9730	1340	9240	-	-	-	-	
			0.365	9.27	40.48	18.38	60.29	41.85	19.31	63.36	STD	40	1220	8410	1430	9860	1200	8270	1400	9650	
			0.438	11.13	48.19	21.91	71.27	-	-	-	-	-	1470	10140	1710	11790	-	-	-	-	
			0.500	12.70	54.74	24.85	81.52	55.82	25.35	83.17	XS	60	1670	11510	1950	13440	1700	11720	2000	13790	
			0.594	15.09	64.43	29.25	95.97	-	-	-	-	-	80	1990	13720	2320	16000	-	-	-	-
			0.719	18.26	77.03	34.96	114.70	-	-	-	-	-	100	2410	16620	2800	19310	-	-	-	-
			0.844	21.44	89.29	40.54	133.00	-	-	-	-	-	120	2800	19310	2800	19310	-	-	-	-

ASTM A53

NPS Designator	Outside diameter		Wall thickness		Nominal weight						Weight class	Schedule No.	Test pressure									
					Plain end			threads & couplings					Plain end				threads & couplings					
	in.	mm	in.	mm	lb/ft	kg/ft	kg/m	lb/ft	kg/ft	kg/m			Grade A		Grade B		Grade A		Grade B			
													psi	kpa	psi	kpa	psi	kpa	psi	kpa		
12	12.750	323.8	0.203	5.16	27.20	12.36	40.55	-	-	-	-	-	570	3930	670	4620	-	-	-	-		
			0.219	5.56	29.31	13.30	43.63	-	-	-	-	-	-	620	-	720	4960	-	-	-	-	
			0.25	6.35	33.38	15.15	49.71	-	-	-	-	-	20	710	4270	820	5650	-	-	-	-	
			0.281	7.14	37.42	16.99	55.75	-	-	-	-	-	-	790	4900	930	6410	-	-	-	-	
			0.312	7.92	41.45	18.80	61.69	-	-	-	-	-	-	880	5450	1030	7100	-	-	-	-	
			0.033	8.38	43.77	19.87	65.18	45.45	20.64	67.72	-	-	-	30	930	6070	1090	7520	950	6550	1100	7580
			0.344	8.74	45.58	20.70	67.90	-	-	-	-	-	-	-	970	6410	1130	7790	-	-	-	-
			0.375	9.52	49.56	22.49	73.78	51.15	23.23	76.21	STD	-	-	-	1060	6690	1240	8550	1100	7580	1200	8270
			0.060	10.31	53.52	24.29	79.70	-	-	-	-	-	-	40	1160	7310	1340	9240	-	-	-	-
			0.438	11.13	57.59	26.16	85.82	-	-	-	-	-	-	-	1240	7930	1440	9930	-	-	-	-
			0.500	12.70	65.43	29.70	97.43	66.71	30.30	99.40	XS	-	-	-	1410	8550	1650	11380	1400	9650	1600	11030
			0.562	14.27	73.15	33.25	108.92	-	-	-	-	-	-	60	1590	9720	1850	12760	-	-	-	-
			0.688	17.48	88.63	40.25	132.04	-	-	-	-	-	-	80	1940	10960	2270	15650	-	-	-	-
0.644	21.44	107.32	48.73	159.86	-	-	-	-	-	-	100	2390	13380	2780	19170	-	-	-	-			
14	14.000	355.6	0.210	5.33	30.93	14.03	46.04	-	-	-	-	-	540	16480	630	4340	-	-	-	-		
			0.219	5.56	32.23	14.63	47.99	-	-	-	-	-	-	560	3720	660	4550	-	-	-	-	
			0.250	6.35	36.71	16.67	54.69	-	-	-	-	-	10	640	3860	750	5170	-	-	-	-	
			0.281	7.14	41.17	18.70	61.35	-	-	-	-	-	-	720	4410	840	5790	-	-	-	-	
			0.312	7.92	45.61	20.70	67.90	-	-	-	-	-	20	800	4960	940	6480	-	-	-	-	
			0.344	8.74	50.17	22.79	74.76	-	-	-	-	-	-	880	5520	1030	7100	-	-	-	-	
			0.375	9.52	54.57	24.77	81.25	-	-	-	STD	-	30	960	6070	1120	7720	-	-	-	-	
			0.438	11.13	63.44	28.82	94.55	-	-	-	-	-	40	1130	6620	1310	9030	-	-	-	-	
			0.469	11.91	67.78	30.77	100.94	-	-	-	-	-	-	1210	7790	1410	9720	-	-	-	-	
			0.500	12.07	72.09	32.73	107.39	-	-	-	XS	-	-	1290	8340	1500	10340	-	-	-	-	
			0.594	15.09	85.05	38.62	126.71	-	-	-	-	-	60	1530	8890	1790	12340	-	-	-	-	
			0.750	19.05	106.13	48.19	158.10	-	-	-	-	-	80	1930	10550	2250	15510	-	-	-	-	
			0.938	23.83	130.85	59.42	194.96	-	-	-	-	-	100	2410	13310	2800	19310	-	-	-	-	
			1.094	27.79	150.70	68.48	224.65	-	-	-	-	-	120	2800	16620	2800	19310	-	-	-	-	
			1.250	31.75	170.22	77.29	253.56	-	-	-	-	-	140	2800	19310	2800	19310	-	-	-	-	
			1.406	35.71	189.11	85.86	281.70	-	-	-	-	-	160	2800	19310	2800	19310	-	-	-	-	
2.000	50.80	256.32	116.38	381.83	-	-	-	-	-	-	2800	19310	2800	19310	-	-	-	-				
2.125	53.97	269.51	122.36	401.44	-	-	-	-	-	-	2800	19310	2800	19310	-	-	-	-				
2.200	55.88	277.26	125.89	413.01	-	-	-	-	-	-	2800	19310	2800	19310	-	-	-	-				
2.500	63.50	307.05	139.42	457.40	-	-	-	-	-	-	2800	19310	2800	19310	-	-	-	-				
16	16.000	406.4	0.219	5.56	36.91	16.75	54.96	-	-	-	-	-	490	3930	570	3930	-	-	-	-		
			0.250	6.35	42.05	19.09	62.64	-	-	-	-	-	10	560	4550	660	4550	-	-	-	-	
			0.281	7.14	47.17	21.43	70.30	-	-	-	-	-	-	630	5100	740	5100	-	-	-	-	
			0.312	7.92	52.27	23.72	77.83	-	-	-	-	-	20	700	5650	820	5650	-	-	-	-	
			0.344	8.74	57.52	26.12	85.71	-	-	-	-	-	-	770	6210	900	6210	-	-	-	-	
			0.375	9.52	62.58	28.40	93.17	-	-	-	STD	-	30	840	6760	980	6760	-	-	-	-	
			0.438	11.13	72.80	33.07	108.49	-	-	-	-	-	-	990	7930	1150	7930	-	-	-	-	
			0.469	11.91	77.79	35.31	115.86	-	-	-	-	-	-	1060	8480	1230	8480	-	-	-	-	
			0.500	12.70	82.77	37.58	123.30	-	-	-	XS	-	40	1120	9030	1310	9030	-	-	-	-	
			0.656	16.66	107.50	48.80	160.12	-	-	-	-	-	60	1480	11860	1720	11860	-	-	-	-	
			0.844	21.44	136.62	62.04	203.53	-	-	-	-	-	80	1900	15310	2220	15310	-	-	-	-	
			1.031	26.19	164.82	74.85	245.56	-	-	-	-	-	100	2320	18680	2710	18680	-	-	-	-	
			1.219	30.96	192.43	87.37	286.64	-	-	-	-	-	120	2740	19310	2800	19310	-	-	-	-	
			1.438	36.53	223.64	101.56	333.19	-	-	-	-	-	140	2800	19310	2800	19310	-	-	-	-	
1.594	40.49	245.25	111.36	365.35	-	-	-	-	-	160	2800	19310	2800	19310	-	-	-	-				

ASTM A53

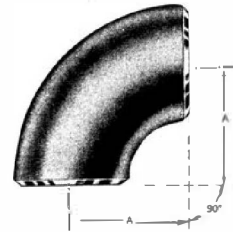
NPS Designator	Outside diameter		Wall thickness		Nominal weight			Weight class	Schedule No.	Test pressure				
					Plain end					Plain end				
	in.	in.	mm	in.	mm	lb/ft	kg/ft			kg/m	Grade A		Grade B	
											psi	kpa	psi	kpa
18	18.000	457.2	0.250	6.35	47.39	21.52	70.60	-	10	500	3450	580	4000	
			0.281	7.14	53.18	24.15	79.24	-	-	560	3860	660	4550	
			0.312	7.92	58.94	26.75	87.75	-	20	620	4270	730	5030	
			0.344	8.74	64.87	29.46	96.66	-	-	690	4760	800	5520	
			0.375	9.52	70.59	32.03	105.10	STD	-	750	5170	880	6070	
			0.406	10.31	76.29	34.63	113.62	-	-	810	5580	950	6550	
			0.438	11.13	82.15	37.32	122.43	-	30	880	6070	1020	7030	
			0.469	11.91	87.81	39.86	130.78	-	-	940	6480	1090	7520	
			0.500	12.70	93.45	42.43	139.20	XS	-	1000	6890	1170	8070	
			0.562	14.27	104.67	47.51	155.87	-	40	1120	7720	1310	9030	
			0.750	19.05	138.17	62.74	205.83	-	60	1500	10340	1750	12070	
			0.938	23.83	170.92	77.62	254.67	-	80	1880	12960	2190	15100	
			1.156	29.36	207.96	94.41	309.76	-	100	2310	15930	2700	18620	
			1.375	34.92	244.14	110.84	363.64	-	120	2750	18960	2800	19310	
1.562	39.67	274.22	124.50	408.45	-	140	2800	19310	2800	19310				
1.781	45.24	308.50	140.08	459.59	-	160	2800	19310	2800	19310				
20	20.000	508	0.250	6.35	52.73	23.94	78.55	-	10	450	3100	520	3590	
			0.281	7.14	59.18	26.88	88.19	-	-	510	3520	590	4070	
			0.312	7.92	65.60	29.77	97.67	-	-	560	3860	660	4550	
			0.344	8.74	72.21	32.80	107.60	-	-	620	4270	720	4960	
			0.375	9.52	78.60	35.67	117.02	STD	20	680	4690	790	5450	
			0.406	10.31	84.96	38.57	126.53	-	-	730	5030	850	5860	
			0.438	11.13	91.51	41.57	136.37	-	-	790	5450	920	6340	
			0.469	11.91	97.83	44.41	145.70	-	-	850	5860	950	6550	
			0.500	12.70	104.13	47.28	155.12	XS	30	900	6210	1050	7240	
			0.594	15.09	123.11	55.91	183.42	-	40	1170	8070	1250	8620	
			0.812	20.62	166.40	75.54	247.83	-	60	1460	10070	1710	11790	
			1.031	26.19	208.87	94.84	311.17	-	80	1860	12820	2170	14960	
			1.281	32.54	256.10	116.29	381.53	-	100	2310	15930	2690	18550	
			1.500	38.10	296.37	134.57	441.49	-	120	2700	18620	2800	19310	
1.750	44.45	341.10	154.87	508.11	-	140	2800	19310	2800	19310				
1.969	50.01	379.10	172.15	564.81	-	160	2800	19310	2800	19310				
24	24.000	609.6	0.250	6.35	63.41	28.79	94.46	-	10	380	2620	440	3030	
			0.281	7.14	71.18/	32.33	106.08	-	-	420	2900	490	3380	
			0.312	7.92	78.93	35.82	117.51	-	-	470	3240	550	3790	
			0.344	8.74	86.91	39.47	129.50	-	-	520	3590	600	4140	
			0.375	9.52	94.62	42.94	140.88	STD	20	560	3860	660	4550	
			0.406	10.31	102.31	46.44	152.37	-	-	610	4210	710	4900	
			0.438	11.13	110.22	50.07	164.26	-	-	660	4550	770	5310	
			0.469	11.91	117.86	53.50	175.54	-	-	700	4830	820	5650	
			0.500	12.70	125.49	56.98	186.94	XS	-	750	5170	880	6070	
			0.562	14.27	140.68	63.86	209.50	-	30	840	5790	980	6760	
			0.688	17.48	171.29	77.80	255.24	-	40	1030	7100	1200	8270	
			0.938	23.83	231.03	104.92	344.23	-	-	1410	9720	1640	11310	
			0.969	24.61	238.85	108.21	355.02	-	60	1450	10000	1700	11720	
			1.219	30.96	296.58	134.65	441.78	-	80	1830	12620	2130	14690	
1.531	38.89	367.39	166.83	547.33	-	100	2300	15860	2680	18480				
1.812	46.02	429.39	194.94	639.58	-	120	2720	18750	2800	19310				
2.062	52.37	483.12	219.34	719.63	-	140	2800	19310	2800	19310				
2.344	59.54	542.14	246.17	807.63	-	160	2800	19310	2800	19310				

MCP FITTINGS

FIGURE
90° ELBOWS
LONG



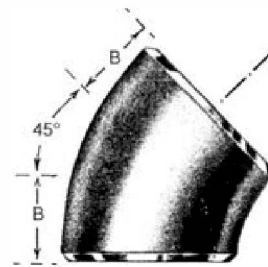
SECTION
90° ELBOWS
LONG



45° ELBOWS



45° ELBOWS



CAPS



CAPS



BRAND STEEL BUTTWELDING FITTINGS

SPS FITTINGS

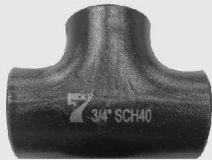
* DIMENSIONAL TOLERANCES ANSI B16.9

All Fittings				90 Deg 45 Deg Elbows and Tees	reducers	Caps	90 Deg. Elbows and Tees		
Nominal Pipe Size	Outside Diameter at Bevel D	Inside Diameter at End	Wall Thickness T Not	Center to End Dimension A.B.C.M	Overall Length F.H	Overall Length E	Nominal Pipe Size	Angularity To	
								off Angle Q	off Plane P
1/2 to 2.1/2	+1.524 -0.762	±0.762	less than	±1.524	±1.524	±3.048	1/2 to 4	0.762	1.524
3 to 4	±1.524	±1.524	87.50%	±1.524	±1.524	±3.048	5 to 8	1.524	3.048
5 to 8	+2.286	±1.524	of nominal	±1.524	±1.524	±6.350	10 to 18	2.286	4.826
10 to 18	-1.524 +4.064 -3.048	±3.048	thickness	±2.286	±2.286	±6.350	14 to 16	2.286	9.652

NOMINAL PIPE SIZE	OUTSIDE DIAMETER	WALL THICKNESS		LONG RADIUS ELBOWS			CAPS E	NOMINAL PIPE SIZE
		STD	X.H	A	B	K		
1/2	21.33	2.77	3.73	38.10	15.87	47.62	25.40	1 1/2
3/4	26.67	2.87	3.91	28.57	11.11	42.86	25.40	3/4
1	33.40	3.38	4.55	38.10	22.22	55.56	38.10	1
1 1/4	42.16	3.56	4.85	47.62	25.40	69.85	38.10	1 1/4
1 1/2	48.26	3.68	5.08	57.15	28.57	82.55	38.10	1 1/2
2	60.33	3.91	5.54	76.20	34.92	106.35	38.10	2
2 1/2	73.03	5.16	7.62	95.25	44.45	131.75	38.10	2 1/2
3	88.90	5.49	8.08	114.30	50.80	158.75	50.80	3
3 1/2	101.60	5.74	8.56	133.35	57.15	184.15	63.50	3 1/2
4	114.30	6.02	9.52	152.40	63.50	209.55	63.50	4
5	141.30	6.55	10.97	190.50	79.37	261.9	76.20	5
6	168.30	7.11	12.70	228.60	95.25	312.72	88.90	6
8	219.10	8.11	12.70	304.80	127.00	414.32	101.60	8
10	273.10	9.27	12.70	381.00	158.75	517.53	127.00	10
12	323.90	9.52	12.70	457.20	190.50	619.13	152.40	12

FIGURE TEES

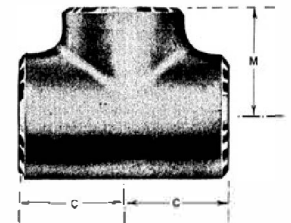
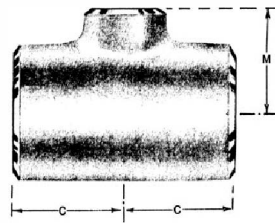
STRAIGHT



REDUCING



SECTION TEES



REDUCERS

CONCENTRIC



ECCENTRIC



REDUCER

CONCENTRIC



ECCENTRIC



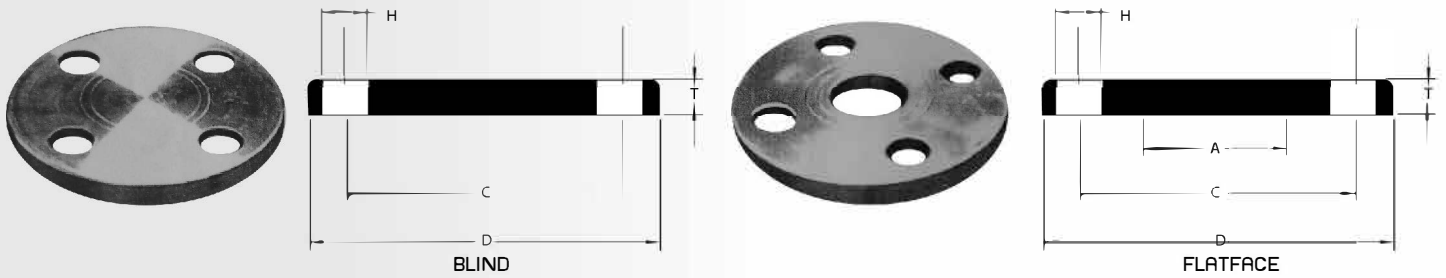
* DIMENSIONAL TOLERANCES ANSI B16.9

NOMINAL PIPE SIZE	REDUCING TEES				NOMINAL PIPE SIZE	REDUCING TEES				NOMINAL PIPE SIZE	REDUCERS			NOMINAL PIPE SIZE	REDUCERS		
	O.D.1	O.D.2	C	M		O.D.1	O.D.2	C	M		O.D.1	O.D.2	H		O.D.1	O.D.2	H
1/2 X 3/8	21.33	17.14	25.40	25.40	4 X 3	114.30	88.90	104.77	98.42	1/2 X 3/8	21.33	17.14	38.10	3 1/2 X 2 1/2	101.60	73.03	101.60
3/4 X 1/2	26.67	21.33	28.57	28.57	4 X 2 1/2	114.30	73.03	104.77	95.25	3/4 X 1/2	26.67	21.33	38.10	3 1/2 X 2	101.60	60.33	101.60
1 X 3/4	33.40	26.67	38.10	38.10	4 X 2 1/2	114.30	60.33	104.77	88.90	1 X 3/4	33.40	26.67	50.80	3 1/2 X 1 1/2	101.60	48.26	101.60
1 X 1/2	33.40	21.83	38.10	38.10	4 X 1 1/2	114.30	48.26	104.77	85.73	1 X 1/2	33.40	21.33	50.80	4 1/2 X 3 1/2	114.30	101.60	101.60
1 1/4 X 1	42.16	33.40	47.62	47.62	5 X 4	141.30	114.30	123.82	117.48	1 X 3/8	33.40	17.14	50.80	4 1/2 X 3	114.30	88.90	101.60
1 1/4 X 3/4	42.16	26.67	47.62	47.62	5 X 3 1/2	141.30	101.60	123.82	114.30	1 1/4 X 1	42.16	33.40	50.80	4 1/2 X 2 1/2	114.30	73.03	101.60
1 1/4 X 1/2	42.16	21.33	47.62	47.62	5 X 3	141.30	88.90	123.82	111.12	1 1/4 X 3/4	42.16	26.67	50.80	4 1/2 X 2	114.30	60.33	101.60
1 1/2 X 1 1/4	48.26	42.16	57.15	57.15	5 X 2 1/2	141.30	73.03	123.82	107.95	1 1/4 X 1/2	42.16	21.33	50.80	5 X 4	141.30	114.30	127.00
1 1/2 X 1	48.26	33.40	57.15	57.15	5 X 2	141.30	60.33	123.82	104.77	1 1/2 X 1 3/4	48.26	42.16	63.50	5 X 3	141.30	88.90	127.00
1 1/2 X 3/4	48.26	26.67	57.15	57.15	6 X 5	168.30	141.30	142.87	136.52	1 1/2 X 1	48.26	33.40	63.50	5 X 2 1/2	141.30	73.03	127.00
1 1/2 X 1/2	48.26	21.33	57.15	57.15	6 X 4	168.30	114.30	142.87	130.17	1 1/2 X 3/4	48.26	26.67	63.50	5 X 2	141.30	60.33	127.00
2 X 1 1/2	60.33	48.26	63.50	60.32	6 X 3 1/2	168.30	101.60	142.87	127.00	1 1/2 X 1/2	48.26	21.33	63.50	6 X 5	168.30	141.30	139.70
2 X 1 1/4	60.33	42.16	63.50	57.15	6 X 3	168.30	88.90	142.87	123.82	2 X 1 1/2	60.33	48.26	76.20	6 X 4	168.30	114.30	139.70
2 X 1	60.33	33.40	63.50	50.80	6 X 2 1/2	168.30	73.03	142.87	120.65	2 X 1 1/4	60.33	42.16	76.20	6 X 3	168.30	88.90	139.70
2 X 3/4	60.33	26.67	63.50	44.50	8 X 6	219.10	168.30	177.80	168.27	2 X 1	60.33	33.40	76.20	6 X 2 1/2	168.30	73.03	139.70
2 1/2 X 2	77.03	60.33	76.20	69.86	8 X 5	219.10	141.30	177.80	161.93	2 X 3/4	60.33	26.67	76.20	8 X 6	219.10	168.30	152.40
2 1/2 X 1 1/2	77.03	48.26	76.20	66.67	8 X 4	219.10	114.30	177.80	155.58	2 X 1/2	60.33	21.33	76.20	8 X 5	219.10	141.30	152.40
2 1/2 X 1 1/4	77.03	42.16	76.20	63.60	8 X 3 1/2	219.10	101.60	177.80	152.40	2 1/2 X 2	77.03	60.33	88.90	8 X 4	219.10	114.30	152.40
2 1/2 X 1	77.03	33.40	76.20	57.15	8 X 3	219.10	88.90	177.80	152.40	2 1/2 X 1 1/2	77.03	48.26	88.90	8 X 3	219.10	88.90	152.40
3 X 2 1/2	88.90	73.03	85.72	82.55	10 X 8	273.10	219.10	215.90	203.20	2 1/2 X 1 1/4	77.03	42.16	88.90	10 X 8	273.10	219.10	177.80
3 X 2	88.90	60.33	85.72	76.20	10 X 6	273.10	168.30	215.90	193.68	2 1/2 X 1	77.03	33.40	88.90	10 X 6	273.10	168.30	177.80
3 X 1 1/2	88.90	48.26	85.72	73.02	10 X 5	273.10	141.30	215.90	190.50	3 X 2 1/2	88.90	73.03	88.90	10 X 5	273.10	141.30	177.80
3 X 1 1/4	88.90	42.16	85.72	69.85	10 X 4	273.10	114.30	215.90	184.15	3 X 2	88.90	60.33	88.90	10 X 4	273.10	114.30	177.80
3 1/2 X 3	101.60	88.90	95.25	92.07	12 X 10	323.90	237.10	254.00	241.30	3 X 1 1/2	88.90	48.26	88.90	12 X 10	323.90	273.10	203.20
3 1/2 X 2 1/2	101.60	73.03	95.25	88.90	12 X 8	323.90	219.10	254.00	228.60	3 X 2 1/4	88.90	42.16	88.90	12 X 8	323.90	219.10	203.20
3 1/2 X 2	101.60	60.33	95.25	82.55	12 X 6	323.90	168.30	254.00	219.08	3 X 1	88.90	33.40	88.90	12 X 6	323.90	168.30	203.20
3 1/2 X 1 1/2	101.60	48.26	95.25	79.38	12 X 5	323.90	141.30	254.00	215.90	3 1/2 X 3	101.60	88.90	101.60	12 X 4	323.90	114.30	203.20

MCP FLANGES

PLATE FLANGES FOR JIS 5K

MCP FLANGES



Dimension

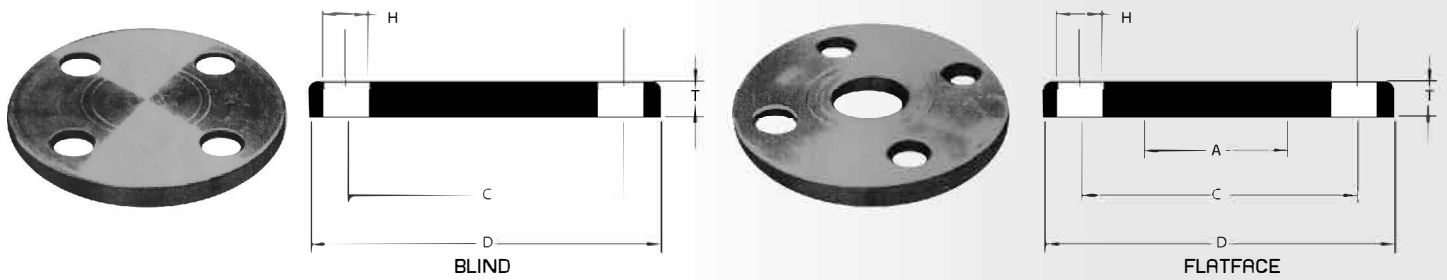
(Unit : mm)

Nominal Pipe Size		Inside Dia.	Outside Dia.	Bolt Circle	Thickness	Drilling		Weight (Kg)	
in	mm	A	D	C	T	H	N	Flat Face	Blind
1/2	15	22.2	80.0	60	9	12	4	0.30	0.33
3/4	20	27.7	85.0	65	10	12	4	0.37	0.42
1	25	34.5	95.0	75	10	12	4	0.45	0.53
1.1/4	32	43.2	115.0	90	12	15	4	0.80	0.94
1.1/2	40	49.1	120.0	95	12	15	4	0.83	1.10
2	50	61.1	130.0	105	14	15	4	1.10	1.50
2.1/2	65	77.1	155.0	130	14	15	4	1.50	2.10
3	80	90.0	180.0	145	14	19	4	2.00	2.70
4	100	115.4	200.0	165	16	19	8	2.40	3.80
5	125	141.2	235.0	200	16	19	8	3.30	5.30
6	150	166.6	265.0	230	18	19	8	4.50	7.70
8	200	218.0	320.0	280	20	23	8	6.40	12.20
10	250	269.5	385.0	345	22	23	12	9.00	19.00
12	300	321.0	430.0	390	22	23	12	10.70	24.70
14	350	358.1	480.0	435	24	25	12	15.00	37.00
16	400	409.0	540.0	495	24	25	12	18.00	43.00
18	450	460.0	605.0	555	24	25	16	23.00	54.00
20	500	511.0	655.0	605	24	25	16	26.00	63.00
22	550	562.0	720.0	655	26	27	20	32.00	82.00
24	600	613.0	770.0	715	26	27	20	35.00	95.00

- Note :
1. Flanges of parenthesized nominal diameter had letter not be used
 2. The facing of Flanges shall conform to KS B1519 (JIS B2202) 1984
 3. Nominal diameter over 1,000 is manufacture's standard

PLATE FLANGES FOR JIS 10K

MCP FLANGES



Dimension

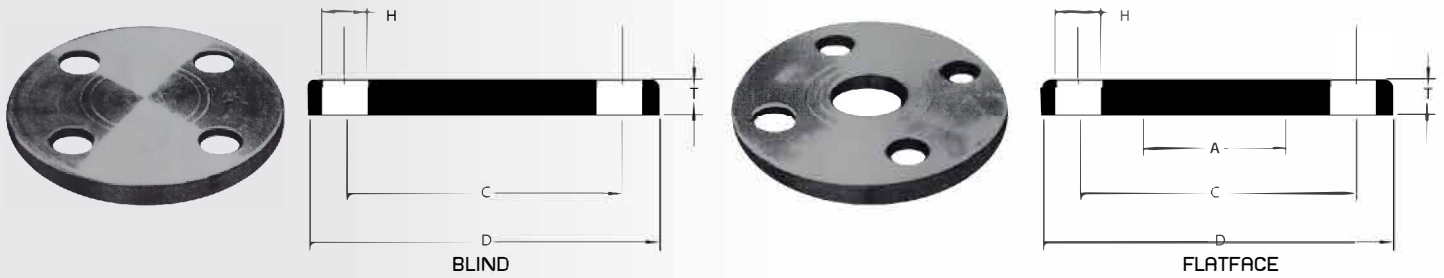
(Unit : mm)

Nominal Pipe Size		Inside Dia.	Outside Dia.	Bolt Circle	Thickness	Drilling		Weight (Kg)	
in	mm	A	D	C	T	H	N	Flat Face	Blind
1/2	15	22.5	95.0	70	12	15	4	0.57	0.61
3/4	20	28.0	100.0	75	14	15	4	0.74	0.80
1	25	34.5	125.0	90	14	19	4	1.20	1.40
1.1/4	32	43.5	135.0	100	16	19	4	1.50	1.70
1.1/2	40	50.0	140.0	105	16	19	4	1.60	1.90
2	50	61.5	155.0	120	16	19	4	1.90	2.30
2.1/2	65	77.5	175.0	140	18	19	4	2.60	3.30
3	80	90.5	185.0	150	18	19	8	2.65	3.60
4	100	116.0	210.0	175	18	19	8	3.20	4.70
5	125	142.0	250.0	210	20	23	8	4.90	7.40
6	150	167.0	280.0	240	22	23	8	6.30	10.10
8	200	218.0	330.0	290	22	23	12	8.60	15.00
10	250	270.0	400.0	355	24	25	12	11.00	22.00
12	300	320.0	445.0	400	24	25	16	12.00	27.00
14	350	358.0	490.0	445	26	25	16	18.50	35.50
16	400	409.0	560.0	510	28	27	16	25.00	58.00
18	450	459.0	620.0	565	30	27	20	33.00	70.00
20	500	510.0	675.0	620	30	27	20	36.00	84.00
22	550	561.0	745.0	680	32	33	20	49.00	110.00
24	600	612.0	795.0	730	32	33	24	52.00	125.00

- Note :
1. Flanges of parenthesized nominal diameter had letter not be used
 2. The facing of Flanges shall conform to KS B1519 (JIS B2202) 1984
 3. Nominal diameter over 1,000 is manufacture's standard

PLATE FLANGES FOR JIS 20K

MCP FLANGES



Dimension

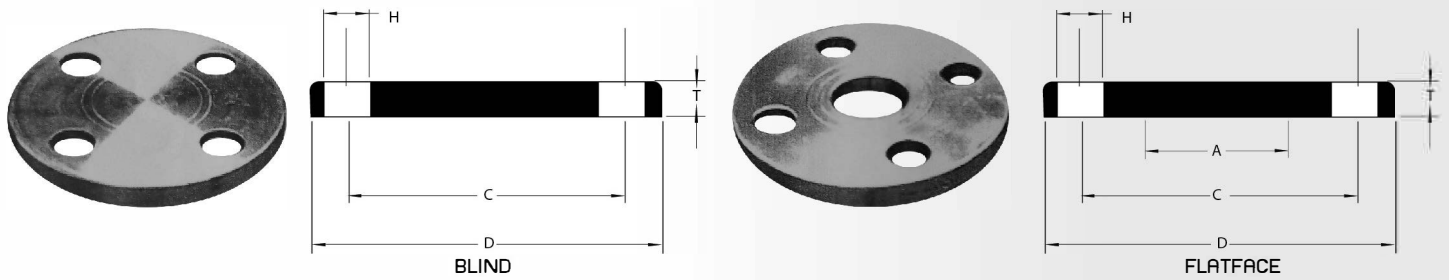
(Unit : mm)

Nominal Pipe Size		Inside Dia.	Outside Dia.	Bolt Circle	Thickness	Drilling		Weight (Kg)	
in	mm	A	D	C	T	H	N	Flat Face	Blind
1/2	15	22.2	80.0	70	14	15	4	0.63	0.70
3/4	20	28.0	85.0	75	16	15	4	0.78	0.90
1	25	34.5	95.0	90	16	19	4	1.20	1.30
1.1/4	32	4.5	115.0	100	18	19	4	1.60	1.70
1.1/2	40	50.0	120.0	105	18	19	4	1.65	1.90
2	50	61.5	130.0	120	18	19	8	2.10	23.30
2.1/2	65	77.5	155.0	140	20	19	8	2.50	3.20
3	80	90.5	180.0	160	22	23	8	3.70	4.40
4	100	116.0	200.0	185	24	23	8	4.90	6.80
5	125	142.0	235.0	225	26	25	8	7.35	10.50
6	150	167.0	265.0	260	28	25	12	9.80	14.50
8	200	218.0	320.0	305	30	25	12	12.20	20.80
10	250	270.0	385.0	380	34	27	12	21.00	34.00
12	300	320.0	430.0	430	36	27	16	24.00	47.00
14	350	358.0	480.0	480	40	33	16	36.00	68.00
16	400	409.0	540.0	540	46	33	16	51.00	94.00
18	450	459.0	605.0	605	48	33	20	67.00	120.00
20	500	510.0	655.0	660	50	33	20	78.00	148.00
22	550	561.0	720.0	720	52	39	20	93.00	180.00
24	600	612.0	770.0	770	54	39	24	103.00	210.00

- Note :
1. Flanges of parenthesized nominal diameter had letter not be used
 2. Nominal diameter over 600 is manufacture's standard

PLATE FLANGES FOR DIN PN 10

MCP FLANGES



Dimension

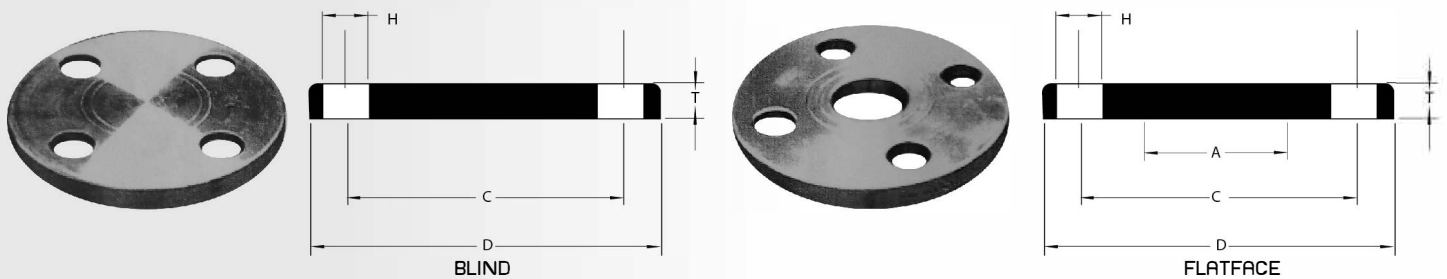
(Unit : mm)

Nominal Pipe Size		Inside Dia.	Outside Dia.	Bolt Circle	Thickness	Drilling		Weight (Kg)	
in	mm	A	D	C	T	H	N	Flat Face	Blind
1/2	15	22.0	95.0	65	14	14	4	0.67	0.71
3/4	20	28.0	105.0	75	16	14	4	0.93	1.01
1	25	34.5	115.0	85	16	14	4	1.11	1.23
1.1/4	32	43.5	140.0	100	16	18	4	1.62	1.81
1.1/2	40	50.0	150.0	110	16	18	4	1.85	2.09
2	50	61.5	165.0	125	18	18	4	2.46	2.88
2.1/2	65	77.5	185.0	145	18	18	4	2.99	3.65
3	80	90.5	200.0	160	20	18	8	3.60	4.61
4	100	116.0	220.0	180	20	18	8	3.99	5.65
5	125	142.0	250.0	210	22	18	8	5.39	8.13
6	150	169.0	285.0	240	22	23	8	6.57	10.44
8	200	221.0	340.0	295	24	23	8	9.25	16.48
10	250	275.0	395.0	350	26	23	12	11.87	23.99
12	300	326.0	445.0	400	26	23	12	13.69	30.73
14	350	358.0	505.0	460	28	23	16	20.44	42.56
16	400	409.0	565.0	515	32	27	16	27.68	60.68
18	450	460.0	615.0	565	32	27	20	-	71.74
20	500	511.0	670.0	620	36	27	20	-	96.40
22	-	-	-	-	-	-	-	-	-
24	600	613.0	780.0	725	40	30	24	-	145.60

- Note :
1. Outside diameter of pipe comllies with ISO recommendation
 2. Norminal Size in parentheses should preferably be avoid

PLATE FLANGES FOR DIN PN 16

MCP FLANGES



Dimension

(Unit : mm)

Nominal Pipe Size		Inside Dia.	Outside Dia.	Bolt Circle	Thickness	Drilling		Weight (Kg)	
in	mm	A	D	C	T	H	N	Flat Face	Blind
1/2	15	22.0	95.0	65	14	14	4	0.37	0.71
3/4	20	28.0	105.0	75	16	14	4	0.93	1.01
1	25	34.5	115.0	85	16	14	4	1.09	1.23
1.1/4	32	43.5	140.0	100	16	18	4	1.62	1.81
1.1/2	40	50.0	150.0	110	16	18	4	1.85	2.09
2	50	61.5	165.0	125	18	18	4	2.46	2.88
2.1/2	65	77.5	185.0	145	18	18	4	2.99	3.65
3	80	90.5	200.0	160	20	18	8	3.60	4.61
4	100	116.0	220.0	180	20	18	8	3.99	5.65
5	125	142.0	250.0	210	22	18	8	5.29	8.13
6	150	169.0	285.0	240	22	23	8	6.57	10.44
8	200	221.0	340.0	295	24	23	12	7.87	16.17
10	250	275.0	405.0	355	26	27	12	12.77	24.89
12	300	326.0	460.0	410	28	27	12	16.67	35.02
14	350	358.0	520.0	470	30	27	16	23.91	47.86
16	400	409.0	580.0	525	32	30	16	30.52	63.53
18	450	460.0	640.0	585	34	20	30	-	82.09
20	500	511.0	715.0	650	36	20	33	-	108.63
22	-	-	-	-	-	-	-	-	-
24	600	613.0	840.0	770	40	20	36	-	167.62

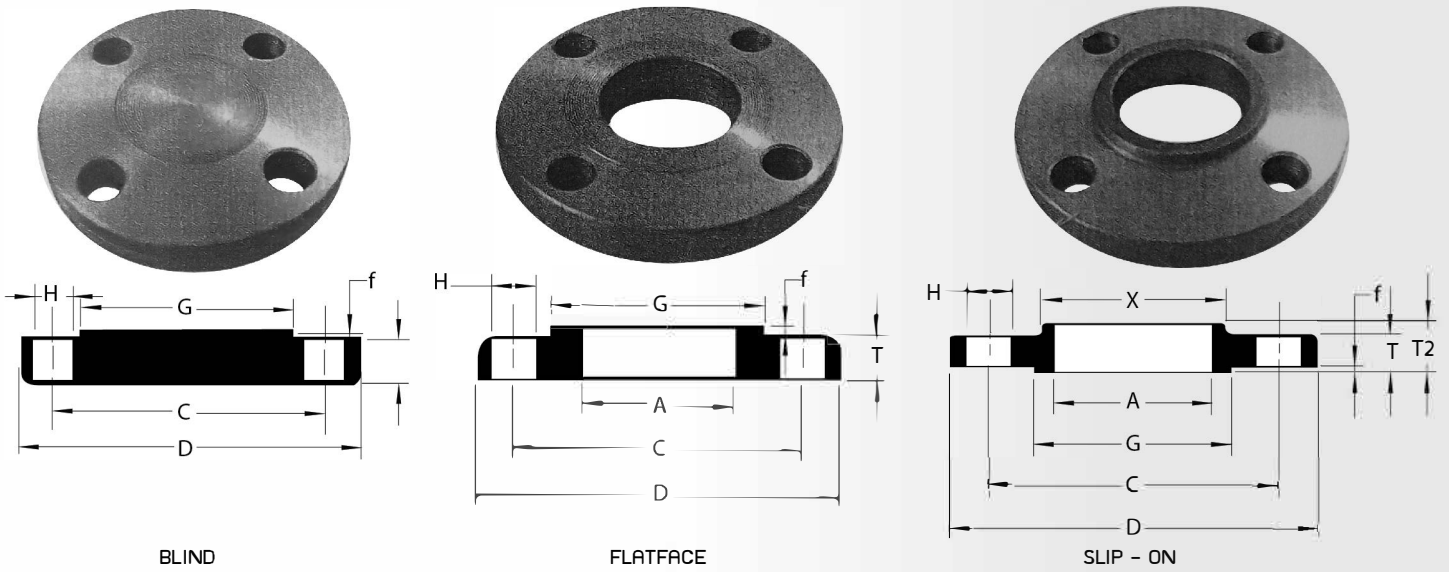
Note : 1. Outside diameter of pipe complies with ISO recommendation R64

2. Nominal Size in parentheses should preferably be avoid.

Screw thread size in parentheses shall not be used for new construction

PLATE FLANGES FOR ANSI 150 Lbs

MCP FLANGES



Dimension

(Unit : mm)

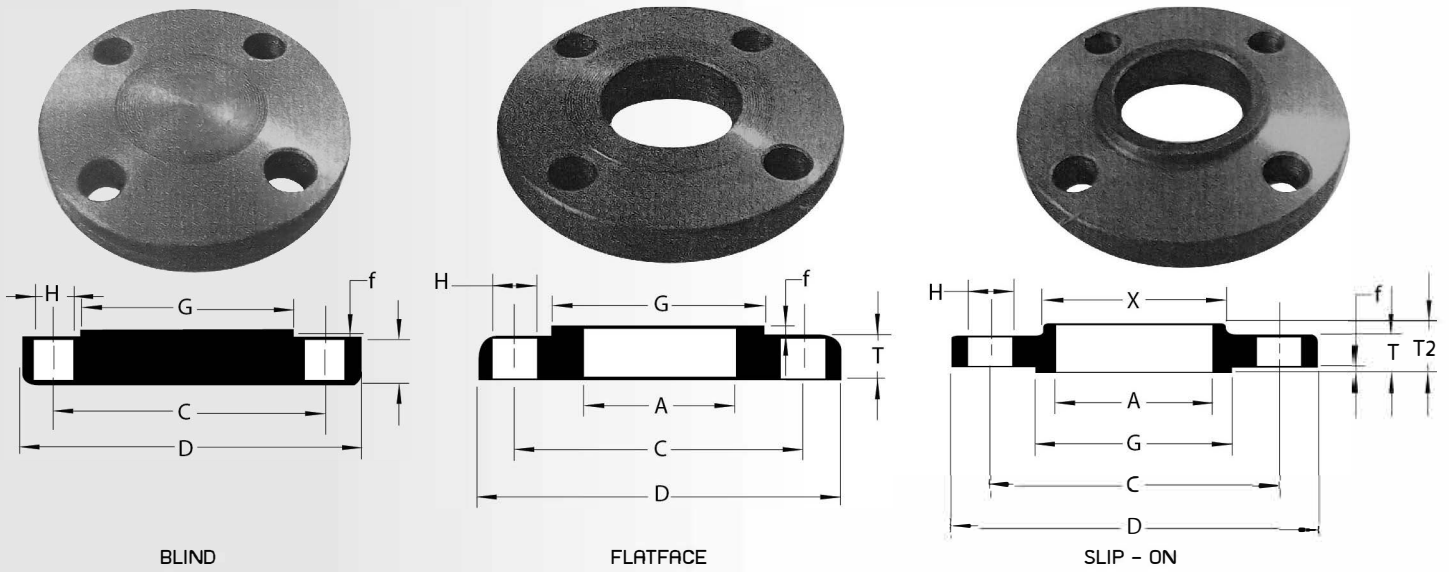
Nominal Pipe Size		Inside Dia.	Outside Dia.	Outside Dia. of Raise Face	At Base Of Hub	Bolt Circle	Thickness	Length Thru Hub	Heigh of Raise Face	Drilling		Weight (Kg)		
in	mm	A	D	G	X	C	T	T2	F	H	N	Flat Face	Slip-on	Blind
1/2	15	22.4	89.0	35.1	30.2	60.3	11.2	15.7	1.6	15.7	4	0.46	0.47	0.50
3/4	20	27.7	98.0	42.9	38.1	69.3	12.7	15.7	1.6	15.7	4	0.60	0.75	0.80
1	25	34.5	108.0	50.8	49.3	79.4	14.3	17.5	1.6	15.7	4	0.80	0.86	0.90
1.1/4	32	43.2	117.0	63.5	58.7	88.9	15.9	20.6	1.6	15.7	4	1.00	1.40	1.40
1.1/2	40	49.5	127.0	73.2	65.0	98.4	17.5	22.4	1.6	15.7	4	1.30	1.41	1.80
2	50	62.0	152.0	91.9	77.7	120.63	19.1	25.4	1.6	19.1	4	2.10	2.26	2.30
2.1/2	65	74.7	178.0	105.0	90.4	139.7	22.3	28.4	1.6	19.1	4	3.20	3.43	3.20
3	80	90.7	190.0	127.0	108.0	152.4	23.8	30.2	1.6	19.1	4	3.90	4.00	4.10
4	100	116.1	229.0	157.0	134.9	190.5	23.8	33.3	1.6	19.1	4	5.30	5.75	7.70
5	125	143.8	254.0	186.0	163.6	215.9	23.8	36.6	1.6	22.4	8	6.00	6.51	9.10
6	150	170.7	279.0	216.0	192.0	241.3	25.4	39.6	1.6	22.4	8	7.30	7.81	11.80
8	200	221.5	343.0	270.0	246.1	298.4	28.6	44.5	1.6	22.4	8	11.50	13.00	20.40
10	250	276.5	406.0	324.0	304.8	361.9	30.2	49.3	1.6	25.4	12	17.50	17.10	31.80
12	300	327.2	483.0	381.0	365.3	431.8	31.8	55.6	1.6	25.4	12	27.40	27.68	49.90
14	350	359.2	533.0	413.0	400.1	476.2	35.0	57.2	1.6	28.4	12	35.40	35.20	63.50
16	400	410.5	597.0	470.0	457.2	539.7	36.0	63.5	1.6	28.4	16	43.90	45.00	81.60
18	450	461.8	635.0	533.0	505.0	578.8	39.8	68.3	1.6	31.8	16	48.00	54.00	99.80
20	500	513.1	698.0	584.0	558.8	635.0	42.9	73.2	1.6	31.8	20	59.20	73.00	129.30
22	500	566.6	749.0	641.0	-	692.0	46.0	-	1.6	-	20	70.20	-	161.00
24	600	616.0	812.0	692.0	663.4	749.3	47.6	82.6	1.6	35.1	20	83.70	69.00	195.00

Note : 1. Dimensions are given in mm.

- For class 150 and 300 Welding Neck Flanges, Standard bore will be furnish unless otherwise specified.
- For class 400 and 600 Welding Neck Flanges, Extra-strong bore will be furnish unless otherwise specified.
- Class 150 and 300 Flanges (except lap joint) will be furnished with 0.06 raised face, which is included in the thickness and the hub length.
- Class 400 and larger Flanges (except lap joint) will be furnished with 0.25 in raised face, which is not included in the thickness and the hub length.

PLATE FLANGES FOR ANSI 300 Lbs

MCP FLANGES



Dimension

(Unit : mm)

Nominal Pipe Size		Inside Dia.	Outside Dia.	Outside Dia. of Raise Face	At Base Of Hub	Bolt Circle	Thickness	Length Thru Hub	Heigh of Raise Face	Drilling		Weight (Kg)		
in	mm	A	D	G	X	C	T	T2	F	H	N	Flat Face	Slip-on	Blind
1/2	15	22.2	95.0	35.1	38.1	66.7	14.2	22.4	1.6	15.7	4	0.85	0.62	0.90
3/4	20	27.8	117.0	42.9	47.8	82.6	15.7	25.4	1.6	19.1	4	1.42	1.30	1.50
1	25	34.5	124.0	50.8	53.8	88.9	17.5	26.9	1.6	19.1	4	1.70	1.50	1.82
1.1/4	32	43.3	133.0	63.5	63.5	98.4	19.1	26.9	1.6	19.1	4	2.50	1.70	2.72
1.1/2	40	49.6	156.0	73.2	73.2	114.3	20.6	30.2	1.6	22.4	4	2.87	2.60	3.18
2	50	61.9	165.0	91.9	91.9	127	22.1	33.3	1.6	19.1	8	3.10	3.00	3.63
2.1/2	65	74.6	191.0	104.6	104.6	149.2	25.4	38.1	1.6	22.4	8	4.57	4.50	5.45
3	80	90.7	210.0	127.0	127.0	168.3	28.4	42.9	1.6	22.4	8	5.80	5.90	7.26
4	100	116.1	254.0	157.2	157.2	200	31.8	47.8	1.6	22.4	8	9.60	10.13	12.26
5	125	143.7	279.0	185.7	185.7	234.9	35.1	50.8	1.6	22.4	8	11.90	13.00	16.33
6	150	170.7	318.0	215.9	215.9	269.9	36.6	52.6	1.6	22.4	12	16.00	17.00	22.68
8	200	221.5	381.0	269.7	269.7	330.2	41.1	62	1.6	25.4	12	24.30	26.00	36.74
10	250	276.2	445.0	323.9	323.9	387.3	47.8	66.5	1.6	28.4	16	33.00	34.16	55.34
12	300	327.0	520.0	381.0	381.0	450.8	50.8	73.2	1.6	31.8	16	49.50	51.26	83.08
14	350	359.2	585.0	412.8	412.8	514.3	53.8	76.3	1.6	31.8	20	66.80	75.00	109.77
16	400	414	650.0	469.9	469.9	571.5	57.2	82.6	1.6	35.1	20	83.70	94.00	143.01
18	450	461.8	710.0	533.4	533.4	628.6	60.5	88.9	1.6	35.1	24	108.50	109.00	187.96
20	500	513.1	775.0	584.2	584.2	685.8	63.5	95.3	1.6	35.1	24	130.60	136.00	233.81
22	500	564.5	838.0	-	-	743.0	-	-	1.6	-	24	159.30	-	290.30
24	600	615.9	915.0	692.2	692.2	812.8	69.9	106.4	1.6	41.1	24	199.70	245.00	363.20

Note : 1. Dimensions are given in mm.

2. For class 150 and 300 Welding Neck Flanges, Standard bore will be furnish unless otherwise specified.

3. For class 400 and 600 Welding Neck Flanges, Extra-strong bore will be furnish unless otherwise specified.

4. Class 150 and 300 Flanges (except lap joint) will be furnished with 0.06 raised face, which is included in the thickness and the hub length.

5. Class 400 and larger Flanges (except lap joint) will be furnished with 0.25 in raised face, which is not included in the thickness and the hub length.

FITTINGS : CARBON STEEL FITTING / GALVANIZED FITTING/ STAINLESS STEEL FITTING



CARBON STEEL FITTING

ERW

SMLS

FORGE STEEL SW / NPT

- ASTM A234 WPB / ANSI B 16.9 / B 16.28
- ASTM A420 WPL6 / WPL3
- ASTM A105 N 3000P / 6000P
- WALL THICKNESS SCH.40-SCH 160

GALVANIZED FITTING

BRITISH STANDARD THREADED

BUTT WELDED

STAINLESS STEEL FITTING

WELDED

SEAMLESS

- ASTM A 403 WP / 304L, 316 / 316L
- ASTM A 182 3000P / 6000P
- WALL THICKNESS SCH.40-SCH 160

FLANGES : CARBON STEEL FLANGE / STAINLESS STEEL FLANGE



CARBON STEEL FLANGE

- CARBON STEEL FLANGE (LOCAL)
- FORGED CARBON STEEL FLANGE (IMPORT)
 - ASTM A105N
- ANSI, JIS, PN
- PLATE, BLIND, WELDING NECK
- SLIP-ON, SOCKET WELD, THREADED

STAINLESS STEEL FLANGE

- STAINLESS STEEL FLANGE
- FORGED STAINLESS STEEL FLANGE (IMPORT)
 - ASTM A182 F304 / 304L / F316 / 316L
- - ANSI, JIS, PN
- PLATE, BLIND, WELDING NECK
- SLIP-ON, SOCKET WELD, THREADED



MCP COMPANY LIMITED

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MCP
MCP COMPANY LIMITED

**65 CHAROEN KRUNG 44, CHAROEN
KRUNG RD. BANGRAK BANGKOK
THAILAND 10500**

TEL : +66 89 944 6964

FAX : +66 2 4178566

WEBSITE : WWW.MCPTRADER.COM