

Kinko -K- ASTM B16.9 Carbon Steel Butt-welding Fittings

FEATURES:

1. Materials
 - use wrought carbon steel which meet ASTM A234 specifications.
 - If necessary, the Ultrasonic Examination, Magnetic Particle Examination, Radiographic Examination, Mechanical Test are performed.
2. With 3D CAD\CAM technology and automatic production line
 - Uniform Wall Thickness and Perfectly Rounded
 - Accurate Dimensions and Shapes
3. Compact and Light Weight compare with malleable iron fittings
4. Simple Insulation with no protruding portion
5. Low Fluid – Resistance with smooth inner surface
6. High Mechanical Strength
 - Same strength as that of pipe to which fittings are welded
7. Wide Service Range With Low Cost
8. Standards of Butt-welding Fittings
 - ASTM B16.9 & B16.28 for API pipes
 - JIS B2311 for BS 1387 and JIS 3453 pipes
9. Coating
 - Rust – resistant black paint or
 - Hot – dip galvanized



90° Elbow (Long)



90° Elbow (Short)



45° Elbow (Long)



Cap



Con - Reducer



Ecc - Reducer



Equal Tee



Reducing Tee

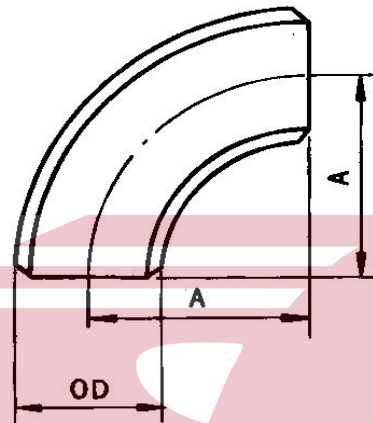
Outside Diameter (OD)

Pipe Standards:		ASTM A53	BS 1387 "B & C"
Fittings Standards:		ASME B16.9	JIS 3453
Nominal Diameter		API	SGP
Inch	DN	OD (mm)	OD (mm)
1/2"	DN15	21.3	21.7
3/4"	DN20	26.7	27.2
1"	DN25	33.4	34.0
1-1/4"	DN32	42.2	42.7
1-1/2"	DN40	48.3	48.6
2"	DN50	60.3	60.5
2-1/2"	DN65	73.0	76.3
3"	DN80	88.9	89.1
4"	DN100	114.3	114.3
5"	DN125	141.3	139.8
6"	DN150	168.3	165.2
8"	DN200	219.1	216.3
10"	DN250	273.0	267.4
12"	DN300	323.8	318.5
14"	DN350	355.6	355.6
16"	DN400	406.4	406.4
18"	DN450	457.2	457.2
20"	DN500	508.0	508.0
22"	DN550	558.8	
24"	DN600	609.6	
26"	DN650	660.4	
28"	DN700	711.2	
30"	DN750	762.0	
32"	DN800	812.8	
34"	DN850	863.6	
36"	DN900	914.4	
38"	DN950	965.2	
40"	DN1000	1016.0	
42"	DN1050	1066.8	
44"	DN1100	1117.6	
46"	DN1150	1168.4	
48"	DN1200	1219.2	
52"	DN1300	1320.8	
54"	DN1350	1371.6	
56"	DN1400	1422.4	
60"	DN1500	1524.0	

Wall Thickness Of Fittings (mm):

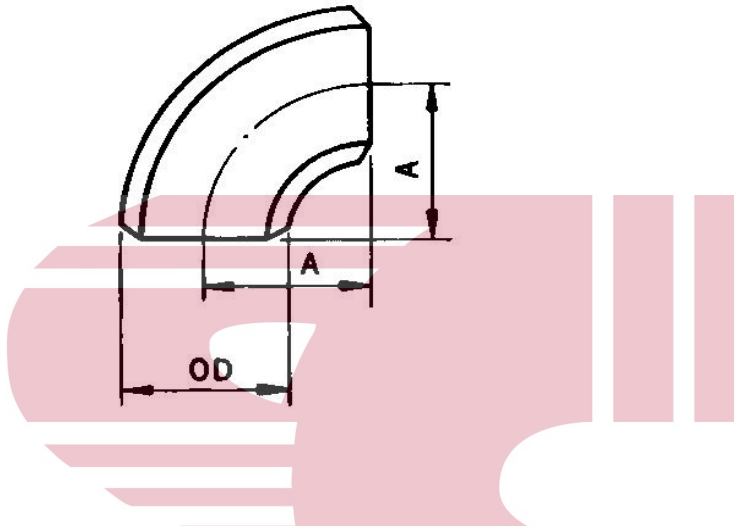
Nominal Diameter		Wall Thickness Schedules (JIS B2311 / ASME B36.10 & B36.19)				
Inch	DN	SGP	STD	Sch40	XS	Sch80
1/2"	DN15	2.8	2.8	2.8	3.7	3.7
3/4"	DN20	2.8	2.9	2.9	3.9	3.9
1"	DN25	3.2	3.4	3.4	4.5	4.5
1-1/4"	DN32	3.5	3.6	3.6	4.9	4.9
1-1/2"	DN40	3.5	3.7	3.7	5.1	5.1
2"	DN50	3.8	3.9	3.9	5.5	5.5
2-1/2"	DN65	4.2	5.2	5.2	7.0	7.0
3"	DN80	4.2	5.5	5.5	7.6	7.6
4"	DN100	4.5	6.0	6.0	8.6	8.6
5"	DN125	4.5	6.6	6.6	9.5	9.5
6"	DN150	5.0	7.1	7.1	11.0	11.0
8"	DN200	5.8	8.2	8.2	12.7	12.7
10"	DN250	6.6	9.3	9.3	12.7	15.1
12"	DN300	6.9	9.5	10.3	12.7	17.4
14"	DN350	7.9	9.5	11.1	12.7	19.0
16"	DN400	7.9	9.5	12.7	12.7	21.4
18"	DN450	7.9	9.5	14.3	12.7	23.8
20"	DN500	7.9	9.5	15.1	12.7	26.2
22"	DN550		9.5	15.9	12.7	28.6
24"	DN600		9.5	17.5	12.7	31.0
26"	DN650		9.5	18.9	12.7	34.0
28"	DN700		9.5	17.5	12.7	
30"	DN750		9.5	17.5	12.7	
32"	DN800		9.5	17.5	12.7	
34"	DN850		9.5	17.5	12.7	
36"	DN900		9.5	19.1	12.7	
38"	DN950		9.5		12.7	
40"	DN1000		9.5	26.2	12.7	
42"	DN1050		9.5		12.7	
44"	DN1100		9.5		12.7	
46"	DN1150		9.5		12.7	
48"	DN1200		9.5		12.7	

Long Radius 90° Elbow



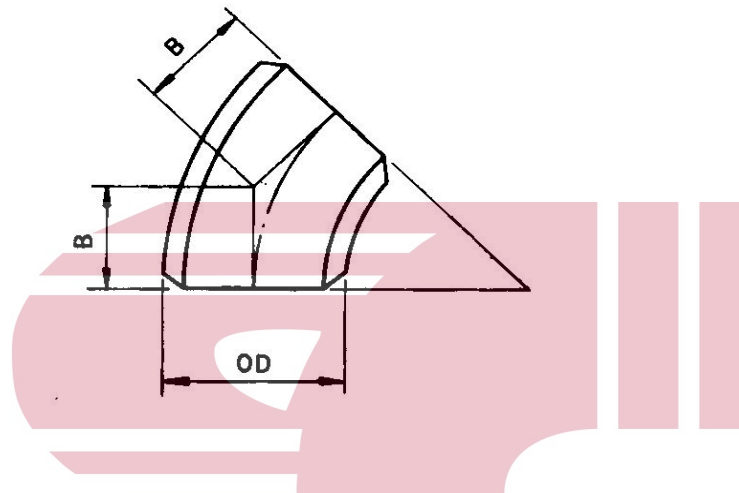
Nominal Diameter		Center-to-End A (mm)	Weight (Kg)				
Inch	DN		SGP	STD	Sch40	XS	Sch80
1/2"	DN15	38.1	0.078	0.078	0.078	0.098	0.098
3/4"	DN20	38.1	0.101	0.104	0.104	0.134	0.134
1"	DN25	38.1	0.146	0.153	0.153	0.196	0.196
1-1/4"	DN32	47.6	0.253	0.259	0.259	0.341	0.341
1-1/2"	DN40	57.2	0.349	0.368	0.368	0.491	0.491
2"	DN50	76.2	0.635	0.651	0.651	0.892	0.892
2-1/2"	DN65	95.3	1.12	1.36	1.36	1.79	1.79
3"	DN80	114.3	1.58	2.03	2.03	2.74	2.74
4"	DN100	152.4	2.91	3.83	3.83	5.36	5.36
5"	DN125	190.5	4.49	6.48	6.48	9.13	9.13
6"	DN150	228.6	7.09	9.93	9.93	15.0	15.0
8"	DN200	304.8	14.4	20.1	20.1	30.5	30.5
10"	DN250	381.0	25.4	35.4	35.4	48.7	56.2
12"	DN300	457.2	38.0	52.8	56.2	69.9	92.7
14"	DN350	533.4	56.7	67.9	78.9	89.9	132.0
16"	DN400	609.6	74.3	89.0	118.0	118.0	194.0
18"	DN450	685.8	94.2	112.9	168.0	149.8	274.0
20"	DN500	762.0	117.0	139.7	219.0	185.5	372.0
22"	DN550	838.2		169.3	280.0	225.0	492.0
24"	DN600	914.4		201.7	367.0	268.3	635.0
26"	DN650	990.6		237.0		315.3	
28"	DN700	1066.8		275.2		366.2	
30"	DN750	1143.0		316.2		420.9	
32"	DN800	1219.2		360.1		479.4	
34"	DN850	1295.4		406.8		541.7	
36"	DN900	1373.6		456.3		607.8	
38"	DN950	1447.8		508.7		677.8	
40"	DN1000	1524.0		563.9		751.5	
42"	DN1050	1600.2		622.0		829.0	
44"	DN1100	1676.4		682.9		910.3	
46"	DN1150	1752.6		746.7		995.5	
48"	DN1200	1828.8		813.3		1084.4	

Short Radius 90° Elbow



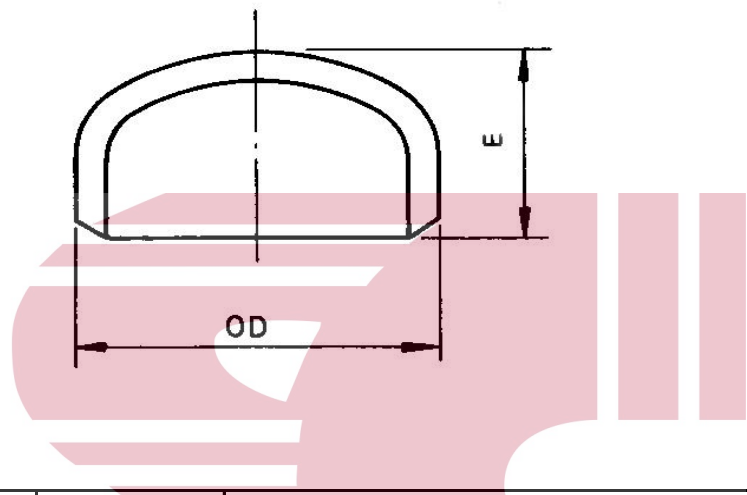
Nominal Diameter		Center-to-End	Weight (Kg)				
Inch	DN	A (mm)	SGP	STD	Sch40	XS	Sch80
1"	DN25	25.4	0.097	0.1	0.1	0.13	0.13
1-1/4"	DN32	31.8	0.169	0.17	0.17	0.23	0.23
1-1/2"	DN40	38.1	0.233	0.24	0.24	0.33	0.33
2"	DN50	50.8	0.424	0.43	0.43	0.60	0.60
2-1/2"	DN65	63.5	0.744	0.91	0.91	1.19	1.19
3"	DN80	76.2	1.05	1.36	1.36	1.83	1.83
4"	DN100	101.6	1.94	2.55	2.55	3.57	3.57
5"	DN125	127.0	2.99	4.32	4.32	6.08	6.08
6"	DN150	152.4	4.72	6.62	6.62	10.0	10.0
8"	DN200	203.2	9.6	13.4	13.4	20.3	20.3
10"	DN250	254.0	16.9	23.6	23.6	32.5	37.4
12"	DN300	304.8	25.4	35.2	37.4	46.6	61.8
14"	DN350	355.6	37.8	45.2	52.6	59.9	88.0
16"	DN400	406.4	49.5	59.3	78.6	78.6	130.0
18"	DN450	457.2	62.8	75.3	112.0	99.9	183.0
20"	DN500	508.0	77.7	93.1	146.0	123.7	248.0
22"	DN550	558.8		112.8	187.0	150.0	328.0
24"	DN600	609.6		134.5	244.0	178.8	423.0
26"	DN650	660.4		158.0		210.2	
28"	DN700	711.2		183.5		244.2	
30"	DN750	762.0		210.8		280.6	
32"	DN800	812.8		240.0		319.6	
34"	DN850	863.6		271.2		361.2	
36"	DN900	914.4		304.2		405.2	
38"	DN950	965.2		339.0		452.0	
40"	DN1000	1016.0		376.0		501.0	
42"	DN1050	1066.8		414.7		552.7	
44"	DN1100	1117.6		455.3		606.9	
46"	DN1150	1168.4		498.0		664.0	
48"	DN1200	1219.2		542.2		722.9	

Long Radius 45° Elbow



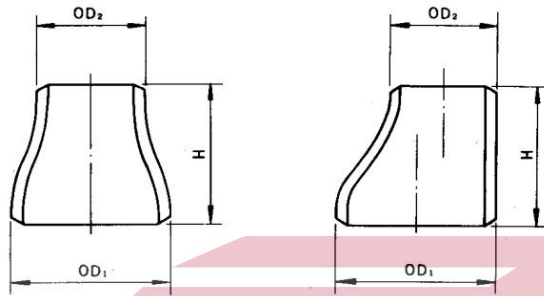
Nominal Diameter		Center-to-End B (mm)	Weight (Kg)				
Inch	DN		SGP	STD	Sch40	XS	Sch80
1/2"	DN15	15.8	0.039	0.039	0.039	0.049	0.049
3/4"	DN20	15.8	0.051	0.052	0.052	0.067	0.067
1"	DN25	15.8	0.073	0.077	0.077	0.098	0.098
1-1/4"	DN32	19.7	0.127	0.13	0.13	0.171	0.171
1-1/2"	DN40	23.7	0.175	0.184	0.184	0.246	0.246
2"	DN50	31.6	0.318	0.326	0.326	0.446	0.446
2-1/2"	DN65	39.5	0.56	0.68	0.68	0.9	0.9
3"	DN80	47.3	0.79	1.02	1.02	1.37	1.37
4"	DN100	63.1	1.46	1.92	1.92	2.68	2.68
5"	DN125	78.9	2.25	3.24	3.24	4.57	4.57
6"	DN150	94.7	3.55	4.97	4.97	7.5	7.5
8"	DN200	126.3	7.2	10.1	10.1	15.3	15.3
10"	DN250	157.8	12.7	17.7	17.7	24.4	28.1
12"	DN300	189.4	19.0	26.4	28.1	35.0	46.4
14"	DN350	220.9	28.4	34.0	39.5	45.0	66.0
16"	DN400	252.5	37.2	44.5	59.0	59.0	97.0
18"	DN450	284.1	47.1	56.5	84.0	74.9	137.0
20"	DN500	315.6	58.5	69.9	109.5	92.8	186.0
22"	DN550	347.2		84.7	140.0	112.5	246.0
24"	DN600	378.7		100.9	183.5	134.2	317.5
26"	DN650	410.3		118.5		157.7	
28"	DN700	441.9		137.6		183.1	
30"	DN750	473.4		158.1		210.5	
32"	DN800	505.0		180.1		239.7	
34"	DN850	536.6		203.4		270.9	
36"	DN900	568.1		228.2		303.9	
38"	DN950	599.7		254.4		338.9	
40"	DN1000	631.2		282.0		375.8	
42"	DN1050	662.8		311.0		414.5	
44"	DN1100	694.4		341.5		455.2	
46"	DN1150	725.9		373.4		497.8	
48"	DN1200	757.5		406.7		542.2	

Cap



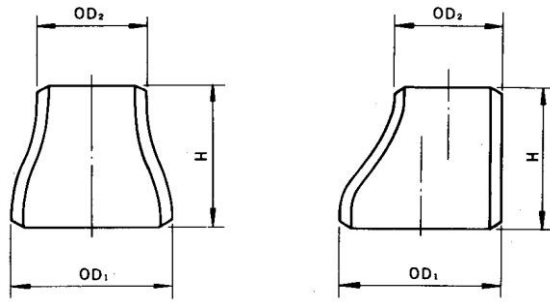
Nominal Diameter		Length E (mm)	Weight (Kg)				
Inch	DN		SGP	STD	Sch40	XS	Sch80
1/2"	DN15	25.4	0.038	0.04	0.04	0.05	0.05
3/4"	DN20	25.4	0.048	0.05	0.05	0.07	0.07
1"	DN25	38.1	0.103	0.11	0.11	0.14	0.14
1-1/4"	DN32	38.1	0.141	0.14	0.14	0.20	0.20
1-1/2"	DN40	38.1	0.162	0.17	0.17	0.24	0.24
2"	DN50	38.1	0.228	0.23	0.23	0.37	0.37
2-1/2"	DN65	38.1	0.34	0.4	0.4	0.70	0.70
3"	DN80	50.8	0.51	0.66	0.66	1.10	1.10
4"	DN100	63.5	0.88	1.17	1.17	1.92	1.92
5"	DN125	76.2	1.29	1.90	1.90	3.06	3.06
6"	DN150	88.9	1.99	2.82	2.82	4.82	4.82
8"	DN200	101.6	3.61	5.11	5.11	9.22	9.22
10"	DN250	127.0	6.33	8.91	8.91	12.5	16.4
12"	DN300	152.4	9.43	13.3	14.1	17.7	26.4
14"	DN350	165.1	13.2	15.9	18.5	21.2	34.9
24"	DN600	266.7		45.0		60.1	
26"	DN650	266.7		50.3		67.3	
28"	DN700	266.7		56.0		74.8	
30"	DN750	266.7		61.9		82.8	
32"	DN800	266.7		68.2		91.2	
34"	DN850	266.7		74.8		100.0	
36"	DN900	266.7		81.7		109.2	
38"	DN950	304.8		94.4		126.2	
40"	DN1000	304.8		102.1		136.5	
42"	DN1050	304.8		110.1		147.2	
44"	DN1100	342.9		124.9		166.9	
46"	DN1150	342.9		133.7		178.7	
48"	DN1200	342.9		142.8		191.0	

Concentric and Eccentric Reducer



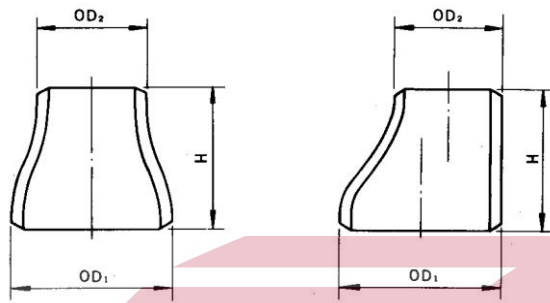
Nominal Diameter		Length H (mm)	Con - Reducer Weight (Kg)				
Inch	DN		SGP	STD	Sch40	XS	Sch80
3/4" x 1/2"	20 x 15	38.1	0.060	0.060	0.060	0.070	0.070
1" x 3/4"	25 x 20	50.8	0.110	0.110	0.110	0.140	0.140
	15		0.099	0.099	0.099	0.132	0.132
1-1/4" x 1"	32 x 25	50.8	0.150	0.150	0.150	0.200	0.200
	20		0.138	0.138	0.138	0.184	0.184
	15		0.126	0.126	0.126	0.167	0.167
1-1/2" x 1-1/4"	40 x 32	63.5	0.240	0.240	0.240	0.320	0.320
	25		0.207	0.207	0.207	0.289	0.289
	20		0.188	0.188	0.188	0.262	0.262
	15		0.173	0.173	0.173	0.240	0.240
2" x 1-1/2"	50 x 40	76.2	0.371	0.371	0.371	0.510	0.510
	32		0.350	0.350	0.350	0.476	0.476
	25		0.320	0.320	0.320	0.431	0.431
	20		0.300	0.300	0.300	0.396	0.396
2-1/2" x 2"	65 x 50	88.9	0.591	0.720	0.720	0.942	0.942
	40		0.536	0.652	0.652	0.851	0.851
	32		0.509	0.619	0.619	0.805	0.805
	25		0.469	0.569	0.569	0.739	0.739
3" x 2-1/2"	80 x 65	88.9	0.722	0.930	0.930	1.250	1.250
	50		0.650	0.835	0.835	1.120	1.120
	40		0.595	0.763	0.763	1.020	1.020
	32		0.568	0.728	0.728	0.971	0.971
4" x 3"	100 x 80	101.6	1.10	1.44	1.44	2.01	2.01
	65		1.02	1.34	1.34	1.87	1.87
	50		0.93	1.22	1.22	1.70	1.70
	40		0.87	1.13	1.13	1.57	1.57
5" x 4"	125 x 100	127.0	1.73	2.49	2.49	3.50	3.50
	80		1.55	2.23	2.23	3.12	3.12
	65		1.46	2.10	2.10	2.93	2.93
	50		1.35	1.93	1.93	2.70	2.70
6" x 5"	150 x 125	139.7	2.54	3.55	3.55	5.36	5.36
	100		2.32	3.24	3.24	4.88	4.88
	80		2.10	2.93	2.93	4.40	4.40
	65		1.99	2.78	2.78	4.16	4.16
8" x 6"	200 x 150	152.4	4.03	5.62	5.62	8.49	8.49
	125		3.75	5.23	5.23	7.89	7.89
	100		3.48	4.84	4.84	7.28	7.28

Concentric and Eccentric Reducer



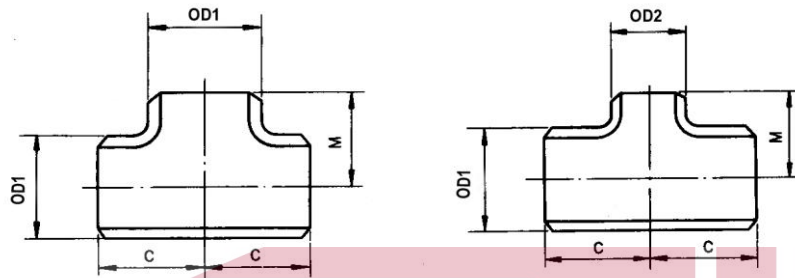
Nominal Diameter		Length H (mm)	Con - Reducer Weight (Kg)				
Inch	DN		SGP	STD	Sch40	XS	Sch80
10" x 8"	250 x 200	177.8	6.80	9.48	9.48	13.1	15.0
	150		6.07	8.44	8.44	12.7	13.3
	125		5.70	7.92	7.92	11.3	12.5
	100		5.33	7.40	7.40	10.5	11.6
12" x 10"	300 x 250	203.2	9.89	13.9	14.6	18.3	24.0
	200		9.00	12.8	13.3	16.8	21.8
	150		8.12	11.0	11.9	15.2	19.6
	125		7.68	10.2	11.3	14.3	18.5
14" x 12"	350 x 300	330.2	21.2	25.6	29.4	33.8	49.2
	250		19.5	23.8	27.1	32.0	45.2
	200		17.9	21.9	24.8	29.8	41.3
	150		16.2	20.2	22.5	27.5	37.3
16" x 14"	400 x 350	355.6	25.8	30.9	41.0	41.0	67.4
	300		24.5	29.4	38.9	38.9	64.0
	250		22.8	27.3	36.1	36.1	59.2
	200		21.0	25.1	33.2	33.2	54.4
18" x 16"	450 x 400	381.0	31.4	37.7	56.1	50.0	91.2
	350		29.6	35.4	52.7	47.0	85.5
	300		28.2	33.8	50.2	44.7	81.4
	250		26.3	31.5	46.7	41.7	75.7
20" x 18"	500 x 450	508.0	47.0	56.3	88.4	74.7	150
	400		44.4	53.3	83.6	70.7	141
	350		41.9	50.2	78.8	66.6	133
	300		40.1	48.0	75.3	63.7	127
22" x 20"	550 x 500	508.0		62.3	103	82.8	181
	450			59.3	98	78.8	172
	400			56.3	92.9	74.7	183
	350			53.3	87.9	70.7	153
24" x 22"	600 x 550	508.0		68.4	124	90.9	215
	500			65.3	119	86.8	205
	450			62.3	113	82.8	195
	400			59.3	107	78.8	185
26" x 24"	650 x 600	609.6		89.3		119	
	550			85.7		114	
	500			82.0		109	
	450			78.4		104	
28" x 26"	700 x 650	609.6		96.5		128	
	600			92.9		124	
	550			89.3		119	
	500			85.7		114	

Concentric and Eccentric Reducer



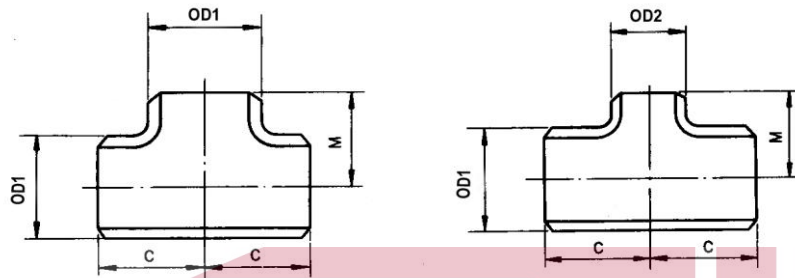
Nominal Diameter		Length H (mm)	Con - Reducer Weight (Kg)				
Inch	DN		SGP	STD	Sch40	XS	Sch80
30" x 28"	750 x 700	609.6		104		138	
	650			100		133	
	600			97		128	
	550			93		124	
32" x 30"	800 x 750	609.6		111		148	
	700			107		143	
	650			104		138	
	600			100		133	
34" x 32"	850 x 800	609.6		118		158	
	750			115		153	
	700			111		148	
	650			107		143	
36" x 34"	900 x 850	609.6		126		167	
	800			122		162	
	750			118		158	
	700			115		153	
38" x 36"	950 x 900	609.6		133		177	
	850			129		172	
	800			126		167	
	750			122		162	
40" x 38"	1000 x 950	609.6		140		187	
	900			136		182	
	850			133		177	
	800			129		172	
42" x 40"	1050 x 1000	609.6		147		196	
	950			144		191	
	900			140		187	
	850			136		182	
44" x 42"	1100 x 1050	609.6		155		206	
	1000			151		201	
	950			147		196	
	900			144		191	
46" x 44"	1150 x 1100	711.2		189		252	
	1050			185		246	
	1000			180		240	
	950			176		235	
48" x 46"	1200 x 1150	711.2		197		263	
	1100			193		257	
	1050			189		252	
	1000			185		246	

Equal and Reduce Tee



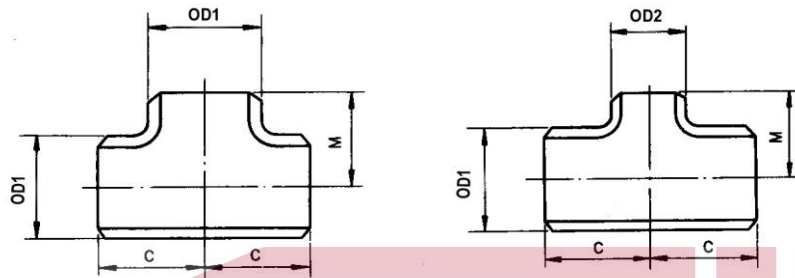
Nominal Diameter		Center-to-End		Weight (Kg)				
Inch	DN	C (mm)	M (mm)	SGP	STD	Sch40	XS	Sch80
1/2" x 1/2"	15 x 15	25.4	25.4	0.085	0.085	0.085	0.107	0.107
3/4" x 3/4" 1/2"	20 x 20	28.6	28.6	0.122	0.125	0.125	0.162	0.162
	15		28.6	0.116	0.119	0.119	0.153	0.153
1" x 1" 3/4" 1/2"	25 x 25	38.1	38.1	0.236	0.250	0.250	0.318	0.318
	20		38.1	0.221	0.232	0.232	0.297	0.297
	15		38.1	0.218	0.223	0.223	0.284	0.284
1-1/4" x 1-1/4" 1" 3/4" 1/2"	32 x 32	47.6	47.6	0.411	0.421	0.421	0.554	0.554
	25		47.6	0.386	0.398	0.398	0.521	0.521
	20		47.6	0.366	0.376	0.376	0.493	0.493
	15		47.6	0.353	0.365	0.365	0.478	0.478
1-1/2" x 1-1/2" 1-1/4" 1" 3/4" 1/2"	40 x 40	57.2	57.2	0.573	0.603	0.603	0.805	0.805
	32		57.2	0.556	0.583	0.583	0.776	0.776
	25		57.2	0.525	0.553	0.553	0.733	0.733
	20		57.2	0.501	0.526	0.526	0.699	0.699
	15		57.2	0.488	0.511	0.511	0.680	0.680
2" x 2" 1-1/2" 1-1/4" 1" 3/4"	50 x 50	63.5	63.5	0.851	0.872	0.872	1.190	1.190
	40		60.3	0.791	0.814	0.814	1.110	1.110
	32		57.2	0.766	0.785	0.785	1.070	1.070
	25		50.8	0.724	0.744	0.744	1.010	1.010
	20		44.5	0.698	0.716	0.716	0.979	0.979
	2-1/2" x 2-1/2" 2" 1-1/2" 1-1/4" 1"	65 x 65	76.2	76.2	1.42	1.74	1.74	2.28
50			69.9	1.31	1.56	1.56	2.06	2.06
40			66.7	1.25	1.15	1.15	1.98	1.98
32			63.5	1.22	1.48	1.48	1.94	1.94
25			57.2	1.18	1.44	1.44	1.88	1.88
3" x 3" 2-1/2" 2" 1-1/2" 1-1/4"		80 x 80	85.7	85.7	1.87	2.41	2.41	3.25
	65		82.6	1.79	2.29	2.29	3.07	3.07
	50		76.2	1.67	2.11	2.11	2.85	2.85
	40		73.0	1.62	2.06	2.06	2.77	2.77
	32		69.9	1.59	2.03	2.03	2.73	2.73
	4" x 4" 3" 2-1/2" 2" 1-1/2"	100 x 100	104.8	104.8	3.13	4.12	4.12	5.76
80			98.4	2.92	3.82	3.82	5.33	5.33
65			95.3	2.84	3.70	3.70	5.15	5.15
50			88.9	2.72	3.53	3.53	4.93	4.93
40			85.7	2.66	3.47	3.47	4.85	4.85
5" x 5" 4" 3" 2-1/2" 2"		125 x 125	123.8	123.8	4.52	6.53	6.53	9.20
	100		117.5	4.3	6.13	6.13	8.62	8.62
	80		111.1	4.08	5.83	5.83	8.18	8.18
	65		108.0	4.00	5.71	5.71	8.01	8.01
	50		104.8	3.90	5.56	5.56	7.81	7.81

Equal and Reduce Tee



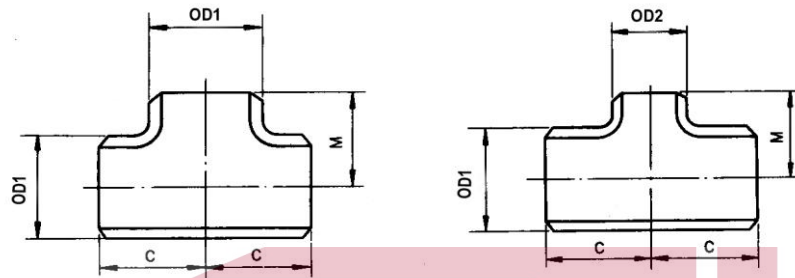
Nominal Diameter		Center-to-End		Weight (Kg)				
Inch	DN	C (mm)	M (mm)	SGP	STD	Sch40	XS	Sch80
6" x 6"	150 x 150	142.9	142.9	6.83	9.58	9.58	14.5	14.5
	125		135.5	6.44	9.05	9.05	13.6	13.6
	100		130.2	6.22	8.67	8.67	13.0	13.0
	80		123.6	6.00	8.37	8.37	12.6	12.6
	65		120.7	5.93	8.25	8.25	12.4	12.4
8" x 8"	200 x 200	177.8	177.8	12.6	17.9	17.9	27.1	27.1
	150		168.3	11.9	16.6	16.6	25.2	25.2
	125		161.9	11.5	16.1	16.1	24.3	24.3
	100		155.6	11.3	15.7	15.7	23.7	23.7
10" x 10"	250 x 250	215.9	215.9	21.8	30.4	30.4	41.7	48.3
	200		203.2	20.4	28.5	28.5	39.1	45.0
	150		193.7	19.5	27.2	27.2	37.5	43.1
	125		190.5	19.2	26.8	26.8	36.9	42.3
	100		184.2	18.9	26.4	26.4	36.4	41.7
12" x 12"	300 x 300	254.0	254.0	31.9	44.2	47.2	58.4	77.8
	250		241.3	30.4	42.1	44.6	54.9	73.3
	200		228.6	29.0	40.5	42.7	52.3	70.0
	150		219.1	28.1	39.4	41.4	50.7	68.1
	125		215.9	27.8	39.0	41.0	50.1	67.3
14" x 14"	350 x 350	279.4	279.4	44.7	53.5	62.2	70.9	104.0
	300		269.9	42.7	51.0	59.9	67.8	100.0
	250		257.2	41.2	49.0	57.4	64.0	95.5
	200		247.7	39.9	47.5	55.6	61.9	92.5
	150		238.1	39.0	46.4	54.3	60.2	90.6
16" x 16"	400 x 400	304.8	304.8	55.2	66.1	87.7	87.7	144
	350		304.8	54.2	64.9	84.7	86	140
	300		295.3	52.2	63.3	82.3	83.9	136
	250		282.6	50.7	61.4	79.8	81.5	131
	200		273.1	49.4	59.6	78.1	79.6	128
	150		263.5	48.5	58.3	76.8	77.7	126
18" x 18"	450 x 450	342.9	342.9	70.0	83.9	125	111	203
	400		330.2	67.9	81.3	120	108	195
	350		330.2	66.9	80.1	117	106	190
	300		320.7	64.9	78.6	114	104	186
	250		308.0	63.4	76.6	112	102	182
20" x 20"	500 x 500	381.0	381.0	86.6	104.0	163	138	277
	450		368.3	84.2	101.0	158	134	266
	400		355.6	82.1	98.4	152	131	258
	350		355.6	81.1	97.2	149	129	253
	300		346.1	79.1	95.6	147	127	249
	250		333.4	77.6	93.6	144	124	245
	200		323.9	76.3	91.9	134	123	242

Equal and Reduce Tee



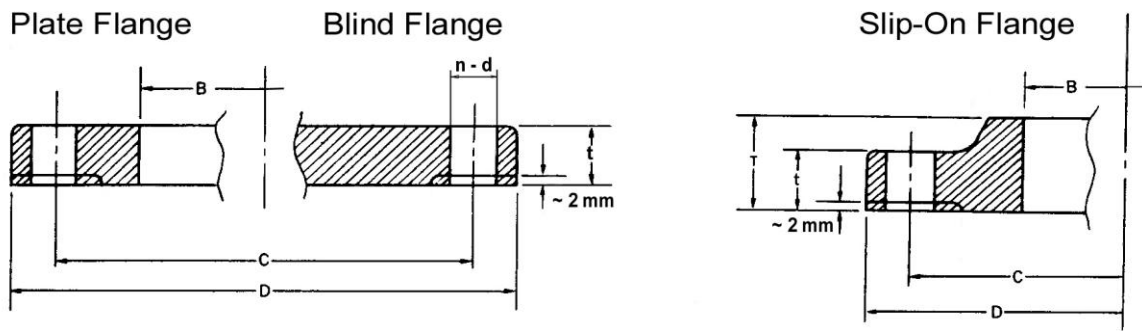
Nominal Diameter		Center-to-End		Weight (Kg)				
Inch	DN	C (mm)	M (mm)	SGP	STD	Sch40	XS	Sch80
22" x 22"	550 x 550	419.1	419.1		126	208	167	366
	500		406.4		123	202	163	353
	450		393.7		120	196	159	342
	400		381.0		117	191	156	334
24" x 24"	600 x 600	431.8	431.8		139	253	185	438
	550		431.8		138	248	183	429
	500		431.8		136	244	181	421
	450		419.1		133	238	177	411
26" x 26"	650 x 650	495.3	495.3		176		234	
	600		482.6		172		229	
	550		469.9		169		225	
	500		457.2		166		221	
28" x 28"	700 x 700	520.7	520.7		198		264	
	650		520.7		196		261	
	600		508.0		193		256	
	550		495.3		189		252	
30" x 30"	750 x 750	558.8	558.8		228		304	
	700		546.1		224		298	
	650		546.1		222		296	
	600		533.4		218		291	
32" x 32"	800 x 800	596.9	596.9		260		347	
	750		584.2		256		341	
	700		571.5		252		335	
	650		571.5		250		332	
34" x 34"	850 x 850	635.0	635.0		295		392	
	800		622.3		290		386	
	750		609.6		285		380	
	700		596.9		281		374	
36" x 36"	900 x 900	673.1	673.1		331		441	
	850		660.4		326		434	
	800		647.7		321		428	
	750		635.0		317		422	
38" x 38"	950 x 950	711.2	711.2		369		492	
	900		711.2		367		489	
	850		698.5		362		482	
	800		685.8		357		475	
40" x 40"	1000 x 1000	749.3	749.3		410		546	
	950		749.3		407		543	
	900		736.6		402		535	
	850		723.9		396		528	

Equal and Reduce Tee



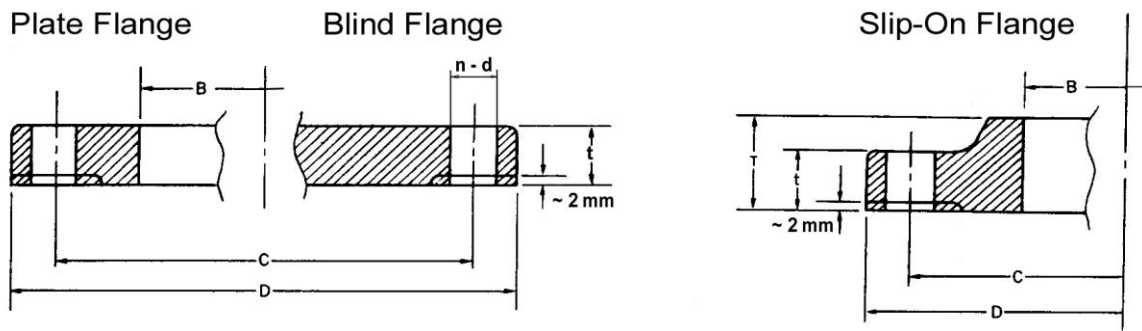
Nominal Diameter		Center-to-End		Weight (Kg)				
Inch	DN	C (mm)	M (mm)	SGP	STD	Sch40	XS	Sch80
42" x 42"	1050 x 1050	762.0	711.2		421		562	
	1000		711.2		419		559	
	950		711.2		417		556	
	900		711.2		415		553	
44" x 44"	1100 x 1100	812.8	762.0		475		633	
	1050		762.0		472		629	
	1000		749.3		467		622	
	950		736.6		462		615	
46" x 46"	1150 x 1150	850.9	800.1		520		694	
	1100		800.1		518		690	
	1050		787.4		512		683	
	1000		774.7		507		676	
48" x 48"	1200 x 1200	889.0	838.2		568		758	
	1150		838.2		566		754	
	1100		838.2		563		751	
	1050		812.8		554		739	

Flanges



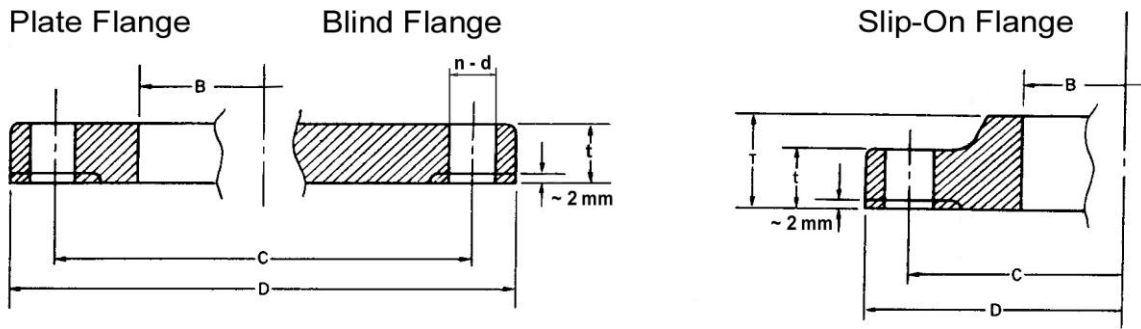
Nominal Size		Flange Standard	Dimension (mm)								Weight (Kg)		
Inch	DN		B	C	D	n	d	Bolt	t	T	Plate	Blind	Slip-on
1/2"	15	150#	22.4	60.5	88.9	4	15.7	1/2"	11.2	15.7		0.42	0.39
		10K	22.2	70.0	95.0	4	15	M12	12		0.58	0.62	
		PN16	22.2	65.0	95.0	4	14	M12	14		0.69	0.72	
3/4"	20	150#	27.7	69.9	98.6	4	15.7	1/2"	12.7	15.7		0.61	0.56
		10K	27.7	75.0	100.0	4	15	M12	14		0.74	0.80	
		PN16	27.7	75.0	105.0	4	14	M12	16		0.94	1.01	
1"	25	150#	34.5	79.2	108.0	4	15.7	1/2"	14.2	17.5		0.86	0.78
		10K	34.5	90.0	125.0	4	19	M16	14		1.14	1.26	
		PN16	34.5	85.0	115.0	4	14	M12	16		1.12	1.23	
1-1/4"	32	150#	43.2	88.9	117.3	4	15.7	1/2"	15.7	20.6		1.17	1.03
		10K	43.2	100.0	135.0	4	19	M16	16		1.50	1.68	
		PN16	43.2	100.0	140.0	4	18	M16	16		1.64	1.80	
1-1/2"	40	150#	49.5	98.6	127.0	4	15.7	1/2"	17.5	22.4		1.53	1.32
		10K	49.1	105.0	140.0	4	19	M16	16		1.58	1.83	
		PN16	49.1	110.0	150.0	4	18	M16	16		1.87	2.09	
2"	50	150#	62.0	120.7	152.4	4	19.1	5/8"	19.1	25.4		2.42	2.06
		10K	61.1	120.0	155.0	4	19	M16	16		1.90	2.26	
		PN16	61.1	125.0	165.0	4	18	M16	18		2.50	2.88	
2-1/2"	65	150#	74.7	139.7	177.8	4	19.1	5/8"	22.4	28.4		3.94	3.28
		10K	77.1	140.0	175.0	4	19	M16	18		2.63	3.28	
		PN16	77.1	145.0	185.0	4	18	M16	18		3.04	3.66	
3"	80	150#	90.7	152.4	190.5	4	19.1	5/8"	23.9	30.2		4.93	3.85
		10K	90.0	150.0	185.0	8	19	M16	18		2.64	3.50	
		PN16	90.0	160.0	200.0	8	18	M16	20		3.65	4.77	
4"	100	150#	116.1	190.5	228.6	8	19.1	5/8"	23.9	33.3		7.00	5.30
		10K	115.4	175.0	210.0	8	19	M16	18		3.18	4.70	
		PN16	115.4	180.0	220.0	8	18	M16	20		4.04	5.65	
5"	125	150#	143.8	215.9	254.0	8	22.4	3/4"	23.9	36.6		8.63	6.07
		10K	141.2	210.0	250.0	8	23	M20	20		4.83	7.40	
		PN16	141.2	210.0	250.0	8	18	M16	22		5.47	8.42	
6"	150	150#	170.7	241.3	279.4	8	22.4	3/4"	25.4	39.6		11.30	7.45
		10K	166.6	240.0	280.0	8	23	M20	22		6.42	10.20	
		PN16	170.7	240.0	285.0	8	23	M20	22		6.59	10.40	
8"	200	150#	221.5	298.5	342.9	8	22.4	3/4"	28.4	44.5		19.60	12.10
		10K	218.0	290.0	330.0	12	23	M20	22		7.63	14.20	
		PN16	221.5	295.0	340.0	12	23	M20	24		9.00	16.10	
10"	250	150#	276.4	362.0	406.4	12	25.4	7/8"	30.2	49.3		28.8	16.5
		10K	269.5	355.0	400.0	12	25	M22	24	36	12.0	23.0	12.9
		PN16	276.4	355.0	405.0	12	27	M24	26		12.9	24.9	
12"	300	150#	327.2	431.8	482.6	12	25.4	7/8"	31.8	55.6		43.2	26.2
		10K	321.0	400.0	445.0	16	25	M22	24	38	13.8	30.8	14.0
		PN16	327.2	410.0	460.0	12	27	M24	28		16.7	35.1	

Flanges



Nominal Size		Flange Standard	Dimension (mm)								Weight (Kg)		
Inch	DN		B	C	D	n	d	Bolt	t	T	Plate	Blind	Slip-on
14"	350	150#	359.2	476.3	533.4	12	28.4	1"	35.1	57.2		58.1	34.6
		10K	358.1	445.0	490.0	16	25	M22	26	42	16.6	37.6	18.4
		PN16	359.2	470.0	520.0	16	27	M24	30		24.2	47.8	
16"	400	150#	410.5	539.8	596.9	16	28.4	1"	36.6	63.5		76.0	44.8
		10K	409.0	510.0	560.0	16	27	M24	28	44	23.3	53.2	25.5
		PN16	410.5	525.0	580.0	16	30	M27	32		30.7	63.5	
18"	450	150#	461.8	577.9	635.0	16	31.8	1-1/8"	39.6	68.3		93.7	48.9
		10K	460.0	565.0	620.0	20	27	M27	30	48	29.9	69.7	33.4
		PN16	461.8	585.0	640.0	20	30	M27	32				
20"	500	150#	513.1	635.0	698.5	20	31.8	1-1/8"	42.9	73.2		122.0	61.9
		10K	511.0	620.0	675.0	20	27	M24	30	48	34.0	83.2	38.1
		PN16	513.1	650.0	715.0	20	33	M30	36		50.8	102.0	
22"	550	150#											
		10K	562.0	680.0	745.0	20	33	M30	32	52	43.6	107.1	50.3
		PN16											
24"	600	150#	616.0	749.3	812.8	20	35.1	1-1/4"	47.8	82.6		185.0	86.9
		10K	613.0	730.0	795.0	24	33	M30	32	52	46.3	121.7	53.3
		PN16	616.0	770.0	840.0	20	36	M33	40				
26"	650	150#	666.7	806.4	869.9	24	34.9	1-1/4"	50.8	85.7			107.0
		10K	664.0	780.0	845.0	24	33	M30	34	56	52.8	146.8	61.4
		PN16											
28"	700	150#	717.6	863.6	927.1	28	34.9	1-1/4"	52.4	87.3			122.0
		10K	715.0	840.0	905.0	24	33	M30	34	58	60.3	169.3	71.5
		PN16	717.6	840.0	910.0	24	36	M33	36				
30"	750	150#	768.3	914.4	984.2	28	34.9	1-1/4"	54.0	88.9			138.0
		10K	766.0	900.0	970.0	24	33	M30	36	62	74.1	206.8	86.9
		PN16											
32"	800	150#	819.1	977.9	1060.4	28	41.3	1-1/2"	57.1	92.1			170.0
		10K	817.0	950.0	1020.0	28	33	M30	36	64	77.4	228.3	92.4
		PN16	819.1	950.0	1025.0	24	39	M36	38				
34"	850	150#	869.9	1028.7	1111.2	32	41.3	1-1/2"	58.7	93.7			184.0
		10K	868.0	1000.0	1070.0	28	33	M30	36	66	81.7	252.0	99.9
		PN16											
36"	900	150#	920.7	1085.8	1168.4	32	41.3	1-1/2"	60.3	95.2			211.0
		10K	919.0	1050.0	1120.0	28	33	M30	38	70	90.5	292.1	104.0
		PN16	920.7	1050.0	1125.0	28	39	M36	40				
38"	950	150#	971.5	1149.3	1238.2	32	41.3	1-1/2"	60.3	95.2			249.0
		10K											
		PN16											
40"	1000	150#	1022.3	1200.1	1289.0	36	41.3	1-1/2"	63.5	98.4			272.0
		10K	1021.0	1160.0	1235.0	28	39	M36	40	74	110.6	372.4	134.7
		PN16	1022.3	1170.0	1255.0	28	42	M39	42				

Flanges



Nominal Size		Flange Standard	Dimmension (mm)								Weight (Kg)		
Inch	DN		B	C	D	n	d	Bolt	t	T	Plate	Blind	Slip-on
42"	1050	150#	1073.1	1257.3	1346.2	36	41.3	1-1/2"	66.7	101.6			313.0
		10K											
		PN16											
44"	1100	150#	1123.9	1314.4	1403.3	40	41.3	1-1/2"	66.7	101.6			331.0
		10K	1123.0	1270.0	1345.0	28	39	M36	42		133.3	465.9	
		PN16											
46"	1150	150#	1174.7	1365.2	1454.1	40	41.3	1-1/2"	68.3	103.2			349.0
		10K											
		PN16											
48"	1200	150#	1225.5	1422.4	1511.1	44	41.3	1-1/2"	69.8	104.8			381.0
		10K	1224.0	1380.0	1465.0	32	39	M36	44		165.6	579.8	
		PN16											

Note:

- 150# : BS.1560 Class150 (ANSI 125#, 150#)
- 10K : JIS 10Kg/cm²
- PN16 : BS.4504 Table 16 (16 bar)