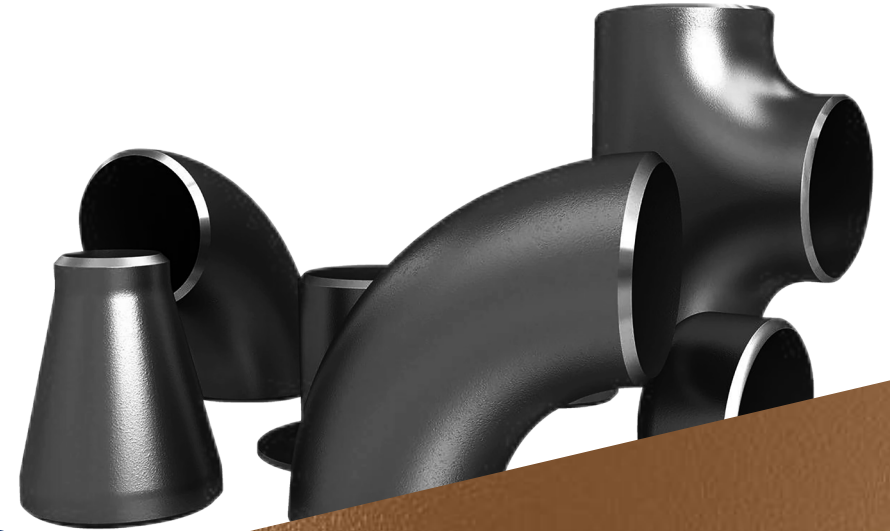


KOUJI

CARBON STEEL / STAINLESS STEEL / BUTT-WELDING FITTINGS



KOUJI BRAND

BUTT-WELDING PIPING FITTINGS

■ APPLICATION

KOUJI butt-welding piping fittings are manufacture with Carbon Steel and Stainless Steel pipe materials, supplies by pipes manuafcatures in accordance with in ASTM/ASME Standard and Specifcation.

■ STANDARD

ASTM (American Society for Testing and Materials)

- A123 Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
- A234 Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service
- A403 Standard Specification for Wrought Austenitic Stainless Steel Piping Fittings
- A960 Standard Specification for Common Requirements for Wrought Steel Piping Fittings

ASME (The American Society of Mechanical Engineers)

- B16.9 Factory-Made Wrought Buttwelding Fittings
- B16.25 Buttwelding Ends

■ PRODUCT

- Carbon steel butt-welding fittings
- Stainless steel butt-welding fittings

BUTT-WELDING FITTINGS

ELBOWS



LONG



SHORT

TEES



STRAIGHT



REDUCING

REDUCERS



CONCENTRIC



ECCENTRIC

CAPS



■ SIZE

- Seamless Carbon Steel Butt-Welding Fittings 1/2" - 24"
- Welded Carbon Steel Butt-Welding Fittings 1/2" - 48"
- Seamless Stainless Steel Butt-Welding Fittings 1/2" - 12"
- Welded Stainless Steel Butt-Welding Fittings 1/2" - 24"

KOUJI BRAND

BUTT-WELDING PIPING FITTINGS

■ WALL THICKNESS

Carbon Steel Material

- Sch20, Sch30, Sch40, Sch60, Sch80, Sch120, Sch160 SchSTD, SchXS, Sch XXS

Stainless Steel Material

- Sch10S, Sch40S, Sch80S

■ MATERIAL OF PRODUCTS

- A234 WPB SMLS made from A106 Grade B
- A244 WPB WELDED made from A53 Grade B
- A403 WP304/304L SMLS made from A312 TP304/304L SMLS
- A403 WP304/304L WELDED made from A312 TP304/304L WELDED

■ COATING

- Painted with clear or black coating for carbon steel fittings
- Hot Dip-Galvanized for carbon steel fittings

■ WALL THICKNESS TOLERANCES

- Not less than 87.5% of nominal standard wall thickness (- 12.5%) Outside Diameter
- According to ASME B16.9

■ MARKING

1. Trade mark "KJ"
2. Material type
3. Size
4. Description
5. Manufacturing Number

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9

90° Elbow (Long , Short)

45° Elbow (Long)

Unit : mm



Long



Short

NOMINAL PIPE SIZE	Outside Diameter O.D	Center to End			Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
		Long		Short	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
		A	B	A																
1/2	21.30	38	16	-	-	-	2.77	15.80	2.77	15.80	3.73	13.80	3.73	13.80	-	-	4.78	11.70	7.47	6.40
3/4	26.70	38	19	-	-	-	2.87	21.00	2.87	21.00	3.91	18.90	3.91	18.90	-	-	5.56	15.60	7.82	11.10
1	33.40	38	22	25	-	-	3.38	26.60	3.38	26.60	4.55	24.30	4.55	24.30	-	-	6.35	20.70	9.09	15.20
1 1/4	42.20	48	25	32	-	-	3.56	35.10	3.56	35.10	4.85	32.50	4.85	32.50	-	-	6.35	29.50	9.70	22.80
1 1/2	48.30	57	29	38	-	-	3.68	40.90	3.68	40.90	5.08	38.10	5.08	38.10	-	-	7.14	34.00	10.15	28.00
2	60.30	76	35	51	-	-	3.91	52.50	3.91	52.50	5.54	49.20	5.54	49.20	-	-	8.74	42.80	11.07	38.20
2 1/2	73.00	95	44	64	-	-	5.16	62.70	5.16	62.70	7.01	59.00	7.01	59.00	-	-	9.53	53.90	14.02	45.00
3	88.90	114	51	76	-	-	5.49	77.90	5.49	77.90	7.62	73.70	7.62	73.70	-	-	11.13	66.60	15.24	58.40
3 1/2	101.60	133	57	89	-	-	5.74	90.10	5.74	90.10	8.08	85.40	8.08	85.40	-	-	-	-	-	-
4	114.30	152	64	102	-	-	6.02	102.30	6.02	102.30	8.56	97.20	8.56	97.20	-	-	13.49	87.30	17.12	80.10
5	141.30	190	79	127	-	-	6.55	128.20	6.55	128.20	9.53	122.20	9.53	122.20	-	-	15.88	109.50	19.05	103.20
6	168.30	229	95	152	-	-	7.11	154.10	7.11	154.10	10.97	146.40	10.97	146.40	-	-	18.26	131.80	21.95	124.40
8	219.10	305	127	203	6.35	206.40	8.18	202.70	8.18	202.70	12.70	193.70	12.70	193.70	15.09	188.90	23.01	173.10	22.23	174.60
10	273.00	381	159	254	6.35	260.30	9.27	254.50	9.27	254.50	12.70	247.60	15.09	242.80	18.26	236.50	28.58	215.80	25.40	222.20
12	323.80	457	190	305	6.35	311.10	9.53	304.70	10.31	303.20	12.70	298.40	17.48	288.80	21.44	280.90	33.32	257.20	25.40	273.00
14	355.60	533	222	356	7.92	339.80	9.53	336.50	11.13	333.30	12.70	330.20	19.05	317.50	23.83	307.90	35.71	284.20	-	-

CARBON STEEL

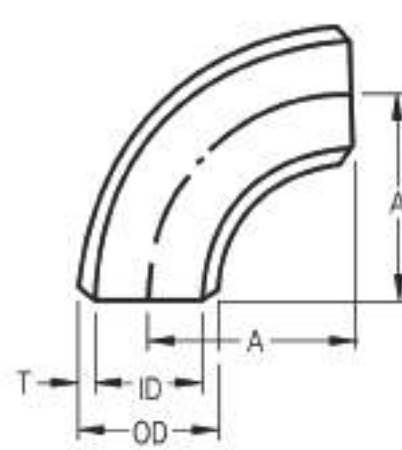
Butt Weld Pipe Fittings

ASME B16.9

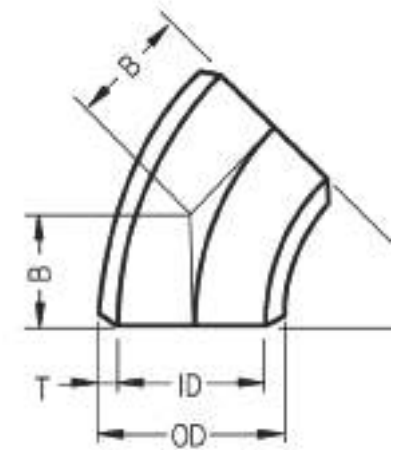
90° Elbow (Long , Short)

45° Elbow (Long)

Unit : mm



Long



Short

NOMINAL PIPE SIZE	Outside Diameter O.D	Center to End			Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
		Long		Short	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
		A	B	A																
16	406.40	610	254	406	7.92	390.60	9.53	387.30	12.70	381.00	12.70	381.00	21.44	363.50	26.19	354.00	40.49	325.40	-	-
18	457.00	686	286	457	7.92	441.20	9.53	437.90	14.27	428.50	12.70	431.60	23.83	409.30	29.36	398.30	45.24	366.50	-	-
20	508.00	762	318	508	9.53	488.90	9.53	488.90	15.09	477.80	12.70	482.60	26.19	455.60	32.54	442.90	50.01	408.00	-	-
22	559.00	838	343	559	9.53	539.90	9.53	539.90	-	-	12.70	533.60	28.58	501.80	34.93	489.10	53.98	451.00	-	-
24	610.00	914	381	610	9.53	590.90	9.53	590.90	17.48	575.00	12.70	584.60	30.96	548.10	38.89	532.20	59.54	490.90	-	-
26	660.00	991	406	-	-	-	9.53	640.90	-	-	12.70	634.60	-	-	-	-	-	-	-	-
28	711.00	1067	438	-	-	-	9.53	691.90	-	-	12.70	685.60	-	-	-	-	-	-	-	-
30	762.00	1143	470	-	-	-	9.53	742.90	-	-	12.70	736.60	-	-	-	-	-	-	-	-
32	813.00	1219	502	-	-	-	9.53	793.90	17.48	778.00	12.70	787.60	-	-	-	-	-	-	-	-
34	864.00	1295	533	-	-	-	9.53	844.90	17.48	829.00	12.70	838.60	-	-	-	-	-	-	-	-
36	914.00	1372	565	-	-	-	9.53	894.90	19.05	875.90	12.70	888.60	-	-	-	-	-	-	-	-
38	965.00	1448	600	-	-	-	9.53	945.90	-	-	12.70	939.60	-	-	-	-	-	-	-	-
40	1016.00	1524	632	-	-	-	9.53	996.90	-	-	12.70	990.60	-	-	-	-	-	-	-	-
42	1067.00	1600	660	-	-	-	9.53	1047.90	-	-	12.70	1041.60	-	-	-	-	-	-	-	-
44	1118.00	1676	695	-	-	-	9.53	1098.90	-	-	12.70	1092.60	-	-	-	-	-	-	-	-
46	1168.00	1753	727	-	-	-	9.53	1148.90	-	-	12.70	1142.60	-	-	-	-	-	-	-	-
48	1219.00	1829	759	-	-	-	9.53	1199.90	-	-	12.70	1193.60	-	-	-	-	-	-	-	-

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9
180° Elbow (Long , Short)



Long



Short

Unit : mm

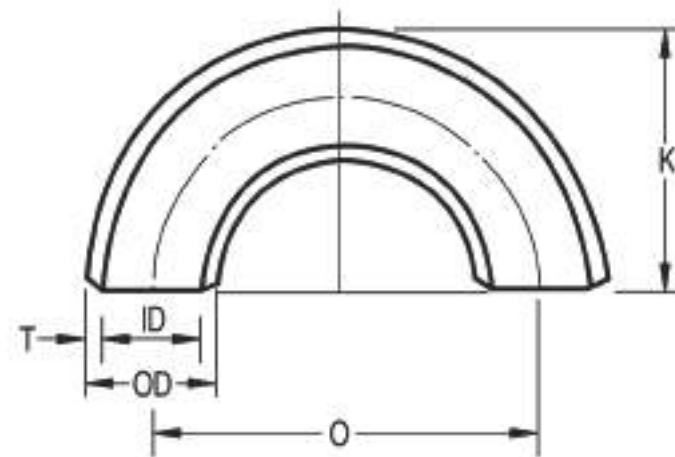
NOMINAL PIPE SIZE	Outside Diameter O.D	Long		Short		Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
		O	K	O	K	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
1/2	21.30	76	48	-	-	-	-	2.77	15.80	2.77	15.80	3.73	13.80	3.73	13.80	-	-	4.78	11.70	7.47	6.40
3/4	26.70	76	51	-	-	-	-	2.87	21.00	2.87	21.00	3.91	18.90	3.91	18.90	-	-	5.56	15.60	7.82	11.10
1	33.40	76	56	51	41	-	-	3.38	26.60	3.38	26.60	4.55	24.30	4.55	24.30	-	-	6.35	20.70	9.09	15.20
1 1/4	42.20	95	70	64	52	-	-	3.56	35.10	3.56	35.10	4.85	32.50	4.85	32.50	-	-	6.35	29.50	9.70	22.80
1 1/2	48.30	114	83	76	62	-	-	3.68	40.90	3.68	40.90	5.08	38.10	5.08	38.10	-	-	7.14	34.00	10.15	28.00
2	60.30	152	106	102	81	-	-	3.91	52.50	3.91	52.50	5.54	49.20	5.54	49.20	-	-	8.74	42.80	11.07	38.20
2 1/2	73.00	190	132	127	100	-	-	5.16	62.70	5.16	62.70	7.01	59.00	7.01	59.00	-	-	9.53	53.90	14.02	45.00
3	88.90	229	159	152	121	-	-	5.49	77.90	5.49	77.90	7.62	73.70	7.62	73.70	-	-	11.13	66.60	15.24	58.40
3 1/2	101.60	267	184	178	140	-	-	5.74	90.10	5.74	90.10	8.08	85.40	8.08	85.40	-	-	-	-	-	-
4	114.30	305	210	203	159	-	-	6.02	102.30	6.02	102.30	8.56	97.20	8.56	97.20	-	-	13.49	87.30	17.12	80.10
5	141.30	381	262	254	197	-	-	6.55	128.20	6.55	128.20	9.53	122.20	9.53	122.20	-	-	15.88	109.50	19.05	103.20

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9 180° Elbow (Long , Short)

Unit : mm



NOMINAL PIPE SIZE	Outside Diameter O.D	Long		Short		Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
		O	K	O	K	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
6	168.30	457	313	305	237	-	-	7.11	154.10	7.11	154.10	10.97	146.40	10.97	146.40	-	-	18.26	131.80	21.95	124.40
8	219.10	610	414	406	313	6.35	206.40	8.18	202.70	8.18	202.70	12.70	193.70	12.70	193.70	15.09	188.90	23.01	173.10	22.23	174.60
10	273.00	762	518	508	391	6.35	260.30	9.27	254.50	9.27	254.50	12.70	247.60	15.09	242.80	18.26	236.50	28.58	215.80	25.40	222.20
12	323.80	914	619	610	467	6.35	311.10	9.53	304.70	10.31	303.20	12.70	298.40	17.48	288.80	21.44	280.90	33.32	257.20	25.40	273.00
14	355.60	1067	711	711	533	7.92	339.80	9.53	336.50	11.13	333.30	12.70	330.20	19.05	317.50	23.83	307.90	35.71	284.20	-	-
16	406.40	1219	813	813	610	7.92	390.60	9.53	387.30	12.70	381.00	12.70	381.00	21.44	363.50	26.19	354.00	40.49	325.40	-	-
18	457.00	1372	914	914	686	7.92	441.20	9.53	437.90	14.27	428.50	12.70	431.60	23.83	409.30	29.36	398.30	45.24	366.50	-	-
20	508.00	1524	1016	1016	762	9.53	488.90	9.53	488.90	15.09	477.80	12.70	482.60	26.19	455.60	32.54	442.90	50.01	408.00	-	-
22	559.00	1676	1118	1118	838	9.53	539.90	9.53	539.90	-	-	12.70	533.60	28.58	501.80	34.93	489.10	53.98	451.00	-	-
24	610.00	1829	1219	1219	914	9.53	590.90	9.53	590.90	17.48	575.00	12.70	584.60	30.96	548.10	38.89	532.20	59.54	490.90	-	-

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9 Tee (Straight)



Straight

Unit : mm

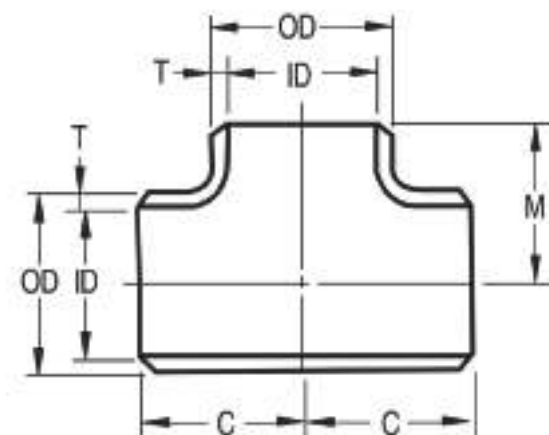
NOMINAL PIPE SIZE	Outside Diameter O.D	Center to End		Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
		Run C	Outlet M	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
1/2	21.30	25	25	-	-	2.77	15.80	2.77	15.80	3.73	13.80	3.73	13.80	-	-	4.78	11.70	7.47	6.40
3/4	26.70	29	29	-	-	2.87	21.00	2.87	21.00	3.91	18.90	3.91	18.90	-	-	5.56	15.60	7.82	11.10
1	33.40	38	38	-	-	3.38	26.60	3.38	26.60	4.55	24.30	4.55	24.30	-	-	6.35	20.70	9.09	15.20
1 1/4	42.20	48	48	-	-	3.56	35.10	3.56	35.10	4.85	32.50	4.85	32.50	-	-	6.35	29.50	9.70	22.80
1 1/2	48.30	57	57	-	-	3.68	40.90	3.68	40.90	5.08	38.10	5.08	38.10	-	-	7.14	34.00	10.15	28.00
2	60.30	64	64	-	-	3.91	52.50	3.91	52.50	5.54	49.20	5.54	49.20	-	-	8.74	42.80	11.07	38.20
2 1/2	73.00	76	76	-	-	5.16	62.70	5.16	62.70	7.01	59.00	7.01	59.00	-	-	9.53	53.90	14.02	45.00
3	88.90	86	86	-	-	5.49	77.90	5.49	77.90	7.62	73.70	7.62	73.70	-	-	11.13	66.60	15.24	58.40
3 1/2	101.60	95	95	-	-	5.74	90.10	5.74	90.10	8.08	85.40	8.08	85.40	-	-	-	-	-	-
4	114.30	105	105	-	-	6.02	102.30	6.02	102.30	8.56	97.20	8.56	97.20	-	-	13.49	87.30	17.12	80.10
5	141.30	124	124	-	-	6.55	128.20	6.55	128.20	9.53	122.20	9.53	122.20	-	-	15.88	109.50	19.05	103.20
6	168.30	143	143	-	-	7.11	154.10	7.11	154.10	10.97	146.40	10.97	146.40	-	-	18.26	131.80	21.95	124.40
8	219.10	178	178	6.35	206.40	8.18	202.70	8.18	202.70	12.70	193.70	12.70	193.70	15.09	188.90	23.01	173.10	22.23	174.60
10	273.00	216	216	6.35	260.30	9.27	254.50	9.27	254.50	12.70	247.60	15.09	242.80	18.26	236.50	28.58	215.80	25.40	222.20
12	323.80	254	254	6.35	311.10	9.53	304.70	10.31	303.20	12.70	298.40	17.48	288.80	21.44	280.90	33.32	257.20	25.40	273.00
14	355.60	279	279	7.92	339.80	9.53	336.50	11.13	333.30	12.70	330.20	19.05	317.50	23.83	307.90	35.71	284.20	-	-
16	406.40	305	305	7.92	390.60	9.53	387.30	12.70	381.00	12.70	381.00	21.44	363.50	26.19	354.00	40.49	325.40	-	-

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9 Tee (Straight)

Unit : mm



Straight

NOMINAL PIPE SIZE	Outside Diameter O.D	Center to End		Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
		Run C	Outlet M	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
18	457.00	343	343	7.92	441.20	9.53	437.90	14.27	428.50	12.70	431.60	23.83	409.30	29.36	398.30	45.24	366.50	-	-
20	508.00	381	381	9.53	488.90	9.53	488.90	15.09	477.80	12.70	482.60	26.19	455.60	32.54	442.90	50.01	408.00	-	-
22	559.00	419	419	9.53	539.90	9.53	539.90	-	-	12.70	533.60	28.58	501.80	34.93	489.10	53.98	451.00	-	-
24	610.00	432	432	9.53	590.90	9.53	590.90	17.48	575.00	12.70	584.60	30.96	548.10	38.89	532.20	59.54	490.90	-	-
26	660.00	495	495	-	-	9.53	640.90	-	-	12.70	634.60	-	-	-	-	-	-	-	-
28	711.00	521	521	-	-	9.53	691.90	-	-	12.70	685.60	-	-	-	-	-	-	-	-
30	762.00	559	559	-	-	9.53	742.90	-	-	12.70	736.60	-	-	-	-	-	-	-	-
32	813.00	597	597	-	-	9.53	793.90	17.48	778.00	12.70	787.60	-	-	-	-	-	-	-	-
34	864.00	635	635	-	-	9.53	844.90	17.48	829.00	12.70	838.60	-	-	-	-	-	-	-	-
36	914.00	673	673	-	-	9.53	894.90	19.05	875.90	12.70	888.60	-	-	-	-	-	-	-	-
38	965.00	711	711	-	-	9.53	945.90	-	-	12.70	939.60	-	-	-	-	-	-	-	-
40	1016.00	749	749	-	-	9.53	996.90	-	-	12.70	990.60	-	-	-	-	-	-	-	-
42	1067.00	762	711	-	-	9.53	1047.90	-	-	12.70	1041.60	-	-	-	-	-	-	-	-
44	1118.00	813	762	-	-	9.53	1098.90	-	-	12.70	1092.60	-	-	-	-	-	-	-	-
46	1168.00	851	800	-	-	9.53	1148.90	-	-	12.70	1142.60	-	-	-	-	-	-	-	-
48	1219.00	889	838	-	-	9.53	1199.90	-	-	12.70	1193.60	-	-	-	-	-	-	-	-

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9
Tee (Reducing)

Unit : mm



Reducing

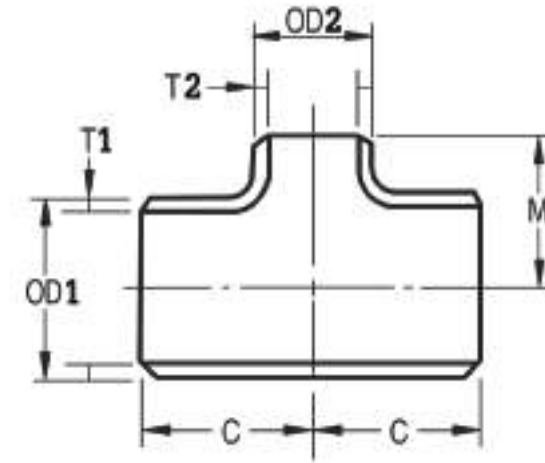
NOMINAL PIPE SIZE	Outside Diameter O.D		Center to End		Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
	OD1	OD2	Run C	Outlet M	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
3/4 X 3/4 X 1/2	26.70	21.30	29	29	-	-	2.87	2.77	2.87	2.77	3.91	3.73	3.91	3.73	-	-	5.56	4.78	7.82	7.47
1 X 1 X 3/4	33.40	26.70	38	38	-	-	3.38	2.87	3.38	2.87	4.55	3.91	4.55	3.91	-	-	6.35	5.56	9.09	7.82
1 X 1 X 1/2	33.40	21.30	38	38	-	-	3.38	2.77	3.38	2.77	4.55	3.73	4.55	3.73	-	-	6.35	4.78	9.09	7.47
1 1/4 X 1 1/4 X 1	42.20	33.40	48	48	-	-	3.56	3.38	3.56	3.38	4.85	4.55	4.85	4.55	-	-	6.35	6.35	9.70	9.09
1 1/4 X 1 1/4 X 3/4	42.20	26.70	48	48	-	-	3.56	2.87	3.56	2.87	4.85	3.91	4.85	3.91	-	-	6.35	5.56	9.70	7.82
1 1/2 X 1 1/2 X 1 1/4	48.30	42.20	57	57	-	-	3.68	3.56	3.68	3.56	5.08	4.85	5.08	4.85	-	-	7.14	6.35	10.15	9.70
1 1/2 X 1 1/2 X 1	48.30	33.40	57	57	-	-	3.68	3.38	3.68	3.38	5.08	4.55	5.08	4.55	-	-	7.14	6.35	10.15	9.09
1 1/2 X 1 1/2 X 3/4	48.30	26.70	57	57	-	-	3.68	2.87	3.68	2.87	5.08	3.91	5.08	3.91	-	-	7.14	5.56	10.15	7.82
2 X 2 X 1 1/2	60.30	48.30	64	60	-	-	3.91	3.68	3.91	3.68	5.54	5.08	5.54	5.08	-	-	8.74	7.14	11.07	10.15
2 X 2 X 1 1/4	60.30	42.20	64	57	-	-	3.91	3.56	3.91	3.56	5.54	4.85	5.54	4.85	-	-	8.74	6.35	11.07	9.70
2 X 2 X 1	60.30	33.40	64	51	-	-	3.91	3.38	3.91	3.38	5.54	4.55	5.54	4.55	-	-	8.74	6.35	11.07	9.09
2 1/2 X 2 1/2 X 2	73.00	60.30	76	70	-	-	5.16	3.91	5.16	3.91	7.01	5.54	7.01	5.54	-	-	9.53	8.74	14.02	11.07
2 1/2 X 2 1/2 X 1 1/2	73.00	48.30	76	67	-	-	5.16	3.68	5.16	3.68	7.01	5.08	7.01	5.08	-	-	9.53	7.14	14.02	10.15
2 1/2 X 2 1/2 X 1 1/4	73.00	42.20	76	64	-	-	5.16	3.56	5.16	3.56	7.01	4.85	7.01	4.85	-	-	9.53	6.35	14.02	9.70
3 X 3 X 2 1/2	88.90	73.00	86	83	-	-	5.49	5.16	5.49	5.16	7.62	7.01	7.62	7.01	-	-	11.13	9.53	15.24	14.02
3 X 3 X 2	88.90	60.30	86	76	-	-	5.49	3.91	5.49	3.91	7.62	5.54	7.62	5.54	-	-	11.13	8.74	15.24	11.07
3 X 3 X 1 1/2	88.90	48.30	86	73	-	-	5.49	3.68	5.49	3.68	7.62	5.08	7.62	5.08	-	-	11.13	7.14	15.24	10.15

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9 Tee (Reducing)

Unit : mm



Reducing

NOMINAL PIPE SIZE	Outside Diameter O.D		Center to End		Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
	OD1	OD2	Run C	Outlet M	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
3 1/2 X 3 1/2 X 3	101.60	88.90	95	92	-	-	5.74	5.49	5.74	5.49	8.08	7.62	8.08	7.62	-	-	-	11.13	-	15.24
3 1/2 X 3 1/2 X 2 1/2	101.60	73.00	95	89	-	-	5.74	5.16	5.74	5.16	8.08	7.01	8.08	7.01	-	-	-	9.53	-	14.02
3 1/2 X 3 1/2 X 2	101.60	60.30	95	83	-	-	5.74	3.91	5.74	3.91	8.08	5.54	8.08	5.54	-	-	-	8.74	-	11.07
3 1/2 X 3 1/2 X 1 1/2	101.60	48.30	95	79	-	-	5.74	3.68	5.74	3.68	8.08	5.08	8.08	5.08	-	-	-	7.14	-	10.15
4 X 4 X 3 1/2	114.30	101.60	105	102	-	-	6.02	5.74	6.02	5.74	8.56	8.08	8.56	8.08	-	-	13.49	-	17.12	-
4 X 4 X 3	114.30	88.90	105	98	-	-	6.02	5.49	6.02	5.49	8.56	7.62	8.56	7.62	-	-	13.49	11.13	17.12	15.24
4 X 4 X 2 1/2	114.30	73.00	105	95	-	-	6.02	5.16	6.02	5.16	8.56	7.01	8.56	7.01	-	-	13.49	9.53	17.12	14.02
4 X 4 X 2	114.30	60.30	105	89	-	-	6.02	3.91	6.02	3.91	8.56	5.54	8.56	5.54	-	-	13.49	8.74	17.12	11.07
5 X 5 X 4	141.30	114.30	124	117	-	-	6.55	6.02	6.55	6.02	9.53	8.56	9.53	8.56	-	-	15.88	13.49	19.05	17.12
5 X 5 X 3 1/2	141.30	101.60	124	114	-	-	6.55	5.74	6.55	5.74	9.53	8.08	9.53	8.08	-	-	15.88	-	19.05	-
5 X 5 X 3	141.30	88.90	124	111	-	-	6.55	5.49	6.55	5.49	9.53	7.62	9.53	7.62	-	-	15.88	11.13	19.05	15.24
5 X 5 X 2 1/2	141.30	73.00	124	108	-	-	6.55	5.16	6.55	5.16	9.53	7.01	9.53	7.01	-	-	15.88	9.53	19.05	14.02
6 X 6 X 5	168.30	141.30	143	137	-	-	7.11	6.55	7.11	6.55	10.97	9.53	10.97	9.53	-	-	18.26	15.88	21.95	19.05
6 X 6 X 4	168.30	114.30	143	130	-	-	7.11	6.02	7.11	6.02	10.97	8.56	10.97	8.56	-	-	18.26	13.49	21.95	17.12
6 X 6 X 3 1/2	168.30	101.60	143	127	-	-	7.11	5.74	7.11	5.74	10.97	8.08	10.97	8.08	-	-	18.26	-	21.95	-
6 X 6 X 3	168.30	88.90	143	124	-	-	7.11	5.49	7.11	5.49	10.97	7.62	10.97	7.62	-	-	18.26	11.13	21.95	15.24
8 X 8 X 6	219.10	168.30	178	168	6.35	-	8.18	7.11	8.18	7.11	12.70	10.97	12.70	10.97	15.09	-	23.01	18.26	22.23	21.95

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9 Tee (Reducing)

Unit : mm



Reducing

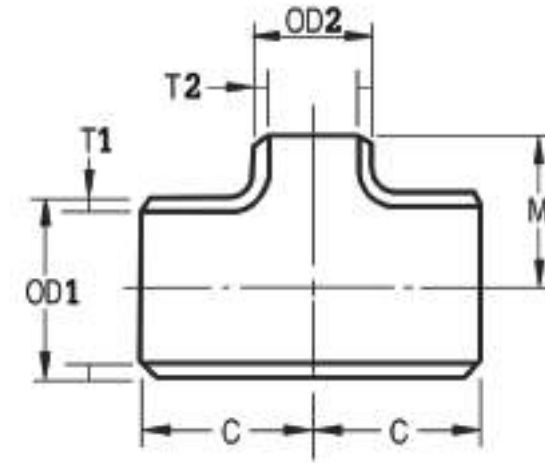
NOMINAL PIPE SIZE	Outside Diameter O.D		Center to End		Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
	OD1	OD2	Run C	Outlet M	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
8 X 8 X 5	219.10	141.30	178	162	6.35	-	8.18	6.55	8.18	6.55	12.70	9.53	12.70	9.53	15.09	-	23.01	15.88	22.23	19.05
8 X 8 X 4	219.10	114.30	178	156	6.35	-	8.18	6.02	8.18	6.02	12.70	8.56	12.70	8.56	15.09	-	23.01	13.49	22.23	17.12
10 X 10 X 8	273.00	219.10	216	203	6.35	6.35	9.27	8.18	9.27	8.18	12.70	12.70	15.09	12.70	18.26	15.09	28.58	23.01	25.40	22.23
10 X 10 X 6	273.00	168.30	216	194	6.35	-	9.27	7.11	9.27	7.11	12.70	10.97	15.09	10.97	18.26	-	28.58	18.26	25.40	21.95
10 X 10 X 5	273.00	141.30	216	191	6.35	-	9.27	6.55	9.27	6.55	12.70	9.53	15.09	9.53	18.26	-	28.58	15.88	25.40	19.05
12 X 12 X 10	323.80	273.00	254	241	6.35	6.35	9.53	9.27	10.31	9.27	12.70	12.70	17.48	15.09	21.44	18.26	33.32	28.58	25.40	25.40
12 X 12 X 8	323.80	219.10	254	229	6.35	6.35	9.53	8.18	10.31	8.18	12.70	12.70	17.48	12.70	21.44	15.09	33.32	23.01	25.40	22.23
12 X 12 X 6	323.80	168.30	254	219	6.35	-	9.53	7.11	10.31	7.11	12.70	10.97	17.48	10.97	21.44	-	33.32	18.26	25.40	21.95
14 X 14 X 12	355.60	323.80	279	270	7.92	6.35	9.53	9.53	11.13	10.31	12.70	12.70	19.05	17.48	23.83	21.44	35.71	33.32	-	25.40
14 X 14 X 10	355.60	273.00	279	257	7.92	6.35	9.53	9.27	11.13	9.27	12.70	12.70	19.05	15.09	23.83	18.26	35.71	28.58	-	25.40
14 X 14 X 8	355.60	219.10	279	248	7.92	6.35	9.53	8.18	11.13	8.18	12.70	12.70	19.05	12.70	23.83	15.09	35.71	23.01	-	22.23
16 X 16 X 14	406.40	355.60	305	305	7.92	7.92	9.53	9.53	12.70	11.13	12.70	12.70	21.44	19.05	26.19	23.83	40.49	35.71	-	-
16 X 16 X 12	406.40	323.80	305	295	7.92	6.35	9.53	9.53	12.70	10.31	12.70	12.70	21.44	17.48	26.19	21.44	40.49	33.32	-	25.40
16 X 16 X 10	406.40	273.00	305	283	7.92	6.35	9.53	9.27	12.70	9.27	12.70	12.70	21.44	15.09	26.19	18.26	40.49	28.58	-	25.40
18 X 18 X 16	457.00	406.40	343	330	7.92	7.92	9.53	9.53	14.27	12.70	12.70	12.70	23.83	21.44	29.36	26.19	45.24	40.49	-	-
18 X 18 X 14	457.00	355.60	343	330	7.92	7.92	9.53	9.53	14.27	11.13	12.70	12.70	23.83	19.05	29.36	23.83	45.24	35.71	-	-
18 X 18 X 12	457.00	323.80	343	321	7.92	6.35	9.53	9.53	14.27	10.31	12.70	12.70	23.83	17.48	29.36	21.44	45.24	33.32	-	25.40

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9 Tee (Reducing)

Unit : mm



Reducing

NOMINAL PIPE SIZE	Outside Diameter O.D		Center to End		Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
	OD1	OD2	Run C	Outlet M	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
20 X 20 X 18	508.00	457.00	381	368	9.53	7.92	9.53	9.53	15.09	14.27	12.70	12.70	26.19	23.83	32.54	29.36	50.01	45.24	-	-
20 X 20 X 16	508.00	406.40	381	356	9.53	7.92	9.53	9.53	15.09	12.70	12.70	12.70	26.19	21.44	32.54	26.19	50.01	40.49	-	-
20 X 20 X 14	508.00	355.60	381	356	9.53	7.92	9.53	9.53	15.09	11.13	12.70	12.70	26.19	19.05	32.54	23.83	50.01	35.71	-	-
22 X 22 X 20	559.00	508.00	419	406	9.53	9.53	9.53	9.53	-	15.09	12.70	12.70	28.58	26.19	34.93	32.54	53.98	50.01	-	-
22 X 22 X 18	559.00	457.00	419	394	9.53	7.92	9.53	9.53	-	14.27	12.70	12.70	28.58	23.83	34.93	29.36	53.98	45.24	-	-
22 X 22 X 16	559.00	406.40	419	381	9.53	7.92	9.53	9.53	-	12.70	12.70	12.70	28.58	21.44	34.93	26.19	53.98	40.49	-	-
24 X 24 X 22	610.00	559.00	432	432	9.53	9.53	9.53	9.53	17.48	-	12.70	12.70	30.96	28.58	38.89	34.93	59.54	53.98	-	-
24 X 24 X 20	610.00	508.00	432	432	9.53	9.53	9.53	9.53	17.48	15.09	12.70	12.70	30.96	26.19	38.89	32.54	59.54	50.01	-	-
24 X 24 X 18	610.00	457.00	432	419	9.53	7.92	9.53	9.53	17.48	14.27	12.70	12.70	30.96	23.83	38.89	29.36	59.54	45.24	-	-
26 X 26 X 22	660.00	559.00	495	470	-	-	9.53	9.53	-	-	12.70	12.70	-	28.58	-	-	-	53.98	-	-
26 X 26 X 18	660.00	457.00	495	444	-	-	9.53	9.53	-	14.27	12.70	12.70	-	23.83	-	-	-	45.24	-	-
26 X 26 X 16	660.00	406.40	495	432	-	-	9.53	9.53	-	12.70	12.70	12.70	-	21.44	-	-	-	40.49	-	-
28 X 28 X 24	711.00	610.00	521	508	-	-	9.53	9.53	-	17.48	12.70	12.70	-	30.96	-	-	-	59.54	-	-
28 X 28 X 20	711.00	508.00	521	483	-	-	9.53	9.53	-	15.09	12.70	12.70	-	26.19	-	-	-	50.01	-	-
28 X 28 X 18	711.00	457.00	521	470	-	-	9.53	9.53	-	14.27	12.70	12.70	-	23.83	-	-	-	45.24	-	-
30 X 30 X 26	762.00	660.00	559	546	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
30 X 30 X 22	762.00	559.00	559	521	-	-	9.53	9.53	-	-	12.70	12.70	-	28.58	-	-	-	53.98	-	-

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9 Tee (Reducing)



Reducing

Unit : mm

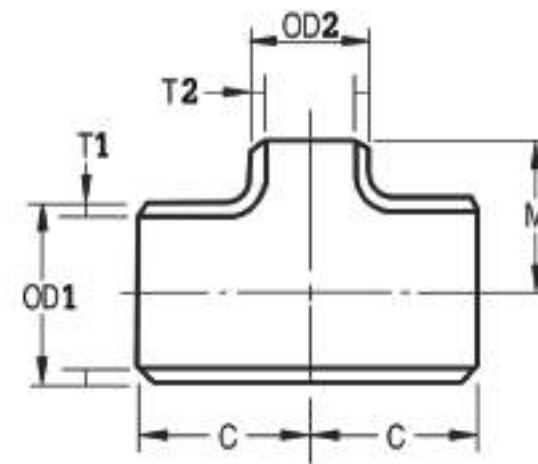
NOMINAL PIPE SIZE	Outside Diameter O.D		Center to End		Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
	OD1	OD2	Run C	Outlet M	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
30 X 30 X 20	762.00	508.00	559	508	-	-	9.53	9.53	-	15.09	12.70	12.70	-	26.19	-	-	-	50.01	-	-
32 X 32 X 28	813.00	711.00	597	559	-	-	9.53	9.53	17.48	17.48	12.70	12.70	-	-	-	-	-	-	-	-
32 X 32 X 24	813.00	610.00	597	546	-	-	9.53	9.53	17.48	17.48	12.70	12.70	-	30.96	-	-	-	59.54	-	-
32 X 32 X 22	813.00	559.00	597	559	-	-	9.53	9.53	17.48	17.48	12.70	12.70	-	28.58	-	-	-	53.98	-	-
34 X 34 X 30	864.00	762.00	635	610	-	-	9.53	9.53	17.48	-	12.70	12.70	-	-	-	-	-	-	-	-
34 X 34 X 26	864.00	660.00	635	597	-	-	9.53	9.53	17.48	-	12.70	12.70	-	-	-	-	-	-	-	-
34 X 34 X 22	864.00	559.00	635	572	-	-	9.53	9.53	17.48	-	12.70	12.70	-	28.58	-	-	-	53.98	-	-
36 X 36 X 32	914.00	813.00	673	648	-	-	9.53	9.53	19.05	17.48	12.70	12.70	-	-	-	-	-	-	-	-
36 X 36 X 28	914.00	711.00	673	622	-	-	9.53	9.53	19.05	-	12.70	12.70	-	-	-	-	-	-	-	-
36 X 36 X 24	914.00	610.00	673	610	-	-	9.53	9.53	19.05	17.48	12.70	12.70	-	30.96	-	-	-	59.54	-	-
38 X 38 X 34	965.00	864.00	711	698	-	-	9.53	9.53	-	17.48	12.70	12.70	-	-	-	-	-	-	-	-
38 X 38 X 30	965.00	762.00	711	673	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
38 X 38 X 26	965.00	660.00	711	648	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
40 X 40 X 36	1016.00	914.00	749	737	-	-	9.53	9.53	-	19.05	12.70	12.70	-	-	-	-	-	-	-	-

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9 Tee (Reducing)

Unit : mm



Reducing

NOMINAL PIPE SIZE	Outside Diameter O.D		Center to End		Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
	OD1	OD2	Run C	Outlet M	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
40 X 40 X 32	1016.00	813.00	749	711	-	-	9.53	9.53	-	17.48	12.70	12.70	-	-	-	-	-	-	-	-
40 X 40 X 28	1016.00	711.00	749	673	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
42 X 42 X 38	1067.00	965.00	762	711	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
42 X 42 X 34	1067.00	864.00	762	711	-	-	9.53	9.53	-	17.48	12.70	12.70	-	-	-	-	-	-	-	-
42 X 42 X 30	1067.00	762.00	762	711	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
44 X 44 X 40	1118.00	1016.00	813	749	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
44 X 44 X 36	1118.00	914.00	813	724	-	-	9.53	9.53	-	19.05	12.70	12.70	-	-	-	-	-	-	-	-
44 X 44 X 32	1118.00	813.00	813	711	-	-	9.53	9.53	-	17.48	12.70	12.70	-	-	-	-	-	-	-	-
46 X 46 X 42	1168.00	1067.00	851	787	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
46 X 46 X 38	1168.00	965.00	851	762	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
46 X 46 X 34	1168.00	864.00	851	749	-	-	9.53	9.53	-	17.48	12.70	12.70	-	-	-	-	-	-	-	-
48 X 48 X 44	1219.00	1118.00	889	838	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
48 X 48 X 40	1219.00	1016.00	889	813	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
48 X 48 X 36	1219.00	914.00	889	787	-	-	9.53	9.53	-	19.05	12.70	12.70	-	-	-	-	-	-	-	-

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9 Reducer



Concentric



Eccentric

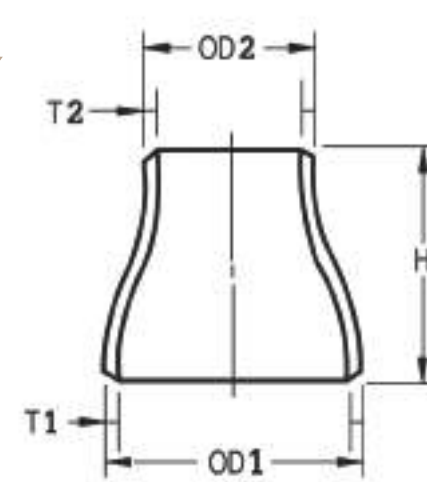
Unit : mm

NOMINAL PIPE SIZE	Outside Diameter O.D		End to End	Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
	OD1	OD2		T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
3/4 X 1/2	26.70	21.30	38	-	-	2.87	2.77	2.87	2.77	3.91	3.73	3.91	3.73	-	-	5.56	4.78	7.82	7.47
1 X 3/4	33.40	26.70	51	-	-	3.38	2.87	3.38	2.87	4.55	3.91	4.55	3.91	-	-	6.35	5.56	9.09	7.82
1 X 1/2	33.40	21.30	51	-	-	3.38	2.77	3.38	2.77	4.55	3.73	4.55	3.73	-	-	6.35	4.78	9.09	7.47
1 1/4 X 1	42.20	33.40	51	-	-	3.56	3.38	3.56	3.38	4.85	4.55	4.85	4.55	-	-	6.35	6.35	9.70	9.09
1 1/4 X 3/4	42.20	26.70	51	-	-	3.56	2.87	3.56	2.87	4.85	3.91	4.85	3.91	-	-	6.35	5.56	9.70	7.82
1 1/4 X 1/2	42.20	21.30	51	-	-	3.56	2.77	3.56	2.77	4.85	3.73	4.85	3.73	-	-	6.35	4.78	9.70	7.47
1 1/2 X 1 1/4	48.30	42.20	64	-	-	3.68	3.56	3.68	3.56	5.08	4.85	5.08	4.85	-	-	7.14	6.35	10.15	9.70
1 1/2 X 1	48.30	33.40	64	-	-	3.68	3.38	3.68	3.38	5.08	4.55	5.08	4.55	-	-	7.14	6.35	10.15	9.09
1 1/2 X 3/4	48.30	26.70	64	-	-	3.68	2.87	3.68	2.87	5.08	3.91	5.08	3.91	-	-	7.14	5.56	10.15	7.82
2 X 1 1/2	60.30	48.30	76	-	-	3.91	3.68	3.91	3.68	5.54	5.08	5.54	5.08	-	-	8.74	7.14	11.07	10.15
2 X 1 1/4	60.30	42.20	76	-	-	3.91	3.56	3.91	3.56	5.54	4.85	5.54	4.85	-	-	8.74	6.35	11.07	9.70
2 X 1	60.30	33.40	76	-	-	3.91	3.38	3.91	3.38	5.54	4.55	5.54	4.55	-	-	8.74	6.35	11.07	9.09
2 X 3/4	60.30	26.70	76	-	-	3.91	2.87	3.91	2.87	5.54	3.91	5.54	3.91	-	-	8.74	5.56	11.07	7.82
2 1/2 X 2	73.00	60.30	89	-	-	5.16	3.91	5.16	3.91	7.01	5.54	7.01	5.54	-	-	9.53	8.74	14.02	11.07

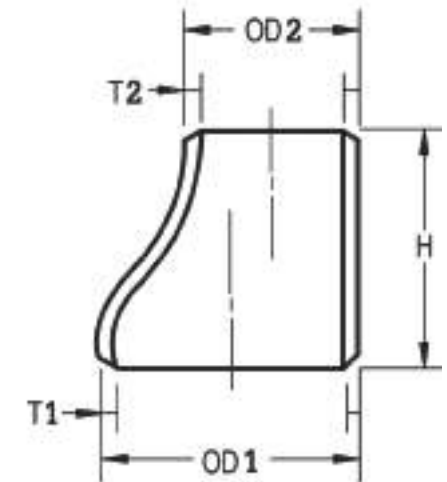
CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9 Reducer



Concentric



Eccentric

Unit : mm

NOMINAL PIPE SIZE	Outside Diameter O.D		End to End	Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
	OD1	OD2		T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
2 1/2 X 1 1/2	73.00	48.30	89	-	-	5.16	3.68	5.16	3.68	7.01	5.08	7.01	5.08	-	-	9.53	7.14	14.02	10.15
2 1/2 X 1 1/4	73.00	42.20	89	-	-	5.16	3.56	5.16	3.56	7.01	4.85	7.01	4.85	-	-	9.53	6.35	14.02	9.70
2 1/2 X 1	73.00	33.40	89	-	-	5.16	3.38	5.16	3.38	7.01	4.55	7.01	4.55	-	-	9.53	6.35	14.02	9.09
3 X 2 1/2	88.90	73.00	89	-	-	5.49	5.16	5.49	5.16	7.62	7.01	7.62	7.01	-	-	11.13	9.53	15.24	14.02
3 X 2	88.90	60.30	89	-	-	5.49	3.91	5.49	3.91	7.62	5.54	7.62	5.54	-	-	11.13	8.74	15.24	11.07
3 X 1 1/2	88.90	48.30	89	-	-	5.49	3.68	5.49	3.68	7.62	5.08	7.62	5.08	-	-	11.13	7.14	15.24	10.15
3 X 1 1/4	88.90	42.20	89	-	-	5.49	3.56	5.49	3.56	7.62	4.85	7.62	4.85	-	-	11.13	6.35	15.24	9.70
3 1/2 X 3	101.60	88.90	102	-	-	5.74	5.49	5.74	5.49	8.08	7.62	8.08	7.62	-	-	-	11.13	-	15.24
3 1/2 X 2 1/2	101.60	73.00	102	-	-	5.74	5.16	5.74	5.16	8.08	7.01	8.08	7.01	-	-	-	9.53	-	14.02
3 1/2 X 2	101.60	60.30	102	-	-	5.74	3.91	5.74	3.91	8.08	5.54	8.08	5.54	-	-	-	8.74	-	11.07
3 1/2 X 1 1/2	101.60	48.30	102	-	-	5.74	3.68	5.74	3.68	8.08	5.08	8.08	5.08	-	-	-	7.14	-	10.15
4 X 3 1/2	114.30	101.60	102	-	-	6.02	5.74	6.02	5.74	8.56	8.08	8.56	8.08	-	-	13.49	-	17.12	-
4 X 3	114.30	88.90	102	-	-	6.02	5.49	6.02	5.49	8.56	7.62	8.56	7.62	-	-	13.49	11.13	17.12	15.24
4 X 2 1/2	114.30	73.00	102	-	-	6.02	5.16	6.02	5.16	8.56	7.01	8.56	7.01	-	-	13.49	9.53	17.12	14.02

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9
Reducer



Concentric



Eccentric

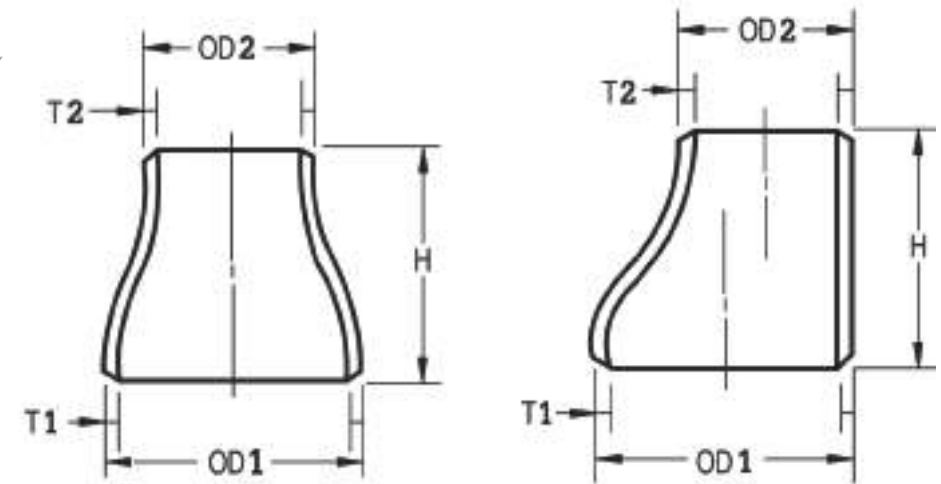
Unit : mm

NOMINAL PIPE SIZE	Outside Diameter O.D		End to End	Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
	OD1	OD2		T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
4 X 2	114.30	60.30	102	-	-	6.02	3.91	6.02	3.91	8.56	5.54	8.56	5.54	-	-	13.49	8.74	17.12	11.07
5 X 4	141.30	114.30	127	-	-	6.55	6.02	6.55	6.02	9.53	8.56	9.53	8.56	-	-	15.88	13.49	19.05	17.12
5 X 3 1/2	141.30	101.60	127	-	-	6.55	5.74	6.55	5.74	9.53	8.08	9.53	8.08	-	-	15.88	-	19.05	-
5 X 3	141.30	88.90	127	-	-	6.55	5.49	6.55	5.49	9.53	7.62	9.53	7.62	-	-	15.88	11.13	19.05	15.24
5 X 2 1/2	141.30	73.00	127	-	-	6.55	5.16	6.55	5.16	9.53	7.01	9.53	7.01	-	-	15.88	9.53	19.05	14.02
6 X 5	168.30	141.30	140	-	-	7.11	6.55	7.11	6.55	10.97	9.53	10.97	9.53	-	-	18.26	15.88	21.95	19.05
6 X 4	168.30	114.30	140	-	-	7.11	6.02	7.11	6.02	10.97	8.56	10.97	8.56	-	-	18.26	13.49	21.95	17.12
6 X 3 1/2	168.30	101.60	140	-	-	7.11	5.74	7.11	5.74	10.97	8.08	10.97	8.08	-	-	18.26	-	21.95	-
6 X 3	168.30	88.90	140	-	-	7.11	5.49	7.11	5.49	10.97	7.62	10.97	7.62	-	-	18.26	11.13	21.95	15.24
6 X 2 1/2	168.30	73.00	140	-	-	7.11	5.16	7.11	5.16	10.97	7.01	10.97	7.01	-	-	18.26	9.53	21.95	14.02
8 X 6	219.10	168.30	152	6.35	-	8.18	7.11	8.18	7.11	12.70	10.97	12.70	10.97	15.09	-	23.01	18.26	22.23	21.95
8 X 5	219.10	141.30	152	6.35	-	8.18	6.55	8.18	6.55	12.70	9.53	12.70	9.53	15.09	-	23.01	15.88	22.23	19.05
8 X 4	219.10	114.30	152	6.35	-	8.18	6.02	8.18	6.02	12.70	8.56	12.70	8.56	15.09	-	23.01	13.49	22.23	17.12
8 X 3 1/2	219.10	101.60	152	-	-	8.18	5.74	8.18	5.74	12.70	8.08	12.70	8.08	-	-	23.01	-	22.23	-

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9 Reducer



Concentric

Eccentric

Unit : mm

NOMINAL PIPE SIZE	Outside Diameter O.D		End to End	Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
	OD1	OD2		T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
10 X 8	273.00	219.10	178	6.35	6.35	9.27	8.18	9.27	8.18	12.70	12.70	15.09	12.70	18.26	15.09	28.58	23.01	25.40	22.23
10 X 6	273.00	168.30	178	6.35	-	9.27	7.11	9.27	7.11	12.70	10.97	15.09	10.97	18.26	-	28.58	18.26	25.40	21.95
10 X 5	273.00	141.30	178	6.35	-	9.27	6.55	9.27	6.55	12.70	9.53	15.09	9.53	18.26	-	28.58	15.88	25.40	19.05
10 X 4	273.00	114.30	178	6.35	-	9.27	6.02	9.27	6.02	12.70	8.56	15.09	8.56	18.26	-	28.58	13.49	25.40	17.12
12 X 10	323.80	273.00	203	6.35	6.35	9.53	9.27	10.31	9.27	12.70	12.70	17.48	15.09	21.44	18.26	33.32	28.58	25.40	25.40
12 X 8	323.80	219.10	203	6.35	6.35	9.53	8.18	10.31	8.18	12.70	12.70	17.48	12.70	21.44	15.09	33.32	23.01	25.40	22.23
12 X 6	323.80	168.30	203	6.35	-	9.53	7.11	10.31	7.11	12.70	10.97	17.48	10.97	21.44	-	33.32	18.26	25.40	21.95
12 X 5	323.80	141.30	203	-	-	9.53	6.55	10.31	6.55	12.70	9.53	17.48	9.53	-	-	33.32	15.88	25.40	19.05
14 X 12	355.60	323.80	330	7.92	6.35	9.53	9.53	11.13	10.31	12.70	12.70	19.05	17.48	23.83	21.44	35.71	33.32	-	25.40
14 X10	355.60	273.00	330	7.92	6.35	9.53	9.27	11.13	9.27	12.70	12.70	19.05	15.09	23.83	18.26	35.71	28.58	-	25.40
14 X 8	355.60	219.10	330	7.92	6.35	9.53	8.18	11.13	8.18	12.70	12.70	19.05	12.70	23.83	15.09	35.71	23.01	-	22.23
16 X 14	406.40	355.60	356	7.92	7.92	9.53	9.53	12.70	11.13	12.70	12.70	21.44	19.05	26.19	23.83	40.49	35.71	-	-
16 X 12	406.40	323.80	356	7.92	6.35	9.53	9.53	12.70	10.31	12.70	12.70	21.44	17.48	26.19	21.44	40.49	33.32	-	25.40
16 X 10	406.40	273.00	356	7.92	6.35	9.53	9.27	12.70	9.27	12.70	12.70	21.44	15.09	26.19	18.26	40.49	28.58	-	25.40

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9
Reducer

Unit : mm



Concentric



Eccentric

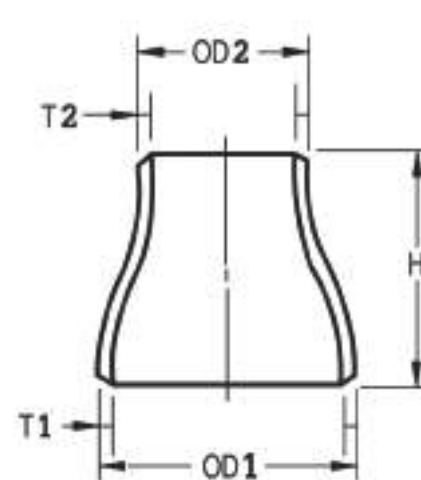
NOMINAL PIPE SIZE	Outside Diameter O.D		End to End	Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
	OD1	OD2	H	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
18 X 16	457.00	406.40	381	7.92	7.92	9.53	9.53	14.27	12.70	12.70	12.70	23.83	21.44	29.36	26.19	45.24	40.49	-	-
18 X 14	457.00	355.60	381	7.92	7.92	9.53	9.53	14.27	11.13	12.70	12.70	23.83	19.05	29.36	23.83	45.24	35.71	-	-
18 X 12	457.00	323.80	381	7.92	6.35	9.53	9.53	14.27	10.31	12.70	12.70	23.83	17.48	29.36	21.44	45.24	33.32	-	25.40
20 X 18	508.00	457.00	508	9.53	7.92	9.53	9.53	15.09	14.27	12.70	12.70	26.19	23.83	32.54	29.36	50.01	45.24	-	-
20 X 16	508.00	406.40	508	9.53	7.92	9.53	9.53	15.09	12.70	12.70	12.70	26.19	21.44	32.54	26.19	50.01	40.49	-	-
20 X 14	508.00	355.60	508	9.53	7.92	9.53	9.53	15.09	11.13	12.70	12.70	26.19	19.05	32.54	23.83	50.01	35.71	-	-
22 X 20	559.00	508.00	508	9.53	9.53	9.53	9.53	-	15.09	12.70	12.70	28.58	26.19	34.93	32.54	53.98	50.01	-	-
22 X 18	559.00	457.00	508	9.53	7.92	9.53	9.53	-	14.27	12.70	12.70	28.58	23.83	34.93	29.36	53.98	45.24	-	-
22 X 16	559.00	406.40	508	9.53	7.92	9.53	9.53	-	12.70	12.70	12.70	28.58	21.44	34.93	26.19	53.98	40.49	-	-
24 X 22	610.00	559.00	508	9.53	9.53	9.53	9.53	17.48	-	12.70	12.70	30.96	28.58	38.89	34.93	59.54	53.98	-	-
24 X 20	610.00	508.00	508	9.53	9.53	9.53	9.53	17.48	15.09	12.70	12.70	30.96	26.19	38.89	32.54	59.54	50.01	-	-
24 X 18	610.00	457.00	508	9.53	7.92	9.53	9.53	17.48	14.27	12.70	12.70	30.96	23.83	38.89	29.36	59.54	45.24	-	-
26 X 22	660.00	559.00	610	-	-	9.53	9.53	-	-	12.70	12.70	-	28.58	-	-	-	53.98	-	-
26 X 18	660.00	457.00	610	-	-	9.53	9.53	-	14.27	12.70	12.70	-	23.83	-	-	-	45.24	-	-
26 X 16	660.00	406.40	-	-	-	9.53	9.53	-	12.70	12.70	12.70	-	21.44	-	-	-	40.49	-	-

CARBON STEEL

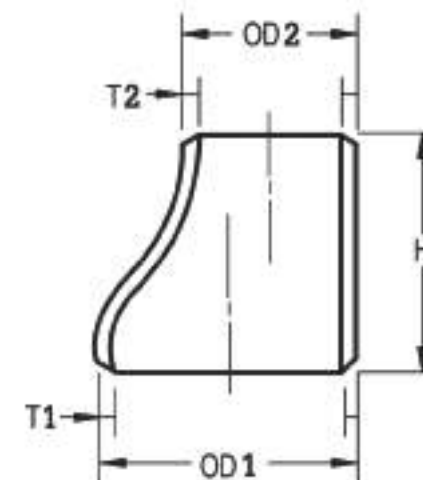
Butt Weld Pipe Fittings

ASME B16.9 Reducer

Unit : mm



Concentric



Eccentric

NOMINAL PIPE SIZE	Outside Diameter O.D		End to End	Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
	OD1	OD2		T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
28 X 24	711.00	610.00	610	-	-	9.53	9.53	-	17.48	12.70	12.70	-	30.96	-	-	-	59.54	-	-
28 X 20	711.00	508.00	610	-	-	9.53	9.53	-	15.09	12.70	12.70	-	26.19	-	-	-	50.01	-	-
28 X 18	711.00	457.00	610	-	-	9.53	9.53	-	14.27	12.70	12.70	-	23.83	-	-	-	45.24	-	-
30 X 26	762.00	660.00	610	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
30 X 22	762.00	559.00	-	-	-	9.53	9.53	-	-	12.70	12.70	-	28.58	-	-	-	53.98	-	-
30 X 20	762.00	508.00	610	-	-	9.53	9.53	-	15.09	12.70	12.70	-	26.19	-	-	-	50.01	-	-
32 X 28	813.00	711.00	610	-	-	9.53	9.53	17.48	-	12.70	12.70	-	-	-	-	-	-	-	-
32 X 24	813.00	610.00	610	-	-	9.53	9.53	17.48	17.48	12.70	12.70	-	30.96	-	-	-	59.54	-	-
32 X 22	813.00	559.00	-	-	-	9.53	9.53	17.48	-	12.70	12.70	-	28.58	-	-	-	53.98	-	-
34 X 30	864.00	762.00	610	-	-	9.53	9.53	17.48	-	12.70	12.70	-	-	-	-	-	-	-	-
34 X 26	864.00	660.00	610	-	-	9.53	9.53	17.48	-	12.70	12.70	-	-	-	-	-	-	-	-
34 X 22	864.00	559.00	-	-	-	9.53	9.53	17.48	-	12.70	12.70	-	28.58	-	-	-	53.98	-	-
36 X 32	914.00	813.00	610	-	-	9.53	9.53	19.05	17.48	12.70	12.70	-	-	-	-	-	-	-	-
36 X 28	914.00	711.00	-	-	-	9.53	9.53	19.05	-	12.70	12.70	-	-	-	-	-	-	-	-
36 X 24	914.00	610.00	610	-	-	9.53	9.53	19.05	17.48	12.70	12.70	-	30.96	-	-	-	59.54	-	-

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9 Reducer

Unit : mm



Concentric



Eccentric

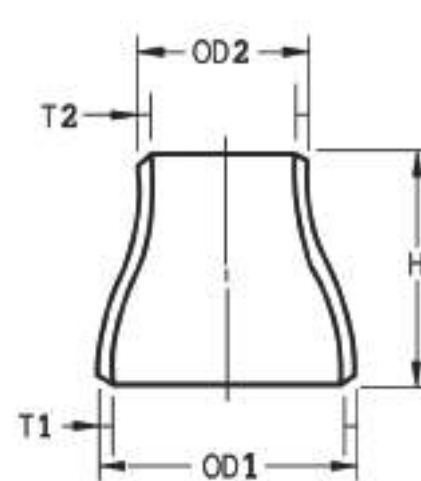
NOMINAL PIPE SIZE	Outside Diameter O.D		End to End	Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
	OD1	OD2	H	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
38 X 34	965.00	864.00	610	-	-	9.53	9.53	-	17.48	12.70	12.70	-	-	-	-	-	-	-	-
38 X 30	965.00	762.00	610	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
38 X 26	965.00	660.00	610	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
40 X 36	1016.00	914.00	610	-	-	9.53	9.53	-	19.05	12.70	12.70	-	-	-	-	-	-	-	-
40 X 32	1016.00	813.00	610	-	-	9.53	9.53	-	17.48	12.70	12.70	-	-	-	-	-	-	-	-
40 X 28	1016.00	711.00	-	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
42 X 38	1067.00	965.00	610	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
42 X 34	1067.00	864.00	610	-	-	9.53	9.53	-	17.48	12.70	12.70	-	-	-	-	-	-	-	-
42 X 30	1067.00	762.00	610	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
44 X 40	1118.00	1016.00	610	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
44 X 36	1118.00	914.00	610	-	-	9.53	9.53	-	19.05	12.70	12.70	-	-	-	-	-	-	-	-

CARBON STEEL

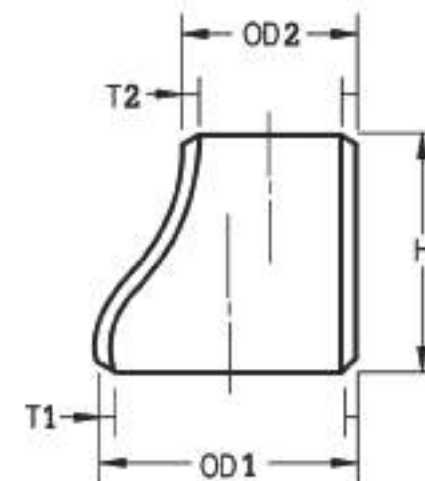
Butt Weld Pipe Fittings

ASME B16.9 Reducer

Unit : mm



Concentric



Eccentric

NOMINAL PIPE SIZE	Outside Diameter O.D		End to End	Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
	OD1	OD2		T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
44 X 32	1118.00	813.00	-	-	-	9.53	9.53	-	17.48	12.70	12.70	-	-	-	-	-	-	-	-
46 X 42	1168.00	1067.00	711	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
46 X 38	1168.00	965.00	711	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
46 X 34	1168.00	864.00	-	-	-	9.53	9.53	-	17.48	12.70	12.70	-	-	-	-	-	-	-	-
48 X 44	1219.00	1118.00	711	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
48 X 40	1219.00	1016.00	711	-	-	9.53	9.53	-	-	12.70	12.70	-	-	-	-	-	-	-	-
48 X 36	1219.00	914.00	-	-	-	9.53	9.53	-	19.05	12.70	12.70	-	-	-	-	-	-	-	-

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9 Cap



Unit : mm

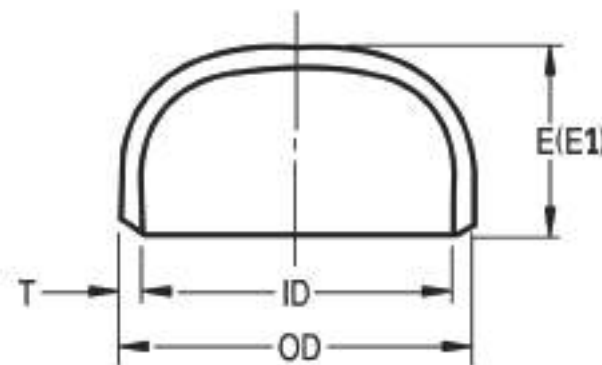
NOMINAL PIPE SIZE	Outside Diameter O.D	Length E	Uniting Wall Thickness for Length E	Length E1	Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
					T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
1/2	21.30	25	4.57	25	-	-	2.77	15.80	2.77	15.80	3.73	13.80	3.73	13.80	-	-	4.78	11.70	7.47	6.40
3/4	26.70	25	3.81	25	-	-	2.87	21.00	2.87	21.00	3.91	18.90	3.91	18.90	-	-	5.56	15.60	7.82	11.10
1	33.40	38	4.57	38	-	-	3.38	26.60	3.38	26.60	4.55	24.30	4.55	24.30	-	-	6.35	20.70	9.09	15.20
1 1/4	42.20	38	4.83	38	-	-	3.56	35.10	3.56	35.10	4.85	32.50	4.85	32.50	-	-	6.35	29.50	9.70	22.80
1 1/2	48.30	38	5.08	38	-	-	3.68	40.90	3.68	40.90	5.08	38.10	5.08	38.10	-	-	7.14	34.00	10.15	28.00
2	60.30	38	5.59	44	-	-	3.91	52.50	3.91	52.50	5.54	49.20	5.54	49.20	-	-	8.74	42.80	11.07	38.20
2 1/2	73.00	38	7.11	51	-	-	5.16	62.70	5.16	62.70	7.01	59.00	7.01	59.00	-	-	9.53	53.90	14.02	45.00
3	88.90	51	7.62	64	-	-	5.49	77.90	5.49	77.90	7.62	73.70	7.62	73.70	-	-	11.13	66.60	15.24	58.40
3 1/2	101.60	64	8.13	76	-	-	5.74	90.10	5.74	90.10	8.08	85.40	8.08	85.40	-	-	-	-	-	-
4	114.30	64	8.64	76	-	-	6.02	102.30	6.02	102.30	8.56	97.20	8.56	97.20	-	-	13.49	87.30	17.12	80.10
5	141.30	76	9.65	89	-	-	6.55	128.20	6.55	128.20	9.53	122.20	9.53	122.20	-	-	15.88	109.50	19.05	103.20
6	168.30	89	10.92	102	-	-	7.11	154.10	7.11	154.10	10.97	146.40	10.97	146.40	-	-	18.26	131.80	21.95	124.40
8	219.10	102	12.70	127	6.35	206.40	8.18	202.70	8.18	202.70	12.70	193.70	12.70	193.70	15.09	188.90	23.01	173.10	22.23	174.60
10	273.00	127	12.70	152	6.35	260.30	9.27	254.50	9.27	254.50	12.70	247.60	15.09	242.80	18.26	236.50	28.58	215.80	25.40	222.20
12	323.80	152	12.70	178	6.35	311.10	9.53	304.70	10.31	303.20	12.70	298.40	17.48	288.80	21.44	280.90	33.32	257.20	25.40	273.00
14	355.60	165	12.70	191	7.92	339.80	9.53	336.50	11.13	333.30	12.70	330.20	19.05	317.50	23.83	307.90	35.71	284.20	-	-
16	406.40	178	12.70	203	7.92	390.60	9.53	387.30	12.70	381.00	12.70	381.00	21.44	363.50	26.19	354.00	40.49	325.40	-	-

CARBON STEEL

Butt Weld Pipe Fittings

ASME B16.9 Cap

Unit : mm



NOMINAL PIPE SIZE	Outside Diameter O.D	Length E	Uniting Wall Thickness for Length E	Length E1	Sch20		STD		Sch40		XS		Sch80		Sch100		Sch160		XXS	
					T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D	T	I.D
18	457.00	203	12.70	229	7.92	441.20	9.53	437.90	14.27	428.50	12.70	431.60	23.83	409.30	29.36	398.30	45.24	366.50	-	-
20	508.00	229	12.70	254	9.53	488.90	9.53	488.90	15.09	477.80	12.70	482.60	26.19	455.60	32.54	442.90	50.01	408.00	-	-
22	559.00	254	12.70	254	9.53	539.90	9.53	539.90	-	-	12.70	533.60	28.58	501.80	34.93	489.10	53.98	451.00	-	-
24	610.00	267	12.70	305	9.53	590.90	9.53	590.90	17.48	575.00	12.70	584.60	30.96	548.10	38.89	532.20	59.54	490.90	-	-
26	660.00	267	-	-	-	-	9.53	640.90	-	-	12.70	634.60	-	-	-	-	-	-	-	-
28	711.00	267	-	-	-	-	9.53	691.90	-	-	12.70	685.60	-	-	-	-	-	-	-	-
30	762.00	267	-	-	-	-	9.53	742.90	-	-	12.70	736.60	-	-	-	-	-	-	-	-
32	813.00	267	-	-	-	-	9.53	793.90	17.48	778.00	12.70	787.60	-	-	-	-	-	-	-	-
34	864.00	267	-	-	-	-	9.53	844.90	17.48	829.00	12.70	838.60	-	-	-	-	-	-	-	-
36	914.00	267	-	-	-	-	9.53	894.90	19.05	875.90	12.70	888.60	-	-	-	-	-	-	-	-
38	965.00	305	-	-	-	-	9.53	945.90	-	-	12.70	939.60	-	-	-	-	-	-	-	-
40	1016.00	305	-	-	-	-	9.53	996.90	-	-	12.70	990.60	-	-	-	-	-	-	-	-
42	1067.00	305	-	-	-	-	9.53	1047.90	-	-	12.70	1041.60	-	-	-	-	-	-	-	-
44	1118.00	343	-	-	-	-	9.53	1098.90	-	-	12.70	1092.60	-	-	-	-	-	-	-	-
46	1168.00	343	-	-	-	-	9.53	1148.90	-	-	12.70	1142.60	-	-	-	-	-	-	-	-
48	1219.00	343	-	-	-	-	9.53	1199.90	-	-	12.70	1193.60	-	-	-	-	-	-	-	-

Butt Welding Fittings

Approximated Weight List

45° Elbows

Unit : Kgs

NOMINAL PIPE SIZE		LONG							SHORT						
mm.	Inch.	SGP	STD	S40	XS	S80	S160	XXS	SGP	STD	S40	XS	S80	S160	XXS
15	1/2	0.04	0.04	0.04	0.05	0.05	-	-	-	-	-	-	-	-	-
20	3/4	0.05	0.06	0.06	0.07	0.07	-	-	-	-	-	-	-	-	-
25	1	0.08	0.08	0.08	0.10	0.10	0.13	0.18	0.05	0.06	0.06	0.07	0.07	-	-
32	1 1/4	0.13	0.13	0.13	0.18	0.18	0.21	0.32	0.09	0.09	0.09	0.12	0.12	-	-
40	1 1/2	0.18	0.19	0.19	0.25	0.25	0.33	0.47	0.12	0.13	0.13	0.17	0.17	-	-
50	2	0.32	0.33	0.33	0.45	0.45	0.67	0.85	0.22	0.22	0.22	0.30	0.30	0.45	0.57
65	2 1/2	0.60	0.69	0.69	0.90	0.90	1.17	1.72	0.38	0.46	0.46	0.60	0.60	0.75	1.10
80	3	0.79	1.02	1.02	1.37	1.37	1.92	2.63	0.53	0.68	0.68	0.92	0.92	1.28	1.75
100	4	1.46	1.92	1.92	2.68	2.68	4.01	5.09	0.97	1.28	1.28	1.79	1.79	2.68	3.40
125	5	2.25	3.24	3.24	4.57	4.57	7.35	8.80	1.50	2.16	2.16	3.05	3.05	4.90	5.88
150	6	3.55	4.97	4.97	7.50	7.50	12.10	14.50	2.36	3.32	3.32	5.00	5.00	8.10	9.75
200	8	7.20	10.10	10.10	15.30	15.30	26.60	25.70	4.80	6.71	6.71	10.20	10.20	17.80	17.20
250	10	12.70	17.70	17.70	23.90	28.50	51.50	41.00	8.46	11.80	11.80	15.90	19.00	34.30	30.50
300	12	19.00	26.00	28.50	34.40	47.00	85.50	65.00	12.70	17.30	19.00	22.90	31.50	57.00	43.50
350	14	28.40	34.00	40.10	45.00	66.50	118.00	-	18.00	22.60	26.50	30.00	44.50	79.00	-
400	16	37.20	44.50	59.00	59.00	97.50	175.00	-	24.00	29.50	39.20	39.20	65.00	117.00	-
450	18	47.10	56.50	84.50	75.00	138.00	247.00	-	31.00	37.60	56.50	50.00	91.50	165.00	-
500	20	58.30	70.00	110.00	93.00	187.00	338.00	-	38.00	46.60	73.50	62.00	124.00	225.00	-
550	22	70.50	84.50	-	113.00	257.00	443.00	-	47.00	56.50	-	75.00	164.00	295.00	-
600	24	84.10	101.00	183.00	134.00	318.00	580.00	-	56.00	67.30	122.00	89.50	212.00	386.00	-

45° Elbows

Unit : Kgs

NOMINAL PIPE SIZE		LONG							SHORT						
mm.	Inch.	SGP	STD	S40	XS	S80	S160	XXS	SGP	STD	S40	XS	S80	S160	XXS
650	26	99.00	119.00	-	158.00	-	-	-	66.00	79.10	-	105.00	-	-	-
700	28	115.00	138.00	-	184.00	-	-	-	77.00	92.00	-	122.00	-	-	-
750	30	132.00	158.00	-	211.00	-	-	-	87.00	105.00	-	140.00	-	-	-
800	32	150.00	180.00	327.00	240.00	-	-	-	101.00	120.00	218.00	160.00	-	-	-
850	34	170.00	204.00	369.00	272.00	-	-	-	114.00	136.00	246.00	181.00	-	-	-
900	36	190.00	228.00	452.00	304.00	-	-	-	127.00	152.00	301.00	202.00	-	-	-
950	38	212.00	255.00	-	339.00	-	-	-	142.00	170.00	-	226.00	-	-	-
1000	40	235.00	282.00	-	376.00	-	-	-	157.00	189.00	-	251.00	-	-	-
1050	42	259.00	311.00	-	414.00	-	-	-	173.00	208.00	-	277.00	-	-	-
1100	44	285.00	342.00	-	456.00	-	-	-	190.00	228.00	-	304.00	-	-	-
1150	46	312.00	374.00	-	498.00	-	-	-	208.00	250.00	-	332.00	-	-	-
1200	48	339.00	407.00	-	542.00	-	-	-	226.00	272.00	-	362.00	-	-	-

90° Elbows

Unit : Kgs

NOMINAL PIPE SIZE		LONG							SHORT						
mm.	Inch.	SGP	STD	S40	XS	S80	S160	XXS	SGP	STD	S40	XS	S80	S160	XXS
15	1/2	0.08	0.08	0.08	0.10	0.10	-	-	-	-	-	-	-	-	-
20	3/4	0.10	0.11	0.11	0.14	0.14	-	-	-	-	-	-	-	-	-
25	1	0.15	0.16	0.16	0.20	0.20	0.25	0.36	0.10	0.11	0.11	0.14	0.14	-	-
32	1 1/4	0.26	0.26	0.26	0.35	0.35	0.42	0.64	0.17	0.18	0.18	0.23	0.23	-	-
40	1 1/2	0.35	0.37	0.37	0.50	0.50	0.65	0.93	0.24	0.25	0.25	0.33	0.33	-	-
50	2	0.64	0.66	0.66	0.90	0.90	1.33	1.69	0.43	0.44	0.44	0.60	0.60	0.89	1.13
65	2 1/2	1.12	1.37	1.37	1.79	1.79	2.33	3.43	0.75	0.91	0.91	1.19	1.19	1.49	2.19
80	3	1.58	2.04	2.04	2.74	2.74	3.83	5.25	1.05	1.36	1.36	1.83	1.83	2.55	3.49

Butt Welding Fittings

Approximated Weight List

90° Elbows

Unit : Kgs

NOMINAL PIPE SIZE		LONG							SHORT						
mm.	Inch.	SGP	STD	S40	XS	S80	S160	XXS	SGP	STD	S40	XS	S80	S160	XXS
100	4	2.91	3.84	3.84	5.36	5.36	8.02	10.20	1.94	2.56	2.56	3.58	3.58	2.35	6.79
125	5	4.49	6.48	6.48	9.13	9.13	14.70	17.60	2.99	4.32	4.32	6.09	6.09	9.79	11.80
150	6	7.09	9.94	9.94	15.00	15.00	24.20	29.10	4.73	6.63	6.63	10.00	10.00	16.20	19.50
200	8	14.40	20.10	20.10	30.50	30.50	53.20	51.40	9.61	13.40	13.40	20.30	20.30	35.50	34.30
250	10	25.40	35.40	35.40	47.70	57.00	103.00	82.00	16.90	23.60	23.60	31.80	38.00	68.60	61.00
300	12	38.10	52.00	57.00	68.70	94.00	171.00	130.00	25.40	34.60	38.00	45.80	63.00	114.00	87.00
350	14	56.70	67.90	79.10	89.90	133.00	236.00	-	37.80	45.30	53.00	60.00	89.00	158.00	-
400	16	74.30	89.00	118.00	118.00	195.00	350.00	-	49.50	59.10	79.00	78.30	130.00	234.00	-
450	18	94.20	113.00	169.00	150.00	275.00	495.00	-	62.80	75.30	113.00	99.90	183.00	330.00	-
500	20	116.00	140.00	220.00	186.00	373.00	676.00	-	77.70	93.10	147.00	124.00	249.00	451.00	-
550	22	141.00	169.00	-	225.00	493.00	886.00	-	94.10	113.00	-	150.00	329.00	591.00	-
600	24	168.00	202.00	366.00	268.00	636.00	1160.00	-	112.00	135.00	244.00	179.00	424.00	773.00	-
650	26	198.00	237.00	-	315.00	-	-	-	132.00	158.00	-	210.00	-	-	-
700	28	230.00	276.00	-	367.00	-	-	-	154.00	184.00	-	245.00	-	-	-
750	30	264.00	316.00	-	421.00	-	-	-	176.00	211.00	-	281.00	-	-	-
800	32	301.00	361.00	654.00	480.00	-	-	-	201.00	241.00	436.00	320.00	-	-	-
850	34	340.00	408.00	739.00	543.00	-	-	-	227.00	272.00	493.00	362.00	-	-	-
900	36	380.00	457.00	904.00	608.00	-	-	-	253.00	304.00	603.00	405.00	-	-	-
950	38	425.00	510.00	-	679.00	-	-	-	283.00	340.00	-	453.00	-	-	-

90° Elbows

Unit : Kgs

NOMINAL PIPE SIZE		LONG							SHORT						
mm.	Inch.	SGP	STD	S40	XS	S80	S160	XXS	SGP	STD	S40	XS	S80	S160	XXS
1000	40	471.00	565.00	-	753.00	-		-	314.00	377.00	-	502.00	-		-
1050	42	518.00	622.00	-	828.00	-		-	346.00	416.00	-	554.00	-		-
1100	44	570.00	684.00	-	912.00	-		-	380.00	456.00	-	608.00	-		-
1150	46	623.00	748.00	-	997.00	-		-	415.00	499.00	-	665.00	-		-
1200	48	677.00	814.00	-	1085.00	-		-	452.00	543.00	-	724.00	-		-

180° Elbows

Unit : Kgs

NOMINAL PIPE SIZE		LONG							SHORT						
mm.	Inch.	SGP	STD	S40	XS	S80	S160	XXS	SGP	STD	S40	XS	S80	S160	XXS
15	1/2	0.16	0.16	0.16	0.20	0.20	-	-	-	-	-	-	-	-	-
20	3/4	0.21	0.22	0.22	0.28	0.28	-	-	-	-	-	-	-	-	-
25	1	0.30	0.32	0.32	0.40	0.40	0.50	0.72	0.20	0.22	0.22	0.28	0.28	-	-
32	1 1/4	0.51	0.52	0.52	0.70	0.70	0.84	1.28	0.34	0.36	0.36	0.46	0.46	-	-
40	1 1/2	0.70	0.74	0.74	1.00	1.00	1.30	1.86	0.48	0.50	0.50	0.66	0.66	-	-
50	2	1.28	1.32	1.32	1.80	1.80	2.66	3.38	0.86	0.88	0.88	1.20	1.20	1.78	2.26
65	2 1/2	2.24	2.74	2.74	3.58	3.58	4.66	6.86	1.50	1.82	1.82	2.38	2.38	2.98	4.38
80	3	3.16	4.08	4.08	5.48	5.48	7.66	10.50	2.10	2.72	2.72	3.66	3.66	5.10	6.98
100	4	5.83	7.68	7.68	10.70	10.70	16.10	20.40	3.88	5.12	5.12	7.16	7.16	10.70	13.60
125	5	8.98	13.00	13.00	18.30	18.30	29.40	35.20	5.98	8.64	8.64	12.20	12.20	19.60	23.50
150	6	14.20	19.90	19.90	30.00	30.00	48.40	58.20	9.46	13.30	13.30	20.00	20.00	32.40	39.00
200	8	28.80	40.20	40.20	61.00	61.00	106.00	103.00	19.20	26.80	26.80	40.60	40.60	71.00	68.60
250	10	50.80	70.80	70.80	95.40	114.00	206.00	164.00	33.80	47.20	47.20	63.60	76.00	138.00	122.00
300	12	76.20	104.00	114.00	137.00	188.00	342.00	260.00	50.80	69.20	76.00	91.60	126.00	228.00	174.00

Butt Welding Fittings Approximated Weight List

180° Elbows

Unit : Kgs

NOMINAL PIPE SIZE		LONG							SHORT						
mm.	Inch.	SGP	STD	S40	XS	S80	S160	XXS	SGP	STD	S40	XS	S80	S160	XXS
350	14	114.00	136.00	158.00	180.00	266.00	472.00	-	75.60	90.60	106.00	120.00	178.00	316.00	-
400	16	149.00	178.00	236.00	236.00	390.00	700.00	-	99.00	118.00	158.00	156.00	260.00	468.00	-
450	18	189.00	226.00	338.00	300.00	550.00	990.00	-	125.00	150.00	226.00	199.00	366.00	660.00	-
500	20	232.00	280.00	440.00	372.00	746.00	1352.00	-	155.00	186.00	294.00	248.00	498.00	902.00	-
550	22	282.00	338.00	-	450.00	986.00	1772.00	-	188.00	226.00	-	300.00	658.00	1182.00	-
600	24	336.00	404.00	732.00	536.00	1272.00	2320.00	-	224.00	270.00	488.00	358.00	848.00	1546.00	-

CAPS

Unit : Kgs

NOMINAL PIPE SIZE		SGP	STD	S40	XS	S80	S160	XXS	NOMINAL PIPE SIZE		SGP	STD	S40	XS	S80	S160	XXS
mm.	Inch.								mm.	Inch.							
15	1/2	0.03	0.04	0.04	0.05	0.05	-	-	50	2	0.23	0.24	0.24	0.33	0.33	0.54	0.68
20	3/4	0.04	0.05	0.05	0.07	0.07	-	-	65	2 1/2	0.34	0.42	0.42	0.57	0.57	0.77	1.13
25	1	0.08	0.11	0.11	0.15	0.15	-	-	80	3	0.51	0.67	0.67	0.92	0.92	1.40	1.92
32	1 1/4	0.11	0.14	0.14	0.20	0.20	-	-	100	4	0.88	1.17	1.17	1.68	1.68	2.76	3.51
40	1 1/2	0.15	0.17	0.17	0.24	0.24	0.35	0.50	125	5	1.29	1.90	1.90	2.73	2.73	4.85	5.82

CAPS

Unit : Kgs

NOMINAL PIPE SIZE		SGP	STD	S40	XS	S80	S160	XXS
mm.	Inch.							
150	6	1.99	2.83	2.83	4.38	4.38	7.81	9.38
200	8	3.61	5.11	5.11	7.91	7.91	15.20	14.70
250	10	6.33	8.92	8.92	12.20	16.40	28.90	25.70
300	12	9.43	13.10	13.1	17.40	26.40	47.70	36.40
350	14	13.20	15.90	18.60	21.20	34.90	61.20	-
400	16	16.60	20.00	26.70	26.70	49.00	130.00	-
450	18	21.20	25.50	41.50	34.10	69.00	131.00	-
500	20	26.40	31.80	54.10	42.50	93.70	179.00	-
550	22	31.50	38.80	-	51.70	116.00	219.00	-
600	24	36.60	45.10	90.10	60.10	160.00	307.00	-
650	26	41.00	50.50	-	67.30	-	-	-

NOMINAL PIPE SIZE		SGP	STD	S40	XS	S80	S160	XXS
mm.	Inch.							
700	28	45.50	56.20	-	74.90	-	-	-
750	30	50.30	62.10	-	82.80	-	-	-
800	32	55.40	68.40	126.00	91.20	-	-	-
850	34	60.80	75.00	138.00	100.00	-	-	-
900	36	66.40	81.90	164.00	109.00	-	-	-
950	38	76.80	94.70	-	126.00	-	-	-
1000	40	83.00	102.00	-	137.00	-	-	-
1050	42	90.00	110.00	-	147.00	-	-	-
1100	44	103.00	126.00	-	167.00	-	-	-
1150	46	109.00	134.00	-	179.00	-	-	-
1200	48	116.00	143.00	-	191.00	-	-	-

TEES

Unit : Kgs

NOMINAL PIPE SIZE Inch	SGP	STD	S40	XS	S80	S160	XXS
1/2 X 1/2	0.09	0.09	0.09	0.11	0.11	-	-
3/4 X 3/4	0.13	0.13	0.13	0.17	0.17	-	-
1/2	0.12	0.12	0.12	0.16	0.16	-	-
1 X 1	0.24	0.25	0.25	0.32	0.32	-	-
3/4	0.23	0.24	0.24	0.30	0.30	-	-
1/2	0.22	0.23	0.23	0.29	0.29	-	-
1 1/4 X 1 1/4	0.42	0.43	0.43	0.56	0.56	-	-
1	0.39	0.40	0.40	0.53	0.53	-	-
1 1/2 X 1 1/2	0.58	0.61	0.61	0.81	0.81	-	-
1 1/4	0.56	0.59	0.59	0.78	0.78	-	-

NOMINAL PIPE SIZE Inch	SGP	STD	S40	XS	S80	S160	XXS
1	0.53	0.56	0.56	0.74	0.74	-	-
3/4	0.51	0.53	0.53	0.70	0.70	-	-
2 X 2	0.86	0.88	0.88	1.20	1.20	-	-
1 1/2	0.80	0.82	0.82	1.11	1.11	-	-
1 1/4	0.77	0.79	0.79	1.07	1.07	-	-
1	0.73	0.75	0.75	1.01	1.01	-	-
2 1/2 X 2 1/2	1.42	1.74	1.74	2.28	2.28	3.63	4.20
2	1.31	1.56	1.56	2.06	2.06	3.56	3.56
1 1/2	1.25	1.51	1.51	1.98	1.98	3.40	3.40
1 1/4	1.22	1.48	1.48	1.94	1.94	-	-

Butt Welding Fittings

Approximated Weight List

TEES

Unit : Kgs

NOMINAL PIPE SIZE Inch	SGP	STD	S40	XS	S80	S160	XXS
3 X 3	1.87	2.41	2.41	3.25	3.25	5.87	7.00
2 1/2	1.79	2.29	2.29	3.07	3.07	5.45	9.49
2	1.68	2.12	2.12	2.85	2.85	5.17	5.17
1 1/2	1.62	2.06	2.06	2.77	2.77	-	-
4 X 4	3.13	4.12	4.12	5.77	5.77	9.76	12.80
3	2.92	3.83	3.83	5.33	5.33	9.05	11.40
2 1/2	2.84	3.71	3.71	5.15	5.15	7.74	11.30
2	2.72	3.53	3.53	4.94	4.94	7.30	9.01
5 X 5	4.53	6.54	6.54	9.20	9.20	22.20	20.20
4	4.30	6.13	6.13	8.63	8.63	15.30	19.00
3	4.08	5.83	5.83	8.19	8.19	14.70	17.90
2 1/2	4.00	5.71	5.71	8.01	8.01	14.30	-
6 X 6	6.84	9.58	9.58	14.50	14.50	31.40	28.40
5	6.45	9.08	9.08	13.60	13.60	24.30	27.10
4	6.23	8.67	8.67	13.00	13.00	23.20	25.80
3	6.01	8.38	8.38	12.60	12.60	22.50	23.70
8 X 8	12.80	17.90	17.90	27.10	27.10	50.70	51.40
6	11.90	16.60	16.60	25.20	25.20	47.60	48.10
5	11.50	16.10	16.10	24.30	24.30	46.10	46.80
4	11.30	15.70	15.70	23.70	23.70	45.00	45.60
10 X 10	21.80	30.40	30.40	41.00	60.80	96.70	96.70

NOMINAL PIPE SIZE Inch	SGP	STD	S40	XS	S80	S160	XXS
8	20.40	28.50	28.50	38.90	51.90	89.70	89.70
6	19.50	27.20	27.20	37.00	50.00	80.90	80.90
5	19.20	26.80	26.80	36.20	49.20	79.60	79.60
12 X 12	32.00	43.60	58.40	57.70	95.80	155.00	155.00
10	30.40	41.60	55.20	55.20	90.50	146.00	146.00
8	29.00	39.70	53.10	53.10	77.10	139.00	139.00
6	28.10	38.40	51.20	51.20	75.20	136.00	136.00
14 X 14	44.70	53.50	83.20	70.90	129.00	201.00	-
12	42.70	51.90	79.40	68.80	123.00	192.00	-
10	41.20	49.90	76.10	66.30	108.00	184.00	-
8	40.00	48.20	63.70	64.50	103.00	178.00	-
16 X 16	55.20	66.10	110.00	87.70	173.00	334.00	-
14	54.20	64.90	95.20	86.10	158.00	280.00	-
12	52.70	63.10	91.40	83.60	152.00	263.00	-
10	51.20	61.30	88.10	81.20	147.00	255.00	-
18 X 18	70.00	83.90	156.00	111.00	253.00	470.00	-
16	67.90	81.40	135.00	108.00	228.00	416.00	-
14	66.90	80.20	132.00	106.00	223.00	375.00	-
12	65.40	78.30	128.00	104.00	217.00	368.00	-
20 X 20	86.60	104.00	204.00	138.00	353.00	631.00	-
18	84.20	101.00	188.00	134.00	306.00	528.00	-

TEES

Unit : Kgs

NOMINAL PIPE SIZE Inch	SGP	STD	S40	XS	S80	S160	XXS
16	82.10	98.40	181.00	131.00	294.00	508.00	-
14	81.10	97.20	178.00	129.00	289.00	491.00	-
22 X 22	106.00	126.00	-	167.00	453.00	835.00	-
20	103.00	123.00	-	163.00	386.00	740.00	-
18	101.00	120.00	-	159.00	373.00	696.00	-
16	98.90	117.00	-	156.00	354.00	656.00	-
24 X 24	116.00	139.00	299.00	185.00	548.00	1012.00	-
22	115.00	138.00	-	183.00	503.00	922.00	-
20	114.00	136.00	268.00	181.00	467.00	843.00	-
18	111.00	133.00	249.00	177.00	418.00	769.00	-
26 X 26	147.00	176.00	-	234.00	-	-	-
24	144.00	172.00	-	229.00	-	-	-
22	141.00	169.00	-	225.00	-	-	-
20	138.00	166.00	-	211.00	-	-	-
28 X 28	161.00	192.00	-	256.00	-	-	-
26	157.00	189.00	-	251.00	-	-	-
24	153.00	184.00	-	244.00	-	-	-
22	151.00	182.00	-	242.00	-	-	-
30 X 30	190.00	228.00	-	304.00	-	-	-
28	188.00	226.00	-	301.00	-	-	-
26	185.00	222.00	-	296.00	-	-	-
24	182.00	218.00	-	291.00	-	-	-
32 X 32	208.00	259.00	-	331.00	-	-	-
30	203.00	244.00	-	325.00	-	-	-
28	200.00	240.00	-	319.00	-	-	-
26	199.00	138.00	-	317.00	-	-	-
34 X 34	246.00	295.00	-	393.00	-	-	-
32	243.00	292.00	-	389.00	-	-	-
30	238.00	290.00	-	380.00	-	-	-

NOMINAL PIPE SIZE Inch	SGP	STD	S40	XS	S80	S160	XXS
28	236.00	288.00	-	377.00	-	-	-
36 X 36	276.00	331.00	-	441.00	-	-	-
34	271.00	329.00	-	434.00	-	-	-
31	269.00	326.00	-	431.00	-	-	-
30	264.00	323.00	-	422.00	-	-	-
38 X 38	308.00	370.00	-	493.00	-	-	-
36	306.00	367.00	-	489.00	-	-	-
34	302.00	362.00	-	481.00	-	-	-
32	298.00	357.00	-	476.00	-	-	-
40 X 40	342.00	411.00	-	547.00	-	-	-
38	340.00	408.00	-	543.00	-	-	-
36	335.00	402.00	-	536.00	-	-	-
34	331.00	397.00	-	529.00	-	-	-
42 X 42	352.00	422.00	-	562.00	-	-	-
40	350.00	420.00	-	559.00	-	-	-
38	348.00	418.00	-	557.00	-	-	-
36	346.00	416.00	-	554.00	-	-	-
44 X 44	396.00	475.00	-	633.00	-	-	-
42	394.00	473.00	-	630.00	-	-	-
40	389.00	467.00	-	623.00	-	-	-
38	385.00	462.00	-	616.00	-	-	-
46 X 46	434.00	521.00	-	695.00	-	-	-
44	432.00	519.00	-	691.00	-	-	-
42	427.00	513.00	-	683.00	-	-	-
40	423.00	507.00	-	676.00	-	-	-
48 X 48	474.00	569.00	-	759.00	-	-	-
46	472.00	566.00	-	755.00	-	-	-
44	470.00	564.00	-	751.00	-	-	-
42	462.00	555.00	-	739.00	-	-	-

Butt Welding Fittings Approximated Weight List

REDUCERS

Unit : Kgs

NOMINAL PIPE SIZE Inch	SGP	STD	S40	XS	S80	S160	XXS
3/4 X 1/2	0.06	0.06	0.06	0.08	0.08	-	-
1 X 3/4	0.11	0.12	0.12	0.15	0.15	0.19	0.25
1/2	0.10	0.11	0.11	0.14	0.14	0.17	0.22
1 1/4 X 1	0.16	0.16	0.16	0.21	0.21	0.25	0.35
3/4	0.15	0.15	0.15	0.19	0.19	0.23	0.31
1/2	0.13	0.14	0.14	0.18	0.18	-	-
1 1/2 X 1 1/4	0.24	0.25	0.25	0.33	0.33	0.43	0.57
1	0.21	0.22	0.22	0.30	0.30	0.38	0.50
3/4	0.20	0.21	0.21	0.27	0.27	0.35	0.45
2 X 1 1/2	0.37	0.38	0.38	0.51	0.51	0.75	0.91
1 1/4	0.35	0.36	0.36	0.48	0.48	0.70	0.85
1	0.31	0.33	0.33	0.44	0.44	0.64	0.77
2 1/2 X 2	0.60	0.73	0.73	0.95	0.95	1.20	1.68
1 1/2	0.55	0.67	0.67	0.87	0.87	1.08	1.51
1 1/4	0.52	0.64	0.64	0.83	0.83	1.02	1.42
3 X 2 1/2	0.73	0.94	0.94	1.25	1.25	1.71	2.25
2	0.66	0.85	0.85	1.13	1.13	1.57	2.01
1 1/2	0.62	0.79	0.79	1.04	1.04	1.44	1.83
4 X 3	1.10	1.45	1.45	2.02	2.01	3.00	3.65

NOMINAL PIPE SIZE Inch	SGP	STD	S40	XS	S80	S160	XXS
2 1/2	1.04	1.37	1.37	1.90	1.90	2.76	3.41
2	0.97	1.27	1.27	1.76	1.76	2.58	3.11
5 X 4	1.74	2.50	2.50	3.52	3.52	5.59	6.47
3	1.58	2.27	2.27	3.18	3.18	5.30	5.78
2 1/2	1.50	2.16	2.16	3.02	3.02	4.70	5.46
6 X 5	2.55	3.57	3.57	5.38	5.38	8.63	9.89
4	2.36	3.30	3.30	4.96	4.96	7.88	8.98
3	2.18	3.04	3.04	4.56	4.56	7.21	8.21
8 X 6	4.17	5.71	5.71	8.63	8.63	15.00	14.30
5	3.87	5.40	5.40	8.14	8.14	14.00	13.40
4	3.67	5.10	5.10	7.68	7.68	13.10	12.60
10 X 8	6.87	9.58	9.58	12.90	15.40	27.50	24.30
6	6.32	8.78	8.78	11.80	14.20	25.10	22.10
5	6.06	8.42	8.42	11.30	13.50	23.90	21.10
12 X 10	9.97	13.60	14.70	18.00	24.80	44.60	34.30
8	9.29	12.70	13.70	16.70	22.70	41.00	31.70
6	8.69	11.80	12.80	15.60	21.40	38.00	29.40
14 X 12	21.20	25.40	29.50	33.60	49.80	88.50	-
10	19.70	23.60	27.40	31.20	46.10	81.60	-

REDUCERS

Unit : Kgs

NOMINAL PIPE SIZE Inch	SGP	STD	S40	XS	S80	S160	XXS
8	18.30	21.80	25.40	28.90	42.20	74.70	-
16 X 14	25.90	31.00	41.10	41.10	67.70	121.00	-
12	24.10	29.60	39.20	39.20	65.00	116.00	-
10	22.40	27.80	36.80	36.80	60.80	108.00	-
18 X 16	31.50	37.80	56.20	50.10	91.40	165.00	-
14	29.80	35.70	53.00	47.40	86.40	155.00	-
12	27.70	33.20	51.00	44.00	83.00	149.00	-
20 X 18	47.00	56.40	88.40	74.90	150.00	-	-
16	44.70	53.50	83.90	71.10	142.00	-	-
14	42.40	50.80	79.60	67.40	136.00	-	-
22 X 20	52.10	62.40	-	82.90	181.00	-	-
18	49.50	59.40	-	78.90	172.00	-	-
16	47.00	56.40	-	74.80	164.00	-	-
24 X 22	57.10	68.40	-	91.00	215.00	-	-
20	54.80	65.70	119.00	87.30	206.00	-	-
18	52.60	63.00	114.00	83.80	197.00	-	-
26 X 24	74.50	89.40	-	119.00	-	-	-
22	71.50	85.80	-	114.00	-	-	-
20	68.50	82.10	-	109.00	-	-	-
28 X 26	80.60	96.60	-	129.00	-	-	-
24	77.50	93.00	-	124.00	-	-	-
22	74.50	89.40	-	119.00	-	-	-
30 X 28	86.60	104.00	-	138.00	-	-	-
26	83.60	100.00	-	133.00	-	-	-
24	80.60	96.60	-	129.00	-	-	-
32 X 30	92.60	111.00	-	148.00	-	-	-

NOMINAL PIPE SIZE Inch	SGP	STD	S40	XS	S80	S160	XXS
28	89.60	108.00	-	143.00	-	-	-
26	86.60	104.00	-	138.00	-	-	-
34 X 32	98.70	118.00	-	158.00	-	-	-
30	95.60	115.00	-	153.00	-	-	-
28	92.60	111.00	-	148.00	-	-	-
36 X 34	105.00	126.00	-	167.00	-	-	-
32	102.00	122.00	-	163.00	-	-	-
30	98.70	118.00	-	158.00	-	-	-
38 X 36	112.00	133.00	-	177.00	-	-	-
34	108.00	129.00	-	172.00	-	-	-
32	105.00	126.00	-	167.00	-	-	-
40 X 38	117.00	140.00	-	187.00	-	-	-
36	114.00	137.00	-	182.00	-	-	-
34	111.00	133.00	-	177.00	-	-	-
42 X 40	123.00	147.00	-	196.00	-	-	-
38	120.00	144.00	-	192.00	-	-	-
36	117.00	140.00	-	187.00	-	-	-
44 X 42	129.00	155.00	-	206.00	-	-	-
40	126.00	151.00	-	201.00	-	-	-
38	123.00	147.00	-	196.00	-	-	-
46 X 44	157.00	189.00	-	252.00	-	-	-
42	154.00	185.00	-	246.00	-	-	-
40	150.00	180.00	-	241.00	-	-	-
48 X 46	164.00	197.00	-	263.00	-	-	-
44	161.00	193.00	-	257.00	-	-	-
42	157.00	189.00	-	252.00	-	-	-

STAINLESS STEEL

Butt Weld Pipe Fittings

ASME B16.9

90° Elbow (Long , Short)

45° Elbow (Long)



Long



Short

Unit : mm

NOMINAL PIPE SIZE	Outside Diameter O.D	Center to End			5S		10S		40S		80S	
		Long		Short								
		A	B	A	T	I.D	T	I.D	T	I.D	T	I.D
1/2	21.30	38	16	-	1.65	18.00	2.11	17.10	2.77	15.80	3.73	13.80
3/4	26.70	38	19	-	1.65	23.40	2.11	22.50	2.87	21.00	3.91	18.90
1	33.40	38	22	25	1.65	30.10	2.77	27.90	3.38	26.60	4.55	24.30
1 1/4	42.20	48	25	32	1.65	38.90	2.77	36.70	3.56	35.10	4.85	32.50
1 1/2	48.30	57	29	38	1.65	45.00	2.77	42.80	3.68	40.90	5.08	38.10
2	60.30	76	35	51	1.65	57.00	2.77	54.80	3.91	52.50	5.54	49.20
2 1/2	73.00	95	44	64	2.11	68.80	3.05	66.90	5.16	62.70	7.01	59.00
3	88.90	114	51	76	2.11	84.70	3.05	82.80	5.49	77.90	7.62	73.70
3 1/2	101.60	133	57	89	2.11	97.40	3.05	95.50	5.74	90.10	8.08	85.40
4	114.30	152	64	102	2.11	110.10	3.05	108.20	6.02	102.30	8.56	97.20
5	141.30	190	79	127	2.77	135.80	3.40	134.50	6.55	128.20	9.53	122.20
6	168.30	229	95	152	2.77	162.80	3.40	161.50	7.11	154.10	10.97	146.40

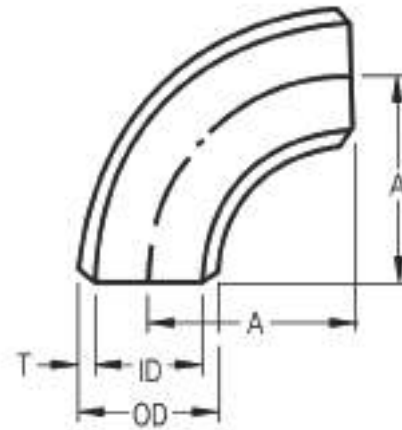
STAINLESS STEEL

Butt Weld Pipe Fittings

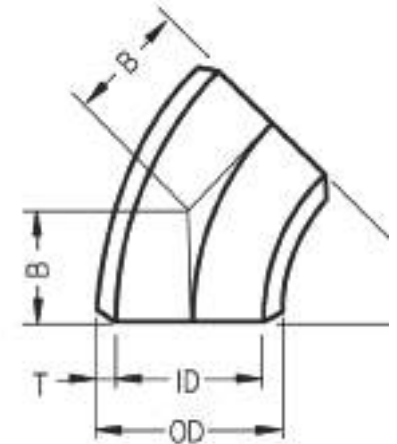
ASME B16.9

90° Elbow (Long , Short)

45° Elbow (Long)



Long



Short

Unit : mm

NOMINAL PIPE SIZE	Outside Diameter O.D	Center to End			5S		10S		40S		80S	
		Long		Short								
		A	B	A	T	I.D	T	I.D	T	I.D	T	I.D
8	219.10	305	127	203	2.77	213.60	3.76	211.60	8.18	202.70	12.70	193.70
10	273.00	381	159	254	3.40	266.20	4.19	264.60	9.27	254.50	12.70	247.60
12	323.80	457	190	305	3.96	315.90	4.57	314.70	9.53	304.70	12.70	298.40
14	355.60	533	222	356	3.96	347.70	4.78	346.00	9.53	336.50	12.70	330.20
16	406.40	610	254	406	4.19	398.00	4.78	396.80	9.53	387.30	12.70	381.00
18	457.00	686	286	457	4.19	448.60	4.78	447.40	9.53	437.90	12.70	431.60
20	508.00	762	318	508	4.78	498.40	5.54	496.90	9.53	488.90	12.70	482.60
22	559.00	838	343	559	4.78	549.40	5.54	547.90	-	-	-	-
24	610.00	914	381	610	5.54	598.90	6.35	597.30	9.53	590.90	12.70	584.60
30	762.00	1143	470	-	6.35	749.30	7.92	746.20	-	-	-	-

STAINLESS STEEL

Butt Weld Pipe Fittings

ASME B16.9 180° Elbow (Long , Short)



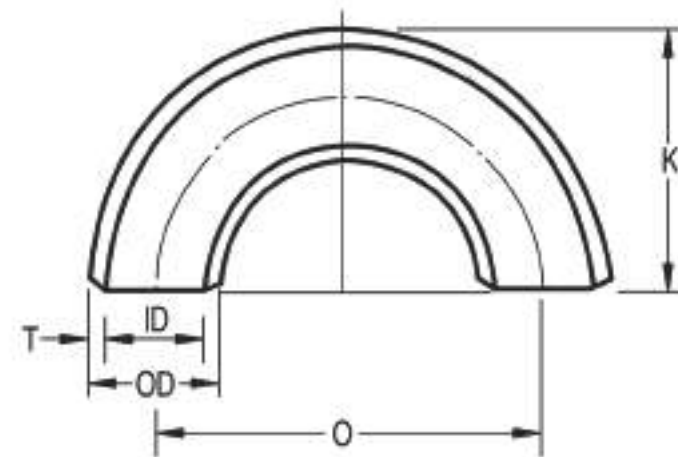
Unit : mm

NOMINAL PIPE SIZE	Outside Diameter	Wall Thickness				180° Elbow			
						Long		Short	
		5S	10S	40S	80S	O	K	O	K
1/2	21.30	1.65	2.11	2.77	3.73	-	48	-	-
3/4	26.70	1.65	2.11	2.87	3.91	-	51	-	-
1	33.40	1.65	2.77	3.38	4.55	-	56	51	41
1 1/4	42.20	1.65	2.77	3.56	4.85	95	70	64	52
1 1/2	48.30	1.65	2.77	3.68	5.08	114	83	76	62
2	60.30	1.65	2.77	3.91	5.54	152	106	102	81
2 1/2	73.00	2.11	3.05	5.16	7.01	190	132	127	100
3	88.90	2.11	3.05	5.49	7.62	229	159	152	121
3 1/2	101.60	2.11	3.05	5.74	8.08	267	184	178	140
4	114.30	2.11	3.05	6.02	8.56	305	210	203	159
5	141.30	2.77	3.40	6.55	9.53	381	262	254	197

STAINLESS STEEL

Butt Weld Pipe Fittings

ASME B16.9 180° Elbow (Long , Short)



Unit : mm

NOMINAL PIPE SIZE	Outside Diameter O.D	Wall Thickness				180° Elbow			
						Long		Short	
		5S	10S	40S	80S	O	K	O	K
6	168.30	2.77	3.40	7.11	10.97	457	313	305	237
8	219.10	2.77	3.76	8.18	12.70	610	414	406	313
10	273.00	3.40	4.19	9.27	12.70	762	518	508	391
12	323.80	3.96	4.57	9.53	12.70	914	619	610	467
14	355.60	3.96	4.78	9.53	12.70	1067	711	711	533
16	406.40	4.19	4.78	9.53	12.70	1219	813	813	610
18	457.00	4.19	4.78	9.53	12.70	1372	914	914	686
20	508.00	4.78	5.54	9.53	12.70	1524	1016	1016	762
22	559.00	4.78	5.54	-	-	1676	1118	1118	838
24	610.00	5.54	6.35	9.53	12.70	1829	1219	1219	914
30	762.00	6.35	7.92	-	-	-	-	-	-

STAINLESS STEEL

Butt Weld Pipe Fittings

ASME B16.9
Tee (Straight)



Straight

Unit : mm

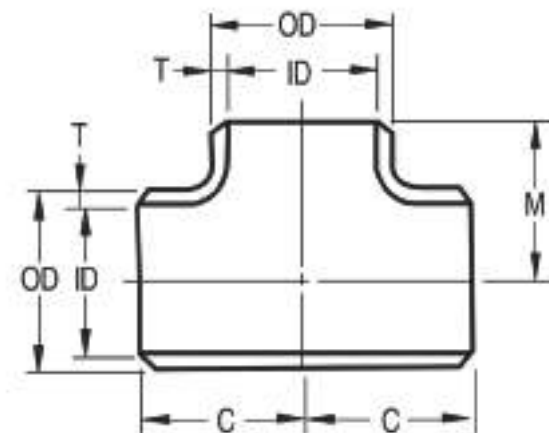
NOMINAL PIPE SIZE	Outside Diameter O.D	Center to End		5S		10S		40S		80S	
		Run C	Outlet M	T	I.D	T	I.D	T	I.D	T	I.D
1/2	21.30	25	25	1.65	18.00	2.11	17.10	2.77	15.80	3.73	13.80
3/4	26.70	29	29	1.65	23.40	2.11	22.50	2.87	21.00	3.91	18.90
1	33.40	38	38	1.65	30.10	2.77	27.90	3.38	26.60	4.55	24.30
1 1/4	42.20	48	48	1.65	38.90	2.77	36.70	3.56	35.10	4.85	32.50
1 1/2	48.30	57	57	1.65	45.00	2.77	42.80	3.68	40.90	5.08	38.10
2	60.30	64	64	1.65	57.00	2.77	54.80	3.91	52.50	5.54	49.20
2 1/2	73.00	76	76	2.11	68.80	3.05	66.90	5.16	62.70	7.01	59.00
3	88.90	86	86	2.11	84.70	3.05	82.80	5.49	77.90	7.62	73.70
3 1/2	101.60	95	95	2.11	97.40	3.05	95.50	5.74	90.10	8.08	85.40
4	114.30	105	105	2.11	110.10	3.05	108.20	6.02	102.30	8.56	97.20
5	141.30	124	124	2.77	135.80	3.40	134.50	6.55	128.20	9.53	122.20

STAINLESS STEEL

Butt Weld Pipe Fittings

ASME B16.9 Tee (Straight)

Unit : mm



Straight

NOMINAL PIPE SIZE	Outside Diameter O.D	Center to End		5S		10S		40S		80S	
		Run C	Outlet M	T	I.D	T	I.D	T	I.D	T	I.D
6	168.30	143	143	2.77	162.80	3.40	161.50	7.11	154.10	10.97	146.40
8	219.10	178	178	2.77	213.60	3.76	211.60	8.18	202.70	12.70	193.70
10	273.00	216	216	3.40	266.20	4.19	264.60	9.27	254.50	12.70	247.60
12	323.80	254	254	3.96	315.90	4.57	314.70	9.53	304.70	12.70	298.40
14	355.60	279	279	3.96	347.70	4.78	346.00	9.53	336.50	12.70	330.20
16	406.40	305	305	4.19	398.00	4.78	396.80	9.53	387.30	12.70	381.00
18	457.00	343	343	4.19	448.60	4.78	447.40	9.53	437.90	12.70	431.60
20	508.00	381	381	4.78	498.40	5.54	496.90	9.53	488.90	12.70	482.60
22	559.00	419	419	4.78	549.40	5.54	547.90	-	-	-	-
24	610.00	432	432	5.54	598.90	6.35	597.30	9.53	590.90	12.70	584.60
30	762.00	559	559	6.35	749.30	7.92	746.20	-	-	-	-

STAINLESS STEEL

Butt Weld Pipe Fittings

ASME B16.9 Tee (Reducing)

Unit : mm



Reducing

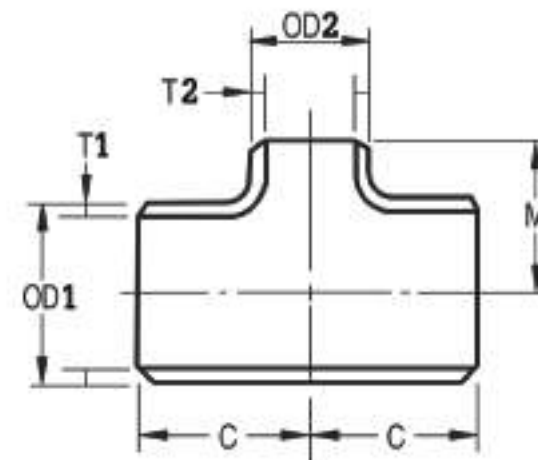
NOMINAL PIPE SIZE	Outside Diameter		Center to End		5S		10S		40S		80S	
	OD1	OD2	Run C	Outlet M	T1	T2	T1	T2	T1	T2	T1	T2
3/4 X 3/4 X 1/2	26.70	21.30	29	25	1.65	1.65	2.11	2.11	2.87	2.77	3.91	3.73
1 X 1 X 3/4	33.40	26.70	38	29	1.65	1.65	2.77	2.11	3.38	2.87	4.55	3.91
1 X 1 X 1/2	33.40	21.30	38	25	1.65	1.65	2.77	2.11	3.38	2.77	4.55	3.73
1 1/4 X 1 1/4 X 1	42.20	33.40	48	38	1.65	1.65	2.77	2.77	3.56	3.38	4.85	4.55
1 1/4 X 1 1/4 X 3/4	42.20	26.70	48	29	1.65	1.65	2.77	2.11	3.56	2.87	4.85	3.91
1 1/2 X 1 1/2 X 1 1/4	48.30	42.20	57	48	1.65	1.65	2.77	2.77	3.68	3.56	5.08	4.85
1 1/2 X 1 1/2 X 1	48.30	33.40	57	38	1.65	1.65	2.77	2.77	3.68	3.38	5.08	4.55
1 1/2 X 1 1/2 X 3/4	48.30	26.70	57	29	1.65	1.65	2.77	2.11	3.68	2.87	5.08	3.91
2 X 2 X 1 1/2	60.30	48.30	64	57	1.65	1.65	2.77	2.77	3.91	3.68	5.54	5.08
2 X 2 X 1 1/4	60.30	42.20	64	48	1.65	1.65	2.77	2.77	3.91	3.56	5.54	4.85
2 X 2 X 1	60.30	33.40	64	38	1.65	1.65	2.77	2.77	3.91	3.38	5.54	4.55
2 1/2 X 2 1/2 X 2	73.00	60.30	76	64	2.11	1.65	3.05	2.77	5.16	3.91	7.01	5.54
2 1/2 X 2 1/2 X 1 1/2	73.00	48.30	76	57	2.11	1.65	3.05	2.77	5.16	3.68	7.01	5.08
2 1/2 X 2 1/2 X 1 1/4	73.00	42.20	76	48	2.11	1.65	3.05	2.77	5.16	3.56	7.01	4.85
3 X 3 X 2 1/2	88.90	73.00	86	76	2.11	2.11	3.05	3.05	5.49	5.16	7.62	7.01
3 X 3 X 2	88.90	60.30	86	64	2.11	1.65	3.05	2.77	5.49	3.91	7.62	5.54
3 X 3 X 1 1/2	88.90	48.30	86	57	2.11	1.65	3.05	2.77	5.49	3.68	7.62	5.08

STAINLESS STEEL

Butt Weld Pipe Fittings

ASME B16.9 Tee (Reducing)

Unit : mm



Reducing

NOMINAL PIPE SIZE	Outside Diameter		Center to End		5S		10S		40S		80S	
	OD1	OD2	Run C	Outlet M	T1	T2	T1	T2	T1	T2	T1	T2
3 1/2 X 3 1/2 X 3	101.60	88.90	95	86	2.11	2.11	3.05	3.05	5.74	5.49	8.08	7.62
3 1/2 X 3 1/2 X 2 1/2	101.60	73.00	95	76	2.11	2.11	3.05	3.05	5.74	5.16	8.08	7.01
3 1/2 X 3 1/2 X 2	101.60	60.30	95	64	2.11	1.65	3.05	2.77	5.74	3.91	8.08	5.54
3 1/2 X 3 1/2 X 1 1/2	101.60	48.30	95	57	2.11	1.65	3.05	2.77	5.74	3.68	8.08	5.08
4 X 4 X 3 1/2	114.30	101.60	105	95	2.11	2.11	3.05	3.05	6.02	5.74	8.56	8.08
4 X 4 X 3	114.30	88.90	105	86	2.11	2.11	3.05	3.05	6.02	5.49	8.56	7.62
4 X 4 X 2 1/2	114.30	73.00	105	76	2.11	2.11	3.05	3.05	6.02	5.16	8.56	7.01
4 X 4 X 2	114.30	60.30	105	64	2.11	1.65	3.05	2.77	6.02	3.91	8.56	5.54
5 X 5 X 4	141.30	114.30	124	105	2.77	2.11	3.40	3.05	6.55	6.02	9.53	8.56
5 X 5 X 3 1/2	141.30	101.60	124	95	2.77	2.11	3.40	3.05	6.55	5.74	9.53	8.08
5 X 5 X 3	141.30	88.90	124	86	2.77	2.11	3.40	3.05	6.55	5.49	9.53	7.62
5 X 5 X 2 1/2	141.30	73.00	124	76	2.77	2.11	3.40	3.05	6.55	5.16	9.53	7.01
6 X 6 X 5	168.30	141.30	143	124	2.77	2.77	3.40	3.40	7.11	6.55	10.97	9.53
6 X 6 X 4	168.30	114.30	143	105	2.77	2.11	3.40	3.05	7.11	6.02	10.97	8.56
6 X 6 X 3 1/2	168.30	101.60	143	95	2.77	2.11	3.40	3.05	7.11	5.74	10.97	8.08
6 X 6 X 3	168.30	88.90	143	86	2.77	2.11	3.40	3.05	7.11	5.49	10.97	7.62
8 X 8 X 6	219.10	168.30	178	143	2.77	2.77	3.76	3.40	8.18	7.11	12.70	10.97

STAINLESS STEEL

Butt Weld Pipe Fittings

ASME B16.9 Tee (Reducing)

Unit : mm



Reducing

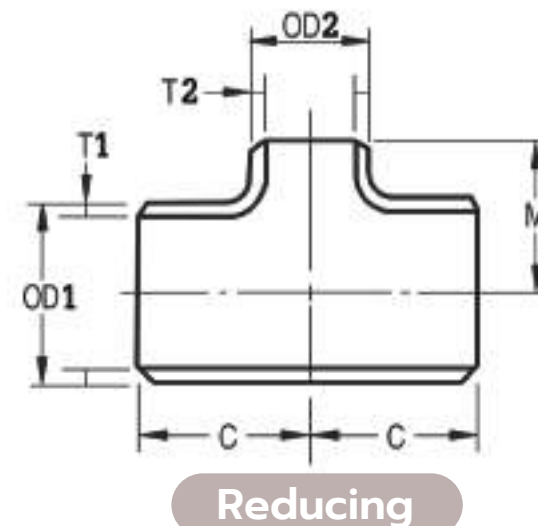
NOMINAL PIPE SIZE	Outside Diameter		Center to End		5S		10S		40S		80S	
	OD1	OD2	Run C	Outlet M	T1	T2	T1	T2	T1	T2	T1	T2
8 X 8 X 5	219.10	141.30	178	124	2.77	2.77	3.76	3.40	8.18	6.55	12.70	9.53
8 X 8 X 4	219.10	114.30	178	105	2.77	2.11	3.76	3.05	8.18	6.02	12.70	8.56
10 X 10 X 8	273.00	219.10	216	178	3.40	2.77	4.19	3.76	9.27	8.18	12.70	12.70
10 X 10 X 6	273.00	168.30	216	143	3.40	2.77	4.19	3.40	9.27	7.11	12.70	10.97
10 X 10 X 5	273.00	141.30	216	124	3.40	2.77	4.19	3.40	9.27	6.55	12.70	9.53
12 X 12 X 10	323.80	273.00	254	216	3.96	3.40	4.57	4.19	9.53	9.27	12.70	12.70
12 X 12 X 8	323.80	219.10	254	178	3.96	2.77	4.57	3.76	9.53	8.18	12.70	12.70
12 X 12 X 6	323.80	168.30	254	143	3.96	2.77	4.57	3.40	9.53	7.11	12.70	10.97
14 X 14 X 12	355.60	323.80	279	254	3.96	3.96	4.78	4.57	9.53	9.53	12.70	12.70
14 X 14 X 10	355.60	273.00	279	216	3.96	3.40	4.78	4.19	9.53	9.27	12.70	12.70
14 X 14 X 8	355.60	219.10	279	178	3.96	2.77	4.78	3.76	9.53	8.18	12.70	12.70
16 X 16 X 14	406.40	355.60	305	279	4.19	3.96	4.78	4.78	9.53	9.53	12.70	12.70
16 X 16 X 12	406.40	323.80	305	254	4.19	3.96	4.78	4.57	9.53	9.53	12.70	12.70
16 X 16 X 10	406.40	273.00	305	216	4.19	3.40	4.78	4.19	9.53	9.27	12.70	12.70
18 X 18 X 16	457.00	406.40	343	305	4.19	4.19	4.78	4.78	9.53	9.53	12.70	12.70

STAINLESS STEEL

Butt Weld Pipe Fittings

ASME B16.9 Tee (Reducing)

Unit : mm



NOMINAL PIPE SIZE	Outside Diameter		Center to End		5S		10S		40S		80S	
	OD1	OD2	Run C	Outlet M	T1	T2	T1	T2	T1	T2	T1	T2
18 X 18 X 14	457.00	355.60	343	279	4.19	3.96	4.78	4.78	9.53	9.53	12.70	12.70
18 X 18 X 12	457.00	323.80	343	254	4.19	3.96	4.78	4.57	9.53	9.53	12.70	12.70
20 X 20 X 18	508.00	457.00	381	343	4.78	4.19	5.54	4.78	9.53	9.53	12.70	12.70
20 X 20 X 16	508.00	406.40	381	305	4.78	4.19	5.54	4.78	9.53	9.53	12.70	12.70
20 X 20 X 14	508.00	355.60	381	279	4.78	3.96	5.54	4.78	9.53	9.53	12.70	12.70
22 X 22 X 20	559.00	508.00	419	381	4.78	4.78	5.54	5.54	-	9.53	-	12.70
22 X 22 X 18	559.00	457.00	419	343	4.78	4.19	5.54	4.78	-	9.53	-	12.70
22 X 22 X 16	559.00	406.40	419	305	4.78	4.19	5.54	4.78	-	9.53	-	12.70
24 X 24 X 22	610.00	559.00	432	419	5.54	4.78	6.35	5.54	9.53	-	12.70	-
24 X 24 X 20	610.00	508.00	432	381	5.54	4.78	6.35	5.54	9.53	9.53	12.70	12.70
24 X 24 X 18	610.00	457.00	432	343	5.54	4.19	6.35	4.78	9.53	9.53	12.70	12.70
30 X 30 X 24	762.00	610.00	559	432	6.35	5.54	7.92	6.35	-	9.53	-	12.70
30 X 30 X 22	762.00	559.00	559	419	6.35	4.78	7.92	5.54	-	-	-	-
30 X 30 X 20	762.00	508.00	559	381	6.35	4.78	7.92	5.54	-	9.53	-	12.70

STAINLESS STEEL

Butt Weld Pipe Fittings

ASME B16.9 Reducer

Unit : mm



Concentric



Eccentric

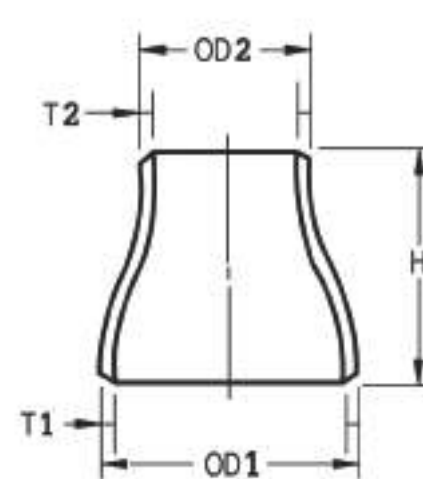
NOMINAL PIPE SIZE	Outside Diameter		End to End	5S		10S		40S		80S	
	OD1	OD2	H	T1	T2	T1	T2	T1	T2	T1	T2
3/4 X 1/2	26.70	21.30	38	1.65	1.65	2.11	2.11	2.87	2.77	3.91	3.73
1 X 3/4	33.40	26.70	51	1.65	1.65	2.77	2.11	3.38	2.87	4.55	3.91
1 X 1/2	33.40	21.30	51	1.65	1.65	2.77	2.11	3.38	2.77	4.55	3.73
1 1/4 X 1	42.20	33.40	51	1.65	1.65	2.77	2.77	3.56	3.38	4.85	4.55
1/4 X 3/4	42.20	26.70	51	1.65	1.65	2.77	2.11	3.56	2.87	4.85	3.91
1 1/4 X 1/2	42.20	21.30	51	1.65	1.65	2.77	2.11	3.56	2.77	4.85	3.73
1 1/2 X 1 1/4	48.30	42.20	64	1.65	1.65	2.77	2.77	3.68	3.56	5.08	4.85
1 1/2 X 1	48.30	33.40	64	1.65	1.65	2.77	2.77	3.68	3.38	5.08	4.55
1 1/2 X 3/4	48.30	26.70	64	1.65	1.65	2.77	2.11	3.68	2.87	5.08	3.91
1 1/2 X 1/2	48.30	21.30	64	1.65	1.65	2.77	2.11	3.68	2.77	5.08	3.73
2 X 1 1/2	60.30	48.30	76	1.65	1.65	2.77	2.77	3.91	3.68	5.54	5.08
2 X 1 1/4	60.30	42.20	76	1.65	1.65	2.77	2.77	3.91	3.56	5.54	4.85
2 X 1	60.30	33.40	76	1.65	1.65	2.77	2.77	3.91	3.38	5.54	4.55
2 X 3/4	60.30	26.70	76	1.65	1.65	2.77	2.11	3.91	2.87	5.54	3.91
2 1/2 X 2	73.00	60.30	89	2.11	1.65	3.05	2.77	5.16	3.91	7.01	5.54
2 1/2 X 1 1/2	73.00	48.30	89	2.11	1.65	3.05	2.77	5.16	3.68	7.01	5.08
2 1/2 X 1 1/4	73.00	42.20	89	2.11	1.65	3.05	2.77	5.16	3.56	7.01	4.85

STAINLESS STEEL

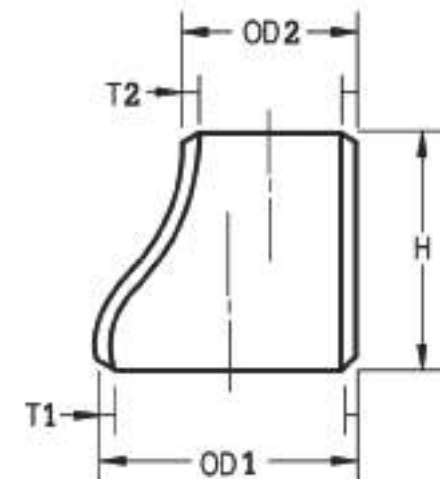
Butt Weld Pipe Fittings

ASME B16.9 Reducer

Unit : mm



Concentric



Eccentric

NOMINAL PIPE SIZE	Outside Diameter		End to End H	5S		10S		40S		80S	
	OD1	OD2		T1	T2	T1	T2	T1	T2	T1	T2
3 X 2 1/2	88.90	73.00	89	2.11	2.11	3.05	3.05	5.49	5.16	7.62	7.01
3 X 2	88.90	60.30	89	2.11	1.65	3.05	2.77	5.49	3.91	7.62	5.54
3 X 1 1/2	88.90	48.30	89	2.11	1.65	3.05	2.77	5.49	3.68	7.62	5.08
3 X 1 1/4	88.90	42.20	89	2.11	1.65	3.05	2.77	5.49	3.56	7.62	4.85
3 1/2 X 3	101.60	88.90	102	2.11	2.11	3.05	3.05	5.74	5.49	8.08	7.62
3 1/2 X 2 1/2	101.60	73.00	102	2.11	2.11	3.05	3.05	5.74	5.16	8.08	7.01
3 1/2 X 2	101.60	60.30	102	2.11	1.65	3.05	2.77	5.74	3.91	8.08	5.54
4 X 3 1/2	114.30	101.60	102	2.11	2.11	3.05	3.05	6.02	5.74	8.56	8.08
4 X 3	114.30	88.90	102	2.11	2.11	3.05	3.05	6.02	5.49	8.56	7.62
4 X 2 1/2	114.30	73.00	102	2.11	2.11	3.05	3.05	6.02	5.16	8.56	7.01
4 X 2	114.30	60.30	102	2.11	1.65	3.05	2.77	6.02	3.91	8.56	5.54
5 X 4	141.30	114.30	127	2.77	2.11	3.40	3.05	6.55	6.02	9.53	8.56
5 X 3 1/2	141.30	101.60	127	2.77	2.11	3.40	3.05	6.55	5.74	9.53	8.08
5 X 3	141.30	88.90	127	2.77	2.11	3.40	3.05	6.55	5.49	9.53	7.62
5 X 2 1/2	141.30	73.00	127	2.77	2.11	3.40	3.05	6.55	5.16	9.53	7.01
6 X 5	168.30	141.30	140	2.77	2.77	3.40	3.40	7.11	6.55	10.97	9.53
6 X 4	168.30	114.30	140	2.77	2.11	3.40	3.05	7.11	6.02	10.97	8.56

STAINLESS STEEL

Butt Weld Pipe Fittings

ASME B16.9 Reducer

Unit : mm



Concentric



Eccentric

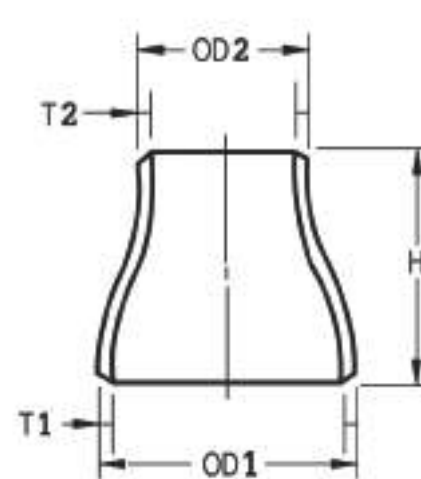
NOMINAL PIPE SIZE	Outside Diameter		End to End	5S		10S		40S		80S	
	OD1	OD2	H	T1	T2	T1	T2	T1	T2	T1	T2
6 X 3 1/2	168.30	101.60	140	2.77	2.11	3.40	3.05	7.11	5.74	10.97	8.08
6 X 3	168.30	88.90	140	2.77	2.11	3.40	3.05	7.11	5.49	10.97	7.62
8 X 6	219.10	168.30	152	2.77	2.77	3.76	3.40	8.18	7.11	12.70	10.97
8 X 5	219.10	141.30	152	2.77	2.77	3.76	3.40	8.18	6.55	12.70	9.53
8 X 4	219.10	114.30	152	2.77	2.11	3.76	3.05	8.18	6.02	12.70	8.56
10 X 8	273.00	219.10	178	3.40	2.77	4.19	3.76	9.27	8.18	12.70	12.70
10 X 6	273.00	168.30	178	3.40	2.77	4.19	3.40	9.27	7.11	12.70	10.97
10 X 5	273.00	141.30	178	3.40	2.77	4.19	3.40	9.27	6.55	12.70	9.53
12 X 10	323.80	273.00	203	3.96	3.40	4.57	4.19	9.53	9.27	12.70	12.70
12 X 8	323.80	219.10	203	3.96	2.77	4.57	3.76	9.53	8.18	12.70	12.70
12 X 6	323.80	168.30	203	3.96	2.77	4.57	3.40	9.53	7.11	12.70	10.97
14 X 12	355.60	323.80	330	3.96	3.96	4.78	4.57	9.53	9.53	12.70	12.70
14 X 10	355.60	273.00	330	3.96	3.40	4.78	4.19	9.53	9.27	12.70	12.70
14 X 8	355.60	219.10	330	3.96	2.77	4.78	3.76	9.53	8.18	12.70	12.70
16 X 14	406.40	355.60	356	4.19	3.96	4.78	4.78	9.53	9.53	12.70	12.70
16 X 12	406.40	323.80	356	4.19	3.96	4.78	4.57	9.53	9.53	12.70	12.70

STAINLESS STEEL

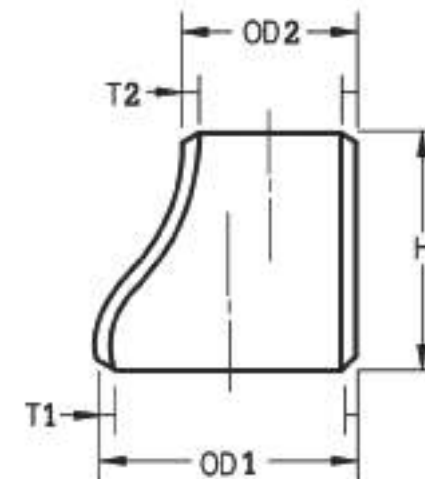
Butt Weld Pipe Fittings

ASME B16.9 Reducer

Unit : mm



Concentric



Eccentric

NOMINAL PIPE SIZE	Outside Diameter		End to End	5S		10S		40S		80S	
	OD1	OD2	H	T1	T2	T1	T2	T1	T2	T1	T2
16 X 10	406.40	273.00	356	4.19	3.40	4.78	4.19	9.53	9.27	12.70	12.70
18 X 16	457.00	406.40	381	4.19	4.19	4.78	4.78	9.53	9.53	12.70	12.70
18 X 14	457.00	355.60	381	4.19	3.96	4.78	4.78	9.53	9.53	12.70	12.70
18 X 12	457.00	323.80	381	4.19	3.96	4.78	4.57	9.53	9.53	12.70	12.70
20 X 18	508.00	457.00	508	4.78	4.19	5.54	4.78	9.53	9.53	12.70	12.70
20 X 16	508.00	406.40	508	4.78	4.19	5.54	4.78	9.53	9.53	12.70	12.70
20 X 14	508.00	355.60	508	4.78	3.96	5.54	4.78	9.53	9.53	12.70	12.70
22 X 20	559.00	508.00	508	4.78	4.78	5.54	5.54	-	9.53	-	12.70
22 X 18	559.00	457.00	508	4.78	4.19	5.54	4.78	-	9.53	-	12.70
22 X 16	559.00	406.40	508	4.78	4.19	5.54	4.78	-	9.53	-	12.70
24 X 22	610.00	559.00	508	5.54	4.78	6.35	5.54	9.53	-	12.70	-
24 X 20	610.00	508.00	508	5.54	4.78	6.35	5.54	9.53	9.53	12.70	12.70
24 X 18	610.00	457.00	508	5.54	4.19	6.35	4.78	9.53	9.53	12.70	12.70
30 X 24	762.00	610.00	610	6.35	5.54	7.92	6.35	-	9.53	-	12.70
30 X 22	762.00	559.00	-	6.35	4.78	7.92	5.54	-	-	-	-
30 X 20	762.00	508.00	610	6.35	4.78	7.92	5.54	-	9.53	-	12.70

STAINLESS STEEL

Butt Weld Pipe Fittings

ASME B16.9 Cap



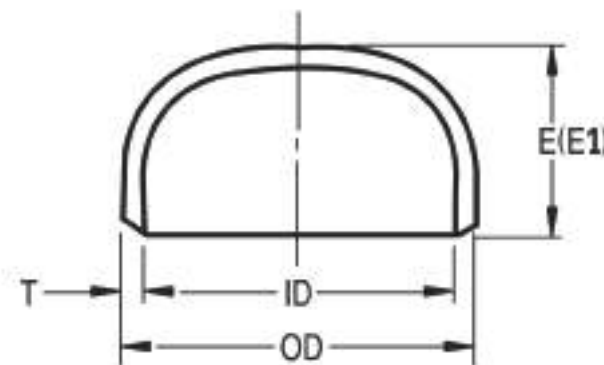
Unit : mm

NOMINAL PIPE SIZE	Outside Diameter	Wall Thickness				Length	Limiting Wall Thickness for Length E	Length
	OD	5S	10S	40S	80S	E		E1
1/2	21.30	1.65	2.11	2.77	3.73	25	4.57	25
3/4	26.70	1.65	2.11	2.87	3.91	25	3.81	25
1	33.40	1.65	2.77	3.38	4.55	38	4.57	38
1 1/4	42.20	1.65	2.77	3.56	4.85	38	4.83	38
1 1/2	48.30	1.65	2.77	3.68	5.08	38	5.08	38
2	60.30	1.65	2.77	3.91	5.54	38	5.59	44
2 1/2	73.00	2.11	3.05	5.16	7.01	38	7.11	51
3	88.90	2.11	3.05	5.49	7.62	51	7.62	64
3 1/2	101.60	2.11	3.05	5.74	8.08	64	8.13	76
4	114.30	2.11	3.05	6.02	8.56	64	8.64	76
5	141.30	2.77	3.40	6.55	9.53	76	9.65	89

STAINLESS STEEL

Butt Weld Pipe Fittings

ASME B16.9 Cap



Unit : mm

NOMINAL PIPE SIZE	Outside Diameter	Wall Thickness				Length	Limiting Wall Thickness for Length E	Length
	OD	5S	10S	40S	80S	E		E1
6	168.30	2.77	3.40	7.11	10.97	89	10.92	102
8	219.10	2.77	3.76	8.18	12.70	102	12.70	127
10	273.00	3.40	4.19	9.27	12.70	127	12.70	152
12	323.80	3.96	4.57	9.53	12.70	152	12.70	178
14	355.60	3.96	4.78	9.53	12.70	165	12.70	191
16	406.40	4.19	4.78	9.53	12.70	178	12.70	203
18	457.00	4.19	4.78	9.53	12.70	203	12.70	229
20	508.00	4.78	5.54	9.53	12.70	229	12.70	254
22	559.00	4.78	5.54	-	-	254	12.70	254
24	610.00	5.54	6.35	9.53	12.70	267	12.70	305
30	762.00	6.35	7.92	-	-	267	-	-

CARBON STEEL, STAINLESS STEEL SEAMLESS/WELDED PIPE WALL THICKNESS

: ASME/ANSI B36.10, B36.19

Unit : mm

NOMINAL PIPE SIZE		Outside Diameter	WALL THICKNESS ASME B36.10													WALL THICKNESS ASME B36.19			
mm.	Inch.	ASME	Sch10	Sch20	Sch30	STD	Sch40	Sch60	XS	Sch80	Sch100	Sch120	Sch140	Sch160	XXS	Sch5S	Sch10S	Sch40S	Sch80S
15	1/2	21.30	2.11	-	2.41	2.77	2.77	-	3.73	3.73	-	-	-	4.78	7.47	1.65	2.11	2.77	3.73
20	3/4	26.70	2.11	-	2.41	2.87	2.87	-	3.91	3.91	-	-	-	5.56	7.82	1.65	2.11	2.87	3.91
25	1	33.40	2.77	-	2.90	3.38	3.38	-	4.55	4.55	-	-	-	6.35	9.09	1.65	2.77	3.38	4.55
32	1 1/4	42.20	2.77	-	2.97	3.56	3.56	-	4.85	4.85	-	-	-	6.35	9.70	1.65	2.77	3.56	4.85
40	1 1/2	48.30	2.77	-	3.18	3.68	3.68	-	5.08	5.08	-	-	-	7.14	10.15	1.65	2.77	3.68	5.08
50	2	60.30	2.77	-	3.18	3.91	3.91	-	5.54	5.54	-	-	-	8.74	11.07	1.65	2.77	3.91	5.54
65	2 1/2	73.00	3.05	-	4.78	5.16	5.16	-	7.01	7.01	-	-	-	9.53	14.02	2.11	3.05	5.16	7.01
80	3	88.90	3.05	-	4.78	5.49	5.49	-	7.62	7.62	-	-	-	11.13	15.24	2.11	3.05	5.49	7.62
90	3 1/2	101.60	3.05	-	4.78	5.74	5.74	-	8.08	8.08	-	-	-	-	-	2.11	3.05	5.74	8.08
100	4	114.30	3.05	-	4.78	6.02	6.02	-	8.56	8.56	-	11.13	-	13.49	17.12	2.11	3.05	6.02	8.56
125	5	114.30	3.40	-	-	6.55	6.55	-	9.53	9.53	-	12.70	-	15.88	19.05	2.77	3.40	6.55	9.53
150	6	168.30	3.40	-	-	7.11	7.11	-	10.97	10.97	15.09	14.27	-	18.26	21.95	2.77	3.40	7.11	10.97
200	8	219.10	3.76	6.35	7.04	8.18	8.18	10.31	12.70	12.70	18.26	18.26	20.62	23.01	22.23	2.77	3.76	8.18	12.70
250	10	273.00	4.19	6.35	7.80	9.27	9.27	12.70	12.70	15.09	21.44	21.44	25.40	28.58	25.40	3.40	4.19	9.27	12.70
300	12	323.80	4.57	6.35	8.38	9.53	10.31	14.27	12.70	17.48	23.83	25.40	28.58	33.32	25.40	3.96	4.57	9.52	12.70
350	14	355.60	6.35	7.92	9.53	9.53	11.13	15.09	12.70	19.05	26.19	27.79	31.75	35.71	-	3.96	4.78	-	-
400	16	406.40	6.35	7.92	9.53	9.53	12.70	16.66	12.70	21.44	29.36	30.96	36.53	40.49	-	4.19	4.78	-	-

CARBON STEEL, STAINLESS STEEL SEAMLESS/WELDED PIPE WALL THICKNESS

: ASME/ANSI B36.10, B36.19

Unit : mm

NOMINAL PIPE SIZE		Outside Diameter	WALL THICKNESS ASME B36.10													WALL THICKNESS ASME B36.19			
mm.	Inch.	ASME	Sch10	Sch20	Sch30	STD	Sch40	Sch60	XS	Sch80	Sch100	Sch120	Sch140	Sch160	XXS	Sch5S	Sch10S	Sch40S	Sch80S
450	18	457.20	6.35	7.92	11.13	9.53	14.27	19.05	12.70	23.83	32.54	34.93	39.67	45.24	-	4.19	7.78	-	-
500	20	508.00	6.35	9.53	12.70	9.53	15.09	20.62	12.70	26.19	34.93	38.10	44.45	50.01	-	4.78	5.54	-	-
550	22	558.80	6.35	9.53	12.70	9.53	-	22.23	12.70	28.58	38.89	41.28	47.63	53.98	-	4.78	5.54	-	-
600	24	609.60	6.35	9.53	14.27	9.53	17.48	24.61	12.70	30.96	-	46.02	52.37	59.54	-	5.54	6.35	-	-
650	26	660.40	7.92	12.70	-	9.53	-	-	12.70	-	-	-	-	-	-	-	-	-	-
700	28	711.20	7.92	12.70	15.88	9.53	-	-	12.70	-	-	-	-	-	-	-	-	-	-
750	30	762.00	7.92	12.70	15.88	9.53	-	-	12.70	-	-	-	-	-	-	6.35	7.92	-	-
800	32	812.80	7.92	12.70	15.88	9.53	17.48	-	12.70	-	-	-	-	-	-	-	-	-	-
850	34	863.60	7.92	12.70	15.88	9.53	17.48	-	12.70	-	-	-	-	-	-	-	-	-	-
900	36	914.40	7.92	12.70	15.88	9.53	19.05	-	12.70	-	-	-	-	-	-	-	-	-	-
950	38	965.20	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-	-	-	-	-
1000	40	1016.00	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-	-	-	-	-
1050	42	1066.80	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-	-	-	-	-
1100	44	1117.60	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-	-	-	-	-
1150	46	1168.60	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-	-	-	-	-
1200	48	1219.20	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-	-	-	-	-

KOUJI

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