

ACTIVA INC. SYMBANG



STAINLESS STEEL BUTTWELD PIPE FITTING
STAINLESS STEEL FORGED FLANGE

PRODUCT GUIDE

<http://www.fitgsmaker.com.tw/>



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Activa is your best source for top quality Stainless/Carbon Steel Pipe Fitting and Flange. With over 20 years of experience, we could manufacture a wide range of butt weld fitting and flange. We can supply both welded and seamless pipe fittings which conform to standard ASME/ANSI, DIN, JIS, GB and forged flanges which conform to ASME/ANSI, DIN, JIS, EN. All our fittings and flanges are manufactured by the most complete and high technical machining equipments.

We pay close attention to the needs of our clients and commit to your satisfaction by our efficient and reliable service. Activa's organizational goal is to achieve total customer satisfaction with regard to the quality of supplied materials, delivery and price.

GENERAL INFORMATION

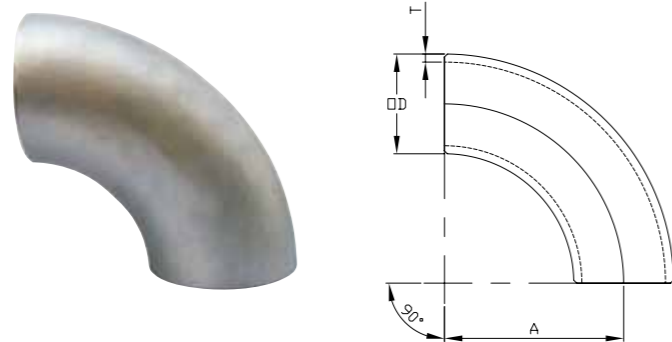
Material	Stainless Steel Carbon Steel
Product	Tee, Elbow, Reducer, Stub End, Cap, etc.
Standard	ASME/ANSI, DIN, JIS, GB12459
Size Range	Size Range 1/2" - 14" (Seamless) 16" - 48" (Welded)

Material	Stainless Steel Carbon Steel
Product	Flange
Standard	ASME/ANSI, DIN, JIS, EN
Size Range	Size Range 1/2" - 24" 150LBS / 300LBS / 400LBS / 600LBS / 900LBS / 1500LBS / 2500LBS"





90° LONG RADIUS ELBOW (1/2" - 48")

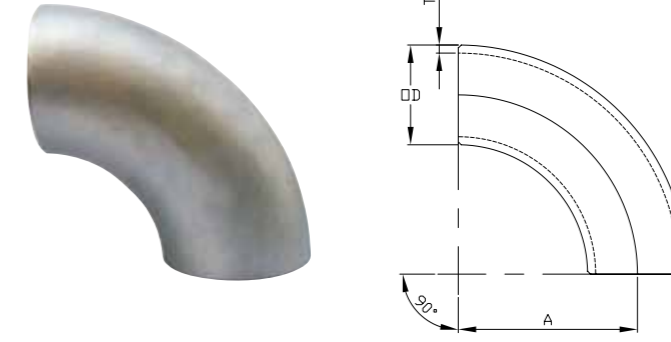


DIMENSIONS

(unit: inch/mm)

Nominal Pipe Size	Outside Dia. (O.D)	Wall Thickness(T)				Center to End (A)
		SCH 5S	SCH 10S	SCH 40S	SCH 80S	
1/2	0.840	0.065	0.083	0.109	0.147	1.500
	21.340	1.650	2.110	2.770	3.730	38.100
3/4	1.050	0.065	0.083	0.113	0.154	1.120
	26.670	1.650	2.110	2.870	3.910	28.450
1	1.315	0.065	0.109	0.133	0.179	1.500
	33.400	1.650	2.770	3.380	4.550	38.100
1-1/4	1.660	0.065	0.109	0.140	0.191	1.880
	42.160	1.650	2.770	3.560	4.850	47.750
1-1/2	1.900	0.065	0.109	0.145	0.200	2.250
	48.260	1.650	2.770	3.680	5.080	57.150
2	2.375	0.065	0.109	0.154	0.218	3.000
	60.320	1.650	2.770	3.910	5.540	76.200
2-1/2	2.875	0.083	0.120	0.203	0.276	3.750
	73.020	2.110	3.050	5.160	7.010	95.250
3	3.500	0.083	0.120	0.216	0.300	4.500
	88.900	2.110	3.050	5.490	7.620	114.300
3-1/2	4.000	0.083	0.120	0.226	0.318	5.250
	101.600	2.110	3.050	5.740	8.080	133.350
4	4.500	0.083	0.120	0.237	0.337	6.000
	114.300	2.110	3.050	6.020	8.560	152.400
5	5.563	0.109	0.134	0.258	0.375	7.500
	141.300	2.770	3.400	6.550	9.530	190.500
6	6.625	0.109	0.134	0.280	0.432	9.000
	168.270	2.770	3.400	7.110	10.970	228.600
8	8.625	0.109	0.148	0.322	0.500	12.000
	219.080	2.770	3.760	8.180	12.700	304.080
10	10.750	0.134	0.165	0.365	0.500	15.000
	273.050	3.400	4.190	9.270	12.700	381.000
12	12.750	0.156	0.180	0.375	0.500	18.000
	323.850	3.960	4.570	9.530	12.700	457.200
14	14.000	0.188	0.312	0.375	0.500	21.000
	355.600	4.780	7.920	9.530	12.700	533.400
16	16.000	0.188	0.312	0.375	0.500	24.000
	406.400	4.780	7.920	9.530	12.700	609.600
18	18.000	0.188	0.312	0.375	0.500	27.000
	457.200	4.780	7.920	9.530	12.700	685.800

90° LONG RADIUS ELBOW (1/2" - 48")



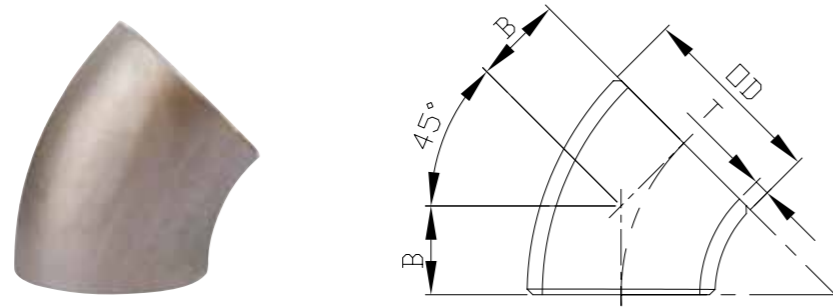
DIMENSIONS

(unit: inch/mm)

Nominal Pipe Size	Outside Dia. (O.D)	Wall Thickness(T)				Center to End (A)
		SCH 5S	SCH 10S	SCH 40S	SCH 80S	
20	20.000	0.218	0.375	0.375	0.500	30.000
	508.000	5.540	9.530	9.530	12.700	762.000
22	22.000	0.218	0.375	0.375	0.500	33.000
	558.800	5.540	9.530	9.530	12.700	838.200
24	24.000	0.250	0.375	0.375	0.500	36.000
	609.600	6.350	9.530	9.530	12.700	914.400
26	26.000	0.312	0.500	0.375	0.500	39.000
	660.400	7.920	12.700	9.530	12.700	990.600
28	28.000	0.312	0.500	0.375	0.500	42.000
	711.200	7.920	12.700	9.530	12.700	1066.800
30	30.000	0.312	0.500	0.375	0.500	45.000
	762.000	7.920	12.700	9.530	12.700	1143.000
32	32.000	0.312	0.500	0.375	0.500	48.000
	812.800	7.920	12.700	9.530	12.700	1219.200
34	34.000	0.312	0.500	0.375	0.500	51.000
	863.600	7.920	12.700	9.530	12.700	1295.400
36	36.000	0.312	0.500	0.375	0.500	54.000
	914.400	7.920	12.700	9.530	12.700	1371.600
38	38.000	0.312		0.375	0.500	57.000
	965.200	7.920		9.530	12.700	1447.800
40	40.000	0.312		0.375	0.500	60.000
	1016.000	7.920		9.530	12.700	1524.000
42	42.000	0.312		0.375	0.500	63.000
	1066.800	7.920		9.530	12.700	1600.200
44	44.000	0.312		0.375	0.500	66.000
	1117.600	7.920		9.530	12.700	1676.400
46	46.000	0.312		0.375	0.500	69.000
	1168.400	7.920		9.530	12.700	1752.600
48	48.000	0.312		0.375	0.500	72.000
	1219.200	7.920		9.530	12.700	1828.800



45° LONG RADIUS ELBOW (1/2" - 48")

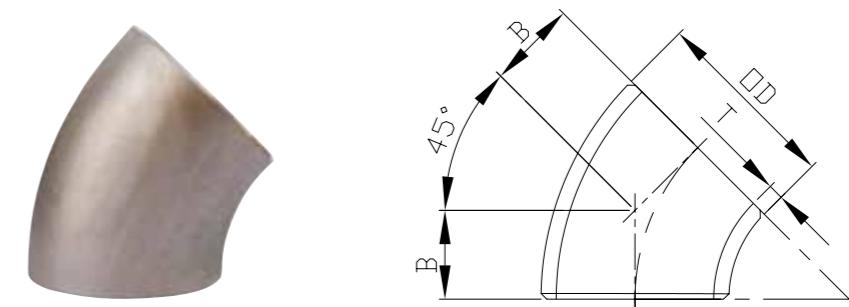


DIMENSIONS

(unit: inch/mm)

Nominal Pipe Size	Outside Dia. (O.D.)	Wall Thickness(T)				Center to End (A)
		SCH 5S	SCH 10S	SCH 40S	SCH 80S	
1/2	0.840	0.065	0.083	0.109	0.147	0.625
	21.340	1.650	2.110	2.770	3.730	15.880
3/4	1.050	0.065	0.083	0.113	0.154	0.4380
	26.670	1.650	2.110	2.870	3.910	11.130
1	1.315	0.065	0.109	0.133	0.179	0.875
	33.400	1.650	2.770	3.380	4.550	22.220
1-1/4	1.660	0.065	0.109	0.140	0.191	1.000
	42.160	1.650	2.770	3.560	4.85	25.400
1-1/2	1.900	0.065	0.109	0.145	0.200	1.120
	48.260	1.650	2.770	3.680	5.080	28.40
2	2.375	0.065	0.109	0.154	0.218	1.380
	60.320	1.650	2.770	3.910	5.540	35.050
2-1/2	2.875	0.083	0.120	0.203	0.276	1.750
	73.020	2.110	3.050	5.160	7.010	44.450
3	3.500	0.083	0.120	0.216	0.300	2.000
	88.900	2.110	3.050	5.490	7.620	50.800
3-1/2	4.000	0.083	0.120	0.226	0.318	2.250
	101.600	2.110	3.050	5.740	8.080	57.150
4	4.500	0.083	0.120	0.237	0.337	2.500
	114.300	2.110	3.050	6.020	8.560	63.500
5	5.563	0.109	0.134	0.258	0.375	3.120
	141.300	2.770	3.400	6.550	9.530	79.250
6	6.625	0.109	0.134	0.280	0.432	3.750
	168.270	2.770	3.400	7.110	10.970	95.250
8	8.625	0.109	0.148	0.322	0.500	5.000
	219.080	2.770	3.760	8.180	12.700	127.000
10	10.750	0.134	0.165	0.365	0.500	6.250
	273.050	3.400	4.190	9.270	12.700	158.750
12	12.750	0.156	0.180	0.375	0.500	7.500
	323.850	3.960	4.570	9.530	12.700	190.500
14	14.000	0.188	0.312	0.375	0.500	8.750
	355.600	4.780	7.920	9.530	12.700	222.250
16	16.000	0.188	0.312	0.375	0.500	10.000
	406.400	4.780	7.920	9.530	12.700	254.000
18	18.000	0.188	0.312	0.375	0.500	11.250
	457.200	4.780	7.920	9.530	12.700	285.750

45° LONG RADIUS ELBOW (1/2" - 48")



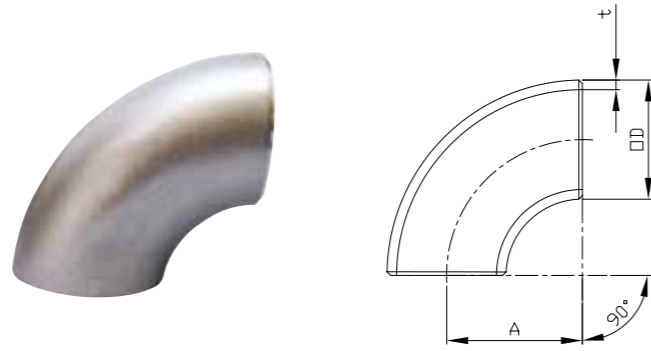
DIMENSIONS

(unit: inch/mm)

Nominal Pipe Size	Outside Dia. (O.D.)	Wall Thickness(T)				Center to End (A)
		SCH 5S	SCH 10S	SCH 40S	SCH 80S	
20	20.000	0.218	0.375	0.375	0.500	11.250
	508.000	5.540	9.530	9.530	12.700	317.500
22	22.000	0.218	0.375	0.375	0.500	13.500
	558.800	5.540	9.530	9.530	12.700	342.900
24	24.000	0.250	0.375	0.375	0.500	15.000
	609.600	6.350	9.530	9.530	12.700	381.000
26	26.000	0.312	0.500	0.375	0.500	16.000
	660.400	7.920	12.700	9.530	12.700	406.400
28	28.000	0.312	0.500	0.375	0.500	17.250
	711.200	7.920	12.700	9.530	12.700	438.150
30	30.000	0.312	0.500	0.375	0.500	18.500
	762.000	7.920	12.700	9.530	12.700	469.900
32	32.000	0.312	0.500	0.375	0.500	19.750
	812.800	7.920	12.700	9.530	12.700	501.650
34	34.000	0.312	0.500	0.375	0.500	21.000
	863.600	7.920	12.700	9.530	12.700	533.400
36	36.000	0.312	0.500	0.375	0.500	22.250
	914.400	7.920	12.700	9.530	12.700	565.150
38	38.000	0.312		0.375	0.500	23.620
	965.200	7.920		9.530	12.700	599.950
40	40.000	0.312		0.375	0.500	24.880
	1016.000	7.920		9.530	12.700	631.950
42	42.000	0.312		0.375	0.500	26.000
	1066.800	7.920		9.530	12.700	660.400
44	44.000	0.312		0.375	0.500	27.380
	1117.600	7.920		9.530	12.700	695.450
46	46.000	0.312		0.375	0.500	28.620
	1168.400	7.920		9.530	12.700	726.950
48	48.000	0.312		0.375	0.500	29.880
	1219.200	7.920		9.530	12.700	758.950



90° SHORT RADIUS ELBOW (1/2" - 24")



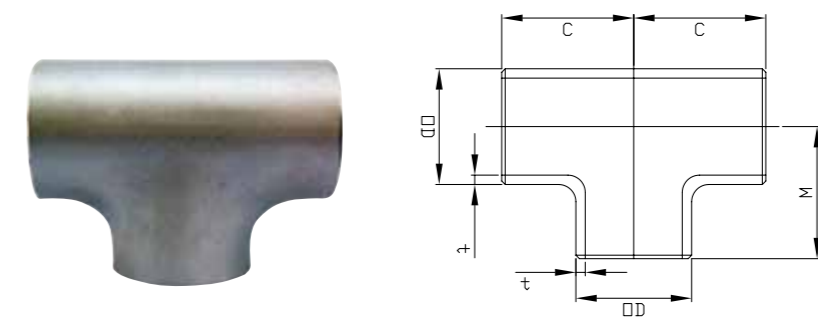
(unit: inch/mm)

DIMENSIONS

Nominal Pipe Size	Outside Dia. (O.D)	Wall Thickness(T)				Center to End (A)
		SCH 5S	SCH 10S	SCH 40S	SCH 80S	
1	1.315	0.065	0.109	0.133	0.179	1.000
	33.400	1.650	2.770	3.380	4.550	25.400
1-1/4	1.660	0.065	0.109	0.140	0.191	1.250
	42.160	1.650	2.770	3.560	4.850	31.750
1-1/2	1.900	0.065	0.109	0.145	0.200	1.500
	48.260	1.650	2.770	3.680	5.080	38.100
2	2.375	0.065	0.109	0.154	0.218	2.000
	60.320	1.650	2.770	3.910	5.540	50.800
2-1/2	2.875	0.083	0.120	0.203	0.276	2.500
	73.020	2.110	3.050	5.160	7.010	63.500
3	3.500	0.083	0.120	0.216	0.300	3.000
	88.900	2.110	3.050	5.490	7.620	76.200
3-1/2	4.000	0.083	0.120	0.226	0.318	3.500
	101.600	2.110	3.050	5.740	8.080	88.900
4	4.500	0.083	0.120	0.237	0.337	4.000
	114.300	2.110	3.050	6.020	8.560	101.600
5	5.563	0.109	0.134	0.258	0.375	5.000
	141.300	2.770	3.400	6.550	9.530	127.000
6	6.625	0.109	0.134	0.280	0.432	6.000
	168.270	2.770	3.400	7.110	10.970	152.400
8	8.625	0.109	0.148	0.322	0.500	8.000
	219.080	2.770	3.760	8.180	12.700	203.200
10	10.750	0.134	0.165	0.365	0.500	10.000
	273.050	3.400	4.190	9.270	12.700	254.000
12	12.750	0.156	0.180	0.375	0.500	12.000
	323.850	3.960	4.570	9.530	12.700	304.800
14	14.000	0.156	0.188	*0.375	**0.500	14.000
	355.600	3.960	4.780	9.530	12.700	355.600
16	16.000	0.156	0.188	*0.375	**0.500	16.000
	406.400	3.960	4.780	9.530	12.700	406.400
18	18.000	0.156	0.188	*0.375	**0.500	18.000
	457.200	3.960	4.780	9.530	12.700	457.200
20	20.000	0.188	0.218	*0.375	**0.500	20.000
	508.000	4.780	5.540	9.530	12.700	508.000
22	22.000	0.188	0.218	*0.375	**0.500	22.000
	558.800	4.780	5.540	9.530	12.700	558.800
24	24.000	0.218	0.250	*0.375	**0.500	24.000
	609.600	5.540	6.350	9.530	12.700	609.600

*STD **XS

EQUAL TEE (1/2" - 24")



(unit: inch/mm)

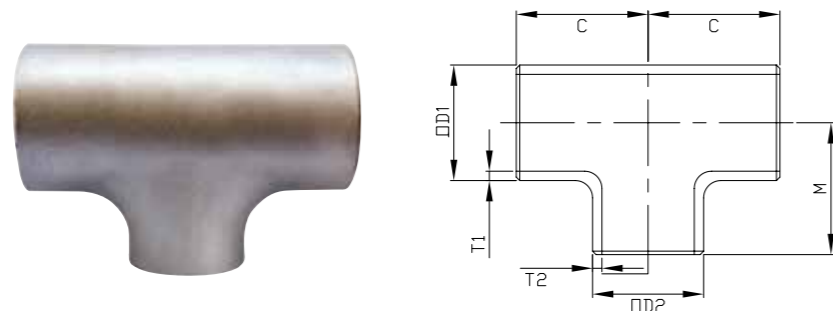
DIMENSIONS

Nominal Pipe Size	Outside Dia. (O.D)	Wall Thickness(T)				Center to End (A)
		SCH 5S	SCH 10S	SCH 40S	SCH 80S	
1/2	0.840	0.065	0.083	0.109	0.147	1.000
	21.340	1.650	2.110	2.770	3.730	25.400
3/4	1.050	0.065	0.083	0.113	0.154	1.130
	26.670	1.650	2.110	2.870	3.910	28.700
1	1.315	0.065	0.109	0.133	0.179	1.500
	33.400	1.650	2.770	3.380	4.550	38.100
1-1/4	1.660	0.065	0.109	0.140	0.191	1.880
	42.160	1.650	2.770	3.560	4.850	47.750
1-1/2	1.900	0.065	0.109	0.145	0.200	2.250
	48.260	1.650	2.770	3.680	5.080	57.150
2	2.375	0.065	0.109	0.154	0.218	2.500
	60.320	1.650	2.770	3.910	5.540	63.500
2-1/2	2.875	0.083	0.120	0.203	0.276	3.000
	73.020	2.110	3.050	5.160	7.010	76.200
3	3.500	0.083	0.120	0.216	0.300	3.380
	88.900	2.110	3.050	5.490	7.620	85.850
4	4.500	0.083	0.120	0.237	0.337	4.130
	114.300	2.110	3.050	6.020	8.560	104.900
5	5.563	0.109	0.134	0.258	0.375	4.880
	141.300	2.770	3.400	6.550	9.530	123.950
6	6.625	0.109	0.134	0.280	0.432	5.630
	168.270	2.770	3.400	7.110	10.970	143.000
8	8.625	0.109	0.148	0.322	0.500	7.000
	219.080	2.770	3.760	8.180	12.700	177.800
10	10.750	0.134	0.165	0.365	0.500	8.500
	273.050	3.400	4.190	9.270	12.700	215.900
12	12.750	0.156	0.180	0.375	0.500	10.000
	323.850	3.960	4.570	9.530	12.700	254.000
14	14.000	0.156	0.188	*0.375	**0.500	11.000
	355.600	3.960	4.780	9.530	12.700	279.400
16	16.000	0.165	0.188	*0.375	**0.500	12.000
	406.400	3.960	4.780	9.530	12.700	304.800
18	18.000	0.165	0.188	*0.375	**0.500	13.500
	457.200	3.960	4.780	9.530	12.700	342.900
20	20.000	0.188	0.218	*0.375	**0.500	15.000
	508.000	4.780	5.540	9.530	12.700	381.000
22	22.000	0.188	0.218	*0.375	**0.500	16.500
	558.800	4.780	5.540	9.530	12.700	419.100
24	24.000	0.218	0.250	*0.375	**0.500	17.000
	609.600	5.540	6.350	9.530	12.700	431.800

*STD **XS



REDUCING TEE (3/4" x 1/2" - 24" x 22")

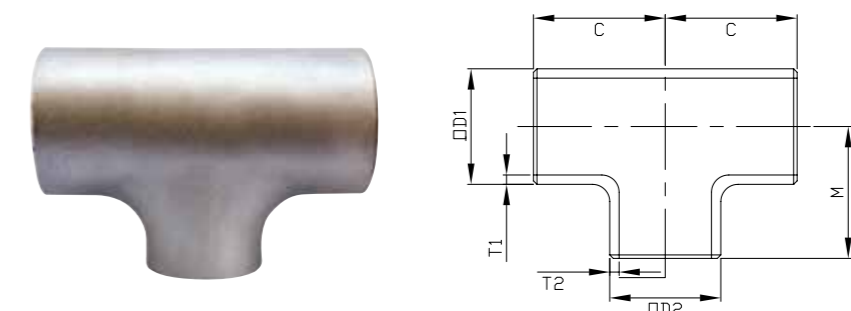


DIMENSIONS

(unit: inch/mm)

Nominal Pipe Size	Outside Dia. (O.D 1)	Outside Dia. (O.D 2)	Wall Thickness(T)								Center to End (E)	Center to End (M)	
			SCH 5S		SCH 10S		SCH 40S		SCH 80S				
			T1	T2	T1	T2	T1	T2	T1	T2			
3/4	1/2	1.050	0.840	0.065	0.065	0.083	0.083	0.113	0.109	0.154	0.147	1.130	1.130
		26.670	21.340	1.650	1.650	2.110	2.110	2.870	2.770	3.910	3.730	28.700	28.700
1	1/2	1.315	0.840	0.065	0.065	0.109	0.083	0.133	0.109	0.179	0.147	1.500	1.500
		33.400	21.340	1.650	1.650	2.770	2.110	3.380	2.770	4.550	3.730	38.100	38.100
1	3/4	1.315	1.050	0.065	0.065	0.109	0.083	0.133	0.113	0.179	0.154	1.500	1.500
		33.400	26.670	1.650	1.650	2.770	2.110	3.380	2.870	4.550	3.910	38.100	38.100
1-1/4	3/4	1.660	1.050	0.065	0.065	0.109	0.083	0.140	0.113	0.191	0.154	1.880	1.880
		42.160	26.670	1.650	1.650	2.770	2.110	3.560	2.870	4.850	3.910	47.750	47.750
1-1/4	1	1.660	1.315	0.065	0.065	0.109	0.109	0.140	0.133	0.191	0.179	1.880	1.880
		42.160	33.400	1.650	1.650	2.770	2.770	3.560	3.380	4.850	4.550	47.750	47.750
1-1/2	1/2	1.900	0.840	0.065	0.065	0.109	0.083	0.145	0.109	0.200	0.147	2.250	2.250
		48.260	21.340	1.650	1.650	2.770	2.110	3.680	2.770	5.080	3.730	57.150	57.150
1-1/2	3/4	1.900	1.050	0.065	0.065	0.109	0.083	0.145	0.113	0.200	0.154	2.250	2.250
		48.260	26.670	1.650	1.650	2.770	2.110	3.680	2.870	5.080	3.910	57.150	57.150
1-1/2	1	1.900	1.315	0.065	0.065	0.109	0.109	0.145	0.133	0.200	0.179	2.250	2.250
		48.260	33.400	1.650	1.650	2.770	2.770	3.680	3.380	5.080	4.550	57.150	57.150
1-1/2	1-1/4	1.900	1.660	0.065	0.065	0.109	0.109	0.145	0.140	0.200	0.191	2.250	2.250
		48.260	42.160	1.650	1.650	2.770	2.770	3.680	3.560	5.080	4.850	57.150	57.150
2	3/4	2.375	1.050	0.065	0.065	0.109	0.033	0.154	0.113	0.218	0.154	2.500	1.750
		60.320	26.67	1.650	1.650	2.770	0.840	3.910	2.870	5.540	3.910	63.500	44.450
2	1	2.375	1.315	0.065	0.065	0.109	0.109	0.154	0.133	0.218	0.179	2.500	2.000
		60.320	33.40	1.650	1.650	2.770	2.770	3.910	3.380	5.540	4.550	63.500	50.800
2	1-1/4	2.375	1.660	0.065	0.065	0.109	0.109	0.154	0.140	0.218	0.191	2.500	2.250
		60.320	42.160	1.650	1.650	2.770	2.770	3.910	3.560	5.540	4.850	63.500	57.150
2	1-1/2	2.375	1.900	0.065	0.065	0.109	0.109	0.154	0.145	0.218	0.200	2.500	2.380
		60.320	48.260	1.650	1.650	2.770	2.770	3.910	3.680	5.540	5.080	63.500	60.450
2-1/2	1-1/2	2.875	1.900	0.083	0.065	0.120	0.109	0.203	0.145	0.276	0.200	3.000	2.630
		73.020	48.260	2.110	1.650	3.050	2.770	5.160	3.680	7.010	5.080	76.200	66.800
2-1/2	2	2.875	2.375	0.083	0.065	0.120	0.109	0.203	0.154	0.276	0.218	3.000	2.750
		73.020	60.320	2.110	1.650	3.050	2.770	5.160	3.910	7.010	5.540	76.200	69.850
3	1-1/2	3.500	1.900	0.083	0.065	0.120	0.109	0.216	0.145	0.300	0.200	3.130	2.880
		88.900	48.260	2.110	1.650	3.050	2.770	5.490	3.680	7.620	5.080	79.500	73.150
3	2	3.500	2.375	0.083	0.065	0.120	0.109	0.216	0.154	0.300	0.218	3.380	3.000
		88.900	60.320	2.110	1.650	3.050	2.770	5.490	3.910	7.620	5.540	85.850	76.200
3	2-1/2	3.500	2.875	0.083	0.083	0.120	0.120	0.216	0.203	0.300	0.276	3.380	3.250
		88.900	73.020	2.110	2.110	3.050	3.050	5.490	5.160	7.620	7.010	85.850	82.550
4	1-1/2	4.500	1.900	0.083	0.065	0.120	0.109	0.237	0.145	0.337	0.200	4.130	3.380
		114.300	48.260	2.110	1.650	3.050	2.770	6.020	3.680	8.560	5.080	104.900	85.850

REDUCING TEE (3/4" x 1/2" - 24" x 22")



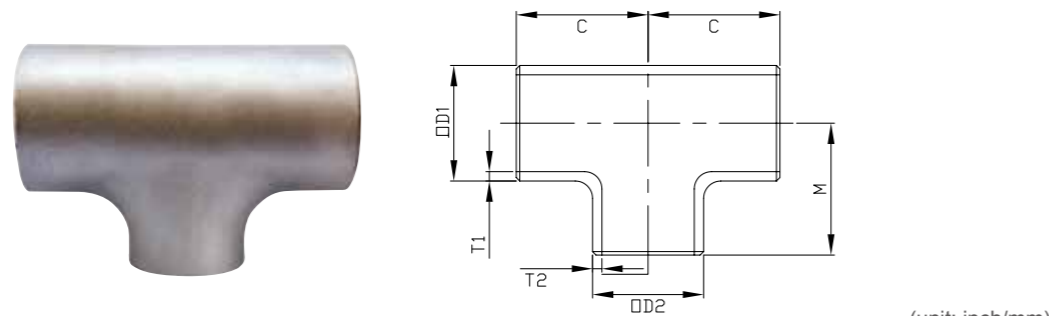
DIMENSIONS

(unit: inch/mm)

Nominal Pipe Size	Outside Dia. (O.D 1)	Outside Dia. (O.D 2)	Wall Thickness(T)								Center to End (E)	Center to End (M)	
			SCH 5S		SCH 10S		SCH 40S		SCH 80S				
			T1	T2	T1	T2	T1	T2	T1	T2			
4	2	4.500	2.375	0.083	0.065	0.120	0.109	0.237	0.154	0.337	0.218	4.130	3.500
		114.300	60.320	2.110	1.650	3.050	2.770	6.020	3.910	8.560	5.540	104.900	88.900
4	2-1/2	4.500	2.875	0.083	0.083	0.120	0.120	0.237	0.203	0.337	0.276	4.130	3.750
		114.300	73.020	2.110	2.110	3.050	3.050	6.020	5.160	8.560	7.010	104.900	95.250
4	3	4.500	3.500	0.083	0.083	0.120	0.120	0.237	0.216	0.337	0.300	4.130	3.880
		114.300	88.900	2.110	2.110	3.050	3.050	6.020	5.490	8.560	7.620	104.900	98.55
5	3	5.563	3.500	0.109	0.083	0.134	0.120	0.258	0.216	0.375	0.300	4.880	4.380
		141.300	88.900	2.770	2.110	3.400	3.050	6.550	5.490	9.530	7.620	123.95	111.250
5	4	5.563	4.500	0.109	0.083	0.134	0.120	0.258	0.237	0.375	0.337	4.880	4.630
		141.300	114.300	2.770	2.110	3.400	3.050	6.550	6.020	9.530	8.560	123.950	117.600
6	2-1/2	6.625	2.875	0.109	0.083	0.134	0.120	0.281	0.203	0.432	0.276	5.630	4.750
		168.270	73.020	2.770	2.110	3.400	3.050	7.110	5.160	10.970	7.010	143.000	120.650
6	3	6.625	3.500	0.109	0.083	0.134	0.120	0.280	0.216	0.432	0.300	5.630	4.880
		168.270	88.900	2.770	2.110	3.400	3.050	7.110	5.490	10.970	7.620	143.000	123.950
6	4	6.625	4.500	0.109	0.083	0.134	0.120	0.280	0.237	0.432	0.337	5.630	5.130
		168.270	114.300	2.770	2.110	3.400	3.050	7.110	6.020	10.970	8.560	143.000	130.300
6	5	6.625	5.563	0.109	0.109	0.134	0.134	0.280	0.258	0.432	0.375	5.630	5.380
		168.270	141.300	2.770	2.770	3.400	3.400	7.110	6.550	10.970	9.530	143.000	136.650
8	4	8.625	4.500	0.109	0.083	0.148	0.120	0.322	0.237	0.500	0.337	7.000	6.130
		219.080	114.300	2.770	2.110	3.760	3.050	8.180	6.020	12.700	8.560	177.800	155.700
8	5	8.625	5.563	0.109	0.109	0.148	0.134	0.322	0.258	0.500	0.375	7.000	6.380
		219.080	141.300	2.770	2.770	3.760	3.400	8.180	6.550	12.700	9.530	177.800	162.050
8	6	8.625	6.625	0.109	0.109	0.148	0.134	0.322	0.280	0.500	0.432	7.000	6.630
		219.080	168.270	2.770	2.770	3.760	3.400	8.180	7.110	12.700	10.970	177.800	168.400
10	5	10.750	5.563	0.134	0.109	0.165	0.134	0.365	0.258	0.500	0.375	8.500	7.500
		273.050	141.300	3.400	2.770	4.190	3.400	9.270	6.550	12.700	9.530	215.900	190.500
10	6	10.750	6.625	0.134	0.109	0.165	0.134	0.365	0.280	0.500	0.432	8.500	7.630
		273.050	168.270	3.400	2.770	4.190	3.400	9.270	7.110	12.700	10.970	215.900	193.800
10	8	10.750	8.625	0.134	0.109	0.165	0.148	0.365	0.322	0.500	0.500	8.500	8.000
		273.050	219.080	3.400	2.770	4.190	3.760	9.270	8.180	12.700	12.700	215.900	203.200
12	6	12.750	6.625	0.156	0.109	0.180	0.134	0.375	0.280	0.500	0.432	10.000	8.630
		323.850	168.270	3.960	2.770	4.570	3.400	9.530	7.110	12.700	10.970	254.000	219.200
12	8	12.750	8.625	0.156	0.109	0.180	0.148	0.375	0.322	0.500	0.500	10.000	9.000
		323.850	219.080	3.960	2.770	4.570	3.760	9.530	8.180	12.700	12.700	254.000	228.600
12	10	12.750	10.750	0.156	0.104	0.180	0.165	0.375	0.365	0.500	0.500	10.000	9.500
		323.850	273.050	3.960	2.640	4.570	4.190	9.530	9.270	12.700	12.700	254.000	241.300
14	8	14.000	8.625	0.188	0.148	0.312	0.250	0.375	0.322	0.500	0.500	11.000	9.750
		355.600	219.080	4.780	3.760	7.920	6.350	9.530	8.180	12.700	12.700	1279.400	247.650



REDUCING TEE (3/4" x 1/2" - 24" x 22")

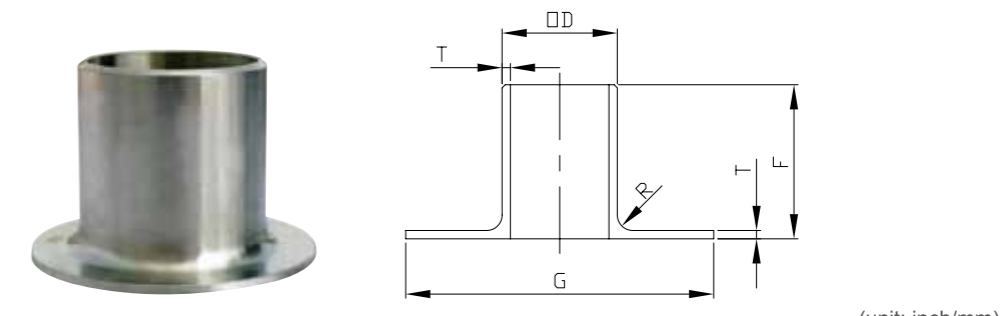


DIMENSIONS

(unit: inch/mm)

Nominal Pipe Size	Outside Dia. (O.D 1)	Outside Dia. (O.D 2)	Wall Thickness(T)								Center to End (E)	Center to End (M)	
			SCH 5S		SCH 10S		SCH 40S		SCH 80S				
			T1	T2	T1	T2	T1	T2	T1	T2			
14	10	14.000	10.750	0.188	0.165	0.312	0.250	0.375	0.365	0.500	0.500	11.000	10.130
		355.600	273.050	4.780	4.190	7.920	6.350	9.530	9.270	12.700	12.700	279.400	257.300
14	12	14.000	12.750	0.188	0.180	0.312	0.250	0.375	0.375	0.500	0.500	11.000	10.630
		355.600	323.850	4.780	4.570	7.920	6.350	9.530	9.530	12.700	12.700	279.400	270.000
16	10	16.000	10.750	0.188	0.165	0.312	0.250	0.375	0.365	0.500	0.500	12.000	11.130
		406.400	273.050	4.780	4.190	7.920	6.350	9.530	9.270	12.700	12.700	304.800	282.700
16	12	16.000	12.750	0.188	0.180	0.312	0.250	0.375	0.375	0.500	0.500	12.000	11.630
		406.400	323.850	4.780	4.570	7.920	6.350	9.530	9.530	12.700	12.700	304.800	295.400
16	14	16.000	14.000	0.188	0.188	0.312	0.312	0.375	0.375	0.500	0.500	12.000	12.000
		406.400	335.600	4.780	4.780	7.920	7.920	9.530	9.530	12.700	12.700	304.800	304.800
18	12	18.000	12.750	0.188	0.180	0.312	0.250	0.375	0.375	0.500	0.500	13.500	12.630
		457.200	323.850	4.780	4.570	7.920	6.350	9.530	9.530	12.700	12.700	342.900	320.800
18	14	18.000	14.000	0.188	0.188	0.312	0.312	0.375	0.375	0.500	0.500	13.500	13.000
		457.200	355.600	4.780	4.780	7.920	7.920	9.530	9.530	12.700	12.700	342.900	330.200
18	16	18.000	16.000	0.188	0.188	0.312	0.312	0.375	0.375	0.500	0.500	13.500	13.000
		457.200	406.400	4.780	4.780	7.920	7.920	9.530	9.530	12.700	12.700	342.900	330.200
20	14	20.000	14.000	0.218	0.188	0.375	0.312	0.375	0.375	0.500	0.500	15.000	14.000
		508.000	355.600	5.540	4.780	9.530	7.920	9.530	9.530	12.700	12.700	381.000	355.600
20	16	20.000	16.000	0.218	0.188	0.375	0.312	0.375	0.375	0.500	0.500	15.000	14.000
		508.000	406.400	5.540	4.780	9.530	7.920	9.530	9.530	12.700	12.700	381.000	355.600
20	18	20.000	18.000	0.218	0.188	0.375	0.312	0.375	0.375	0.500	0.500	15.000	14.500
		508.000	457.200	5.540	4.780	9.530	7.920	9.530	9.530	12.700	12.700	381.000	368.300
22	16	22.000	16.000	0.218	0.188	0.375	0.312	0.375	0.375	0.500	0.500	16.500	15.000
		558.800	406.400	5.540	4.780	9.530	7.920	9.530	9.530	12.700	12.700	381.000	381.000
22	18	22.000	18.000	0.218	0.188	0.375	0.312	0.375	0.375	0.500	0.500	16.500	15.500
		558.800	457.200	5.540	4.780	9.530	7.920	9.530	9.530	12.700	12.700	419.100	393.700
22	20	22.000	20.000	0.218	0.218	0.375	0.375	0.375	0.375	0.500	0.500	16.500	16.000
		558.800	508.000	5.540	5.540	9.530	9.530	9.530	9.530	12.700	12.700	419.100	406.400
24	16	24.000	16.000	0.250	0.188	0.375	0.312	0.675	0.375	0.500	0.500	17.000	16.000
		609.600	406.400	6.350	4.780	9.530	7.920	9.530	9.530	12.700	12.700	431.800	406.400
24	18	24.000	18.000	0.250	0.188	0.375	0.312	0.375	0.375	0.500	0.500	17.000	16.500
		609.600	457.200	6.350	4.780	9.530	7.920	9.530	9.530	12.700	12.700	431.800	419.100
24	20	24.000	20.000	0.250	0.218	0.375	0.375	0.375	0.375	0.500	0.500	17.000	17.000
		609.600	508.000	6.350	5.540	9.530	9.530	9.530	9.530	12.700	12.700	431.800	431.800
24	22	24.000	22.000	0.250	0.218	0.375	0.375	0.375	0.375	0.500	0.500	17.000	17.000
		609.600	558.800	6.350	5.540	9.530	9.530	9.530	9.530	12.700	12.700	431.800	431.800

STUB END (1/2" - 24")



DIMENSIONS

(unit: inch/mm)

Nominal Pipe Size	Outside Dia. (O.D)	Wall Thickness(T)				Dia of Lap (G)	Length F		Radius R	
		SCH 5S	SCH 10S	SCH 40S	SCH 80S		ANSI	MSS	Type A (max)	Type B (max)
		T	T	T	T		F	F	R	R
1/2	0.840	0.065	0.083	0.109	0.147	1.375	3.000	2.000	0.130	0.030
	21.340	1.650	2.110	2.770	3.730	34.930	76.200	50.800	3.300	0.760
3/4	1.050	0.065	0.083	0.113	0.154	1.688	3.000	2.000	0.130	0.030
	26.670	1.650	2.110	2.870	3.910	42.880	76.200	50.800	3.300	0.760
1	1.315	0.065	0.109	0.133	0.179	2.000	4.000	2.000	0.130	0.030
	33.400	1.650	2.770	3.380	4.550	50.800	101.600	50.800	3.300	0.760
1-1/4	1.660	0.065	0.109	0.140	0.191	2.500	4.000	2.000	0.190	0.030
	42.160	1.650	2.770	3.560	4.850	63.500	101.600	50.800	4.830	0.760
1-1/2	1.900	0.065	0.109	0.145	0.200	2.875	4.000	2.000	0.250	0.030
	48.260	1.650	2.770	3.680	5.080	73.020	101.600	50.800	6.350	0.760
2	2.375	0.065	0.109	0.154	0.218	3.625	6.000	2.500	0.310	0.030
	60.320	1.650	2.770	3.910	5.540	92.070	152.400	63.500	7.870	0.760
2-1/2	2.875	0.083	0.120	0.203	0.276	4.125	6.000	2.500	0.310	0.030
	73.020	2.110	3.050	5.160	7.010	104.770	152.400	63.500	8.870	0.760
3	3.500	0.083	0.120	0.216	0.300	5.000	6.000	2.500	0.380	0.030
	88.900	2.110	3.050	5.490	7.620	127.000	152.400	63.500	9.650	0.760
4	4.500	0.083	0.120	0.237	0.337	6.188	6.000	3.000	0.440	0.030
	114.300	2.110	3.050	6.020	8.560	157.180	152.400	76.200	11.180	0.760
5	5.563	0.109	0.134	0.258	0.375	7.313	8.000	3.000	0.440	0.060
	141.300	2.770	3.400	6.550	9.530	185.750	203.200	76.200	11.180	1.520
6	6.625	0.109	0.134	0.280	0.432	8.500	8.000	3.500	0.500	0.060
	168.270	2.770	3.400	7.110	10.970	215.900	203.200	88.900	12.700	1.520
8	8.625	0.109	0.148	0.322	0.520	10.625	8.000	4.000	0.500	0.060
	219.080	2.770	3.760	8.180	12.700	269.880	203.200	101.600	12.700	1.520
10	10.750	0.134	0.165	0.365	0.520	12.750	10.000	5.000	0.500	0.060
	273.050	3.400	4.190	9.270	12.700	323.850	254.000	127.000	12.700	1.520
12	12.750	0.156	0.180	0.375	0.500	15.000	10.000	6.000	0.500	0.060
	323.850	3.960	4.570	9.530	12.700	381.000	254.000	152.400	12.700	1.520
14	14.000	0.156	0.188	*0.375	0.500	16.250	12.000	6.000	0.500	0.060
	355.600	3.960	4.780	9.530	12.700	412.750	304.800	152.400	12.700	1.520
16	16.000	0.165	0.188	*0.375	**0.500	18.500	12.000	6.000	0.500	0.060
	406.400	4.190	4.780	9.530	12.700	469.900	304.800	152.400	12.700	1.520
18	18.000	0.165	0.188	*0.375	**0.500	21.000	12.000	6.000	0.500	0.060
	457.200	4.190	4.780	9.530	12.700	533.400	304.800	152.400	12.700	1.520
20	20.000	0.188	0.218	*0.375	**0.500	23.000	12.000	6.000	0.500	0.060
	508.000	4.780	5.540	9.530	12.700	574.200	304.800	152.400	12.700	1.520
22	22.000	0.188	0.218	*0.375	**0.500	25.250	12.000	-	0.500	0.060
	558.800	4.780	5.540	9.530	12.700	641.350	304.800	-	12.700	1.520
24	24.000	0.218	0.250	*0.375	**0.500	27.250	12.000	6.000	0.500	0.060
	609.600	5.540	6.350	9.530	12.700	692.150	304.800	152.400	12.700	1.520

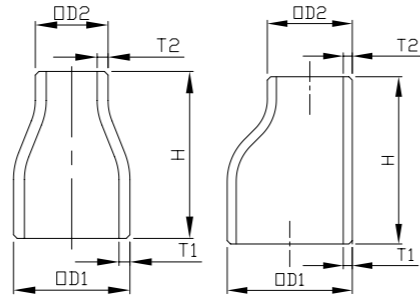
*STD **XS



CONCENTRIC & ECCENTRIC REDUCER

(3/4" x 1/2" - 48" x 40")

Bell Shape (3/4" x 1/2" - 12" x 10")



(unit: inch/mm)

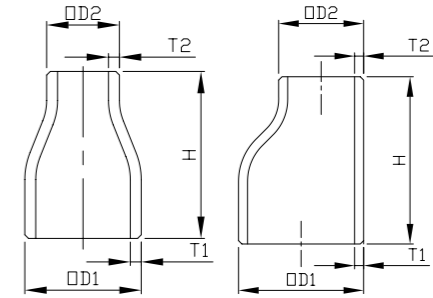
DIMENSIONS

Nominal Pipe Size	Outside Dia. (O.D 1)	Outside Dia. (O.D 2)	Wall Thickness(T)								Length H	
			SCH 5S		SCH 10S		SCH 40S		SCH 80S			
			T1	T2	T1	T2	T1	T2	T1	T2		
3/4	1/2	1.050	0.840	0.065	0.065	0.083	0.083	0.113	0.109	0.154	0.147	1.500
		26.670	21.340	1.650	1.650	2.110	2.110	2.870	2.770	3.910	3.730	38.100
1	1/2	1.315	0.840	0.065	0.065	0.109	0.083	0.133	0.109	0.179	0.147	2.000
		33.400	21.340	1.650	1.650	2.770	2.110	3.380	2.770	4.550	3.730	50.800
1	3/4	1.315	1.050	0.065	0.065	0.109	0.083	0.133	0.113	0.179	0.154	2.000
		33.400	26.670	1.650	1.650	2.770	2.110	3.380	2.870	4.550	3.910	50.800
1-1/4	1	1.660	1.315	0.065	0.065	0.109	0.109	0.140	0.133	0.191	0.179	2.000
		42.160	33.400	1.650	1.650	2.770	2.770	3.560	3.380	4.850	4.550	50.800
1-1/2	1/2	1.900	0.840	0.065	0.065	0.109	0.083	0.145	0.109	0.200	0.147	2.500
		48.260	21.340	1.650	1.650	2.770	2.110	3.680	2.770	5.080	3.730	63.500
1-1/2	3/4	1.900	1.050	0.065	0.065	0.109	0.083	0.145	0.113	0.200	0.154	2.500
		48.260	26.670	1.650	1.650	2.770	2.110	3.680	2.870	5.080	3.910	63.500
1-1/2	1	1.900	1.315	0.065	0.065	0.109	0.109	0.145	0.133	0.200	0.179	2.500
		48.260	33.400	1.650	1.650	2.770	2.770	3.680	3.380	5.080	4.550	63.500
1-1/2	1-1/4	1.900	1.660	0.065	0.065	0.109	0.109	0.145	0.140	0.200	0.191	2.500
		48.260	42.160	1.650	1.650	2.770	2.770	3.680	3.560	5.080	4.850	63.500
2	3/4	2.375	1.050	0.065	0.065	0.109	0.083	0.154	0.113	0.218	0.154	3.000
		60.320	26.670	1.650	1.650	2.770	2.110	3.910	2.870	5.540	3.910	76.200
2	1	2.375	1.315	0.065	0.065	0.109	0.109	0.154	0.133	0.218	0.179	3.000
		60.320	33.400	1.650	1.650	2.770	2.770	3.910	3.380	5.540	4.550	76.200
2	1-1/4	2.375	1.660	0.065	0.065	0.109	0.109	0.154	0.140	0.218	0.191	3.000
		60.320	42.160	1.650	1.650	2.770	2.770	3.910	3.560	5.540	4.850	76.200
2	1-1/2	2.375	1.900	0.065	0.065	0.109	0.109	0.154	0.145	0.218	0.200	3.000
		60.320	48.260	1.650	1.650	2.770	2.770	3.910	3.680	5.540	5.080	76.200
2-1/2	1	2.875	1.315	0.083	0.065	0.120	0.109	0.203	0.133	0.276	0.179	3.500
		73.020	33.400	2.110	1.650	3.050	2.770	5.160	3.380	7.010	4.550	88.900
2-1/2	1-1/4	2.875	1.660	0.083	0.065	0.120	0.109	0.203	0.140	0.276	0.191	3.500
		73.020	42.160	2.110	1.650	3.050	2.770	5.160	3.560	7.010	4.850	88.900
2-1/2	1-1/2	2.875	1.900	0.083	0.065	0.120	0.109	0.203	0.145	0.276	0.200	3.500
		73.020	48.260	2.110	1.650	3.050	2.770	5.160	3.680	7.010	5.080	88.900
2-1/2	2	2.875	2.375	0.083	0.065	0.120	0.109	0.203	0.154	0.276	0.218	3.500
		73.020	60.320	2.110	1.650	3.050	2.770	5.160	3.910	7.010	5.540	88.900
3	1	3.500	1.315	0.083	0.065	0.120	0.109	0.216	0.133	0.300	0.179	3.500
		88.900	33.400	2.110	1.650	3.050	2.770	5.490	3.380	7.620	4.550	88.900
3	1-1/4	3.500	1.660	0.083	0.065	0.120	0.109	0.216	0.140	0.300	0.191	3.500
		88.900	42.160	2.110	1.650	3.050	2.770	5.490	3.560	7.620	4.850	88.900
3	1-1/2	3.500	1.900	0.083	0.065	0.120	0.109	0.216	0.145	0.300	0.200	3.500
		88.900	48.260	2.110	1.650	3.050	2.770	5.490	3.680	7.620	5.080	88.900

CONCENTRIC & ECCENTRIC REDUCER

(3/4" x 1/2" - 48" x 40")

Bell Shape (3/4" x 1/2" - 12" x 10")



(unit: inch/mm)

DIMENSIONS

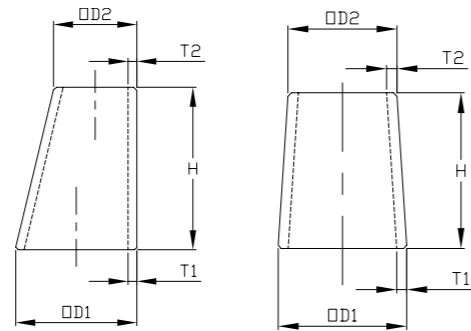
Nominal Pipe Size	Outside Dia. (O.D 1)	Outside Dia. (O.D 2)	Wall Thickness(T)								Length H	
			SCH 5S		SCH 10S		SCH 40S		SCH 80S			
			T1	T2	T1	T2	T1	T2	T1	T2		
3	2	3.500	2.375	0.083	0.065	0.120	0.109	0.216	0.154	0.300	0.218	3.500
		88.900	60.320	2.110	1.650	3.050	2.770	5.490	3.910	7.620	5.540	88.900
3	2-1/2	3.500	2.875	0.083	0.083	0.120	0.120	0.216	0.203	0.300	0.276	3.500
		88.900	73.020	2.110	2.110	3.050	3.050	5.490	5.160	7.620	7.010	88.900
4	1-1/2	4.500	1.900	0.083	0.065	0.120	0.109	0.237	0.145	0.337	0.200	4.000
		114.300	48.260	2.110	1.650	3.050	2.770	6.020	3.680	8.560	5.080	101.600
4	2	4.500	2.375	0.083	0.065	0.120	0.109	0.237	0.154	0.337	0.218	4.000
		114.300	60.320	2.110	1.650	3.050	2.770	6.020	3.910	8.560	5.540	101.600
4	2-1/2	4.500	2.875	0.083	0.083	0.120	0.120	0.237	0.203	0.337	0.276	4.000
		114.300	73.020	2.110	2.110	3.050	3.050	6.020	5.160	8.560	7.010	101.600
4	3	4.500	3.500	0.083	0.083	0.120	0.120	0.237	0.216	0.337	0.300	4.000
		114.300	88.900	2.110	2.110	3.050	3.050	6.020	5.490	8.560	7.620	101.600
5	3	5.563	3.500	0.109	0.083	0.134	0.120	0.258	0.216	0.375	0.300	5.000
		141.300	88.900	2.770	2.110	3.400	3.050	6.550	5.490	9.530	7.620	127.000
5	4	5.563	4.500	0.109	0.083	0.134	0.120	0.258	0.237	0.375	0.337	5.000
		141.300	114.300	2.770	2.110	3.400	3.050	6.550	6.020	9.530	8.560	127.000
6	2-1/2	6.625	2.875	0.109	0.083	0.134	0.120	0.280	0.203	0.432	0.276	5.500
		168.270	73.020	2.770	2.110	3.400	3.050	7.110	5.160	10.970	7.070	139.700
6	3	6.625	3.500	0.109	0.083	0.134	0.120	0.280	0.126	0.432	0.300	5.500
		168.270	88.900	2.770	2.110	3.400	3.050	7.110	5.490	10.970	7.620	139.700
6	4	6.625	4.500	0.109	0.083	0.134	0.120	0.280	0.237	0.432	0.337	5.500
		168.270	114.300	2.770	2.110	3.400	3.050	7.110	6.020	10.970	8.560	139.700
6	5	6.625	5.563	0.109	0.109	0.134	0.134	0.280	0.258	0.432	0.375	5.500
		168.270	141.300	2.770	2.770	3.400	3.400	7.110	6.550	10.970	9.530	139.700
8	4	8.625	4.500	0.109	0.083	0.148	0.120	0.322	0.237	0.500	0.337	6.000
		219.080	114.300	2.770	2.110	3.760	3.050	0.180	6.020	12.700	8.560	152.400
8	5	8.625	5.563	0.109	0.109	0.148	0.134	0.322	0.258	0.500	0.375	6.000
		219.080	141.300	2.770	2.770	3.760	3.400	0.180	6.550	12.700	9.530	152.400
8	6	8.625	6.625	0.109	0.109	0.148	0.134	0.322	0.280	0.500	0.432	6.000
		219.080	168.270	2.770	2.770	3.760	3.400	0.180	7.110	12.700	10.970	152.400
10	5	10.750	5.563	0.134	0.109	0.165	0.134	0.365	0.258	0.500	0.375	7.000
		273.500	141.300	3.400	2.770	4.190	3.400	9.270	6.550	12.700	9.530	177.800
10	6	10.750	6.625	0.134	0.109	0.165	0.134	0.365	0.280	0.500	0.432	7.000
		273.500	168.270	3.400	2.770	4.190	3.400	9.270	7.110	12.700	10.970	177.800
10	8	10.750	8.625	0.134	0.109	0.165	0.148	0.365	0.322	0.500	0.500	7.000
		273.500	219.080	3.400	2.770	4.190	3.760	9.270	8.180	12.700	12.700	177.800
12	6	12.750	6.625	0.156	0.109	0.180	0.134	0.375	0.280	0.500	0.432	8.000
		323.850	168.270	3.960	2.770	4.570	3.400	9.530	7.110	12.700	10.970	203.200



CONCENTRIC & ECCENTRIC REDUCER

(3/4" x 1/2" - 48" x 40")

Cone Shape (14" x 12" - 48" x 40")



(unit: inch/mm)

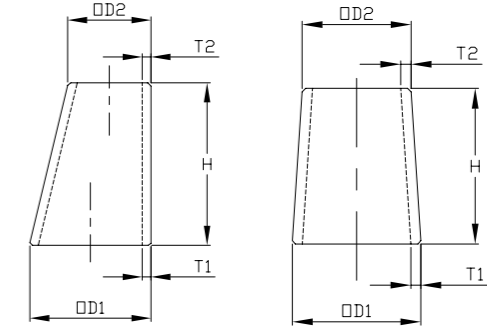
DIMENSIONS

Nominal Pipe Size	Outside Dia. (O.D 1)	Outside Dia. (O.D 2)	Wall Thickness(T)								Length H	
			SCH 5S		SCH 10S		SCH 40S		SCH 80S			
			T1	T2	T1	T2	T1	T2	T1	T2		
12	8	12.750	8.625	0.156	0.109	0.180	0.148	0.375	0.322	0.500	0.500	8.000
		323.850	219.080	3.960	2.770	4.570	3.760	9.530	8.180	12.700	12.700	203.200
12	10	12.750	10.750	0.156	0.134	0.180	0.165	0.375	0.365	0.500	0.500	8.000
		323.850	273.050	3.960	3.400	4.570	4.190	9.530	9.270	12.700	12.700	203.200
14	12	14.000	12.750	0.188	0.180	0.312	0.250	0.375	0.375	0.500	0.500	13.000
		355.600	323.850	4.780	4.570	7.920	6.350	9.530	9.530	12.700	12.700	330.200
14	10	14.000	10.750	0.188	0.165	0.312	0.250	0.375	0.375	0.500	0.500	13.000
		355.600	273.050	4.780	4.190	7.920	6.350	9.530	9.530	12.700	12.700	330.200
14	8	14.000	8.625	0.188	0.148	0.312	0.250	0.375	0.322	0.500	0.500	13.000
		355.600	219.080	4.780	3.760	7.920	6.350	9.530	8.180	12.700	12.700	330.200
14	6	14.000	6.625	0.188	0.134	0.312	-	0.375	0.280	0.500	0.432	13.000
		355.600	168.270	4.780	3.400	7.920	-	9.530	7.110	12.700	10.970	330.200
16	14	16.000	14.000	0.188	0.188	0.312	0.312	0.375	0.375	0.500	0.500	14.000
		406.400	355.600	4.780	4.780	7.920	7.920	9.530	9.530	12.700	12.700	355.600
16	12	16.000	12.750	0.188	0.180	0.312	0.250	0.375	0.375	0.500	0.500	14.000
		406.400	323.850	4.780	4.570	7.920	6.350	9.530	9.530	12.700	12.700	355.600
16	10	16.000	10.750	0.188	0.165	0.312	0.250	0.375	0.375	0.500	0.500	14.000
		406.400	273.050	4.780	4.190	7.920	6.350	9.530	9.530	12.700	12.700	355.600
16	8	16.000	8.625	0.188	0.148	0.312	0.250	0.375	0.375	0.500	0.500	14.000
		406.400	219.080	4.780	3.760	7.920	6.350	9.530	9.530	12.700	12.700	355.600
18	16	18.000	16.000	0.188	0.188	0.312	0.312	0.375	0.375	0.500	0.500	15.000
		457.200	406.400	4.780	4.780	7.920	7.920	9.530	9.530	12.700	12.700	381.000
18	14	18.000	14.000	0.188	0.188	0.312	0.312	0.375	0.375	0.500	0.500	15.000
		457.200	355.600	4.780	4.780	7.920	7.920	9.530	9.530	12.700	12.700	381.000
18	12	18.000	12.750	0.188	0.180	0.312	0.250	0.375	0.375	0.500	0.500	15.000
		457.200	323.850	4.780	4.570	7.920	6.350	9.530	9.530	12.700	12.700	381.000
18	10	18.000	10.750	0.188	0.165	0.312	0.250	0.375	0.365	0.500	0.500	15.000
		457.200	273.050	4.780	4.190	7.920	6.350	9.530	9.270	12.700	12.700	381.000
20	18	20.000	18.000	0.218	0.188	0.375	0.312	0.375	0.375	0.500	0.500	20.000
		508.000	457.200	5.540	4.780	9.530	7.920	9.530	9.530	12.700	12.700	508.000
20	16	20.000	16.000	0.218	0.188	0.375	0.312	0.375	0.375	0.500	0.500	20.000
		508.000	406.400	5.540	4.780	9.530	7.920	9.530	9.530	12.700	12.700	508.000
20	14	20.000	14.000	0.218	0.188	0.375	0.312	0.375	0.375	0.500	0.500	20.000
		508.000	355.600	5.540	4.780	9.530	7.920	9.530	9.530	12.700	12.700	508.000
20	12	20.000	12.750	0.218	0.180	0.375	0.250	0.375	0.375	0.500	0.500	20.000
		508.000	323.850	5.540	4.570	9.530	6.350	9.530	9.530	12.700	12.700	508.000
22	20	22.000	20.000	0.218	0.218	0.375	0.375	0.375	0.375	0.500	0.500	20.000
		558.800	508.000	5.540	5.540	9.530	9.530	9.530	9.530	12.700	12.700	508.000

CONCENTRIC & ECCENTRIC REDUCER

(3/4" x 1/2" - 48" x 40")

Cone Shape (14" x 12" - 48" x 40")



(unit: inch/mm)

DIMENSIONS

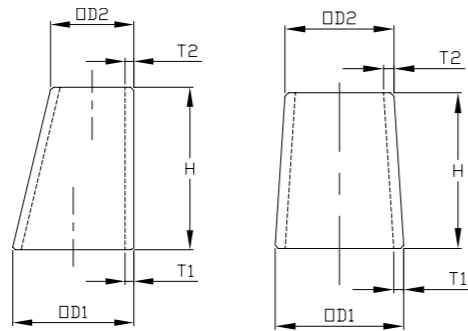
Nominal Pipe Size	Outside Dia. (O.D 1)	Outside Dia. (O.D 2)	Wall Thickness(T)								Length H	
			SCH 5S		SCH 10S		SCH 40S		SCH 80S			
			T1	T2	T1	T2	T1	T2	T1	T2		
22	18	22.000	18.000	0.218	0.188	0.375	0.312	0.375	0.375	0.500	0.500	20.000
		558.800	457.200	5.540	4.780	9.530	7.920	9.530	9.530	12.700	12.700	508.000
22	16	22.000	16.000	0.218	0.188	0.375	0.312	0.375	0.375	0.500	0.500	20.000
		558.800	406.400	5.540	4.780	9.530	7.920	9.530	9.530	12.700	12.700	508.000
22	14	22.000	14.000	0.218	0.188	0.375	0.312	0.375	0.375	0.500	0.500	20.000
		558.800	355.600	5.540	4.480	9.530	7.920	9.530	9.530	12.700	12.700	508.000
24	22	24.000	22.000	0.250	0.218	0.375	0.375	0.375	0.375	0.500	0.500	20.000
		609.600	558.800	6.350	5.540	9.530	9.530	9.530	9.530	12.700	12.700	508.000
24	20	24.000	20.000	0.250	0.218	0.375	0.375	0.375	0.375	0.500	0.500	20.000
		609.600	508.000	6.350	5.540	9.530	9.530	9.530	9.530	12.700	12.700	508.000
24	18	24.000	18.000	0.250	0.188	0.375	0.312	0.375	0.375	0.500	0.500	20.000
		609.600	457.200	6.350	4.780	9.530	7.920	9.530	9.530	12.700	12.700	508.000
24	16	24.000	16.000	0.250	0.188	0.375	0.312	0.375	0.375	0.500	0.500	20.000
		609.600	406.400	6.350	4.780	9.530	7.920	9.530	9.530	12.700	12.700	508.000
24	14	24.000	14.000	0.250	0.188	0.375	0.312	0.375	0.375	0.500	0.500	20.000
		609.600	355.600	6.350	4.780	9.530	7.920	9.530	9.530	12.700	12.700	508.000
26	24	26.000	24.000	-	-	0.500	0.375	0.375	0.375	0.500	0.500	24.000
		660.400	609.600	-	-	12.700	9.530	9.530	9.530	12.700	12.700	609.600
26	20	26.000	20.000	-	-	0.500	0.375	0.375	0.375	0.500	0.500	24.000
		660.400	508.000	-	-	12.700	9.530	9.530	9.530	12.700	12.700	609.600
26	18	26.000	18.000	-	-	0.500	0.312	0.375	0.375	0.500	0.500	24.000
		660.400	457.200	-	-	12.700	7.920	9.530	9.530	12.700	12.700	609.600
26	16	26.000	16.000	-	-	0.500	0.312	0.375	0.375	0.500	0.500	24.000
		660.400	406.400	-	-	12.700	7.920	9.530	9.530	12.700	12.700	609.600
28	26	28.000	26.000	-	-	0.500	0.500	0.375	0.375	0.500	0.500	24.000
		711.200	660.400	-	-	12.700	12.700	9.530	9.530	12.700	12.700	609.600
28	24	28.000	24.000	-	-	0.500	0.375	0.375	0.375	0.500	0.500	24.000
		711.200	609.600	-	-	12.700	9.530	9.530	9.530	12.700	12.700	609.600
28	20	28.000	20.000	-	-	0.500	0.375	0.375	0.375	0.500	0.500	24.000
		711.200	508.000	-	-	12.700	9.530	9.530	9.530	12.700	12.700	609.600
28	18	28.000	18.000	-	-	0.500	0.312	0.375	0.375	0.500	0.500	24.000
		711.200	457.200	-	-	12.700	7.920	9.530	9.530	12.700	12.700	609.600
30	28	30.000	28.000	-	-	0.500	0.500	0.375	0.375	0.500	0.500	24.000
		762.000	711.200	-	-	12.700	12.700	9.530	9.530	12.700	12.700	609.600
30	26	30.000	26.000	-	-	0.500	0.500	0.375	0.375	0.500	0.500	24.000
		762.000	660.400	-	-	12.700	12.700	9.530	9.530	12.700	12.700	609.600
30	24	30.000	24.000	-	-	0.500	0.375	0.375	0.375	0.500	0.500	24.000
		762.000	609.600	-	-	12.700	9.530	9.530	9.530	12.700	12.700	609.600



CONCENTRIC & ECCENTRIC REDUCER

(3/4" x 1/2" - 48" x 40")

Cone Shape (14" x 12" - 48" x 40")



(unit: inch/mm)

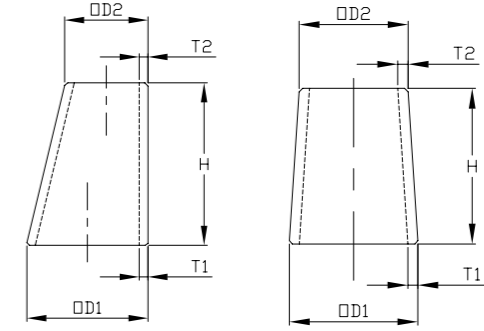
DIMENSIONS

Nominal Pipe Size	Outside Dia. (O.D 1)	Outside Dia. (O.D 2)	Wall Thickness(T)								Length H	
			SCH 5S		SCH 10S		SCH 40S		SCH 80S			
			T1	T2	T1	T2	T1	T2	T1	T2		
30	20	30.000	20.000	-	-	0.500	0.375	0.375	0.375	0.500	0.500	24.000
		762.000	508.000	-	-	12.700	9.530	9.530	9.530	12.700	12.700	609.600
32	30	32.000	30.000	-	-	0.500	0.500	0.375	0.375	0.500	0.500	24.000
		812.800	762.000	-	-	12.700	12.700	9.530	9.530	12.700	12.700	609.600
32	28	32.000	28.000	-	-	0.500	0.500	0.375	0.375	0.500	0.500	24.000
		812.800	711.200	-	-	12.700	12.700	9.530	9.530	12.700	12.700	609.600
32	26	32.000	26.000	-	-	0.500	0.500	0.375	0.375	0.500	0.500	24.000
		812.800	660.400	-	-	12.700	12.700	9.530	9.530	12.700	12.700	609.600
32	24	32.000	24.000	-	-	0.500	0.375	0.375	0.375	0.500	0.500	24.000
		812.800	609.600	-	-	12.700	9.530	9.530	9.530	12.700	12.700	609.600
34	32	34.000	32.000	-	-	0.500	0.500	0.375	0.375	0.500	0.500	24.000
		863.600	812.800	-	-	12.700	12.700	9.530	9.530	12.700	12.700	609.600
34	30	34.000	30.000	-	-	0.500	0.500	0.375	0.375	0.500	0.500	24.000
		863.600	762.000	-	-	12.700	12.700	9.530	9.530	12.700	12.700	609.600
34	28	34.000	28.000	-	-	0.500	0.500	0.375	0.375	0.500	0.500	24.000
		863.600	711.200	-	-	12.700	12.700	9.530	9.530	12.700	12.700	609.600
34	26	34.000	26.000	-	-	0.500	0.500	0.375	0.375	0.500	0.500	24.000
		863.600	660.400	-	-	12.700	12.700	9.530	9.530	12.700	12.700	609.600
36	34	36.000	34.000	-	-	0.500	0.500	0.375	0.375	0.500	0.500	24.000
		914.400	863.600	-	-	12.700	12.700	9.530	9.530	12.700	12.700	609.600
36	32	36.000	32.000	-	-	0.500	0.500	0.375	0.375	0.500	0.500	24.000
		914.400	812.800	-	-	12.700	12.700	9.530	9.530	12.700	12.700	609.600
36	30	36.000	30.000	-	-	0.500	0.500	0.375	0.375	0.500	0.500	24.000
		914.400	762.000	-	-	12.700	12.700	9.530	9.530	12.700	12.700	609.600
36	28	36.000	28.000	-	-	0.500	0.500	0.375	0.375	0.500	0.500	24.000
		914.400	711.200	-	-	12.700	12.700	9.530	9.530	12.700	12.700	609.600
38	36	38.000	36.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		965.200	914.400	-	-	-	-	9.530	9.530	12.700	12.700	609.600
38	34	38.000	34.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		965.200	863.600	-	-	-	-	9.530	9.530	12.700	12.700	609.600
38	32	38.000	32.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		965.200	812.800	-	-	-	-	9.530	9.530	12.700	12.700	609.600
38	30	38.000	30.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		965.200	762.000	-	-	-	-	9.530	9.530	12.700	12.700	609.600
38	28	38.000	28.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		965.200	711.200	-	-	-	-	9.530	9.530	12.700	12.700	609.600
38	26	38.000	26.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		965.200	660.400	-	-	-	-	9.530	9.530	12.700	12.700	609.600

CONCENTRIC & ECCENTRIC REDUCER

(3/4" x 1/2" - 48" x 40")

Cone Shape (14" x 12" - 48" x 40")



(unit: inch/mm)

DIMENSIONS

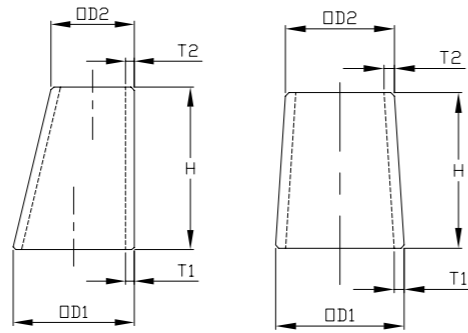
Nominal Pipe Size	Outside Dia. (O.D 1)	Outside Dia. (O.D 2)	Wall Thickness(T)								Length H	
			SCH 5S		SCH 10S		SCH 40S		SCH 80S			
			T1	T2	T1	T2	T1	T2	T1	T2		
40	38	40.000	38.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1016.000	965.200	-	-	-	-	9.530	9.530	12.700	12.700	609.600
40	36	40.000	36.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1016.000	914.400	-	-	-	-	9.530	9.530	12.700	12.700	609.600
40	34	40.000	34.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1016.000	863.600	-	-	-	-	9.530	9.530	12.700	12.700	609.600
40	32	40.000	32.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1016.000	812.800	-	-	-	-	9.530	9.530	12.700	12.700	609.600
40	30	40.000	30.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1016.000	762.000	-	-	-	-	9.530	9.530	12.700	12.700	609.600
42	40	42.000	40.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1066.800	1016.000	-	-	-	-	9.530	9.530	12.700	12.700	609.600
42	38	42.000	38.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1066.800	965.200	-	-	-	-	9.530	9.530	12.700	12.700	609.600
42	36	42.000	36.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1066.800	914.400	-	-	-	-	9.530	9.530	12.700	12.700	609.600
42	34	42.000	34.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1066.800	863.600	-	-	-	-	9.530	9.530	12.700	12.700	609.600
42	32	42.000	32.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1066.800	812.800	-	-	-	-	9.530	9.530	12.700	12.700	609.600
42	30	42.000	30.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1066.800	762.000	-	-	-	-	9.530	9.530	12.700	12.700	609.600
44	42	44.000	42.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1117.600	1066.800	-	-	-	-	9.530	9.530	12.700	12.700	609.600
44	40	44.000	40.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1117.600	1016.000	-	-	-	-	9.530	9.530	12.700	12.700	609.600
44	38	44.000	38.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1117.600	965.200	-	-	-	-	9.530	9.530	12.700	12.700	609.600
44	36	44.000	36.000	-	-	-	-	0.375	0.375	0.500	0.500	24.000
		1117.600	914.400	-	-	-	-	9.530	9.530	12.700	12.700	609.600
46	44	46.000	44.000	-	-	-	-	0.375	0.375	0.500	0.500	28.000
		1168.400	1117.600	-	-	-	-	9.530	9.530	12.700	12.700	711.200
46	42	46.000	42.000	-	-	-	-	0.375	0.375	0.500	0.500	28.000
		1168.400	1066.800	-	-	-	-	9.530	9.530	12.700	12.700	711.200
46	40	46.000	40.000	-	-	-	-	0.375	0.375	0.500	0.500	28.000
		1168.400	1016.000	-	-	-	-	9.530	9.530	12.700	12.700	711.200
46	38	46.000	38.000	-	-	-	-	0.375	0.375	0.500	0.500	28.000
		1168.400	965.200	-	-	-	-	9.530	9.530	12.700	12.700	711.200



CONCENTRIC & ECCENTRIC REDUCER

(3/4" x 1/2" - 48" x 40")

Cone Shape (14" x 12" - 48" x 40")

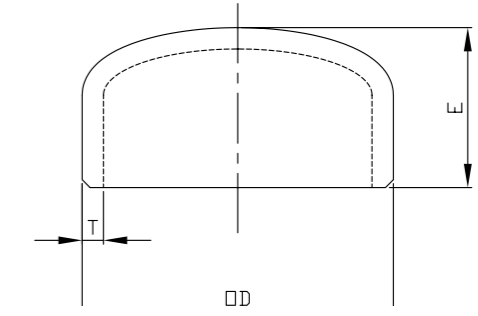


(unit: inch/mm)

DIMENSIONS

Nominal Pipe Size	Outside Dia. (O.D 1)	Outside Dia. (O.D 2)	Wall Thickness(T)								Length H
			SCH 5S		SCH 10S		SCH 40S		SCH 80S		
			T1	T2	T1	T2	T1	T2	T1	T2	
46 36	46.000	36.000	-	-	-	-	0.375	0.375	0.500	0.500	28.000
	1168.400	914.400	-	-	-	-	9.530	9.530	12.700	12.700	711.200
48 44	48.000	44.000	-	-	-	-	0.375	0.375	0.500	0.500	28.000
	1219.200	1117.600	-	-	-	-	9.530	9.530	12.700	12.700	711.200
48 42	48.000	42.000	-	-	-	-	0.375	0.375	0.500	0.500	28.000
	1219.200	1066.800	-	-	-	-	9.530	9.530	12.700	12.700	711.200
48 40	48.000	40.000	-	-	-	-	0.375	0.375	0.500	0.500	28.000
	1219.200	1016.000	-	-	-	-	9.530	9.530	12.700	12.700	711.200

CAP (1/2" - 24")



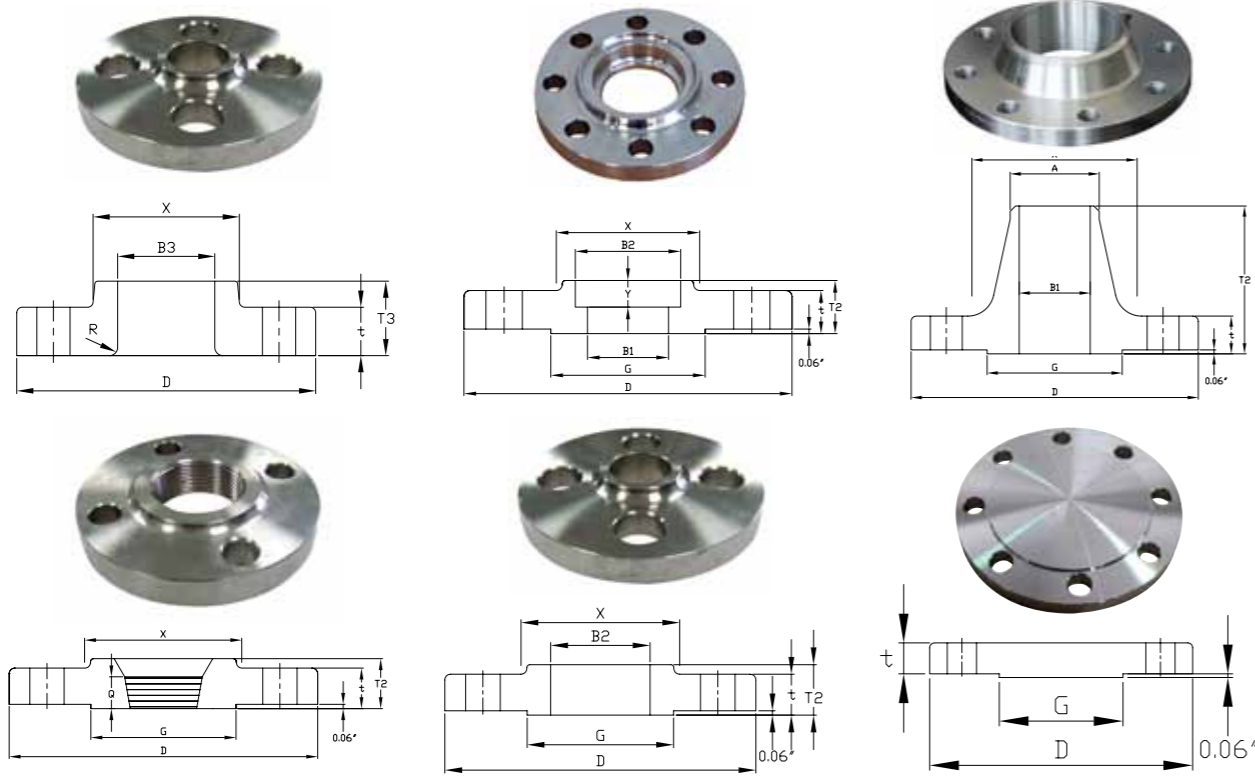
(unit: inch/mm)

DIMENSIONS

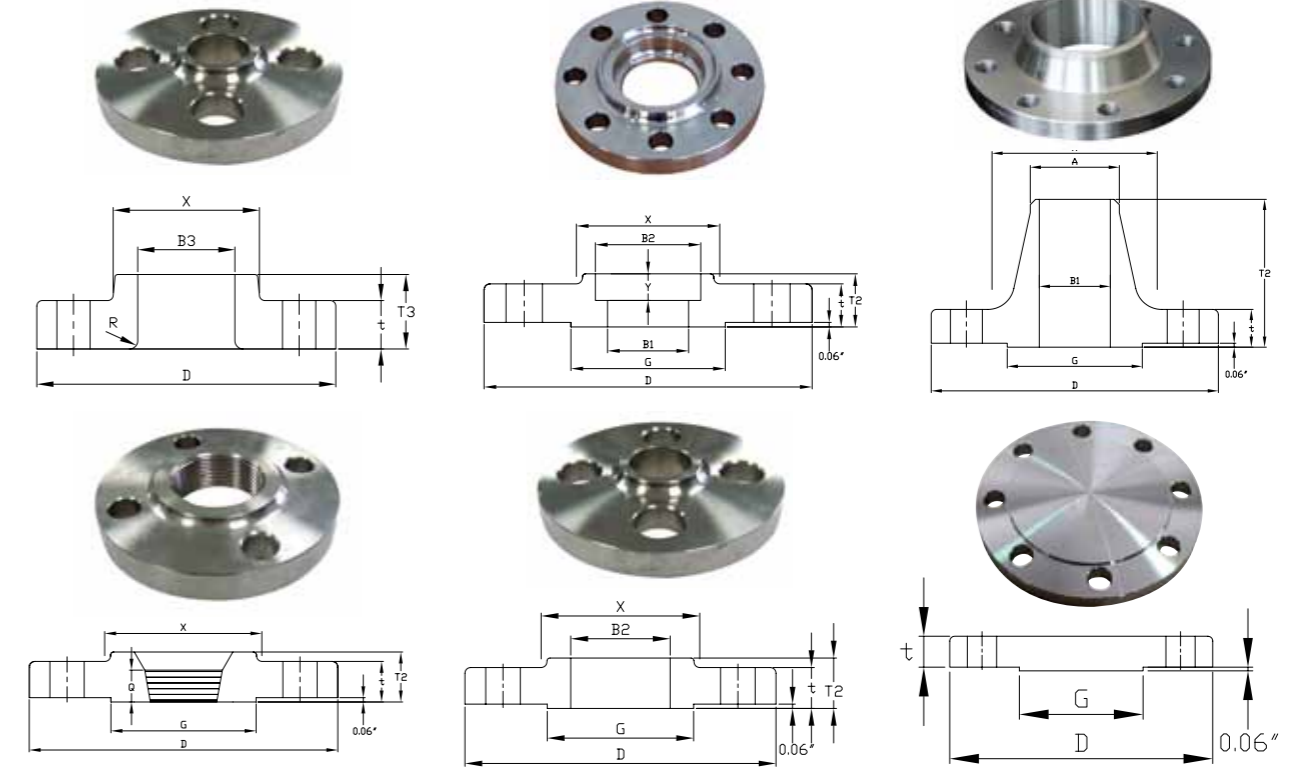
Nominal Pipe Size	"Outside Dia. (O.D)"	Wall Thickness(T)				"Center to End (E)"
		SCH 5S	SCH 10S	SCH 40S	SCH 80S	
1/2	0.840	0.065	0.083	0.109	0.147	1.000
	21.340	1.650	2.110	2.770	3.730	25.400
3/4	1.050	0.065	0.083	0.113	0.154	1.000
	26.670	1.650	2.110	2.870	3.910	25.400
1	1.315	0.065	0.109	0.133	0.179	1.500
	33.400	1.650	2.770	3.380	4.550	38.100
1-1/4	1.660	0.065	0.109	0.140	0.191	1.500
	42.160	1.650	2.770	3.560	4.850	38.100
1-1/2	1.900	0.065	0.109	0.145	0.200	1.500
	48.260	1.650	2.770	3.680	5.080	38.100
2	2.375	0.065	0.109	0.154	0.218	1.500
	60.320	1.650	2.770	3.910	5.540	38.100
2-1/2	2.875	0.083	0.120	0.203	0.276	1.500
	73.020	2.110	3.050	5.160	7.010	38.100
3	3.500	0.083	0.120	0.216	0.300	2.000
	88.900	2.110	3.050	5.490	7.620	50.800
4	4.500	0.083	0.120	0.237	0.337	2.500
	114.300	2.110	3.050	6.020	8.560	63.500
5	5.563	0.109	0.134	0.258	0.375	3.000
	141.300	2.770	3.400	6.550	9.530	76.200
6	6.625	0.109	0.134	0.280	0.432	3.500
	168.270	2.770	3.400	7.110	10.970	88.900
8	8.625	0.109	0.148	0.322	0.500	4.000
	219.080	2.770	3.760	8.180	12.700	101.600
10	10.750	0.134	0.165	0.375	0.500	5.000
	273.000	3.400	4.190	9.530	12.700	127.000
12	12.750	0.156	0.180	0.375	0.500	6.000
	323.850	3.960	4.570	9.530	12.700	152.400
14	14.000	-	0.188	*0.375	**0.500	6.500
	355.600	-	4.780	9.530	12.700	165.100
16	16.000	-	0.188	*0.375	**0.500	7.000
	406.400	-	4.780	9.530	12.700	177.800
18	18.000	-	0.188	*0.375	**0.500	8.000
	457.200	-	4.780	9.530	12.700	203.200
20	20.000	-	0.218	*0.375	**0.500	9.000
	508.000	-	5.540	9.530	12.700	228.600
24	24.000	-	0.250	*0.375	**0.500	10.500
	609.600	-	6.350	9.530	12.700	266.700



CLASS 150 FLANGES (1/2" ~ 24")



CLASS 150 FLANGES (1/2" ~ 24")



ANSI B16.5 FORGED FLANGE

(unit: inch/mm)

Nominal Pipe Size (INCH)	Outside Dia. (O.D) D	O.D of Raised Face G	Diam at base of Hub X	Thickness T	Bore			Length Thru Hub		
					Welding Neck Socket Welding B1	Slip-On Socket Welding B2	Lap Joint B3	Welding Neck T1	Slip-On Socket Welding T2	Lap Joint T3
1/2	89.00	35.10	30.20	11.20	15.70	22.40	22.90	47.80	15.70	15.70
3/4	99.00	42.90	38.10	12.70	20.80	27.70	28.20	52.30	15.70	15.70
1	108.00	50.80	49.30	14.20	26.70	34.50	35.10	55.60	17.50	17.50
1-1/4	117.00	63.50	58.70	15.70	35.10	43.20	43.70	57.20	20.60	20.60
1-1/2	127.00	73.20	65.00	17.50	40.90	49.50	50.00	62.00	22.40	22.40
2	152.00	91.90	77.70	19.10	52.60	62.00	62.50	63.50	25.40	25.40
2-1/2	178.00	104.60	90.40	22.40	62.70	74.70	75.40	69.90	28.40	28.40
3	191.00	127.00	108.00	23.90	78.00	90.70	91.40	69.90	30.20	30.20
3-1/2	216.00	139.70	122.20	23.90	90.20	103.40	104.10	71.40	31.80	31.80
4	229.00	157.20	134.90	23.90	102.40	116.10	116.80	76.20	33.30	33.30
5	254.00	185.70	163.60	23.90	128.30	143.80	144.50	88.90	36.60	36.60
6	279.00	215.90	192.00	25.40	154.20	170.70	171.50	88.90	39.60	39.60
8	343.00	269.70	246.10	28.40	202.70	221.50	222.30	101.60	44.50	44.50
10	406.00	323.90	304.80	30.20	254.50	276.40	277.40	101.60	49.30	49.30
12	486.00	381.00	365.30	31.80	304.80	327.20	328.20	114.30	55.60	55.60
14	533.00	412.80	400.10	35.10	336.60	359.20	360.20	127.00	57.20	79.20
16	597.00	469.90	457.20	36.60	387.10	410.50	411.20	127.00	63.50	87.40
18	635.00	533.40	505.00	39.60	438.20	461.80	462.30	139.70	68.30	96.80
20	699.00	584.20	558.80	42.90	489.00	513.10	514.40	144.50	73.20	103.10
24	813.00	692.20	663.40	47.80	590.60	616.00	616.00	152.40	82.60	111.30

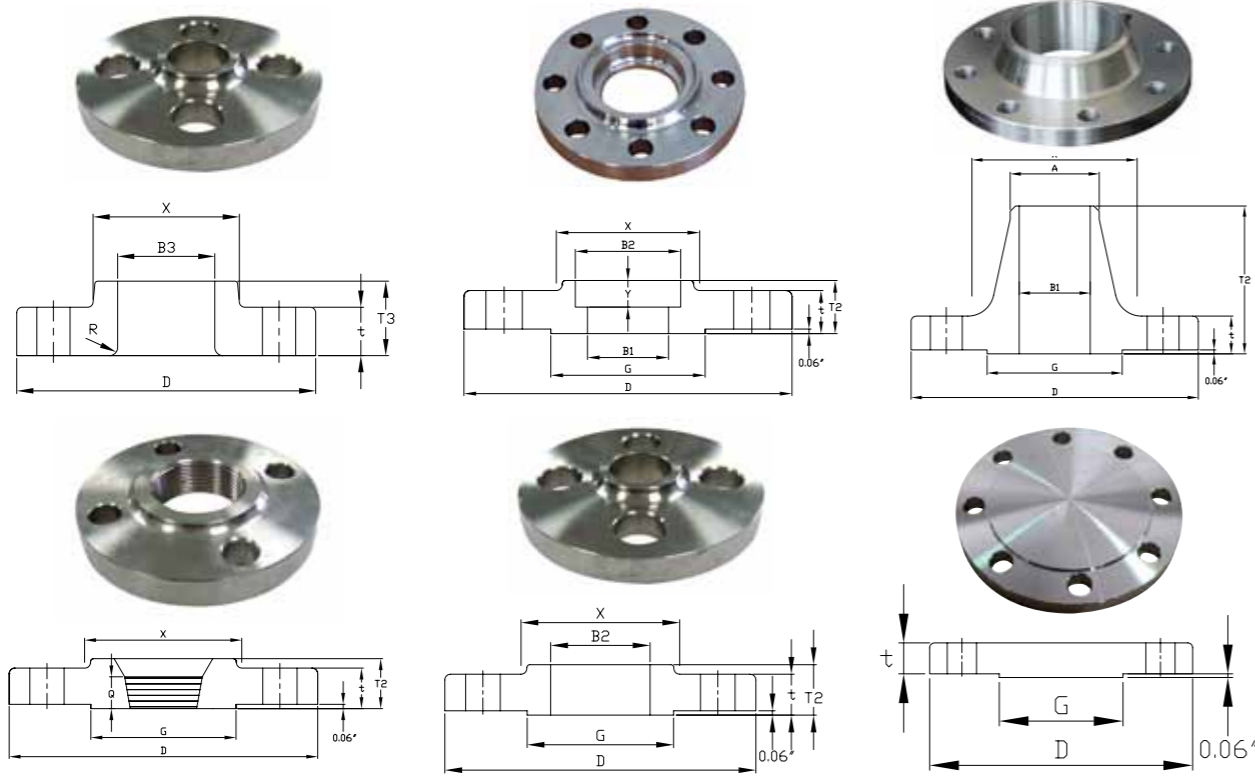
ANSI B16.5 FORGED FLANGE

(unit: inch/mm)

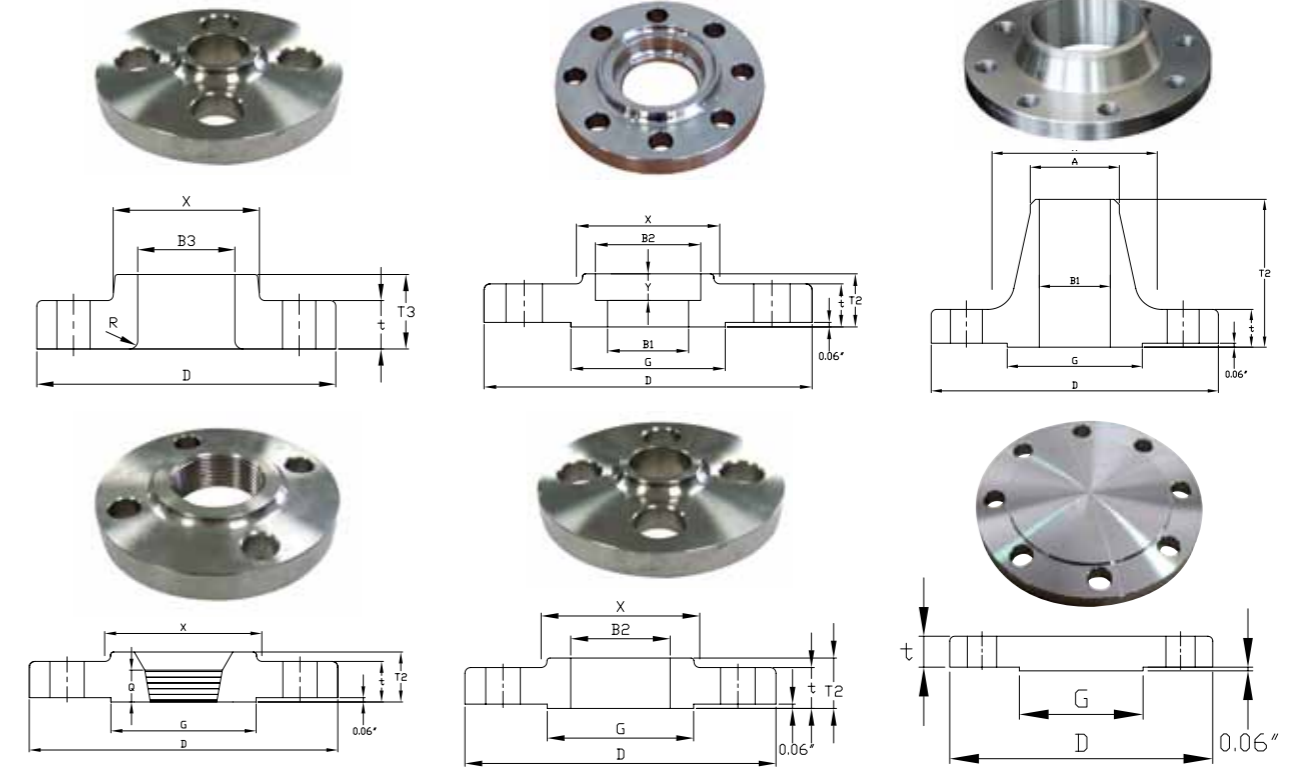
Nominal Pipe Size (INCH)	Diam of Hub at Bevel A	Radius of Fillet R	Thread Length Q	Depth of Socket Y	Drilling			Bolting			
					Bolt Circle Diam	Number of Holes	Diam of Holes	Diam of Bolts (inch)	Machine Bolt length		Stub Bolt Length
									Raised Face	Ring Joint	
1/2	21.30	3.00	15.70	9.70	60.50	4	15.70	1/2	50.80	57.20	-
3/4	26.70	3.00	15.70	11.20	69.90	4	15.70	1/2	50.80	63.50	-
1	33.50	3.00	17.50	12.70	79.20	4	15.70	1/2	57.20	63.50	76.20
1-1/4	42.20	4.80	20.60	14.20	88.90	4	15.70	1/2	57.20	69.90	82.60
1-1/2	48.30	6.40	22.40	15.70	98.60	4	15.70	1/2	63.50	69.90	82.60
2	60.50	7.90	25.40	17.50	120.70	4	19.10	5/8	69.90	82.60	95.30
2-1/2	73.20	7.90	28.40	19.10	139.70	4	19.10	5/8	76.20	88.90	101.60
3	88.90	9.70	30.20	20.60	152.40	4	19.10	5/8	76.20	88.90	101.60
3-1/2	101.60	9.70	31.80	22.40	177.80	8	19.10	5/8	76.20	88.90	101.60
4	114.30	11.20	33.30	23.90	190.50	8	19.10	5/8	76.20	88.90	101.60
5	141.20	11.20	36.60	23.90	215.90	8	22.40	3/4	82.60	95.30	108.00
6	168.40	12.70	39.60	26.90	241.30	8	22.40	3/4	82.60	101.60	114.30
8	219.20	12.70	44.50	31.80	298.50	8	22.40	3/4	88.90	108.00	120.70
10	273.10	12.70	49.30	33.30	362.00	12	25.40	7/8	101.60	114.30	127.00
12	323.90	12.70	55.60	39.60	431.80	12	25.40	7/8	101.60	120.70	133.40
14	355.60	12.70	57.20	41.40	476.30	12	28.40	1	114.30	133.40	146.10
16	406.40	12.70	63.50	44.50	539.80	16	28.40	1	114.30	133.40	146.10
18	457.20	12.70	68.30	49.30	577.90	16	31.80	1-1/8	127.00	146.10	158.80
20	508.00	12.70	73.20	54.10	635.00	20	31.80	1-1/8	139.70	158.80	171.50
24	609.60	12.70	82.60	63.50	749.30	20	35.10	1-1/4	152.40	171.50	184.20



CLASS 300 FLANGES (1/2" ~ 24")



CLASS 300 FLANGES (1/2" ~ 24")



ANSI B16.5 FORGED FLANGE

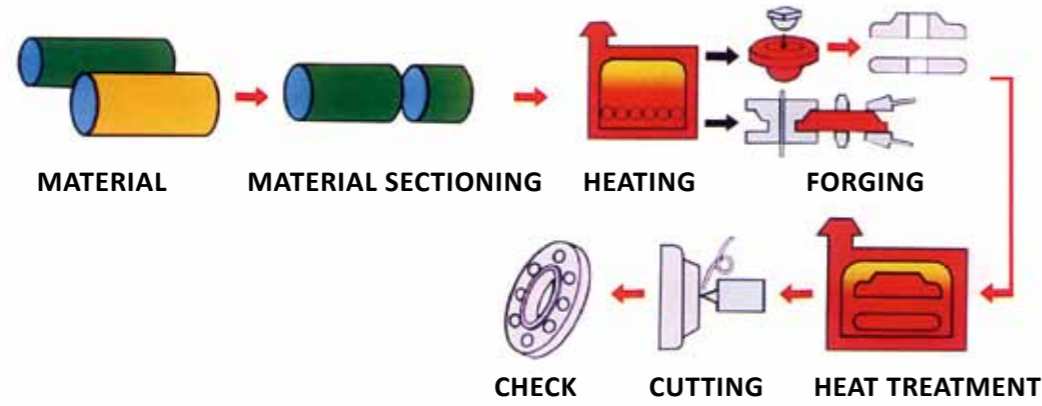
(unit: inch/mm)

Nominal Pipe Size (INCH)	Outside Dia. (O.D)	O.D of Raised Face	Diam at base of Hub	Thickness	Bore			Length Thru Hub		
					Welding Neck Socket Welding	Slip-On Socket Welding	Lap Joint	Welding Neck	Slip-On Socket Welding	Lap Joint
					B1	B2	B3	T1	T2	T3
1/2	95.00	35.10	38.10	14.20	15.70	22.40	23.60	52.30	22.40	22.40
3/4	117.00	42.90	47.80	15.70	30.80	27.70	29.00	57.20	25.40	25.40
1	124.00	50.80	53.80	17.50	26.70	34.50	35.80	62.00	26.90	26.90
1-1/4	133.00	63.50	63.50	19.10	35.10	43.20	44.50	65.00	26.90	26.90
1-1/2	155.00	73.20	69.90	20.60	40.90	49.50	50.50	68.30	30.20	30.20
2	165.00	91.90	84.10	22.10	52.60	62.00	63.50	69.90	33.30	33.30
2-1/2	191.00	104.60	100.10	25.40	62.70	74.70	76.20	76.20	38.10	38.10
3	210.00	127.00	117.30	28.40	78.00	90.70	92.20	79.20	42.90	42.90
3-1/2	229.00	139.70	133.40	30.20	90.20	103.40	104.90	81.00	44.50	44.50
4	254.00	157.20	146.10	31.80	102.40	116.10	117.60	85.90	47.80	47.80
5	279.00	185.70	177.80	36.10	128.30	143.80	144.50	98.60	50.80	50.80
6	318.00	215.90	206.20	36.60	154.20	170.70	171.50	98.60	52.60	52.30
8	381.00	269.70	260.40	41.10	202.70	221.50	222.30	111.30	62.00	62.00
10	445.00	323.90	320.50	47.80	254.50	276.40	276.40	117.30	66.50	95.30
12	521.00	381.00	374.70	50.80	304.80	327.20	328.70	130.00	73.20	101.60
14	584.00	412.80	425.50	53.80	336.60	359.20	360.40	142.70	76.20	111.30
16	648.00	469.90	482.60	47.20	387.40	410.50	411.20	146.10	82.60	120.70
18	711.00	533.40	533.40	60.50	438.20	461.80	462.00	158.80	88.90	130.00
20	775.00	584.20	587.20	63.50	489.00	513.10	512.80	162.10	95.30	139.70
24	914.00	692.20	701.50	69.90	590.60	616.00	614.40	168.10	106.40	152.40

ANSI B16.5 FORGED FLANGE

(unit: inch/mm)

Nominal Pipe Size (INCH)	Diam of Hub at Bevel	Radius of Fillet	Thread Length	Depth of Socket	Drilling				Bolting		
					Bolt Circle Diam	Number of Holes	Diam of Holes	Diam of Bolts (inch)	Machine Bolt length	Stub Bolt Length	
					A	R	Q	Y	Raised Face	Ring Joint	Stub Bolt Length
1/2	21.30	3.00	15.70	9.70	66.50	4	15.70	1/2	57.20	63.50	76.20
3/4	26.70	3.00	15.70	11.20	82.60	4	19.10	5/8	63.50	76.20	88.90
1	33.50	3.00	17.50	12.70	88.90	4	19.10	5/8	63.50	76.20	88.90
1-1/4	42.20	4.80	20.60	14.20	98.60	4	19.10	5/8	69.90	82.60	95.30
1-1/2	48.30	6.40	22.40	15.70	114.30	4	22.40	3/4	76.20	88.90	101.60
2	60.50	7.90	28.40	17.50	127.00	8	19.10	5/8	76.20	88.90	101.60
2-1/2	73.20	7.90	31.80	19.10	149.40	8	22.40	3/4	82.60	101.60	114.30
3	88.90	9.70	31.80	20.60	168.10	8	22.40	3/4	88.90	108.00	120.70
3-1/2	101.60	9.70	36.60	22.40	184.20	8	22.40	3/4	95.30	108.00	127.00
4	114.30	11.20	36.60	23.90	200.20	8	22.40	3/4	95.30	114.30	127.00
5	141.20	11.20	42.90	23.90	235.00	8	22.40	3/4	108.00	120.70	133.40
6	168.40	12.70	46.00	26.90	269.70	12	22.40	3/4	108.00	120.70	139.70
8	219.20	12.70	50.80	31.80	330.20	12	25.40	7/8	120.70	139.70	152.40
10	273.10	12.70	55.60	33.30	387.40	16	28.40	1	139.70	158.80	171.50
12	323.91	12.70	60.50	39.60	450.90	16	31.80	1-1/8	146.10	171.50	184.20
14	355.60	12.70	63.50	41.40	514.40	20	31.80	1-1/8	158.80	177.80	190.50
16	406.40	12.70	68.30	44.50	571.50	20	35.10	1-1/4	165.10	190.50	203.20
18	457.20	12.70	69.90	49.30	628.70	24	35.10	1-1/4	171.50	196.90	209.60
20	508.00	12.70	73.20	54.10	685.80	24	35.10	1-1/4	184.20	203.20	222.30
24	609.60	12.70	82.60	63.50	812.80	24	41.10	1-1/2	203.20	228.60	254.00



ANSI FLANGE

Material Grades

ASTM A182: F5 F9 F11, F304/F304L, F316/F316L, F317L, F321/F321H, F347, F309H, F44, F51, F52, F53...F904L...
ASTM SA-266: Class 1, 2, 3, 4
ASTM A105, ASTM A350-LF1, LF2, LF3, LF4

ANSI FLANGE B16.47 Series A & Series B

CLASSES	WN	BL
150LBS	26"~60"	26"~60"
300LBS	26"~60"	26"~60"
400LBS	26"~58"	26"~56"
600LBS	26"~50"	26"~50"
900LBS	26"~32"	26"~32"

ANSI FLANGE B16.5

CLASSES	WN/SO/LJ	BL	SW/THR
150LBS	1/2"~24"	1/2"~24"	1/2"~24"
300LBS	1/2"~24"	1/2"~24"	1/2"~24"
400LBS	1/2"~24"	1/2"~24"	1/2"~24"
600LBS	1/2"~24"	1/2"~24"	1/2"~24"
900LBS	1/2"~24"	1/2"~24"	1/2"~24"
1500LBS	1/2"~20"	1/2"~20"	1/2"~20"
2500LBS	1/2"~12"	1/2"~12"	1/2"~12"

LONG WELDING NECKS

150LBS	1/2"~24"
300LBS	1/2"~24"
400LBS	1/2"~24"
600LBS	1/2"~24"
900LBS	1/2"~24"
1500LBS	1/2"~20"
2500LBS	1/2"~12"

DIN FLANGE

Material Grades

EN 10272: 1.4301, 1.4306, 1.4307, 1.4404, 1.4541, 1.4571

TYPE	SIZE
DIN2527 PN6	DN10~DN500
DIN2527 PN10	DN10~DN500
DIN2527 PN16	DN10~DN500
DIN2527 PN25	DN10~DN500
DIN2527 PN40	DN10~DN500
DIN2527 PN64	DN10~DN400
DIN2527 PN100	DN10~DN350
DIN2566 PN16	DN6~DN100
DIN2573 PN6	DN10~DN500
DIN2576 PN10	DN10~DN500
DIN2631 PN6	DN10~DN2600
DIN2632 PN10	DN10~DN2600
DIN2633 PN16	DN10~DN2000
DIN2634 PN25	DN10~DN1000
DIN2635 PN40	DN10~DN500
DIN2636 PN64	DN10~DN2400
DIN2637 PN100	DN10~DN350
DIN2642 PN10	DN10~DN800
DIN2655 PN25	DN10~DN500
DIN2656 PN40	DN10~DN400
DIN2673 PN10	DN10~DN1200

EN FLANGE

Material Grades

EN 10272: 1.4301, 1.4306, 1.4307, 1.4404, 1.4541, 1.4571

	TYPE01	TYPE02&32/33	TYPE04&34
PN2.5	DN10~DN2600	-----	-----
PN6	DN10~DN2600	DN10~DN600	-----
PN10	DN10~DN2600	DN10~DN600	DN10~DN600
PN16	DN10~DN2000	DN10~DN600	DN10~DN600
PN25	DN10~DN2000	DN10~DN600	DN10~DN600
PN40	DN10~DN600	DN10~DN600	DN10~DN600
PN63	DN10~DN1200	-----	-----
PN100	DN10~DN500	-----	-----
	TYPE05	TYPE11	TYPE12
PN2.5	DN10~DN2000	DN10~DN2600	-----
PN6	DN10~DN2000	DN10~DN2600	DN10~DN300
PN10	DN10~DN1200	DN10~DN2600	DN10~DN600
PN16	DN10~DN1200	DN10~DN2600	DN10~DN600
PN25	DN10~DN1000	DN10~DN600	DN10~DN600
PN40	DN10~DN600	DN10~DN600	DN10~DN600
PN63	DN10~DN400	DN10~DN400	DN10~DN150
PN100	DN10~DN350	DN10~DN350	DN10~DN150
	TYPE13	TYPE14	
PN2.5	-----	-----	
PN6	DN10~DN300	DN10~DN2000	
PN10	DN10~DN150	DN10~DN2000	
PN16	DN10~DN600	DN10~DN2000	
PN25	DN10~DN150	DN10~DN2000	
PN40	DN10~DN600	DN10~DN600	
PN63	DN10~DN150	DN10~DN1200	
PN100	DN10~DN150	DN10~DN500	

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