FLANGED FITTINGS

Import Ductile and Cast Iron Fittings - C110





Metalfit

U.S. PIPE

A QUIKRETE® COMPANY

PIPE

FABRICATION

RESTRAINED JOINTS

FITTINGS

GASKETS

COATINGS & LININGS

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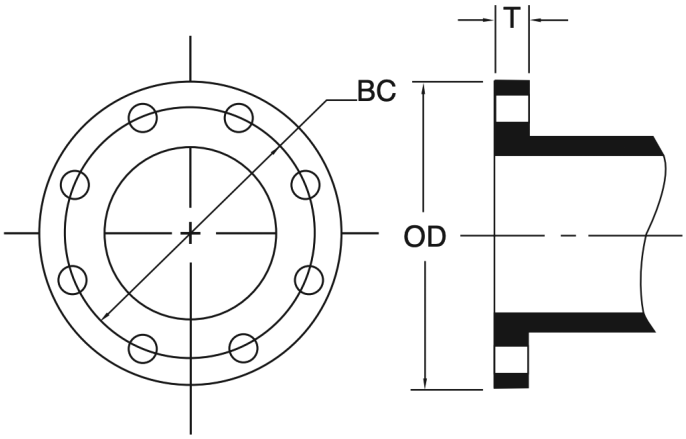
Flanged Joint Dimensions
ANSI/AWWA C110/A21.10

SIZE	OD	BC	T	HOLE DIA.	BOLT SIZE	NO. of BOLTS
2	6.00	4.75	0.62	0.75	5/8 x 2-1/4	4
2-1/2	7.00	5.50	0.69	0.75	5/8 x 2-1/2	4
3	7.50	6.00	0.75	0.75	5/8 x 2-1/2	4
4	9.00	7.50	0.94	0.75	5/8 x 3	8
5	10.00	8.50	0.94	0.88	3/4 x 3	8
6	11.00	9.50	1.00	0.88	3/4 x 3-1/2	8
8	13.50	11.75	1.12	0.88	3/4 x 3-1/2	8
10	16.00	14.25	1.19	1.00	7/8 x 4	12
12	19.00	17.00	1.25	1.00	7/8 x 4	12
14	21.00	18.75	1.38	1.12	1 x 4-1/2	12
16	23.50	21.25	1.44	1.12	1 x 4-1/2	16
18	25.00	22.75	1.56	1.25	1-1/8 x 5	16
20	27.50	25.00	1.69	1.25	1-1/8 x 5	20
24	32.00	29.50	1.88	1.37	1-1/4 x 5-1/2	20
30	38.75	36.00	2.12	1.37	1-1/4 x 6-1/2	28
36	46.00	42.75	2.38	1.62	1-1/2 x 7	32
42	53.00	49.50	2.62	1.62	1-1/2 x 7-1/2	36
48	59.50	56.00	2.75	1.62	1-1/2 x 8	44

Dimensions in inches. Weights in pounds.



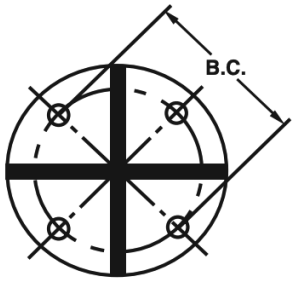
Note:
Flange working pressure rating 250psi, 4" through 24". Flange working pressure can be 350psi with special gasket, i.e Flange TYTE gasket. Flange facing and drilling pattern match ASME B16.1, Class 125.

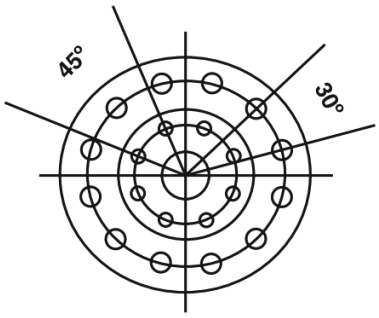
For higher pressure rating applications, contact U.S. Pipe

Base Dimensions

SIZE	BC	HOLE DIA.	NO. of BOLTS
3	3.88	0.62	4
4	4.75	0.75	4
6	5.50	0.75	4
8	7.50	0.75	4
10	7.50	0.75	4
12	9.50	0.88	4
14	9.50	0.88	4
16	9.50	0.88	4
18	11.75	0.88	4
20	11.75	0.88	4
24	11.75	0.88	4
30	14.25	1.00	4
36	17.00	1.00	4
42	21.25	1.12	4
48	22.75	1.25	4

Dimensions in inches.





Installation Note:
Drilling Templates are furnished in multiples of four. Standard flanged reducers, with a different number of holes in each flange, will have only two centerlines which are common to the drilling templates of both flanges.

SPECIFICATIONS
ENGINEERING SUBMITTAL DATA

ENGINEERING SUBMITTAL DATA

U.S. Pipe / Metalfit manufactures Ductile Iron and Gray Cast Iron Flanged Fittings for both Waterworks and Industrial applications and conforms fully to the required industry standards. Flanged Fittings are manufactured in accordance with ANSI/AWWA C110/A21.10 and ANSI B16.1, Class 125. Metalfit 2″ through 12″ Flanged Fittings are also listed by Underwriters Laboratories for fire protection service. Additionally, **Metalfit hydrostatically tests every fitting to ensure quality casting integrity**. These tests are performed at 1.5 times the rated working pressure.

MECHANICAL PROPERTIES	WATER WORKING PRESSURE
Cast Iron to ASTM A48 Minimum Tensile Strength 31,000 psi	**Gray Cast Iron** 2″ – 12″ CI Fittings rated 250 psi 14″ – 42″ CI Fittings rated 150 psi
Ductile Iron to ASTM A 536 Minimum Tensile Strength 70,000 psi Yield Strength 50,000 psi Elongation 5%	**Ductile Iron** All DI Fittings Rated 250 psi As noted in ANSI/AWWA C111 and C115, ductile iron flanged joints in the 24″ and smaller sizes may be rated to 350 psi with the use of "special" gaskets.
Ductile Iron to ASTM A 536 Reference AWWA C110, section 5.4.2.1.1.	

COATINGS & LININGS

Interior Linings:
Flanged fittings are furnished cement lined and seal coated per ANSI/AWWA C104/A21.4. Fittings are also available unlined for air service or with other special linings for particular service conditions.

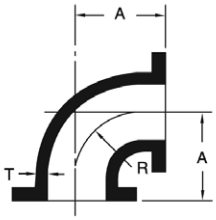
Exterior Coatings:
Flanged fittings are furnished standard with a red epoxy primer or tar coated at the customer's discretion. Special primer coatings are also available for particular service conditions.

All standard coatings and linings are provided in full accordance with ANSI/NSF 61.

COMMITMENT TO QUALITY

U.S. Pipe / Metalfit takes pride in producing the finest quality Flanged Fittings available in today's market. Our manufacturing standards and a strict adherence to the quality control procedures, developed over many years, make certain that we abide by our commitment to be the best.

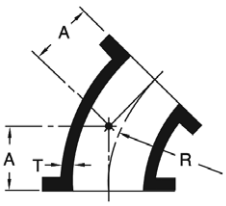
SPECIFICATIONS
BENDS & BASE BENDS



BENDS, 1/4 (90°)

SIZE	Wt.	A	R	T
2	14	4.5	3.0	0.31
2-1/2	22	5.0	3.5	0.31
3	25	5.5	4.0	0.48
4	45	6.5	4.5	0.52
5	52	7.5	5.5	0.52
6	65	8.0	6.0	0.55
8	105	9.0	7.0	0.60
10	165	11.0	9.0	0.68
12	235	12.0	10.0	0.75
14	290	14.0	11.5	0.66
16	370	15.0	12.5	0.70
18	450	16.5	14.0	0.75
20	580	18.0	15.5	0.80
24	900	22.0	18.5	0.89
30	1430	25.0	21.5	1.03
36	2135	28.0	24.5	1.15
42	3055	31.0	27.5	1.28
48	4095	34.0	30.5	1.42

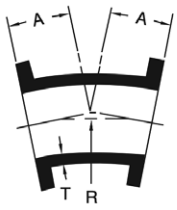
Dimensions in inches. Weights in pounds.



BENDS, 1/8 (45°)

SIZE	Wt.	A	R	T
2	12	2.5	2.41	0.31
2-1/2	18	3.0	3.02	0.31
3	20	3.0	3.62	0.48
4	40	4.0	4.81	0.52
5	45	4.5	6.04	0.52
6	55	5.0	7.25	0.55
8	90	5.5	8.44	0.60
10	130	6.5	10.88	0.68
12	195	7.5	13.25	0.75
14	220	7.5	12.06	0.66
16	280	8.0	13.25	0.70
18	325	8.5	14.50	0.75
20	430	9.5	16.88	0.80
24	630	11.0	18.12	0.89
30	1120	15.0	27.75	1.03
36	1755	18.0	35.00	1.15
42	2600	21.0	42.45	1.28
48	3580	24.0	49.50	1.42

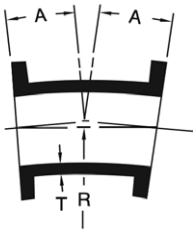
Dimensions in inches. Weights in pounds.



BENDS, 1/16 (22-1/2°)

SIZE	Wt.	A	R	T
2	12	2.5	6.04	0.31
2-1/2	18	3.0	6.80	0.31
3	20	3.0	7.56	0.48
4	40	4.0	10.06	0.52
5	45	4.5	10.86	0.52
6	55	5.0	15.06	0.55
8	90	5.5	17.62	0.60
10	135	6.5	22.62	0.68
12	205	7.5	27.62	0.75
14	225	7.5	25.12	0.66
16	285	8.0	27.62	0.70
18	335	8.5	30.19	0.75
20	435	9.5	35.19	0.80
24	640	11.0	37.69	0.89
30	1135	15.0	57.81	1.03
36	1790	18.0	72.88	1.15
42	2665	21.0	88.00	1.28
48	3665	24.0	103.06	1.42

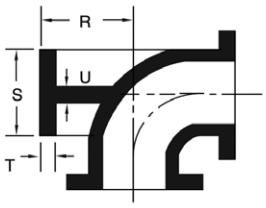
Dimensions in inches. Weights in pounds.



BENDS, 1/32 (11-1/4°)

SIZE	Wt.	A	R	T
2	12	2.5	12.69	0.31
3	20	3.0	15.25	0.48
4	40	4.0	20.31	0.52
5	45	4.5	22.85	0.52
6	55	5.0	30.50	0.55
8	90	5.5	35.50	0.60
10	135	6.5	45.69	0.68
12	205	7.5	55.81	0.75
14	225	7.5	50.75	0.66
16	285	8.0	55.81	0.70
18	335	8.5	60.94	0.75
20	435	9.5	71.06	0.80
24	645	11.0	76.12	0.89
30	1150	15.0	116.75	1.03
36	1805	18.0	147..25	1.15
42	2680	21.0	177.69	1.28
48	3695	24.0	208.12	1.42

Dimensions in inches. Weights in pounds.

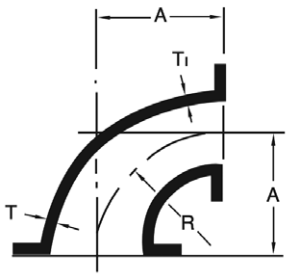


BASE BENDS

SIZE	WEIGHT		R	S	T	U	BC
	Base Bend	Base Only					
3	35	10	4.88	5.00	0.56	0.50	3.88
4	55	10	5.50	6.00	0.62	0.50	4.75
6	85	20	7.00	7.00	0.69	0.62	5.50
8	145	40	8.38	9.00	0.94	0.88	7.50
10	210	45	9,75	9.00	0.94	0.88	7.50
12	300	65	11.25	11.00	1.00	1.00	9.50
14	360	70	12.50	11.00	1.00	1.00	9.50
16	445	75	13.75	11.00	1.00	1.00	9.50
18	565	115	15.00	13.50	1.12	1.12	11.75
20	700	120	16.00	13.50	1.12	1.12	11.75
24	1030	130	18.50	13.50	1.12	1.12	11.75
30	1625	190	23.00	16.00	1.19	1.15	14.25
36	2385	250	26.00	19.00	1.25	1.15	17.00
42	3465	410	30.00	23.50	1.44	1.28	21.25
48	4610	515	34.00	25.00	1.56	1.42	22.75

Dimensions in inches. Weights in pounds.

SPECIFICATIONS
REDUCING, SIDE OUTLET & RETURN BENDS

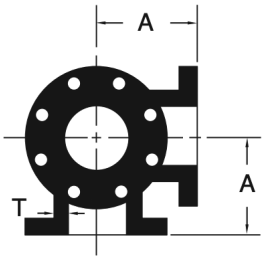


REDUCING 90° BENDS

SIZE	Wt.	A	R	T	T_1
2-1/2 x 2	18	5.0	3.5	0.31	0.31
3 x 2	22	5.5	4.0	0.48	0.31
3 x 2-1/2	23	5.5	4.0	0.48	0.31
4 x 2	27	6.6	4.5	0.52	0.31
4 x 2-1/2	29	6.6	4.5	0.52	0.31
4 x 3	29	6.6	4.5	0.52	0.48
5 x 4	51	7.5	5.5	0.52	0.52
6 x 3	45	8.0	6.0	0.55	0.48
6 x 4	55	8.0	6.0	0.55	0.52
6 x 5	65	8.0	6.0	0.55	0.52
8 x 4	75	9.0	7.0	0.60	0.52
8 x 5	80	9.0	7.0	0.60	0.52
8 x 6	85	9.0	7.0	0.60	0.55
10 x 4	110	11.0	9.0	0.68	0.52
10 x 6	135	11.0	9.0	0.68	0.55
10 x 8	150	11.0	9.0	0.68	0.60
12 x 4	140	12.0	10.0	0.75	0.52
12 x 6	160	12.0	10.0	0.75	0.55
12 x 8	180	12.0	10.0	0.75	0.60
12 x 10	210	12.0	10.0	0.75	0.68
14 x 6	144	14.0	11.5	0.66	0.55
14 x 8	200	14.0	11.5	0.66	0.60
14 x 10	240	14.0	11.5	0.66	0.68
14 x 12	270	14.0	11.5	0.66	0.75
16 x 6	220	15.0	12.5	0.70	0.55
16 x 8	240	15.0	12.5	0.70	0.60
16 x 10	280	15.0	12.5	0.70	0.68
16 x 12	310	15.0	12.5	0.70	0.75
16 x 14	330	15.0	12.5	0.70	0.66
18 x 6	260	16.5	14.0	0.75	0.55
18 x 8	280	16.5	14.0	0.75	0.60
18 x 10	320	16.5	14.0	0.75	0.68
18 x 12	350	16.5	14.0	0.75	0.75
18 x 14	370	16.5	14.0	0.75	0.66
18 x 16	410	16.5	14.0	0.75	0.70
20 x 6	320	18.0	15.5	0.80	0.55
20 x 8	345	18.0	15.5	0.80	0.60

SIZE	Wt.	A	R	T	T_1
20 x 10	385	18.0	15.5	0.80	0.68
20 x 12	415	18.0	15.5	0.80	0.75
20 x 14	435	18.0	15.5	0.80	0.66
20 x 16	475	18.0	15.5	0.80	0.70
20 x 18	515	18.0	15.5	0.80	0.75
24 x 6	480	22.0	18.5	0.89	0.55
24 x 8	505	22.0	18.5	0.89	0.60
24 x 10	545	22.0	18.5	0.89	0.68
24 x 12	575	22.0	18.5	0.89	0.75
24 x 14	595	22.0	18.5	0.89	0.66
24 x 16	635	22.0	18.5	0.89	0.70
24 x 18	675	22.0	18.5	0.89	0.75
24 x 20	740	22.0	18.5	0.89	0.80
30 x 12	840	25.0	21.5	1.03	0.75
30 x 14	860	25.0	21.5	1.03	0.66
30 x 16	900	25.0	21.5	1.03	0.70
30 x 18	940	25.0	21.5	1.03	0..75
30 x 20	1005	25.0	21.5	1.03	0.80
30 x 24	1165	25.0	21.5	1.03	0.89
36 x 12	1195	28.0	24.5	1.15	0.75
36 x 14	1215	28.0	24.5	1.15	0.66
36 x 16	1255	28.0	24.5	1.15	0.70
36 x 18	1295	28.0	24.5	1.15	0.75
36 x 20	1360	28.0	24.5	1.15	0.80
36 x 24	1520	28.0	24.5	1.15	0.89
36 x 30	1785	31.0	27.5	1.28	1.03
42 x 14	1675	31.0	27.5	1.28	0.66
42 x 16	1715	31.0	27.5	1.28	.070
42 x 18	1755	31.0	27.5	1.28	0.75
42 x 20	1820	31.0	27.5	1.28	0.80
42 x 24	1980	31.0	27.5	1.28	0.89
42 x 30	2245	31.0	27.5	1.28	1.03
42 x 36	2600	31.0	27.5	1.28	1.15
48 x 24	3240	34.0	30.5	1.42	0.89
48 x 30	3600	34.0	30.5	1.42	1.03
48 x 36	3255	34.0	30.5	1.42	1.15
48 x 42	4685	34.0	30.5	1.42	1.28

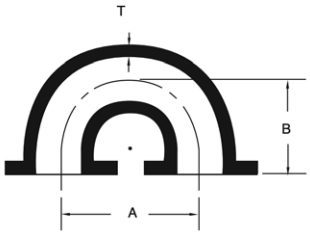
Dimensions in inches. Weights in pounds.



SIDE OUTLET BENDS

SIZE	Wt.	A	T
3	36	5.5	0.48
4	60	6.5	0.50
6	96	8.0	0.55
8	150	9.0	0.60
10	235	11.0	0.68
12	335	12.0	0.80
14	405	14.0	0.66
16	490	15.0	0.70
18	580	16.5	0.75
20	740	18.0	0.80
24	1145	22.0	0.89

Dimensions in inches.
Weights in pounds.

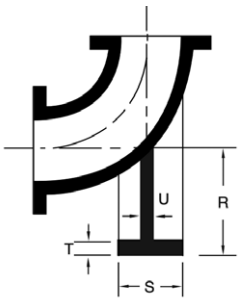


RETURN BENDS

SIZE	Wt.	A	T
4	60	6.5	0.52
6	95	8.0	0.55
8	165	9.0	0.60
10	260	11.0	0.68
12	395	12.0	0.75

Dimensions in inches.
Weights in pounds.

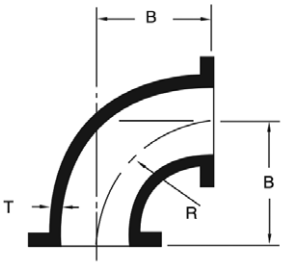
SPECIFICATIONS
LONG RADIUS BENDS



LONG RADIUS BASE BENDS

SIZE	WEIGHT		R	S	T	U	BC
	Base Bend	Base Only					
3	48	18	4.88	5.00	0.56	0.50	3.88
4	73	23	5.50	6.00	0.62	0.50	4.75
6	120	40	7.00	7.00	0.69	0.62	5.50
8	205	65	8.38	9.00	0.94	0.88	7.50
10	295	80	9,75	9.00	0.94	0.88	7.50
12	435	95	11.25	11.00	1.00	1.00	9.50
14	490	105	12.50	11.00	1.00	1.00	9.50
16	615	110	13.75	11.00	1.00	1.00	9.50
18	800	170	15.00	13.50	1.12	1.12	11.75
20	985	175	16.00	13.50	1.12	1.12	11.75
24	1430	190	18.50	13.50	1.12	1.12	11.75
30	2400	295	23.00	16.00	1.19	1.15	14.25
36	3680	395	26.00	19.00	1.25	1.15	17.00

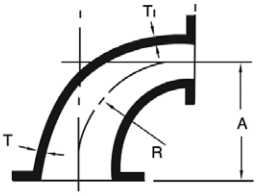
Dimensions in inches. Weights in pounds.



LONG RADIUS BENDS

SIZE	Wt.	B	T	R
2	20	6.50	0.31	5.0
2-1/2	22	7.00	0.31	6.0
3	30	7.75	0.48	6.0
4	50	9.00	0.52	7.0
6	80	11.50	0.55	9.5
8	140	14.00	0.60	12.0
10	215	16.50	0.68	14.5
12	325	19.00	0.75	17.0
14	385	21.50	0.66	19.0
16	505	24.00	0.70	21.0
18	630	26.50	0.75	24.0
20	810	29.00	0.80	26.5
24	1240	34.00	0.89	30.5
30	2105	41.50	1.03	38.0
36	3285	49.00	1.15	45.5
42	4865	56.50	1.28	53.0

Dimensions in inches. Weights in pounds.



LONG RADIUS REDUCING BENDS

SIZE	Wt.	A	T	T_1	R
4 x 3	32	9.0	0.52	0.48	7.0
6 x 4	61	11.5	0.55	0.52	9.5
8 x 4	100	14.0	0.60	0.52	12.0
8 x 6	110	16.5	0.60	0.55	12.0
10 x 4	195	16.5	0.68	0.52	14.5
10 x 6	180	16.5	0.68	0.55	14.5
10 x 8	215	16.5	0.68	0.60	14.5
12 x 6	235	19.0	0.75	0.55	17.0
12 x 8	285	19.0	0.75	0.60	17.0
12 x 10	325	19.0	0.75	0.68	17.0
14 x 8	285	21.5	0.66	0.60	19.0
14 x 10	325	21.5	0.66	0.68	19.0
14 x 12	370	21.5	0.66	0.75	19.0
16 x 8	395	24.0	0.70	0.60	21.0
16 x 10	395	24.0	0.70	0.68	21.0
16 x 12	415	24.0	0.70	0.75	21.0
16 x 14	460	24.0	0.70	0.66	21.0
18 x 10	465	26.5	0.75	0.68	24.0
18 x 12	585	26.5	0.75	0.75	24.0
18 x 14	535	26.5	0.75	0.66	24.0
18 x 16	585	26.5	0.75	0.70	24.0
20 x 10	640	29.0	0.80	0.68	26.5
20 x 12	630	29.0	0.80	0.75	26.5
20 x 14	770	29.0	0.80	0.66	26.5
20 x 16	695	29.0	0.80	0.70	26.5
20 x 18	905	29.0	0.80	0.75	26.5
24 x 12	855	34.0	0.89	0.75	30.5
24 x14	875	34.0	0.89	0.66	30.5
24 x 16	940	34.0	0.89	0.70	30.5
24 x 20	1080	34.0	0.89	0.80	30.5
30 x 16	1400	41.5	1.03	0.70	38.0
30 x 20	1575	41.5	1.03	0.80	38.0
30 x 24	1675	41.5	1.03	0.89	38.0
36 x 20	2835	49.0	1.15	0.80	45.5
36 x 24	3140	49.0	1.15	0.89	45.5
36 x 30	3675	49.0	1.15	1.03	45.5
42 x 30	4905	56.5	1.28	1.03	53.0
42 x 36	4270	56.5	1.28	1.15	53.0

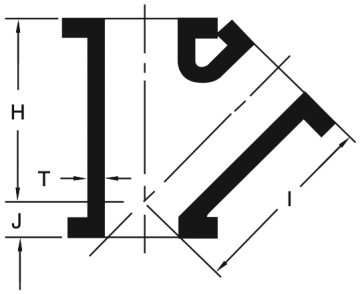
Dimensions in inches. Weights in pounds.

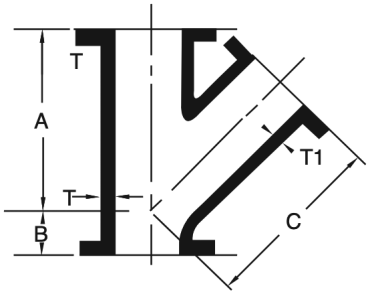
SPECIFICATIONS
LATERAL WYES

45° LATERAL WYES

SIZE	Wt.	H	J	I	T
3	45	10.0	3.0	10.0	0.48
4	75	12.0	3.0	12.0	0.52
6	120	14.5	3.5	14.5	0.55
8	200	17.5	4.5	17.5	0.60
10	335	20.5	5.0	20.5	0.80
12	515	24.5	5.5	24.5	0.87
14	605	27.0	6.0	27.0	0.66
16	805	30.0	6.5	30.0	0.70
18	980	32.0	7.0	32.0	0.75
20	1265	35.0	8.0	35.0	0.80
24	1905	40.5	9.0	40.5	0.89
30	3225	49.0	10.0	49.0	1.03
36	5740	60.0	19.5	60.0	1.15

Dimensions in inches. Weights in pounds.





45° REDUCING LATERAL WYES

SIZE	Wt.	A	B	C	T	T_1
4 x 3	65	12.0	3.0	12.0	0.52	0.48
6 x 4	105	14.5	3.5	14.5	0.55	0.52
8 x 4	165	17.5	4.5	17.5	0.60	0.52
8 x 6	175	17.5	4.5	17.5	0.60	0.55
10 x 4	235	20.5	5.0	20.5	0.68	0.52
10 x 6	250	20.5	5.0	20.5	0.68	0.55
10 x 8	270	20.5	5.0	20.5	0.68	0.60
12 x 4	350	24.5	5.5	24.5	0.75	0.52
12 x 6	365	24.5	5.5	24.5	0.75	0.55
12 x 8	390	24.5	5.5	24.5	0.75	0.60
12 x 10	470	24.5	5.5	24.5	0.75	0.68
14 x 6	475	27.0	6.0	27.0	0.66	0.55
14 x 8	500	27.0	6.0	27.0	0.66	0.60
14 x 10	525	27.0	6.0	27.0	0.66	0.68
14 x 12	570	27.0	6.0	27.0	0.66	0.75
16 x 6	620	30.0	6.5	30.0	0.70	0.55
16 x 8	645	30.0	6.5	30.0	0.70	0.60
16 x 10	675	30.0	6.5	30.0	0.70	0.68
16 x 12	715	30.0	6.5	30.0	0.70	0.75
16 x 14	755	30.0	6.5	30.0	0.70	0.66
18 x 8	780	32.0	7.0	32.0	0.75	0.60
18 x 10	810	32.0	7.0	32.0	0.75	0.68
18 x 12	850	32.0	7.0	32.0	0.75	0.75
18 x 14	885	32.0	7.0	32.0	0.75	0.66

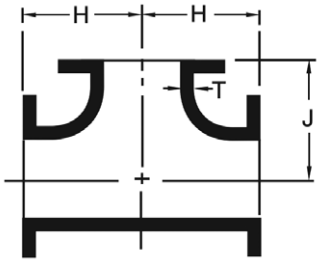
SIZE	Wt.	A	B	C	T	T_1
18 x 16	935	32.0	7.0	32.0	0.75	0.70
20 x 8	995	35.0	8.0	35.0	0.80	0.60
20 x 10	1025	35.0	8.0	35.0	0.80	0.68
20 x 12	1065	35.0	8.0	35.0	0.80	0.75
20 x 14	1110	35.0	8.0	35.0	0.80	0.66
20 x 16	1155	35.0	8.0	35.0	0.80	0.70
20 x 18	1315	35.0	8.0	35.0	0.80	0.75
24 x 8	1470	40.5	9.0	40.5	0.89	0.60
24 x 10	1505	40.5	9.0	40.5	0.89	0.68
24 x 12	1550	40.5	9.0	40.5	0.89	0.75
24 x 14	1590	40.5	9.0	40.5	0.89	0.66
24 x 16	1640	40.5	9.0	40.5	0.89	0.70
24 x 18	1685	40.5	9.0	40.5	0.89	0.75
24 x 20	1750	40.5	9.0	40.5	0.89	0.80
30 x 12	2795	49.0	10.0	49.0	1.03	0.75
30 x 14	2850	49.0	10.0	49.0	1.03	0.66
30 x 16	2905	49.0	10.0	49.0	1.03	0.70
30 x 18	2960	49.0	10.0	49.0	1.03	0.75
30 x 20	3040	49.0	10.0	49.0	1.03	0.80
30 x 24	3205	49.0	10.0	49.0	1.03	0.89
36 x 16	4455	54.0	15.3	54.0	1.15	0.70
36 x 18	4505	54.0	15.3	54.0	1.15	0.75
36 x 20	4575	54.0	15.3	54.0	1.15	0.80
36 x 24	4725	54.0	15.3	54.0	1.15	0.89

Dimensions in inches. Weights in pounds.

TEES

SIZE	Wt.	H	J	T
2	20	4.5	4.5	0.31
2-1/2	27	5.0	5.0	0.31
3	40	5.5	5.5	0.48
4	65	6.5	6.5	0.52
5	85	7.5	7.5	0.52
6	95	8.0	8.0	0.55
8	155	9.0	9.0	0.60
10	270	11.0	11.0	0.80
12	385	12.0	12.0	0.87
14	435	14.0	14.0	0.66
16	550	15.0	15.0	0.70
18	665	16.5	16.5	0.75
20	855	18.0	18.0	0.80
24	1330	22.0	22.0	0.89
30	2150	25.0	25.0	1.03
36	3160	28.0	28.0	1.15
42	5580	31.0	31.0	1.78
42 (150 psi)	4470	31.0	31.0	1.28

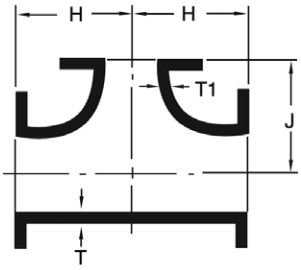
Dimensions in inches. Weights in pounds.



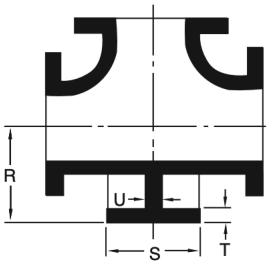
REDUCING TEES

SIZE	Wt.	H	J	T	T_1
3 x 2	35	5.5	5.5	0.48	0.31
3 x 2-1/2	37	5.5	5.5	0.48	0.31
4 x 2	50	6.5	6.5	0.52	0.31
4 x 2-1/2	55	6.5	6.5	0.52	0.31
4 x 3	60	6.5	6.5	0.52	0.48
5 x 4	80	7.5	7.5	0.52	0.52
6 x 2	85	8.0	8.0	0.55	0.31
6 x 2-1/2	85	8.0	8.0	0.55	0.31
6 x 3	85	8.0	8.0	0.55	0.48
6 x 4	90	8.0	8.0	0.55	0.52
6 x 5	95	8.0	8.0	0.55	0.52
8 x 3	135	9.0	9.0	0.60	0.48
8 x 4	140	9.0	9.0	0.60	0.52
8 x 6	145	9.0	9.0	0.60	0.55
10 x 3	200	11.0	11.0	0.68	0.48
10 x 4	205	11.0	11.0	0.68	0.52
10 x 6	215	11.0	11.0	0.68	0.55
10 x 8	225	11.0	11.0	0.68	0.60
12 x 3	280	12.0	12.0	0.75	0.48
12 x 4	290	12.0	12.0	0.75	0.52
12 x 6	295	12.0	12.0	0.75	0.55
12 x 8	310	12.0	12.0	0.75	0.60
12 x 10	360	12.0	12.0	0.87	0.80
14 x 4	365	14.0	14.0	0.66	0.52
14 x 6	375	14.0	14.0	0.66	0.55
14 x 8	390	14.0	14.0	0.66	0.60
14 x 10	400	14.0	14.0	0.66	0.68
14 x 12	425	14.0	14.0	0.66	0.75
16 x 4	440	15.0	15.0	0.70	0.52
16 x 6	465	15.0	15.0	0.70	0.55
16 x 8	475	15.0	15.0	0.70	0.60
16 x 10	495	15.0	15.0	0.70	0.68
16 x 12	520	15.0	15.0	0.70	0.75
16 x 14	530	15.0	15.0	0.70	0.66
18 x 6	480	13.0	15.5	0.75	0.55
18 x 8	495	13.0	15.5	0.75	0.60
18 x 10	510	13.0	15.5	0.75	0.68
18 x 12	535	13.0	15.5	0.75	0.75
18 x 14	630	16.5	16.5	0.75	0.66
18 x 16	650	16.5	16.5	0.75	0.70
20 x 6	610	14.0	17.0	0.80	0.55
20 x 8	620	14.0	17.0	0.80	0.60
20 x 10	635	14.0	17.0	0.80	0.68
20 x 12	660	14.0	17.0	0.80	0.75
20 x 14	665	14.0	17.0	0.80	0.66
20 x 16	810	18.0	18.0	0.80	0.70
20 x 18	820	18.0	18.0	0.80	0.75
24 x 6	845	15.0	19.0	0.89	0.55
24 x 8	860	15.0	19.0	0.89	0.60
24 x 10	880	15.0	19.0	0.89	0.68
24 x 12	890	15.0	19.0	0.89	0.75
24 x 14	900	15.0	19.0	0.89	0.66
24 x 16	915	15.0	19.0	0.89	0.70
24 x 18	1220	22.0	22.0	0.89	0.75
24 x 20	1255	22.0	22.0	0.89	0.80
30 x 6	1460	18.0	23.0	1.03	0.55
30 x 8	1470	18.0	23.0	1.03	0.60
30 x 10	1480	18.0	23.0	1.03	0.68
30 x 12	1490	18.0	23.0	1.03	0.75
30 x 14	1490	18.0	23.0	1.03	0.66
30 x 16	1505	18.0	23.0	1.03	0.70
30 x 18	1515	18.0	23.0	1.03	0.75
30 x 20	1540	18.0	23.0	1.03	0.80
30 x 24	2025	25.0	25.0	1.03	0.89
36 x 12	2170	20.0	26.0	1.15	0.75
36 x 14	2175	20.0	26.0	1.15	0.66
36 x 16	2185	20.0	26.0	1.15	0.70
36 x 18	2190	20.0	26.0	1.15	0.75
36 x 20	2210	20.0	26.0	1.15	0.80
36 x 24	2255	20.0	26.0	1.15	0.89
36 x 30	3000	28.0	28.0	1.15	1.03
42 x 12	3165	23.0	30.0	1.28	0.75
42 x 14	3170	23.0	30.0	1.28	0.66
42 x 16	3180	23.0	30.0	1.28	0.70
42 x 18	3185	23.0	30.0	1.28	0.75
42 x 20	3205	23.0	30.0	1.28	0.80
42 x 24	3245	23.0	30.0	1.28	0.89
42 x 30	4125	31.0	31.0	1.28	1.03
42 x 36	5360	31.0	31.0	1.78	1.58
48 x 12	4315	26.0	34.0	1.42	0.75
48 x 14	4315	26.0	34.0	1.42	0.66
48 x 16	4330	26.0	34.0	1.42	0.70
48 x 18	4330	26.0	34.0	1.42	0.75
48 x 20	4350	26.0	34.0	1.42	0.80
48 x 24	4385	26.0	34.0	1.42	0.89
48 x 30	4455	26.0	34.0	1.42	1.03

Dimensions in inches. Weights in pounds.



SPECIFICATIONS
TEES



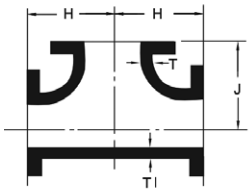
BASE TEES

SIZE	WEIGHT		R	S	T	U	BC
	Base Tee	Base Only					
3	45	5	4.88	5.00	0.56	0.50	3.88
4	75	10	5.50	6.00	0.62	0.50	4.75
6	110	15	7.00	7.00	0.69	0.62	5.50
8	185	30	8.38	9.00	0.94	0.88	7.50
10	300	30	9,75	9.00	0.94	0.88	7.50
12	430	45	11.25	11.00	1.00	1.00	9.50
14	485	50	12.50	11.00	1.00	1.00	9.50
16	600	50	13.75	11.00	1.00	1.00	9.50
18	740	75	15.00	13.50	1.12	1.12	11.75
20	930	75	16.00	13.50	1.12	1.12	11.75
24	1410	80	18.50	13.50	1.12	1.12	11.75
30	2270	120	23.00	16.00	1.19	1.15	14.25
36	3320	160	26.00	19.00	1.25	1.15	17.00
42	5850	270	30.00	23.50	1.44	1.28	21.25

Dimensions in inches. Weights in pounds.

BULLHEAD TEES

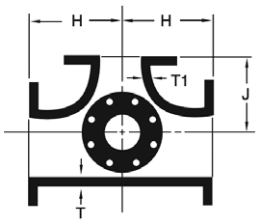
SIZE	Wt.	H	J	T_1	T
2-1/2 x 2-1/2 x 3	36	5.5	5.5	0.31	0.48
3 x 3 x 4	49	6.5	6.5	0.48	0.52
4 x 4 x 6	88	8.0	8.0	0.52	0.55
6 x 6 x 8	142	9.0	9.0	0.55	0.60
8 x 8 x 10	240	11.0	11.0	0.60	0.68
10 x 10 x 12	340	12.0	12.0	0.80	0.87
12 x 12 x 16	425	15.0	15.0	0.75	0.75
12 x 12 x 24	845	22.0	22.0	0.75	0.89
16 x 16 x 24	993	22.0	22.0	0.70	0.89



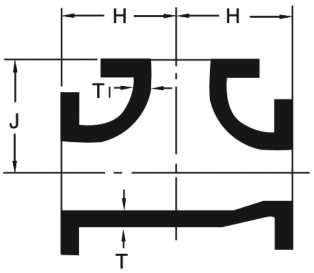
Dimensions in inches. Weights in pounds.

SIDE OUTLET TEES

SIZE	Wt.	H	J	T_1	T
4	82	6.5	6.5	0.52	0.52
6	135	8.0	8.0	0.55	0.55
8	210	9.0	9.0	0.60	0.60
10	330	11.0	11.0	0.68	0.80
12	470	12.0	12.0	0.75	0.87
14	650	14.0	14.0	0.66	0.66
16	850	15.0	15.0	0.70	0.70
18	1040	16.5	16.5	0.75	0.75
20	1330	18.0	18.0	0.80	0.80
24	2080	22.0	22.0	0.89	0.89



Dimensions in inches. Weights in pounds.

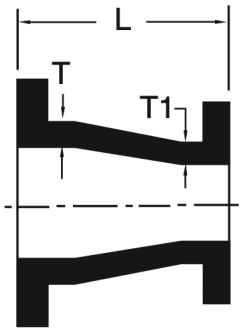


REDUCING TEES ON RUN

SIZE	Wt.	H	J	T	T_1
4 x 2 x 4	50	6.5	6.5	0.52	0.48
4 x 3 x 3	53	6.5	6.5	0.52	0.48
4 x 3 x 4	55	6.5	6.5	0.52	0.52
6 x 3 x 4	85	8.0	8.0	0.55	0.52
6 x 3 x 6	91	8.0	8.0	0.55	0.55
6 x 4 x 3	86	8.0	8.0	0.55	0.48
6 x 4 x 4	90	8.0	8.0	0.55	0.52
6 x 4 x 6	95	8.0	8.0	0.55	0.52
8 x 4 x 6	140	9.0	9.0	0.60	0.55
8 x 4 x 8	135	9.0	9.0	0.60	0.60
8 x 6 x 4	125	9.0	9.0	0.60	0.55
8 x 6 x 6	145	9.0	9.0	0.60	0.55
8 x 6 x 8	160	9.0	9.0	0.60	0.55
10 x 6 x 10	234	11.0	11.0	0.80	0.80
10 x 8 x 6	210	11.0	11.0	0.80	0.55
10 x 8 x 8	227	11.0	11.0	0.80	0.60
10 x 8 x 10	248	11.0	11.0	0.80	0.80
12 x 6 x 12	300	12.0	12.0	0.87	0.80
12 x 8 x 8	275	12.0	12.0	0.87	0.80
12 x 8 x 12	310	12.0	12.0	0.75	0.60
12 x 10 x 10	325	12.0	12.0	0.87	0.80
12 x 10 x 12	350	12.0	12.0	0.87	0.87
14 x 10 x 10	380	14.0	14.0	0.66	0.68
14 x 10 x 12	400	14.0	14.0	0.66	0.68
14 x 10 x 14	425	14.0	14.0	0.66	0.68
16 x 10 x 10	490	15.0	15.0	0.70	0.68
16 x 12 x 12	525	14.0	14.0	0.70	0.66
16 x 12 x 16	600	15.0	15.0	0.70	0.75
16 x 14 x 16	630	14.0	14.0	0.70	0.66
20 x 12 x 20	660	18.0	18.0	0.80	0.75
20 x 14 x 20	680	18.0	18.0	0.80	0.66
24 x 16 x 24	915	22.0	22.0	0.89	0.70
36 x 24 x 36	2255	28.0	28.0	1.15	0.89

Dimensions in inches. Weights in pounds.

SPECIFICATIONS
CONCENTRIC REDUCERS



CONCENTRIC REDUCERS

SIZE	Wt.	L	T	T_1
2-1/2 x 2	14	5.5	0.31	0.31
3 x 2	16	6.0	0.48	0.31
3 x 2-1/2	20	6.0	0.48	0.31
4 x 2	25	7.0	0.52	0.31
4 x 2-1/2	28	7.0	0.52	0.31
4 x 3	30	7.0	0.52	0.48
5 x 3	38	8.0	0.52	0.48
5 x 4	40	8.0	0.52	0.52
6 x 2	35	9.0	0.55	0.31
6 x 2-1/2	38	9.0	0.55	0.31
6 x 3	40	9.0	0.55	0.48
6 x 4	45	9.0	0.55	0.52
6 x 5	50	9.0	0.55	0.52
8 x 3	60	11.0	0.60	0.48
8 x 4	65	11.0	0.60	0.52
8 x 5	70	11.0	0.60	0.52
8 x 6	75	11.0	0.60	0.55
10 x 4	85	12.0	0.68	0.52
10 x 5	88	12.0	0.68	0.52
10 x 6	90	12.0	0.68	0.55
10 x 8	110	12.0	0.68	0.60
12 x 4	120	14.0	0.75	0.52
12 x 6	130	14.0	0.75	0.55
12 x 8	145	14.0	0.75	0.60
12 x 10	170	14.0	0.75	0.68
14 x 4	150	16.0	0.66	0.52
14 x 6	155	16.0	0.66	0.55
14 x 8	175	16.0	0.66	0.60
14 x 10	190	16.0	0.66	0.68
14 x 12	220	16.0	0.66	0.75
16 x 4	180	18.0	0.70	0.52
16 x 6	190	18.0	0.70	0.55
16 x 8	210	18.0	0.70	0.60
16 x 10	235	18.0	0.70	0.68
16 x 12	265	18.0	0.70	0.75
16 x 14	280	18.0	0.70	0.66
18 x 6	230	19.0	0.75	0.55
18 x 8	240	19.0	0.75	0.60
18 x 10	265	19.0	0.75	0.68
18 x 12	295	19.0	0.75	0.75
18 x 14	310	19.0	0.75	0.66
18 x 16	340	19.0	0.75	0.70
20 x 6	300	20.0	0.80	0.55
20 x 8	305	20.0	0.80	0.60
20 x 10	310	20.0	0.80	0.68
20 x 12	345	20.0	0.80	0.75
20 x 14	355	20.0	0.80	0.66
20 x 16	390	20.0	0.80	0.70
20 x 18	410	20.0	0.80	0.75
24 x 8	460	24.0	0.89	0.60
24 x 10	470	24.0	0.89	0.68
24 x 12	480	24.0	0.89	0.75
24 x 14	490	24.0	0.89	0.66
24 x 16	525	24.0	0.89	0.70
24 x 18	550	24.0	0.89	0.75
24 x 20	590	24.0	0.89	0.80
30 x 18	810	30.0	1.03	0.75
30 x 20	870	30.0	1.03	0.80
30 x 24	970	30.0	1.03	0.89
36 x 20	1230	36.0	1.15	0.80
36 x 24	1345	36.0	1.15	0.89
36 x 30	1555	36.0	1.15	1.03
42 x 24	1820	42.0	1.28	0.89
42 x 30	2060	42.0	1.28	1.03
42 x 36	2345	42.0	1.28	1.15
48 x 30	2625	48.0	1.42	1.03
48 x 36	2950	48.0	1.42	1.15
48 x 42	3320	48.0	1.42	1.28

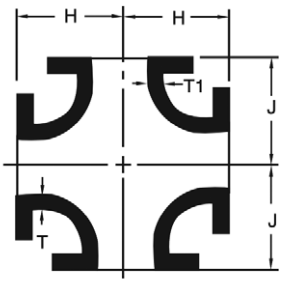
Dimensions in inches. Weights in pounds.

SPECIFICATIONS
CROSSES

REDUCING CROSSES

SIZE	Wt.	H	J	T	T_1
3 x 2	45	5.5	5.5	0.48	0.31
4 x 2	60	6.5	6.5	0.52	0.31
4 x 2-1/2	65	6.5	6.5	0.52	0.31
4 x 3	70	6.5	6.5	0.52	0.48
6 x 2	90	8.0	8.0	0.55	0.31
6 x 3	95	8.0	8.0	0.55	0.48
6 x 4	110	8.0	8.0	0.55	0.52
8 x 4	155	9.0	9.0	0.60	0.52
8 x 6	165	9.0	9.0	0.60	0.55
10 x 4	220	11.0	11.0	0.68	0.52
10 x 6	240	11.0	11.0	0.68	0.55
10 x 8	265	11.0	11.0	0.68	0.60
12 x 4	310	12.0	12.0	0.75	0.52
12 x 6	320	12.0	12.0	0.75	0.55
12 x 8	345	12.0	12.0	0.75	0.60
12 x 10	415	12.0	12.0	0.87	0.80
14 x 6	400	14.0	14.0	0.66	0.55
14 x 8	425	14.0	14.0	0.66	0.60
14 x 10	460	14.0	14.0	0.66	0.68
14 x 12	505	14.0	14.0	0.66	0.75
16 x 6	490	15.0	15.0	0.70	0.55
16 x 8	520	15.0	15.0	0.70	0.60
16 x 10	555	15.0	15.0	0.70	0.68
16 x 12	605	15.0	15.0	0.70	0.75
16 x 14	620	15.0	15.0	0.70	0.66
18 x 6	505	13.0	15.5	0.75	0.55
18 x 8	535	13.0	15.5	0.75	0.60
18 x 10	560	13.0	15.5	0.75	0.68
18 x 12	610	13.0	15.5	0.75	0.75
18 x 14	720	16.5	16.5	0.75	0.66
18 x 16	765	16.5	16.5	0.75	0.70
20 x 6	635	14.0	17.0	0.80	0.55
20 x 8	665	14.0	17.0	0.80	0.60
20 x 10	685	14.0	17.0	0.80	0.68
20 x 12	735	14.0	17.0	0.80	0.75
20 x 14	745	14.0	17.0	0.80	0.66
20 x 16	915	18.0	18.0	0.80	0.70
20 x 18	945	18.0	18.0	0.80	0.75
24 x 6	875	15.0	19.0	0.89	0.55
24 x 8	895	15.0	19.0	0.89	0.60
24 x 10	930	15.0	19.0	0.89	0.68
24 x 12	960	15.0	19.0	0.89	0.75
24 x 14	975	15.0	19.0	0.89	0.66
24 x 16	1010	15.0	19.0	0.89	0.70
24 x 18	1365	22.0	22.0	0.89	0.75
24 x 20	1430	22.0	22.0	0.89	0.80
30 x 12	1565	18.0	23.0	1.03	0.75
30 x 14	1570	18.0	23.0	1.03	0.66
30 x 16	1605	18.0	23.0	1.03	0.70
30 x 18	1615	18.0	23.0	1.03	0.75
30 x 20	1670	18.0	23.0	1.03	0.80
30 x 24	2245	25.0	25.0	1.03	0.89
36 x 12	2240	20.0	26.0	1.15	0.75
36 x 14	2240	20.0	26.0	1.15	0.66
36 x 16	2270	20.0	26.0	1.15	0.70
36 x 18	2280	20.0	26.0	1.15	0.75
36 x 20	2325	20.0	26.0	1.15	0.80
36 x 24	2405	20.0	26.0	1.15	0.89
36 x 30	3300	28.0	28.0	1.15	1.03
42 x 12	3240	23.0	30.0	1.28	0.75
42 x 16	3270	23.0	30.0	1.28	0.70
42 x 18	3275	23.0	30.0	1.28	0.75
42 x 20	3320	23.0	30.0	1.28	0.80
42 x 24	3395	23.0	30.0	1.28	0.89
42 x 30	4375	31.0	31.0	1.28	1.03
42 x 36	5720	31.0	31.0	1.78	1.58
48 x 10	4350	34.0	26.0	1.42	0.68
48 x 12	4390	34.0	26.0	1.42	0.75
48 x 14	4385	34.0	26.0	1.42	0.66
48 x 16	4415	34.0	26.0	1.42	0.70
48 x 18	4420	34.0	26.0	1.42	0.75
48 x 20	4460	34.0	26.0	1.42	0.80
48 x 24	4535	34.0	26.0	1.42	0.89
48 x 30	4670	34.0	26.0	1.42	1.03

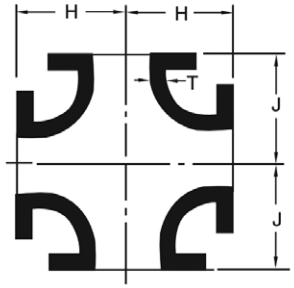
Dimensions in inches. Weights in pounds.

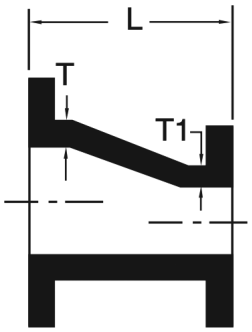


CROSSES

SIZE	Wt.	H	J	T
2	30	4.5	4.5	0.31
2-1/2	41	5.0	5.0	0.31
3	50	5.5	5.5	0.48
4	80	6.5	6.5	0.52
6	120	8.0	8.0	0.55
8	195	9.0	9.0	0.60
10	330	11.0	11.0	0.80
12	460	12.0	12.0	0.87
14	530	14.0	14.0	0.66
16	665	15.0	15.0	0.70
18	795	16.5	16.5	0.75
20	1015	18.0	18.0	0.80
24	1570	22.0	22.0	0.89
30	2500	25.0	25.0	1.03
36	3620	28.0	28.0	1.15
42 (150 psi)	5060	31.0	31.0	1.28

Dimensions in inches. Weights in pounds.





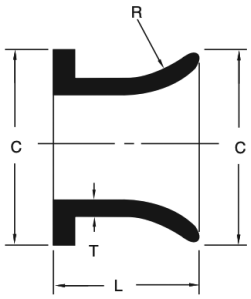
ECCENTRIC REDUCERS

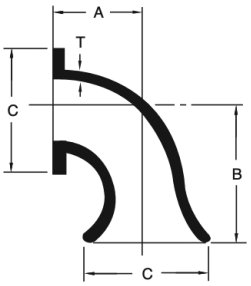
SIZE	Wt.	L	T	T_1
3 x 2	16	6.0	0.48	0.31
3 x 2-1/2	20	6.0	0.48	0.31
4 x 2	26	7.0	0.52	0.31
4 x 2-1/2	28	7.0	0.52	0.31
4 x 3	30	7.0	0.52	0.48
6 x 2	35	9.0	0.55	0.31
6 x 2-1/2	38	9.0	0.55	0.31
6 x 3	40	9.0	0.55	0.48
6 x 4	45	9.0	0.55	0.52
6 x 5	50	9.0	0.55	0.52
8 x 4	65	11.0	0.60	0.52
8 x 5	70	11.0	0.60	0.52
8 x 6	75	11.0	0.60	0.55
10 x 4	85	12.0	0.68	0.52
10 x 6	90	12.0	0.68	0.55
10 x 8	110	12.0	0.68	0.60
12 x 4	120	14.0	0.75	0.52
12 x 6	130	14.0	0.75	0.55
12 x 8	145	14.0	0.75	0.60
12 x 10	170	14.0	0.75	0.68
14 x 6	155	16.0	0.66	0.55
14 x 8	175	16.0	0.66	0.60
14 x 10	190	16.0	0.66	0.68
14 x 12	220	16.0	0.66	0.75
16 x 6	190	18.0	0.70	0.55
16 x 8	210	18.0	0.70	0.60
16 x 10	235	18.0	0.70	0.68
16 x 12	265	18.0	0.70	0.75
16 x 14	280	18.0	0.70	0.86

SIZE	Wt.	L	T	T_1
18 x 8	240	19.0	0.75	0.60
18 x 10	265	19.0	0.75	0.68
18 x 12	295	19.0	0.75	0.75
18 x 14	310	19.0	0.75	0.66
18 x 16	340	19.0	0.75	0.70
20 x 10	310	20.0	0.80	0.68
20 x 12	345	20.0	0.80	0.75
20 x 14	355	20.0	0.80	0.66
20 x 16	390	20.0	0.80	0.70
20 x 18	410	20.0	0.80	0.75
24 x 12	480	24.0	0.89	0.75
24 x 14	490	24.0	0.89	0.66
24 x 16	525	24.0	0.89	0.70
24 x 18	550	24.0	0.89	0.75
24 x 20	590	24.0	0.89	0.80
30 x 18	810	30.0	1.03	0.75
30 x 20	870	30.0	1.03	0.80
30 x 24	970	30.0	1.03	0.89
36 x 18	1200	36.0	1.15	0.75
36 x 20	1230	36.0	1.15	0.80
36 x 24	1345	36.0	1.15	0.89
36 x 30	1555	36.0	1.15	1.03
42 x 24	1820	42.0	1.28	0.89
42 x 30	2060	42.0	1.28	1.03
42 x 36	2345	42.0	1.28	1.15
48 x 30	2625	48.0	1.42	1.03
48 x 36	2950	48.0	1.42	1.15
48 x 42	3320	48.0	1.42	1.28

Dimensions in inches. Weights in pounds.

SPECIFICATIONS
STRAIGHT FLARE PIECES & FLARE BENDS





STRAIGHT FLARE PIECES

SIZE	Wt.	T	C	L	R
3	20	0.40	7.50	8	6
4	30	0.40	9.00	8	6
6	40	0.45	11.00	8	6
8	70	0.53	13.50	10	8
10	95	0.55	16.00	10	10
12	155	0.60	19.00	12	12
14	165	0.65	21.00	12	14
16	240	0.70	23.50	16	16
18	275	0.75	25.00	16	18
20	355	0.80	27.50	18	20
24	480	0.90	32.00	18	24
30	1100	1.07	38.75	24	30
36	1460	1.19	46.00	24	36
42	1900	1.28	53.00	30	42
48	2375	1.42	59.50	18	48

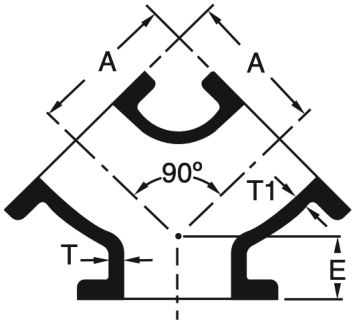
Dimensions in inches. Weights in pounds.

90° FLARE BENDS

SIZE	Wt.	T	C	A	B
3	25	0.40	7.50	5.5	11
4	40	0.40	9.00	6.5	12
6	70	0.45	11.00	8.0	12
8	110	0.53	13.50	9.0	14
10	175	0.55	16.00	11.0	17
12	245	0.60	19.00	12.0	18
14	340	0.65	21.00	14.0	20
16	460	0.70	23.50	15.0	21
18	560	0.75	25.00	16.5	22.5
20	700	0.80	27.50	18.0	24
24	1100	0.90	32.00	22.0	28
30	1840	1.07	38.75	25.0	32
36	2700	1.19	46.00	28.0	35
42	3250	1.28	53.00	31.0	38
48	4425	1.42	59.50	34.0	41

Dimensions in inches. Weights in pounds.

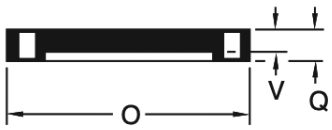
SPECIFICATIONS
TRUE WYES & BLIND FLANGES



TRUE WYES

SIZE	Wt.	T	T_1	A	E
4	55	0.52	0.52	6.5	3.0
6	85	0.55	0.55	8.0	3.5
8	140	0.60	0.60	9.0	4.5
10	205	0.68	0.68	11.0	5.0
12	300	0.75	0.75	12.0	5.5
14	435	0.66	0.66	14.0	6.0

Dimensions in inches. Weights in pounds.

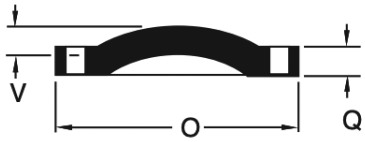


10" and smaller

FLAT BLIND FLANGES

SIZE	Wt.	O	Q	V
12	85	19.0	1.25	1.25
14	120	21.0	1.38	1.38
16	155	23.5	1.44	1.44
18	190	25.0	1.56	1.56
20	250	27.5	1.69	1.69
24	380	32.0	1.88	1.88

Dimensions in inches. Weights in pounds.



12" and larger

BLIND FLANGES*

SIZE	Wt.	O	Q	V
3	9	7.50	0.75	0.69
4	16	9.00	0.94	0.88
6	25	11.00	1.00	0.94
8	42	13.50	1.12	1.06
10	63	16.00	1.19	1.12
12	85	19.00	1.25	0.81
14	120	21.00	1.38	0.88
16	145	23.50	1.44	1.00
18	185	25.00	1.56	1.06
20	245	27.50	1.69	1.12
24	370	32.00	1.88	1.25
30	500	38.75	2.12	1.44
36	790	46.00	2.38	1.62
42	1175	53.00	2.62	1.81

Dimensions in inches. Weights in pounds.

*Blind Flanges can be provided tapped according to customer's requirement.

BLIND FLANGES with 2" TAP

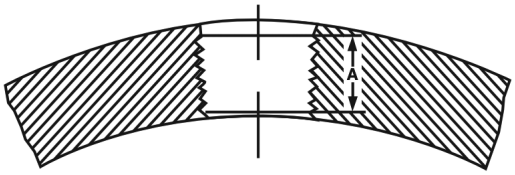
SIZE	Wt.	O	Q	V
3	9	7.50	0.75	0.69
4	16	9.00	0.94	0.88
6	25	11.00	1.00	0.94
8	42	13.50	1.12	1.06
10	63	16.00	1.19	1.12
12	85	19.00	1.25	0.81
14	120	21.00	1.38	0.88
16	145	23.50	1.44	1.00
18	185	25.00	1.56	1.06
20	245	27.50	1.69	1.12
24	370	32.00	1.88	1.25
30	500	38.75	2.12	1.44
36	790	46.00	2.38	1.62
42	1175	53.00	2.62	1.81

Dimensions in inches. Weights in pounds.

SPECIFICATIONS
TAPS & BOSSES

TAPS & BOSSES

Flanged Fittings may be drilled and tapped if the fitting wall thickness will provide the effective thread length as shown in the following table.



DRAIN TAPPINGS

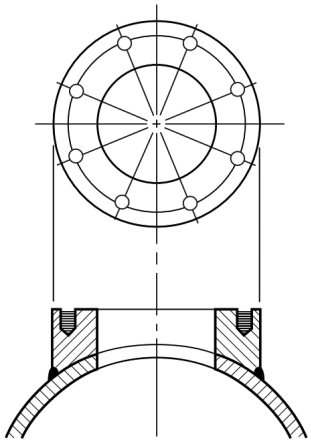
TAP SIZE	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
LENGTH of THREAD "A"	0.41"	0.53"	0.55"	0.68"	0.71"	0.72"	0.76"

These lengths are in accordance with the effective thread length as required in ANSI B2.1. If the tap size is too large to be accommodated by the standard fitting wall thickness, an integrally cast boss may be required to provide the necessary thickness for tapping.

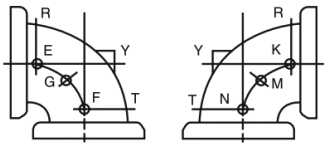
The following will serve as a guideline for maximum tap sizes into standard fitting wall thicknesses for ANSI/AWWA C110/A21.10 Flanged Fittings:

FITTING SIZE	MAXIMUM TAP SIZE without BOSS
3"	1/2"
4" - 6"	3/4"
8"	1-1/4"
10" - 16"	1-1/2"
18" x 42"	2"

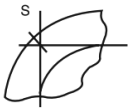
To accommodate larger size holes that are impractical to thread, it may be necessary to integrally cast a flanged boss to the fitting. In this case, a boss the size of a flange shall be integrally cast. The hole shall be cored or drilled at our option. The flange boss shall be faced and the bolt holes drilled and blind tapped so as not to interfere with the fitting wall thickness.



METHODS OF DESIGNATING LOCATION OF TAPPED HOLES FOR DRAINS WHEN SPECIFIED



90° ELBOW
STRAIGHT SIZE



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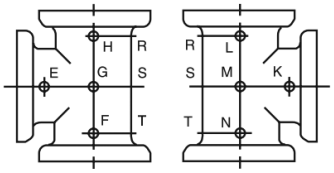
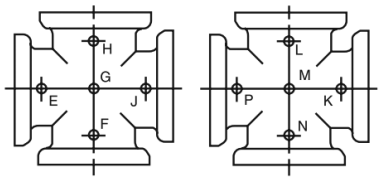
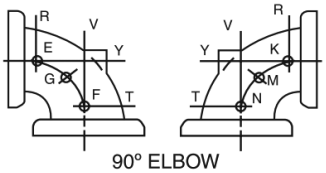


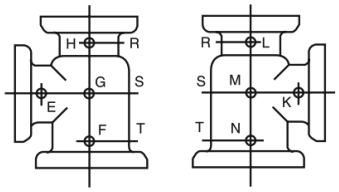
TEE
STRAIGHT SIZE



CROSS
STRAIGHT SIZE



90° ELBOW
REDUCING SIZE



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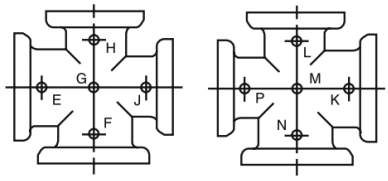
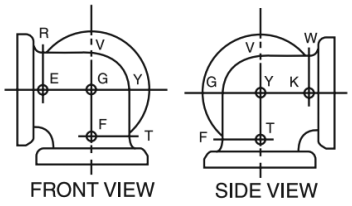
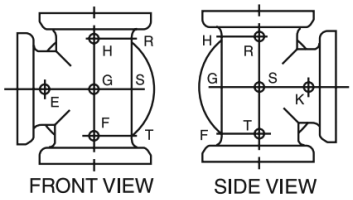


CROSS
REDUCING SIZE



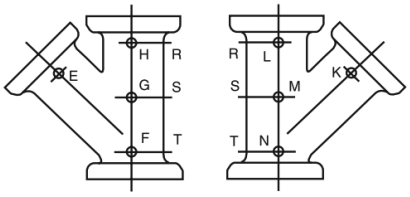
FRONT VIEW SIDE VIEW

SIDE OUTLET 90° ELBOW
STRAIGHT SIZE

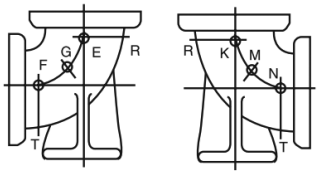


FRONT VIEW SIDE VIEW

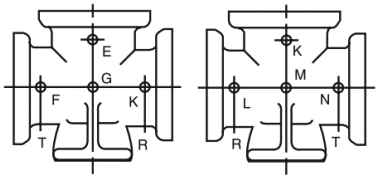
SIDE OUTLET TEE
STRAIGHT SIZE



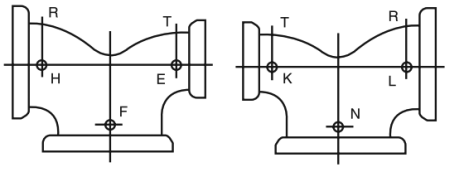
45° LATERAL
STRAIGHT SIZE



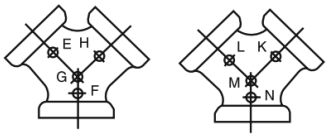
90° BASE ELBOW



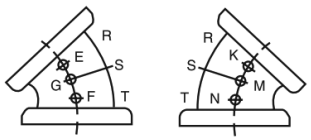
BASE TEE



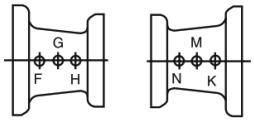
DOUBLE BRANCH ELBOW



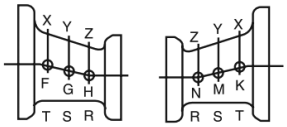
TRUE "Y"



45° ELBOW



REDUCER



ECCENTRIC REDUCER

NOTES

NOTES

U.S. Pipe, A Quikrete® Company, is the leading manufacturer and a principal supplier of highly engineered ductile iron pipe and fabrication in the United States and Canada. Providing custom solutions to owners, engineers and contractors for even the most demanding applications, including water transmission and distribution lines, plant piping, intake and outfall lines, and other diverse applications.

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