



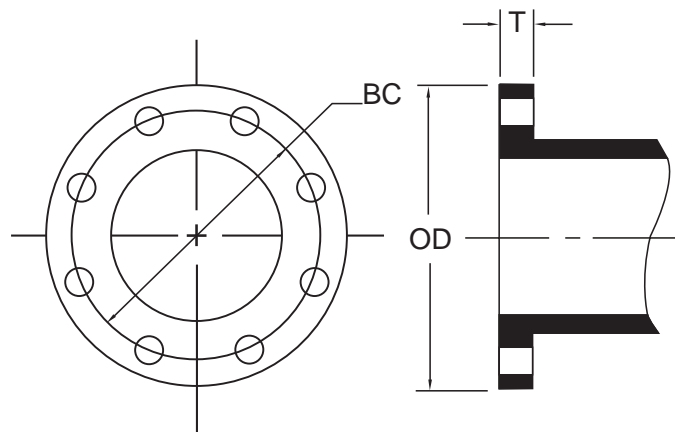
Griffin Pipe Products Co.

Ductile and
Cast Iron
Flanged
Fittings
2" - 36"



Ductile and Cast Iron Flanged Fittings

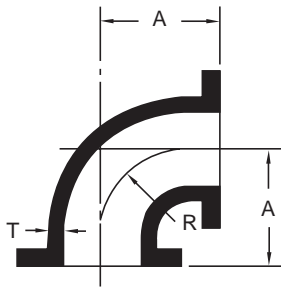
- All Griffin Pipe Flanged Fittings are 100% hydrostatically tested at 1.5 times rated working pressure.
- Griffin Pipe Flanged Fittings are suitable for both waterworks and industrial applications and are manufactured in accordance to ANSI/AWWA C110/A21-10.
- All flanges manufactured to AWWA C110 standards conform to the drilling and facing of ANSI specification B16.1 class 125.
- 2" - 12" fittings are listed by Underwriter Laboratories for fire protection service.
- Unless otherwise specified, Griffin Pipe furnished flanged fittings cement lined and tar coated inside in accordance to ANSI/AWWA C104/A21.4 and prime coated outside.
- Griffin Pipe can also provide bare fittings for special coatings.
- Fitting sizes 2" - 12" are adequate for water pressure of 250 PSI. In cast or ductile Iron.
- Fittings sizes 14" - 36" are adequate for water pressure of 150 PSI. In cast iron.
- Fittings sizes 14" - 36" are adequate for water pressure of 250 PSI in ductile iron.



Size	OD	BC	T	Hole Dia.	Bolt Size	No. Bolts
2	6.00	4.75	.62	.75	5/8 x 2-1/4	4
2-1/2	7.00	5.50	.69	.75	5/8 x 2-1/2	4
3	7.50	6.00	.75	.75	5/8 x 2-1/2	4
4	9.00	7.50	.94	.75	5/8 x 3	8
5	10.00	8.50	.94	.88	3/4 x 3	8
6	11.00	9.50	1.00	.88	3/4 x 3-1/2	8
8	13.50	11.75	1.12	.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

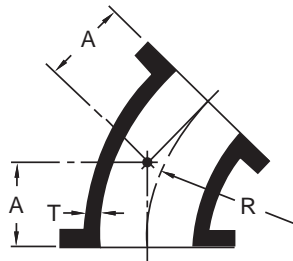
ANSI/AWWA C110/A21.10

Ductile and Cast Iron Flanged Fittings



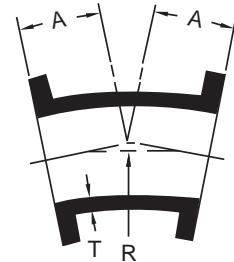
BENDS, 1/4 (90 DEG)

Size	Wt.	A	R	T
2	14	4.5	3.0	.31
2-1/2	22	5.0	3.5	.31
3	25	5.5	4.0	.48
4	45	6.5	4.5	.52
5	52	7.5	5.5	.52
6	65	8.0	6.0	.55
8	105	9.0	7.0	.60
10	165	11.0	9.0	.80
12	235	12.0	10.0	.87
14	290	14.0	11.5	.66
16	370	15.0	12.5	.70
18	450	16.5	14.0	.75
20	580	18.0	15.5	.80
24	900	22.0	18.5	.89
30	1430	25.0	21.5	1.03
36	2135	28.5	24.5	1.15



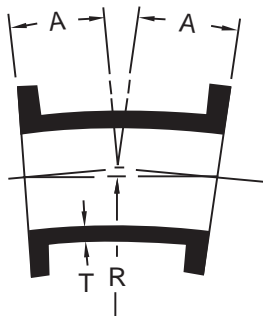
BENDS, 1/8 (45 DEG)

Size	Wt.	A	R	T
2	12	2.5	2.41	.31
2-1/2	18	3.0	3.02	.31
3	20	3.0	3.62	.48
4	40	4.0	4.81	.52
5	45	4.5	6.04	.52
6	55	5.0	7.25	.55
8	90	5.5	8.44	.60
10	130	6.5	10.88	.80
12	195	7.5	13.25	.87
14	220	7.5	12.06	.66
16	280	8.0	13.25	.70
18	325	8.5	14.50	.75
20	430	9.5	16.88	.80
24	630	11.0	18.12	.89
30	1120	15.0	27.75	1.03
36	1735	18.0	35.00	1.15



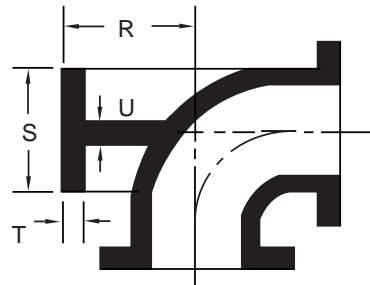
BENDS, 1/16 (22-1/2 DEG)

Size	Wt.	A	R	T
2	12	2.5	6.04	.31
2-1/2	18	3.0	6.80	.31
3	20	3.0	7.56	.48
4	40	4.0	10.06	.52
5	45	4.5	10.86	.52
6	55	5.0	15.06	.55
8	90	5.5	17.62	.60
10	135	6.5	22.62	.80
12	205	7.5	27.62	.87
14	225	7.5	25.12	.66
16	285	8.0	27.62	.70
18	335	8.5	30.19	.75
20	435	9.5	35.19	.80
24	640	11.0	37.69	.89
30	1135	15.0	57.81	1.03
36	1755	18.0	72.88	1.15



BENDS, 1/32 (11-1/4 DEG)

Size	Wt.	A	R	T
2	12	2.5	12.69	.31
3	20	3.0	15.25	.48
4	40	4.0	20.31	.52
5	45	4.5	22.85	.52
6	55	5.0	30.50	.55
8	90	5.5	35.50	.60
10	135	6.5	45.69	.80
12	205	7.5	55.81	.87
14	225	7.5	50.75	.66
16	285	8.0	55.81	.70
18	335	8.5	60.94	.75
20	435	9.5	71.06	.80
24	640	11.0	76.12	.89
30	1135	15.0	116.75	1.03
36	1755	18.0	147.25	1.15



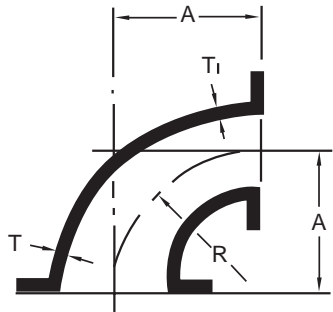
BASE BENDS

Size	Weight		R	S	T	U	BC
	Base Bend	Base Only					
3	35	10	4.88	5.00	.56	.60	3.88
4	55	10	5.50	6.00	.62	.50	4.75
6	85	20	7.00	7.00	.69	.62	5.50
8	145	40	8.38	9.00	.94	.88	7.50
10	210	45	9.75	9.00	.94	.86	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	585	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

ANSI/AWWA C110/A21.10

Dimensions in inches.
Weights in Pounds.

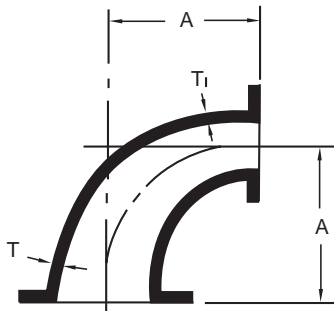
Ductile and Cast Iron Flanged Fittings



REDUCING 90 DEG. BENDS

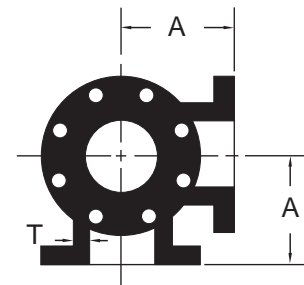
Size	Wt.	A	R	T	T1
3 x 2	22	5.5	4.0	.48	.31
4 x 3	29	6.6	4.5	.52	.48
6 x 3	45	8.0	6.0	.55	.48
6 x 4	55	8.0	6.0	.55	.52
6 x 5	65	8.0	6.0	.55	.52
8 x 4	75	9.0	7.0	.60	.52
8 x 5	80	9.0	7.0	.60	.52
8 x 6	85	9.0	7.0	.60	.55
10 x 4	110	11.0	9.0	.68	.52
10 x 6	135	11.0	9.0	.68	.55
10 x 8	150	11.0	9.0	.68	.60
12 x 4	140	12.0	10.0	.75	.52
12 x 6	160	12.0	10.0	.75	.55
12 x 8	180	12.0	10.0	.75	.60
12 x 10	210	12.0	10.0	.75	.68
14 x 6	144	14.0	11.5	.66	.55
14 x 8	200	14.0	11.5	.66	.60
14 x 10	240	14.0	11.5	.66	.88
14 x 12	270	14.0	11.5	.66	.75
16 x 6	220	15.0	12.5	.70	.55
16 x 8	240	15.0	12.5	.70	.60
16 x 10	280	15.0	12.5	.70	.68
16 x 12	310	15.0	12.5	.70	.75
16 x 14	330	15.0	12.5	.70	.66
18 x 6	260	18.5	14.0	.75	.55
18 x 8	280	16.5	14.0	.75	.60
18 x 10	320	16.5	14.0	.75	.68
18 x 12	350	16.5	14.0	.75	.75
18 x 14	370	16.5	14.0	.75	.66

Size	Wt.	A	R	T	T1
18 x 16	410	16.5	14.0	.75	.70
20 x 6	320	18.0	15.5	.80	.55
20 x 8	345	18.0	15.5	.80	.60
20 x 10	385	18.0	15.5	.80	.68
20 x 12	415	18.0	15.5	.80	.75
20 x 14	435	18.0	15.5	.80	.66
20 x 16	475	18.0	15.5	.80	.70
20 x 18	515	18.0	15.5	.80	.75
24 x 6	480	22.0	18.5	.89	.55
24 x 8	505	22.0	18.5	.89	.60
24 x 10	545	22.0	18.5	.89	.68
24 x 12	575	22.0	18.5	.89	.75
24 x 14	595	22.0	18.5	.89	.68
24 x 16	635	22.0	18.5	.89	.70
24 x 18	675	22.0	18.5	.89	.75
24 x 20	740	22.0	18.5	.89	.80
30 x 12	840	25.0	21.5	1.03	.75
30 x 14	860	25.0	21.5	1.03	.66
30 x 16	900	25.0	21.5	1.03	.70
30 x 18	940	25.0	21.5	1.03	.75
30 x 20	1005	25.0	21.5	1.03	.80
30 x 24	1165	25.0	21.5	1.03	.89
36 x 12	1195	28.0	24.5	1.15	.75
36 x 14	1215	28.0	24.5	1.15	.66
36 x 16	1255	28.0	24.5	1.15	.70
36 x 18	1295	28.0	24.5	1.15	.76
36 x 20	1360	28.0	24.5	1.15	.80
36 x 24	1520	28.0	24.5	1.15	.89
36 x 30	1785	28.0	24.5	1.15	1.03



LONG RADIUS REDUCING BENDS

Size	Wt.	A	T	T1
4 x 3	32	9.0	.52	.48
6 x 4	61	11.5	.55	.52
8 x 6	110	14.0	.60	.55



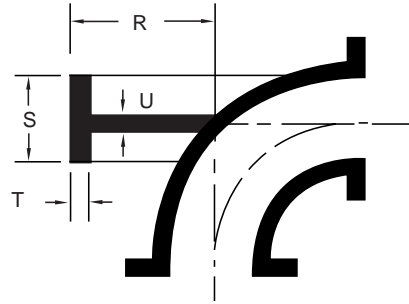
SIDE OUTLET BENDS

Size	Wt.	A	T
4	60	6.5	.50
6	96	8.0	.55
8	150	9.0	.60
10	235	11.0	.68
12	335	12.0	.80

ANSI/AWWA C110/A21.10

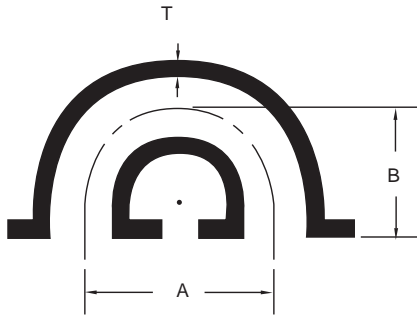
Dimensions in inches.
Weights in Pounds.

Ductile and Cast Iron Flanged Fittings



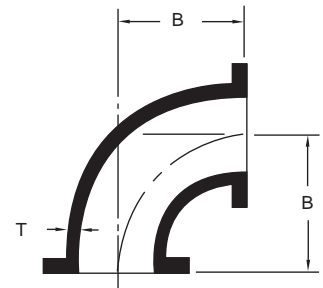
LONG RADIUS BASE BENDS

Size	Weight		R	S	T	U	BC
	Base Bend	Base Only					
3	48	18	4.88	5.0	.56	.50	3.88
4	73	23	5.50	6.0	.62	.50	4.75
6	120	40	7.00	7.0	.69	.62	5.50
8	205	65	8.38	9.0	.94	.88	7.50
10	295	80	9.75	9.0	.94	.88	7.50
12	435	110	11.25	11.0	1.00	1.00	9.50



RETURN BENDS

Size	Wt.	A	B	T
4	60	10	6.5	.52
6	95	12	8.0	.55
8	165	18	9.0	.60
10	260	20	11.0	.68
12	395	24	12.0	.75



LONG RADIUS BENDS

Size	Wt.	B	T
2	20	6.50	.31
3	30	7.75	.48
4	50	9.00	.52
5	65	10.25	.52
6	80	11.50	.55
8	140	14.00	.60
10	215	16.50	.68
12	325	19.00	.75
14	385	21.50	.66
16	505	24.00	.70
18	630	26.50	.75
20	810	29.00	.80
24	1240	34.00	.89

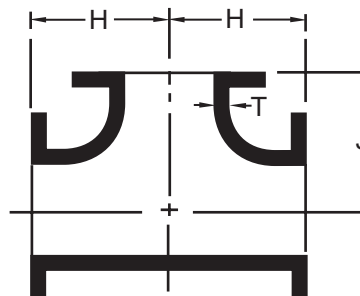
ANSI/AWWA C110/A21.10

Dimensions in inches.
Weights in Pounds.

Ductile and Cast Iron Flanged Fittings

TEES

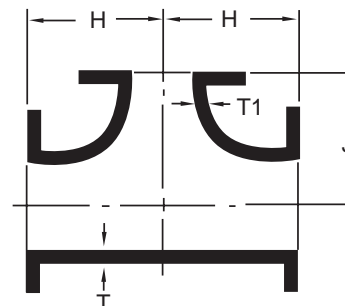
Size	Wt.	H	J	T
2	20	4.5	4.5	.31
2-1/2	27	5.0	5.0	.31
3	40	5.5	5.5	.48
4	65	6.5	6.5	.52
5	85	7.5	7.5	.52
6	95	8.0	8.0	.55
8	155	9.0	9.0	.60
10	270	11.0	11.0	.80
12	385	12.0	12.0	.87
14	435	14.0	14.0	.66
16	550	15.0	15.0	.70
18	665	16.5	16.5	.75
20	855	18.0	18.0	.80
24	1330	22.0	22.0	.89
30	2150	25.0	25.0	1.03
36	3160	28.0	28.0	1.15



REDUCING TEES

Size	WT.	H	J	T	T1
3x2	35	5.5	5.5	.48	.31
3x2-1/2	37	5.5	5.5	.48	.31
4x2	50	6.5	6.5	.52	.31
4x2-1/2	55	6.5	6.5	.52	.31
4x3	60	6.5	6.5	.52	.48
5x4	80	7.5	7.5	.52	.52
6x2	85	8.0	8.0	.55	.31
6x2-1/2	85	8.0	8.0	.55	.31
6x3	85	8.0	8.0	.55	.48
6x4	90	8.0	8.0	.55	.52
8x3	135	9.0	9.0	.60	.48
8x4	140	9.0	9.0	.60	.52
8x6	145	9.0	9.0	.60	.55
10x4	205	11.0	11.0	.68	.52
10x6	215	11.0	11.0	.68	.55
10x8	225	11.0	11.0	.68	.60
12x4	290	12.0	12.0	.75	.52
12x6	295	12.0	12.0	.75	.55
12x8	310	12.0	12.0	.75	.60
12x10	360	12.0	12.0	.87	.80
14x6	375	14.0	14.0	.66	.55
14x8	390	14.0	14.0	.66	.60
14x10	400	14.0	14.0	.66	.68
14x12	425	14.0	14.0	.66	.75
16x6	465	15.0	15.0	.70	.55
16x8	475	15.0	15.0	.70	.60
16x10	495	15.0	15.0	.70	.68
16x12	520	15.0	15.0	.70	.75
16x14	530	15.0	15.0	.70	.66
18x6	480	13.0	15.5	.75	.55
18x8	495	13.0	15.5	.75	.60
18x10	510	13.0	15.5	.75	.68
18x12	535	13.0	15.5	.75	.75
18x14	630	16.5	16.5	.75	.66
18x16	650	16.5	16.5	.75	.70

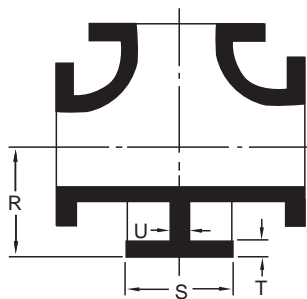
Size	WT.	H	J	T	T1
20x6	610	14.0	17.0	.80	.55
20x8	620	14.0	17.0	.80	.60
20x10	635	14.0	17.0	.80	.68
20x12	660	14.0	17.0	.80	.75
20x14	665	14.0	17.0	.80	.66
20x16	810	18.0	18.0	.80	.70
20x18	820	18.0	18.0	.80	.75
24x6	845	15.0	19.0	.89	.55
24x8	860	15.0	19.0	.89	.60
24x10	880	15.0	19.0	.89	.68
24x12	890	15.0	19.0	.89	.75
24x14	900	15.0	19.0	.89	.66
24x16	915	15.0	19.0	.89	.70
24x18	1220	22.0	22.0	.89	.75
24x20	1255	22.0	22.0	.89	.80
30x12	1490	18.0	23.0	1.03	.75
30x14	1490	18.0	23.0	1.03	.66
30x16	1505	18.0	23.0	1.03	.70
30x18	1515	18.0	23.0	1.03	.75
30x20	1540	18.0	23.0	1.03	.80
30x24	2025	25.0	25.0	1.03	.89
36x12	2170	20.0	26.0	1.15	.75
36x14	2175	20.0	26.0	1.15	.66
36x16	2185	20.0	26.0	1.15	.70
36x18	2190	20.0	26.0	1.15	.75
36x20	2210	20.0	26.0	1.15	.80
36x24	2255	20.0	26.0	1.15	.89
36x30	3000	28.0	28.0	1.15	1.03



ANSI/AWWA C110/A21.10

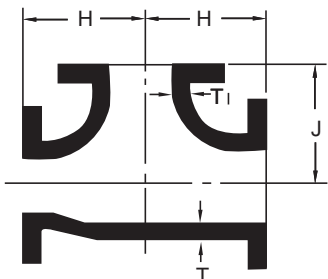
Dimensions in inches.
Weights in Pounds.

Ductile and Cast Iron Flanged Fittings



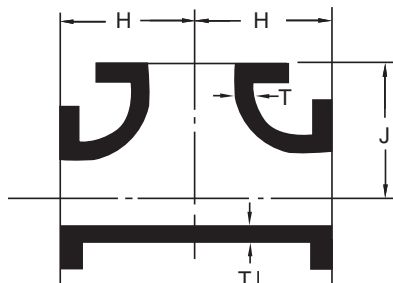
BASE TEES

Size	W		R	S	T	U	BC
	Base Tee	Base Only					
3	45	5	4.88	5.00	.56	.50	3.88
4	75	10	5.50	6.00	.62	.50	4.75
6	110	15	7.00	7.00	.69	.62	5.50
8	185	30	8.38	9.00	.94	.88	7.50
10	300	30	9.75	9.00	.94	.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



REDUCING TEES ON RUN

Size	Wt.	H	J	T	T
4x2x4	50	6.5	6.5	.52	.48
4x3x3	53	6.5	6.5	.52	.48
4x3x4	55	6.5	6.5	.52	.52
6x3x6	91	8.0	8.0	.55	.55
6x4x3	86	8.0	8.0	.55	.48
6x4x4	90	8.0	8.0	.55	.52
6x4x6	95	8.0	8.0	.55	.52
8x4x6	140	9.0	9.0	.60	.55
8x4x8	135	9.0	9.0	.60	.60
8x6x4	125	9.0	9.0	.60	.55
8x6x6	125	9.0	9.0	.60	.55
8x6x8	160	9.0	9.0	.60	.55
10x6x10	234	11.0	11.0	.80	.80
10x8x6	210	11.0	11.0	.80	.55
10x8x8	227	11.0	11.0	.80	.60
10x8x10	248	11.0	11.0	.80	.80
12x10x10	325	12.0	12.0	.87	.80
12x10x12	350	12.0	12.0	.87	.87



BULLHEAD TEES

Size	Wt.	H	J	T ₁	T
2-1/2x2-1/2x3	36	5.5	5.5	.31	.48
3x3x4	49	6.5	6.5	.48	.52
4x4x6	88	8.0	8.0	.52	.55
6x6x8	142	9.0	9.0	.55	.60
8x8x10	240	11.0	11.0	.60	.67
10x10x12	340	12.0	12.0	.80	.87

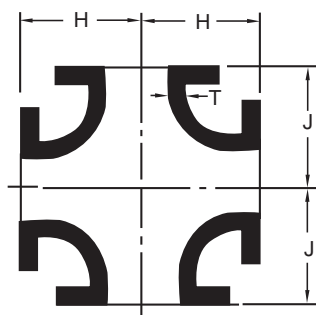
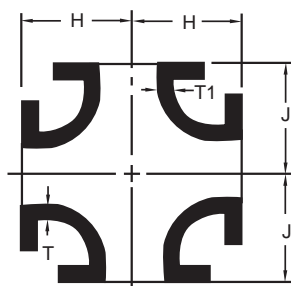
ANSI/AWWA C110/A21.10

Dimensions in inches.
Weights in Pounds.

Ductile and Cast Iron Flanged Fittings

REDUCING CROSSES

Size	Wt.	H	J	T	T ₁
3x2	45	5.5	5.5	.48	.31
4x2	60	6.5	6.5	.52	.31
4x2-1/2	65	6.5	6.5	.52	.31
4x3	70	6.5	6.5	.52	.48
6x2	90	8.0	8.0	.55	.31
6x3	95	8.0	8.0	.55	.48
6x4	110	8.0	8.0	.55	.52
8x4	155	9.0	9.0	.60	.52
8X6	165	9.0	9.0	.60	.55
10x4	220	11.0	11.0	.68	.52
10x6	240	11.0	11.0	.68	.55
10x8	265	11.0	11.0	.68	.60
12x4	310	12.0	12.0	.76	.52
12x6	320	12.0	12.0	.75	.55
12x8	345	12.0	12.0	.75	.60
12x10	415	12.0	12.0	.87	.80
14x6	400	14.0	14.0	.66	.55
14x8	425	14.0	14.0	.66	.60
14x10	460	14.0	14.0	.66	.68
14x12	555	14.0	14.0	.66	.75
16x6	490	15.0	15.0	.70	.55
16x8	520	15.0	15.0	.70	.60
16x10	555	15.0	15.0	.70	.68
16x12	605	15.0	15.0	.70	.75
16x14	700	15.0	15.0	.70	.66
18x6	505	13.0	15.5	.75	.55
18x8	535	13.0	15.5	.75	.60
18x10	560	13.0	15.5	.75	.68
18x12	610	13.0	15.5	.75	.75
18x14	720	16.5	16.5	.75	.66
18x16	880	16.5	16.5	.75	.70
20x6	635	14.0	17.0	.80	.55
20x8	665	14.0	17.0	.80	.60
20x10	685	14.0	17.0	.80	.68
20x12	735	14.0	17.0	.80	.75
20x14	745	14.0	17.0	.80	.66
20x16	915	18.0	18.0	.80	.70
20x18	1100	18.0	18.0	.80	.75
24x6	875	15.0	19.0	.89	.55
24x8	895	15.0	19.0	.89	.60
24x10	930	15.0	19.0	.89	.69
24x12	960	15.0	19.0	.89	.75
24x14	975	15.0	19.0	.89	.66
24x16	1010	15.0	19.0	.89	.70
24x18	1365	22.0	22.0	.89	.75
24x20	1695	22.0	22.0	1.16	1.03
30x12	1565	18.0	23.0	1.03	.75
30x14	1570	18.0	23.0	1.03	.66
30x16	1605	18.0	23.0	1.03	.70
30x18	1615	18.0	23.0	1.03	.75
30x20	1670	18.0	23.0	1.03	.80
30x24	2695	25.0	25.0	1.37	1.16
36x12	2240	20.0	26.0	1.15	.75
36x14	2240	20.0	26.0	1.15	.66
36x16	2270	20.0	26.0	1.15	.70
36x18	2280	20.0	26.0	1.15	.75
36x20	2325	20.0	26.0	1.15	.80
36x24	2405	20.0	26.0	1.15	.89
36x30	4025	28.0	28.0	1.58	1.37



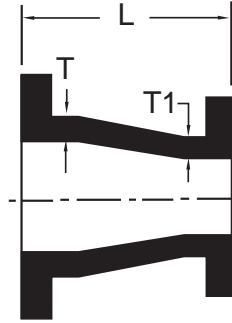
CROSSES

Size	Wt.	H	J	T
2	30	4.5	4.5	.31
2-1/2	41	5.0	5.0	.31
3	50	5.5	5.5	.48
4	80	6.5	6.5	.52
5	105	7.5	7.5	.52
6	120	8.0	8.0	.55
8	195	9.0	9.0	.60
10	330	11.0	11.0	.80
12	460	12.0	12.0	.87
14	595	14.0	14.0	.66
16	755	15.0	15.0	.70
18	915	16.5	16.5	.75
20	1175	18.0	18.0	.80
24	1850	22.0	22.0	.89
30	2500	25.0	25.0	1.03
36	3620	28.0	28.0	1.15

ANSI/AWWA C110/A21.10

Dimensions in inches.
Weights in Pounds.

Ductile and Cast Iron Flanged Fittings



CONCENTRIC REDUCERS

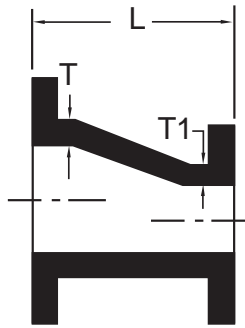
Size	Wt.	L	T	T ₁
2-1/2x2	14	5.5	.31	.31
3x2	16	6.0	.48	.31
3x2-1/2	20	6.0	.48	.31
4x2	25	7.0	.52	.31
4x2-1/2	28	7.0	.52	.31
4x3	30	7.0	.52	.48
5x3	38	8.0	.52	.48
5x4	40	8.0	.52	.52
6x2	35	9.0	.55	.31
6x2-1/2	38	9.0	.55	.31
6x3	40	9.0	.55	.48
6x4	45	9.0	.55	.52
6x5	50	9.0	.55	.52
8x3	60	11.0	.60	.48
8x4	65	11.0	.60	.52
8x5	70	11.0	.60	.52
8x6	75	11.0	.60	.55
10x4	85	12.0	.68	.52
10x6	90	12.0	.68	.55
10x8	110	12.0	.68	.60
12x4	120	14.0	.75	.52
12x6	130	14.0	.75	.55
12x8	145	14.0	.75	.60
12x10	170	14.0	.75	.68
14x4	150	16.0	.66	.52
14x6	155	16.0	.66	.55
14x8	175	16.0	.66	.60
14x10	190	16.0	.66	.68
14x12	220	16.0	.66	.75

Size	Wt.	L	T	T ₁
16x4	180	18.0	.70	.52
16x6	190	18.0	.70	.55
16x8	210	18.0	.70	.60
16x10	235	18.0	.70	.68
16x12	265	18.0	.70	.75
16x14	280	18.0	.70	.66
18x6	230	19.0	.75	.55
18x8	240	19.0	.75	.60
18x10	265	19.0	.75	.68
18x12	295	19.0	.75	.75
18x14	310	19.0	.75	.66
18x16	340	19.0	.75	.70
20x8	305	20.0	.80	.60
20x10	310	20.0	.80	.68
20x12	345	20.0	.80	.75
20x14	355	20.0	.80	.66
20x16	390	20.0	.80	.70
20x18	410	20.0	.80	.75
24x8	460	24.0	.89	.60
24x12	480	24.0	.89	.75
24x14	490	24.0	.89	.66
24x16	525	24.0	.89	.70
24x18	550	24.0	.89	.75
24x20	590	24.0	.89	.80
30x18	810	30.0	1.03	.75
30x20	870	30.0	1.03	.80
30x24	970	30.0	1.03	.89
36x20	1230	36.0	1.15	.80
36x24	1345	36.0	1.15	.89
36x30	1555	36.0	1.15	1.03

ANSI/AWWA C110/A21.10

Dimensions in inches.
Weights in Pounds.

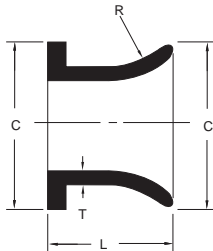
Ductile and Cast Iron Flanged Fittings



ECCENTRIC REDUCERS

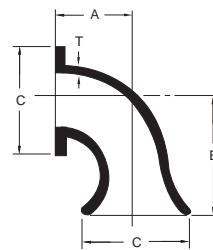
Size	Wt.	L	T	T ₁
3x2	16	6	.48	.31
3x2-1/2	20	6	.48	.31
4x2	26	7	.52	.31
4x2-1/2	28	7	.52	.31
4x3	30	7	.52	.48
6x2	35	9	.55	.31
6x2-1/2	38	9	.55	.31
6x3	40	9	.55	.48
6x4	45	9	.55	.52
6x5	50	9	.55	.52
8x4	65	11	.60	.52
8x5	70	11	.60	.52
8x6	75	11	.60	.55
10x4	85	12	.68	.52
10x6	90	12	.68	.55
10x8	110	12	.68	.60
12x4	120	14	.75	.52
12x6	130	14	.75	.55
12x8	145	14	.75	.60
12x10	170	14	.75	.68
14x6	155	16	.66	.55
14x8	175	16	.66	.60
14x10	190	16	.66	.68
14x12	220	16	.66	.75

Size	Wt.	L	T	T ₁
16x6	190	18	.70	.55
16x8	210	18	.70	.60
16x10	235	18	.70	.68
16x12	265	18	.70	.75
16x14	280	18	.70	.86
18x8	240	19	.75	.60
18x10	265	19	.75	.68
18x12	295	19	.75	.75
18x14	310	19	.75	.66
18x16	340	19	.75	.70
20x10	310	20	.80	.68
20x12	345	20	.80	.75
20x14	355	20	.80	.66
20x16	390	20	.80	.70
20x18	410	20	.80	.75
24x12	480	24	.89	.75
24x14	490	24	.89	.66
24x16	525	24	.89	.70
24x18	550	24	.89	.75
24x20	590	24	.89	.80
30x18	810	30	1.03	.75
30x20	870	30	1.03	.80
30x24	970	30	1.03	.89
36x20	1230	36	1.15	.80
36x24	1345	36	1.15	.89
36x30	1555	36	1.15	1.03



STRAIGHT FLARE PIECES

Size	Wt	T	C	L	R
3	20	.40	7.50	8	6
4	30	.40	9.00	8	6
6	40	.45	11.00	8	6
8	70	.53	13.50	10	8
10	95	.55	16.00	10	10
12	155	.60	19.00	12	12
14	165	.65	21.00	12	14
16	240	.70	23.50	16	18
18	275	.75	25.00	16	18
20	355	.80	27.50	18	20
24	480	.90	32.00	18	24
30	1100	1.07	38.75	24	30
36	1460	1.19	46.00	24	36



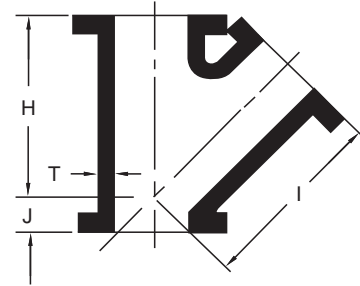
90° FLARE BENDS

Size	Wt	T	C	A	B
3	25	.40	7.5	5.5	11
4	40	.40	9.00	6.5	12
6	70	.45	11.00	8.0	12
8	110	.53	13.50	9.0	14
10	175	.55	16.00	11.0	17
12	245	.70	19.00	12.0	18
14	340	.65	21.00	14.0	20
16	460	.70	23.50	15.0	21
18	560	.75	25.00	16.5	22.5
20	700	.80	27.50	18.0	24
24	1100	.90	32.00	22.0	28
30	1840	1.07	38.75	25.0	32
36	2700	1.19	46.00	28.0	35

Ductile and Cast Iron Flanged Fittings

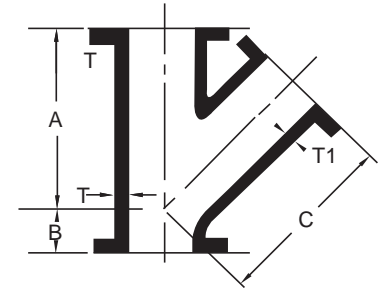
45° LATERAL WYES

Size	Wt	H	J	I	T	
3	45	10.0	3.0	10.0	.48	
4	75	12.0	3.0	12.0	.52	
6	120	14.5	3.5	14.5	.55	
8	200	17.5	4.5	17.5	.60	
10	335	20.5	5.0	20.5	.80	
12	515	24.5	5.5	24.5	.87	
14	605	27.0	6.0	27.0	.66	
16	805	30.0	6.5	30.0	.70	
18	980	32.0	7.0	32.0	.75	
20	1265	35.0	8.0	35.0	.80	
24	1905	40.5	9.0	40.5	.89	



45° REDUCING LATERAL WYES

Size	Wt.	A	B	C	T	T1
4 x 3	65	12.0	3.0	12.0	.52	.48
5 x 3	100	14.5	3.5	14.5	.55	.48
6 x 4	105	14.5	3.5	14.5	.55	.52
8 x 4	165	17.5	4.5	17.5	.60	.52
8 x 6	175	17.5	4.5	17.5	.60	.55
10 x 4	235	20.5	5.0	20.5	.68	.52
10 x 6	250	20.5	5.0	20.5	.68	.55
10 x 8	270	20.5	5.0	20.5	.68	.60
12 x 4	350	24.5	5.5	24.5	.75	.52
12 x 6	365	24.5	5.5	24.5	.75	.55
12 x 8	390	24.5	5.5	24.5	.75	.60
12 x 10	470	24.5	5.5	24.5	.67	.60
14 x 6	475	27.0	6.0	27.0	.66	.55
14 x 8	500	27.0	6.0	27.0	.66	.60
14 x 10	525	27.0	6.0	27.0	.66	.68
14 x 12	570	27.0	6.0	27.0	.66	.75
16 x 6	620	30.0	6.5	30.0	.70	.55
16 x 8	645	30.0	6.5	30.0	.70	.60
16 x 10	675	30.0	6.6	30.0	.70	.68
16 x 12	715	30.0	6.5	30.0	.70	.75
16 x 14	755	30.0	6.5	30.0	.70	.55
18 x 6	755	32.0	7.0	32.0	.75	.55
18 x 8	780	32.0	7.0	32.0	.75	.60
18 x 10	810	32.0	7.0	32.0	.75	.68
18 x 12	850	32.0	7.0	32.0	.75	.75
18 x 14	885	32.0	7.0	32.0	.75	.66
18 x 16	935	32.0	7.0	32.0	.75	.70
20 x 8	995	35.0	8.0	35.0	.80	.60
20 x 10	1025	35.0	8.0	35.0	.80	.68
20 x 12	1065	35.0	8.0	35.0	.80	.75
20 x 14	1110	35.0	8.0	35.0	.80	.66
20 x 16	1155	35.0	8.0	35.0	.80	.70
20 x 18	1200	35.0	8.0	35.0	.80	.75
24 x 8	1470	40.5	9.0	40.5	.89	.60
24 x 10	1505	40.5	9.0	40.5	.89	.69
24 x 12	1550	40.5	9.0	40.5	.89	.75
24 x 14	1590	40.5	9.0	40.5	.89	.66
24 x 16	1640	40.5	9.0	40.5	.89	.70
24 x 18	1685	40.5	9.0	40.5	.89	.75
24 x 20	1750	40.5	9.0	40.5	.89	.80



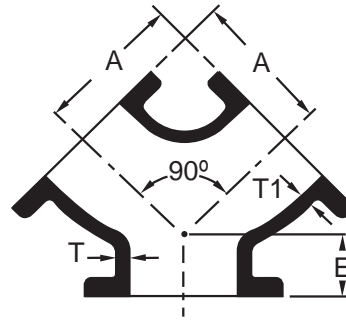
ANSI/AWWA C110/A21.10

Dimensions in inches.
Weights in Pounds.

Ductile and Cast Iron Flanged Fittings

TRUE WYES

	Size	Wt	T	T1	A	E
	4	55	.52	.52	6.5	3.0
	6	85	.55	.55	8.0	3.5
	8	140	.60	.60	9.0	4.5
	10	205	.68	.68	11.0	5.0
	12	300	.75	.75	12.0	5.5



BLIND FLANGES*

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

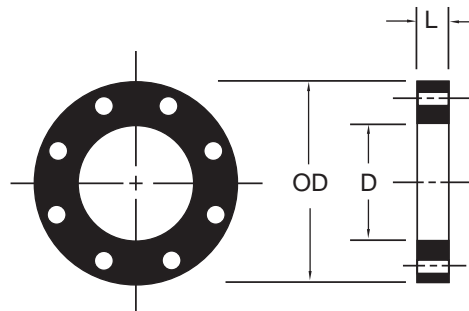
Size	Wt	O	Q	V
3	9	7.50	.75	.69
4	16	9.00	.94	.88
6	25	11.00	1.00	.94
8	42	13.50	1.12	1.06
10	63	16.00	1.19	1.12
12	85	19.00	1.25	.81
14	120	21.00	1.38	.88
16	145	23.50	1.44	1.00
18	185	25.00	1.56	1.06
20	245	27.50	1.69	1.12
24	370	32.00	1.88	1.25
30	500	38.75	2.12	1.44
36	790	46.00	2.38	1.62



10" and Smaller



12" and Larger



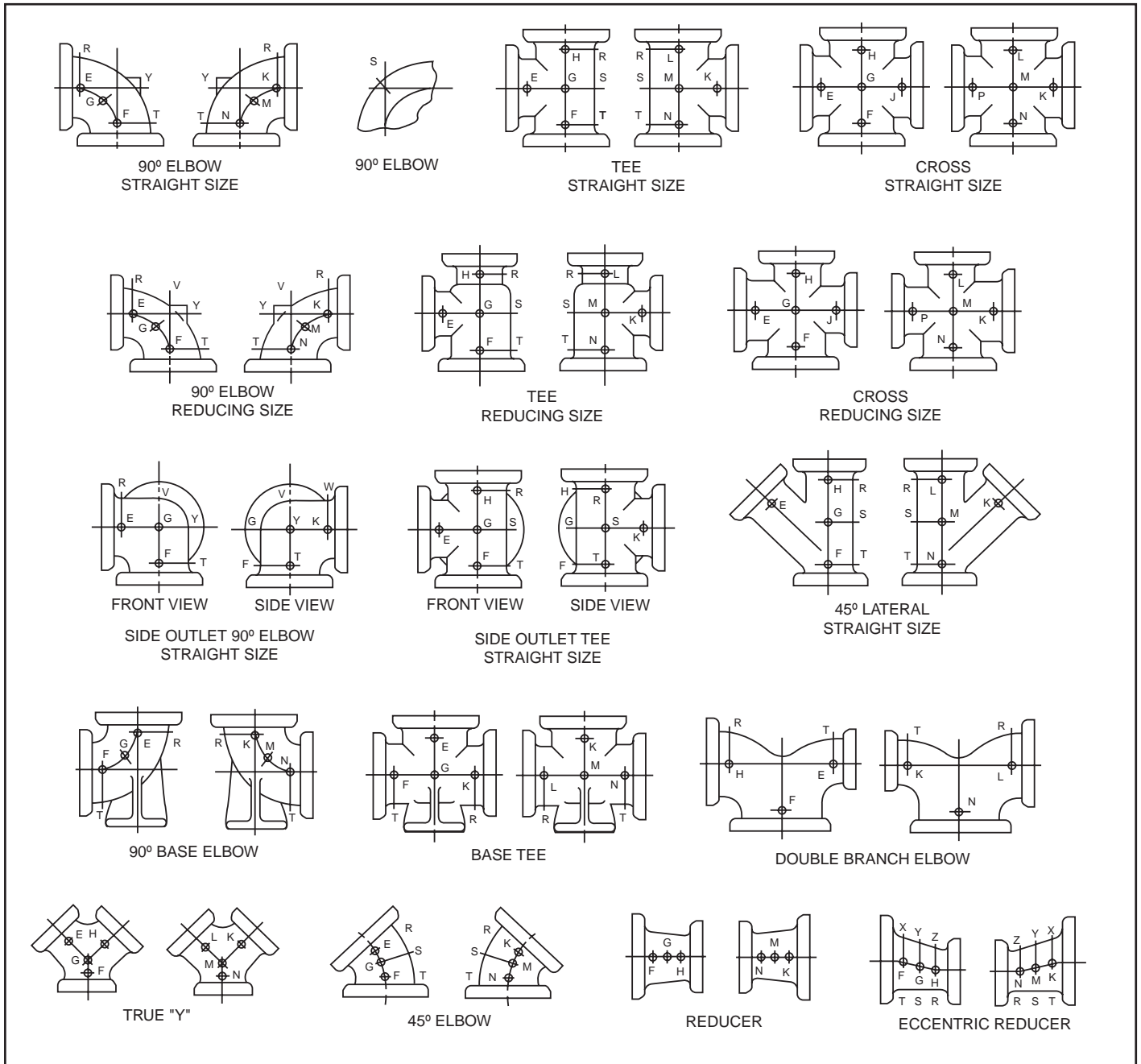
FLANGE FILLERS

Size		Wt & Length				
D	O.D.	1"	1-1/2"	2"	3"	4"
3	7.5	9	14	18	28	36
4	9.0	12	19	25	37	50
5	10.0	14	21	28	42	50
6	11.0	16	24	32	48	64
8	13.5	23	34	46	69	92
10	16.0	29	44	59	88	118
12	19.0	42	63	84	126	168
14	21.0	47	70	94	141	188
16	23.5	56	85	113	169	226
18	25.0	62	92	123	184	246
20	27.5	66	100	133	199	266
24	32.0	84	126	168	251	336
30	38.7	112	168	224	336	448
36	46.0	150	225	300	451	600

ANSI/AWWA C110/A21.10

Dimensions in inches.
Weights in Pounds.

Methods of Designating Location of Tapped Holes for Drains When Specified



ENGINEERING SUBMITTAL DATA GRIFFIN PIPE PRODUCTS CO.'S COMMITMENT TO QUALITY

Griffin Pipe Products Co. manufactures Class 125 Cast & Ductile Iron Flanged Fittings for both Waterworks and Industrial applications. All of our fittings are manufactured in accordance with ANSI Specification B16.1 and AWWA C110. Griffin 2" through 12" Flanged Fittings are also listed by Underwriters Laboratories for fire protection service.

Griffin Pipe Products Co.'s quality control department maintains strict control over all manufacturing standards. Our fittings are produced to the following tolerances:

Mechanical Properties

Cast Iron to ASTM A 48 - Minimum Tensile Strength 30,000 psi

Ductile Iron to ASTM A 536 - Minimum Tensile Strength 70,000 psi

Yield Strength 50,000 psi

Elongation 5%

Chemical Properties

Phosphorous, Maximum
0.75%

Sulfur, Maximum 0.15%

Dimensional Tolerances

Center to face distance + or - .03 in.

Wall thickness -0.10 in.

Angle of bends + or - 1/2 degree

Flange thickness +.12 in. - 0 in.

As standard procedure **Griffin Pipe Products Co. hydrostatically tests every fitting** to insure quality casting integrity. These tests are performed at 1.5 times the rated working pressure.

At the buyers request Griffin Pipe Products Co. will also provide fittings cement-lined and tar-coated in accordance with **ANSI A 21.4** and **AWWA C104**. Griffin Pipe Products Co. fittings are provided with either a tar coated or epoxy primed exterior surface at the customers discretion.

We pride ourselves in producing the finest quality Flanged Fittings available in today's market. Our manufacturing standards and quality control procedures make certain that we abide by our commitment to be the best!

GRIFFIN PIPE PRODUCTS CO.

CERTIFICATE OF COMPLIANCE

Plant _____

Date _____

NAME

PROJECT

OUR ORDER NO.

We hereby certify materials furnished by Griffin Pipe Products Co. either for your stock or for direct shipment to your customer, are manufactured and tested in accordance with the following standards, and meet or exceed the requirements and recommendations therein.

UNIT	MATERIAL
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UNIT	MATERIAL
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Cement Mortar Lining.....	ANSI/AWWA C104/A21.4	of latest Revision
Polyethylene Encasement	ANSI/AWWA C105/A21.5	of latest Revision
Ductile and Grey Iron Fittings	ANSI/AWWA C110/A21.10	of latest Revision
Rubber-Gasket Joints (*)	ANSI/AWWA C111/A21.11	of latest Revision
Flanged Ductile - Iron Pipe	ANSI/AWWA C115/A21.15	of latest Revision
Ductile - Iron Pipe	ANSI/AWWA C151/A21.51	of latest Revision
Ductile - Iron Compact Fittings	ANSI/AWWA C153/A21.53	of latest Revision
Ductile - Iron Castings.....	ASTM Designation A 536	of latest Revision
Ductile - Iron Gravity Sewer Pipe	ASTM Designation A 746	of latest Revision
Cast Iron.....	ASTM A 48	of latest Revision
Flange and Bolt Holes (Drilling and Facing)	ANSI B 16.1	of latest Revision

(*) Joints included are FASTITE, TYTON Joint and MECHANICAL Joints

Subscribed and sworn to before me

**AMSTED INDUSTRIES INCORPORATED
GRIFFIN PIPE PRODUCTS CO. DIVISION**

This _____ day of _____, _____

Notary public

By _____

My Commission expires _____

Title _____



Griffin Pipe Products Co.

Plants and Regional Sales Offices:

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Florence, New Jersey 08518
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609/499-1400
Fax 609/499-4868

Lynchburg, Virginia 24505
Adams St.- Upper Basin, Box 740
804/522-4742 Fax 804/522-4739

Visit our website at:
<http://www.griffinpipe.com>
E-Mail: griffin@griffinpipe.com

Products by Griffin Pipe

Ductile Iron Pipe and Fittings

Ductile Iron TYTON JOINT Pipe 3" -24" and/or FASTITE JOINT Pipe 30" -48"

is the preferred piping material for water and wastewater systems and is normally supplied with Portland Cement linings.

Griffin's Ductile Iron H₂Sewer Safe Pipe is the ideal selection for sewer force mains and deep bury collectors and interceptors. The fused calcium aluminate cement lining outperforms conventional linings.

Compact Ductile Iron Fittings are available in many configurations and are usually furnished with Portland Cement linings. Compact fittings are designed to be used with modern ductile iron pipe and provide ductile's strength with significant weight savings.

For severe service applications, ductile iron pipe with Snap-Lok Restrained Joints does the job along with Bolt-Lok Restrained Joints at fittings connections. Griffin's restrained joint system is unique because readily available Ductile Iron Mechanical Joint Fittings are utilized. Field applied versions of Snap-Lok and Bolt-Lok are available.

When lakes or rivers must be crossed, Snap-Lok Ductile Iron River Crossing Pipe is suited for the task because its ball and socket joints allow up to 15° deflection.

Flanged Fittings are offered in many configurations and sizes. Griffin manufactures both cast iron and ductile iron fittings and hydrostatically tests each finished part to 1-1/2 times the rated working pressure.

