

**Standardized
Mechanical Joint Cast Iron Pipe
and Fittings**

(Revised, 1950)

UNITED STATES PIPE & FOUNDRY CO.

General Office: Birmingham, Ala.

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Plants: Bessemer (Ala.), Birmingham (Ala.), Burlington (N. J.), Chattanooga (Tenn.), Decoto (Calif.).

District Sales Offices: Burlington, New York, Boston, Pittsburgh, Birmingham, Kansas City, Houston, Dallas, Chicago, Cleveland, Minneapolis, San Francisco, Los Angeles, Seattle, Syracuse

General Specifications *for mechanical joint cast iron pipe, fittings and accessories*

Pipe shall be cast iron produced centrifugally in sand lined or metal molds, horizontally in green sand molds or by the pit cast method. Each pipe shall be provided with a mechanical joint socket on one end and the other end shall be plain. Fittings shall be provided with sockets at all openings unless specifically ordered otherwise.

Three to twelve-inch fittings conform to A.S.A. Specification A-21.10 (for short body fittings) and joints conform to A.S.A. Specification A-21.11 (for mechanical joints).

Pipe shall be tested in a suitable hydraulic press to the pressure indicated in the appropriate pipe specification.

Pipe and fittings shall be furnished to dimensions as tabulated. All sockets and plain ends shall be checked with ring and plug gages.

Pipe and fittings shall be furnished uncoated and unlined unless otherwise specified. If coatings are required they shall meet specifications agreed upon by the purchaser and seller.

All joint surfaces shall be protected by suitable means at the foundry against corrosion during storage and shipment.

High strength Cast Iron Tee Head Bolts and Hex Nuts shall be furnished in sufficient quantities to provide for each socket opening on pipe and fittings. These bolts shall have a minimum tensile strength of 50,000 pounds per square inch.

Cast Iron Glands shall be furnished in sufficient quantities to provide for each socket opening on pipe and fittings. These glands shall be made of high strength Cast Iron.

Gaskets shall be furnished in sufficient quantities to provide for each socket opening on pipe or fittings. The type of gasket shall be as stipulated in sales contract.

Weights and Dimensions *of mechanical joint cast iron pipe, fittings and accessories*

Fittings and all accessories for mechanical joint cast iron pipe are standardized and interchangeable regardless of which member, or members, of the Cast Iron Pipe Research Association they are obtained from.

Association members have devoted many years of research, involving the testing to destruction of hundreds of specimens, to the improvement of design and strength factors of fittings.

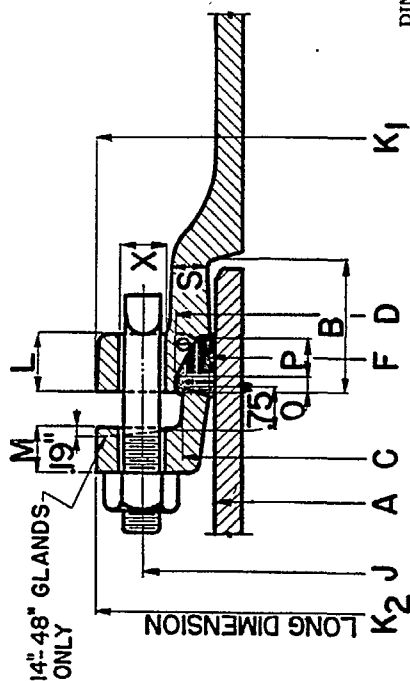
On the pages following are shown cross-sectional drawings and Tables of Weights and Dimensions of Pipe; Bends; Tees and Crosses; Reducers; Sleeves; Glands, Plugs and Caps; Connecting Pieces; Offsets and Drip Pots.

All fittings are made to dimensions, as shown in the Tables, of high quality cast iron and are rigidly inspected and tested. They are furnished with sockets at all openings unless otherwise specified. Socket dimensions of pipe and fittings are the same.

Joint surfaces are protected against corrosion during storage and shipment. Fittings are furnished uncoated and unlined unless otherwise specified.

For further information, refer to General Specifications for Mechanical Joint Cast Iron Pipe, Fittings and Accessories on page 17.

For information regarding Gaskets, Bolts and Glands please turn to page 32.



Dimensions of mechanical joint cast iron pipe and fittings

DIMENSIONS IN INCHES

Size	A	B	C	D	F	φ	X	J	KI		K2	L	M	O	P	S		Bolts			Weight of Bell, lb.		Weight of Gland, Bolts and Gasket, lbs.
									Cent. Pipe	Pit Cast Pipe and Fittings						Cent. Pipe	Pit Cast Pipe and Fittings	No.	Size	Lgth.	Cent. Pipe	Pit Cast Pipe and Fittings	
3	±.06 3.96	2.50	±.04 4.84	+ .06 - .04 4.94	+ .07 - .03 4.06	28°	+ .06 - .0 ¾	±.06 6.19	-.06 7.62	- .12 7.69	- .12 7.69	- .06 .94	- .06 .62	.31	.63	-.05 .47	-.10 .52	4	¾	3	11	11	7
4	±.06 4.80	2.50	±.04 5.92	+ .06 - .04 6.02	+ .07 - .03 4.90	28°	+ .06 - .0 ¾	±.06 7.50	-.06 9.06	- .12 9.12	- .12 9.12	- .06 1.00	- .06 .75	.31	.75	-.05 .55	-.10 .65	4	¾	3½	16	16	10
6	±.06 6.90	2.50	±.04 8.02	+ .06 - .04 8.12	+ .07 - .03 7.00	28°	+ .06 - .0 ¾	±.06 9.50	-.06 11.06	- .12 11.12	- .12 11.12	- .06 1.06	- .06 .88	.31	.75	-.05 .60	-.10 .70	6	¾	3½	22	23	16
8	±.06 9.05	2.50	±.04 10.17	+ .06 - .04 10.27	+ .07 - .03 9.15	28°	+ .06 - .0 ¾	±.06 11.75	-.06 13.31	- .12 13.37	- .12 13.37	- .06 1.12	- .06 1.00	.31	.75	-.05 .66	-.12 .75	6	¾	4	30	31	25
10	±.06 11.10	2.50	+ .06 - .04 12.22	+ .06 - .04 12.34	+ .07 - .03 11.20	28°	+ .06 - .0 ¾	±.06 14.00	-.06 15.62	- .12 15.69	- .12 15.62	- .06 1.19	- .06 1.00	.31	.75	-.06 .72	-.12 .80	8	¾	4	40	41	30
12	±.06 13.20	2.50	+ .06 - .04 14.32	+ .06 - .04 14.44	+ .07 - .03 13.30	28°	+ .06 - .0 ¾	±.06 16.25	-.06 17.88	- .12 17.94	- .12 17.88	- .06 1.25	- .06 1.00	.31	.75	-.06 .79	-.12 .85	8	¾	4	50	51	40
14	+ .05 - .08 15.30	3.50	+ .07 - .05 16.40	+ .07 - .05 16.54	+ .06 - .07 15.44	28°	+ .06 - .0 ¾	±.06 18.75	-.03 20.25	- .12 20.31	- .12 20.25	- .12 1.31	- .12 1.25	.31	.75	-.08 .85	-.12 .89	10	¾	4	78	79	45
16	+ .05 - .08 17.40	3.50	+ .07 - .05 18.50	+ .07 - .05 18.64	+ .06 - .07 17.54	28°	+ .06 - .0 ¾	±.06 21.00	-.08 22.56	- .12 22.56	- .12 22.50	- .12 1.38	- .12 1.31	.31	.75	-.08 .91	-.12 .97	12	¾	4½	95	97	55
18	+ .05 - .08 19.50	3.50	+ .07 - .05 20.60	+ .07 - .05 20.74	+ .06 - .07 19.64	28°	+ .06 - .0 ¾	±.06 23.25	-.08 24.75	- .15 24.83	- .15 24.75	- .12 1.44	- .12 1.38	.31	.75	-.08 .97	-.15 1.05	12	¾	4½	113	117	65
20	+ .05 - .08 21.60	3.50	+ .07 - .05 22.70	+ .07 - .05 22.84	+ .06 - .07 21.74	28°	+ .06 - .0 ¾	±.06 25.50	-.08 27.00	- .15 27.08	- .15 27.00	- .12 1.50	- .12 1.44	.31	.75	-.08 1.03	-.15 1.12	14	¾	4½	134	140	85
24	+ .05 - .08 25.80	3.50	+ .07 - .05 26.90	+ .07 - .05 27.04	+ .06 - .07 25.94	28°	+ .06 - .0 ¾	±.06 30.00	-.08 31.50	- .15 31.58	- .15 31.50	- .12 1.62	- .12 1.56	.31	.75	-.08 1.08	-.15 1.22	16	¾	5	177	185	105
30	32.00 4.00	4.00	33.29	33.46	32.17	20°	1¼	36.88	39.12	39.12	39.12	1.81	2.00	.38	1.00	1.20	1.50	20	1	5¼	285	315	220
36	38.30 4.00	4.00	39.59	39.76	38.47	20°	1¼	43.75	46.00	46.00	46.00	2.00	2.00	.38	1.00	1.35	1.80	24	1	5¼	395	445	285
42	44.50 4.00	4.00	45.79	45.96	44.67	20°	1¼	50.62	53.12	53.12	53.12	2.00	2.00	.38	1.00	1.48	1.95	28	1¼	6	510	570	400
48	50.80 4.00	4.00	52.09	52.26	50.97	20°	1¼	57.50	60.00	60.00	60.00	2.00	2.00	.38	1.00	1.61	2.20	32	1¼	6	645	725	475

NOTES:

1. Cored holes may be tapered an additional 0.06" in diameter.
2. In case of ovalness of the spigot O. D., the mean diameter measured by a circumferential tape shall not be less than the minimum diameter shown in the table. The minor axis shall not be less than the above minimum diameter plus an additional minus tolerance of .04" for sizes 8" through 12", and .07" for sizes 14" through 24".
3. K2 is O. D. of glands across bolt holes, outside of gland may be polygon shape.
4. Dimensions of 30"-48" sizes are tentative, consult the manufacturer.
5. This joint conforms to A.S.A. Specification A-21.11.

**STANDARD THICKNESSES AND WEIGHTS OF CAST IRON MECHANICAL JOINT PIPE
CENTRIFUGALLY CAST IN METAL AND SAND LINED MOLDS FOR WATER AND OTHER LIQUIDS**

Note: Thicknesses in accordance with A.S.A. Specifications, 18,000 psi full length bursting tensile, 40,000 psi ring modulus of rupture. For pipe laid without blocks on flat bottom trench with tamped backfill under 5 feet of cover. For other conditions consult the manufacturer.

Size ins.	Weight Based On											
	Thick- ness ins.	Out- side Diam. ins.	12 ft. Lgth.*		16 ft. Lgth.*		16½ ft. Lgth.*		18 ft. Lgth.*		20 ft. Lgth.*	
			Avg. per ft.	per Lgth.	Avg. per ft.	per Lgth.	Avg. per ft.	per Lgth.	Avg. per ft.	per Lgth.	Avg. per ft.	per Lgth.
Class 50—50 Lb. Pressure—115 Foot Head												
3	.32	3.96	12.3	150	12.2	195	12.1	200	12.0	215		
4	.35	4.80	16.6	200	16.4	260	16.3	270	16.2	290		
6	.38	6.90	26.1	315	25.7	410	25.6	420	25.5	460		
8	.41	9.05	37.2	445	36.7	585	36.6	605	36.4	655		
10	.44	11.10	49.3	590	48.5	775	48.4	800	48.2	870		
12	.48	13.20	64.0	770	62.9	1005	62.8	1035	62.6	1125	62.3	1245
14	.48	15.30	76.2	915	74.6	1195	74.4	1230	74.1	1335	73.6	1470
16	.54	17.40	97.1	1165	95.0	1520	94.9	1565	94.5	1700	94.0	1880
18	.54	19.50	109.8	1320	107.5	1720	107.2	1770	106.7	1920	106.0	2120
20	.57	21.60	128.7	1545	125.9	2015	125.7	2075	124.9	2250	124.2	2485
24	.63	25.80	170.2	2040	166.5	2665	166.1	2740	165.2	2975	164.2	3285
30	.79	32.00			259.5	4150	259.0	4275			256.0	5120
36	.87	38.30			343.9	5500						
42	.97	44.50			445.7	7130						
48	1.06	50.80			557.1	8915						
Class 100—100 Lb. Pressure—231 Foot Head												
3	.32	3.96	12.3	150	12.2	195	12.1	200	12.0	215		
4	.35	4.80	16.6	200	16.4	260	16.3	270	16.2	290		
6	.38	6.90	26.1	315	25.7	410	25.6	420	25.5	460		
8	.41	9.05	37.2	445	36.7	585	36.6	605	36.4	655		
10	.44	11.10	49.3	590	48.5	775	48.4	800	48.2	870		
12	.48	13.20	64.0	770	62.9	1005	62.8	1035	62.6	1125	62.3	1245
14	.51	15.30	80.4	965	78.8	1260	78.6	1295	78.2	1410	77.8	1555
16	.54	17.40	97.1	1165	95.0	1520	94.9	1565	94.5	1700	94.0	1880
18	.58	19.50	117.0	1405	114.7	1835	114.4	1890	113.9	2050	113.2	2265
20	.62	21.60	138.7	1665	135.9	2175	135.7	2240	134.9	2430	134.2	2685
24	.68	25.80	182.2	2185	178.5	2855	178.1	2940	177.2	3190	176.2	3525
30	.79	32.00			259.5	4150	259.0	4275			256.0	5120
36	.87	38.30			343.9	5500						
42	.97	44.50			445.7	7130						
48	1.06	50.80			557.1	8915						
Class 150—150 Lb. Pressure—346 Foot Head												
3	.32	3.96	12.3	150	12.2	195	12.1	200	12.0	215		
4	.35	4.80	16.6	200	16.4	260	16.3	270	16.2	290		
6	.38	6.90	26.1	315	25.7	410	25.6	420	25.5	460		
8	.41	9.05	37.2	445	36.7	585	36.6	605	36.4	655		
10	.44	11.10	49.3	590	48.5	775	48.4	800	48.2	870		
12	.48	13.20	64.0	770	62.9	1005	62.8	1035	62.6	1125	62.3	1245
14	.51	15.30	80.4	965	78.8	1260	78.6	1295	78.2	1410	77.8	1555
16	.54	17.40	97.1	1165	95.0	1520	94.9	1565	94.5	1700	94.0	1880
18	.58	19.50	117.0	1405	114.7	1835	114.4	1890	113.9	2050	113.2	2265
20	.62	21.60	138.7	1665	135.9	2175	135.7	2240	134.9	2430	134.2	2685
24	.73	25.80	194.2	2330	190.4	3045	190.1	3135	189.2	3405	188.2	3765
30	.85	32.00			277.3	4435	276.8	4565			273.8	5475
36	.94	38.30			368.9	5900						
42	1.05	44.50			479.1	7665						
48	1.14	50.80			595.2	9525						

*Including Bell. Calculated weight of pipe rounded off to nearest 5 pounds.

References: A.S.A.—A-21.6—pipe cast in metal molds. A.S.A.—A-21.8—pipe cast in sand lined molds. A.S.A.—A-21.11—mechanical joints.

Continued on page 21

Size ins.	Thick- ness ins.	Out side Diam. ins.	Weight Based On									
			12 ft. Lgth.*		16 ft. Lgth.*		16½ ft. Lgth.*		18 ft. Lgth.*		20 ft. Lgth.*	
			Avg. per ft.	per Lgth.	Avg. per ft.	per Lgth.	Avg. per ft.	per Lgth.	Avg. per ft.	per Lgth.	Avg. per ft.	per Lgth.
Class 200—200 Lb. Pressure—462 Foot Head												
3	.32	3.96	12.3	150	12.2	195	12.1	200	12.0	215		
4	.35	4.80	16.6	200	16.4	260	16.3	270	16.2	290		
6	.38	6.90	26.1	315	25.7	410	25.6	420	25.5	460		
8	.41	9.05	37.2	445	36.7	585	36.6	605	36.4	655		
10	.44	11.10	49.3	590	48.5	775	48.4	800	48.2	870		
12	.48	13.20	64.0	770	62.9	1005	62.8	1035	62.6	1125	62.3	1245
14	.55	15.30	86.0	1030	84.4	1350	84.2	1390	83.8	1510	83.4	1670
16	.58	17.40	103.5	1240	101.5	1625	101.3	1670	100.9	1815	100.3	2005
18	.63	19.50	125.9	1510	123.5	1975	123.3	2035	122.8	2210	122.2	2445
20	.67	21.60	148.7	1785	145.9	2335	145.7	2405	144.9	2610	144.2	2885
24	.79	25.80	208.4	2500	204.8	3275	204.4	3375	203.5	3665	202.6	4050
30	.92	32.00			298.1	4770	297.6	4910			294.6	5890
36	1.02	38.30			397.4	6360						
42	1.13	44.50			512.3	8195						
48	1.23	50.80			637.9	10205						
Class 250—250 Lb. Pressure—577 Foot Head												
3	.32	3.96	12.3	150	12.2	195	12.1	200	12.0	215		
4	.35	4.80	16.6	200	16.4	260	16.3	270	16.2	290		
6	.38	6.90	26.1	315	25.7	410	25.6	420	25.5	460		
8	.41	9.05	37.2	445	36.7	585	36.6	605	36.4	655		
10	.44	11.10	49.3	590	48.5	775	48.4	800	48.2	870		
12	.52	13.20	68.8	825	67.7	1085	67.6	1115	67.4	1215	67.1	1340
14	.59	15.30	91.6	1100	90.0	1440	89.8	1480	89.4	1610	89.0	1780
16	.63	17.40	111.5	1340	109.6	1755	109.4	1805	108.9	1960	108.3	2165
18	.68	19.50	134.8	1620	132.5	2120	132.2	2180	131.7	2370	131.0	2620
20	.72	21.60	158.6	1905	155.7	2490	155.5	2565	154.8	2785	154.1	3080
24	.79	25.80	208.4	2500	204.8	3275	204.4	3375	203.5	3665	202.6	4050
30	.99	32.00			318.7	5100	318.2	5250			315.2	6305
36	1.10	38.30			425.8	6815						
42	1.22	44.50			549.5	8790						
48	1.33	50.80			685.2	10965						
Class 300—300 Lb. Pressure—693 Foot Head												
3	.32	3.96	12.3	150	12.2	195	12.1	200	12.0	215		
4	.35	4.80	16.6	200	16.4	260	16.3	270	16.2	290		
6	.38	6.90	26.1	315	25.7	410	25.6	420	25.5	460		
8	.41	9.05	37.2	445	36.7	585	36.6	605	36.4	655		
10	.48	11.10	53.3	640	52.5	840	52.4	865	52.2	940		
12	.52	13.20	68.8	825	67.7	1085	67.6	1115	67.4	1215	67.1	1340
14	.59	15.30	91.6	1100	90.0	1440	89.8	1480	89.4	1610	89.0	1780
16	.68	17.40	119.3	1430	117.3	1875	117.2	1935	116.7	2100	116.2	2325
18	.73	19.50	143.7	1725	141.4	2260	141.1	2330	140.6	2530	140.0	2800
20	.78	21.60	170.4	2045	167.6	2680	167.3	2760	166.6	3000	165.9	3320
24	.85	25.80	222.6	2670	219.0	3505	218.6	3605	217.7	3920	216.8	4335
Class 350—350 Lb. Pressure—808 Foot Head												
3	.32	3.96	12.3	150	12.2	195	12.1	200	12.0	215		
4	.35	4.80	16.6	200	16.4	260	16.3	270	16.2	290		
6	.38	6.90	26.1	315	25.7	410	25.6	420	25.5	460		
8	.41	9.05	37.2	445	36.7	585	36.6	605	36.4	655		
10	.52	11.10	57.2	685	56.4	900	56.3	930	56.1	1010		
12	.56	13.20	73.6	885	72.5	1160	72.4	1195	72.2	1300	71.9	1440
14	.64	15.30	98.5	1180	96.9	1550	96.7	1595	96.3	1735	95.9	1920
16	.68	17.40	119.3	1430	117.3	1875	117.2	1935	116.7	2100	116.2	2325
18	.79	19.50	154.3	1850	152.0	2430	151.7	2505	151.2	2720	150.6	3010
20	.84	21.60	182.1	2185	179.3	2870	179.0	2955	178.3	3210	177.6	3550
24	.92	25.80	239.2	2870	235.4	3765	235.1	3880	234.2	4215	233.2	4665

*Including Bell. Calculated weight of pipe rounded off to nearest 5 pounds.

**STANDARD THICKNESSES AND WEIGHTS OF CAST IRON MECHANICAL JOINT PIPE
CENTRIFUGALLY CAST IN METAL AND SAND LINED MOLDS FOR GAS**

Note: Thicknesses in accordance with A.S.A. Specifications, 18,000 psi full length bursting tensile, 40,000 psi ring modulus of rupture. For pipe laid without blocks on flat bottom trench with tamped backfill under 5 feet of cover. For other conditions consult the manufacturer.

Size ins.	Thick- ness ins.	Out- side Diam. ins.	Weight Based On									
			12 ft. Lgth.*		16 ft. Lgth.*		16½ ft. Lgth.*		18 ft. Lgth.*		20 ft.	Lgth.*
			Avg. per ft.	per Lgth.	Avg. per ft.	per Lgth.	Avg. per ft.	per Lgth.	Avg. per ft.	per Lgth.	Avg. per ft.	per Lgth.
Class 10—10 Lb. Pressure												
4	.35 ⁽¹⁾	4.80	16.6	200	16.4	260	16.3	270	16.2	290		
6	or .38 ⁽²⁾	4.80	17.8	215	17.6	280	17.5	290	17.4	315		
	.38 ⁽¹⁾	6.90	26.1	315	25.7	410	25.6	420	25.5	460		
8	or .41 ⁽²⁾	6.90	27.9	335	27.6	440	27.5	455	27.3	490		
	.41	9.05	37.2	445	36.7	585	36.6	605	36.4	655		
10	.44	11.10	49.3	590	48.5	775	48.4	800	48.2	870		
12	.48	13.20	64.0	770	62.9	1005	62.8	1035	62.6	1125	62.3	1245
16	.50	17.40	90.7	1090	88.7	1420	88.6	1460	88.1	1585	87.6	1750
20	.57	21.60	128.7	1545	125.9	2015	125.7	2075	124.9	2250	124.2	2485
24	.63	25.80	170.2	2040	166.5	2665	166.1	2740	165.2	2975	164.2	3235
30	.73	32.00			241.5	3865	241.0	3975			238.0	4760
36	.81	38.30			322.4	5160						
42	.90	44.50			416.5	6665						
48	.98	50.80			519.0	8305						
Class 50—50 Lb. Pressure												
4	.35 ⁽¹⁾	4.80	16.6	200	16.4	260	16.3	270	16.2	290		
6	or .33 ⁽²⁾	4.80	17.8	215	17.6	280	17.5	290	17.4	315		
	.33 ⁽¹⁾	6.90	26.1	315	25.7	410	25.6	420	25.5	460		
8	or .41 ⁽²⁾	6.90	27.9	335	27.6	440	27.5	455	27.3	490		
	.41	9.05	37.2	445	36.7	585	36.6	605	36.4	655		
10	.44	11.10	49.3	590	48.5	775	48.4	800	48.2	870		
12	.48	13.20	64.0	770	62.9	1005	62.8	1035	62.6	1125	62.3	1245
16	.50	17.40	90.7	1090	88.7	1420	88.6	1460	88.1	1585	87.6	1750
20	.57	21.60	128.7	1545	125.9	2015	125.7	2075	124.9	2250	124.2	2485
24	.63	25.80	170.2	2040	166.5	2665	166.1	2740	165.2	2975	164.2	3235
30	.79	32.00			259.5	4150	259.0	4275			256.0	5120
36	.87	38.30			343.9	5500						
42	.97	44.50			445.7	7130						
48	1.06	50.80			557.1	8915						
Class 100—100 Lb. Pressure												
4	.35 ⁽¹⁾	4.80	16.6	200	16.4	260	16.3	270	16.2	290		
6	or .38 ⁽²⁾	4.80	17.8	215	17.6	280	17.5	290	17.4	315		
	.33 ⁽¹⁾	6.90	26.1	315	25.7	410	25.6	420	25.5	460		
8	or .41 ⁽²⁾	6.90	27.9	335	27.6	440	27.5	455	27.3	490		
	.41	9.05	37.2	445	36.7	585	36.6	605	36.4	655		
10	.44	11.10	49.3	590	48.5	775	48.4	800	48.2	870		
12	.48	13.20	64.0	770	62.9	1005	62.8	1035	62.6	1125	62.3	1245
16	.54	17.40	97.1	1165	95.0	1520	94.9	1565	94.5	1700	94.0	1880
20	.62	21.60	138.7	1665	135.9	2175	135.7	2240	134.9	2430	134.2	2685
24	.68	25.80	182.2	2185	178.5	2855	178.1	2940	177.2	3190	176.2	3525
Class 150—150 Lb. Pressure												
4	.35 ⁽¹⁾	4.80	16.6	200	16.4	260	16.3	270	16.2	290		
6	or .33 ⁽²⁾	4.80	17.8	215	17.6	280	17.5	290	17.4	315		
	.38 ⁽¹⁾	6.90	26.1	315	25.7	410	25.6	420	25.5	460		
8	or .41 ⁽²⁾	6.90	27.9	335	27.6	440	27.5	455	27.3	490		
	.41	9.05	37.2	445	36.7	585	36.6	605	36.4	655		
10	.44	11.10	49.3	590	48.5	775	48.4	800	48.2	870		
12	.48	13.20	64.0	770	62.9	1005	62.8	1035	62.6	1125	62.3	1245

*Including Bell. Calculated weight of pipe rounded off to nearest 5 pounds.

⁽¹⁾Class 22 thickness.

⁽²⁾Class 23 thickness offers increased factor of safety and is recommended for use in areas of dense population and heavy traffic.

References: A.S.A.—21.7—pipe cast in metal molds. A.S.A.—A-21.9—pipe cast in sand lined molds. A.S.A.—A-21.11—mechanical joints.

**STANDARD THICKNESSES AND WEIGHTS OF CAST IRON MECHANICAL
JOINT PIT CAST PIPE FOR WATER AND OTHER LIQUIDS**

Note: Thicknesses in accordance with A.S.A. Specifications, 11,000 psi full length bursting tensile, 31,000 psi ring modulus of rupture. For pipe laid without blocks on flat bottom trench with tamped backfill under 5 feet of cover. For other conditions consult the manufacturer.

		Class 50 50 lb. Pressure 115 ft. Head			Class 100 100 lb. Pressure 231 ft. Head			Class 150 150 lb. Pressure 346 ft. Head			Class 200 200 lb. Pressure 462 ft. Head		
Size ins.	Out- side Diam. ins.	Weight Based on 12 ft. Length*			Weight Based on 12 ft. Length*			Weight Based on 12 ft. Length*			Weight Based on 12 ft. Length*		
		Thick- ness ins.	Avg. per ft.	per Length	Thick- ness ins.	Avg. per ft.	per Length	Thick- ness ins.	Avg. per ft.	per Length	Thick- ness ins.	Avg. per ft.	per Length
3	3.96	.37	13.9	165	.37	13.9	165	.37	13.9	165	.37	13.9	165
4	4.80	.40	18.6	225	.40	18.6	225	.40	18.6	225	.40	18.6	225
6	6.90	.43	29.2	350	.43	29.2	350	.43	29.2	350	.43	29.2	350
8	9.05	.46	41.3	495	.46	41.3	495	.46	41.3	495	.46	41.3	495
10	11.10	.50	55.4	665	.50	55.4	665	.54	59.3	710	.58	63.2	760
12	13.20	.54	71.2	855	.54	71.2	855	.58	76.0	910	.63	81.8	980
14	15.30	.54	84.7	1015	.58	90.3	1085	.63	97.2	1165	.68	104.0	1250
16	17.40	.58	103.7	1245	.63	111.7	1340	.68	119.5	1435	.79	136.7	1640
18	19.50	.63	126.2	1515	.68	135.2	1620	.79	154.6	1855	.85	165.2	1980
20	21.60	.66	147.2	1765	.71	157.1	1885	.83	180.7	2170	.90	194.3	2330
24	25.80	.74	197.2	2365	.80	211.4	2535	.93	242.1	2905	1.00	258.5	3100
30	32.00	.87	291.8	3500	.94	312.4	3750	1.10	359.4	4315	1.19	385.7	4630
36	38.30	.97	392.0	4705	1.13	448.8	5385	1.22	480.5	5765	1.43	553.9	6645
42	44.50	1.07	503.0	6035	1.16	540.3	6485	1.35	618.5	7420	1.58	712.2	8545
48	50.80	1.18	634.3	7610	1.37	724.2	8690	1.48	775.9	9310	1.73	892.5	10710

		Class 250 250 lb. Pressure 577 ft. Head			Class 300 300 lb. Pressure 693 ft. Head			Class 350 350 lb. Pressure 808 ft. Head		
Size ins.	Out- side Diam. ins.	Weight Based on 12 ft. Length*			Weight based on 12 ft. Length*			Weight Based on 12 ft. Length*		
		Thick- ness ins.	Avg. per ft.	per Length	Thick- ness ins.	Avg. per ft.	per Length	Thick- ness ins.	Avg. per ft.	per Length
3	3.96	.37	13.9	165	.37	13.9	165	.37	13.9	165
4	4.80	.40	18.6	225	.40	18.6	225	.40	18.6	225
6	6.90	.43	29.2	350	.46	30.9	370	.50	33.3	400
8	9.05	.50	44.5	535	.54	47.6	570	.58	50.8	610
10	11.10	.63	68.1	815	.68	72.9	875	.73	77.6	930
12	13.20	.68	87.6	1050	.73	93.4	1120	.79	100.4	1205
14	15.30	.79	119.0	1430	.85	127.0	1525	.92	136.3	1635
16	17.40	.85	146.0	1750	.92	156.7	1880	.99	167.2	2005
18	19.50	.92	177.2	2125	.99	189.3	2270	1.07	203.0	2435
20	21.60	.97	207.8	2495	1.05	223.2	2680	1.22	255.4	3065
24	25.80	1.17	297.9	3575	1.26	318.5	3820	1.36	341.2	4095
30	32.00	1.39	443.2	5320	1.50	474.6	5695	1.62	508.6	6105
36	38.30	1.54	592.0	7105	1.79	677.7	8130	1.93	725.1	8700
42	44.50	1.71	764.7	9175						
48	50.80	2.02	1026.2	12315						

*Including Bell. Calculated weight of pipe rounded off to nearest 5 pounds.

References: Thicknesses—A.S.A.—A-21.2. Mechanical joint A.S.A.—A-21.11.

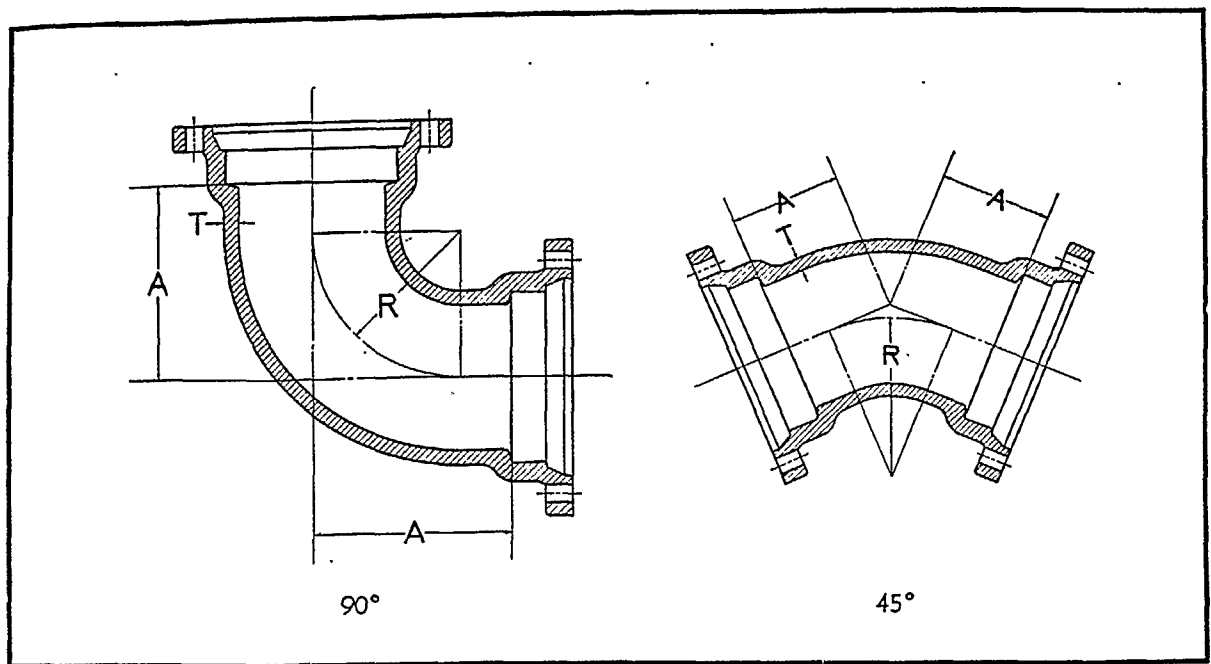
**STANDARD THICKNESSES AND WEIGHTS OF CAST IRON
MECHANICAL JOINT PIT CAST PIPE FOR GAS**

Note: Thicknesses in accordance with A.S.A. Specifications, 11,000 psi full length bursting tensile, 31,000 psi ring modulus of rupture. For pipe laid without blocks on flat bottom trench with tamped backfill under 5 feet of cover. For other conditions consult the manufacturer.

Size ins.	Out- side Diam. ins.	Class 10 10 lb. Pressure			Class 50 50 lb. Pressure			Class 100 100 lb. Pressure			Class 150 150 lb. Pressure		
		Weight Based on 12 ft. Lgth.*			Weight Based on 12 ft. Lgth.*			Weight Based on 12 ft. Lgth.*			Weight Based on 12 ft. Lgth.*		
		Thick- ness ins.	Avg. per ft.	per Lgth.	Thick- ness ins.	Avg. per ft.	per Lgth.	Thick- ness ins.	Avg. per ft.	per Lgth.	Thick- ness ins.	Avg. per ft.	per Lgth.
4	4.80	.40	18.6	225	.40	18.6	225	.40	18.6	225	.40	18.6	225
6	6.90	.43	29.2	350	.43	29.2	350	.43	29.2	350	.43	29.2	350
8	9.05	.46	41.3	495	.46	41.3	495	.46	41.3	495	.46	41.3	495
10	11.10	.50	55.4	665	.50	55.4	665	.50	55.4	665	.50	55.4	665
12	13.20	.54	71.2	855	.54	71.2	855	.54	71.2	855	.54	71.2	855
16	17.40	.58	103.7	1245	.58	103.7	1245	.58	103.7	1245			
20	21.60	.66	147.2	1765	.66	147.2	1765	.71	157.1	1885			
24	25.80	.74	197.2	2365	.74	197.2	2365	.80	211.4	2535			
30	32.00	.87	291.8	3500	.87	291.8	3500						
36	38.30	.97	392.0	4705	.97	392.0	4705						
42	44.50	1.07	503.0	6035	1.07	503.0	6035						
48	50.80	1.18	634.3	7610	1.18	634.3	7610						

*Including Bell. Calculated weight of pipe rounded off to nearest 5 pounds.

References: Thicknesses—A.S.A.—A-21.3—pit cast for gas. Mechanical joint—A.S.A.—A-21.11.



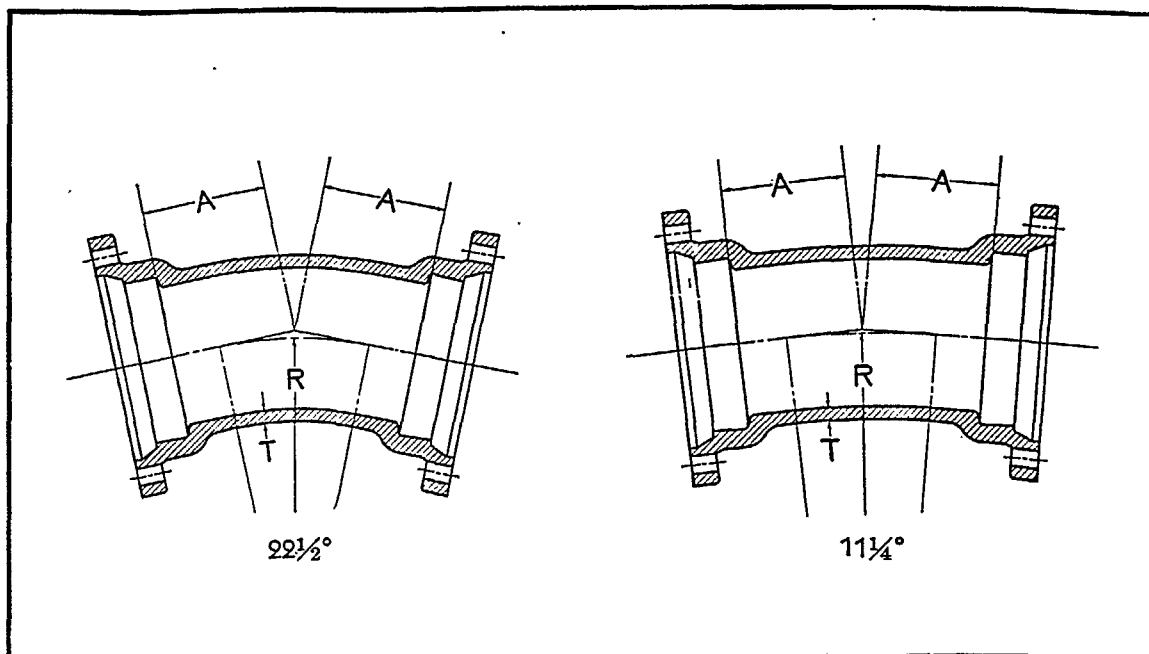
Bends

TABLE OF DIMENSIONS									
Nominal Diam.	Outside Diam.	90° Bends				45° Bends			Max. Working Pressure
		T	A	R	Weights	A	R	Weights	
3	3.96	.48	5.5	4.0	35	3.0	3.62	30	250
4	5.00	.52	6.5	4.5	55	4.0	4.81	50	250
6	7.10	.55	8.0	6.0	85	5.0	7.25	75	250
8	9.30	.60	9.0	7.0	125	5.5	8.44	110	250
10	11.40	.68	11.0	9.0	190	6.5	10.88	155	250
12	13.50	.75	12.0	10.0	255	7.5	13.25	215	250
14	15.30	.66	14.0	11.5	340	7.5	12.06	270	150
16	17.40	.70	15.0	12.5	430	8.0	13.25	340	150
18	19.50	.75	16.5	14.0	545	8.5	14.50	420	150
20	21.60	.80	18.0	15.5	680	9.5	16.88	530	150
24	25.80	.89	22.0	18.5	1025	11.0	18.12	755	150
30	32.00	1.03	36.0	32.5	2145	15.0	27.75	1380	150
36	38.30	1.15	48.0	44.5	3575	18.0	35.00	2095	150
42	44.50	1.28	48.0	44.5	4615	21.0	42.25	2955	150
48	50.80	1.42	54.0	50.5	6395	24.0	49.50	4080	150

All weights are approximate and do not include joint accessories.

See page 19 for joint dimensions and weight of joint accessories.

Three to twelve-inch fittings conform to A.S.A. Specification—A-21.10—for short body fittings.



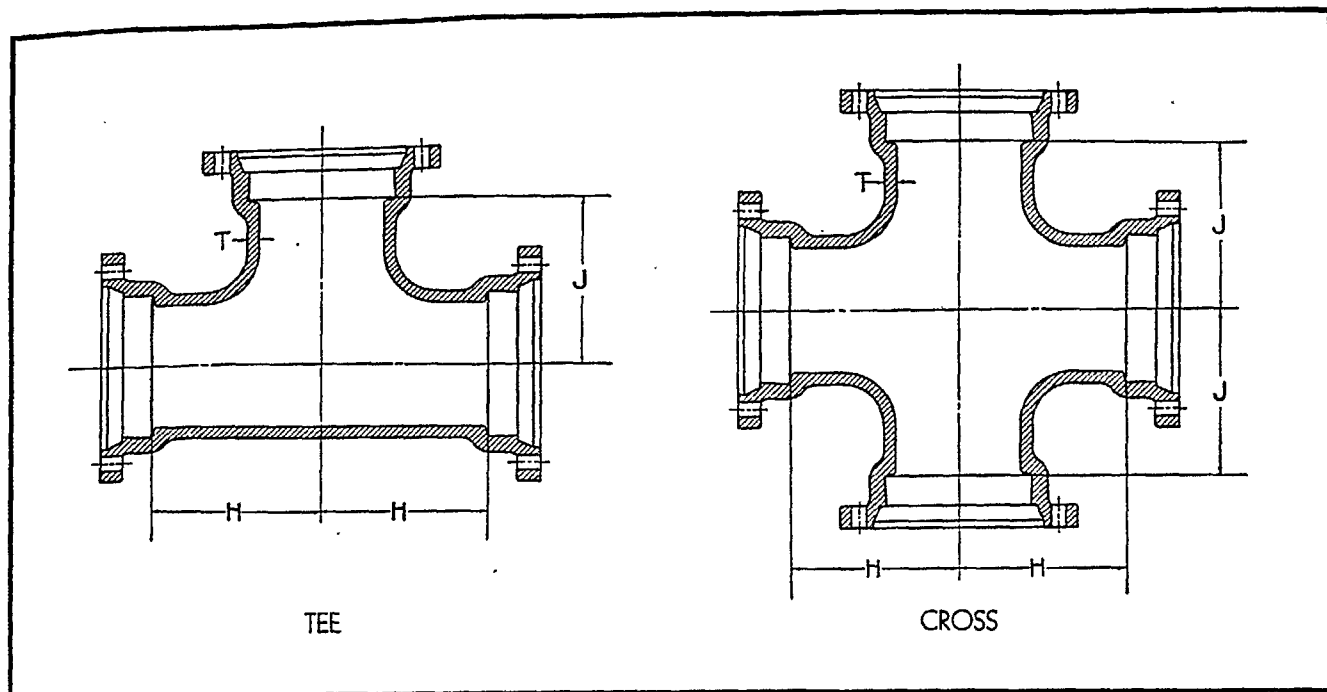
Bends

TABLE OF DIMENSIONS									
Nominal Diam.	Outside Diam.	22½° Bends				11¼° Bends			Max. Working Pressure
		T	A	R	Weights	A	R	Weights	
3	3.96	.48	3.0	7.56	30	3.0	15.25	30	250
4	5.00	.52	4.0	10.06	50	4.0	20.31	50	250
6	7.10	.55	5.0	15.06	75	5.0	30.50	75	250
8	9.30	.60	5.5	17.62	110	5.5	35.50	110	250
10	11.40	.68	6.5	22.62	160	6.5	45.69	160	250
12	13.50	.75	7.5	27.62	220	7.5	55.81	220	250
14	15.30	.66	7.5	25.12	275	7.5	50.75	275	150
16	17.40	.70	8.0	27.62	345	8.0	55.81	345	150
18	19.50	.75	8.5	30.19	430	8.5	60.94	430	150
20	21.60	.80	9.5	35.19	535	9.5	71.06	540	150
24	25.80	.89	11.0	37.69	765	11.0	76.12	770	150
30	32.00	1.03	15.0	57.81	1400	15.0	116.75	1410	150
36	38.30	1.15	18.0	72.88	2135	18.0	147.25	2145	150
42	44.50	1.28	21.0	88.00	3020	21.0	177.69	3035	150
48	50.80	1.42	24.0	103.06	4170	24.0	208.12	4190	150

All weights are approximate and do not include joint accessories.

See page 19 for joint dimensions and weight of joint accessories.

Three to twelve-inch fittings conform to A.S.A. Specification—A-21.10—for short body fittings.



Tees and Crosses

TABLE OF DIMENSIONS										
Nominal Diam.		Outside Diam.		T				Tee	Cross	Max.
Run	Branch	Run	Branch	Run	Branch	H	J	Weight	Weight	Working Pressure
3	3	3.96	3.96	.48	.48	5.5	5.5	55	70	250
4	3	5.00	3.96	.52	.48	6.5	6.5	75	90	250
4	4	5.00	5.00	.52	.52	6.5	6.5	80	105	250
6	3	7.10	3.96	.55	.48	8.0	8.0	110	125	250
6	4	7.10	5.00	.55	.52	8.0	8.0	115	140	250
6	6	7.10	7.10	.55	.55	8.0	8.0	125	160	250
8	4	9.30	5.00	.60	.52	9.0	9.0	165	185	250
8	6	9.30	7.10	.60	.55	9.0	9.0	175	205	250
8	8	9.30	9.30	.60	.60	9.0	9.0	185	235	250
10	4	11.40	5.00	.68	.52	11.0	11.0	235	260	250
10	6	11.40	7.10	.68	.55	11.0	11.0	250	285	250
10	8	11.40	9.30	.68	.60	11.0	11.0	260	310	250
10	10	11.64	11.64	.80	.80	11.0	11.0	310	380	250
12	4	13.50	5.00	.75	.52	12.0	12.0	315	340	250
12	6	13.50	7.10	.75	.55	12.0	12.0	325	360	250
12	8	13.50	9.30	.75	.60	12.0	12.0	340	385	250
12	10	13.74	11.64	.87	.80	12.0	12.0	390	460	250
12	12	13.74	13.74	.87	.87	12.0	12.0	410	495	250
14	6	15.30	7.10	.66	.55	14.0	14.0	435	475	150
14	8	15.30	9.30	.66	.60	14.0	14.0	450	500	150
14	10	15.30	11.40	.66	.68	14.0	14.0	465	540	150
14	12	15.65	13.50	.82	.75	14.0	14.0	540	630	150
14	14	15.65	15.65	.82	.82	14.0	14.0	585	710	150
16	6	17.40	7.10	.70	.55	15.0	15.0	540	575	150
16	8	17.40	9.30	.70	.60	15.0	15.0	550	605	150
16	10	17.40	11.40	.70	.68	15.0	15.0	570	645	150
16	12	17.40	13.50	.70	.75	15.0	15.0	590	685	150
16	14	17.80	15.65	.89	.82	15.0	15.0	710	830	150
16	16	17.80	17.80	.89	.89	15.0	15.0	740	895	150

All weights are approximate and do not include joint accessories.

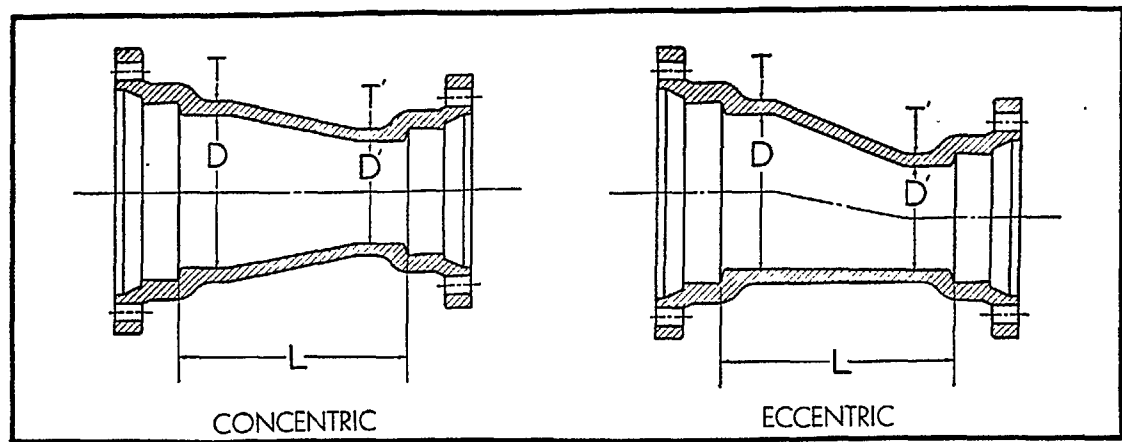
See page 19 for joint dimensions and weight of joint accessories.

Three to twelve-inch fittings conform to A.S.A. Specification—A-21.10—for short body fittings.

Tees and Crosses Continued

TABLE OF DIMENSIONS										
Nominal Diam.		Outside Diam.		T				Tee	Cross	Max. Working Pressure
Run	Branch	Run	Branch	Run	Branch	H	J	Weight	Weight	
18	6	19.50	7.10	.75	.55	13.0	15.5	590	625	150
18	8	19.50	9.30	.75	.60	13.0	15.5	605	655	150
18	10	19.50	11.40	.75	.68	13.0	15.5	620	685	150
18	12	19.50	13.50	.75	.75	13.0	15.5	640	725	150
18	14	19.50	15.30	.75	.66	16.5	16.5	755	870	150
18	16	19.92	17.80	.96	.89	16.5	16.5	905	1060	150
18	18	19.92	19.92	.96	.96	16.5	16.5	945	1130	150
20	6	21.60	7.10	.80	.55	14.0	17.0	725	760	150
20	8	21.60	9.30	.80	.60	14.0	17.0	735	790	150
20	10	21.60	11.40	.80	.68	14.0	17.0	755	820	150
20	12	21.60	13.50	.80	.75	14.0	17.0	775	860	150
20	14	21.60	15.30	.80	.66	14.0	17.0	795	905	150
20	16	21.60	17.40	.80	.70	18.0	18.0	945	1085	150
20	18	22.06	19.92	1.03	.96	18.0	18.0	1140	1330	150
20	20	22.06	22.06	1.03	1.03	18.0	18.0	1185	1415	150
24	6	25.80	7.10	.89	.55	15.0	19.0	985	1025	150
24	8	25.80	9.30	.89	.60	15.0	19.0	1000	1045	150
24	10	25.80	11.40	.89	.68	15.0	19.0	1020	1085	150
24	12	25.80	13.50	.89	.75	15.0	19.0	1030	1110	150
24	14	25.80	15.30	.89	.66	15.0	19.0	1055	1155	150
24	16	25.80	17.40	.89	.70	15.0	19.0	1075	1200	150
24	18	25.80	19.50	.89	.75	22.0	22.0	1400	1590	150
24	20	26.32	22.06	1.16	1.03	22.0	22.0	1720	1965	150
24	24	26.32	26.32	1.16	1.16	22.0	22.0	1815	2155	150
30	6	32.00	7.10	1.03	.55	18.0	23.0	1730	1770	150
30	8	32.00	9.30	1.03	.60	18.0	23.0	1745	1795	150
30	10	32.00	11.40	1.03	.68	18.0	23.0	1760	1830	150
30	12	32.00	13.50	1.03	.75	18.0	23.0	1780	1865	150
30	14	32.00	15.30	1.03	.66	18.0	23.0	1800	1905	150
30	16	32.00	17.40	1.03	.70	18.0	23.0	1820	1950	150
30	18	32.00	19.50	1.03	.75	18.0	23.0	1845	2000	150
30	20	32.00	21.60	1.03	.80	18.0	23.0	1875	2060	150
30	24	32.74	26.32	1.37	1.16	25.0	25.0	2880	3180	150
30	30	32.74	32.74	1.37	1.37	25.0	25.0	3105	3640	150
36	8	38.30	9.30	1.15	.60	20.0	26.0	2520	2565	150
36	10	38.30	11.40	1.15	.68	20.0	26.0	2535	2600	150
36	12	38.30	13.50	1.15	.75	20.0	26.0	2550	2630	150
36	14	38.30	15.30	1.15	.66	20.0	26.0	2570	2665	150
36	16	38.30	17.40	1.15	.70	20.0	26.0	2585	2705	150
36	18	38.30	19.50	1.15	.75	20.0	26.0	2610	2750	150
36	20	38.30	21.60	1.15	.80	20.0	26.0	2635	2805	150
36	24	38.30	25.80	1.15	.89	20.0	26.0	2690	2910	150
36	30	39.16	32.74	1.58	1.37	28.0	28.0	4345	4790	150
36	36	39.16	39.16	1.58	1.58	28.0	28.0	4590	5280	150
42	12	44.50	13.50	1.28	.75	23.0	30.0	3555	3640	150
42	14	44.50	15.30	1.28	.66	23.0	30.0	3575	3675	150
42	16	44.50	17.40	1.28	.70	23.0	30.0	3595	3715	150
42	18	44.50	19.50	1.28	.75	23.0	30.0	3615	3755	150
42	20	44.50	21.60	1.28	.80	23.0	30.0	3640	3810	150
42	24	44.50	25.80	1.28	.89	23.0	30.0	3690	3910	150
42	30	44.50	32.00	1.28	1.03	31.0	31.0	4650	5040	150
42	36	45.58	39.16	1.78	1.58	31.0	31.0	6075	6655	150
42	42	45.58	45.58	1.78	1.78	31.0	31.0	6320	7145	150
48	12	50.80	13.50	1.42	.75	26.0	34.0	4870	4955	150
48	14	50.80	15.30	1.42	.66	26.0	34.0	4885	4985	150
48	16	50.80	17.40	1.42	.70	26.0	34.0	4905	5025	150
48	18	50.80	19.50	1.42	.75	26.0	34.0	4925	5065	150
48	20	50.80	21.60	1.42	.80	26.0	34.0	4950	5115	150
48	24	50.80	25.80	1.42	.89	26.0	34.0	4995	5210	150
48	30	50.80	32.00	1.42	1.03	26.0	34.0	5140	5495	150
48	36	50.80	38.30	1.42	1.15	34.0	34.0	6280	6790	150
48	42	51.98	45.58	1.96	1.78	34.0	34.0	8130	8815	150
48	48	51.98	51.98	1.96	1.96	34.0	34.0	8420	9380	150

All weights are approximate and do not include joint accessories.
See page 19 for joint dimensions and weight of joint accessories.



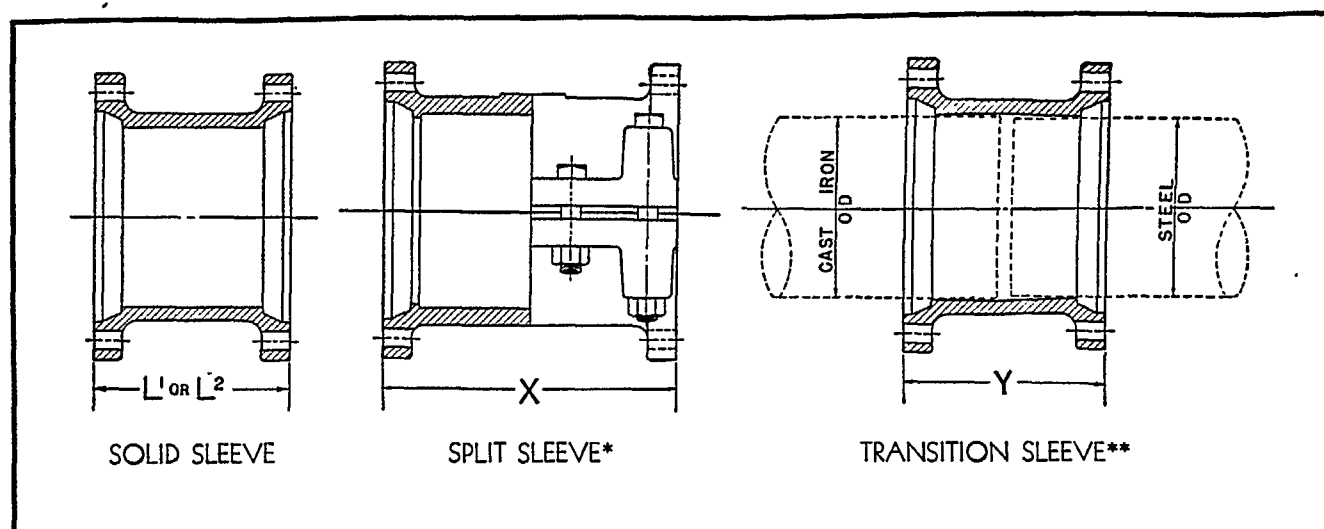
Reducers

TABLE OF DIMENSIONS												
Nominal Diam.		Outside Diam.		Metal Thickness		Bell & Bell		Large End Bell		Small End Bell		Max. Working Pressure
D	D'	Large	Small	T	T'	L	Weight	L	Weight	L	Weight	
4	3	5.00	3.96	.52	.48	7	40	15	40	15	35	250
6	3	7.10	3.96	.55	.48	9	55	17	55	17	50	250
6	4	7.10	5.00	.55	.52	9	60	17	60	17	60	250
8	4	9.30	5.00	.60	.52	11	80	19	80	19	80	250
8	6	9.30	7.10	.60	.55	11	95	19	90	19	90	250
10	4	11.40	5.00	.68	.52	12	105	20	100	20	100	250
10	6	11.40	7.10	.68	.55	12	115	20	115	20	115	250
10	8	11.40	9.30	.68	.60	12	135	20	130	20	130	250
12	4	13.50	5.00	.75	.52	14	135	22	130	22	130	250
12	6	13.50	7.10	.75	.55	14	150	22	145	22	150	250
12	8	13.50	9.30	.75	.60	14	165	22	165	22	165	250
12	10	13.50	11.40	.75	.68	14	190	22	185	22	190	250
14	6	15.30	7.10	.66	.55	16	190	24	185	24	175	150
14	8	15.30	9.30	.66	.60	16	210	24	205	24	190	150
14	10	15.30	11.40	.66	.68	16	230	24	230	24	215	150
14	12	15.30	13.50	.66	.75	16	255	24	255	24	240	150
16	6	17.40	7.10	.70	.55	18	230	26	230	26	210	150
16	8	17.40	9.30	.70	.60	18	250	26	250	26	230	150
16	10	17.40	11.40	.70	.68	18	280	26	275	26	255	150
16	12	17.40	13.50	.70	.75	18	305	26	305	26	285	150
16	14	17.40	15.30	.70	.66	18	335	26	315	26	310	150
18	8	19.50	9.30	.75	.60	19	295	27	295	27	270	150
18	10	19.50	11.40	.75	.68	19	325	27	320	27	300	150
18	12	19.50	13.50	.75	.75	19	350	27	350	27	325	150
18	14	19.50	15.30	.75	.66	19	380	27	365	27	355	150
18	16	19.50	17.40	.75	.70	19	415	27	395	27	390	150
20	10	21.60	11.40	.80	.68	20	375	28	375	28	345	150
20	12	21.60	13.50	.80	.75	20	405	28	405	28	375	150
20	14	21.60	15.30	.80	.66	20	430	28	415	28	400	150
20	16	21.60	17.40	.80	.70	20	470	28	445	28	435	150
20	18	21.60	19.50	.80	.75	20	510	28	485	28	475	150
24	12	25.80	13.50	.89	.75	24	550	32	550	32	510	150
24	14	25.80	15.30	.89	.66	24	575	32	560	32	535	150
24	16	25.80	17.40	.89	.70	24	615	32	595	32	575	150
24	18	25.80	19.50	.89	.75	24	660	32	635	32	620	150
24	20	25.80	21.60	.89	.80	24	705	32	675	32	665	150
30	18	32.00	19.50	1.03	.75	30	990	38	965	38	885	150
30	20	32.00	21.60	1.03	.80	30	1050	38	1020	38	945	150
30	24	32.00	25.80	1.03	.89	30	1165	38	1125	38	1060	150
36	20	38.30	21.60	1.15	.80	36	1450	44	1420	44	1285	150
36	24	38.30	25.80	1.15	.89	36	1580	44	1535	44	1410	150
36	30	38.30	32.00	1.15	1.03	36	1855	44	1750	44	1690	150
42	20	44.50	21.60	1.28	.80	42	1915	50	1880	50	1705	150
42	24	44.50	25.80	1.28	.89	42	2060	50	2020	50	1855	150
42	30	44.50	32.00	1.28	1.03	42	2370	50	2265	50	2165	150
42	36	44.50	38.30	1.28	1.15	42	2695	50	2530	50	2485	150
48	30	50.80	32.00	1.42	1.03	48	3005	56	2900	56	2740	150
48	36	50.80	38.30	1.42	1.15	48	3370	56	3205	56	3100	150
48	42	50.80	44.50	1.42	1.28	48	3750	56	3540	56	3480	150

All weights are approximate and do not include joint accessories.

See page 19 for joint dimensions and weight of joint accessories.

Three to twelve-inch fittings conform to A.S.A. Specification—A-21.10—for short body fittings.



Sleeves

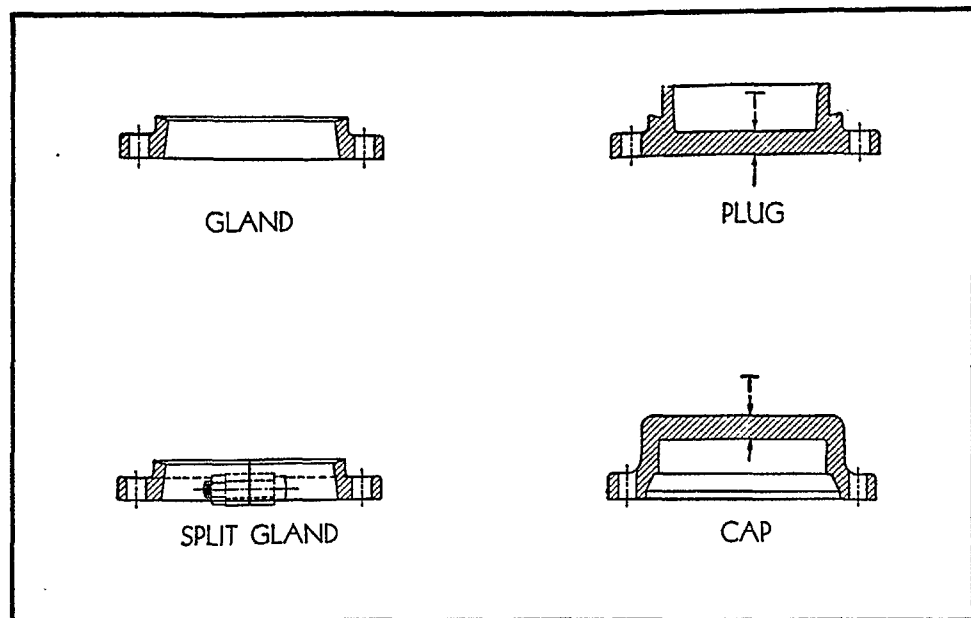
TABLE OF DIMENSIONS											
Nominal Diam.	T	Fits O. D. C. I. Pipe	Solid Sleeves				Split Sleeves	Transition Sleeves			Max. Working Pressure
			L ₁	Weight	L ₂	Weight	X Min.	Fits O. D. Steel Pipe	Y	Weight	
3	.48	3.96	7.5	25	12	30	10	3.50	7.50	25	250
4	.52	4.80	7.5	35	12	45	10	4.50	7.50	35	250
6	.55	6.90	7.5	45	12	65	10	6.62	7.50	45	250
8	.60	9.05	7.5	65	12	85	10	8.62	7.50	65	250
10	.68	11.10	7.5	85	12	115	10	10.75	7.50	85	250
12	.75	13.20	7.5	110	12	145	10	12.75	7.50	110	250
14	.82	15.30	9.5	165	15	225	11				150
16	.89	17.40	9.5	200	15	275	11				150
18	.96	19.50	9.5	240	15	330	11				150
20	1.03	21.60	9.5	275	15	380	11				150
24	1.16	25.80	9.5	360	15	505	11				150
30	1.37	32.00	15.0	745	24	1085	15				150
36	1.58	38.30	15.0	1030	24	1495	15				150
42	1.78	44.50	15.0	1330	24	1940	15				150
48	1.96	50.80	15.0	1645	24	2405	15				150

*This split sleeve can be furnished with boss and tap for service connection.

**Transition sleeves are furnished with one end designed for standard steel outside diameter pipe and the other to fit mechanical joint cast iron pipe.

All weights are approximate and do not include joint accessories.

See page 19 for joint dimensions and weight of joint accessories.



Glands, Plugs and Caps

TABLE OF DIMENSIONS							
Nominal Diam.	Weights		Design	Weights			Max. Working Pressure
	Solid Glands	Split Glands		T	Plugs	Caps	
3	5	9	Flat	.75	14	13	250
4	6	14	Flat	.75	20	20	250
6	11	18	Flat	.75	30	30	250
8	18	20	Flat	.75	50	45	250
10	20	30	Flat	.75	65	55	250
12	30	35	Flat	.75	85	75	250
14	35	60	Dished	.82	115	120	150
16	45	70	Dished	.89	150	155	150
18	55	85	Dished	.96	195	190	150
20	70	100	Dished	1.03	225	240	150
24	90	130	Dished	1.16	330	345	150
30	180	205	Dished & Ribbed	1.37	590	660	150
36	235	265	Dished & Ribbed	1.58	880	960	150
42	300	330	Dished & Ribbed	1.78	1250	1355	150
48	365	400	Dished & Ribbed	1.96	1670	1830	150

All weights are approximate.

See page 19 for joint dimensions and weight of joint accessories.

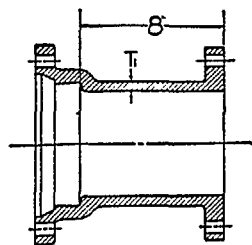


Figure A

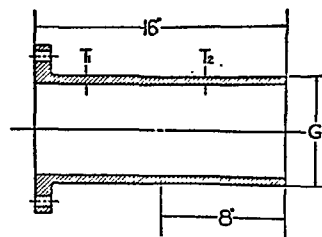


Figure B

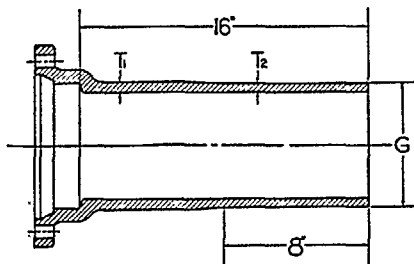


Figure C

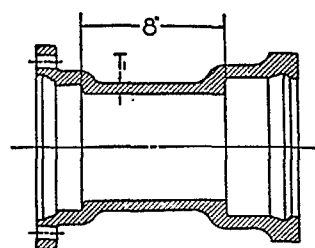


Figure D

All flanges are American 125 standard unless otherwise specified.

Connecting Pieces

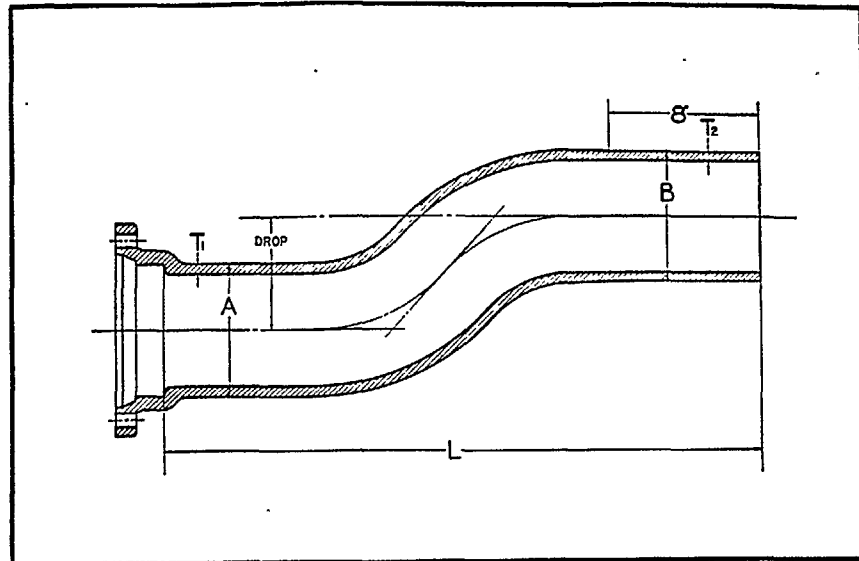
TABLE OF DIMENSIONS										
Nominal Diam.	Body O. D.	T ₁	P. E. Diam. "G"	T ₂	A	B	C	D	E*	Max. Working Pressure
					MJ & Flg Weight	Flg. & PE Weight	MJ & PE Weight	MJ & B Weight	MJ & MJ Weight	
3	3.96	.48	3.96	.48	30	30	35	40	35	250
4	5.00	.52	4.80	.45	40	40	45	55	45	250
6	7.10	.55	6.90	.48	60	55	65	80	70	250
8	9.30	.60	9.05	.51	85	85	95	115	95	250
10	11.40	.68	11.10	.57	115	115	125	150	130	250
12	13.50	.75	13.20	.62	155	155	165	190	165	250
14	15.30	.66	15.30	.66	195	180	205	230	220	150
16	17.40	.70	17.40	.70	240	220	250	290	270	150
18	19.50	.75	19.50	.75	280	255	300	340	325	150
20	21.60	.80	21.60	.80	340	305	360	405	390	150
24	25.80	.89	25.80	.89	455	415	475	530	515	150
30	32.00	1.03	32.00	1.03	710	600	730	820	840	150
36	38.30	1.15	38.30	1.15	1000	830	1005	1170	1170	150
42	44.50	1.28	44.50	1.28	1325	1115	1295	1515	1500	150
48	50.80	1.42	50.80	1.42	1655	1390	1640	1930	1910	150

Fittings shown in Fig. B and C may be furnished from centrifugally cast pipe.

*Figure E is a mechanical joint-to-mechanical joint connecting piece having laying length of 8".

All weights are approximate.

See page 19 for joint dimensions and weight of joint accessories.

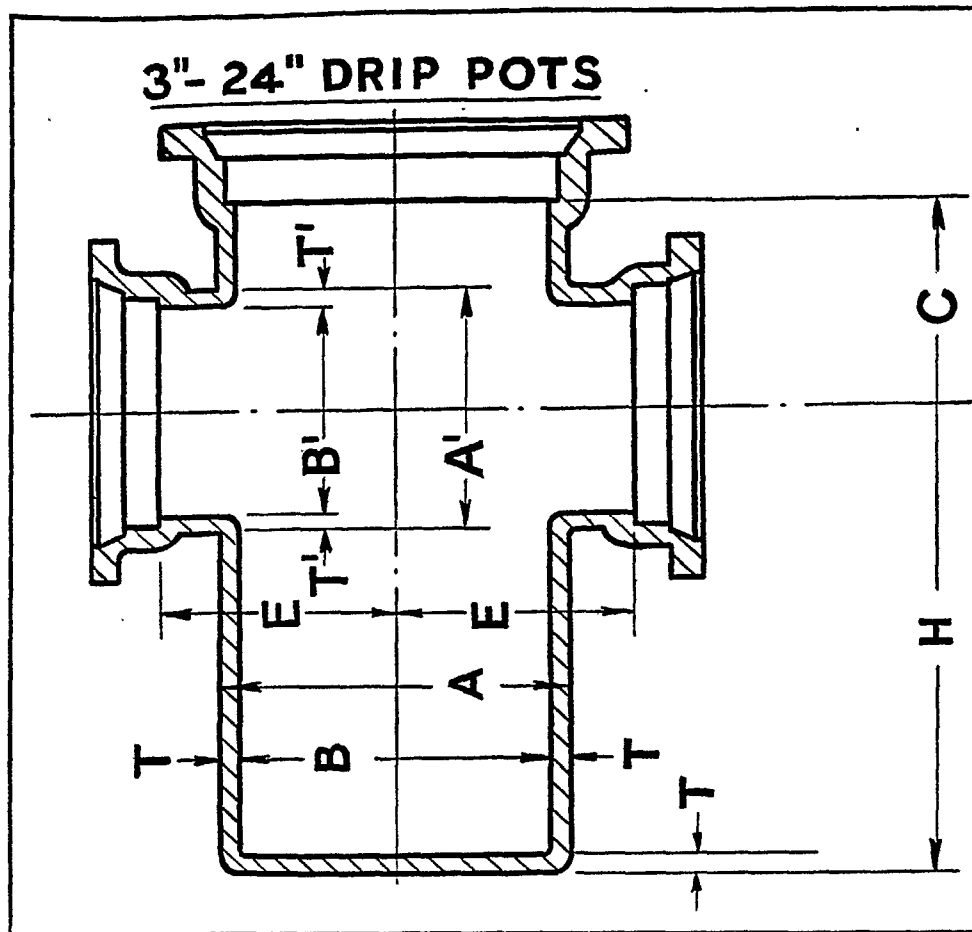


Offsets

TABLE OF DIMENSIONS								
Nominal Diam.	Plain End Diam.	Outside Diam. A	Drop	L	T ₁	T ₂	Weight	Max. Working Pressure
3	3.96	3.96	6	27	.48	.48	50	250
3	3.96	3.96	12	30	.48	.48	60	250
3	3.96	3.96	18	38	.48	.48	75	250
4	4.80	5.00	6	27	.52	.45	70	250
4	4.80	5.00	12	30	.52	.45	80	250
4	4.80	5.00	18	38	.52	.45	100	250
6	6.90	7.10	6	28	.55	.48	105	250
6	6.90	7.10	12	34	.55	.48	130	250
6	6.90	7.10	18	41	.55	.48	160	250
8	9.05	9.30	6	29	.60	.51	155	250
8	9.05	9.30	12	36	.60	.51	195	250
8	9.05	9.30	18	43	.60	.51	240	250
10	11.10	11.40	6	30	.68	.57	220	250
10	11.10	11.40	12	38	.68	.57	280	250
10	11.10	11.40	18	46	.68	.57	340	250
12	13.20	13.50	6	34	.75	.62	320	250
12	13.20	13.50	12	45	.75	.62	420	250
12	13.20	13.50	18	56	.75	.62	520	250

All weights are approximate.

See page 19 for joint dimensions and weight of joint accessories.



Drip Pots

DIMENSIONS IN INCHES												
Size	A ₁	A	B ₁	B	C	E	H	T ₁	T	Plug- Size	Cap., qts.	Wts., lbs.
4	5.00	15.30	3.96	13.98	6.00	10.75	14.75 26.75	.52	.66	14	32 64	435 530
6	7.10	15.30	6.00	13.98	7.12	10.75	15.75 27.75	.55	.66	14	32 64	465 560
8	9.30	15.30	8.10	13.98	8.25	10.75	28.75 40.88	.60	.66	14	64 96	595 695
10	11.40	15.30	10.04	13.98	9.25	10.75	29.75 41.88	.68	.66	14	64 96	645 740
12	13.50	17.40	12.00	16.00	10.25	11.75	30.88 42.88	.75	.70	16	84 126	815 930
16	17.40	21.60	16.00	20.00	12.25	14.38	34.12 46.88	.70	.80	20	138 208	1285 1460
20	21.60	25.80	20.00	24.02	15.38	16.50	36.75 49.62	.80	.89	24	203 304	1875 2110
24	25.80	32.00	24.02	29.94	17.50	20.50	36.12 47.62	.89	1.03	30	280 420	2895 3195

Weights include plug, bolts and gasket for top.
 All weights are approximate.
 See page 19 for joint dimensions and weight of joint accessories.

Gaskets, Glands and Bolts

for mechanical joint cast iron pipe and fittings

(in conformance with A.S.A.—A-21.11)

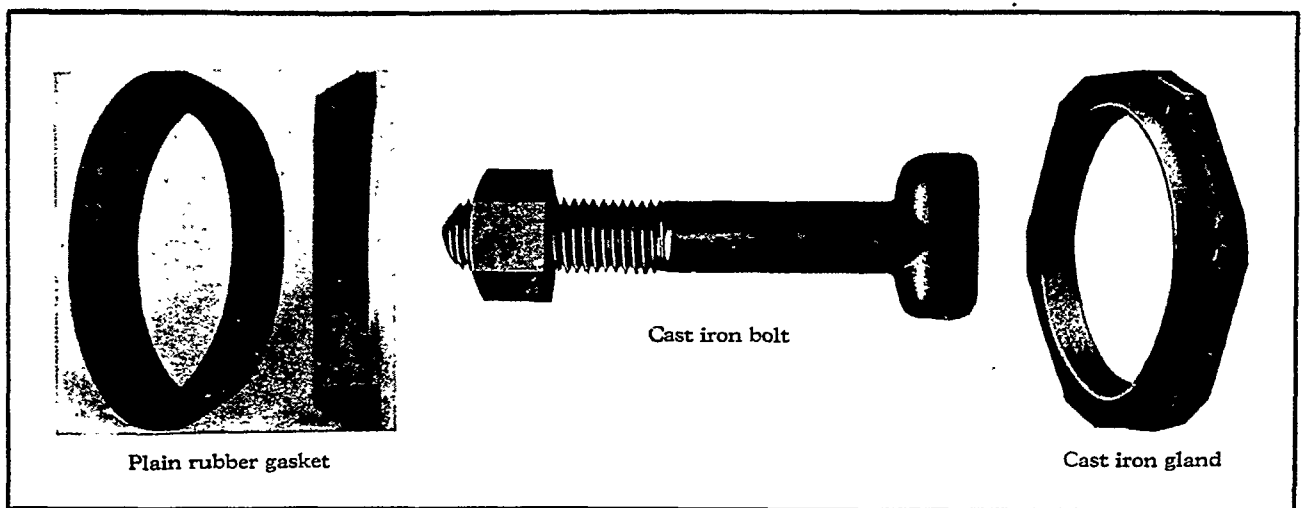
All *gaskets* furnished for the standardized mechanical joint are produced by long-established manufacturers who are recognized specialists in this field, and are made to accurate dimensions under rigid controls and inspection. Generally plain rubber gaskets are furnished and in sufficient quantities to provide for each socket opening on pipe and fittings. Metal tipped, duck tipped, Thiokol tipped and other special types of gaskets can be supplied when specified by the purchaser.

Glands are made of special high quality cast iron under rigid metallurgical controls and inspections.

Bolts furnished with the standardized mechanical joint are made of high strength cast iron and have a minimum tensile strength of 50,000 pounds per square inch. They possess the inherent corrosion resistance of cast iron and will therefore play their full part in living up to the long life records of the pipe itself. Other types of bolts for unusual requirements are furnished to meet purchasers' specifications.

Glands and bolts are furnished in sufficient quantities to provide for each socket opening on pipe and fittings.

Thus, the standardized mechanical joint is homogeneous throughout—a true cast iron joint.



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