



DUCTILE IRON C110 FULL BODY MECHANICAL JOINT DIMENSIONS

Sizes 3" thru 12" UL Listed for Fire Main Equipment

SAMPLE SPECIFICATION (Current ANSI/AWWA revision apply)

Mechanical joint watermain fittings with accessories, 2" through 48" shall be produced of ductile iron in accordance with and meet all applicable terms and provisions of standards ANSI/AWWA C110/A21.10 and ANSI/AWWA C111/A21.11. Ductile iron mechanical joint fittings 3" through 24" shall be rated for 350 PSI working pressure. All ductile iron mechanical joint fittings 30" through 48" shall be rated for 250 PSI working pressure. Flanged ductile-iron fittings in 24-in. (610mm) and smaller sizes may be rated for 350 psi (2,413 kPa) with the use of special (annular ring or comparable) gaskets.

NOTE - EXCEPTIONS: Mechanical Joint Fittings with flanged branches and 14" and larger caps and plugs are rated for water pressure of 250 PSI.

NOTE - Installation per AWWA C600 and AWWA C651, current revision

NOTE: Fittings are cement lined and seal coated in accordance with ANSI/AWWA C104/A21.4. Fittings are also available double cement lined, bare or epoxy coated. Coated and lined fittings meet requirements of NSF-61, NSF-372, & Annex G..

NOMINAL JOINT DIMENSIONS IN INCHES - MECHANICAL JOINT FITTINGS

DIMENSIONS IN INCHES																
Size	A	B	C	D	F	⅓	X	J	K ¹	K ²	L	M	N	O	P	S
*2	2.50	2.50	3.39	3.50	2.61	28°	¾	4.75	6.25	6.25	.75	.62	1.12	.31	.63	.44
3	3.96	2.50	4.84	4.94	4.06	28°	¾	6.19	7.69	7.69	.94	.62	1.37	.31	.63	.52
4	4.80	2.50	5.92	6.02	4.90	28°	⅞	7.50	9.12	9.12	1.00	.75	1.50	.31	.75	.65
6	6.90	2.50	8.02	8.12	7.00	28°	⅞	9.50	11.12	11.12	1.06	.88	1.63	.31	.75	.70
8	9.05	2.50	10.17	10.27	9.15	28°	⅞	11.75	13.37	13.37	1.12	1.00	1.75	.31	.75	.75
10	11.10	2.50	12.22	12.34	11.20	28°	⅞	14.00	15.69	15.62	1.19	1.00	1.75	.31	.75	.80
12	13.20	2.50	14.32	14.44	13.30	28°	⅞	16.25	17.94	17.88	1.25	1.00	1.75	.31	.75	.85
14	15.30	3.50	16.40	16.54	15.44	28°	⅞	18.75	20.31	20.25	1.31	1.25	2.00	.31	.75	.89
16	17.40	3.50	18.50	18.64	17.54	28°	⅞	21.00	22.56	22.50	1.38	1.31	2.06	.31	.75	.97
18	19.50	3.50	20.60	20.74	19.64	28°	⅞	23.25	24.83	24.75	1.44	1.38	2.13	.31	.75	1.05
20	21.60	3.50	22.70	22.84	21.74	28°	⅞	25.50	27.08	27.00	1.50	1.44	2.19	.31	.75	1.12
24	25.80	3.50	26.90	27.04	25.94	28°	⅞	30.00	31.58	31.50	1.62	1.56	2.31	.31	.75	1.22
30	32.00	4.00	33.29	33.46	32.17	20°	1⅞	36.88	39.12	39.12	1.81	2.00	2.75	.38	1.00	1.50
36	38.30	4.00	39.59	39.76	38.47	20°	1⅞	43.75	46.00	46.00	2.00	2.00	2.75	.38	1.00	1.80
42	44.50	4.00	45.79	45.96	44.67	20°	1⅞	50.62	53.12	53.12	2.00	2.00	2.75	.38	1.00	1.95
48	50.80	4.00	52.09	52.26	50.97	20°	1⅞	57.50	60.00	60.00	2.00	2.00	2.75	.38	1.00	2.20

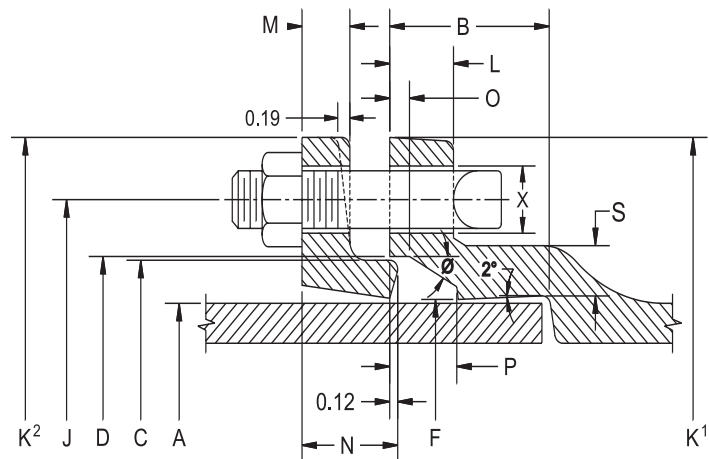
* Not included in AWWA C110.

ACCESSORIES AND WEIGHTS

Size	No.	Bolt Size	Bolt Length	Bolt Torque Ft/Lbs.	Wt. of Gland, Bolts and Gasket, Lbs.	Pipe Barrel O.D.
*2	2	⅝	3	45-60	5	2.50
3	4	⅝	3	45-60	7	3.96
4	4	¾	3½	75-90	10	4.80
6	6	¾	3½	75-90	16	6.90
8	6	¾	4	75-90	25	9.05
10	8	¾	4	75-90	30	11.10
12	8	¾	4	75-90	40	13.20
14	10	¾	4½	75-90	45	15.30
16	12	¾	4½	75-90	55	17.40
18	12	¾	4½	75-90	65	19.50
20	14	¾	4½	75-90	85	21.60
24	16	¾	5	75-90	105	25.80
30	20	1	6	100-120	220	32.00
36	24	1	6	100-120	301	38.30
42	28	1¼	6½	120-150	389	44.50
48	32	1¼	6½	120-150	477	50.80

* Not included in AWWA C110.

14" THRU 48"
GLANDS MAY
BE TAPERED

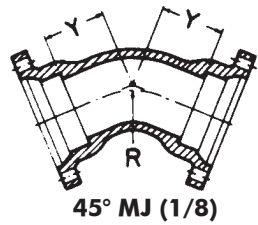


ANSI/AWWA C110/A21.10, ANSI/AWWA C111/A21.11

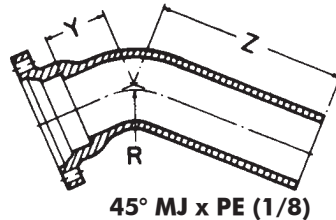


TYLER UNION

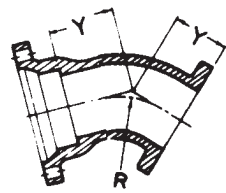
BENDS



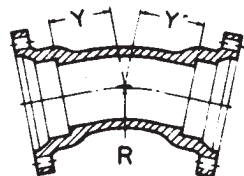
45° MJ (1/8)



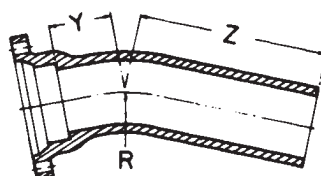
45° MJ x PE (1/8)



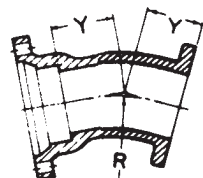
45° MJ x FE (1/8)



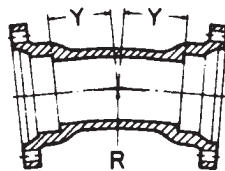
22 1/2° MJ (1/16)



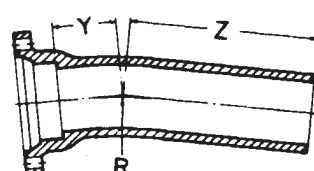
22 1/2° MJ x PE (1/16)



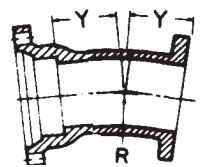
22 1/2° MJ x FE (1/16)



11 1/4° MJ (1/32)



11 1/4° MJ x PE (1/32)



11 1/4° MJ x FE (1/32)

DUCTILE IRON C110 FULL BODY MECHANICAL JOINT FITTINGS

45° Bends (1/8)

Size	Dimensions			MJ	Weights	
	R	Y	Z		MJxFE*	MJxPE
*2	1.96	1.8	...	16	...	...
3	3.62	3.0	11.0	30	...	...
4	4.81	4.0	12.0	53	48	45
6	7.25	5.0	13.0	77	60	69
8	8.44	5.5	13.5	110	107	111
10	10.88	6.5	14.5	172	168	167
12	13.25	7.5	15.5	222	215	218
14	12.06	7.5	15.5	311	...	...
16	13.25	8.0	16.0	364	360	360
18	14.50	8.5	16.5	531	430	455
20	16.88	9.5	17.5	655	543	664
24	18.12	11.0	19.0	865	1099	825
30	27.75	15.0	23.0	1447	...	1510
36	35.00	18.0	26.0	2435	...	1930
42	42.25	21.0	...	2955	...	...
48	49.50	24.0	...	4080	...	...

* Not included in AWWA C110.

22 1/2° Bends (1/16)

Size	Dimensions			MJ	Weights	
	R	Y	Z		MJxFE*	MJxPE
3	7.56	3.0	11.0	30	...	...
4	10.06	4.0	12.0	52	...	...
6	15.06	5.0	13.0	77	71	70
8	17.62	5.5	13.5	110	107	109
10	22.62	6.5	14.5	156	155	163
12	27.62	7.5	15.5	221	215	224
14	25.12	7.5	15.5	300	...	...
16	27.62	8.0	16.0	391	315	365
18	30.19	8.5	16.5	527	422	455
20	35.19	9.5	17.5	611	...	575
24	37.69	11.0	19.0	986	800	930
30	57.81	15.0	23.0	1898	...	1540
36	72.88	18.0	26.0	2372	...	1970
42	88.00	21.0	...	3020	...	...
48	103.06	24.0	...	4170	...	...

11 1/4° Bends (1/32)

Size	Dimensions			MJ	Weights	
	R	Y	Z		MJxFE*	MJxPE
3	15.25	3.0	11.0	30	...	...
4	20.31	4.0	12.0	52	...	...
6	30.50	5.0	13.0	65	71	...
8	35.50	5.5	13.5	104	105	...
10	45.69	6.5	14.5	171	...	...
12	55.81	7.5	15.5	221	215	...
14	50.75	7.5	15.5	305	...	...
16	55.81	8.0	16.0	391	367	...
18	60.94	8.5	16.5	525	422	...
20	71.06	9.5	17.5	605	...	...
24	76.12	11.0	19.0	996	800	972
30	116.75	15.0	23.0	1410	...	1305
36	147.25	18.0	26.0	2397	...	2185
42	177.69	21.0	...	3035	...	...
48	208.12	24.0	...	4190	...	...

ANSI/AWWA C110/A21.10, ANSI/AWWA C111/A21.11