



Ductile Iron MJ Full Body Fittings

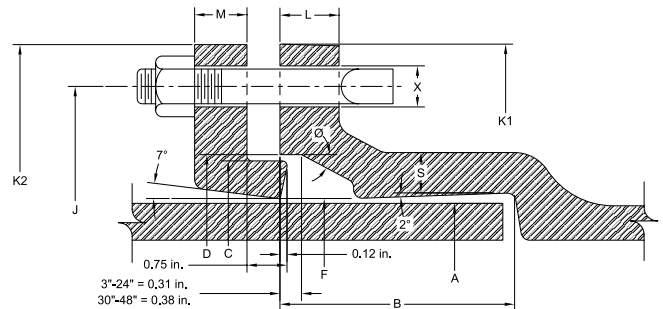
ANSI/AWWA C110/A21.10

GENERAL SPECIFICATIONS

- MATERIAL:** Ductile iron per ASTM A536
- PRESSURE:** 350 PSI rating for 2" - 24" sizes, 250 PSI rating for 30" - 48" and 150 PSI for 54"-64" or as noted
- TESTING:** In accordance with ANSI/AWWA C110/A21.10
- LAYING LENGTH:** In accordance with ANSI/AWWA C110/A21.10 (fittings not listed in ANSI/AWWA have dimensions per Star design as noted in the catalog)
- WEIGHTS:** Are in pounds, unless noted otherwise and do not include accessories, cement lining and coating
- FLANGES:** Flanged ends on fittings match ANSI/AWW C110/A21.10 and ANSI B16.1 class 125 flanges.
- CEMENT LINING:** In accordance with ANSI/AWWA C104/A21.4 -- sizes 2" - 3" single thickness and sizes 4" - 54" double thickness
- COATING:** Asphaltic seal coat inside and out in accordance with ANSI/AWWA C104/A21.4 and referenced in ANSI/AWWA C110/A21.10
- GASKETS:** SBR in accordance with ANSI/AWWA C111/A21.11
- T-BOLTS/NUTS:** Low alloy steel in accordance with ANSI/AWWA C11/A21.11
- APPROVALS:** Sizes 2" and greater are UL/ANSI/NSF Standards 61 and 372
- DIMENSIONS:** All dimensions are in inches unless noted otherwise.
- INSTALLATION:** Per ANSI/AWWA C600 and C111 using DIP conforming to C150/C151 and PVC pipe conforming to C900/C905



SUBMITTAL INFORMATION	
PROJECT NAME:	<input type="text"/>
ENGINEER:	<input type="text"/>
CONTRACTOR:	<input type="text"/>
SPEC. SECTION:	<input type="text"/>



MECHANICAL JOINT DIMENSIONS															
NOM. SIZE	A DIA.	B	C DIA.	D DIA.	F DIA.	J DIA.	K1 DIA.	K2 DIA.	L	M	S	Ø	X DIA.	BOLTS	
														SIZE	NO.
2	2.50	2.50	3.39	3.50	2.61	4.75	6.25	6.25	0.75	0.62	0.44	28°	¾	⅝ x 3	2
3	3.96	2.50	4.84	4.94	4.06	6.19	7.69	7.69	0.94	0.62	0.52	28°	¾	⅝ x 3	4
4	4.80	2.50	5.92	6.02	4.90	7.50	9.12	9.12	1.00	0.75	0.65	28°	⅞	¾ x 3 ½	4
6	6.90	2.50	8.02	8.12	7.00	9.50	11.12	11.12	1.06	0.88	0.70	28°	⅞	¾ x 3 ½	6
8	9.05	2.50	10.17	10.27	9.15	11.75	13.37	13.37	1.12	1.00	0.75	28°	⅞	¾ x 4	6
10	11.10	2.50	12.22	12.34	11.20	14.00	15.69	15.62	1.19	1.00	0.80	28°	⅞	¾ x 4	8
12	13.20	2.50	14.32	14.44	13.30	16.25	17.94	17.88	1.25	1.00	0.85	28°	⅞	¾ x 4	8
14	15.30	3.50	16.40	16.54	15.44	18.75	20.31	20.25	1.31	1.25	0.89	28°	⅞	¾ x 4 ½	10
16	17.40	3.50	18.50	18.64	17.54	21.00	22.56	22.50	1.38	1.31	0.97	28°	⅞	¾ x 4 ½	12
18	19.50	3.50	20.60	20.74	19.64	23.25	24.83	24.75	1.44	1.38	1.05	28°	⅞	¾ x 4 ½	12
20	21.60	3.50	22.70	22.84	21.74	25.50	27.08	27.00	1.50	1.44	1.12	28°	⅞	¾ x 4 ½	14
24	25.80	3.50	26.90	27.04	25.94	30.00	31.58	31.50	1.62	1.56	1.22	28°	⅞	¾ x 5	16
30	32.00	4.00	33.29	33.46	32.17	36.88	39.12	39.12	1.81	2.00	1.50	20°	1 ½	1 x 6	20
36	38.30	4.00	39.59	39.76	38.47	43.75	46.00	46.00	2.00	2.00	1.80	20°	1 ½	1 x 6	24
42	44.50	4.00	45.79	45.96	44.67	50.62	53.12	53.12	2.00	2.00	1.95	20°	1 ¾	1 ¼ x 6 ½	28
48	50.80	4.00	52.09	52.26	50.97	57.50	60.00	60.00	2.00	2.00	2.20	20°	1 ¾	1 ¼ x 6 ½	32
54	{ Fittings & Dimensions Available On Request }														
60															
64															

SIZE RANGE (Please specify): _____

Size Range _____

LINING OPTIONS (Please check one): _____

- Standard: Cement-lined and asphalt seal coat per ANSI/AWWA C104/A21.4 and UL/NSF-61
- Optional: FBE (Fusion Bonded Epoxy) per ANSI/AWWA C116/A21.15 and UL/NSF-61 - ID & OD Only
- Optional: P401 (Protecto 401) Ceramic Epoxy - sewer applications only. Not NSF-61
- Optional: Other (specify) _____

COATING OPTIONS (Please check one): _____

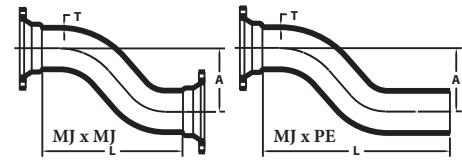
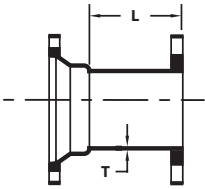
- Standard: Asphaltic seal coat per ANSI/AWWA C104/A21.4
- Optional: FBE (Fusion Bonded Epoxy) per ANSI/AWWA C116/A21.15 and UL/NSF-61 - ID & OD Only
- Optional: Other (specify) _____





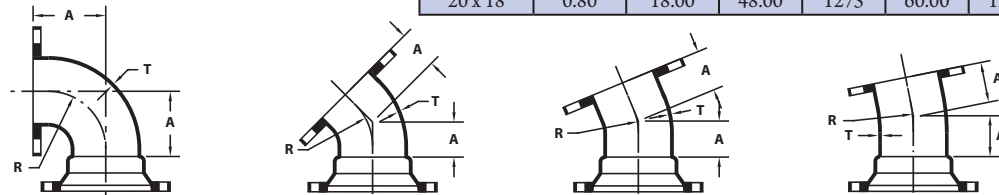
Full Body MJ Fittings

ANSI/AWWA C110/A21.10



MJ x FLANGE ADAPTER			
NOM. SIZE	T	L	WT (LBS.)
3	0.48	8.00	30
4	0.52	8.00	40
6	0.55	8.00	60
8	0.60	8.00	85
10	0.68	8.00	115
12	0.75	8.00	155
14	0.66	8.00	195
16	0.70	8.00	240
18	0.75	8.00	280
20	0.80	8.00	340
24	0.89	8.00	455
30	1.03	10.00	760
36	1.15	10.00	1070

NOM. SIZE	MJ OFFSETS		MJ x MJ		MJ x PE	
	T	A	L	WT (LBS.)	L	WT (LBS.)
4 x 6	0.52	6.00	19.00	75	27.00	70
4 x 12	0.52	12.00	22.00	85	30.00	80
4 x 18	0.52	18.00	30.00	105	38.00	100
4 x 24	0.52	24.00	30.00	125	38.00	115
6 x 6	0.55	6.00	20.00	110	28.00	105
6 x 12	0.55	12.00	26.00	135	34.00	130
6 x 18	0.55	18.00	33.00	165	41.00	160
6 x 24	0.55	24.00	33.00	195	41.00	195
8 x 6	0.60	6.00	21.00	160	29.00	155
8 x 12	0.60	12.00	28.00	200	36.00	195
8 x 18	0.60	18.00	35.00	245	43.00	240
8 x 24	0.60	24.00	36.00	280	44.00	275
10 x 12	0.68	12.00	30.00	250	38.00	280
10 x 18	0.68	18.00	38.00	340	46.00	340
10 x 24	0.68	24.00	38.00	420	46.00	420
12 x 12	0.75	12.00	37.00	420	45.00	420
12 x 18	0.75	18.00	48.00	520	56.00	520
12 x 24	0.75	24.00	48.00	640	56.00	630
16 x 12	0.70	12.00	40.00	600	48.00	580
16 x 18	0.70	18.00	50.00	710	58.00	690
20 x 12	0.80	12.00	40.00	1025	48.00	1015
20 x 18	0.80	18.00	48.00	1275	60.00	1265



MJ x FE BENDS		90° MJ x FE BENDS (1/4)			45° MJ x FE BENDS (1/8)			22 1/2° MJ x FE BENDS (1/16)			11 1/4° MJ x FE BENDS (1/32)		
NOM. SIZE	T	A	R	WT (LBS.)	A	R	WT (LBS.)	A	R	WT (LBS.)	A	R	WT (LBS.)
4	0.52	6.50	4.50	38	4.00	4.81	45	4.00	10.06	45	4.00	20.31	45
6	0.55	8.00	6.00	75	5.00	7.25	69	5.00	15.06	69	5.00	30.50	69
8	0.60	9.00	7.00	115	5.50	8.44	105	5.50	17.62	105	5.50	35.50	105
10	0.68	11.00	9.00	177	6.50	10.88	155	6.50	22.62	155	6.50	45.69	155
12	0.75	12.00	10.00	246	7.50	13.25	215	7.50	27.62	215	7.50	55.81	215
14	0.66	-	-	-	7.50	12.06	245	-	-	-	-	-	-
16	0.70	15.00	12.50	465	8.00	13.25	360	8.00	27.62	360	8.00	55.81	360
18	0.75	16.50	14.00	577	8.50	14.50	422	8.50	30.19	422	8.50	60.94	422
20	0.80	18.00	15.50	745	9.50	16.88	543	9.50	35.19	575	9.50	71.06	575
24	0.89	22.00	18.50	1150	11.00	18.12	800	11.00	37.69	800	11.00	76.12	800
30	1.03	25.00	21.50	1559	-	-	-	15.00	57.81	1270	-	-	-
36	1.15	28.00	24.50	2318	-	-	-	-	-	-	-	-	-
48	1.42	34.00	30.50	4378	-	-	-	-	-	-	-	-	-

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