

# C110 DUCTILE IRON MECHANICAL JOINT FITTINGS

<b>Project Name:</b>	<b>Contractor:</b>	<b>Date</b>
<b>Engineer:</b>	<b>Spec Section:</b>	

## Optional Specifications

<b>Gaskets</b>	SBR <i>(In accordance with ANSI/AWWA C111/A21.11)</i>	<b>Coating</b>	Asphaltic Seal Coat <i>(In accordance with ANSI / AWWA C104/A21.04 and ANSI / AWWA C110/A21.10)</i>
	EPDM		Fusion Bonded Epoxy (FBE)*Interior and exterior <i>(In accordance with ANSI / AWWA C116/A21.16)</i>
	Neoprene		Zinc <i>(In accordance with ISO 8179-2)</i>
	Nitrile		<b>Others- Specify</b>
	<b>Others -Specify</b>		
<b>Bolts &amp; Nuts</b>	High Strength Low Alloy Steel (HSLA) <i>(In accordance with ANSI/AWWA C111/A21.11)</i>	<b>Lining</b>	Cement-Mortar *Double thickness with asphaltic coating <i>(In accordance with ANSI/AWWA C104/A21.4)</i>
	Stainless Steel ___Type 304 ___Type 316		Fusion Bonded Epoxy (FBE)*Interior and exterior <i>(In accordance with ANSI/AWWA C116/A21.16)</i>
	Blue Fluoropolymer		Protecto 401 Ceramic Epoxy
	<b>Other- Specify</b>		<b>Others- Specify</b>



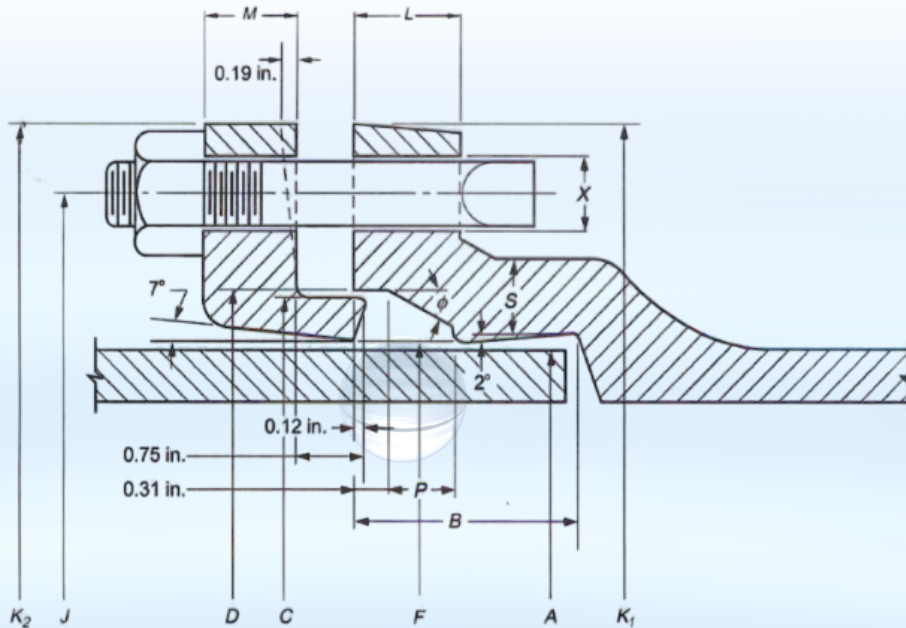
WATER QUALITY  
Certified to ANSI/NSF  
Standards 61 and 372



## Product Specifications

<b>Material:</b>	Ductile Iron ASTM A536 Grade 60-42-10, 65-45-12 or 70-50-05
<b>Pressure Rating:</b>	350 PSI rating for 2" – 24" sizes and 250 PSI rating for 30" – 48" sizes
<b>Testing:</b>	In accordance with ANSI/AWWA C110/A21.10 & UL-FM Requirements.   Hydrostatically Tested in accordance with SIGMA Quality Management Standard.
<b>Traceability:</b>	All fittings are heat coded to ensure traceability and verification of metallurgical properties in accordance with SIGMA Quality Management Standards.
<b>Size Range:</b>	2" - 48"
<b>Laying Length:</b>	In accordance with ANSI/AWWA C110/A21.10. Non-standard items will be as per SIGMA design.
<b>Deflection:</b>	Maximum allowable deflection for MJ Joint is as mentioned: 2"-4"=8°   6"=7°   8"-12"=5°   14"-48"=3°
<b>Approvals:</b>	3"-16" Underwriters Laboratories listed and Factory Mutual Approved. UL/NSF61 & 372.
<b>Standards</b>	ANSI/AWWA C111/A21.11 and ANSI/AWWA C153/A21.53 for Ductile Iron Fittings 2"-64" for water and other liquids. NSF61, Annex G & 372
<b>Installations:</b>	Per ANSI/AWWA C600 and C111 using DIP conforming to C150/C151 and PVC pipe conforming to C900/905.

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## Mechanical Joint Details

Size	A	B	C	D	F	J	K1	K2	L	M	P	S	Ø	X	Bolts		
															No. of Bolts	Size	Length
*2	2.50	2.50	3.39	3.50	2.61	4.75	6.25	6.25	0.75	0.62	0.63	0.44	28°	3/4	2	5/8	3
3	3.96	2.50	4.84	4.94	4.06	6.19	7.69	7.69	0.94	0.62	0.63	0.52	28°	3/4	4	5/8	3
4	4.80	2.50	5.92	6.02	4.90	7.50	9.12	9.12	1.00	0.75	0.75	0.65	28°	7/8	4	3/4	3 1/2
6	6.90	2.50	8.02	8.12	7.00	9.50	11.12	11.12	1.06	0.88	0.75	0.70	28°	7/8	6	3/4	3 1/2
8	9.05	2.50	10.17	10.27	9.15	11.75	13.37	13.37	1.12	1.00	0.75	0.75	28°	7/8	6	3/4	4
10	11.10	2.50	12.22	12.34	11.20	14.00	15.69	15.62	1.19	1.00	0.75	0.80	28°	7/8	8	3/4	4
12	13.20	2.50	14.32	14.44	13.30	16.25	17.94	17.88	1.25	1.00	0.75	0.85	28°	7/8	8	3/4	4
14	15.30	3.50	16.40	16.54	15.44	18.75	20.31	20.25	1.31	1.25	0.75	0.89	28°	7/8	10	3/4	4 1/2
16	17.40	3.50	18.50	18.64	17.54	21.00	22.56	22.50	1.38	1.31	0.75	0.97	28°	7/8	12	3/4	4 1/2
18	19.50	3.50	20.60	20.74	19.64	23.25	24.83	24.75	1.44	1.38	0.75	1.05	28°	7/8	12	3/4	4 1/2
20	21.60	3.50	22.70	22.84	21.74	25.50	27.08	27.00	1.50	1.44	0.75	1.12	28°	7/8	14	3/4	4 1/2
24	25.80	3.50	26.90	27.04	25.94	30.00	31.58	31.50	1.62	1.56	0.75	1.22	28°	7/8	16	3/4	5
30	32.00	4.00	33.29	33.46	32.17	36.88	39.12	39.12	1.81	2.00	1.00	1.50	20°	1 1/8	20	1.00	6
36	38.30	4.00	39.59	39.76	38.47	43.75	46.00	46.00	2.00	2.00	1.00	1.80	20°	1 1/8	24	1.00	6
42	44.50	4.00	45.79	45.96	44.67	50.62	53.12	53.12	2.00	2.00	1.00	1.95	20°	1 3/8	28	1 1/4	6 1/2
48	50.80	4.00	52.09	52.26	50.97	57.50	60.00	60.00	2.00	2.00	1.00	2.20	20°	1 3/8	32	1 1/4	6 1/2

\*Not included in AWWA C110

All dimensions are in inches

**For sewer applications that require mandrel passage after installation, SIGMA recommends the end user check the fitting with the respective size mandrel BEFORE installing the fitting. SIGMA Corporation will NOT take responsibility for any back charges incurred due to the fitting not being checked with a mandrel prior to installation.**