C110 DUCTILE IRON
MECHANICAL JOINT FITTINGS

Project Name: | Contractor: | Date:

Engineer: | Spec Section:

PRODUCT SPECIFICATIONS

Material:
Ductile Iron ASTM A536 Grade 60-42-10, 65-45-12 or 70-50-05.

Pressure Rating:
350 PSI rating for 2" – 24" sizes and 250 PSI rating for 30" – 48" sizes.

Testing:
In accordance with ANSI/AWWA C110/A21.10 & UL-FM Requirements. | Hydrostatically Tested in accordance with SIGMA Waterworks Quality Management Standard.

Traceability:
All fittings are heat coded to ensure traceability and verification of metallurgical properties in accordance with SIGMA Waterworks Quality Management Standards.

Size Range:
2"- 48"

Laying Length:
In accordance with ANSI/AWWA C110/A21.10. Non-standard items will be as per SIGMA design.

Deflection:
Maximum allowable deflection for MJ Joint is as mentioned: 2"-4"=8° | 6"=7° | 8"-12"=5° |14"-48"=3°

Approvals:
3"-16" Underwriters Laboratories listed and Factory Mutual Approved. UL/NSF61 & 372.

Standards:
ANSI/AWWA C111/A21.11 and ANSI/AWWA C153/A21.53 for Ductile Iron Fittings 2"-64" for water and other liquids.
Certified to NSF/ANSI/CAN 61 and NSF/ANSI 372.

Installations:
Per ANSI/AWWA C600 and C111 using DIP conforming to C150/C151 and PVC pipe conforming to C900/905 and C909.

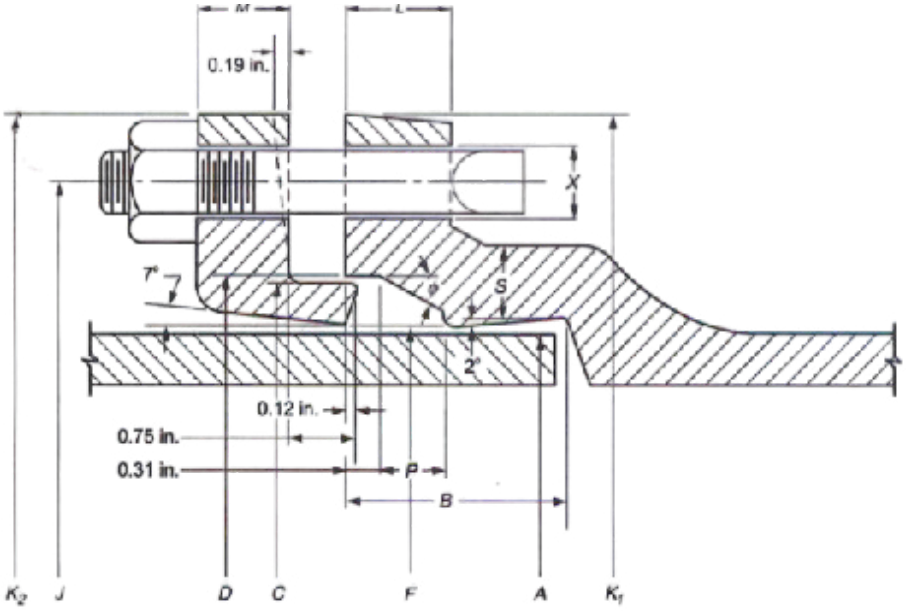
OPTIONAL SPECIFICATIONS

Gaskets	SBR (In accordance with ANSI/AWWA C111/A21.11)	☐
	EPDM	☐
	Neoprene	☐
	Nitrile	☐
	Other - Specify	☐
Coating	Asphaltic Seal Coat (In accordance with ANSI / AWWA C104/A21.04 and ANSI / AWWA C153/A21.10)	☐
	Fusion Bonded Epoxy (FBE) *Interior and exterior (In accordance with ANSI / AWWA C116/A21.16)	☐
	Zinc (In accordance with ISO 8179-2)	☐
	Others- Specify	☐
Lining	Cement-Mortar *Double thickness with asphaltic coating (In accordance with ANSI/AWWA C104/A21.4)	☐
	Fusion Bonded Epoxy (FBE)*Interior and exterior (In accordance with ANSI/AWWA C116/A21.16)	☐
	Protecto 401 Ceramic Epoxy	☐
	Others- Specify	☐
	Refer to: Lining Technical Bulletin and Guideline for more information	
Bolts & Nuts	High Strength Low Alloy Steel (HSLA) (In accordance with ANSI/AWWA C111/A21.11)	☐
	Stainless Steel ☐ Type 304 ☐ Type 316	☐
	Blue Fluoropolymer	☐
	Others- Specify	☐

SIGMA WATERWORKS

C110 DUCTILE IRON

MECHANICAL JOINT FITTINGS



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°	¾	2	⅝	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°	¾	4	⅝	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°	⅞	4	¾	3
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°	⅞	6	¾	3 ½
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°	⅞	6	¾	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°	⅞	8	¾	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°	⅞	8	¾	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°	⅞	10	¾	4 ½
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°	⅞	12	¾	4 ½
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°	⅞	12	¾	4 ½
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°	⅞	14	¾	4 ½
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°	⅞	16	¾	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 ⅛	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 ⅛	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 ⅜	28	1 ¼	6 ½
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 ⅜	32	1 ¼	6 ½

*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.

FM APPROVED

CLASSIFIED UL WATER QUALITY

Certified to NSF/ANSI/CAN 61 and NSF/ANSI 372