

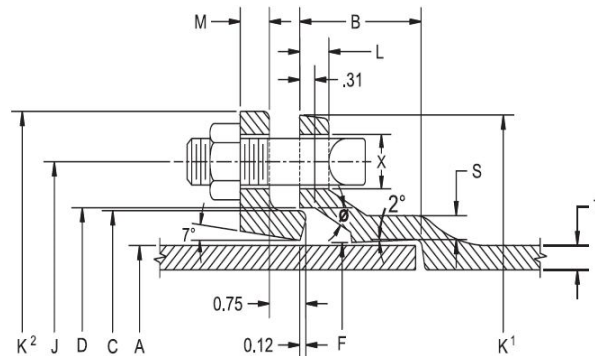
DOMESTIC

NON-DOMESTIC

## SUBMITTAL: C153 MECHANICAL JOINT PRODUCT

(Current revisions for the noted Standards apply)

- SIZES:** 2" - 64" (2" not included in ANSI/AWWA C153 standard)
- STANDARDS:** ANSI/AWWA C153/A21.53, NFPA13/24, 3"-16" UL and 3"-10" FM listed & approved (File - Tyler Union)
- MATERIAL:** Cast of ASTM A536 qualified ductile iron. Date code is cast on and required for traceability.
- PRESSURE RATING:** \*Flanged fittings rated at 250 psi. Mechanical joints 2" – 24" rated at 350 psi and 30" – 48" at 250 psi.  
\*Note: With rubber annular ring flange gasket, 2" – 24" Flanged fittings can be rated at 350 psi.  
Note: Wyes over 12" are not pressure rated. Contact Tyler Union for rating in your application.
- DEFLECTION:** Joint deflection 5° max for 2"– 12" and 3° max for 14"– 48". Reduces by 50% at nominal pipe & fitting diameters
- NSF-61 & NSF372:** Meets all requirements including Annex G, Tyler Union's Underwriters Laboratory listing MH16439.
- ASPHALT COATING:** Per ANSI/AWWA C104/A21.4 and ANSI/AWWA C153/A21.53.
- CEMENT LINING:** Per ANSI/AWWA C104/A21.4, with double cement lining available upon request.
- EPOXY COATING:** Fusion bonded epoxy per ANSI/AWWA C116/A21.16. Additional coatings available upon request.
- BARE FITTINGS:** Available upon request.
- FASTNERS:** High strength low alloy weathering steel per ANSI/AWWA C111/A21.11 and ASTM A242
- INSTALLATION:** Install per AWWA C600/C651 using pipe conforming to ANSI/AWWA C151/A21.51 or AWWA C900/905.



**NOMINAL JOINT DIMENSIONS IN INCHES**

**BOLTS**

Size Inches	A Dia. DI Pipe	B Hub Depth	C Dia. GLAND	D Dia.	F Dia.	J Dia. GLAND	K <sup>1</sup> Dia.	K <sup>2</sup> Dia. GLAND	L	M GLAND	S	T	X	Size	Qty.
2	2.51	2.50	3.50	3.60	2.61	4.75	6.19	6.89	0.58	0.62	0.36	0.30	3/4	5/8x3	2
3	3.96	2.50	4.84	4.94	4.06	6.19	7.62	7.69	0.58	0.62	0.39	0.33	3/4	5/8x3	4
4	4.80	2.50	5.92	6.02	4.90	7.50	9.06	9.12	0.60	0.75	0.39	0.34	7/8	3/4x3-1/2	4
6	6.90	2.50	8.02	8.12	7.00	9.50	11.06	11.12	0.63	0.88	0.43	0.36	7/8	3/4x3-1/2	6
8	9.05	2.50	10.17	10.27	9.15	11.75	13.31	13.37	0.66	1.00	0.45	0.38	7/8	3/4x4	6
10	11.10	2.50	12.22	12.34	11.20	14.00	15.62	15.62	0.70	1.00	0.47	0.40	7/8	3/4x4	8
12	13.20	2.50	14.32	14.44	13.30	16.25	17.88	17.88	0.73	1.00	0.49	0.42	7/8	3/4x4	8
14	15.30	3.50	16.40	16.54	15.44	18.75	20.31	20.25	0.79	1.25	0.55	0.47	7/8	3/4x4-1/2	10
16	17.40	3.50	18.50	18.64	17.54	21.00	22.56	22.50	0.85	1.31	0.58	0.50	7/8	3/4x4-1/2	12
18	19.50	3.50	20.60	20.74	19.64	23.25	24.83	24.75	1.00	1.38	0.68	0.54	7/8	3/4x4-1/2	12
20	21.60	3.50	22.70	22.84	21.74	25.50	27.08	27.00	1.02	1.44	0.69	0.57	7/8	3/4x4-1/2	14
24	25.80	3.50	26.90	27.04	25.94	30.00	31.58	31.50	1.02	1.56	0.75	0.61	7/8	3/4x5	16
30	32.00	4.50	33.29	33.46	32.17	36.88	39.12	39.12	1.31	2.00	0.82	0.66	1-1/8	1x6	20
36	38.30	4.50	39.59	39.76	38.47	43.75	46.00	46.00	1.45	2.00	1.00	0.74	1-1/8	1x6	24
42	44.50	4.50	45.79	45.96	44.67	50.62	53.12	53.12	1.45	2.00	1.25	0.82	1-3/8	1-1/4x6-1/2	28
48	50.80	4.50	52.09	52.26	50.97	57.50	60.00	60.00	1.45	2.00	1.35	0.90	1-3/8	1-1/4x6-1/2	32
54	Available on Request														
60	Available on Request														
64	Available on Request														

C153 DUCTILE IRON COMPACT FITTINGS

**SAMPLE SPECIFICATIONS**

(Current ANSI/AWWA revisions apply)

Mechanical joint watermain fittings with accessories, 2" through 64" shall be manufactured from ductile iron in accordance with and meet all applicable terms and provisions of standards ANSI/AWWA C153/A21.53 and ANSI/AWWA C111/A21.11. Ductile iron mechanical joint fittings 2" through 24" shall be rated for 350 psi working pressure. Ductile iron 30" through 48" shall be rated for 250 psi working pressure. Flanged ductile iron fittings in 4" (610 mm) and smaller sizes may be rated for 350 psi (2,413 kPa) with the use of special (annular ring or comparable) gaskets. All coated and lined fittings meet requirements of NSF-61, NSF-372 and Annex G.

**NOTE: EXCEPTIONS:** Mechanical joint fittings with flanged branches are rated for water pressure of 250 psi.

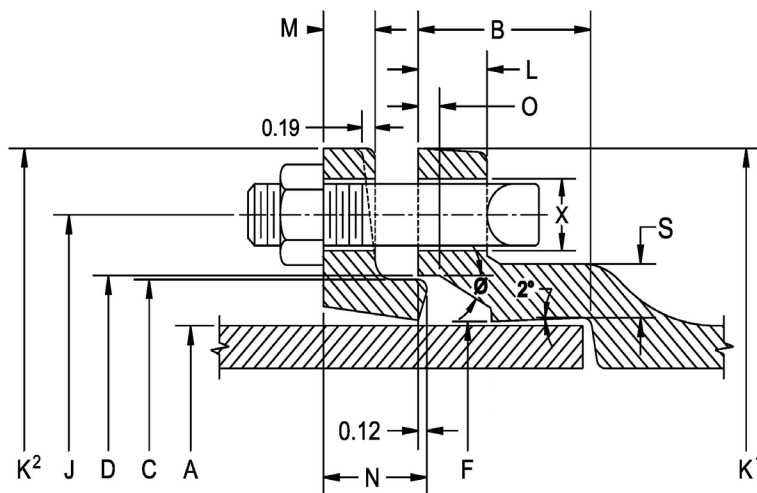
**NOTE:** Wyes over 12" are not pressure rated. Contact manufacturer for rating in your application.

**NOTE:** Fittings are cement lined and seal coated in accordance with ANSI/AWWA C104/A21.4. Fittings are available double cement-lined, bare, or epoxy coated upon request. Epoxy coating per ANSI/AWWA C116.

**NOTE:** Installation per AWWA C600 and AWWA C651, current revision.

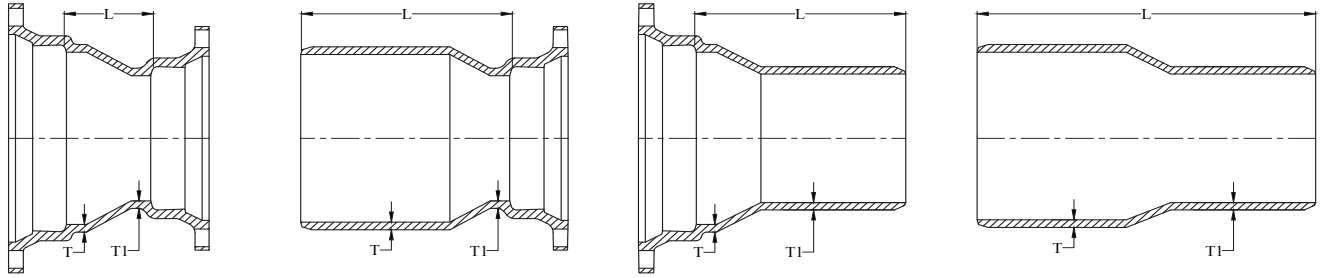
Nominal Joint Dimensions in Inches														
Size	A	B	C	D	F	ø	X	J	K1	K2	L	M	O	S
2	2.51	2.50	3.50	3.60	2.61	28°	3/4	4.75	6.19	6.89	0.58	0.62	0.31	0.36
3	3.96	2.50	4.84	4.94	4.06	28°	3/4	6.19	7.62	7.69	0.58	0.62	0.31	0.39
4	4.80	2.50	5.92	6.02	4.90	28°	7/8	7.50	9.06	9.12	0.60	0.75	0.31	0.39
6	6.90	2.50	8.02	8.12	7.00	28°	7/8	9.50	11.06	11.12	0.63	0.88	0.31	0.43
8	9.05	2.50	10.17	10.27	9.15	28°	7/8	11.75	13.31	13.37	0.66	1.00	0.31	0.45
10	11.10	2.50	12.22	12.34	11.20	28°	7/8	14.00	15.62	15.62	0.70	1.00	0.31	0.47
12	13.20	2.50	14.32	14.44	13.30	28°	7/8	16.25	17.88	17.88	0.73	1.00	0.31	0.49
14	15.30	3.50	16.40	16.54	15.44	28°	7/8	18.75	20.25	20.25	0.79	1.25	0.31	0.55
16	17.40	3.50	18.50	18.64	17.54	28°	7/8	21.00	22.50	22.50	0.85	1.31	0.31	0.58
18	19.50	3.50	20.60	20.74	19.64	28°	7/8	23.25	24.75	24.75	1.00	1.38	0.31	0.68
20	21.60	3.50	22.70	22.84	21.74	28°	7/8	25.50	27.00	27.00	1.02	1.44	0.31	0.69
24	25.80	3.50	26.90	27.04	25.94	28°	7/8	30.00	31.50	31.50	1.02	1.56	0.31	0.75
30	32.00	4.00	33.29	33.46	32.17	20°	1 1/8	36.88	39.12	39.12	1.31	2.00	0.38	0.82
36	38.30	4.00	39.59	39.76	38.47	20°	1 1/8	43.75	46.00	46.00	1.45	2.00	0.38	1.00
42	44.50	4.00	45.79	45.96	44.67	20°	1 3/8	50.62	53.12	53.12	1.45	2.00	0.38	1.35
48	50.80	4.00	52.09	52.26	50.97	20°	1 3/8	57.50	60.00	60.00	1.45	2.00	0.38	1.35
54	57.56	4.00	58.82	59.02	57.73	20°	1 3/8	63.20	65.70	65.70	1.55	2.00	0.38	1.45
60	61.61	4.00	62.87	63.07	61.78	20°	1 3/8	67.72	70.22	70.22	1.75	2.00	0.38	1.50
64	65.67	4.00	66.96	67.13	65.84	20°	1 3/8	71.86	74.36	74.36	1.75	2.00	0.38	1.50

**NOTE:** For projects where product weights, specifications or dimensions are critical, advise upon order placement



ANSI/AWWA  
C153 Mechanical Joint Fittings

C153 DUCTILE IRON COMPACT FITTINGS



Size	MJxMJ		PExMJ-SEB								MJ-LEBxPE				PExPE							
			Domestic												Import							
	T	T1	MJ	SEB	LEB	PE	Weight				T	T1	MJ	SEB	LEB	PE	Weight					
		L	L	L	L	MJ	SEB	LEB	PE	L	L	L	L	L	L	MJ	SEB	LEB	PE			
4x3	0.35	0.34	3.00	8.50	8.50	14.00	18	17	17	18	0.34	0.33	3.00	8.50	8.50	14.00	18	17	18	14		
6x3	0.37	0.34	5.00	10.50	10.50	16.00	28	25	27	20	0.36	0.33	5.00	10.50	10.50	16.00	22	24	19	16		
6x4	0.37	0.35	4.00	9.50	9.50	15.00	28	26	27	26	0.36	0.34	4.00	9.50	9.50	15.00	24	25	25	22		
8x4	0.39	0.35	5.00	10.50	10.50	16.00	36	34	36	33	0.38	0.34	5.00	10.50	10.50	16.00	32	30	34	30		
8x6	0.39	0.37	4.00	9.50	9.50	15.00	39	38	39	30	0.38	0.36	4.00	9.50	9.50	15.00	36	35	32	30		
10x4	0.41	0.35	7.00	12.50	12.50	18.00	53	46	51	-	0.40	0.34	7.00	12.50	12.50	18.00	46	43	43	46		
10x6	0.41	0.37	5.00	10.50	10.50	16.00	59	48	52	49	0.40	0.36	5.00	10.50	10.50	16.00	47	46	42	46		
10x8	0.41	0.39	4.00	9.50	9.50	15.00	54	52	52	47	0.40	0.38	4.00	9.50	9.50	15.00	50	42	50	47		
12x4	0.43	0.35	9.00	14.50	14.50	20.00	67	61	68	60	0.42	0.34	9.00	14.50	14.50	20.00	58	60	60	58		
12x6	0.43	0.37	7.00	12.50	12.50	18.00	64	58	66	54	0.42	0.36	7.00	12.50	12.50	18.00	58	58	58	57		
12x8	0.43	0.39	5.00	10.50	10.50	16.00	57	62	65	60	0.42	0.38	5.00	10.50	10.50	16.00	57	54	55	54		
12x10	0.43	0.41	4.00	9.50	9.50	15.00	63	61	65	57	0.42	0.40	4.00	9.50	9.50	15.00	61	59	59	54		
14x6	0.51	0.44	9.00	17.00	14.50	22.50	104	107	112	-	0.47	0.36	9.00	16.90	14.50	22.30	100	100	104	93		
14x8	0.51	0.45	7.00	15.00	12.50	20.50	104	107	108	-	0.47	0.38	7.00	14.90	12.40	20.30	100	98	98	94		
14x10	0.51	0.46	5.00	13.00	10.50	18.50	100	102	100	-	0.47	0.40	5.00	12.90	10.40	18.30	100	94	92	90		
14x12	0.51	0.47	4.00	12.00	9.50	17.50	100	101	100	100	0.47	0.42	4.00	11.90	9.40	17.30	100	90	92	88		
16x6	0.52	0.45	11.00	19.00	16.50	24.50	132	131	141	128	0.50	0.36	11.00	18.90	16.50	24.30	124	125	136	93		
16x8	0.52	0.46	9.00	17.00	14.50	22.50	136	128	136	136	0.50	0.38	9.00	16.90	14.40	22.30	124	121	128	119		
16x10	0.52	0.47	7.00	15.00	12.50	20.50	128	124	128	123	0.50	0.40	7.00	15.00	12.50	20.50	124	105	123	119		
16x12	0.52	0.48	5.00	13.00	10.50	18.50	120	123	119	11	0.50	0.42	5.00	12.90	10.50	18.30	112	109	108	99		
16x14	0.52	0.51	4.00	12.00	12.00	20.00	140	139	138	133	0.50	0.47	4.00	12.00	12.00	19.70	140	126	132	129		
18x8	0.59	0.45	14.00	22.00	19.50	27.50	201	180	195	-	0.54	0.38	13.00	20.00	19.50	27.40	190	170	195	170		
18x10	0.59	0.47	12.00	20.00	17.50	25.50	196	180	185	-	0.54	0.40	10.00	18.00	17.40	25.50	195	165	185	160		
18x12	0.59	0.49	10.00	18.00	15.50	23.50	175	170	190	-	0.54	0.42	7.00	15.50	14.00	19.50	180	150	175	150		
18x14	0.59	0.56	8.00	16.00	16.00	24.00	180	181	200	-	0.54	0.47	6.00	15.00	15.00	23.00	190	175	190	160		
18x16	0.59	0.57	7.00	15.00	15.00	23.00	194	180	190	-	0.54	0.50	5.00	12.50	12.50	18.00	195	170	190	145		
20x10	0.60	0.47	14.00	22.00	19.40	27.50	225	210	210	-	0.57	0.40	14.00	22.00	19.00	27.50	220	200	210	180		
20x12	0.60	0.49	12.00	20.00	17.50	25.50	214	208	210	-	0.57	0.42	12.00	17.50	16.00	21.50	205	170	205	190		
20x14	0.60	0.56	10.00	18.00	17.80	26.00	208	198	205	-	0.57	0.47	10.00	18.00	17.90	26.00	200	190	205	195		
20x16	0.60	0.57	8.00	16.00	15.80	24.00	225	215	222	-	0.57	0.50	7.00	13.50	13.50	19.00	200	200	185	170		
20x18	0.60	0.59	7.00	15.00	15.00	23.00	233	220	-	-	0.57	0.54	4.00	12.00	12.00	20.00	225	200	215	190		
24x12	0.62	0.49	16.00	24.00	21.40	29.50	320	302	300	-	0.61	0.42	16.00	21.50	21.00	22.50	305	275	290	240		
24x14	0.62	0.56	14.00	22.00	21.80	30.00	314	325	322	-	0.61	0.47	14.00	22.00	21.90	25.00	306	310	315	295		
24x16	0.62	0.57	12.00	20.00	19.80	28.00	325	319	340	-	0.61	0.50	12.00	17.50	17.50	23.00	320	285	285	285		
24x18	0.62	0.59	10.00	18.00	18.00	26.00	325	310	-	-	0.61	0.54	10.00	18.00	18.00	21.00	305	300	310	290		
24x20	0.62	0.60	8.00	16.00	16.00	24.00	315	305	-	-	0.61	0.57	7.00	13.50	13.50	14.00	300	270	275	240		
30x16	0.66	0.50	30.00	39.00	-	-	475	565	-	-	0.66	0.50	30.00	39.00	39.00	48.00	633	565	623	555		
30x18	0.66	0.54	28.00	37.00	-	-	495	590	-	-	0.66	0.54	28.00	37.00	37.00	46.00	658	590	635	567		
30x20	0.66	0.57	24.00	33.00	-	-	525	560	-	-	0.66	0.57	24.00	33.00	33.00	42.00	628	560	603	535		
30x24	0.66	0.61	10.00	24.50	-	-	478	495	-	-	0.66	0.61	10.00	24.50	24.50	33.50	478	495	526	458		
36x16	0.74	0.50	30.00	-	-	-	789	890	-	-	0.74	0.50	30.00	27.00	-	-	1016	595	-	-		
36x20	0.74	0.57	36.00	45.00	-	-	970	874	-	-	0.74	0.57	36.00	45.00	45.00	54.00	975	874	950	849		
36x24	0.74	0.61	19.00	33.00	-	-	770	746	-	-	0.74	0.61	19.00	33.00	33.00	42.00	770	746	810	709		
36x30	0.74	0.66	15.50	24.50	-	-	838	725	-	-	0.74	0.66	15.50	24.50	24.50	725.00	650	33.5	758	657		
42x30	0.82	0.74	20.00	-	-	-	1067	-	-	-	0.82	0.66	20.00	29.00	29.00	38.00	1083	931	1015	863		
42x36	0.82	0.74	15.50	-	-	-	1116	-	-	-	0.82	0.74	15.50	24.50	24.50	33.50	1114	962	1013	861		
48x30	0.90	0.66	40.00	-	-	-	1852	-	-	-	0.90	0.66	40.00	49.00	49.00	58.00	1779	1594	1711	1526		
48x36	0.90	0.74	28.00	-	-	-	1632	-	-	-	0.90	0.74	28.00	37.00	37.00	46.00	1641	1456	1540	1355		
48x42	0.90	0.82	15.50	-	-	-	1486	-	-	-	0.90	0.82	15.50	24.50	24.50	33.50	1426	1241	1274	1089		

Tyler Union does not recommend the use of wedge action restraints on plain end fittings