

# Water, Sewer & Drain Fittings

## Why Compact Ductile Iron Fittings?

Compact Ductile Iron Mechanical Joint Fittings are manufactured from a high strength, impact resistant ductile iron that offers a great margin of safety against service failures and provides vastly increased resistance to breakage caused by rough handling during shipment and installation. Compact fittings are manufactured from ductile iron with a minimum tensile strength of 70,000 psi, minimum yield of 50,000 psi and minimum elongation of 5%. This compares to a minimum tensile strength of 25,000 psi in gray iron fittings.

Compact fittings offer a lighter, more economical fitting capable of withstanding high internal pressures and heavy external loading. Cost effective performance is assured

with fittings having a minimum wall thickness equal to class 54 ductile iron pipe in sizes 3" to 12" and class 56 ductile iron pipe in sizes 14" to 24". All compact ductile iron fittings have a working pressure rating of 350 psi. 3" through 12" mechanical joint ductile iron fittings are produced in strict accordance with all applicable terms and provisions of ANSI/AWWA C-153/A21.53. 14" through 24" are manufacturer's standards and are produced to the intent of ANSI/AWWA C-153/A21.53.

Compact ductile iron fittings are produced with full flow diameters and are designed for use with modern ductile iron pipe. The resulting benefits are reduced head loss and lower pumping costs.

## Fitting Assembly



1. Clean bell and plain end and lubricate gasket with pipe lubricant. The joint area must be free of dirt.



2. Slip gasket into position — assure even seating in the bell.



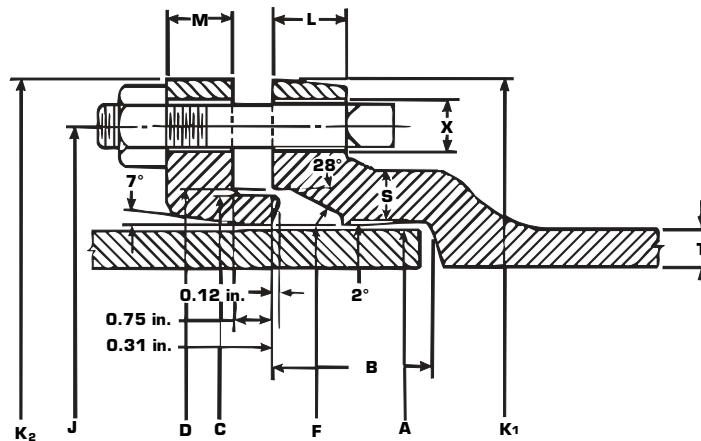
3. When gland is in position, insert bolts and partially tighten with fingers. Tighten bolts to the normal range of bolt torque [75-90 ft pounds] while maintaining approximately the same distance between the gland and the face of the socket. A proper joint is accomplished by partially tightening the bottom bolt first then the top bolt, next the bolts at either side, and finally the remaining bolts. Repeat this process until all bolts are within the appropriate range of torque.

## Class 350 Ductile Iron Fittings

Mechanical joint ductile iron fittings are cement lined. They conform to AWWA C-153, latest edition. Ductile iron fittings combined with ductile iron pipe create an almost failure proof water system. The lighter weight, higher pressure rating and increased strength make these fittings labor saving and economical.

### SHORT SPEC:

Mechanical joint compact fittings shall be ductile iron class 350 and shall be produced in strict accordance with ANSI/AWWA A21.53/C-153 and ANSI/AWWA A21.11/C-111 for joints and ANSI/AWWA A21.4/C-104 for cement lining in sizes 3" through 24". Mechanical joint nuts and bolts shall be Corten or Ductile Iron, high strength, low alloy steel per ANSI/AWWA A21.11/C-111.



### Joint Dimensions (in inches)

SIZE	A DIA.	B	C DIA.	D DIA.	F DIA.	J DIA.	K1 DIA.	K2 DIA.	L	M	S	T	X DIA.	BOLT	
														SIZE	NO.
3	3.96	2.50	4.84	4.94	4.06	6.19	7.62	7.69	.59	.62	.38	.34	¾	¾ × 3	4
4	4.80	2.50	5.92	6.02	4.90	7.50	9.06	9.12	.60	.75	.41	.35	7/8	¾ × 3½	4
6	6.90	2.50	8.02	8.12	7.00	9.50	11.06	11.12	.63	.88	.43	.37	7/8	¾ × 3½	6
8	9.05	2.50	10.17	10.27	9.15	11.75	13.31	13.37	.66	1.00	.45	.39	7/8	¾ × 3½	6
10	11.10	2.50	12.22	12.34	11.20	14.00	15.62	15.62	.70	1.00	.47	.41	7/8	¾ × 3½	8
12	13.20	2.50	14.32	14.44	13.30	16.25	17.88	17.88	.73	1.00	.49	.43	7/8	¾ × 3½	8
14	15.30	3.50	16.40	16.54	15.44	18.75	20.31	20.25	.79	1.25	.56	.51	7/8	¾ × 4	10
16	17.40	3.50	18.50	18.64	17.54	21.00	22.56	22.50	.85	1.31	.57	.52	7/8	¾ × 4	12
18	19.50	3.50	20.60	20.74	19.64	23.25	24.83	24.75	1.00	1.38	.68	.59	7/8	¾ × 4	12
20	21.60	3.50	22.70	22.84	21.74	25.50	27.08	27.00	1.02	1.44	.69	.60	7/8	¾ × 4½	14
24	25.80	3.50	26.90	27.04	25.94	30.00	31.58	31.50	1.02	1.56	.75	.62	7/8	¾ × 4½	16

**NOTE:** Actual fitting weights may vary slightly from those listed on pages B-2 thru B-8. Each manufacturer uses slightly different weights. Weights shown are an average.

# Ductile Iron Mechanical Joint Fittings

## Class 350 DI Bends



**1/4 Bend [90°]**

SIZE	WEIGHT	PRODUCT NUMBER
3"	20	33101
4"	26	33175
6"	48	33400
8"	68	33660
10"	107	33945
12"	141	34245
14"	220	34580
16"	264	34705 1
18"	410	34811
20"	505	34916
24"	695	35016



**1/16 Bend [22½°]**

SIZE	WEIGHT	PRODUCT NUMBER
3"	15	33109
4"	21	33200
6"	37	33425
8"	51	33680
10"	67	33965
12"	80	34265
14"	148	34591
16"	179	34715 1
18"	292	34821
20"	364	34926
24"	460	35026



**1/8 Bend [45°]**

SIZE	WEIGHT	PRODUCT NUMBER
3"	16	33104
4"	22	33190
6"	38	33410
8"	59	33670
10"	81	33955
12"	111	34255
14"	164	34586
16"	202	34710 1
18"	289	34816
20"	348	34921
24"	475	35021



**1/32 Bend [11¼°]**

SIZE	WEIGHT	PRODUCT NUMBER
3"	15	33114
4"	20	33210
6"	33	33435
8"	48	33690
10"	61	33975
12"	79	34275
14"	131	34592
16"	159	34720 1
18"	292	34826
20"	377	34931
24"	457	35031

FOR FOREIGN MECHANICAL JOINT FITTINGS  
ADD 600D AFTER THE PRODUCT NUMBER

**NOTES:**

- MJ by plain end bends are available as special order items.
- Fitting weights listed do not include mechanical joint accessories.

## Class 350 DI Tees



SIZE	WEIGHT	PRODUCT NUMBER	SIZE	WEIGHT	PRODUCT NUMBER
3" x 3"	24	33094	16" x 14"	317	34666
4" x 3"	32	33164	16" x 16"	323	34665 1
4" x 4"	35	33165	18" x 6"	275	34806
6" x 4"	51	33385	18" x 8"	310	34801
6" x 6"	60	33360	18" x 10"	350	34796
8" x 4"	71	33645	18" x 12"	370	34791
8" x 6"	80	33625	18" x 14"	415	34788
8" x 8"	90	33615	18" x 16"	445	34786
10" x 4"	83	33936	18" x 18"	490	34781
10" x 6"	93	33920	20" x 6"	335	34906
10" x 8"	111	33910	20" x 8"	383	34901
10" x 10"	120	33900	20" x 10"	410	34896
12" x 4"	104	34234	20" x 12"	432	34891
12" x 6"	115	34220	20" x 14"	475	34887
12" x 8"	123	34210	20" x 16"	530	34886
12" x 10"	153	34200	20" x 18"	560	34882
12" x 12"	178	34190	20" x 20"	605	34881
14" x 6"	183	34574	24" x 6"	454	35011
14" x 8"	206	34560	24" x 8"	475	35006
14" x 10"	229	34559	24" x 10"	505	35001
14" x 12"	235	34558	24" x 12"	454	34996
14" x 14"	281	34556	24" x 14"	585	34993
16" x 4"	224	NA	24" x 16"	625	34991
16" x 6"	229	34690 1	24" x 18"	675	34987
16" x 8"	248	34685 1	24" x 20"	740	34985 1
16" x 10"	265	34680 1	24" x 24"	830	34981
16" x 12"	281	34670 1	—	—	—

### NOTES:

- Mechanical joint tees are also available as reducing run tees. Call your local Team EJP sales office for prices and availability.
- Fitting weights listed do not include mechanical joint accessories.

FOR FOREIGN MECHANICAL JOINT FITTINGS  
ADD 600D AFTER THE PRODUCT NUMBER

# Water, Sewer & Drain Fittings B-4

# Ductile Iron Mechanical Joint Fittings

## Class 350 DI Hydrant Tees and Solid & Dual Sleeves



**MJ Hydrant Tees**

Our ductile iron Hydrant Tee provides positive restraint to mechanical joint valves or fittings attached to the branch. Tie rodding is eliminated. The rotating split anchor gland allows connection at any grade or bolt hole alignment.

SIZE	WEIGHT	PRODUCT NUMBER
6" x 6"	77	33375
8" x 6"	89	33635
10" x 6"	113	33930
12" x 6"	128	34230
14" x 6"	211	34576
16" x 6"	248	34693 1
18" x 6"	266	34807
20" x 6"	346	34907
24" x 6"	445	35012

**NOTES:**

- Transition gaskets can be used with Solid Sleeves for connecting ductile iron to steel pipe or steel O.D. PVC pipe in sizes 3" thru 12" and for connecting SDR 35 sewer pipe in sizes 4" thru 12". Order from Page B-13.
- Fitting weights listed do not include mechanical joint accessories.

**SHORT SPEC:**

Mechanical joint compact fittings shall be ductile iron class 350 and shall be produced in strict accordance with ANSI/AWWA A21.53/C-153 and ANSI/AWWA A21.11/C-111 for joints and ANSI/AWWA A21.4/C-104 for cement lining in sizes 3" thru 24". Mechanical joint nuts and bolts shall be Corten or Ductile Iron, high strength, low alloy steel per ANSI/AWWA A21.11/C-111.

FOR FOREIGN MECHANICAL JOINT FITTINGS  
ADD 600D AFTER THE PRODUCT NUMBER



**MJ Solid Sleeve**



**MJ Dual Sleeve (with oversized glands)**

### MJ Solid Sleeves

SIZE	WT.	LENGTH	PRODUCT NUMBER
3"	21	12"	33126
4"	17	7.5"	33285
4"	25	12"	33275
6"	28	7.5"	33545
6"	39	12"	33535
8"	38	7.5"	33820
8"	53	12"	33810
10"	49	7.5"	34105
10"	64	12"	34095
12"	56	7.5"	34450
12"	82	12"	34440
14"	141	15"	34621
16"	137	12"	34772
16"	172	15"	34774 1
18"	235	15"	34877
20"	270	15"	34977
24"	370	15"	35087

### MJ Dual Sleeves

SIZE	O.D. RANGE	WT.	LENGTH	PRODUCT NUMBER
4"	4.80-5.00	35	7.5"	33287
		45	12"	33276
6"	6.90-7.10	45	7.5"	33539
		65	12"	33536
8"	9.05-9.30	65	7.5"	33814
		85	12"	33811
10"	11.10-11.40	85	7.5"	34101
		115	12"	34096
12"	13.20-13.50	115	7.5"	34449
		145	12"	34441

## Class 350 DI Reducers


**MJ X MJ**

**MJ X LEB**

**MJ X SEB**

SIZE	MJ X MJ		MJ X LEB		MJ X SEB	
	WT.	PRODUCT NUMBER	WT.	PRODUCT NUMBER	WT.	PRODUCT NUMBER
4" x 3"	18	33326	17	33239	18	33240
6" x 4"	27	33465	26	33471	22	33476
8" x 4"	36	33745	34	33751	29	33756
8" x 6"	40	33720	37	33726	32	33731
10" x 4"	47	34050 1	46	34056	40	34061
10" x 6"	47	34030	48	34036	42	34041
10" x 8"	54	34005	52	34011	45	34016
12" x 4"	67	34376	61	34381	52	34386
12" x 6"	67	34355	58	34361	53	34366
12" x 8"	64	34330	62	34336	55	34341
12" x 10"	78	34305	62	34311	57	34316
14" x 6"	108	34619 1	107	34618	112	34617
14" x 8"	104	34619 3	107	34619 4	108	34619 5
14" x 10"	100	34619 6	102	34619 7	100	34619 8
14" x 12"	100	34620	101	34620 2	100	34620 1
16" x 6"	136	34744	132	34748	144	34746 1
16" x 8"	132	34736	128	34742	136	34739
16" x 10"	128	34731	124	34734	128	34732 1
16" x 12"	125	34726	123	34727 1	119	34729
16" x 14"	140	34724 1	139	34724 2	138	34724 3
18" x 6"	194	34849	193	34849 1	170	34849 2
18" x 8"	194	34846	190	34847	195	34848
18" x 10"	196	34841	180	34842	185	34843
18" x 12"	185	34836	170	34837	190	34838
18" x 14"	190	34834	181	34834 1	200	34834 2
18" x 16"	196	34831	180	34832	190	34833
20" x 6"	232	34949	231	34949 1	201	34949 2
20" x 8"	227	34947	222	34947 1	198	34947 2
20" x 10"	225	34946	210	34946 1	210	34946 2
20" x 12"	210	34941	200	34942	210	34943
20" x 14"	208	34944	198	34944 1	205	34944 2
20" x 16"	225	34936	215	34937	222	34938
20" x 18"	233	34932	220	34932 1	225	34932 2
24" x 10"	—	NA	310	35044 1	276	35044 2
24" x 12"	310	35041	315	35042	310	35043
24" x 14"	315	35040	325	35040 1	335	35040 2
24" x 16"	324	35036	319	35038	310	35039
24" x 18"	312	35034 3	315	35034 4	310	35034 5
24" x 20"	315	35034	305	35034 1	307	34034 2

**NOTE:** Some sizes and configurations shown are non-stock and require special ordering. Call your local Team EJP sales office for information.

Weights do not include accessories.

# Water, Sewer & Drain Fittings B-6

# Ductile Iron Mechanical Joint Fittings

## Class 350 DI Wyes & Crosses



**MJ Wyes**



**MJ Crosses**

SIZE	WT.	PRODUCT NUMBER
3" x 3"	36	33098
4" x 3"	43	33345
4" x 4"	45	33344
6" x 4"	67	33602
6" x 6"	93	33598
8" x 4"	93	33883
8" x 6"	113	33881
8" x 8"	136	33877
10" x 4"	118	34169
10" x 6"	136	34167 1
10" x 8"	170	34166
10" x 10"	199	34161
12" x 4"	150	34533
12" x 6"	186	34531
12" x 8"	188	34526
12" x 10"	223	34521
12" x 12"	272	34516
14" x 6"	256	NS
14" x 8"	286	NS
14" x 10"	322	NS
14" x 12"	387	NS
14" x 14"	465	34557
16" x 6"	300	34771 1
16" x 8"	327	34771
16" x 10"	375	NS
16" x 12"	465	34771 2
16" x 14"	492	NS
16" x 16"	575	34773

SIZE	WT.	PRODUCT NUMBER
3" x 3"	33	NS
4" x 3"	38	NS
4" x 4"	42	33351
6" x 4"	62	33608
6" x 6"	80	33607
8" x 4"	84	NS
8" x 6"	108	33889
8" x 8"	120	33886
10" x 4"	98	34182
10" x 6"	118	34181
10" x 8"	138	34176
10" x 10"	155	34171
12" x 4"	123	34551 1
12" x 6"	140	34551
12" x 8"	162	34546
12" x 10"	187	34541
12" x 12"	212	34536
14" x 6"	210	34622
14" x 8"	231	34622 1
14" x 10"	255	34623
14" x 12"	269	34624
14" x 14"	344	34625
16" x 6"	250	34764 2
16" x 8"	264	34743
16" x 10"	286	34764 1
16" x 12"	310	34763
16" x 14"	363	NS
16" x 16"	410	34764

**NOTE:**

- Fitting weights listed do not include mechanical joint accessories.
- NS means non stock. Non-stock items are nonreturnable and noncancelable.

**FOR FOREIGN MECHANICAL JOINT FITTINGS  
ADD 600D AFTER THE PRODUCT NUMBER**

**SHORT SPEC:**

Mechanical joint compact fittings shall be ductile iron class 350 and shall be produced in strict accordance with ANSI/AWWA A21.53/C-153 and ANSI/AWWA A21.11/C-111 for joints and ANSI/AWWA A21.4/C-104 for cement lining in sizes 3" through 24". Mechanical joint nuts and bolts shall be Corten or Ductile Iron, high strength, low alloy steel per ANSI/AWWA A21.11/C-111.



## Class 350 DI Caps & Plugs



**MJ Caps**



**MJ Plugs**

SIZE	SOLID		TAPPED (2")	
	WT.	PRODUCT NUMBER	WT.	PRODUCT NUMBER
3"	7	33151	7	33156
4"	10	33330	10	33340
6"	17	33585	17	33595
8"	25	33860	25	33870
10"	35	34145	35	34155
12"	44	34500	44	34510
14"	79	34655	79	NS
16"	100	34769	100	34775 1
18"	122	34871	122	34876
20"	148	34971	148	34976
24"	202	35071	202	35076

SIZE	SOLID		TAPPED (2")	
	WT.	PRODUCT NUMBER	WT.	PRODUCT NUMBER
3"	6	33141	6	33146
4"	10	33305	10	33320
6"	18	33565	18	33575
8"	26	33840	26	33850
10"	36	34125	36	34135
12"	46	34480	46	34490
14"	85	34645	85	34650
16"	93	34761	93	34766
18"	130	34861	130	34866
20"	153	34961	153	34966
24"	202	35059	202	35066

**FOR FOREIGN MECHANICAL JOINT FITTINGS  
ADD 600D AFTER THE PRODUCT NUMBER**

**NOTES:**

- Standard tap size on caps and plugs is 2" IPS thread. Other tap sizes available by special order.
- Fitting weights listed do not include mechanical joint accessories.



## Push-In Plugs



**Push-In Plugs With Ears**

Push-in plugs can be used with Bell-Tite, All-Tite, Grip-Tite, Fastite and Tyton Pipe. Taps are 2" standard.

SIZE	SOLID		TAPPED (2")	
	WT.	PRODUCT NUMBER	WT.	PRODUCT NUMBER
3"	8	33130	8	33135
4"	12	33294	12	33293
6"	22	33549	22	33553
8"	35	33824	35	33831
10"	52	34109	52	34107
12"	79	34454	79	34464
14"	102	NS	102	NS
16"	144	34752	144	34754
18"	180	NS	180	NS
20"	235	34950	235	34955
24"	325	NS	325	35055

**FOR FOREIGN MECHANICAL JOINT FITTINGS  
ADD 600D AFTER THE PRODUCT NUMBER**



**Push-In Plugs With Setscrews**

SIZE	SOLID		TAPPED (2")	
	WT.	PRODUCT NUMBER	WT.	PRODUCT NUMBER
3"	8	NS	8	NS
4"	12	33291	12	33296
6"	22	33551	22	33554
8"	35	33826	35	33829
10"	52	34108	52	34116
12"	79	34453	79	34466
14"	102	NS	102	NS
16"	144	NS	144	NS
18"	180	NS	180	NS
20"	235	34953	235	NS
24"	325	35052	325	NS

**NOTES:**

- NS items are non-stock; please call your local Team EJP sales office for price and availability.
- Push-In Plugs are made to AWWA standards.
- Push-In Plugs do not include gaskets.