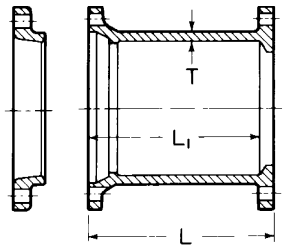


DUAL PURPOSE CUTTING-IN SLEEVE

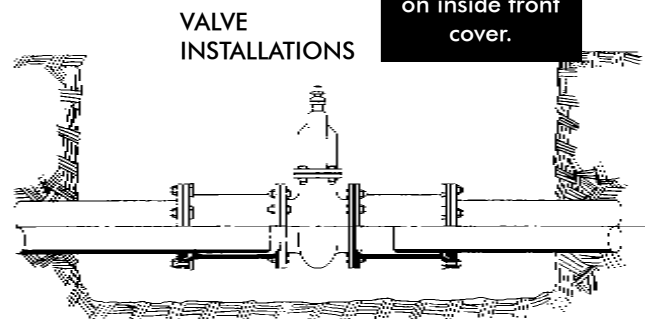
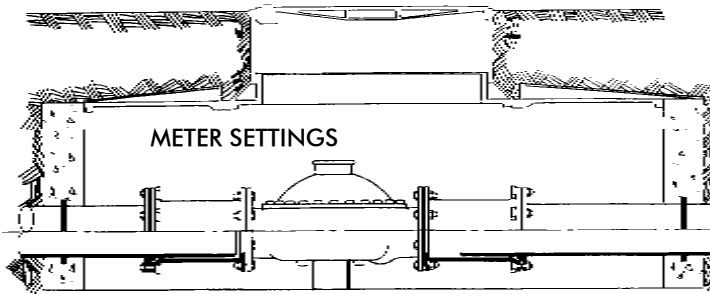


MJ x FE
Cutting-In Sleeve with Dual Purpose Accessories

Size	For Pipe Size	Dimensions			Shipping Wt. Assembled
		L	L ¹	T	
4	4.80-5.00 O.D.	10	9.5	.35	33
6	6.90-7.10 O.D.	10	9.5	.37	50
8	9.05-9.30 O.D.	10	9.5	.39	67
10	11.10-11.40 O.D.	10	9.5	.41	122
12	13.20-13.50 O.D.	10	9.5	.43	157

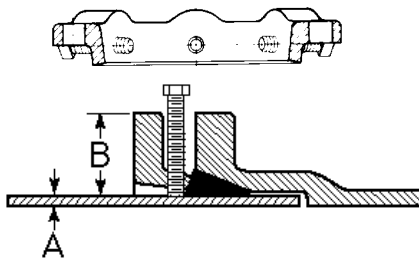
Flanged ends are faced and drilled per ANSI/AWWA C110/A21.10. Mechanical joint ends are designed to receive both standard and oversize gray or ductile iron pipe as shown above.

TYPICAL CUTTING-IN SLEEVE INSTALLATIONS



MJ x FE Flange Dimensions are on inside front cover.

*RETAINER GLAND ASSEMBLY



See Installations Instructions..... Page 50

Size	Pressure Rating, psi	Gland O.D. B	Pipe O.D. A	D.I. Pipe Wall Class	No of Set Screws	Size of Set Screws	Gland Weight	Weight w/Acces.
3	350	7.69	3.96	50-56	4	5/8x2	5	7
4	350	9.12	4.80	50-56	4	5/8x2	6	13
6	350	11.12	6.90	50-56	6	5/8x2	11	20
8	250	13.37	9.05	50-56	9	5/8x2	13	25
10	250	15.62	11.10	50-56	12	5/8x2	18	33
12	150	17.88	13.20	50-56	16	5/8x2	23	38
14	250	20.25	15.30	53-56	20	5/8x2 1/2	44	55
16	200	22.50	17.40	53-56	24	5/8x2 1/2	51	64
18	200	24.75	19.50	53-56	24	5/8x2 1/2	62	72
20	200	27.00	21.60	53-56	28	5/8x3	73	91
24	150	31.50	25.80	53-56	32	5/8x3	93	118

* Not included in AWWA C110

Pipe Wall Thickness:

Sizes 3"-12" are recommended for ductile iron pipe class 50 thru 56. Sizes 14" thru 24" are recommended for ductile iron pipe class 53 thru 56.

DUCTILE IRON RETAINER GLANDS

Mechanical Joint Retainer Glands are designed to provide a method for restraining mechanical joint pipe and fittings and other standardized mechanical joints against possible joint separation, rupture or blow-out caused by internal water pressure.

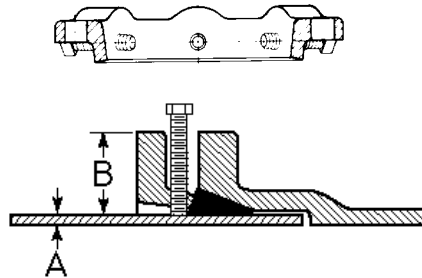
The set screws are square-headed with Type C knurled cup points, and are shipped already assembled in the Glands. They are manufactured of 4140 grade alloy steel, and are heat treated to a Rock-wall "C" 45/53 case hardness. Tee-head bolts and gaskets are not included, but may be ordered separately. Recommended torque for set screws is 75 foot pounds, and set screws on opposite sides of the glands should be tightened alternately.

Tee-head bolt hole size and spacing are equal to MJ Glands as shown in AWWA C-111. Standard mechanical joint gaskets as shown in C-111 should be used.



DUCTILE IRON C110 FULL BODY MECHANICAL JOINT FITTINGS

*RETAINER GLAND ASSEMBLY



See Installations Instructions..... Page 50

Size	Pressure Rating, psi	Gland O.D. B	Pipe O.D. A	D.I. Pipe Wall Class	No of Set Screws	Size of Set Screws	Gland Weight	Weight w/Access.
3	350	7.69	3.96	50-56	4	5/8x2	4	8
4	350	9.12	4.80	50-56	4	5/8x2	5	11
6	350	11.12	6.90	50-56	6	5/8x2	9	16
8	250	13.37	9.05	50-56	9	5/8x2	13	21
10	250	15.62	11.10	50-56	12	5/8x2	17	26
12	150	17.88	13.20	50-56	16	5/8x2	20	28
14	250	20.25	15.30	53-56	20	5/8x2 1/2	44	55
16	200	22.50	17.40	53-56	24	5/8x2 1/2	54	64
18	200	24.75	19.50	53-56	24	5/8x2 1/2	62	72
20	200	27.00	21.60	53-56	28	5/8x3	76	91
24	150	31.50	25.80	53-56	32	5/8x3	103	118

* Not included in AWWA C110

Pipe Wall Thickness:

Sizes 3"-12" are recommended for ductile iron pipe class 50 thru 56. Sizes 14" thru 24" are recommended for ductile iron pipe class 53 thru 56.

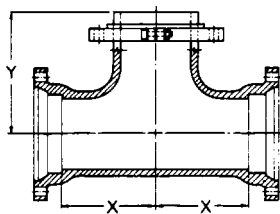
DUCTILE IRON RETAINER GLANDS

Mechanical Joint Retainer Glands are designed to provide a method for restraining mechanical joint pipe and fittings and other standardized mechanical joints against possible joint separation, rupture or blow-out caused by internal water pressure.

The set screws are square-headed with Type C knurled cup points, and are shipped already assembled in the Glands. They are manufactured of 4140 grade alloy steel, and are heat treated to a Rockwell "C" 45/53 case hardness. Tee-head bolts and gaskets are not included, but may be ordered separately. Recommended torque for set screws is 75 foot pounds, and set screws on opposite sides of the glands should be tightened alternately.

Tee-head bolt hole size and spacing are equal to MJ Glands as shown in AWWA C-111. Standard mechanical Joint gaskets as shown in C-111 should be used.

TEES



MJ x MJ x Swivel

Size	Dimensions		Weight
	X	Y	
6	8.0	10.5	150
8x6	9.0	11.5	199
8	9.0	11.5	210
10x6	11.0	13.5	267
12x6	12.0	14.5	346
16x6	15.0	17.5	619
16x8	15.0	17.5	649
30x6	18.0	24.5	2070

All weights shown include the Swivel Gland

MJ GLAND



Size	Gland Weight	
	Wt. Pack	Gland Only
2	5	3
3	7	4
4	10	6
6	16	10
8	25	16
10	30	19
12	40	26
14	45	34
16	55	54
18	65	52
20	85	73
24	105	91
30	220	90
36	301	127

ANSI/AWWA C110/A21.10, ANSI/AWWA C111/A21.11

Tyler Utilities Division • 11910 CR 492 • Tyler, Texas 75706 • (800) 527-8478

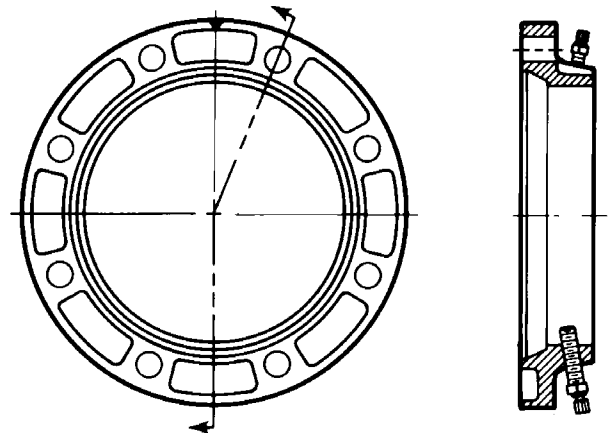
Union Foundry Company • Box 309 • Anniston, Alabama 36202 • (800) 226-7601

ADAPTER FLANGE



FM APPROVED

Wall Thickness Note:
Recommended for ductile
iron pipe Class 53 thru
Class 56.



1. Place adapter flange and MJ gasket over the plain end of the pipe with the small side of the MJ gasket facing the flange side of the adapter flange.
2. Place the pipe end against flange to be joined and slip the MJ gasket into position against the flange. Make sure the gasket is evenly seated against the flange.
3. Slide adapter flange into position against the small (tapered) side of the MJ gasket and align the bolt holes. Insert the bolts and finger tighten the nuts to maintain position and alignment.
4. Snug up all nuts evenly. Alternating @ 180°, tighten the nuts to a torque of: 3" - 60 foot pounds; 4" thru 12" - 90 foot pounds.
5. Snug up all set screws evenly around the pipe. Tighten the Torque Head Set Screws evenly, alternating at 180 degrees.

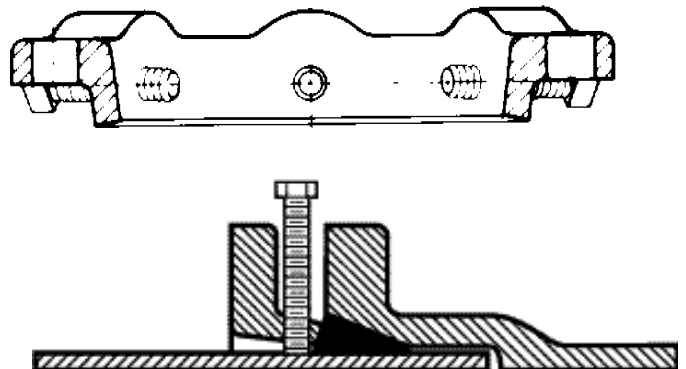
NOTE: THE TORQUE HEAD TOP WILL BREAK OFF AT THE RECOMMENDED SETTING OF 80-90 FT. LBS.
MAXIMUM DEFLECTION OF JOINT (2°)

RETAINER GLAND



Pipe Wall Thickness: Sizes 3"-12" are recommended for ductile iron pipe class 50 thru 56. Sizes 14" thru 24" are recommended for ductile iron pipe class 53 thru 56.

1. Wash bell and plain end with soapy water, then slip gland and gasket over plain end with the small side of the gasket and ring side of of the gland facing the bell.
2. Slip plain end into bell. Brush soapy water on gasket. This lubricates the gasket and allows it to slip easily into place. Push gasket into bell making sure it is evenly in the bell gasket landing.
3. Slide the gland into position against the back of the gasket. Align bolt holes, insert T-bolts and tighten nuts to finger tight.
4. Snug up all T-bolt nuts evenly. Alternating at 180°, tighten the T-bolt nuts to a torque of:
3" - 60 foot pounds 4" thru 24" - 90 foot pounds.
5. Snug up all set screws evenly. Using a torque wrench, tighten the set screws alternating at 180° to the recommended torque value of 75 foot pounds. If required double check set screws immediately.



Maximum recommended deflection of joints:
3" thru 12"-2°; 14" thru 30" - 1°