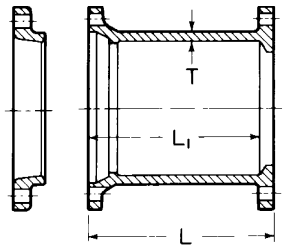


## DUAL PURPOSE CUTTING-IN SLEEVE

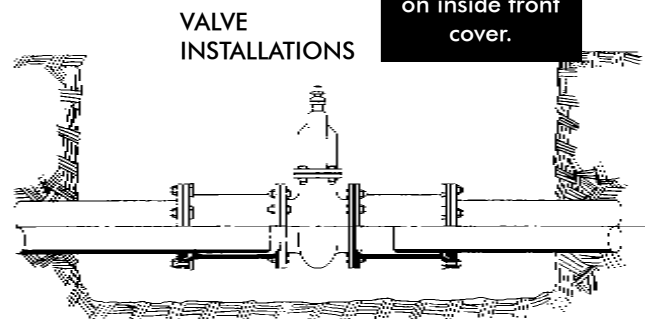
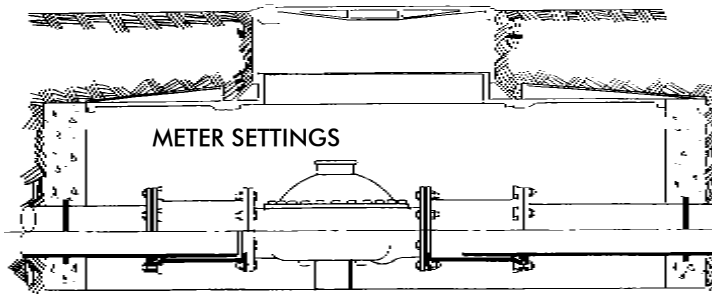


**MJ x FE**  
Cutting-In Sleeve with Dual Purpose Accessories

| Size | For Pipe Size    | Dimensions |                |     | Shipping Wt. Assembled |
|------|------------------|------------|----------------|-----|------------------------|
|      |                  | L          | L <sup>1</sup> | 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                    |

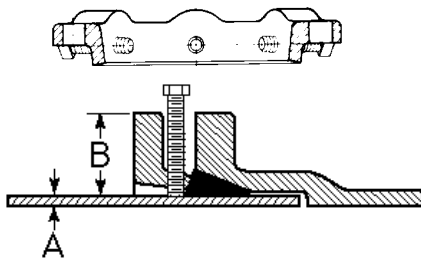
Flanged ends are faced and drilled per ANSI/AWWA C110/A21.10. Mechanical joint ends are designed to receive both standard and oversize gray or ductile iron pipe as shown above.

## 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.

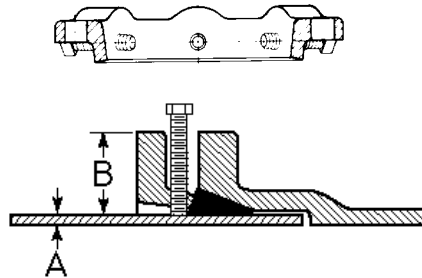
The set screws are square-headed with Type C knurled cup points, and are shipped already assembled in the Glands. They are manufactured of 4140 grade alloy steel, and are heat treated to a Rock-wall "C" 45/53 case hardness. Tee-head bolts and gaskets are not included, but may be ordered separately. Recommended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

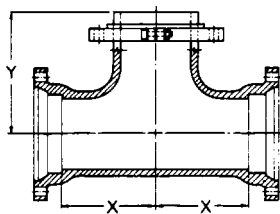
## DUCTILE IRON RETAINER GLANDS

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

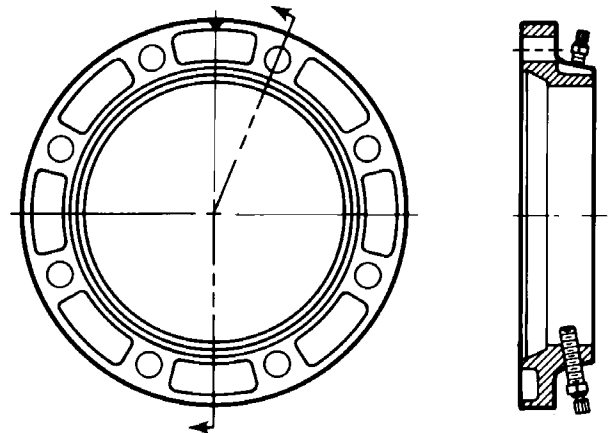
Union Foundry Company • Box 309 • Anniston, Alabama 36202 • (800) 226-7601

**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.

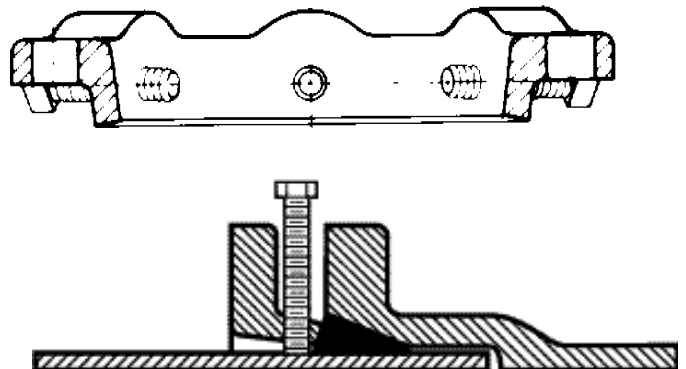
NOTE: THE TORQUE HEAD TOP WILL BREAK OFF AT THE RECOMMENDED SETTING OF 80-90 FT. LBS.  
MAXIMUM DEFLECTION OF JOINT ( 2°)

**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°