



**Series 1400
Joint Restraint
for Ductile Iron Pipe**

**Installation
Instructions**



1.

1A.



2.



3.



4.



5.



6.



Refer to the FMB website (<http://www.fordmeterbox.com>) for additional and most recent instructions and product information.

1. Clean the socket and pipe. Lubricate gasket and pipe with approved pipe lubricant meeting AWWA C111. Place the gland on the pipe with the lip extension toward the plain end, followed by the gasket with the narrow edge of the gasket toward the plain end.

1A. Note: The Uni-Flange SO-EZ gasket may be used on 3"-12" pipes. The SO-EZ gasket can be snapped onto the gland compression lip instead of first pressing it into the socket as stated in step number 2.

2. Insert the pipe into the socket and press the gasket firmly and evenly into the gasket recess. Keep the joint straight and centered during assembly. In cold conditions, it is best to warm the gasket approximately to room temperature to facilitate assembly.

3. Push the gland toward the socket and center it around the pipe with the gland lip against the gasket. Insert the T-bolts and hand tighten nuts keeping the gland centered around the pipe. Set deflection (max. 5°, 14"-24" sizes max. 3°, 30"-48" sizes max. 1°) after initial joint assembly but before tightening bolts to the recommended torque.

4. Tighten the T-bolts to the same torque recommended in AWWA C111 (**45-60 ft-lb on 3", 75-90 ft-lb in 4"-24" sizes, 100-120 ft-lb in 30"-36" sizes, 120-150 ft-lb in 42"-48" sizes**). Tighten in an alternating manner, (6 o'clock, 12 o'clock, 3 o'clock, 9 o'clock) maintaining the same gap between the gland and the MJ bell face at all points around the socket. Repeat the process until all bolts are within the recommended torque range. Use of a torque wrench is recommended and required to ensure proper torque.

5. After correct assembly of the mechanical joint, bring all wedges in contact with the pipe surface by turning all the Auto-Tork actuating screws in a clockwise direction until they are hand tight.

6. Continue tightening the Auto-Tork screws in an alternating manner until all heads have twisted off. If the restraint is re-used, use a torque wrench to ensure a torque of 75 - 110 ft-lb has been applied to the actuating screws.

7. Although it is not a requirement, it is always good practice to recheck t-bolt torque prior to back filling and/or applying water pressure.

THE SERIES 1400 IS INTENDED FOR USE ON ANY PRESSURE OR THICKNESS CLASS OF DUCTILE IRON PIPE MEETING AWWA C151-91 STANDARD, WITHOUT LIMITATION.

MECHANICAL JOINT RETAINER
GLAND



FORM # 91753-99



Not recommended for use on plain end fittings.



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