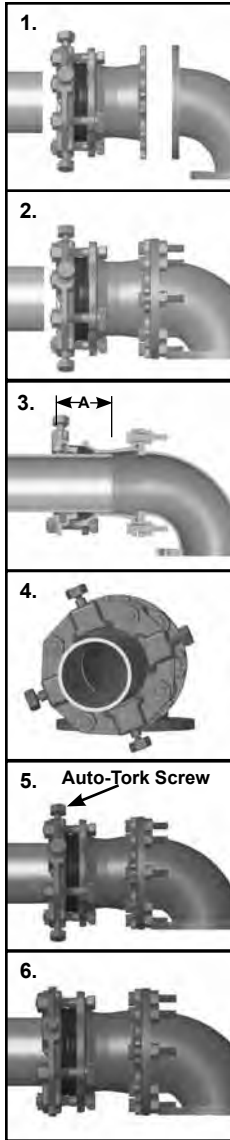


**Series RFAD
3"-12" Restrained
Flange Adapter
for Ductile Iron Pipe***

**Installation
Instructions**



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

1. Measure the pipe diameter carefully, making sure the pipe O.D. falls within the range of the RFA. Check to ensure the RFA is not damaged and the FORD-supplied o-ring is attached to the flange face of the RFA. Prepare plain end pipe by cleaning a surface from the end of the pipe to a distance equal to the length of the flange adapter plus 3 inches. Check the pipe surface to ensure the gasket-bearing surface is free from dents, flat spots, or pitted areas that might impair gasket seating. Make sure the pipe has a bare metal surface to allow proper restraint engagement. Lubricate the pipe with an approved pipe lubricant meeting AWWA C111.

2. After ensuring the mating flange is free of debris, bolt the flange of the RFA to the mating flange. (A solid lug is provided to hold the RFA onto the mating flange while additional bolts are installed.) Flange bolts should be securely tightened in an alternating pattern to evenly compress the gasket. **Note:** Flange bolts are supplied with the RFA if ordered accordingly.

3. Insert the pipe into the RFA. Pipe must be inserted into the RFA a minimum distance (see chart and illustration) from the restraint face. Measure and mark this distance from pipe end as a reference point for proper insertion. Set deflection before tightening tee-head bolts. (Maximum allowable deflection is 5° on 3"-8" and 3° on 10"-12".)

*MINIMUM PIPE INSERTION	
SIZE	"A"
3"	4"
4"	4-1/2"
6"	4-5/8"
8"	4-13/16"
10"	4-3/4"
12"	4-3/4"

* Not accounting for beveled, unsquare or deflected pipe ends

4. Tighten the nuts on the tee-head bolts to the torque recommended in AWWA C111 (45-60 ft-lb for 3" and 75-90 ft-lb for 4"-12" sizes). Tighten in an alternating manner, (6 o'clock, 12 o'clock, 9 o'clock, 3 o'clock) maintaining the same gap between the restraint gland and the MJ face at all points around the RFA sleeve. Repeat the process until all bolts are within the recommended torque range. Use of a torque wrench is strongly recommended and required to ensure proper torque. It is important to ensure the same torque has been applied to each tee-head bolt.

5. After correct assembly of the mechanical joint, bring all restraint wedges in contact with the pipe surface by turning the Auto-Tork actuating screws in a clockwise direction until initial contact is made with the pipe surface.

6. Tighten each Auto-Tork screw approximately 180° (1/2 turn), alternating among screws until the heads twist off. Never turn a single screw more than 180° without alternating to another screw. **Note:** To re-use or re-install the restraint after the Auto-Tork break-off heads have been removed; tighten the 5/8" hex head of the actuating screw to 75 ft-lb. Also, while it is not a requirement, it is a good practice to recheck the tee-head bolt torque prior to backfilling and/or after applying water pressure.

4" THROUGH 12"
MECHANICAL JOINT
RETAINER GLAND



* Intended for use on any pressure or thickness class of ductile iron pipe meeting AWWA C151 Standard without limitation. Not recommended for use on plain end fittings.



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