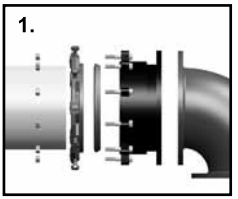
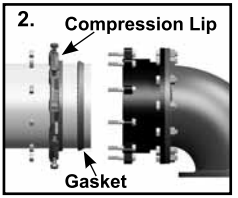
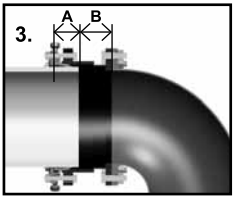
UNI-FLANGE

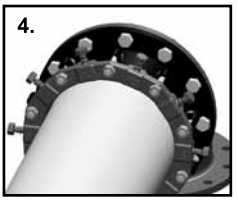
Series RFAD
14" - 36" Restrained Flange Adapter for Ductile Iron Pipe*

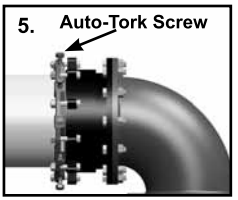
Installation Instructions

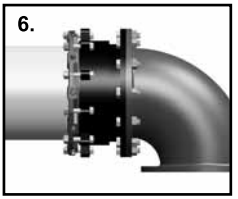












Refer to the FMB website (http://www.fordmeterbox.com) for additional and most recent instructions and product information.

1. Measure the pipe diameter carefully, making sure the pipe O.D. falls within the size of the RFA. Check to ensure the RFA is not damaged. 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. Flange bolts should be securely tightened in an alternating pattern to evenly compress the gasket. **Note:** Flange bolts are not supplied with the RFA. Slide the retainer gland and the gasket onto the pipe with the compression lip against the gasket and the tapered edge of the gasket toward the pipe end.

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. Press the gasket firmly and evenly into the gasket recess, push the gland toward the socket, insert and tighten hex bolts hand tight. Set deflection before tightening hex bolts. (Maximum allowable deflection is 3° for 14"-24", 1° for 30" and 36".)

**Minimum Pipe Insertion		Adj.
Size	"A"	"B"
14"	4-3/8"	3-3/4"
16"	4-7/16"	3-3/4"
18"	4-1/2"	3-3/4"
20"	4-9/16"	3-3/4"
24"	4-3/4"	3-3/4"
30" & 36"	5-7/16"	3-1/2"
** Not accounting for beveled, unsquare or deflected pipe ends		

4. Tighten the nuts on the hex bolts to the torque recommended in AWWA C111 (75-90 ft-lb for 14"-24" and 100-120 ft-lb for 30" and 36" 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 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 hex 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 hex bolt torque prior to backfilling and/or after applying water pressure.

*** Intended for use on any pressure or thickness class of ductile iron pipe meeting AWWA C151 Standard without limitation.**

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