



# Series 1104XEC

4 inch MEGALUG® Restraint with M.J. Accessories

For Ductile Iron Pipe

For Regular or Compact Fittings

Spec-ANSI/AWWA C110/A21.10 or Spec-ANSI/AWWA C153/A21.53

## Installation Instructions

1. The Series 1100 MEGALUG® joint restraint is designed for use on ductile iron pipe conforming to ANSI/AWWA C151/A21.51 (all thickness classes) when restraining mechanical joint pipe fittings.

All EBAA products intended for installation on ductile iron pipe are designed for and limited to use on ductile iron pipes that comply with the requirements of ANSI/AWWA C151/A21.51 and have a Brinell Hardness or equivalent measurement value that does not exceed 230BHN. **These requirements apply to the entire pipe wall profile at all restraining wedge engagement points and to the full penetration depth of each restraining wedge.\***

2. Clean the socket and the plain end. Lubrication and additional cleaning should be provided by brushing both the gasket and the plain end with soapy water or an approved pipe lubrication meeting the requirement of ANSI/AWWA C111/A21.11 just prior to slipping the gasket onto the plain end for joint assembly. Place the gland on the plain end with lip extension toward the plain end, followed by the gasket with the narrow edge of the gasket toward the plain end. [The gasket provided may be the EBAA-SEAL® Improved Mechanical Joint Gasket, there is no narrow end as the gasket is bi-directional. In certain sizes, use of the EBAA-SEAL is required to achieve the pressure ratings of the MEGALUG.]

**NOTE: In cold weather it is preferable to warm the gasket to facilitate assembly of the joint.**

3. Insert the pipe into the socket and press the gasket firmly and evenly into the gasket recess. Keep the joint straight during assembly.
4. Push the gland toward the socket and center it around the pipe with the gland lip against the gasket. Insert bolts and hand tighten nuts. Make deflection after joint assembly but before tightening bolts.
5. Tighten the bolts to the normal range of torque as indicated [3-inch 45-60 ft.-lbs., 4 through 24-inch 75-90 ft.-lbs., 30 and 36-inch 100-120 ft.-lbs., and 42, 48, 54, and 60-inch 120-150 ft.-lbs.] While at all times maintaining approximately the same distance between the gland and the face of the flange at all points around the socket. This can be accomplished by partially tightening the bottom bolt first, then top bolt, next the bolts at either side, finally the remaining bolts. Repeat the process until all bolts are within the appropriate range of torque.

In large sizes (30 through 64-inch [762mm - 1,600mm]), five or more repetitions may be required. The use of a torque-indicating wrench will facilitate this procedure.

6. Tighten the torque limiting twist off nuts in a clockwise direction (direction indicated by arrow on top of nut) until all wedges are in firm contact with the pipe surface. Continue tightening in an alternating manner until all of the nuts have been twisted off.
7. If removal is necessary, utilize the 5/8 inch (1 1/4 inch on the 1160) hex heads provided. If reassembly is required, assemble the joint in the same manner as above, by tightening the wedge bolts to 90 ft.-lbs (150 ft.-lbs on the 1160). If the series 1100 restraint is removed from the pipe, be sure that all the collar bolts and wedges are in place before the restraint is reassembled.

Steps 2-5 are requirements of AWWA Standard C600-17

\*To learn more about this addendum, please visit: <https://ebaa.com/spec/dip>

APPROXIMATE SHIPPING WEIGHT: 11.59 lbs.

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## CONTENTS

Qty.	Description
1	4 in. 1104 Oversized MEGALUG® Restraint
1	4 in. EBAA-Seal M.J. Gasket
4	3/4 x 3 1/2 in. T-Bolts w/ Nuts
1	Gasket Lubrication Packet

## Restraints Made in The USA



For use on water or wastewater pipelines subject to hydrostatic pressure and tested in accordance with either AWWA C600 or ASTM D2774

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