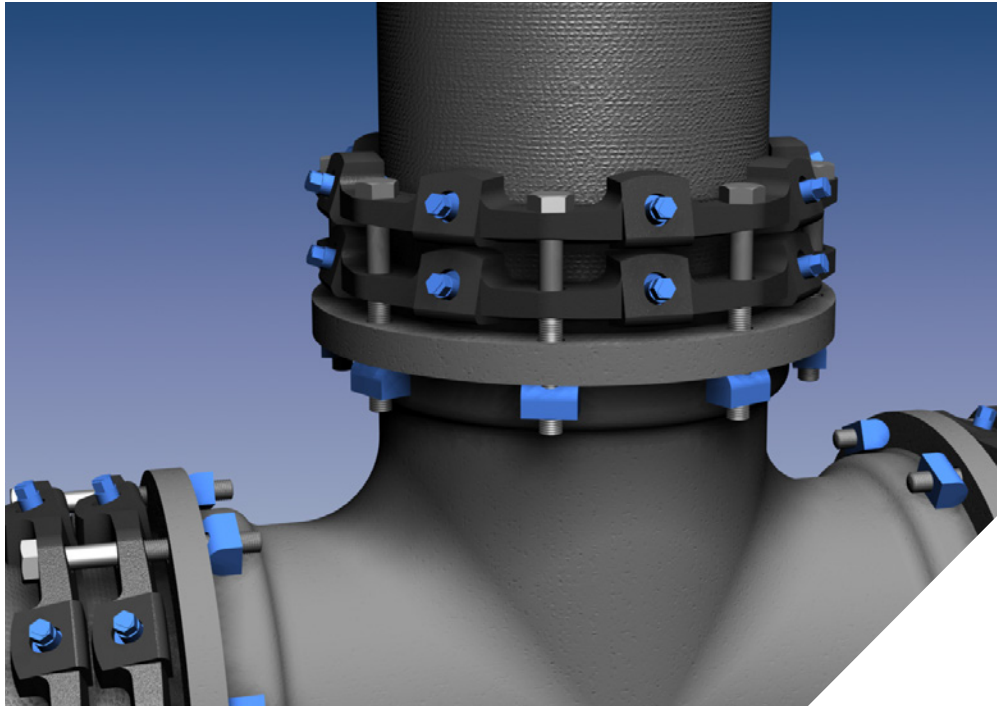


Series 1100TDM

Tandem MEGALUG® Mechanical Joint Restraint
High Pressure Restraint for Ductile Iron Pipe



Series 1112TDM restraining a mechanical joint fitting.

Features and Applications:

- For use on Ductile Iron Pipe 4 inch through 54 inch
- High Pressure Restraint
- Torque Limiting Twist-Off Nuts
- Mechanical Joint follower gland incorporated into the restraint
- **MEGA-BOND®** Coating System
For more information on MEGA-BOND, visit our web site at www.ebaa.com
- Minimum 2 to 1 Safety Factor
- Constructed of A536 Ductile Iron
- EBAA-Seal™ Mechanical Joint Gaskets are provided with all 1100TDM MEGALUG restraints. These are required to accommodate the pressure ratings and safety factors shown.
- **New:** High strength heavy hex machine bolts with T-nuts are provided to facilitate easier assembly due to the fittings radius area prohibiting the use longer T-bolts.
- T-Nuts constructed of High Tensile Ductile Iron with Fluoropolymer Coating.

For use on water or wastewater pipelines subject to hydrostatic pressure and tested in accordance with either AWWA C600, C605 or ASTM D2774.

| Nominal Pipe Size | Shipping Weights* | Post Assembly Deflection | Pressure Rating (PSI) |
|-------------------|-------------------|--------------------------|-----------------------|
| 4 | 21.6 | 3° | 700 |
| 6 | 33.0 | 3° | 700 |
| 8 | 40.0 | 3° | 700 |
| 10 | 60.2 | 3° | 700 |
| 12 | 75.0 | 3° | 700 |
| 14 | 112.7 | 2° | 700 |
| 16 | 131.6 | 2° | 700 |
| 18 | 145.2 | 1½° | 500 |
| 20 | 166.6 | 1½° | 500 |
| 24 | 290.2 | 1½° | 500 |
| 30 | 457.9 | 1° | 500 |
| 36 | 553.63 | 1° | 500 |
| 42 | 1,074.8 | 1° | 500 |
| 48 | 1,283.1 | 1° | 500 |
| 54 | 1,445.32 | ½° | 400 |

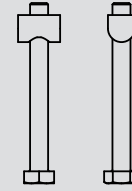
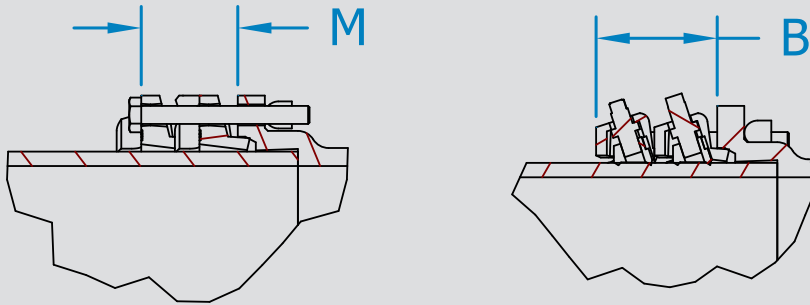
NOTE: For applications or pressures other than those shown please contact EBAA for assistance.

*lbs., weights are approximate.

1100TDM Submittal Reference Drawing

EBAA IRON

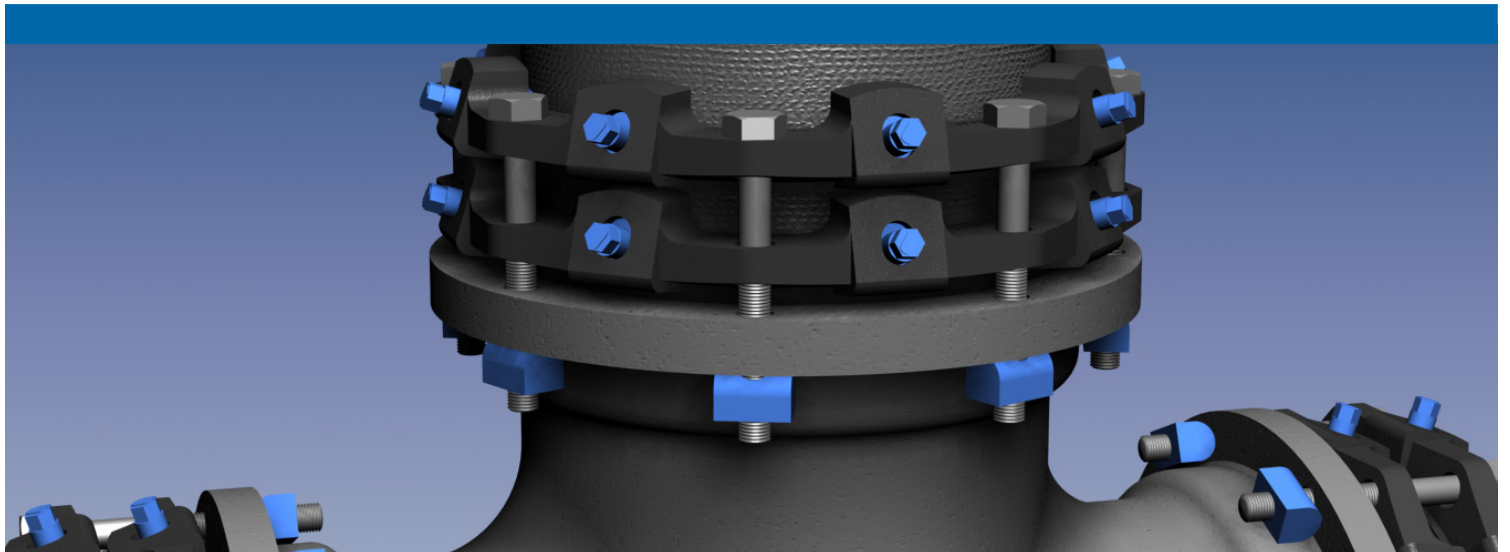
MADE IN USA



Heavy Hex Bolt with T-Nut

Due to the longer bolt requirement of the 1100TDM a Heavy Hex Bolt with T-Nuts are supplied in lieu of T-bolts.

| Nominal Pipe Size | Series Number | Pipe O.D. | B | M | Wedge Per Gland | Heavy Hex Head Bolt w/ T-Nut | |
|-------------------|---------------|-----------|------|------|-----------------|------------------------------|------------|
| | | | | | Qty | Quantity | D x L |
| 4 | 1104TDM | 4.80 | 5.30 | 3.80 | 4 | 4 | 3/4 x 7 |
| 6 | 1106TDM | 6.90 | 5.30 | 3.90 | 6 | 6 | 3/4 x 7 |
| 8 | 1108TDM | 9.05 | 5.40 | 4.10 | 6 | 6 | 3/4 x 7 |
| 10 | 1110TDM | 11.10 | 5.50 | 4.10 | 8 | 8 | 3/4 x 7 |
| 12 | 1112TDM | 13.20 | 5.50 | 4.40 | 8 | 8 | 3/4 x 8 |
| 14 | 1114TDM | 15.30 | 6.10 | 4.90 | 10 | 10 | 3/4 x 8 |
| 16 | 1116TDM | 17.40 | 6.10 | 5.00 | 12 | 12 | 3/4 x 9 |
| 18 | 1118TDM | 19.50 | 6.10 | 5.10 | 12 | 12 | 3/4 x 9 |
| 20 | 1120TDM | 21.60 | 6.10 | 5.10 | 14 | 14 | 3/4 x 9 |
| 24 | 1124TDM | 25.80 | 6.20 | 5.30 | 16 | 16 | 3/4 x 9 |
| 30 | 1130TDM | 32.00 | 6.20 | 6.20 | 20 | 20 | 1 x 12 |
| 36 | 1136TDM | 38.30 | 7.20 | 6.20 | 24 | 24 | 1 x 12 |
| 42 | 1142TDM | 44.50 | 9.80 | 9.10 | 28 | 28 | 1 1/4 x 15 |
| 48 | 1148TDM | 50.80 | 9.80 | 9.10 | 32 | 32 | 1 1/4 x 15 |
| 54 | 1154TDM | 57.56 | 9.80 | 9.20 | 36 | 36 | 1 1/4 x 15 |



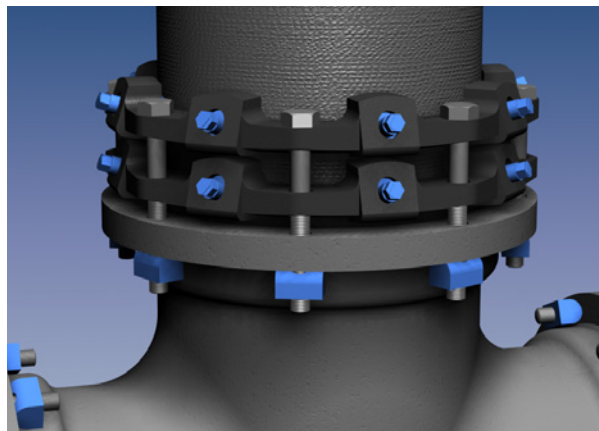
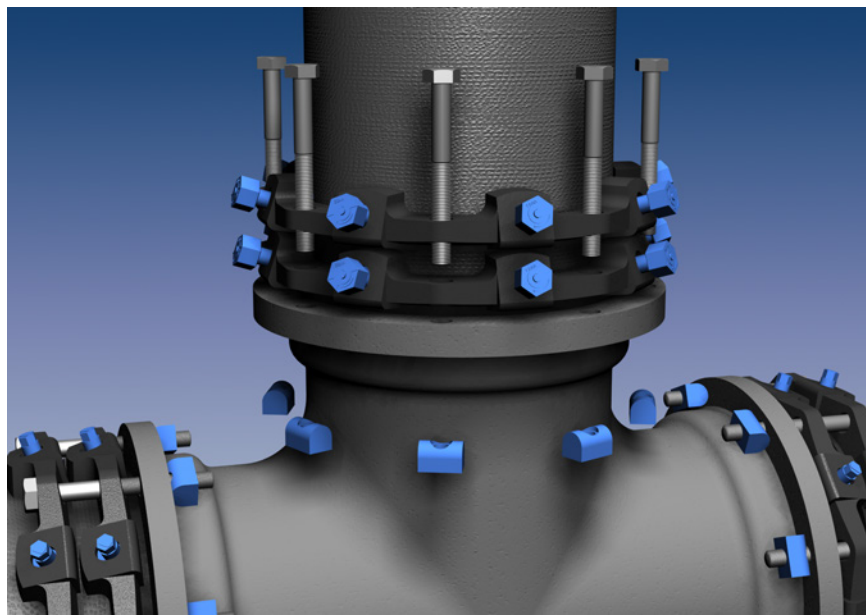
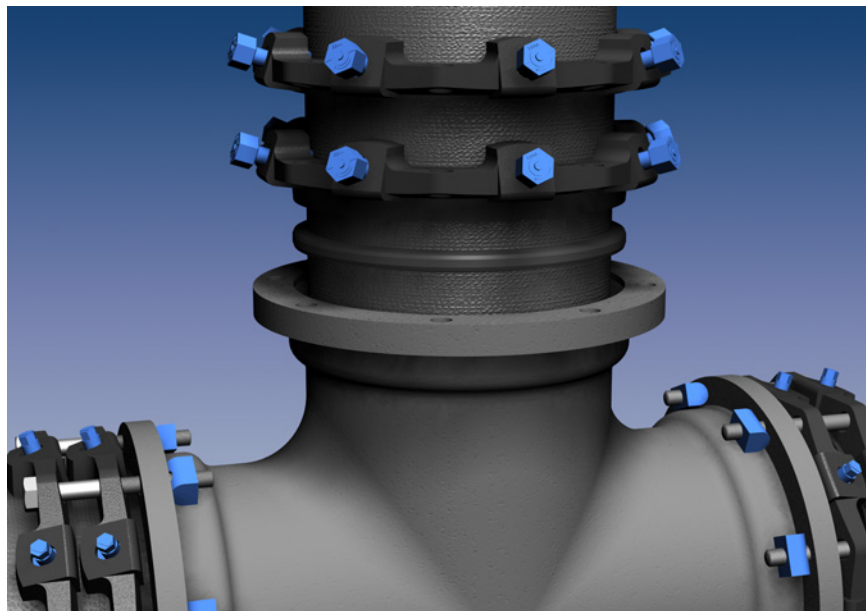
Note: All dimensions are in inches ± 1% and are subject to change without notice. For additional submittal dimensional data refer to the series 1100 brochure.

Series 1100TDM Installation Instructions

1. The Series 1100TDM 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 with high pressure.
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 second restraint ring with no mechanical joint lip onto the pipe. The machined circular face should toward the plain end.] 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 supplied is the EBAA-SEAL® Improved Mechanical Joint Gasket, it's use is required to achieve the pressure ratings of the 1100TDM restraint. The EBAA-SEAL is bi-directional gasket and has no narrow end.]

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[s] toward the socket and center it around the pipe with the gland lip against the gasket. Insert bolts and hand tighten nuts. [Heavy Hex Head Bolts with T-Nuts have been provided for assembly because the radius of the fitting prevents installation of long t-bolts.] 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 and 54-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 through 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.



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7. If removal is necessary, utilize the $\frac{5}{8}$ inch 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. 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