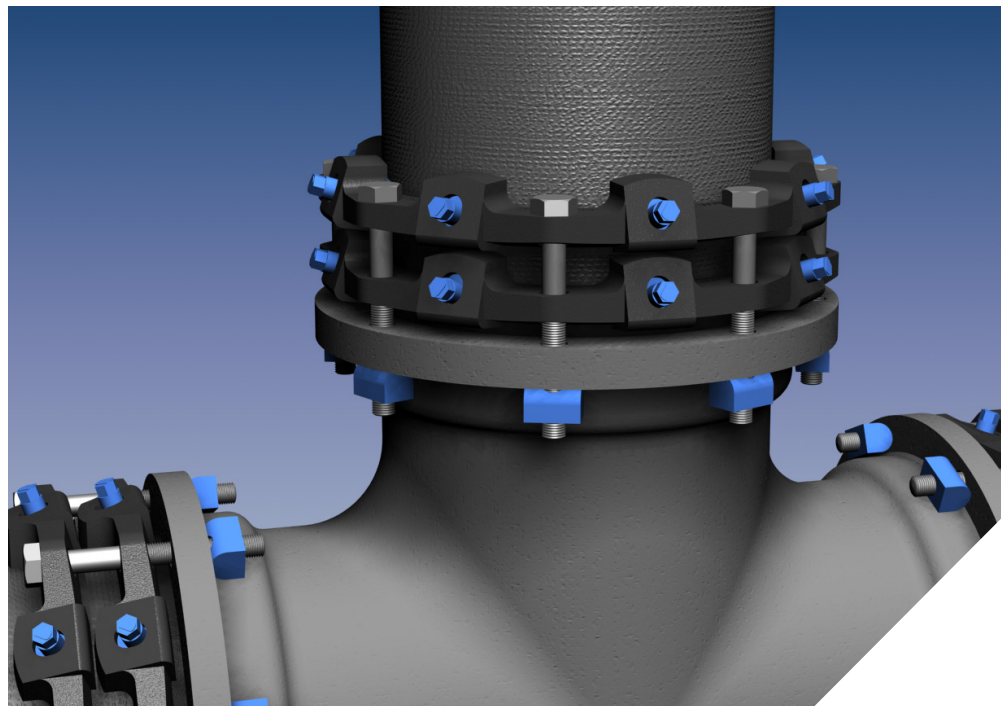


Series 1100TDM

Tandem MEGALUG® Mechanical Joint Restraint

High Pressure Restraint for Ductile Iron Pipe



Series 1100TDM 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.

EBAA Iron products are not designed, intended, or approved for use with compressed air or any gas service. All entrapped air must be completely removed from the pipeline prior to pressurization, testing, or placing the line into service. Failure to eliminate air pockets may result in improper product performance or hazardous conditions.

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.

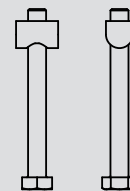
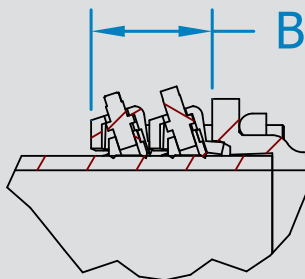
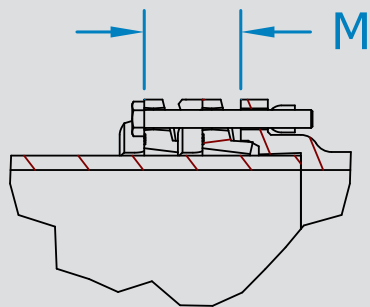
*lbs., weights are approximate.



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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.			Wedge Per Gland	Heavy Hex Head Bolt w/ T-Nut	
			B	M	Qty	Quantity	D x L
4	1104TDM	4.80	5.30	3.80	2	4	¾ x 7
6	1106TDM	6.90	5.30	3.90	3	6	¾ x 7
8	1108TDM	9.05	5.40	4.10	4	6	¾ x 7
10	1110TDM	11.10	5.50	4.10	6	8	¾ x 7
12	1112TDM	13.20	5.50	4.40	8	8	¾ x 8
14	1114TDM	15.30	6.10	4.90	10	10	¾ x 8
16	1116TDM	17.40	6.10	5.00	12	12	¾ x 9
18	1118TDM	19.50	6.10	5.10	12	12	¾ x 9
20	1120TDM	21.60	6.10	5.10	14	14	¾ x 9
24	1124TDM	25.80	6.20	5.30	16	16	¾ 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	1¼ x 15
48	1148TDM	50.80	9.80	9.10	32	32	1¼ x 15
54	1154TDM	57.56	9.80	9.20	36	36	1¼ 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.

Sample Specification

High pressure restraint of mechanical joint fittings and appurtenances on ductile iron pipe shall consist of the following: The restraint rings shall be manufactured of ductile iron conforming to ASTM A536 and incorporate a plurality of individually-actuating gripping surfaces to grip the pipe. The restraint device shall be coated in MEGA-BOND® Restraint Coating System (MEGA-BOND specifications can be found at www.ebaa.com). The restraint system shall consist of two series 1100 MEGALUGS® mechanical joint restraint follower glands with the second follower gland having the mechanical joint lip removed at the factory to seat properly behind the first. The restraint system shall have a sufficient number of fastening bolts to connect the rings to the mechanical joint. The restraint system shall have a minimum safety factor of 2 to 1. The restraint system shall be the Series 1100TDM Tandem MEGALUG Mechanical Joint Restraint manufactured by EBAA Iron, Inc., or approved equal.

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.

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 secondary restraint ring labeled “1100TDMSUB (ring without a lip)” onto the pipe with the machined smooth face toward the plain end. Place the primary 1100 restraint (gland with a lip) onto the pipe with the lip facing the plain end. Place the EBAA Seal Improved Mechanical Joint Gasket onto the pipe. The EBAA Seal gasket is bi-directional and is necessary for the high-pressure rating of the assembly.]

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. Ensure that all gland wedge pockets and torque limiting twist-off nuts are aligned. 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 60-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.
7. If removal is necessary, utilize the $\frac{5}{8}$ ($\frac{7}{8}$ ” 1142TDM through 1154TDM) 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 (135 ft-lbs for 1124TDM through 1154TDM). 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.

