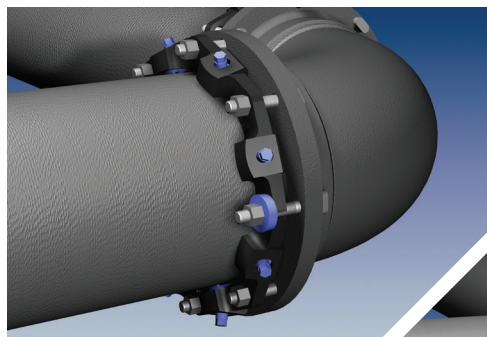
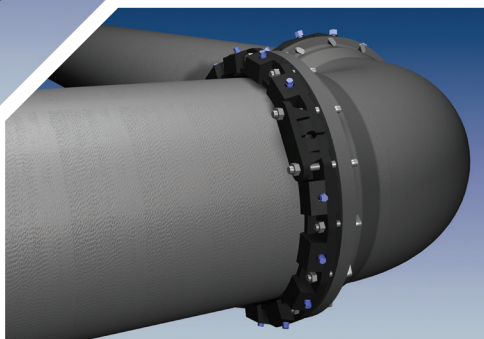


Series 1100SD

Restraint for Existing Mechanical Joints on
Ductile Iron Pipe



Series 1112SD at a fitting
on 12 inch ductile iron pipe.



Series 1124SD at a fitting
on 24 inch ductile iron pipe.

Features and Applications:

- For use on Ductile Iron Pipe at Existing Mechanical Joints
- Minimum 2 to 1 Safety Factor
- **MEGA-BOND®**
Restraint Coating System For more information regarding MEGA-BOND refer to www.ebaa.com
- Split design for ease of installation
- Constructed of ASTM A536 Ductile Iron
- For mid-span restraint accommodation please refer to Series 1100SDB
- For use on water or wastewater pipelines subject to hydrostatic pressure and tested in accordance with either AWWA C600 or ASTM D2774
- In accordance with AWWA C600, all air must be expelled from the line before hydrostatic testing.

Sample Specification

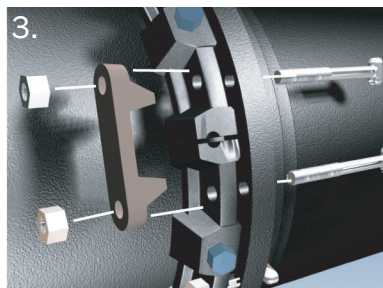
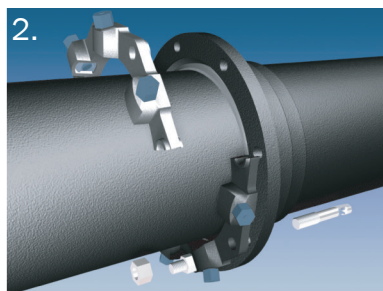
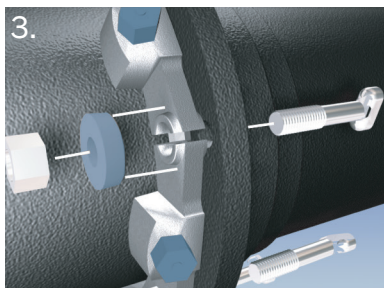
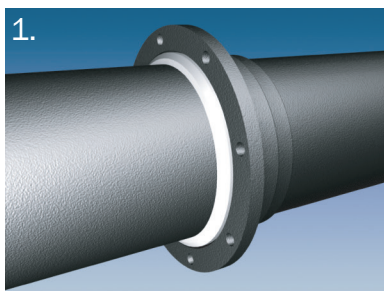
Restraint for existing mechanical joints found on ductile iron pipes shall consist of the following: The restraint shall be manufactured of ductile iron conforming to ASTM A536. The restraint devices shall be coated using MEGA-BOND. (For complete specifications on MEGA-BOND visit www.ebaa.com.) The split restraint ring, incorporating a plurality of individually-actuating gripping surfaces, shall be used to grip the pipe, and a sufficient number of bolts shall be used to connect the restraint to the mechanical joint. The combination shall have a minimum working pressure rating as shown in the adjacent table. The restraint shall be the Series 1100SD, as manufactured by EBAA Iron, Inc., or approved equal.

All EBAA restraint 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.

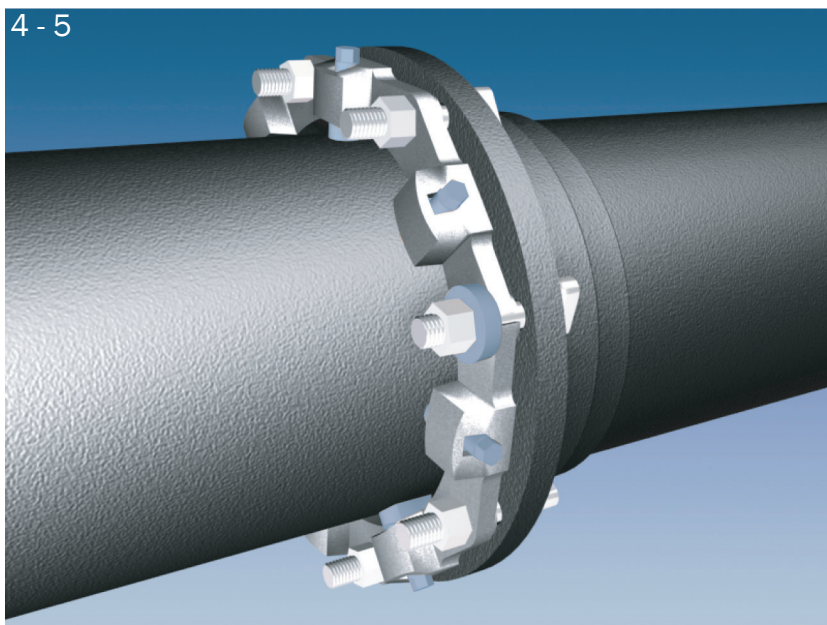
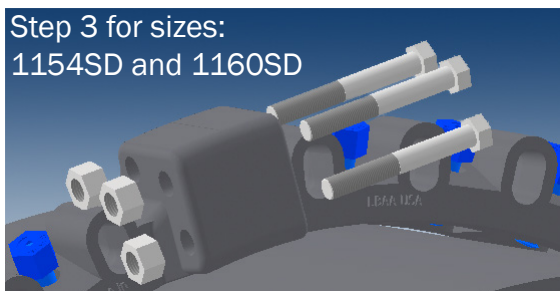
Nominal Pipe Size	Series Number	Approximate Shipping Weight	Pressure Ratings (PSI)
			Ductile Iron Pipe
3	1103SD	9.50	350
4	1104SD	12.50	350
6	1106SD	18.60	350
8	1108SD	23.30	350
10	1110SD	32.70	300
12	1112SD	42.50	300
14	1114SD	71.10	300
16	1116SD	81.30	300
18	1118SD	85.90	200
20	1120SD	101.00	200
24	1124SD	153.70	200
30	1130SD	251.20	200
36	1136SD	314.10	200
42	1142SD	478.00	175
48	1148SD	633.40	175
54	1154SD	1,012.78	250
60	1060SD	1,305.15	175

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

Installation Instructions For the Series 1100SD



Step 3 for sizes:
1154SD and 1160SD



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1. The EBAA Iron Series 1100SD is designed for restraining existing mechanical joint pipe or fittings. (This product is not intended for use as a restraining anchor in the mid span of a pipe. Refer to Series 1100SDB.)

2. Clean and clear the existing joint. Replace the existing gasket with a field cut gasket if necessary. Lubrication and additional cleaning should be provided by brushing both the gasket and the plain end with soapy water or an approved pipe lubricant meeting the requirements of ANSI/AWWA C111/A21.11.

Note: In cold weather, it is preferable to warm the gasket to facilitate assembly of the joint

3. Remove the clamps from the split gland. Loosely assemble the halves on the pipe by installing the t-bolts hand tight everywhere except at each split.

4. Assemble each clamp so that the angled surfaces of the clamp mate with the angled surfaces on each side of the split. Insert the long t-bolts (provided) through the clamps and tighten hand tight.

5. Tighten the T-bolts/Machine Bolts. Tighten the bolts to the normal range of bolt torque (45-60 ft-lbs for 3", 75-90 ft-lbs for 4" through 24", 100-120 ft-lbs 30" through 36", and 120-150 ft-lbs for 42" through 60") 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 the top, next bolts at either side, finally the remaining bolts. Repeat the process until all bolts are within the appropriate range of torque. 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 alternate manner until all of the nuts have twisted off.

7. If removal is necessary; use the 5/8" (7/8" 1142SD through 1154SD, and 1 1/8" for 1160SD) hex heads provided. If reassembly is required, assemble the joint in the same manner as above; tighten the wedge bolt to 90 ft-lbs (135 ft-lbs for 1124SD through 1154SD, and 165 ft-lbs for the 1160SD).

For Submittal Reference Drawing Information, please refer to the Series 1100