

# SERIES 2104

## MEGAFLANGE®

### Restrained Flange Adapter

## INSTALLATION INSTRUCTIONS

1. **Identify the pipe.** The Series 2100 MEGAFLANGE® Restrained Flange Adapter, sizes 4 inch through 12 inch, is designed for use with ductile iron pipe, PVC (C900 & IPS O.D. (ASTM D2241)) pipe, and steel pipe. Check to see if the spacers under the twist-off screws are in place (spacers are flat washers). If the pipe is ductile iron or Cast Iron O.D. PVC (C900), **DO NOT REMOVE THE SPACERS**. If the pipe is steel or IPS O.D. PVC, **REMOVE THE SPACERS** (Sizes 4 inch through 12 inch). The 3 inch size is designed for use on ductile iron pipe and IPS O.D. pipe with out the need of spacers. Sizes 30 inch and larger are designed for ductile iron pipe only. There are no spacers on the 3 inch, 14 inch, or larger sizes.

The MEGAFLANGE Series 2100 is composed of a Restraint Ring, a Gasket Ring, an EBAA-Seal™ Mechanical Joint Gasket, an O-Ring, and the necessary amount of machine bolts to install the flange adapter.

The Restraint Ring is the mechanical locking device that locks the joint to the plain end of the pipe. It can be identified by the Twist-Off actuating screws and spacers that are on the outside circumference of the ring, as well as it has the exact amount of bolt holes as a flange.

The Gasket Ring is the ring designed to create all the necessary seals for the joint. The Gasket Ring can be identified by looking at ends for either an O-Ring gasket or for the groove required to place an O-Ring gasket into. The O-Ring side of the ring faces the flange. **(THE FLAT FACE FLANGE GASKET IS NOT REQUIRED AND TO BE DISREGARDED.)**

2. Cut the pipe to the required length. Clean the end of the pipe, to be adapted as a flange, for a length of approximately one foot using a wire brush if needed, removing all excess paint and foreign material. Also clean the opposing flange to be connected to the 2100. Place the 2100 restraint ring on the clean pipe with the lip facing the plain end.
3. Lubricate and place the EBAA-Seal Gasket on the clean pipe following the restraint ring. **(USE A TRANSITION GASKET IN PLACE OF THE EBAA-Seal GASKET FOR STEEL PIPE AND IPS O. D. PVC PIPE.)**
4. Place the O-Ring gasket into the groove of the 2100 Gasket Ring (This step has already been completed in all sizes except 30 inch and larger.). Place the gasket ring on the pipe with the O-Ring facing the pipe end and the gasket recess facing the EBAA-Seal (or transition) Gasket and restraint ring.
5. Bring the pipe and flanges together within the maximum assembled deflection and maximum allowable gap "L" to the flange face" (The "L" dimension can be found in the submittal drawing area of the product brochure.). Slide the gasket ring, gasket, and restraint ring until contact is made with opposing flange.
6. Insert and tighten all flange bolts. Torque all flange bolts in an alternate manner to the value listed in the Table 1.1. [Size 3 inch 45-60 ft-lbs, Size 4-6 inch 75-90 ft-lbs, size 8-24 inch 90-110 ft-lbs, size 30-60 inch 110-130 ft-lbs.] Be sure to make any necessary joint deflection before tightening the Twist-Off actuating screws. Joint deflection should not exceed the maximum allowable deflection. Be sure that deflection of the joint does not cause the end of the pipe to be separated from the opposing flange more than the maximum allowable gap "L".
7. Tighten the actuating screws in an alternating manner until all wedges touch the pipe. Continue tightening the nuts in an alternating pattern until all of the torque-limiting nuts have been twisted off.
8. If removal is necessary, utilize the 5/8 inch hex head provided. For re-installation, repeat steps 2 through 7, torque the actuating screws to 70 ft-lbs or until the hex heads bottom out on the spacers or the gland.



## CONTENTS

- 1 - 4 inch 2100 Restraint and Gasket Ring
- 1 - 4 inch EBAA-Seal Gasket
- 1 - 4 inch O-ring Gasket
- 8 - 5/8 x 5 1/2 Flange Bolts w Nuts
- 1 - Lubrication Package

made in the U.S.A.



**For use on water or wastewater pipelines subject to hydrostatic**

APPROXIMATE SHIPPING WEIGHT: 20 LBS.

1111-B

©EBAA IRON, Inc

**SERIES 2104**  
MEGAFLANGE®  
Restrained Flange Adapter



**EBAA Iron Sales, Inc.**  
P.O. Box 857, Eastland, TX 76448  
Tel: (254) 629-1731  
Fax: (254) 629-8931  
(800) 433-1716 within US and Canada  
**contact@ebaa.com**  
**www.ebaa.com**

**Made in the USA**