

# Series 2800

Bell Restraint Harness

For 14" - 54" PVC Pipe

ANSI/AWWA C900-16

U.S. Patent Nos 4,627,774 5,071,175

## Features and Applications:

- For use on ANSI/AWWA C900-16 PVC pipe when restraining PVC pipe bells
- Minimum 2 to 1 Safety Factor
- Actuating gripping wedge design for dynamic axial restraint
- **MEGA-BOND®** Restraint Coating System  
For more information regarding MEGA-BOND, refer to [www.ebaa.com](http://www.ebaa.com)
- 42 inch through 54 inch come with two restraint rings
- Constructed of ASTM A536 ductile iron

For use on water and 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.

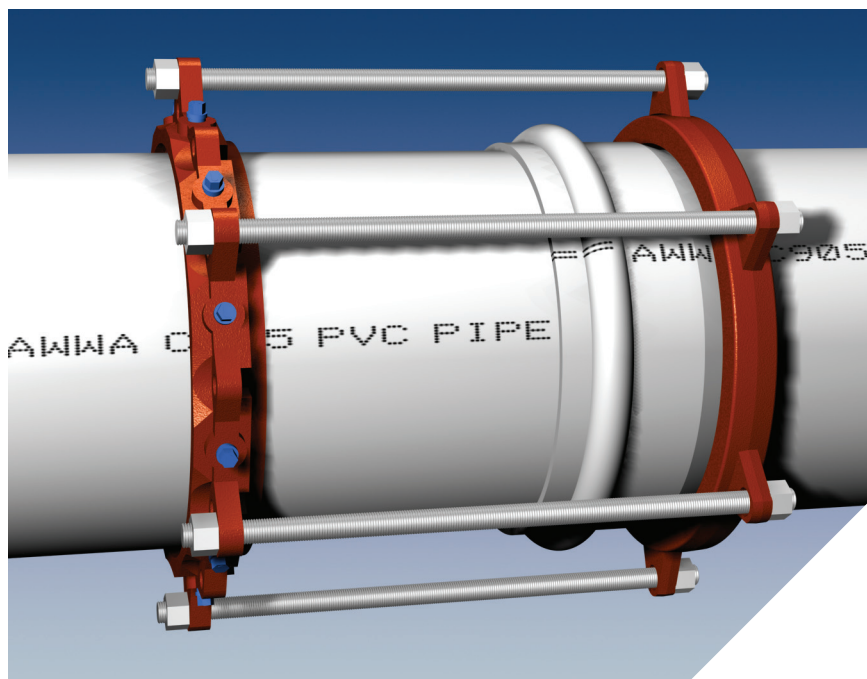
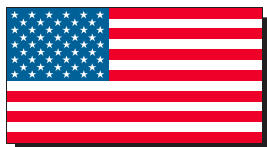


Image Depicts Series 2816 on 16 inch PVC Pipe.

## Pressure Ratings (PSI) and Weights (lbs)

Nominal Pipe Size	Series Number	Approximate Shipping Weight	DR14	DR18	DR21	DR25	DR32.5	DR41	DR51
14	2814	118.9	235	235	-	165	125	100	-
16	2816	137.9	235	235	-	165	125	100	-
18	2818	152.9	200	200	165	165	125	100	-
20	2820	178.6	200	200	-	165	125	100	-
24	2824	272.6	200	200	-	165	125	100	-
30	2830	464.3	-	-	165	165	125	100	80
36	2836	580.8	-	-	125	125	125	100	80
42	2842	907.3	-	-	-	125	125	100	80
48	2848	1,030.1	-	-	-	125	125	100	80
54	2854	2,477.1	-	-	-	150	-	-	-

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



## EBAA IRON Sales, Inc.

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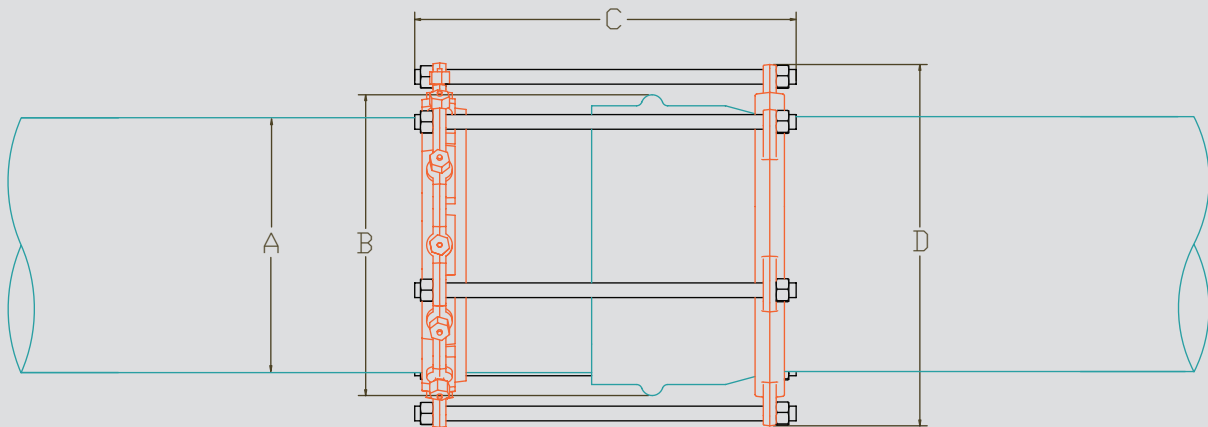
[contact@ebaa.com](mailto:contact@ebaa.com)

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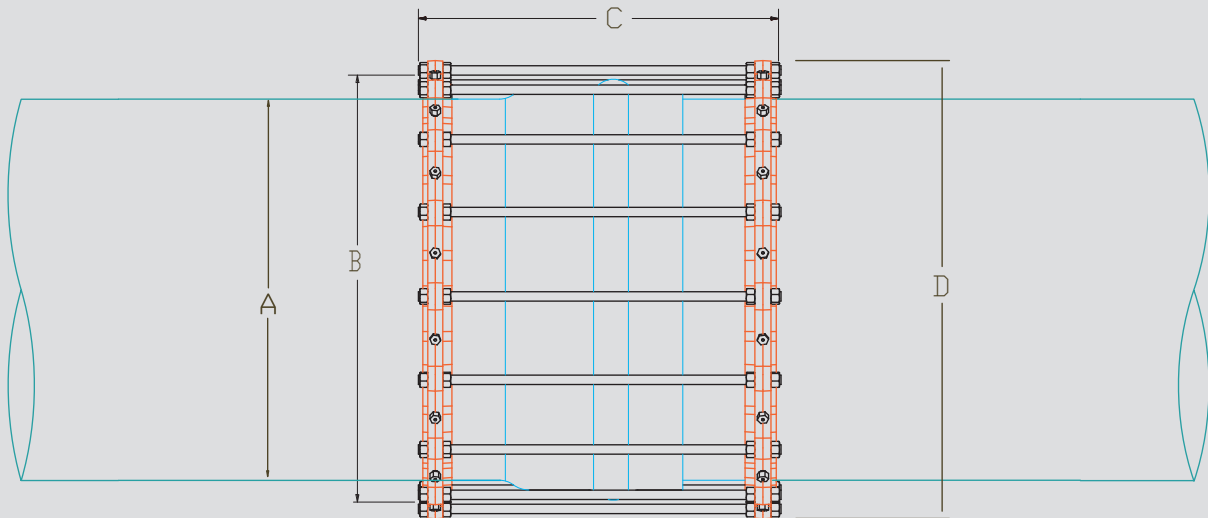
Members of...



14 in. through 36 in.



42 in. through 54 in.



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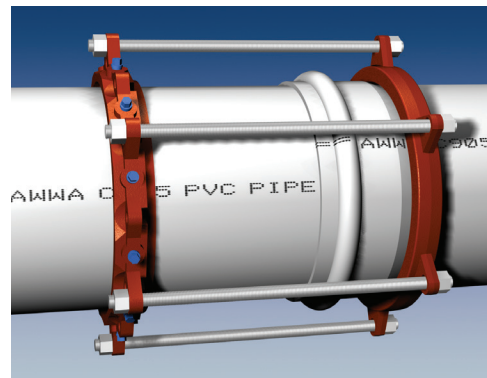
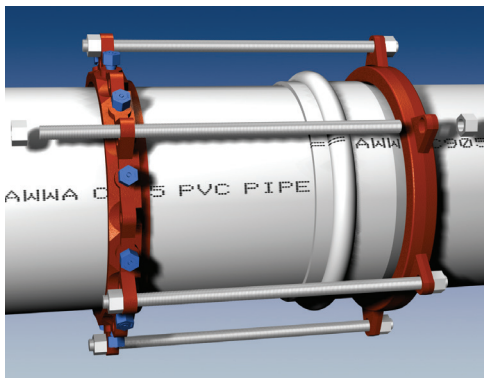
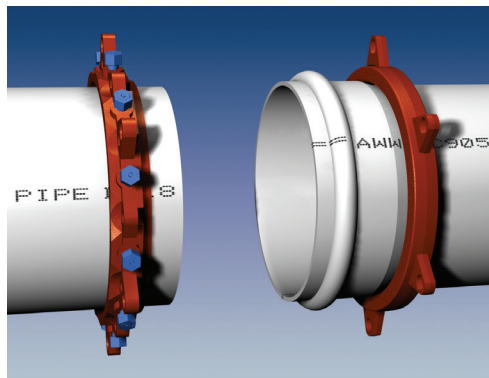
MADE IN USA

Submittal Reference Drawing Dimensions

Nominal Pipe Size	Series Number	A Pipe O.D.	B Maximum Bell O.D. Cleared	C Thrust Bolt (Number - Size)	D Max. Restraint O.D. (Casing Clearance)
14	2814	15.30	20.38	5 - 1 x 26	23.26
16	2816	17.40	22.75	6 - 1 x 26	25.51
18	2818	19.50	24.88	6 - 1 x 26	27.76
20	2820	21.60	27.13	7 - 1 x 26	30.01
24	2824	25.80	31.63	8 - 1¼ x 32	35.00
30	2830	32.00	39.25	10 - 1¼ x 32	42.88
36	2836	38.30	46.13	12 - 1¼ x 36	49.76
42	2842	44.50	53.75	14 - 1¼ x 48	57.75
48	2848	50.80	57.20	16 - 1¼ x 48	61.08
54	2854	57.60	66.75	18 - 1¼ x 48	71.00

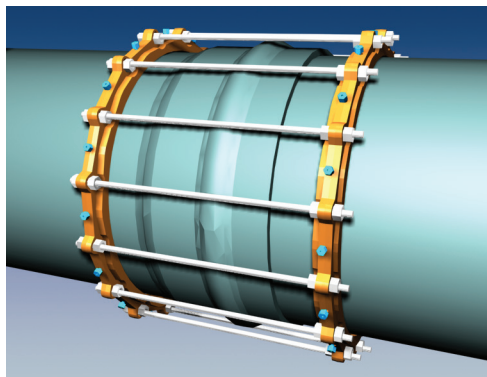
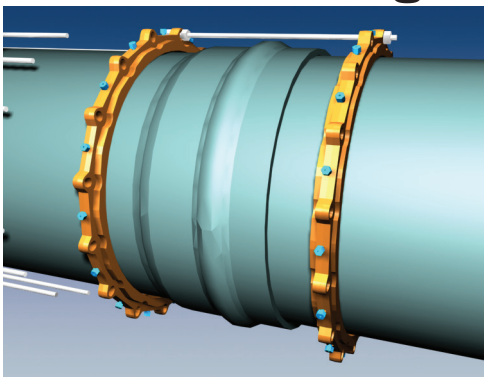
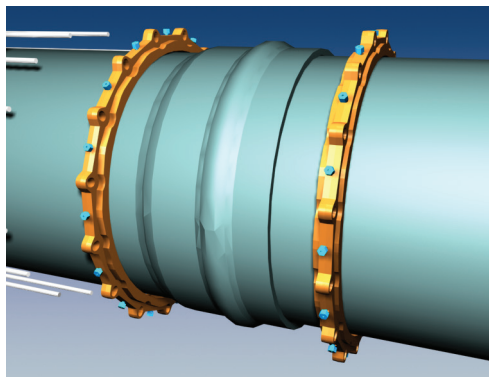
NOTE: Dimensions are in inches and are subject to change without notice.

## Installation Instructions for 14 in. through 36 in.



1. The Series 2800 is designed to restrain C900-16 PVC pipe bell joints. It consists of one restraint ring with individual actuating wedges to restrain the spigot end of the pipe, and one back up ring that slides onto the pipe and fits behind the pipe bell as an anchor point while the two rings are connected together by an array of connecting thrust rods.
2. Slide the Series 2800 bell ring along the length of the PVC pipe to fit snugly behind the bell. Slide the Series 2800 restraint ring on the spigot end of the second pipe with the lip facing spigot end of the pipe.
3. Assemble the pipe joint per the pipe manufacturer's instructions.
4. Insert all of the connecting rods through the bolt holes provided and thread the nuts on each of the rods so that several threads show. Do not tighten these at this time.
5. Hand tighten the actuating screws on the spigot restraint ring until all wedges are touching the pipe. Continue tightening the screws in an alternating manner until the torque limiting twist-off nuts twist off.
6. Snug all of the nuts on the connecting rods. Make sure that the Series 2800 bell ring bears evenly against the back side of the pipe bell. Do not over tighten the connecting rods as to move the spigot end further into the bell.

## Installation Instructions for 42 in. through 54 in.



1. Slide one of the uni-directional restraint rings along the length of the PVC pipe until 2-3 inches from bell. Make sure the lettering on the restraint ring that says "This Side Toward Bell" faces the bell. Slide the remaining restraint ring on the spigot end, again with the lettering facing the bell in which the spigot end will be inserted into.
2. Assemble the pipe joint per the pipe manufacturer's instructions.
3. Run one hex nut onto each end of the connecting rod about 3-4 inches. Install the rods into the provided bolt holes of the restraint rings. Thread the remaining hex nuts onto the connecting rods until about 1-2 threads are showing. Run up the inside hex nuts onto the restraint rings then tighten the hex nuts securely.
4. Hand tighten the actuating screws until all wedges are touching the pipe. Continue to tighten the screws in an alternating manner until torque limiting heads twist-off.



## Sample Specification

Restraint for PVC pipe (ANSI/AWWA C900-16) at the bell shall consist of the following: The restraint shall be manufactured of ductile iron conforming to ASTM A536. A backup ring shall be used behind the PVC bell. A 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 bell ring and the gripping ring. The restraint devices shall be coated with MEGA-BOND. (For complete specifications on MEGA-BOND visit [www.ebaa.com](http://www.ebaa.com).) The restraint shall be the Series 2800, as manufactured by EBAA Iron, Inc., or approved equal.

A Microsoft® Office Word Document version of this Sample Specification may be downloaded from [www.ebaa.com](http://www.ebaa.com).

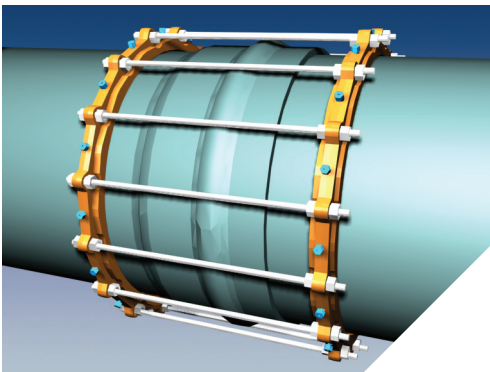


Image Depicts Series 2848 on 48 inch PVC Pipe.

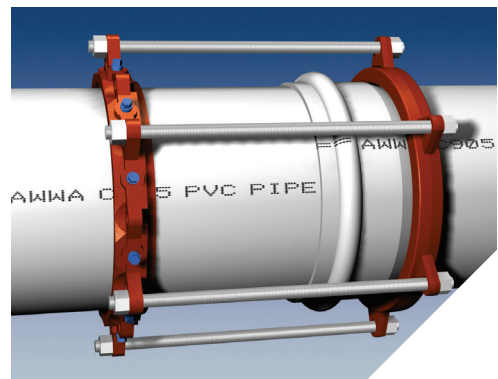


Image Depicts Series 2816 on 16 inch PVC Pipe.