

# Specifications - Uni-Flange® Series 1350

## Series 1350 Uni-Flange® Restraint Device for PVC Pipe Bell Joints

The Uni-Flange® Series 1350 offers the fastest, most economical method of restraining bell and spigot joints of PVC Pipe in new installations. Total thrust restraint is guaranteed, in any soil condition.

The Series 1350 consists of two basic components... a Series 1300 split restraint device, which is installed on the spigot end of the pipe, and a Series 1350 solid back-up ring, which has a beveled leading edge and seats behind the pipe bell.

### Features:

- Fast and Easy - 1350 solid back-up ring eliminates the need to tighten extra bolts and nuts
- Can be installed outside of the trench, prior to pipe laying
- 360° contact and support of the pipe wall
- Meets Uni-B-13-94
- Cannot be over-tightened due to "pad-to-pad" feature
- Visual Safety Feature... easy to verify correct installation
- Rated at full working pressure rating of any class of PVC Pipe, minimum 2:1 safety factor

**Note:** Series 1350 (4" – 12" sizes) is NOT recommended for use on AWWA C-900, DR-14 PVC pipe. Use Series 1390 for C-900 DR-14 PVC pipe.

#### Split Ring Restraint - Uni-Flange®

Series 1300 made from Ductile Iron per ASTM A536, Grade 65-45-12, or ASTM A36 Structural Steel.

#### Color Code:

Black for PVC with ductile iron pipe O.D.  
Gray for PVC with steel pipe O.D.  
Contact factory for coating options.

#### Side Clamping Bolts and Nuts

**T-Bolts / Studs** - High strength, low alloy steel ANSI / AWWA C111/A21.11.  
Optional: Type 304 Stainless Steel

**Back-Up Ring** - 2" - 18" Sizes: Ductile Iron per ASTM A536, Grade 65-45-12.  
20" - 24" Steel per ASTM A36



2" - 12"  
Series 1350 Installed



14" - 24"  
Series 1350 Installed

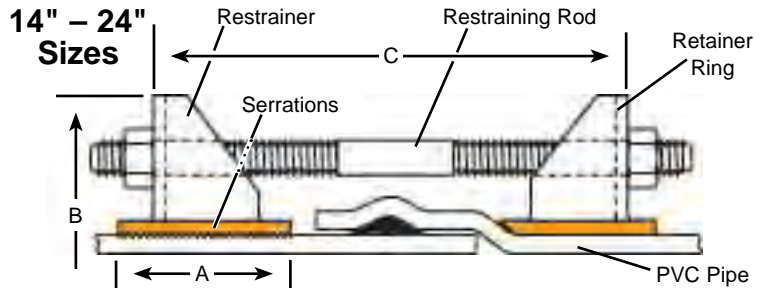
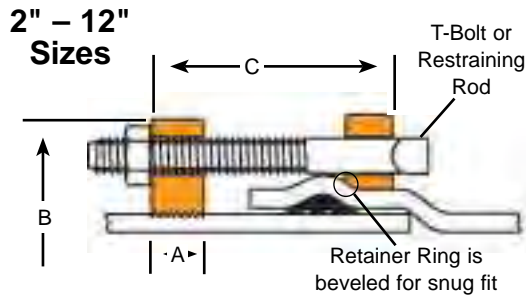
### Suggested Specification - Series 1350

Restraint Devices for bell and spigot joints of PVC Pipe shall consist of a split restraint ring installed on the spigot, connected to a solid back-up ring seated behind the bell. The split restraint ring shall incorporate a series of serrations on the inside diameter to provide positive restraint, exact fit and 360° contact and support of the pipe wall. The solid back-up ring shall have a beveled leading edge to assure exact fit behind the pipe bell. Restraint Devices shall be of ductile iron, ASTM A536, Grade 65-45-12, or ASTM A36 structural steel. Connecting bolts shall be of high strength, low alloy material in accordance with ANSI / AWWA C111 / A21.11.

All Restraint Devices shall carry a water working pressure rating equivalent to the full rated pressure of the PVC Pipe they are installed on, with a minimum 2:1 safety factor in any nominal pipe size. In addition, they shall meet or exceed the requirements of Uni-B-13-94, **Recommended Performance Specification For Joint Restraint Devices For Use With Polyvinyl Chloride (PVC) Pipe**. Notarized certification from the manufacturer of the restraint device shall be provided with submittals. Restraint Devices for bell and spigot joints of PVC pipe shall be Uni-Flange® 1350 or approved equal.

# Uni-Flange® Series 1350 Pipe Restraint

## Restraint Device for PVC Pipe Bell Joints



NOM. PIPE SIZE	PVC PIPE WITH STEEL PIPE O.D. STYLE 1350-S		PVC PIPE WITH DUCTILE IRON PIPE O.D. STYLE 1350-C		A	B APPROX.	C MAX.	RESTRAINT BOLTS / RODS		CLAMPING BOLTS		APPROX. WT. LBS.
	O.D.	CATALOG NUMBER	O.D.	CATALOG NUMBER				No.	SIZE	No.	SIZE	
2"	2.375	UFR1350-S-2-I	N/A	-	1-1/8"	6-1/4"	4"	2	5/8"x5"	2	5/8"x3-1/2"	8.5
3"	3.500	UFR1350-S-3-I	N/A	-	1-1/8"	7-11/16"	4"	2	5/8"x5"	2	5/8"x3-1/2"	11.0
4"	4.500	UFR1350-S-4-I	4.80	UFR1350-C-4-(I or U)	1-1/8"	9-1/8"	6"	2	3/4"x9"	2	5/8"x3-1/2"	13.0
6"	6.625	UFR1350-S-6-I	6.90	UFR1350-C-6-(I or U)	1-1/8"	11-7/8"	6"	2	3/4"x9"	2	5/8"x3-1/2"	16.5
8"	8.625	UFR1350-S-8-I	9.05	UFR1350-C-8-(I or U)	1-1/4"	14-5/8"	8"	2	3/4"x12"	2	3/4"x4"	26.5
10"	10.750	UFR1350-S-10-I	11.10	UFR1350-C-10-(I or U)	1-3/8"	16-5/8"	8"	4	3/4"x17"	2	7/8"x5"	43.5
12"	12.750	UFR1350-S-12-I	13.20	UFR1350-C-12-(I or U)	1-3/8"	19-1/4"	8"	4	3/4"x17"	2	7/8"x5"	50.0
14"	14.000	UFR1350-S-14-U	15.30	UFR1350-C-14-(I or U)	4"	23-3/16"	15"	6	3/4"x24"	4	7/8"x7"	118.0
16"	16.000	UFR1350-S-16-U	17.40	UFR1350-C-16-(I or U)	4"	25-3/8"	15"	6	3/4"x24"	4	7/8"x7"	127.0
18"	18.000	UFR1350-S-18-U	19.50	UFR1350-C-18-(I or U)	5"	27-3/8"	15"	8	3/4"x24"	4	1"x7"	166.0
20"	20.000	UFR1350-S-20-U	21.60	UFR1350-C-20-(I or U)	5"	29-3/4"	21-1/2"	8	3/4"x30"	◆ 4/6	1-1/8"x9"	223.0
24"	24.000	UFR1350-S-24-U	25.80	UFR1350-C-24-(I or U)	5"	33-7/8"	21-1/2"	12	3/4"x36"	◆ 4/6	1-1/8"x9"	334.0
30"	USE SERIES 1390 FOR THESE SIZES											
36"	USE SERIES 1390 FOR THESE SIZES											
42"	USE SERIES 1390 FOR THESE SIZES											

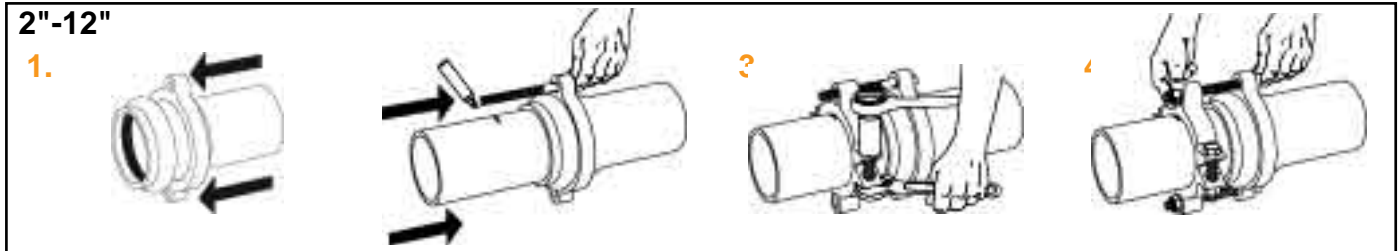
I = Import Casting U = Domestic Casting

Note: 14" - 24" are non-returnable and may be subject to a cancellation fee.

All dimensions in inches unless otherwise stated.

◆ Contact factory for details.

### Installation Instructions

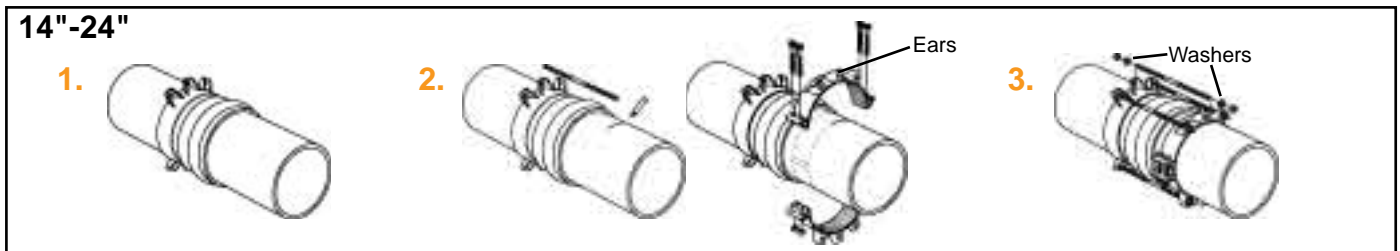


1. Slide bell ring over pipe and onto bell. Make sure beveled side of ring faces the pipe bell.

2. Assemble push-on joint using standard procedure. Mark assembly line for restrainer using an extra long bolt as a guide.

3. Assemble Series 1300 serrated clamping ring onto pipe, evenly tighten clamping bolts to recommended torque.

4. Insert T-Bolts/restraint rods and snug nuts. **Do not over-tighten retaining nuts.** (Hand tight - then one full turn.)



1. Assemble pipe bell joint. Slide 1350 Restraint ring up the length of pipe until it seats against the back of the pipe bell. Make sure the beveled edge is facing bell.

2. Use one of the rods (provided) as a guide to position serrated restrainer. Leave sufficient threads on the rod ends to fully engage nuts. Install the serrated restrainer on plain end of pipe; tighten clamping bolts to torque recommended on restrainer label, ensuring the gap between pads on both sides remain even. Stated torque values are the minimum requirement.

3. Connect 1300 to restrainer ring with rods provided. Use one washer (these are provided) behind each ear, install nut behind washer and tighten. **Do not over-tighten retaining nuts.** (Hand tight - then one full turn.)