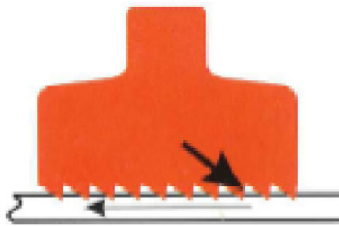


# PV-LOK™ Series PWPR for Bell Joint Restraint (CIOD)



## Features & Advantages:

The PV-LOK™ Series PWPR bell joint restrainer for AWWA C900 PVC pipe sizes 4” through 12” incorporates a machined serrated clamping ring for the plain-end pipe and a solid beveled back-up ring that locates behind the pipe bell. These components are joined using threaded rods and nuts to provide positive joint security and full support of the pipe. The directional gripping action on the pipe spigot maximizes restraint during increased line pressures such as those resulting from surges and water hammers



Cross Section of PV-LOK illustrates directional grip of serrations to maximize restraint of PVC pipe

## Sample Specification:

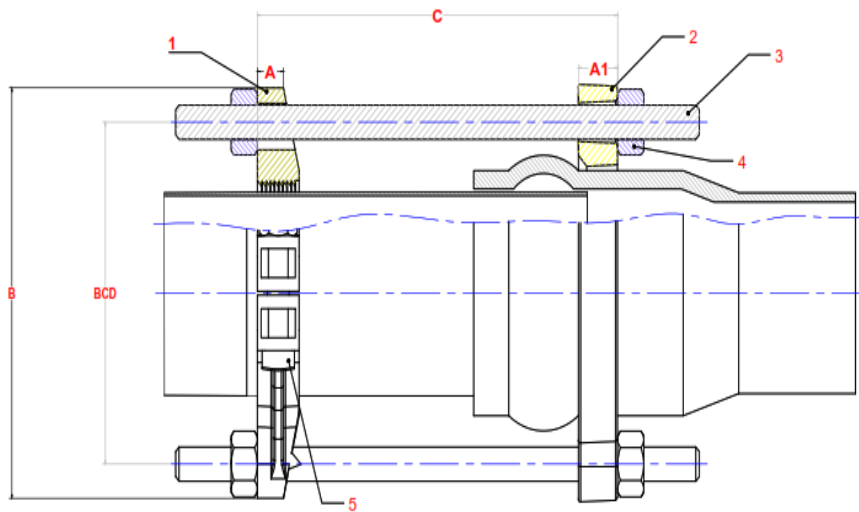
Restraint devices for bell and spigot joints of PVC pipe shall consist of one split retainer ring incorporating a series of machined (not “as cast”) serrations and a solid beveled back-up ring installed behind the gasketed PVC pipe bell. The required restraining rods and nuts shall connect the clamping ring and the solid back-up ring providing joint security, exact fit and full support of the pipe wall. The restraining device shall carry a water working pressure rating equal to the pipe it is installed on while providing a minimum 2:1 safety factor. Restraint devices for securing PVC pipe bell assemblies shall be SIGMA PV-LOK™ Series PWPR or approved equal.

## Material:

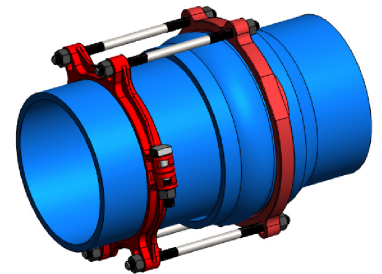
- Clamping ring is manufactured of high strength ductile iron in accordance with ASTM A536, grade 65-45-12.
- Solid beveled back-up ring is manufactured of high strength ductile iron in accordance with ASTM A536, grade 65-45-12.
- Side clamping bolt and hex nuts are high strength steel in accordance with ASTM A449 and zinc plated to B633, Type III Sc.1 for corrosion resistance.
- Restraining rods and hex nuts are of high strength, low alloy steel in accordance with
- AWWA/ANSI C111/A21.11 and provide a minimum 45,000 psi yield and 60,000 psi tensile strength.

# PV-LOK™ Series PWP for Bell Joint Restraint (CIOD)

## PV-LOK MODEL PWPR SERRATED CLAMPING RING AND SOLID BACKUP RING FOR C900 PVC PIPE BELLS



1. SERRATED CLAMPING RING
2. SOLID BACKUP RING
3. RESTRAINING ROD
4. NUT
5. CLAMPING BOLT & NUT



### Dimensions in Inches, Weights in Pounds:

| Pipe Size | Part #   | PVC pipe w/ DI Pipe OD | A    | A1   | B     | C (Max) | BCD         |     | Restraining Rods/Nuts |     | Clamping Bolts |        |       | Weight |
|-----------|----------|------------------------|------|------|-------|---------|-------------|-----|-----------------------|-----|----------------|--------|-------|--------|
|           |          |                        |      |      |       |         | Min/Max     | Qty | Size                  | Qty | Size           | Torque |       |        |
| 4         | PWPR-C4  | 4.80                   | 0.75 | 1.12 | 9.16  | 10.30   | 7.50        | 2/4 | 3/4 x 12              | 2   | 5/8 x 3 3/8    | 85     | 12.50 |        |
| 6         | PWPR-C6  | 6.90                   | 0.90 | 1.12 | 11.97 | 10.30   | 9.75/10.25  | 2/4 | 3/4 x 12              | 2   | 5/8 x 3 3/8    | 85     | 15.80 |        |
| 8         | PWPR-C8  | 9.05                   | 1.00 | 1.24 | 14.72 | 11.50   | 12.50/13.00 | 2/4 | 3/4 x 14              | 2   | 3/4 x 3 7/8    | 100    | 24.25 |        |
| 10        | PWPR-C10 | 11.10                  | 1.37 | 1.38 | 16.61 | 12.15   | 15.00       | 4/8 | 3/4 x 15              | 2   | 7/8 x 4 3/8    | 125    | 38.40 |        |
| 12        | PWPR-C12 | 13.20                  | 1.37 | 1.34 | 19.45 | 12.60   | 17.62       | 4/8 | 3/4 x 15              | 2   | 7/8 x 4 3/8    | 125    | 44.50 |        |

PV-LOK Products are rated with a working pressure equal to that of the PVC pipe to which they are applied.


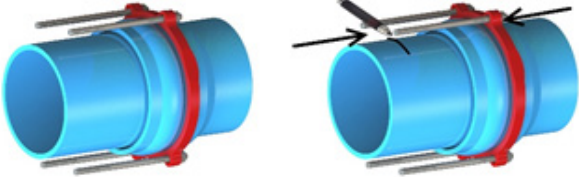

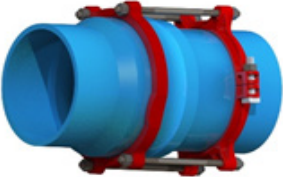
NOTE: Series PWPR is not recommended for use of AWWA C900 DR14 PVC pipes

\*When calculating clearance for pipe in a casing, add a minimum of 1-1/2" to the "B" dimension above.

### Pressure Rating:

| Nominal Pipe Size | Item #   | Pressure Rating |      |
|-------------------|----------|-----------------|------|
|                   |          | C900            |      |
|                   |          | DR18            | DR25 |
| 4                 | PWPR-C4  | 235             | 165  |
| 6                 | PWPR-C6  | 235             | 165  |
| 8                 | PWPR-C8  | 235             | 165  |
| 10                | PWPR-C10 | 235             | 165  |
| 12                | PWPR-C12 | 235             | 165  |

### Installation Instructions (4-12")

|   |   |
|---|---|
| <p>Slide the solid back-up ring over the pipe spigot and slide down until it seats up against the bell profile. Make certain the beveled side of the solid back-up ring faces the pipe bell, allowing it to seat comfortably against the slope of the bell. Assemble the bell and spigot PVC joint as per manufacturer's installation recommendation.</p> |    |
| <p>Using one of the extra-long t-bolts provided, insert from the back side of the solid back-up ring and mark the pipe approximately "C" dimension as specified in the chart for proper placement of the serrated clamp.</p>  |     |
| <p>Assemble the serrated clamping ring immediately in front of the mark, making sure the flat side of the serrated clamp ears face away from the pipe bell to ensure proper direction of the angled serrations and proper seating of the restraining nuts. Tighten the side clamping bolts evenly to the recommended torque.</p>                          |   |
| <p>Insert the extra-long t-bolts and hand-tighten the restraining nuts. <b>Do not over-tighten the restraining nuts - hand tighten and then one complete turn with a wrench.</b></p>  |  |

## LOCATIONS

### Northeast Region

**Cream Ridge, New Jersey (HQ)**  
700 Goldman Drive  
Cream Ridge, NJ 08514  
Phone (800) 999-2550  
Fax (609) 758-1158  
crmcsr@sigmaco.com

### REPCO

395 Boul. Labbé Nord  
Victoriaville, Qc G6P 1B1  
Phone (888) 744-6262  
Fax (819) 758-1153  
jboucher@repcoc.ca

### Concord Supply

2353 Bowman Street  
Innisfil, Ontario L9S 3V6  
Phone (877) 436-3800  
Fax (705) 436-6338  
tanya@concordsupply.ca

### Midwest Region

**Sauk Village, Illinois**  
21699 Torrence Avenue  
Sauk Village, IL 60411  
Phone (888) 999-0420  
Fax (708) 758-6790  
chicsr@sigmaco.com

### Southeast Region

**Alexander City, Alabama**  
1500 Highway 22 W  
Alexander City, AL 35010  
Phone (800) 824-4513  
Fax (256) 234-4956  
alxcsr@sigmaco.com

### Southwest Region

**Houston, Texas**  
5000 Askins Lane  
Houston, TX 77093  
Phone (800) 999-0109  
Fax (281) 987-0200  
htncsr@sigmaco.com

### Western Region

**Ontario, California**  
4652 E. Guasti Road  
Ontario, CA 91761  
Phone (800) 688-6230  
Fax (909) 391-2033  
ontcsr@sigmaco.com

### Auburn, Washington (Branch)

902 W Main Street  
Auburn, WA 98001  
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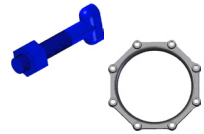
## AWWA Ductile Iron Fittings



- 2-64" C153 Ductile Iron Mechanical Joint Fittings
- 2-48" C110 Ductile Iron Mechanical Joint Fittings
- 2-64" C110 Ductile Iron Flanged Fittings
- 3-24" C153 Ductile Iron Push-On Fittings
- 4-24" C110 Ductile Iron Push-On Fittings
- 4-12" Ductile Iron Mechanical Joint Connector
- C116 Fusion Bonded Epoxy Lining Available
- PROTECTO 401® Ceramic Epoxy Lining Available

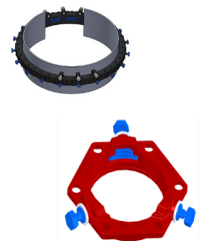
Visit our website for available special coatings. <http://www.sigmaco.com/fittings-coatings-linings/>

## Mechanical Joint Accessories



- Prepackaged and Loose Mechanical Joint Accessories
- SIGMASEAL™ Improved Mechanical Joint Gasket
- Snap-On Multi-Purpose Gasket for Ductile Iron or PVC Pressure Pipes
- OMNI-SLEEVE™ Improved Wall Penetration Sleeve
- Specialty Bolts and Nuts for Mechanical Joint Assemblies

## ONE-LOK™ Wedge Action Restraints

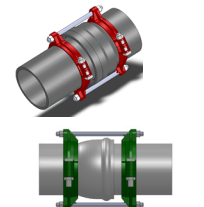


- 3-48" ONE-LOK D-SLDE Domestic Wedge Restraint for Ductile Iron Pipe
- 3-64" ONE-LOK SLDE Wedge Restraint for Ductile Iron Pipe (Import)
- 4-48" ONE-LOK T-SLDE Tandem Wedge Restraint for High Pressure Ductile Iron Pipe
- 3-36" ONE-LOK D-SLCE Domestic Wedge Restraint for PVC Pipe
- 3-36" ONE-LOK SLCE Wedge Restraint for PVC Pipe (Import)
- 3-36" ONE-LOK SLDEH Wedge Harness Restraint for Ductile Iron Pipe
- 4-12" / 20" ONE-LOK SLDM Wedge Restraint for Oversized Cast Iron Pipe
- 4-36" ONE-LOK SSLD Split Wedge Restraint for Installed Ductile Iron Pipe & Fitting
- 4-36" ONE-LOK SSLDH Split Wedge Harness Restraint for Installed Ductile Iron Pipe
- 4-12" ONE-LOK SLCEH Wedge Harness Restraint for AWWA C900 PVC Pipe

Visit our website for available special coatings.

<http://www.sigmaco.com/pipe-restraint-product-coatings-linings/>

## PV-LOK™ Serration Lock Restraints



- 4-48" PV-LOK PWM Serrated Restraint for Ductile Iron Fitting & AWWA C900/905 PVC Pipe
- 4-48" PV-LOK PWP Serrated Bell Joint Restraint for AWWA C900/905 PVC Pipe
- 4-12" PV-LOK D-PWP Domestic Serrated Bell Joint Restraint for AWWA C900 PVC Pipe
- 4-48" PV-LOK PVPF Restraint for AWWA C900/905 PVC Pipe & PVC Fitting
- 4-12" PV-LOK PWH Serrated Harness Restraint for AWWA C900 PVC Pipe
- 2-12" PV-LOK PVM Serrated Restraint for Ductile Iron & IPS OD PVC pipe
- 2-12" PV-LOK PVP Serrated Bell Joint Restraint for IPS OD PVC Pipe
- 4-8" PV-LOK PVPF Serrated Restraint for IPS OD PVC Pipe & PVC Fitting
- 4-12" PV-LOK PWP Serrated Bell Joint Restraint for Ductile Iron Pipe

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## Flange Adapters



- 3-36" SIGMAFLANGE Flange Adapter Sleeve for PVC and Ductile Iron Pipe
- 2-48" ZIP FLANGE Set Screw Style Flange Adapter

## Municipal Construction Castings



- Manhole Rings and Covers
- Curb and Meter Boxes
- Frames and Grates
- Storm Inlets
- Valve Boxes, Risers, and Extensions

## Products for the Ductile Iron Fabricator



- 3-64" High Hub Threaded Flanges
- 3-48" Tapped High Hub Threaded Flanges
- 3-36" Extra Heavy 250lb Drilled Threaded Flanges
- 3-48" Threaded MJ Bell Adapters
- 3-48" MJ x PE Bell adapter
- 3-48" Anchor Flanges
- 3-16" Filler Flanges

## Extended Range Products



- Flange-Pak™ Prepackaged Flange Accessory Sets
- Polyethylene Encasement for Ductile Iron Pipe
- Copper Tubing Products
- Tracer Wire & Detectable/Non-Detectable Marking Tape
- Pipe Joint Lubricant & Hydraulic Cement
- Socket Clamps and Tie Rod Accessories
- BoxLok Valve Box Alignment Device
- Cast Iron Companion Flanges