## $\Sigma$ SIGMA $^{*}$

## Quality - Service - Commitment - Delivered.

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




Features \& Advantages:
The PV-LOK ${ }^{\text {TM }}$ Series PWP restrainer incorporates a series of machined serrations that effectively engage PVC pipe walls, to provide positive joint security and full support of the pipe. The directional gripping action maximizes restraint during increased line pressures such as those resulting from surges and water hammers. The Series PWP incorporates two PV-LOK clamping rings and a series of restraining rods \& nuts that tie the two rings together and secure the PVC bell and spigot pipe joint.

## Sample Specification:

Restraint devices for bell and spigot joints of PVC pipe shall consist of two split retainer rings incorporated a series of machined (not "as cast") serrations. One clamping ring shall be installed on the spigot pipe, and with the necessary restraining rods and nuts, connected to a second clamping ring located on the pipe barrel immediately behind the gasket bell. Restraint devices shall incorporate a series of machined serrations that provide positive restraint, exact fit and full support of the pipe wall. The restraint device shall provide the necessary bolts and nuts to complete the PVC pipe bell assembly. Devices shall carry a minimum $2: 1$ safety factor and meet or exceed the recognized testing for restrained joints on PVC pressure pipe and offer factory certification and independent test results. Restraint devices for securing PVC pipe bell assemblies shall be SIGMA PV-LOK ${ }^{\text {TM }}$ Series PWP or approved equal.

## Material:

- Clamping 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)



1. Plain End Pipe
2. Restrainer Clamp
3. Bell End Pipe
4. Restraining Rod

## Dimensions in Inches, Weights in Pounds:

| Pi | Item \# | PVC pipe w DI Pipe OD | A | B | C (max) | Restraining Rods |  | Nuts for Res Rods |  | Clamping Bolts |  |  | Weight |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Size |  |  |  |  |  | No. | Size | No. | Size | No. | Size | Min Torque |  |
| 4 | PWP-C4 | 4.80 | 1.20 | 9.00 | 13.00 | 2 | $3 / 4 \times 15$ | 4 | 3/4 | 4 | 5/8x3 3/8 | 85 | 14.36 |
| 6 | PWP-C6 | 6.90 | 1.20 | 11.52 | 13.00 | 2 | $3 / 4 \times 18$ | 4 | 3/4 | 4 | 5/8x3 3/8 | 85 | 16.44 |
| 8 | PWP-C8 | 9.05 | 1.75 | 12.81 | 13.00 | 2 | $3 / 4 \times 18$ | 4 | 3/4 | 4 | 3/4x3 7/8 | 100 | 27.00 |
| 10 | PWP-C10 | 11.10 | 1.75 | 16.88 | 16.00 | 4 | $3 / 4 \times 24$ | 8 | 3/4 | 4 | 7/8x4 3/8 | 125 | 44.40 |
| 12 | PWP-C12 | 13.20 | 1.75 | 19.12 | 22.00 | 4 | $3 / 4 \times 24$ | 8 | 3/4 | 4 | 7/8x4 3/8 | 125 | 50.64 |
| 14 | PWP-C14 | 15.30 | 3.50 | 21.10 | 22.00 | 6 | 3/4x30 | 12 | 3/4 | 8 | 7/8x6 1/4 | 130 | 101.61 |
| 16 | PWP-C16 | 17.40 | 3.50 | 23.58 | 22.00 | 6 | 3/4x30 | 12 | 3/4 | 8 | 7/8x6 1/4 | 130 | 114.15 |
| 18 | PWP-C18 | 19.50 | 4.25 | 25.80 | 22.00 | 8 | $3 / 4 \times 30$ | 16 | 3/4 | 8 | 1.00x6 1/4 | 130 | 164.97 |
| 20 | PWP-C20 | 21.60 | 5.00 | 29.06 | 22.00 | 8 | 3/4x36 | 16 | 3/4 | 8 | 1-1/4x6-1/2 | 130 | 234.50 |
| 24 | PWP-C24 | 25.80 | 5.00 | 34.64 | 22.00 | 10 | 3/4x36 | 20 | 3/4 | 8 | 1-1/4x6-1/2 | 130 | 288.50 |
| 30 | PWP-C30 | 32.00 | 5.50 | 41.80 | 38.00 | 10 | $1 \times 40$ | 20 | 1 | 8 | 1-1/4x8-1/2 | 130 | 463.75 |
| 36 | PWP-C36 | 38.30 | 5.50 | 49.04 | 38.00 | 12 | 1x40 | 24 | 1 | 8 | 1-1/4x8-1/2 | 130 | 520.40 |
| 42 | PWP-C42 | 44.50 | 6.26 | 57.18 | 46.00 | 16 | $11 / 4 \times 48$ | 32 | 1 1/4 | 8 | 1 1/2x9 | 175 | 983.76 |
| 48 | PWP-C48 | 50.80 | 6.26 | 63.48 | 46.00 | 16 | 11/4x48 | 32 | $11 / 4$ | 24 | 1 1/2x9 | 175 | 1058.50 |

PV-LOK Products are rated with a working pressure equal to that of the PVC pipe to which they are applied.
Also suitable for use on ductile iron pipe in sizes 4-12" (350psi 4-6", 250psi 8-12")
*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 |  |  | ASTM D2241 |  |  | C905 |  |  |  |  |  |
|  |  | DR14 | DR18 | DR25 | SDR17 | SDR21 | SDR26 | DR18 | DR21 | DR25 | DR32.5 | DR41 | DR51 |
| 4 | PWP-C4 | 305 | 235 | 165 | 250 | 200 | 160 | - | - | - | - | - | - |
| 6 | PWP-C6 | 305 | 235 | 165 | 250 | 200 | 160 | - | - | - | - | - | - |
| 8 | PWP-C8 | 305 | 235 | 165 | 250 | 200 | 160 | - | - | - | - | - | - |
| 10 | PWP-C10 | 305 | 235 | 165 | 250 | 200 | 160 | - | - | - | - | - | - |
| 12 | PWP-C12 | 305 | 235 | 165 | 250 | 200 | 160 | - | - | - | - | - | - |
| 14 | PWP-C14 | - | - | - | - | - | - | 235 | 200 | 165 | 125 | 100 | - |
| 16 | PWP-C16 | - | - | - | - | - | - | 235 | 200 | 165 | 125 | 100 | - |
| 18 | PWP-C18 |  |  |  |  |  |  | 235 | 200 | 165 | 125 | 100 | 80 |
| 20 | PWP-C20 | - | - | - | - | - | - | 235 | 200 | 165 | 125 | 100 | 80 |
| 24 | PWP-C24 | - | - | - | - | - | - | 235 | 200 | 165 | 125 | 100 | 80 |
| 30 | PWP-C30 | - | - | - | - | - | - | - | - | 165 | 125 | 100 | 80 |
| 36 | PWP-C36 | - | - | - | - | - | - | - | - | 165 | 125 | 100 | 80 |
| 42 | PWP-C42 |  |  |  |  |  |  |  |  |  | 125 | 100 | 80 |
| 48 | PWP-C48 |  |  |  |  |  |  |  |  |  | 125 | 100 | 80 |

