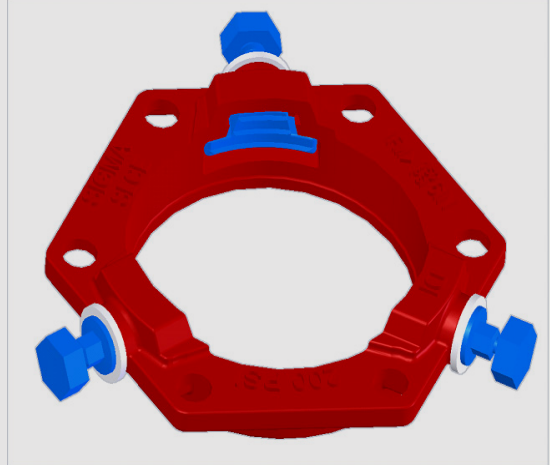
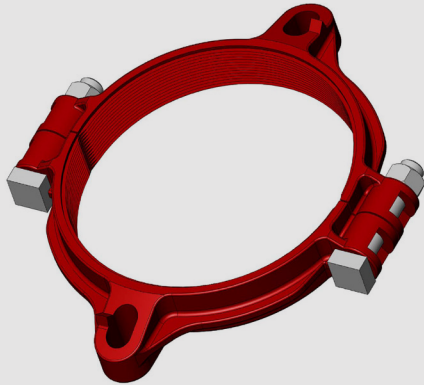


ONE-LOK™ and PV-LOK™ Series Pipe Restraint Systems for HDPE



The ONE-LOK™ and PV-LOK™ Pipe Restraint Systems may successfully be used for the restraint of High Density Polyethylene Pipe with ductile iron mechanical joint and push on fittings. Rated pressure of the restraint is limited to the rated pressure of the HDPE pipe.

Sample Specification for HDPE Restraint:

High Density Polyethylene Pipe meeting AWWA C906 shall be restrained to a ductile iron mechanical joint or push on joint fitting with either a follower gland incorporating multiple lugs or a split restrainer ring that incorporates a series of machined serrations.

HDPE Pipe restrained with these devices shall be reinforced with an internal pipe wall stiffening device.

Restraint devices shall be SIGMA ONE-LOK SLC, SIGMA PV-LOK PVM/PWM, or approved equal.

- All HDPE Pipe must meet the requirements of ANSI/AWWA C906, latest revision.
- Piping systems must be designed with allowances for expansion and contraction caused by temperature, pressure, and any other source.
- Restraint devices for HDPE are not recommended for use in above ground applications.
- Internal pipe stiffening devices must be incorporated, and must be of a length that will extend to the area in which the restraining device is attached to the pipe.

Diameter	ONE-LOK	PV-LOK		PRESSURE RATING		
	SLC	PVM (CIOD)	PVM (IPS)	DR11	DR13.5	DR17
3	SLC3	-	PVM-S3	160	130	100
4	SLC4	PWM-C4	PVM-S4	160	130	100
6	SLC6	PWM-C6	PVM-S6	160	130	100
8	SLC8	PWM-C8	PVM-S8	160	130	100
10	SLC10	PWM-C10	PVM-S10	160	130	100
12	SLC12	PWM-C12	PVM-S12	160	130	100

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Installation Instructions for ONE-LOK™ SLC on HDPE Pipe

1. Clean the fitting socket and pipe end. Lubricate gasket and pipe end with soapy water (or approved pipe lubricant meeting AWWA C111). Install ONE-LOK restrainer on the pipe with the lip extension facing the pipe end, followed by the proper mechanical joint gasket, tapered side toward pipe end. Insert the pipe wall stiffener per the pipe manufacturer's instructions. Ensure that the stiffener is of adequate length to encompass the area of the pipe where the restrainer engages the pipe wall. Insert pipe into the fitting outlet and seat the gasket firmly and evenly into the gasket cavity. Maintain a straight joint during assembly.

2. Push the ONE-LOK gland toward the fitting and center it around the pipe with the lip evenly pressed against the gasket. Insert the T-bolts and hand-tighten in an alternating manner, maintaining an even gap between the gland and the fitting face at all points around the socket. Continue tightening until all the T-bolts are within the suggested torque per AWWA C111, latest revision. Use of a torque wrench is recommended. Following proper assembly of the mechanical joint, hand tighten all actuating bolts until complete contact of the wedge segments with the pipe is made.

3. Tighten each actuating bolt clockwise, ALTERNATING BETWEEN BOLTS (star pattern) until all the breakaway tops have been removed. Never tighten an actuating bolt more than 180 degrees before moving to the next bolt. If removal is necessary use the residual hex heads. To reassemble the restraint, follow previous instructions. In the absence of the breakaway tops, tighten all actuating bolts until the metal bolt collars (with ABS spacer for CIOD) bottom out in the gland housing. If the SLC is removed from the pipe, be sure all of the bolts and wedge segments are in place before the SLC restrainer is reassembled.

Identify the pipe. The SLC is for use with HDPE pipe when restraining mechanical joints. The 4" through 12" size may be used on both Cast Iron OD and IPS OD HDPE pipe. The ABS spacers (white) under the actuating bolt collars must remain in place when used with CIOD pipe and must be removed when used with IPS OD pipe.

SPECIAL INSTRUCTIONS for CIOD HDPE Pipe (Cast Iron Outside Diameter)

- ABS spacers MUST NOT BE REMOVED from actuating bolts for SLC installation on CIOD HDPE Pipe
- Use standard mechanical joint gasket

SPECIAL INSTRUCTIONS for IPS HDPE Pipe (Steel Pipe Outside Diameter)

- ABS spacers MUST BE REMOVED for SLC installation on IPS HDPE Pipe.
- Using pliers, grasp the two-piece ABS spacer at the point where the spacer halves interlock and twist back-and-forth, to break the spacer apart. Remove the spacer halves from the bolt stem.

Installation Instructions for PV-LOK™ PVM/PVM on HDPE Pipe

1. Install plain-end PVC pipe into the mechanical joint bell. Insert one of the extra-long T-bolts provided with PV-LOK Series PVM through one of the bolt holes, marking a reference line on the pipe approximately 1 to 2 inches from the end of the bolt. Insert the pipe wall stiffener per the pipe manufacturer's instructions. Ensure that the stiffener is of adequate length to encompass the area of the pipe where the restrainer engages the pipe wall.

2. Assemble the MJ gland, gasket and bolts to AWWA standards. Assemble PVM clamping ring on the pipe at the reference line. Tighten the side clamping bolts to recommended torque. The protrusions on the restrainer ears must face the fitting to insure proper direction of the angled serrations. Line up the ears with the corresponding MJ bolt holes.

3. Insert the extra-long T-bolts and install one nut each between the gland and the clamping ring. Tighten the nuts against the MJ gland to AWWA standards to complete the gasketed assembly.

4. Tighten the retaining nuts behind the restrainer ears against the flat surface approximately one turn past snug. DO NOT over-tighten retaining nuts.