

ONYX VALVE COMPANY

Series ILCV & ILCV-F In-Line Check Valve

Installation & Maintenance

Table of Contents:

- 1.1 Onyx In-Line Check Valve2
- 1.2 Series ILCV Installation3
- 1.2 Series ILCV-F Installation4
- 1.3 Anchor Bolt/Pins5
- 1.4 ILCV-F Flange Bolt Torque Data6



1.1 ILCV: Onyx In-Line Rubber Check Valve

This type of rubber check valve is designed to slip directly inside of an existing pipe with the supplied stainless steel expandable clamp or retaining ring to secure in place; it can be fastened from either the inlet or discharge end of the valve. The standard in-line check valve styles must be installed in a truly round pipe. Out of round pipe may cause distortion of the valve causing valve failure.

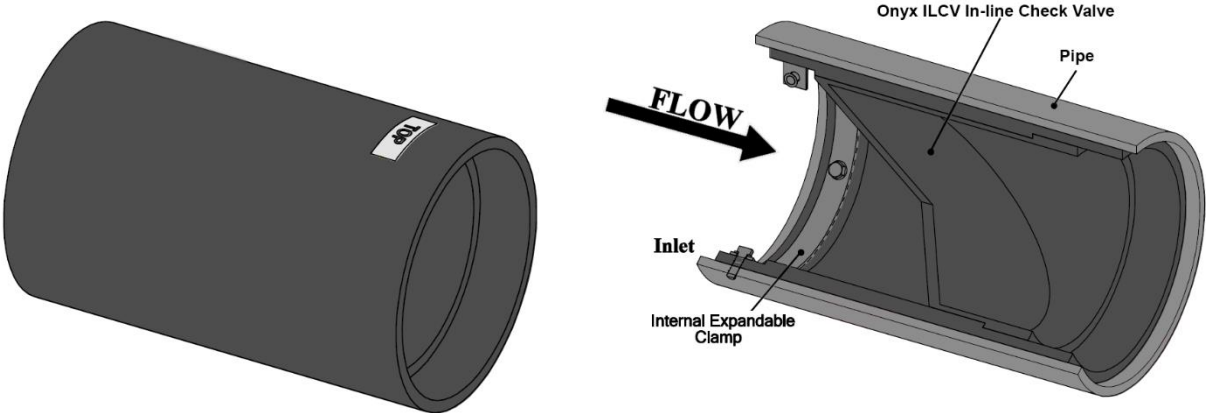


Figure 1: ILCV In-Line Rubber Check Valve

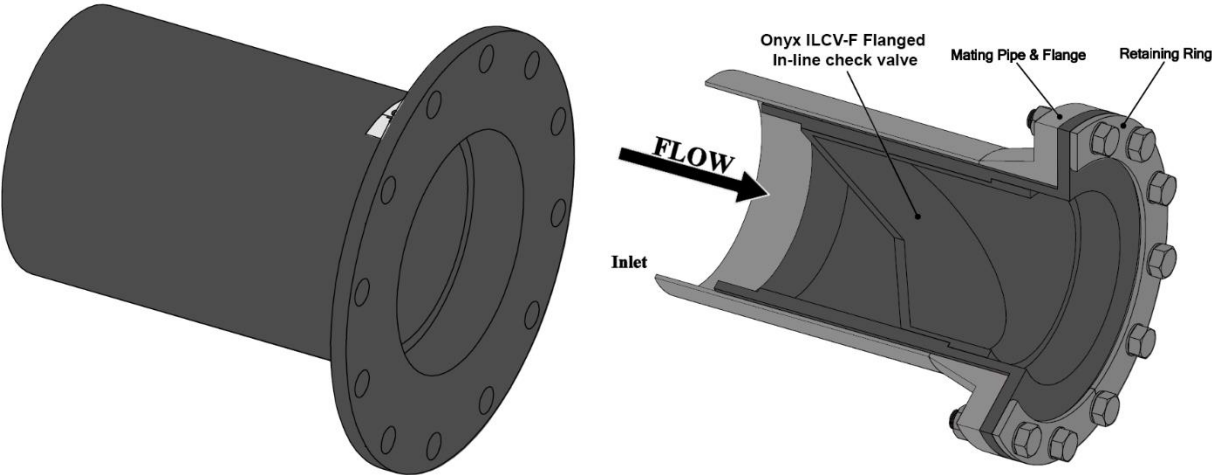


Figure 2: ILCV-F Flanged In-Line Rubber Check Valve

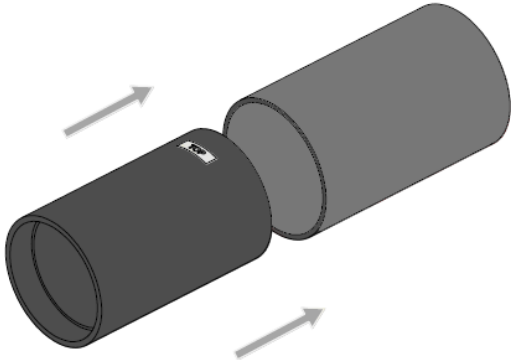
Note: For flanged versions of the In-Line Rubber Check Valves, the integrated rubber flange can be located on either the inlet or discharge end depending on required installation orientation.

1.2 Onyx In-Line Rubber Check Valve Installation

Series ILCV Style:

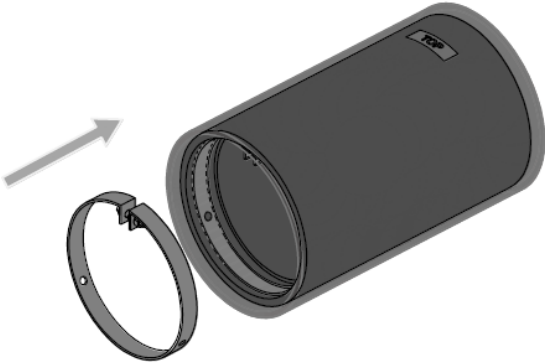
Step 1: Insert Valve

The ILCV valve must be installed in a horizontal pipe and will be supplied with a “FLOW” direction label and a “TOP” label to ensure proper installation orientation within the pipe. Insert the slip-in check valve inside the existing pipe and push until inlet/discharge end is flush with end of pipe.



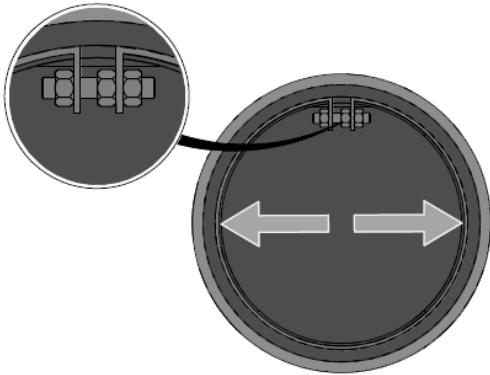
Step 2: Insert Clamp

Insert the expandable internal clamp(s) into the rubber check valve in either the inlet or discharge end depending on installation orientation and ensuring that the adjustable bolts are located at the top of the valve. When installing multiple internal expandable clamps ensure the clamps are evenly spaced/ rotated to provide even clamping pressure as well as the internal expandable fasteners located in a position that minimizes flow interference.



Step 3: Expand Clamp

Tighten the expandable internal clamp until the stainless-steel portion of the clamp has imbedded itself into the rubber of the valve. Tighten the lock nut once the internal expandable clamp is in the proper position and proceed to section for anchor bolting/pinning to anchor the slip-in check valve to the mating pipe.

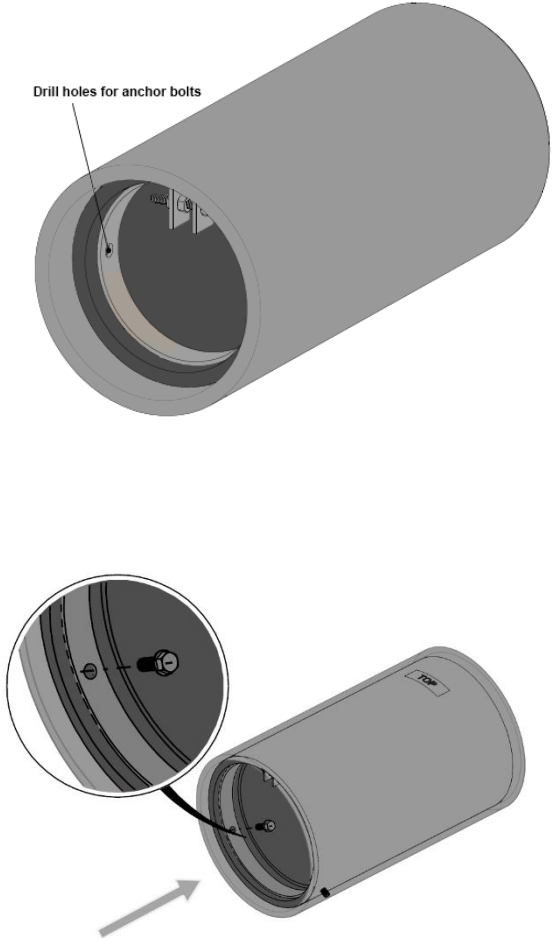


Note: This style of check valve installation relies on external pressure of the internal expandable clamp to ensure that the valve does not move, care should be taken to ensure proper sealing.

1.3 Anchor Bolts/Pins

After the Check Valve is installed, drill a hole or holes, depending on the valve size number of clamps, through the cuff of the check valve and into the mating pipe using the center hole on the clamp as a guide. Insert a bolt, which will be sufficient in length to completely travel through the clamp, valve and mating pipe. Completely weld or use some other means of ensuring that this bolt/pin will not fall out or be removed. It is imperative that the clamp and sleeve is properly lined up, so that the rubber is not under pressure due to misalignment.

Insert the Bolt/Pin through the drilled hole(s) and completely weld or use some other means of ensuring that this bolt/pin will not fall out or be removed from to the internal expandable clamp.



1.4 ILCV-F Flange Bolt Torque Data

Series ILCV-F Torque Valves	
Size	Approx. Torque Values (ft/lbs)
1" thru 2"	20 - 40
2.5" thru 5"	25 - 60
6" thru 12"	35 - 140
14" thru 18"	50 - 180
20" thru 24"	60 - 200
26" thru 40"	70 - 300
42" thru 50"	80 - 300
52" thru 60"	100 - 400
66" thru 72"	200 - 500
78" thru 90"	300 - 600
96" thru 108"	400 - 700
120"	500 - 800