TROY VALVE
A DIVISION OF PENN-TROY MANUFACTURING INC.

Non-Rising T-Valve Installation, Operation & Maintenance

Slip Tube Assembly

Installation

The first step in the installation of your t-valve should be the slip tube assembly. To begin with, the wiper gasket tension is preset. Install the slip tube assembly in receiving pipe in completely vertical line.

Attach the companion flange of the assembly to the receiving pipe flange with necessary hardware (not provided).

After installation, gravity may pull the slip tube down. Block/prop up the slip tube in preparation for operator installation.

*NOTE: If the slip tube doesn't fall, the gasket tension may be too tight. Proper adjustment must be made before proceeding. Contact Troy Valve for additional "tension washers." When you receive them, remove the nuts from the compression ring, lift the ring and add one washer to each stud. Replace the compression ring and tighten nuts until bottomed out. Test to ensure slip tube falls gradually. If issues persist, do not proceed and contact us for further instructions.

Operation & Maintenance

The slip tube will travel axially as the operator is operated.

- Ensure the slip tube assembly is adequately greased before operation is initiated. It is best to grease the tube/gasket at least quarterly.
- Be alert for symptoms of wear or of adjustments being necessary, such as hearing or feeling abnormal friction or the water level dropping below slip tube elevation.
- If you are having difficulty turning the operator/hand wheel, check to confirm proper tension of the assembly.
- If the wiper gasket must be replaced, remove the nuts from the compression ring, lift the ring and remove the split MJ gasket. You will need to order a replacement gasket using the

diameter of the receiving pipe flange. Once the replacement arrives, install and readjust per the installation instructions above.

- Addition or subtraction of tension washers may be necessary throughout the life of the valve to keep proper compression of the gasket.

Operator

Installation

1. If supplied with floor stand mounting bracket, install this component first, ensuring the bracket is level in all directions.
2. The lift rod is usually preinstalled to the travel tube. If the lift rod is excessively long, it will not come preassembled to the travel tube. The lift rod must be pinned to the travel tube with the supplied hardware. We recommend doing this before proceeding. If the lift rod is excessively long, it may be necessary to pin the rod to the tube after the floor stand has been mounted.
3. All non-rising t-valve operator assemblies are supplied with an anti-rotation plate on the bottom of the floor stand. Before proceeding, please ensure the square tubing of the anti-rotation plate is protruding down and out of the floor stand. If the plate is protruding into the floor stand, remove the two bolts securing it to the base, flip it over to correct the orientation, and re-screw it to the base of the floor stand using the same two bolts. If the anti-rotation plate is in the correct orientation, do not remove it from the base of the floor stand.
4. Mount the floor stand in line with vertical receiving pipe. Fine adjustment may be needed later, so do not fully tighten the mounting bolts at this time.
5. Using a plumb-bob, adjust the floor stand to obtain proper axial alignment. Once alignment is achieved, tighten the mounting bolts of the floor stand fully.
6. Remove the bail riser crossbar, then remove the jam nut from the lift rod and thread the bail riser crossbar onto it. Replace the jam nut onto the lift rod.
7. At this time, the slip tube must be adjusted to an elevation above low water, but below high water. Operate the valve to adjust the height of the lift rod so that the bail riser crossbar can be remounted. Tighten the jam but on the bail riser crossbar fully.

8. Close the valve until it bottoms out.
9. Open the valve approximately 1 full turn (this should approximately be high water elevation).
10. Operate the valve between high and low water elevations to ensure that both are achieved.
    a. If not achieved, fine adjustment may be made by removing the crossbar again, and turning it to adjust the height accordingly. Replace the bail riser crossbar and ensure jam nut is tight. Operate the valve again to recheck elevations and adjust as necessary.

    The valve will travel .75" per turn (i.e. 4' of travel is achieved at 64 full turns). CAUTION: Operating the valve below the specified low water setting will cause the travel tube to disengage from the anti-rotation plate. This MUST reengage before operating the valve back to the closed position. If operation of the valve is difficult (hard to turn or otherwise) recheck proper alignment of all components and proper compression of the slip tube gasket.
11. Using the supplied tags mark the open and closed valve positions on the indicator.

Operation

- To lower the valve (open it) turn the operator counterclockwise
- To raise the valve (close it) turn the operator clockwise. A floor stand indicator can be used to verify the valve position.

No adjustments are recommended for the internal components of the floor stand operator. If the valve doesn't operate as expected or starts to bind over time, refer to the slip tube adjustments section of the slip tube installation, operation and maintenance instructions.

Maintenance

- Lubricate the stem at least once a month. First, operate the valve in a fully closed position. Then, remove the 3/8" bolt and nut from the hand wheel. DO NOT turn the hand wheel while the bolt is removed. If the hand wheel is turned too far in the wrong direction, internal components of the floor stand actuator will fall out of the bottom. Apply 15-20 pumps of a moly-based grease into the grease fitting in the center of the hand wheel on the top of the stem. Replace the 3/8" bolt and nut through the hand wheel and stem.
- Lubricate the indicator tube monthly. Grease is NOT recommended for this area, as it may allow dirt, grit or other debris to stick to the fine threads of the indicator tube and cause

damage or premature wear to the indicator. Instead, apply WD-40 (a non-grease based spray lubricant) to the exposed indicator tube threads through the open slot on the face of the indicator.

Troubleshooting

If the t-valve is hard to operate:

- Ensure that the operator and slip tube are completely vertical and in line.
- The stem should be well greased.
- The gasket retainer should not be tightened too tight or the split gasket may bind the tube. Only tighten the gasket retainer tight enough to hold the split gasket in place.

Parts List and Predicted Life

See Troy Valve Telescoping Valve literature for a parts list. Although the life of the unit and parts are dependent on the type of usage and maintenance it receives, it is designed to last for many years of operation.

Wear Parts

The split gasket is the only predicted wear part of the valve. The life of this gasket is dependent on the amount of usage and conditions it sees. Before replacement is necessary, the gasket may be adjusted by tightening the gasket retainer.

Long Term Storage Prior to Installation

The valves and operator should be protected from excess sun exposure as the gaskets, which are normally submerged, may deteriorate if exposed to too much direct sunlight. The valves should not be stacked and the slip tube should be protected from crushing so that they do not go out of round.