

1. INTRODUCTION

The heart of EVR Series CP Check Valves is a reinforced rubber “duckbill”. Manufactured with top quality materials the valves are, like our pinch valves, highly resistant to wear caused by continuous operation with abrasive slurries and sludge.

The flexible sleeve provides maximum flow with a minimum pressure drop across the valve at all times. The simple one-piece “duckbill” sleeve eliminates the mechanical components and intrusive body structures that create problems with conventional check valve designs.

Available in four styles -CPO, CPI, CPF, and CPJ- and a variety of rubbers and reinforcements, the EVR Series CP Check Valves can be adapted to almost any application.

2. STYLES AVAILABLE

2.1. Series CPO

Sleeve end to slip over OD of a discharge pipe, used in lift stations, sumps, and storm sewer drains where variable levels can cause backups.

2.1.1 Series CPO-D

Same as CPO Style. Designed for submersion service on diffusers.

2.1.2 Series CPO-LP

Same as CPO Style, made for low pressure / high flow applications.

The “lips” at the discharge end of the valve are formed with a locking seal to ensure positive shutoff while maintaining flexibility for low opening pressures.

2.2. Series CPF

Flanged style bolts to the flange of a discharge pipe. Same applications as style CPO and can also be used as a diffuser nozzle in effluent discharge systems.

2.2.1 Series CPF-D

Same as CPF Style. Designed for submersion service on diffusers.

2.1.2 Series CPF-LP

A flanged version of the CPO-LP.

2.3. Series CPJ

Full metal body style fits between flanges in piping systems and functions as a whisper quiet , non-slamming, low maintenance, low pressure-drop check valve.

2.4. Series CPI

In-Line type. Fits inside the pipe and is “sandwiched” between the pipe flanges. This style is not recommended for high flow / low pressure-drop applications.

3. INSTALLATION

For all styles, bill (lips) should be installed in as close to a vertical position as possible. Only with bill (lips) in a vertical position can the check valve function properly. Installing the check valve in a position that is not vertical may prevent the Check Valve from closing. In cases where clearance is minimal special consideration to mounting orientation may be made. Please consult with factory.

3.1. CPO STYLE

1. Circumference of the pipe must be smooth and free of sharp and damaged areas. It will prevent cutting the check valve
2. Lifting devices (Lifting Clevis and Lifting Eye Bolts) are supplied only for sizes 42” and bigger.
3. After the Check Valve is safely positioned, install the clamp(s). If the valve has two clamps, they should be rotated relatively to each other for 90 degrees. It will ensure even pressure on the common surface in between the cuff and the pipe, and as a result it will produce higher effectiveness of the clamps. A thin coat of mild lubricant or glycerin may be applied on the inner surface(s) of the clamp(s). It will reduce the friction when tightening the clamp(s).

3.1.1. ADDITIONAL INSTRUCTIONS FOR CPO STYLE

1. The check valve is to fit snugly over the pipe. Do not use a lubricant to ease the installation of the valve on the pipe. It will also help the valve slip of the pipe.
2. The Check Valves 24” in size and over should be pinned to the outfall line.
The working conditions generate on large diameter valves pressure and velocity that could be quite large, and could have a tendency to push the Check valve off the outfall pipe. The metal clamps on large size Check Valves (24” and bigger) are provided with drilled holes for pinning bolts. Use these holes as a drilling pattern for drilling the holes through the rubber and the outfall pipe. Installed bolts should be at 90 degrees to the clamp
3. Certain sizes of the Check Valves are furnished with lifting clevises and eye bolts to be used during the installation. The Check Valve should be at an angle of 30 to 45 degrees to the outfall pipe. This enables easy installation of the cuff over the top of the outfall pipe.

3.2. CPF, CPI, AND CPJ STYLES

1. Remove all burrs or sharp edges from the pipe flange faces and wipe clean of oil, grease, etc. Apply a thin coat of graphite or glycerin to the pipe flange face(s). This will ease installation and allow for easy removal at a later date.
2. (Series CPJ only) Measure distance in between the pipe flanges accurately, then install the Check Valve at exact normal length (“FACE TO FACE”) avoiding compression or elongation forces acting on the Check Valve body.
3. Position the Check Valve(and retaining ring-if applicable), and push two (2) bolts through to ensure alignment. After the proper alignment has been obtained, install remaining bolts and nuts, using washers at the split holes -if the Check Valve comes with a retaining ring.
4. Use two wrenches to prevent torque when installing the Check Valve, tighten bolts in equal steps until the rubber flange bulges slightly.
5. Do not weld near by the Check Valve.

4.0 OPERATION

Elasto Valve Series CP Check Valves are passive devices and require no operation.

Series CPO-LP & CPF-LP which have the locking seal may be adjusted for optimum performance.

This style of valve is made with very flexible “lips” which are formed with a reverse-fold locking seal to ensure positive shut-off against low back-pressure.

In situations where the inlet pressure is so low that the flow-rate is restricted, the “locking seal” of the lips can be trimmed back in increments until the desired flow rate is achieved.

Care should be taken not to trim too much because the backflow seal could be affected.

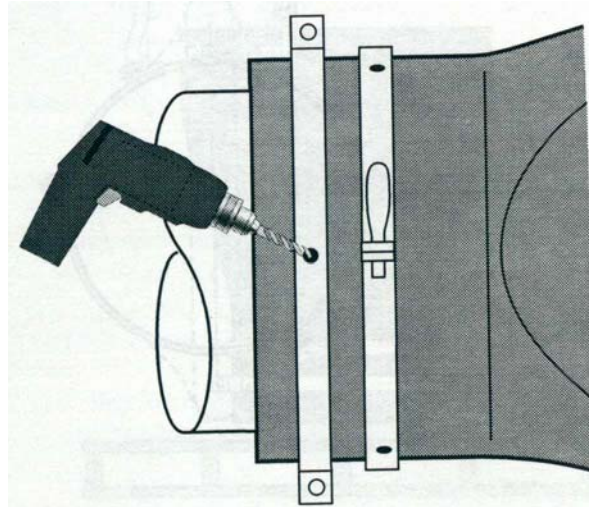
5. MAINTENANCE

There are no mechanical parts to replace.

1. Inspect periodically and remove any debris which may be lodged in the valve(a feathered 2 x 4 or suitable plank inserted into the bill of the valve and turned for 90 degrees is a simple method of cleaning the Check Valve of small debris trapped between the lips.)
2. Series CPJ have flushing ports on each side of the valve body which may be used to clean out the valve.
3. Tighten bolts and clamps as necessary.

Duckbill Clamp Installation

For check valves over 24", clamps are secured using a standard steel drill bit and drill holes through the cuff. Insert **stainless steel bolts** through the cuff and secure opposite side with **stainless steel nut and washers**. Holding bolts are not supplied with valves due to various thickness of outfall pipes.



After desired tightness is achieved, heads of holding bolts can be tack welded to the clamps using tiny tacks. Certain installations will not permit installing of nuts to bolts. In these situations, the bolts may be tack welded to the clamps, the tightness of the clamps, and tack weld of bolts will assure good support.

