

DUAL DISC CHECK VALVES

INSTALLATION & MAINTENANCE INSTRUCTIONS

General:

Stayflow's Dual Disc Check Valves are designed to automatically prevent back-flow in systems where it is desirable to permit flow in one direction and prevent flow in the opposite direction. When the pump starts and the downstream flow creates the required pressure drop in the forward direction, the Dual Plates will automatically open. When the pump stops and the flow ceases, the torsion of the spring will automatically close the Dual Plates prior to flow reversal. This creates a positive shutoff against flow reversal and eliminates system surges and water hammer.

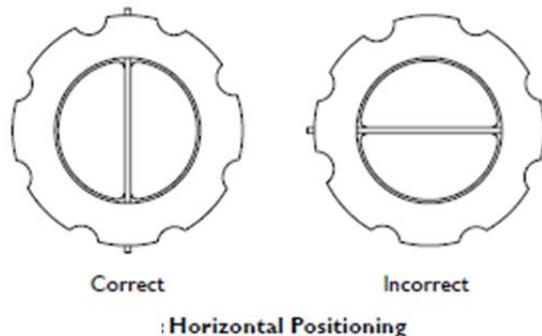
Application:

Stayflow Dual Plate Check Valves are intended for liquid service that does not exceed 10 ft/sec. They are not recommended for steam service or flow media that contains suspended solids such as wastewater. They are designed for steady flow conditions and are not recommended for use in reciprocating pump, compressor or other types of physical/thermal shock-load applications. In this type of application, the Check Valve will not perform efficiently and will ultimately fail.

Installation:

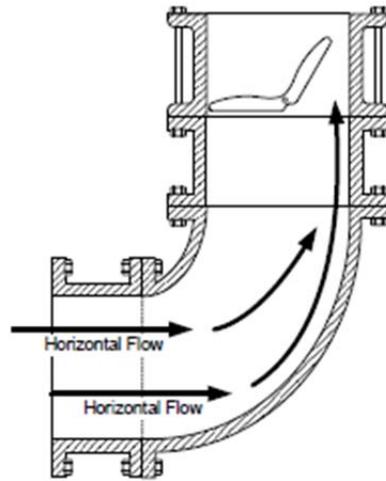
Horizontal Installation:

The valve rib must be installed perpendicular to the flow. This is shown in the diagram below. The eyebolt or plug is located directly above the valve rib can be used to correctly position the valve.

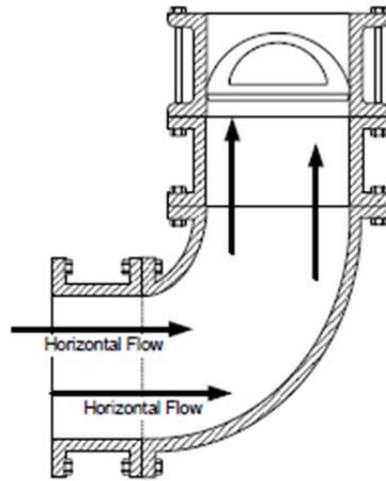


Vertical Installation:

It is necessary to orientate the valve rib such that there is equal loading on the Dual Plates. This is illustrated in the diagram below. Additional pressure drop should be expected due to the weight of the discs.



In this position, the valve rib is perpendicular to the incoming horizontal piping which creates an unequal loading on the plates.



In this position, the valve rib is parallel to the incoming horizontal piping and creates an equal loading on the plates.

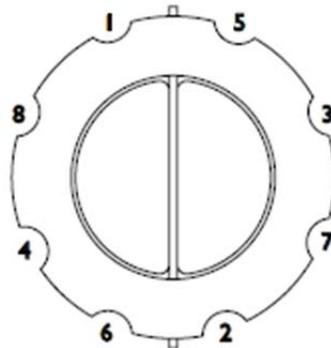
Vertical Positioning

CAUTION:

For vertical installations, Dual Plate Check Valves can only be installed with flow direction upward. In the vertical position, the outlet will be above the inlet.

1. Following the instructions for horizontal or vertical installation described previously, orientate the flow arrow (cast into the side of the valve body or printed on the nameplate) in the direction of the pipeline flow. In the correct position, the dual plates will move away from the valve seat, in the direction of the pipeline flow.
2. While supporting the existing pipeline, lift the Check Valve into position. For large or heavy Check Valves, the appropriate material handling equipment must be used in order to prevent injury and possible damage to the Check Valve.

3. Install a standard, 1/8" thick flange gasket (in accordance with ANSI B16.5) between valve and mating flanges (on both sides). Ensure the flange gaskets are centered correctly to prevent internal leakage.
4. Install lubricated flange bolts and hand tighten. Flange bolts should then be tightened using a star or crisscross pattern to evenly load the bolts. This is illustrated in the diagram below.



Bolting Sequence

CAUTION:

When lifting the Check Valve, utilize the eye bolt or place slings/ chains securely around the valve body. Never lift the Check Valve by attaching slings/chains to the trim/seat assembly. The trim/seat assembly is not designed to withstand the weight of the unit.

Testing:

Valve may be one-time pressure tested to 1-1/2 times the product's maximum operating pressure. Do not exceed maximum pressure or temperature during operation.

Precautions:

Do NOT inspect the seat area of the valve by removing the piping from the inlet side of the valve when back pressure is present. This will result in the seat and trim of the valve being damaged.

Storage:

Store valves with flow arrows pointing upwards.

Maintenance:

Silent check valves have no serviceable parts and do not require maintenance. Stayflow recommends periodic inspection.
