

## HAYWARD SERIES SW, SWING CHECK INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

**PLEASE READ THE FOLLOWING INFORMATION PRIOR TO INSTALLING AND USING ANY HAYWARD PRODUCT. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN PRODUCT DAMAGE, PROPERTY DAMAGE, PERSONAL INJURY, OR EVEN DEATH.**

1. Hayward Flow Control (Hayward), a division of Hayward Industries, guarantees its products against defective material and workmanship only. Hayward assumes no responsibility for property damage or personal injury resulting from improper installation, misapplication, or abuse of any product.
2. Hayward assumes no responsibility for property damage or personal injury resulting from chemical incompatibility between its products and the process fluids to which they are exposed. Determining whether a particular PVC, CPVC, or GFPP product is suitable for an application is the responsibility of the user. Chemical compatibility charts provided in Hayward literature are based on ambient temperatures of 70°F and are for reference only.
3. Hayward products are designed for use with non-compressible liquids.

**WARNING**  
Hayward PVC and CPVC products should NEVER be used or tested with compressible fluids such as compressed air or nitrogen. Use of PVC and CPVC products in compressible fluid applications may result in product damage, property damage, personal injury, or even death.

4. The maximum recommended fluid velocity through the Series SW swing check is eight feet per second (8 ft/s). Higher fluid velocity can result in damage due to the water hammer effect.
5. Piping systems must be designed and supported to prevent excess mechanical loading on Hayward products due to system misalignment, weight, shock, vibration, and the effects of thermal expansion and contraction.
6. The effect of temperature on plastic piping systems must be considered when the systems are initially designed. The pressure rating of plastic systems must be reduced with increasing temperature. Maximum operating pressure is dependent upon material selection as well as operating temperature. Before installing any Hayward product, consult Hayward product literature for pressure vs. temperature curves to determine any operating pressure or temperature limitations.
7. PVC and CPVC plastic products become brittle below 40°F. Use caution in their installation and operation below this temperature.

**WARNING**  
Hayward PVC and CPVC products should not be used in services with operation temperatures below 34°F

Due to differential thermal expansion rates between metal and plastic, transmittal of pipe vibration and pipe loading forces, **DIRECT INSTALLATION OF HAYWARD FLOW CONTROL PRODUCTS INTO METAL PIPING SYSTEMS IS NOT RECOMMENDED.** Wherever installation of Hayward product into metal piping systems is necessary, at least six (6) feet of plastic pipe should be installed upstream and downstream of these valves when installed in metal piping systems to compensate for the factors mentioned above.

8. Published operating requirements are based on testing of new products using clean water at 70°F. Performance is affected by many factors including fluid chemistry, viscosity, specific gravity, flow rate, and temperature. These should be considered when sizing Hayward products.
9. Systems should always be depressurized and drained prior to installing or maintaining any Hayward product.
10. Always follow your site and/or company procedures for any safety training and/or site specific precautions or warnings in addition to those in this document.

**WARNING**  
Failure to depressurize and drain system prior to installing or maintaining any Hayward product may result in product damage, property damage, personal injury, or even death.

**FLANGED CONNECTION:**

Flange bolts should be tight enough to slightly compress the gasket or end O-ring and make a good seal, without distorting or putting excessive stress on the flanges. Table 1 has recommended bolt torque values. Suitable washers should be used between the bolt head and flange and the nut and flange. Bolts should be tightened in an alternating sequence per Figure 1.

**NOTE: USE WELL LUBRICATED METAL BOLTS AND NUTS. USE SOFT RUBBER GASKETS.**

TABLE 1: RECOMMENDED FLANGE BOLT TORQUE		
VALVE SIZE	FLANGE BOLT DIA.	TORQUE, FT*LBS
3"	5/8"	20-25
4"	5/8"	20-25
6"	3/4"	30-40
8"	3/4"	30-40

Note: 8" not available in CPVC

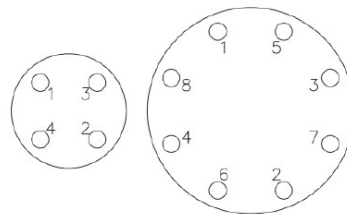


Figure 1: Bolt Tightening Sequence

**INSTALLATION:**

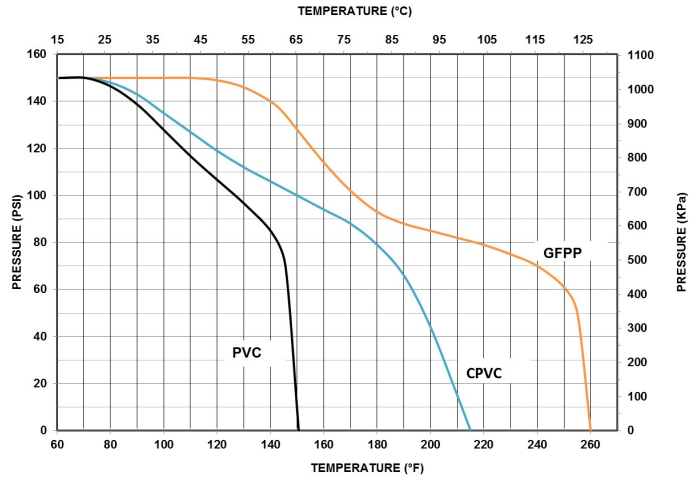
FOR HORIZONTAL PIPE RUNS IT IS NECESSARY THAT THE VALVE BE INSTALLED WITH THE SIZE LABEL MOUNTED ON THE TOP. It is recommended that these valves be installed no closer than 10 pipe diameters from a pump. At least 5 pipe diameters should be between these valves and an elbow. At least six (6) feet of plastic pipe should be installed upstream and downstream of these valves when installed in metal piping systems.

**OPERATION:**

These valves are designed to open in the direction of the flow arrow. A minimum of 3 psi back pressure is required to seal. Two drain plugs are installed in the unit. If there are solids in the system, the drains can be used to flush body and remove solid build up from under and around the seat. The optional counter weight can be adjusted to aid in obtaining an initial seal on check valve closure. Additional weight may be required depending on valve orientation and fluid viscosity. Adjustment of the counterweight set screw or bolt **MUST** be made if the weight is to aid in obtaining a valve seal.

Pressure rating of PVC, CPVC, and GFPP Series SW at 70°F is 150 psi, non-shock. See Pressure vs. Temperature graph for pressure down rating due to temperature.

Material	Minimum Operating Temperature	Maximum Operating Temperature
PVC	34°F (1.1°C)	140°F (60.0°C)
CPVC	34°F (1.1°C)	180°F (82.2°C)
GFPP	20°F (-6.6°C)	240°F (115°C)



**MAINTENANCE:**

Follow all safety warnings in this document. Remove the complete valve body from the piping system. If the valve seat is damaged due to solids or erosion the valve does not necessarily have to be replaced. A new seat seal surface can be obtained by reversing the clapper in the body. Remove the bolts, nuts and washers that hold the body together. Carefully remove all solids from the body halves. Remove the snap rings from both the pivot shafts. **IF THERE IS A SHEAR PIN AND COUNTER WEIGHT THE SHEAR PIN MUST BE REMOVED TO REMOVE THE CLAPPER.** Carefully push the shafts out of the valve body. Check all O-rings for damage and replace if damaged. Reassemble the valve with the clapper on the undamaged seat side. The snap rings are required to maintain the shafts in the correct position. Install the body bolts with flat washers. A flat washer, lock washer and nut must be installed on the opposite body half. Carefully peel the label from the valve and apply it to the opposite body half. Reinstall the valve in the line. The clapper must open in the direction of intended flow.

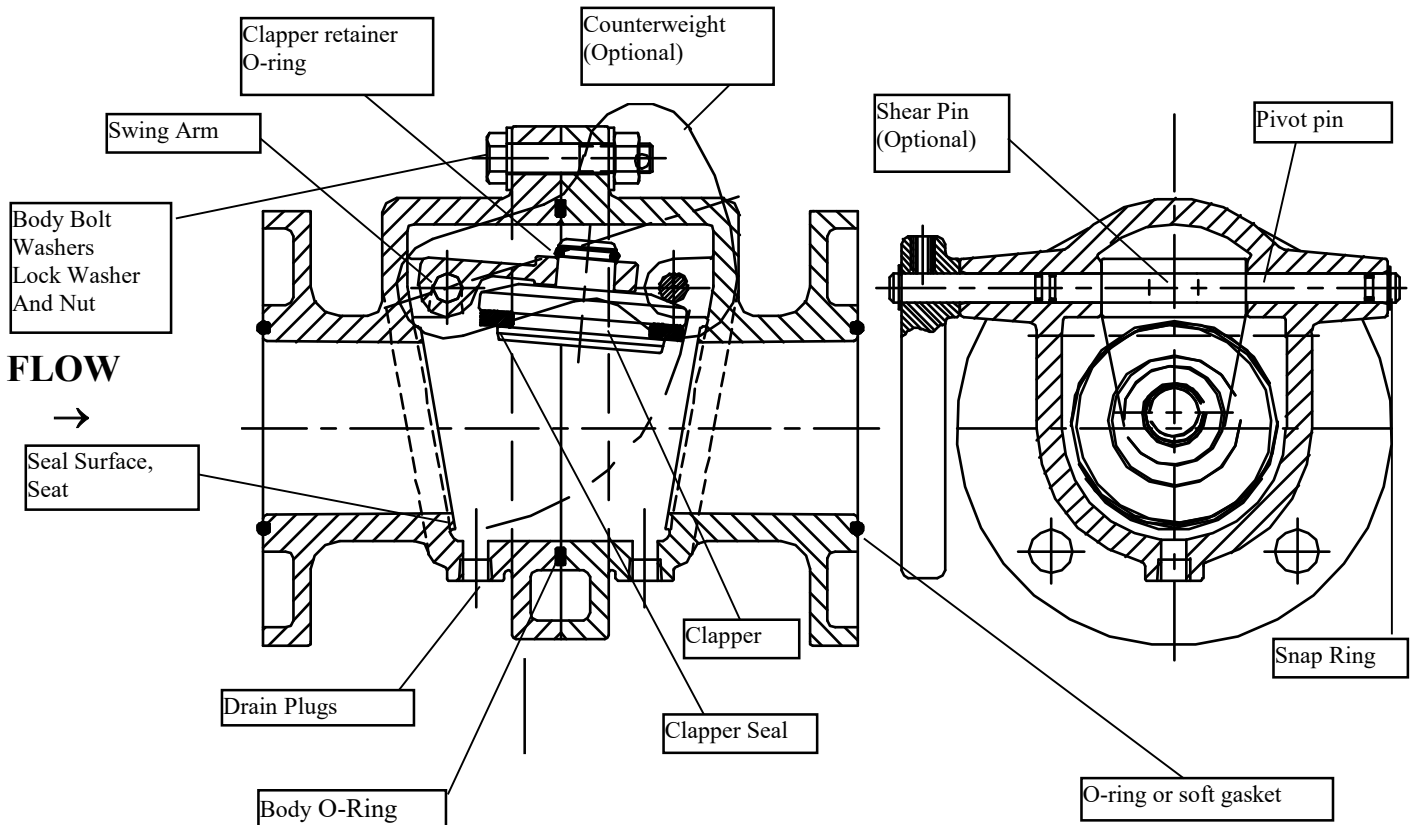


Figure 2: SW SWING CHECK CUT-A-WAY VIEW (Shown with optional counter weight.)