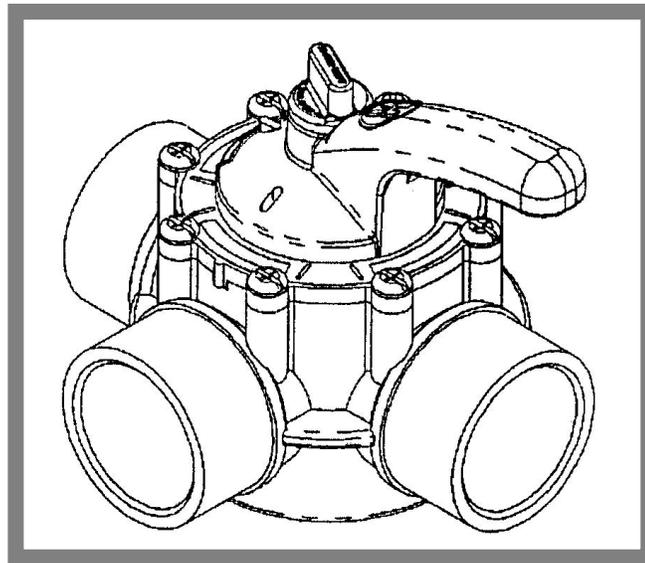


PSV SERIES VALVES

Owner's Manual

Models PSV2S PSV2S2 PSV3S PSV3S2 PSV3SM
 PSV2SDGR PSV2S2DGR PSV3SDGR PSV3S2DGR PSV3SMDGR



CPVC MODEL	PVC MODEL	Type	Size
PSV2S	PSV2SDGR	2-way	1-1/2" or 2" Pipe
PSV2S2	PSV2S2DGR	2-Way	2" or 2 1/2" Pipe
PSV3S	PSV3SDGR	3-Way	1-1/2" or 2" Pipe
PSV3S2	PSV3S2DGR	3-Way	2" or 2-1/2" Pipe
PSV3SM	PSV3SMDGR	3-Way	1 1/2" or 2" Pipe Side Port Union

SAVE THESE INSTRUCTIONS

▲ This is the safety-alert symbol. When you see this symbol on your equipment or in this manual, look for one of the following signal words and be alert to the potential for personal injury or death.

▲ **WARNING** Warns about hazards that **could** cause serious personal injury or, death, and or major property damage and if ignored presents a potential hazard.

▲ **CAUTION** Warns about hazards that **will** or **can** cause minor or moderate personal injury and/or property damage and if ignored presents a potential hazard. It can also make consumers aware of actions that are unpredictable and unsafe. The **NOTICE** label indicates special instructions that are important but not related to hazards.

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⚠ WARNING - Read and follow all instructions in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.



⚠ WARNING – Suction Entrapment Hazard. Suction in suction outlets and/or suction outlet covers which are, damaged, broken, cracked, missing, or unsecured can cause severe injury and/or death due to the following entrapment hazards:



Hair Entrapment- Hair can become entangled in suction outlet cover.



Limb Entrapment- A limb inserted into an opening of a suction outlet sump or suction outlet cover that is damaged, broken, cracked, missing, or not securely attached can result in a mechanical bind or swelling of the limb.



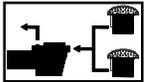
Body Suction Entrapment- A negative pressure applied to a large portion of the body or limbs can result in an entrapment.



Evisceration/ Disembowelment - A negative pressure applied directly to the intestines through an unprotected suction outlet sump or suction outlet cover which is, damaged, broken, cracked, missing, or unsecured can result in evisceration/ disembowelment.

Mechanical Entrapment- There is potential for jewelry, swimsuit, hair decorations, finger, toe or knuckle to be caught in an opening of a suction outlet cover resulting in mechanical entrapment.

⚠ WARNING - To Reduce the risk of Entrapment Hazards:



- o When outlets are small enough to be blocked by a person, a minimum of two functioning suction outlets per pump must be installed. Suction outlets in the same plane (i.e. floor or wall), must be installed a minimum of three feet (3') [1 meter] apart, as measured from near point to near point.
- o Dual suction fittings shall be placed in such locations and distances to avoid “dual blockage” by a user.
- o Dual suction fittings shall not be located on seating areas or on the backrest for such seating areas.
- o The maximum system flow rate shall not exceed the flow rating of as listed on Table 1.
- o Never use Pool or Spa if any suction outlet component is damaged, broken, cracked, missing, or not securely attached.
- o Replace damaged, broken, cracked, missing, or not securely attached suction outlet components immediately.
- o In addition two or more suction outlets per pump installed in accordance with latest ASME, APSP Standards and CPSC guidelines, follow all National, State, and Local codes applicable.
- o Installation of a vacuum release or vent system, which relieves entrapping suction, is recommended.

⚠ WARNING – Failure to remove pressure test plugs and/or plugs used in winterization of the pool/spa from the suction outlets can result in an increase potential for suction entrapment as described above.

⚠ WARNING – Failure to keep suction outlet components clear of debris, such as leaves, dirt, hair, paper and other material can result in an increase potential for suction entrapment as described above.

⚠ WARNING – Suction outlet components have a finite life, the cover/grate should be inspected frequently and replaced at least every ten years or if found to be damaged, broken, cracked, missing, or not securely attached.

⚠ CAUTION – Components such as the filtration system, pumps and heater must be positioned so as to prevent their being used as means of access to the pool by young children. To reduce risk of injury, do not permit children to use or climb on this product. Closely supervise children at all times. Components such as the filtration system, pumps, and heaters must be positioned to prevent children from using them as a means of access to the pool.



⚠ WARNING – Hazardous Pressure. Pool and spa water circulation systems operate under hazardous pressure during start up, normal operation, and after pump shut off. Stand clear of circulation system equipment during pump start up. Failure to follow safety and operation instructions could result in violent separation of the pump housing and cover, and/or filter housing and clamp due to pressure in the system, which could cause property damage, severe personal injury, or death. Before servicing pool and spa water circulation system, all system and pump controls must be in off position and filter manual air relief valve must be in open position. Before starting system pump, all system valves must be set in a position to allow system water to return back to the pool. Do not change filter control valve position while system pump is running. Before starting system pump, fully open filter manual air relief valve. Do not close filter manual air relief valve until a steady stream of water (not air or air and water) is discharged.



⚠ WARNING – Separation Hazard. Failure to follow safety and operation instructions could result in violent separation of pump and/or filter components. Strainer cover must be properly secured to pump housing with strainer cover lock ring. Before servicing pool and spa circulation system, filters manual air relief valve must be in open position. Do not operate pool and spa circulation system if a system component is not assembled properly, damaged, or missing. Do not operate pool and spa circulation system unless filter manual air relief valve body is in locked position in filter upper body. **Never operate or test the circulation system at more than 50 PSI. Do not purge the system with compressed air.** Purging the system with compressed air can cause components to explode, with risk of severe injury or death to anyone nearby. Use only a low pressure (below 5 PSI), high volume blower when air purging the pump, filter, or piping.



⚠ WARNING – Risk of Electric Shock. All electrical wiring MUST be in conformance with applicable local codes, regulations, and the National Electric Code (NEC). Hazardous voltage can shock, burn, and cause death or serious property damage. To reduce the risk of electric shock, do NOT use an extension cord to connect unit to electric supply. Provide a properly located electrical receptacle. Before working on any electrical equipment, turn off power supply to the equipment. To reduce the risk of electric shock replace damaged wiring immediately. Locate conduit to prevent abuse from lawn mowers, hedge trimmers and other equipment. Do NOT ground to a gas supply line.

⚠ WARNING – Risk of Electric Shock Failure to ground all electrical equipment can cause serious or fatal electrical shock hazard. Electrical ground all electrical equipment before connecting to electrical power supply.

⚠ WARNING – Risk of Electric Shock Failure to bond all electrical equipment to pool structure will increase risk for electrocution and could result in injury or death. To reduce the risk of electric shock, see installation instructions and consult a professional electrician on how to bond all electrical equipment. Also, contact a licensed electrician for information on local electrical codes for bonding requirements.

Notes to electrician: Use a solid copper conductor, size 8 or larger. Run a continuous wire from external bonding lug to reinforcing rod or mesh. Connect a No. 8 AWG (8.4 mm²) [No. 6 AWG (13.3 mm²) for Canada] solid copper bonding wire to the pressure wire connector provided on the electrical equipment and to all metal parts of swimming pool, spa, or hot tub, and metal piping (except gas piping), and conduit within 5 ft. (1.5 m) of inside walls of swimming pool, spa, or hot tub.

IMPORTANT - Reference NEC codes for all wiring standards including, but not limited to, grounding, bonding and other general wiring procedures.

⚠ WARNING – Risk of Electric Shock . The electrical equipment must be connected only to a supply circuit that is protected by a ground-fault circuit-interrupter (GFCI). Such a GFCI should be provided by the installer and should be tested on a routine basis. To test the GFCI, push the test button. The GFCI should interrupt power. Push reset button. Power should be restored. If the GFCI fails to operate in this manner, the GFCI is defective. If the GFCI interrupts power to the electrical equipment without the test button being pushed, a ground current is flowing, indicating the possibility of an electrical shock. Do not use this electrical equipment. Disconnect the electrical equipment and have the problem corrected by a qualified service representative before using.

⚠ CAUTION – HAYWARD® pumps are intended for use with permanently-installed pools and may be used with hot tubs and spas if so marked. Do not use with storable pools. A permanently-installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it is capable of being readily disassembled for storage and reassembled to its original integrity.

⚠ WARNING – Risk of Hyperthermia. To avoid hyperthermia the following “Safety Rules for Hot Tubs” are recommended by the U.S. Consumer Product Safety Commission.

1. Spa or hot tub water temperatures should never exceed 104°F [40°C]. A temperature of 100°F [38°C] is considered safe for a healthy adult. Special caution is suggested for young children. Prolonged immersion in hot water can induce hyperthermia.
2. Drinking of alcoholic beverages before or during spa or hot tub use can cause drowsiness, which could lead to unconsciousness and subsequently result in drowning.
3. Pregnant women beware! Soaking in water above 100°F [38°C] can cause fetal damage during the first three months of pregnancy (resulting in the birth of a brain-damaged or deformed child). Pregnant women should adhere to the 100°F [38°C] maximum rule.
4. Before entering the spa or hot tub, users should check the water temperature with an accurate thermometer; spa or hot tub thermostats may err in regulating water temperatures by as much as 4°F (2.2°C).
5. Persons taking medications, which induce drowsiness, such as tranquilizers, antihistamines or anticoagulants, should not use spas or hot tubs.
6. If the pool/spa is used for therapy, it should be done with the advice of a physician. Always stir pool/ spa water before entering the pool/spa to mix in any hot surface layer of water that might exceed healthful temperature limits and cause injury. Do not tamper with controls, because scalding can result if safety controls are not in proper working order.
7. Persons with a medical history of heart disease, circulatory problems, diabetes or blood pressure problems should obtain a physicians advice before using spas or hot tubs.
8. Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above normal body temperature of 98.6°F [37°C]. The symptoms of Hyperthermia include: drowsiness, lethargy, dizziness, fainting, and an increase in the internal temperature of the body.

The effects of Hyperthermia include:

1. Unawareness of impending danger.
2. Failure to perceive heat.
3. Failure to recognize the need to leave the spa.
4. Physical inability to exit the spa.
5. Fetal damage in pregnant women.
6. Unconsciousness resulting in danger of drowning.

SAVE THESE INSTRUCTIONS

Your Hayward PSV Series Diverter Valve is designed to permit efficient operation of pool/spa installations by providing for convenient control of water flow through your pool equipment. The Hayward PSV Series of Valves is engineered to deliver long-lasting performance in all pool and spa applications. The easy dial-index handle indicates the flow setting at a glance and locks in each position. Hayward PSV Valves are compatible with the Hayward Model GVA-24 Valve Actuator.

Hayward recommends that a qualified professional install PSV valves.

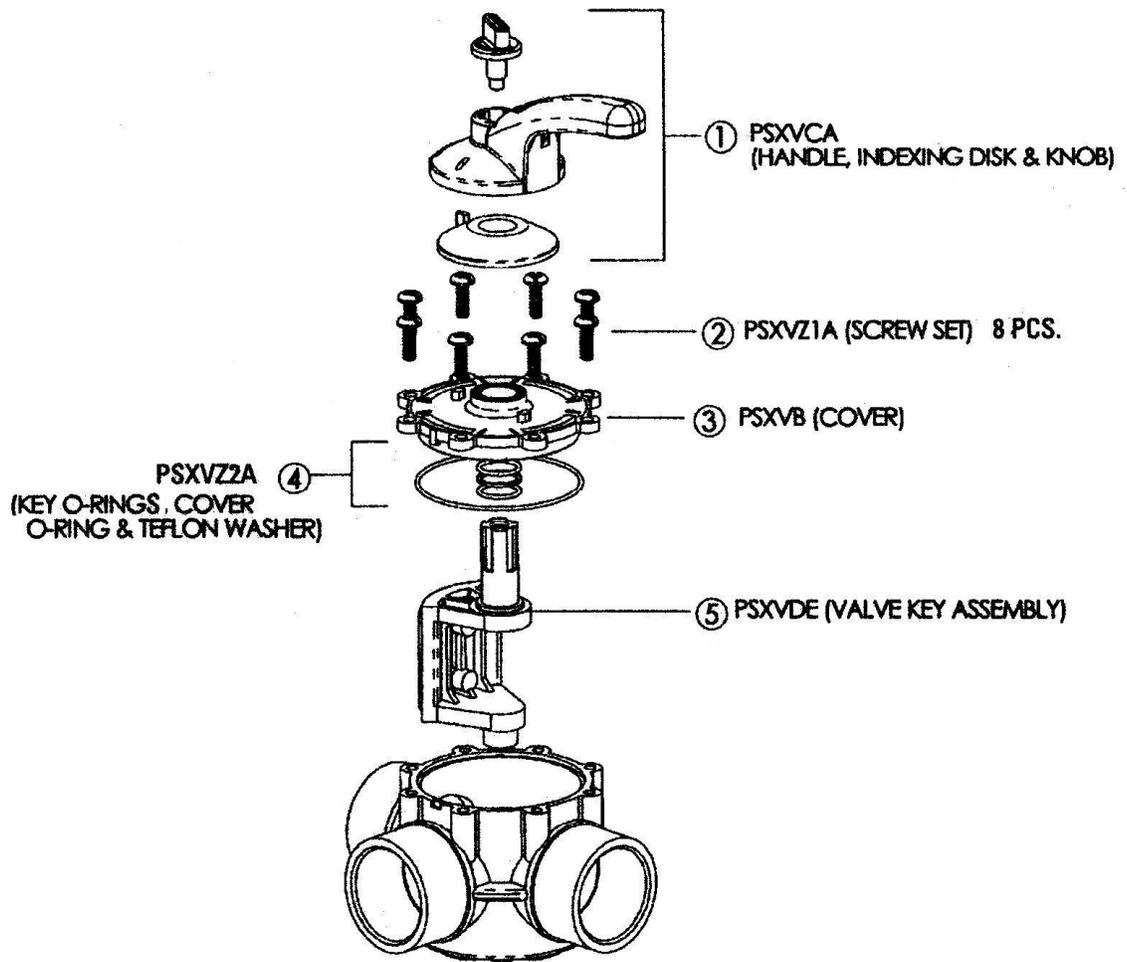
NOTE: The Gray Valves are PVC. The Black Valves are CPVC. Proper Solvent Cementing practices as outlined in ASTM D2855 and ASTM F493 should be followed.

MAXIMUM WORKING PRESSURE OF ALL VALVES IS 50PSI @104°F

USE ONLY HAYWARD GENUINE REPLACEMENT PARTS

REF. NO.	REPLACEMENT PART NO.	DESCRIPTION	NO. REQ'D.
1	PSXVCA	Handle/Index Kit	1
2	PSXVZ1A	Screw Set (8 pcs.)	1
3	PSXVB	Cover CPVC ONLY- Black-	1
4	PSXVZ2A	Key & Cover O-Ring Kit	1
5	PSXVDE	Valve Key Assembly	1
6	PSXVBCA	Upper Valve Kit (Includes 1 - 5)	1

⑥ PSXVBCA (KEY, COVER & HANDLE ASSY)
INCLUDES 1, 2, 3, 4, & 5



USE ONLY HAYWARD GENUINE REPLACEMENT PARTS



PSV₃S, PSV₃S₂, PSV₃SDGR, PSV₃S₂DGR,
PSV₃SM, PSV₃SMDGR

RECOMMENDED PLUMBING

The PSV₃S & PSV₃SDGR Valves are designed for use with 1-1/2" and 2" pipe. The 1-1/2" pipe slips directly into the socket port. For use with 2" pipe, use a 2" pipe coupling.

The PSV₃S₂ & PSV₃S₂DGR Valves are designed for use with 2" and 2-1/2" pipe. 2" pipe slips directly into the socket port. For use with 2-1/2" pipe, use a 2-1/2" pipe coupling.

- Do not remove handle from the valve assembly.
- Remove (8) cover screws, remove the cover and key assembly, set aside.
- Any port can be plumbed as inlet. See diagrams of possible combinations and instructions for setting valve indexing disk on page 6. Labels have been provided for marking of ports.
- Glue piping connections as required.
- **NOTE: When gluing pipe, make sure no glue enters the main body (key area) of the valve.**
- Replace cover and key assembly. Be sure to align tab in cover with slot in body.
- Proceed to indexing disk positioning.

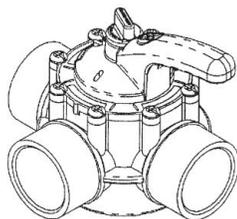
PSV₃SM & PSV₃SMDGR
for use with vacuum side pool cleaners

RECOMMENDED PLUMBING

- Do not remove handle from the valve assembly.
- Remove (8) cover screws, remove the cover and key assembly, set aside.
- Glue piping connections as required.
- **NOTE: When gluing pipe, make sure no glue enters the main body (key area) of the valve.**
- Replace cover and key assembly. Be sure to align tab in cover with slot in body.
- Proceed to indexing disk positioning.

TO OPERATE VALVE

- Loosen knob, then turn handle to desired position, diverting flow from one port to the other.
- Tighten knob finger tight only.
- The closed position engraved on the handle indicates the position of the internal key seal.



3-WAY

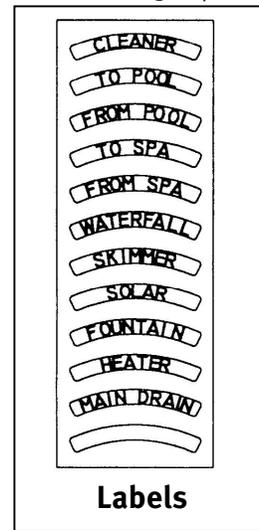
PSV₂S, PSV₂S₂, PSV₂SDGR, & PSV₂S₂DGR

RECOMMENDED PLUMBING

The PSV₂S & PSV₂SDGR Valves are designed for use with 1-1/2" and 2" pipe. The 1-1/2" pipe slips directly into the socket port. For use with 2" pipe, use a 2" pipe coupling.

The PSV₂S₂ & PSV₂S₂DGR Valves are designed for use with 2" and 2-1/2" pipe. 2" pipe slips directly into the socket port. For use with 2-1/2" pipe, use a 2-1/2" pipe coupling.

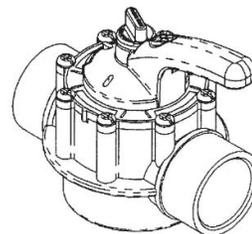
- Do not remove handle from the valve assembly.
- Remove (8) cover screws, remove the cover and key assembly, set aside.
- Plumb one port as the inlet and the other port to any pool-related appliance. Labels have been provided for marking of port.



- Glue piping connections as required.
- **NOTE: When gluing pipe, make sure no glue enters the main body (key area) of the valve.**
- Replace cover and key assembly. Be sure to align tab in cover with slot in body.

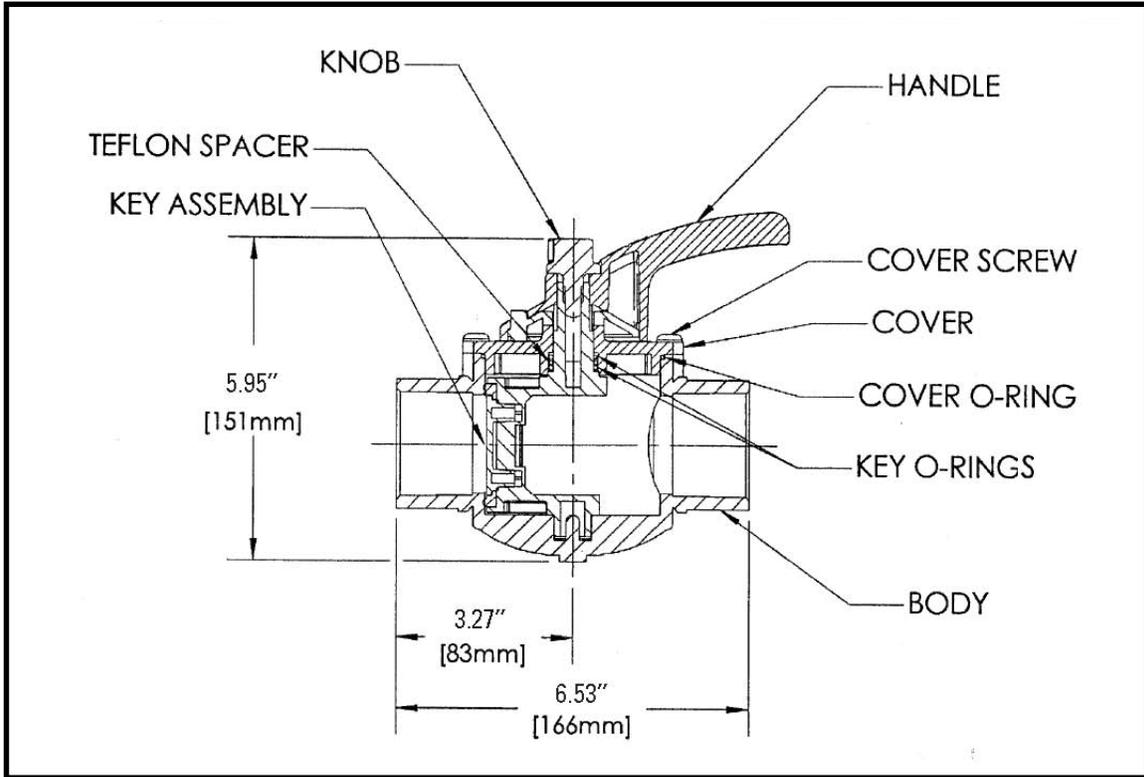
TO OPERATE VALVE

- Loosen knob, then turn handle to desired position.
- Tighten knob finger tight only.
- The closed position engraved on the handle indicates the position of the internal key seal.
- Note: Flow can be varied from 0, (complete shut off) to 100%, (fully open).



2-WAY

USE ONLY HAYWARD GENUINE REPLACEMENT PARTS



INDEXING DISK ALIGNMENT

The valve is factory set with port 1 as the common port. In this configuration, the flow can be diverted to port 2 or port 3 or mixed. (Fig. 1)

- To change common port to port 2
- Remove knob and handle.
- Position indexing disk as shown in Fig. 2.
- Reinstall handle and knob. (Tighten knob finger tight only.)
- In this configuration, the flow can be diverted to port 1 or port 3 or mixed.

- To change common port to port 3
- Remove knob and handle.
- Position indexing disk as shown in Fig. 3.
- Reinstall handle and knob. (Tighten knob finger tight only.)
- In this configuration, the flow can be diverted port 1 or port 2 or mixed.

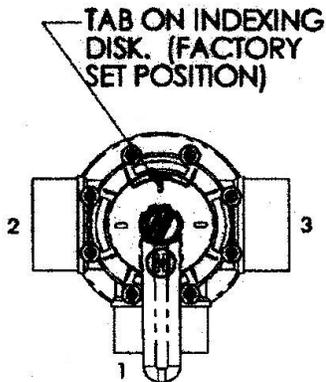


FIG 1

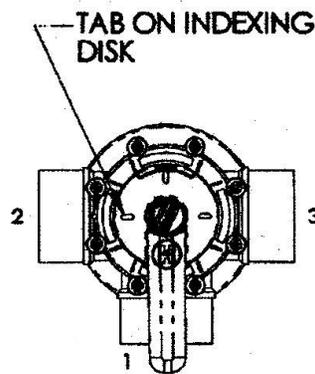


FIG 2

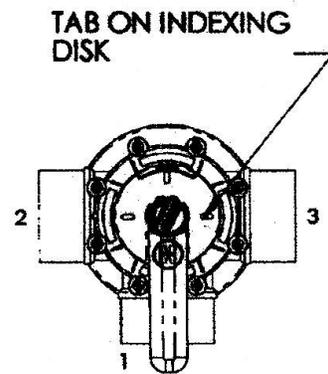


FIG 3

USE ONLY HAYWARD GENUINE REPLACEMENT PARTS

HAYWARD® LIMITED WARRANTY

To Buyer, as original purchaser of this equipment, Hayward Pool Products, 620 Division Street, Elizabeth, New Jersey, warrants its products free from defects in materials and workmanship for a period of **ONE (1)** year from the date of purchase.

Parts which fail or become defective during the warranty period, except as a result of freezing, negligence, improper installation, use, or care, shall be repaired or replaced, at our option, without charge, within 90 days of the receipt of defective product, barring unforeseen delays.

To obtain warranty replacements or repair, defective components or parts should be returned, transportation paid, to the place of purchase, or to the nearest authorized Hayward service center. For further Hayward dealer or service center information, contact Hayward customer service department. No returns may be made directly to the factory without the express written authorization of Hayward Pool Products.

To original purchasers of this equipment, Hayward Pool Products warrants its products to be free from defects in materials and workmanship for a period of **ONE (1)** year from the date of purchase.

Filters which become defective during the warranty period, except as a result of freezing, negligence, improper installation, use or care, shall be repaired or replaced, at our option, without charge.

All other conditions and terms of the standard warranty apply.

Hayward shall not be responsible for cartage, removal and/or reinstallation labor or any other such costs incurred in obtaining warranty replacements.

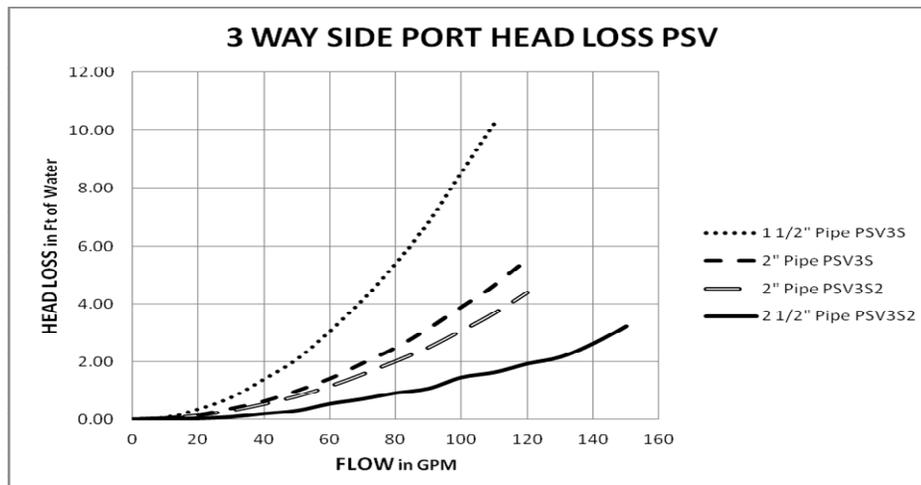
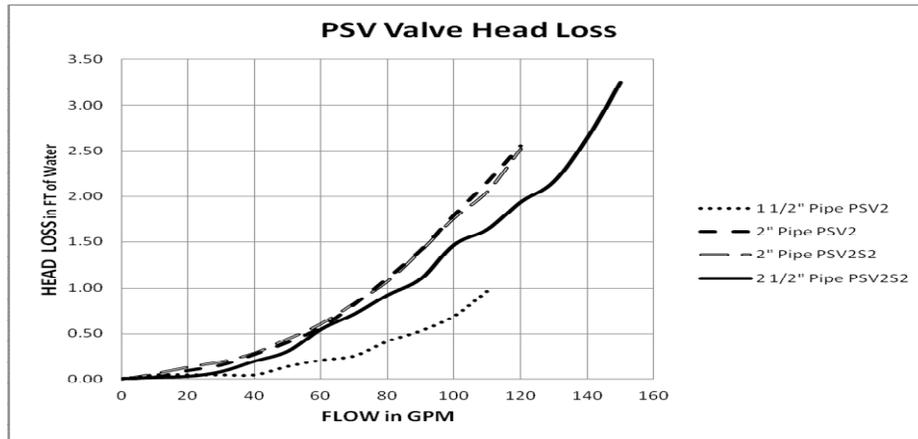
The Hayward Pool Products warranty does not apply to components manufactured by others. For such products, the warranty established by the respective manufacturer will apply.

Some states do not allow a limitation on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Hayward Pool Products
620 Division Street
Elizabeth, NJ 07207

***Supersedes all previous publications.**



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