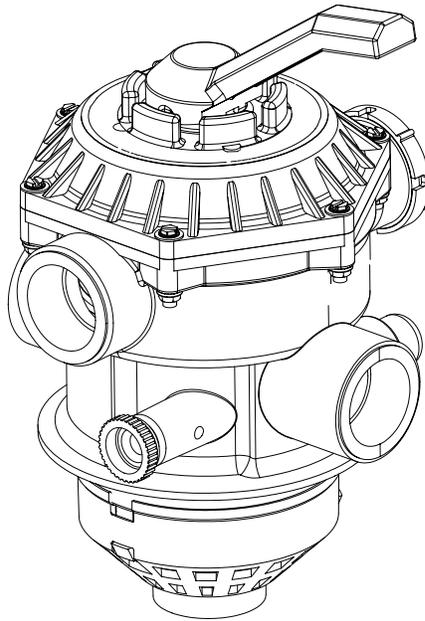




# HI FLOW™ SIX-WAY 1-1/2 INCH TOP MOUNT VALVE INSTALLATION AND USER'S GUIDE



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IMPORTANT SAFETY INSTRUCTIONS  
*READ AND FOLLOW ALL INSTRUCTIONS*  
SAVE THESE INSTRUCTIONS

## OPERATION

**WARNING** Air entering a filter with a poorly or improperly closed valve clamp can cause the valve to separate from the filter and can cause severe bodily injury and/or property damage. (Some valve models do not have a clamp but thread into the filter tank.)

The HiFlow™ Six-Way Top Mount Valve operates under pressure. When closed properly and operated without air in the water system, this valve will operate in a safe manner.

This six position valve is designed to provide all the necessary positions required to operate, maintain, troubleshoot and service your filter. It is provided with six operating positions and one winterize position. The valve is constructed of high quality corrosion-resistant materials and when installed, operated and maintained in accordance to these instructions your valve will provide years of trouble free operation.

1. This valve is equipped with an external air bleeder (item 12, page 6). Always open this air bleeder and stand clear of the filter and valve before starting the system pump. Leave the air bleeder open until a steady stream of water appears.

**CAUTION** To prevent damage to the equipment and possibly injury always turn the pump off before changing valve positions.

2. The valve has a closed position. **THE PUMP SHOULD NEVER BE ON WHEN THE VALVE IS IN THE CLOSED POSITION.** If the pump is operated while the valve is closed, the air relief system becomes inoperative and separation of system components can occur. Additionally, running the system with no flow will seriously damage the equipment.

### Valve Positions

**FILTER:** From pump, through valve downward THRU FILTER up through center pipe to valve RETURN port for normal filter action and vacuuming pool thru filter.

**BACKWASH:** From pump through valve, down through center pipe and to valve WASTE port for cleaning filter by reversing flow.

**RINSE:** From pump, through valve downward, up through filter, up through center pipe to valve WASTE port for start-up cleaning and resetting filter bed after backwashing

**WASTE:** From pump through valve BY PASSES FILTER and goes to WASTE port for vacuuming directly to waste, lowering pool level, or draining pool.

**CLOSED:** NO FLOW - DO NOT USE THIS SETTING WHILE PUMP IS OPERATING.

**RECIRCULATE:** From pump, through valve, bypasses filter and goes to return port for circulating water without going thru filter.

## INSTALLATION

The filter valve will be installed on to the filter in one of two ways depending upon the filter and valve type:

- Clamp-style valves utilize a clamp which holds together the flanges of the valve and filter. **To install a clamp-style valve follow the instructions below, disregarding steps 13-15.**
- Threaded-style valves utilize a large 6" buttress thread that screw directly into the filter tank. **To install a threaded-style valve follow steps 1-3 and then proceed to steps 13-20 (disregard steps 4-12).**

**Note:** All item numbers called out in the instructions below refer to the item numbers given in the replacement parts list on page 6.

1. Inspect carton and valve for any evidence of damage due to rough handling during shipment. If carton or any valve components are damaged, notify freight carrier immediately.

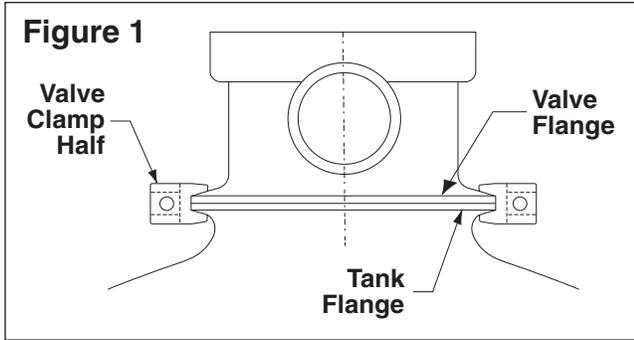
**CAUTION** Use caution when handling or working around valve clamp to prevent potential injury to fingers or hands from contact with sharp edges.

2. After initial inspection, carefully remove valve components from carton.
3. Be sure sand has been placed into filter, sand guide has been removed and top of filter cleaned of any sand or debris.
4. Ensure o-ring (item 13) is in place in groove on valve body.
5. Open clamp (item 14) wide enough to place over the flange on the tank and rest on the tank before the valve is installed.
6. Place valve over opening in top of tank so that filter centerpipe slips into bore of valve body.
7. Valve ports are labeled with the location of where they should be connected; i.e. pump port must go to pump discharge, waste port must go to the waste line and return port must go to the pool return.  
Orient the valve to allow the ports to be plumbed to the proper location.
8. Press down on valve so that o-ring (item 13) is down inside of opening of tank top.

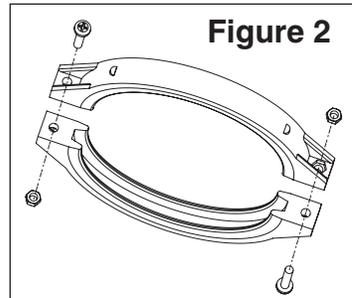
**WARNING** HIGH PRESSURE: An improperly installed valve may separate from the filter and cause severe injury and/or property damage.

- Continue on to next page -

9. Lift the clamp (item 14) over the tank flange and carefully guide the clamp so that it catches both the valve flange and the tank flange as shown in **Figure 1**.



10. Insert the valve screws and nuts into the clamp half making sure that the nuts are located in the special hexagonal retainer slots on the clamps. See **Figure 2**.



11. Begin to tighten the clamp screws with a Phillips screwdriver. Tap around the outside of the clamp with a rubber mallet (or similar tool) to ensure uniform loading and proper seating of the clamp halves. Continue tapping and tightening until the clamp ends touch each other. Do not tighten beyond this point to avoid damaging the screws or clamp.
12. Check to be sure o-ring (item 18), is in place above large thread on valve body and that o-ring is lubricated. If o-ring requires lubrication, use only silicone type lubrication.

**WARNING** Use of lubricants or pipe sealants other than those recommended in this instruction booklet may damage the valve and cause the valve to separate from the filter, causing severe bodily injury or property damage.

13. Check to be sure filter piping assembly is exactly centered about 1-1/2" below the large threaded opening in the tank.
14. Carefully install the valve inside the filter opening so that the filter piping assembly slips into socket of the valve. Slowly turn valve clockwise until the thread engages with the thread on the tank. Continue to turn valve until the o-ring on valve contacts the tank. Grasp valve by the two opposing ports and tighten as secure as possible by hand.

**Note:** The valve should easily thread into the filter opening by hand, until the valve o-ring contacts the filter surface. Failure to position the filter piping assembly in the center of the large filter opening, can cause the valve to not thread properly into the filter tank.

15. Orient the filter and valve to allow the ports to be plumbed to the proper location.
16. The Maximum operating pressure of this valve is 50 psi. The filter unit also has a maximum operating pressure listed on the filter nameplate. **DO NOT OPERATE** this unit above the maximum operating pressure of the valve or the filter. Never connect the filter and valve unit to a pump which can generate a pressure that exceeds the operating pressure of the filter or valve.
17. Assemble piping and pipe fittings to pump and valve. All piping must conform to local and state plumbing and sanitary codes.
18. Use sealant on all tapered male connections of pipe and fittings. Use only sealant compounds suited for plastic pipe. Support pipe to prevent strains on filter, pump or valve.
- Note:** All valve internal threads are tapered except the air bleeder connection. Do **NOT** overtighten tapered thread connections.
19. Install pressure gage in 1/4" NPT port directly across from the pump port.
20. Never store pool chemicals within 10 feet (3 meters) of your pool filter valve. Pool chemicals should always be stored in a cool, dry, well ventilated area.

**WARNING** Chemical fumes and/or spills can cause severe degradation of valve components. Structurally weakened components can cause filter valve or attachments to blow off and could cause severe bodily injury and/or property damage.

# MAINTENANCE

## Replacing the Valve Top and Diverter Assembly

1. Shut off pump and open air bleeder to relieve all internal pressure.
2. Set valve handle to winterize position.
3. Remove 6 cover screws (item 10).
4. Lift off valve top and diverter assembly.

**Note:** Valve diverter assembly has the sealing gasket attached to the diverter. When handling the diverter use caution to prevent the sealing surface from being damaged during handling.

5. Clean valve body sealing surface with soft clean lint free cloth. Inspect surface for damage such as scratches or nicks. If surface is damaged the valve body must be replaced.
6. Carefully lubricate the new valve top replacement o-ring (item 6) with a silicone based lubricant and place appropriately on valve top.

**WARNING** HIGH PRESSURE: An improperly installed valve may separate from the filter and cause severe injury and/or property damage.

7. Place the new valve top handle in the winterize position. Install new valve top and diverter assembly making sure small recess on lid and small bump on valve body are aligned. Start all 6 screws with fingers to insure that the screw is started in the formed thread of the valve body. Screws should be tightened progressively by tightening diametrically opposite screws and following a crisscross pattern. Tighten all 6 valve top attachment screws firmly. DO NOT OVERTIGHTEN.

**Note:** Valve top is attached with self-tapping screws. The screws must be aligned properly to prevent cross threading of the screws in the valve body.

## Valve Care

The valve is a very important part of your pool equipment and system. Proper care and maintenance will add many years of service and enjoyment to the pool. Follow these suggestions for long trouble free operation:

1. To clean the exterior of the valve of dust and dirt, wash with a mild detergent and water, then hose off. Do NOT use solvents.

### **WARNING**

Always visually inspect valve components during normal servicing to insure structural safety. Replace any item which is corroded, bent or otherwise visually defective. Defective valve components can allow the valve or attachments to separate from the filter and could cause severe bodily injury and/or property damage.

2. The valve clamp used on your valve has been manufactured with high quality corrosion resistant materials. The manufacturing process could allow sharp edges to be present on the parts. When working in and around the clamp use caution to prevent potential injury to fingers or hands from contact with sharp edges.
3. Your valve is a pressure vessel and should never be serviced while under pressure. Always relieve tank pressure and open air bleeder before attempting to service your valve.
4. Open the manual air bleeder and stand clear of the filter/valve before restarting your pump.

## Winterizing

1. Shut off pump and open the valve air bleeder.
2. Drain and winterize the pump and filter per manufacturer's instructions
3. Press down on valve handle and rotate so valve pointer is on circular rib on valve top at area on valve marked WINTERIZE.

**Note:** The valve should be left in this position during the shutdown season so the valve diverter has no pressure on the rubber seal.

## TROUBLESHOOTING

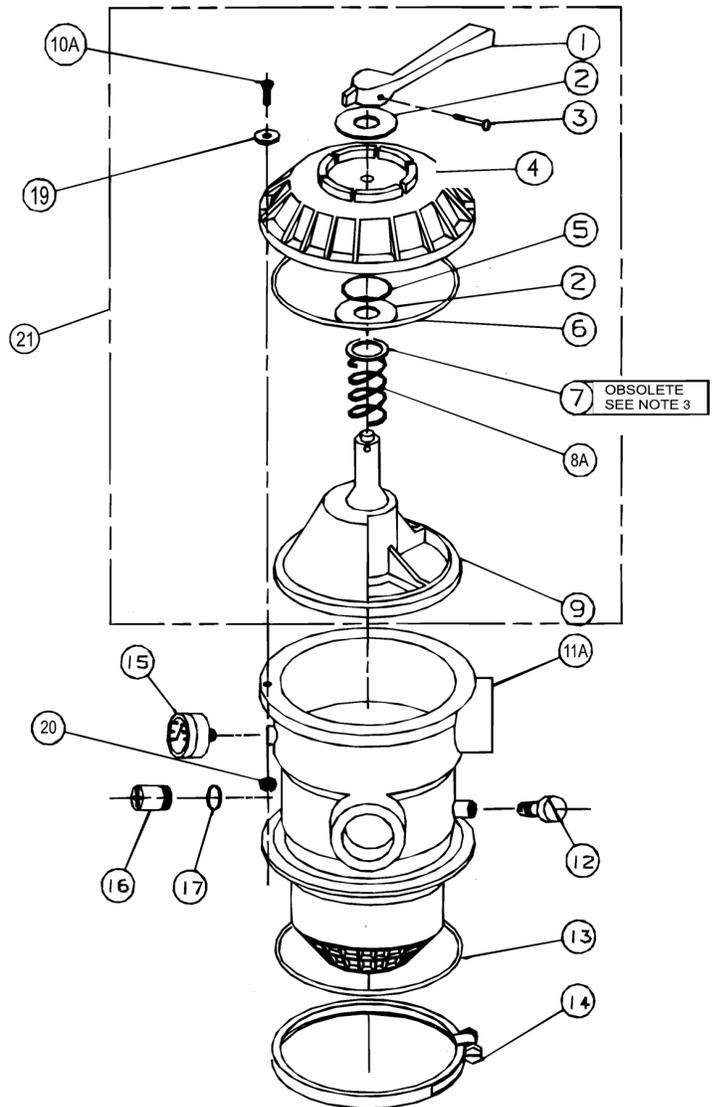
| Problem  | Possible Cause   | Corrective Action  |
|--|--|--|
| <b>Leak to Waste Port</b>                          | Dirt or sand under seal.<br>Damaged seal.<br>Damaged valve body in seal area.                  | Remove valve top and clean seal area.<br>Replace valve top assembly.<br>Replace valve body.                        |
| <b>Leakage at Port Connection to Valve</b>         | Cracked ports.<br>Insufficient sealant on threads.   | Replace valve body using the proper assembly and do NOT overtighten port connections.<br>Apply sealant.            |
| <b>Sand Returning to Pool</b>                      | Filter problem.<br>Sand blowing through air vent slots or between filter center pipe in valve. | Refer to filter troubleshooting in the filter manual.<br>Sand size too small or flow rate through filter too high. |
| <b>Leakage at Valve Attachment to Filter</b>       | Leakage past o-ring.   | Remove valve and inspect o-ring and sealing surface.<br>Replace as necessary.                                      |
| <b>Leakage at Handle</b>                           | Leakage past o-ring.   | Replace valve top assembly.  |
| <b>Leakage at the Top of Valve to Valve Body</b>   | Leakage past o-ring.   | Remove valve and inspect o-ring and sealing surface.<br>Replace as necessary.                                      |
| <b>Leakage at Sight Glass with Vacuum Breaker.</b> | Dirt on sealing gasket.  | Remove sight glass and rinse with cool water to remove dirt. Replace sight glass if damaged.                       |

# REPLACEMENT PARTS

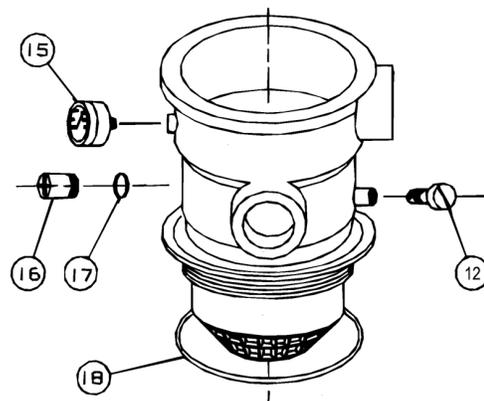
| Item # | Part # | Description                                  |
|--------|--------|--|
| 1      | 272520 | Handle                                       |
| 2      | 272505 | Washer, Plastic (Qty2)                       |
| 3      | 272405 | Screw, Handle                                |
| 4      | 272527 | Valve Top, Black                             |
| 5      | 272511 | O-Ring, Diverter Shaft                       |
| 6      | 354053 | O-Ring                                       |
| 7      | 272401 | Washer, SS <sup>4</sup>                      |
| 8      | 272400 | Spring, 100lb. 1-13/16 O.D. SS <sup>4</sup>  |
| 8A     | 272535 | Spring, 100lb. 1-3/8 O.D. SS <sup>4</sup>    |
| 9      | 272512 | Diverter w/Grasket                           |
| 10A    | 354541 | Screw, #10-24 Hex Pan HD (Qty6) <sup>5</sup> |
| 11A    | 272530 | Valve Body w/Diffuser - Clamp Style          |
| 11B    | 272538 | Valve Body w/Diffuser - Threaded Style       |
| 12     | 273512 | Air Bleeder w/O-ring <sup>3</sup>            |
| 13     | 272541 | O-Ring, 3/16" x 4-5/8" I.D.                  |
| 14     | 152162 | Clamp  |
| 15     | 155050 | Pressure Gauge                               |
| 16     | 271106 | Sightglass                                   |
| 16     | 272550 | Sightglass w/Vacuum Protector                |
| 17     | 271107 | Gasket, Sightglass 5/8" I.D. x 1" O.D.       |
| 18     | 154493 | O-Ring, 0.157" x 5.75" I.D.                  |
| -      | 155037 | Carton                                       |
| -      | 272517 | Manual                                       |
| 19     | 272555 | Washer, 9/16 SS <sup>5</sup>                 |
| 20     | 272554 | Nut, #10-24 Serrated Flange SS <sup>5</sup>  |
| 21     | 354562 | Label, No Petroleum                          |

## Notes:

- 1 VALVE TOP ASSEMBLY P/N 272531 CONSISTS OF ITEMS 1 THRU 9 AND VALVE INSTRUCTIONS 27-2517.
- 2 VALVES MANUFACTURED BEFORE MARCH 1, 1993 DO NOT CONTAIN ITEM 16 SIGHTGLASS OR ITEM 17 SIGHTGLASS GASKET.
- 3 CLAMP STYLE VALVES MANUFACTURED BEFORE MARCH 1, 1993 CONTAIN A DIFFERENT AIR BLEEDER WITH O-RING PART NO. 272515. THIS PART IS NOT INTERCHANGEABLE WITH PART NO. 273512. THREADED VALVES MANUFACTURED BEFORE MARCH 1, 1993 DO NOT CONTAIN AN AIR BLEEDER WITH O-RING.
- 4 ITEM 8A USED ON VALVES MANUFACTURED AFTER MAY 1, 1992 AND REPLACES BOTH ITEMS 7 AND 8.
- 5 VALVES MANUFACTURED AFTER APRIL 15, 1994 USE NUT/BOLT DESIGN, SEE ITEMS 10A, 19, 20, & 21.



### Clamp Style Valve



### Threaded Style Valve

# NOTES

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