



SAFETY INFORMATION

**READ THESE INSTRUCTIONS THOROUGHLY BEFORE OPERATING YOUR FILTER.
REFER TO PRODUCT DATA FOR ADDITIONAL OPERATION INSTRUCTIONS AND
SPECIFICATIONS.**

-  **WARNING** This equipment must be installed and serviced by a qualified technician in accordance with all applicable codes and ordinances. Improper installation can create hazards which could result in property damage, serious injury or death. Improper installation will void the warranty.
-  **WARNING** To reduce risks of injury do not permit children to use this product unless they are closely supervised at all times.
-  **WARNING** Risk of suction entrapment hazard which, if not avoided will result in injury or death.
-  **WARNING** Never place filter where it can be pushed or in some way fall into the hot tub (e.g: setting atop hot tub deck).
-  **WARNING** Do not allow anyone under the influence of drugs or alcohol to operate, use hot tub filters, or any hot tub equipment.
-  **WARNING** Never run filter with more than 20 PSI pressure. Tank could rupture and serious personal injury could occur.
-  **WARNING** Sand filters are designed to work with water at a temperature from 32° Fahrenheit - 110° Fahrenheit.
-  **WARNING** Do not store hot tub chemicals near equipment. Spills and fumes can result in damage and weakening of equipment to fail.



How to add sand to filter

This filter tanks requires 50lbs of grade 20 filter sand.

1. Do not remove cardboard insert on top of standpipe. This ensures no media is spilled into the pipe opening and helps to center the standpipe.
2. When using sand fill tank $\frac{1}{4}$ full of water before adding.
NOTE: This allows for more even settling of filter sand.
3. Pour sand in each side of the tank making sure to distribute evenly throughout.
4. Do not fill tank more than $\frac{2}{3}$ full with sand.
5. With sand in filter tank, add water until full.
6. Once completed remove the standpipe insert and store for later use.
7. Record the pressure gauge reading (start up pressure) during initial operation. After a period of time, the accumulated dirt and debris in the filter causes a resistance to flow, and the flow diminishes. The pressure will start to rise and the flow of water will start to diminish. When the pressure gauge reading is 8-10 PSI higher than the initial "Start up" pressure, it is time to backwash (clean) the filter (see Backwashing).

How to install 6-way multi-port valve

NOTE: Prior to installation ensure the exposed standpipe end is free of debris and has a small amount of lubricant applied.

1. Apply lubricant to Saturn gasket then place in track on the bottom of the valve.
2. Apply lubricant to top of standpipe, place valve over top of standpipe push down on valve firmly over pipe until it is seated on top of tank.
3. Seal the valve to the tank by fastening the two clamp halves together using the screws provided. Place thread protectors over exposed threads. Refer to **Figure 1** for detailed instructions.

FIGURE 1**CLAMPING RING INSTRUCTION**

- Top view of tank and clamping rings (valve omitted for the sake for visual clarity).



CAUTION: Over tightening of screws can cause and worsen leaks. Over tightening will ultimately break the clamp. DO NOT USE POWER SCREWDRIVERS TO TIGHTEN CLAMP SCREWS.

- When properly tightened, the gap between the clamp halves should be $\frac{1}{4}$ " to $\frac{3}{8}$ ".
- Make sure to tighten clamp halves evenly. The gaps on both sides should match.
- Make sure to line up clamp halves so the gaps are aligned over the tank seam.



6 WAY MULTI-PORT VALVE POSITIONS

NOTE: Before operating or switching valve positions, the pump must be turned off.

1. **Filter – Position for filtering the body of water.** Incoming water from the piping system is automatically directed by the Multiport Valve to the top of the filter bed. As the water is pumped through the filter sand, dirt, and debris are trapped by the filter bed, and filtered out. The filtered water is returned from the bottom of the filter tank, through the Multiport Valve and back through the piping system.
2. **Backwash – Position for cleaning the filter media.** Water flow is reversed by the Multiport Valve through the filter bed so that water flow is directed to the bottom of the tank and up through the filter bed, flushing the previously trapped dirt and debris out the backwash / waste port.
3. **Rinse – Position for flushing the filter system.** The water flow is directed to the Multiport Valve through the filter bed and out the water line. This process settles the filter media bed into place and ensures any dirt and debris is rinsed out of the filter, preventing possible return to the Hot Tub / Spa **(6-way valve only)**. **NOTE: “Waste” position on push / pull valve is interchangeable as “rinse” position.**
4. **Waste – Position for bypassing the filter bed to Waste.** The water flow is directed by the Multiport Valve straight to the backwash outlet, bypassing the entire filter bed. This Multiport Valve position is used to lower the water level or for vacuuming water with high dirt loads.
5. **Re-circulate – Position for bypassing the filter bed to the Hot Tub / Spa.** The Multiport Valve re-circulates water flow directly back to the Hot Tub / Spa, bypassing the filter **(6-way valve only)**.
6. **Closed - Position for closing all flow to the filter.** This position is not to be used with the pump operating.

CAUTION: Operation of the Multiport Valve or mode selection is always done with the pump turned off



BACKWASHING

The function of backwashing is to separate the deposited particles from the filter media grains and flush them from the filter bed. Backwashing is achieved by reversing the flow of water through the filter based at a fairly high flow rate. This high flow rate expands the filter bed and the water collects the debris taking it to waste.

Conditions for Backwashing

Time for backwashing is determined by the following conditions:

1. The flow rate through the filter bed decreases until it is insufficient to meet the demand.
2. The removal efficiency of the filter bed decreases to the point where the water quality deteriorates and is no longer acceptable.
3. When the pressure gauge reading is 9 PSI higher than the start up pressure.
4. If the filter is connected to main water, pressure rise is not an accurate indicator as main pressure tends to fluctuate. It is best to rely on the actual flow rate. **NOTE: We recommend that you backwash a sand filter in a residential installation at least once a month.**

Importance of Backwashing

The importance of backwashing cannot be overstated. Dense filter media can become “packed” without proper and frequent backwashing. Debris will remain trapped and create channeling within the filter bed. This will result in the filter bed exhausting early. Moreover, if debris is not flushed from the media grains, the filter bed will become dirtier and dirtier as time goes on until the filter operation fails.

Backwashing Instructions

1. Switch off the Pump.
NOTE: If a pump is installed, switch the pump on and off, instead of closing and opening the Inlet Valve.
2. Turn off the pump. Depress and turn handle 180° to the BACKWASH position. In the BACKWASH position, the water flow is automatically reversed through the filter so that it is directed to the bottom of the filter tank, up through the sand, flushing the previously trapped dirt and debris out the waste / back wash line.
3. Switch on the Pump. Backwash water will flow out through backwash /waste drain line.
4. When the backwash water in the sight glass appears clear, Switch off the Pump.
5. Depress and turn the handle to the RINSE position. In the RINSE position water flow is directed through the filter bed and out of the filter through the backwash outlet. This process settles the filter media bed into place and ensures any dirt or debris is rinsed out of the filter, preventing possible return to the hot tub.
6. Switch on the Pump. Rinse water will flow out through the backwash / waste drain line.
7. When the rinse water in the sight glass appears clear, switch off the pump.
8. Depress and turn the handle to the Filter position and switch on the pump.