



# Fiberglass Filter

Side Mount Series

**USER MANUAL**

## Fiberglass Filter Parameters

Model	Filter Area (m <sup>2</sup> )	Valve Connections		Max Flow Rate (m <sup>3</sup> /h)	0.5-1.2mm Sand Weight (kg)	Size A (mm)	Size B (mm)	Size C (mm)	Size D (mm)
HT-VS525	0.22	1.5"	50mm	12.00	85	40	47	780	525
HT-VS625	0.30	1.5"	50mm	16.00	150	45	52	880	625
HT-VS700	0.40	1.5"	50mm	20.00	210	50	57	945	700
HT-VS700B	0.40	2.0"	63mm	21.00	215	52	62	945	700
HT-VS750	0.45	2.0"	63mm	23.00	300	58	68	960	750
HT-VS800	0.50	2.0"	63mm	25.00	355	64	74	1080	800
HT-VS900	0.64	2.0"	63mm	31.00	470	65	75	1100	900
HT-VS1000	0.79	2.0"	63mm	36.00	620	70	80	1285	1000
HT-VS1100	0.96	2.0"	63mm	42.00	800	72	82	1380	1100
HT-VS1200	1.13	2.0"	63mm	45.00	900	73	83	1500	1200

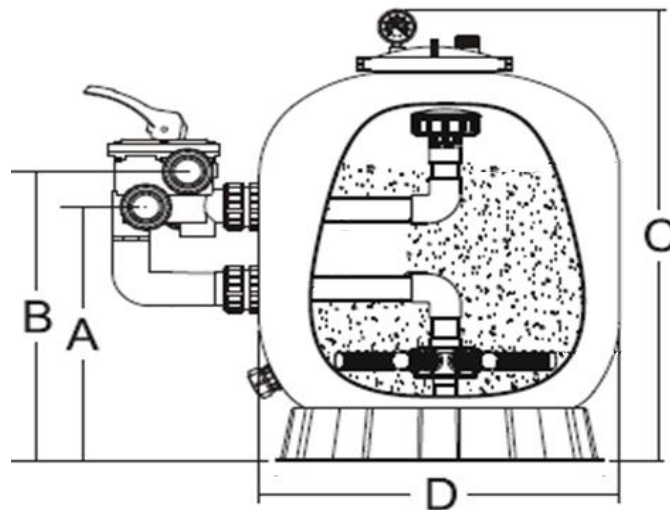


Figure 1

### Function

The filter uses special filter sand to remove dirt particles from pool water. The filter sand is loaded into the filter tank and functions as the permanent dirt removing media. When the control valve is in the FILTER position, the pool water which contains suspended dirt particles, is pumped through the piping system and is automatically directed by the filter control valve to the top of the filter tank. As the pool water is pumped through the filter, dirt particles are rapped by the sand bed, and filtered out. The cleaned Pool water is returned from the bottom of the filter tank, through the control valve and back to the pool through the piping system. This entire sequence is continuous and automatic and provides for total recirculation of pool water through the filter and piping system.

After a period of time the accumulated dirt in the filter causes a resistance to the flow, making it to diminish. This means it is time to clean your filter. With the control valve in the BACKWASH position, the water flow is automatically reversed through the filter so that it is directed to the bottom of the tank, up through the sand, flushing the previously trapped dirt and debris out the waste line. Once the filter is back-washed of dirt, set control valve to the RINSE position and run the pump for about 1/2 to 1 minute, then resume to normal filtering.

**NOTE: Stop the pump before changing the valve position!**



**Please read and follow this MANUAL before install and use the filter!**



## Installation

Required Tools: Screwdriver, Wrenches, pipe sealant and plastic adapters.

1. The filter should be placed on a reasonably level surface and provided adequate drainage. Position the filter so that the piping connections, control valve are convenient and accessible for operations and service, The filter should be placed as close to the pool as possible in order to reduce the line loss from pipe friction.
2. Loading the sand media. The filter sand media is loaded through the filters top opening.
  - a) Loosen the flange clamp and remove the filter control valve (if previously installed).
  - b) Cap the internal pipe with a plastic cap to prevent sand from entering it.
  - c) We recommend filling the tank approximately to half of its water capacity, in order to provide a cushion effect when the filter sand is poured in. This helps to protect the under-drain laterals from an excessive shock.
  - d) Carefully pour in the correct amount and grade of filter sand. (Be sure the center pipe remains centered in the opening.) The sand surface should be leveled and up to about the middle of the filter tank. Remove the plastic cap from the internal pipe.
3. Assemble the filter control valve to the filter tank.
  - a) Insert the filter control valve (with the O-ring in place) into the tank neck, beware that the center pipe slips into the hole at the bottom of the valve.
  - b) Place two plastic clamps around the valve flange and tank flange and tighten just enough so that the valve may be rotated on the tank for final positioning.
  - c) Carefully screw the pressure gauge (with the O-ring in place) into the tapped hole on the valve body. Do not over-tighten.
  - d) Connect the pump to control the valve opening marked PUMP. After connections are made, tighten the valve flange clamps with a screwdriver, tap around the clamp with a screwdriver handle to help seat the valve flange clamp.
4. Set a return to the pool pipe connection to control the valve opening marked RETURN and complete other necessary plumbing connections, suction as lines to the pump, waste, etc.
5. Perform the electrical connections to the pump following the pump manual.
6. Make sure all the pipe connections are tight and there are no leakages.

## Filter's Start -Up

1. Make sure the correct amount of filter sand is in the tank and that all connections have been correctly made and secured.
2. Push the down control valve handle and rotate to the BACKWASH position. (To prevent any damage to the control valve seal, always push down the handle before turning.)
3. Start the pump according to the pump manual (Make sure all the suction and return lines are opened), allowing the filter tank to fill in with water. Once the water is flowing out it removes any fine sand particles and impurities from the sand media.
4. Stop the pump and set valve to the RINSE position. Start the pump and operate for 1 minute until water is clear. Stop the pump and set the valve to the FILTER position and then restart the pump. The filter is now operating at the normal filtering mode, removing dirt particles from the pool water.
5. Adjust the pool suction and the return valves to achieve desired flow. Check the system and the filter for water leaks and tighten the connections, bolts, nuts, as required.
6. Acknowledge the initial pressure gauge reading when the filter is clean. (It will vary from each pool depending on the pump and general piping system.) As the filter removes dirt and impurities from the pool water, the accumulation in the filter will cause the pressure to rise and the flow to diminish. When the pressure gauge reading is 1.5 BAR higher than the initial "clean" pressure you noticed, then it is time to backwash the filter (See BACKWASH under filter and control valve functions).

**Note: During the initial clean-up of the pool water it may be necessary to backwash frequently due to the heavy initial dirt load in the pool.**



# Fiberglass Filter Structure

## 1. Filter Replacement Parts

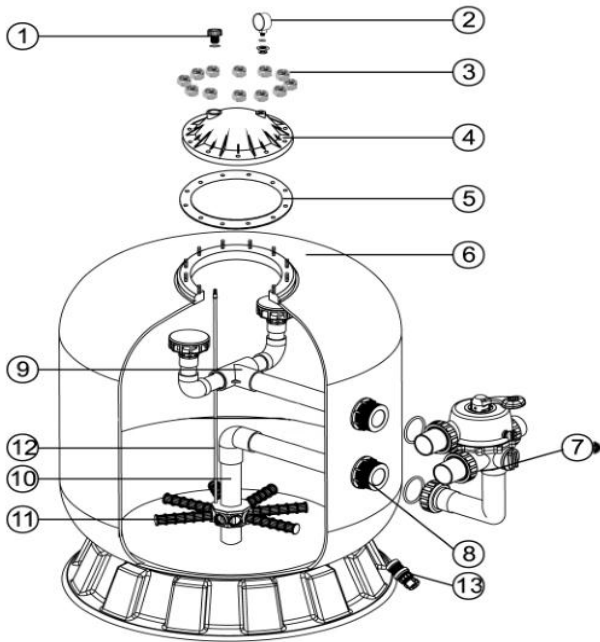


Figure 2

Key No.	Product Description	Qty
1	Air Release Valve	1
2	Oil Pressure Gauge with O-ring (40 psi)	1
	Connector for Pressure Gauge/Stopper	1
3	03013003 M8 Nut*12Pc; 03012003 M8 Washer*12Pc	1
4	Lid (Grey Color)	1
5	Filter Neck Gasket	1
6	Φ700B Filter Tank With Base	1
	Φ800 Filter Tank With Base	1
	Φ900 Filter Tank With Base	1
7	2.0" Side Mount Valve	1
8	Connector Plate Side Mount	1
9	Φ700B Top part of the inner tank system	1
	Φ800 Top part of the inner tank system	1
	Φ900 Top part of the inner tank system	1
10	Φ700B Bottom part of the inner tank system	1
	Φ800 Bottom part of the inner tank system	1
	Φ900 Bottom part of the inner tank system	1
11	Laterals (233mm)	8
12	Φ700B Air Vent Pipe	1
	Φ800 Air Vent Pipe	1
	Φ900 Air Vent Pipe	1
13	Water Drain set	1

## 2. Multiport Valve Replacement Parts

Item No.	Product Description	Qty
1	Handle (Big)	1
2	Pin for Handle	1
3	Washer for Handle	1
4	2.0" Side Mount Valve Squareness Lid (White)	1
5	M6*32 Screw with Nut	10
6	Connector for Pressure Gauge/Stopper	1
7	Drain Plug with O-ring	1
8	Oil Pressure Gauge with O-ring (40psi)	1
9	O-ring for 2.0" Union	8
10	2.0" Connector (White)	3
11	2.0" Union (A/E)	3
12	2.0" Union Nut (White)	3
13	O-ring for 2.0" Valve Lid	1
14	Washer for spring	1
15	O-ring for 2.0" Valve Rotor	2
16	Spring	1
17	2.0" Valve Rotor	1
18	Spider Gasket	1
19	2.0" Side Mount Valve Bottom Body(White)	1
20	Sight Glass With O-ring	1
21	O-ring for Union tale	1
22	2.0" Union Tale (White)	1
23	2.0" Union Nut (Black)	2
24	O-ring for Plug	1
25	2.0" Side Mount Valve Plug (White)	2
26	2.0" Elbow Tube (White) 183mm	1
27	2.0" Union Adaptor (Metric)	1

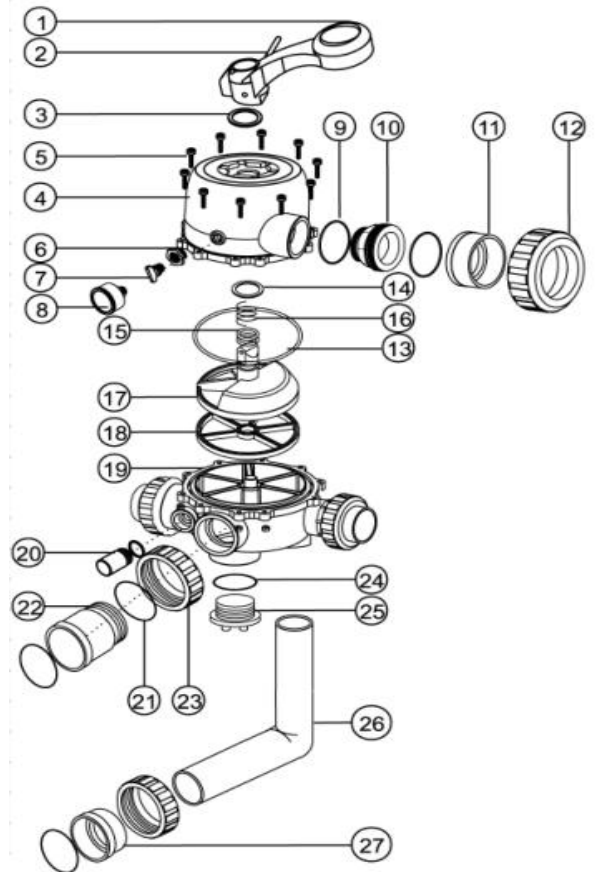


Figure 3



## Trouble Shooting Guide

SYMPTOMS	PROBABLE CAUSES	ACTION TO BE TAKEN
Water leaks from handle position	1. the ring under the standard lid of handle is damaged. ( Please see Figure 3, Item No. 3-Washer for Handle)	1. Replace item No.3 washer (Please see Figure 3)
Water leaks from the top lid of the filter	1. The O-Ring for 1.5"Valve rotor cover is not sealed well. (Please see Figure 3, Item No.14-Washer for spring)	1. Check if the washer for spring is sealed well and adjust it.
	2. Item No.14-Washer for spring is damaged.	2. Replace item No.14 washer for spring.(Please see Figure 3)
Sand media leaking from drain outlet	1. The sand media diameter is too small.	1. Check if the sand media diameter is too small or not.
	2. The laterals are damaged. (Please see Figure 2, item No.11-Laterals).	2. If water outlet pipe also leaking, that means the laterals are broken, please replace these. (See Figure 2, item No.11-Laterals)
Water leaks from drain outlet	1. The spider gasket is loose or damaged. (Please see Figure 3, Item No.18-Spider Gasket)	1. Check if the spider gasket is loose or not, adjust it.
		2. If it was damaged please replace it.(See Figure 3, Item No.18-Spider Gasket).

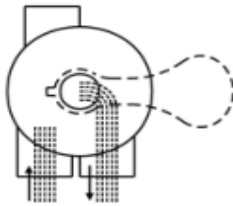


## Valve Positions Function

Valve Position	Function
FILTER	Normal Filtration and Vacuum
BACK WASH	Clean Filter by reversing the flow
RINSE	Use after backwash to flush dirt from valve
WASTE	By-passes filter, use to vacuum the waster for lowering water level
RECIRCULATE	By-passes filter for circulating water to pool
CLOSED	Shut off all flow to filter or pool

### FILTER

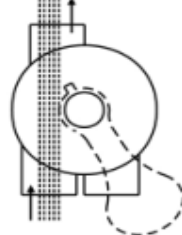
WASTE



IN FLOW OUT FLOW

### WASTE

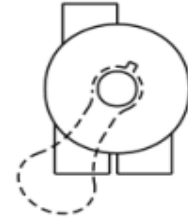
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IN FLOW OUT FLOW

### CLOSED

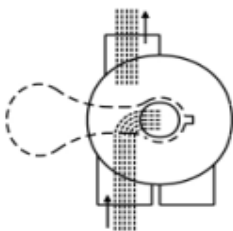
WASTE



IN FLOW OUT FLOW

### BACKWASH

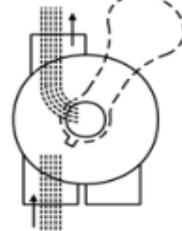
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IN FLOW OUT FLOW

### RINSE

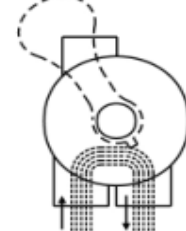
WASTE



IN FLOW OUT FLOW

### RECIRCULATE

WASTE



IN FLOW OUT FLOW

## Function and Installation Scheme

### I. Filtration of Medium (i.e. Water)

Pool => Pump => Valve (to filter) =>  
filter => Valve (from filter) => Pool

### II. Drainage of Pool with Pump

Pool => Pump => Valve => Canal

### III. No Circulation

Do not operate pump.  
Pool => Pump => Valve

### IV. Cleaning of Filter Medium (i.e. Sand) in upstream (reserved flow in filter)

Pool => Pump => Valve (from filter) =>  
filter => Valve (to filter) => Waste

### V. Recirculation of Fluid Without Filter (by pass filter)

Pool => Pump => Valve => Pool

### VI. Cleaning of Filter Medium (i.e. Sand) after Backwash

Pool => Pump => Valve (to filter) => filter  
=> Valve (from filter) => Waste



## Warning



1. THIS FILTER OPERATES UNDER HIGH PRESSURE. WHEN ANY PART OF THE CIRCULATING SYSTEM (e.g. CLAMP, PUMP, FILTER, VALVES, ETC.) IS SERVICED, AIR CAN ENTER THE SYSTEM AND BECOME PRESSURIZED. PRESSURIZED AIR CAN CAUSE THE LID OR VALVE TO BE BLOWN OFF WHICH CAN RESULT IN SEVERE INJURY, DEATH, OR PROPERTY DAMAGE.



2. TURN PUMP OFF BEFORE CHANGING VALVE POSITION.



3. TO PREVENT DAMAGE TO THE PUMP AND FOR PROPER OPERATION OF THE SYSTEM, CLEAN PUMP STRAINER AND SKIMMER BASKET REGULARLY.



4. DO NOT UNSCREW SCREWS OF FLANGE CLAMP WHILE PUMP IS RUNNING.

