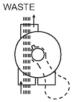
#### **\* MULTIPORT VALVE**

#### FILTER

# WASTE

IN FLOW OUT FLOW

#### WASTE



IN FLOW OUT FLOW

#### CLOSED



IN FLOW OUT FLOW

#### BACKWASH

WASTE



IN FLOW OUT FLOW

#### RINSE



IN FLOW OUT FLOW

#### RECIRCULATE



IN FLOW OUT FLOW

#### **FUNCTIONS OF VALVE POSITIONS**

* VALVE POSITION	Function	
× FILTER	Normal Filtration and Vacuuming	
* BACKWASH	Cleaning Filter by reversing the flow	
RINSE	Used after backwash to flush dirt from valve	
* WASTE	By-passes filter, used for vacuuming to waste or lowering water level	
RECIRCULATE	By-passes filter for circulating water to pool	
* CLOSED	Shuts off all flow to filter or pool	

#### **★ GENERAL**

- A connector is provided for optional installation of a pressure gauge.
- 2. Piping stops are provided to prevent over-tightening. Always use Teflon pipe tape for connections to provide a good, "living" seal. Add extra sealant if the male pipe fitting is undersized.
- 3. SERVICING VALVE. If it becomes necessary to service or gain access to the key or valve gasket:
- a. Set the handle in the filter position.
- b. Remove the cover screws.
- c. Lift the cover and key assembly out.

#### **★ TO ASSEMBLE**

- 1. Place the valve key so that the wedge opening is at the top (handle in the Filter position).
- 2. Check all accessories for the valve, match the connections, connect the unions, and install the Lipipe.
- 3. Finish the installation of the inlet and outlet unions, and connect the valve to the sand filter tank.

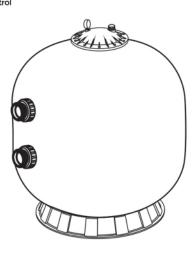
# **APS Series Berlin Fiberglass** Product Manual APS 750/ APS 900



#### **★ 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 automatically directed by the patented filter control valve to the top of the filter tank. As the pool water is pumped through the filter, dirt particles are trapped 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, providing for the total recirculation of pool water through your filter and piping system.

After a period of time, the accumulated dirt in the filter causes resistance to flow, and the flow diminishes. This indicates it is time to clean your filter. With the control valve in the BACKWASH position, the water flow is automatically reversed through the filter, directing it 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 backwashed of dirt, set the control valve to the RINSE position and run the pump for about 1/2 to 1 minute, and then switch it back to FILTER to resume normal filtering.



## NOTE: Turn pump off before changing valve position.

### \* INSTALLATION

Only simple tools (screwdriver and wrenches), plus pipe sealant for plastic adapters are required to install and service the filter.

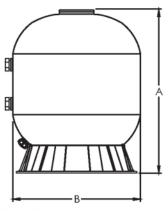
- 1. The filter should be placed on a level concrete slab, very firm ground, or an equivalent position. Position the filter so that the piping connections and control valve are conveniently accessible for operation and service.
- 2. Loading the sand media:
- a. Remove the screws, nuts, and lid (if previously installed).
- b. Cover the diffuser (if needed) to prevent sand from entering it.
- c. We recommend filling the tank approximately halfway with water to provide a cushion effect when the filter sand is poured in. This helps to protect the under-drain laterals from excessive shock.
- d. Carefully pour in the correct amount and grade of filter sand. Ensure the center pipe remains centered in the opening. The sand surface should be leveled and reach about the middle of the filter tank. Remove the plastic cap from the internal pipe.
- 3. Replace the filter lid. Place the twelve nuts and washers onto each of the twelve bolts, then screw on all the nuts with a wrench, ensuring that they are all tight.
- a. Install the pressure gauge and air release valve on the lid. Do not over-tighten.
- b. Ensure the air relief valve (with the O-ring in place) fits tightly to the filter coping and turns easily.
- c. Connect the pump outlet to the valve inlet. A preliminary combination has been completed.

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- Make return to pool pipe connection to control valve opening marked RETURN and complete other necessary plumbing connections, suction lines to pump, waste, etc.
- 5. Make electrical connections to pump per pump instructions.
- 6. To prevent water leakage, be sure all pipe connections are tight.

#### **\* MAIN DIMENSION**

Model	Dimension(mm)			
	High A mm	Diameter B mm	Valve (inch)	Sand (kg)
APS 750	920	750	2"	250
APS 900	1110	900	2"	470



#### **★INSTALL/START-UP OF FILTER**

- Make sure the correct amount of filter media sand is located in the tank and all connections have been connected
  and secured.
- Depress control valve handle and rotate to BACKWASH position. (To prevent damage to control valve seal, always depress handle before turning.)
- 3. Prime and start pump according to pump instructions (be sure all suction and return lines are open), allowing the filter tank to fill with water. Once water is flowing out of the waste line, run the pump for 1 minute or more. The initial backwashing of the filter is recommended to remove any impurities or fine sand particles in the sand media.
- 4. Turn pump off and set valve to RINSE position. Start pump and operate until water in sight glass is clear, for 11/2 to 1 minute. Turn pump off and set valve to FILTER position and restart pump. The filter is now operating in the normal filter mode, filtering dirt particles from the pool water.
- Adjust pool suction and return valves to achieve desired flow. Check system and filter for water leaks and tighten connections, bolts, nuts, as required.
- 6. Note the initial pressure gauge reading when the filter is filtering. (It will vary from pool to pool depending upon 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 flow to diminish. When the pressure gauge reading is 1.5 bar higher than the initial "filter" pressure you noted, 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 unusually heavy initial dirt load in the water.

#### **\* WARNING**

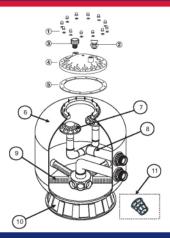
⚠ THIS FILTER OPERATES UNDER HIGH PRESSURE. WHEN ANY PART OF THE CIRCULATING SYSTEM (E.G., CLAMP, PUMP, FILTER, VALVES, ETC.) IS SERVICED, AIR CAN ENTER THE SYSTEM AND BECOME PRESSURIZED. PRESSURIZED AIR CAN CAUSE THE LID VALVE TO BE BLOWN OFF, WHICH CAN RESULT IN SEVERE INJURY, DEATH, OR PROPERTY DAMAGE.

TURN THE PUMP OFF BEFORE CHANGING THE VALVE POSITION.

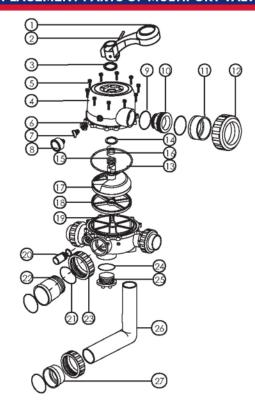
▲ TO PREVENT DAMAGE TO THE PUMP AND FOR PROPER OPERATION OF THE SYSTEM, CLEAN THE PUMP STRAINER AND SKIMMER BASKETS REGULARLY.

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

#### \* REPLACEMENT PARTS OF FILTER



#### **\* PLACEMENT PARTS OF MULTIPORT VALVE**



#### FILTER PARTS TABLE

ITEM	PART NO.	DESCRIPTION			
1	WS-37	Nut With Washer			
2	WS-38	Connector for Pressure Gauge			
3	WS-39	Air Release Valve With Oring			
4	WS-40	Cover			
5	WS-41	Filter Neck Gasket			
6	WS-42	Filter Tank			
7	WS-43	Funnel			
8	WS-44	Lateral Assembly With Center Pipe			
9	WS-45	Lateral			
10	WS-46	Filter Base			
11	WS-47	Under Drain (for both sand and water)			

#### **VALVE PARTS TABLE**

	AKIS IABLE	
ITEM	PART NO.	DESCRIPTION
1	WS-48	Handle (Big)
2	WS-49	Pin for Handle
3	WS-50	Washer for Handle
4	WS-51	2.0" Side Mount Valve Squareness Lid
5	WS-52	Screw with Nut
6	WS-53	Connector for Pressure Gauge/Stopper
•	WS -54	O-Ring
7	WS-55	Drain Plug with O'Ring
8	WS-56	Oil Pressure Gauge With O-ring
9	WS-57	O-Ring for 2.0"Union
10	WS-58	2.0" Connector
11	WS-59	2.0" Union (AVE)
12	WS-60	2.0" Union Nut
13	WS-61	O-Ring for 2.0" Valve Lid
14	WS-62	WASHER FOR SPRING
15	WS-63	O-RING FOR 2.0" VALVE ROTOR
16	WS-65	Spring
17	WS-28	2.0" VALVE ROTOR
18	WS-66	Spider Gasket
19	WS-67	2.0° Side Mount Valve Bottom Body
20	WS-68	Sight Glass With O-Ring
21	WS-69	O-Ring for Union Tale
22	WS-70	2.0" Union Tale
23	WS-71	2.0° Union Nut
24	WS-72	O-Ring for Plug
25	WS-73	2.0° Side Mount Valve Plug
26	WS-74	2.0° Elbow Tube 183mm
27	WS-75	2.0" Union Adaptor

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