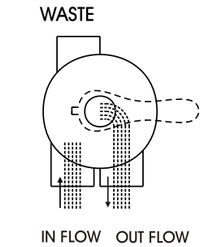
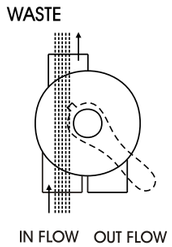
FUNCTIONS OF VALVE POSITIONS

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

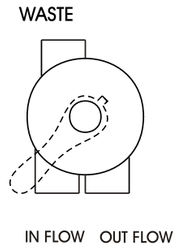
FILTER



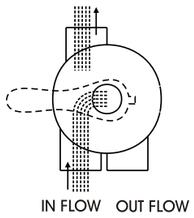
WASTE



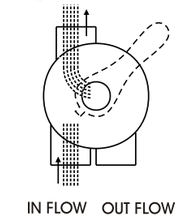
CLOSED



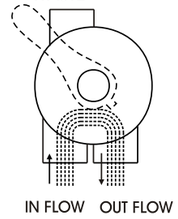
BACKWASH



RINSE



RECIRCULATE



GENERAL

1. Pipe tap boss provided for optional influent pressure gauge.
2. SERVICING VALVE(Stop pump,close gate valve in suction&discharge before proceeding):
   a. Set handle in filter position. b. Remove cover screws. c. Lift cover and key assembly out.

TO ASSEMBLE:

1. Place valve key so that wedge opening is at TOP port (handle in Filter psn.). Flat edge of cover screw lug should align with flat edge of body screw lug.
2. Position cover O'Ring.
3. Secure assembly to body with cover screws. Tighten cover screws evenly and alternately. Do not over-tighten.

WARNING

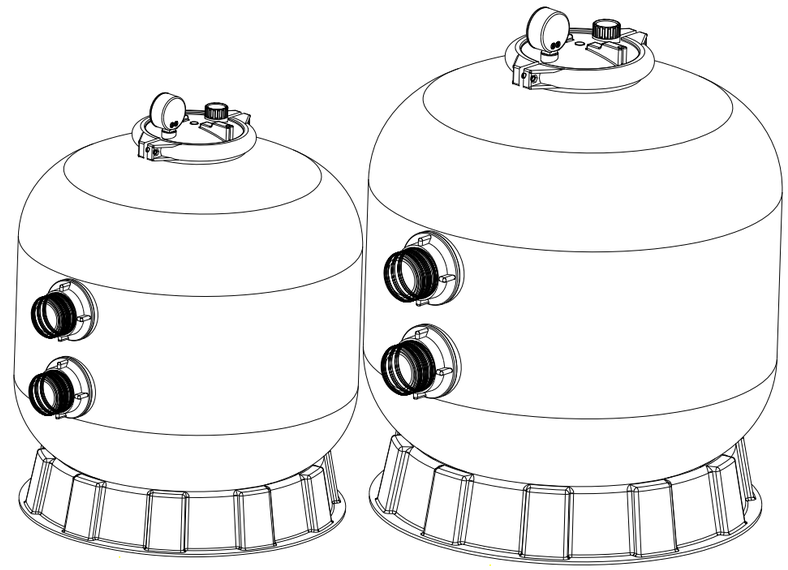
⚠ THIS FILTER OPERATES UNDER HIGH PRESSURE. WHEN ANY PART OF THE CIRCULATING SYSTEM (e.g., CLAMP, PUMP, FILTER, VALVES, ETC.) IS SERVICED, AIR CAN ENTER THE SYSTEM AND BECOME PRESSURIZED . PRESSURIZED AIR CAN CAUSE THE LID OR VALVE TO BE BLOWN OFF WHICH CAN RESULT IN SEVERE INJURY, DEATH, OR PROPERTY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

⚠ TURN PUMP OFF BEFORE CHANGING VALVE POSITION.

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

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

Models:SP450,SP500,SP650,SP700



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 your piping system and is 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 and provides for total recirculation of pool water through your filter and piping System.

After a period of time the accumulated dirt in the filter causes a resistance to flow, and the flow diminishes. 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 RINSE position and run pump for about 1/2 to 1 minute, and then 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 equivalent. Position the filter so that the piping connections, control valve are convenient and accessible for operation and service.
2. Loading the sand media. Filter sand media is loaded through the top opening of the filter.
   a. Place tow O'ring on the side of the filter tank and Connect control valve to the filter using pipes with unions and glues.(see the fig on page4).
   b. Loosen the filter coping and remove it .
   c. We recommend filling tank approximately 1/3 way with water to provide a cushion effect when the filter sand is poured in. This helps protect the under-drain laterals from excessive shock.
   d. Carefully pour in correct amount and grade of filter sand. Sand surface should be leveled and should come to about the middle of the filter tank.

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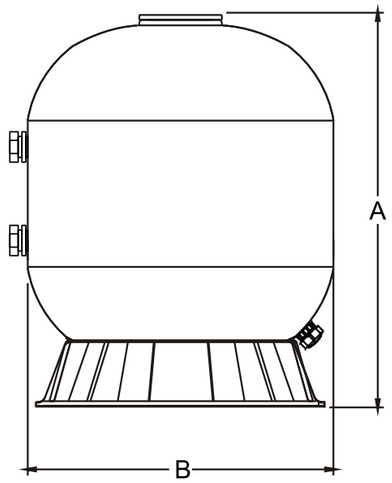
3. Replace filter coping (with O'ring in place).
   a. Carefully screw pressure gauge (with O'ring in place) into tapped hole in the filter coping. Do not over-tighten.
   b. Ensure air relief valve (with O'ring in place) is tight fit to filter coping and turn it easily.
4. Connect pump to control valve opening marked PUMP.
5. Make return to pool pipe connection to control valve opening marked RETURN and complete other necessary plumbing connections, suction lines to pump, waste, etc.
6. Make electrical connections to pump per pump instructions.
7. To prevent water leakage, be sure all pipe connections are tight.

MAIN DIMENSION

DIMENSION TABLE

Model	High mm A	Diameter mm B	Design Flow (m^3/h)	Filter Area. (m^2)
SP450	730	455	7.98	0.16
SP500	770	535	11.52	0.22
SP650	850	635	16.20	0.32
SP700	960	710	19.20	0.40

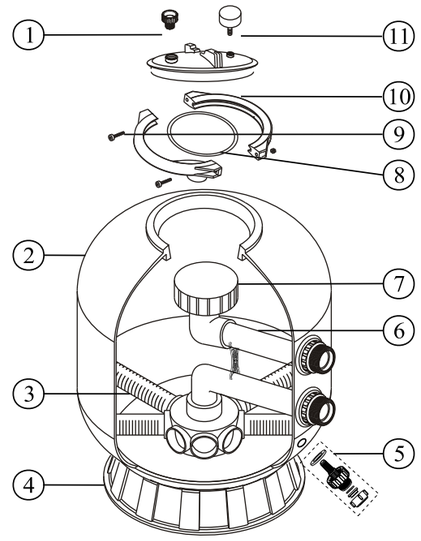


INSTALL/START-UP OF FILTER

1. Be sure correct amount of filter media sand is in tank and that all connections have been made and are secure.
2. 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 at least 1 minute. The initial back-washing 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, about 1/2 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.
5. 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 clean. (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 "clean" pressure you noted, it is time to backwash the filter (see BACKWASH under filter and control valve functions).

NOTE: During 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.

REPLACEMENT PARTS OF FILTER



Item	Part No.	Description
1	090130	Ari bleeder
2	0101053	SP450 Filter tank
	0101054	SP500
	0101055	SP650
	0101056	SP700
3	010113	SP450-SP500 Lateral
	010118	SP650-SP700
4	020322	SP450 Filter base
	020323	SP500-SP700
5	010136	Drain
	010330	
	0101065	
	0101066	
	0101067	
6	0203241	SP450 Pipe assy
	0203242	SP500
	0203243	SP650
	0203244	SP700
7	0103102	Diffuer
	0103101	
8	010104	O`ring,lid
9	020108	Screw with nut
	020107	
10	010107	Flange clamp
11	020131	Pressure gauge with o'ring

REPLACEMENT PARTS OF MULTIPORT VALVE

Item	Part No	Description
1	MPV-01-020	Handle
2	MPV-01W-1	Pin,handle
3	MPV-01-006	Washer
4	MPV-01W-02-1 MPV-01W-02-2	Bolt with nut,lid
5	MPV-01-007	Washer
6	MPV-01W-05	O`ring,rotor
7	MPV-01-005	Rotor
8	MPV-03W-01	O`ring,sight glass
9	MPV-04-010	Sight glass
10	MPV-01-014	Nut,plug
11	CP-01W-05 MPV-01-013	Plug with o'ing
12	MPV-03-002	Union head
13	MPV-01W-06	O`ring,union head
14	FT-03-013	Nut,bulkhead
15	MPV-03-005	Plug,valve
16	MPV-03-010	Elbow with pipe
17	MPV-03-004	Bulkhead fitting
18	MPV-01W-7	O`ring,bulkhead
19	MPV-01-009	Nut,bulkhead
20	MPV-02-010	Adaptor,bulkhead
21	MPV-03-001	Body-diffuser assy
22	MPV-01-015	Gasket,spider
23	MPV-01W-03	O`ring,lid
24	MPV-01W-04	Spring
25	MPV-01-004	Lid assy