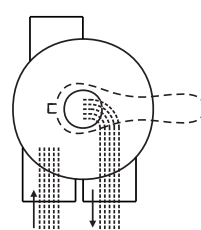


## FUNCTIONS OF VALVE POSITIONS

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

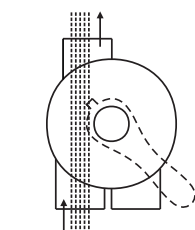
WASTE



IN FLOW OUT FLOW

### WASTE

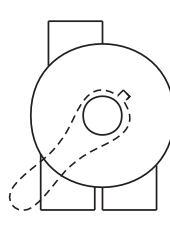
WASTE



IN FLOW OUT FLOW

### CLOSED

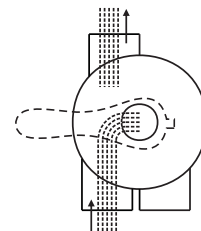
WASTE



IN FLOW OUT FLOW

### BACKWASH

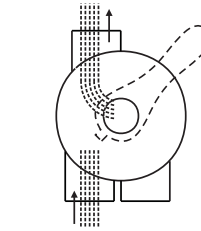
WASTE



IN FLOW OUT FLOW

### RINSE

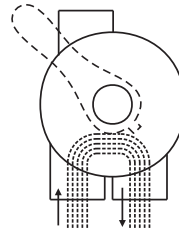
WASTE



IN FLOW OUT FLOW

### RECIRCULATE

WASTE



IN FLOW OUT FLOW

### 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.

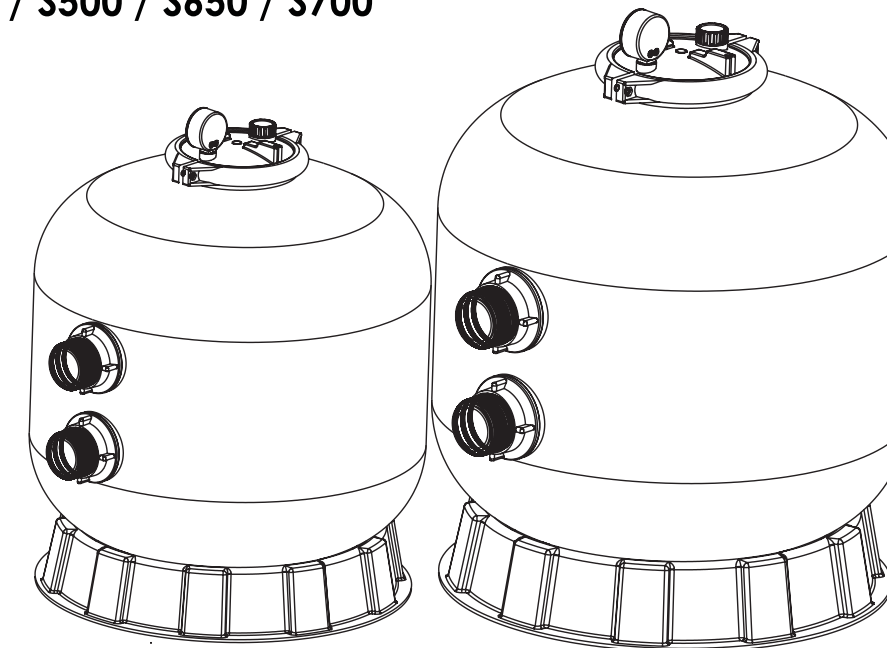
### TO ASSEMBLE:

- 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: S450 / S500 / S650 / S700



### 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.

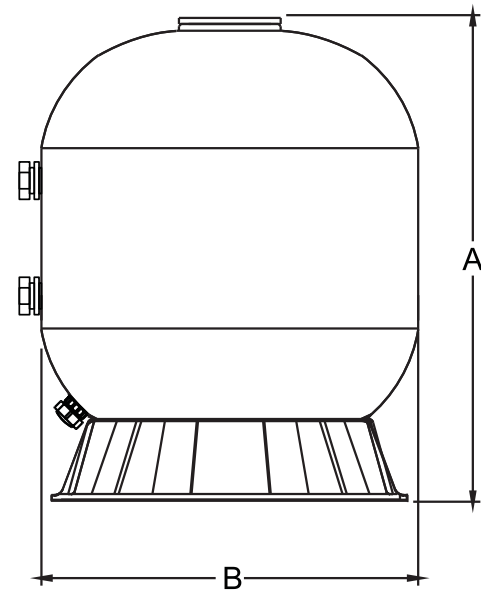
- 1) The filter should be placed on a level concrete slab, very firm ground, or equivalent. Position the filter so that the piping connections, control valve are convenient and accessible for operation and service.
- 2) Loading the sand media. Filter sand media is loaded through the top opening of the filter.
  - a) Loosen the clamp lock, remove the transparent lid.
  - b) Cover the diffuser with the block sand cover.
  - c) We recommend: add a half tank of water in the tank, then to fill with sand, so that we can protect the bottom of the filter from the damage caused by excessive shock.
  - d) Add the right amount of sand, sand surface to smooth.

- 3) Replace filter coping (with O'ring in place).
  - a) Mount the O-ring for filter neck, covered with transparent lid.
  - b) Lock the clamp lock, pay attention to the clamp lock clip on both sides are even.
  - c) Install the pressure gauge and air release valve to the transparent lid.
  - d) Connect the pump outlet to the valve inlet, a preliminary combination has completed.
- 4) 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

**DIMENSION TABLE**

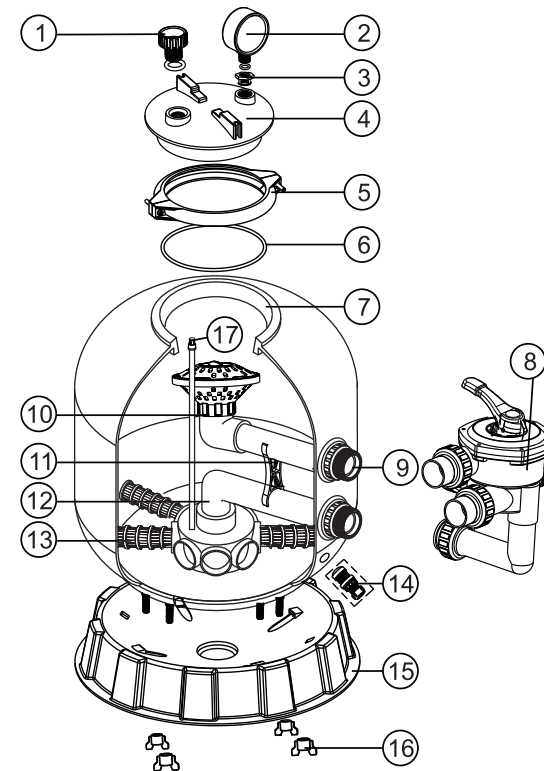
Model	High A mm	Diameter B mm	Valve inch	Sand kg
S450	730	455	1.5 "	45
S500	770	535	1.5 "	85
S650	850	635	1.5 "	145
S700	960	710	1.5 "	210



### 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).

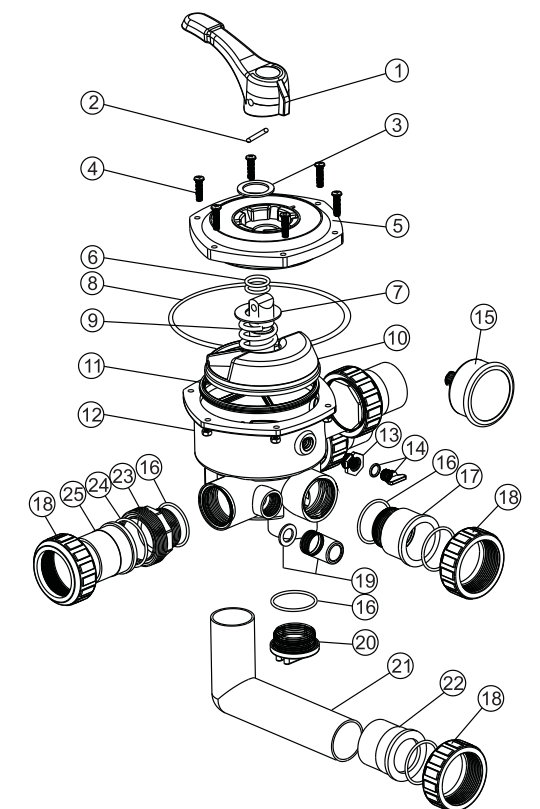
### REPLACEMENT PARTS OF FILTER



Key No.	Part No.	Product Description	Qty
1	89010701	Air Release Valve	1
2	06011032	Oil Pressure Gauge With O-ring (40 psi)	1
3	01111048	Connector for Pressure Gauge/Stopper	1
	02011139	O-ring	1
4	01201022	Lid (Transparent)	1
5	89010119	M6*50 Screws With Nut	2
	01271010	Clamp Lock	2
6	02011134	O-Ring for Filter Neck	1
7	89010706	S450 Filter tank	1
	89010705	S500 Filter tank	1
	89010704	S650 Filter tank	1
	89010703	S700 Filter tank	1
8	88280811	1.5" Side Mount Valve	1
9	89010707	Connector Plate Side Mount	1
10	89010708	S450 Top part of the inner tank system	1
	89010709	S500 Top part of the inner tank system	1
	89010710	S650 Top part of the inner tank system	1
	89010711	S700 Top part of the inner tank system	1
11	01111046	Tank System Support	1
12	89010712	S450 bottom part of the inner tank system	1
	89010713	S500 bottom part of the inner tank system	1
	89010714	S650 bottom part of the inner tank system	1
	89010715	S700 bottom part of the inner tank system	1
13	01172007	S450 Laterals (115mm)	8
	01172008	S500-S700 Laterals (126mm)	8
14	89010107	Water Drain Set	1
15	01111059	S450 Filter Base	1
	01111062	S500-S700 Filter Base	1
16	01181052	Fastener for Filter Base	4
17	89010716	S450 Air Vent Pipe	1
	89010717	S500 Air Vent Pipe	1
	89010718	S650 Air Vent Pipe	1
	89011205	S700 Air Vent Pipe	1

### REPLACEMENT PARTS OF MULTIPOINT VALVE

Key No.	Part No.	Product Description	Qty
1	01013002	Handle (Small)	1
2	03018008	Pin for Handle	1
3	01181001	Washer for Handle	1
4	89281203	M6*25 Screw with Nut for Camber Lid	6
	89280107	M6*30 Screw with Nut for Standard Lid	6
5	01051010	1.5" Side Mount Valve Standard Lid (White)	1
6	02011022	O-Ring for 1.5" Valve Rotor	2
7	01181002	Washer for Spring	1
8	02011002	O-Ring for 1.5" Valve Lid	1
9	03014001	Spring for 1.5" Side Mount Valve	1
10	01021001	1.5" Valve Rotor	1
11	02311002	Spider Gasket	1
12	01051021	1.5" Side Mount Valve Bottom Body (White)	1
13	01111048	Connector for Pressure Gauge/Stopper	1
	02011139	O-ring	1
14	89021303	Drain Plug with O-ring	1
15	06011032	Oil Pressure Gauge with O-ring (40Psi)	1
16	02020013	O-Ring	5
17	01051022	1.5" Union Tale (White)	1
18	01013017	1.5" Union Nut (Black)	5
19	89280104	Sight Glass with O-Ring	1
20	01051023	1.5" Side Mount Valve Plug (White)	1
21	01051193	1.5" Elbow Tube (White) 120mm	1
22	01171002	1.5" Union Adaptor (Metric)	1
23	01051013	1.5" Connector with External Thread (White)	3
24	02011003	O-Ring $\phi 59 \times \phi 53 \times \phi 3$	5
25	01171153	1.5" Union Adaptor	3

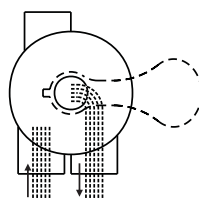


## FUNCTIONS OF VALVE POSITIONS

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

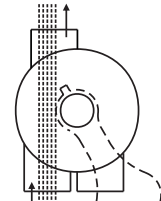
WASTE



IN FLOW OUT FLOW

### WASTE

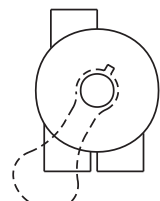
WASTE



IN FLOW OUT FLOW

### CLOSED

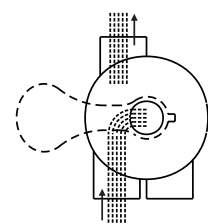
WASTE



IN FLOW OUT FLOW

### BACKWASH

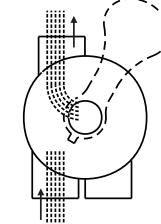
WASTE



IN FLOW OUT FLOW

### RINSE

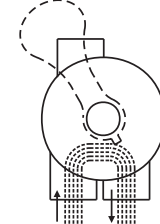
WASTE



IN FLOW OUT FLOW

### RECIRCULATE

WASTE



IN FLOW OUT FLOW

### 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.

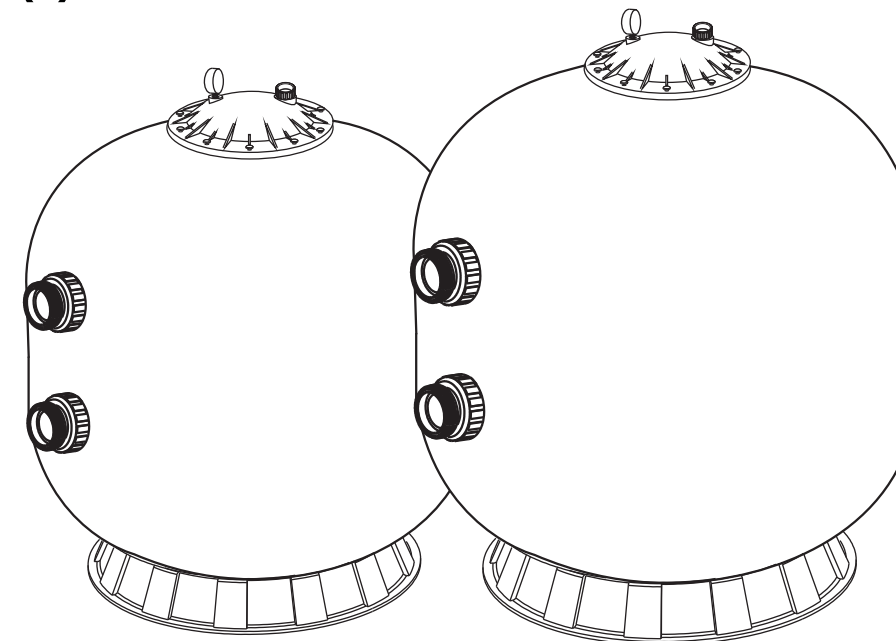
### TO ASSEMBLE:

- 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: S700(B) / S800 / S900



### 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) Connect control valve to the filter using pipes with unions and glues. (see the fig on page 4).
  - b) Loosen the twelve nuts and washers and remove the filter coping.
  - 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.

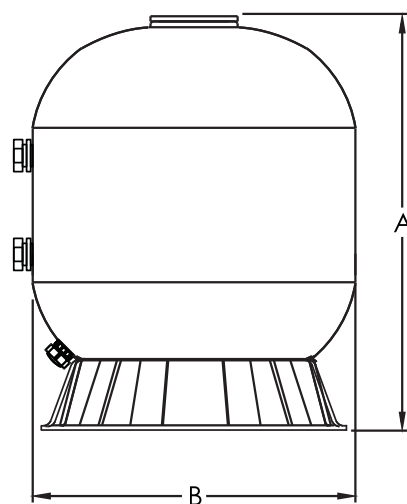


- 3) Replace filter coping. Put the twelve nuts and washers onto each of the twelve bolts, then screw all the nuts on with wrench, ensuring that all nuts are tight.
  - a) Carefully screw pressure gauge (with O'ring in place) into tapped hole in the filter coping. Do not over-tighten.
  - b) Ensure air 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 A mm	Diameter B mm	Valve Port Size Inch	Sand Kg
S700(B)	890	723	2"	215
S800	1050	820	2"	355
S900	1180	920	2"	470



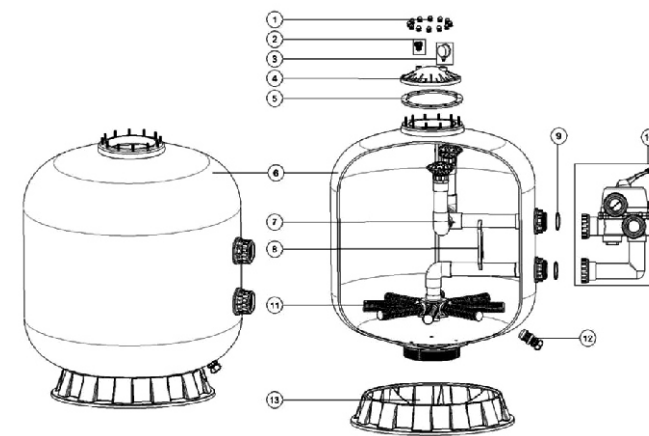
### INSTALL/START-UP OF FILTER

- 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

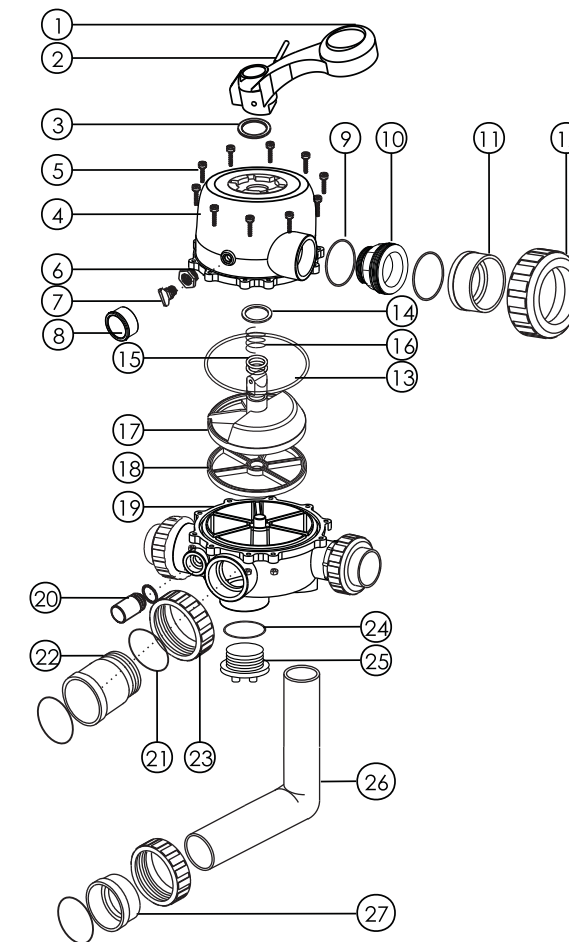
Key No.	Part No.	Description	Qty
1	89010601	Nut with washer	12
2	89010701	Air Release Valve with Oring	1
3	06011033	Maximum 60PSI Indication, Stainless Steel Casing	1
4	01172005	Lid (Grey Colour)	1
5	02011126	Filter Neck Gasket	1
6	89011202	S700B Filter Tank	1
6	89011208	Filter Tank with Base for S800	1
6	89011209	Filter Tank with Base for S900	1
7	89011203	The Inner Tank System for S700 (B)	1
7	89011210	The Inner Tank System for S800	1
7	89011211	The Inner Tank System for S900	1
8	01111090	2.0" Tank System Support	1
9	02011127	O-Ring for Inlet & Outlet	2
10	88280813W	6 Way 2" Valve with Piping Kit, 2" union set x 3 and pressure gauge (White)	1
11	01172010	Laterals (185mm)	8
11	01172011	Laterals (233mm)	8
12	89010107	Water Drain Set	1
13	01111062	21-28inch Filter Base	1
13	01112038	32-40 inch Filter Base	1



Notes: 11\* 01172010 laterals (185mm) is for S700B  
11\* 01172011 laterals (233mm) is for S800 & S900

### REPLACEMENT PARTS OF MULTIPORT VALVE

Key No.	Part No.	Product Description	Qty
1	01013003	Handle (Big)	1
2	03018008	Pin for Handle	1
3	01181027	Washer for Handle	1
4	01051026	2.0" Side Mount Valve Squareness Lid (White)	1
5	89280301	M6*32 Screw with Nut	10
6	01111048	Connector for Pressure Gauge/Stopper	1
6	02011139	O-Ring	1
7	89021303	Drain Plug with O'Ring	1
8	06011033	Oil Pressure Gauge With O-ring (60psi)	1
9	02020016	O-Ring for 2.0" Union	8
10	01051033	2.0" Connector(White)	3
11	01171154	2.0" Union (A/E)	3
12	01051032	2.0" Union Nut(White)	3
13	02011009	O-Ring for 2.0" Valve Lid	1
14	01181002	Washer for spring	1
15	02011022	O-Ring for 2.0" Valve Rotor	2
16	03014014	Spring	1
17	01021002	2.0" Valve Rotor	1
18	02311003	Spider Gasket	1
19	01051027	2.0" Side Mount Valve Bottom Body (White)	1
20	89280104	Sight Glass With O-Ring	1
21	02011011	O-Ring for Union Tale	1
22	01051035	2.0" Union Tale (White)	1
23	01013034	2.0" Union Nut (Black)	2
24	02020017	O-Ring for Plug	1
25	01051029	2.0" Side Mount Valve Plug (White)	2
26	01051195	2.0" Elbow Tube (White)183mm	1
27	01171035	2.0" Union Adaptor (Metric)	1



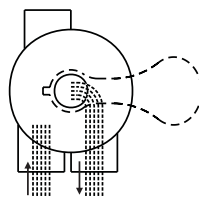


## FUNCTIONS OF VALVE POSITIONS

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

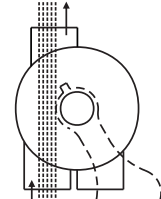
WASTE



IN FLOW OUT FLOW

### WASTE

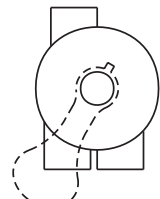
WASTE



IN FLOW OUT FLOW

### CLOSED

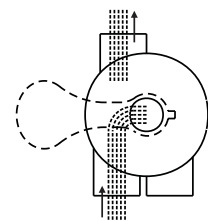
WASTE



IN FLOW OUT FLOW

### BACKWASH

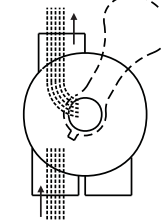
WASTE



IN FLOW OUT FLOW

### RINSE

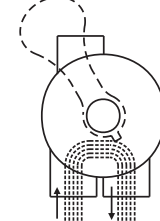
WASTE



IN FLOW OUT FLOW

### RECIRCULATE

WASTE



IN FLOW OUT FLOW

### 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.

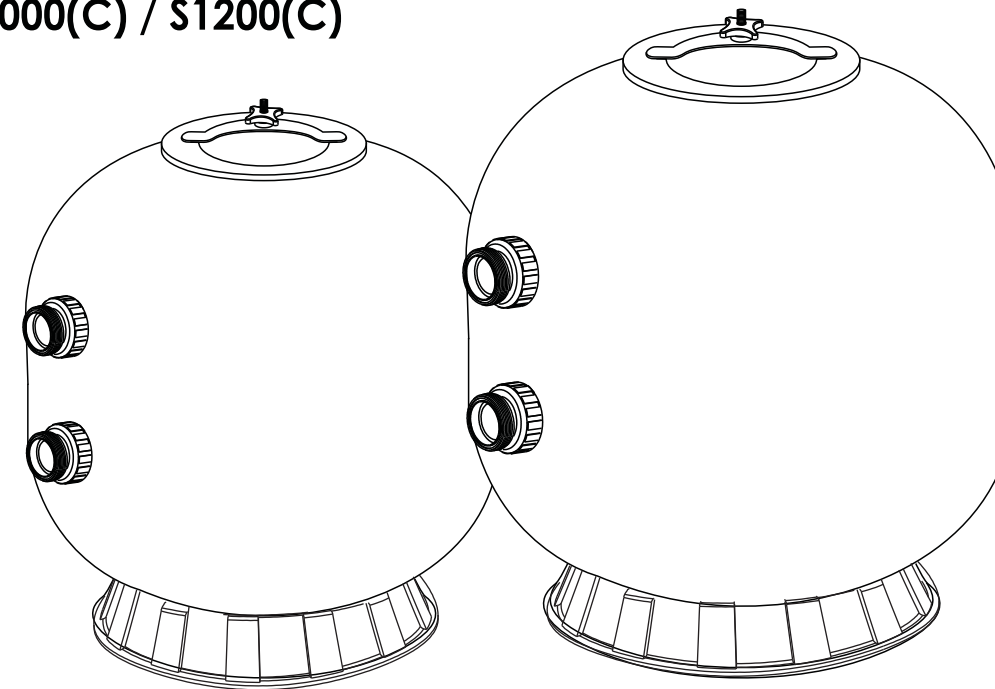
### TO ASSEMBLE:

- 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: S1000(C) / S1200(C)



### 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.

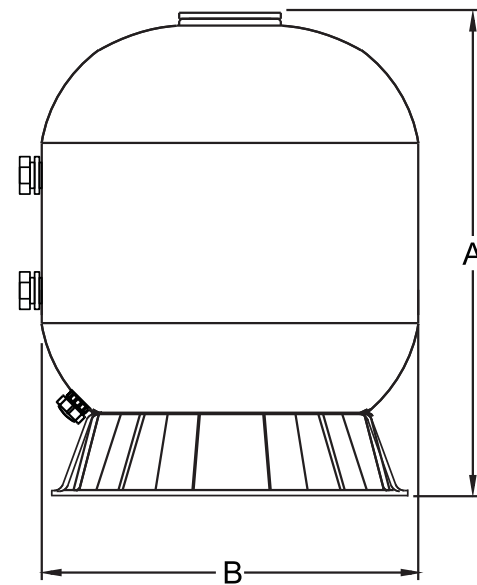
- 1) The filter should be placed on a level concrete slab, very firm ground, or equivalent. Position the filter so that the piping connections, control valve are convenient and accessible for operation and service.
- 2) Loading the sand media. Filter sand media is loaded through the top opening of the filter.
  - a) Connect control valve to the filter using pipes with unions and glues. (see the fig on page 4).
  - b) Loosen the twelve nuts and washers and remove the filter coping.
  - 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.

- 3) Replace filter coping. Put the twelve nuts and washers onto each of the twelve bolts, then screw all the nuts on with wrench, ensuring that all nuts are tight.
  - 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

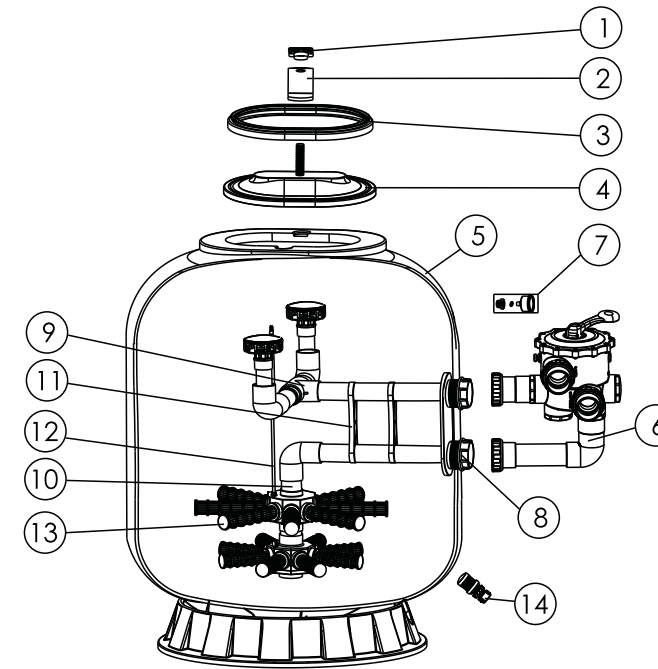
Model	Height A mm	Diameter B mm	Valve Port Size Inch	Sand Kg
S1000(C)	1220	1020	2.5"	620
S1200(C)	1410	1220	2.5"	860



### 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.

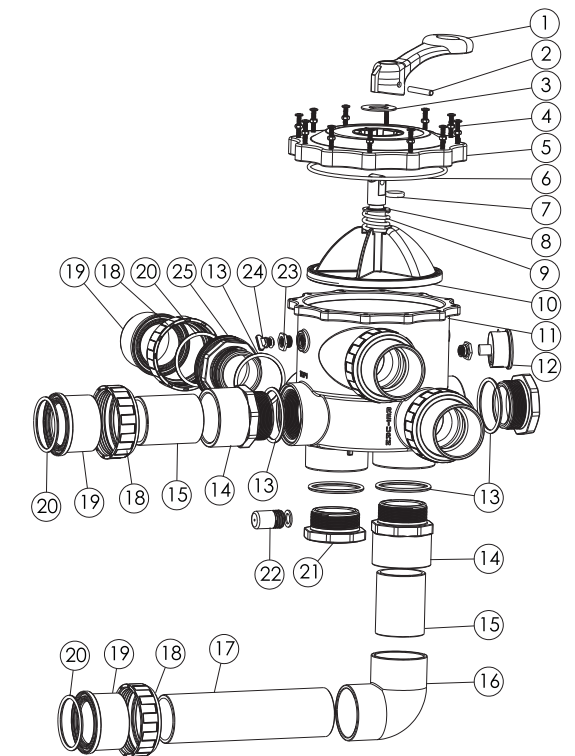
### REPLACEMENT PARTS OF FILTER



Item	Part No.	Description	Qty
1	01111100	Star-Shaped Nut	1
2	03042001	Bow-Shaped Metal Bar	1
3	02011155	O-Ring for Manhole	1
4	01161006	Manhole	1
5	89011313	S1000C Filter Tank With Base	1
	89011314	S1200C Filter Tank With Base	1
6	89280804	2.5" Side Mount Valve	1
7	06011029	Oil Pressure Gauge With O-ring (40 psi)	1
	01111048	Connector for Pressure Gauge/Stopper	1
8	89280117	Connector Plate Side Mount	1
9	89011309	S1000C Top part of the inner tank system	1
	89011310	S1200C Top part of the inner tank system	1
10	89011311	S1000C Bottom part of the inner tank system	1
	89011312	S1200C Bottom part of the inner tank system	1
11	01110030	Tank System Support	2
12	89011307	S1000C Air Vent Pipe	1
	89011308	S1200C Air Vent Pipe	1
13	89011319	S1000C Laterals(185mm+129mm+126mm)	8
	89011320	S1200C Laterals(233mm+129mm+126mm)	8
14	89010107	Water Drain Set	1

### REPLACEMENT PARTS OF MULTIPORT VALVE

Item	Part No.	Description	Qty
1	01013003	Handle (Big)	1
2	03018008	Pin for Handle	1
3	01181027	Washer for Handle	1
4	89281204	M6 x 33 "T" Screw with Nut	12
5	01021129	2.5" Side Mount Valve Standard Lid (White/Black)	1
6	02010228	O-Ring for 2.5" Valve Lid	1
7	02011022	O-Ring for Valve Rotor	2
8	01181002	Washer for Spring	1
9	03014014	Spring for Valve	1
10	89280806	2.5" Valve Rotor with Spider Gasket	1
11	01021128	2.5" Side Mount Valve Bottom Body (White)	1
12	06011032	Oil Pressure Gauge with O-ring (40Psi)	1
13	02020053	O-Ring for 2.5" Union	7
14	01171159	2.5" Union	2
15	01150180	2.5" PVC Tube 90mm	2
16	01150181	2.5" Elbow Tube	1
17	01150180	2.5" PVC Tube 270mm	1
18	01013147	2.5" Connector (Black)	2
18	01051243	2.5" Connector (White)	3
19	01171158	2.5" Union Adaptor (White)	5
20	02010043	O-Ring for Union Adaptor	5
21	01051240	2.5" Side Mount Valve Plug (White)	2
22	89280104	Sight Glass with O-Ring	1
23	89280120	Drain Plug Fitting with O-ring	2
24	89021307	Drain Plug with O-Ring	2
25	01013143	2.5" Connector (White)	3

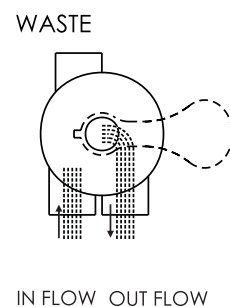




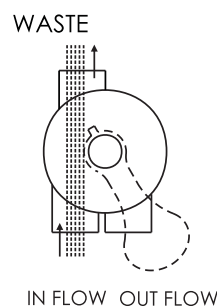
## FUNCTIONS OF VALVE POSITIONS

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

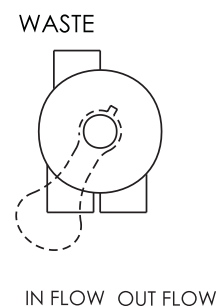
### FILTER



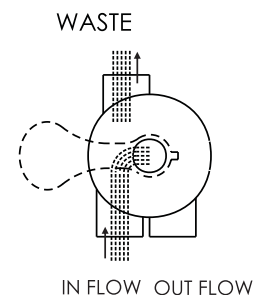
### WASTE



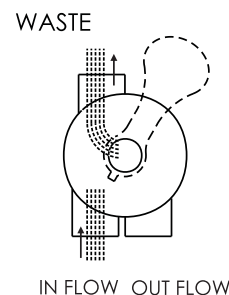
### CLOSED



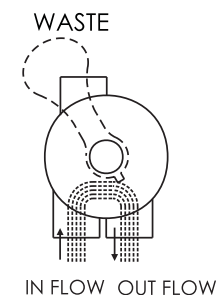
### BACKWASH



### 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.

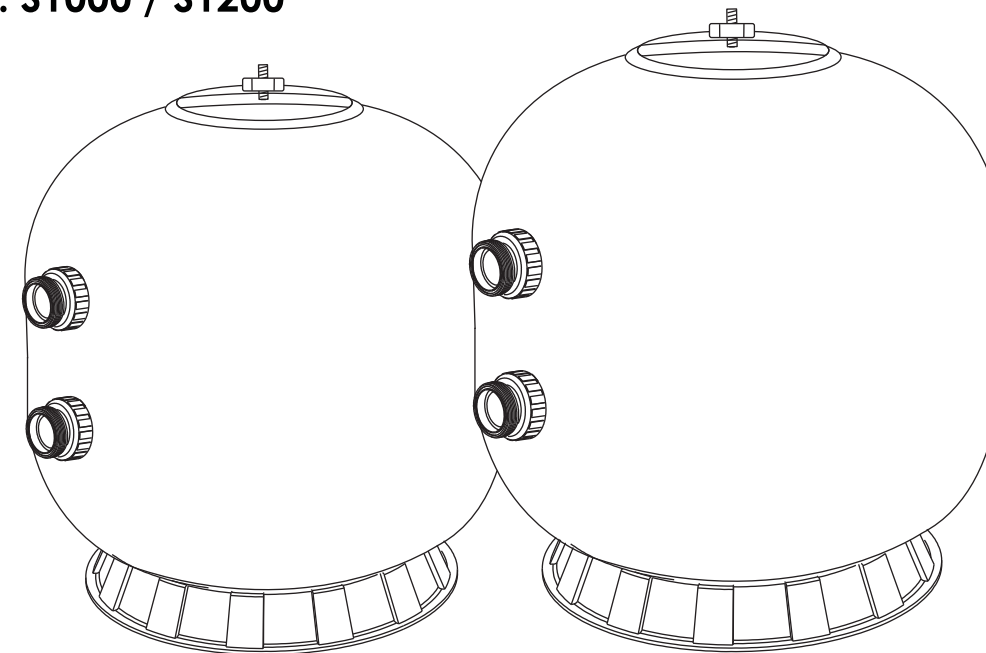
### TO ASSEMBLE:

- 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: S1000 / S1200



### 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.

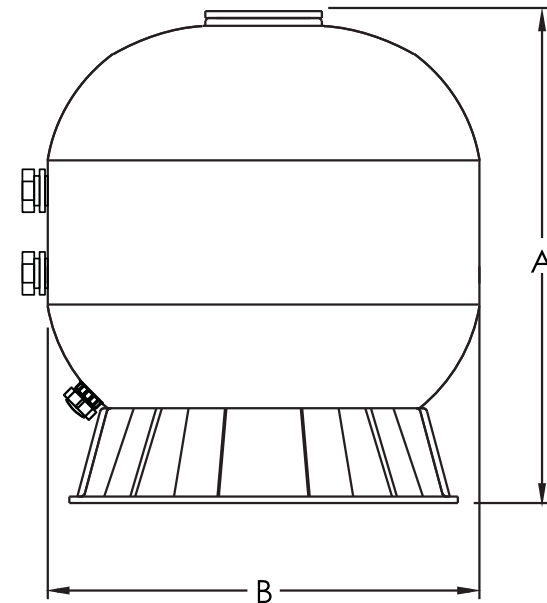
- 1) The filter should be placed on a level concrete slab, very firm ground, or equivalent. Position the filter so that the piping connections, control valve are convenient and accessible for operation and service.
- 2) Loading the sand media. Filter sand media is loaded through the top opening of the filter.
  - a) Connect control valve to the filter using pipes with unions and glues. (see the fig on page 4).
  - b) Loosen the twelve nuts and washers and remove the filter coping.
  - 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.

- 3) Replace filter coping and tighten the nut. Take care, do not over-tighten.
- 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	Height A mm	Diameter B mm	Valve Port Size Inch	Sand Kg
S1000	1220	1020	2"	620
S1200	1410	1220	2"	860

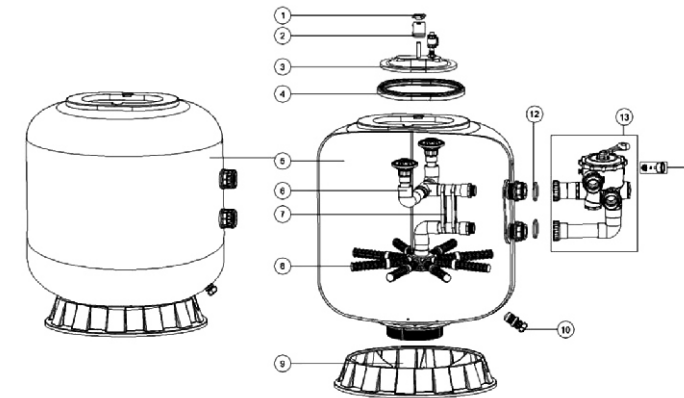


### INSTALL/START-UP OF FILTER

- 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



Key No.	Part No.	Description	Qty
1	01111100	Star-Shaped Nut	1
2	03042001	Bow-Shaped Metal Bar	1
3	01161006	Manhole	1
4	02011155	O-Ring for Manhole	1
5	89011301	S1000 Filter Tank With Base	1
5	89011302	S1200 Filter Tank With Base	1
6	89011303	The Inner Tank System for 1000	1
6	89011304	The Inner Tank System for S1200	1
7	01101065	2.0" Tank System Support	1
8	89010613	Laterals (129mm & 185mm) for S1000	8
8	89010614	Laterals (129mm & 233mm) for S1200	8
9	01112038	32-40 inch Filter Base	1
9	01112039	Base for V1200	1
10	89010107	Water Drain Set	1
11	06011029	Maximum 40PSI Indication, Stainless Steel Casing	1
12	02011127	O-Ring for Inlet & Outlet	2
13	88280813W	6 Way 2" Valve with Piping Kit, 2" union set x 3 and pressure gauge (White)	1

### REPLACEMENT PARTS OF MULTIPOINT VALVE

Key No.	Part No.	Product Description	Qty
1	01013003	Handle (Big)	1
2	03018008	Pin for Handle	1
3	01181027	Washer for Handle	1
4	01051026	2.0" Side Mount Valve Squareness Lid (White)	1
5	89280301	M6*32 Screw with Nut	10
6	01111048	Connector for Pressure Gauge/Stopper	1
6	02011139	O-Ring	1
7	89021303	Drain Plug with O'Ring	1
8	06011029	Oil Pressure Gauge With O-ring (40psi)	1
9	02020016	O-Ring for 2.0" Union	8
10	01051033	2.0" Connector(White)	3
11	01171154	2.0" Union (A/E)	3
12	01051032	2.0" Union Nut(White)	3
13	02011009	O-Ring for 2.0" Valve Lid	1
14	01181002	Washer for spring	1
15	02011022	O-Ring for 2.0" Valve Rotor	2
16	03014014	Spring	1
17	01021002	2.0" Valve Rotor	1
18	02311003	Spider Gasket	1
19	01051027	2.0" Side Mount Valve Bottom Body (White)	1
20	89280104	Sight Glass With O-Ring	1
21	02011011	O-Ring for Union Tale	1
22	01051035	2.0" Union Tale (White)	1
23	01013034	2.0" Union Nut (Black)	2
24	02020017	O-Ring for Plug	1
25	01051029	2.0" Side Mount Valve Plug (White)	2
26	01051195	2.0" Elbow Tube (White)183mm	1
27	01171035	2.0" Union Adaptor (Metric)	1

