SANDIA
SAND FILTERS

- Residential
  Hi-Rate Sand Filters
- Light-Medium Commercial
  Standard Media Depth Sand Filters
- Heavy Commercial
  Medium Media Depth Sand Filters
- Deep Bed Commercial
  Maximum Media Depth Sand Filters
- Industrial
  High Pressure Standard Media
  Depth Filters

## 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 page4).
   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

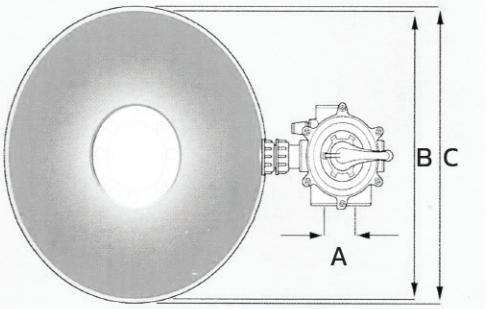
**FILTER / PUMP - SELECTION GUIDE**

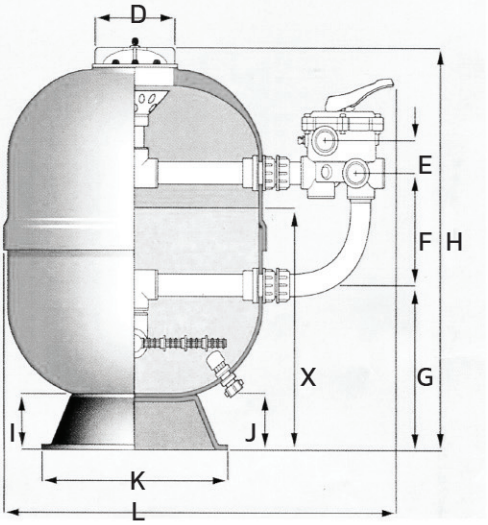
| | FILTER | | MEDIA | | PIPE / CONNECTIONS | | PUMP - H.P. | | PUMP – KW | | OUTPUT m3 / hr | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CODE | TYPE | Ø-MM | AREA (m2) | WEIGHT (kg) | INCH | mm | MIN | MAX | MIN | MAX | MIN | MAX |
| 16014 | SSR-16 | 450 | 0.135 | 50 | 1 ½ | 50 | ½ | ½ | 0.24 | 0.37 | 4.0 | 6.5 |
| 18014 | SSR-18 | 460 | 0.166 | 75 | 1 ½ | 50 | ½ | ¾ | 0.37 | 0.55 | 6.5 | 8.5 |
| 21014 | SSR-21 | 540 | 0.220 | 100 | 1 ½ | 50 | ¾ | 1.0 | 0.55 | 0.75 | 8.5 | 11.0 |
| 24014 | SSR-24 | 610 | 0.300 | 125 | 1 ½ | 50 | ¾ | 1.0 | 0.55 | 0.75 | 10.5 | 14.5 |
| 28014 | SSR-28 | 710 | 0.390 | 200 | 2 | 63 | 1.0 | 1.5 | 0.75 | 1.10 | 15.5 | 19.0 |
| 30014 | SSR/C-30 | 762 | 0.460 | 200 | 2 | 63 | 1 ½ | 2.0 | 1.10 | 1.50 | 18.5 | 22.5 |
| 32014 | SSR-32 | 820 | 0.530 | 250 | 2 | 63 | 1.5 | 2.0 | 1.10 | 1.50 | 20.0 | 25.0 |
| 36015 | SSC-36 | 900 | 0.660 | 375 | 2 | 63 | 2.0 | 3.0 | 1.50 | 2.20 | 27.0 | 31.0 |
| 42220 | SSC-42 | 1100 | 0.970 | 550 | 3 | 90 | 3.0 | 4.0 | 2.20 | 3.00 | 38.0 | 43.0 |
| 48215 | SSC-48 | 1200 | 1.130 | 850 | 3 | 90 | 4.0 | 5 ½ | 3.00 | 4.12 | 50.0 | 56.0 |

## 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, and 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).

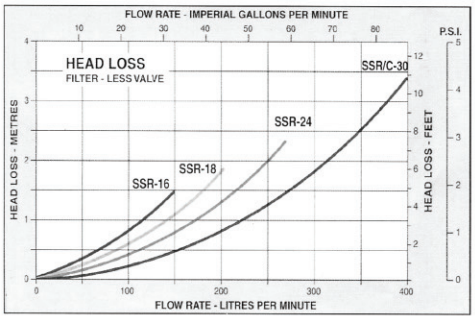
NOTE: During initial clean-up of the pool water it may be necessary to backwash frequently due to the unusually heavy initial dirt load in the water.




## DIMENSION

| TYPE | SSR-16 | SSR-18 | SSR-24 | SSR/C-30 |
|---|---|---|---|---|
| A | 73 | 73 | 73 | 70 |
| B | 450 | 460 | 610 | 762 |
| C | 465 | 475 | 625 | 780 |
| D | 230 | 230 | 230 | 230 |
| E | 61 | 61 | 61 | 81 |
| F | 127 | 204 | 204 | 215 |
| G | 240 | 245 | 250 | 315 |
| H | 575 | 685 | 760 | 780 |
| I | 65 | 65 | 65 | 85 |
| J | 70 | 70 | 70 | 90 |
| K | 360 | 360 | 490 | 560 |
| L | 725 | 790 | 945 | 1100 |
| M | - | - | - | - |
| N | - | - | - | - |
| X | 300 | 350 | 380 | 400 |
| Y | - | - | - | - |
| Z | - | - | - | - |




## ORDERING

| TYPE | SSR-16 | SSR-18 | SSR-24 | SSR/C-30 |
|---|---|---|---|---|
| CODE | 16014 | 18014 | 24014 | 30014 |
| ST-COL | Blue | Blue | Blue | Blue |
| WIDTH | 470 | 480 | 630 | 790 |
| LENGTH | 470 | 480 | 630 | 790 |
| HEIGHT | 590 | 700 | 790 | 810 |
| WEIGHT | 6.0 | 10.0 | 17.0 | 30.0 |

## "SANDIA" HI-RATE SAND FILTER


1


2


3


4

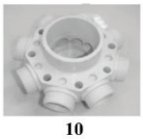

5


6


7

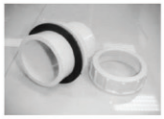

8

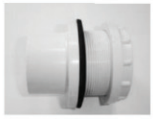

9

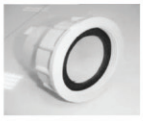

10


11


12


13


14


15


16

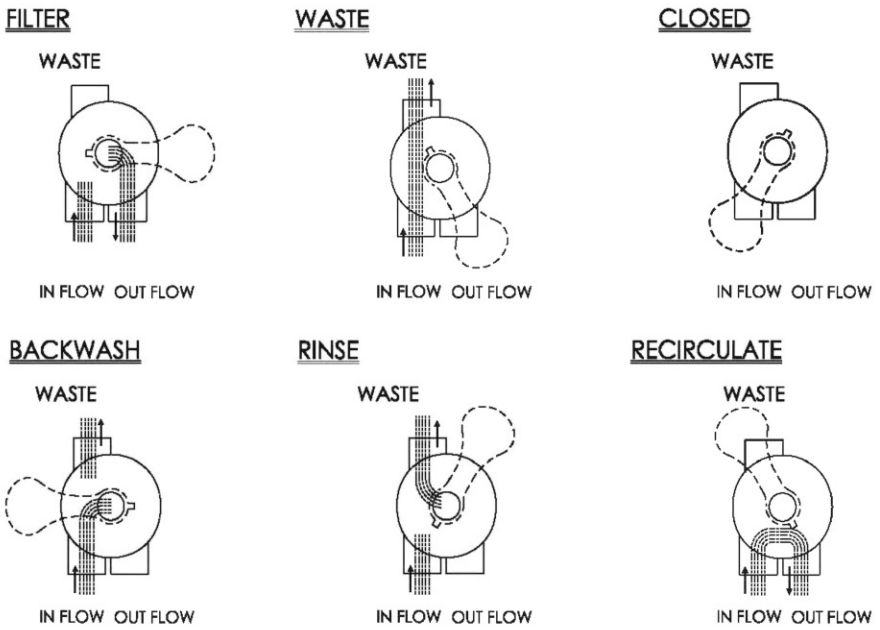

17


18

| No. | Code | Descriptions |
|---|---|---|
| 1 | 2010060070 | ฝาเครื่องกรองทราย สีดำ / Top Lid |
| 2 | 2010060069 | โอริงฝาเครื่องกรอง / O'Ring Top Lid |
| 3 | 2010060114 | จุกระบายอากาศ / Air Bleed with O'Ring<br>จุกระบายอากาศ / Air Bleed Stainless Steel with O'Ring |
| 4 | 2010060075 | น็อตยึดฝากรอง / Bolt & Nut Size M8 |
| 5 | 2010060007-01 | จุกปิดน็อตยึดฝากรอง / Plastic Corn |
| 6 | 2010060007-02 | จุกปิดน็อตยึดฝากรอง / Plastic Corn |
| 7 | 2010060074 | ท่ออากาศ / Air Tube |
| 8 | 2010060085 | กรวยจ่ายน้ำ / Rose Distributor |
| 9 | 2010060107 | แกนกลางไส้กรอง / Main Collector |
| 10 | 2010016636 | ฐานกลางไส้กรอง / Center Collector |
| 11 | 2010060104<br>2010060105 | ไส้กรอง ขนาด 6 ซม. / Laterial Size 6 cm.<br>ไส้กรอง ขนาด 12 ซม. / Laterial Size 12 cm. |
| 12 | 2010060103 | ฝาปิดไส้กรอง / Laterial Cap |
| 13 | | ยูเนียนเครื่องกรองขนาด 1.5"/ ราคาต่อชุด / Union Set Size 1.5"<br>ยูเนียนเครื่องกรองขนาด 2" / ราคาต่อชุด / Union Set Size 2" |
| 14 | | หัวต่อยูเนียนเครื่องกรองขนาด 1.5" /ราคาต่อชุด / Bulkhead Set Size 1.5"<br>ยูเนียนเครื่องกรองขนาด 2" / ราคาต่อชุด / Bulkhead Set Size 2" |
| 15 | 2010060007-03 | ชุดท่อปล่อยน้ำทิ้งขนาด 1.5" / ราคาต่อชุด / สำหรับเครื่องกรองทราย ขนาด 42" - 48"<br>Sand Drainage Plug Set Size 1.5" for 42" - 48" |
| 16 | | ชุดท่อปล่อยน้ำทิ้งขนาด 1" ราคาต่อชุด / สำหรับเครื่องกรองทราย ขนาด 16" 36"<br>Sand Drainage Plug Set Size 1" for 16" - 36" |
| 17 | | ประเก็น ยูเนียน ขนาด 1.5" / ราคาต่อชิ้น<br>ประเก็น ยูเนียน ขนาด 2" / ราคาต่อชิ้น<br>ประเก็น ยูเนี่ยน ขนาด 3" / ราคาต่อชิ้น |
| 18 | | ประเก็น หน้าแปลน ขนาด 1.5" / ราคาต่อชิ้น<br>ประเก็น หน้าแปลน ขนาด 2" / ราคาต่อชิ้น<br>ประเก็น หน้าแปลน ขนาด 3" / ราคาต่อชิ้น |
| | 2010060115 | ชุดไส้กรอง ครบชุด Size: 400 mm. (16") |
| | 2010060099 | ชุดไส้กรอง ครบชุด Size: 450 mm. (18")<br>ชุดไส้กรอง ครบชุด Size: 500 mm. (21") |
| | 2010060102 | ชุดไส้กรอง ครบชุด Size: 600 mm. (24")<br>ชุดไส้กรอง ครบชุด Size: 700 mm. (28") |
| | 2010060098 | ชุดไส้กรอง ครบชุด Size: 750 mm. (30") |
| | 2010060096 | ชุดไส้กรอง ครบชุด Size: 800 mm. (32")<br>ชุดไส้กรอง ครบชุด Size: 900 mm. (36") |
| | 2010060097 | ชุดไส้กรอง ครบชุด Size: 1050 mm. (42") |
| | 2010060109 | ชุดไส้กรอง ครบชุด Size: 1200 mm. (48") |

# 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

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.

## FUNCTIONS OF VALVE POSITIONS

⚠ 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.