



SERIES SAND FILTER

INSTALLATION AND OPERATING INSTRUCTIONS

FOR FILTER WITH SIX POSITION VALVE



Capacity Table

FILTER MODEL	TANK DIAMETER	FILTER AREA (SQ. FT.)	8 HOUR TURNOVER	MEDIA REQUIREMENTS
AS160	16"	1.39	16,800	100 lbs
AS180	18"	1.76	21,600	150 lbs
AS210	21"	2.20	26,400	200 lbs
AS250	25"	3.14	36,000	300 lbs

SAVE THESE INSTRUCTIONS!

GENERAL NOTES

1. When unpacking the filter make sure the unit is complete and no visible shipping damage has occurred.
2. Allow sufficient clearance around filter system for access and maintenance.
3. Provide adequate ventilation for pumping equipment installed in conjunction with filter.
4. Provide solid mounting for filter and pump. If installed outdoors, install system on sidewalk slab or solid concrete base to avoid risk of settlement. Filter systems once loaded with media can exceed a weight of 400-700 lbs.
5. Installation of filters and pumps should be located as close to the pool as possible to avoid excessive piping friction loss.
6. If system is installed below pool level it is important to install isolating valves to prevent risk of flooding from back-up water from the pool or spa.
7. The proper media selection is critical to good filter performance. Insure that media is an approved Quartz Silica with a sizing range of 0.4 TO 0.6 mm (20-30 grade).
8. The installation of filters requires no special tools.
9. Confirm that plumbing lines from pool are correctly identified. This will insure proper connection to markings on filter valve (i.e. "Pump", "Waste" and "Return").
10. The tank should be positioned in such a way to allow easy access to **winter drain** on underside of filter.

LOADING FILTER MEDIA

Once the filter system has been positioned, the installation of filter media may be undertaken as follows:

1. Check filter size in order to determine necessary amount of media required.
2. Double-check that the internal system consisting of a twelve lateral hub and standpipe are intact inside the tank.
3. Fill tank half full with water.
4. Place the disposable plastic loading disc in upper tank opening to stabilize the filter standpipe. It is important that the standpipe remain centered through the media loading procedure to insure alignment with valve assembly opening.
5. Proceed to load correct volume of dry media slowly (if media is saturated loading can be difficult). Generally, a coffee can or funnel can aid in the loading process.
6. Once media is loaded, discard sand loading disc and check to determine if standpipe is properly centered in tank opening.

INSTALLATION OF SELECTOR VALVE

1. Following the media loading, clean any sand particles or debris from upper surface of tank opening.
2. Install six- (6) position selector valve after placing o-ring in cavity on underside of valve body. Place valve into tank opening while insuring that o-ring has remained in position.
3. Place the v-clamp halves around the circumference of the valve and tank flange, securing them with the v-clamp halves nuts and bolts. If the v-clamp halves are not sufficiently closed to engage the bolts and nuts, tap the outer faces of v-clamp halves lightly with a rubber mallet. Tighten the bolts until the v-clamp halves are closed to within 1/6" – 1/8" of clamp ends touching.
4. Double check that incoming pool lines are connected to appropriate valve openings as marked on valve ports (i.e. pump, return (pool) and waste).
5. The threaded openings on valve are 1 ½ " female pipe thread which will accommodate standard plumbing adaptors or threaded couplings. Do not over tighten these connections since normally hand tightening with one (1) turn with wrench will provide leak proof connection. Use only teflon tape (do not use paste).
6. Install threaded pressure gauge using teflon tape wrap (do not over tighten). Hand tightening is adequate to provide a good seal.

VALVE OPERATION

Valve Settings	Direction of Flow Through Valve
Filter (also flow during vacuuming)	From pump down through valve, through sand bed up through pool return.
Back-Wash	From pump, through valve, down through standpipe, up through sand bed, and through valve to waste.
Rinse	Flow from pump through valve down through sand bed up through standpipe through valve to waste. (Position also used for initial start-up and leveling sand bed after Back-Wash.)
Waste	From pump through valve to waste. Also position for lowering water level or assist in draining pool.
Closed	From pump to valve without further circulation. Prevents any flow to filter and pool.
Recirculate	From pump through valve to pool. This position bypasses filter and is used for circulation of pool water only.

NOTE: Always “STOP” pump when changing selector valve position.

PUMP PRIMING

1. With the pump “OFF”, remove the lid from the pump strainer basket and pour in approximately 1 gallon of water.
2. Replace lid.
3. If valve has been installed on the pump suction line, close before filling strainer. Open again after lid has been securely fastened in place. Any valves on the return lines should be open. The pump should not need to be re-primed unless the pump has been drained for servicing or winterizing. (Refer to complete pump operations manual provided with pump.)

INITIAL START-UP

1. Make sure the correct amount of media is in the filter tank.
2. Prime pump.
3. Set valve handle in “BACK-WASH” position.
4. Start pump and operate in “BACK-WASH” cycle for three (3) minutes. This will purge the filter of excess lines in the media.
5. Turn pump “OFF” and set valve handle to “RINSE”. Start pump and run for one (1) minute.
6. Stop pump and set valve handle to “FILTER”. Re-start pump. System is now operating on a normal “FILTER” cycle.
7. Adjust the valves in the skimmer and main drain lines (if provided) to achieve balanced flow rates.
8. When a pool is filled initially, the filter may have to be back-washed once a day until the water becomes sparkling clear. From that point-on, “BACK-WASH” when pressure gauge indicates 10 PSI higher than at starting pressure.

SYSTEM OPERATION

To Filter:

1. With pump "OFF", set valve handle to "FILTER".
2. Turn pump "ON".
3. Adjust skimmer and main drain lines for balanced flow.

To Back-Wash:

1. With pump "OFF", set valve handle to "Back-Wash".
2. Turn pump "ON" and run for approximately 2-3 minutes or until water shows clear in sight glass.
3. Stop pump and proceed to "RINSE".

To Rinse:

1. With pump "OFF", set valve handle to "RINSE".
2. Start pump and run for approximately one (1) minute.
3. Stop pump. Set valve handle to "FILTER". Re-start pump.

To Clean Strainer:

1. Turn pump "OFF". Unscrew strainer lid and remove basket.
2. Replace lid to prevent the system from draining while the basket is being cleaned.
3. Clean basket. Restore to pot and fasten lid securely.

To Vacuum:

1. Turn pump "OFF". Leave handle at "FILTER" position.
2. Place vacuum cleaner in pool with hose attached to vacuum head.
3. Fill the hose by submerging under water. Alternatively, hold the hose end over a return inlet until full of water (with pump running).
4. Vacuuming is normally achieved by inserting the hose into the skimmer suction manifold, or into the vacuum line in the pool wall.
5. Turn pump "ON".
6. After vacuuming, clean the pump strainer to remove accumulated debris, then Back-Wash the filter

To Lower Pool Level:

1. With pump "OFF", set valve handle to "WASTE".
2. Turn pump "ON" and run until desired level is attained.
3. Turn pump "OFF". Return valve handle to "FILTER". Re-start pump.

To Drain Pool:

1. Close the valve in the skimmer line (if one is provided), or in the skimmer itself, so all water will be drained through the main drain.
2. Set valve handle to "WASTE".
3. Turn pump "ON" and run until pool is drained.
4. Do not stop pump during drain cycle, since lowered water level may prevent re-priming.
5. Extremely dirty water should be drained using a portable pump.

To Winterize:

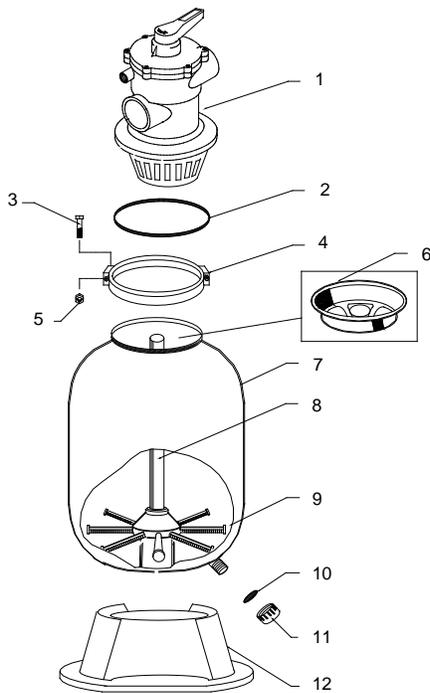
1. Depress valve handle and lock in this position by locating the pointer mid-way between any two-valve positions. This preserves the valve seat gasket during the winter by relieving the spring pressure. (TM-12-L valve only. Does not apply to T40 valve)
2. Remove the drain cap from bottom of filter.
3. Remove pump drain plugs. ALLOW FILTER, PUMP AND PIPING TO DRAIN COMPLETELY.

OPERATIONAL TIPS

1. Never run pump dry as it depends on water for lubrication
2. Motor bearings are sealed. Do not lubricate.
3. Always maintain minimum water level to ½ way up the skimmer mouth. This prevents air being drawn through the skimmer or potential pump damage resulting from a dry run condition.
4. If pump priming difficulties are experienced, check all suction lines, valves, gaskets and strainer lid for tightness.
5. Clean pump strainer regularly.
6. Maintain a proper chemical balance in the pool.

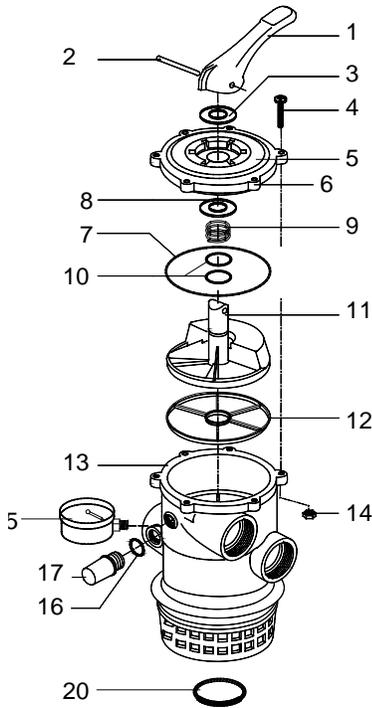
NOTE: Operation procedure outlined covers basic filtration system. In cases where additional equipment such as: chemical feed apparatus, heating equipment, etc. Have been installed, consult with installer to verify operational and winterization requirements.

FILTER SYSTEM ASSEMBLY



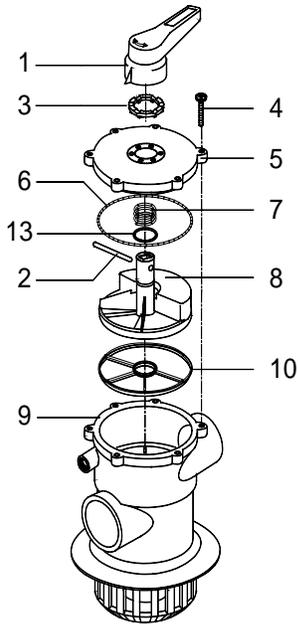
PART NUMBER	QUANTITY	DESCRIPTION
1*	1	VALVE COMPLETE (TM-12-L) 25" FILTER ONLY
1	1	VALVE COMPLETE (T40) 16 & 21" FILTER ONLY
2	1	O-RING - TANK
3	2	BOLT - V CLAMP M6 x 35mm SS
4	1	V CLAMP ASSEMBLY COMPLETE WITH HARDWARE
5	2	NUT - V CLAMP BOLT M6 SS
6	1	PROTECTIVE FILLER CAP 25" FILTER ONLY
6	1	PROTECTIVE FILLER CAP 16 & 21" FILTER ONLY
7	1	TANK - 16"
7a	1	TANK - 21"
7b	1	TANK - 25"
8	1	HUB WITH STANDPIPE - 16"
8a	1	HUB WITH STANDPIPE - 21"
8b	1	HUB WITH STANDPIPE - 25"
9	8	LATERAL - 4" FOR 16" & 21" TANK
9a	8	LATERAL - 7" FOR 25" TANK
10	1	GASKET - TANK DRAIN 16"
10	1	GASKET - TANK DRAIN 21" & 25"
11	1	CAP - TANK DRAIN 16"
11	1	CAP - TANK DRAIN 21" & 25"
12	1	FILTER PEDESTAL
12	1	FILTER PEDESTAL WITH PUMP BASE
13	2	BOLT - PUMP BASE 1/4-20 x 3/4"

MULTIPOINT VALVE - MODEL TM-12-L



PART NUMBER	QUANTITY	DESCRIPTION
1	1	HANDLE
2	1	DRIVE PIN
3	1	WASHER - HANDLE
4	6	BOLT - KEY/BODY, PHILLIPS M6 x 35mm SS
5	1	DECAL
6	1	COVER
7	1	O-RING - COVER
8	1	WASHER - SPRING
9	1	SPRING
10	2	O-RING - DIVERTER STEM
11	1	DIVERTER
12	1	GASKET - SPIDER
13	1	BODY - VALVE
14	6	NUT - KEY/BODY M6 SS
15	1	GAUGE - BOTTOM MOUNT
16	1	O-RING - SIGHT GLASS
17	1	SIGHT GLASS
20	1	O-RING - STANDPIPE
1-20	1	VALVE COMPLETE (TM-12-L)
1-3/5-11	1	KEY ASSEMBLY
12,13	1	BODY ASSEMBLY

MULTIPOINT VALVE - MODEL T40



PART NUMBER	QUANTITY	DESCRIPTION
1	1	HANDLE
2	1	DRIVE PIN
3	1	RING - POSITIONING
4	6	TAPPING SCREW - COVER, PHILLIPS 5 x 20mm
5	1	COVER
6	1	O-RING - COVER 117 x 4mm
7	1	SPRING
8	1	DIVERTER
9	1	HOUSING COMPLETE
10	1	GASKET - SPIDER
13	2	O-RING - DIVERTER STEM 23 x 3mm

LIMITED WARRANTY

The manufacturer supplies a limited warranty to the original consumer purchaser of the equipment on the following terms and conditions:

1. The equipment is warranted to be free from defects in material and workmanship for a period of twelve (12) months from the date that the equipment is originally installed. The filter tank itself is warranted for a ten (10) year period on a pro-rata basis. If, in the opinion of the manufacturer, after one (1) year of operation the tank requires replacement, the tank will be exchanged for a new tank on an adjusted pro-rata basis. Costs to the original owner will be established by the number of months the unit has been installed. Commencing with the date of installation by the original owner.
2. Notwithstanding any provision herein to the contrary, the warranties and obligations hereunder shall not in any event extend for more than two (2) years beyond the date of shipment of the equipment from the factory, eleven (11) years on tank body.
3. Warranty is void in the following cases: damages which result in whole or in part from: (a) careless or improper installation of the equipment; (b) improper or negligent use and maintenance of the equipment; (c) tampering with the equipment by unauthorized repair personnel; (d) ground movement.
4. The manufacturer's sole obligation hereunder shall be to replace or repair any defective equipment. The manufacturer reserves the absolute right to determine whether any defective equipment should be replaced or repaired.
5. Any customer who wishes to make a claim under this Limited Warranty shall notify the factory of such claim by telephone or by mail. After the customer has been authorized to return defective equipment, the customer must return the equipment to the manufacturer. Any goods returned without prior authorization will be returned to the shipper unopened. The manufacturer shall not bear any costs or risks incurred in shipping defective equipment to the manufacturer, or in shipping repaired or replaced equipment to a customer.
6. The manufacturer will charge customer for all non-warranty work, which it may perform. Warranty work will not be performed until the customer has accepted the price quoted.
7. **Except as specifically set forth above, no other warranties, whether express or implied, including, without limitation, the implied warranties of merchantability and fitness for a particular purpose, are made by the manufacturer. In no event will the manufacturer be liable for any loss, including time, money, goodwill, lost profits and consequential damages based on contract, tort or other legal theory, which may arise hereunder or from the use, operation or modification of the filter and associated parts. The maximum liability of the manufacturer hereunder shall not exceed the amount actually paid by the customer for the filter and associated parts.**
8. Some states do not permit limitations on the terms of implied warranties or on the recovery of incidental or consequential damages. Accordingly, the limitations contained in paragraph 7, may not apply to certain customers.
9. This warranty gives customers specific legal rights. Customers may have other rights, which vary from state to state.

Date of installation _____ Installed by _____

For Service Call _____

8125 BAYBERRY ROAD, JACKSONVILLE, FLORIDA 32256 USA
Telephone (904) 739-2626 Fax (904) 737-5261