

TITAN SERIES SAND FILTER

INCLUDES BASE FOR FILTER AND PUMP



AC 167AG-1, AC 197AG-1 & AC 247AG-1

TOOLS REQUIRED

- Phillips head screwdriver
- Flat head screwdriver
- O-ring lube

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PARTS FOR SAND FILTER

NOTE The quantity of parts and part numbers will vary for each filter.
See breakdown on following page for model specific part lists.



A. FILTER TANK



B. BASE



C. 6 WAY VALVE



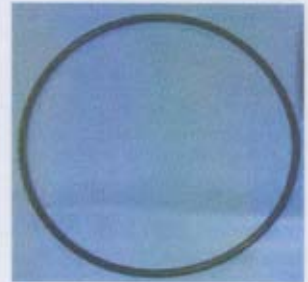
D. CLOSURE CLAMP



E. STANDPIPE



F. LATERALS (8)



G. VALVE O-RING



H. HOSE CLAMPS (6)



I. PRESSURE GAUGE



J. STRAIGHT FITTING (3)



K. TEFLON TAPE



L. 3' 1-1/2" HOSE



M. 6' 1-1/2" HOSE (2)



N. DRAIN PLUG

NOTE: Pre-installed on tank



O. SIGHT GLASS

FILTER PARTS BY MODEL

PART #	DESCRIPTION	AC 167AG-1	AC 197AG-1	AC 247AG-1
AC SANDBASE	Filter Base	1	1	1
AC SDTNK16	16" Molded Tank	1	N/A	N/A
AC SDTNK19	19" Molded Tank	N/A	1	N/A
AC SDTNK24	24" Molded Tank	N/A	N/A	1
AC 17256	6 Position Valve	1	1	1
AC 17884	Closure Clamp	1	1	1
AC STPIPE16	13.4" Stand Pipe for 16" Tank	1	N/A	N/A
AC STPIPE19	16.9" Stand Pipe for 19" Tank	N/A	1	N/A
AC STPIPE24	21.6" Stand Pipe for 24" Tank	N/A	N/A	1
AC 19690	3.5" Lateral for 16"/19"	8	8	N/A
AC 19720	6.6" Lateral for 24"	N/A	N/A	8
AC 20729	Valve O-Ring	1	1	1
BS 11673	Sight Glass With Gasket	1	1	1
BS 39349	Pressure Gauge (Rear MT)	1	1	1
BS 40061BLK	Straight Fitting	3	3	3
BS 35858	Teflon Tape	1	1	1
BS 10022	6' 1-1/2" Hose	2	2	2
BS 10014	3' 1-1/2" Hose	1	1	1
BS 35815	2 Pk. Hose Clamps	3	3	3
AC 04863	Drain Plug	1	1	1

ASSEMBLY INSTRUCTIONS FOR SAND FILTER



NOTE Filter is partially assembled; however, nothing has been properly tightened. **DO NOT** operate filter system without completing assembly instructions.

STEP 1

- Using Phillips head screwdriver, remove the closure clamp (D) from the valve assembly. *You only need to unscrew one side completely as it can be removed and reinstalled without unscrewing both screws.*
- Remove the valve (C) from the tank and place it to the side until instructed to reattach it.



- Inside the tank you will find the standpipe (E) and a plastic bag containing the laterals (F).
- Attach lateral to standpipe by pushing into opening and turning to the right as shown above.
- Repeat for remaining seven laterals.

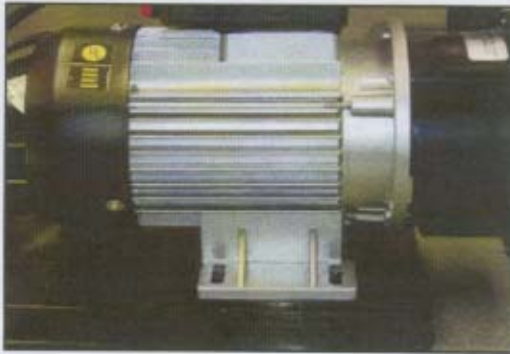
NOTE You **MUST** install the laterals on the standpipe **INSIDE** the tank as the standpipe will not fit back through the opening once laterals are attached.



STEP 2

- The filter and pump should be attached to the base prior to filling the filter with sand as it will be difficult to maneuver after the tank is full.
- In order to attach your pump to the base, determine which of the two pumps shown below is most like your pump and follow the corresponding instructions for installation to the base.

A. CRADLE STYLE MOUNT



- Pumps with cradles located directly under the motor should be aligned with the holes on the base in the raised area where the six holes are close together. This type of mount will require the use of **FOUR** mounting bolts from the hardware supplied with the base.
- Line the pump up with the set of holes which are the best fit for the pump and bolt in place.
- Proceed to **STEP 3**.

B. PLASTIC PUMP HOUSING MOUNT

- Pumps with plastic pump housing mounts should be attached by aligning the openings with a set of the OVAL shaped holes which are towards the center of the base. This type of mount will require the use of **TWO** mounting bolts from the hardware supplied with the base.

If you are attaching a Speck SS E90 or SS E91 pump, use the larger oval holes towards the back of the base.

- Bolt the housing of the pump through the base and tighten.
- Proceed to **STEP 3**.



STEP 3

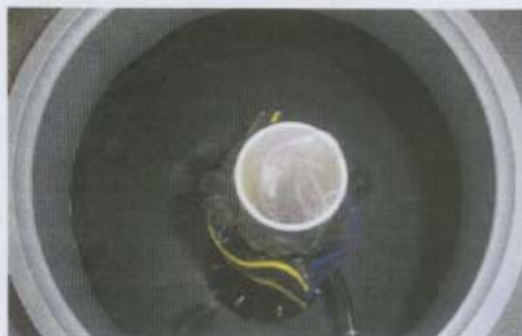


- Before filling tank with sand, cover standpipe with a plastic bag to prevent sand from entering standpipe. Secure in place with rubber band so it does not fall off.
- Once bag is secured in place, place standpipe in the bottom of the sand tank. Make sure pipe is centered in tank BEFORE pouring sand into tank because you will NOT be able to move it once sand is in.

- Notice that near the rounded area on the base there is a sticker which has three arrows.
- Line up drain plug (N) on filter tank (A) with the arrow labeled "1 - Align drain plug here."
- Now that the drain plug is lined up with the arrow, turn the tank to left as indicated by the "2" arrow labeled "Turn tank."
- If you have turned the tank to the proper place, the drain plug should now line up with the "3" arrow which is labeled with the filter size (16", 19", 24") and the word "lock."
- Test to ensure that the filter tank is now locked into place on the base. Pull the tank upwards to make sure that the tank does not lift up.



NOTE If the drain plug is not lined up with the third arrow OR it lifts off the base, retry the aforementioned steps to properly attach tank to base.



- Clear plastic tube attached to standpipe is an air relief. As you are adding the sand into the tank, try to hold the tube up against the standpipe. The white piece on the end of this tube should be ABOVE sand level when you are done adding sand to the filter.



NOTE DO NOT pull too hard when holding up air relief tube, if you pull it off the bottom of the standpipe, sand will be able to enter your pool through the hole.

STEP 3 — CONTINUED

- Add filter grade sand (sold separately) to filter tank around standpipe. The approximate amount of sand necessary will vary based on the size filter you purchased.

16" Tank 70 Lbs.
19" Tank 125 Lbs.
24" Tank 225 Lbs.



NOTE NEVER FILL SAND TANK MORE THAN 1/2 TO 2/3 OF THE WAY. Adding too much sand can cause weak return flow.

- Remove plastic bag and fill tank with hose water until the tank is filled right below opening of standpipe.

STEP 4



- Locate o-ring (**G**) on bottom of 6-way valve (**C**).
- Lubricate with o-ring lube or any water-based lubricant to ensure proper seal on tank.
- Push o-ring against the lip of the valve. It **MUST** sit flat against the lip to protect from leaking at the valve.

- Clean off any sand or debris on top lip of filter and position valve over the opening of the standpipe.
- Valve will slide **ONTO** standpipe when positioned properly in tank (as shown). Push down firmly to make sure valve slides on all the way.



NOTE You **CANNOT** pull standpipe up to secure the valve. Pulling up can damage the laterals and cause sand to get sent back with water flow to pool.

STEP 5



- Once valve is in place, hold clamp (D) as shown and position clamp around lip of filter and over edge of valve.

- The clamp should sit flat around the lip of the tank and valve. If it is not sitting even the clamp will leak.



- Make sure that the screws of the clamp are lined up with the seams of the tank. Tighten two screws on clamp a little at a time.
- Alternate when tightening such that both sides are tightened **EQUALLY**. Failure to follow these instructions will result in a leak at the clamp.

- Cover threads of pressure gauge (I) with Teflon tape (K) and thread into the open hole on the valve and hand tighten only.



STEP 6

- The filter ports are labeled **“RETURN”**, **“PUMP”** and **“WASTE”** with raised letters next to the openings.
- Cover the threads of each straight fitting (**J**) with Teflon tape (**K**) and thread one fitting into each of the 1-1/2" threaded openings on the valve.
- Attach one 6' hose (**M**) to the bottom of the thru-wall skimmer and to the front of the pump with (2) hose clamps (**H**).
- Clamp one end of 3' hose (**L**) to the top of the pump and the other end to the threaded fitting on the **“PUMP”** port of the filter.
- Attach second 6' hose (**M**) to the fitting on the **“RETURN”** port and secure the opposite end to the fitting on the pool's return with clamp.
- **“WASTE”** port will accept a standard fitting and a backwash hose (**sold separately**) which will be used during maintenance.
- Check drain plug (**N**) at bottom of filter to ensure that it is screwed on tight.



OPERATING YOUR FILTER

NOTE Your filter cannot be run if the water is not at the proper level in the pool. Running the filter without water can cause serious damage to your pump and filter.

- Prime filter prior to starting up filter system. **DO NOT** turn motor on until system has been primed, you can damage your pump.
 - Make sure water in pool is up to middle of skimmer(s) and that there is nothing blocking water flow from return(s) and skimmer(s) (i.e. plug, plate).
 - Push down selector handle on valve and turn to notch labeled **BACKWASH**. Let go of handle and the valve is now in backwash. Make sure backwash hose (sold separately) is attached to the waste port so water will not spray all over you once pump is started.
 - Remove lid of strainer basket on pump (if applicable) and fill with water. Skimmer and return lines should be filled with water as well (when water level is in proper place in pool this will happen naturally).
 - Place cover back on basket and plug in/switch on pump. When pump starts up, water will come out through the backwash hose. If the pump is properly primed, the water in the strainer basket should not be moving and air pocket will be eliminated.
 - Repeat above until all air is purged from the system then turn off the pump. If this does not get air out of system, double check all connections to make sure they are properly tightened and try again.
- To use filter, with pump **OFF**, push down selector handle on valve and turn to notch labeled **FILTER**.
 - Connect pump to power to start filter operation.
 - Note pressure gauge reading at this time.
- When pressure through return fades and pressure gauge reads 5 psi above starting pressure, you will need to backwash the filter system to remove debris.
 - Turn pump off before moving selector to **BACKWASH** position. Once in backwash, turn pump back on.
 - Water will come out through the waste port, so position backwash hose where you would like water to run out.
 - **NEVER** backwash for longer than **ONE MINUTE** at a time! Backwashing longer than one minute will cause sandblasting of internal components and can lead to damage of standpipe and/or laterals and **VOIDS WARRANTY**.
 - Turn pump off and move selector to **RINSE** position. Rinse will allow water to flow through to clear out the lines and prevent a puff of sand or debris back into the pool after backwashing.
 - Rinse for approximately 15 seconds and turn off pump again. Move selector back to filter and turn pump back on. You are now filtering water.
- The **WASTE** position does not allow water to pass through the filter.
 - If there is a point where you would like to take water directly out of the pool, this is the option available to do so.
 - You may also vacuum on waste to take serious debris straight out of the pool if/when necessary.
 - Remember, this is taking water out of the pool so watch the water level to protect your pump and filter. If water drops below skimmer level you **MUST** turn pump off.
- **RECIRCULATE** allows you to move water in the pool **WITHOUT** filtering the water. This is usually used when adding chemicals to the pool, during pool opening or regular maintenance.



NOTE NEVER move selector handle while pump is on. Pump **MUST** be switched off to change the position of the valve. Failure to comply will cause damage to your valve and is not covered by **WARRANTY**.

TROUBLESHOOTING

LOW WATER FLOW	SHORT FILTER CYCLES	POOL WATER WON'T CLEAR UP
<ol style="list-style-type: none"> 1. Check skimmer and pump strainer baskets for debris. 2. Check for restrictions in intake and discharge lines. 3. Check for air leak in intake line (indicated by bubbles returning to pool). 4. Backwash filter. 5. Bring sand level in filter down to 1/2 full. 	<ol style="list-style-type: none"> 1. Check for algae in pool and superchlorinate as required. 2. Be sure chlorine and pH levels are in proper range. Adjust as required. 3. Check surface of filter sand for crusting or caking. Remove 1" of sand if necessary. 	<ol style="list-style-type: none"> 1. Check chlorine, pH and total alkalinity levels and adjust as required. 2. Be sure flow rate through filter is sufficient. 3. Operate filter for longer periods. 4. Be sure valve is set on "Filter" position.

WINTERIZING

NOTE Failure to winterize your filter properly may result in damage to the tank which is **NOT** covered under any warranty.

- At the end of the season once you disconnect filter system, remove the valve from the tank. Valve selector handle should be positioned **BETWEEN** any of the notches to allow for air ventilation through the valve to protect from cracking.
- Remove drain plug from bottom of sand tank to drain water out of the filter tank. Keep this plug off for the winter to allow any potential water build-up to escape from the tank.
- Empty **ALL** sand from the filter system and dispose of as it is recommended to replace sand **EACH** season.
- Rinse out inside of tank and air dry. You **MAY** remove laterals from standpipe and standpipe from tank.
- Store tank in an area where it will be protected from the elements and keep valve and tank stored **APART** to protect from condensation forming and causing cracks in the tank or valve.
- Run hose water through pump to rinse out and store in a warm, dry place for the winter.