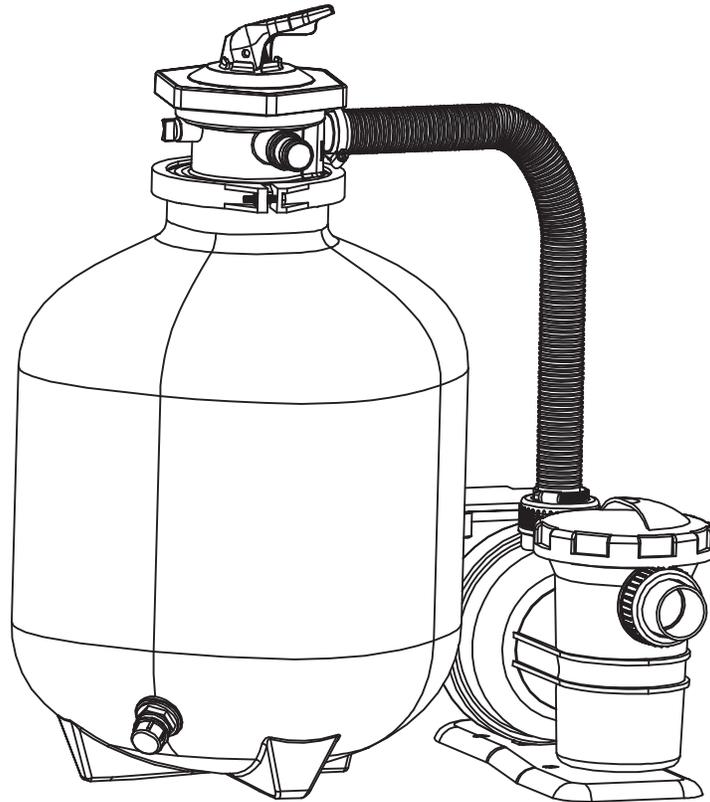




# SMARTCLEAR™



## INSTALLATION INSTRUCTIONS AND OPERATION MANUAL

Model: EQ-SC-1900

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# IMPORTANT SAFETY INSTRUCTIONS

-  **WARNING:** Read and follow all instruction in this owner's manual and on the labels of the equipment. Failure to do so can cause serious injury or death.
-  **WARNING:** Suction entrapment hazard near or in suction outlets or suction outlet covers that are damaged or missing. Entrapment can cause serious injury or death.
-  **WARNING:** Ensure all suction outlet points are inspected routinely and remove debris or repair damaged components that could lead to an increase in entrapment potential.
-  **WARNING:** It is recommended that a vacuum relief or vent system is installed to relieve entrapping suction. Ensure the suction lines, return lines and valve position are open and clear prior to starting the system. Failure to do so can result in a dangerous increase in pressure that can lead to violent separation of filter or pump components.
-  **WARNING:** Check all connections (seal ring, hose clamps, pump fittings, return and suction fittings, etc) for proper installation. Failure to do so can lead to leaks or separation hazards causing damage to property or severe injury/death.
-  **CAUTION:** All electrical wiring must be performed by a professional and must conform to local codes and regulations.
-  **CAUTION:** Ensure the system is plugged directly into a GFI protected outlet.
-  **WARNING:** Do not use an extension cord to operate the filter system as this is an electrical shock hazard.
-  **CAUTION:** Do not allow children to install or operate the filter system.
-  **WARNING:** Ensure the filter system is unplugged before changing the valve position or performing any maintenance.
-  **WARNING:** Ensure the filter system is positioned as to prevent using the unit to gain access to the pool.
-  **WARNING:** Never change the valve position while the system is running.
-  **WARNING:** Do not submerge the filter or pump in water.
-  **CAUTION:** Do not carry or lift the filter by the handle.
-  **CAUTION:** Do not attempt to carry the filter while filled with filter media or water.
-  **WARNING:** Do not operate the filter system while in standing water or with wet hands.
-  **CAUTION:** Do not use petroleum based lubricants.
-  **CAUTION:** Do not operate the filter system if pool water temperatures exceed 95°F or fall below 39°F as this may damage the unit and will void the warranty.

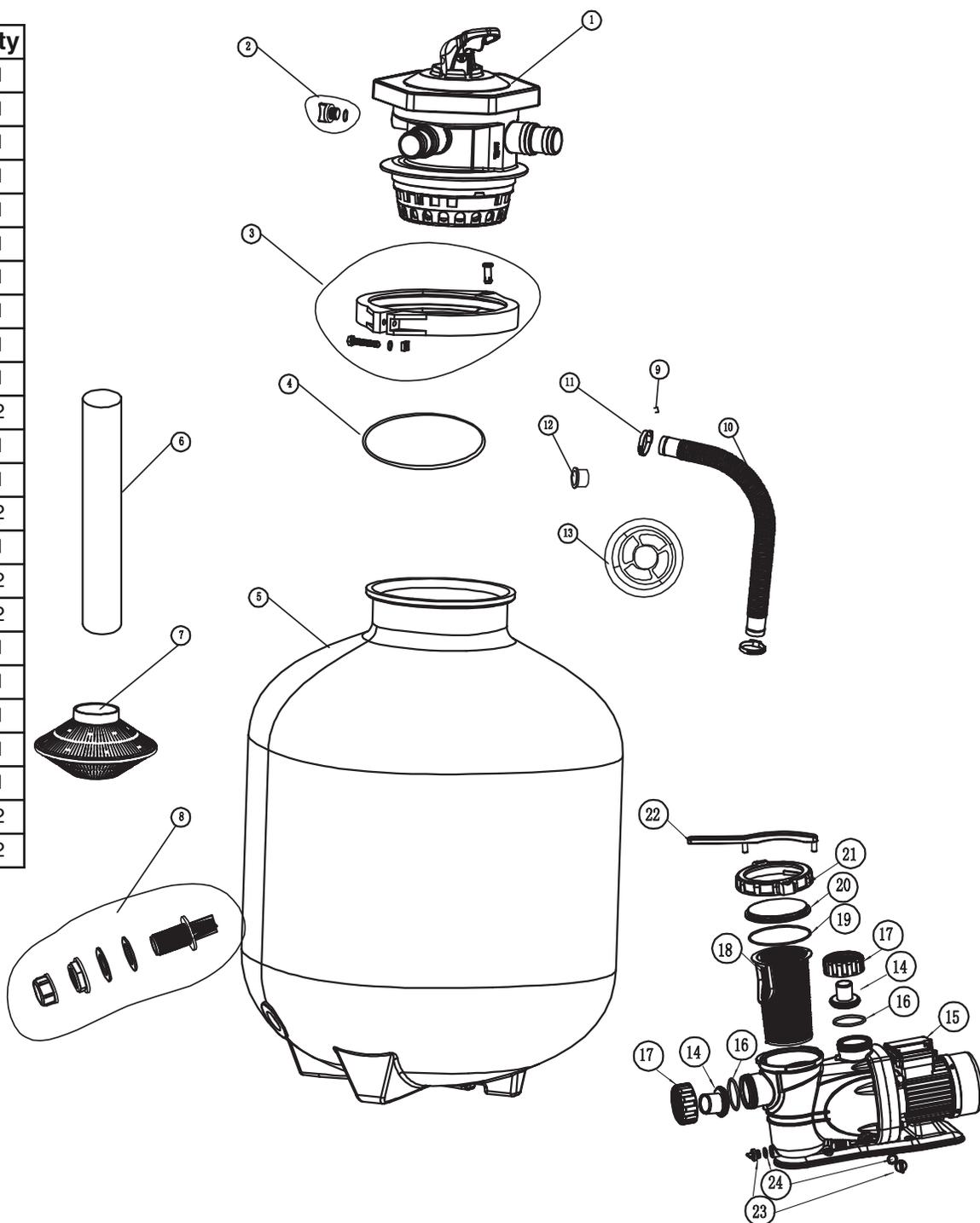
## HOW A SAND FILTER WORKS

The filter uses specific filter sand that acts as the media for trapping dirt particles suspended in pool water. The water is pulled from the suction outlet of the pool and is pumped into the top of the filter tank. The water is forced down through the filter sand and back up through the center stand pipe, where it is directed back to the pool through the return line, by the control valve. As the water passes through the sand bed, it is filtered, leaving dirt particle behind and returning clean water back to the pool. This process is automatic and is essential in keeping the pool a clean and healthy environment.

The filter will reach a point when it needs to be cleaned. This is determined by an increase in pressure and a decrease in water flow. When this occurs, the system should be shutdown and the valve turned to the Backwash position. The valve reverses the flow of the water so that it travels down the center stand pipe, up through the sand and out the Backwash port. Once the water runs clear, the valve is turned to the Rinse position before it is turned back to the Filter position, to resume pool filtering.

# LIST OF COMPONENTS AND SPECIFICATIONS

No.	Description	Qty
1	7 Position Valve	1
2	Valve Cap with O-Ring	1
3	Valve Clamp	1
4	Valve Gasket	1
5	Filter Tank	1
6	Center Pipe	1
7	Basket Filter	1
8	Filter Drain Valve	1
9	Clamp Protector	1
10	Filter Hose	1
11	Hose Clamp	2
12	Hose Reducer	1
13	Sand Funnel	1
14	Barbed Fitting	2
15	Pump Motor	1
16	Barbed Fitting O-Ring	2
17	Seal Ring	2
18	Strainer Basket	1
19	Strainer Cover O-Ring	1
20	Clear Strainer Cover	1
21	Strainer Cover Seal Ring	1
22	Strainer Cover Wrench	1
23	Pump Drain Valve	2
24	Drain Valve O-Ring	2



SPECIFICATIONS							
Model Number	Filtration Area		Maximum Working Pressure		Media Required		
					Type	Amount	
	ft <sup>2</sup>	m <sup>2</sup>	PSI	BAR	Filter Sand	lbs	kg
EQ-SC-1900	1.73	0.16	50	3.4	0.45-0.55mm	150	68

# INSTALLATION

## Tools

- Flat-head Screwdriver
- Channel Lock Pliers or Adjustable Wrench
- Allen Key (included)
- Strainer Lid Wrench (included)
- Teflon Tape

## Guidelines for Positioning

- Install the filter system 1.5 feet below the pool water level.
- Install the filter system on a level, firm surface.
- The filter system should be far enough from the pool as to not be used as a means to access the pool.
- Ensure there is adequate space provided around the filter system for operation, maintenance and winterization.

## Motor Assembly

- 1) Install O-Ring (16) into the center outlet port of the Pump Motor (15) as shown in Figure 1.
- 2) Place one of the Barbed Fittings (14) on the center outlet port and secure using a Seal Ring (17) as shown in Figure 2.
- 3) Install O-Ring (16) into the channel of the front intake port as shown in Figure 3.
- 4) Place the Barbed Fittings (14) on the front intake port and secure using a Seal Ring (17) as shown in Figure 4.

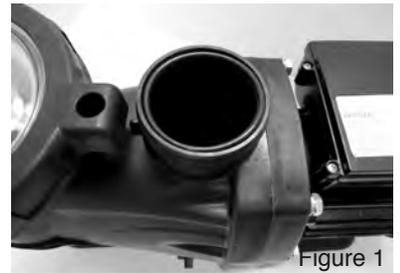


Figure 1



Figure 2



Figure 3



Figure 4

## Filter Assembly and Filter Sand Loading

- 1) Install the Drain Valve (8) by placing one gasket on the inside of the Filter Tank (5) and one on the outside of the tank. Carefully tighten the locking nut with pliers as shown in Figure 5.
- 2) Place the tank in the location that it will be installed and connected to the pool.
- 3) Place the Center Pipe/Basket assembly (6,7) into the center of the tank as shown in Figure 6.
- 4) Place the Sand Funnel (13) over the Center Pipe (6), making sure the pipe is resting in the bottom of the tank and is centered in the tank opening as shown in Figure 7.
- 5) Fill the tank ~half way with water to act as a cushion for when the filter sand is added.
- 6) Slowly add the appropriate amount of sand to the tank as listed on the Specification Table.
- 7) Once the sand is loaded, remove the funnel and store in a secure area for future use.
- 8) Ensure the Valve Gasket (4) is installed on the 7 Position Valve (1) and fit the valve over the Center Pipe (6), providing steady, even pressure for proper seating of the valve as shown in Figure 8.
- 9) Rotate the valve so that the port marked PUMP is facing the Pump Motor (15) and port marked RETURN is facing the pool.
- 10) Secure the valve to the tank using the Valve Clamp (3) and the Allen Key supplied with the unit as shown in Figure 9.
- 11) Remove the Valve Cap (2) and install the Gauge supplied with the unit, using Teflon tape to prevent leaks as shown in Figure 10. Do not over-tighten the Gauge.
- 12) Connect the tank to the pump using the Filter Hose (10) and Hose Clamps (11). Tighten using a flat-head screwdriver as shown in Figure 11.

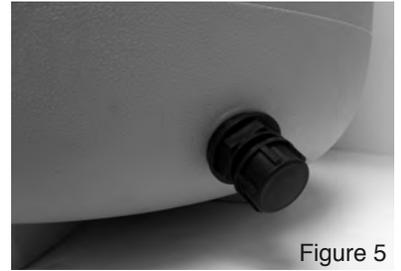


Figure 5



Figure 6



Figure 7



Figure 8

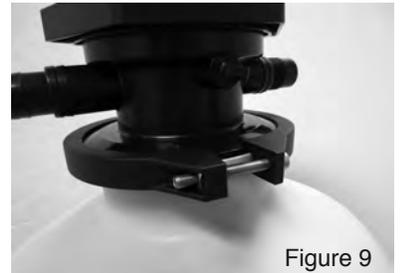


Figure 9



Figure 10



Figure 11

## **Connecting the Filter System**

CAUTION: If replacing an existing system, make sure to disconnect the old system and plug the return and suction lines of the pool to prevent water loss.

- 1) Connect the suction hose from the pool to the front intake port of the Pump Motor using a hose clamp (hose and clamp not supplied).
- 2) Connect the return line hose to the valve port marked RETURN and secure it using a hose clamp (hose and clamp not supplied).
- 3) Remove any plugs from the return and suction lines, allow the system to fill with water and check for leaks. Tighten clamps to close off any leaks.
- 4) Tighten the Strainer Cover Seal Ring (21) using Wrench (22) as shown in Figure 12.



Figure 12

## **OPERATION**

### **Initial Start Up**

- 1) Ensure proper amount of filter sand is placed in the tank.
- 2) Check that all connections are made and are secure.
- 3) Turn the valve to the Backwash position.

IMPORTANT: All suction and return lines must be open prior to turning the system ON as failure to do so can cause a dangerous increase in pressure.

- 4) Turn the filter ON by plugging in the Pump Motor and let the system run for 1 minute to clear any impurities.
- 5) After 1 minute, unplug the pump and turn the valve to Rinse. Plug the pump in and run for 30 seconds.
- 6) Unplug the pump, turn the valve to Filter and restart the pump.
- 7) Tighten any connections that may be leaking and adjust the return fitting in the pool for desired flow.

IMPORTANT: Note the initial pressure gauge reading. Once the pressure gauge reads 5 PSI greater than the initial reading, it is time to backwash the filter.

NOTE: Initial clean up or start up for the season may result in frequent backwashing due to heavy debris loads.

NOTE: After initial start up procedures are followed, normal use of the filter system can resume, running the system on the Filter position and Backwashing as necessary.

### **Backwashing**

- 1) Unplug the Pump Motor.
- 2) Turn the Valve to the Backwash position.
- 3) Plug the Pump Motor in and let the filter run until the water runs clear, approximately 1-2 minutes depending on debris load.
- 4) Unplug the Pump Motor and turn the Valve to the Rinse position.
- 5) Plug the Pump Motor in and run for approximately 30 seconds to 1 minute.
- 6) Unplug the Pump Motor, turn the Valve to Filter and return to regular use of the system.

## Valve Positions and Functions

IMPORTANT: Unplug the pump prior to changing the valve position on the filter.

Setting	Function
Filter	Water will flow through the sand to remove particles from the water.
Backwash	Reverses the flow through the filter to clean the sand.
Rinse	Used after backwashing to clear the valve of any residual debris.
Recirculate	Used during pool clean-up or chemical treatment to create water movement without filtering the water through the sand.
Waste	Bypasses the filter to remove any large contaminants from the water. Ideal for vacuuming.
Open	The lever will be between locking positions to keep the valve in an open position. Used for winterization of the filter system.
Close	Restricts the flow of water. Ideal for maintenance and cleaning of strainer. <b>DO NOT RUN PUMP IN THIS POSITION.</b>

## WINTERIZATION

- 1) Unplug the pump from the outlet.
- 2) Plug the return and suction outlets to shut off water flow to the filter system.
- 3) Turn the valve to the OPEN position.
- 4) Remove the drain plug from the filter and pump to drain water from the system.
- 5) Remove the 7-Position Valve and allow it to drain.
- 6) Store the pump and valve in a dry area where temperatures do not go below freezing.

## TROUBLESHOOTING

SYMPTOM	SUGGESTED REMEDIES
Pump Not Turning ON	<ol style="list-style-type: none"><li>1) Check GFI and reset if needed</li><li>2) Check main circuit breaker and reset if needed</li><li>3) Ensure plug is secure in outlet</li></ol>
Low Water Flow	<ol style="list-style-type: none"><li>1) Clean skimmer and pump strainer baskets</li><li>2) Check that suction and return lines are clear</li><li>3) Check if system is taking in air</li><li>4) Backwash filter</li></ol>
Pool Water is Not Clear	<ol style="list-style-type: none"><li>1) Check pool chemical balance</li><li>2) Ensure valve is positioned to FILTER</li><li>3) Operate filter for longer periods of time</li><li>4) Check flow and Backwash filter if needed</li></ol>
Air in System	<ol style="list-style-type: none"><li>1) Check seal at suction/intake port</li><li>2) Ensure water level is high enough</li><li>3) Loosen the Seal Ring of the Clear Cover briefly to release trapped air</li></ol>

## 1-YEAR LIMITED WARRANTY

This product has been manufactured, tested and inspected in accordance with carefully specified engineering requirements. It is warranted to be free from defects in materials and workmanship under normal use and service, subject to qualifications, conditions and limitations described below.

This warranty extends to the first consumer/purchaser for a period of 12 months from the original date of purchase.

Consumable or expendable parts such as O-Rings, Pressure Gauge, Strainer Basket, Mechanical Seal (complete) or Hoses are NOT covered under this limited warranty. This warranty only applies to products used in North America.

This warranty covers only normal and reasonable use. Any damage, defects, malfunctions or other failures arising from any use which does not comply with the instructions in this manual, including failure of the purchaser to provide reasonable and necessary maintenance, will void this warranty. The customer must provide a copy of the original retail receipt to establish the warranty and file a claim.

The warranty obligations of SmartPool shall be limited to repair or replacement of the product or any defective component, at the discretion of SmartPool. The repair or replacement may include the use of refurbished components and/or units. SmartPool will not be liable or responsible under any circumstances or in any amount for any consequential or incidental damages, for any injury or damages to persons or property using or used in connection with this product, or for loss of profits or other costs or expenses of any kind or character. Return costs such as freight are the responsibility of the consumer.

THERE ARE NO OTHER WARRANTIES OR REPRESENTATIONS, EITHER EXPRESSED OR IMPLIED, WHETHER OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHER, MADE BY SMARTPOOL OTHER THAN THOSE SPECIFICALLY SET FORTH IN THIS WARRANTY. NO PERSON, FIRM, OR CORPORATION IS AUTHORIZED TO MAKE ANY REPRESENTATIONS OR INCUR ANY OBLIGATIONS IN THE NAME OF OR ON BEHALF OF SMARTPOOL, EXCEPT AS STATED HEREIN. THE REMEDIES SET FORTH IN THIS WARRANTY ARE EXPRESSLY UNDERSTOOD TO BE THE EXCLUSIVE REMEDIES AVAILABLE TO THE PURCHASER, AND THIS WARRANTY CONTAINS THE FULL AND COMPLETE AGREEMENT BETWEEN SMARTPOOL AND THE PURCHASER. THIS WARRANTY SETS FORTH THE ONLY OBLIGATIONS OF SMARTPOOL WITH REGARDS TO THIS PRODUCT, AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

To obtain warranty service, call SmartPool Technical Support Specialist at (732) 730-9880, Monday – Friday, 9:00 a.m. – 5:00 p.m. EST.

Please visit [smartpool.com](http://smartpool.com) to view our full line of quality pool products, including robotic pool cleaners, solar pool heaters, lights, saltwater chlorine generators and alarms.

