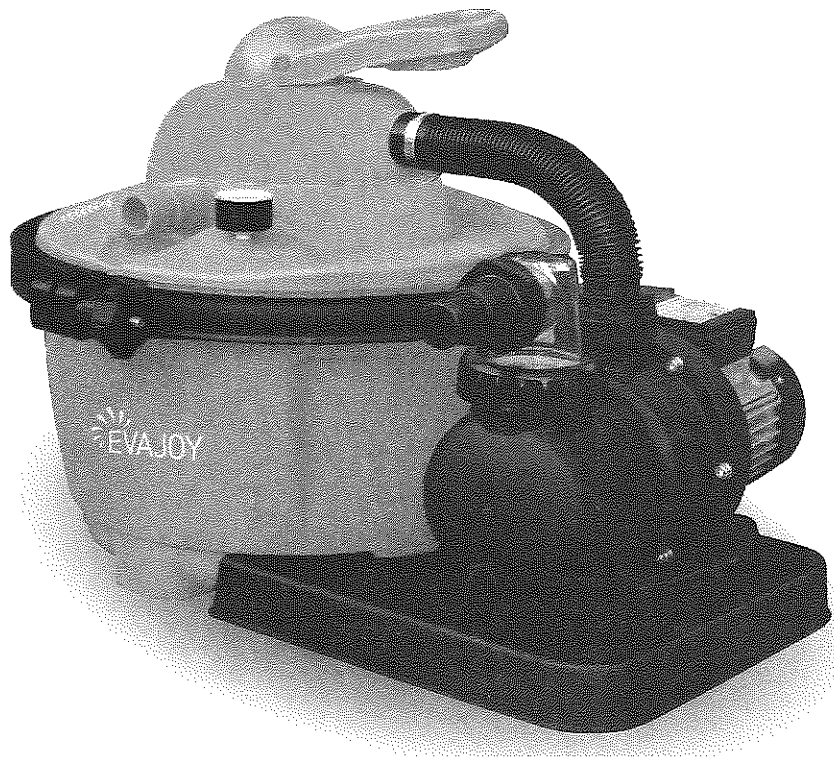


# EVAJOY



Sand Filter Pump

EJ-HF050

User Manual

## **ⓘ Safety Warnings**

Read all Warnings and Cautions noted below. Failure to do so could result in serious or fatal injury.

- Prior to installation of this unit, carefully-read and adhere to all CAUTION, ATTENTION, and ADVICE notices located throughout this manual. Failure to comply with these instructions can cause serious injury, death, or damage to the unit.

- **RISK OF SUCTION ENTRAPMENT HAZARD, WHICH, IF NOT AVOIDED CAN RESULT IN SERIOUS INJURY OR DEATH.** Do not block pump suction at the pump or in the pool as this can cause severe injury or death.

- Electrical wiring **MUST** be installed by a trained professional and adhere to local code and regulations.

- Avoid electric shock. **DO NOT USE** power extension cords.

- Connect **ONLY** to a Ground-Fault Circuit Interrupter (GFCI) power outlet. Consult a Qualified professional electrician for safe and proper installation of a qualified electrical outlet.

- Incorrectly installed equipment may fail, causing severe injuries or damage to the pump-filter system.

- Never submerge the filter and/or pump in water.

- Never place the pump or filter in your pool.

- Trapped air in the pump-filter system may cause the **TANK COVER** to be blown off which can result in death, serious injury, or damage to the pump-filter system. Ensure all air is out of system before operating.

- **NEVER** change the 7 Position Multi-Port-Valve while the system is operating.

- **ALWAYS** unplug the system before changing the control valve.

- Install this product with a sufficient safety-margin from the pool to prevent children-from using the system to access the pool.

- Never **PLUG** or **UNPLUG** this unit from an electrical source while standing in water.

- **NEVER** service this unit with the electrical-power cord connected.

- **Do NOT** operate the system while the pool is being used.

- **KEEP CHILDREN AWAY** from all electrical equipment.

- **NEVER ALLOW CHILDREN TO OPERATE THIS EQUIPMENT.**

- The Pool Owner should always exercise-caution and common sense when utilizing their swimming pool and operating equipment.

## **ⓘ General Information**

This manual provides information relating to the installation, utilization and maintenance of our filtration system. We recommend that you read this manual in its entirety and keep it for future reference.

The pump included with the filtration system is a horizontal, self-priming centrifugal pump. For the pump to function correctly, the water temperature must not exceed 35°C /95°F. The materials used in the pump have undergone stringent hydraulic testing and electrical inspections.

The filter included in the filtration system consists of high-grade polypropylene (PP). It is seamless and manufactured as a single unit (absolutely corrosion resistant and resistant to commercially available swimming pool chemicals). (Prerequisite: Compliance with the standard recommended specifications for the pH- and chlorine value). It is equipped with a container drainage system, pressure gauge, built-in container components, e.g. bottom strainer for even water distribution and a stable PE separation wall between the filter and the fresh water chamber. The filter container comes ready to plug-in and is supplied with a user-friendly 7 Position Multi-Port Valve integrated into the tank cover, an approved filter pump with hair and lint basket, and a plastic base for ready on-site mounting.

Read this manual carefully before installation. The filtration system and pump must be installed in accordance with the standards in effect.

We decline all responsibility for the consequences of failure to comply with the installation instructions. We recommend that you comply with the power source instructions to avoid overloading the pump motor and/or electric shock.

This filtration system is not intended for use by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.

Safety notes and callout boxes should always be observed.

## ⚠ Safety Notes

Your filter pump was constructed and tested and left the manufacturing plant in technically operational condition. In order to maintain this condition and ensure safe operation, the user should observe the notes and product information contained in this technical handbook. If there is any indication that safe operation is no longer possible, the device is to be disconnected from the power supply and secured against accidental use.

This is the case when:

- The device has visible damage
- The device no longer appears functional
- After long periods of storage in poor conditions

**If the power cord or other parts of this equipment are damaged, they have to be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid danger.**

## ⚠ Damage during delivery

Your filter system has been carefully and professionally packed for delivery. Please check to ensure that the package is undamaged and that all parts are in the box. If you purchased this product on order and the product was shipped to you, ensure that delivery is complete. Damage to product as a result of shipping is not the responsibility of the supplier and must be immediately reported to the shipper. The shipper assumes the liability for damages during delivery, the supplier is not responsible for it.

## ⚠ Implied Warranty

The manufacturer warranties safe operation and reliability only under the following conditions:

- The filter system is installed and operated according to the assembly and operating instructions.

- Only original replacement parts are used (consumable parts do not fall under the warranty).

Expendable parts do not fall under the warranty. These include:

- All O-rings
- Pressure gauge
- Mechanical seal, complete

## ⚠ Resultant Damages

We cannot be responsible for damages to the product if the product is not used in accordance with the instructions provided.

## ⚠ Unpacking your filter system

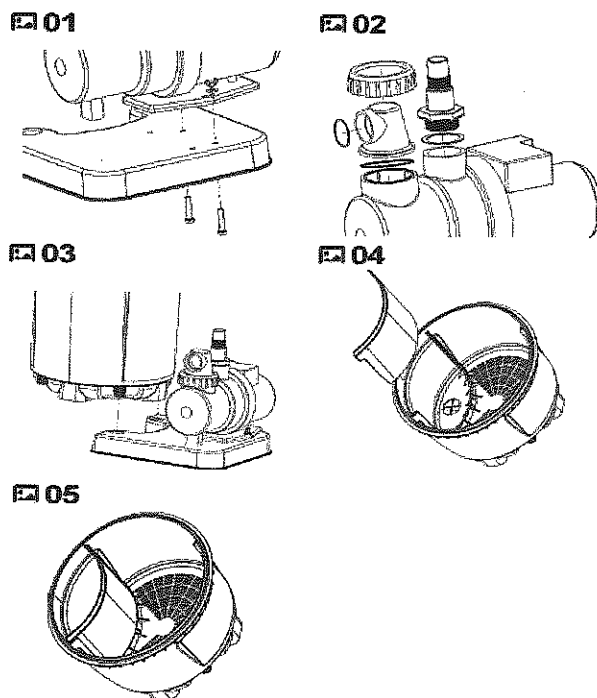
Carefully remove the product and all component parts from the box. Cross reference all parts in the box with the parts list reference chart to make certain all parts are present before beginning assembly.

**NOTE:** Some parts may be located within the filter tank. To access these parts you must remove the tank cover.

Refer to Appendix A for a complete EXPLODED VIEW PARTS DIAGRAM

## Set up

### Filter- Pump Assembly (Picture 1 – 5)



## 1. Water Pump – Base Plate Assembly

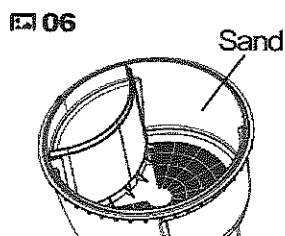
a) Secure water pump to the base plate with the provided pump mounting hardware. Orient as shown.

## 2. Pump Fittings Assembly

- a) Screw the 1¼"-1½" hose connector into the center port of the water pump. Ensure that the O-ring "A" is installed between the port and the connector.
- b) Remove the threaded ring (Collar) on the outer opening of the pump.
- c) Place O-ring "B" in the groove around the hair and lint strainer basket.
- d) Place the transparent hair & lint strainer cover in place and then screw the threaded ring (Collar) back on securely over the cover.
- e) Insert O-ring "C" (1 1/4") inside the outward facing opening of the transparent hair & lint strainer cover. Place the base plate and pump in the location where the Pump Filter System will be located for normal operation and within reach of the pool filter and return hoses but with a sufficient safety margin from the edge of the pool.

Attach the filter tank to the base plate as shown. The feet on the bottom of the filter tank fit within the holes provided on the base plate. Insert the tank separator plate inside the main tank in the guides provided.

## 2. Filling sand chamber with sand (Picture 6)



Position the filter pump assembly to the location you have dedicated for its operation. NOTE: Do this before you fill the chamber with sand as the unit will become heavy and difficult to move around.

Check to ensure that the bottom strainer is correctly positioned.

Check to ensure that the tank separator plate is seated properly.

Fill the sand chamber half full with water.

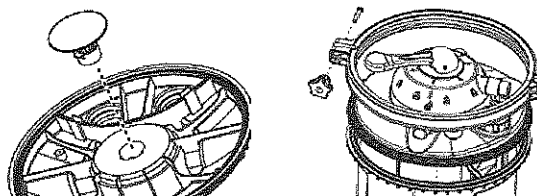
Pour Quartz Sand with a particle size of 0,40 – 0,80mm into the SAND FILTER CHAMBER being careful not to allow any sand to enter the FILTERED WATER CHAMBER (see figure).

Requires 33 LBS of Quartz Sand with a particle size of 0,4 – 0,8mm.

## 3. Securing filter assembly (picture 7,8)

07

08



Ensure the main tank seal around the top of the filter tank is in good condition and securely seated in the groove. Be sure groove is free of sand.

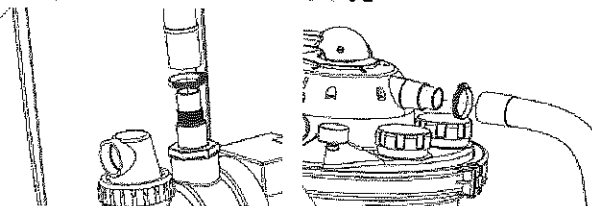
Carefully place the tank cover onto the filter tank. The tank cover should be oriented so that the notch on the cover is aligned with the matching tab on the filter tank – this ensures proper alignment.

Secure tank cover and filter tank with the tank cover lock ring assembly and tighten with the knob and bolt.

## 4. Hooking up the hoses (Picture 9,10,11)

09

10



## 5. Connecting the filter system

This pool filter system is designed to connect to pools with standard 1¼ or 1½" diameter hose connectors.

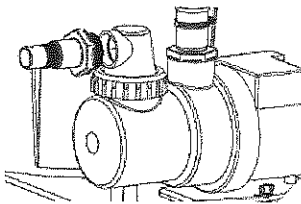
If your pool has a hose connector size and/or type different than described here, you may need to purchase an adapter at your local pool supply store or hardware retailer.

Since the hoses utilized for filtration and return lines differ for various types of above-ground pools, the pool-filter connection section is different.

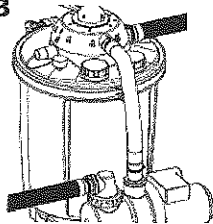
Before you begin to connect hoses to the filter and pump, make certain that no water can flow through the intake or return hoses connected to the pool. Some pools have shut off valves in their intake and return ports, others do not. If you do not have a shut off valve, block the ports with a removable plug to prevent water from passing into and through the hoses.

**6. For Pools with 1¼" or 1½" Diameter Unthreaded Hoses (Picture 12,13)**

Picture 12



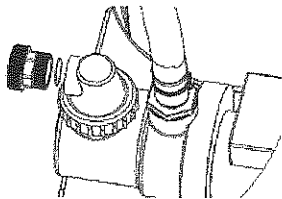
Picture 13



These instructions assume that the pool is already assembled with hoses attached to the water intake and return ports on the pool.

**7. Adapter installation (Picture 15)**

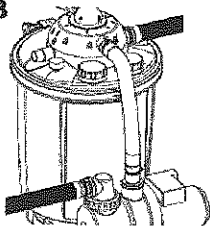
Picture 15



Screw the 1¼"-1½" hose connector into the transparent hair & lint strainer cover. Make certain that flat gasket "A" is in place before securing.

**8. Pool "Skimmer Hose" "Return-Hose" Attachment (Picture 13)**

Picture 13



Attach the hose coming from your pool's skimmer (outlet of pool) to the 1¼"-1½" hose connector extending from the hair & lint strainer cover. Secure with a hose clamp.

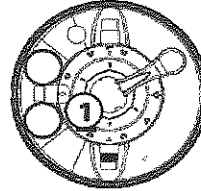
Lightly lubricate the pool return port on the tank cover with petroleum jelly.

Attach the pool return hose (inlet of pool) to the pool return port on the tank cover. Secure with a hose clamp.

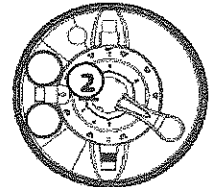
**NOTE:** Be careful not to secure return hose to the waste/backwash.

**Filter operations**  
(Picture 19-25)

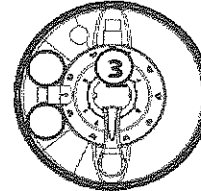
Picture 19



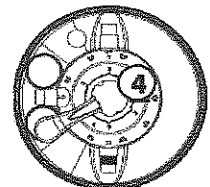
Picture 20



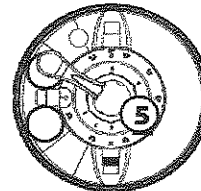
Picture 21



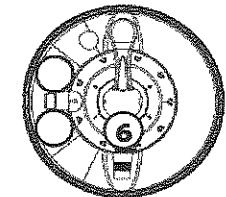
Picture 22



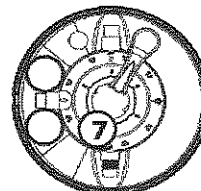
Picture 23



Picture 24



Picture 25



Setting	Complete water flow/function
Filter Position 1 Picture 19	Function: Vacuum, regular pool filter action. This is the setting the filter will be set to most of the time. In this position, water is directed through the top of the filter where it compresses and flattens down the sand. Contaminants are trapped by the sand as water makes it way to the bottom strainer, out of the filter and back to the pool.

Rinse Position 2 Picture 20	Function: Use after backwashing to clean the filter bed. This should always be done immediately after backwashing, new sand addition or filter start-up. In this position, water is directed to the top of the tank where it flushes the valve while sending water out the waste line.
Circulation Position 3 Picture 21	Function: circulate water after chemical treatment. This position is used during certain pool cleanups and chemical treatments when you don't want the water contaminating the sand. In this position, water is only directed through the valve back to the pool and does not filter through the sand.
Backwash Position 4 Picture 22	Function: clean filter of captured debris. This is the position needed to clean the filter/the sand. You'll know it is time to backwash when the pressure-gauge rises 0,3 to 0,6 bar above what it normally reads when the filter is clean. In this position, water is directed through the bottom strainer, reversing the flow through the tank. This causes the sand to separate and lift while releasing trapped debris out the waste line.
Closed Position 5 Picture 23	Function: Cleaning the hair and lint strainer. This position stops the flow of water into the pump and filter. CAUTION: Do not run pump with valve in this position.
Purge/ Drain Position 6 Picture 24	Function: bypass the filter. This position is ideal for vacuuming pools with large amounts of debris or after an algae treatment. In this position, water bypasses the filter and sends all the water and contaminates out the waste line.

Winterize Position 7 Picture 25	Function: winterizing and storage. In this position, the valve lever is between positions which removes pressure from internal valve components for winter (off-season) storage. CAUTION: Do not run pump with valve in this position.
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## Important Do's and Dont's

### DO's:

- Be aware and make note of the filter pressure when the sand is clean. Backwash when you see an increase of 4.5-9 PSI on the pressure gauge.
- Backwash long enough to get the job done right. Let the system backwash until the water leaving the waste line is clear. Note that backwashing can remove 53 – 290 GAL of water from your pool so pay attention. Also, be aware of local codes regarding pool water disposal as some communities outlaw drainage.
- Protect bottom strainer while replacing or adding sand. Fill the tank with 9" – 12" of water and cover the water chamber to avoid getting sand inside.
- Start filter in Backwash mode for approx. 3 minutes and then for about 1 minute in the rinse mode before initial start up or after adding new sand. By doing this you can avoid blowing small particles and impurities from the new sand into your pool. If some debris from the new sand does go into your pool, vacuum it up with the system in purge mode, otherwise you may keep sending it back to the pool.

### DO's:

- Move valve handle while the pump is running. It will damage the valve and possibly other equipment as well.
- Backwash excessively. Sand filters operate more efficiently during mid-cycle. Some level of debris in the sand bed actually helps filtration and makes the filter more effective. Too much backwashing will reduce efficiency.

●Vacuum the pool in backwash mode. You can plug up the strainer at the bottom of the filter which will result in inefficient operation. Plus you may have to remove all of the sand to get it unclogged.

### **🕒 In start up**

Once the filter system has been properly assembled, the sand chamber filled with sand and the hoses connected as described above, you may begin with filtration. However, we recommend that you clean and prepare the new sand that is in the sand chamber first. Cleaning the sand prior to filtering your pool will remove most of the dust and tiny sand particles that may exist in the sand. If you move straight to filtering, these particles will end up in your pool. To clean the sand, please follow the instructions below.

Do not plug the system in until advised to do so below.

- 1) Make certain the pump is not plugged in to a power supply.
- 2) Start with the valve in the 5 Closed position.
- 3) If you haven't done so already, fill your pool with water. Ensure that the water level is at least 1" – 2" above the top of the hose intake (Skimmer) and return ports in the pool.
- 4) Release the shut off valve at the intake port (Skimmer) in the pool. If you plugged the intake port (Skimmer), remove the plug to allow the water to flow into the intake hose.
- 5) With the filter-pump system installed in a location level lower than your pool's water level – water will automatically flow into the pump-filter system.
- 6) Allow the filter tank to fill with water.
- 7) Check for leaks and make any necessary adjustments. Because of tolerances (in consequence of the production process), it is possible that it may be necessary to use a Teflon tape additionally which has to be wrapped around the connections, before the connection tube is fixed, in order to correct these tolerances.

8) Follow the backwash process described below.

### **Backwash Process**

- Disconnect the Motor/Pump from the Power Source.
- Attach backwash hose (not included) to backwash port.
- Place the Multi-Port Valve in the "4 - Backwash" position.
- Reconnect to power source.
- Run filter in BACKWASH mode until discharge water is clear.
- Disconnect the Motor/Pump from the Power Source.
- Place the Multi-Port Valve in the "2 - RINSE" position. It is important that you read and follow the instructions on proper-power supply sources.
- Reconnect to power source.
- Allow filter to run for 60 seconds to remove any remaining residue from pump and valve.
- Disconnect the Motor/Pump from the Power Source.
- Place the Multi-Port Valve in the "1 - Filtration" position.
- Reconnect to power source.
- Your filtration system is RUNNING and ready for further operation.

### **🕒 To winterize the system**

- 1) Unplug the pump from the power source.
- 2) Close the shut off valves or block the flow of water at the pool inlet and return ports.
- 3) Disconnect the filtration system from the pool, drain the tank and hoses.
- 4) Place the handle on the central valve in position 7- 'Winterize' to relieve the tension on the spring and internal valve components.
- 5) Store the filter system in a location protected from frost and severely cold temperatures. In a garage or insulated storage shed is recommended.

## Troubleshooting

Malfunction	Cause	Solution
Pressure gauge has-reading over 1 bar	Dirty filter bed	Backwash the filter (position 4)
Pressure is too low	Hair and lint strainer basket is dirty; Pump gets too little water	Clean the hair and lint strainer; check the suction line and the water level
Air in the pump	Poor seal on the intake side of the pump	Tighten hose clamps and connecting fittings.
Leaking filter	Seal Defective	Check the seal, replace if needed
Pump does not run	Not plugged in	Check the socket and power cord
	G.F.C.I/ or main circuit breaker tripped	Switch on the breaker (if it is immediately tripped again, there is a defect in pump or controls)
	Pump motor defective	Replace the entire pump
Sand in Pool	If the sand is newly replaced, the undersized grains are still present	Backwash several times until the backwash water is clear (position 4)
	Sand in Central Valve (from backwash)	Purge into drainpipe for 30 seconds (position 6)
	Separation wall in filter is improperly installed	Check the separation wall for proper positioning
	Filter bottom strainer is damaged	Replace the filter bottom strainer
Air in system		Loosen, but do not remove, the transparent cover on the filter tank to allow any trapped air to escape. Tighten the cover once all of the air has escaped