

# The manual of sand filter with pumps

**MODELS :** 72012/72013/72014/72015/72212/72213/72214/72215/72016/72017/72216  
72217/72018/72019/72020/72021/72218/72219/72220/72221/72022/72005  
72205/72211/72011/72223/72023/72225/72025

## SAFETY INFORMATION

1. The sand filters are designed to work with water at temperature >than 0°C and <than 45°C. The filter should never be operated outside of these temperatures or damage may occur.
2. The installation should be carried out in accordance to the safety instructions of swimming pools and the specific instructions for each facility.
3. The user should make sure that the installation is carried out by qualified authorized persons and that these persons have first carefully read the following instructions. Incorrectly installed equipment may fail, causing severe injury or property damage.
4. The operating safety of the filter is only guaranteed if the installation and operation instructions are correctly followed.
5. To reduce the risk of injury, do not permit children to use this product.
6. Chemical spills and fumes can weaken Swimming Pool/ Spa. Corrosion can cause filters and other equipment to fail, resulting in severe injury or property damage. Do not store pool chemicals near your equipment.
7. Any modification of the filter requires the prior consent from the supplier's original replacement parts and accessories authorized by the manufacturer ensure a high level of safety. The supplier assumes no liability for the damage and injuries caused by unauthorized replacement parts and accessories.
8. In the event of defective operation or fault, contact the supplier or its nearest authorized service agent.

## Sand Filtration system working principle

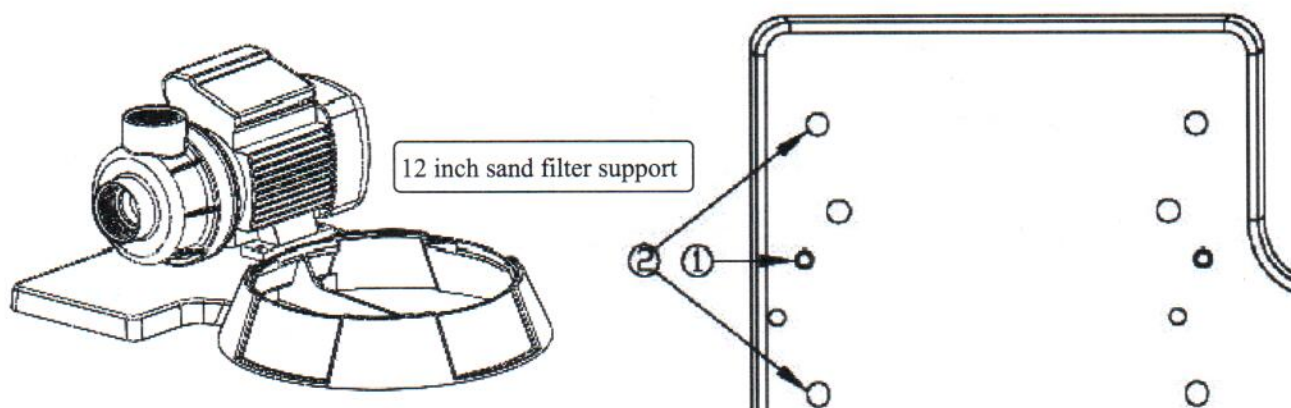
Incoming water from the piping system is automatically directed by the Multiport Valve to the top of the filter bed. As the water is pumped through the filter sand, dirt and debris are trapped by the filter bed, and filtered out. The filtered water is returned from the bottom of the filter tank, through the Multiport Valve and back through the piping system.

## Preparation before installation

1. Position the filter as close to the Swimming Pool/ Spa as possible.
2. The filter should be placed on a level concrete slab, very firm ground, or equivalent. Ensure that the ground will not subside, preventing any strain from the attached plumbing.
3. Position the filter under consideration of the piping connections, so that it is convenient for operating and servicing.
4. Ensure that the compliance label is facing the front to allow easy identification in the case of service difficulties.

## How to install the filter tank

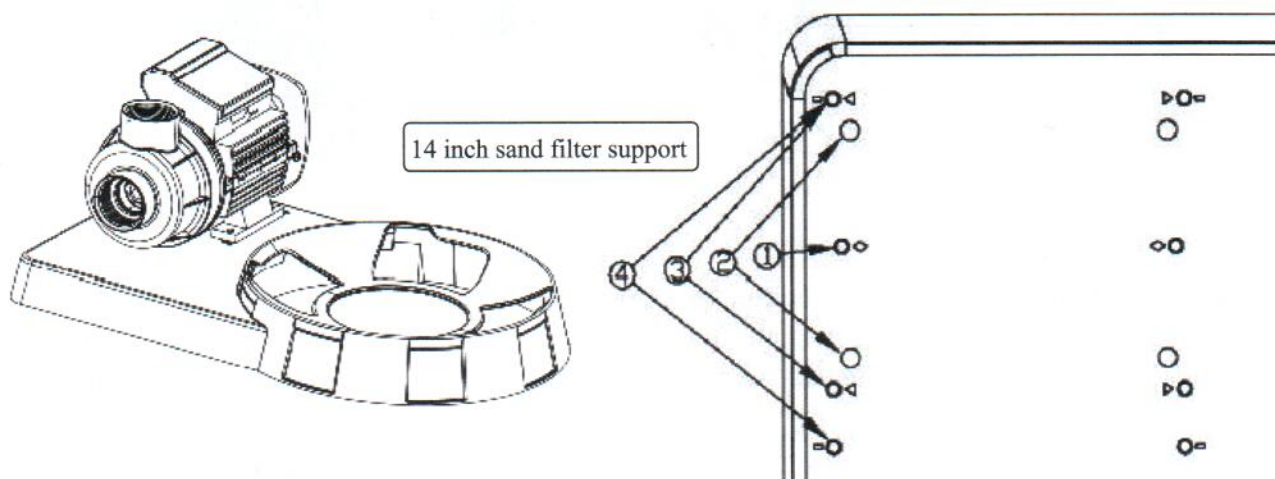
1. Mount the Pump to sand filter support by using bolts and nuts.



For 12 inch sand filter:

The location of ① is the mounting hole to install 72516/72517/72716/72717 pumps.

The location of ② is the mounting hole to install 72512/72513/72514/72515/72712/72713/72714/2715 pumps.



For 14 inch sand filter:

The location of ① is the mounting hole to install 72516/72517/72716/72717 pumps.

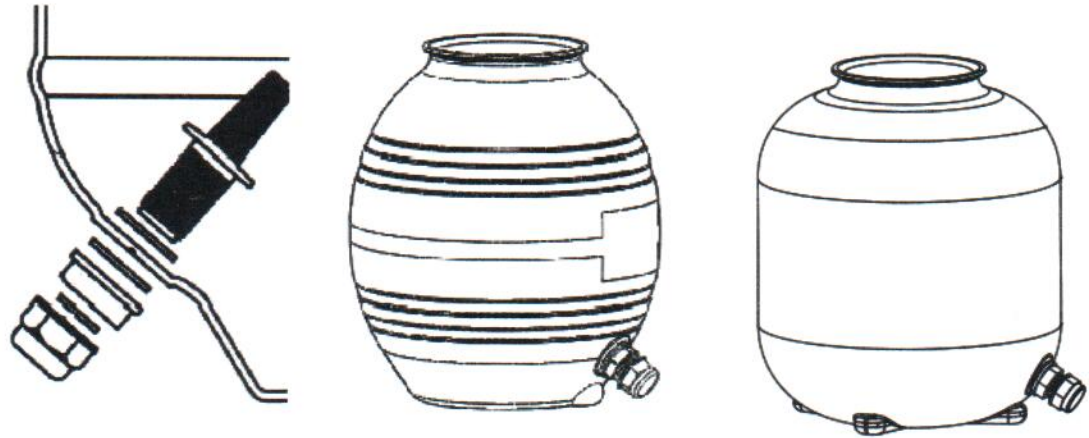
The location of ② is the mounting hole to install 72512/72513/72514/72515/72712/72713/72714/72715 pumps.

The location of ③ is the mounting hole to install 72527/72528 pumps.

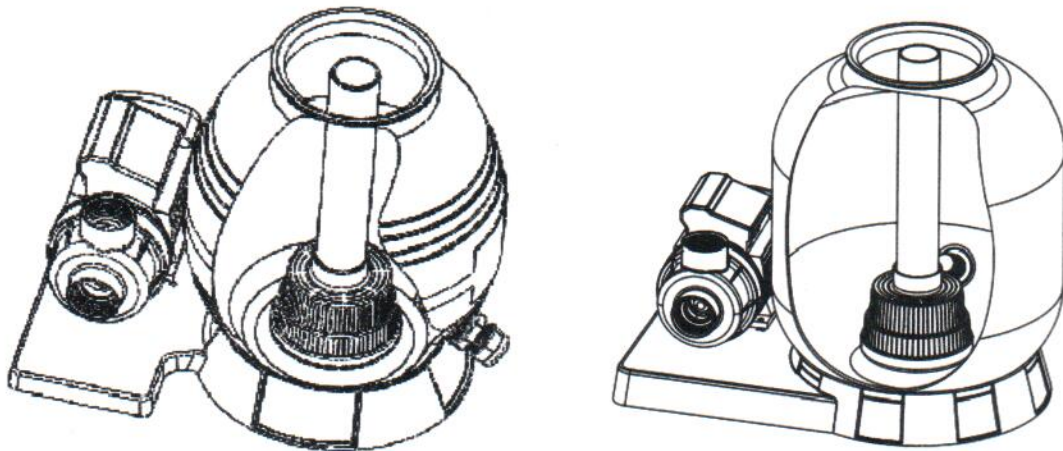
The location of ④ is the mounting hole to install 72529 pumps.



2. Install the drain plug assembly to sand tank as below pictures.



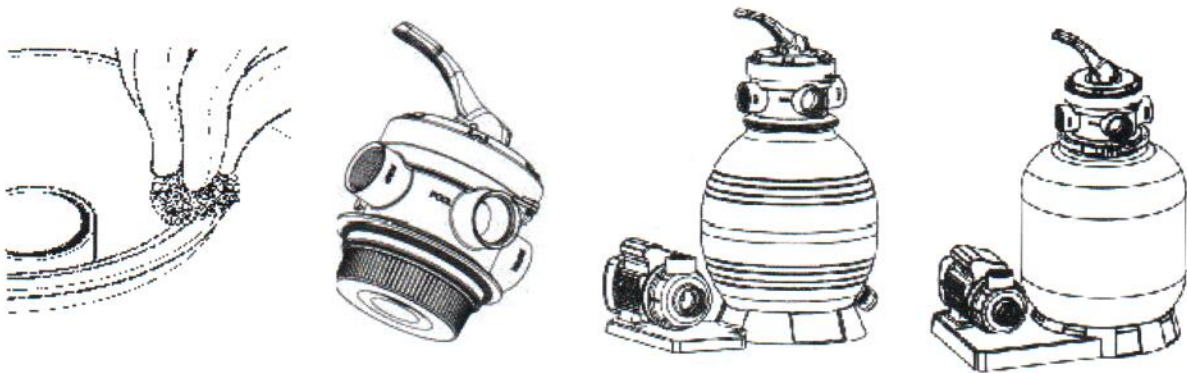
3. Press and turn the sand tank to mount it to sand filter support with correction direction (drain plug is at outside as below pictures).



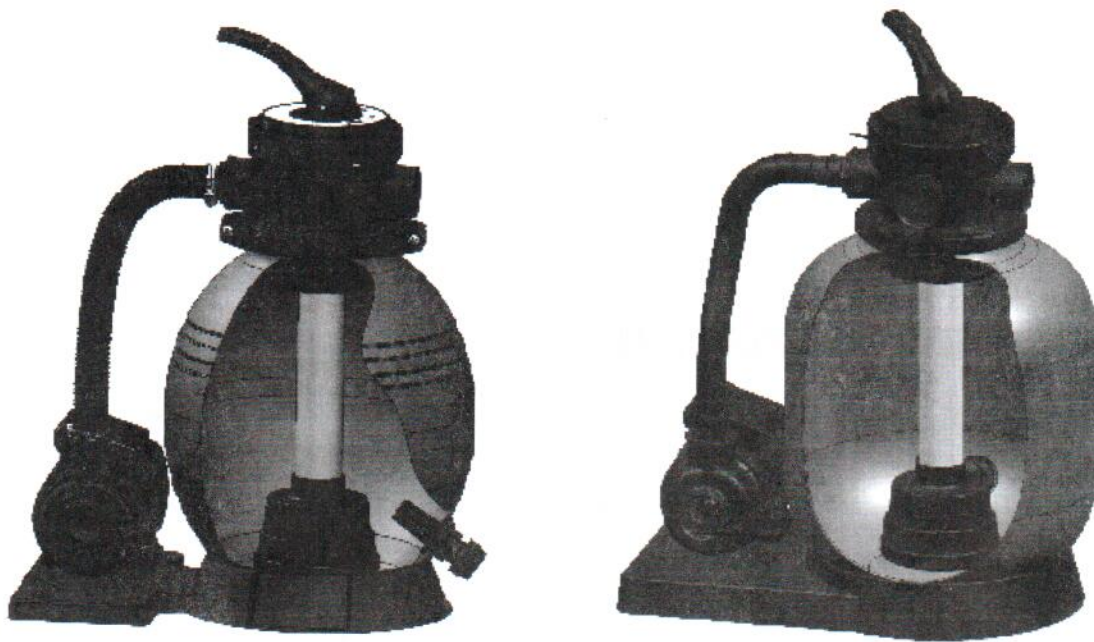
4. Insert the tube with the diffuser body inside the tank as above picture, then place the funnel on the tank's mouth and pour the quartz sand into the tank (12 inch sand filter needs about 19kg sands to fill into the tank, 14 inch sand filter needs about 27kg sands to fill into the tank).



5. Take away the funnel, and then please make sure tank's neck is very clean. Put the O-ring on the valve and use clamp to fix the valve with tank. (the direction of "PUMP" port on valve needs to face pump out port).



6. Connect the sand tank to pump with hose, hose clamps and hose adaptors.



### **INSTALLATION NOTES:**

1. Make sure the filter is worked under the work pressure, and using a pressure control valve when the system using a booster pump.
2. If the pump position is higher than the water level, it requires to install the back water control valve.
3. If the pump position is lower than the water level, it requires installing an isolation valve. It could stop the water return back when people do the general inspection.
4. Reducing the connect adaptors and hose connecting bending as less as possible. Decreasing the water flow scrub, it could reach the maximum effective.
5. Ensure solvents are not excessively applied to fittings as this could run into O-ring and create sealing problems.
6. Do not over tighten fittings or adapters.



## HOW TO USE

1. Inspect all the connections have been made correct and are secure.
2. Depress top mount valve handle and rotate to BACKWASH position.
3. Prime and start pump according to pump instructions.

**NOTE:** ALL SUCTION AND DISCHARGE VALVES MUST BE OPENING

WHEN STARTING THE SYSTEM. FAILURE TO DO SO COULD CAUSE SEVERE PERSONAL INJURY.

MAKE SURE THE FILTER VESSEL ARE FULL FILL THE WATER BEFORE START UP THE PUMP.  
OR IT WILL CAUSE THE PUMP DAMAGED.

4. Once water flow is steady out the waste line, run the pump for at least 2 minutes. The initial back-washing of the filter is recommended to remove any impurities of fine sand particles in the sand media.
5. 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, set valve to FILTER position and restart pump. Your filter is now operating in the normal filter mode, filtering particles from the pool water.

## NOTES:

1. Note the initial pressure gauge reading when the filter is clean. (it will vary from 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 8-10 PSI(0.55-0.69 BAR) higher than the initial "clean" pressure you noted, it is the time to backwash (clean) the filter.
2. IMPORTANT: To prevent unnecessary strain on piping system and valving, always shut off pump before switching filter control valve position.
3. To prevent damage to the pump and filter and for proper operation of the system, clean pump strainer and skimmer baskets regularly.

## FILTER CONTROL VALVE FUNCTIONS:

**FILTER** - Set valve to FILTER for normal filtering. Also use for regular vacuuming.

**BACKWASH** – For cleaning filter. When filter pressure gauge rises 8-10 PSI (0.55-0.69 BAR) above start-up (clean pressure):

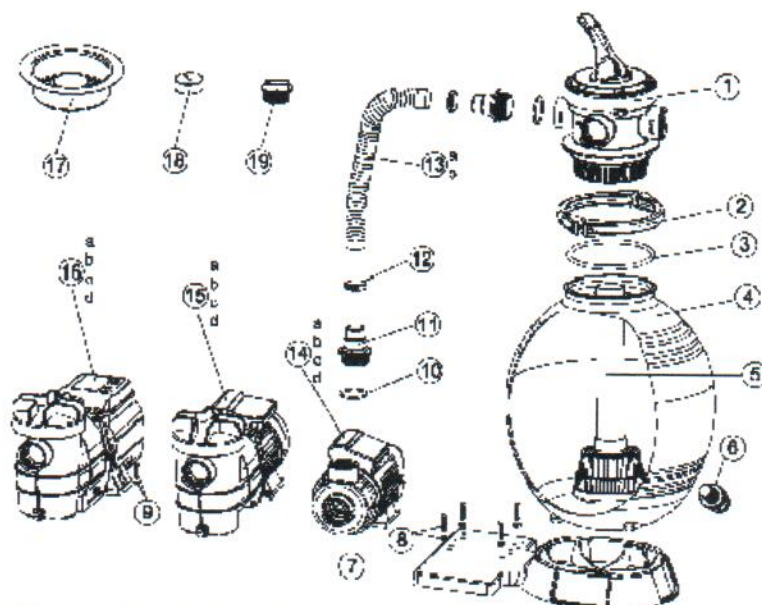
Stop the pump, set valve to BACKWASH. Start pump and backwash until water in sight glass is clear. Approximately 2 minutes or less depending on dirt accumulation. Proceed to RINSE.

**RINSE** – After backwashing, with pump off, set valve to RINSE. Start pump and operate for about 1/2 to 1 minute.

This ensures that all dirty water from backwashing is rinsed out of the filter to waste, preventing possible return to the pool. Stop pump, set valve to FILTER and start pump for normal filtering.

**WASTE** – To bypass filter for draining or lowering water level and for vacuuming heavy debris directly to waste.

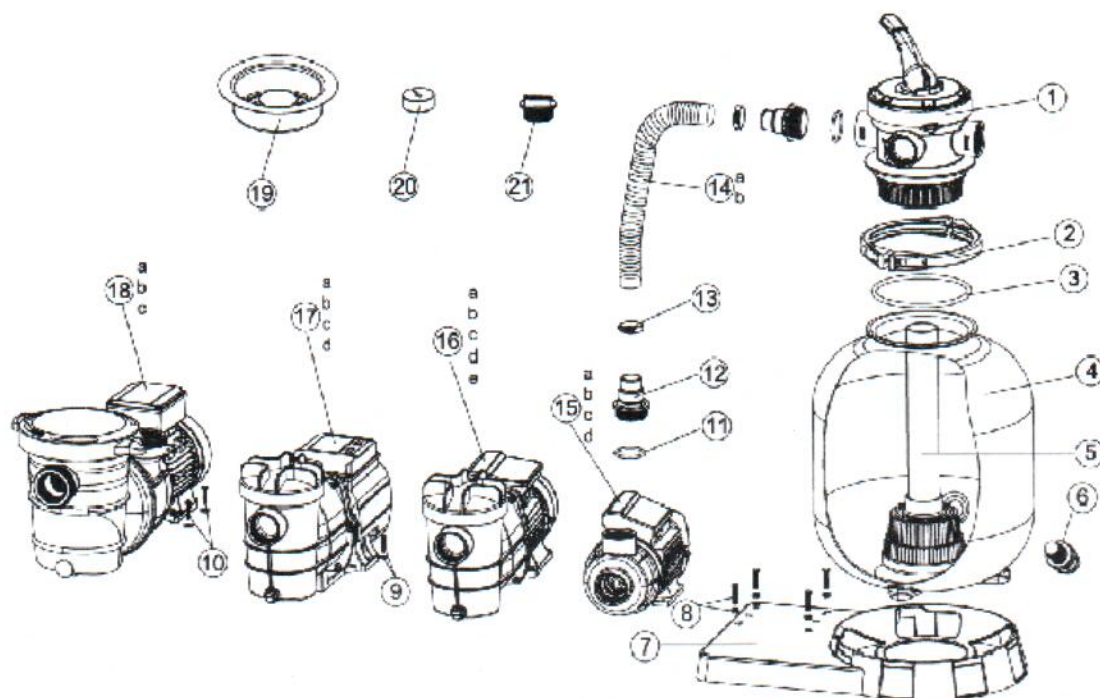




### Parts Listing for 12" sand filter with pump

Ref. No.	Part No.	Description	QTY
1	647303071001	4-Way Valve	1
2	647303076	Flange clamp	1
3	65431041080	O-ring	1
4	647303013931	Filter Tank	1
5	647303074	Filter Assembly	1
6	647303075	Drain plug	1
7	647303012	sand filter support	1
8	647201273000	Screw M6X25 and Nut M6	4
9	647202272000	Screw ST5.5X30 and Nut $\Phi$ 16X $\Phi$ 6.5X1	2
10	65431021080	O-ring	5
11	647303014	Hose Adaptor	5
12	97208	Hose Clamp	1
13a	65749014011	1 1/4" (32mm)x45cm hose for 72013/72015/72213/72215	1
13b	65749017011	1 1/4" (32mm)x35cm hose for 72012/72014/72212/72214	1
14a	72512	0.25HP Pump for 72012 (230V-50HZ)	1
14b	72514	0.35HP Pump for 72014 (230V-50HZ)	1
14c	72712	0.25HP Pump for 72212 (115V-60HZ)	1
14d	72714	0.35HP Pump for 72214 (115V-60HZ)	1
15a	72513	0.25HP Pump for 72013 (230V-50HZ)	1
15b	72515	0.35HP Pump for 72015 (230V-50HZ)	1
15c	72713	0.25HP Pump for 72213 (115V-60HZ)	1
15d	72715	0.35HP Pump for 72215 (115V-60HZ)	1
16a	72516	0.25HP Pump for 72017 (230V-50HZ)	1
16b	72517	0.35HP Pump for 72016 (230V-50HZ)	1
16c	72716	0.25HP Pump for 72217(115V-60HZ)	1
16d	72717	0.35HP Pump for 72216(115V-60HZ)	1
17	65756006000	Neck Fitting	1
18	97202	Pressure gauge	1
19	91215	Plug W/o-ring 1 1/2" MIP	1



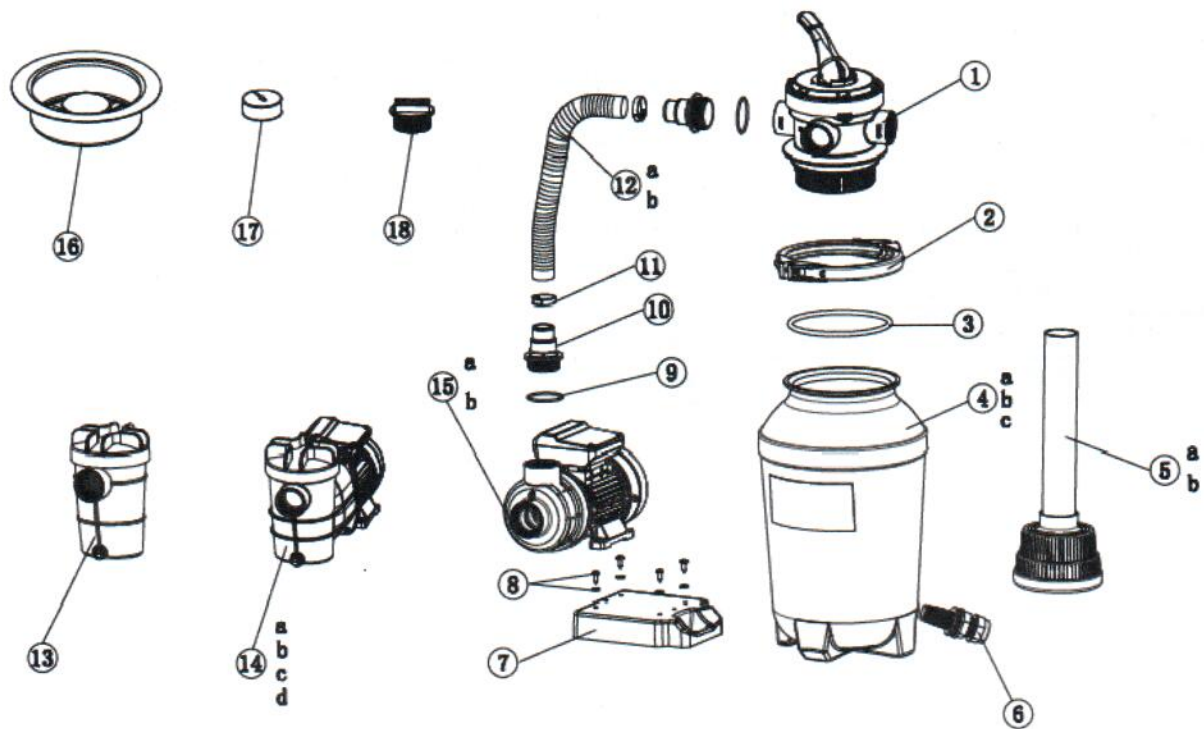


### Parts Listing for 14" sand filter with pump

Ref. No.	Part No.	Description	QTY
1	647303071001	4-Way Valve	1
2	647303076	Flange clamp	1
3	65431041080	O-ring	1
4	647303501906	Filter Tank	1
5	647303074	Filter Assembly	1
6	647303075	Drain plug	1
7	647303502	sand filter support	1
8	647201273000	Screw M6X25 and Nut M6	4
9	647202272000	Screw ST5.5X30 and Nut $\Phi$ 16X $\Phi$ 6.5X1	2
10	647202272000	Screw ST5.5X30 and Nut $\Phi$ 16X $\Phi$ 6.5X1	4
11	65431021080	O-ring	5
12	647303014	Hose Adaptor	5
13	97208	Hose Clamp	1
14a	65749014011	1 1/4" (32mm)x45cm hose for 72018/72020/72218/72220	1
14b	65749017011	1 1/4" (32mm)x35cm hose for 72019/72021/72219/72221	1
15a	72512	0.25HP Pump for 72018 (230V-50HZ)	1
15b	72514	0.35HP Pump for 72020 (230V-50HZ)	1
15c	72712	0.25HP Pump for 72218 (115V-60HZ)	1
15d	72714	0.35HP Pump for 72220 (115V-60HZ)	1
16a	72513	0.25HP Pump for 72019000 (230V-50HZ)	1
16b	72515	0.35HP Pump for 72021000 (230V-50HZ)	1
16c	72713	0.25HP Pump for 72219000 (115V-60HZ)	1
16d	72715	0.35HP Pump for 72221000 (115V-60HZ)	1
16e	72521	0.5HP Pump for 72022001 (230V-50HZ)	1
17a	72516	0.25HP Pump for 72019200 (230V-50HZ)	1

17b	72517	0.35HP Pump for 72021200 (230V-50HZ)	1
17c	72716	0.25HP Pump for 72219200 (115V-60HZ)	1
17d	72717	0.35HP Pump for 72221200 (115V-60HZ)	1
18a	72527	0.5HP Pump for 72022000 (230V- 50 HZ)	1
18b	72528	0.75HP Pump for 72022100 (230V-50 HZ)	1
18c	72529	1.0HP Pump for 72022200 (230V-50 HZ)	1
19	65756006000	Neck Fitting	1
20	97202	Pressure gauge	1
21	91215	Plug W/o-ring 1 1/2" MIP	1





### Parts Listing for 10"/12.5"/15" sand filter with pump

Ref. No.	Part No.	Description	QTY
1	647303071001	4-Way Valve	1
2	647303076	Flange clamp	1
3	65431041080	O-ring	1
4a	647302501	Filter Tank for 73025(10")	1
4b	647303101	Filter Tank for 73031(12.5")	1
4c	647303801	Filter Tank for 73038(15")	1
5a	647302571000	Filter Assembly for 73025 / 73031	1
5b	647303871000	Filter Assembly for 73038	1
6	647304073	Drain plug	1
7	647302502	sand filter support	1
8	65862062000	Screw ST5.5*25 and hose clamp $\Phi 18*\Phi 6.5*1.5$	1
9	65431021080	O-ring	6
10	647303014	Hose Adaptor	5
11	65021004000	Hose Clamp	2
12a	65749017011	1 1/4" (32mm)*35cm hose for 72005/72205/72211/72011/72223/72023	1
12b	65749014011	1 1/4" (32mm)*45cm hose for 72225/72025	1
13	647251273000	Filtering barrel component for 72005002/72205002	1
14a	72715	0.35HP Pump (115V-60HZ) for 72211000/72223000	1
14b	72515	0.35HP Pump (230V-50HZ) for 72011000/72023000	1
14c	72721	0.5HP Pump(115V-60HZ) for 72225000	1
14d	72521	0.5HP Pump(230V-50HZ) for 72025000	1
15a	72712	0.25HP Pump(115V-60HZ) for 72205000	1
15b	72512	0.25HP Pump(230V-50HZ) for 72005000	1
16	65756006000	Neck Fitting	1
17	97202	Pressure gauge	1
18	91215	Plug W/o-ring 1 1/2" MIP	1