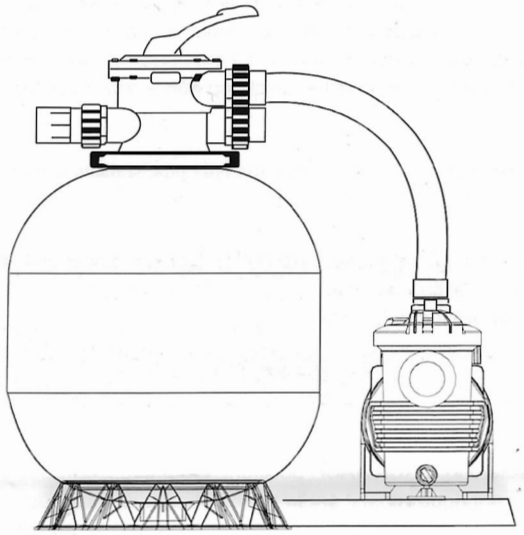
JESTA

PLASTIC SAND FILTERS SYSTEM
OWNER'S MANUAL

P-DYG350 P-DYG400 P-DYG450
P-DYG500 P-DYG650



1 HOW IT WORKS

The filter uses special filter sand to remove dirt particles from pool water. The filter sand is loaded into the filter tank and functions as the permanent dirt removing media. The pool water, which contains suspended dirt particles, is pumped through your piping system and is automatically directed by the patented filter control valve to the top of the filter tank. As the pool water is pumped through the filter sand, dirt particles are trapped by the sand bed, and filtered out. The cleaned pool water is returned from the bottom of the filter tank, through the control valve and back to the pool through the piping system. This entire sequence is continuous and automatic and provides for total recirculating of pool water through your filter and piping system.

After a period of time, the accumulated dirt in the filter causes a resistance to flow, and the flow diminishes and the reading of pressure gauge rises. This means it is time to clean (backwash) your filter. With the control valve in the backwash position, the water flow is automatically reversed through the filter so that is directed to the bottom of the tank, up through the sand, flushing the previously trapped dirt and debris out the waste line. Once the filter is backwashed (cleaned) of dirt,the control valve is manually positioned to Rinse, and then positioned to Filter to resume normal operation.

2 INSTALLATION

Only simple tools (screwdriver and wrenches), plus pipe sealant for plastic adapters, are required to install and/or service filter.

1. The filter system must be placed on level, very firm, ground. Position the filter so that the piping connections, control valve and winter drain are convenient and accessible for operation, service and winterizing.
2. Assemble the Pump to the platform base. The adapters must now be installed to connect the pump/filter system.
   a. Apply Teflon pipe sealant tape or Permatex No. 2 sealant to straight adapter. Screw adapter into pump discharge port. (Do not over tighten.)
   b. Apply Teflon pipe sealant tape or Permatex No. 2 sealant to elbow adapter. Screw adapter securely into opening in control valve marked PUMP. (Do not over tighten.)
3. Loading sand media. Filter sand media is loaded through the top opening of the filter.
   a. Loosen flange clamp and remove Filter Control Valve (if previously installed).
   b. Cap internal pipe with sand shield to prevent sand from entering it. Be sure pipe is securely in place in bottom under drain hub.

c. We recommend filling tank approximately 1/2 way with water to provide a cushioning effect when the filter sand is poured in. This helps protect the under drain laterals from excessive shock. (Be sure the winter drain cap is securely in place on drain pipe.)

NOTE Check to confirm all laterals are in the down position before loading with sand. (See Figure in Page 2.)

d. Carefully pour in correct amount and grade of filter sand, as specified. (Be sure center pipe remains centered in opening.) Sand surface should be leveled and should come to about the middle of the filter tank. Remove sand shield from internal pipe.

4. Assemble Filter Control Valve to filter tank.
   a. Place valve flange clamp around neck of tank. Do not tighten. Wipe filter flange clean.
   b. Insert Filter Control Valve (with valve/flange O-ring in place) into the tank neck, taking care that the center pipe slips into the hole in the bottom of the valve. Place clamp around valve flange and tank flange just enough so that the valve may be rotated on tank for final positioning.
   c. Carefully screw pressure gauge, with pipe tape, into 1/4 tapped hole in valve body. Do not over tighten.
   d. Place hose clamps on clear hose and fit hose over straight and elbow adapters and secure with clamps. If it is difficult to fit hose over adapters, place hose in hot water for several minutes. Connect pump to control valve opening marked PUMP according to instructions. After connections are made,tighten valve flange clamp with screwdriver, tapping around clamp with screwdriver handle to help seat valve flange clamp.

NOTE To prevent breakage and damage to pump and control valve, use only pipe sealants specifically formulated for plastics. Do not over tighten fittings or adapters.

5. Connect pool return line to control valve opening marked RETURN. Complete suction line and waste plumbing connections.
6. Refer to Pump Owners Guide for electrical connections.
7. Check all connections including winter drain cap for leaks.

3 INITIAL START-UP OF FILTER

1. Be sure correct amount of filter sand media is in tank and that all connections have been made and are secured.
2. Depress control valve handle and rotate to BACKWASH position. (To prevent damage to control valve seal, always depress handle before turning.)
3. Prime and start pump according to pump instructions (be sure all suction and return lines are open), allowing the filter tank to fill with water.

NOTE All suction and discharge valves must be open before operating the filter system. Failure to do so could cause severe personal injury and/or property damage. Once water flow is steady out the waste line, run the pump for at least 2 minutes. An initial backwashing of the filter is recommended to remove any impurities or fine sand particles in the sand media.

4. Turn pump off and set valve to RINSE position. Start pump and operate until water in sight glass is clear-about 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.
5. Adjust pool suction and return valves to achieve desired flow. Check system and filter for water leaks and tighten connections, bolts, nuts, as required.
6. Note the initial pressure gauge reading when the filter is clean. (It will vary from pool to 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 time to backwash (clean) the filter (see BACKWASH under Filter Control Valve Functions).

NOTE During initial clean-up of the pool water, it may be necessary to backwash frequently due to the unusually heavy initial dirt load in the water.

NOTE To prevent unnecessary strain on piping system and valves, always shut off pump before switching Filter Control Valve positions.

To prevent damage to the pump and filter and for proper operation of the system, clean pump strainer and skimmer baskets regularly.

4 BACKWASHING

The function of backwashing is to separate the deposited particles from filter media grains and flush them from the filter bed. Backwashing is achieved by reversing the flow of water through the filter bed at a fairly high flow rate. This high flow rate expands the filter bed and the water collects the debris taking it to waste.

1.CONDITIONS FOR BACKWASHING:-

Time for backwashing is determined by the following conditions:

1. The flow rate through the filter bed decreases until it is insufficient to meet the demand.
2. The removal efficiency of the filter bed decreases to the point where the effluent quality deteriorates and is no longer acceptable.
3. When the pressure gauge reading is 50 kPa (7.2 psi) higher than the start up pressure.
4. If the filter is connected to mains water, pressure rise is not an accurate indicator as mains pressure tends to fluctuate. It is best to rely on the actual flow rate.

NOTE recommends that you backwash a swimming pool sand filter in a residential installation at least once a month.

2.IMPORTANCE OF BACKWASHING

The importance of backwashing cannot be overstated. Dense filter media can become "packed" without proper and frequent enough backwashing. Debris will remain trapped and create channeling within the filter bed.

This will result in the filter bed exhausting early. Moreover, if debris is not flushed from the media grains,the filter bed will become dirtier and dirtier as time goes on until the filter operation fails.

3.BACKWASHING INSTRUCTIONS:

1. Switch off the Pump / Close the Inlet Valve.

NOTE If a pump is installed, switch the pump on and off, instead of closing and opening the Inlet Valve.

2. Release the filter's pressure by loosening Pressure Release Valve until the Pressure Gauge needle drops to zero <0>.
3. Retighten Pressure Release Valve.
4. Depress and turn Handle 180℃ to the BACKWASH position.
   In the BACKWASH position,the water flow is automatically reversed through the filter so that it is directed to the bottom of the filter vessel,up through the sand,flushing the previously trapped dirt and debris out the waste line.
5. Switch on the Pump / Open the Inlet Valve. Backwash water will flow out through drain pipe.
6. When the backwash water in the sight glass appears clear, Switch off the Pump / Close the Inlet Valve.
7. Depress and turn the handle to the RINSE position.
   In the RINSE water flow is directed through the filter bed and out of the filter through the backwash outlet.
   This process settles the filter media bed into place and ensures any dirt or debris is rinsed out of the filter,preventing possible return to the pool.
8. Switch on the Pump / Open the Inlet Valve. Rinse water will flow out through the drain pipe.
9. When the rinse water in the sight glass appears clear. Switch off the Pump / Close the Inlet Valve.
10. Depress and turn the handle to the Filter position and Switch on the Pump / Open the Inlet Valve for normal operation.

5 MAINTENANCE

The filter media will only require replacement once it has reached the limits of its designated life.Refer to the product information of the particular filter media used.

To ensure the maximum life of the selected filter media, please follow the procedures below:

1. Backwash the filter regularly according to the instructions set under "Backwashing".
2. Refer to the specifications of the filter media used and implement regeneration procedures accordingly.
3. Maintain a correct chemical balance your pool / spa water. The chemical balance of water is a relationship between its Ph, total alkalinity, calcium hardness and water temperature. The water must be maintained at all times to the following:

PH LEVEL: BETWEEN 7.2 & 7.8.

TOTAL ALKALINITY: BETWEEN 80 & 150ppm. CALCIUM HARDNESS: BETWEEN 150 & 300ppm.

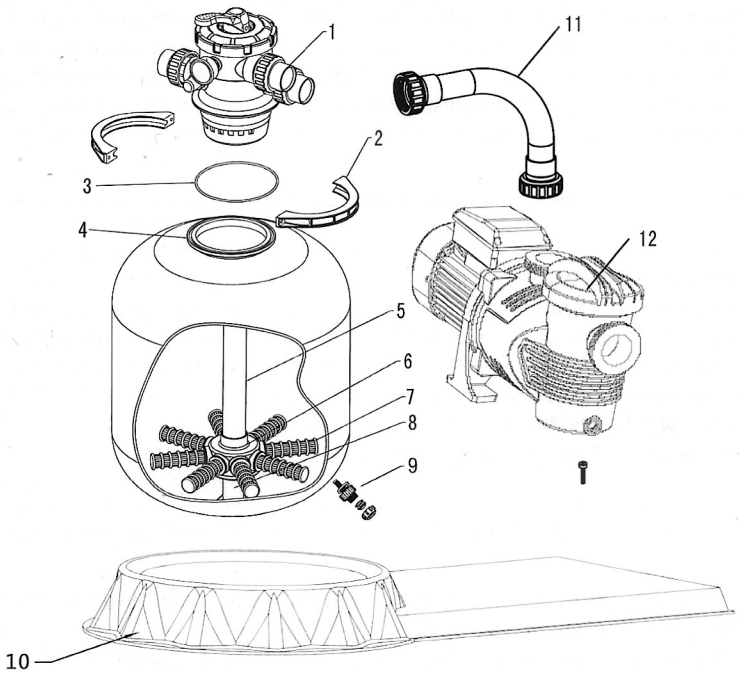
And within these tolerances be balanced to the Langelier Saturation Index within a range of -0.2 to +0.2.

NOTE Testing kits are available to test the water yourself or alternately bring a sample of the water to a professional pool and spa shop.

4. Mains water and rural water supplies need to be monitored. Saturation (life) in mains water or bore (rural) will vary depending on water quality.
5. To prevent damage to the pump and filter and for proper operation of the system, clean pump strainer and skimmer baskets regularly.
6. Replace the pressure gauge if faulty readings are observed.

6 REPLACEMENT PARTS

ID	CODE	DESCRIPTION	QTY
1	01-05	Multiport Valve 1.5"	1
2	01-0505	Valve Clip-L	1
	01-0506	Valve Clip-R	1
	01-0507	Screw	2
	01-0112	Nut	2
3	02-0901	O-ring	1
4	02-09031	14" Tank	1
	02-09032	16" Tank	1
	02-09033	18" Tank	1
	02-09034	21" Tank	1
	02-09035	25" Tank	1
5	02-09036	PVC pipe	1
6	02-0107	Lateral Assembly	1
7	02-0108	Lateral	8
8	02-0112	Support pipe	1
9	02-0111	Drain	1
10	02-0110	Filter Support Stand Ø 350~Ø 550	1
11	04-0103	Hose	1
12	04-08	Pump	1



7 TECHNICAL APPENDIX

1.INSTALLATION INSTRUCTIONS

The installation of the valve is carried out by screwingor sliping in, of the available connections according to the installation scheme.

NOTE

It is recommended to use adapter unions. Maintenance works and replacement are also easier by using adapter unions.

2.FUNCTION AND INSTALLATION SCHEME

I. Filtration of medium (i.e. water)
Pool → pump → valve (to filter) →filter → valve (from filter) → pool

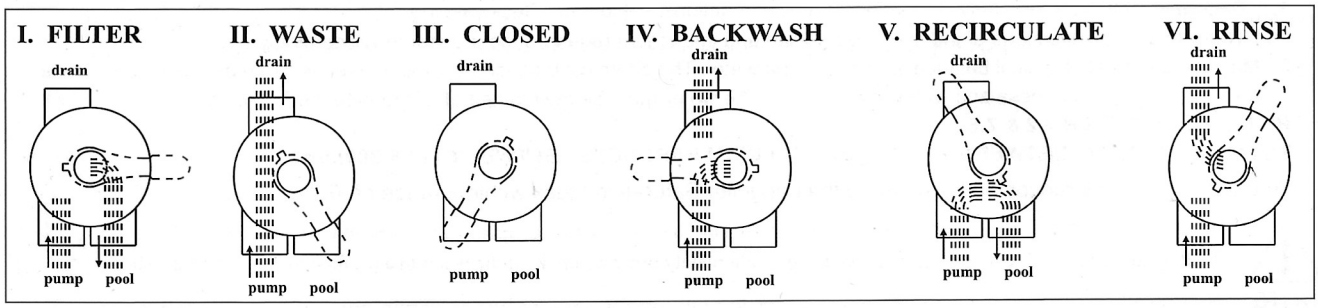
II. Drainage of pool wtih pump
Pool → pump → valve → canal

III. No circulation
Do not operate pump.
Pool → pump → valve

IV.Cleaning of filter medium (i.e.sand) in upstream (reserved flow in filter)
Pool → pump → valve (from filter) → filter → valve (to filter) → waste

V. Recirculation of fluid without filter (by pass filter)
Pool → pump → valve → pool

VI.Cleaning of filter medium (i.e. sand) after backwash
Pool → pump → valve (to filter) → filter → valve (from filter) → waste



8 WARNING

NOTE

1.This filter operates under high pressure. When any part of the circulating system (e.g., clamp, pump, filter, valves, etc.) is serviced, air can enter the system and become pressurized . Pressurized air can cause the lid or valve to be blown off which can result in severe injury, death, or property damage. Do not unscrew screws of flange clamp while filter operating.
2.Turn pump off before changing valve position.
3.To prevent damage to the pump and for proper operation of the system, Clean pump strainer and skimmer baskets regularly.