



HydroPRO[®]sf

Sand Filter for Inground and Aboveground Swimming Pools

OPERATION / INSTALLATION INSTRUCTIONS

sf16 | sf19 | sf22 | sf24
063010 063020 063021 063030

MODEL NUMBER	FILTER DIAMETER	FILTER AREA ft ² /m ²	PIPE SIZE	FLOW RATE GPM (M ³ /H)	MAXIMUM PRESSURE (PSI)	SAND REQ'D (POUNDS) kg (lbs)
063010	16 in	1.35 (0.125)	1 1/2 in	35 (7.9)	50 (3.5)	45 (110)
063020	19 in	2.1 (0.195)	1 1/2 in	40 (3.5)	50 (3.5)	79 (175)
063021	22 in	2.5 (0.232)	1 1/2 in	45 (10)	50 (3.5)	100 (220)
063030	24 in	3.04 (0.28)	1 1/2 in	50 (3.5)	50 (3.5)	136 (300)

Filter rates are calculated using a residential non-NSF max. flow rate of 25 GPM/SQ.FT. Actual rate depends on pump selection and plumbing.

Before installation be sure to read all instructions and warnings carefully. Refer to product label(s) for additional operating instructions and specifications.

IMPORTANT: This product has been carefully inspected and packed at our factory. As the carrier has assumed full responsibility for its safe arrival, any claim for damage to the shipment, either visible or concealed, must be made with the carrier. Make sure that you have received the correct equipment for the installation.

WARNING!

Your filter is a pressure vessel and should never be serviced while under pressure. Always shut off the pump to relieve the pressure in the filter prior to servicing the unit.

WARNING!

To reduce risk of injury, do not permit children to use this product unless they are closely supervised at all times.

WARNING!

Locate the system at least five feet (1.5M) from the pool to prevent it being used as a means of access to the pool by young children. (See ANSI/NSPI-8 1996 "Model Barrier Code For Residential Swimming Pools, Spas and Hot Tubs").

PUMP SELECTION

A full line of pool pumps is available for installation with these filters. For those installations where the equipment will be placed above the water level, a self-priming pump should be selected. Ask your dealer to determine the proper size and distance from the pool or spa and the friction losses (restrictions) of associated equipment. The filter system is assembled at the site using a filter module and a pump module. This arrangement permits a choice of pump to suit a FLOW RATE of 20 US gallons per minute per square foot of filter area (equal to a WATER VELOCITY OF 0.0133 m/s).

When using a pump with a line cord:

WARNING!

Risk of electric shock! Connect plug only into a receptacle protected by a ground fault circuit interrupter (GFCI).

WARNING!

Do not use an extension cord! Protect the cord from abuse but do not bury it. Use of an extension cord will void all warranties.

WARNING!

If the pump cord is damaged or appears to be damaged, replace it immediately with the same type of cord which is available from your local dealer.

The new cord must be installed by a qualified electrician. Inspect the cord annually.

For Canada only:

WARNING!

The motor of the filter pump for above-ground pools is equipped with a splash cover and a 25-foot, three-conductor cord ending with a three-pin grounding plug and must be connected only to a grounding type receptacle protected by a ground fault circuit interrupter (GFCI).

The filter module is equipped with a dial valve that works as follows:

1) **FILTER** gives a downward flow through the filter bed. Dirt accumulates in the sand as filtering proceeds, and gradually restricts the flow of water until backwashing is necessary. This position can also be used for vacuuming.

2) **BACKWASH** gives an upward flow through the filter bed that removes the dirt from the sand and carries it to the waste.

3) **DRAIN** is for pumping water from the pool. It allows the flow from the pump to bypass the filter and go directly to the waste. You can also use this position to vacuum heavy concentrations of debris.

4) **WHIRLPOOL** bypasses the filter to obtain the optimum performance from a hydro-air fitting fed by the filter pump. (No filtration occurs in this position).

5) **WINTERIZE** allows air to leave or enter the tank to help priming and draining. Only to be used when pump is off.

6) **RINSE** gives a downward flow that settles the filter bed after backwashing and carries any remaining loose dirt to the waste.

7) **TEST** prevents only backflow of water from pool during pump maintenance if filter is below water level.

FILTER SAND

The outstanding filtration and superior dirt-holding capacity of this filter depends on the use of the proper grade of filter sand. It should meet the following specifications: The filter sand must be free of clay, loam, dirt and organic matter, and must consist of hard, durable, rounded or sub-angular grains of silica sand with no more than 1% of flat or micaceous particles. The grains should have an effective size of 0.44mm with a uniformity coefficient of 1.35. DO NOT USE "SANDBOX" SAND. The filter sand is NOT included in the filter module and must be purchased separately. Refer to the table for the quantity required. Do not fill the tank with sand before the filter is in its final position. Keep the sand dry for easy installation. Use only the approved filter sand, otherwise the system may not operate correctly.

INSTALLATION LOCATION

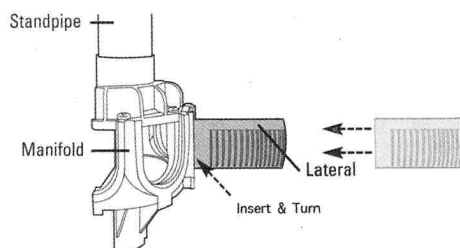
Locate the system as close to the pool as possible, but keep at a distance of at least five feet (1.5m). (See previous warning). Place the system on a hard, level surface, preferably in a dry, shaded, and well-ventilated area. Give consideration to the following: Position of suction, return, and waste connections; Access for backwashing and servicing; Protection from the sun, rain, splashing, etc; Drainage of filter room or pit; Ventilation and protection of the motor.

ASSEMBLY OF SYSTEM

1) Place the empty tank in position on the base. Press the tank down until it engages into the base.

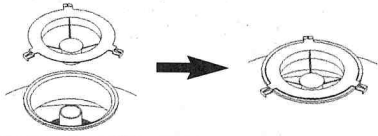
2) If the lateral tubes are not installed, hold the standpipe/manifold assembly so that the manifold is located in the middle of the tank. Take one of the lateral flow tubes in your other hand and lower it into the tank, sliding it down the tube and into one of the grooves in the manifold until a snap-fit is obtained. Repeat this action until all eight lateral flow tubes are installed, then lower the complete assembly down to the bottom of the tank. Press it down to ensure that the central tube is seated in the gouge in the base of the tank. See figure 1.

FIGURE 1 - Snap-Fit Detail



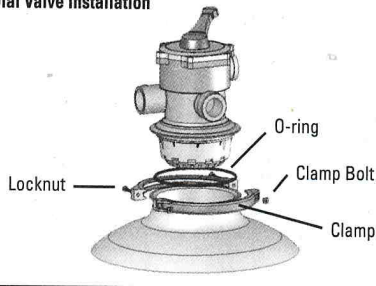
- Place the sand fill cover over the tank opening to prevent the sand from getting into the standpipe. See figure 2.

FIGURE 2 - Sand Fill Cover Assembly



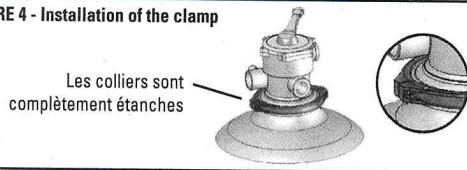
- Fill the tank approximately 1/2 full of water.
- Pour the recommended amount of sand into the tank, making sure that the standpipe remains centered and vertical. Level the surface upon completion.
- Remove the sand-fill cover.
- Preassemble the clamps with one screw and one nut, turning the screw 3-4 turns only. See Figure 3.

FIGURE 3 - Dial Valve Installation



- Carefully remove all sand particles from the valve mounting surfaces.
- Place the O-ring onto the bottom of the valve body.
- Lower the dial valve carefully into position so that its underside engages with the standpipe. Rotate the valve until the inlet is approximately in line with the pump.
- Place clamps around tank and valve neck and assemble second screw and nut.
- Firmly tap the outside of the clamps with a rubber mallet as you tighten both screws alternately and evenly.
- Make sure the screws are tightened until clamps are completely closed. See figure 4.

FIGURE 4 - Installation of the clamp



- Install the pressure gauge into the threaded opening in the dial valve. Do not overtighten.
- Insert the inputs and outputs of the dial valve into the openings on the side of the filter. See figure 5.
- Tighten the locknuts by hand so that the connections are waterproof.
- Install the backwash adapter into the orifice of the dial valve where "waste" is indicated.

PLUMBING CONNECTIONS

The provision of gate valves and unions in the pump suction and pool return lines of a permanent installation will make servicing easier and prevent water loss during routine maintenance. Pump Installation: Follow the instructions supplied with the pump. Connect the pipes to the filter system as shown on page 3. Do not use pipes smaller than the connections provided. Support the plumbing so that no strain is placed on either the pump or the filter.

FOR SOLVENT WELD CONNECTIONS

Rigid or flexible PVC pipe can be used. Pipe ends should be clean and free of any debris caused by the cutting operation. Be sure that the proper adhesive is used on the type of pipe specified. Recommended Adhesives: These are examples only and are not intended to restrict brands:

PVC-PVC Joint	PVC-ABS Joint
Uni-Weld Pool-Tite 2000	Uni-Weld Pool-Tite 2000
Suregard Flex 20	Suregard Weld-All No. 5
IPS Weld-On 705	IPS Weld-On 794

Note: A primer will ensure superior adhesive joints. Suregard P-3000 has a purple tracer to qualify in areas where codes specify a primer must be used. **Caution:** We recommend that you consider climatic conditions when applying adhesives. Certain atmospheric situations, such as high moisture content, make the adhesive action of certain glues less effective. Check the manufacturer's instructions.

FOR THREADED CONNECTIONS

Use only Teflon tape or equivalent on threaded plumbing connections. Other pipe compounds may damage threads. We do not recommend the use of silicone or petroleum based compounds. **DO NOT OVERTIGHTEN: HAND-TIGHTEN PLUS 1/2 TURN IS SUFFICIENT.**

FILTER PLUMBING

If the filter is equipped with union connections, union adapters are needed to complete plumbing connections and may need to be ordered separately.

ELECTRICAL INSTALLATION

CAUTION: NEVER RUN THE PUMP WITHOUT WATER IN THE PUMP CASE, LACK OF WATER CAN DAMAGE THE SHAFT SEAL.

Check that the information on the motor nameplate of the filter pump corresponds to the power supply. Only a competent electrician should proceed with the wiring installation in accordance with the local electrical code. Every motor requires a fused disconnect switch. Install a ground fault circuit interrupter for maximum safety. Inground pump motors operate on either 115V or 230V single-phase power. Pump motors connected to an aboveground cord should be installed on a 115V circuit only. Follow the motor manufacturer's instructions for making the connections to the electrical supply.

START-UP PROCEDURE

After completing the preceding steps and filling the pool with water, put the system into operation as described below. When the filter system is below deck level, always close the gate valves in the pump suction and pool return lines before you remove the cover from the hair and lint strainer. Re-open the valves before you restart the pump.

- 1a) For inground pools:** Set the dial valve to WINTERIZE. Remove the cover from the hair and lint strainer, and fill the pump with water. Refit the cover and strainer - hand tighten only - do not re-tighten strainer during operation.
- 1b) For aboveground pools:** When the water level in the pool reaches the skimmer and return fitting, the filter and pump will begin filling with water. Some air may be trapped in the pump or filter, but will be removed when the pump is started. Removing the pressure gauge temporarily while the filter is filling with water will also help remove any trapped air. Replace the pressure gauge when a steady stream of water appears.
- Set the dial valve to DRAIN position.
- Perform pump start-up.
- After a good flow has been established, continue pumping for one minute or until wastewater is clear, then stop the pump.
- Set the dial valve to BACKWASH, and start the pump. The pump should deliver a strong stream of water as soon as it has removed the air from the suction system. Should the pump fail to prime within two or three minutes, stop the pump and repeat steps 1 and 2.
- After a proper flow of clean water has been established, operate the filter with the dial valve set to DRAIN, WHIRLPOOL and RINSE for ONE minute each in that order. Stop the pump before changing valve positions.
- Set the dial valve back to FILTER. After the filter has operated for about 10 minutes, check the pool return fitting for air bubbles. A continuous flow of air indicates a leak in the suction system, which must be corrected immediately.

NORMAL FILTER OPERATION

Set the dial valve to FILTER, and start the pump.

BACKWASH

Backwash the filter thoroughly at least once a week, and whenever the pressure gauge reads 6 - 8 PSI above normal.

- 1). Stop the pump.
- 2). Close the valve at the pump suction. (If equipped).
- 3). Set the dial valve to TEST.
- 4). Remove the cover from the hair and lint strainer. Lift out the basket and empty it. Refit the cover and strainer - hand-tighten only - **do not re-tighten strainer during operation.**
- 5). **Re-open the valve at the pump suction and re-start the pump with the dial valve set at FILTER.**
- 6). Once air in the system has been removed and a steady flow of water has resumed, turn off the pump and change the dial valve to BACKWASH.
- 7). Re-start the pump and backwash for about THREE minutes, or until the backwash water is clear.
- 8). Stop the pump. If the dial valve is equipped with RINSE, set the dial valve to RINSE. Re-start the pump and run for 20 seconds.
- 9). Stop the pump. Set the dial valve back to FILTER. Re-start the pump.

NOTE: Do not vacuum when in BACKWASH position.

VACUUMING THE POOL

LIGHT SOIL: set dial valve to FILTER. HEAVY SOIL: set dial valve to DRAIN.

DRAINING THE POOL

Use the filter pump to drain the pool, or lower the pool water level, by setting the dial valve to DRAIN. This position allows the water to be pumped directly to waste without passing through the tank. Use the DRAIN position for emptying the pool, and also when using the vacuum cleaner to remove heavy dirt, soil, and sand from the pool.

CLOSING DOWN AND WINTERIZING

Backwash the filter for five minutes before closing down the pool for an extended period. Consult your pool dealer for advice on winterizing your pool and equipment if freezing temperatures occur in your locality. Follow his recommendations, because his knowledge of your equipment makes him the best qualified source of information.

Backwash the filter for at least thirty minutes before closing down the pool for winterizing. This will clean the filter bed thoroughly (the original sand should last for several years depending on conditions). Where the filter system is unprotected from frost, drain the tank and pump in the following manner. (Note that it is NOT sufficient to set the dial valve to WINTERIZE, because the tank and pump will not empty unless the drain plugs are removed.)

- 1). Remove the drain cap located at the base of the filter tank. Should the water not drain readily from the tank, dislodge any sand that may be blocking the drain hole, or blow out the obstruction by running the pump for a short period. **CAUTION: DO NOT DAMAGE THE DRAIN NOZZLE.**
- 2). Set the dial valve to WINTERIZE. This will help the draining process by allowing air to enter the tank.
- 3). Unscrew the pressure gauge from the dial valve by using a wrench on the square metal shank. **Do not apply force to the case of the gauge.** Store the gauge indoors where it will not be misplaced.
- 4). Remove the drain plug(s) from the pump. Take the cover off the hair and lint strainer and check that most of the water drains from the pump and strainer. Store the pump and motor indoors, or protect them from the elements and extreme temperatures. Have any repairs made during the off-season when the best service is available - do not leave them until next season. If the electric motor requires service or repairs, take or send it to the motor manufacturer's local service station, as listed in the information supplied with the motor. DPL Pool Equipment, Inc. does not perform the service or repair of motors.

TROUBLE SHOOTING SAND BACK TO POOL

Sand too small; Flow too high; Sand bed calcified; Broken lateral tubes; Broken manifold; Loose standpipe; Too much sand; Dial valve not engaged; Air accumulation in filter.

SAND OUT OF BACKWASH HOSE

No backwash adapter/orifice; Flow too high; Too much sand in tank.

INADEQUATE FILTERING

Dirty make-up water; Improper sand; Sand is low; Algae in filter; Excessive dirt in pool; Calcified sand bed; Heavy swimmer load; Flow rate too high/too low; Backwashing cycle too short; Backwash adapter in wrong location; Backwash line too small.

SHORT FILTER CYCLE

Dirty filter; Improper sand; Sand is low; Algae in filter; Excessive dirt in pool; Calcified sand bed; Heavy swimmer load; Flow rate too high or too low; Backwashing cycle too

short; Backwash adapter in wrong location; Channels low; Backwashing cycle too short; Backwash adapter in wrong location; Channels in sand.

FILTER LEAKS

Tank cracked; Drain plug not tight; Valve/tank O-ring damaged.

DIAL VALVE LEAKS

Handle not properly engaged; Valve/tank O-ring damaged; Valve cover O-ring damaged; Pressure gauge needs sealant.

ABNORMAL LOSS OF POOL WATER

Leak inside dial valve; Leakage from pool or piping.

HIGH PRESSURE IN FILTER

Dirty filter; Backwash adapter installed in return; Calcified sand bed; Return lines too small.

LOW PRESSURE IN FILTER

Dial valve incorrectly set; Pump running too slow (plugged); Air leakage into pump suction.

NOTE: If the recommendations in this manual do not solve your particular problem(s), please contact your local dealer for service.

WATER CHEMISTRY

A proper and consistent use of chemicals is necessary to maintain clean, sanitary water, prevent a spread of germ infection and control the growth of algae which can spoil the appearance and enjoyment of your pool or spa. Chlorine is the most commonly used chemical to provide clean, sanitary water. Either dry or liquid chlorine can be used which should be added daily as it is dissipated by dirt and germs as well as by the sun and the wind. It is also important that the correct level of acidity or alkalinity of the pool water be maintained. This is the pH of your pool with pH 7.0 being neutral. Readings above pH 7.0 are alkaline and readings below are acid. A desirable range is 7.2 to 7.4. Consult your local pool/spa dealer for complete information on the proper application and use of chemicals.

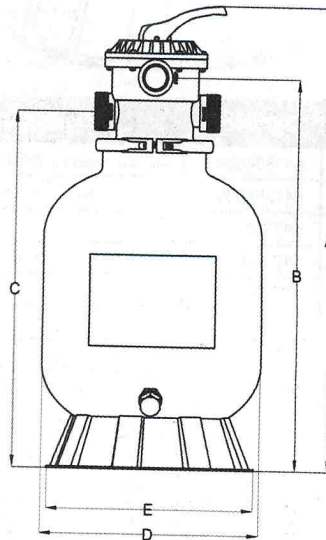
FILTER MAINTENANCE

Filter tank and contents should not require attention other than backwashing, provided water is kept in continuous chemical balance without heavy dosages of corrosive chemicals.

SERVICE AND REPAIR PARTS

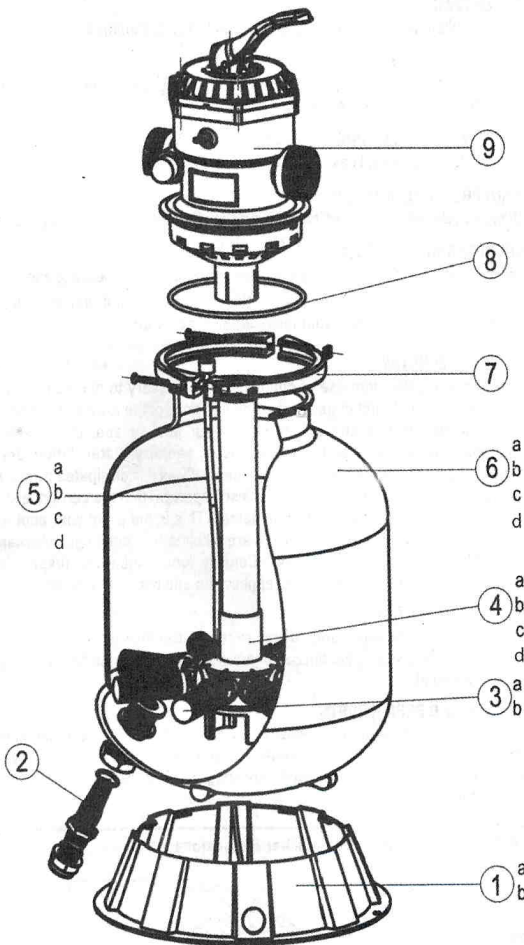
Refer all service to your local dealer as his knowledge of your equipment makes him the best qualified source of information. Order all repair parts through your dealer. Give the following information when ordering repair parts: Unit nameplate date and description of part.

FIGURE 6 - Stand Alone Sand Filter Dimensions



MODEL NUMBER	A mm/in	B mm/in	C mm/in	D mm/in	E mm/in
063010	810 mm 31.89"	685 mm 26.97"	625 mm 24.6"	406 mm 16"	400 mm 15.75"
063020	930 mm 36.61"	805 mm 31.69"	745 mm 29.33"	485 mm 19"	480 mm 18.89"
063021	968 mm 38.11"	843 mm 33.18"	783 mm 30.82"	560 mm 22"	480 mm 18.89"
063030	1110 mm 43.7"	985 mm 38.78"	925 mm 36.42"	610 mm 24"	480 mm 18.89"

FIGURE 7 - Parts for models: 063010-063020-063021-063030



Ref. No.	Part No.	Description	QTY
1a	647304009	Sand filter support for 063010	1
1b	647305009	Sand filter support for 063020/063030/063021	1
2	647304073	Drain plug	1
3a	647304017	Lateral for 063010/063020/063021	8
3b	647306016	Lateral for 063030	8
4a	647304079	Center pipe for 063010	1
4b	647305071	Center pipe for 063020	1
4c	647306072	Center pipe for 063030	1
4d	5748037001	Center pipe for 063021	1
5a	647304172	Air release assembly for 063010	1
5b	647305173	Air release assembly for 063020	1
5c	647306173	Air release assembly for 063030	1
5d	574900800	Air release assembly for 063021	1
6a	647304008	Filter tank for 063010	1
6b	647305008	Filter tank for 063020	1
6c	647306008	Filter tank for 063030	1
6d	47305408011	Filter tank for 063021	1
7	647304072	Flange clamp	1
8	65431012080	O-ring	1
9	647304071	6-way valve	1

DPL POOL EQUIPMENT, INC.
Limited Warranty

DPL POOL EQUIPMENT Inc. warrants "DPL" pool products to be free of defects in material and workmanship for a period of 12 months from the date of purchase with the following exceptions:

DPL heat pumps: are warranted against material and manufacturing defects for a period of one (1) year, including parts and labour. The compressor is also warranted for a period of one (1) year.

The warranty period is deemed to start on the installation date and the limited warranty plan form must be sent within sixty days (60) following the installation.

Light Bulbs: - Incandescent bulbs are warranted for 90 days from the date of purchase.

CONDITIONS IN ORDER TO EXERCISE THE WARRANTY:

In order to activate this 12 month warranty, "DPL" products must be registered with "DPL" by either of the following methods:

- Mail-in the Warranty Registration Card
- Online at www.dplpool.com

All defects must be reported within 72 hours in order to avoid affecting the other equipment, failing which, the present warranty will not be honoured. This warranty is non transferable and extends only to the original retail buyer and only for the time during which the original retail buyer occupies the site where the product was originally installed. "DPL's" warranty obligation with regard to equipment which it does not manufacture itself is limited to the warranty currently extended to "DPL" by its suppliers (i.e. motors).

This warranty applies to products used in swimming pools, spas, & aquaculture applications only and does not apply to any product which has been subjected to negligence, alteration, accident, abuse, misuse, improper installation, abrasives, corrosion, improper voltage supply, vandalism, civil disturbances, or acts of God (including but not limited to damage caused by freezing, lightning strikes, and other damage caused by catastrophic events). The only warranties authorized by "DPL" are those set forth herein. "DPL" does not authorize other persons to extend any warranties with respect to its products, nor will "DPL" assume liability for any unauthorized warranties made in connection with the sale of its products. "DPL" will not be responsible for any statements that are made or published, written or oral, which are misleading or inconsistent with the facts as published in the literature or specifications provided by "DPL".

WARRANTY CLAIM PROCEDURE

Warranty claims shall be made by contacting the installer/seller, builder, dealer, or retailer (point of purchase) or the "DPL" pool products distributor in your area. All equipment must be inspected by a local "DPL" authorized representative or at the factory before warranty is authorized. All charges or expenses for freight to and from the factory, removal and reinstallation of the products, or installation of a replacement product are the responsibility of the purchaser unless otherwise expressly authorized in writing by "DPL". "Competition", at its discretion, may repair or replace free of charge (F.O.B. factory in Blainville, Québec, Canada) any product that is proven defective within the warranty period, or it may issue credit in the amount of the invoice of the defective equipment in lieu of its repair or replacement. "DPL" reserves its right to substitute new or improved equipment for any replacements.

If you are unable to solve your problem and need help, contact our Service Centre at +1.450.818.4758

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