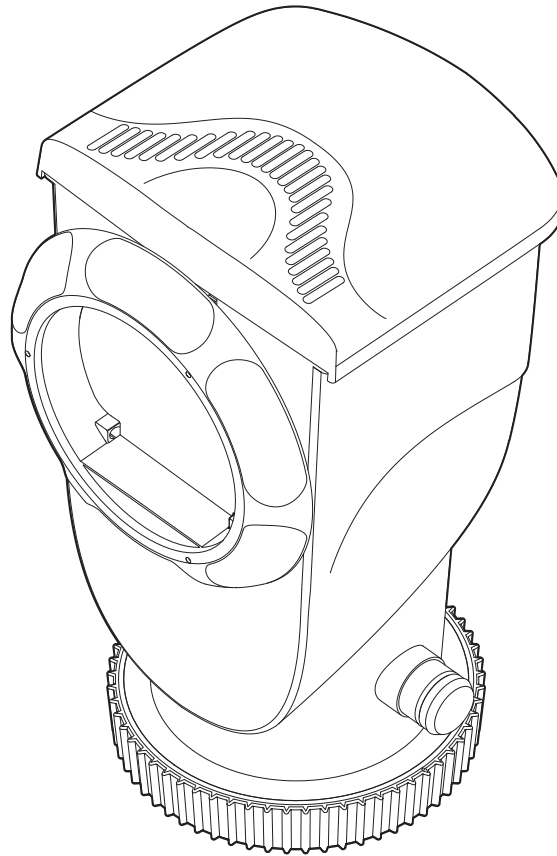


# SKIMMERPLUS® FILTER PUMP

FOR ABOVE GROUND SWIMMING POOLS  
SFX600 / SFX1000 / SFX1500 models



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## READ AND KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE

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For answers to common questions, setup videos and troubleshooting tips,  
please visit our support center at: [support.polygroupstore.com](http://support.polygroupstore.com),  
or call Customer Service at: +1 (888) 919-0070

**DO NOT RETURN PRODUCT TO STORE**



To order parts, accessories,  
and to learn more about our  
products, please visit:  
[www.larkoutdoors.com](http://www.larkoutdoors.com)



Thank you for your Lark Outdoors purchase! Should you encounter any problems, please **DO NOT** return the product to your place of purchase. For assistance with product setup, parts or troubleshooting, please visit [support.polygroupstore.com](http://support.polygroupstore.com), or call our customer service team at +1 (888) 919-0070. All warranty claims and parts requests must be made directly to our service & support partner, Polygroup. Depending on the nature of the concern, you may be asked to return all or part of the product for inspection or repair. Making it right is our top priority!

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### Limited Warranty

Polygroup<sup>®</sup> Trading Limited (hereinafter “Polygroup<sup>®</sup>”) makes products at the best quality we are able to offer. All Polygroup<sup>®</sup> products have been inspected against defects in materials and workmanship prior to leaving factory. Polygroup<sup>®</sup> is happy to offer warranty for the repair or replacement of pool products for 180 days from the date of purchase. The provisions of this Limited Warranty only apply to the original purchaser. Please keep your original store sales receipt, as this proof of purchase will be required and must accompany warranty claims to Polygroup<sup>®</sup> or its designated agents. This Limited Warranty does not apply without proof of purchase; or should the purchaser modify or repair the product themselves or by unauthorized people; use non-Polygroup<sup>®</sup> parts or accessories with the product; use the product in contravention of the manufacturer’s instructions; use improper voltage; abuse the product in any way; or through accident or negligence. This Limited Warranty will not cover consequential damages, including claims for loss of water, pool chemicals, damage, or labor, normal wear-and-tear; nor acts of God outside the control of Polygroup<sup>®</sup>. Non-manufacturing defects, such as grasses that may grow through the ground cloth and/or pool liner are examples of which Polygroup<sup>®</sup> cannot be held responsible for.

IN NO EVENT SHALL Polygroup<sup>®</sup>, ITS AUTHORIZED AGENTS, RELATED ENTITIES, OR EMPLOYEES BE LIABLE TO THE BUYER OR ANY OTHER PARTY FOR DIRECT OR CONSEQUENTIAL DAMAGES. Some states or countries, or other jurisdictions, do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This Limited Warranty is not extended to close-outs, factory seconds, or resold products (i.e. garage sales, online auctions, or online retailers unaffiliated with Lark Outdoors or Polygroup<sup>®</sup>). Any issues with items purchased from these types of vendors / sellers will need to be addressed through these stores. Items purchased from seasonal stores will be treated with an “All Sales Final” Policy instead.

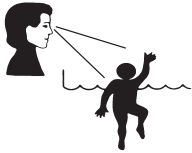
## IMPORTANT SAFETY INSTRUCTIONS

When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:

### READ AND FOLLOW ALL INSTRUCTIONS

Keep for future reference. Failure to follow these warnings and instructions can result in serious injury or death to users, especially children.

## WARNING



### DANGER

#### PREVENT DROWNING!

WATCH CHILDREN WHO ARE IN OR NEAR THIS POOL CLOSELY. CHILDREN UNDER 5 ARE AT HIGHEST RISK OF DROWNING. EMPTY POOL OR PREVENT ACCESS WHEN NOT IN USE.

#### NO DIVING!

SHALLOW WATER YOU CAN BREAK YOUR NECK AND BE PARALYSED.

### WARNING

**DO NOT SIT ON OR LAY OVER POOL WALL**  
YOU CAN BE PERMANENTLY INJURED.

**AVOID ENTRAPMENT!**  
STAY AWAY FROM DRAINS & SUCTION FITTINGS. YOUR HAIR, BODY & JEWELRY CAN GET SUCKED INTO THE DRAIN. YOU COULD BE HELD UNDER WATER & DROWN. DO NOT USE POOL IF DRAIN OR SUCTION OUTLET COVER IS MISSING OR BROKEN.

**NOTICE:** CUSTOMERS WHO PURCHASE POOLS MAY BE REQUIRED BY LOCAL OR STATE LAW TO INCUR ADDITIONAL EXPENSES WHEN INSTALLING A POOL, IN ORDER TO COMPLY WITH STATE OR LOCAL LAWS REGARDING FENCING AND OTHER SAFETY REQUIREMENTS. CUSTOMERS SHOULD CONTACT THEIR LOCAL BUILDING CODE ENFORCEMENT OFFICE FOR FURTHER DETAILS. POLYGROUP® IS NOT RESPONSIBLE FOR ANY ADDITIONAL EXPENSES THAT YOU MAY INCUR.

## Safety Care for Children

1. Children, especially children younger than five years, are at high risk of drowning. Drowning occurs silently and quickly and can occur in as little as 2 in (5 cm) of water.
2. Keep children in your direct sight, stay close, and actively supervise them when they are in or near this pool and when you are filling and emptying this pool.
3. When searching for a missing child, check the pool first, even if the child is thought to be in the house.
4. Locate pumps and filters in such a way that children cannot climb on them and gain access to the pool.
5. **WARNING:** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.

## Swimming Pool Barriers

### Very Important:

Swimming pool barriers, which restrict access to the pool by small children, may be required by law. A barrier is necessary to provide protection against potential drowning and near drowning. Barriers are not a substitute for constant supervision of children. Check state or local laws and codes before setting up the pool.

## Swimming Pool Equipment

1. The use of artificial pool lighting is at the discretion of the pool owner. Lighting, when installed, should be in accordance with Article 680 of the National Electrical Code (NEC®) or its latest approved edition and in consultation with a licensed electrical professional.
2. Keep all electrical lines, radios, speakers, and other electrical appliances away from the pool.
3. Do not place the pool near or under overhead electrical lines.
4. All electrical components installed in and/or adjacent to an above-ground/on-ground residential swimming pool shall be installed in accordance with and shall comply with the requirements of the latest published edition of NFPA 70, National Electrical Code (NEC®) Article 680 "Swimming Pools, Fountains, and Similar Installations", and any state or local code.

## Filter Pump Awareness

1. **WARNING:** Risk of electric shock. Connect only to a grounding type receptacle. This product is provided with a ground-fault circuit-interrupter. If replacement of the plug or cord is needed, use only identical replacement parts.
2. **WARNING:** To reduce the risk of electric shock, replace damaged cord immediately.
3. **WARNING:** To reduce the risk of electric shock, do not use the extension cord to connect the unit to the electric supply; provide a properly located outlet.
4. **CAUTION:** To reduce the risk of electric shock, the pool must be installed no closer than 6 feet (1.83 m) from any electrical outlet. Do not place portable appliances closer than 5 feet (1.5 m) to the pool.
5. **CAUTION:** This pump is for use with storable pools only. Do not use with permanently-installed pools. A storable pool is constructed so that it is capable of being readily disassembled for storage and reassembled to its original integrity. A permanently-installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage.

6. **CAUTION:** For continued protection against possible electric shock, this unit is to be mounted to the base in accordance with the installation instructions.
7. Do not bury the cord. Locate cord to minimize abuse from lawn mowers, hedge trimmers, and other equipment.
8. The unit is provided with a ground-fault circuit-interrupter (GFCI). To test the GFCI, push the test button. The GFCI should interrupt power. Push the reset button. Power should be restored. If the GFCI fails to operate in this manner, the GFCI is defective. If the GFCI interrupts power to the pump without the test button being pushed, a ground current is flowing, indicating the possibility of an electric shock. Do not use this pump. Disconnect the pump, and have the problem corrected by a qualified service representative before using.
9. The Filter Pump is to be assembled by an adult; care should be taken in the unpacking and assembling of the Filter Pump. This pool may contain accessible potentially hazardous sharp edges or sharp points that are a necessary part of the function of the Filter Pump.
10. If a drain or suction outlet cover is missing or broken, do not use the pool. Suction can cause body part entrapment, hair and jewelry entanglement, evisceration, or drowning. Repair or replace the drain or suction outlet cover before allowing the pool to be used. During nighttime pool use, artificial lighting shall be used to illuminate all safety signs, ladders, steps, deck surfaces, and walks.
11. The floor of the pool shall be visible at all times from the outside perimeter of the pool.
12. Post a list of emergency telephone numbers such as the nearest available police, fire, ambulance, and/or rescue unit. These numbers are to be kept near the telephone that is closest to the pool.
13. Basic lifesaving equipment, including one of the following should be on hand at all times:
  - A light, strong, rigid pole (shepherd's crook) not less than twelve feet (12') [366 cm] long.
  - A minimum one-fourth inch (1/4") [6.35 mm] diameter rope as long as one and one half (1 1/2) times the maximum width of the pool or fifty feet (50') [15.24 meters], whichever is less, which has been firmly attached to a Coast Guard-approved ring buoy having an outside diameter of approximately fifteen inches (15") [38.1 cm], or similarly approved flotation device.
14. Pool shall be located at a minimum distance of 6 ft (1.83 m) from any receptacle, and all 125-volt 15- and 20-ampere receptacles located within 20 ft (6.0 m) of the pool shall be protected by a ground fault circuit interrupter (GFCI), where distances are by measuring the shortest path the supply cord of an appliance connected to the receptacle would follow, without piercing a floor, wall, ceiling, doorway with hinged or sliding door, window opening, or other effective permanent barrier, to the inside pool wall.

## Circulation Systems

1. The installer shall follow written instructions regarding positioning of all equipment connected to the circulation systems.
2. The installer shall follow written instructions provided for operating the circulation system components.
3. All circulation system components and pump that require replacement or servicing shall be installed according to the pump's instruction manual.
4. Circulation equipment shall be installed per manufacturer's instructions to provide proper mounting and support, to prevent damage from misalignment, settlement, and vibration, and to minimize the potential for the accumulation of debris and moisture. Please refer to pump's instruction manual.

## Chemicals

For safety sake, ensure the deepest part of the pool is always visible. The user must properly maintain the clarity of the pool water at all times. Check the pH and chlorine levels periodically and make sure they are within the recommended limits. Additional water treatment chemicals might be needed from time to time. Have the water sample tested by a local pool supply store to determine if additional chemical is needed. Turn on the pump for the recommended hours daily. If you are unsure of the time frames please refer to [support.polygroupstore.com](http://support.polygroupstore.com) for the recommended Pump Operation Hours based on pool types and sizes. Clean and replace filter cartridge frequently. Replace only with a genuine Polygroup® / Summer Waves® Brand filter cartridge. Refer to the Filter Pump manual for additional water care information.

## Risk of Entrapment

1. **Entrapment Avoidance:** There shall be no protrusions or other obstruction in the swimming area, which may cause entrapment or entanglement of the user. If a suction outlet cover is missing or broken, do not use the pool. Suction can cause body part entrapment, hair and jewelry entanglement, evisceration, or drowning. Repair or replace the suction outlet cover before allowing the pool to be used.
2. **DANGER! TO AVOID SERIOUS INJURY OR DEATH, CLOSE THE POOL OR SPA TO BATHERS IF ANY SUCTION OUTLET COVER/GRATE IS MISSING, BROKEN, OR INOPERATIVE.**
3. Never play or swim near drains or suction fittings. Your body or hair may be trapped causing permanent injury or drowning.
4. Never enter the pool or spa if a suction fitting or drain cover is loose, broken, or missing.
5. Immediately notify the pool/spa owner or operator if you find a drain cover loose, broken, or missing.

## Risk of Drowning

1. Keep unsupervised children from accessing the pool by installing fencing or other approved barriers around all sides of pool. State or local laws or codes may require fencing or other approved barriers. Check state or local laws and codes before setting up the pool.
2. Toys, chairs, tables, or similar objects that a young child could climb shall be at least four feet (4') [121.92 cm] from the pool. The pump filter system shall be positioned so as to prevent it being used as a means of access to the pool by young children. Do not leave toys inside pool when no longer in use, as toys and similar items might attract a child to the pool.
3. Position furniture (for example: tables, chairs) away from pool and so that children cannot climb on it to gain access to the pool.

## Risk of Electrocutation

1. Keep all electrical lines, radios, speakers, and other electrical appliances away from the pool.
2. Do not place the pool near or under overhead electrical lines.



## First Aid

1. Keep a working phone and a list of emergency numbers near the pool.
2. Become certified in cardiopulmonary resuscitation (CPR). In the event of an emergency, immediate use of CPR can make a lifesaving difference.

## Special Warning

1. Local building codes may require obtaining a building or electrical permit. Installer shall follow regulations on setback, barriers, devices, and other conditions.
2. Safety signs shall comply with requirements of ANSI-Z535 and use signal wording.
3. DO NOT attempt to assemble this pool in adverse weather conditions, windy conditions, or when the temperature is below 60°F.
4. This is a storable filter pump, which should be disassembled and stored when temperatures are expected to fall below 32°F.

## Extra Safety Warning

1. Adult supervision is always required.
2. Parents should learn CPR.
3. Keep all electrical radios, speakers, and other appliances away from the swimming pool.
4. When you touch the filter, pump, or electrical parts, be sure the ground under your feet is "Bone Dry."
5. All electrical outlets should have a GFCI, and connections should be a minimum of 6 feet (1.83 m) from the outside perimeter of the wall of the pool.  
From 6–10 feet (1.83–3.05 m), there should be either a fixed connection (outlet box) or twistlock connection with a GFCI.
6. Connect power cords to a 3-wire grounding-type outlet only.
7. Keep all breakable objects out of the pool area.
8. Alcohol consumption and pool activities do not mix. Never allow anyone to swim, dive, or slide under the influence of alcohol or drugs.
9. Severe electrical shock could result if you install your pump or filter on a deck. The pump or filter could fall into the water, causing severe shock or electrocution.
10. Do not install on a deck or other surface at, above, or slightly below the top rail of the pool.
11. Do not use the filter pump during severe weather conditions, i.e. electrical storms, tornadoes, etc.
12. Be aware of overhead power lines when vacuuming your pool or using a telescoping pole.
13. Check regularly for signs of wear or loose bolts that could make the deck unsafe.
14. Please contact pool site dealer or manufacturer for additional safety signs if deemed necessary.
15. For pool service, select a certified pool professional. For additional safety information, see [www.APSP.org](http://www.APSP.org)

## Consumer Awareness Booklets and Information Source

**Contact:** U.S. Consumer Product Safety Commission at [www.cpsc.gov/safety-education/safety-guides/pools-and-spas](http://www.cpsc.gov/safety-education/safety-guides/pools-and-spas), Pub. #362 "Safety Barrier Guidelines for Home Pools."

1. The Sensible Way to Enjoy Your Above-ground/On-ground Swimming Pool.
2. Children Aren't Waterproof.
3. Layers of Protection.
4. Pool and Spa Emergency Procedures for Infants and Children.
5. Be Safety Aware.

Copies of the above brochures are available free from the APSP at [www.APSP.org](http://www.APSP.org)

## Safety Education Programs and Materials

Educational programs and materials (i.e., seminars, workshops, brochures, videos, instructional guides) are available from the APSP, other aquatic safety groups, and from private firms. As a means of communicating useful safety information to pool owners/operators, and users, industry members are permitted to provide such information to owners/operators and to request or require owners/operators to sign a statement that they have received, read, and will follow the guidelines.

### Other sources of safety information:

- [www.cdc.gov](http://www.cdc.gov)
- [www.cpsc.gov](http://www.cpsc.gov)
- [www.drowningpreventionalliance.com](http://www.drowningpreventionalliance.com)
- [www.nspf.org](http://www.nspf.org)
- [www.safekids.org](http://www.safekids.org)

### ANSI American National Standards Institute

25 West 43rd Street, New York NY 10036

Contact: 212-642-4900

[www.ansi.org](http://www.ansi.org)

### APSP Association of Pool & Spa Professionals

(formerly National Spa and Pool Institute)

2111 Eisenhower Avenue, Suite 500

Alexandria VA 22314-4679

Contact: 703-838-0083

[www.apsp.org](http://www.apsp.org)

**ASME American Society of Mechanical Engineers**

Two Park Avenue, New York NY 10016-5990  
Contact: 800-843-2763 (U.S. & Canada) 973-882-1170 (outside North America)  
[www.asme.org](http://www.asme.org)

**NSPI National Spa and Pool Institute (see APSP)****UL Underwriters Laboratories**

333 Pfingsten Road, Northbrook IL 60062-2096  
Contact: 877-854-3577 or 847-272-8800  
[www.ul.com](http://www.ul.com)

**NSF NSF International**

P.O. Box 130140  
789 N. Dixboro Road  
Ann Arbor MI 48105  
Contact: 800-673-6275 or 734-769-8010  
[www.nsf.org](http://www.nsf.org)

**ASTM ASTM International (formerly American Society of Testing & Materials)**

100 Barr Harbor Drive, P.O. BOX C700  
West Conshohocken, PA 19428-2959  
Contact: 877-909-2786 (USA & Canada) or 610-832-9585 (International)  
[www.astm.org](http://www.astm.org)

**NEC National Electrical Code (see NFPA)**

NFPA National Fire Protection Association  
1 Batterymarch Park, Quincy MA 02169-7471  
Contact: 800-344-3555 (U.S. & Canada) or 617-770-3000 (International)  
[www.nfpa.org](http://www.nfpa.org)

## Filtration Systems

Any equipment connected to the circulation systems shall be positioned so as to prevent their being used as a means of access to the pool by young children. (See the latest published edition of ANSI/APSP-8 Model Barrier Code for Residential Swimming Pools, Spas, and Hot Tubs.)

## Barriers

Barriers are necessary to provide protection against potential drowning and near drowning, and barriers are not a substitute for the constant supervision of children. (See latest published edition of ANSI/APSP-8 Model Barrier Code for Residential Swimming Pools, Spas, and Hot Tubs.)

## Risk of Drowning, Entrapment, and Diving Accidents

Publications are available that describe the risk of drowning, entrapment, and diving accidents. Available publications related to pool safety include the Association of Pool and Spa Professionals' (APSP) booklets entitled: The Sensible Way to Enjoy Your Above-ground/On-ground Swimming Pool, Children Aren't Waterproof, Pool and Spa Emergency Procedures for Infants and Children, Layers of Protection, and the latest published edition of ANSI/APSP-8 Model Barrier Code for Residential Swimming Pools, Spas, and Hot Tubs.

## Installer Responsibilities

All of these components shall be positioned so as to prevent their being used as a means of access to the pool by young children. (See Barrier Code for Residential Swimming Pools, Spas, and Hot Tubs.)

# SAVE THESE INSTRUCTIONS

## PRELIMINARY STEPS

1. READ ALL INSTRUCTIONS CAREFULLY and get a thorough understanding of what is required to assemble your Filter Pump.
2. It is recommended to have some petroleum jelly (not included) on hand for lubricating the gaskets and o-rings.

## FILTER PUMP IMPORTANT NOTES

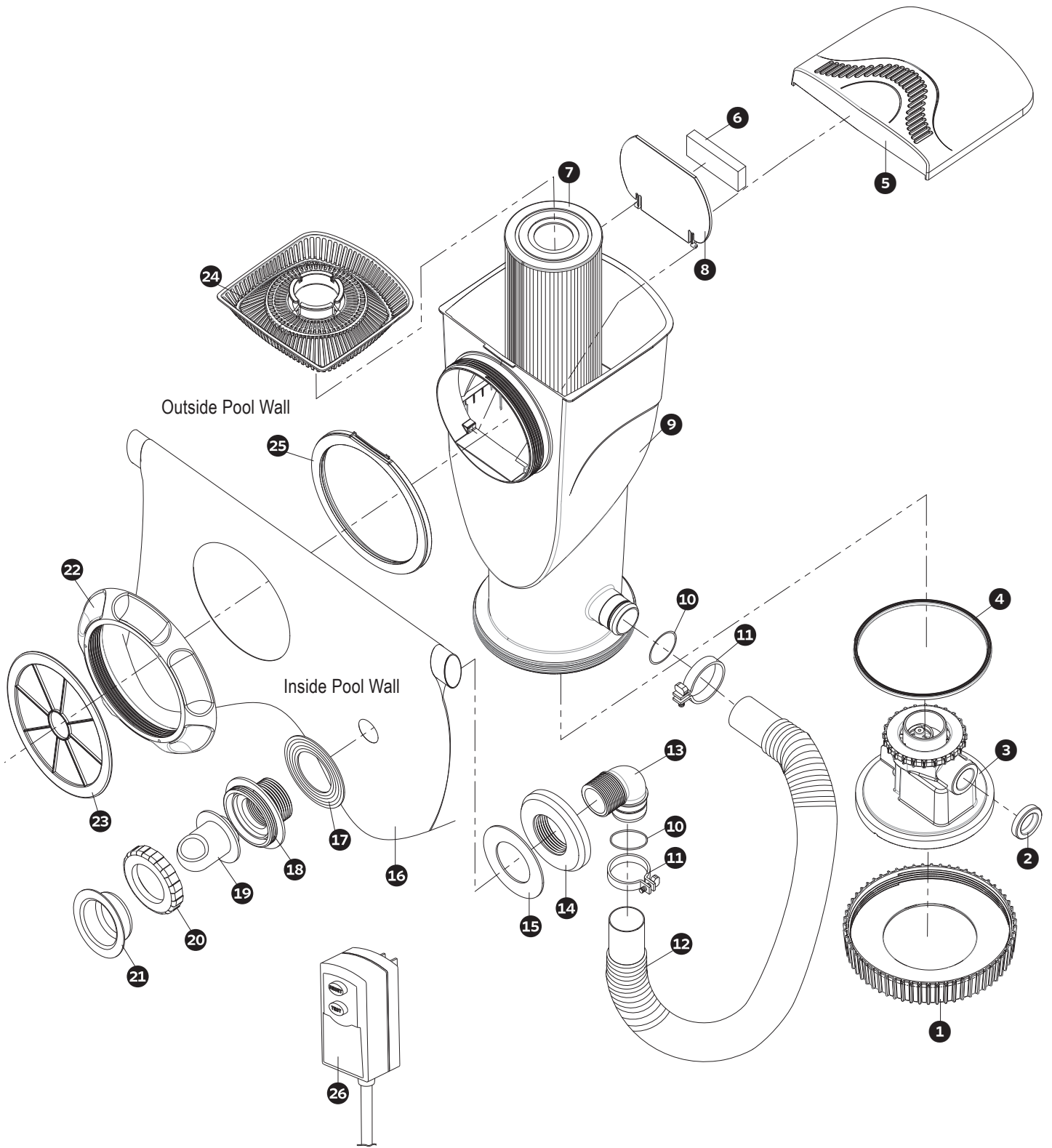
1. The installer shall follow the written instructions provided for the operation of the filter pump system.
2. All electrical components shall be installed in accordance with Article 680 of the 2017 National Electrical Code® (NEC®) or its latest approved edition.
3. DO NOT use this product to dispense powdered chlorine, shock treatment, or any other types of chemicals as this will damage the pump, filter cartridge and pool.
4. This Filter Pump is manufactured by Polygroup® and ETL control number 4000608 and 4006317 – double insulated and grounded – 120VAC 60Hz. All units must have a minimum of 105VAC to start and run properly.

## FILTER PUMP POWER INFO

Model	Wattage	Amperage
SFX600	70 Watts	1.7 Amps
SFX1000	115 Watts	1.4 Amps
SFX1500	180 Watts	3.1 Amps

## PARTS LIST

Items	Parts Name	Qty.	Items	Parts Name	Qty.
1	Motor Seal Nut	1	14	RF Nut	1
2	Rubber Nozzle	1	15	RF Thrust Washer (white)	1
3	Pump Motor Assembly	1	16	Pool Wall (for reference only)	1
4	Canister Gasket / Motor Seal	1	17	RF Gasket (black)	1
5	Top Cover	1	18	Return Fitting (RF), threaded	1
6	Weir Foam	1	19	RF Diverter	1
7	Type D Filter Cartridge (SFX600 only)	1	20	RF Locking Ring, threaded	1
	Type A/C Filter Cartridge (SFX1000 or SFX1500)		21	Service Plug	1
8	Weir	1	22	Skimmer Seal Ring	1
9	Skimmer Canister	1	23	Water Stopper	1
10	Hose Connection O-Ring	2	24	SFX Skimmer Strainer Basket	1
11	Hose Clamp	2	25	Skimmer Gasket Rubber Seal	1
12	Return Hose	1	26	GFCI Power Cord Set	1
13	90° Elbow	1			



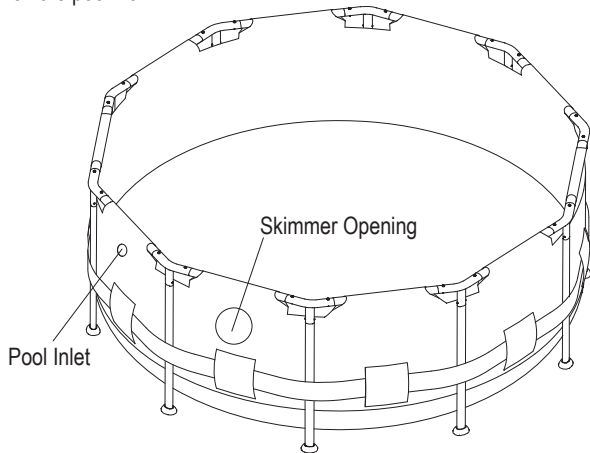
## SETUP INSTRUCTIONS

Before assembly, take a few minutes to identify and become familiar with all the parts.

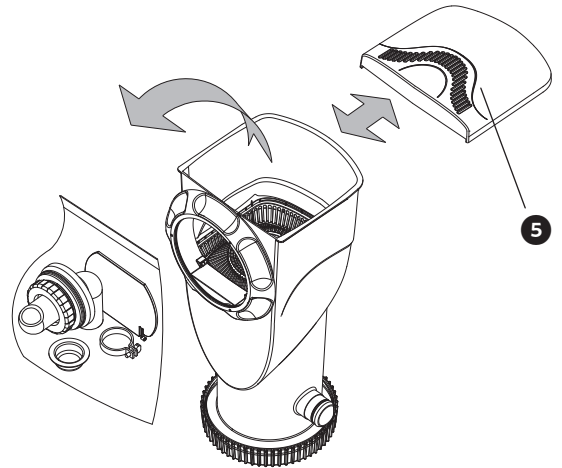
**⚠ WARNING:** CLIMBING HAZARD! PLEASE PREVENT CHILDREN FROM CLIMBING ON THE FILTER CANISTER TO GAIN ACCESS TO THE POOL.

### Skimmer Installation

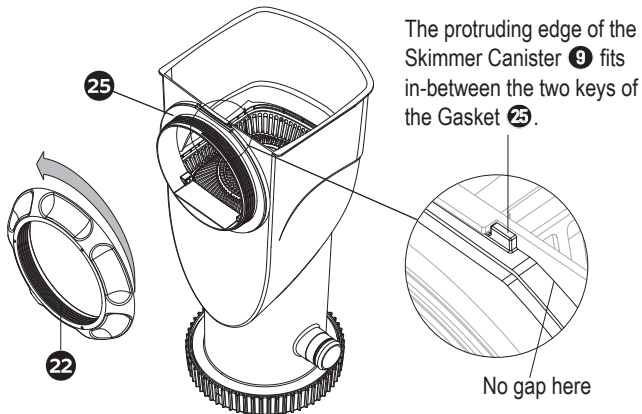
1. Set up your pool following the pool Owner's Manual instructions. Do NOT fill water until the Filter Pump is properly installed. Locate the Skimmer Opening on the pool wall.



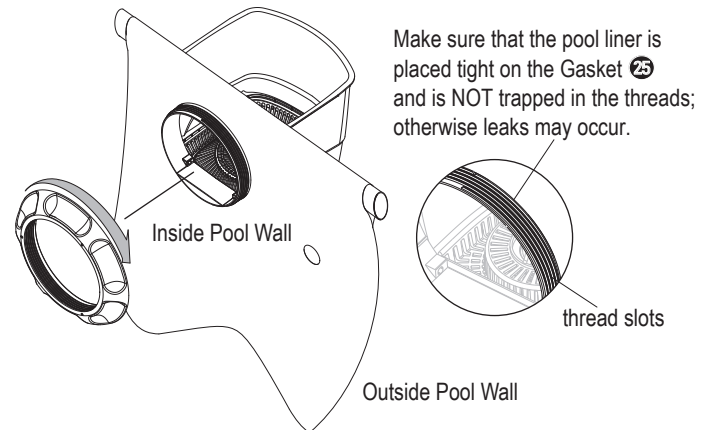
2. Slide open the Top Cover **5** and take out the parts inside.



3. Turn counterclockwise to remove the Skimmer Seal Ring **22**. Make sure the Skimmer Gasket Rubber Seal **25** is in the correct position.

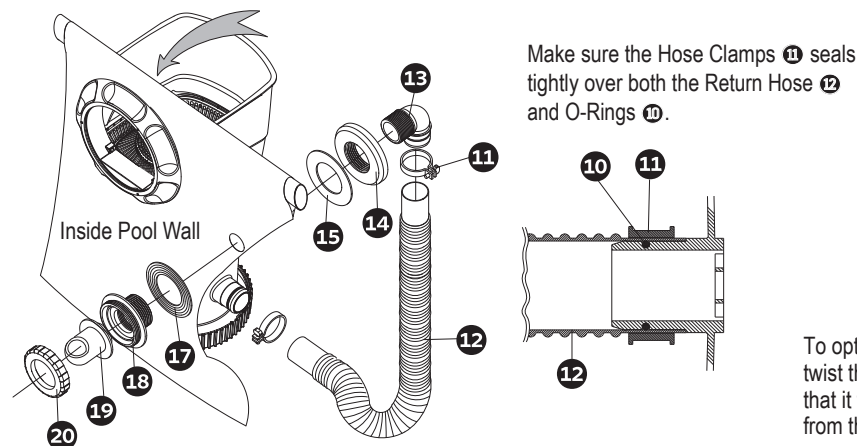


4. Insert the threaded part of the Skimmer Canister **9** through the Skimmer Opening, and then secure with the Skimmer Seal Ring **22**.

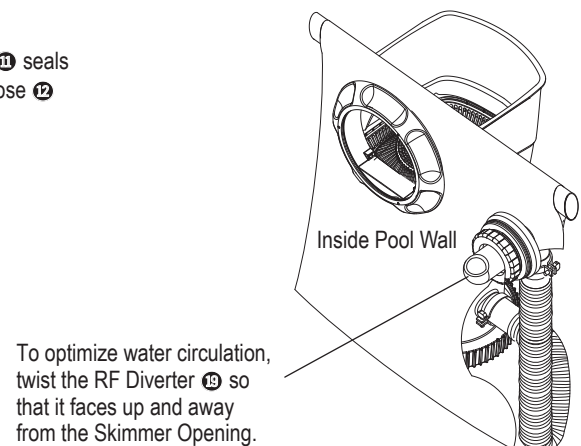


### Return Fitting Installation

5. Assemble the Return Fitting **18** as indicated below.

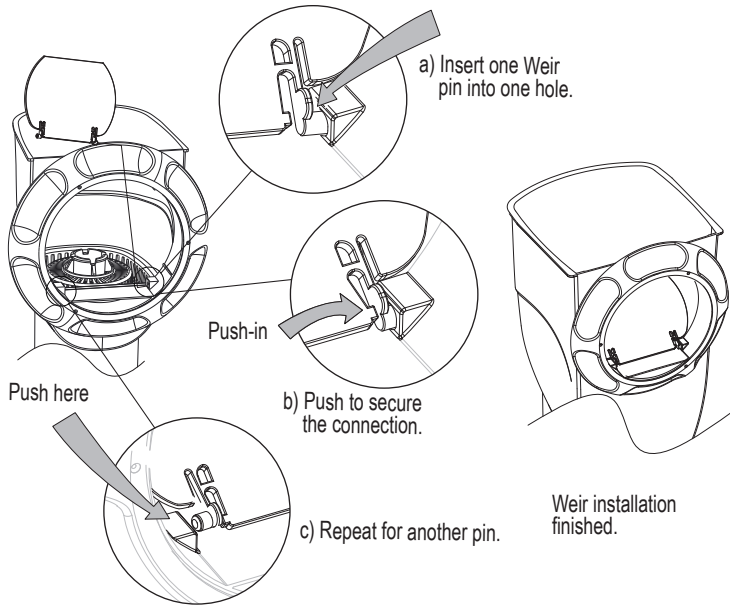


6. Now the Pump should be installed outside the pool wall as below.

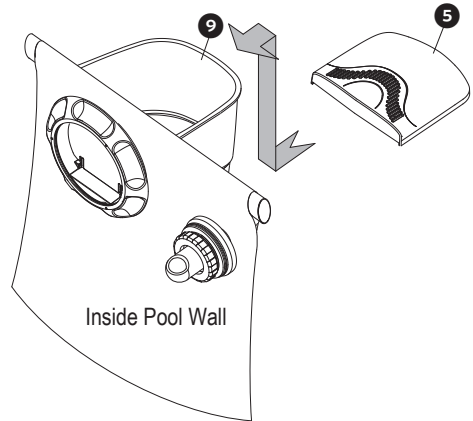


## Pump Installation

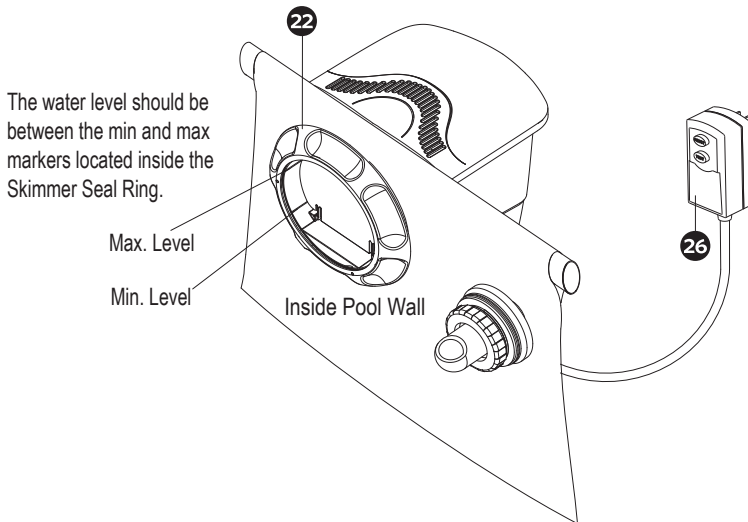
7. From inside the Skimmer Canister **9**, snap the pins of the Weir **8** into the pivot slots, one after another. The Weir should now stand upright but not stuck.



8. Slide close the Top Cover **5** onto the Skimmer Canister **9**.

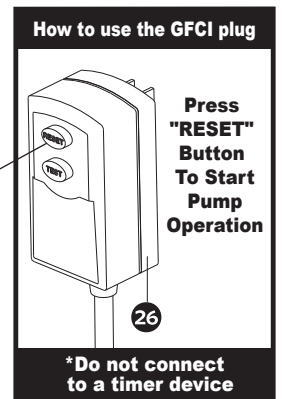
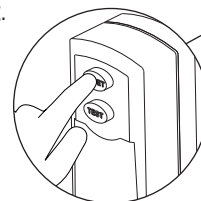


9. You can now fill the pool with water up to between the MIN and MAX markings on the inside of Skimmer Seal Ring **22**.



## USE OF PUMP

1. Plug the GFCI Power Cord Set **26** to a properly grounded receptacle at least 15 feet (4.5m) away from the pool.
2. To turn on the Pump, press the RESET button of the GFCI Plug.
3. From inside the pool, check if the water flow from the RF Diverter **19** is correct. It should feel like a solid stream of water returning to the pool. If not, or if you feel a reduction in flow, clean or replace the Filter Cartridge **7**. For details, see **FILTER CARTRIDGE USE & CARE (p. 11)** as well as Symptom 2 of **TROUBLESHOOTING GUIDE (p. 17)**.
4. To turn the Pump off, press the TEST button of the GFCI Plug, and unplug it from the power outlet.
5. **VERY IMPORTANT:** Check and adjust the pH and chlorine levels daily. **FILTER PUMP ALONE WILL NOT PREVENT ALGAE FROM GROWING IN POOL WATER; THIS CAN ONLY BE DONE BY MAINTAINING PROPER CHLORINE AND pH LEVELS AT ALL TIMES.** For details, see **POOL WATER CARE (p. 12)**.



**IMPORTANT:** Do NOT connect to a timer device!



## PUMP MOTOR CARE

**IMPORTANT!** This Skimmer Filter Pump is protected by a thermal switch, a safety device that stops the pump from running when it's overheated, to prevent pump damage and prolong service life. If your pump turns off automatically, it's likely the pool water temperature is too high or the water flow through the pump is insufficient for cooling the pump down. Check and correct the water flow, let the motor rest for at least 15 minutes and then restart the pump by pressing the RESET button of the GFCI Plug, or run the pump at night when the temperature is lower. If pump turns off automatically again, inspect if the rotor is blocked by dirt.

## PUMP MAINTENANCE

1. Check the pump output daily. If water flow reduces, see Symptom 2 of **TROUBLESHOOTING GUIDE** (p. 17).
2. Check the Pump, Hoses and Fittings for leaks. If a leak is found, see Symptom 4 of **TROUBLESHOOTING GUIDE**.
3. It's essential to replace any damaged parts as soon as possible. Use only spare parts from approved, reliable dealers, or from **polygroupstore.com**
4. Inspect the filter and all filter media regularly to ensure that there's no build-up of detritus that prevents good filtration. See **FILTER CARTRIDGE USE & CARE** below.
5. Run the Pump for the recommended number of hours daily. If you are unsure of the time frame, please see **Pump Operation Hours** at **support.polygroupstore.com**

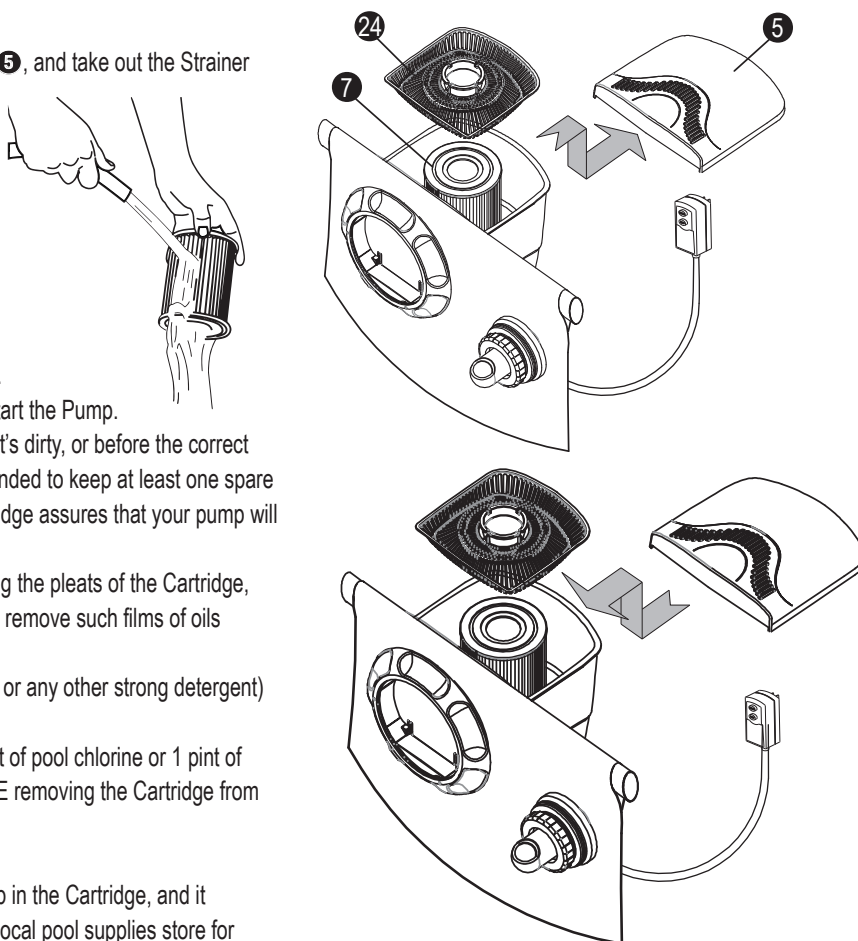
## FILTER CARTRIDGE USE & CARE

1. To clean the Filter Cartridge **7**:
  - a. Turn off and unplug the Pump. Slide open the Top Cover **5**, and take out the Strainer Basket **24** and Filter Cartridge.
  - b. Pressure wash the Cartridge thoroughly (including between the pleats) with a garden hose to remove larger debris. Then allow the Cartridge to dry, and carefully brush away smaller and fine particles of dirt. Do NOT scrub the pleats, or the Cartridge will wear out faster than it should.
  - c. To ensure pool water stays clean, please clean the filter cartridge every day and change when required.
  - d. Reassemble the parts in reverse order. Then you can restart the Pump.
2. You may need to clean or replace the Filter Cartridge when it's dirty, or before the correct chlorine and pH levels are attained. Therefore, it's recommended to keep at least one spare cartridge on hand at all times. A clean, well-maintained cartridge assures that your pump will always be ready to operate at peak efficiency.
3. Suntan oils, body oils and algae can quickly build up and clog the pleats of the Cartridge, reducing the filtration efficiency. Therefore, it is imperative to remove such films of oils and/or algae.
 

**To remove oils:** mix 1 pound of tri-sodium phosphate (TSP, or any other strong detergent) and 5 gallons of water, and soak the Cartridge for 12 hours.

**To remove oils AND algae:** same as above, and add ½ pint of pool chlorine or 1 pint of liquid household bleach to the solution ONE HOUR BEFORE removing the Cartridge from the solution.

Thoroughly rinse the Cartridge before reusing it.
4. Excessive calcium and/or mineral deposits may also build up in the Cartridge, and it requires to be handled differently. Contact and consult your local pool supplies store for solutions/treatment, and maintain an adequate pH level of pool water (see **POOL WATER CARE**, p. 12).
5. Dispose of any used filter media in accordance with applicable regulations/legislation.
6. Always use genuine Polygroup® Summer Waves® Filter Cartridges; they are available at where you purchased your pool or from **polygroupstore.com**



## POOL WATER CARE

1. The following items are required to get your pool ready for use. They are available at [polygroupstore.com](http://polygroupstore.com) or your local pool supplies stores:
  - a. **Test kit** – for checking the chlorine and pH levels of the pool water
  - b. **Floating chlorine dispenser (not included) and chlorine tablet** – for water disinfection and prevention of the growth of algae
  - c. **pH control chemicals** – for adjusting the pH level up (soda ash) or down (acid)
  - d. **Algacides** – to eliminate algae
  - e. **Superchlorinator** – to destroy (“shock”) the combined chlorine, ammonia, nitrogen, and organic compounds that build up in pool water over time and with extended use
  - f. **Leaf net with handle** – for removing leaves, trash, insects, etc. from the pool
2. **IMPORTANT:** it is a **MUST** to maintain the chlorine and pH levels at all times:
  - a. Check and adjust the pH and chlorine levels daily. **FILTER PUMP ALONE WILL NOT PREVENT ALGAE FROM GROWING IN POOL WATER; THIS CAN ONLY BE DONE BY MAINTAINING PROPER CHLORINE AND pH LEVELS AT ALL TIMES.**
  - b. **Recommended pH level:** between 7.3 and 7.8
  - c. **Recommended chlorine level:** between 1.0 and 1.6 ppm
  - d. Superchlorinate your pool at least every other week.
  - e. Hot weather and heavy use may require the pH and chlorine levels to be maintained on the upper side of the scale as well as a weekly superchlorination.
  - f. Using a pool and/or solar cover will help maintain the pH and chlorine levels by reducing evaporation of pool water.
  - g. **CAUTION:** High chlorine concentration and low pH level will damage the pool/pool liner. You must follow the instructions on quantity and safe usage of the pool chemicals you use.  
**NEVER** drop lumps or pellets of chemicals into the pool – this may present a hazard to the swimmers and/or damage your pool liner.
3. Clean your pool regularly using a maintenance kit with vacuum. You can get the kit from [polygroupstore.com](http://polygroupstore.com)
4. Using a foot bath prior to entering the pool will help keep the pool clean.
5. Avoid using well water. If you must use well water, always seek professional advice from your local pool chemical suppliers before adding ANY chemicals into it.
6. Find out the water capacity (in gallon) of your pool from the pool Owner’s Manual. You will need it to determine the amount of chemicals required, or when you contact a pool supplies expert for water testing and advice on safe use of chemicals.  
**NOTE:** Always follow the manufacturer label directions of the chemicals you choose to use.

## PUMP DISASSEMBLY & STORAGE

1. Turn off the Pump, and unplug it from the power outlet.
2. Disassemble the return fittings **11-20** :
  - a. Loosen the Hose Clamps **11**, detach the Hose **12**, and drain any remaining water.
  - b. Remove, clean and dry all the parts. Liberally lubricate the RF Gasket **17** with petroleum jelly. Then snap all the parts together in sequence.
3. Disassemble the Pump:
  - a. Slide open the Top Cover **5**, take out the Strainer Basket **23**, Filter Cartridge **7** and detach the Weir **8**. Clean and dry all the parts, and liberally lubricate the Skimmer Gasket Rubber Seal **25** with petroleum jelly. Then reassemble them back onto the Skimmer Canister **9**.
  - b. Remove the Motor Assembly **3** by turning open the Motor Seal Nut **1**. Clean and dry completely the Pump.  
 Then see **STEP 3: Pump Reassembly/Replacement (p. 15-16)** to reassemble the Motor into the Canister.
4. Store all the parts in a dry place that remains above 32°F (0°C) at all times.

## PUMP SERVICING INSTRUCTIONS

The most efficient way to troubleshoot or replace the Pump is to disassemble the entire filtration system. Please drain the water level to below the pool's Skimmer Opening, then disassemble the system following the steps below.

### CAUTION:

1. You may get wet.
2. Please read and follow the instructions carefully. Incorrect handling may cause damages resulting in leaks between the Skimmer Canister ⑨ and the pool wall.
3. REMEMBER TO KEEP ALL THE PARTS IN A SAFE PLACE FOR REASSEMBLY LATER.

### STEP 1: Removal of Motor Assembly ③

1. Turn the Pump off, and unplug it from the power outlet.
2. Slide open the Skimmer Top Cover ⑤, remove the Strainer Basket and the Filter Cartridge.
3. At the Return Fitting ⑬:
  - a. Unscrew and remove the RF Locking Ring and RF Diverter. Then insert the Service Plug to block the water flow.
  - b. Loosen the Hose Clamp attaching to the 90° Elbow ⑬. Carefully detach the Hose, and let the water drain from the Hose and the Canister.

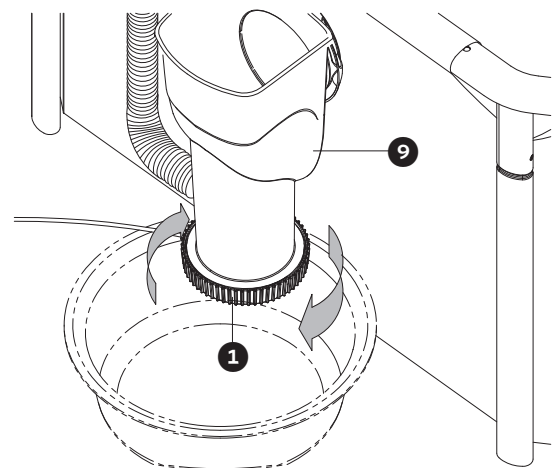
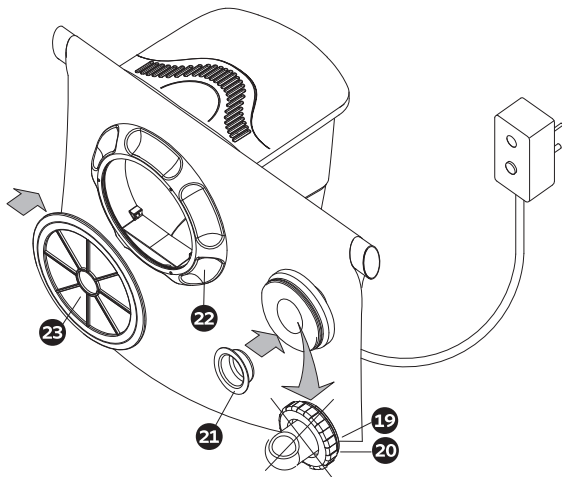
NOTE: you may also detach the other end of Hose attaching to the Canister, but it is not required.
4. Unscrew the Skimmer Seal Ring ⑫ to remove the entire filtration system from the pool.
5. Flip the Canister upside down. Unscrew the Motor Seal Nut ① and take out the Motor Assembly.

**IF YOU PREFER TO LEAVE THE SYSTEM ATTACHED TO THE POOL, please follow the process below instead.**

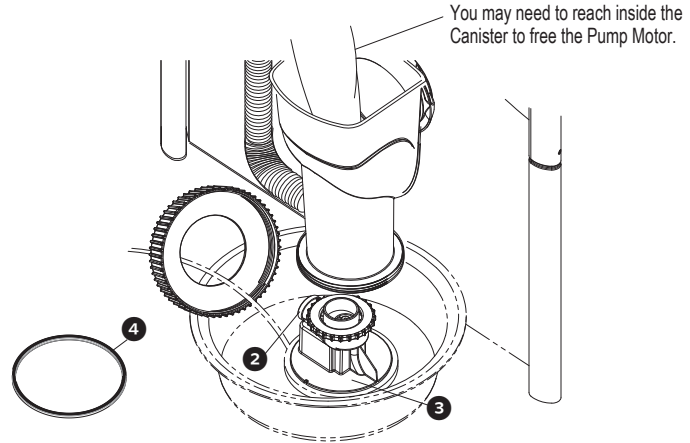
**CAUTION:** you will need two people for some of the steps. Incorrect handling may cause damages resulting in leaks between the Skimmer Canister ⑨ and the pool wall.

1. Turn the Pump off, then unplug it from the power outlet.
2. Block the water flow:
  - a. Unscrew and remove the RF Locking Ring ⑳ and RF Diverter ⑲. Then insert the Service Plug ㉑ to block the water flow.
  - b. Push the Water Stopper ㉓ tightly into the Skimmer Seal Ring ㉒.
3. Put a water container (not included) under the Skimmer to collect water. Slide open the Top Cover ⑤, and take out the Strainer Basket ㉔ and Filter Cartridge ⑦.
4. Have one person holding the Water Stopper and Skimmer Canister ⑨, while the other person unscrews the Motor Seal Nut ①.
 

**CAUTION: DO NOT PUSH OR PULL THE CANISTER** as this may cause damage between the Canister and pool liner.



5. Slowly take out the Motor Assembly **3**. Be careful not to lose the Rubber Nozzle **2** or Canister Gasket **4**.



## STEP 2: Rotor Inspection/Replacement

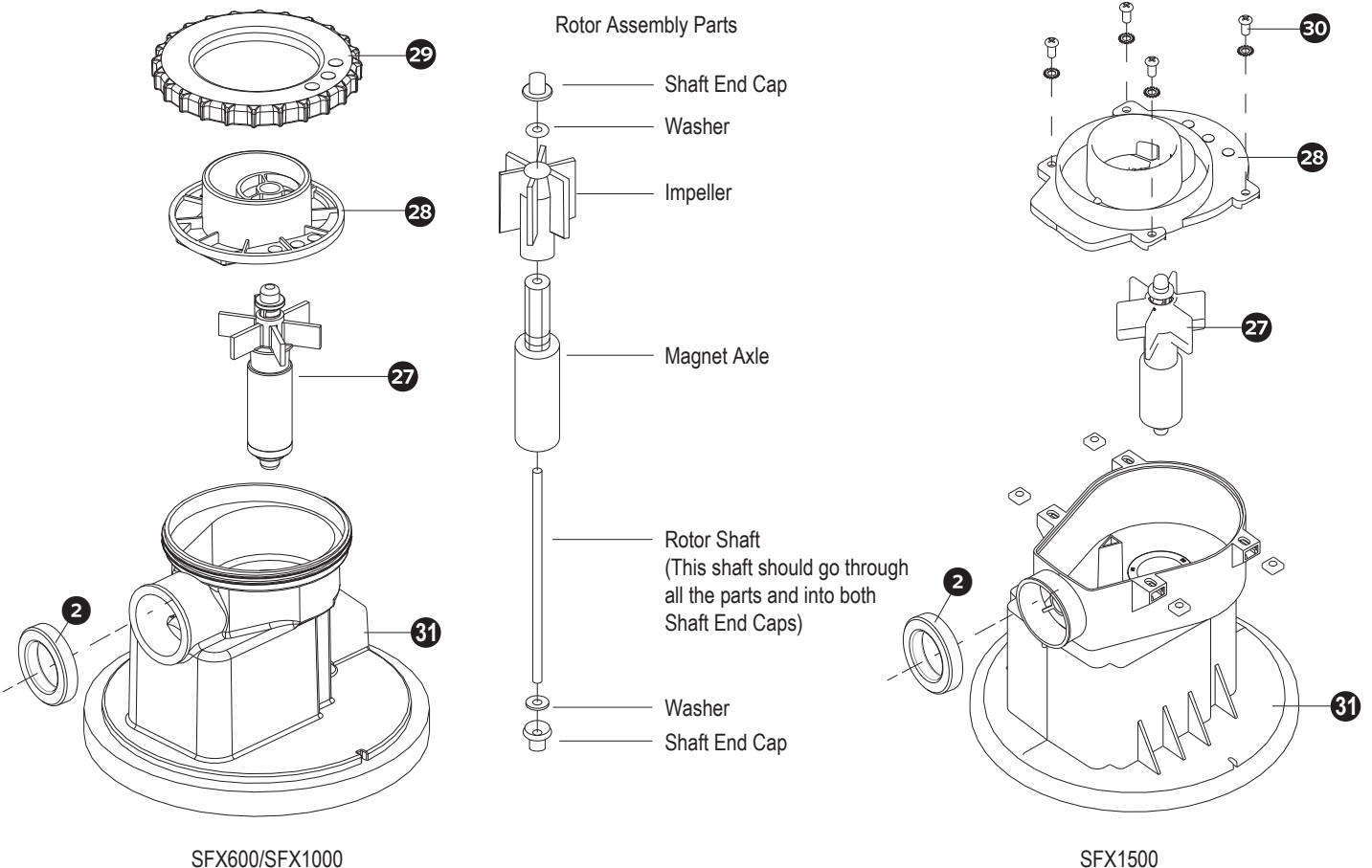
The Pump **3** is consisted of a Rotor Assembly **27** and its related parts. If the Rotor and/or its parts is/are broken, or the Rotor, even in perfect condition, is not seated in place between the Volute Cover **28** and Pump Body **31**, the Pump will not function properly.

1. Loosen the Volute Cover Lock Nut **29** or Bolts **30** (depends on the pump model), and remove the Volute Cover **28**.
2. Pull the Rotor Assembly **27** out from the Pump Body **31**.

Inspect the Rotor (see image below) to make sure that the Rotor Shaft, Magnet Axle, Impeller and other parts are intact. If either of them is broken, you can purchase a new Rotor Assembly at [polygroupstore.com](http://polygroupstore.com) without having to replace the whole Pump.

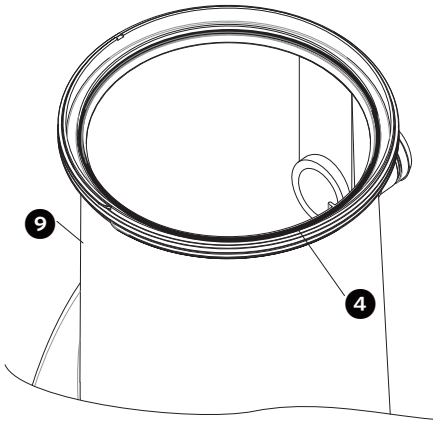
For more details, please see **Pool Support – Filtration System Troubleshooting** at [support.polygroupstore.com](http://support.polygroupstore.com)

3. Once the inspection or replacement is done, carefully insert the Rotor Assembly **27** back into the Pump Body **31**. The force of the magnet will pull the Rotor down in place.
4. Align the Volute Cover **28** with the top Shaft End Cap, then tighten with the Volute Cover Lock Nut **29** or Bolts **30** (depends on the pump model).
5. Attach the Rubber Nozzle **2** to the outlet of the Pump Body **31**.

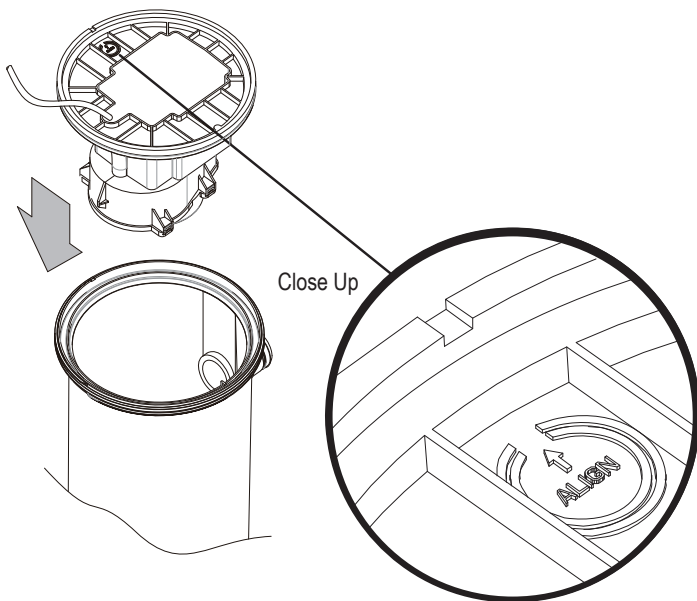


## STEP 3: Pump Reassembly/Replacement

1. Lubricate the Canister Gasket ④, then insert it back into the groove (inner groove for SFX600/SFX1000) at the bottom of the Skimmer Canister ⑨.

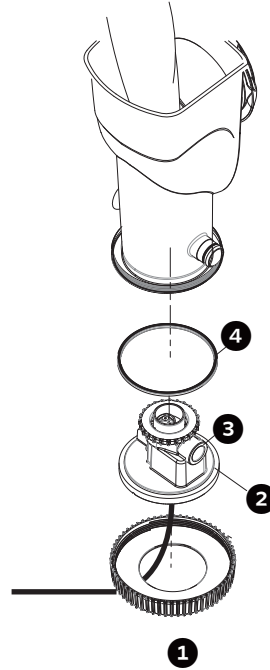


- 2a. If your Pump is removed from the pool, slowly insert the Motor Assembly back into the upside-down Canister. There's an indent on the inside of Canister (only visible from bottom), which needs to be aligned with an indent at the bottom of the Motor (marked "ALIGN"); to this end, make sure that the arrow of the "ALIGN" mark is pointing to the Canister indent.



**BOTTOM VIEW OF PUMP & CANISTER**

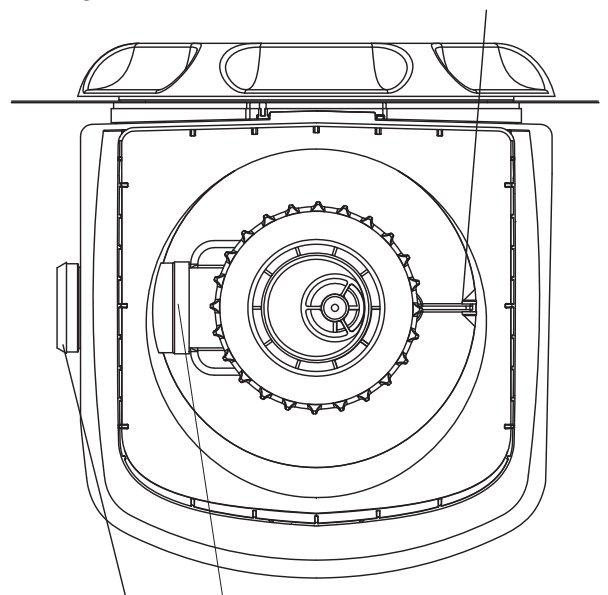
**IMPORTANT: make sure that the cord of the Motor Assembly ③ is placed through the Motor Seal Nut ① BEFORE replacing the Pump.**



- 2b. If your Pump is left attached to the pool, reach in through the Canister to pull the Motor Assembly up and insert it back into the Canister. Make sure that the key of the Canister is slotted into the notch on the Pump to align the Rubber Nozzle ② with the hose opening of the Canister, otherwise the Pump may leak even already locked in place.

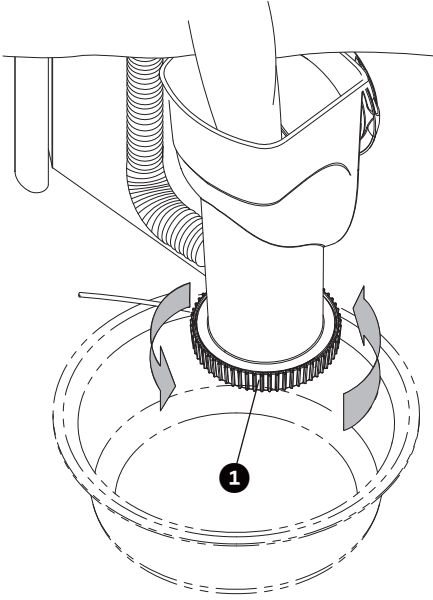
**TOP VIEW**

Make sure that the key of the Canister is slotted into the notch on the Pump



Outlet of Canister and Rubber Nozzle ② on the pump should be aligned.

3. Once the Motor is correctly aligned, match the threads of the Motor Seal Nut **1** to that of the Canister, and tighten by twisting the Nut counterclockwise.  
**IMPORTANT:** make sure the Nut and Canister are not cross-threaded; otherwise leaks may occur.





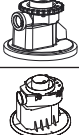



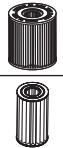

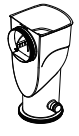


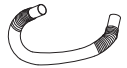
















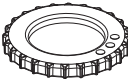
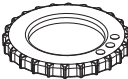

## TROUBLESHOOTING GUIDE

**⚠ WARNING:** UNPLUG THE POWER CORD BEFORE TROUBLESHOOTING THE FILTER PUMP.

Problem	Cause	Solution
1. Pump Motor ③ doesn't start, or kicks on and off	A Pump not plugged in	A Plug the GFCI Power Cord Set ②⑤ to a grounded power outlet. Then press the RESET button to start the Pump.
	B GFCI Power Cord Set ②⑤ and/or circuit breaker tripped	B Reset your circuit breaker on the electrical panel. If problem persists, have the circuit checked by a qualified electrician.
	C Low Voltage	C Check and make sure the line voltage is between 105VAC and 125VAC.
2. No or slow water flow from the Return Fitting ⑬	A Low pool water level	A Water level must be between the MIN and MAX lines on the Skimmer Seal Ring ②②.
	B Clogged water inlet/outlet	B Check for obstructions at the Strainer Basket ②④, Filter Cartridge ⑦, Hose ⑫ and Return Fitting ⑬.
	C The Filter Cartridge ⑦ is too dirty	C Clean or replace the Cartridge following the steps of <b>FILTER CARTRIDGE USE &amp; CARE</b> (p. 11).
	D Motor Rotor block by dirt	D Refer to pump servicing instructions to clean dirt.
3. Pump is not cleaning the pool properly e.g. cloudy/green water	A Inadequate chlorine level	A Maintain the chlorine level between 1.0 and 1.6 ppm.
	B Inadequate pH level	B Maintain the pH level between 7.3 and 7.8
	C The Filter Cartridge ⑦ is too dirty	C Clean or replace the Cartridge following the steps of <b>FILTER CARTRIDGE USE &amp; CARE</b> (p. 11).
	D The Filter Cartridge ⑦ is damaged	D Inspect the Cartridge for holes or tears. If it's visibly damaged, replace it with a new one.
	E Water flow is slow	E Check for obstructions at the Strainer Basket ②④, Filter Cartridge ⑦, Hose ⑫ and Return Fitting ⑬.
	F Other chemicals required	F Have your pool water sample tested by a pool supplies store. You may need to add other chemicals since water quality varies in different localities.
	G Pool water is too dirty	G Chemicals are essential to keep the pool water clean. Clean the pool and filter more often.
4. Water leakage at	A Hose ⑫– Hose connections with Skimmer Canister ⑨ and/or 90° Elbow ⑬ are not secured	A Check that the Hose Clamps ⑪ are properly tightened over both the Hose and the Hose Connection O-Rings ⑩; adjust and retighten if necessary. Also, check the Hose for cracks or holes and replace as needed.
	B Bottom of Canister ⑨	B See <b>STEP 3: Pump Reassembly/Replacement, p. 15-16:</b> B1. The Canister Gasket ④ must sit in the groove (inner groove for SFX600/SFX1000) on the bottom of the Canister before installing the pump. B2. Check Pump alignment. The arrow of the Pump indent (marked "ALIGN") <b>MUST</b> point to the Canister indent (only visible from bottom). B3. Make sure the Motor Seal Nut ① is not cross-threaded.
	C Between Canister ⑨ and pool wall	C Make sure the Skimmer Gasket Rubber Seal ②⑤ is installed properly. See <b>SETUP INSTRUCTIONS (3) &amp; (4), p. 9:</b> - The two keys of the Gasket should be at the top. - The pool liner is not trapped in the threads. - No gaps between the Gasket and the Canister. - The Skimmer Seal Ring ②② is firmly tightened onto the Canister.

## REPLACEMENT PARTS ORDERING INFO

		SFX600	SFX1000	SFX1500
1		P58PP1954W05	P58PP1954W05	P58PP1954W05
		P58PP19548UN	P58PP19548UN	P58PP19548UN
		P58PP19547CN	P58PP19547CN	P58PP19547CN
		P58PP1954C01	P58PP1954C01	P58PP1954C01
2		P58182601K01	P58182601K01	P58185201K01
3		P58X0601C000	P58X1001C000	--
		--	--	P58X1500C000
4		P58147800K01	P58147800K01	P58164800K01
5		P58PP1950W05	P58PP1950W05	P58PP1950W05
		P58PP19508UN	P58PP19508UN	P58PP19508UN
		P58PP19507CN	P58PP19507CN	P58PP19507CN
		P58PP1950C01	P58PP1950C01	P58PP1950C01
6		P58SFX002W01	P58SFX002W01	P58SFX002W01
7		P581041037PR	--	--
		--	P581041080PR	P581041080PR
8		P58PP1956W05	P58PP1956W05	P58PP1956W05
		P58PP19568UN	P58PP19568UN	P58PP19568UN
		P58PP19567CN	P58PP19567CN	P58PP19567CN
		P58PP1956C01	P58PP1956C01	P58PP1956C01
9		P58PP1984W05	P58PP1951W05	P58PP1983W05
		P58PP19848UN	P58PP19518UN	P58PP19838UN
		P58PP19847CN	P58PP19517CN	P58PP19837CN
		P58PP1984C01	P58PP1951C01	P58PP1983C01
10		P58030001K01	P58037000K01	P58037000K01
11		P58220221W05	P58219221W05	P58219221W05
		P582202218UN	P582192218UN	P582192218UN
		P582202217CN	P582192217CN	P582192217CN
		P58220221C01	P58219221C01	P58219221C01
12		P58125009W01	P58150012W01	P58150012W01
13		P58PF1740W05	P58PF1700W05	P58PF1700W05
		P58PF17408UN	P58PF17008UN	P58PF17008UN
		P58PF17407CN	P58PF17007CN	P58PF17007CN
		P58PF1740C01	P58PF1700C01	P58PF1700C01
14		P58PF1690W05	P58PF1690W05	P58PF1690W05
		P58PF16908UN	P58PF16908UN	P58PF16908UN
		P58PF16907CN	P58PF16907CN	P58PF16907CN
		P58PF1690C01	P58PF1690C01	P58PF1690C01

		SFX600	SFX1000	SFX1500
15		P58PF2960W05	P58PF2960W05	P58PF2960W05
		P58PF29608UN	P58PF29608UN	P58PF29608UN
		P58PF29607CN	P58PF29607CN	P58PF29607CN
		P58PF2960C01	P58PF2960C01	P58PF2960C01
17		P58PF1730K01	P58PF1730K01	P58PF1730K01
18		P58PF1680W05	P58PF1680W05	P58PF1680W05
		P58PF16808UN	P58PF16808UN	P58PF16808UN
		P58PF16807CN	P58PF16807CN	P58PF16807CN
		P58PF1680C01	P58PF1680C01	P58PF1680C01
19		P58PF1721W05	P58PF1721W05	P58PF1721W05
		P58PF17218UN	P58PF17218UN	P58PF17218UN
		P58PF17217CN	P58PF17217CN	P58PF17217CN
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		P58PF17108UN	P58PF17108UN	P58PF17108UN
		P58PF17107CN	P58PF17107CN	P58PF17107CN
		P58PF1710C01	P58PF1710C01	P58PF1710C01
21		P58PF0620K01	P58PF0620K01	P58PF0620K01
22		P58PP1953W05	P58PP1953W05	P58PP1953W05
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		P58PP1953C01	P58PP1953C01	P58PP1953C01
23		P58PP2163K01	P58PP2163K01	P58PP2163K01
24		P58PP1952P01	P58PP1952P01	P58PP1952P01
25		P58PP1957W05	P58PP1957W05	P58PP1957W05
27		P58050137001	P58050505001	P58050506001
28		P58PF1009K01	P58PF1009K01	--
		--	--	P58184501K01
29		P58PF1010K01	P58PF1010K01	--
30		--	--	P5800400080A
*		P53FX0609W05	P53FX1009W05	P53FX1509W05
		P53FX06098UN	P53FX10098UN	P53FX15098UN
		P53FX06097CN	P53FX10097CN	P53FX15097CN
		P53FX0609C01	P53FX1009C01	P53FX1509C01