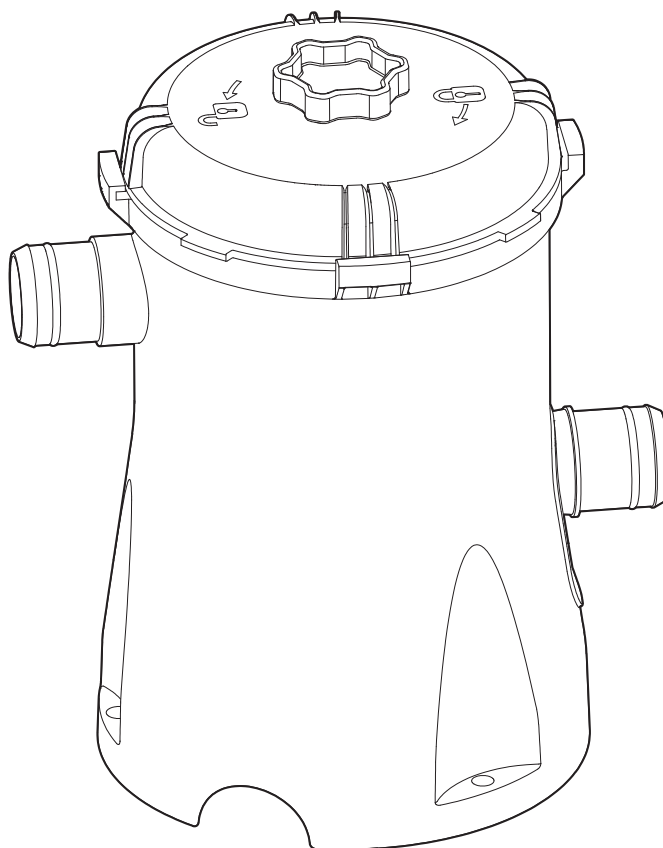


# SUMMER WAVES® CARTRIDGE FILTER PUMP

FOR ABOVE GROUND SWIMMING POOLS

RP350 / RP400 Models



## READ AND KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE

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

**DO NOT RETURN PRODUCT TO STORE**



To order parts and accessories, please visit [www.polygroupstore.com](http://www.polygroupstore.com)



Should you encounter a problem with your Polygroup® Product, please **DO NOT** return the product to the place of purchase. All warranty claims must be made directly to Polygroup®. For any setup and troubleshooting issues, please visit [support.polygroupstore.com](http://support.polygroupstore.com). Customer Service: +1 (888) 919-0070. You may be asked to return all or part of the product for inspection and/or repair. Do not return any product to Polygroup® without a Return Merchandise Authorization number.

## TABLE OF CONTENTS

Warnings .....	3 ~ 6
Preliminary steps, preliminary steps, Filter pump important notes, Filter pump power information, Parts list .....	7 ~ 9
Setup instructions .....	10 ~ 11
Use of pump, Motor care .....	12
Filter cartridge use & Care .....	13
Pool maintenance & Pool water care .....	14
Troubleshooting guide & Pool pump disassembly & Storage .....	15
Pump removal instructions for troubleshooting, Rotor inspection and replacement instructions .....	16 ~ 17
Replacement parts ordering info .....	18 ~19
ASME compliant suction fitting info .....	20

### Limited Warranty

Polygroup® Trading Limited (hereinafter “Polygroup®”) makes products at the best quality we are able to offer. All Polygroup® products have been inspected against defects in materials and workmanship prior to leaving factory. Polygroup® 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® 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® 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®. Non-manufacturing defects, such as grasses that may grow through the ground cloth and/or pool liner are examples of which Polygroup® cannot be held responsible for.

IN NO EVENT SHALL Polygroup®, 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 not purchased directly from Polygroup®). 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.

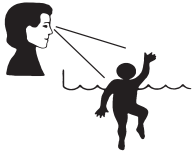
## IMPORTANT SAFETY INSTRUCTIONS

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 pump is equipped with a Ground-Fault Circuit-Interrupter (GFCI).  
To test the GFCI's leakage protection function: Plug the GFCI power cord set into the power outlet, make sure the pump is in working mode (i.e. display screen of the GFCI plug IS NOT showing "00"). Press the "TEST" button, the power to the pump should be interrupted by the GFCI and the pump will stop working. Press the "RESET" button to restore the power. If the GFCI fails to interrupt the power to the pump while it is on, the GFCI is defective, so contact Customer Service.  
If the GFCI interrupts power to the pump without the Test button being pushed, that means a ground current is flowing, indicating the possibility of an electric shock. In this case, stop using the pump immediately, disconnect the pump from the power outlet, and have the problem corrected by a qualified service representative before using the product again.
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 RP series Filter Pump.
2. It is recommended that you have some petroleum jelly (not included) on hand for lubricating the gaskets.

## FILTER PUMP IMPORTANT NOTES

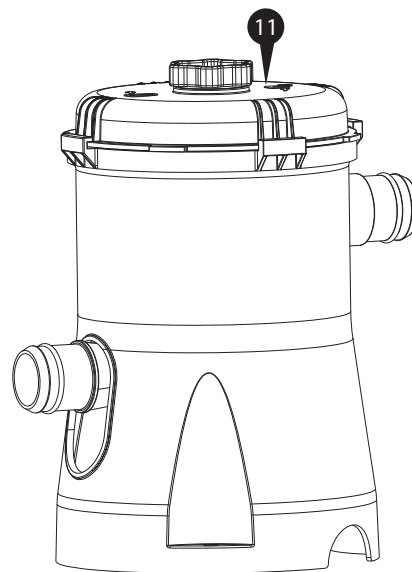
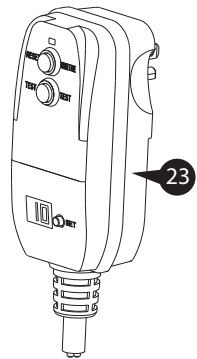
1. Installer shall follow written instructions provided for operation of the filter pump systems.
2. All electrical components shall be installed in accordance with Article 680 of the National Electrical Code (NEC) "Swimming Pools, Fountains and Similar Installations" or its latest approved edition.
3. DO NOT use this product to dispense powdered chlorine, shock treatment, or any other type of chemicals as damage to the pump, filter cartridge, and pool will occur.
4. The RP Series Filter Pump systems are manufactured by Polygroup® and ETL control number 4000608 and 4006317 - double insulated and grounded - 120 Volts A.C. - 60 Hz. (All unit must have a minimum of 105 Volts A.C. to start and run properly.)

## FILTER PUMP POWER INFORMATION

FILTER PUMP MODEL	WATTAGE	AMPERAGE
RP350	20 Watts	0.35 Amps
RP400	25 Watts	0.2 Amps

## PARTS LIST

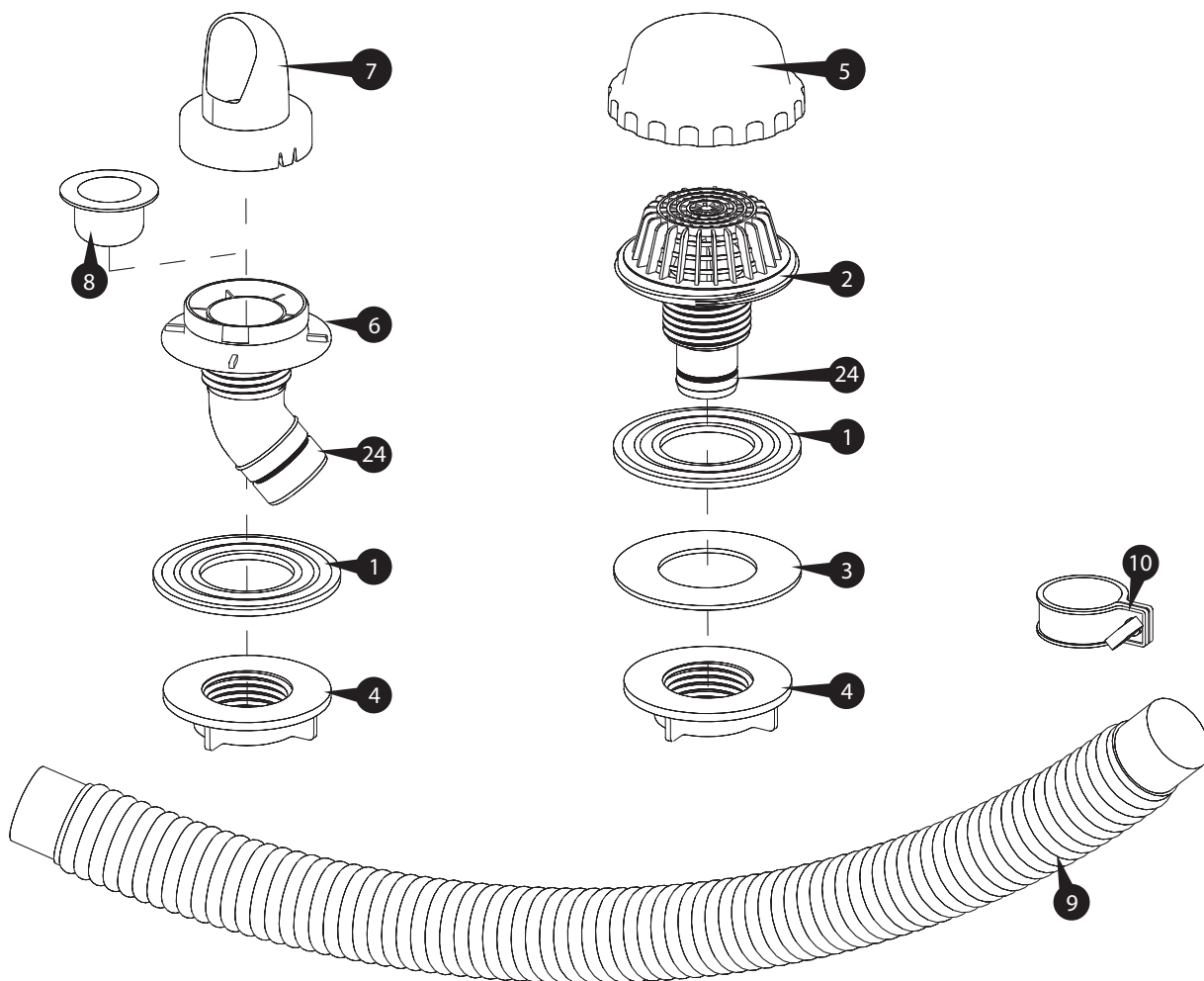
ITEMS	PARTS NAME	QTY.	ITEMS	PARTS NAME	QTY.
1	Fitting Gasket	2	16	Filter Pump Canister	1
2	Suction Fitting	1	17	Motor Assembly	1
3	Suction Fitting Washer (SF Washer)	1		A) RP350	
4	Return/Suction Fitting Lock Nut	2		B) RP400	
5	Suction Fitting Cap (SF/Service Cap)	1	18	Type D Filter Cartridge	1
6	Return Fitting	1	19	Pump Motor Body	1
7	Return Fitting Diverter (RF Diverter)	1		A) RP350	
8	Return Fitting Plug (RF/Service Plug)	1		B) RP400	
9	Hose	2	20	Rotor Assembly	1
10	Hose Camp	4		A) RP350	
11	Filter Pump Assembly	1		B) RP400	
	A) RP350		21	Volute Housing	1
	B) RP400		22	Volute Housing Screw Set (2 ea.)	1 set
12	Vent Screw	1	23	GFCI Power Cord Set	1
13	Vent Screw O-Ring	1	24	Filter Pump Port / Fitting O-Ring	4
14	Seal Top	1	25	Volute Housing Inlet O-Ring	1
15	Canister Gasket	1	26	Motor Assembly Screw and Washer Set (4 ea.)	1 set



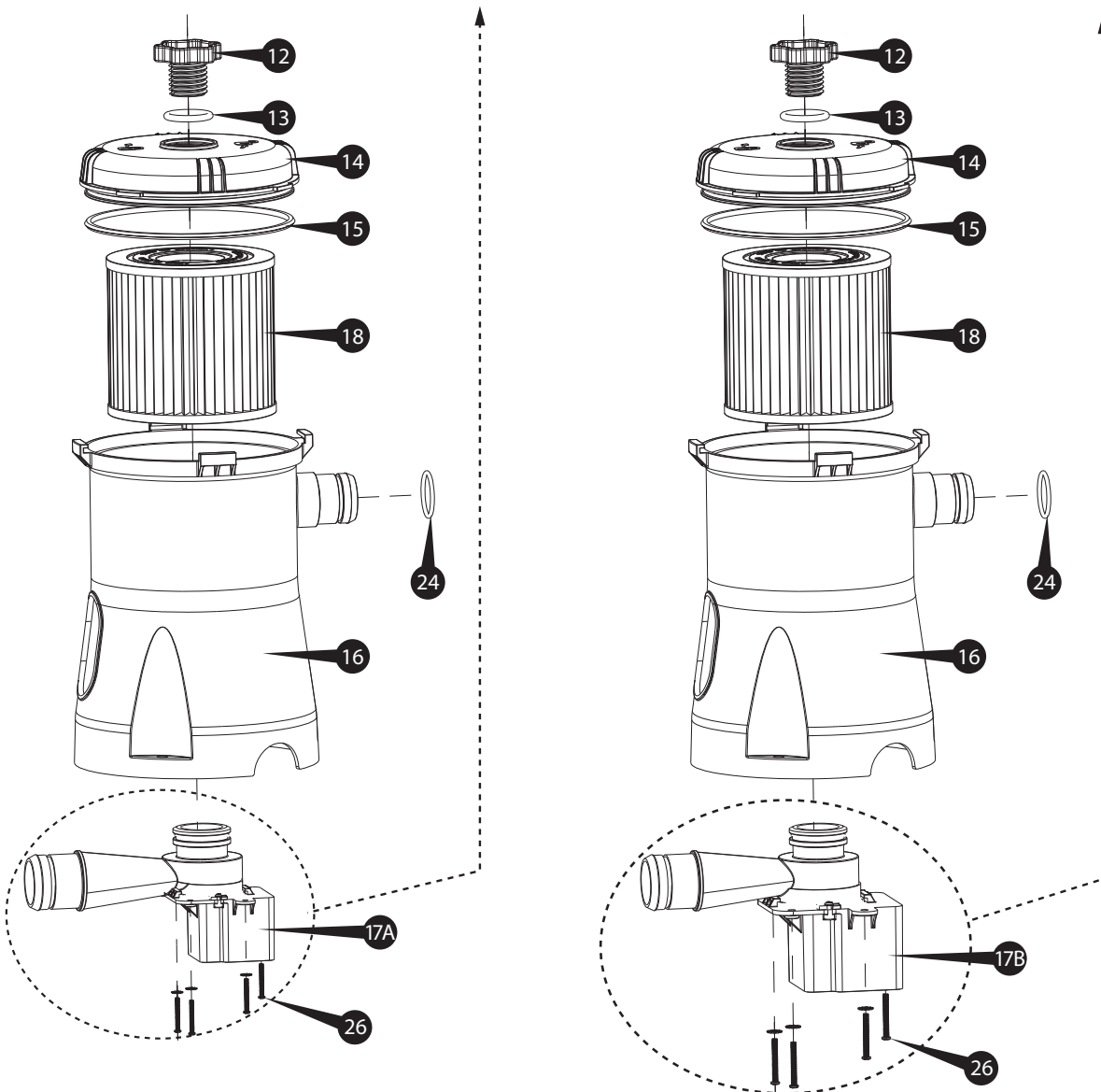
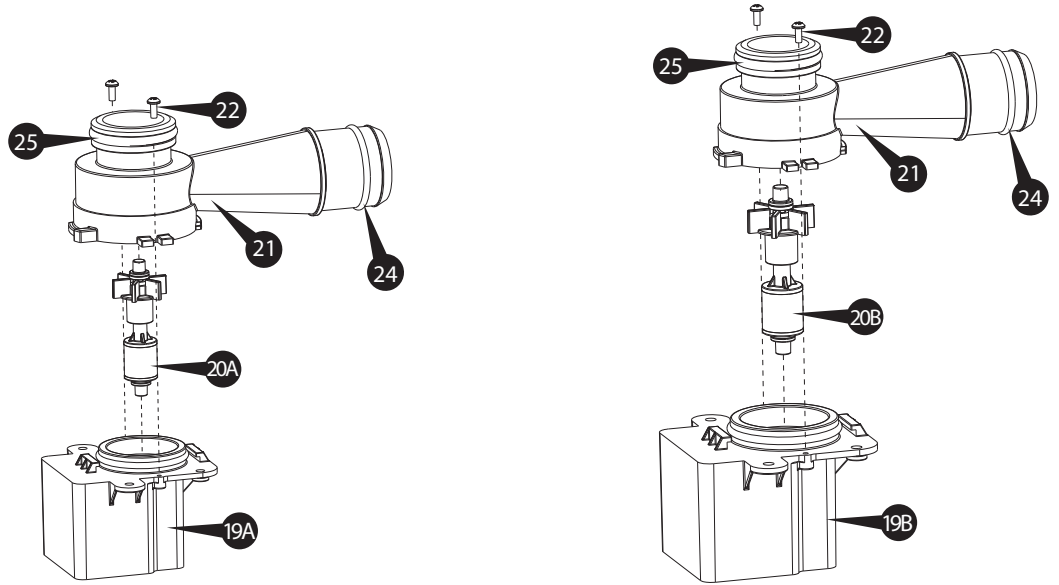
RP350 / RP400

RETURN FITTING

SUCTION FITTING







RP350

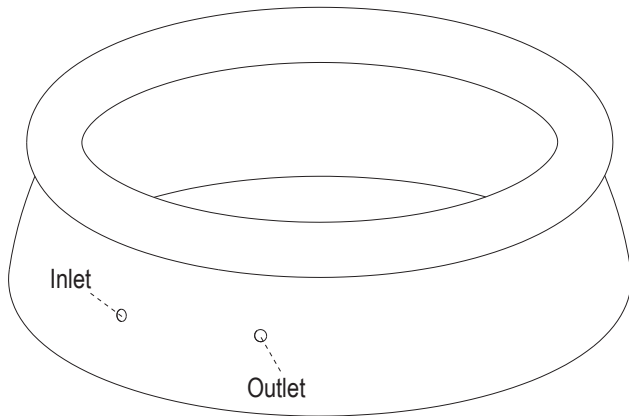
RP400

## SETUP INSTRUCTIONS

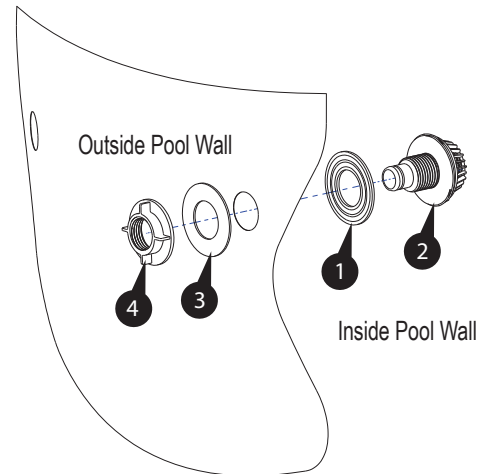
Before assembling your product, please take a few minutes to check the contents and become familiar with all the parts.

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

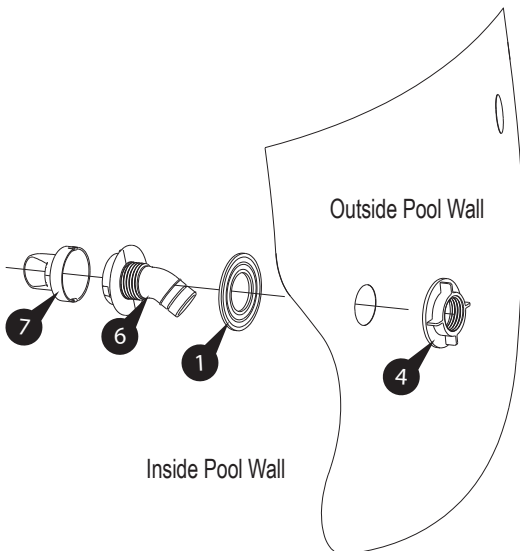
1. Set up the pool by following all the instructions that come with the pool. Do not fill with water until the Filter Pump is properly installed. Locate the Outlet and Inlet openings on the pool wall.



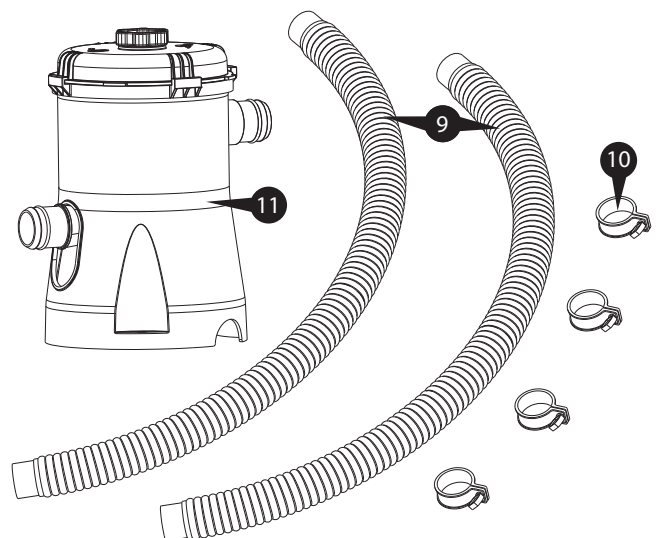
2. Lubricate the Fitting Gasket with petroleum jelly (not included) and install the Suction Fitting on the Outlet opening of the pool.



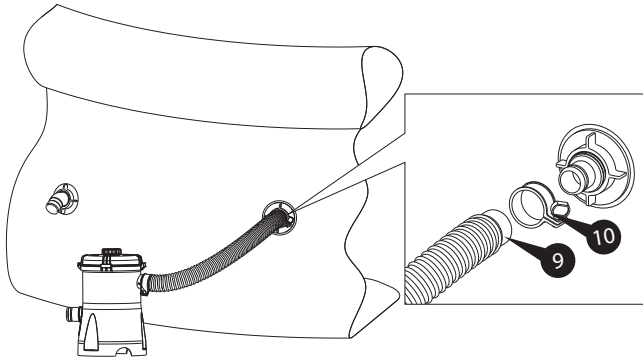
3. Lubricate the Fitting Gasket with petroleum jelly (not included) and install the Return Fitting on the Inlet opening of the pool.



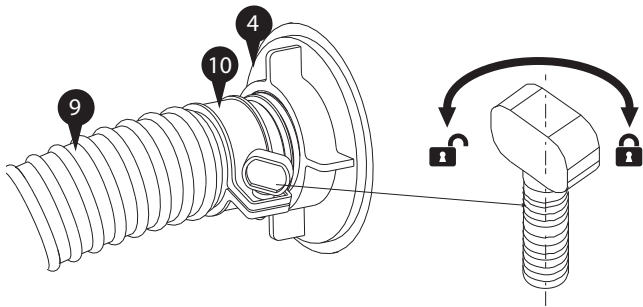
4. Remove the Filter Pump (11), Hoses (9), and Hose Clamps (10) from the package.



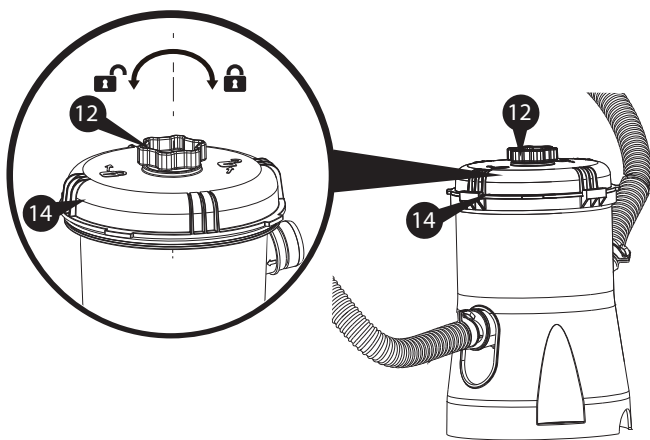
5. Lubricate the O-rings on the Suction Fitting and the Filter Pump Inlet with petroleum jelly (not included). Connect the Hose 9 from the Suction Fitting 10 to the Filter Pump Inlet.



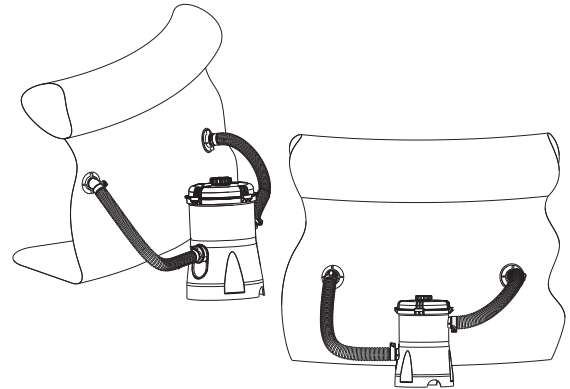
7. Tighten all Hose Clamps 10 to prevent water leakage.



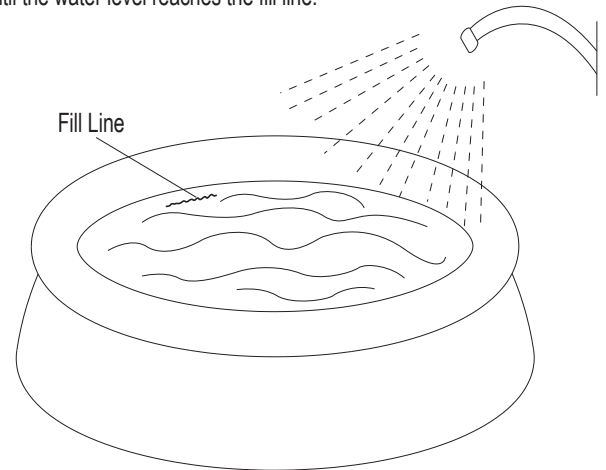
9. Air is now trapped inside the Filter Pump system, which will prevent the water from flowing smoothly. To VENT the system (release the trapped air), open the Vent Screw 12 at the top of the pump by turning it counter-clockwise. The water pressure will force out all the trapped air inside the Filter Pump system. Tighten the Vent Screw 12 when you see water flowing out from the Seal Top 14.



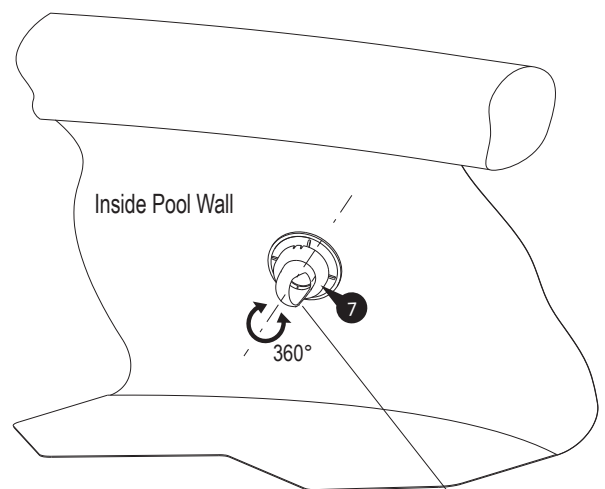
6. Lubricate the O-rings on the Return Fitting and the Filter Pump Outlet with petroleum jelly (not included). Connect the Hose 9 from the Return Fitting to the Filter Pump Outlet.



8. Do not plug in the filter pump at this point. Begin to fill the pool with water until the water level reaches the fill line.



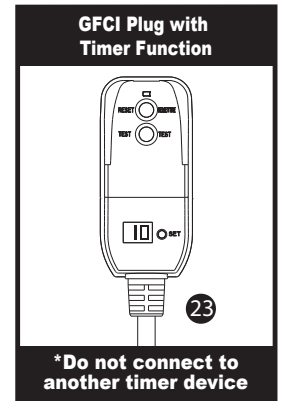
10. Adjust the Return Fitting Diverter 7 to maximize the circulation of the pool water.



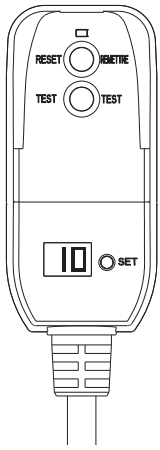
It is recommended to point the diverter down and away from the suction or water intake for optimum pool circulation.

## USE OF PUMP

1. Locate a grounded receptacle at least 15 feet (4.5 m) away from the pool.
2. To turn on the Pump, plug in the GFCI power cord set **23** to the power outlet.
3. The GFCI power cord set **23** comes with a pre-set timer function.
  - a. **Default timer setting:** When the power is on, the display screen shows "10", indicating that the default working time of the pump is 10 hours. The pump will automatically turn off after the 10 hours and remain off for 14 hours. This is based on a 24-hour cycle. This cycle will then continue as long as the power is on.
  - b. **Time adjustment:** Press the "SET" button to set the desired operating time of the pump between 1 to 10 hours, with each press increases the time by 1 hour. For example, when the display screen on the plug shows "05", the pump will work for 5 hours and restart after a 19 hours break.
  - c. If the display screen shows "00", it indicates that the pre-set working time has ended and the pump is currently off.
  - d. To restart the pump earlier than the pre-set time, press the "SET" button.  
In this case, the pre-set working time will increase by 1 hour from the previous setting.
4. To turn off the pump, press the "TEST" button of the GFCI Plug, and unplug it from the power outlet.  
If you accidentally press the "TEST" button while the pump is working, you can press the "RESET" button to restore the pump to work.
5. From inside the pool, check if the water flow from the RF Diverter **7** 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 **19**. For details, see **FILTER CARTRIDGE USE & CARE (p. 13)** as well as Symptom 2 of the **TROUBLESHOOTING GUIDE (p. 15)**.
6. **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. 14)**.



### Description of GFCI Plug with Timer Function

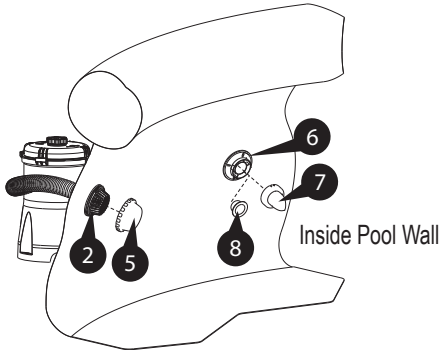
	<p><b>"RESET" button:</b></p> <ul style="list-style-type: none"> <li>• When the display screen shows a number between "01" to "10", but the pump is not working (e.g. the "TEST" button is pressed while the pump is working), you can press the "RESET" button to restore the pump to work.</li> <li>• When the display screen shows "00", the pump has stopped working, pressing the "RESET" button will have no action.</li> </ul>
	<p><b>"TEST" button:</b></p> <ul style="list-style-type: none"> <li>• To test the GFCI's leakage protection function: Plug the GFCI power cord set into the power outlet, make sure the pump is in working mode (i.e. display screen of the GFCI plug IS NOT showing "00"). Push the "TEST" button, the power to the pump should be interrupted by the GFCI and the pump will stop working.</li> <li>• When the display screen shows "00", the pump has stopped working, pressing the "TEST" button will have no action.</li> </ul>
	<p><b>"SET" button:</b></p> <ul style="list-style-type: none"> <li>• Press the "SET" button to set the desired operating time of the pump between 1 to 10 hours, with each press increases the time by 1 hour.</li> <li>• If the display screen shows "00", press the "SET" button will restart the pump. In this case, the pre-set working time will increase by 1 hour from the previous setting.</li> </ul>
	<p><b>Display Screen:</b></p> <ul style="list-style-type: none"> <li>• Shows "01", "02"...to "10" to represent the pre-set working time when the GFCI power cord set is plugged into a power outlet.</li> <li>• Shows "00" when the pump is in off mode.</li> </ul>

## PUMP MOTOR CARE

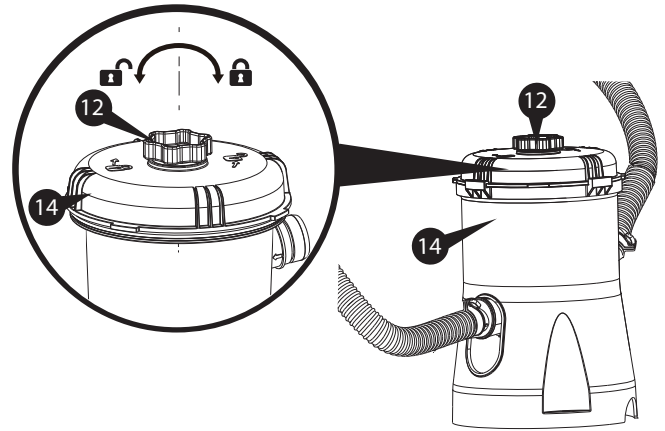
**IMPORTANT!** Your filter pump is protected by a thermal switch. The switch senses the temperature of the filter pump. If it gets too hot, the switch will stop the pump from running until it cools off. This is a safety device to prevent pump damage and prolong service life. If your pump is automatically turning off, it is because of high pool water temperature and/or low water flow through the pump. If this happens you need to check the water flow and correct it if needed, as this filter pump uses the water flow for cooling. It is recommended that you run the pump at night or early morning when the temperature is lower to prevent overheating.

## FILTER CARTRIDGE USE & CARE

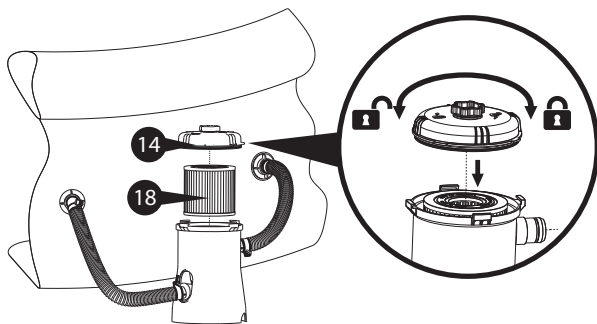
1. Turn off and unplug the Pump. Remove the RF Diverter **7** from the Return Fitting **6** and plug with the Service Plug **8**. Hand tighten the Service Cap **5** onto the Suction Fitting **2**.



2. To depressurize the Filter Pump system, vent the filter pump by twisting the Vent Screw **12** counter-clockwise.



3. Use both hands to twist off the Seal Top **14** by turning counter-clockwise. Remove the Filter Cartridge **13**.



4. The filter cartridge can be cleansed of coarse dirt and debris by thoroughly pressure washing inside and out with a garden hose, making sure to wash between all pleats. Allow a few hours for the filter to fully dry and CAREFULLY BRUSH the pleats to avoid damaging the filter cartridge. DO NOT scrub the pleated surface areas. Cleaning and scrubbing a filter too vigorously will wear out the cartridge much faster than if it is simply hosed off correctly.  
To ensure pool water stays clean, please clean the filter cartridge every day and change when required.



5. After you finished cleaning the filter cartridge, liberally lubricate the GASKET **15** with petroleum jelly and re-assemble in reverse order. Before restarting the filter pump, be sure to remove the Service Plug **8** and Service Cap **5**.
6. Suntan oils, body oils, and algae can form a coating on the filter pleats which may not be thoroughly removed by hosing. Such films of oils and/or algae will rapidly clog up the filters' pores, greatly reducing filtration. Therefore, it is imperative to remove such materials from the filter element as soon as possible. To remove oils, we recommend soaking the cartridge in a solution of 1 lb. of tri-sodium phosphate (TSP or any other strong detergent) to 5 gallons of water for up to 12 hours. Tri-sodium phosphate is available in many supermarkets, hardware stores, or janitorial supply stores. After the oils have been removed, rinse the filter cartridge to remove any dirt. If algae is a problem, add 1/2 pint of pool chlorine or 1 pint of liquid household bleach to the cleaning solution, 1 hour before removing the filter cartridge from the solution. Thoroughly rinse the filter cartridge before replacing it in the filter case. Check the pool chemistry to determine the cause of algae growth.
7. Excessive calcium and/or mineral deposits may build up on a filter cartridge and should be handled differently. Contact your local pool supply store to ask about additional filter cartridge cleaners or treatment for calcium or mineral deposits. Check pool chemistry for high pH or alkalinity; this may cause a calcium or mineral build-up.
8. A spare "stand-by" Filter Cartridge **13** is an excellent investment. It provides a convenient way to continue filtration of your pool while cleaning or replacing a dirty Filter Cartridge **13**. Also, a well-maintained, clean cartridge assures you that your filter will always be ready to operate at peak efficiency.
9. Filter cartridges may be purchased at the store you purchased your pool from, or ordered from Polygroup® at [polygroupstore.com](http://polygroupstore.com). Always replace with genuine Polygroup® SUMMER WAVES® filter cartridges.

## POOL MAINTENANCE

1. Check and adjust pH and chlorine levels daily using required chemicals. See Section "POOL WATER CARE." or contact your local pool store.
2. Check filter pump output daily. If flow is reduced, see Symptom 2 in Section "TROUBLESHOOTING GUIDE."
3. Check filter pump, hoses and fitting for leaks. If a leak is found, see Symptom 4 in Section "TROUBLESHOOTING GUIDE."
4. Run the pump for the recommended number of hours daily. If you are unsure of the time frame please refer to [support.polygroupstore.com](http://support.polygroupstore.com) for the recommended "Pump Operation Hours" bases on pool types and sizes.

## 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. **Algaecides** – 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. Use test kit daily to check pH and chlorine levels. Adjust accordingly using the required chemicals.  
**NOTE:** Excessive levels of chlorine or low pH levels will damage pool liner.
3. The pool can be cleaned using a garden hose powered vacuum from Polygroup® or a pool supply store.
4. Using a foot bath near the pool to wash off your feet prior to entering the pool will assist in keeping the pool clean.
5. Well water often presents special problems with water chemistry. If you must use well water, take a sample to your local pool chemical supplier for analysis before adding ANY chemicals.
6. Refer to the retail package box or visit the support pages at [support.polygroupstore.com](http://support.polygroupstore.com) for the capacity of your pool. You will need this information to determine the amount of chemicals you will need to correct the pool water.  
**NOTE:** It is recommended to use a 5 gallon bucket of water to mix and dissolve your chemicals and then applying directly to the pool water. Follow manufacturer's label directions on all chemicals. \*Most pool supply stores will test your pool water for free and advise you of what chemicals you need, and the correct amount to use for your pool. You will need to tell them the pool capacity in gallons.
7. **IMPORTANT** - We cannot emphasize enough the importance of proper and adequate daily chemical treatment. Chlorine and pH levels must be properly maintained at all times. PUMP AND FILTER ALONE WILL NOT PREVENT ALGAE FROM GROWING IN POOL WATER; THIS CAN ONLY BE DONEY BE MAINTAINING PROPER CHLORINE AND pH LEVELS AT ALL TIMES.
  - Maintain pH level between 7.3 and 7.8.
  - Maintain chlorine level between 1.0 and 1.6 ppm (parts per million).
  - Superchlorinate your pool at least every other week.

### NOTE :

1. Hot weather/heavy use may require pH and chlorine levels to be maintained on the upper side of the scale and superchlorination of the pool every week.
2. Using a pool cover and/or solar cover (available at [polygroupstore.com](http://polygroupstore.com)) will assist in maintaining your pH and chlorine levels by reducing the amount of evaporation from your pool.  
**CAUTION** - Concentrated chlorine levels and low pH levels will damage pool. You must follow the instructions for the pool chemicals you use, as to quantity and recommended usage. **NEVER** drop lumps or pellets of chemicals in pool; this may present a hazard to swimmers and/or damage your liner.

## TROUBLESHOOTING GUIDE

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

SYMPTOM		CAUSE	SOLUTION
1	Motor fails to start or kicks on and off	A Unit not plugged in or GFCI not activated	A Unit must be plugged into a 3-wire grounded power outlet. Press the reset button on the GFCI to start the pump.
		B GFCI Plug and/or circuit breaker tripped	B Reset the GFCI plug and/or circuit breaker. If problem persists, have the circuit checked by a qualified electrician.
		C Low voltage	C Check the line voltage, it must be in the range of 105 to 125 Volts A.C.
2	No flow or slow water flow through the return hose.	A Low pool water level	A Fill the pool to the fill line. The suction fitting must be at least 4" under water.
		B Inlet/Outlet clogged	B Check for obstructions in the suction hose or fitting and in the return hose or fitting.
		C Dirty filter cartridge	C Clean or replace the filter cartridge (See p. 12). A spare cartridge makes servicing more convenient.
3	Filter pump is not cleaning the pool properly (e.g. cloudy/green water)	A Chlorine level is not in the suitable range	A Maintain chlorine level between 1.0 to 1.6 ppm.
		B pH level is not in the suitable range	B Maintain pH level between 7.3 to 7.8.
		C Dirty filter cartridge	C Clean or replace the filter cartridge (See p. 12). A spare cartridge makes servicing more convenient.
		D Damaged filter cartridge	D Inspect the filter cartridge for holes or tears. If visibly damaged; replace the filter cartridge
		E Slow water flow	E Check for obstructions in the suction hose or fitting and in the return hose or fitting.
		F Other Chemicals Required	F Have water tested at pool supply store. It may be necessary to add other chemicals due to varying water quality in different localities.
		G Pool water very dirty	G Chemicals are required to maintain clean pool water. Clean pool and filter more often.
4	Water leakage	A Hose area: Suction or Return hose does not fit well on canister connections and/or wall fitting connections	A Make sure the hose clamp <b>10</b> is positioned properly over the hose and O-ring <b>24</b> to ensure a proper seal. Adjust hose clamp, check o-ring and re-tighten. Check hose for any holes or cracks and replace if needed.
		B Vent screw in Seal Top	B Check O-ring <b>13</b> for damage. Replace if needed. Tighten the Vent Screw <b>12</b> .
		C Seal Top	C Check Gasket <b>15</b> for damage. Replace if needed. Tighten the Seal Top <b>14</b> .

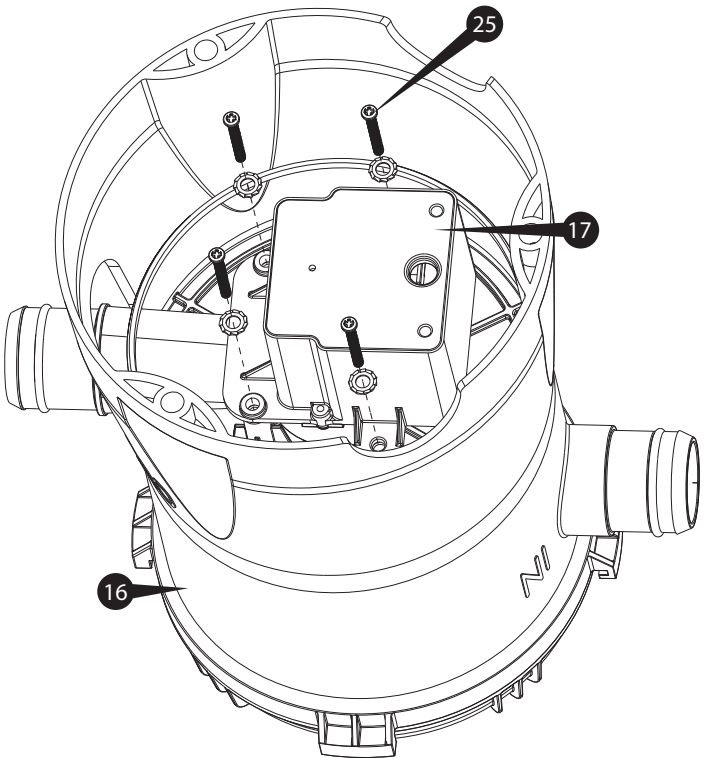
## POOL PUMP DISASSEMBLY & STORAGE

1. First turn the pump off and unplug the main power cord of the system. Remove the RF Diverter **7** from the Return Fitting **6** and then seal the Return Fitting **6** with the Service Plug **8**. Hand tighten the Service Cap **5** onto the Suction Fitting **2**.
2. Slowly unscrew the Vent Screw **12** from the Seal Top **14** to depressurize the pump.
3. Remove the Seal Top **14** by turning it counter-clockwise.
4. Remove the Filter Cartridge **13**.
5. Loosen all four Hose Clamps **10**, remove the Hoses **9** and allow water to drain out.
6. Clean and dry all filter pump parts including the Filter Cartridge.
7. Liberally lubricate the O-ring **13** and Gasket **15** with petroleum jelly, and then reassemble them, along with the Seal Top **14** and Vent Screw **12**, onto the Canister **16**. Store all parts carefully in an airtight plastic bag.
8. Store all the parts in a dry environment that remains above 32 degrees Fahrenheit at all times.

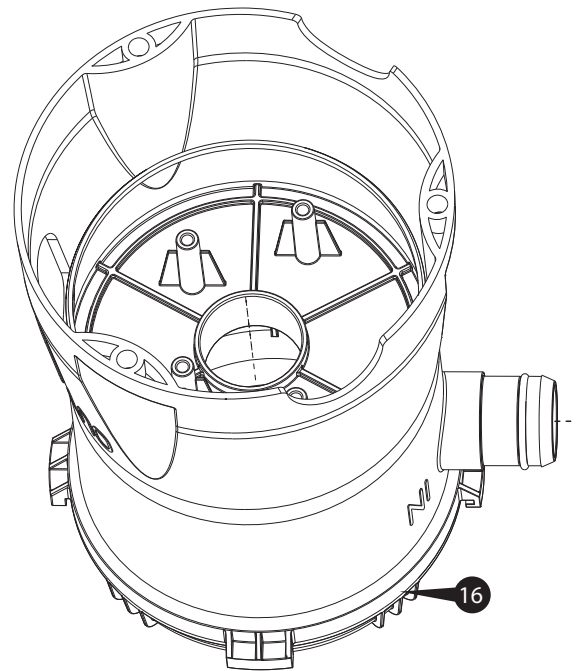
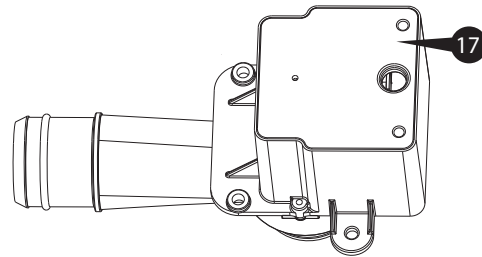
## PUMP REMOVAL INSTRUCTIONS FOR TROUBLESHOOTING

1. First turn the pump off and unplug the main power cord of the system. Remove the RF Diverter **7** from the Return Fitting **6** and then seal the Return Fitting **6** with the Service Plug **8**, Hand tighten the Service Cap **5** onto the Suction Fitting **2**.
2. Slowly unscrew the Vent Screw **12** from the Seal Top **14** to depressurize the pump.
3. Loosen the Hose Clamps **10** at the filter pump inlet and outlet. Detach both Hoses **9** from the filter pump.
4. Turn the filter pump upside down. Remove the Motor Assembly Washer and Screw Set **25**.

**(REMEMBER TO KEEP ALL PARTS IN A SAFE PLACE FOR REASSEMBLY LATER)**



5. Remove the Motor Assembly **17** from the Canister **16**.



## ROTOR INSPECTION AND REPLACEMENT INSTRUCTIONS

**(REMEMBER TO KEEP ALL PARTS IN A SAFE PLACE FOR REASSEMBLY LATER)**

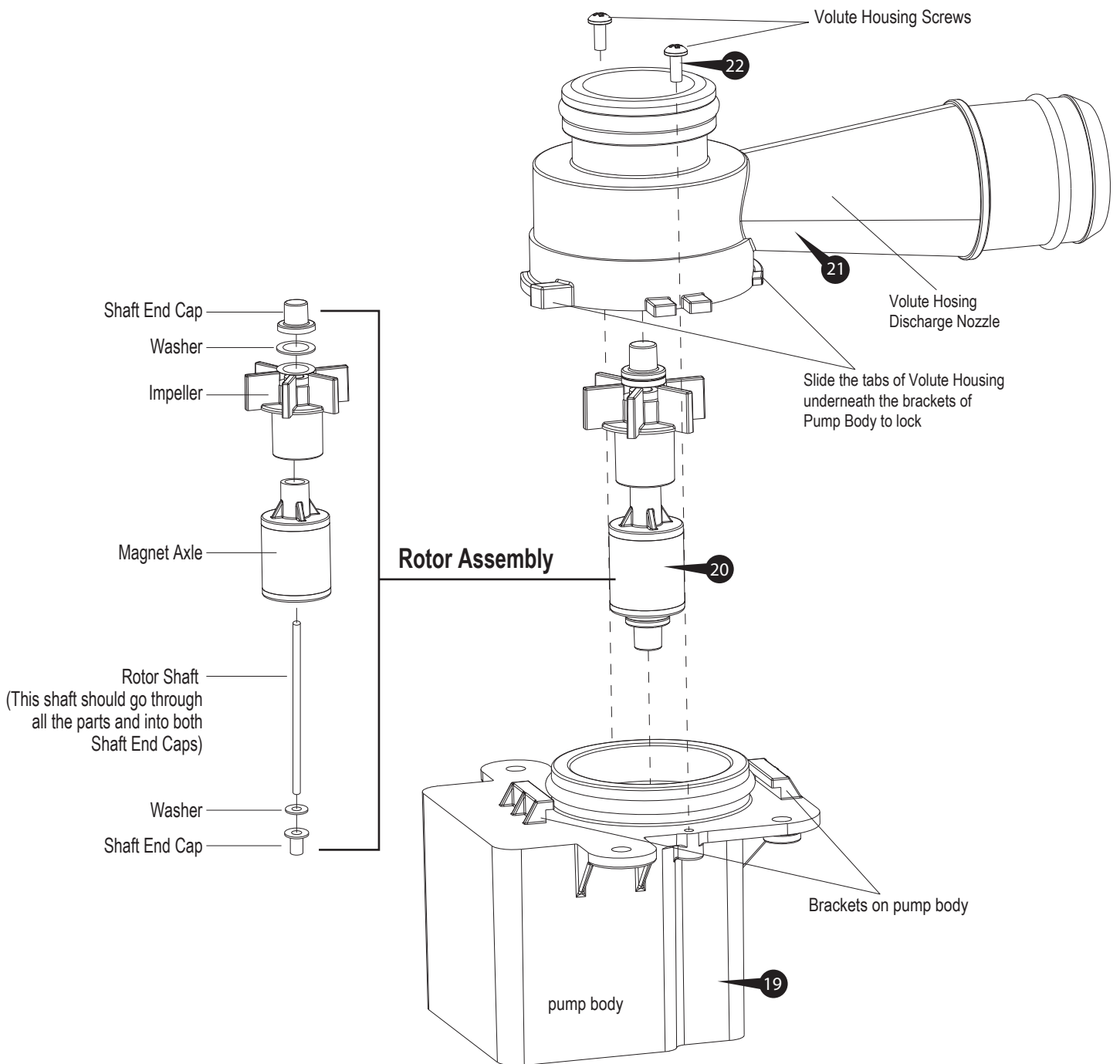
1. To replace the Rotor Assembly **20**, remove the Volute Housing Screw Set **22**. Grasp the Pump Motor Body in one hand and the volute cover discharge nozzle in the other hand. Rotate the nozzle counterclockwise to release the tabs of volute housing from the brackets of pump body.
2. Carefully pull upwards once the tabs are clear of the brackets.
3. Remove the Volute Housing **21** and pull out the Rotor Assembly **20** from the Pump Motor Body **19**. Please be careful as the Rotor Assembly has multiple parts which may come out separately.
4. Inspect the Rotor Assembly to make sure that it has all of its parts and that the Rotor Shaft, Magnet Axle, or Impeller are not broken as this will cause the pump to fail. If your Rotor Assembly is broken, a complete Rotor Assembly may be purchased at [polygroupstore.com](http://polygroupstore.com) without having to replace the whole pump.








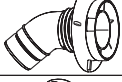

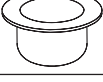







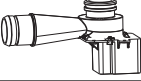


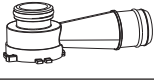

5. Please see Pool Support - Filtration System Troubleshooting for the RP350/RP400 Filtration System at [support.polygroupstore.com](http://support.polygroupstore.com).








**PLEASE NOTE:** Even if the rotor assembly is in perfect condition; if it is not seated properly between the volute housing and the pump it will not function correctly.

6. To reassemble the pump (Motor Assembly): Carefully insert the Rotor Assembly **20** into the Pump Motor Body **19**. The force of the magnet will pull the rotor assembly into the pump. Ensure that the Rotor Assembly is completely assembled and aligned correctly inside the pump body.
7. Once the rotor has been inserted, fasten the volute housing tabs back under the brackets of pump body by turning the volute housing discharge nozzle clockwise.
8. Tighten the Volute Housing **21** With the Volute Cover Screw Set **22** to complete the reassembly of the pump (Motor Assembly).
9. Slowly insert the Motor Assembly **17** back into the Canister **15**, and fasten the Motor Assembly **17** With Motor Assembly Washer and Screw Set **25**.



## REPLACEMENT PARTS ORDERING INFO

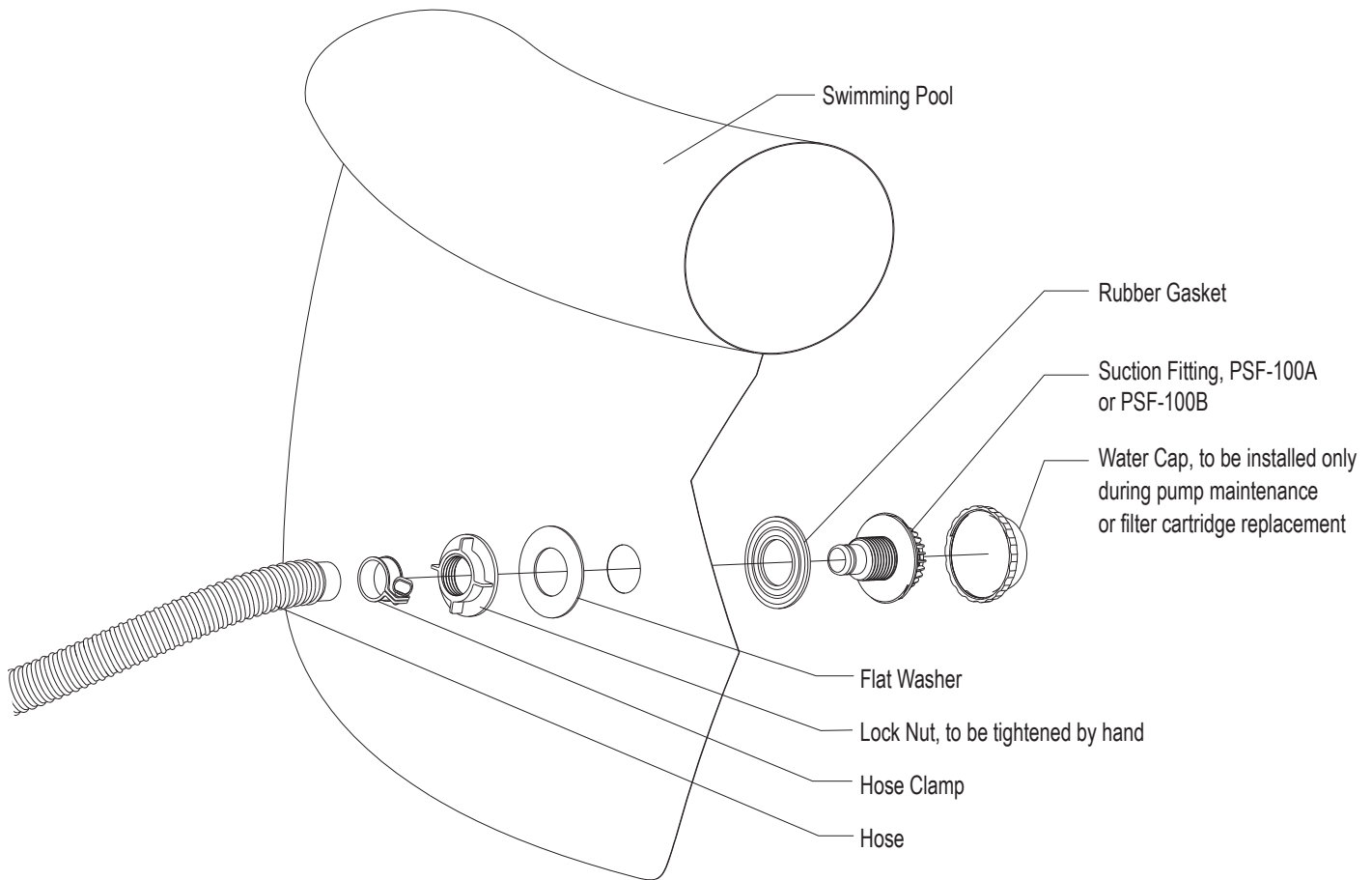
		RP350	RP400
1		P58PF1520K01	P58PF1520K01
2		P58281283W05	P58281283W05
3		P58PF1510K01	P58PF1510K01
4		P58PF1430W05	P58PF1430W05
5		P58PF2820P01	P58PF2820P01
6		P58PF7800W05	P58PF7800W05
7		P58PF7790W05	P58PF7790W05
8		P58PF0620K01	P58PF0620K01
9		P58125036W01	P58125036W01
10		P58220221W05	P58220221W05
12		P58534000W05	P58534000W05
13		P58031000K01	P58031000K01
14		P58PF5290W05	P58PF5290W05
15		P58096000K01	P58096000K01
16		P58530000W05	P58530000W05
17		P53F0350C001	P58F0400C000
18		P581041037PR	P581041037PR
20		P581160049B1	P58050400001
21		P58PF5270K01	P58PF5270K01
22		P5816300270B	P5816300270B

		RP350	RP400
24		P58030001K01	P58030001K01
25		P58031001K01	P58031001K01
26		P5816400290A	P5816400290A
*		P584150006W1	P584150006W1
*		P58PF5620P01	P58PF5620P01
*		P58003689W05	P58003689W05
*		P53FR035AW05	P53FR0400W05

# ASME COMPLIANT SUCTION FITTING INFORMATION

## PSF-100A and PSF-100B Suction Outlet Fitting (For Aboveground Pool)

1. PSF-100A and PSF-100B Suction Outlet Fitting are certified by IAPMO in accordance with the ASME/ANSI/APSP/ICC-16 2011 **Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs.**
2. This is a submerged suction outlet fitting for use with aboveground swimming pool.
3. For single drain only. Use only ONE outlet fitting for each pump.
4. Do not locate this suction outlet fitting on sitting areas or on the backrest for such seating area.
5. Install this outlet fitting at location recommended by the pool manufacturer. Maximum height 1.8 m from the ground.
6. The maximum allowable flow rate of this suction outlet fitting is 24 gallons per minute (1,440 gallons per hour).
7. Connection hose:
  - a. Model PSF-100A is to be connected with 1 ¼" (31.8mm) diameter hose.
  - b. Model PSF-100B is to be connected with 1 ½" (38.1mm) diameter hose.
8. The suction outlet fitting is to be mounted at the suction outlet fitting opening as specified by the manufacturer of the aboveground pool. The diameter of this opening should be within the range of 1.77" to 1.85" (45mm to 47mm). Refer to the following diagram for detailed assembly instructions:



9. PSF-100A or PSF-100B Suction Outlet Fitting is to be replaced every 5 years.
10. No tool is required for installation.
11. Service & winterizing instructions:
  - a. **CAUTION! DO NOT EXCEED THE MAXIMUM ALLOWABLE FLOW RATE: 24 gallons per minute (1,440 gallons per hour)**
  - b. Carefully observe and inspect the suction outlet fitting for damage and tampering. Missing, broken or cracked suction outlet fitting must be replaced before each use of your pool.
  - c. Loose suction outlet fitting should be reattached or replaced before each use of your pool.
  - d. Remove and store the suction outlet fitting assembly if temperatures are expected to fall below 32°F (0°C).