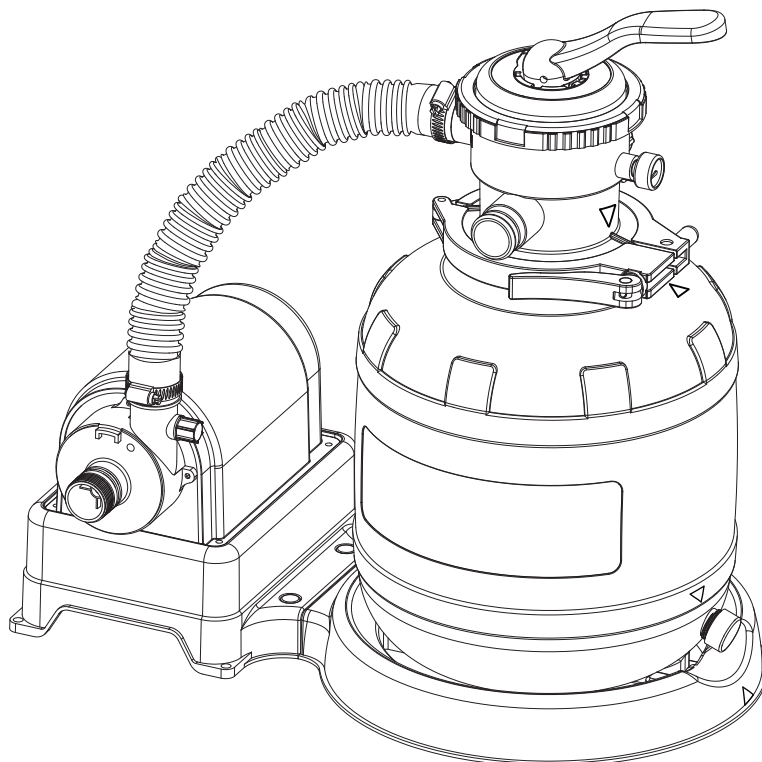


SUMMER WAVES® SAND FILTER PUMP

FOR ABOVE GROUND SWIMMING POOLS

ST1100 (10") / ST1600 (12") models



NOTE: For the instructional video on setting up the sand filter pump and pairing it with the pool, please visit www.polygroupstore.com

READ AND KEEP THESE INSTRUCTIONS FOR FUTURE REFERENCE

For answers to common questions, setup videos and troubleshooting tips, please visit 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



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. 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.

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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.

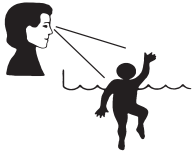
IMPORTANT SAFETY INSTRUCTIONS

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 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 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

Consumer Awareness Booklets and Information Source

Contact: U.S. Consumer Product Safety Commission at 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

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
- www.cpsc.gov
- www.drowningpreventionalliance.com
- www.nspf.org
- www.safekids.org

ANSI American National Standards Institute

25 West 43rd Street, New York NY 10036

Contact: 212-642-4900

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

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

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

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

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

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

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 ST Series Filter Pump.
2. Before you begin to assemble the pool, identify, count, and check all parts needed for assembly.
3. It is recommended that you have some PETROLEUM JELLY on hand for lubricating the gaskets.
4. Installer shall follow written instructions provided for operation of the filter pump systems.
5. 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.
6. The ST Series Sand Filtration Systems are 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.

SAND PUMP POWER INFORMATION

SAND PUMP MODEL	WATTAGE	AMPERAGE
10" SAND FILTER (WITH CP2000 PUMP)	350 watts	3.0amps
12" SAND FILTER (WITH CP2000 PUMP)	350 watts	3.0amps

PARTS LIST

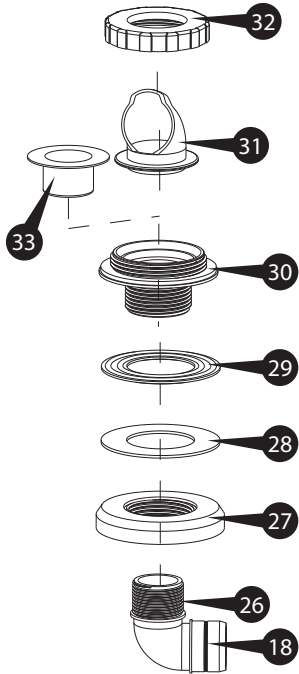
ITEMS	PARTS NAME		QTY.	ITEMS	PARTS NAME		QTY.
①	Sand Tank Base	A) ST1100	1	⑰	Pump		1
		B) ST1600		⑱	1.5" Fitting O-Ring		8
②	Sand Tank	A) ST1100	1	⑲	Drain Indicator		1
		B) ST1600		⑳	6-Port Valve Handle		1
③	Drain Valve Cap		1	㉑	SF Gasket (black)		1
④	GFCI Power Cord Set		1	㉒	Suction Fitting (SF)		1
⑤	Center Pipe	A) ST1100	1	㉓	SF Thrust Washer		1
		B) ST1600		㉔	SF Nut		1
⑥	Sand Guard		1	㉕	SF Cap		1
⑦	Clamp		1	㉖	RF 90° Elbow		1
⑧	Camshaft Bolt Cap		1	㉗	RF Nut		1
⑨	Gasket		1	㉘	RF Thrust Washer		1
⑩	6-Port Valve		1	㉙	RF Gasket		1
⑪	Blue Drain Outlet Cap		1	㉚	Return Fitting (RF)		1
⑫	Pressure Gauge		1	㉛	Snap On RF Diverter		1
⑬	Long Hose		2	㉜	RF Locking Ring		1
⑭	Short Hose	A) ST1100 12" Hose	1	㉝	RF Service Plug		1
		B) ST1600 16" Hose		㉞	Wrench		1
⑮	Hose Clamp		6	㉟	Drain Valve Filter		1
⑯	Lock Pin		2	㊱	Drain Valve Filter O-Ring		1
				㊲	Vent Cap		1

Sand Specifications:

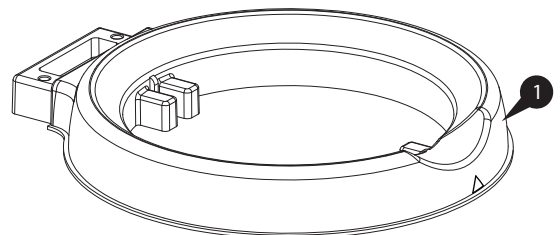
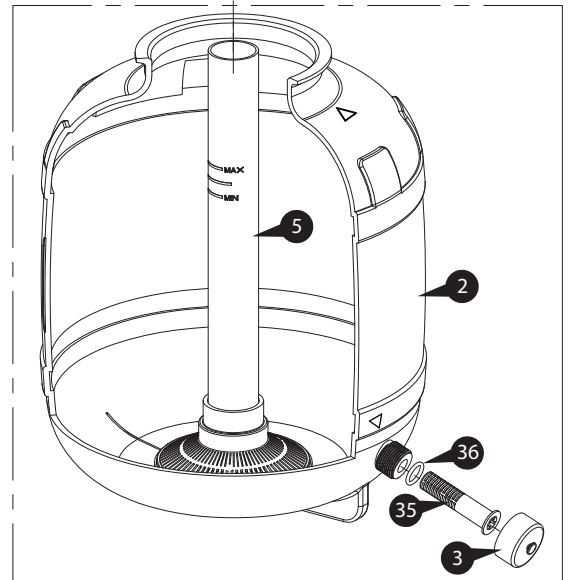
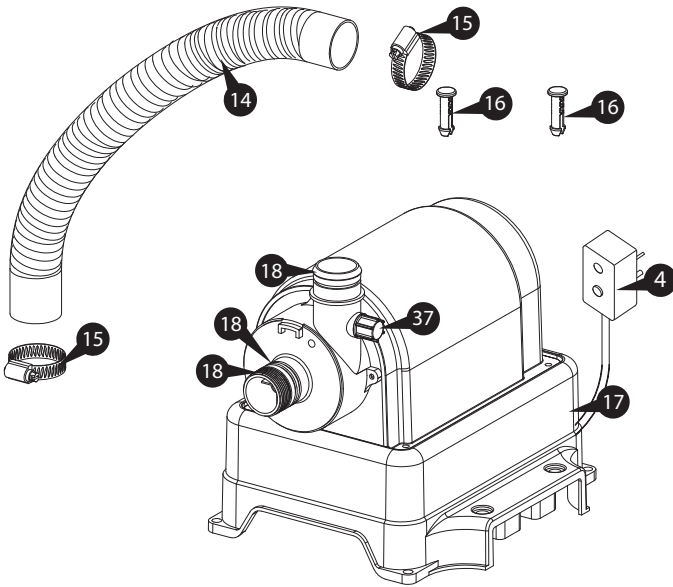
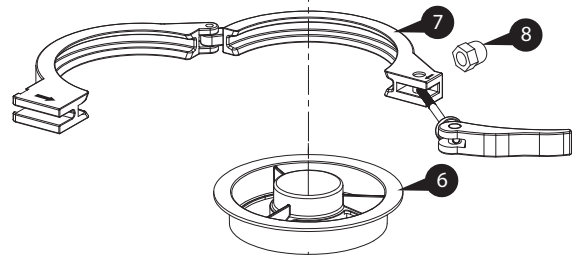
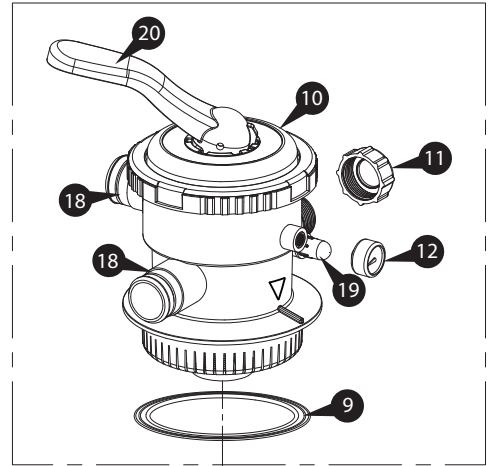
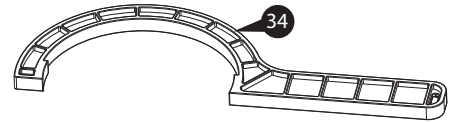
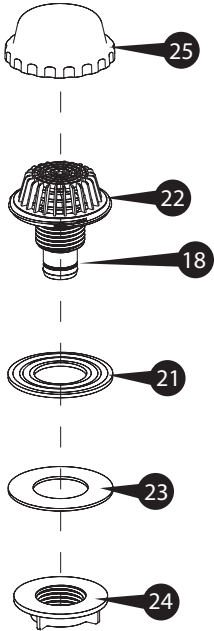
Fill the tank with #20 silica sand ONLY. You can purchase the sand from your local home improvement or building material stores.

WARNING: Using the incorrect sand may damage the filtration system and will void the warranty.

RETURN FITTING SET



SUCTION FITTING



SETUP INSTRUCTIONS

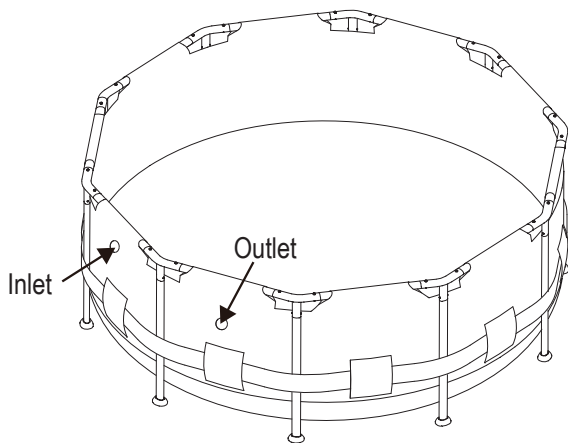
Before assembling your product, please take a few minutes to check the contents and become familiar with all the parts.

⚠ WARNING: CLIMBING HAZZARD! PLEASE PREVENT CHILDREN FROM CLIMBING ON THE FILTRATION SYSTEM TO GAIN ACCESS TO THE POOL.

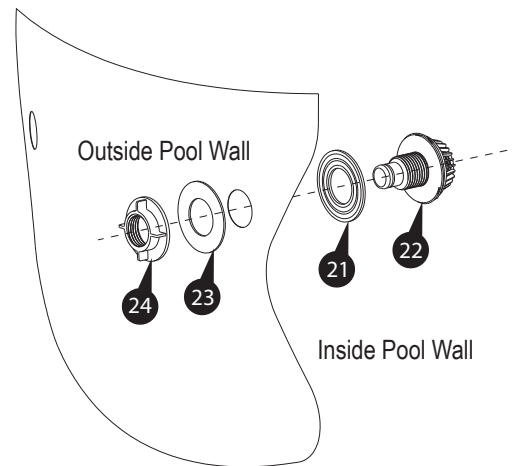
Tools required:

Flat-blade screwdriver (not included)

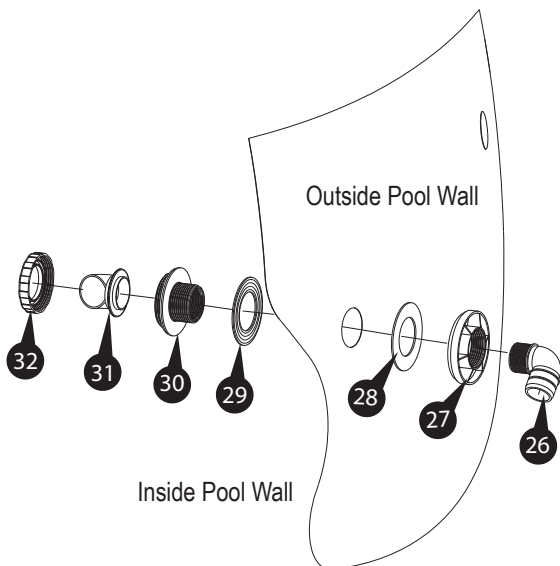
1. Set up the pool by following all the instructions that came with the pool. Do not fill water until the Filter Pump is properly installed. Locate the Outlet and Inlet openings on the pool wall.



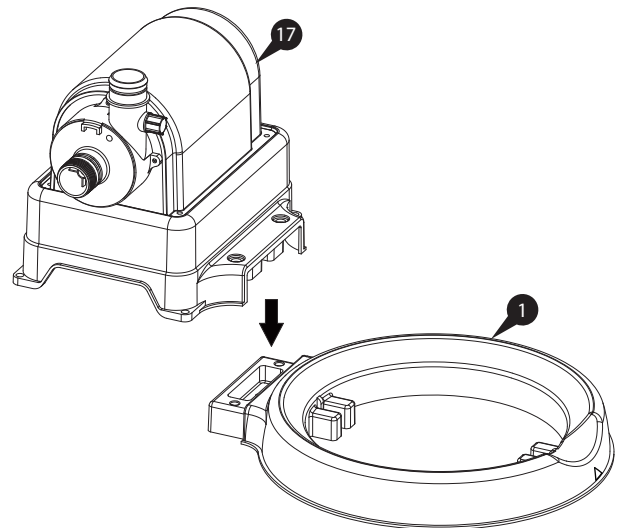
2. Install the Suction Fitting 22 on the Outlet opening of the pool.



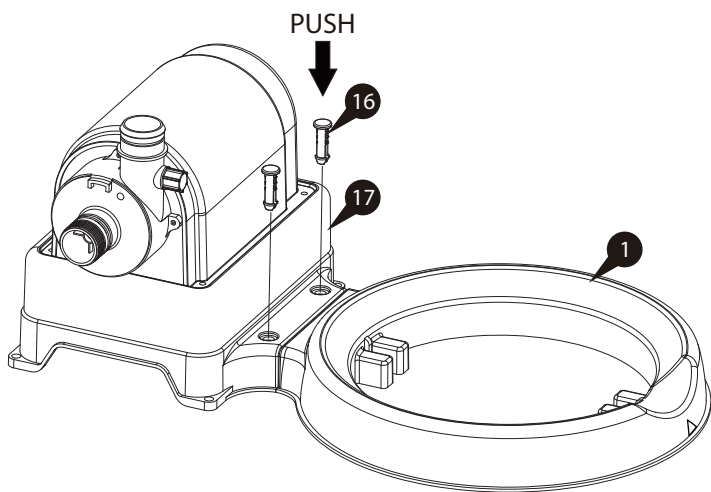
3. Install the Return Fitting 30 on the Inlet opening of the pool.



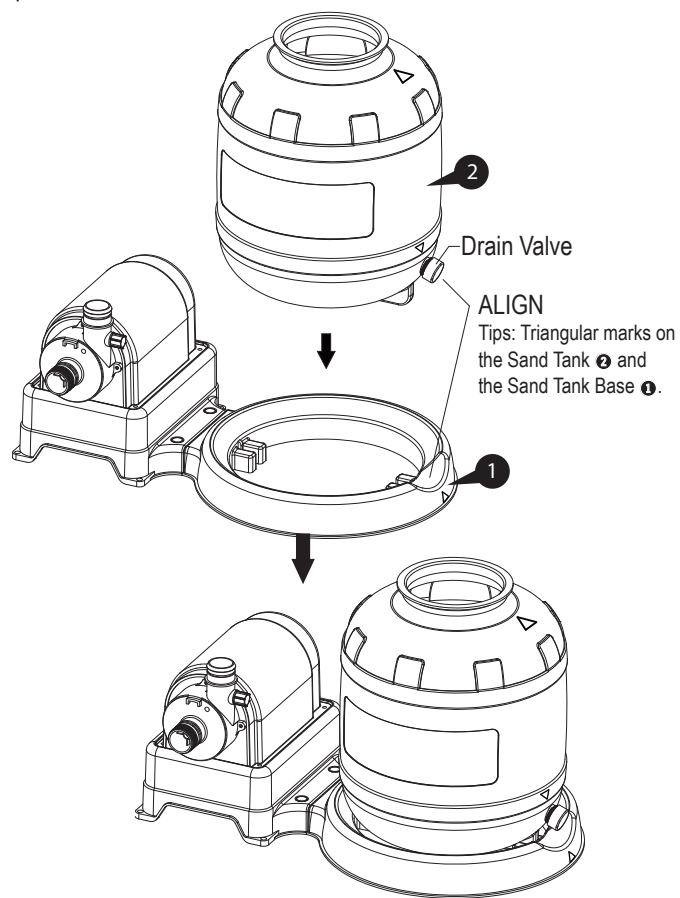
4. Snap the Pump 17 on to the Sand Tank Base 1.



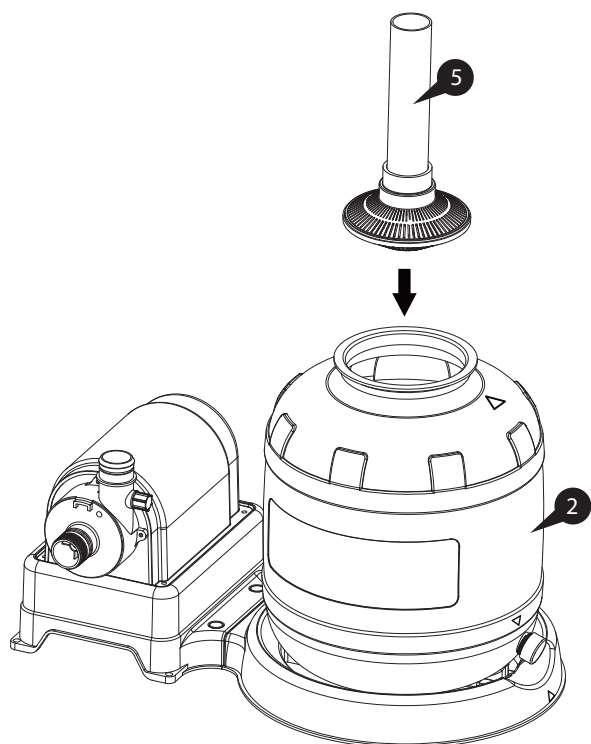
5. Insert and push the Lock Pins **16** all the way down to secure the Pump **17** to the Sand Tank Base **1**.



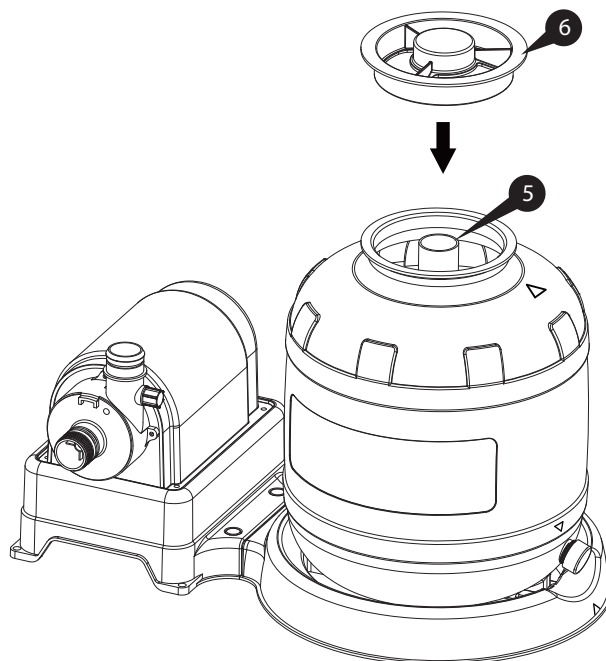
6. With the Drain Valve of the Sand Tank **2** pointing outwards, place the Sand Tank **2** onto the Sand Tank Base **1**.



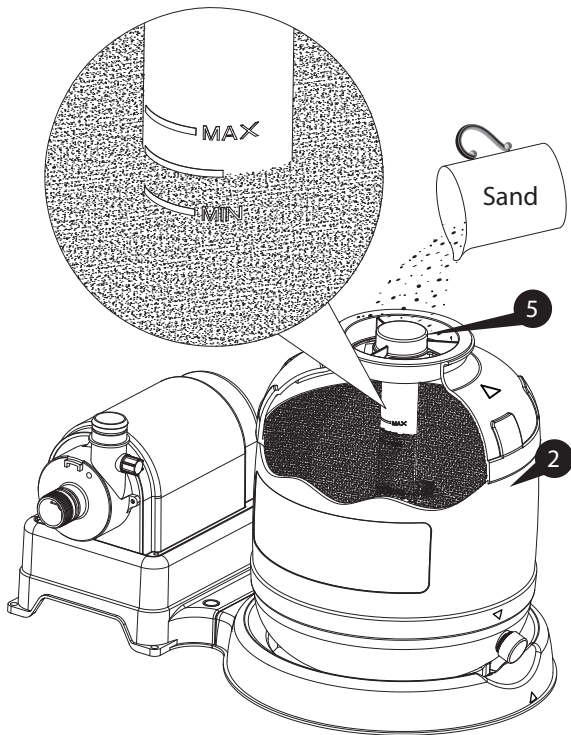
7. Put the Center Pipe **5** into the Sand Tank **2**. Position the Center Pipe **5** at the bottom center of the Sand Tank **2**.



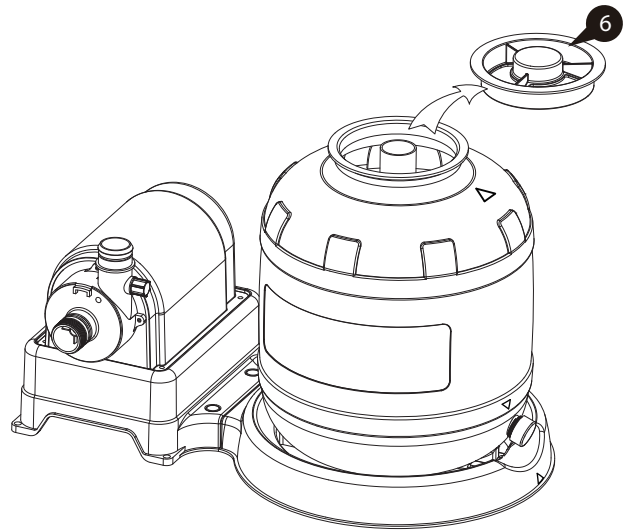
8. Place the Sand Guard **6** over the top opening of the Center Pipe **5**.



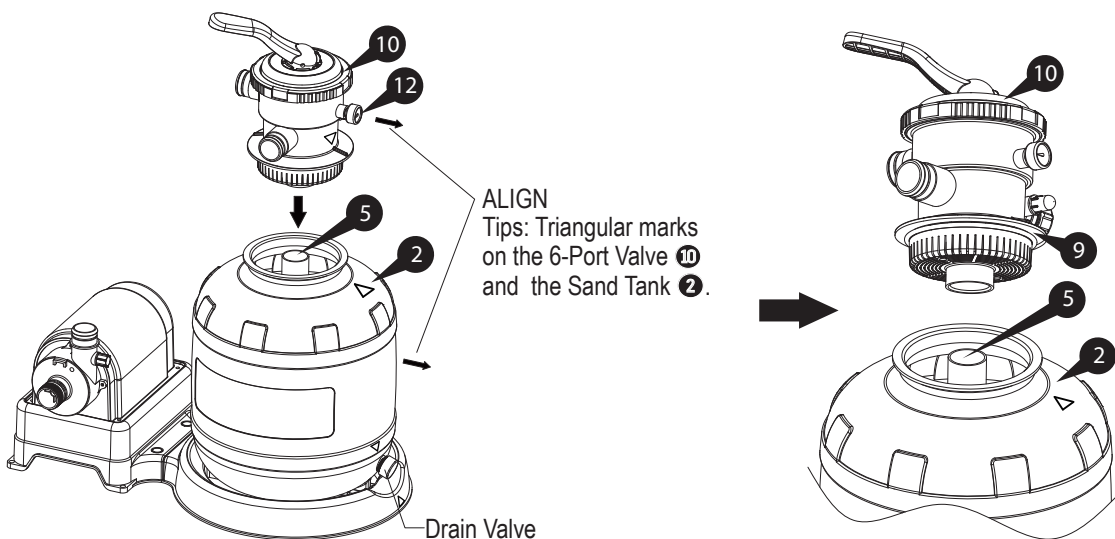
9. Fill the tank with #20 silica sand ONLY. You can purchase the sand from your local home improvement or building material stores. Slowly pour sand into the Sand Tank 2 until the sand level is between the Min and Max marks on the Center Pipe 5.



10. Remove the Sand Guard 6 and save for future use.

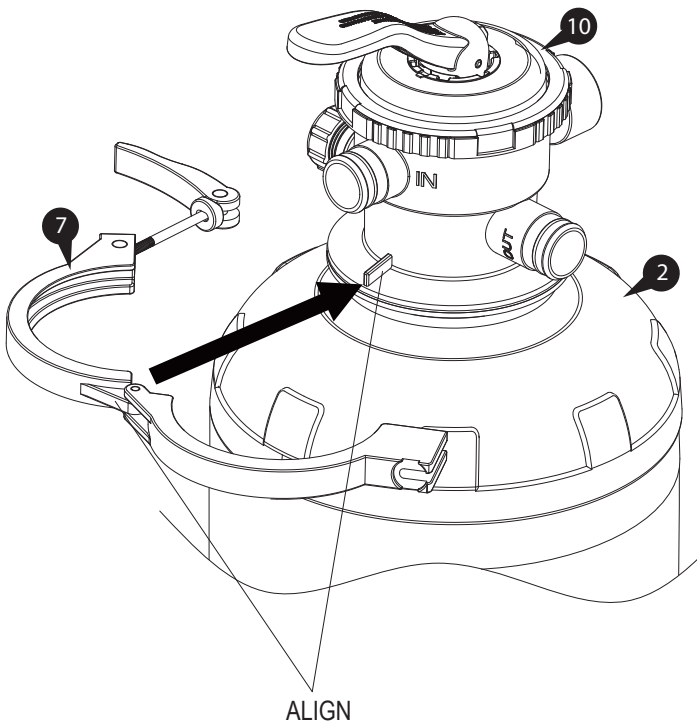


11. Install the 6-Port Valve 10 to the Sand Tank 2, and ensure it fits securely into the Center Pipe 5. Rotate the Valve so that the Pressure Gauge 12 is aligned with the Drain Valve.

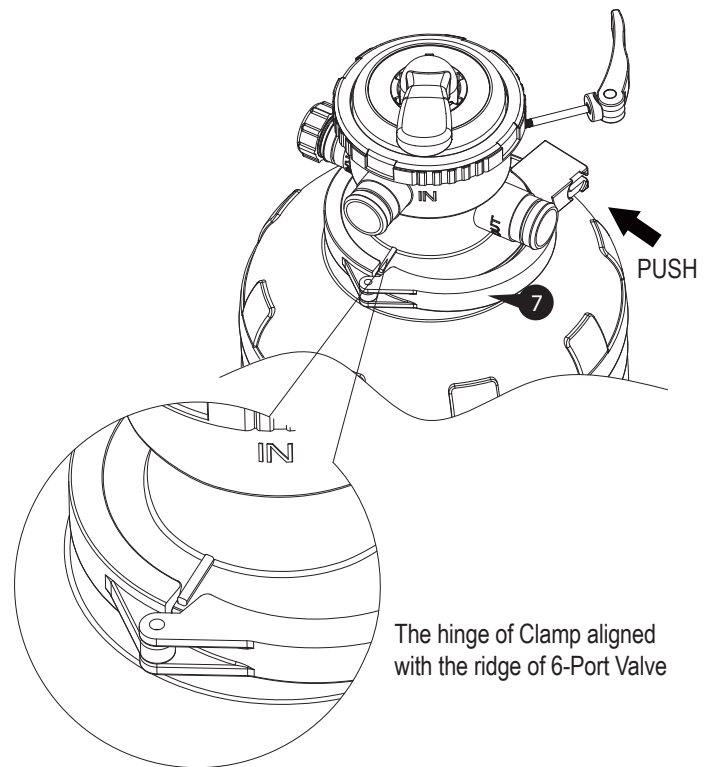


12. Place the Clamp **7** around the flange of the 6-Port Valve **10** and Sand Tank **2**.

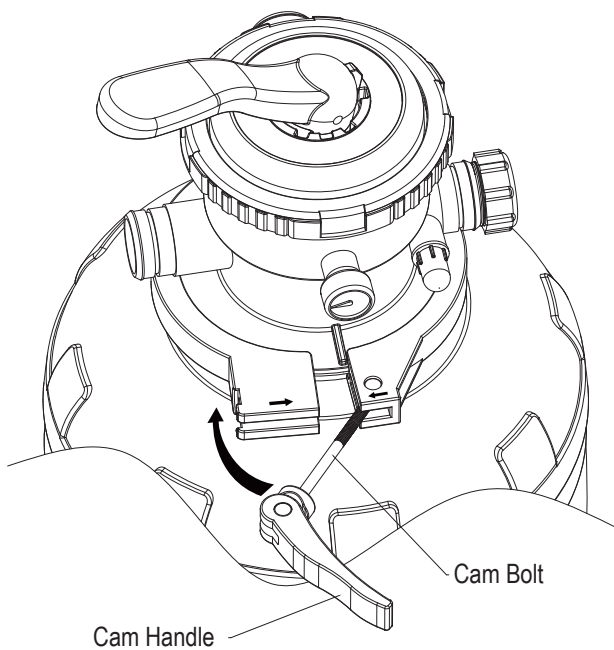
IMPORTANT: Align the hinge on the Clamp **7** with the ridge on the flange of the 6-Port Valve **10**.



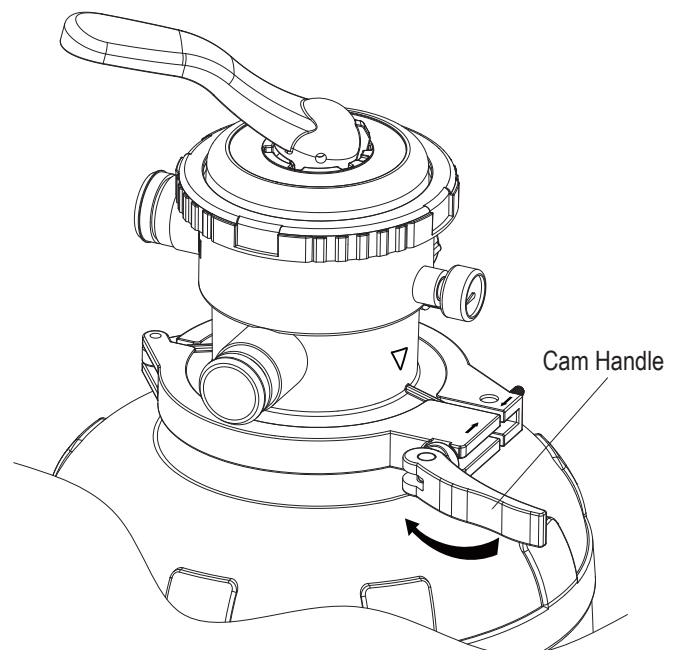
13. Close the Clamp **7** by pushing the two jaws as close together as possible.



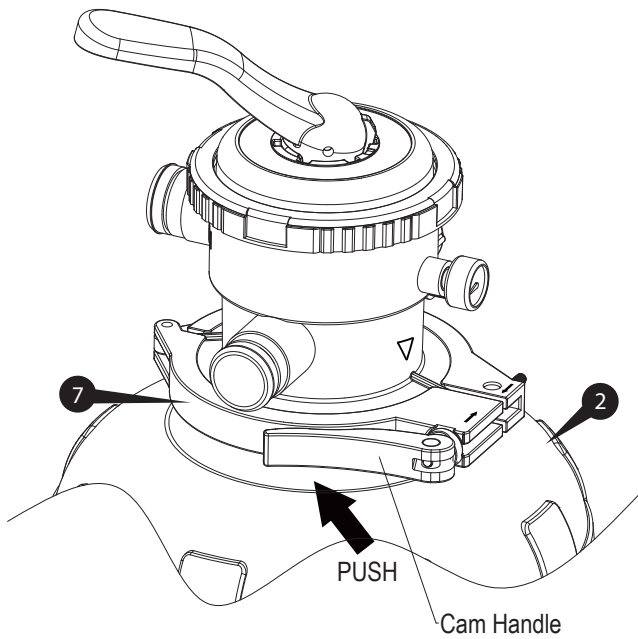
14. Pull on the Cam Handle, and insert the Cam Bolt into the opposite jaw until it locks in place.



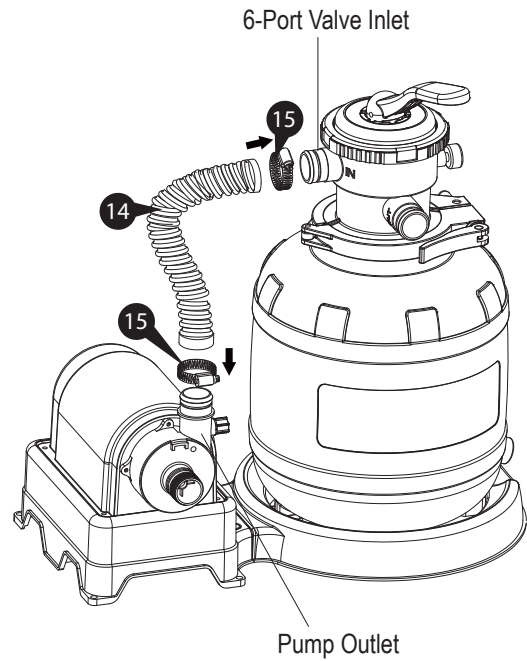
15. Hold the Cam Handle with one hand and start turning in clockwise direction to close the jaws further.



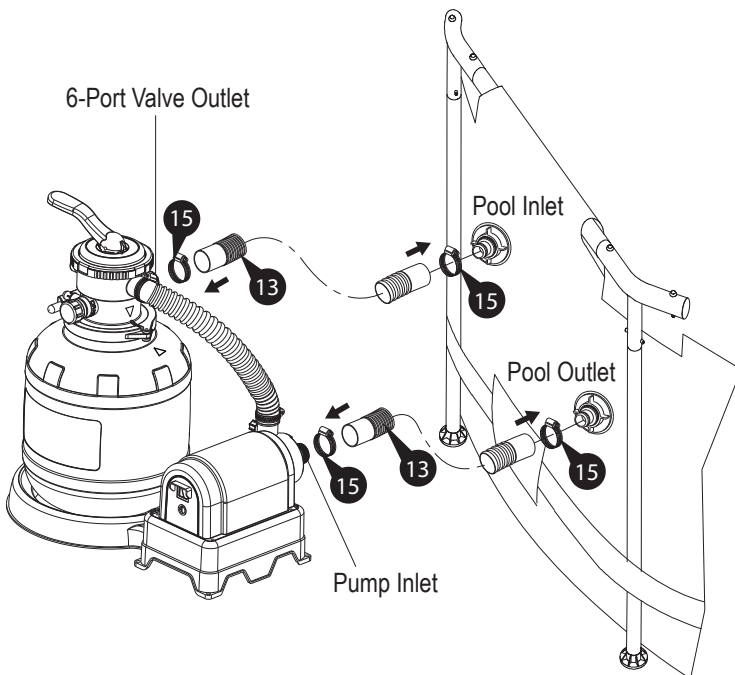
16. When the Clamp **7** is tightened and no more turns can be made, flip and push the Cam Handle towards the Sand Tank **2** to secure.



17. Connect the Short Hose **14** between the Pump Outlet and the 6-Port Valve Inlet. Tighten the Hose Clamps **15** with a flat-blade screwdriver.



18. The sand filter pump is now fully assembled. To install it to the pool, connect the Pump Inlet to the pool Outlet with a Long Hose **13** and one Clamp **15** on each end. Then connect the 6-Port Valve Outlet to the pool Inlet with another Long Hose and Clamps. Tighten all the Clamps with a flat-blade screwdriver.

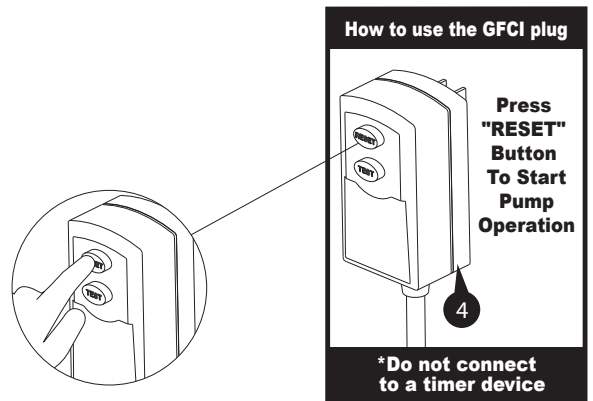
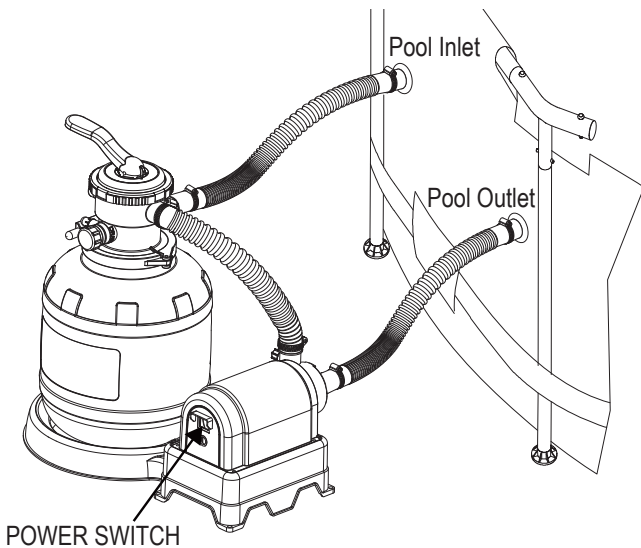


USE OF PUMP

Before using the Pump

IMPORTANT:

1. Make sure to press the pump power switch to OFF before plugging the GFCI Power Cord Set ④ into a power outlet. Do NOT connect the Set to a timer device.
2. Always PRESS DOWN the 6-Port Valve Handle ⑫ BEFORE switching handle positions.
3. Always BACKWASH the sand before filtering. This prevents fine sand from going through the pump and then to the pool, meanwhile washes off the dirt and debris of the sand.
4. Make sure that the Hoses ⑬ ⑭ are firmly secured to the fittings on the pump and the pool.
5. Fill the pool with water up to the FILL LINE. Do NOT dry run the filter pump.
6. 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. 16).



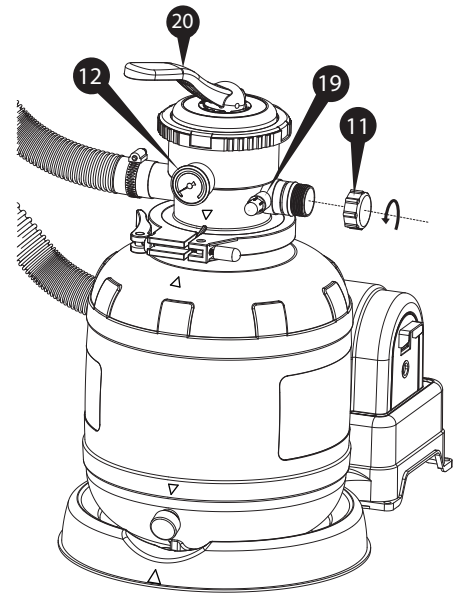
IMPORTANT: Do NOT connect to a timer device!

FUNCTIONS OF 6-PORT VALVE

Valve Handle Position	Function	Water Flow Direction
1 BACKWASH	Reverses the water flow to wash the sand Also prevents fine sand from ending up in your pool ALWAYS remove the Blue Drain Outlet Cap ⑪ before using this setting, and replace the cap when done. * Backwash the sand when the pressure reading is 1-1.5 bar (14.5-21.8 psi) ABOVE the initial pressure OR at least once every 2 weeks. Continue to backwash until the water from the drain outlet runs clean.	Pool → Pump → Sand (Backward) → Drain Outlet
2 RINSE	Levels out the sand bed after backwashing ALWAYS remove the Blue Drain Outlet Cap ⑪ before using this setting, and replace the cap when done. Continue to rinse until the water from the drain outlet runs clean.	Pool → Pump → Sand (Forward) → Drain Outlet
3 FILTER	Normal filtration and vacuuming of the pool	Pool → Pump → Sand (Forward) → Pool
WASTE	Vacuums water directly to drain and lowers the pool water level ALWAYS remove the Blue Drain Outlet Cap ⑪ before using this setting, and replace the cap when done.	Pool → Pump → Drain Outlet
RECIRCULATE	Recirculates water without filtering	Pool → Pump → Pool
CLOSED DO NOT SWITCH ON THE PUMP	Shuts off the water flow between the sand filter system and the pool DO NOT SWITCH ON THE PUMP	No water flow DO NOT SWITCH ON THE PUMP
NULL	For winterizing and storage	Excess water flow

USE OF PUMP

1. Make sure the pump is switched OFF.
2. Plug the GFCI Power Cord Set **4** to a grounded receptacle at least 15 feet (4.5m) away from the pool. Press the RESET button to start the pump.
3. **BACKWASH the sand:**
ALWAYS BACKWASH THE SAND BEFORE FILTERING. This prevents fine sand from going through the pump and then to the pool, meanwhile washes off the dirt and debris of the sand.
 - a. Remove the Blue Drain Outlet Cap **11**.
 (Optionally, connect a 1.5" [38mm] hose to the drain outlet to direct the waste water to a nearby drain)
 - b. Press down the 6-Port Valve Handle **20** and turn it to BACKWASH.
 - c. Switch the pump on.
 The water should now be circulating backward through the sand bed to the drain outlet. Continue to BACKWASH until the drain water runs clear, or the Drain Indicator **19** shows clear water.
 - d. Switch the pump off.
4. **RINSE the sand:**
The RINSE function will clean up and level out the sand bed after each BACKWASHING.
 - a. Press down the 6-Port Valve Handle **20** and turn it to RINSE.
 - b. Switch the pump on.
 RINSE for ONE MINUTE, then switch the pump off.
 - c. Put back and retighten the Blue Drain Outlet Cap **11**.
5. **FILTER the pool:**
 - a. Press the 6-Port Valve Handle **20** down and turn it to FILTER.
 - b. Switch the pump on.
 - c. Jot down the sand tank pressure reading of Pressure Gauge **12**. This reading indicates the "initial pressure", meaning the tank pressure when the sand bed is clean. Backwash the sand bed whenever the reading is 1-1.5 bar (14.5-21.8 psi) above the initial pressure, or once every TWO weeks to maintain water cleanliness.
6. To turn off the pump, press the power switch to OFF and unplug the GFCI Set **4**.



PUMP MOTOR CARE

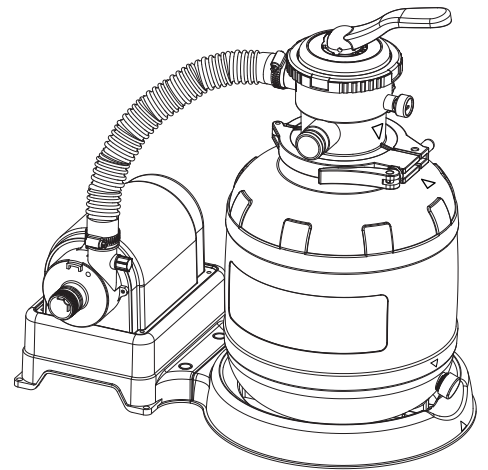
IMPORTANT! This Sand Filter Pump is protected by a thermal switch, a safety device that stops the pump from running when it's overheated, to prevent pump damage and prolong service life. If your pump turns off automatically, it's likely the pool water temperature is too high or the water flow through the pump is insufficient for cooling the pump down. Check and correct the water flow 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.

PUMP MAINTENANCE

1. BACKWASH the sand bed when the pressure reading is 1-1.5 bar (14.5 - 21.8 psi) above the initial pressure; or, BACKWASH the sand bed at least once every TWO weeks.
2. Discard all the sand at the end of the season, and wash the pump components, sand tank and 6-port valve thoroughly with fresh water before storage. Fill up with new sand at the beginning of the swimming season.
3. Check the pump output daily. If flow is reduced, see Symptom 3 of **TROUBLESHOOTING GUIDE** (p. 17).
4. Check the pump, hoses and fittings for leaks. If a leak is found, see Symptom 5 & 6 of **TROUBLESHOOTING GUIDE**.

POOL WATER CARE

1. The following items are required to get your pool ready for use. They are available at 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. **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 ppm 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.
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 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.



TROUBLESHOOTING GUIDE

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

Problem	Cause	Solution
1. The Pump motor fails to start	A. The Pump not plugged in OR the GFCI Power Cord Set ④ not activated	A. The GFCI Set must be plugged into a grounded power outlet. Then press the RESET button to start the Pump.
	B. Low voltage	B. Check and make sure the line voltage is between 105VAC and 125VAC.
	C. The GFCI Power Cord Set ④ and/or circuit breaker tripped	C. Reset the Set. If problem persists, have the circuit checked by a qualified electrician.
	D. The Pump motor is too hot, and the thermal safety switch shut it off	D. Let the motor cool down and restart the Pump.
2. The Sand Filter doesn't clean the pool	A. Inadequate chlorine or pH level	A. Adjust the chlorine and pH levels. Consult your local pool supplies stores.
	B. No sand in the Sand Tank ②	B. Fill sand in as per SETUP INSTRUCTIONS (8)-(10) on p. 10-11.
	C. Wrong 6-Port Valve ⑩ setting	C. Set the Valve Handle ⑳ to "FILTER" position.
	D. The pool is too dirty	D. Run the Pump longer.
	E. Clogged Suction Fitting ㉓	E. Clean the strainer of the Suction Fitting.
3. The Sand Filter doesn't pump water, or the flow is very slow	A. Clogged Suction Fitting ㉓ or inlet of the Pump	A. Clean the Suction Fitting and the Hose ⑬ connecting it to the Pump inlet.
	B. An air leak on the intake Hose ⑬	B. Check the Hose for damage; tighten the Hose Clamps ⑮, and check the pool water level.
	C. The sand is too dirty	C. Backwash the sand more frequently.
	D. Crusting or caking of sand surface	D. Replace about 1" (25mm) of the sand, or all the sand if problem persists.
	E. A pool vacuuming device is attached to the Pump	E. Remove the device.
4. The Pump doesn't work	A. Low water level	A. Fill water up to the FILL LINE marked on the pool wall.
	B. Clogged Suction Fitting ㉓ strainer	B. Clean the strainer.
	C. An air leak on the intake Hose ⑬	C. Check the Hose for damage; tighten the Hose Clamps ⑮, and check the pool water level.
	D. Faulty motor or the impeller is jammed	D. Contact our Customer Service.
5. The 6-Port Valve ⑩ or its locking ring is leaking	A. The Gasket ⑨ is missing	A. Remove the 6-Port Valve ⑩ and check to ensure the Gasket is in place.
	B. The Gasket ⑨ is dirty	B. Clean the Gasket with garden hose water.
	C. Loose Hose Clamps ⑮	C. Tighten/reinstall the Clamps.
	D. Faulty 6-Port Valve	D. Contact our Customer Service.
6. Leakage at Hoses ⑬ ⑭	A. Loose Hose Clamps ⑮	A. Tighten/reinstall the Clamps.
	B. The O-Rings ⑬ of Hose connections are missing	B. Ensure that the O-Rings are in place and intact.
7. Pressure Gauge ⑫ doesn't work	A. Clogged inlet of the Pressure Gauge	A. Unscrew and remove the Gauge, then clear any obstructions in its inlet.
	B. Faulty Pressure Gauge	B. Contact our Customer Service.
8. Sand ended up in the pool	A. The sand is too small for the Pump	A. Use only #20 grade silica sand with particle size range 0.45-0.85 mm (0.018-0.033 inches) and uniformity coefficient less than 1.75
	B. The sand bed is calcified	B. Discard all the used sand and replace with new sand.

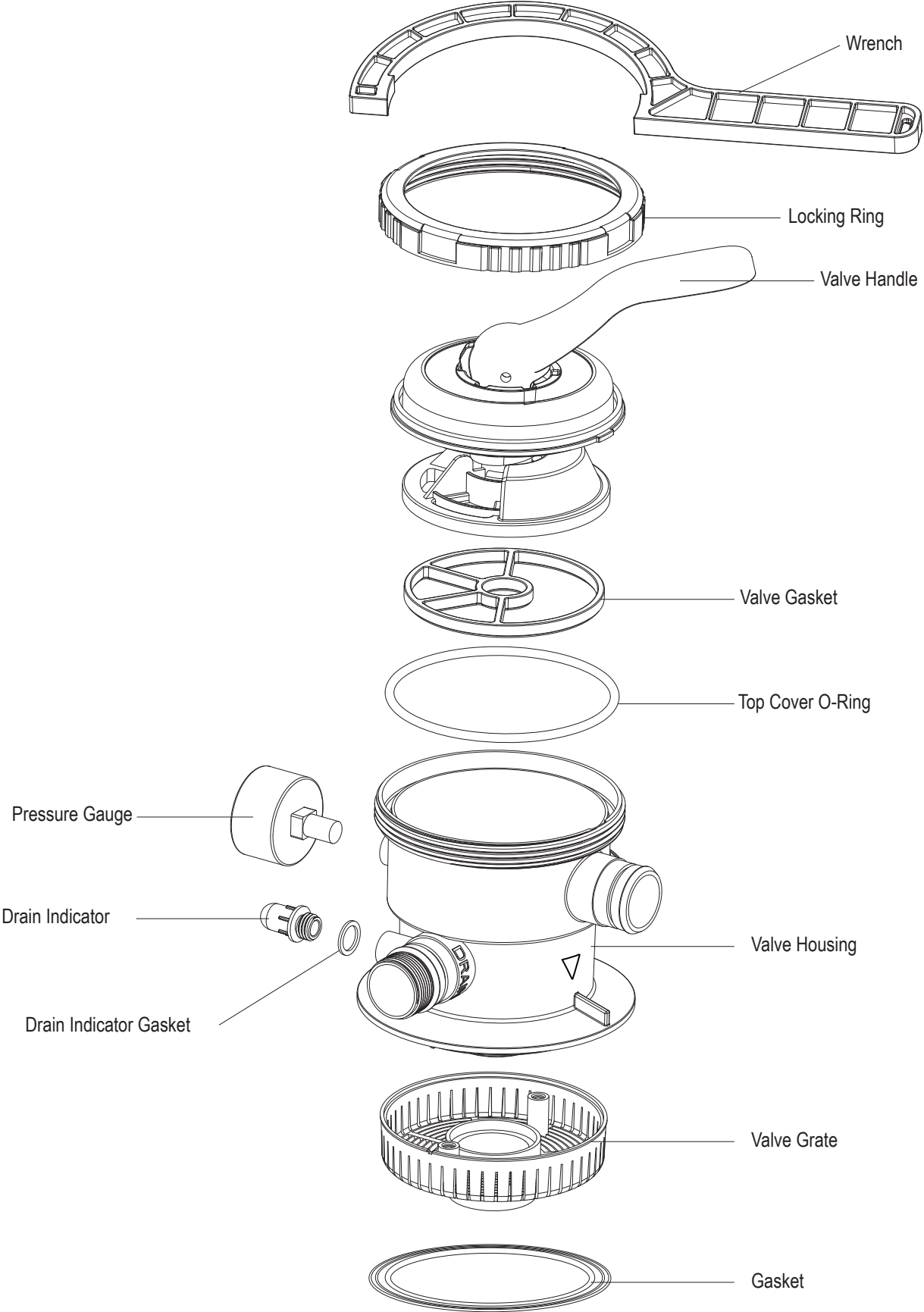
REPLACEMENT PARTS ORDERING INFO

Key#	Description	ST1100	ST1600	Key#	Description	ST1100	ST1600		
		PART #	PART #			PART #	PART #		
1	Sand Tank Base	P58PP2884A09	P58PP1782E09	22	Suction Fitting (SF)	P58284283W05	P58284283W05		
		P58PP28848UN	P58PP17828UN			P582842838UN	P582842838UN		
		P58PP28847CN	P58PP17827CN			P582842837CN	P582842837CN		
2	Sand Tank	P58000001W05	P58000000W05	23	SF Thrust Washer	P58PF1510P01	P58PF1510P01		
3	Drain Valve Cap	P58PF0800W05	P58PF0800W05			P58PF15108UN	P58PF15108UN		
5	Center Pipe	P586402001W1	P586402000W1			P58PF15107CN	P58PF15107CN		
6	Sand Guard	P58PF8891P01	P58PF8891P01	24	SF Nut	P58PF1430W05	P58PF1430W05		
7	Clamp	P58897023E09	P58897023E09			P58PF14308UN	P58PF14308UN		
		P588970238UN	P588970238UN			P58PF14307CN	P58PF14307CN		
		P588970237CN	P588970237CN	25	SF Cap	P58PF2820P01	P58PF2820P01		
8	Camshaft Bolt Cap	P59231M6000A	P59231M6000A			26	RF 90° Elbow	P58PF1700W05	P58PF1700W05
9	Gasket	P58135001K01	P58135001K01					P58PF17008UN	P58PF17008UN
10	6-Port Valve	P58PF8880E09	P58PF8880E09	P58PF17007CN	P58PF17007CN				
		P58PF88808UN	P58PF88808UN	27	RF Nut	P58PF1690W05	P58PF1690W05		
		P58PF88807CN	P58PF88807CN			P58PF16908UN	P58PF16908UN		
11	Blue Drain Outlet Cap	P58PF8910E09	P58PF8910E09			P58PF16907CN	P58PF16907CN		
		P58PF89108UN	P58PF89108UN	28	RF Thrust Washer	P58PF2960W05	P58PF2960W05		
		P58PF89107CN	P58PF89107CN			P58PF29608UN	P58PF29608UN		
12	Pressure Gauge	P58340000000	P58340000000			P58PF29607CN	P58PF29607CN		
13	Long Hose (59" Hose)	P584150006W1	P584150006W1	29	RF Gasket	P58PF1730K01	P58PF1730K01		
14	Short Hose	ST1100 12" Hose	P584150012W1	30	Return Fitting (RF)	P58PF1680W05	P58PF1680W05		
		ST1600 16" Hose	--			P584150014W1	P58PF16808UN	P58PF16808UN	
15	Hose Clamp	P5842504500A	P5842504500A	31	Snap On RF Diverter	P58PF16807CN	P58PF16807CN		
16	Lock Pin	P58PP1759E09	P58PP1759E09			P58PF1721W05	P58PF1721W05		
		P58PP17598UN	P58PP17598UN			P58PF17218UN	P58PF17218UN		
		P58PP17597CN	P58PP17597CN	P58PF17217CN	P58PF17217CN				
17	Pump	P530C2000SW5	P530C2000SW5	32	RF Locking Ring	P58PF1710W05	P58PF1710W05		
		P530C2000S0N	P530C2000S0N			P58PF17108UN	P58PF17108UN		
		P530C2000S0K	P530C2000S0K			P58PF17107CN	P58PF17107CN		
18	1.5" Fitting O-Ring	P58037000K01	P58037000K01	33	RF Service Plug	P58PF0620K01	P58PF0620K01		
19	Drain Indicator	P58PF8960C01	P58PF8960C01	34	Wrench	P58PF1023E09	P58PF1023E09		
20	6-Port Valve Handle	P58PF8950E09	P58PF8950E09	35	Drain Valve Filter	P58PP1023E09	P58PP1023E09		
		P58PF89508UN	P58PF89508UN	36	Drain Valve Filter O-Ring	P5807P000K01	P5807P000K01		
		P58PF89507CN	P58PF89507CN	37	Vent Cap	P58PF9570W05	P58PF9570W05		
21	SF Gasket (black)	P58PF1520K01	P58PF1520K01	*	For Sand Filter Pump series sold separately	P53ST1100099	P53ST1600099		
						P53ST1101G0N	P53ST1601G0N		
						P53ST1101G0K	P53ST1601G0K		

WINTERIZING, DISASSEMBLY & STORAGE

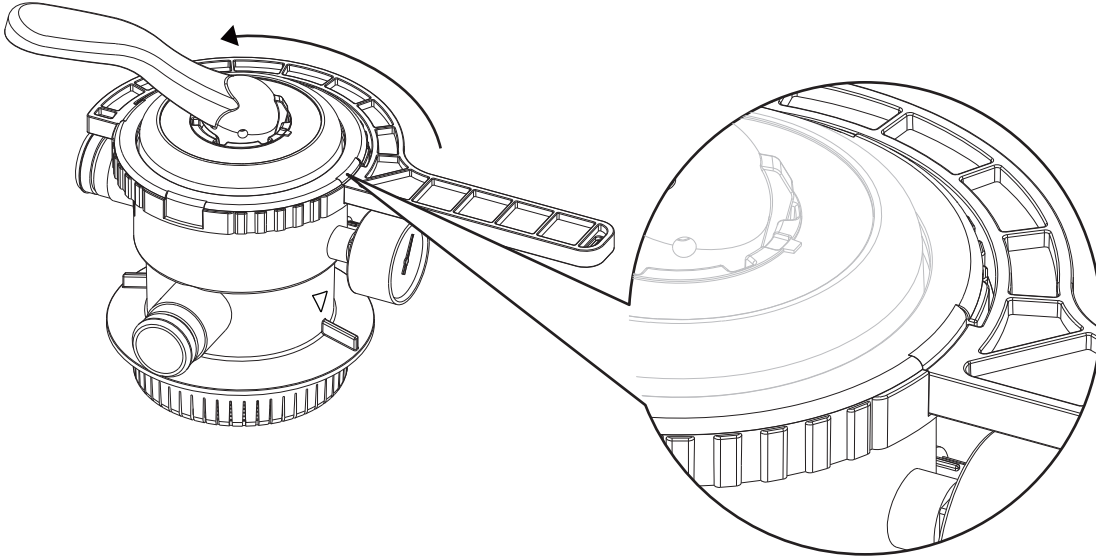
1. First, unplug the GFCI Power Cord ❹ of the system.
2. Loosen all Hose Clamps ❶. Remove the Hose ❷ ❸ and allow water to drain.
3. Remove Drain Valve Cap ❸ from the Sand Tank ❷ and allow water to drain. Replace and tighten the Drain Valve Cap ❸.
4. Clear and lubricate all Fitting O-Rings ❶ with petroleum jelly.
5. Turn the 6-Port Valve Handle ❶ to "NULL" position.
6. Allow the sand filter pump to dry completely. Store the sand filter pump in a cool and dry location away from direct sun light.
7. All items should be stored in a dry environment that remains above 32 degrees Fahrenheit at all times.

6-PORT VALVE PARTS LIST

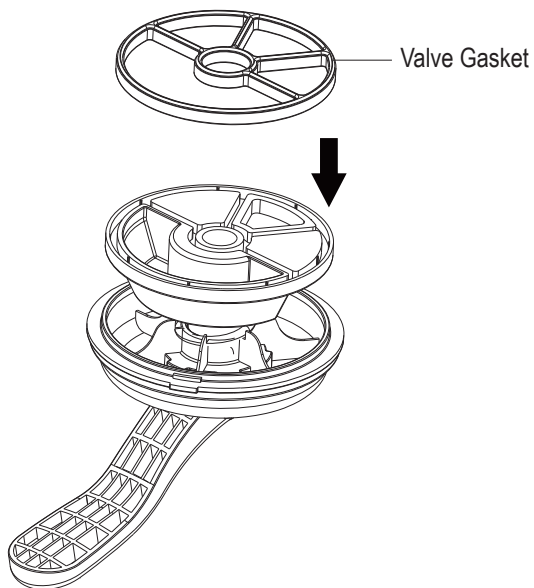


6-PORT VALVE SETUP

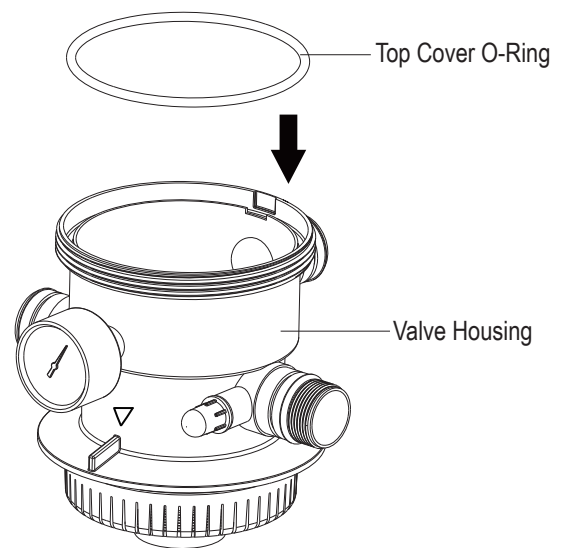
1. Using the Wrench, twist counterclockwise to loosen and remove the Locking Ring.



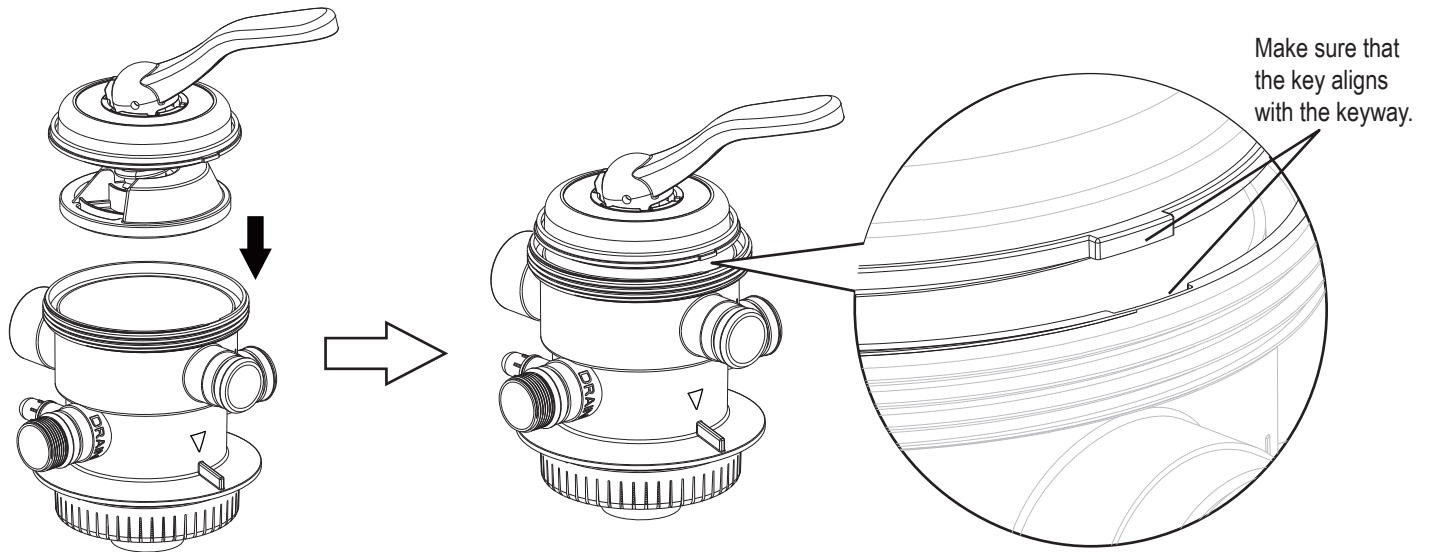
2. Fit the Gasket in place.



3. Insert the Top Cover O-Ring into the groove of the Valve Housing.

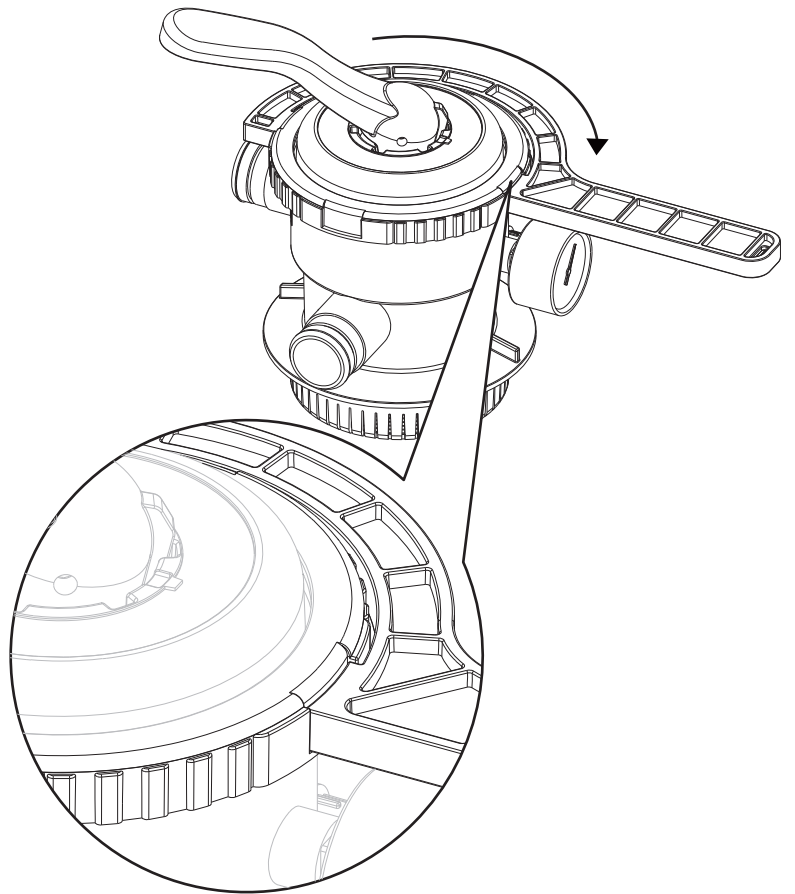
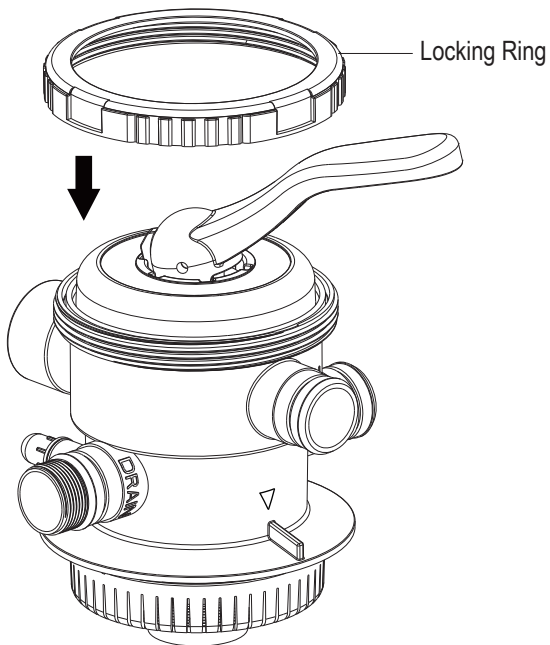


4. Insert the Valve Handle into the Valve Housing.



5. Place the Locking Ring over the Valve Housing.

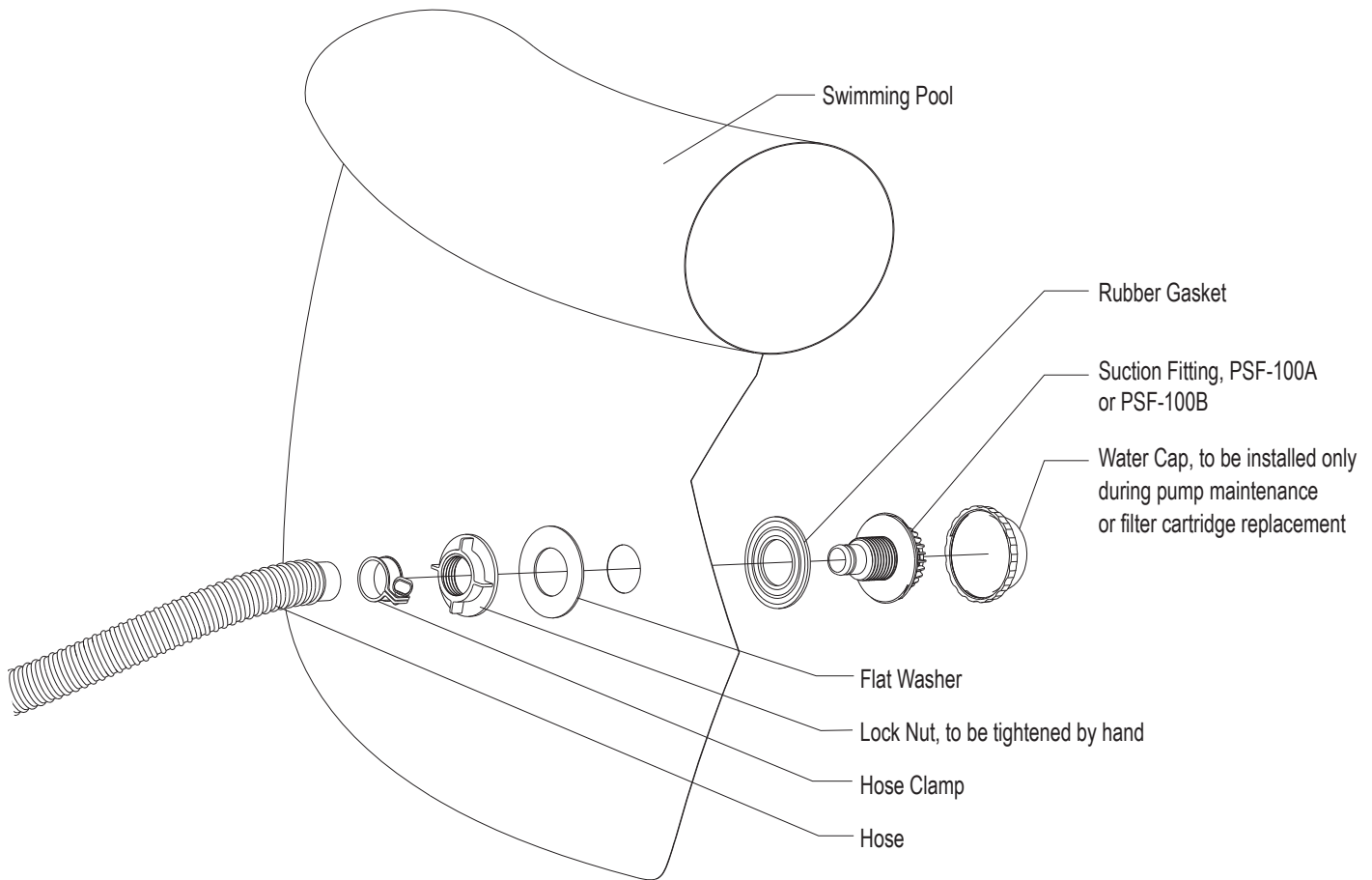
6. Tighten the Locking Ring with the Wrench.



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).