

English

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IMPORTANT SAFETY RULES

Read, understand, and follow
all instructions carefully before
installing and using this product.

Krystal Clear™ Sand Filter Pump Model SF90110T



For illustrative purposes only.

Don't forget to try these other fine Intex products: pools, pool accessories, inflatable pools and in-home toys, airbeds and boats available at fine retailers or visit our website.

Due to a policy of continuous product improvement, Intex reserves the right to change specifications and appearance, which may result in updates to the instruction manual without notice.



IMPORTANT! DO NOT RETURN PRODUCT TO STORE

To purchase parts and accessories or to obtain non-technical assistance, Visit

www.intexcorp.com

For technical assistance and missing parts call us toll-free (for U.S. and Canadian Residents):

1-800-234-6839

Monday through Friday, 8:30am to 5:00pm Pacific Time

193-*PO-R0-1505

OWNER'S MANUAL

IMPORTANT SAFETY RULES

Read, Understand and Follow All Instructions Carefully Before Installing and Using this Product.

READ AND FOLLOW ALL INSTRUCTIONS**⚠ WARNING**

- To reduce the risk of injury, do not permit children to use this product. Always supervise children and those with disabilities.
- Children must stay away from this product and electrical cord(s).
- Assembly and disassembly by adults only.
- 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.
- Always unplug this product from the electrical outlet before removing, cleaning, servicing or making any adjustment to the product.
- 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.
- Do not bury the electrical cord. Locate the cord where it will not be damaged by lawn mowers, hedge trimmers and other equipment.
- To reduce the risk of electric shock, replace damaged cord immediately. Use a qualified electrician to replace the cord.
- To reduce the risk of electric shock, do not use extension cords, timers, plug adaptors or converter plugs to connect unit to electric supply; provide a properly located outlet.
- Do not attempt to plug in or unplug this product while standing in water or when your hands are wet.
- Do not use an appliance leakage current interrupter (ALCI) in place of a GFCI since the ALCI will protect people.
- Position this product away from pool, so as to prevent children from climbing on it and access the pool.
- Do not operate this product when pool is occupied.
- To reduce the risk of entrapment hazard, never enter the pool if suction strainer component is loose, broken, cracked, damaged or missing. Replace loose, broken, damaged, cracked or missing suction strainer components immediately.
- Never play or swim near suction fittings. Your body or hair may be trapped causing permanent injury or drowning.
- To prevent equipment damage and risk of injury, always turn pump off before changing the filter control valve position.
- Never operate this product above the maximum working pressure stated on the filter tank.
- Hazardous Pressure. Improper tank valve cover assembly could cause the valve cover to blow off and cause serious injury, property damage or death.
- This product is intended to be used only for the purposes described in the manual!

FAILURE TO FOLLOW THESE WARNINGS MAY RESULT IN PROPERTY DAMAGE, ELECTRIC SHOCK, ENTANGLEMENT OR OTHER SERIOUS INJURY OR DEATH.

⚠ CAUTION

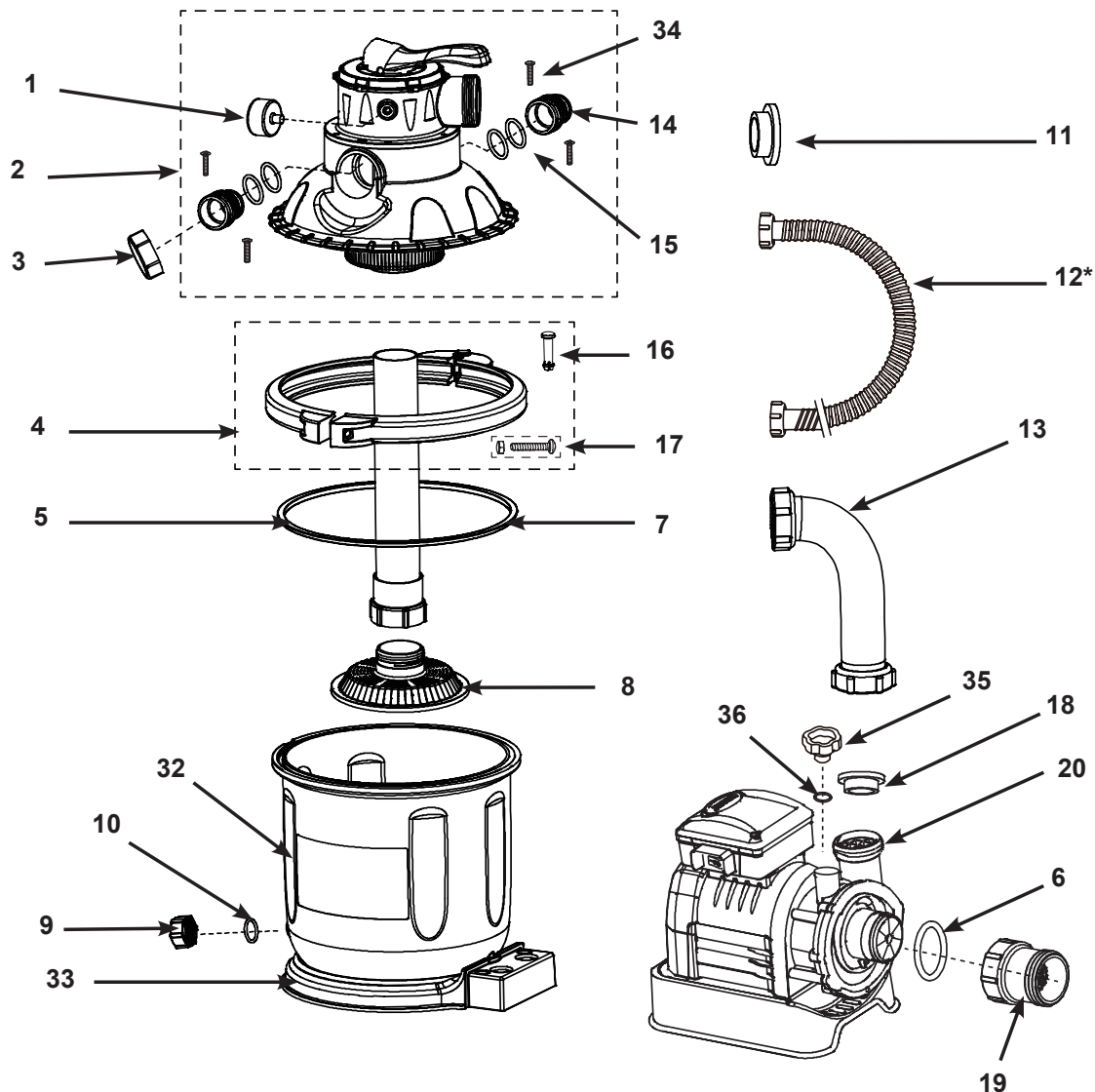
This product is for use with storable pools only. Do not use with permanently-installed pools. A storable pool is constructed so that it is capable of being readily disassembled for storage and reassembled to its original integrity. A permanently-installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage.

To reduce the risk of electric shock the pool must be installed no closer than 6 feet (1.8 m) from any electrical outlet. Do not place portable appliances closer than 5 feet (1.5 m) from the pool.

These product warnings, instructions and safety rules provided with the product represent some common risks of water recreation devices and do not cover all instances of risk and danger. Please use common sense and good judgement when enjoying any water activity.

PARTS REFERENCE

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

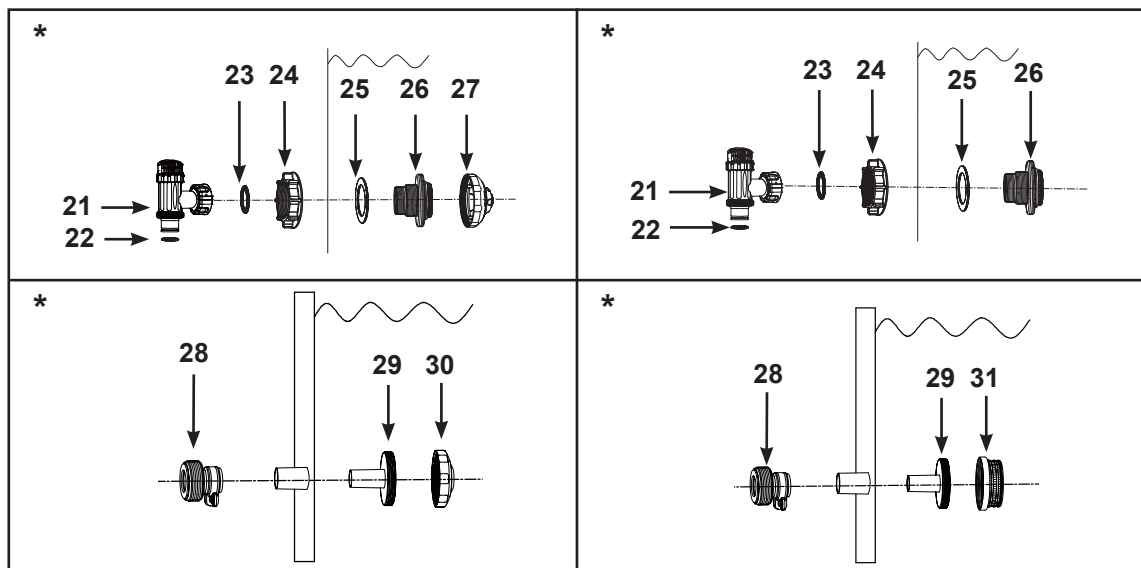


NOTE: Drawings for illustration purpose only. Actual product may vary. Not to scale.

PARTS REFERENCE

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

Parts shown on this page are supplied with the pool package and are shown here for assembly purposes only.



NOTE: Drawings for illustration purpose only. Actual product may vary. Not to scale.

*** If this pump was not purchased as part of a pool set, the above parts can be ordered at www.intexcorp.com if needed.**

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

PARTS REFERENCE (continued)

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

| REF. NO. | DESCRIPTION | QTY. | SPARE PART NO. |
|----------|--|------|----------------|
| 1 | PRESSURE GAUGE | 1 | 11720 |
| 2 | TANK COVER & 6-WAY VALVE SET | 1 | 11721 |
| 3 | DRAIN OUTLET COVER | 1 | 11131 |
| 4 | CLAMP ASSEMBLY | 1 | 11722 |
| 5 | TANK O-RING | 1 | 11728 |
| 6 | SAND FILTER PUMP MOTOR INLET O-RING | 1 | 10712 |
| 7 | CENTER PIPE | 1 | 11729 |
| 8 | FILTER GRID | 1 | 11730 |
| 9 | DRAIN VALVE CAP | 1 | 11456 |
| 10 | DRAIN VALVE O-RING | 1 | 11385 |
| 11 | L-SHAPE O-RING | 4 | 11228 |
| 12* | HOSE WITH NUTS | 2 | 11009 |
| 13 | SAND FILTER INTERCONNECTING HOSE | 1 | 11763 |
| 14 | TRANSPARENT OUTLET ADAPTOR | 2 | 11723 |
| 15 | TRANSPARENT OUTLET ADAPTOR O-RING | 4 | 11724 |
| 16 | CLAMP PIN | 1 | 11726 |
| 17 | CLAMP SCREW | 1 | 11727 |
| 18 | L-SHAPE O-RING | 1 | 11412 |
| 19 | TRANSPARENT LEAF TRAP | 1 | 11733 |
| 20 | PUMP MOTOR | 1 | 11734 |
| 21* | PLUNGER VALVE (HOSE O-RING & STEP WASHER INCLUDED) | 2 | 10747 |
| 22* | HOSE O-RING | 2 | 10262 |
| 23* | STEP WASHER | 2 | 10745 |
| 24* | STRAINER NUT | 2 | 10256 |
| 25* | FLAT STRAINER RUBBER WASHER | 2 | 10255 |
| 26* | THREADED STRAINER CONNECTOR | 2 | 11235 |
| 27* | ADJUSTABLE POOL INLET NOZZLE | 1 | 11074 |
| 28* | ADAPTOR B | 2 | 10722 |
| 29* | STRAINER CONNECTOR | 2 | 11070 |
| 30* | POOL INLET NOZZLE | 1 | 11071 |
| 31* | STRAINER GRID | 1 | 11072 |
| 32 | 10" SAND FILTER PUMP TANK | 1 | 11731 |
| 33 | 10" SAND FILTER PUMP TANK BASE | 1 | 11732 |
| 34 | TRANSPARENT OUTLET ADAPTOR SCREW | 4 | 11725 |
| 35 | AIR RELEASE VALVE | 1 | 10725 |
| 36 | VALVE O-RING | 1 | 10264 |

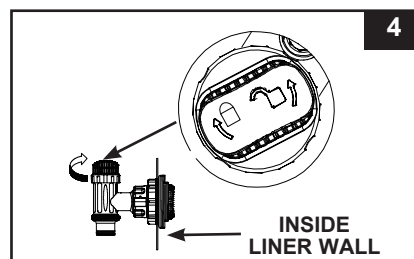
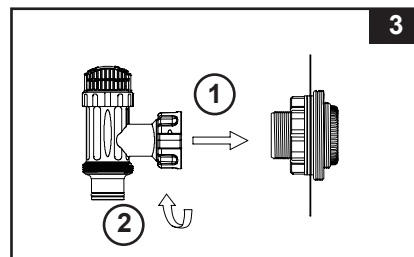
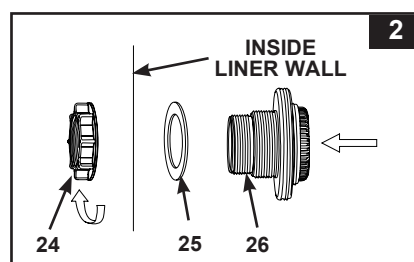
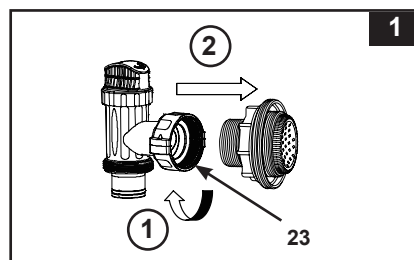
" * ": Optional.

When ordering parts, be sure to quote the model number and part numbers.

POOL OUTLET - STRAINER & PLUNGER VALVE SETUP (OPTIONAL)

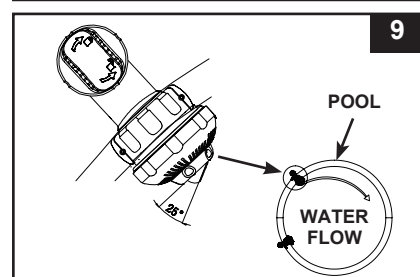
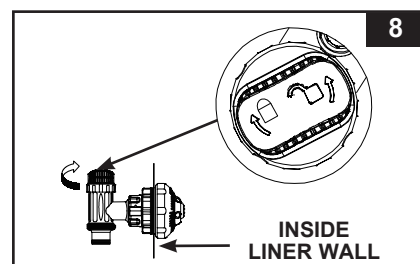
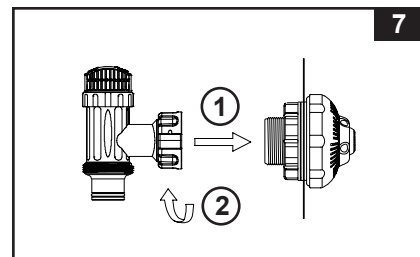
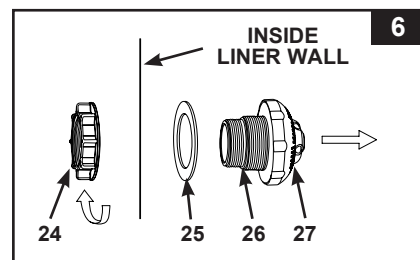
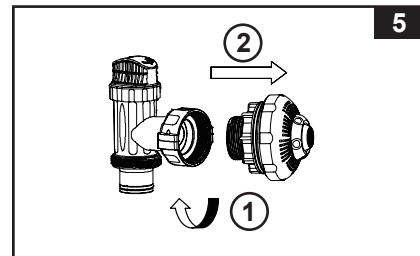
The strainer grid prevents large objects from jamming and/or damaging the filter pump. If your pool has an inflatable top ring, install the strainer, nozzle and plunger valve before inflating the pool liner top ring. The part numbers here onward refer to the parts depicted in the Parts List section of this manual. To install, do the following:

1. In a counter-clockwise motion unscrew plunger valve union from the threaded strainer connector (26) (see **drawing 1**). Be careful not to lose the step rubber washer (23). Place the plunger valve on the ground in a safe place.
2. In a counter-clockwise motion unscrew the strainer nut (24) from the threaded connector (26). Leave the flat washer (25) on the connector (26).
3. Install the strainer and plunger valve at the lower position of pool outlet (marked "+"). From the inside of the pool liner insert the connector (26) into one of the pre-cut holes with the washer remaining on the connector to be placed against the inside of the liner wall.
4. Before assembly, lubricate the threads with a petroleum jelly. With the flat side of the strainer nut (24) facing the outside wall of the liner in a clockwise motion screw the strainer nut (24) back onto the threaded connector (26) (see **drawing 2**).
5. Finger tighten the strainer nut (24) onto the threaded connector (26).
6. Grasp the plunger valve assembly. Make sure the step washer (23) is in place.
7. In a clockwise motion screw the plunger valve union back onto the threaded connector (26) (see **drawing 3**).
8. In a clockwise motion turn the plunger valve handle to close position. Ensure the plunger valve is securely closed. This will prevent water from flowing out during filling of the pool (see **drawing 4**).



POOL INLET - NOZZLE & PLUNGER VALVE SETUP (OPTIONAL)

1. In a counter-clockwise motion unscrew plunger valve union from the threaded strainer connector **(26)** (see **drawing 5**). Be careful not to lose the step rubber washer **(23)**. Place the plunger valve on the ground in a safe place.
2. In a counter-clockwise motion unscrew the strainer nut **(24)** from the threaded connector **(26)**. Leave the flat washer **(25)** on the connector **(26)**.
3. Install the nozzle and plunger valve at the upper position of pool inlet. From the inside of the pool liner insert the connector **(26)** into one of the pre-cut holes with the washer remaining on the connector to be placed against the inside of the liner wall.
4. Before assembly, lubricate the threads with a petroleum jelly. With the flat side of the strainer nut **(24)** facing the outside wall of the liner in a clockwise motion screw the strainer nut **(24)** back onto the threaded connector **(26)** (see **drawing 6**).
5. Finger tighten the adjustable pool inlet nozzle **(27)** and the strainer nut **(24)** onto the threaded connector **(26)**.
6. Grasp the plunger valve assembly. Make sure the step washer **(23)** is in place.
7. In a clockwise motion screw the plunger valve union back onto the threaded connector **(26)** (see **drawing 7**).
8. In a clockwise motion turn the plunger valve handle to close position. Ensure the plunger valve is securely closed. This will prevent water from flowing out during filling of the pool (see **drawing 8**).
9. **Adjust the direction of nozzle head pointing away from the pool outlet for a better circulation result (see drawing 9).**
10. The pool liner is now ready to fill with water. Consult the above-ground-pool owner's manual for filling instructions.



PRODUCT SPECIFICATIONS

The sand filter removes suspended particles but does not sanitize your pool. Pool chemistry is a specialized area and you should consult your local pool service specialist for details.

| | |
|--|---|
| Power: | 110-120 Volt AC |
| Amperage: | 1.8 A |
| Maximum working pressure: | 1.4 bar (20 psi) |
| Effective filtering area: | 0.05 m ² (0.54 ft ²) |
| Maximum Flow Rate: | 4000 liters/hour (1050 gallons/hour) |
| Recommended filtering media: (Not included) | No. 20 silica sand or glass sand. Particle size range 0.45 to 0.85 mm (0.018 to 0.033 inches). Uniformity Coefficient less than 1.75. |
| Recommended filtering media quantity: | No. 20 silica sand 12 Kg (26 Lbs) or glass sand 8.5 Kg (18.5 Lbs). |
| Limited Warranty: | see "Limited Warranty" |

NOTE: NOT SUITABLE FOR USE WITH KCP-LOW -SALT AUTOMATIC SALTWATER SYSTEM (MODEL 6110/6220)

SETUP INSTRUCTIONS

TOOLS REQUIRED: One (1) Phillips screwdriver

Pump location and mounting:

- The system must be installed on a solid level and vibration-free base.
- Provide a location protected from the weather, moisture, flooding and freezing temperature.
- Provide adequate access, space and lighting for routine maintenance.
- Pump motor requires free circulation of air for cooling. Do not install the pump in a damp or non-ventilated location.

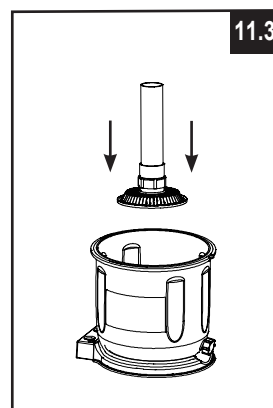
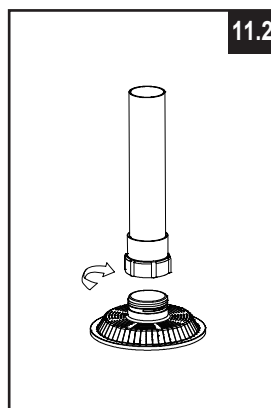
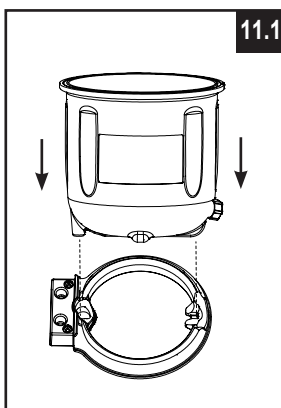
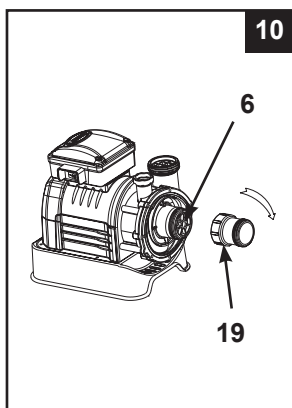
A team of 2 or more people is recommended for setting up this product.

Leaf trap setup:

1. Make sure the pump o-ring (6) is in place. In a clockwise motion screw the leaf trap (19) onto the motor inlet (see drawing 10).

Sand tank installation:

1. Place the tank support base at the selected location.
2. Place the tank on the tank support base (see drawing 11.1).



SETUP INSTRUCTIONS (continued)

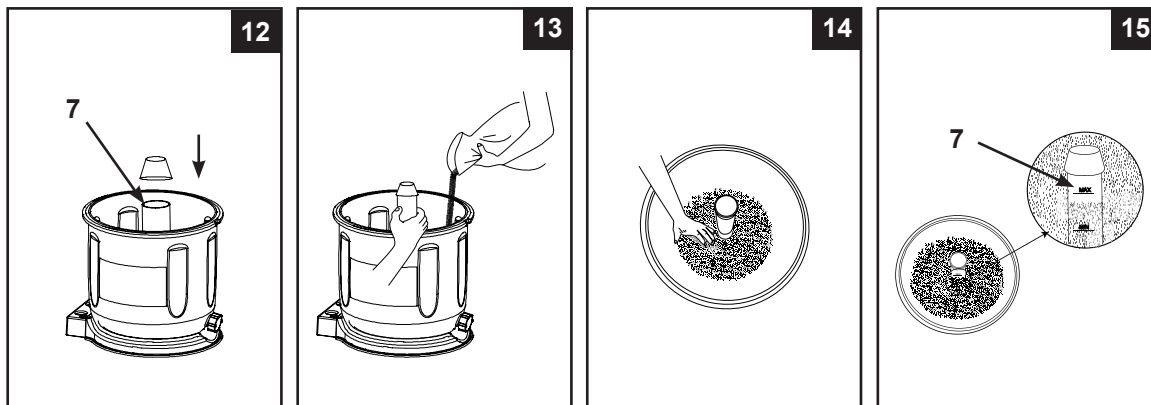
3. In a clockwise motion screw the center pipe (7) onto the filter grid (8) securely by hand (see drawing 11.2).
4. Vertically insert the filter grid and center pipe assembly into the tank. Ensure filter grid assembly is securely fitted to the bottom of the tank, and the center pipe is vertically centered inside the tank (see drawing 11.3).

Sand loading:

IMPORTANT: Use No. 20 silica sand or glass sand with particle size range 0.45 to 0.85 mm (0.018 to 0.033 inches) and a Uniformity Coefficient less than 1.75.

NOTE: Before loading the tank with sand, ensure the sand filter grid and center pipe assembly is securely in place on the tank bottom, and the center pipe (7) is vertically centered inside the tank.

1. To prevent sand from falling into the center pipe top opening when pouring the sand, cover the center pipe top opening with a cup or similar object (see drawing 12).
2. With one person holding the center pipe to keep it centered, pour the sand into the tank at a slow rate manually to prevent the filter grid assembly from shifting (see drawing 13).



3. Fill the tank approximately half way first to evenly distribute the sand inside the tank, then fill the tank with some water to provide a cushioning effect when the remaining sand is poured in. This prevents the filter grid (8) from excessive shock (see drawing 14).
4. Sand shall be filled between the "MAX" and "MIN" marked gauge on the center pipe. Evenly spread and level out the sand by hand (see drawings 14 & 15).
5. Remove the protective cup from the center pipe top opening.
6. Wash away all sand around the top edge of the tank.

IMPORTANT: Ensure the center pipe (7) remains centered after sand loading is completed before proceeding to the next step.

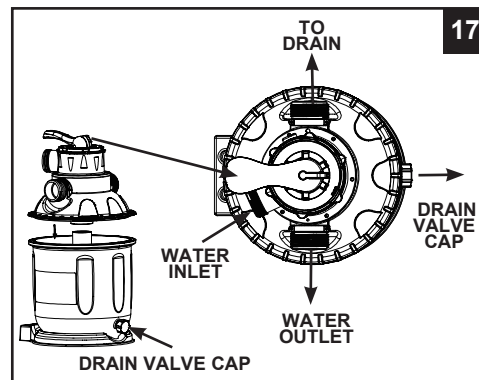
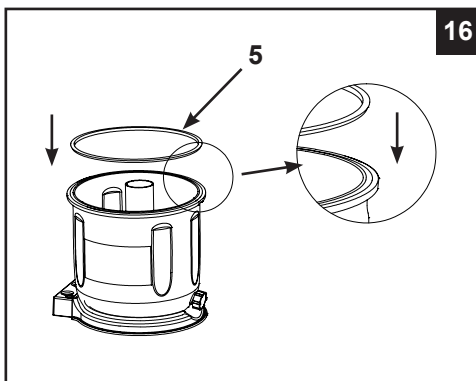
SETUP INSTRUCTIONS (continued)

⚠ WARNING

Improper tank valve and clamp assembly could cause the valve and clamp to blow off and cause serious injury, property damage or death.

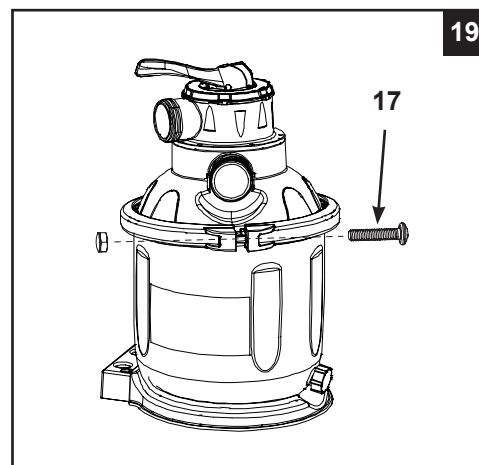
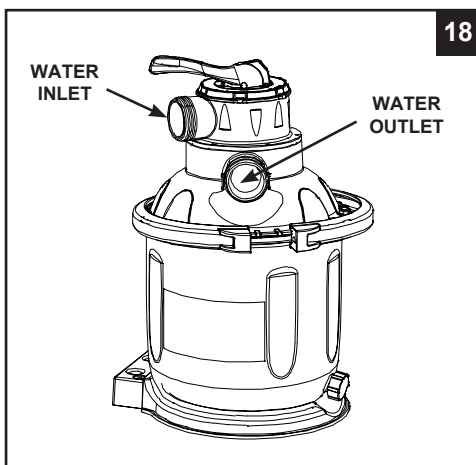
6-way valve installation:

1. Make sure the tank o-ring (5) is in place. (see drawing 16). NOTE: Ensure the tank o-ring is free of sand or debris.
2. Lower the 6-way valve cover over the tank slowly, and ensure the bypass pipe protruding underneath the 6-way valve cover fits securely into the center pipe (7) top opening (see drawing 17). Make sure the tank o-ring is securely fitted between the top edge of the tank groove and the 6-way valve cover edge. **IMPORTANT:** Ensure the 6-way valve cover ridge is aligned with the groove on the tank rim.



IMPORTANT: There are three hose connection ports on the 6-way valve, ensure the outlet connection (from filter to the pool) on the valve is facing towards the pool (see drawing 18).

3. Remove the screw, and install the clamp around the tank and 6-way valve flanges, then replace the screw and use a phillips screwdriver (not included) to tighten it (see drawings 18 & 19).



SETUP INSTRUCTIONS (continued)

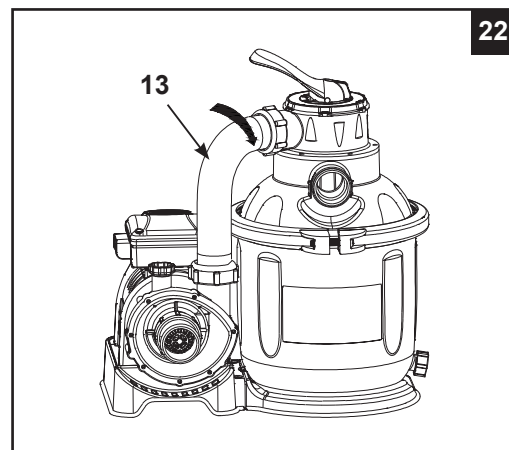
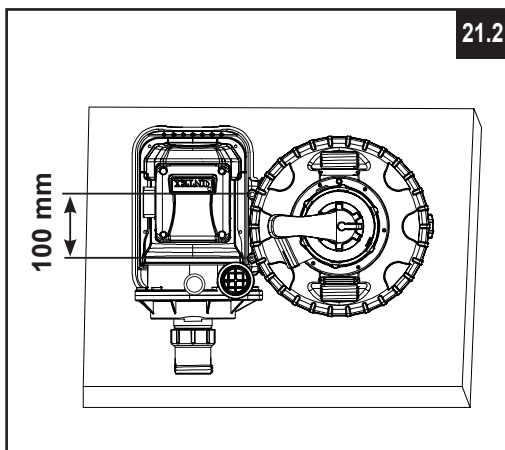
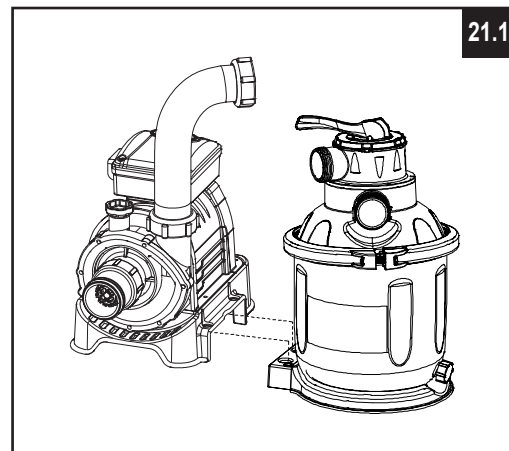
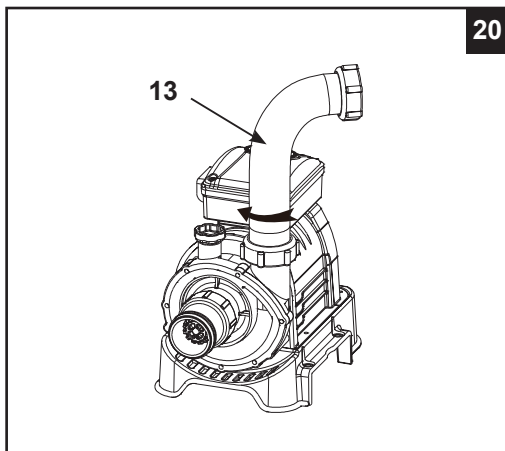
Motor installation:

1. Place an L-shape o-ring (18) on the pump motor outlet. In a clockwise motion connect the sand filter interconnecting hose (13) to the pump motor outlet (see drawing 20).
2. Connect the pump motor unit to the tank support base (see drawing 21.1). NOTE: Ensure the leaf trap water inlet hose connection is facing towards the pool.

IMPORTANT: Some countries, especially in the European community, require the product to be secured to the ground or to a base in a permanent upright position. Check your local authorities to determine if there is a regulation in your area regarding above-the-ground swimming pool filter-pumps. If yes, then the product can be mounted to a platform using the two holes located in the base. See drawing 21.2. The product can be mounted on a cement base or onto a wooden platform to prevent accidental falling over.

- The mounting holes are 6.4 mm in diameter and spaced 100 mm apart.
- Use two bolts and lock nuts with a maximum of 6.4 mm in diameter.

3. Place an L-shape o-ring (11) on the 6-way valve inlet connection. In a clockwise motion connect the sand filter interconnecting hose (13) to the 6-way valve inlet connection (see drawing 22).



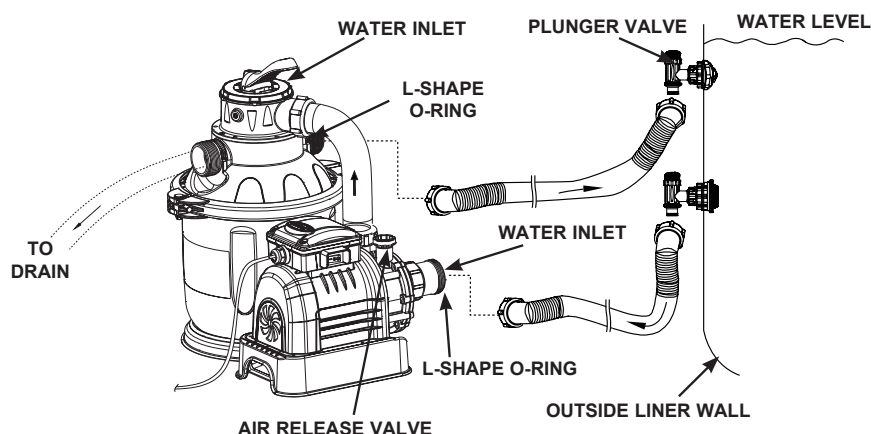
SAND FILTER PUMP HOSE CONNECTION SETUP

⚠ WARNING

- Position this product away from the pool, so as to prevent children from climbing on it and accessing the pool.

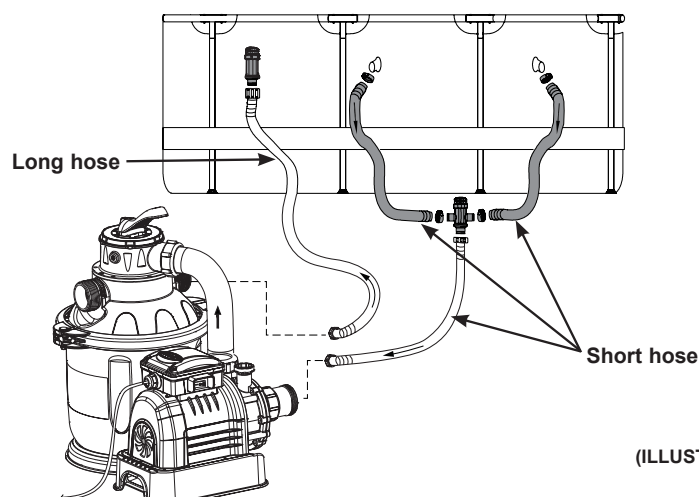
The 6-way valve has three hose connection ports.

1. Connect one hose (12) end to the pre-filter inlet and the other end of the hose to the lower connector with the strainer. Ensure the hoses are securely tightened.
2. Connect the second hose (12) between the 6-way valve water outlet and the upper connector with the inlet-nozzle. Ensure the hoses are securely tighten.
3. The third hose connection port (drain/waste outlet) on the 6-way valve shall be directed to a proper draining receptacle using a hose or pipe (not provided). Remove the drain cap before attaching the drain/waste hose or pipe.
4. The sand filter pump is now ready to filter the pool.



For Pools with Dual Suction Outlets Configuration:

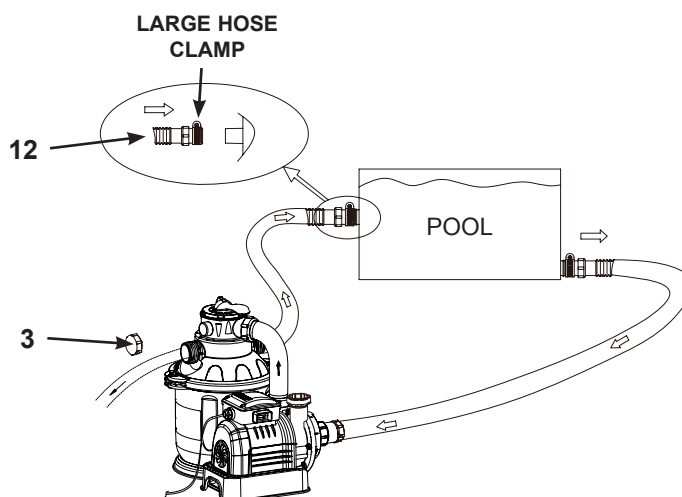
In order to comply with the requirement of the Virginia Grahame Baker Act (for USA and Canada), your pool is designed with dual suction outlets and one inlet fittings. Parts in grey highlight on this page are supplied with the pool set package and are shown here for assembly purposes only. If this pump was purchased as part of a pool set, refer to the pool owner's manual for more details.



SAND FILTER PUMP HOSE CONNECTION SETUP (continued)

For NON-INTEX pool:

Connect the hose (12) to the pool inlet/outlet connection with a large hose clamp. Tighten securely. Remove the drain cap (3) before attaching the drain/waste hose or pipe.



For INTEX pool size 16' and below:

1. In a counter-clockwise motion unscrew plunger valve union from the threaded strainer connector (26). Be careful not to lose the step rubber washer (23).
2. Grasp the plunger valve assembly. Make sure the step washer (23) is in place. Connect adaptor B (28) to plunger valve union.
3. Remove wall plug and then insert the strainer (29 & 31) into the lower position of protruding hose connection, and the nozzle (29 & 30) into the upper position of protruding hose connection. Adaptor B (28) fits over the strainer connection (29) inserted into the connection. Tighten securely.
4. Remove the drain cap (3) before attaching the drain/waste hose or pipe.

