

SandPRO™ POOL FILTER SYSTEM OWNER'S MANUAL

MODELS 4510 AND 4511

IMPORTANT SAFETY RULES

Read all instructions BEFORE assembling and using
this product. KEEP THIS MANUAL.



MODEL 4511



MODEL 4510

Sand not included. USE ONLY No. 20 Silica Sand with a particle size of 0.45 mm – 0.55 mm

IMPORTANT DO NOT RETURN PRODUCT TO STORE

For technical assistance and missing parts, call Customer Service toll-free

1.888.339.2546

(press 135 at any time)

Monday through Friday, 8am to 5:00pm MST



Your Pool Filter System has been engineered and manufactured to our highest standard for dependability, ease of operation and safety. With proper care, it will give you years of durable, trouble-free performance. Thank you for your purchase.

PRIOR TO ASSEMBLING AND USING THIS PRODUCT, CAREFULLY READ AND ADHERE TO ALL CAUTION AND IMPORTANT NOTICES LOCATED THROUGHOUT THIS MANUAL. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY DAMAGE TO THE PRODUCT OR CAUSE SERIOUS PERSONAL INJURY OR DEATH.

In this manual, some of the following callouts may be used. Please pay special attention to these. CAUTION, IMPORTANT and STOP have the following meanings:

CAUTION

Used when injury or accidents may occur if the operating instructions, work instructions, work procedures, etc. are either NOT strictly adhered to or not carried out at all.

IMPORTANT

Used when damage to the device may occur if the operating instructions, work instructions, work procedures, etc. are either NOT strictly adhered to or not carried out at all.

STOP

Calls attention to special details or information.

IMPORTANT
DO NOT RETURN PRODUCT TO STORE

For technical assistance and missing parts, call Customer Service toll-free

1.888.339.2546

(press 135 at any time)

Monday through Friday, 8am to 5:00pm MST

TABLE OF CONTENTS

1. Safety Warnings	4
2. General Information	5
How Sand Filtration Works	5
Powering the Filter Pump..	5
Sand & Initial Preparation	5
Installation	5
3. Technical Specifications	5
4. Parts List/Reference	6
5. Getting Started	7
Unpacking Your Filter System	7
Tools & Equipment Required	7
Know Your Pool	7
Filter Location	7
Power Source Requirements	7
6. Assembly Instructions	8
Water Pump Assembly	8
Filter Tank Assembly	8
7. Connecting the Filter System.	10
For pools with 1¼" or 1½" Diameter Unthreaded Hose.	10
For pools with 2¼" Diameter Threaded Hose Connectors	11
8. Valve Operations	12
Filter Valve Settings & Functions.	12
Changing Valve Positions	13
9. Filter Operations.	14
Start Up	14
Cleaning Sand	14
Backwash Process	14
Backwash Do's & Don't's	15
10. Maintenance	15
Adding Sand	15
Cleaning the Hair and Lint Filter	15
Winterizing the System	16
Safety Notes	16
11. Troubleshooting.	16
12. Limited Warranty Statement	17
13. Appendix: Exploded parts diagram	18

1. SAFETY WARNINGS

**READ ALL WARNINGS BELOW. FAILURE TO DO SO COULD RESULT
IN SERIOUS PERSONAL INJURY OR DEATH.**

- RISK OF SUCTION ENTRAPMENT HAZARD, WHICH, IF NOT AVOIDED CAN RESULT IN SERIOUS INJURY OR DEATH.
- Do not block pump suction at the pump or in the pool as this can cause severe injury or death.
- Electrical wiring MUST be installed by a trained professional and adhere to local code and regulations.
- Avoid electric shock. DO NOT USE power extension cords.
- Connect ONLY to a Ground-Fault Circuit Interrupter (GFCI) power outlet. Consult a qualified, professional electrician for safe and proper installation of the required electrical outlet.
- Incorrectly installed equipment may fail, causing severe injuries or damage to the pump-filter system.
- Never place or submerge the filter and/or pump in water.
- Trapped air in the pump-filter system may cause the tank cover to be blown off which can result in death, serious injury, or damage to the pump-filter system. Ensure all air is out of system before operating.
- NEVER use the valve lever as a handle to carry or lift the filter.
- NEVER change the position of the Multi-Port Valve while the system is operating. ALWAYS unplug the system first.
- Install this product at least 10 feet away from the pool to prevent children from using the system to access the pool.
- Never PLUG or UNPLUG this unit from an electrical source while standing in water or with wet hands.
- NEVER service this unit with the electrical power cord connected.
- Do not use any petroleum based lubricant. Petroleum based products will destroy plastic parts.
- Do NOT operate the system while the pool is in use.
- KEEP CHILDREN AWAY from all electrical equipment.
- NEVER ALLOW CHILDREN TO OPERATE THIS EQUIPMENT.

**THESE SAFETY WARNINGS ARE NOT INTENDED TO INCORPORATE
ALL POSSIBLE INSTANCES FOR RISK AND/OR SEVERE INJURY.**

2. GENERAL INFORMATION

This manual provides information relating to the installation, utilization and maintenance of the Pool Filter System. The pump included with the filtration system is a horizontal, self-priming centrifugal pump. For the pump to function correctly, the water temperature must not exceed 95°F/35°C. The filter included in the filtration system is equipped with a container drainage system, pressure gauge and built-in container components. The filter container comes ready to plug-in and is supplied with a user-friendly 7 Position Multi-Port Valve integrated into the tank cover, an approved filter pump with hair and lint basket, and a plastic base for ready on-site mounting.

How Sand Filtration Works

The Pool Filter System is designed to use special silica sand to remove dirt particles from pool water. Filter sand is loaded into the filter tank and functions as a permanent dirt and debris removing medium. Pool water, which contains dirt particles, is pumped through the intake hose leading from the pool to the filter tank and is directed by the filter control valve to the top of the filter tank. As water is pumped through the filter sand, dirt particles are trapped by the bed of sand and filtered out. The cleaned/filtered water is then returned from the bottom of the filter tank, through the control valve and back to the pool through the return hose. This sequence is continuous and automatic and provides total recirculation of pool water through your filter and hose connections.

After a period of time, the accumulated dirt in the filter causes a resistance to the flow of water and an increase in pump pressure (psi). When this happens, it is time to clean (backwash) the filter. To backwash the system, you must change the valve to the backwash position. When in backwash mode, the water flow is automatically reversed through the filter so that it is directed to the bottom of the tank, up through the sand, which flushes any trapped dirt and debris out through the waste line. Once the filter is backwashed and cleaned of dirt, the control valve should be moved into the rinse position to allow the sand to settle. After rinsing, the filter valve should be changed back to the filtration position to resume normal filtering.

Powering The Filter Pump

It should be noted that the Pool Filter System does not have an on/off switch. Rather, power to the filter pump is connected and disconnected by means of plugging in and unplugging the power cord from the power source. It is important that you read and follow the instructions on proper power supply sources (see Section 5, Power Source Requirements) to avoid overloading the pump motor and/or electric shock.

Sand & Initial Preparation

The Pool Filter System requires a specific type of sand (not included) for optimum operation: namely, Number 20 Silica Sand with a particle size of 0.45 mm - 0.55 mm. You can purchase this sand at most pool supply stores. While the sand will come packaged, it is important that the sand be cleaned prior to running the filter system in filtration mode (see Section 9, Filter Operations).

Installation

Read and understand this manual carefully before installation. Failure to follow all instructions may result in electric shock, serious personal injury or death.

3. TECHNICAL SPECIFICATIONS

Model 4510 (1/2 Horsepower Model)

Item	U.S. Units	Metric Units
Flow Rate	1950 GPH @ 6 PSI	7.4 m ³ /hr @ 0.4 Bar
MAX Operating Pressure	22 psi	1.5 Bar
Filtration Area	1.4 ft ²	0.13 m ²
Rated Voltage	110 VAC	110 VAC
Sand Volume	38 lbs	17 kg

Model 4511 (3/4 Horsepower Model)

Item	U.S. Units	Metric Units
Flow Rate	2330 GPH @ 6 PSI	8.8 m ³ /hr @ 0.4 Bar
MAX Operating Pressure	22 psi	1.5 Bar
Filtration Area	1.4 ft ²	0.13 m ²
Rated Voltage	110 VAC	110 VAC
Sand Volume	76 lbs	34 kg

4. PARTS LIST/REFERENCE

Before starting installation, check to make sure all parts are present in package.

Primary Components

BASE PLATE (1)



WATER PUMP (1)



FILTER TANK (1)



TANK COVER / VALVE ASSEMBLY (1)



TANK COVER LOCK RING ASSEMBLY (1)



FILTER-PUMP HOSE



(Model 4510 has threaded end)

TANK SEPARATOR PLATE (1)



UPPER DISTRIBUTOR (1)



OWNER'S MANUAL

Parts Bag A

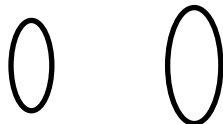
1 1/4"-1 1/2" HOSE CONNECTOR (2)



FLAT GASKET "A" (1)



O-RINGS (2) A: 2 1/4" Dia, B: 3" Dia



HAIR & LINT STRAINER COVER (1)

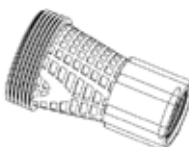


Parts Bag B

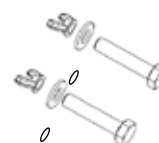
SHORT INTEX® CONNECTOR (1)



LONG INTEX® CONNECTOR (1)



PUMP MOUNTING HARDWARE



O-RING (1) C: 1 1/4" Dia



HOSE CLAMP (2)



FLAT GASKET "B" (2)



Note: Some parts may be pre-installed at the factory. Parts not shown to scale.

5. GETTING STARTED

Unpacking Your Filter System

This product requires assembly.

Carefully remove the product and all parts. Make sure all items listed in the Parts List/Reference are included. Please note that some parts may be pre-assembled.

Inspect everything carefully to make sure nothing is damaged.

Do not discard packing material until you have satisfactorily operated the product.

If any parts are missing or damaged, please call the number listed on the front page of this manual.

NOTE: Some parts may be located within the filter tank. To access these parts you must remove the tank cover.

Refer to Appendix for a complete EXPLODED VIEW PARTS DIAGRAM

Tools & Equipment Required

The following items are not included with your new filter system, but will be required for proper installation and operation:

- 1/4" Blade Screwdriver
- #2 Phillips Screwdriver
- Rubber Mallet
- No. 20 Silica Sand (Model 4510 requires 38 lbs of sand; Model 4511 requires 76 lbs of sand.)
- A small container of silicone based lubricant
- G.F.C.I. (Ground Fault Circuit Interrupter) – Must be installed by a certified electrician
- One 1 1/2" backwash hose

The above equipment list is based on the assumption that your above-ground pool is assembled, filled with water, and that your pool is equipped with the necessary filtration hoses needed to operate with a filter (cartridge or otherwise). If your pool is not assembled, please refer to the pool's installation manual for details. If you do not have hoses for your pool's intake and return, you will need to purchase the hoses from a pool supply store.

This Pool Filter System is designed to connect to pools with standard 1 1/4" or 1 1/2" diameter hose connectors and has 2 1/4" hose adapters for INTEX® pools. If your pool has a hose connector with a different size and/or type, you may need to purchase an adapter at your local pool supply store or hardware retailer.

Know Your Pool

Before you begin installation, it is a good idea to know certain specifications of your pool:

- How big is your pool?
- How many gallons does it hold?
- What size hose does it use? (i.e. 1 1/4" dia, 1 1/2" dia or 2 1/4" dia)
- What kind of hose connection does it use? (i.e. threaded/unthreaded)

Filter Location

The Pool Filter System needs to be located on a 2' x 3' completely level, hard surface lower than the pool's water level and at least 10 feet away from the pool. The hard surface may be made of concrete, gravel, patio pavers, etc.

Power Source Requirements

The Pool Filter System is equipped with a US standard electrical cord and plug which should only be connected to a power outlet protected by a qualified Ground-Fault Circuit Interrupter (GFCI) that has been installed by a professional electrician and adheres to local codes and regulations. To AVOID electric shock, serious personal injury or death, power cord extensions should NOT BE USED. DO NOT handle power cords or equipment with wet hands or while standing in water or while wet.

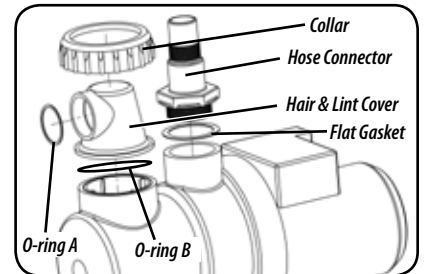
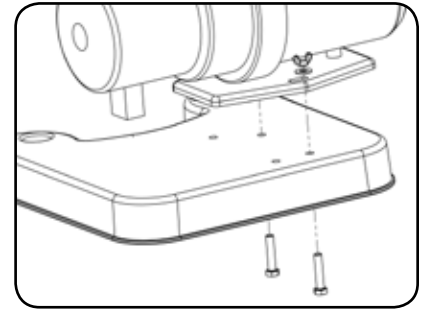
6. ASSEMBLY INSTRUCTIONS

Water Pump Assembly

1. Secure the water pump to the base plate with the provided pump mounting hardware as shown in illustration to the right.
2. Screw the 1¼"-1½" hose connector into the center port of the water pump. Ensure that o-ring "A" is installed between the port and the connector.

NOTE: If your system came with a threaded filter-pump hose (Model 4510), you will not need the 1¼" – 1½" hose connector. Instead, screw the hose into the center port of the water pump directly with o-ring "A" in between.

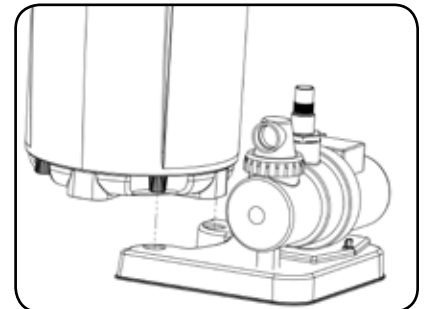
3. Remove the threaded ring (collar) on the outer opening of the pump.
4. Place o-ring "B" in the groove around the hair and lint strainer basket.
5. Place the transparent hair & lint strainer cover in place and then screw the threaded ring (collar) back on securely over the cover.
6. Insert gasket "A" inside the outward facing opening of the transparent hair & lint strainer cover.
7. Place the base plate and pump in your selected site where the Pool Filter System will be located for normal operation. This site should be within the reach of the pool filter and return hoses but no closer than 10 feet to the pool (see Section 1, Safety Warnings).



Filter Tank Assembly

1. Place the filter tank on the base plate as shown. The feet on the bottom of the filter tank fit within the holes provided on the base plate.
2. Insert the tank separator plate inside the main tank in the guides provided. The plate divides the tank into two compartments, the Filtered Water Chamber and the Sand Filter Chamber.
3. Filling Sand Chamber with Sand

Note: The filter pump assembly should be in its permanent location before filling the chamber with sand. Otherwise, the unit will be heavy and difficult to move around.



- a. Check to ensure that the bottom strainer is correctly positioned.
- b. Check to ensure that the tank separator plate is seated properly.
- c. Fill the sand chamber half full with water.

CAUTION

Use breathing filter/mask approved for dust & sand and adequate eye protection while filling the tank. Avoid breathing dust.

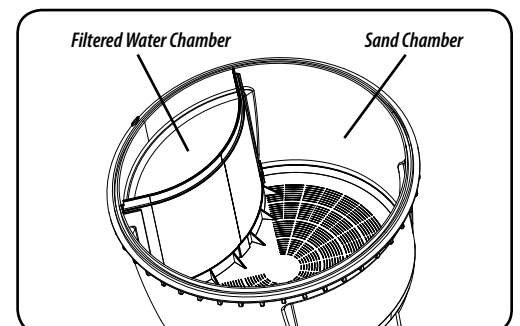
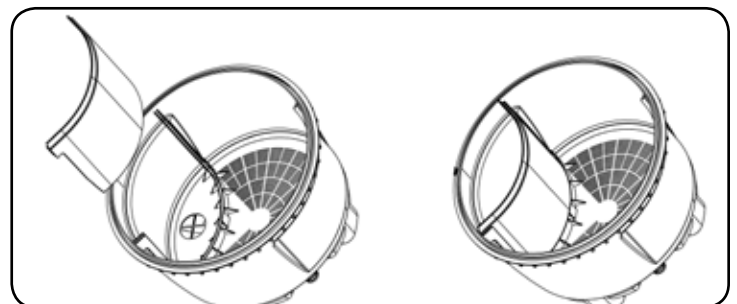
IMPORTANT

To prevent damage to the container and the bottom strainer, fill the tank halfway with water before adding the filter sand.

- d. Pour Number 20 Silica Sand into the sand filter chamber being careful not to allow any sand to enter the filtered water chamber. Model 4510 requires 38 lbs. of No. 20 Silica Sand. Model 4511 requires 76 lbs. of No. 20 Silica Sand.

IMPORTANT

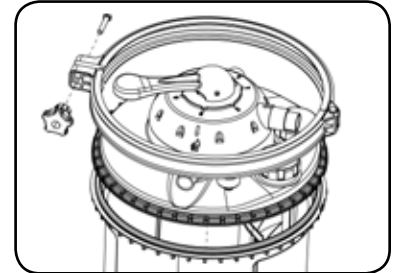
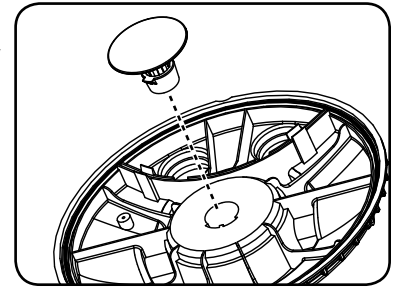
It is important to ensure that sand does not exceed the recommended quantity/weight.



4. Securing Filter Assembly

- Ensure the main tank seal around the top of the filter tank is in good condition and securely seated in the groove. Be sure groove is free of sand.
- Locate the upper distributor and press it into the center hole located under the tank cover.
- Carefully place the tank cover onto the filter tank. The tank cover should be oriented so that the notch on the cover is aligned with the matching tab on the filter tank – this ensures proper alignment.
- To secure the tank cover and filter tank, use the tank cover lock ring assembly. **Make certain that the head of the hinge pin is facing up on the ring assembly.** Align the bolt with the receiving hole and squeeze the gap closed as far as you can. When tight, the gap between the clamp halves at the tightening screw should be approximately 1/16" to 1/4".

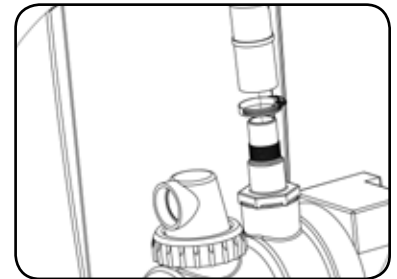
NOTE: Using a rubber mallet to lightly tap the ring during assembly eases the installation and promotes a better seal. DO NOT use a hammer or other hard striking implement on the lock ring as damage may result.



5. Hooking Up the Hoses

- Lightly lubricate the 1 1/4" – 1 1/2" hose connector (pump intake) on the pump with silicone based lubricant.
- Attach the filter-pump hose to the 1 1/4" – 1 1/2" hose connector on the water pump.
- Secure with a hose clamp.

NOTE: If your system came with a threaded filter-pump hose (Model 4510), you will not need the 1 1/4" – 1 1/2" hose connector. Rather screw the hose into the center port of the water pump directly with o-ring "A" in between.

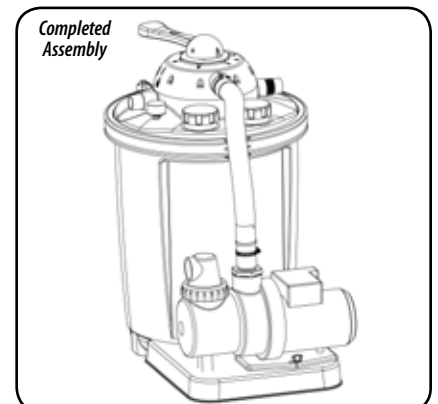
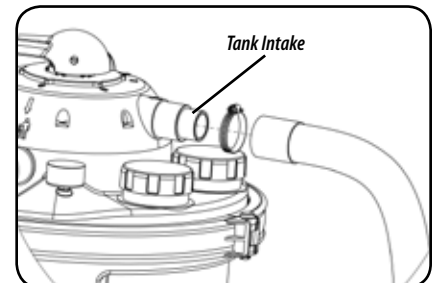


6. Connecting Filter Hose to the Tank

- First lightly lubricate the tank intake port (tank intake) on the tank cover with silicone based lubricant.
- Place a hose clamp (do not tighten) on the loose end of the filter-pump hose and connect to the tank intake port on the tank cover.
- Tighten hose clamp.

7. Completed Assembly

The basic Filter-to-Pump Assembly should resemble the figure shown at right.



CAUTION

Ensure ALL hose connections are tight and the hoses are NOT kinked or bent at severe angles. If the hoses are leaking, check to make sure ALL of the parts that have O-Rings have them attached and are screwed on tightly. DO NOT over tighten hose clamps (35 in/lb max torque)

7. CONNECTING THE FILTER SYSTEM

The next section outlines installation instructions for connecting the Pool Filter System to your pool. Since the hoses utilized for filtration and return lines differ for various types of above-ground pools, the pool-filter connection section is broken down by pool hose size and type. For pools with 1¼" or 1½" diameter unthreaded hoses, see "A" below. For pools with 2¼" threaded hose connectors, see "B" on following page.

STOP

Before you begin to connect hoses to the filter and pump, make certain that no water can flow through the intake or return hoses connected to the pool. Some pools have shut off valves in their intake and return ports, others do not. If you do not have a shut off valve, block the ports with a removable plug to prevent water from passing into and through the hoses.

A. For Pools with 1¼" or 1½" Diameter Unthreaded Hoses

These instructions assume that the pool is already assembled with hoses attached to the water intake and return ports on the pool.

1. Adapter Installation

- Screw the 1¼" – 1½" hose connector into the transparent hair & lint strainer cover. Make certain that flat gasket "A" is in place before securing.
- Lightly lubricate the end of the 1¼" – 1½" hose connector with silicone based lubricant.

2. Pool "Skimmer Hose" Attachment

- Attach the hose coming from your pool's skimmer (outlet of pool) to the 1¼" – 1½" hose connector extending from the hair & lint strainer cover.
- Secure with a hose clamp.

3. Pool "Return Hose" Attachment

- Lightly lubricate the pool return port on the tank cover with silicone based lubricant.
- Attach the pool return hose (inlet of pool) to the pool return port on the tank cover.

Note: Be sure not to secure the return hose to the waste/backwash port.

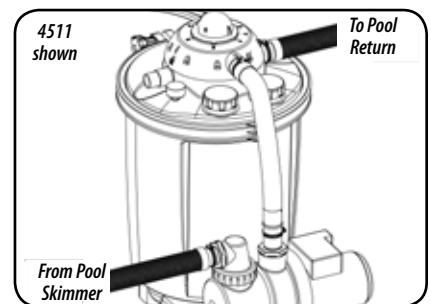
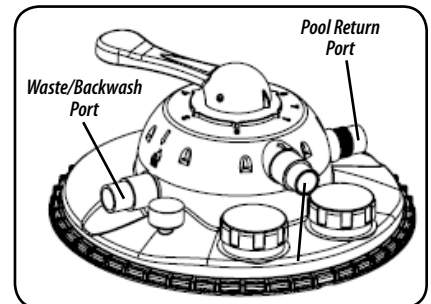
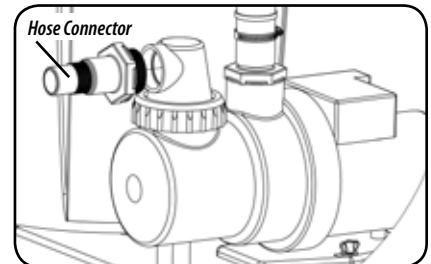
- Secure with a hose clamp.

IMPORTANT

Ensure that all HOSE connections are tight and that the hoses are NOT kinked or bent at severe angles.

4. Completed Filter-Pump Installation

Should resemble the figure shown at right.

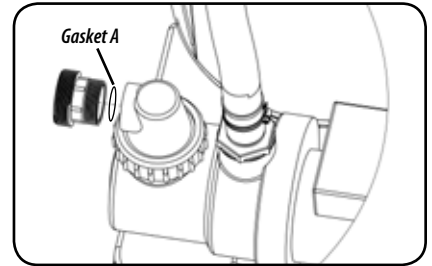


B. For Pools with 2¼" Diameter Threaded Hose Connectors

These instructions assume that the pool is already assembled with hoses attached to the water intake and return ports on the pool.

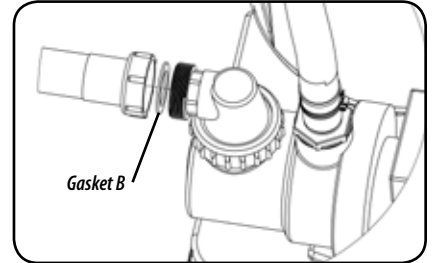
1. Short INTEX® Adapter Installation

- Screw the short INTEX® adapter into the transparent hair & lint strainer cover on the water pump.
- Make certain that flat gasket "A" is in place before securing.



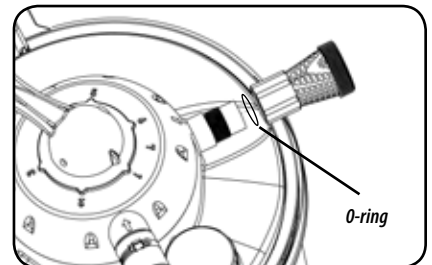
2. Pool "Skimmer Hose" Attachment

- Attach the pool skimmer hose (outlet of pool) to the short INTEX® adapter.
- Ensure that the flat gasket "B" is installed between the short adapter and the face of the hose.



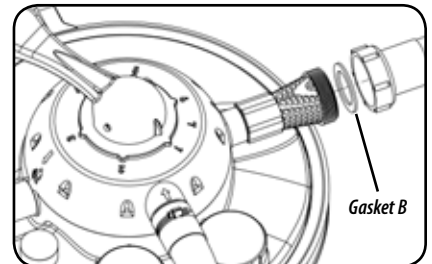
3. Long INTEX® Adapter Installation

- Insert o-ring "C" inside the long INTEX® adapter.
- Screw the long INTEX® adapter onto the pool return port on the tank cover.



4. Pool Return Hose Attachment

- Screw the pool return hose (inlet of pool) to the long INTEX® adapter on the tank cover.
- Ensure that the flat gasket "B" is inserted between the adapter and the face of the hose.



Note: Be careful not to secure return hose to the waste/backwash port.

IMPORTANT

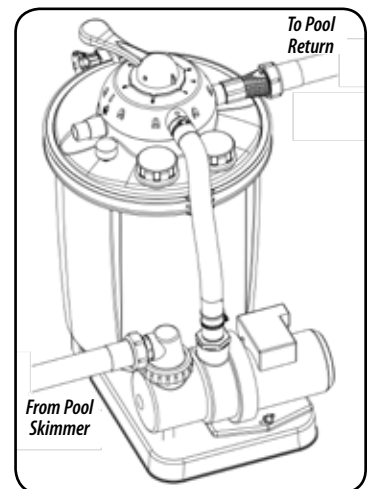
Ensure that all hose connections are tight and that the hoses are NOT kinked or bent at severe angles.

5. Completed Filter-Pump Installation.

Should resemble the figure shown at right.

CAUTION

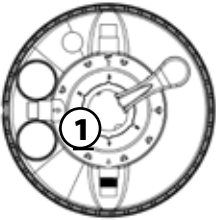
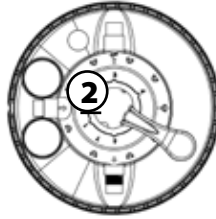
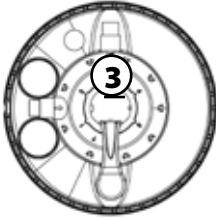
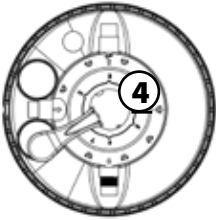
Do not power pump at this point.

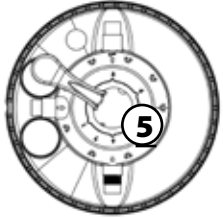
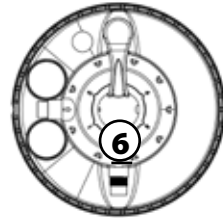


8. VALVE OPERATIONS

Make yourself familiar with your filter system's valve settings and functions.

Filter Valve Settings & Functions

Setting	Complete Water Flow/Function	Valve Diagram
Filtration Position 1	Function: Vacuum, regular pool filter action. This is the setting the filter will be set to most of the time. In this position, water is directed through the top of the filter where it compresses and flattens down the sand. Contaminants are trapped by the sand as water makes it way to the bottom strainer, out of the filter and back to the pool.	 A circular valve diagram showing the internal components. A handle is positioned at the 12 o'clock position, indicated by a circled number 1. The diagram shows the flow path for filtration, where water enters from the top and passes through the filter media.
Rinse Position 2	Function: Use after backwashing to clean and resettle filter bed. This should always be done immediately after backwashing, new sand addition or filter start-up. In this position, water is directed to the top of the tank where it reseats the sand and flushes the valve while sending water out the waste line. This reduces the chance of contaminant blow back to the pool when the valve is moved back to the filtration position after backwashing.	 A circular valve diagram showing the internal components. A handle is positioned at the 2 o'clock position, indicated by a circled number 2. The diagram shows the flow path for rinsing, where water is directed to the top of the tank and out the waste line.
Circulation Position 3	Function: circulate water after chemical treatment. This position is used during certain pool cleanups and chemical treatments when you don't want the water contaminating the sand. In this position, water is only directed through the valve back to the pool and does not filter through the sand.	 A circular valve diagram showing the internal components. A handle is positioned at the 3 o'clock position, indicated by a circled number 3. The diagram shows the flow path for circulation, where water is directed through the valve back to the pool without passing through the filter media.
Backwash Position 4	Function: clean filter of captured debris. This is the position needed to clean the filter and sand. You'll know it is time to backwash when the pressure gauge rises 5 to 10 psi above what it normally reads when the filter is clean. In this position, water is directed through the bottom strainer, reversing the flow through the tank. This causes the sand to separate and lift while releasing trapped debris out the waste line.	 A circular valve diagram showing the internal components. A handle is positioned at the 4 o'clock position, indicated by a circled number 4. The diagram shows the flow path for backwashing, where water is directed through the bottom strainer, reversing the flow through the tank and out the waste line.

Closed Position 5	Function: Cleaning the hair and lint strainer. This position stops the flow of water into the pump and filter. CAUTION: Do not run pump with valve in this position.	
Purge/ Drain Position 6	Function: bypass the filter. This position is ideal for vacuuming pools with large amounts of debris or after an algae treatment. In this position, water bypasses the filter and sends all the water and contaminants out the waste line.	
Winterize Position 7	Function: winterizing and storage. In this position, the valve lever is between positions which removes pressure from internal valve components for winter (off-season) storage. CAUTION: Do not run pump with valve in this position.	

Changing Valve Positions

The 7 Position Multi-Port Valve is designed to give the required flow rate for each action that is described above. Always make sure the power source to the filter is unplugged before changing valve positions. In other words, the pump should not be running when you change valve settings (i.e. moving from Filtration position to the Backwash position). Changing valve positions while the pump is running could result in irreparable damage to the valve and its inner workings. To change valve positions, press down firmly on the valve lever and rotate to the desired setting.

IMPORTANT

ALWAYS unplug power source to pump before changing valve positions.
Changing valve positions while the pump is running could result in irreparable damage to the valve and its inner workings.

CAUTION

NEVER use the valve lever as a handle to carry or lift the filter.

9. FILTER OPERATIONS

Start Up

Once the filter system has been properly assembled, the sand chamber filled with sand and the hoses connected, you may begin with filtration. However, we recommend that you clean and prepare the new sand that is in the sand chamber first. Cleaning the sand prior to filtering your pool will remove most of the dust and tiny sand particles that may exist in the sand. If you move straight to filtering, these particles will end up in your pool. To clean the sand, please follow the instructions below.

Cleaning Sand

1. Make certain the pump is not plugged in to a power supply.
2. Start with the valve in the "5" - Closed" position.
3. If you haven't done so already, fill your pool with water. Ensure that the water level is at least 1 – 2 inches above the top of the hose intake and return ports in the pool.
4. Release the shut off valve at the intake port in the pool. If you plugged the intake port, remove the plug to allow the water to flow into the intake hose.
5. With the filter-pump system installed in a location level lower than your pool's water level – water will automatically flow into the pump-filter system.
6. Allow the filter tank to fill with water.
7. Check for leaks and make any necessary adjustments.
8. Follow the backwash process below.

Backwash Process

1. Disconnect the motor/pump from the power source.
2. Attach backwash hose (not included) to backwash port.
3. Place the multi-port valve in the "4 - Backwash" position.
4. Reconnect to power source.
5. Run filter in backwash mode until discharge water is clear.
6. Disconnect the motor/pump from the power source.
7. Place the multi-port valve in the "2 - Rinse" position.

CAUTION

See Section 5, Power Source Requirements

8. Reconnect to power source.
9. Allow filter to run for 60 seconds to remove any remaining residue from pump and valve.
10. Disconnect the motor/pump from the power source.
11. Place the multi-port valve in the "1 - Filtration" position.
12. Reconnect to power source.

Your filtration system is running and ready for further operation.

NOTE: When the filter pump is properly connected to the power supply, the pump will begin to push the water through the bed of sand and out the backwash hose. In this process, water will be drained from your pool as it cleans the bed of sand within the tank. You may want to put a garden hose in the pool to add water in while the pump is pulling water out so that the water level does not go below the intake return ports. While the sand is being cleaned, run your fingers through the water exiting the backwash hose. When you can no longer feel sandy grit in the water, the sand cleaning process should be complete.

Backwash Do's and Don't's

Be aware and make note of the filter pressure when the sand is clean. Backwash when you see an increase of 5 – 10 psi on the pressure gauge.

- Do backwash long enough to get the job done right. Let the system backwash until the water exiting the waste line is clear. Note that backwashing can remove 50 -300 gallons of water from your pool so pay attention. Also, be aware of local codes regarding pool water disposal as some communities outlaw drainage.
- Don't backwash excessively. Sand filters operate more efficiently during mid-cycle. Some level of debris in the sand bed actually helps filtration and makes the filter more effective. Too much backwashing will reduce efficiency.
- Don't vacuum the pool in backwash mode. You can plug up the strainer at the bottom of the filter which will result in inefficient operation. Plus you may have to remove all of the sand to get it unclogged.

10. MAINTENANCE

The chart below outlines the recommended maintenance schedule for your Pool Filter System.

Intervals	Maintenance Items
Weekly	Backwashing, regardless of the pressure or how dirty the filter might be
	Cleaning of the Debris/Lint filter in the pump hair and lint strainer (directions below)
Annually	Winterize the system before the first frost (directions below)
	Add sand at the beginning of each swim season as necessary

Adding New Sand

CAUTION

Use breathing filter/mask approved for dust & sand and adequate eye protection while filling sand container. Avoid breathing dust.

- Protect bottom strainer while replacing or adding sand. Fill the tank with a foot of water and cover the water chamber to avoid getting sand inside.
- Start filter in rinse mode for 1 – 3 minutes after initial start up or after adding new sand. By doing this you can avoid blowing small particles and impurities from the new sand into your pool. If some debris from the new sand does go into your pool, vacuum it up with the system in purge mode, otherwise you may keep sending it back to the pool.

CAUTION

Before loosening any threaded connections on the filtration system, be sure that the intake and return hoses are closed or plugged to prevent water flow over the motor.

Cleaning the Hair and Lint Filter

1. Unplug the pump from the power source.
2. Close the shutoff valves or block the water flow at the pool inlet port.
3. Place valve in the "5 - Closed" position.
4. Remove the hair & lint strainer cover on the pump by unscrewing the threaded collar. Take out the strainer basket, clean it, and replace it. Replace the hair & lint strainer cover and tighten the threaded collar. DO NOT OVER TIGHTEN.
5. Open the shutoff valves or unblock the water flow at the pool inlet port.
6. Place valve in the "1 - Filtration" position.
7. Reconnect to power source.

IMPORTANT

NEVER operate the pump without the hair and lint strainer basket in place – this can cause damage to the motor and pump assembly.

Winterizing the System

1. Unplug the pump from the power source.
2. Close the shut off valves or block the flow of water at the pool inlet and return ports.
3. Disconnect the filtration system from the pool, drain the tank and hoses.
4. Place the handle on the central valve in position "7- Winterize" to relieve the tension on the spring and internal valve components.
5. Store the filter system in a location protected from frost and freezing temperatures.

Safety Notes

If there is any indication that safe operation is no longer possible, the device is to be disconnected from the power supply and secured against accidental use.

This is the case when:

- The device has visible damage
- The device no longer appears functional
- After long periods of storage in poor conditions

11. TROUBLESHOOTING

Problem	Cause	Solution
Pressure gauge has reading over 15 psi	Dirty filter bed	Backwash the filter (position 4)
Pressure is too low	Hair and lint strainer basket is dirty	Clean the hair and lint strainer
Air in the pump	Poor seal on the intake side of the pump.	Tighten hose clamps and connecting fittings.
Water flows into the drainpipe	Dirt around the seal of the Central Valve	Unscrew the central valve from tank cover and clean the seal
Leaking filter	Seal Defective	Check the seal, replace if needed
	Clamp not tight	Tighten clamp. DO NOT over tighten hose clamps (35 in/lb max torque).
Pump does not run	Not plugged in	Check the socket and power cord
	G.F.C.I/ or main circuit breaker tripped	Switch on the breaker (if it is immediately tripped again, there is a defect in pump or controls)
	Pump motor defective	Replace the entire pump
Sand in Pool	If the sand is newly replaced, the undersized grains are still present	Backwash several times until the backwash water is clear (position 4)
	Sand in central valve (from backwash)	Purge into drainpipe for 30 seconds (position 6)
	Separation wall in filter is improperly installed	Check the separation wall for proper positioning
	Filter bottom strainer is damaged	Replace the filter bottom strainer
Air in system	Water level low or system recently opened for service.	While pump is running, loosen, but do not remove, one of the screw-on transparent covers on the filter tank to allow any trapped air to escape. Tighten the cover once all of the air has escaped.

STOP

Repairs on the pump should only be performed by professionally trained, qualified technicians.

12. LIMITED WARRANTY STATEMENT

The manufacturer warrants safe operation and reliability only under the following conditions:

The filter system is installed and operated according to the assembly and operating instructions.

Only original replacement parts are used.

Consumable parts do NOT fall under the warranty

Expendable parts do NOT fall under the warranty. These include:

- All O-rings (40x5 mm O-ring for tank cover, 105x5 mm O-ring for pump cover, 58x6 mm O-ring for housing, 50x3 mm O-rings for hose connections, 6x2 mm O-rings for screws)
- Pressure Gauge
- Hair & Lint Strainer Basket
- Mechanical Seal, Complete
- Filter-to-Pump Hose

General Terms

This Limited Warranty applies to the enclosed product (the "Product") distributed by Great American Duck Races, Inc., an Arizona corporation (doing business as Great American Marketing and Events) ("GAME").

GAME warrants that the Product will be free from defects in materials and workmanship under normal use for a period of one (1) year from the date of purchase. (Your dated sales or delivery receipt, showing the date of your Product purchase, is your proof of the purchase date.) During the warranty period, GAME will repair or replace any defective parts at no charge.

All defective parts that are replaced by GAME will be replaced, at GAME's discretion, with either new parts or used parts that meet or exceed performance specifications for new parts. All parts removed from the Product under this warranty will become the property of GAME. Repair or replacement of any parts will not serve to extend the one (1) year warranty period.

This Limited Warranty does not apply to expendable parts. This Limited Warranty does not extend to any product (a) from which the serial number has been removed or (b) that has been damaged or rendered defective (i) as a result of accident, misuse, abuse or other external causes; (ii) by operation outside the usage parameters stated in the manual that shipped with the Product; (iii) by the use of parts not manufactured or sold by GAME; or (iv) by modification or service by anyone other than GAME or an authorized GAME distributor.

If a defect is identified within the warranty period, please contact GAME.

EXCEPT FOR THE LIMITED WARRANTY SET FORTH ABOVE, GAME EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, ORAL OR STATUTORY (INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE). ANY IMPLIED WARRANTIES THAT MAY BE IMPOSED BY LAW ARE LIMITED TO THE TERMS OF THE ABOVE LIMITED WARRANTY.

Limitation of Liability

EXCEPT FOR THE LIMITED WARRANTY DESCRIBED ABOVE, IN NO EVENT WILL GAME HAVE ANY LIABILITY OF ANY KIND WHATSOEVER (WHETHER UNDER CONTRACT, TORT, OR ANY OTHER THEORY OF LEGAL LIABILITY) TO ANY PERSON WITH RESPECT TO THE PRODUCT (INCLUDING, WITHOUT LIMITATION, (A) ANY USE OR MISUSE OF THE PRODUCT, (B) ANY FAILURE OR MALFUNCTION OF THE PRODUCT, (C) ANY BODILY INJURY, DEATH, LOSS OF OR DAMAGE TO ANY PROPERTY, OR ANY OTHER DAMAGES RELATED TO OR RESULTING FROM THE PRODUCT OR ITS USE (INCLUDING, WITHOUT LIMITATION, ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, LOST PROFITS, LOSS OF USE), EVEN IF GAME OR GAME'S AUTHORIZED REPRESENTATIVES HAVE BEEN ADVISED OF THE POSSIBILITY OF ANY SUCH DAMAGES.

Severability

Any provision of this Limited Warranty which is prohibited or unenforceable in any jurisdiction will, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining portions hereof or affecting the validity or enforceability of such provision in any other jurisdiction.

Venue and Choice of Law

This Limited Warranty is applicable in all countries. This Limited Warranty will be governed by the laws of the State of Arizona (regardless of any conflict of laws rules), and any disputes arising from this Limited Warranty will be resolved in Phoenix, Arizona.

Entire Agreement

This Limited Warranty is understood to be the complete and exclusive agreement between GAME and the purchaser of the Product, superseding all prior agreements, oral or written, and all other communications between such parties relating to the Product. No employee or representative of GAME or any other party is authorized to make any warranty in addition to the limited warranty set forth above.

IMPORTANT
DO NOT RETURN PRODUCT TO STORE

For technical assistance and missing parts, call Customer Service toll-free

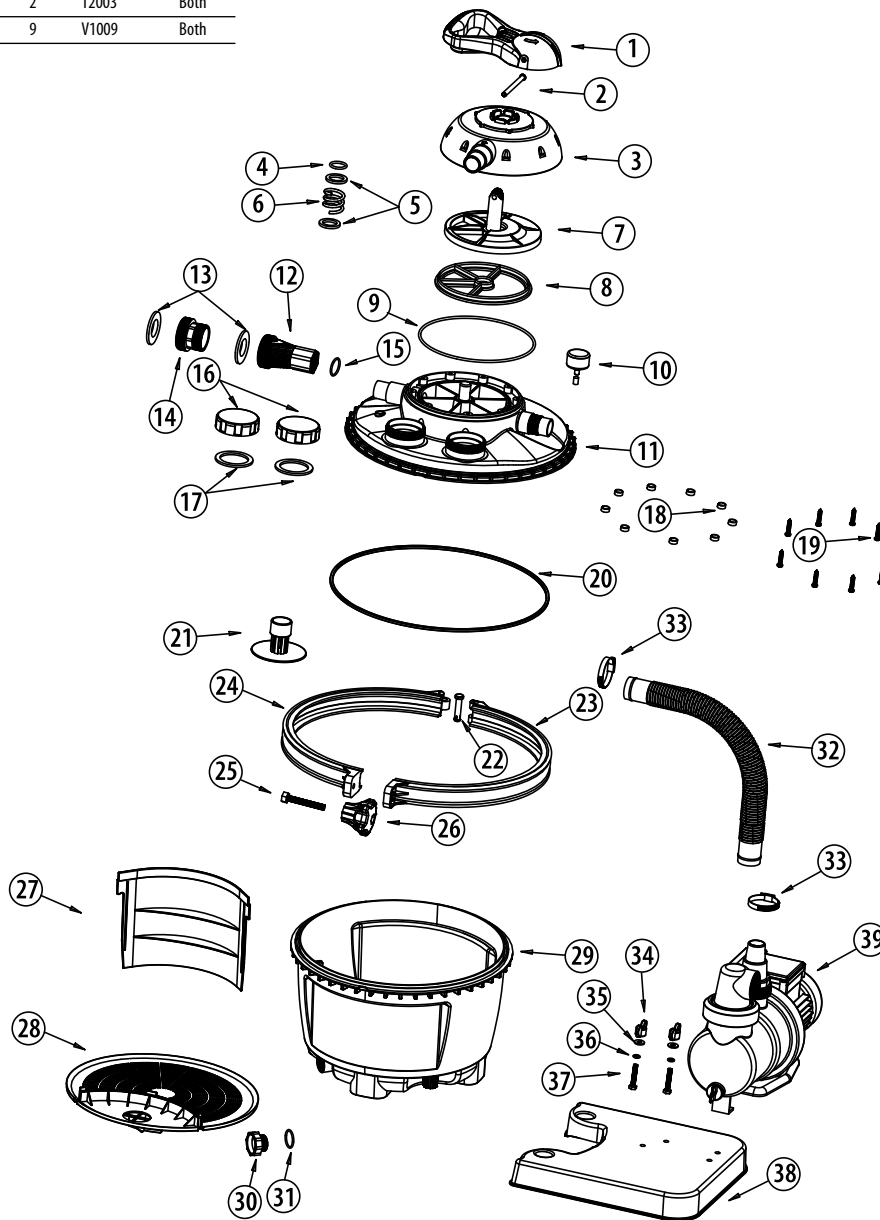
1.888.339.2546

(press 135 at any time)

Monday through Friday, 8am to 5:00pm MST

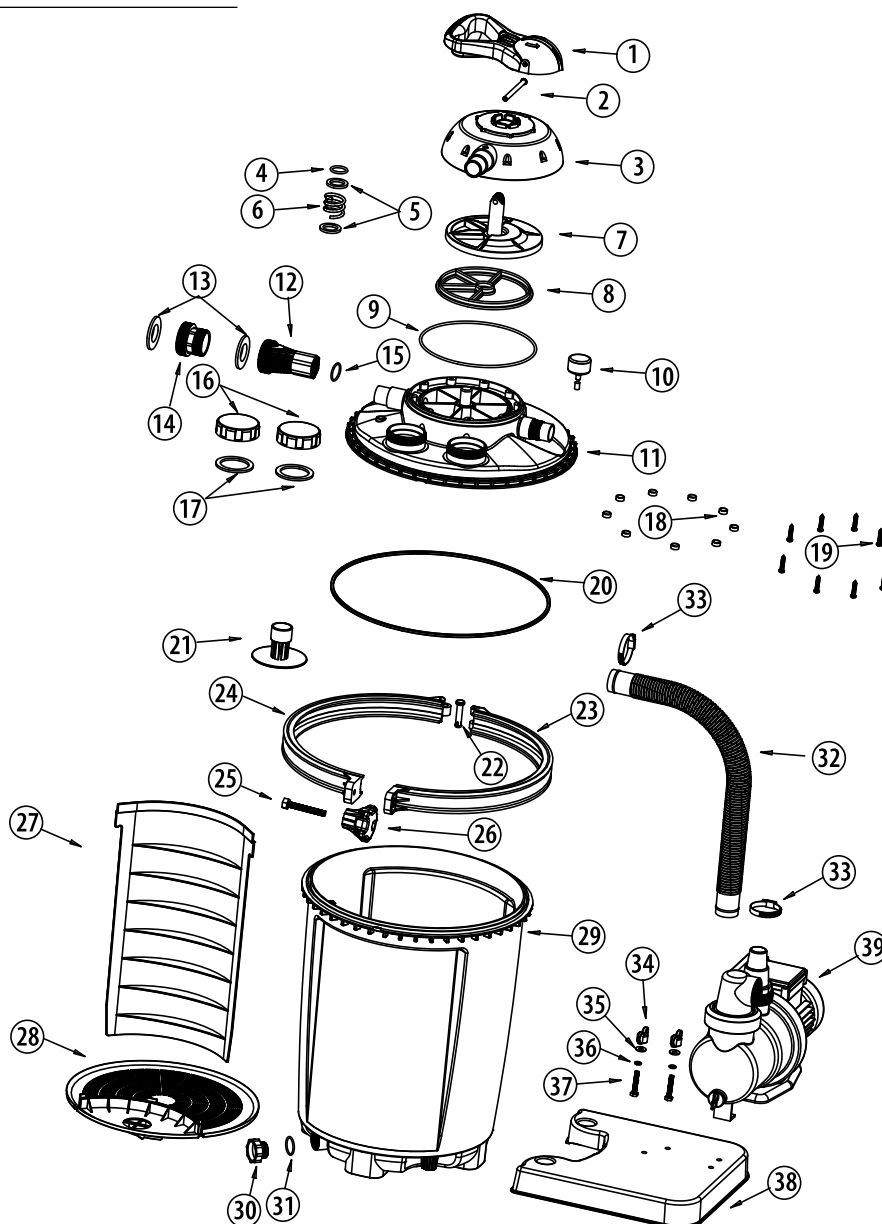
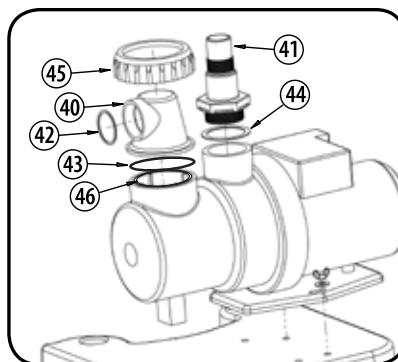
13. APPENDIX: EXPLODED PARTS DIAGRAM

Key Part Name	Qty	Game Part #	For Model #	19 Valve Cover Screws	9	V1010	BOTH
1 Valve Handle	1	V1000	BOTH	20 Tank O-Ring	1	T2005	BOTH
2 Valve Stem Pin	1	V1001	BOTH	21 Upper Distributor	1	T2006	BOTH
3 Valve Cover	1	V1002	BOTH	22 Lock Ring Pin	1	L4001	BOTH
4 Diverter Stem Spool	1	V1003	BOTH	TANK COVER LOCK RING ASSEMBLY			
5 Diverter Stem Gasket	2	V1004	BOTH	23 Left Side Lock Ring	1	L4002	BOTH
6 Diverter Stem Spring	1	V1005	BOTH	TANK COVER LOCK RING ASSEMBLY			
7 Diverter	1	V1006	BOTH	24 Right Side Lock Ring	1	L4003	BOTH
8 Diverter Gasket	1	V1007	BOTH	TANK COVER LOCK RING ASSEMBLY			
9 Valve Cover Seal	1	V1008	BOTH	25 Lock Ring Bolt	1	L4004	BOTH
10 Pressure Gauge	1	G5001	BOTH	TANK COVER LOCK RING ASSEMBLY			
11 Tank Cover	1	T2001	BOTH	26 Lock Ring Knob	1	L4005	BOTH
12 Long INTEX Connector	1	I3001	BOTH	TANK COVER LOCK RING ASSEMBLY			
13 Flat Gasket "B" for INTEX Connector	2	I3002	BOTH	27 Tank Separator Plate	1	T2007 / T2008	4510 / 4511
14 Short INTEX Connector	1	I3003	BOTH	28 Tank Bottom Strainer	1	T2009	BOTH
15 1 1/4" O-ring "C" for long INTEX Connector	1	I3004	BOTH	29 Filter Tank	1	T2010 / T2011	4510 / 4511
16 View Port Cover	2	T2002	BOTH	30 Drain Cap	1	T2012	BOTH
17 Gasket for View Port Cover	2	T2003	Both	31 Drain Cap Gasket	1	T2013	BOTH
18 Seal Washer for Valve Cover Stems	9	V1009	Both				



MODEL 4510

32	Filter Pump Hose	1	P6001 / P6002	4510 / 4511
33	Hose Clamp	2	P6003	BOTH
34	Pump Bolt Wing Nut	2	P6004	BOTH
PUMP MOUNTING HARDWARE				
35	Pump Bolt Flat Water	2	P6005	BOTH
PUMP MOUNTING HARDWARE				
36	Pump Bolt Lock Washer	2	P6006	BOTH
PUMP MOUNTING HARDWARE				
37	Pump Bolt	2	P6007	BOTH
PUMP MOUNTING HARDWARE				
38	Base Plate	1	B7001	BOTH
39	Water Pump / Motor	1	P6010 / P6011	4510 / 4511
40	Transparent Hair & Lint Strainer Cover	1	P6012	BOTH
41	1 1/4" - 1 1/2" Hose Connector	2	P6013	BOTH
42	O-RING "A" - 2 1/4"	1	P6014	BOTH
43	O-RING "B" - 3"	1	P6015	BOTH
44	FLAT GASKET "A"	1	P6016	BOTH
45	Strainer Collar	1	P6017	BOTH
46	Strainer Basket	1	P6018	BOTH



MODEL 4511

IMPORTANT
DO NOT RETURN PRODUCT TO STORE

For technical assistance and missing parts, call Customer Service toll-free

1.888.339.2546

(press 135 at any time)

Monday through Friday, 8am to 5:00pm MST

Look for other GAME products at your favorite store
or visit our website, www.game-group.com/retailers.



Great American Merchandise & Events™
16043 N. 82nd Street
Scottsdale, AZ 85260-1800 U.S.A.

tel: 888.382.5988, 602.957.3825
fax: 602.957.7665
email: products@game-group.com
www.game-group.com/retailers