

IMPORTANT SAFETY RULES

Please read, understand, and follow all instructions carefully before installing and using this product. Keep for future reference.

QX2100

Krystal Clear™ Sand Filter Pump
Certified Model Number ECO15220-2 220-230 V~
Certified Model Number ECO15230-2 230-240 V~,
50 Hz, 300 W, Hmax 5 m, Hmin 0.19 m, IPX4
Max. Water Temperature 35°C

QX2600

Krystal Clear™ Sand Filter Pump
Certified Model Number ECO20220-2 220-230 V~
Certified Model Number ECO20230-2 230-240 V~,
50 Hz, 520 W, Hmax 7.5 m, Hmin 0.19 m, IPX4
Max. Water Temperature 35°C



For illustrative purposes only.

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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.

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IMPORTANT SAFETY RULES

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

READ AND FOLLOW ALL INSTRUCTIONS

WARNING

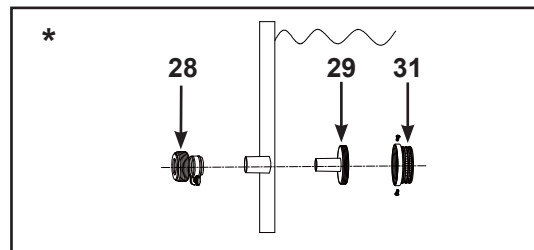
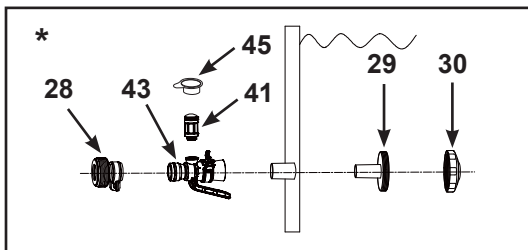
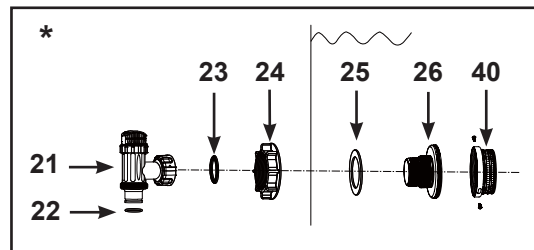
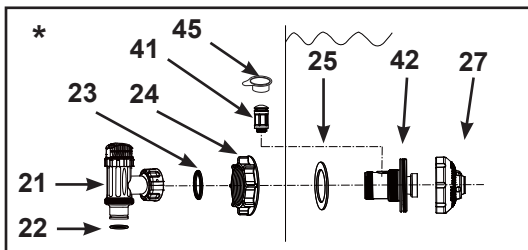
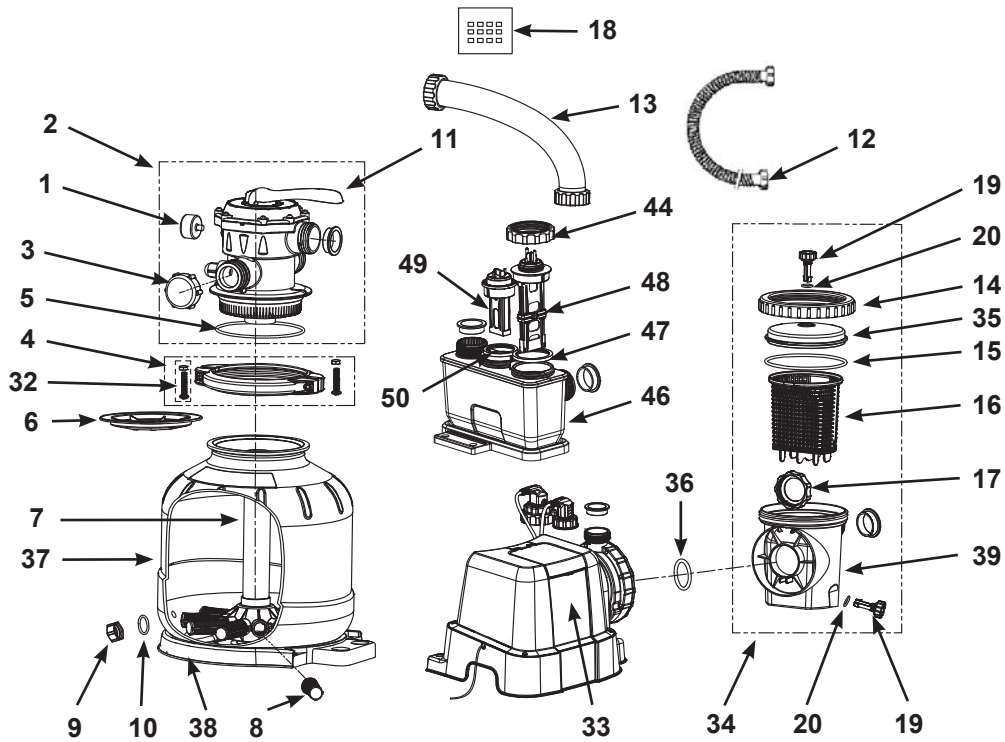
- This Saltwater System is designed only to produce sodium hypochlorite. It does not monitor or control sodium hypochlorite levels in the pool. It is the pool owner's responsibility for monitoring and maintaining free chlorine levels in the recommended range of 0.5 to 3.0 parts per million (ppm). It is the pool owner's responsibility to check, on a regular basis, the free chlorine level while the pool pump is running and adjust the Saltwater System accordingly.
- Always supervise children and those with disabilities.
- Children must stay away from this product and electrical cord(s).
- Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Assembly and disassembly by adults only.
- Risk of electric shock. Connect this product only to a grounding type receptacle protected by a ground-fault circuit interrupter (GFCI) or residual current device (RCD). Contact a qualified electrician if you cannot verify that the receptacle is protected by a GFCI/RCD. Use a qualified electrician to install the GFCI/RCD, which has a maximum rate of 30mA. Do not use a portable residual current device (PRCD).
- Always unplug this product from the electrical outlet before removing, cleaning, servicing or making any adjustment to the product.
- The plug must be accessible after product is installed.
- Do not bury the electrical cord. Locate the cord where it will not be damaged by lawn mowers, hedge trimmers and other equipment.
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- 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.
- Keep this product more than 2m away from the pool.
- Keep this product more than 3.5m away from the pool (for France only).
- Keep the plug of this product more than 3.5m away from the pool.
- Position this product away from the pool, so as to prevent children from climbing on it and accessing the pool.
- Do not operate this product when pool is occupied.
- This product is for use with storable pools only. Do not use with permanently installed pools. A storable pool is constructed so that it may be readily disassembled for storage and reassembled to its original configuration.
- 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.

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.



" * ": These parts are not included if this pump was not purchased as part of a pool set. Contact our Authorized Service Centers to order these parts if needed.

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

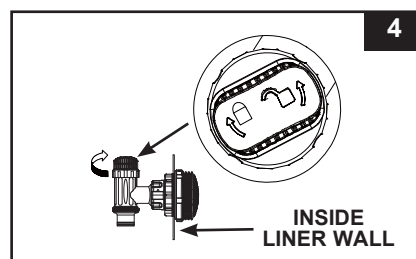
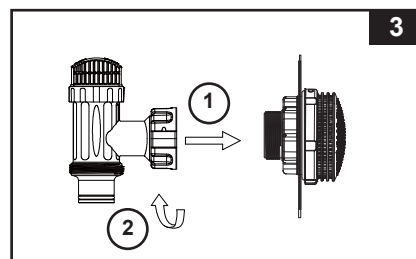
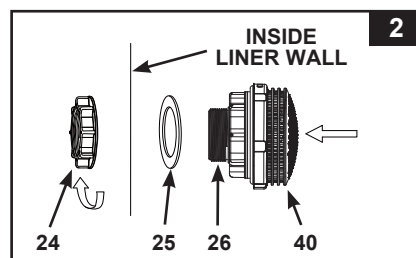
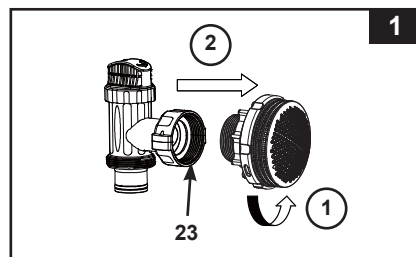
REF. NO.	DESCRIPTION	QTY.	SPARE PART NO.	
			ECO20220-2/ECO20230-2	ECO15220-2/ECO15230-2
1	PRESSURE GAUGE	1	11224	11411
2	6-WAY VALVE	1	11496	11378
3	DRAIN OUTLET COVER	1	11131	11131
4	CLAMP	1	11380	11380
5	TANK O-RING	1	11379	11379
6	SAND SHIELD	1	11382	11382
7	CENTER PIPE HUB	1	11814	11813
8	LATERAL	12	11384	11384
9	DRAIN VALVE CAP	1	11456	11456
10	DRAIN VALVE O-RING	1	11385	11385
11	L-SHAPE O-RING	7	11228	11228
12	HOSE WITH NUTS	2	11010	11010
13	SAND FILTER INTERCONNECTING HOSE	2	11535	11388
14	LEAF TRAP NUT	1	11479	11822
15	LEAF TRAP O-RING	1	11232	11824
16	BASKET	1	11260	11821
17	FILTER HOUSING NUT	1	11261	11261
18	TEST STRIPS	1	19635	19635
19	AIR RELEASE VALVE/SEDIMENT RELEASE VALVE	2	10460	10460
20	VALVE O-RING	2	10264	10264
21*	PLUNGER VALVE (HOSE O-RING & STEP WASHER INCLUDED)	2	10747	10747
22*	HOSE O-RING	2	10262	10262
23*	STEP WASHER	2	10745	10745
24*	STRAINER NUT	2	10256	10256
25*	FLAT STRAINER RUBBER WASHER	2	10255	10255
26*	THREADED STRAINER CONNECTOR	1	10744	10744
27*	ADJUSTABLE POOL INLET JET NOZZLE	1	12369	12369
28*	ADAPTOR B	2	10722	10722
29*	STRAINER CONNECTOR	2	11070	11070
30*	POOL INLET JET NOZZLE	1	13162	13162
31*	STRAINER GRID	1	12197	12197
32	SCREW	2	11381	11381
33	PUMP MOTOR & CONTROL	1	13040	13038
34	PRE-FILTER ASSEMBLY	1	11371	11826
35	LEAF TRAP COVER	1	11480	11823
36	SAND FILTER PUMP MOTOR INLET O-RING	2	11457	11457
37	SAND FILTER PUMP TANK	1	12714	12713
38	SAND FILTER PUMP TANK BASE	1	12870	12869
39	PRE-FILTER HOUSING	1	12099	12100
40*	STRAINER GRID	1	12198	12198
41*	AIR JET VALVE	1	12363	12363
42*	INLET THREADED AIR CONNECTOR	1	12372	12371
43*	POOL INLET AIR ADAPTOR	1	12368	12368
44*	ELECTROLYTIC CELL NUT	1	13044	13044
45*	AIR JET VALVE CAP	1	12373	12373
46	CELL HOUSING	1	12864	12864
47	TITANIUM PLATES O-RING	1	12871	12871
48	TITANIUM ELECTRODE	1	13043	13042
49	E.C.O. ELECTRODE	1	12875	12874
50	E.C.O. ELECTRODE O-RING	1	12876	12876

" * ": These parts are not included if this pump was not purchased as part of a pool set. Contact our Authorized Service Centers to order these parts if needed.
When ordering parts, be sure to quote the model number and part numbers.

POOL OUTLET - STRAINER & PLUNGER VALVE SETUP (optional)

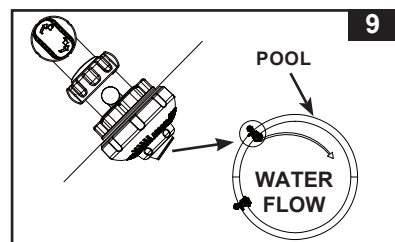
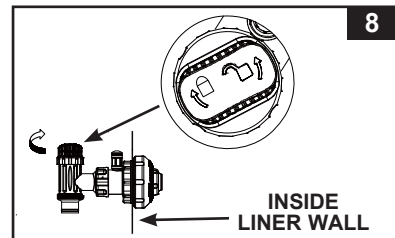
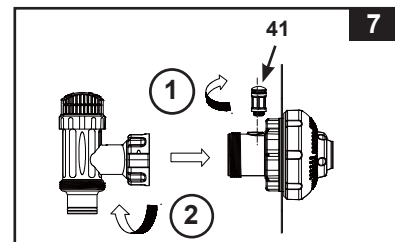
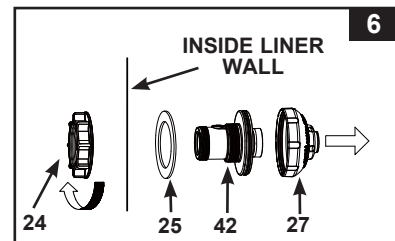
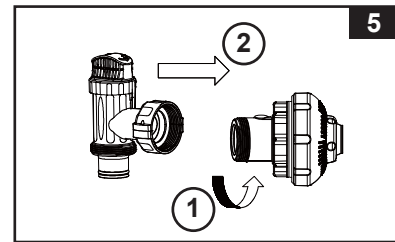
The strainer grid prevents large objects from jamming and/or damaging the filter pump. If your pool has an inflatable top ring, install the strainer, nozzle and plunger valve before inflating the pool liner top ring. The part numbers here onward refer to the parts depicted in the Parts List section of 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 inlet threaded air connector **(42)** (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 inlet threaded air connector **(42)**. Leave the flat washer **(25)** on the connector **(42)**.
3. Install the nozzle and plunger valve at the upper position of pool inlet. From the inside of the pool liner insert the nozzle union **(27 & 42)** 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. Then, 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 inlet threaded air connector **(42)** (see drawing 6).
5. Finger tighten the adjustable pool inlet jet nozzle **(27)** and the strainer nut **(24)** onto the inlet threaded air connector **(42)**.
6. Grasp the plunger valve assembly. Make sure the step washer **(23)** is in place.
7. Screw the air jet valve **(41)** over the inlet threaded air connector **(42)**. **NOTE:** Make sure the air jet valve is securely tighten and facing up. In a clockwise motion screw the plunger valve union back onto the inlet threaded air connector **(42)** (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.



NOTE: Do not cover the air jet valve **(41)** with the valve cap **(45)** under normal situation or when the pump is operating. See Troubleshooting Guide section for more details.

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.

Certified Model Number:	ECO20220-2/ECO20230-2	ECO15220-2/ECO15230-2
Power:	220-240 Volt AC	220-240 Volt AC
Wattage:	520 W	300 W
Ideal Salt Level:	3000 ppm (parts per million)	3000 ppm
Maximum Sanitizer Output/hour:	11 grams/hour	7 grams/hour
E.C.O. Cell Output Current:	800mA	500mA
Maximum working pressure:	2 bar (30 psi)	2 bar (30 psi)
Effective filtering area:	0.13 m ² (1.44 ft ²)	0.1 m ² (1.07 ft ²)
Pump flow rate (at pump outlet):	10.0 m ³ /h (2650 GPH)	7.9 m ³ /h (2100 GPH)
Recommended filtering media quantity:	No. 20 silica sand 55 Kg (120 Lbs), glass sand 38 Kg (85 Lbs), or fiber ball 1500 g (3.3 Lbs).	No. 20 silica sand 35 Kg (77 Lbs), glass sand 25 Kg (55 Lbs), or fiber ball 1000 g (2.2 Lbs).
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.	
Limited Warranty:	see "Limited Warranty"	

SETUP INSTRUCTIONS

TOOLS REQUIRED: One (1) Phillips screwdriver

Pump location and mounting:

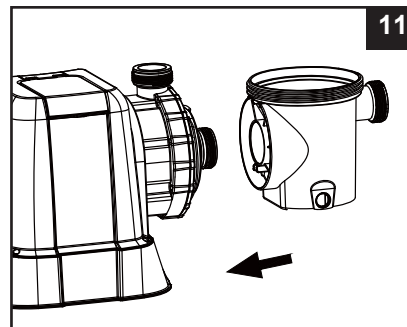
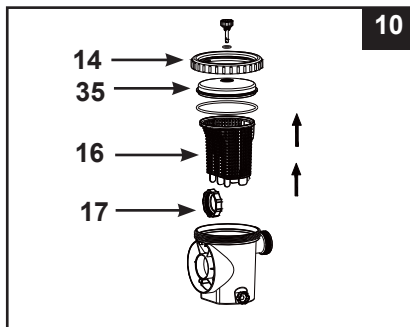
- The system must be installed on a solid level and vibration-free base.
- Provide a location protected from the weather, moisture, flooding and freezing temperature.
- Provide adequate access, space and lighting for routine maintenance.
- Pump motor requires free circulation of air for cooling. Do not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

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

The appliance is intended only for household use.

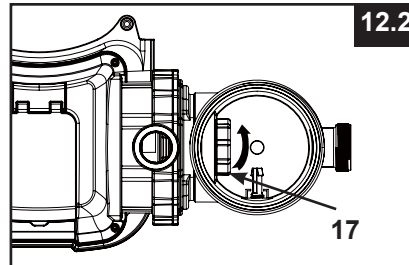
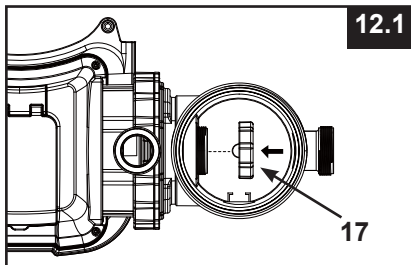
Motor pre-filtering assembly setup:

1. Remove the sand filter and its accessories from the packaging carefully and inspect for any visible damage.
2. In a counter-clockwise motion unscrew the leaf trap nut (14) from the pre-filter housing. Take out the basket (16) and filter housing nut (17) (see drawing 10).
3. Connect the pre-filter housing to the motor water inlet. Note: Align the connector in the pre-filter housing with the water inlet on the motor (see drawing 11).

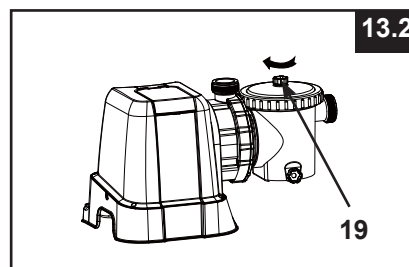
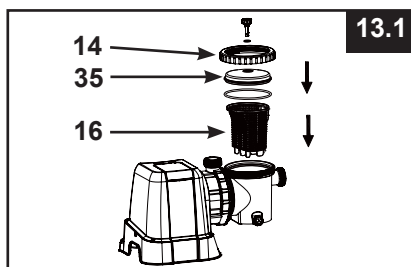


SETUP INSTRUCTIONS (continued)

4. In a clockwise motion screw filter housing nut (17) onto the motor water inlet (see drawings 12.1 & 12.2).



5. Replace the basket (16) and leaf trap nut (14) back to the pre-filter housing (see drawings 13.1 & 13.2).



Sand tank installation:

1. Place the tank support base at the selected location.
2. Place the tank on the tank support base (see drawing 14.1).
3. Connect the motor pre-filtering assembly unit to the tank support base (see drawing 14.2).

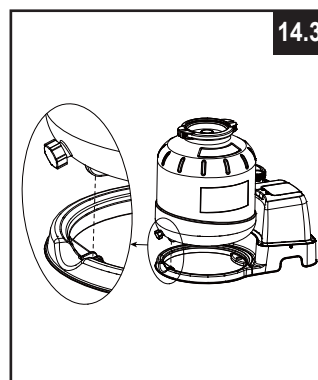
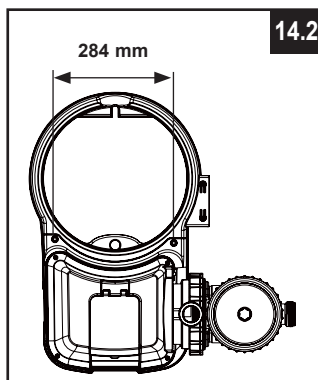
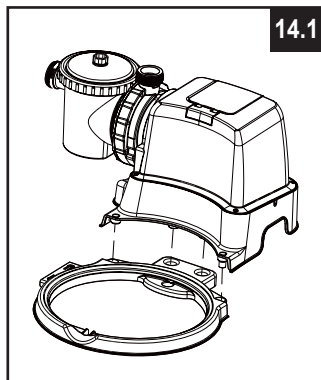
NOTE: Ensure the pre-filter housing water inlet hose connection is facing towards the pool.

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 14.3.

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 284 mm apart.
- Use two bolts and lock nuts with a maximum of 6.4 mm in diameter.



SETUP INSTRUCTIONS (continued)

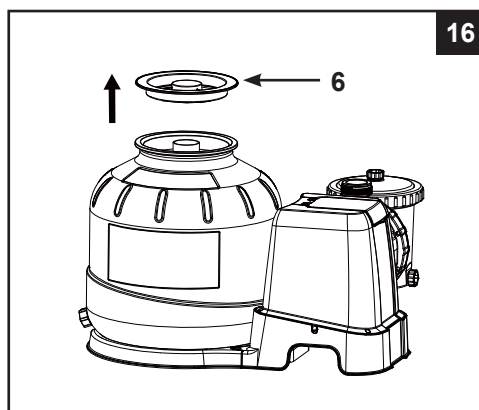
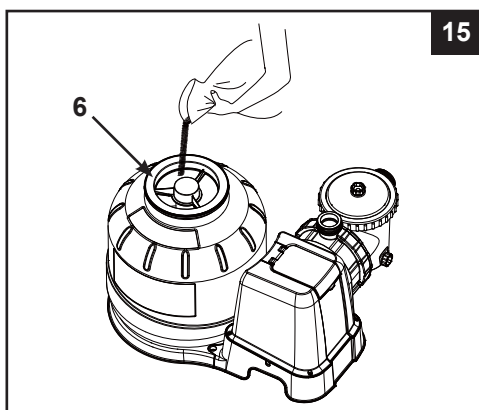
Sand loading:

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.

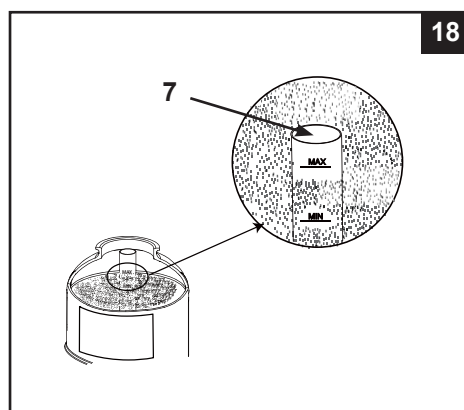
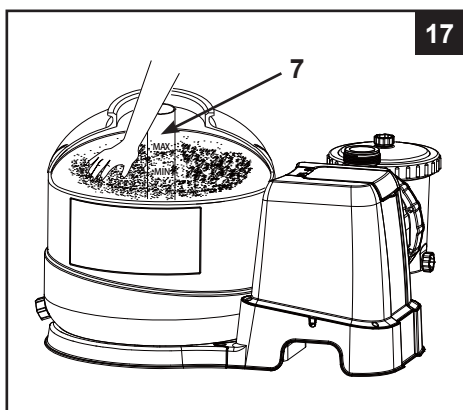
Only use the filter media specified by the manufacturer.

NOTE: Before loading the tank with sand, ensure the center pipe hub assembly is securely in place at the bottom of the tank, and vertically centered inside the tank.

1. Place the sand shield (6) over the top of the center pipe. Pour the sand into the tank at a slow rate (see drawing 15).
2. Fill the tank approximately half way, remove the sand shield (6) from the top (see drawing 16).



3. 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 center pipe hub (7) from excessive shock (see drawing 17). Place the sand shield (6) back and continue to pour the sand into the tank.
4. Sand shall be filled between the "MAX" and "MIN" marked gauge on the center pipe (see drawings 18).



5. Remove the sand shield (6) (see drawing 16) and evenly spread and level out the sand by hand (see drawing 17).
6. Wash away all sand around the top edge of the tank.

SETUP INSTRUCTIONS (continued)

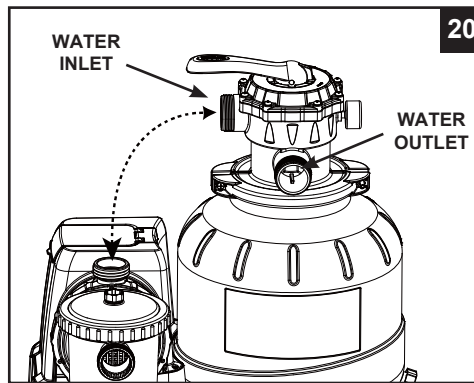
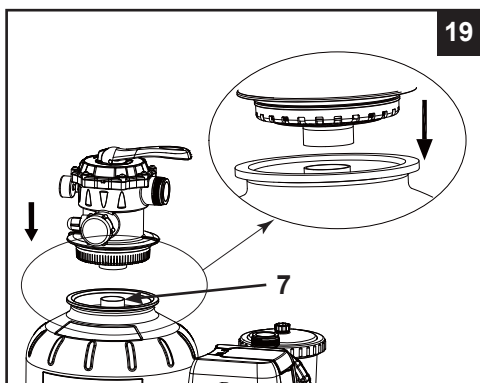
⚠ WARNING

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

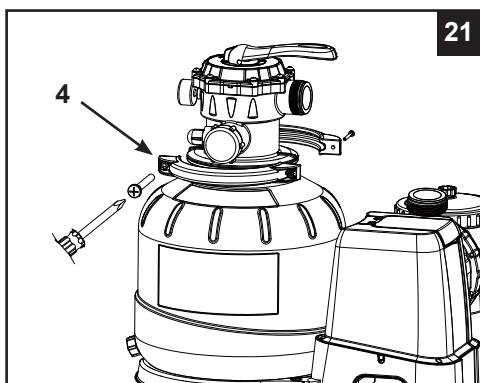
6-way valve installation:

1. Lower the 6-way valve over the tank slowly, and ensure the bypass pipe protruding underneath the 6-way valve fits securely into the center pipe hub (7) top opening (see drawing 19).

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, and the inlet connection (from motor to valve) is aligned with the motor outlet (see drawing 20).



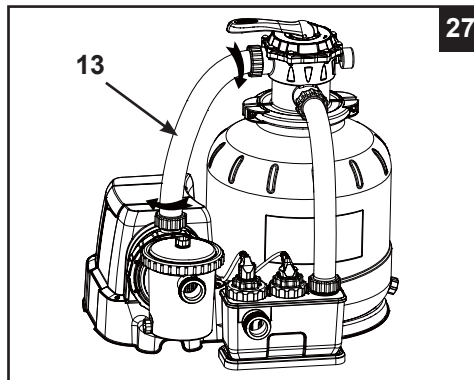
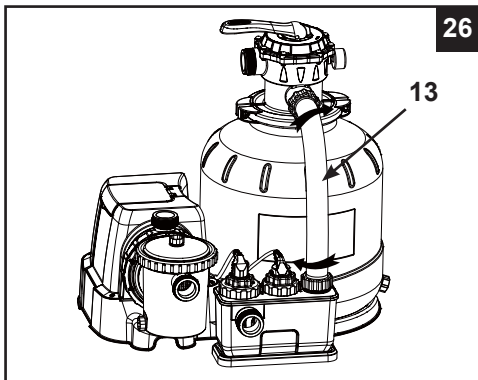
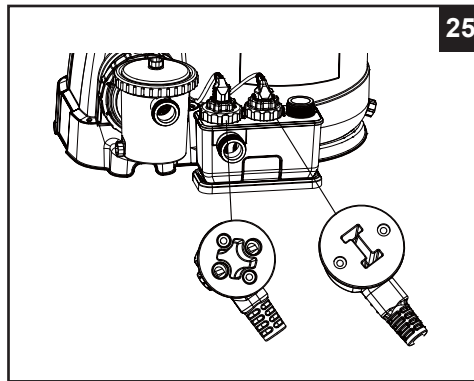
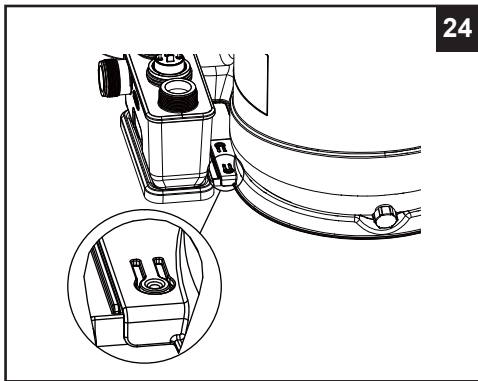
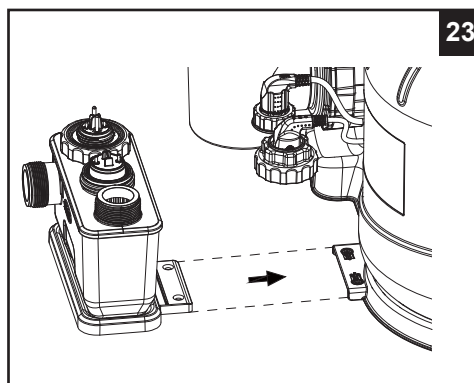
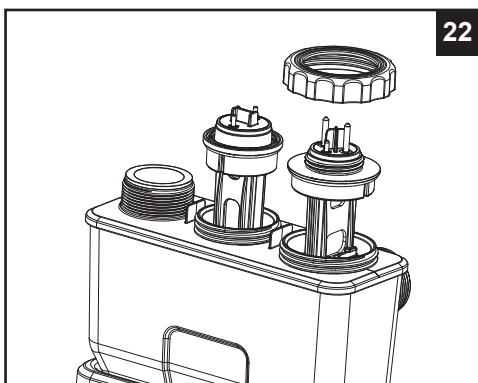
2. Remove the clamp bolt, and install the clamp around the tank and 6-way valve flanges, then replace the clamp bolt and use a phillips screwdriver (not included) to tighten it (see drawing 21).



SETUP INSTRUCTIONS (continued)

Cell housing installation:

1. Align the notch on the electrodes to the connection ridges in the cell housing electrode holes. Insert the electrodes into the respective holes (see drawing 22).
2. Attached the cell housing (46) to the tank base (see drawings 23 & 24).
3. Plug in the electrodes' line cords to the respective electrodes (48 & 49), tighten the plugs collars and electrodes cell housing collars by hand (see drawing 25).
4. Place an L-shape o-ring (11) on the cell housing inlet and 6-way valve outlet connection. In a clockwise motion connect the sand filter interconnecting hose (13) between the cell housing inlet and the 6-way valve outlet connection (see drawing 26).
5. Place an L-shape o-ring (11) on the pump motor outlet and the 6-way valve inlet connection. In a clockwise motion connect the other sand filter interconnecting hose (13) between the pump motor outlet and the 6-way valve inlet connection (see drawing 27).



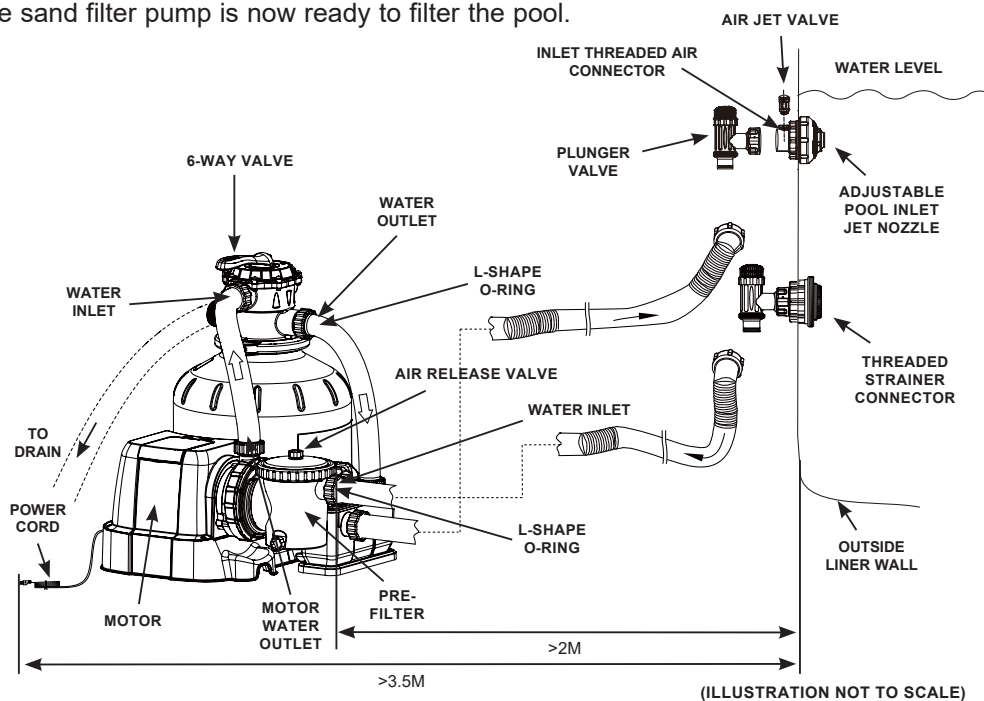
SAND FILTER PUMP HOSE CONNECTION SETUP

⚠ WARNING

- Keep this product more than 2m away from the pool.
- Keep this product more than 3.5m away from the pool (for France only).
- Keep the plug of this product more than 3.5m away from the pool.
- 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 plunger valve with the strainer. Ensure the hose nuts are securely tightened.
2. Connect the second hose (12) between the cell housing (46) outlet and the upper plunger valve with the inlet-nozzle. Ensure the hose nuts 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.



According to the International Standard, IEC 60364-7-702, on electrical installation of swimming pools and other basins equipment, the following installation distances must be respected:

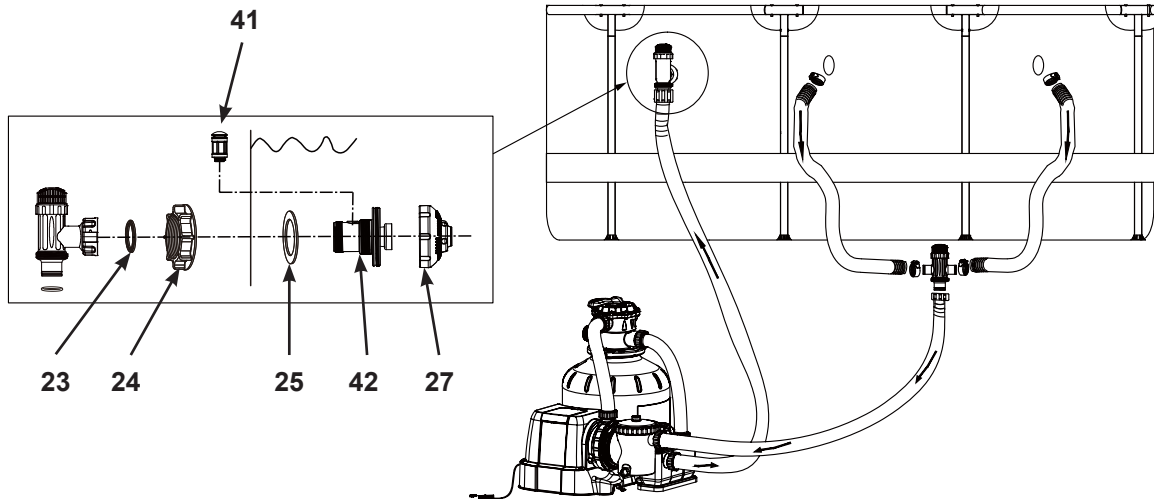
- The filter pump must be positioned more than 2m away from the pool walls.
- The power plug to the 220-240 volt electrical power source of the filter pump must be positioned more than 3.5m away from the pool walls.

Check your local authorities to determine the appropriate standard and requirements for "electrical installation of swimming pools and basins equipment". The following table is for reference only:

Country/Region	Standard Number
International	IEC 60364-7-702
France	NF C 15-100-7-702
Germany	DIN VDE 0100-702
The Netherlands	NEN 1010-702

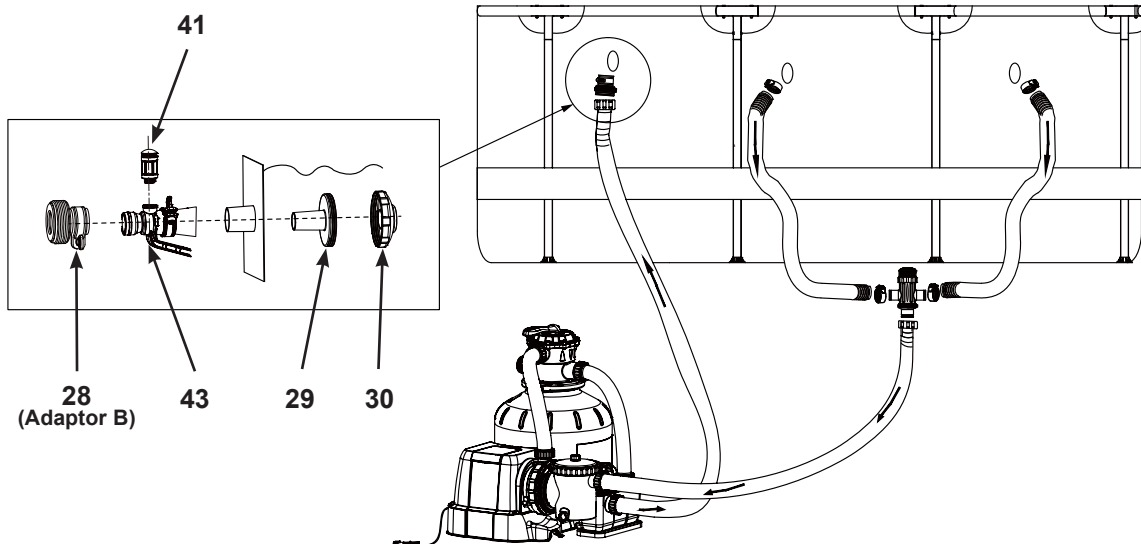
SAND FILTER PUMP HOSE CONNECTION SETUP (continued)

For INTEX pool with 1-1/2" (38mm) connections/hoses:



For INTEX pool with 1-1/4" (32mm) connections/hoses:

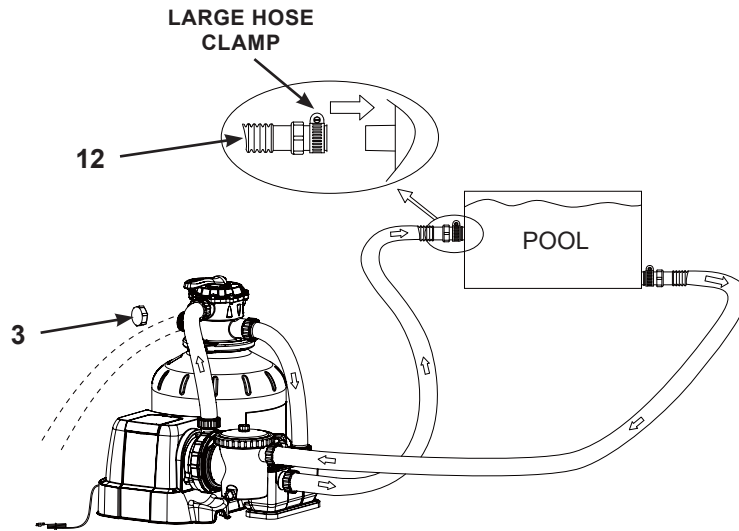
Make sure the air jet valve (41) is securely tighten onto the pool inlet air adaptor (43) and facing up.



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.



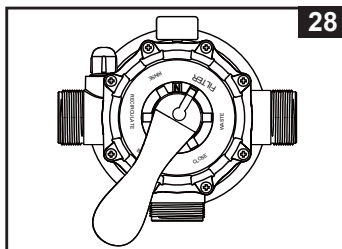
OPERATING INSTRUCTIONS

⚠ WARNING

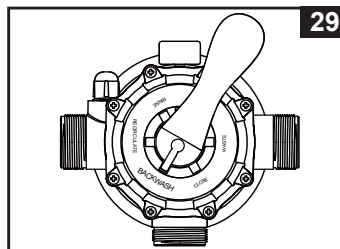
- Risk of electric shock. Connect this product only to a grounding type receptacle protected by a ground-fault circuit interrupter (GFCI) or residual current device (RCD). Contact a qualified electrician if you cannot verify that the receptacle is protected by a GFCI/RCD. Use a qualified electrician to install the GFCI/RCD, which has a maximum rate of 30mA. Do not use a portable residual current device (PRCD).
- 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.
- Never operate this product above the maximum working pressure stated on the filter tank.
- Always switch off pump before changing the 6-way valve position.
- Operating this product without water flowing through the system can cause a build up of hazardous pressure which can result in an explosive situation, serious injury, property damage or death.
- Never test this pump with compressed air. Never operate the system with water temperature above 35°C (95°F).

6-way valve positions and function:

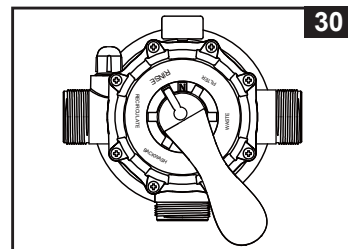
Valve Position	Function	Water Flow Direction
FILTER (see drawing 28)	Normal filtration and regular vacuuming of pool	From pump through filter media to pool
BACKWASH (see drawing 29)	Reverses water flow to clean filter media	From pump through filter media to valve waste/drain outlet
RINSE (see drawing 30)	For initial startup cleaning of the sand, and leveling the sand bed after backwashing	From pump through filter media to valve waste/drain outlet
WASTE (see drawing 31)	For vacuuming directly to waste, lowering pool level or to drain the pool	From pump to valve waste/drain outlet bypassing the filter media
RECIRCULATE (see drawing 32)	For circulating water back to pool without going through the filter media	From pump through valve to pool bypassing the filter media
CLOSED (see drawing 33)	Shuts off all flow to filter and pool "Do not use this setting with pump running"	



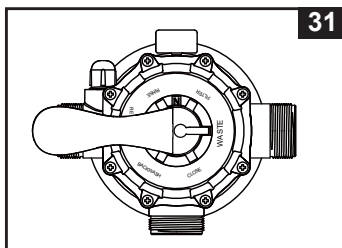
28



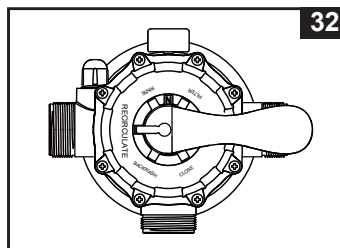
29



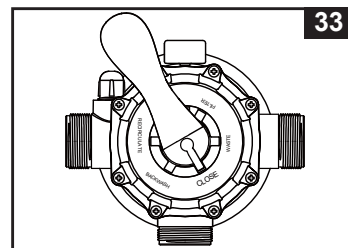
30



31



32



33

OPERATING INSTRUCTIONS (continued)

Initial startup and operation:

Before operating, be sure that:



- All the hoses have been connected and tightened securely, and correct amount of filter sand have been loaded.
- The entire system is connected to a grounding type receptacle protected by a ground-fault circuit interrupter (GFCI) or residual current device (RCD).

⚠ CAUTION

The filter control valve has a closed position. The pump should never be on when the valve is in the closed position. If the pump is operated with the valve closed, explosive situation could exist.

1. Turn both plunger valve handles fully counter-clockwise until they stop. This opens the valves to allow water to flow into the sand filter pump. With water flowing into sand filter pump, the water pressure will allow the air trapped inside to escape from the air release valves (19). When all the air has escaped water will flow out of the valves (19). When this occurs gently finger tighten the valves (19) in a clockwise direction.
IMPORTANT: To prevent air lock, open the lower plunger valve (connected inlet hose) first and then the upper plunger valve (connected outlet hose). Open the air release valves, wait until water starts to flow out of the air release valves, close air release valves.
2. Ensure the drain/waste outlet on the 6-way valve is not covered and directed to a proper draining receptacle.
3. **BACKWASH** - Ensure the pump is off, depress the 6-way valve and turn it to the "BACKWASH" position (see drawings 29 & 34).

IMPORTANT: To prevent damage to the 6-way valve, always depress the valve handle before turning. Always switch off pump before changing the 6-way valve position.

4. Press  to switch on the system, and then press  to set

the operating TIMER hours (see "Operating the system under TIMER mode or manually" section for details). Water is circulating backward through the sand media and to waste/drain outlet. Backwash until a clear flow of water is observed in the waste/drain outlet or through the drain sediment window.

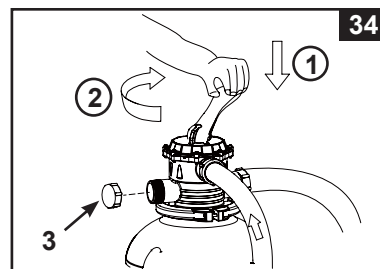
NOTE: If the LED display flashes "00", the device is in stand-by mode and the pump will not operate. The initial backwash of the filter is recommended to remove any impurities or fine sand particles in the sand media.

5. Switch off the pump, change the 6-way valve to "RINSE" position (see drawing 30).
6. Switch on the pump and run the pump for about one minute to level out the sand bed after backwashing the sand media.
7. Switch off the pump, change the 6-way valve to "FILTER" position (see drawing 28).
8. Switch on the pump. The system is now operating in the normal filtering mode. Run the pump until the desired pool water clearance is obtained and no more than 12 hours per day. For the initial startup, it is recommended setting the system to a longer TIMER operating hours or "FP" for the pump to operate continuously without the TIMER.
9. Record the initial pressure gauge reading when the filter media is clean.

NOTE: During initial setup of the system, it may be necessary to backwash frequently due to unusual heavy dirt present in the water and sand. After that, as the filter removes dirt and impurities from the pool water, the accumulated dirt in the sand media will cause the pressure to rise and the flow to diminish. If there is no vacuuming device attached to the system and the pressure gauge reading is in the yellow zone it is time to backwash the sand media, see "BACKWASH" under "initial startup and operation" section.

Vacuuming device (i.e. Intex auto pool cleaner) attached to the system may also cause the flow to diminish and the pressure to rise. Remove any vacuuming device from the system and check if the pressure gauge reading has dropped from the yellow zone to the green zone.


10. Monitor the pressure gauge reading, and check that the inlet and outlet openings are not obstructed on a weekly basis. If the pressure gauge indicates yellow it is time to backwash the filter media.

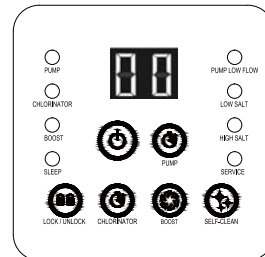


OPERATING INSTRUCTIONS (continued)


**Operating the sand filter pump under "TIMER" mode or manually:
To operate the sand filter pump in "FILTER" mode under "TIMER"
control:**



1. Activate the unit:

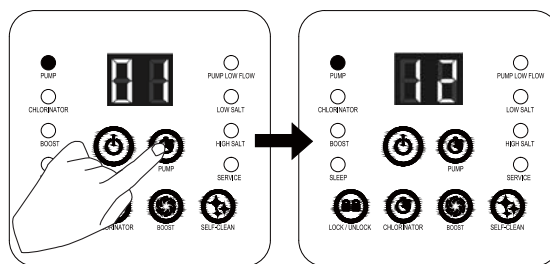
Press  button. Flashing code "00" appears on the LED display, indicating that the unit is ready to be programmed.



2. Set operating hours for the filter pump:

With code "00" flashing, press  button to set the desired operating hours. See the "Operating Time Table" for the required operating hours related to each pool size.

Pressing  will increase the time from 01 to 12 hours maximum. If you have selected too many hours keep pressing  to repeat



(1 to 12 hours max per cycle)

the cycle. The built-in timer will now activate the Sand filter pump, at the same time each day, for the number of hours you have set.


3. Lock keypad controls:

With the desired hour value showing, press  to lock the keypad controls which prevents unauthorized changing of the operating cycle.

NOTE: If you forget to lock the keypad controls, the system will automatically lock it and start working 10 seconds later.

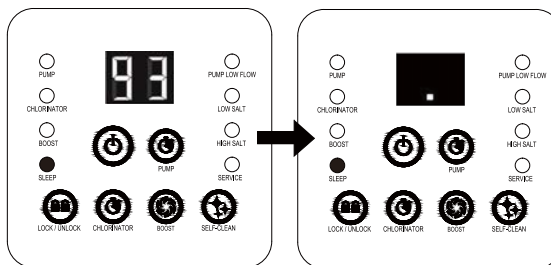
The sand filter pump is now filtering the water and will stop after the operating hours are completed.

4. Readjust operating time if necessary:

The operating hours can be re-adjusted if necessary. Press  button and the current programmed time will flash. Repeat steps 2 to 3.


5. Stand-by/power saving mode:

- When the cycle ends, the LED display shows "93". The system is now in Stand-By mode. After 5 minutes the system goes into Power Saving mode and the LED display shows ".". The system will automatically turn itself back on in 24 hours.
- While the system is in Power Saving mode, press any button and the system will briefly display the programmed time and then "93".






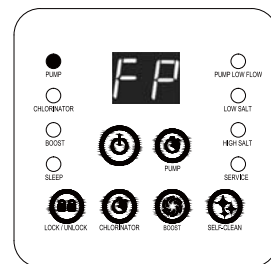
OPERATING INSTRUCTIONS (continued)

To view the TIMER preset hours:


While the pump is operating, press  button, the display will briefly flash the preset hours for 10 seconds and then display back the remaining operating hours.




To operate the sand filter pump manually (without the "TIMER" mode):

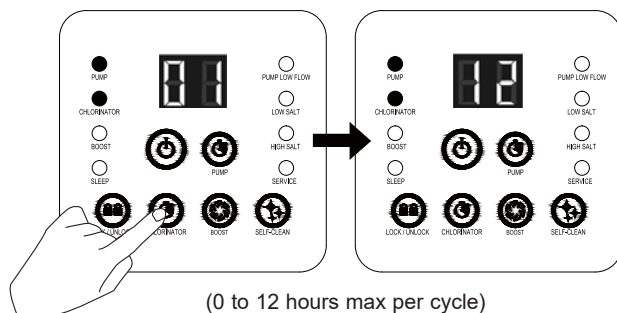
- To run the pump alone without the "Timer", press  button to turn on the pump, then press  button until the LED displays "FP", this indicates that the TIMER is off and the pump is now operating continuously.
- To stop the pump, press  button again.







Set operating hours for the chlorinator mode:

- Press  button to unlock the keypad.

With LED flashing, press  button to set the desired operating hours. See the "Operating Time Table" for the required operating hours related to each pool size. Pressing  will increase the time from 00 to 12 hours maximum. If you have selected too many hours keep pressing  to repeat the cycle. The built-in timer will now activate your chlorinator mode, at the same time each day, for the number of hours you have set.










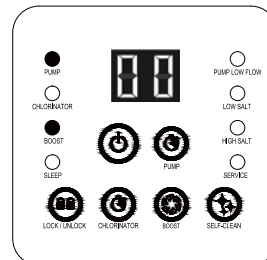
- With the desired hour value showing, press  button to lock the keypad controls. The chlorinator indicator light is up when activated. The system is now starting chlorine sanitizer production and will stop after the operating hours are completed.
NOTE: If you forget to lock the keypad controls, the system will automatically lock it and start working 10 seconds later.
- The system in chlorinator mode will activate the pump automatically, the LED will always first display the remaining chlorinator hours until it's finished. To check the preset chlorinator hours, you need to unlock the keypad and press  button.
- To stop the chlorinator mode, press  button to unlock the keypad controls, then press  button and reset the hour to "00".

NOTE: If the chlorinator and the filter pump are in timer mode and the chlorinator timer is set longer than the filter pump timer, the filter pump timer will automatically change to the same time as the chlorinator set time.

OPERATING INSTRUCTIONS (continued)



Set operating hours for BOOST:

1. Press  button to unlock the keypad. With LED flashing, press  button to set the desired operating hours. Total of 4 settings: 36 hours, 48 hours, 60 hours and 00 (OFF). Keep pressing  button to repeat the cycle.
2. With the desired hour value showing, press  button to lock the keypad controls. The BOOST indicator light is up when activated. The system is now starting E.C.O. and more sodium hypochlorite sanitizer production. After boost procedure has been completed, the system will automatically switch to the normal working mode.
NOTE: If you forget to lock the keypad controls, the system will automatically lock it and start working 10 seconds later. During the BOOST mode, periodically test the free chlorine level which should not exceed the recommended level of 3.0 parts per million (ppm). Do not use the pool if the free chlorine level exceeds 5.0 ppm.
3. Operating the system in this mode will automatically activate the pump and chlorinator mode, the LED will always display the remaining operating hours of the pump. You need to unlock the keypad and press  button to review the programmed boost operating hours.
4. To cancel the boost cycle, press  button to unlock the keypad, then press  button and reset the hour to "00".

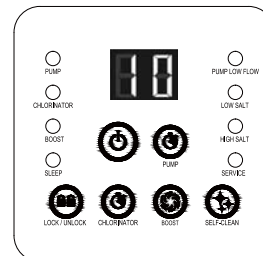



Set electrode Self-Clean cycle time:

The default self-clean cycle time is 14 hours. To adjust the self-clean cycle time:

1. Press  button to unlock the keypad and the LED display is flashing. Depending on your pool water calcium hardness level, press  button to select the self-clean cycle time as below. Total of 3 settings: 14 hours, 10 hours and 06 hours.

Calcium Hardness	Self-clean cycle time
0 - 150 ppm	Reverse polarity every 14 hours
150 - 250 ppm	Reverse polarity every 10 hours
250 - 350 ppm	Reverse polarity every 06 hours



2. With the desired hour value showing, press  button to lock the keypad controls. The system will reverse the polarity of the electrode (48) every time according to the selected hours.
NOTE: If you forget to lock the keypad controls, the system will automatically lock it and start working 10 seconds later.

LED CODE CHART

LED Reading	Definitions
00	Stand-By Mode (Start-up)
01	Minimum Operating Hour (1 hour remaining)
02	Operating Hours (2 hours remaining)
03	Operating Hours (3 hours remaining)
04	Operating Hours (4 hours remaining)
05	Operating Hours (5 hours remaining)
06	Operating Hours (6 hours remaining)
07	Operating Hours (7 hours remaining)
08	Operating Hours (8 hours remaining)
09	Operating Hours (9 hours remaining)
10	Operating Hours (10 hours remaining)
11	Operating Hours (11 hours remaining)
12	Maximum Operating Hours (12 hours remaining)
90	Alarm Code (Low Pump Flow / No Flow)
91	Alarm Code (Low Salt Level)
92	Alarm Code (High Salt Level)
93	Stand-By Mode (Operating Process finished)
"BLANK"	No Power or "Power Saving Mode" waiting to start next Saltwater System cycle.

SALT & POOL WATER VOLUMES

• Which kind of salt to use:

A specific type of salt must be used in swimming pools to protect the equipment. When buying salt, check that the salt conforms with the EN16401 standard for Chemicals for use in swimming pools. Consult your local pool store or contact the salt manufacturer if you need help with verifying you have the correct salt. **Do not use iodized salt, salt containing anti-caking agent (E535) or yellow (yellow prussiate of soda) colored salt.**

When choosing the pool salt for use within the EU, please also note that the European Chemicals Agency (ECHA) requires that salt (sodium chloride) be used from registered/authorized manufacturers listed in the ECHA Article 95 List in accordance with the Biocidal Product Regulation (BPR, Regulation (EU) 528/2012). For more information, please consult ECHA's website at <https://echa.europa.eu/information-on-chemicals/active-substance-suppliers>.

Use only Sodium Chloride Salts




Use only sodium chloride (NaCl) salt that is at least 99.4% pure. It is also acceptable to use water conditioning salt pellets (the compressed forms of evaporated salt). However, it will take a longer time for them to dissolve. Salt is added to the pool water and the electrolytic cell uses the salt to create the sanitizer. So, the purer the salt the better the performance of the electrolytic cell.


• Optimum Salt Levels

The ideal salt level in the pool water is between 2500-3500 ppm (parts per million). The optimal level is 3000 ppm.

A too low salt level will reduce the efficiency of the saltwater system and result in low sanitizer production. A high salt level may generate a salty taste to the pool water (this may occur at a salt level above 3500-4000 ppm). Too high of a salt level may damage the power supply and cause corrosion to pool metal fixtures and accessories. The Salt Table page of this manual shows the correct dosage of salt needed.

• Adding Salt

1. Press  button. Then press  button until the LED displays "FP". The unit is now in a Filter pump working mode to start the water circulation.
2. Keep the Saltwater System turned off.
3. Determine the amount of salt to be added (see "Salt Table").
4. Evenly spread the proper amount of salt around the inside perimeter of the pool.
5. Avoid clogging the filter by not adding salt through the skimmer.
6. Brush the pool bottom to speed up the dissolving process. Do not allow salt to pile up on the bottom of the pool. Run the filter pump 24 consecutive hours to thoroughly dissolve the salt.
7. After 24 hours and if all the salt is dissolved, press  button to unlock the keypad controls.

With LED flashing, press  button to set the desired operating hours for your chlorinator (see "Operating Instruction" section & "Operating Time Table").

• Removing Salt

If too much salt has been added, the unit will beep and display "Code 92" (see "Alarm Codes"). You will need to lower the salt concentration. The only way to do so, is to partially drain the pool and refill it with fresh water. Drain and refill approximately 20% of the pool's water until the "Code 92" disappears.

• Pool Volume Calculation

Types of Pool	Gallons (pool size in feet)	Cubic Meters (pool size in meters)
Rectangular	Length x Width x Average Depth x 7.5	Length x Width x Average Depth
Circular	Length x Width x Average Depth x 5.9	Length x Width x Average Depth x 0.79
Oval	Length x Width x Average Depth x 6.0	Length x Width x Average Depth x 0.80

INTEX POOLS SALT TABLE

This table shows the dosage of salt needed to achieve and maintain the optimal 3000 ppm salt level.

Pool Size		Water Capacity (Calculated at 90% for Frame Pool and 80% for Easy Set & Oval Pool)		Salt Needed for Startup 3.0g/L (3000ppm)				Salt Needed when Low Salt Detected (CODE "91")			
		(Gals)	(Liters)	ECO20220-2/ ECO20230-2		ECO15220-2/ ECO15230-2		ECO20220-2/ ECO20230-2		ECO15220-2/ ECO15230-2	
				(Lbs)	(Kgs)	(Lbs)	(Kgs)	(Lbs)	(Kgs)	(Lbs)	(Kgs)
INTEX ABOVE GROUND POOLS (AGP's)											
EASY SET® POOL	15' x 33" (457cm x 84cm)	2587	9792	-	-	65	30	-	-	20	10
	15' x 36" (457cm x 91cm)	2822	10681	-	-	65	30	-	-	20	10
	15' x 42" (457cm x 107cm)	3284	12430	-	-	80	35	-	-	20	10
	15' x 48" (457cm x 122cm)	3736	14141	-	-	95	45	-	-	25	10
	16' x 42" (488cm x 107cm)	3754	14209	-	-	95	45	-	-	25	10
	16' x 48" (488cm x 122cm)	4273	16173	-	-	110	50	-	-	30	15
	16' x 52" (488cm x 132cm)	4614	17464	-	-	115	50	-	-	30	15
	18' x 42" (549cm x 107cm)	4786	18115	120	55	120	55	30	15	30	15
18' x 48" (549cm x 122cm)	5455	20647	135	60	135	60	35	15	35	15	
CIRCULAR METAL FRAME POOL	15' x 36" (457cm x 91cm)	3282	12422	-	-	80	35	-	-	20	10
	15' x 42" (457cm x 107cm)	3861	14614	-	-	100	45	-	-	25	10
	15' x 48" (457cm x 122cm)	4440	16805	-	-	110	50	-	-	30	15
	16' x 48" (488cm x 122cm)	5061	19156	-	-	125	55	-	-	35	15
	18' x 48" (549cm x 122cm)	6423	24311	160	75	160	75	40	20	40	20
	21' x 52" (640cm x 132cm)	9533	36082	240	110	-	-	60	30	-	-
24' x 52" (732cm x 132cm)	12481	47241	310	140	-	-	80	35	-	-	
ULTRA FRAME POOL	16' x 48" (488cm x 122cm)	5061	19156	-	-	125	55	-	-	35	15
	18' x 48" (549cm x 122cm)	6423	24311	160	75	160	75	40	20	40	20
	18' x 52" (549cm x 132cm)	6981	26423	175	80	175	80	45	20	45	20
	20' x 48" (610cm x 122cm)	7947	30079	210	90	210	90	50	25	50	25
	22' x 52" (671cm x 132cm)	10472	39637	260	120	-	-	65	30	-	-
	24' x 52" (732cm x 132cm)	12481	47241	310	140	-	-	80	35	-	-
26' x 52" (792cm x 132cm)	14667	55515	365	165	-	-	90	40	-	-	
GRAPHITE GRAY PANEL POOL SET™	15'8" x 49" (478cm x 124cm)	4440	16805	110	50	110	50	30	15	30	15
	16'8" x 49" (508cm x 124cm)	5061	19156	125	55	125	55	35	15	35	15
	18'8" x 53" (569cm x 135cm)	6981	26423	175	80	175	80	45	20	45	20
PRISM Frame™ Oval Pool	16'6" x 9' x 48" (503cm x 274cm x 122cm)	3531	13365			90	40			25	10
	20' x 10' x 48" (610cm x 305cm x 122cm)	4809	18202	120	55	120	55	30	15	30	15
RECT. ULTRA FRAME POOL	9' x 15' x 48" (274cm x 457cm x 122cm)	3484	13187	-	-	90	40	-	-	25	10
	9' x 18' x 52" (274cm x 549cm x 132cm)	4545	17203	115	50	115	50	30	15	30	15
	10' x 20' x 52" (305cm x 610cm x 132cm)	5835	22085	145	65	145	65	40	20	40	20
	12' x 24' x 52" (366cm x 732cm x 132cm)	8403	31805	210	95	210	95	55	25	55	25
	16' x 32' x 52" (488cm x 975cm x 132cm)	14364	54368	360	165	-	-	90	40	-	-

INTEX POOLS CYANURIC ACID TABLE

Cyanuric acid is a chemical that reduces the loss of chlorine in water due to ultraviolet rays. To maintain maximum performance, we recommend that the cyanuric acid level be maintained at approximately 1% of the salt, i.e. 100 Lbs (45 Kgs) salt x 1% = 1 Lbs (0.45 Kgs) cyanuric acid. If the pool water is dirty, filthy or grimy, DO NOT add chlorine stabilizer (cyanuric acid) as this will slowdown the sanitization time of the device. Under this condition you must BOOST your pool water, refer to BOOST cycle steps. Once the pool water has been restored to clear and clean conditions you may add cyanuric acid.

Pool Size		Water Capacity (Calculated at 90% for Frame Pool and 80% for Easy Set & Oval Pool)		Cyanuric Acid Needed for Startup 0.03g/L (30ppm)			
		(Gals)	(Liters)	ECO20220-2/ECO20230-2		ECO15220-2/ECO15230-2	
				(Lbs)	(Kgs)	(Lbs)	(Kgs)
INTEX ABOVE GROUND POOLS (AGP's)							
EASY SET® POOL	15' x 33" (457cm x 84cm)	2587	9792	-	-	0.6	0.3
	15' x 36" (457cm x 91cm)	2822	10681	-	-	0.7	0.3
	15' x 42" (457cm x 107cm)	3284	12430	-	-	0.8	0.4
	15' x 48" (457cm x 122cm)	3736	14141	-	-	0.9	0.4
	16' x 42" (488cm x 107cm)	3754	14209	-	-	0.9	0.4
	16' x 48" (488cm x 122cm)	4273	16173	-	-	1.1	0.5
	16' x 52" (488cm x 132cm)	4614	17464	-	-	1.2	0.5
	18' x 42" (549cm x 107cm)	4786	18115	1.2	0.5	1.2	0.5
18' x 48" (549cm x 122cm)	5455	20647	1.4	0.6	1.4	0.6	
CIRCULAR METAL FRAME POOL	15' x 36" (457cm x 91cm)	3282	12422	-	-	0.8	0.4
	15' x 42" (457cm x 107cm)	3861	14614	-	-	1.0	0.4
	15' x 48" (457cm x 122cm)	4440	16805	-	-	1.1	0.5
	16' x 48" (488cm x 122cm)	5061	19156	-	-	1.3	0.6
	18' x 48" (549cm x 122cm)	6423	24311	1.6	0.7	1.6	0.7
	21' x 52" (640cm x 132cm)	9533	36082	2.4	1.1	-	-
ULTRA FRAME POOL	24' x 52" (732cm x 132cm)	12481	47241	3.1	1.4	-	-
	16' x 48" (488cm x 122cm)	5061	19156	-	-	1.3	0.6
	18' x 48" (549cm x 122cm)	6423	24311	1.6	0.7	1.6	0.7
	18' x 52" (549cm x 132cm)	6981	26423	1.7	0.8	1.7	0.8
	20' x 48" (610cm x 122cm)	7947	30079	2.0	0.9	2.0	0.9
	22' x 52" (671cm x 132cm)	10472	39637	2.6	1.2	-	-
	24' x 52" (732cm x 132cm)	12481	47241	3.1	1.4	-	-
26' x 52" (792cm x 132cm)	14667	55515	3.7	1.7	-	-	
GRAPHITE GRAY PANEL POOL SET™	15'8" x 49" (478cm x 124cm)	4440	16805	1.1	0.5	1.1	0.5
	16'8" x 49" (508cm x 124cm)	5061	19156	1.3	0.6	1.3	0.6
	18'8" x 53" (569cm x 135cm)	6981	26423	1.7	0.8	1.7	0.8
PRISM Frame™ Oval Pool	16'6" x 9' x 48" (503cm x 274cm x 122cm)	3531	13365			0.9	0.4
	20' x 10' x 48" (610cm x 305cm x 122cm)	4809	18202	1.2	0.5	1.2	0.5
RECT. ULTRA FRAME POOL	9' x 15' x 48" (274cm x 457cm x 122cm)	3484	13187	-	-	0.9	0.4
	9' x 18' x 52" (274cm x 549cm x 132cm)	4545	17203	1.1	0.5	1.1	0.5
	10' x 20' x 52" (305cm x 610cm x 132cm)	5835	22085	1.5	0.7	1.5	0.7
	12' x 24' x 52" (366cm x 732cm x 132cm)	8403	31805	2.1	1.0	2.1	1.0
	16' x 32' x 52" (488cm x 975cm x 132cm)	14364	54368	3.6	1.6	-	-

INTEX POOLS OPERATING TIME TABLE (WITH CYANURIC ACID)

Pool Size		Water Capacity (Calculated at 90% for Frame Pool and 80% for Easy Set & Oval Pool)		Operating Time (hours) at different ambient/air temperatures					
		(Gals)	(Liters)	ECO20220-2/ECO20230-2			ECO15220-2/ECO15230-2		
				10 - 19°C (50 - 66°F)	20 - 28°C (68 - 82°F)	29 - 36°C (84 - 97°F)	10 - 19°C (50 - 66°F)	20 - 28°C (68 - 82°F)	29 - 36°C (84 - 97°F)
INTEX ABOVE GROUND POOLS (AGP's)									
EASY SET® POOL	15' x 33" (457cm x 84cm)	2587	9792	-	-	-	2	2	3
	15' x 36" (457cm x 91cm)	2822	10681	-	-	-	2	2	3
	15' x 42" (457cm x 107cm)	3284	12430	-	-	-	2	3	4
	15' x 48" (457cm x 122cm)	3736	14141	-	-	-	3	3	4
	16' x 42" (488cm x 107cm)	3754	14209	-	-	-	3	3	4
	16' x 48" (488cm x 122cm)	4273	16173	-	-	-	3	3	4
	16' x 52" (488cm x 132cm)	4614	17464	-	-	-	3	4	5
	18' x 42" (549cm x 107cm)	4786	18115	2	2	3	3	4	5
	18' x 48" (549cm x 122cm)	5455	20647	2	3	4	4	4	5
CIRCULAR METAL FRAME POOL	15' x 36" (457cm x 91cm)	3282	12422	-	-	-	2	3	4
	15' x 42" (457cm x 107cm)	3861	14614	-	-	-	3	3	4
	15' x 48" (457cm x 122cm)	4440	16805	-	-	-	3	4	5
	16' x 48" (488cm x 122cm)	5061	19156	-	-	-	4	4	5
	18' x 48" (549cm x 122cm)	6423	24311	3	3	4	5	5	6
	21' x 52" (640cm x 132cm)	9533	36082	4	5	6	-	-	-
	24' x 52" (732cm x 132cm)	12481	47241	6	6	7	-	-	-
ULTRA FRAME POOL	16' x 48" (488cm x 122cm)	5061	19156	-	-	-	4	4	5
	18' x 48" (549cm x 122cm)	6423	24311	3	3	4	5	5	6
	18' x 52" (549cm x 132cm)	6981	26423	3	4	5	5	6	7
	20' x 48" (610cm x 122cm)	7947	30079	4	4	5	6	6	7
	22' x 52" (671cm x 132cm)	10472	39637	5	5	6	-	-	-
	24' x 52" (732cm x 132cm)	12481	47241	6	6	7	-	-	-
	26' x 52" (792cm x 132cm)	14667	55515	7	8	8	-	-	-
GRAPHITE GRAY PANEL POOL SET™	15'8" x 49" (478cm x 124cm)	4440	16805	2	2	3	3	4	5
	16'8" x 49" (508cm x 124cm)	5061	19156	2	3	4	4	4	5
	18'8" x 53" (569cm x 135cm)	6981	26423	3	4	5	5	6	7
PRISM Frame™ Oval Pool	16'6" x 9' x 48" (503cm x 274cm x 122cm)	3531	13365				2	3	4
	20' x 10' x 48" (610cm x 305cm x 122cm)	4809	18202	2	2	3	3	4	5
RECT. ULTRA FRAME POOL	9' x 15' x 48" (274cm x 457cm x 122cm)	3484	13187	-	-	-	2	3	4
	9' x 18' x 52" (274cm x 549cm x 132cm)	4545	17203	2	2	3	3	4	5
	10' x 20' x 52" (305cm x 610cm x 132cm)	5835	22085	3	3	4	4	5	6
	12' x 24' x 52" (366cm x 732cm x 132cm)	8403	31805	4	4	5	6	7	8
	16' x 32' x 52" (488cm x 975cm x 132cm)	14364	54368	7	7	8	-	-	-

NOTE: The timer setting has an additional 10 minutes over the actual setting.

SALT CALCULATION FORMULA FOR ALL POOLS

Salt Needed for Startup (Lbs)	Salt Needed for Startup (Kgs)	Salt Needed when Low Salt Detected (Lbs)	Salt Needed when Low Salt Detected (Kgs)
Water Capacity (Gals) x 0.025	Water Capacity (Liters) x 0.003	Water Capacity (Gals) x 0.0067	Water Capacity (Liters) x 0.0008

SALT TABLE FOR COMMON NON-INTEX POOLS

Water Capacity		Salt Needed for Startup				Salt Needed when Low Salt Detected (CODE "91")			
(Gals)	(Liters)	ECO20220-2/ECO20230-2		ECO15220-2/ECO15230-2		ECO20220-2/ECO20230-2		ECO15220-2/ECO15230-2	
		(Lbs)	(Kgs)	(Lbs)	(Kgs)	(Lbs)	(Kgs)	(Lbs)	(Kgs)
2000	7500	50	20	50	20	10	5	10	5
4000	15000	100	45	100	45	25	10	25	10
6000	22500	150	65	150	65	40	20	40	20
8000	30000	200	90	-	-	55	25	-	-
8500	32000	-	-	210	95	-	-	55	25
10000	37500	250	110	-	-	70	30	-	-
12000	45500	300	135	-	-	80	35	-	-
14000	53000	350	160	-	-	95	45	-	-

CYANURIC ACID TABLE FOR COMMON NON-INTEX POOLS

Water Capacity		Cyanuric Acid Needed for Startup 0.03g/L (30ppm)			
(Gals)	(Liters)	ECO20220-2/ECO20230-2		ECO15220-2/ECO15230-2	
		(Lbs)	(Kgs)	(Lbs)	(Kgs)
2000	7500	0.5	0.23	0.5	0.23
4000	15000	1.0	0.45	1.0	0.45
6000	22500	1.5	0.68	1.5	0.68
8000	30000	2.0	0.90	-	-
8500	32000	-	-	2.13	0.96
10000	37500	2.5	1.13	-	-
12000	45500	3.0	1.37	-	-
14000	53000	3.5	1.59	-	-

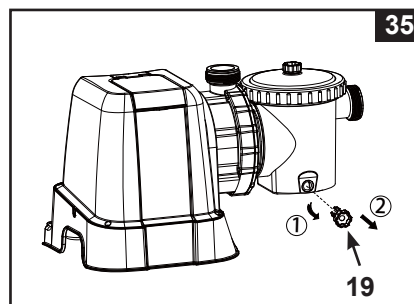
OPERATING TIME TABLE FOR COMMON NON-INTEX POOLS

Water Capacity		Operating Time (hours) at different ambient/air temperatures					
(Gals)	(Liters)	ECO20220-2/ECO20230-2			ECO15220-2/ECO15230-2		
		10 - 19°C (50 - 66°F)	20 - 28°C (68 - 82°F)	29 - 36°C (84 - 97°F)	10 - 19°C (50 - 66°F)	20 - 28°C (68 - 82°F)	29 - 36°C (84 - 97°F)
2000	7500	1	1	1	1	2	3
4000	15000	2	2	3	3	3	4
6000	22500	3	3	4	4	5	6
8000	30000	4	4	5	-	-	-
8500	32000	-	-	-	6	7	8
10000	37500	5	5	6	-	-	-
12000	45500	6	6	7	-	-	-
14000	53000	7	7	8	-	-	-

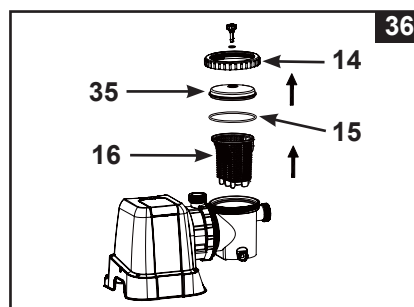
MOTOR PRE-FILTER CLEANING AND MAINTENANCE

It is essential to change any damaged element or set of elements as soon as possible. Use only parts approved by the manufacturer.

1. Make sure the filter pump is switched off, then disconnect the power cord from the electrical outlet.
2. Turn both plunger valve handles fully clockwise until they stop. This closes the valve, prevents the water from flowing out of the pool.
3. Release the pressure first by opening the sediment release valve **(19)** located on the lower side of the pre-filter housing **(see drawing 35)**.



4. In a counter-clockwise motion unscrew the leaf trap nut **(14)**, then remove the basket **(16)** and leaf trap o-ring **(15)** from the pre-filter housing **(see drawing 36)**.



5. Empty and flush the basket using a garden hose, may use a plastic brush to remove deposits from the basket. Do not use metal brush.
6. Clean and rinse the inside of the pre-filter housing and the leaf trap O-ring with a garden hose.
7. Reinstall the leaf trap O-ring, basket and leaf trap cover to the pre-filter housing.
8. Close the sediment release valve **(19)**.

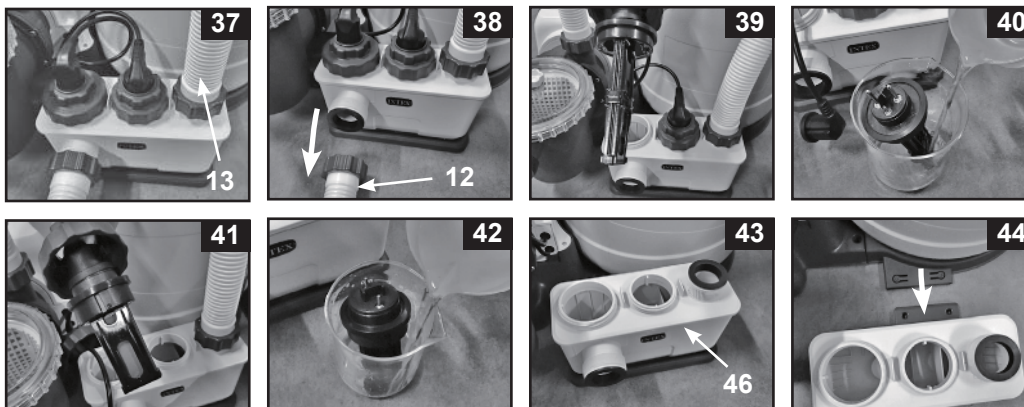
All filter and filter media shall be inspected regularly to ensure that there is no build-up of debris thus preventing a good filtration. Disposal of any used filter media should be in accordance with applicable local regulation and legislation.

TITANIUM AND E.C.O. ELECTRODES CLEANING

The titanium electrode and E.C.O. electrodes have a self cleaning function incorporated into the electronic control's programming. In most cases this self cleaning action will keep the electrodes working at optimum efficiency. If the pool water is hard (high mineral content) the electrodes may require periodic manual cleaning. To maintain maximum performance, we recommend that you open and visually inspect the titanium and E.C.O. electrodes (**48 & 49**) monthly.

The following steps are some instructions on how to clean your cell.

1. Switch off the unit and unplug the power cord from the electrical socket.
2. Disconnect the hose (**12**) from the cell housing (**46**) outlet (**see drawing 38**).
3. Unscrew the titanium electrode plug collar and cell collar, disconnect the plug from the titanium electrode (**48**) and remove the titanium electrode from the cell housing (**see drawing 39**).
4. Place the titanium electrode in a container and pour kitchen grade vinegar into the container until the titanium electrode is immersed (**see drawing 40**). Soak for 1 hour and then flush with a high-pressure garden hose.
5. Unscrew the E.C.O. electrode plug collar and cell collar, disconnect the plug from the E.C.O. electrode (**49**) and remove the E.C.O. electrode from the cell housing (**see drawing 41**).
6. Place the E.C.O. electrode in a container and pour kitchen grade vinegar into the container until the E.C.O. electrode is immersed (**see drawing 42**). Soak for 1 hour and then flush with a high-pressure garden hose.
7. Disconnect the interconnecting hose (**13**) from the cell housing inlet (**see drawings 37 & 43**).
8. Remove the cell housing from the tank base (**see drawing 44**).
9. Flush with a high-pressure garden hose if there is any sediments in the cell housing.
10. Reverse steps 2 to 9 to reconnect everything back.



MAINTENANCE (continued)

INTEX® TEST STRIPS (PACKED WITH THE PRODUCT)

The Test Strips can test the "Free Chlorine", "pH", "Calcium Hardness" and "Total Alkalinity" levels at the same time. We recommend that you test the water chemistry weekly, and maintain the chlorine concentration at 0.5-3 ppm.

Directions and Use

1. Dip the entire strip into the water and remove immediately.
2. Hold the strip level for 15 seconds. Do not shake excess water from the strip.
3. Now compare the strip pad to the color chart on the packaging label. If necessary, adjust the chemical level in the pool water. It is very important, to use the proper technique when testing the water's chemical level. Read and follow the written strip instructions carefully.

POOL MAINTENANCE & CHEMICAL DEFINITIONS

Preferred Water Chemistry Reading			
	Minimum	Ideal	Maximum
Free Chlorine	0	0.5 - 3.0 ppm	5.0 ppm
Combined Chlorine	0	0 ppm	0.2 ppm
pH	7.2	7.4 - 7.6	7.8
Total Alkalinity	40 ppm	80 ppm	120 ppm
Calcium Hardness	50 ppm	100 - 250 ppm	350 ppm
Stabilizer (Cyanuric Acid)	10 ppm	20 - 40 ppm	50 ppm

Consult with local swimming pool dealer for water treatment.

Free Chlorine	- Is the chlorine residual present in pool water.
Combined Chlorine	- Is formed by the reaction of free chlorine with ammonia wastes. Result if too high - Sharp chlorinous odor, eye irritation.
pH	- A value that indicates how acidic or basic a solution is. Result if too low - Corroded metals, eye & skin irritation, destruction of total alkalinity. Result if too high - Scale formation, cloudy water, shorter filter runs, eye & skin irritation, poor chlorine efficiency.
Total Alkalinity	- Indicates the degree of the water's resistance to change in pH. It determines the speed and ease of pH change, so always adjust total alkalinity before adjusting the pH level. Result if too low - Corroded metals, eye & skin irritation. Low alkalinity will cause the pH to be unstable. Any chemical added to the water will have an affect on pH. Result if too high - Scale formation, cloudy water, eye & skin irritation, poor chlorine efficiency.
Calcium Hardness	- Refers to the amount of calcium and magnesium dissolved in the water. Result if too high - Eye & skin irritation, difficulty balancing water and poor chlorine efficiency. Scale will form and will cause the water to become cloudy.
Stabilizer (Cyanuric Acid)	- Stabilizers extend the life of chlorine in swimming pools.

- Do not add pool chemicals directly to the skimmer. This may damage the cell.
- Maintaining a salt and sanitizer level above the recommended range can contribute to the corrosion of the pool equipment.
- Check the expiry date of the test kit as the test results may be inaccurate if the kit is used after that date.
- If, due to heavy pool usage, it is required to increase the sanitizer level, then use a chemical based on trichlor, TCCA or dichloro.

POOL CARE & CHEMICALS

- All pools require care to keep the water clear and hygienically clean. With proper chemical control, your filter will help attain this objective. Consult your pool supply dealer for instructions regarding the proper use of chlorine, algaecide and other chemical agents required for sparkling clear water.
- Keep pool chemicals away from children.
- Do not replenish chemicals in pool while pool is occupied. Skin or eye irritations could occur.
- Daily pH checking and chemical treatment of the water is very important and cannot be overemphasized. Chlorine, algaecide and maintenance of proper pH levels are required when filling the pool as well as during the season. Consult your local swimming pool supply store for instructions.
- The season's first filling of the pool may have brackish water requiring extra water additives and extra filtering time. Do not allow swimming in pool until the pH level is balanced. Consult your local swimming pool supply store for instructions.
- Chlorinated water may damage lawns, gardens or shrubbery as children play in the pool and splash water outside the pool. Lawn areas underneath the pool liner will be destroyed. Note that some types of grass may grow through the liner.
- Filter run time depends on pool size, weather and usage level. Experiment with various run times so as to produce clean clear water.
- European standard EN16713-3 lists some additional pool water quality and water treatment information that can be found at www.intexcorp.com/support.

CAUTION

Concentrated chlorine solutions may damage the pool liner. Always follow the chemical manufacturer's directions, and the health and hazard warnings.

LONG TERM STORAGE & WINTERIZATION

CAUTION






Allowing the water to freeze will damage the sand filter and void the warranty.

1. Before emptying your pool for long term storage, or relocation, be sure the water is directed towards an acceptable drain water receptacle away from the house. Check local regulations for specific directions regarding disposal of swimming pool water.
2. Switch off the unit, and disconnect power cord from electrical outlet.
3. When the pool is empty, disconnect all hoses from pump and plunger valves and remove the strainers/plunger valves from the pool wall.
4. In a counter clockwise motion unscrew the drain valve cap (9) from the drain valve to thoroughly drain the tank. The drain valve is located at the bottom of the filter tank.
5. Disconnect all interconnecting hoses, disassemble the cell housing (46) from the tank base and drain out any water inside. Clean the electrode cells before storage, see "Electrolytic Cell Cleaning" section.
6. Disassemble the pump motor & control (33) from the tank base.
7. Leave sand filter pump pieces and hoses outside to thoroughly air dry.
8. Coat the following o-rings and washers with petroleum jelly for long term storage:
 - L-shape o-ring (11).
 - Pump hose O-rings (22).
 - Strainer valve assembly step washers (23).
 - Flat strainer rubber washers (25).
9. Depress the 6-way valve handle and rotate so as to set the pointer on the valve top "N" position. This allows the water to drain from the valve. Leave the 6-way valve in this inactive position.
10. It is best to place all dry pieces and pump motor in the original packaging for storage. To avoid condensation or corrosion problem, do not cover or wrap pump motor with plastic bags.
11. Store the pump motor and accessories in a dry place. The storage's temperature should be controlled, between 0 degrees Celsius (32 degrees Fahrenheit) and 40 degrees Celsius (104 degrees Fahrenheit).
12. Cover the tank with a tarpaulin or plastic sheet to protect it from the weather.

TROUBLESHOOTING GUIDE

TROUBLE	CAUSE	SOLUTION
FILTER MOTOR FAILS TO START	<ul style="list-style-type: none"> The motor is not plugged in. The GFCI/RCD circuit breaker is tripped. Motor too hot and overload protection is shut off. 	<ul style="list-style-type: none"> Line cord must be plugged into a 3 wire outlet that is protected by a Class A Ground Fault Circuit Interrupter, or RCD. Reset circuit breaker. If circuit breaker trips repeatedly, your electrical system may have a defect. Turn off circuit breaker and call an electrician to correct the problem. Let the motor cool down and restart again.
FILTER DOESN'T CLEAN POOL	<ul style="list-style-type: none"> Improper chlorine or pH levels. No filtering media in tank. Wrong 6-way valve setting position. Excessively dirty pool. The strainer screen is restricting the water flow. 	<ul style="list-style-type: none"> Adjust the chlorine and pH level. Consult your local swimming pool supply stores. Load with filter sand, see "sand loading instructions". Set valve to "FILTER" position. Operate the filter for longer periods. Clean the strainer screen at the inlet.
FILTER DOESN'T PUMP WATER OR FLOW IS VERY SLOW	<ul style="list-style-type: none"> Clogged inlet or discharge. An air leak on the intake line. Excessively dirty pool. Sand media clogged with dirt. Nozzle and strainer connections are reversed. Crusting or caking on the filtering sand surface. Pool vacuuming device attached to the system. Inlet threaded air connector connected to the wrong hole on the liner. 	<ul style="list-style-type: none"> Clear any obstructions in the intake hose by discharging it inside pool wall. Tighten hose nuts, check hoses for damage, check pool water level. Clean the pre-filtering basket more often. Backwash filter. Install the nozzle at the upper position of the pool inlet, and the strainer at the lower position of the pool outlet. Remove about 1" of sand if necessary. Remove any pool vacuuming device attached to the system line. Make sure the inlet threaded air connector is connected to the pool inlet upper hole.
PUMP DOESN'T WORK	<ul style="list-style-type: none"> Low water level. Strainer screen clogged up. An air leak on the intake hose. Faulty motor or the impeller is jammed. 	<ul style="list-style-type: none"> Fill pool to correct water level. Clean strainer screens at pool inlet. Tighten hose nuts, check hose for damage. Contact Intex service center.
6-WAY VALVE/COVER LEAKING	<ul style="list-style-type: none"> Sand tank o-ring missing. Sand tank o-ring dirty. Flange clamp not tight. 6-way valve damage. 	<ul style="list-style-type: none"> Remove 6-way valve cover and ensure the o-ring is in place. Clean sand tank o-ring with garden hose water. Tighten securely. Contact Intex service center.
HOSE LEAKING	<ul style="list-style-type: none"> Hose nut not securely tight. Hose connection fitting o-ring/L-shape o-ring missing. 	<ul style="list-style-type: none"> Tighten/reinstall hose nut. Ensure o-ring/L-shape o-ring is in place and not damaged.
TIMER IS INACCURATE OR TIMER CAN'T BE SET	<ul style="list-style-type: none"> Possible inner timer defective. 	<ul style="list-style-type: none"> Turn off the pump and restart 5 minutes later. Re-set the timer. Contact Intex service center.
PRESSURE GAUGE DOESN'T WORK	<ul style="list-style-type: none"> Clogged inlet of the pressure gauge. Pressure gauge damage. 	<ul style="list-style-type: none"> Clear any obstructions in the intake by unscrewing it from the 6-way valve. Contact Intex service center.
SAND IS FLOWING BACK INTO THE POOL	<ul style="list-style-type: none"> Sand is too small. Sand bed is calcified. 	<ul style="list-style-type: none"> Use only No. 20 silica 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. Change sand.
INLET THREADED AIR CONNECTOR /AIR JET VALVE LEAKING	<ul style="list-style-type: none"> Plunger valve not well-fitted. Air jet valve is not tight and facing up. Air jet valve internal seal blocked. Air jet valve internal seal dirty. Air jet valve broken. 	<ul style="list-style-type: none"> Tighten or reinstall plunger valve. Tighten air jet valve and make sure it's facing up. Turn pump ON and run for few seconds, then turn OFF, repeat 3 times. Remove air jet valve, flush dirt out with water and replace valve back. Replace a new air jet valve.
SMALL LEAK FROM AIR JET VALVE WHEN PUMP IS ON	<ul style="list-style-type: none"> Accessories attached to the water circulation line. 	<ul style="list-style-type: none"> Remove all the accessories (such as solar mat, auto pool cleaner, LED light) from the water circulation line and place the air jet valve cap (45) over the air jet valve (41). Do not cover the air jet valve (41) with the valve cap (45) under normal situation or when the pump is operating.

TROUBLESHOOTING GUIDE (continued)

LED PANEL CODE	PROBLEM	SOLUTION
LED Panel Code Flash & Alarm On (NOTE: Always turn off the power before cleaning and servicing).		
 <p>The LED panel shows code 90. The display is lit, and the SERVICE light is on. The PUMP LOW FLOW light is also on.</p>	<ol style="list-style-type: none"> 1. Circulation line is blocked. 2. Incorrect inlet and outlet hose direction. 3. Scale on flow sensor pins inside the titanium electrode. 4. Titanium electrode cord is loose. 5. Device is set and operating in backwash, rinse or waste mode. 6. Titanium electrode failure. 	<ul style="list-style-type: none"> • If your unit has plunger valves, ensure that they are open. • Clear the basket and cell housing from debris and dirt. See "Maintenance" section. • Depress the 6-way valve, release all trapped air in the circulation line. • Check the direction of the inlet and the outlet hose. Reverse the hoses if necessary. See "Set Up Instructions". • Clean the titanium electrode. See "Titanium & E.C.O. Electrodes Cleaning" section. • Plug the cord into the titanium electrode and tighten the plug collar firmly. • Ignore the alarm, finish the backwash, rinse or waste operation then turn the power switch OFF and ON again to reset the alarm. • Contact Intex Service Center.
 <p>The LED panel shows code 91. The display is lit, and the SERVICE light is on. The PUMP LOW FLOW light is also on.</p>	<ol style="list-style-type: none"> 1. Dirt or scale on titanium electrode plates. 2. Low salt level / No salt. 3. Titanium electrode cord is loose. 4. Possible electrolytic cell failure. 	<ul style="list-style-type: none"> • Remove the titanium electrode for inspection. Clean it if necessary. See "Titanium & E.C.O. Electrodes Cleaning" section. • Add salt. See "Salt & Pool Water Volumes". • Plug the cord into the titanium electrode and tighten the plug collar firmly. • Contact Intex Service Center. Replace the cell if needed.
 <p>The LED panel shows code 92. The display is lit, and the SERVICE light is on. The PUMP LOW FLOW light is also on.</p>	<ol style="list-style-type: none"> 1. High salt level. 2. Water Temperature > 35°C. 3. Titanium electrode failure. 	<ul style="list-style-type: none"> • Partially drain the pool and refill it with fresh water. See "Salt & Pool Water Volumes". • Contact Intex Service Center.
 <p>The LED panel shows code 93. The display is off, and the SERVICE light is on. The PUMP LOW FLOW light is also on.</p>	<ol style="list-style-type: none"> 1. LED display is off and the "SERVICE" light is on - the system does not power up. 2. Control station failure. 	<ul style="list-style-type: none"> • Household voltage is too high or too low ($\pm 20\%$). Check the voltage is within the range stated on the device housing. • Contact Intex Service Center.
 <p>The LED panel shows code 94. The display is off, and the SERVICE light is on. The PUMP LOW FLOW light is also on.</p>	<ol style="list-style-type: none"> 1. The LED display shows a red dot only and unit does not respond - the electrode(s) is/are short circuited. 2. Control station failure. 	<ul style="list-style-type: none"> • Remove and clean the electrode(s). Replace the electrode(s) if needed. • Contact Intex Service Center.

COMMON POOL PROBLEMS

PROBLEM	DESCRIPTION	CAUSE	SOLUTION
ALGAE	<ul style="list-style-type: none"> Greenish water. Green or black spots on pool liner. Pool liner is slippery and/or has a bad odor. 	<ul style="list-style-type: none"> Chlorine and pH levels need adjustment. 	<ul style="list-style-type: none"> Super chlorinate with shock treatment. Correct pH to your pool store's recommended level. Vacuum pool bottom. Maintain proper sodium hypochlorite level.
COLORED WATER	<ul style="list-style-type: none"> Water turns blue, brown, or black when first treated with chlorine. 	<ul style="list-style-type: none"> Copper, iron or manganese in water being oxidized by the added chlorine. 	<ul style="list-style-type: none"> Adjust pH level to the recommended level. Run filter until water is clear.
FLOATING MATTER IN WATER	<ul style="list-style-type: none"> Water is cloudy or milky. 	<ul style="list-style-type: none"> "Hard water" caused by a too high pH level. Sodium hypochlorite content is low. Foreign matter in water. 	<ul style="list-style-type: none"> Correct the pH level. Check with your pool dealer for advice. Adjust the sodium hypochlorite level.
CHRONIC LOW WATER LEVEL	<ul style="list-style-type: none"> Level is lower than on previous day. 	<ul style="list-style-type: none"> Rip or hole in pool liner or hoses. The drain valves are loose. 	<ul style="list-style-type: none"> Repair with a patch kit. Finger tighten all caps.
SEDIMENT ON POOL BOTTOM	<ul style="list-style-type: none"> Dirt or sand on pool floor. 	<ul style="list-style-type: none"> Heavy use, getting in and out of pool. 	<ul style="list-style-type: none"> Use Intex pool vacuum to clean bottom of pool.
SURFACE DEBRIS	<ul style="list-style-type: none"> Leaves, insects etc. 	<ul style="list-style-type: none"> Pool too close to trees. 	<ul style="list-style-type: none"> Use Intex pool skimmer.

IMPORTANT

If you continue to experience difficulty, please contact our Consumer Service Department for assistance. See separate "Authorized Service Centers" sheet.

GENERAL AQUATIC SAFETY

Water recreation is both fun and therapeutic. However, it involves inherent risks of injury and death. To reduce your risk of injury, read and follow all product, package and package insert warnings and instructions. Remember, however, that product warnings, instructions and safety guidelines cover some common risks of water recreation, but do not cover all risks and dangers.

For additional safeguards, also familiarize yourself with the following general guidelines as well as guidelines provided by nationally recognized Safety Organizations:

- Demand constant supervision. A competent adult should be appointed as a "lifeguard" or water watcher, especially when children are in and around the pool.
- Learn to swim.
- Take the time to learn CPR and first aid.
- Instruct anyone who is supervising pool users about potential pool hazards and about the use of protective devices such as locked doors, barriers, etc.
- Instruct all pool users, including children what to do in case of an emergency.
- Always use common sense and good judgement when enjoying any water activity.
- Supervise, supervise, supervise.

LIMITED WARRANTY

Your Sand Filter Pump has been manufactured using the highest quality materials and workmanship. All Intex products have been inspected and found free of defects prior to leaving the factory. This limited warranty applies only to the Sand Filter Pump and accessories listed below.

This limited warranty is in addition to, and not a substitute for, your legal rights and remedies. To the extent that this warranty is inconsistent with any of your legal rights, they take priority. For example, consumer laws across the European Union provide statutory warranty rights in addition to the coverage you receive from this limited warranty: for information on EU-wide consumer laws, please visit the European Consumer Center website at http://ec.europa.eu/consumers/ecc/contact_en/htm.

The provisions of this limited warranty apply only to the original purchaser and are not transferable. This limited warranty is valid for the period noted below from the date of the initial retail purchase. Keep your original sales receipt with this document, as proof of purchase will be required and must accompany warranty claims or the limited warranty will be invalid.

Sand Filter Pump Warranty – 2 Years
Titanium electrode & E.C.O. electrode Warranty – 2 Years
Hoses, Plunger Valves & Fittings Warranty – 180 days

If you find a manufacturing defect in the Sand Filter Pump during the warranty periods noted above, please contact the appropriate Intex Service Center listed in the separate "Authorized Service Centers" sheet. If the item is returned as directed by the Intex Service Center, the Service Center will inspect the item and determine the validity of the claim. If the item is covered by the provisions of the warranty, the item will be repaired or replaced, with the same or comparable item (at Intex's choice) at no charge to you.

Other than this warranty, and other legal rights in your country, no further warranties are implied. To the extent possibly in your country, in no event shall Intex be liable to you or any third party for direct or consequential damages arising out of the use of your Sand Filter Pump, or Intex or its agents' and employees' actions (including the manufacture of the product). If your country does not allow the exclusion or limitation of incidental or consequential damages, this limitation or exclusion does not apply to you.

You should note that this limited warranty does not apply in the following circumstances:

- If the Sand Filter Pump is subject to negligence, abnormal use or application, accident, improper operation, improper voltage or current contrary to operating instructions, improper maintenance or storage;
- If the Sand Filter Pump is subject to damage by circumstances beyond Intex's control, including but not limited to, ordinary wear and tear and damage caused by exposure to fire, flood, freezing, rain, or other external environmental forces;
- To parts and components not sold by Intex; and/or
- To unauthorized alterations, repairs or disassembly to the Sand Filter Pump by anyone other than Intex Service Center personnel.

The costs associated with the loss of pool water, chemicals or water damage are not covered by this warranty. Injury or damage to any property or person is not covered by this warranty.

Read the owner's manual carefully and follow all instructions regarding proper operation and maintenance of your Sand Filter Pump. Always inspect your product prior to use. This limited warranty will be void if use instructions are not followed.