

2015-6332
2016-02-12

EN

Reg. No. 30116 P.C.P.A

**KRYSTAL CLEAR™ SAND FILTER PUMP
& SALTWATER SYSTEM
MODEL CS20110**

110 – 120 V~, 60 Hz, 7.1 A (0.95HP) THERMALLY
PROTECTED, WEATHERPROOF ENCLOSURE, CSA
ENCLOSURE 3, FOR USE WITH SWIMMING POOLS ONLY.

WARNING

RISK OF ELECTRIC SHOCK. CONNECT ONLY TO **A** GROUNDING
TYPE RECEPTACLE PROTECTED BY A CLASS A GROUND FAULT
CIRCUIT INTERRUPTER (GFCI).

CAUTION

TO ENSURE CONTINUED PROTECTION AGAINST SHOCK HAZARD,
USE ONLY IDENTICAL REPLACEMENT PARTS
WHEN SERVICING. THIS PRODUCT IS FOR USE WITH
STORABLE POOLS ONLY, DO NOT USE WITH PERMANENTLY
INSTALLED POOLS.

EN

Reg. No. 30116 P.C .P.A.

WARNING – RISK OF ELECTROCUTION

CONNECT ONLY TO PROPERLY GROUNDED OUTLET.

DO NOT REMOVE GROUNDING PIN.

INSPECT CORD BEFORE USING – DO NOT USE IF
CORD IS DAMAGED.

KEEP GROUND-FAULT CIRCUIT-INTERRUPTER DRY AND
OFF THE GROUND.

DO NOT TOUCH PLUG WITH WET HANDS.

DOUBLE INSULATED – WHEN SERVICING USE ONLY
IDENTICAL REPLACEMENT PARTS.

READ INSTRUCTION MANUAL BEFORE USING.

DO NOT REMOVE THIS TAG

**KRYSTAL CLEAR™ SAND FILTER PUMP & SALTWATER SYSTEM
Model CS20110**

CHLORINE GENERATOR and COPPER IONS RELEASING DEVICE

CONTROLS BACTERIA AND ALGAE in Storable Swimming pool Waters. DOMESTIC.

A Maximum of 50,000L (13,210 gal) of water can be treated with one Krystal Clear™ SAND Filter Pump & Saltwater System Model CS20110. Maximum output of hypochlorous acid equivalent to 0.14 kg (0.317 lb) of free available chlorine per day. Copper electrodes are more than 400 grams and output current to 175 mA(360mg/h).

For swimming pools, 1.0-3.0ppm of free available chlorine must be maintained. This level may be lowered to 0.6-3.0ppm of free available chlorine once the copper concentration has reached the required level of 0.2 ppm. Copper ions level 0.2 - 0.3 ppm.

READ THE LABEL AND OPERATING MANUAL BEFORE USING. KEEP OUT OF REACH OF CHILDREN.

REGISTRATION NO.30116 *PEST CONTROL PRODUCTS ACT.*

Registrant: Intex Trading Ltd., 9th floor Dah Sing Financial Center, 108 Gloucester Road, Wanchai, Hong Kong

Canadian Agent: The Canadian Group, 430 Signet Drive Suite A, Toronto, Ontario M9L2T6, Canada 1-800-234-6839

WARNING: Operating Krystal Clear™ SAND Filter Pump & Saltwater System Model CS20110 without water flow through the cell can cause a build up of flammable gases which can result in FIRE OR EXPLOSION. Staining of pool surfaces may occur due to deposits of copper salts. Excessive levels of copper will increase the probability of this occurrence.

CS20110 KRYSTAL CLEAR SAND FILTER PUMP &
SALTWATER SYSTEM™

SIZE: 80mm x 120mm

07//05/2011

**KRYSTAL CLEAR™ SAND FILTER PUMP & SALTWATER SYSTEM MODEL CS15110
AND MODEL CS20110 REPLACEMENT CHLORINE CELL**

Replacement chlorine cell for the krystal clear™ sand filter pump & saltwater system model CS15110 and model CS20110,

This cell must only be used on these models of Krystal Clear™ Sand Filter Pump & Saltwater System. Read the Label, the Installation Manual and Operation Manual of the Krystal Clear™ Sand Filter Pump & Saltwater System Model CS15110 and Model CS20110 before using.

REGISTRATION NOS. 30115 and 30116 PEST CONTROL PRODUCTS ACT.

Registrant: Intex Trading Ltd., 9th floor Dah Sing Financial Center, 108 Gloucester Road, Wanchai, Hong Kong Canadian Agent: The Canadian Group, 430 Signet Drive Suite A, Toronto, Ontario M9L2T6, Canada 1-800-234-6839

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KRYSTAL CLEAR™ SAND FILTER PUMP & SALTWATER SYSTEM
CS15110 AND CS20110

SIZE: 150mm x 40mm

07/18/2011

KRYSTAL CLEAR SALTWATER SYSTEM® MODEL CS20110: REPLACEMENT COPPER CELL

Replacement electrode for the copper releasing device Krystal Clear Saltwater System Model CS20110,
REGISTRATION NUMBER 30116, *PEST CONTROL PRODUCTS ACT*. This cell must only be used on this
model of copper ionization device.

Read the Label, the Installation Manual and Operation Manual of the copper ionization device Krystal Clear Saltwater System Model CS20110 before using.

Registrant: Intex Trading Ltd., 9th floor Dah Sing Financial Center, 108 Gloucester Road, Wanchai, Hong Kong

Canadian Agent: The Canadian Group, 430 Signet Drive Suite A, Toronto, Ontario M9L2T6,
Canada Phone: 416-746-3388

CS20110 KRYSTAL CLEAR SALTWATER SYSTEM®

**IMPORTANT
SAFETY RULES**

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

OWNER'S MANUAL

Krystal Clear™ Sand Filter Pump & Saltwater System Model CS20110

REGISTRATION NO. 30116 PEST CONTROL
PRODUCTS ACT

410mm (16")

For illustrative purposes only.

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

**IMPORTANT!
DO NOT RETURN PRODUCT TO STORE**

To purchase parts and accessories or to obtain non-technical assistance,
Visit www.intexcorp.com

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

1-800-234-6839

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

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SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY RULES

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

READ AND FOLLOW ALL INSTRUCTIONS

WARNING

- To reduce the risk of injury, do not permit children to use this product. Always supervise children and those with disabilities.
- Children must stay away from this product and electrical cord(s).
- Assembly and disassembly by adults only.
- Risk of electric shock. Connect only to a grounding type receptacle, this product is provided with a ground-fault circuit interrupter. If replacement of the plug or cord is needed, use only identical replacement parts.
- Always unplug this product from the electrical outlet before removing, cleaning, servicing or making any adjustment to the product.
- The unit is provided with a ground-fault circuit interrupter (GFCI). To test the GFCI, push the test button. The GFCI should interrupt power. Push the reset button, power should be restored. If the GFCI fails to operate in this manner, the GFCI is defective. If the GFCI interrupts power to the pump without the test button being pushed, a ground current is flowing, indicating the possibility of an electric shock. Do not use this pump. Disconnect the pump and have the problem corrected by a qualified service representative before using.
- Do not bury the electrical cord. Locate the cord where it will not be damaged by lawn mowers, hedge trimmers and other equipment.
- To reduce the risk of electric shock, replace damaged cord immediately. Use a qualified electrician to replace the cord.
- To reduce the risk of electric shock, do not use extension cords, timers, plug adaptors or converter plugs to connect unit to electric supply; provide a properly located outlet.
- Do not attempt to plug in or unplug this product while standing in water or when your hands are wet.
- Do not use an appliance leakage current interrupter (ALCI) in place of a GFCI since the ALCI will not protect people.
- Position this product away from pool, so as to prevent children from climbing on it and access the pool.
- Do not operate this product when pool is occupied.
- To reduce the risk of entrapment hazard, never enter the pool if suction strainer component is loose, broken, cracked, damaged or missing. Replace loose, broken, damaged, cracked or missing suction strainer components immediately.
- Never play or swim near suction fittings. Your body or hair may be trapped causing permanent injury or drowning.
- To prevent equipment damage and risk of injury, always turn pump off before changing the filter control valve position.
- Never operate this product above the maximum working pressure stated on the filter tank.
- Hazardous Pressure. Improper tank valve cover assembly could cause the valve cover to blow off and cause serious injury, property damage or death.
- This product is intended to be used only for the purposes described in the manual!

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

CAUTION

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

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 judgment when enjoying any water activity. Follow all aspects of the local and National Electrical Code(s) when installing Krystal Clear Sand Filter Pump and Saltwater System Model CS20110.

SAVE THESE INSTRUCTIONS

English

KRYSTAL CLEAR™ SAND FILTER PUMP & SALTWATER SYSTEM

MODEL CS20110

110 – 120 V~, 60 Hz, 7.1 A
THERMALLY PROTECTED
WEATHERPROOF ENCLOSURE
CSA ENCLOSURE 3
DOUBLE INSULATED AND GROUNDED
FOR USE WITH SWIMMING POOLS ONLY.

CAUTION

FOR CONTINUED PROTECTION AGAINST POSSIBLE ELECTRIC SHOCK,
USE ONLY IDENTICAL REPLACEMENT PARTS WHEN SERVICING.

IMPORTANT

READ THE LABEL AND OWNER'S MANUAL BEFORE USING.

KRYSTAL CLEAR™ SAND FILTER PUMP & SALTWATER SYSTEM

MODEL CS20110

CHLORINE GENERATOR and COPPER IONS RELEASING DEVICE

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WARNING

RISK OF ELECTRIC SHOCK.

CONNECT ONLY TO GROUNDING TYPE RECEPTACLE PROTECTED BY A CLASS

LED	
FILTER PUMP WORKING MODE	FP
START-UP	00
BOOST MODE	80
SLEEP	93
LOW FLOW	90
LOW SALT	91
HIGH SALT	92

SAVE THESE INSTRUCTIONS

PARTS LIST

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

SAVE THESE INSTRUCTIONS

PARTS LIST (continued)

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

SAVE THESE INSTRUCTIONS

PARTS REFERENCE

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

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

SAVE THESE INSTRUCTIONS

PARTS REFERENCE (continued)

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

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

SAVE THESE INSTRUCTIONS

PARTS REFERENCE (continued)

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

REF. NO.	DESCRIPTION	QTY.	SPARE PART NO.
1	6-WAY VALVE SET	1	11321
2	PRESSURE GAUGE	1	11224
3	DRAIN OUTLET COVER	1	11131
4	CENTER PIPE HUB	1	11268
5	TANK O-RING	1	11225
6	FILTER GRID	1	11269
7	DRAIN VALVE CAP	1	11226
8	DRAIN VALVE O-RING	1	11227
9	FLOW SENSOR	1	11373
10	ELECTROLYTIC CELL	1	11372
11	TITANIUM ELECTRODE	1	11374
12	L-SHAPE O-RING	4	11228
13	CLAMP BOLT	1	11262
14	WRENCH	1	11231
15	SAND FILTER INTERCONNECTING HOSE	1	11375
16	COPPER ELECTRODE	1	11234
17	LEAF TRAP COVER	1	11259
18	LEAF TRAP O-RING	1	11232
19	BASKET	1	11260
20	FILTER HOUSING NUT	1	11261
21	L-SHAPE O-RING	1	11228
22	SEDIMENT RELEASE VALVE	1	10460
23	VALVE O-RING	1	10264
24	PUMP MOTOR & CONTROL	1	11377
25	HOSE WITH NUTS	2	11009
26	PLUNGER VALVE (HOSE O-RING & STEP WASHER INCLUDED)	2	10747
27	HOSE O-RING		10262
28	STEP WASHER		10745
29	STRAINER NUT	2	10256
30	FLAT STRAINER RUBBER WASHER	2	10255
31	THREADED STRAINER CONNECTOR	2	11235
32	ADJUSTABLE POOL INLET NOZZLE	1	11074
33	ADAPTOR B	2	10722
34	STRAINER CONNECTOR	2	11070
35	POOL INLET NOZZLE	1	11071
36	STRAINER GRID	1	11072
37	CHLORINE TEST STRIPS	1	19635
38	COPPER TEST STRIPS	1	11254

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

SAVE THESE INSTRUCTIONS

POOL OUTLET - STRAINER & PLUNGER VALVE SETUP

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 (31) (see **drawing 1**). Be careful not to lose the step rubber washer (28). Place the plunger valve on the ground in a safe place.
2. In a counter-clockwise motion unscrew the strainer nut (29) from the threaded connector (31). Leave the flat washer (30) on the connector (31).
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 (31) 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 (29) facing the outside wall of the liner in a clockwise motion screw the strainer nut (29) back onto the threaded connector (31) (see **drawing 2**).
5. Finger tighten the strainer nut (29) onto the threaded connector (31).
6. Grasp the plunger valve assembly. Make sure the step washer (28) is in place.
7. In a clockwise motion screw the plunger valve union back onto the threaded connector (31) (see **drawing 3**).
8. Examine the plunger valve to see if the handle is pushed fully down to the "0/1" position. If not, then grasp the handle at the top and push down turning the handle in a clockwise direction until the plastic protruding notch anchors in the "0/1" position. This will prevent water from flowing out during filling (see **drawings 4.1 & 4.2**).

SAVE THESE INSTRUCTIONS

POOL INLET - NOZZLE & PLUNGER VALVE SETUP

1. In a counter-clockwise motion unscrew plunger valve union from the threaded strainer connector (31) (see **drawing 5**). Be careful not to lose the step rubber washer (28). Place the plunger valve on the ground in a safe place.
2. In a counter-clockwise motion unscrew the strainer nut (29) from the threaded connector (31). Leave the flat washer (30) on the connector (31).
3. Install the nozzle and plunger valve at the upper position of pool inlet. From the inside of the pool liner insert the connector (31) 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 (29) facing the outside wall of the liner in a clockwise motion screw the strainer nut (29) back onto the threaded connector (31) (see **drawing 6**).
5. Finger tighten the adjustable pool inlet nozzle (32) and the strainer nut (29) onto the threaded connector (31).
6. Grasp the plunger valve assembly. Make sure the step washer (28) is in place.
7. In a clockwise motion screw the plunger valve union back onto the threaded connector (31) (see **drawing 7**).
8. Examine the plunger valve to see if the handle is pushed fully down to the "0/1" position. If not, then grasp the handle at the top and push down turning the handle in a clockwise direction until the plastic protruding notch anchors in the "0/1" position. This will prevent water from flowing out during filling (see **drawings 8.1 & 8.2**).
9. Adjust the direction of nozzle head pointing away from the pool outlet for a better circulation result (see **drawing 9**).
10. The pool liner is now ready to fill with water. Consult the above-ground-pool owner's manual for filling instructions.

PRODUCT SPECIFICATIONS

The sand filter removes suspended particles from your pool. Pool chemistry is a specialized area and you should consult your local pool service specialist for details.

Power:	110 - 120 Volt AC
Amperage:	Saltwater System - 1.1 A; Filter Pump - 6 A
Wattage:	Saltwater System - 120 W; Filter Pump - 650 W
Ideal Salt Level:	3000 ppm (parts per million)
Maximum Sanitizer Output/hour:	12 grams/hour
Copper Ionizer Output Current:	175 mA
Maximum working pressure:	3.5 bar (50 psi)
Effective filtering area:	0.13 m ² (1.44 ft ²)
Maximum Flow Rate:	10030 liters/hour (2650 gallons/hour)
Recommended filtering media: (Not included)	Use only No. 20 silica sand. Particle size range 0.45 to 0.85 mm (0.018 to 0.033 inches). Uniformity Coefficient less than 1.75.
Recommended filtering media quantity:	45 Kg (100 Lbs)
Limited Warranty:	2 Years (see "Limited Warranty")

SETUP INSTRUCTIONS

TOOLS REQUIRED: **One (1) Phillips screwdriver**
 One (1) pair of pliers or a small adjustable wrench

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 adults is recommended for setting up this product.

Motor pre-filtering assembly setup:

1. Remove the sand filter and its accessories from the packaging carefully and inspect for any visible damage. If parts are damaged contact your local service center listed at the back of this owner's manual.
2. In a counter-clockwise motion unscrew the leaf trap cover (17) from the pre-filter housing. Take out the basket (19) and filter housing nut (20) (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).

SAVE THESE INSTRUCTIONS

SETUP INSTRUCTIONS (continued)

4. In a clockwise motion screw filter housing nut (20) onto the motor water inlet (See drawings 12.1 & 12.2).

5. Replace the basket (19) and leaf trap cover (17) back to the pre-filter housing (See drawings 13.1 & 13.2).

Sand tank installation:

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

The product can be mounted on a cement base or onto a wooden platform to prevent accidental falling over.

- The mounting holes are 6.4 mm in diameter and spaced 117.4 mm apart.
- Use two bolts and lock nuts with a maximum of 6.4 mm in diameter.

SAVE THESE INSTRUCTIONS

SETUP INSTRUCTIONS (continued)

3. In a clockwise motion screw the center pipe (4) onto the filter grid (6) securely by hand (see **drawing 15**).
4. Vertically insert the filter grid and center pipe assembly into the tank. Ensure filter grid assembly is securely fitted to the bottom of the tank, and the center pipe is vertically centered inside the tank (see **drawing 16**).

Sand loading:

IMPORTANT: 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.

NOTE: Before loading the tank with sand, ensure the sand filter grid and center pipe assembly is securely in place on the tank bottom, and the center pipe (4) is vertically centered inside the tank.

1. To prevent sand from falling into the center pipe top opening when pouring the sand, cover the center pipe top opening with a cup or similar object (see **drawing 17**).
2. With one person holding the center pipe to keep it centered, pour the sand into the tank at a slow rate manually to prevent the filter grid assembly from shifting (see **drawing 18**).

3. Fill the tank approximately half way first to evenly distribute the sand inside the tank, then fill the tank with some water to provide a cushioning effect when the remaining sand is poured in. This prevents the filter grid (6) from excessive shock (see **drawing 19**).

SAVE THESE INSTRUCTIONS

SETUP INSTRUCTIONS (continued)

4. Sand shall be filled between the "MAX" and "MIN" marked gauge on the center pipe. Evenly spread and level out the sand by hand (see drawings 19 & 20).

5. Remove the protective cup from the center pipe top opening.
6. Wash away all sand around the top edge of the tank.

IMPORTANT: Ensure the center pipe (4) remains centered after sand loading is completed before proceeding to the next step.

6-way valve installation:

1. Place the tank o-ring (5) around the top edge of the tank groove (see drawing 21). NOTE: Ensure the tank o-ring is free of sand or debris.
2. 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 (4) top opening (see drawing 22). Make sure the tank o-ring is securely fitted between the top edge of the tank groove and the 6-way valve cover edge.

IMPORTANT: 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 23).

SETUP INSTRUCTIONS (continued)

3. Remove the clamp bolt cover and the clamp bolt (13), and install the flange clamp around the tank and 6-way valve flanges (see **drawing 24**).
4. Insert the clamp bolt (13) into the pre-installed nut on the clamp, and securely tighten it with the wrench (14) supplied. Replace the clamp bolt cover back. (see **drawings 25.1 & 25.2**).

5. Place an L-shape o-ring (12) on the 6-way valve inlet connection and on the pump motor outlet. In a clockwise motion connect the sand filter interconnecting hose (15) between the pump motor outlet and the 6-way valve inlet connection (see **drawing 26**).
6. Insert the electrolytic cell (10) into the 6-way valve outlet. Hand tighten them securely (see **drawing 27**).

7. Screw and tighten the flow sensor (9) to the electrolytic cell (10), then plug in the electrolytic cell line cord and tighten the nut (see **drawings 28 and 29**).

WARNING

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

SAVE THESE INSTRUCTIONS

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 (25) 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 (25) between the electrolytic cell outlet and the upper plunger valve with the inlet-nozzle. Ensure the hose nuts are securely tightened.
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.

SAVE THESE INSTRUCTIONS

SAND FILTER PUMP HOSE CONNECTION SETUP (continued)

For NON-INTEX pool:

Connect the hose (25) to the pool inlet/outlet connection with a large hose clamp. Tighten securely. Remove the drain cap (3) before attaching the drain/waste hose or pipe.

For INTEX pool size 4.88 m (16') and below:

1. In a counter-clockwise motion unscrew plunger valve union from the threaded strainer connector (31). Be careful not to lose the step rubber washer (28).
2. Grasp the plunger valve assembly. Make sure the step washer (28) is in place. Connect adaptor B (33) to plunger valve union.
3. Remove wall plug and then insert the strainer (34 & 36) into the lower position of protruding hose connection, and the nozzle (34 & 35) into the upper position of protruding hose connection. Adaptor B (33) fits over the strainer connection (34) inserted into the connection. Tighten securely.
4. Remove the drain cap (3) before attaching the drain/waste hose or pipe.

SAVE THESE INSTRUCTIONS

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 30)	Normal filtration and regular vacuuming of pool	From pump through filter media to pool
BACKWASH (see drawing 31)	Reverses water flow to clean filter media	From pump through filter media to valve waste/drain outlet
RINSE (see drawing 32)	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 33)	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 34)	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 35)	Shuts off all flow to filter and pool "Do not use this setting with pump running"	

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 has 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, an explosive situation could exist.

1. Grasp a plunger valve handle. Turn the handle counter-clockwise, pull up until it stops, and then turn it clockwise until the metal protruding notch anchor is in the "0/1" position. Repeat for the second plunger valve. This opens the valves to allow water to flow into the sand filter pump.
2. Ensure the drain/waste outlet on the 6-way valve is not covered and is directed to a proper draining receptacle.
3. Ensure the pump is off, depress the 6-way valve and turn it to the "BACKWASH" position (see drawings 31 & 36).
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. Switch on the pump (see drawing 37). 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: The initial backwash of the filter is recommended to remove any impurities or fine sand particles in the sand media.

SAVE THESE INSTRUCTIONS

OPERATING INSTRUCTIONS (continued)

5. Switch off the pump, change the 6-way valve to "RINSE" position (see **drawing 32**).
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 30**).
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.
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 devices (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.

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

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

This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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



SALTWATER SYSTEM OPERATION

1. Start up the unit:





Plug the power cord into the electrical outlet and test the GFCI/RCD (circuit breaker). Switch on the unit.

With the Filter Pump turned "ON" and operating, the green "Pump" light on the control panel will be on and code "00" appears on the electronic control station's LED, indicating that the unit is in a Stand-By Mode. This is normal.

2. Unlock keypad controls:

Press and hold the  button for 2 seconds until you hear a short "beep". Then press and hold the  button for another 2 seconds until you hear the second short "beep". The LED flashes "00". This procedure unlocks the keypad control buttons.



3. Set operating hours for Saltwater System:

Increase the scheduled number of operating hours by pressing the button , or reduce them by pressing the button . See the "Operating Time Table" for the required operating hours related to each pool size. Press the button  to select the desired hours. You can press  if you have selected too many hours. The built-in timer will now activate your Saltwater System, at the same time each day, for the number of hours you have set.

NOTE: The Saltwater System will not operate if the filter pump is not operating.

4. Lock keypad controls:

(1 to 12 hours max per cycle)

With the desired hour value showing, press and hold the  button for 2 seconds until you hear a long "beep". Then press and hold  for another 2 seconds until you hear the second long "beep". The green "WORKING" indicator on the control panel will light up within a few seconds to indicate that the saltwater system has started sanitizer production. Locking the control buttons into this setting 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 1 minute later.

5. Readjust operating time if necessary:

The operating hours can be re-adjusted if necessary. Just repeat the steps 2 through 4.

6. Test the copper concentration in the pool water.

The Saltwater System recommends a copper level of 0.2 to 0.3 ppm. This is easily tested by the copper ion test strips provided. If the test result is 0.2~0.3 ppm, go directly to step 8.

SALTWATER SYSTEM OPERATION (continued)

7. Boost cycle

- If the test result is below 0.2 ppm, press and hold “BOOST” button for 5 seconds until the indicator lights up and the LED display displays “80”. This indicates that the saltwater system has started copper ion production. You can press and hold the “BOOST” button for another 5 seconds until the indicator is off, which will cancel the Boost cycle.

Note: Once the system has started copper ion production, the boost button can't be re-set until the power switch is off.

- The boost operating hours is 4 times the amount of time programmed into the system, i.e. if your saltwater system operating time is 2 hours, the boost procedure will run $4 \times 2 = 8$ hours. After boost procedure has been completed, the system will automatically switch to the normal working mode.
- After a heavy rain or if the pool is dirty, press the “BOOST” button to shock the pool again.

8. Test pool water regularly:

For the maximum pool volume of 50 000 L, it will take from 2 to 3 days for the copper concentration to reach the recommended level, when the system is set at its maximal intensity.

Maintain 1-3 ppm of free available chlorine until the copper concentration reaches 0.2-0.3 ppm. Until then, copper levels should be checked daily with a test kit. Once the copper concentration has reached the required level, maintain 0.6 - 3 ppm of free available chlorine.



The presence of organic matter in swimming pool water reduces the effectiveness of sanitizers. Reducing sanitizer levels from 1- 3 ppm to 0.6 - 3 ppm is possible only when the organic matter content in swimming pool water is controlled.

Once the copper level is balanced, test the pool water daily to maintain the free available chlorine level between 0.6 - 3 ppm.



NOTE: A High copper ion concentration may cause blonde hair to exhibit a green colour. To prevent this, wear a swimming cap during swimming, and wash hair with special shampoo after using the pool.

See “Troubleshooting Guide”.

9. Stand-by/power saving mode:

- When the cycle ends, the green “SLEEP” indicator on the control panel lights up and the LED display flashes “93”. The system is now in Stand-By mode. After a while, it shuts down and sets itself in a Power Saving mode. The system will automatically turn itself back on in 24 hours, starting its daily cycle of chlorine production.
- The “SLEEP” indicator stays on, while the system is in the Power Saving mode. The LED display however, goes blank after 1 hour. Press any button ( or ) to view the last LED code.

10. Running the pump alone without the Saltwater System:

To run the pump alone without the Saltwater System function, press and hold both () and () buttons for 5 seconds until you hear a “beep” and the LED display shows “FP”.

The pump is now operating alone. To stop the pump, manually turn the switch OFF. **NOTE:** The pump cannot be operated alone under an automatic timer mode.

IMPORTANT: To keep the initial automatic operating cycle setting of the Saltwater System, turn the switch ON, the LED display shows “FP”, then unlock and lock the keypad controls again, see previous steps 2 and 4. The LED display shows the initial input hours and the Saltwater System cycle repeats again.

LED CODE CHART

LED Reading	Definitions
FP	Filter Pump Working Mode
80	Boost Mode
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 Water 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.

- The life expectancy of the copper electrode is 5,760 hours (240 days) under normal use conditions.
- When replacing the chlorine generating cell and copper cell, only use replacement cells having a label that clearly states that it is a replacement cell for the Krystal Clear Sand Filter Pump and Saltwater System Model CS20110 REGISTRATION NUMBER 30116, PEST CONTROL PRODUCTS ACT.

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)	(Lbs)	(Kgs)	(Lbs)	(Kgs)
INTEX STORABLE POOLS (SP's)							
EASY SET® POOL	457cm x 84cm (15' x 33")	2587	9792	65	30	15	10
	457cm x 91cm (15' x 36")	2822	10681	65	30	20	10
	457cm x 107cm (15' x 42")	3284	12430	80	35	20	10
	457cm x 122cm (15' x 48")	3736	14141	95	45	25	10
	488cm x 107cm (16' x 42")	3754	14209	95	45	25	10
	488cm x 122cm (16' x 48")	4273	16173	110	50	30	15
	549cm x 107cm (18' x 42")	4786	18115	120	55	30	15
	549cm x 122cm (18' x 48")	5455	20647	135	60	35	15
549cm x 132cm (18' x 52")	5894	22309	150	65	40	20	
CIRCULAR METAL FRAME POOL	457cm x 91cm (15' x 36")	3282	12422	80	35	20	10
	457cm x 107cm (15' x 42")	3861	14614	100	45	25	10
	457cm x 122cm (15' x 48")	4440	16805	110	50	30	15
	488cm x 122cm (16' x 48")	5061	19156	125	55	35	15
	549cm x 122cm (18' x 48")	6423	24311	160	75	40	20
	549cm x 132cm (18' x 52")	6981	26423	175	80	45	20
	610cm x 132cm (20' x 52")	8638	32695	220	100	60	25
	732cm x 122cm (24' x 48")	11483	43462	290	130	75	35
732cm x 132cm (24' x 52")	12481	47241	310	140	85	40	
ULTRA FRAME POOL	488cm x 122cm (16' x 48")	5061	19156	125	55	35	15
	549cm x 132cm (18' x 52")	6981	26423	175	80	45	20
SEQUOIA SPIRIT™ POOL SET	508cm x 124cm (16'8" x 49")	5061	19156	125	55	35	15
	569cm x 135cm (18'8" x 53")	6981	26423	175	80	45	20
OVAL FRAME POOL	549cm x 305cm x 107cm (18' x 10' x 42")	2885	10920	65	30	20	10
	610cm x 366cm x 122cm (20' x 12' x 48")	4393	16628	110	50	30	15
	732cm x 366cm x 122cm (24' x 12' x 48")	5407	20465	135	60	35	15
	853cm x 366cm x 122cm (28' x 12' x 48")	6420	24300	160	75	40	20
RECT. ULTRA FRAME POOL	549cm x 274cm x 132cm (18' x 9' x 52")	4545	17203	115	50	30	15
	732cm x 366cm x 132cm (24' x 12' x 52")	8403	31805	210	100	55	25

SAVE THESE INSTRUCTIONS

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)	10 - 19°C (50 - 66°F)	20 - 28°C (68 - 82°F)	29 - 36°C (84 - 97°F)
INTEX STORABLE POOLS (SP's)						
EASY SET® POOL	457cm x 84cm (15' x 33")	2587	9792	1	1	2
	457cm x 91cm (15' x 36")	2822	10681	1	1	2
	457cm x 107cm (15' x 42")	3284	12430	1	2	2
	457cm x 122cm (15' x 48")	3736	14141	2	2	3
	488cm x 107cm (16' x 42")	3754	14209	2	2	3
	488cm x 122cm (16' x 48")	4273	16173	2	3	3
	549cm x 107cm (18' x 42")	4786	18115	2	3	3
	549cm x 122cm (18' x 48")	5455	20647	3	3	4
	549cm x 132cm (18' x 52")	5894	22309	3	3	4
CIRCULAR METAL FRAME POOL	457cm x 91cm (15' x 36")	3282	12422	1	1	2
	457cm x 107cm (15' x 42")	3 861	14614	2	2	3
	457cm x 122cm (15' x 48")	4440	16805	2	3	3
	488cm x 122cm (16' x 48")	5061	19156	3	3	4
	549cm x 122cm (18' x 48")	6423	24311	3	4	5
	549cm x 132cm (18' x 52")	6981	26423	4	4	5
	610cm x 132cm (20' x 52")	8638	32695	4	5	6
	732cm x 122cm (24' x 48")	11483	43462	7	7	8
732cm x 132cm (24' x 52")	12481	47241	7	8	9	
ULTRA FRAME® POOL	488cm x 122cm (16' x 48")	5061	19156	3	3	4
	549cm x 132cm (18' x 52")	6981	26423	4	4	5
SEQUOIA SPIRIT® POOL SET	508cm x 124cm (16'8" x 49")	5061	19156	3	3	4
	569cm x 135cm (18'8" x 53")	6981	26423	4	4	5
OVAL FRAME POOL	549cm x 305cm x 107cm (18' x 10' x 42")	2885	10920	1	1	2
	610cm x 366cm x 122cm (20' x 12' x 48")	4393	16628	2	3	3
	732cm x 366cm x 122cm (24' x 12' x 48")	5407	20465	3	3	4
RECT. ULTRA FRAME POOL	549cm x 274cm x 132cm (18' x 9' x 52")	4545	17203	2	3	3
	732cm x 366cm x 132cm (24' x 12' x 52")	8403	31805	5	5	6

SAVE THESE INSTRUCTIONS

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 between 30-100 ppm.

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)	(Lbs)	(Kgs)
INTEX STORABLE POOLS (SP's)					
EASY SET® POOL	457cm x 84cm (15' x 33")	2587	9792	0.6	0.3
	457cm x 91cm (15' x 36")	2822	10681	0.7	0.3
	457cm x 107cm (15' x 42")	3284	12430	0.8	0.4
	457cm x 122cm (15' x 48")	3736	14141	0.9	0.4
	488cm x 107cm (16' x 42")	3754	14209	0.9	0.4
	488cm x 122cm (16' x 48")	4273	16173	1.1	0.5
	549cm x 107cm (18' x 42")	4786	18115	1.2	0.5
	549cm x 122cm (18' x 48")	5455	20647	1.4	0.6
	549cm x 132cm (18' x 52")	5894	22309	1.5	0.7
CIRCULAR METAL FRAME POOL	457cm x 91cm (15' x 36")	3282	12422	0.8	0.4
	457cm x 107cm (15' x 42")	3861	14614	1.0	0.4
	457cm x 122cm (15' x 48")	4440	16805	1.1	0.5
	488cm x 122cm (16' x 48")	5061	19156	1.3	0.6
	549cm x 122cm (18' x 48")	6423	24311	1.6	0.7
	549cm x 132cm (18' x 52")	6981	26423	1.7	0.8
	610cm x 132cm (20' x 52")	8638	32695	2.2	1.0
	732cm x 122cm (24' x 48")	11483	43462	2.9	1.3
ULTRA FRAME® POOL	488cm x 122cm (16' x 48")	5061	19156	1.3	0.6
	549cm x 132cm (18' x 52")	6981	26423	1.7	0.8
SEQUOIA SPIRIT® POOL SET	508cm x 124cm (16'8" x 49")	5061	19156	1.3	0.6
	569cm x 135cm (18'8" x 53")	6981	26423	1.7	0.8
OVAL FRAME POOL	549cm x 305cm x 107cm (18' x 10' x 42")	2885	10920	0.7	0.3
	610cm x 366cm x 122cm (20' x 12' x 48")	4393	16628	1.1	0.5
	732cm x 366cm x 122cm (24' x 12' x 48")	5407	20465	1.4	0.6
	853cm x 366cm x 122cm (28' x 12' x 48")	6420	24300	1.6	0.7
RECT. ULTRA FRAME POOL	549cm x 274cm x 132cm (18' x 9' x 52")	4545	17203	1.1	0.5
	732cm x 366cm x 132cm (24' x 12' x 52")	8403	31805	2.1	1.0

SAVE THESE INSTRUCTIONS

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)	(Lbs)	(Kgs)	(Lbs)	(Kgs)
2000	7500	50	20	10	5
4000	15000	100	45	25	10
6000	22500	150	65	40	20
8000	30000	200	90	55	25
10000	37500	250	110	70	30
12000	45500	300	135	80	35
14000	53000	350	160	95	45

OPERATING TIME TABLE FOR COMMON NON-INTEX POOLS (WITHOUT CYANURIC ACID)

Water Capacity		Operating Time (hours) at different ambient/air temperatures		
(Gals)	(Liters)	10 - 19°C (50 - 66°F)	20 - 28 °C (68 - 82 °F)	29 - 36 °C (84 - 97 °F)
2000	7500	1	1	1
4000	15000	2	2	3
6000	22500	3	3	4
8000	30000	5	5	6
10000	37500	6	6	7
12000	45500	7	8	9
14000	53000	9	9	10

CYANURIC ACID TABLE FOR COMMON NON-INTEX POOLS

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

SAVE THESE INSTRUCTIONS

MOTOR PRE-FILTER CLEANING AND MAINTENANCE

1. Make sure the filter pump is switched off, then disconnect the power cord from the electrical outlet.
2. Grasp a plunger valve handle. Turn the handle counter-clockwise, push down until it stops and then turn it clockwise until the plastic protruding notch anchors in the "0/1" position. Repeat for the second plunger valve. This prevents the water from flowing out of the pool.
3. Release the pressure first by opening the sediment release valve (22) located on the lower side of the pre-filter housing (see **drawing 38**).
4. In a counter-clockwise motion unscrew the leaf trap cover (17), then remove the basket (19) and leaf trap o-ring (18) from the pre-filter housing (see **drawing 39**).
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 (22) back.

ELECTROLYTIC CELL CLEANING

If the pool water is hard (high mineral content) the cell may require periodic manual cleaning. To maintain maximum performance, we recommend that you open and visually inspect the electrolytic cell (10) once every month.

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

1. Switch off the unit, unplug the power cord from the electrical socket.
2. Disconnect the hose (25) from the electrolytic cell (10) outlet and cover the outlet with the drain outlet cover (3) from the 6-way valve (see **drawings 40 and 41**).
3. Remove the electrolytic cell from the 6-way valve outlet by unscrewing the electrolytic cell (10) collar (see **drawing 42**).
4. Pour kitchen grade vinegar into the cell to immerse the titanium plates (see **drawing 43**). Soak for about 1 hour and then flush with a high-pressure garden hose.
5. Reverse steps 2 to 4 to reconnect the electrolytic cell.

SAVE THESE INSTRUCTIONS

COPPER ELECTRODE CLEANING

1. Switch off the unit, unplug the power cord from the electrical socket.
2. In a counter-clockwise motion, unscrew the electrical plug collar from the copper electrode cell, and remove the electrical plug from electrode cell (see **drawings 44 and 45**).
3. Unscrew the copper electrode cell collar, then remove the electrode cell and place it in a bucket.
4. Pour kitchen grade vinegar into the bucket until the copper electrode cell is immersed (see **drawing 47**). Soak for 1 hour and then flush with a high-pressure garden hose.
5. Reverse steps 2 to 4 to reconnect the copper electrode cell.

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 checking of water parameters and chemical treatment of the water is very important and cannot be overemphasized. Chlorine, algaecide and maintenance of proper water parameter 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 water parameters and sanitizer levels are balanced. Consult your local swimming pool supply store for instructions.
 - Chlorinated water may damage lawns, gardens or shrubbery as water is splashed 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.
- Heavy pool (or spa) usage and higher temperatures may require a higher chlorine output to maintain proper free available chlorine residuals.

Water parameters to be maintained as part of daily maintenance:

Parameters	Recommended range
Free available chlorine	1.0-3.0 ppm This level may be lowered to 0.6-3.0 ppm once the copper concentration has reached 0.2-0.3 ppm.
pH	7.2-7.8
Total alkalinity	100-120 ppm
Calcium hardness	200-300 ppm
Stabilizer (cyanuric acid)	30-100 ppm
Copper levels	0.2-0.3 ppm

SAVE THESE INSTRUCTIONS

LONG TERM STORAGE & WINTERIZATION

CAUTION

Allowing the water to freeze will damage the sand filter and void the warranty. If anti-freeze solution is needed, use only propylene glycol. Propylene glycol is non-toxic and will not damage plastic system components; other anti-freezes are highly toxic and may damage plastic components in the system.

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 (7) from the drain valve to thoroughly drain the tank. The drain valve is located at the bottom of the filter tank.
5. Disassemble the pump motor from the tank base.
6. Leave sand filter pump pieces and hoses outside to thoroughly air dry.
7. Coat the following o-rings and washers with petroleum jelly for long term storage:
 - L-shape o-ring (12).
 - o-ring A (21).
 - Pump hose O-rings (27).
 - Strainer valve assembly step washers (28).
 - Flat strainer rubber washers (30).
8. 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.
9. 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.
10. 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).

SAVE THESE INSTRUCTIONS

TROUBLESHOOTING GUIDE

TROUBLE	CAUSE	SOLUTION
FILTER MOTOR FAILS TO START	<ul style="list-style-type: none"> • The power cord is loose. • The GFCI/RCD circuit breaker is tripped. • Motor too hot and overload protection is shut off. • Stand-by/power saving mode. 	<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. • See "Saltwater system operation".
FILTER DOESN'T CLEAN POOL	<ul style="list-style-type: none"> • Without cyanuric acid. • Improper chlorine or pH levels. • No filtering media in tank. • Wrong 6-way valve setting position. • Excessively dirty pool. • Dirt or sand on pool floor. • The basket is restricting the water flow. 	<ul style="list-style-type: none"> • See "Cyanuric acid table". • 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. • Use Intex pool vacuum to clean bottom of pool. • Clean the basket.
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. 	<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.
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 the clamp with wrench supplied. • 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.
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.

SAVE THESE INSTRUCTIONS

TROUBLESHOOTING GUIDE (continued)

LED PANEL CODE	PROBLEM	SOLUTION
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LED Panel Code Flash & Alarm On (NOTE: Always turn off the power before cleaning and servicing).

	<ol style="list-style-type: none"> 1. Circulation line is blocked. 	<ul style="list-style-type: none"> • If your unit has plunger valves, ensure that they are open. <ul style="list-style-type: none"> - Clear your basket and cell of debris and dirt. See "Maintenance" - Depress the 6-way valve, release all trapped air in the circulation line.
	<ol style="list-style-type: none"> 2. Incorrect inlet and outlet hose direction. 	<ul style="list-style-type: none"> • Check the direction of the inlet and the outlet hose. Reverse the hoses if necessary. See "Set Up Instructions".
	<ol style="list-style-type: none"> 3. Scale on the flow sensor. 	<ul style="list-style-type: none"> • Clean the flow sensor, paying special attention to the hinge. See "Maintenance".
	<ol style="list-style-type: none"> 4. Flow sensor cord is loose. 	<ul style="list-style-type: none"> • Plug the flow sensor firmly into the flow sensor receptacle.
	<ol style="list-style-type: none"> 5. Flow sensor failure. 	<ul style="list-style-type: none"> • Contact Intex Service Center.
	<ol style="list-style-type: none"> 1. Dirt or scale on titanium plates. 	<ul style="list-style-type: none"> • Remove the electrolytic cell for inspection. Clean it if necessary. See "Maintenance".
	<ol style="list-style-type: none"> 2. Low salt level / No salt. 	<ul style="list-style-type: none"> • Add salt. See "Salt & Pool Water Volumes".
	<ol style="list-style-type: none"> 3. Electrolytic cell cord is loose. 	<ul style="list-style-type: none"> • Ensure that the cell cord is plugged firmly into the cell housing receptacle.
	<ol style="list-style-type: none"> 4. Possible electrolytic cell failure. 	<ul style="list-style-type: none"> • Contact Intex Service Center. Replace the cell if needed.
	<ol style="list-style-type: none"> 1. High salt level. 	<ul style="list-style-type: none"> • Partially drain the pool and refill it with fresh water. See "Salt & Pool Water Volumes".
	<ol style="list-style-type: none"> 1. Display and all lights are off - the system does not power up. 	<ul style="list-style-type: none"> • Household voltage is too high or too low (\neq 20%). Check the voltage is within the Range stated on the device housing. <ul style="list-style-type: none"> - Contact Intex Service Centre

SAVE THESE INSTRUCTIONS

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 chlorine 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. This is Common. 	<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. • Chlorine 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 chlorine 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 back cover for contact information.

SAVE THESE INSTRUCTIONS

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.

For additional information on safety, please visit

- **The Association of Pool and Spa Professionals: The Sensible Way to Enjoy Your Aboveground/Onground Swimming Pool** www.nspi.org
- **American Academy of Pediatrics: Pool Safety for Children** www.aap.org
- **Red Cross** www.redcross.org
- **Safe Kids** www.safekids.org
- **Home Safety Council: Safety Guide** www.homesafetycouncil.org
- **Toy Industry Association: Toy Safety** www.toy-tia.org

SAVE THESE INSTRUCTIONS

LIMITED WARRANTY PARTS LIST

Your Sand Filter Pump & Saltwater system 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 & Saltwater system and accessories listed below.

The provisions of this Limited Warranty apply only to the original purchaser and is 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 manual, as proof of purchase will be required and must accompany warranty claims or the Limited Warranty is invalid.

Sand Filter Pump & Saltwater system Warranty – 2 Years
Hoses, Plunger Valves & Fittings Warranty – 180 days

If a manufacturing defect is found within the periods noted above, please contact the appropriate Intex Service Center listed in this manual. The Service Center will determine the validity of the claim. If the Service Center directs you to return the product, please carefully package the product and send with shipping and insurance prepaid to the Service Center. Upon receipt of the returned product, the Intex Service Center will inspect the item and determine the validity of the claim. If the provisions of this warranty cover the item, the item will be repaired or replaced at no charge.

Any and all disputes regarding the provisions of this Limited Warranty shall be brought before an informal dispute settlement board and unless and until the provisions of these paragraphs are carried forth, no civil action may be instituted. The methods and procedures of this settlement board shall be subject to the rules and regulations set forth by the Federal Trade Commission (F.T.C.). IMPLIED WARRANTIES ARE LIMITED TO THE TERMS OF THIS WARRANTY AND IN NO EVENT SHALL INTEX, THEIR AUTHORIZED AGENTS OR EMPLOYEES BE LIABLE TO THE BUYER OR ANY OTHER PARTY FOR DIRECT OR CONSEQUENTIAL DAMAGES OR LIABILITIES. Some states, or jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This Limited Warranty does not apply if the product is subject to negligence, abnormal use or operation, accident, improper operation, improper voltage or current contrary to operating instructions, or 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. This Limited Warranty applies only to those parts and components sold by Intex. The Limited Warranty does not cover unauthorized alterations, repairs or disassembly by anyone other than Intex Service Center personnel.

DO NOT GO BACK TO THE PLACE OF PURCHASE FOR RETURN OR REPLACEMENT. IF YOU ARE MISSING PARTS OR NEED ASSISTANCE, PLEASE CALL US TOLL-FREE (FOR U.S. AND CANADIAN RESIDENTS): 1-800-234-6839 OR VISIT OUR WEBSITE: WWW.INTEXSTORE.COM.

Proof of Purchase must accompany all returns or the warranty claim will be invalid.

SAVE THESE INSTRUCTIONS

COUNTRIES/REGIONS

- UNITED STATES
- CANADA

- MEXICO

- PANAMA
- PARAGUAY
- ECUADOR
- HONDURAS
- EL SALVADOR
- NICARAGUA

- COSTA RICA
- DOMINICAN REPUBLIC
- GUATEMALA
- COLOMBIA
- VENEZUELA

- MIDDLE EAST REGION
REGION

- ASIA

SERVICE CENTER LOCATIONS

INTEX RECREATION CORP.

14779 Bar Harbor Road
Fontana, CA 92336
Tel: 1-800-234-6839
Fax: 310-549-2900
Website: www.intexcorp.com (U.S./Canada only)
Consumer Service Hours: 8:30 am to 5:00 pm
Pacific Time, Mon. thru Fri. only.

KAY INTERNACIONAL, S.A. DE C.V.

SAN JERONIMO # 550- INT.501 Y 502. COL.
JARDINES DEL PEDREGAL. C.P. 01900
MÉXICO D.F.
Tel: 01-800-347-4020 (Collect Call)
Tel: 55-9172-8035
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E-mail: servicenter@kayinternacional.com
Website: www.intexmexico.com.mx

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Website: www.intexdevelopment.com

For answers to most frequently asked questions, please visit

www.intexcorp.com.

Non U.S. Residents, please visit

www.intexdevelopment.com.

SAVE THESE INSTRUCTIONS

INTEX®

For Residents of the U.S. & Canada:

INTEX RECREATION CORP.

Attn: Consumer Service

14779 Bar Harbor Road

Fontana, CA 92336

Phone: 1-800-234-6839

Fax: (310) 549-2900

Consumer Service Hours:

8:30 am to 5:00 pm Pacific time

Monday thru Friday only

Website: www.intexcorp.com

For Residents outside of the U.S. and Canada:

Please refer to the Service Center Locations

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