

ICE 900

Supplemental Service Manual



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ICE 900 SUPPLEMENTAL MANUAL

Congratulations on your choice of the *ICE 900*. The *ICE 900* is a fully programmable self-contained unit that dispenses ice along with ambient, cold, and hot water. The versatile *ICE 900* provides great tasting ice and water with every use.

INTRODUCTION

This manual is a supplemental to *ICE 900* instructions and manuals provided by ChungHo, the manufacturer of the *ICE 900*. *The Waterlogic ICE 900 is the ChungHo SUPER IGUASSU or ChungHo IGUASSU ICE 900*.

Carefully read and follow all instructions provided by ChungHo and included in this supplement to ensure proper and efficient operation of your *ICE 900*. Documents include but are not limited to:

ChungHo SUPER IGUASSU ICE User's Manual

ChungHo Iguassu ICE 900 Technical Manual

Waterlogic ICE 900 Supplemental Service Manual

Contact *Waterlogic* if you have any questions or need additional information about the *ICE 900*.

Waterlogic and *Authorized Waterlogic Dealers* employ trained service personnel who are experienced in the installation, function and repair of *Waterlogic* equipment. This publication is written for use by these qualified individuals. *Waterlogic* encourages users to learn about products, however, we believe that product knowledge and service is best obtained by consulting *Waterlogic* or an *Authorized Waterlogic Dealer*.

Water treatment systems should be combined with selected water treatment components to create a system specifically tailored for each application by trained and qualified personnel.

Waterlogic reserves the right to change the specifications referred to in this literature at any time, without prior notice. Changes or modifications not expressly approved by *Waterlogic* could void the warranty and user's authority to operate the equipment.



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SAFETY ALERT SYMBOLS

Read and follow all safety information carefully. The signal words used in this manual are selected as shown below and based on an assessment of the degree of potential injury or damage (severe or minor) and the occurrence of injury (definitely occurs or has the potential to occur) when the warning is ignored:

<u> DANGER!</u>

Indicates a situation which, when not avoided, results in death or severe injury.

<u> WARNING!</u>

Indicates a situation which, when not avoided, has the potential to result in death or severe injury; and/or severe property damage.

A CAUTION!

Indicates a situation which, when not avoided, results or has the potential to result in injury, minor property damage or reduced product performance.

SAFETY PRECAUTIONS

Basic safety precautions should be followed, including the following:

Ensure all local, state, and federal laws and codes including health and safety guidelines are met when installing the *ICE 900*. Only qualified service technicians should attempt installation and service of *the ICE 900*. Always read the entire operating instructions before using the appliance and save these instructions for future use.

▲ DANGER! ELECTRICAL SHOCK HAZARD. Always unplug from power supply prior to service. Always use a dedicated and properly grounded outlet that is protected by ground-fault circuit interrupter (GFCI) or residual current device (RCD) having a rated residual operating current not exceeding 30mA.

▲ DANGER! ELECTRICAL SHOCK OR FIRE HAZARD. Only use power cord supplied with unit. Never use extension cords, power strips or use multiple electrical appliances in one power outlet simultaneously. Do not use if the power supply cord is damaged. Do not bend the power supply cord excessively or put heavy objects on the power supply cord. Keep power supply cord in a stable position and avoid heat sources. Do not touch the power plug with wet hands or when standing in water.

▲ DANGER! ELECTRICAL SHOCK OR FIRE HAZARD. Do not install the ICE 900 in or around largely damp areas, at a place near flammable materials or at a place exposed to rain, snow, or freezing temperatures.

WARNING! AUTHORIZED USE ONLY. This appliance is to be used for its intended purpose as described in this manual, and untrained individuals who use this manual assume the risk of any resulting property damage or personal injury. This appliance can be used by children 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.



WARNING! SUPERVISE CHILDREN. Keep appliance and cord out of reach of children under the age of 8 years. Children under the age of 8 years must not use or play with the appliance.

WARNING! DO NOT OPERATE IF DAMAGED OR MALFUNCTIONING. Unplug if abnormal case occurs. Contact Waterlogic or authorized dealer for repair, service, and installation to avoid hazards.

WARNING! UNIT PRODUCES HOT WATER. Water above 52°C (125°F) can cause severe burns or scalding. Keep unauthorized people and children away from the unit to avoid accidental dispensing of hot water. Always use an appropriate heat-resistant container for hot water dispense.

WARNING! CONNECT TO POTABLE WATER SUPPLY. This system is to be used for water only and is not intended for use where water is microbiologically unsafe or with water of unknown quality without adequate disinfection. System is not intended for treatment of contaminated water.

▲ WARNING! TIP HAZARD. Dispenser could tip or fall causing serious injury. Do not attempt to install the ICE 900 on a surface on a sloped or unstable position. Never place heavy items on top of unit and never climb, stand, or hang on unit or storage cabinet to prevent injury and damage. Do not tilt the ICE 900 over 45° during transportation or installation as this may damage the compressor.

WARNING! UNIT IS HEAVY. TWO PERSON LIFT REQUIRED. Transport unit empty and always use material handling equipment or two people with proper lifting technique to reduce injury risk.

▲ WARNING! STORE AND TRANSPORT UNIT EMPTY. ALWAYS SANITIZE BEFORE USE. The unit must be completely drained and sealed before storing to avoid stagnation and reduce microbiological contamination (potential bacterial growth). Sanitize before use to eliminate any potential microbiological contaminates

▲ CAUTION! INDOOR USE ONLY. Never expose to direct sunlight, heat sources, or ambient air temperature above 37°C (100°F) or below 2°C (35°F). Install indoors and keep unit away from excessive humidity. Never expose to freezing temperatures. Ensure there is 4-inches of clearance around the unit to allow refrigeration system condenser to dissipate heat. Warmer environments require more clearance around the unit. Minimum clearance around all surfaces of the machine is 2-inches. Installs where the ambient temperature exceeds 27°C (80°F), require a minimum of 4-inches clearance for proper heat dissipation and efficient operation. Do not cover or block ventilation holes.

▲ <u>CAUTION!</u> USE A WATER PRESSURE REGULATOR. Waterlogic will not be responsible for injury or damage caused by excessive water pressure. Input or feed pressure must be 40 psi to 60 psi. Be aware of any potential pressure surges caused by building/municipal pumping stations. Water block devices and external leak detectors are strongly recommended. Locate the unit as close to the water supply and the electrical connections as possible to minimize risk.

▲ CAUTION! USE PROPER SUPPLY LINES AND FEED WITH POTABLE AMBIENT WATER ONLY. Feed water over 37°C (100°F) may damage the treatment components. Always use supply lines with adequate pressure rating and UV resistance. Close water supply valve and contact service representative if a leak is noticed. Contact Waterlogic for assistance or help finding an Authorized Service Representative.



ICE 900 FEATURES AND BENEFITS

ICE Making Capacity

22 kg (44 pounds) of ice making per day with a 4 kg (8.8 pound) insulated storage bin.

High Volume Storage and Water Capacity

17 liters (4.5 gallons) of Ambient storage combined with 3.8 liters (1 gallon) Cold and 5.3 liter (1.4 gallon) Hot Tank.

Large Dispense Area

8 inch dispense height for Ice dispense and 8½ inches for water dispense height with full width drip tray.

Reverse Osmosis Filtration

ICE 900 is an innovative hybrid of a reverse osmosis water purification system.

Pure ice production utilizing the freezing point method

Principle that purest water freezes at 0°C (32°F) while non-pure water will freeze at a temperature below that (Patent application: No.2005-99663, 2005-365293, 200510127096.9, 11/342,117).

Energy Efficient Design

Energy-efficiently designed Super Iguassu Ice delivers purified water to the ice making unit to make pure ice while simultaneously sending cooled water to Cold-water tank.

Power Saving function

Light detection sensor activates power save function to turn off Hot and reduce consumption at night.

24 Hour natural water circulation system (N.W.P.W.)

The *ICE 900* purification system is designed to allow water to continuously flow for 24 hours within the water purifier by adopting a natural circulation method. This mode, entitle N.W.P.W., applies the natural weight of water pressure to always supply clean and fresh water. (Patent: No.105585)

Child Safeguard (Ice Dispensing and Hot Water Locking Function)

Setting the Ice Cube /Hot water locking function using Lock / Hot touch sensor buttons prevents ice cube and hot water from being dispensed from the unit. The *ICE 900* automatically defaults to coldwater mode when after 5 seconds.

Separate water delivery from a single spout

Ambient, Cold and Hot Water come out from a single spout. Programmable continuous dispense available in 1 Liter, 1.5 Liter, 4.5L, and 8 Liter dose.

Audible Signals

Programmable audible controls provide user feedback and can be disabled.

Leak Detection

ICE 900 comes standard with a leak detection sensor at the bottom of the unit, which protects unit by closing water supply valve and alarming user if a leak is noticed.



MODEL/PART DESIGNATIONS

BRAND NAME	DESCRIPTION	MODEL – PART NUMBER
ICE 900	ICE 900 Ambient, Cold, Hot and Ice	CHP-5070S

SPECIFICATIONS

ITEM	<u>ICE 900</u>	
Water Input	Potable Water 39-100°F <300ppm hardness ¼" Quick Connect Input	
Cold-water Temperature	3°C (37°F) Thermistor Controlled	
Hot Water Temperature	90°C (199°F) Automatic Thermostat with 105°C (221°F) Manual Reset Hi Limit	
Service Pressure	7-120 psi Supply – Internal Pressure Reducer	
Environmental Temperature	35° - 100°F (2° - 37°C)	
Refrigerant Gas	R134a – 98 grams (3.46 ounces)	
	Ambient – 16.9 Liters (4.5 Gallons)	
Tank Conscition	Hot – 5.3 Liters (1.4 Gallon)	
	Cold – 1.8 Liters (1 Gallon)	
	Ice Storage Bin – 4 Liters (8.8 Pounds)	

SPECIFICATIONS

Ice Making Capacity (differ depending on ambient temperature)	Ambient Temperature20°C (68°F)	Ambient Temperature 30°C (86°F)
Ice Cycle Time	11 +/- 1 minutes per cycle 12 +/- 1 minutes per cycle	
Daily Ice Production Capacity	20 Kg (44 pounds) per day	17 Kg (38 pounds) per day
Ice Size	13 Grams +/- 1 gram	
Number of Ice Cubes per Cycle ¹² cubes per cycle <i>*may have one ice cubes that drops into the cold water</i>		the cold water
Ice Storage Bin	4 Liters (8.8 Pounds)	



SHIPPING SPECIFICATIONS

ITEM		
Width/Depth/Height of ICE 900	430 x 492 x 1490 mm (17" x 19 ½" x 50")	
Weight – Dry (w/o packaging)	53.5 kg (118 pounds)	
Shipping Information (length x width x height)	533 x 584 x 1575 mm (21" x 23" x 62") 4 units per pallet	
Shipping Weight – Dry	59 kg (130 pounds)	

ELECTRICAL SPECIFICATIONS

ELECTRICAL SUPPLY	120V/60Hz	15 Amp Service ⁺
COMPONENT	POWER (approximate)	AMP DRAW (approximate)
Heater	500 Watts	4.16 Amps
Compressor	200 Watts	1.67 Amps
Pump	20 Watts	0.17 Amps
<i>ICE 900</i> TOTAL	720 Watts	6.00 Amps

	110V/60Hz	15 Amp Service ⁺
POWER CONSUMPTION	POWER (approximate)	AMP DRAW (approximate)
Hot	500 Watts	4.16 Amps
Cold	155 Watts	1.29 Amps
Ice Making	220 Watts	1.16 Amps



OPERATING INSTRUCTIONS

Hold water selection touch screen icon for 3 seconds until LED indicated water selection is active.







CHUNGHO U.S.A. APPLIANCE WARRANTY

ONE YEAR LIMITED WARRANTY

For one year from the date of purchase, when this product is operated and maintained according to instructions attached to or furnished with the product, ChungHo U.S.A. (hereafter "ChungHo") will pay for replacement parts and repair labor* to correct defects in materials or workmanship or replace the product at our discretion. Service must be provided by a ChungHo designated service company. This warranty does not cover the sealed refrigeration system (*repair labor provided by local area dealer)

FIVE YEAR (EXTENDED) LIMITED WARRANTY ON THE SEALED SYSTEM (OPTIONAL UPON PURCHASE)

For five years from the date of purchase, when this product is operated and maintained according to the instructions attached to or furnished with the product, ChungHo will pay for replacement parts and repair labor* to correct defects in materials or workmanship in the sealed refrigeration system, including the compressor, evaporator, or replace the product at our discretion. Service must be provided by a ChungHo designated service company (*repair labor provided by local area dealer).

ITEMS CHUNGHO WILL NOT PAY FOR

- 1. Service calls to correct the installation of your product, instruct you how to use your product, to replace house fuses or reset circuit breakers, replace or clean filters, or to correct house wiring.
- 2. Service calls to repair or replace water filters. Those consumable parts are excluded from warranty coverage.
- 3. Repairs when your product is used for other than normal water purification needs.
- 4. Damage resulting from accident, alteration, misuse, abuse, fire, flood, acts of God, improper installation, installation not in accordance with electrical or plumbing codes, or use of products not approved by ChungHo.
- 5. Replacement parts or repair labor costs for units operated outside the United States or Canada.
- 6. Pickup and delivery. This product is designed to be repaired at the customer site.
- 7. Repairs to parts or systems resulting from unauthorized modifications made to the appliance.
- 8. Expenses for travel and transportation for product service in remote locations.
- 9. The removal and reinstallation of your appliance it if is installed in an inaccessible location or is not installed in accordance with published installation instructions.

DISCLAIMER OF IMPLIED WARRANTIES; LIMITATION OF REMEDIES

CUSTOMERS SOLE AND EXCLUSIVE REMEDY UNDER THIS LIMITED WARRANTY SHALL BE PRODUCT REPAIR AS PROVIDED HEREIN. IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR OR THE SHORTEST PERIOD ALLOWED BY LAW. CHUNGHO SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES AND PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR LIMITATIONS ON THE DURATION OF IMPLIED WARRANTIES OF MERCHANTAILTY OR FITNESS, SO THESE EXCLUSIONS OR LIMITATIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY, FROM STATE TO STATE OR PROVINCE TO PROVINCE.

Outside the 50 United States and Canada, this warranty does not apply. Contact your authorized ChungHo dealer to determine if another warranty applies.

If you need service, first see the "Troubleshooting" section of the User's Manual Guide. After checking "troubleshooting", additional help can be found by contacting your local certified ChungHo dealer.

You must provide proof of purchase or installation date for in-warranty service. 03/05



ICE 900 PRINCIPLES OF OPERATION

The ice making system of the *ICE 900* automatically operates according to designed program settings based upon inputs from the Cold-water, Ice, and Environmental Sensors. You must allow time for water fill and refrigeration system to cool before the *ICE 900* will start to make ice.

1. Ensure the ICE making function is enabled (Red ICE LED should be on as shown:



- 2. Level of purified water must be at proper operating level. The compressor and heater will turn on once minimum water level is reached.
- 3. To produce cold-water, the compressor and circulation pump must operate properly. (The coldwater production process automatically operates according to designated programming).

Cold-water operation: This refers to an operation that makes cold-water by continuously circulating and supplying water over the cooling fingers in the ice tray and into the cold-water reservoir. Water temperature in the cold-water tank is automatically checked by the cold-water temperature sensor, and if it drops below the set temperature, the cold-water operation will automatically stop (set point is reached).

- 4. Cold-water reservoir must be cold before the ice making system will start to produce ice.
 - a. Water supply action: this refers to an action to supply about .25g (1L) of cold-water every 50 seconds into ice making mechanism to make ice.
 - b. Ice making action: this refers to the making of ice by way of an ice tray by supplying cold refrigerant onto the fingers with tray full of water.
 - c. Harvest action: this refers to an action to separate the ice created in the ice tray by supplying hot refrigerant into fingers to release the cubes.
- 5. When the ice storage house if full, the ice detection sensor will automatically stop the ice making process.
- 6. If ice in the storage house is not used for long periods of time, Ice may melt, and during ice dispensing, smaller melted ice cubes can come out.

TDSs (Total Dissolved Solids) of ice may increase depending on environment in which the ice is created.

Higher temperatures surrounding the machine will result in longer ice making process her temperatures surrounding the machine will result in longer ice making process



DISPLAY AND SYSTEM FUNCTION SETTINGS

USB
CDS
ICE FULL
WATER FULL
HOT
CONST. 0.1.5 0 (.1.5 0 (.4.5 0
,80

USB	USB Port	Auxiliary Charging port for cell phone and other devices.
O CDS	Light Detection Sensor	When in Power Saving Mode (ECONO LED is Red), the <i>ICE 900</i> detects the amount of light surrounding the machine. The hot water will automatically be turned off when there is no light and turned on when there is sufficient light surrounding the unit.
ICE FULL	Ice Storage Full	Indicates when ice storage is full.
WATER FULL	Ambient Water Tank Full	Indicates when ambient water tank is full.

LOCK/ICE FUNCTIONS

The LOCK FUNCTION is a safety function that allows or prevents hot water and ice from dispensing from the *ICE 900*. To change LOCK setting, touch and hold the button for approximately 3 seconds until the LED light indicates the desired setting.

The ICE FUNCTION enables and disables ice making process. To change ICE setting, touch and hold the button for approximately 10 seconds until the LED light indicates the desired setting.

LOCK	LOCK OFF - Hot water and Ice dispense are enabled		
ICE	ICE OFF - Ice making is <u>disabled</u>		
LOCK	LOCK ON - Hot water and Ice dispense are disabled		
ICE	ICE OFF - Ice making is disabled		
LOCK	LOCK OFF - Hot water and Ice dispense are enabled		
ICE	ICE ON - Ice making is <u>enabled</u>	* Default Setting Most Applications	
LOCK	LOCK ON - Hot water and Ice dispense are disabled		
ICE	ICE ON - Ice making is <u>enabled</u>		



DISPLAY AND SYSTEM FUNCTION SETTINGS

HOT/ECONO FUNCTIONS

The HOT FUNCTION enables or disables the production of the Hot Water. To change HOT setting, touch and hold the button for approximately 3 *seconds* until the LED light indicates the desired setting.

The ECONO FUNCTION enables and disables Power Saving Mode. To change ECONO setting, touch and hold the button for approximately *10 seconds* until the LED light indicates the desired setting.

When in Power Saving Mode, the *ICE 900* detects the amount of light surrounding the machine. Hot Water production will automatically be turned off when there is no light, and turned on when there is sufficient light surrounding the *ICE 900*.

LOCK	HOT	Hot Water production is disabled .
ICE	ECONO	ECONO (Power Saving Setting) is disabled.
~	НОТ	Hot Water production is enabled .
	ECONO	ECONO (Power Saving Setting) is disabled.
.10	*Default Setting	Hot Water production is enabled.
CONST. 01.52		ECONO (Power Saving Setting) is enabled.
60110 0,4.5 ¢		When in Power Saving Mode, the ICE 900 detects the amount of
		light surrounding the machine. The hot water will automatically
		be turned off when there is no light, and turned on when there
		is sufficient light surrounding the ICE 900.

TURN ON / OFF SOUND FUNCTION



<u>Turn off or on the Sound Function</u> - Push and hold the HOT/ECONO button and the Hot Product Select Button at same time for 5 seconds to turn on/off sound function.

It may take up to 10 minutes for the hot tank to reach set point temperature when coming out of ECONO Mode. Ensure customers understand ECONO function or we recommend disabling to avoid needless service calls for no hot water upon initial use.



CONST (CONTINUOUS DISPENSE) FUNCTION

The purpose of the CONST (Continuous Dispensing) function is to provide the option of continuous dispensing of Ambient or Cold-water for 1, 1.5, 4.5 or 8 Liters (.26, .40, 1.2 or 2.1 Gallons) at a time. Hot Water is not an option for continuous dispensing.

To enable the CONST (continuous dispensing) option, touch the touch sensor button for approximately 3 seconds until the 1 Liter (.26 Gallons) indication turns red. Touch the touch sensor button again until the amount of water desired to continually dispense is selected.



- 1. Touch CONST (continuous dispense) touch sensor for 3 seconds turn on CONST function. Repeatedly touch sensor to select the amount of cold or ambient water amount desired. The 1, 1.5, 4.5, or 8 Liters light will turn red to indicate selection.
- 2. Select Ambient or Cold-water to dispense. Hot Water is not an option for continuous dispensing.
- 3. Place container big enough to hold the amount of water selected to dispense at one time under the dispenser.
- 4. Push container against water dispensing button to start continuous dispense.

To STOP CONTINUOUS DISPENSE, touch the Hot, Cold, or Ambient water selection button





ERROR PROOFING THE FRONT DISPLAY

We **<u>strongly recommend</u>** covering the LOCK/ICE and the HOT/ECON buttons and LED indicators once programmed to prevent users from disabling machine function inadvertently.

Covering programming buttons prevents accidental disabling of ICE making and Hot water functions by end users and will reduce unnecessary emergency service calls accordingly.

<u>*Tip*</u> - Use black tape or Part Number 21-1280 to Cover Programming Buttons LED lights before installing decal to help prevent light from coming thru.



Black Label to Cover Programming Buttons Part Number 21-1280





SERVICE REQUIREMENTS

MARNING! Read and understand the contents of this manual before attempting to service ICE 900 Water Treatment System. Failure to follow the instructions in this manual could result in death, serious personal injury, or severe property damage. Only trained and qualified technicians should attempt to install, maintain, or service the ICE 900.

A DANGER! HIGH VOLTAGE ELECTRICAL HAZARD. Unplug before inspection and service.

Annual preventative maintenance is the key to performance and should be performed off-site if possible as this takes approximately 4 hours to complete. Rotating inventory is strongly encouraged.

- 1. Visually inspect all electrical and water connections for signs of wear or damage.
- Visually inspect the water inlet solenoid (SV Raw Water) for heat damage.
 Replace the water inlet solenoid #21-1095 if any sign of heat damage (discoloration or melting) is noticed. Recommend changing inlet solenoid annually as proactive preventative maintenance.
- 3. **Change Filters.** Filter replacement based upon 20 liters (5.3 gallons) usage per day. Local water conditions will dictate your exact filters requirements and service intervals

Sediment Filter (5 micron) #21-1200 – every 6 Months

Pre-Carbon Filter (10 micron) #21-1205 – every 12 Months

RO Membranes (0.0001 micron) #21-1210 – *every 24 Months* or once TDS is > 10% incoming supply. 2 each 80 gallon per day RO membranes are in parallel for increased production and recovery rates.

Post-Carbon Filter (1 micron) #21-1210 – every 12 Months

Flush 19 Liters (5 gallons) of water through the carbon filters to rinse carbon fines. Do not rinse the Filters through the unit Solenoid Valve(s) and Tanks if at all possible to avoid contamination. Flush RO membrane to rinse preservative from the membrane for 4 hours.

- Change the ice (#21-1040), cold (#21-1030), and environmental (#21-1045) sensors *See "Design changes to main PCB and environmental sensor affecting serial numbers Z-10369 and beyond" elsewhere in this manual" on a regular basis (annually) to prevent unexpected downtime and avoid emergency service calls.
- 5. Ensure there is adequate (minimum of 4") clearance around the unit and clean the condenser grill and Compressor fan to provide efficient cooling system operation.
- 6. Test the drip tray overflow function. Water should drain through the Drain Outlet into a floor drain. Clean and dry out the drip tray. Clean or replace the drain pump if present.
- 7. Sanitize entire unit including cold reservoir, ice making tray, and ice storage bin per instructions.
- 8. Clean and sanitize external surfaces of the unit. Use soap and water or chemicals that are compatible with ABS plastic and will not damage or degrade the product surfaces.

WARNING! SANITIZER MAY CONTAIN HAZARDOUS CHEMICALS. Use of proper personal protective equipment such as rubber gloves and eye protection is required.



DESIGN CHANGES TO MAIN PCB AND ENVIRONMENTAL SENSOR

Change implemented effective Serial Numbers Z-10369

Environmental Sensors <u>are not interchangeable</u> – verify sensor part number to the applicable serial number listed below.

Location of Environmental Sensor



OLD LOCATION Serial Numbers: Prior to Z-10368 Date of Manufacture: Prior to 7-6-2017

WLCP PN 21-1045 Iguassu PN 45-0022-0

NEW LOCATION Serial Numbers: Z-10369 and beyond Date of Manufacture: After 7-6-2017

WLCP PN 21-1046

Iguassu PN 41-1354-0

Environmental Sensor Part Number Changes

Serial Numbers Z-10064 through Z-10368



Serial Numbers after Z-10369



Main PCB Design Changes

The two different designs of the Main PCB <u>are not interchangeable</u> – verify Main PCB part number to the applicable serial number listed below.

Serial Numbers Z-10064 through Z-10368

Serial Numbers after Z-10369





Environmental Sensor Connection to PCB





CONSUMABLES AND RECOMMENDED SPARE PARTS DRAWINGS





CONSUMABLES AND RECOMMENDED SPARE PARTS DRAWINGS





REPLACEMENT COMPONENTS (CONSUMABLES)

Component	Part No.	Frequency of Replacement	Stocked?	
Sediment Filter	21-1200	Every 6-12 months or as required.	Yes	
Pre-Carbon Filter	21-1205	Every 12 months or as required.	Yes	
Post-Carbon Filter	21-1215	Every 12 months or as required.	Yes	
Membranes – requires 2 each	21-1210	Inspect every 12 months and replace if needed. At the least membranes should be replaced every 24 months.		
Cold Sensor Probe	21-1030	Every 12 months or as required.	Yes	0-
Ice Sensor	21-1040	Every 12 months or as required.	Yes	
Environmental Sensor	21-1045	Every 12 months or as required. *For for serial numbers between Z-10064 to Z-10368 Mfg. P/N: 45-0022-0	Yes	-0-
Environmental Sensor	TBD	Every 12 months or as required. *For serial numbers after Z- 10369. Mfg. P/N: 41-1354-0	Yes	-0-
Wire from Main PCB to Environmental Sensor	TBD	Every 12 months or as required. *Use this P/N for serial numbers after Z-10369. Mfg. P/N 41-1349-0	Yes	
Inlet Solenoid (SV Raw Water)	21-1095	Every 12 months or as required.	Yes	



RECOMMENDED SPARE PARTS

Component	Part No.	Stocked?	
Filter O-ring	21-1275	Yes	\bigcirc
Power Transformer	21-1090	Yes	Print of the second sec
lce Coupler	21-1050	Yes	
Optical Level Control (Water Level Sensor)	21-1085	Yes	
Main Printed Circuit Board (PCB) *For for serial numbers between Z-10064 to Z- 10368	21-1070	Yes	
Main Printed Circuit Board (PCB) *Use this P/N for serial numbers after Z-10369.	TBD	Yes	
Cold Solenoid (SV)	21-1105	Yes	
Dispensing Solenoid (SV)	21-1110	Yes	
Ice Full – Transmitter	21-1020	Yes	O'
Ice Full – Receiver	21-1025	Yes	
Cold-water Level Sensor (Probe)	21-1250	Yes	- 1 Dance
Front Panel Programming Sticker	21-1280	Yes	

Replacement and recommended spare parts can be obtained from *Waterlogic* or an *Authorized Waterlogic Dealer*.

NOTE:

At the **end of this product's life**, ensure that it is disposed of in an environmentally friendly manner which is fully compliant with all Federal/State/Local Requirements and Guidelines.



OVERVIEW DRAWINGS





FLOW DIAGRAM





FILTER REPLACEMENT

Remove Front Bottom Cover Panel to gain access to the main filter housing area.



- 1. Push down panel compressing spring loaded pins.
- 2. Gently pull towards you to release the front panel hooks.

Remove and Flush Filter to be replaced:

- 1. Remover front lower panel per above. Turn off incoming water supply. Power On.
- 2. Use Filter Station 1 (Sediment) to Flush Sediment and Carbon Filters.
- 3. Remove filter to be changed. The Filter Block identifies the correct location of the filters. Unscrew by hand or use strap wrench if needed.





Install new filter.



A CAUTION! ENSURE OUTER O-RING REMAINS IS IN PLACE AT TOP OF FILTER. DO NOT DISCARD THE O-RING AT TOP OF FILTER.

Failure to keep the O-ring in place will result in the filter leaking.





4. Turn on Incoming Water Supply



5. Flush Filter to drain or basin.



<u>CAUTION!</u> FILTERS FLUSH REQUIRED.

In order for filters to perform as represented and to provide the best quality water possible, it is essential that filters be replaced periodically. The frequency of Filters changes depends upon your water quality and your water usage. For example, if there is a lot of sediment and/or particles in your water, then you will have to change your sediment filters more frequently than a location with little to no sediment. Be sure to replace your Filters whenever you notice a decline in the performance, whether it is a drop in flow rate and/or pressure or an unusual taste in the water.

Flush preservative from RO membrane to drain before use. Check incoming and output Total Dissolved Solids (T.D.S.). The product water (output) should be <10% of the incoming feed water.

Do not flush carbon fines into RO membranes as this will degrade the membranes.

Filters should not be flushed prior to 24 hours before installation to limit Microbial Growth.

Always use Potable and Safe Water Supply

Flush Filters in the following order:

- 1. Pre-Carbon
- 2. Post-Carbon
- 3. Sediment

*Do not flush filters through the RO membranes as it will foul and degrade the membranes.

Note: Move the filter being flushed to the Sediment Filter Location to flush filter.





ICE TRAY MOTOR AND COUPLER ASSEMBLY

Ice tray motor removed with the	Coupler removed from the Ice	Coupler Location
coupler still attached.	Tray Motor	
		Coupler inserted into ice tray
(1) Micro switches		between two (3) micro
(2) Coupler fits into the tray itself		switches with the (2) two-way
in between the switches		motor detached.

<u>Note</u>: It may be necessary to activate the drain switch to reposition the motor to reassemble the Coupler/ Motor Assembly.

ICE TRAY COUPLER POSITION SWITCHES



Ice releasing Function



Rotating to make ice position



Ice making position



ENVIRONMENTAL TEMPERATURE SENSOR REPLACEMENT

Environmental Temperature Sensor (aka Surrounding Temperature Sensor) is located below the PCB controller – behind the upper front assembly.

Environmental Sensor – Part and Location



OLD Serial Numbers: Prior to Z-10368 Date of Manufacture: Prior to 7-6-2017 <u>WLCP PN 21-1045</u> Iguassu PN 45-0022-0

NEW Serial Numbers: Z-10369 and beyond Date of Manufacture: After 7-6-2017

<u>WLCP PN 21-1046</u> Iguassu PN 41-1354-0



COOLING SENSOR REPLACEMENT





ICE SENSOR REPLACEMENT





SENSOR TABLES

(°F)	(ΚΩ)	(°F)	(ΚΩ)	(°F)	(KΩ)
-22	117	41	22.2	104	5.8
-13	90	50	18.1	113	4.9
-4	70	59	14.7	122	4.1
5	55	68	12.1	131	3.5
14	43.3	77	10	140	3
23	34.5	86	8.3	149	2.6
32	27.6	95	6.9	158	2.2

Ice Making Temp Sensor, Cold Water Temp Sensor Table



Environmental Temp Sensor Table

(°F)	(ΚΩ)	(°F)	(ΚΩ)	(°F)	(ΚΩ)
-22	885	41	127	104	26.6
-13	652	50	99.5	113	21.8
-4	485	59	78.5	122	18
5	364	68	62.5	131	14.9
14	276	77	50	140	12.4
23	211	86	40.3	149	10.4
32	170	95	32.6	158	8.7

Ice Making Time - Minutes

(°F)	Minutes	(°F)	Minutes	(°F)	Minutes
32	6.4	59	7.4	86	10
41	6.4	68	8	95	10.8
50	6.7	77	9	104	12.9





HOT TANK RESET





ELECTRICAL SCHEMATIC





PRE-INSTALLATION PROCEDURES

<u>A DANGER!</u> ELECTRICAL SHOCK HAZARD.

Only qualified personnel who have read and understand this entire manual should attempt to install, or service this unit, failure to do so could result in death or serious injury. DO NOT plug into an electrical supply until specifically instructed.

MARNING! ALWAYS SANITIZE BEFORE USE.

Sanitize before use to eliminate any potential microbiological contaminates.

Materials Needed:

- Personal Protective Equipment. Rubber or Nitrile Safety Gloves and Protective Eyewear
- Phillips Screwdriver
- Water Pitcher or Container to collect water from the faucet
- 1 Capful of Household Bleach (5.25% Sodium Hypochlorite)
- ¼" Plastic Tubing, at least 4 feet in length, and assorted ¼" quick connect fittings
- TDS Meter and Test Strips for measuring chlorine Optional
- 1/8 NPT Female Thread to ¼" Compression Fitting (Used to connect hose to drain fittings)
- 1. Unpack the *Waterlogic ICE 900 Water Treatment System* and check exterior for damage.

<u>MARNING!</u> ICE 900 WATER TREATMENT SYSTEM IS HEAVY.

Use proper lifting aids and handling techniques to avoid injury. Use assistance as single person lift could cause injury. Always drain before handling and transporting and handling to reduce the weight of the unit.

2. Carefully remove front lower panel. Push down and gently pull toward you to release hooks from side panel.

Flush Filters

<u>CAUTION!</u> FILTERS FLUSH REQUIRED.

In order for our Filters to perform as represented and to provide the best quality water possible, it is essential that Filters be replaced periodically. The frequency of Filters changes depends upon your water quality and your water usage. For example, if there is a lot of sediment and/or particles in your water, then you will have to change your Filters more frequently than a location with little to no sediment. Be sure to replace your Filters whenever you notice a decline in the performance, whether it is a drop in flow rate and/or pressure or an unusual taste in the water.

NOTE: Filters should not be flushed prior to 24 hours before installation to limit Microbial Growth.



<u>CAUTION!</u> O-RING TO REMAIN IN PLACE AT TOP OF FILTER. Failure to keep the O-ring in place will result in the filter leaking.

<u>CAUTION!</u> DO NOT DISCARD THE O-RING AT TOP OF FILTER. Filters are not supplied with the O-Ring.

FLUSH PRE-CARBON FILTER

- 3. Plug power cord in.
- 4. Turn off Incoming Water Supply.
- 5. Remove white tube above Sediment Filter on the Filter Block.

- 6. Install a tube that will reach the drain or bucket that will be used to collect water used in filter flushing process.
- 7. Remove Sediment Filter and set aside by unscrewing filter from filter block by hand or using a strap wrench if needed.

Flushing of the filters will take place in the Sediment Filter Location

- 8. Install Pre-Carbon Filter into the now empty Sediment Filter Location.
- 9. Turn on Incoming Water Supply







- 10. Run 7-8 Gallons of Water through the Pre-Carbon Filter.
- 11. Turn off Incoming Water Supply.

FLUSH POST CARBON FILTER

12. Install Post-Carbon Filter into the empty Sediment Filter Location and flush as stated for the Pre-Carbon Filter above.

FLUSH SEDIMENT FILTER

- 13. Install Sentiment Filter into its location and flush as stated for Pre-Carbon Filter above.
- 14. Reinstall the filters back to their correction location. The Filter Block identifies correct location of the filters.









SANITIZATION

1. Remove Top Cover to access the Ambient Tank– remove the two screws from back of the Top Cover. Slide the Top Cover towards rear of the *ICE 900* and lift Top Cover Up.





FLUSH HOT TANK



Do not fill past the "fill line" or the overflow sensor will shut down the system. If this occurs, see the Troubleshooting section addressing.

- 2. Access the Ambient Water Tank by removing the Tank Cover rotate counter clockwise as shown and fill the Ambient Tank 2-3 times to ensure that any odorous tastes left in the system lines, etc. are removed.
- 3. Remove the Front Bottom Cover to the *ICE 900* to gain access to the main filter housing area and to reveal the filter block.
- 4. Remove Hot Flush Valve Cover located above the Filter Block as shown.





- Attach a 3/8" hose from the Hot Water Flush Valve. Hose to be long enough to drain water into the drain or bucket.
- 6. Open Hot Flush by turning the flush valve counter clockwise.
- Turn "DRAIN" valve "ON" and drain the water in the Hot Tank.

8. Catch water from the Hot Tank Flushing Valve in a bucket or drain. Re-fill and drain the ambient water tank for 2-3 times to complete the flushing of the Hot Water System.

NOTE: Systems LED's on the front panel will continuously and flash and the *ICE 900* will sound while the "DRAIN" switch is in the ON position.

9. Add one capful of household bleach to the inside of the Ambient Tank.



<u>CAUTION!</u> Always ensure proper ventilation and use proper personal protective equipment such as gloves and eye protection when using chemicals. Refer to Material Safety Data Sheet for specific requirements of each chemical product. Take all necessary precautions to prevent sanitizer from contacting eyes, clothing, and any other surfaces in could damage (carpets).

10. Fill Ambient Tank with Water. Do not fill past the "fill line" or the Overflow Sensor will shut down the system. If this occurs, see the Troubleshooting section addressing.



3/8" Hose







11. Run several gallons of water, a minimum of 8 gallons through the faucet by dispensing cold-water to dilute and remove the sanitizer from the cold circuit. You can use chlorine test strips to evaluate the water. Ensure any odor / taste issues have flushed out of the machine



Compressor Test

- 12. Once the water level is above minimum the compressor will automatically start. Verify by feeling the compressor and the discharge of heat off the condenser at the rear grill of the machine. Heat exchange is a signal that the refrigeration system is working properly.
- 13. Once the cold-water in the cold reservoir reaches its target temperature, the ice making process will start until the ice bin is full. The ice full light will illuminate green and the compressor will shut off. Draw a glass of cold-water and ice verify it is has been chilled to proper temperature and inspect cubes to ensure ice making process is running properly.

Heater Test

14. It will take the heater approximately 10 minutes to heat the water from ambient 75°F to the set point. Dispense a cup of hot water to ensure the temperature/odor/taste is acceptable.

MARNING! VERY HOT WATER CAN BURN OR SCALD.

Hot water should be dispensed carefully into insulated container to avoid injury.



DRAINING

Drain the ICE 900 Water Treatment System for transportation per the Draining Instructions in this and all other supplied manuals.



A WARNING! STORE UNIT EMPTY. ALWAYS SANITIZE BEFORE REUSE. The unit must be completely drained and sealed before storing to avoid stagnation and reduce microbiological contamination (potential bacterial growth).

- 1. Remove the front lower cover to gain access to the Hot Flush Valve. Remove the front lower cover by carefully pushing down and gently pull towards you to free the panel hooks from the side panel slots.
- 2. Remove Hot Flush Valve Cover located above the Filter Block as shown. Follow instructions to remove Front Bottom Cover.



Hot Flush Valve Cover

3. Attach a 3/8" hose from the Hot Water Flush Valve. Hose to be long enough to drain water into the drain or bucket.





4. Open Hot Flush by turning the flush valve counter clockwise.





ICE 900 Supplemental Service Manual

6. Catch water from the Hot Tank Flushing Valve in a bucket or drain. Re-fill and drain the ambient water tank for 2-3 times to complete the flushing of the Hot Water System.

<u>Note</u>: Systems LED's on the front panel will continuously and flash and the ICE 900 will sound while the "DRAIN" switch is in the ON position.

7. Drain the Ambient / Cold-water System

8. Reassemble the *ICE 900* to transport.









INSTALLATION PROCEDURES

Safety and Installation Guidelines

Ensure all Local, State, and Federal Laws and Codes including health and safety guidelines are met when installing Waterlogic Equipment. Only qualified service technicians should attempt installation and service of *Waterlogic* Equipment.



A WARNING! ELECTRICAL SHOCK HAZARD. Always unplug (isolate from power supply) to prevent electrical shock except where electrical tests are specified.

MARNING! IMPROPER SUPPLY OR CONNECTION CAN RESULT IS RISK OF SHOCK. Connect to a 15 amp 120V 60Hz properly grounded outlet (GFI is recommended). Ensure polarity is correct and always use a 3-prong outlet. Consult a qualified electrician if you have any questions.

A WARNING! USE ONLY SUPPLIED POWER CORD. Locate system within reach of power supply. Never use an extension cord or adapter. Do not use a damaged power cord or plug. Keep power cord out of heavy traffic areas and away from heat sources. Do not, under any circumstances, remove ground prong or alter the power cord. Never pull the power plug from the outlet with a wet hand or allow the plug to get wet. Failure to use the supplied power cord will void UL Certification and Warrantv.

<u>A CAUTION!</u> INDOOR USE ONLY. Never exposed to direct sunlight, heat sources, or ambient air temperature above 97°F (36°C) or below 50°F (10°C). Install indoors and keep unit away from excessive humidity. Never expose to freezing temperatures. Ensure there is adequate clearance around the unit to allow refrigeration system condenser to dissipate heat. Warmer environments require more clearance around the unit. Minimum clearance around all surfaces of the machine is 4inches. Installs where the ambient temperature exceeds 80°F, require a minimum of 8-inches clearance for proper heat dissipation and efficient operation.

A CAUTION! USE A WATER PRESSURE REGULATOR. Waterlogic will not be responsible for injury or damage caused by excessive water pressure. Operating pressure to machine must be 40 psi to 60 psi. Be aware any of potential pressure surges caused by building/municipal pumping stations.

A CAUTION! USE UV STABILIZED SUPPLY LINES. Feed the unit with a potable ambient or cold-water supply only. Feed water over 105° F (40°C) can damage the treatment components. Water block devices and external leak detectors are strongly recommended. Locate the unit as close to the water supply and the electrical connections as possible.

MARNING! STORE UNIT EMPTY. ALWAYS SANITIZE BEFORE USE.

The unit must be completely drained and sealed before storing to avoid stagnation and reduce microbiological contamination (potential bacterial growth). Sanitize before use to eliminate any potential microbiological contaminates

The ICE 900 utilizes a Reverse Osmosis Filtration System. The unit and ice making process is calibrated to utilize the supplied filtration and requires a drain connection. Do not alter the filtration system. Refer to all applicable plumbing codes and standards in your area for these requirements (air gap connections and back flow prevention may be necessary).



Pre-installation and sanitization procedures as prescribed in this manual must be performed before installing the *ICE 900 Water Treatment System*.

Always install indoors and place the *ICE 900* on a firm, flat and stable surface. It is critical that the unit be level to produce consistent ice and avoid ice tray freezing issues.

Attach the water supply line to the 1/4" feed water inlet bulkhead fitting on the back of the unit. **Waterlogic** requires the use of a water pressure regulator. Water feed pressure must be between 40-60 psi. Turn on the water supply and check for leaks. Leak detection and prevention are strongly recommended at the source.

- 1. Connect the power cord to the back of the *Waterlogic ICE 900 Water Treatment System* and to a 120 Volt supply.
- 2. Hook up drain and waste water outlet to drain. Condensate pump may be necessary to pump water to drain. See condensate pump installation instructions.
- 3. Move the *Waterlogic ICE 900 Water Treatment System* into its final operating position. Be sure that a minimum of 4" clearance is maintained around both the sides and the back of the unit. This is important to allow proper airflow and heat exchange of refrigeration system.
- 4. Level unit using the adjustable feet to level if necessary. Never install on incline.
- 5. Wait for water to heat and cool to meet customer expectations. Taste water to determine if additional rinsing is required.
- 6. Ensure ice is making 12 properly sized cubes and timing is within expectations (batch of 12 cubes every 11-12 minutes).
- 7. Check the unit for any leaks. External Leak Protection is always recommended.



DRAIN (CONDENSATE PUMP) INSTALLATION

When and why is a pump needed?

All ice units require a drain to take melted ice water from the ice storage house and RO condensate water to drain. If a floor drain is not readily available, a condensation (sump) pump may be required. This all depends on the distance and height to the drain to ensure water is removed and will not back up the drip tray or obstruct the RO process.

CONDENSATE PUMP – TYPICAL PLUMBING

A 3/8" drain is located above the inlet / outlet of the ICE 900 and should be run into the (2) holding area of the condensate pump. The (3) pump outlet should then be plumbed to an available drain.



CONDENSATE PUMP – ALTERNATIVE PLUMBING

Due to certain installation restrictions, it may be necessary to connect the brine line and the drain line from the condensation pump together with a tee union (1).

This is not a recommended installation procedure. It is only provided as an alternative option.

Install (2) check valve to prevent back flow from the condensation pump to the membrane.





ERROR CODES

No Lights on Front Display. - No Power to Front PCB. Trace Power Supply

Water Full Light Flashing – Water overfill.

Ice Full Light Flashing – Ice process fault.

All Systems LED's on the front panel will continuously and flash and the ICE 900 will sound while the "DRAIN" switch is in the ON position.

Leak Detector – Float System in the base of the unit that mechanically shuts off inlet water to entire unit.



TROUBLESHOOTING TIPS

- 1. The Ice 900 RO system and ice storage bin must both be hooked to a floor drain. You can use a one-way check valve to prevent backflow and tee the lines together to reduce overall drain line requirements.
- 2. The Ice Motor Coupler is designed to be the "weak link" when the ice tray goes to dump and the ice is built up abnormally in the top tray or frozen solid, it won't dump and the coupler is designed to break. This is not a coupler issue, but rather a result of a bad ice cycle that jams the ice tray and breaks the coupler.
 - a. Change All Sensors
 - b. Replace Coupler
 - c. Check Ice Production See sample pictures below:
- 3. Auto Flush Valve (AFV) is used to clean the RO membrane at start up by allowing more water to drain to flush contaminants from the surface of the membrane.
- 4. You can use and additional sediment filter for added capacity in locations where sediment filter requires more frequently changes than desired. The pre-sediment filter could be placed outside of the unit. Inside would be ideal to provide leak protection.
- 5. You can check all sensors by ohm meter and calibration chart to determine resistance at a range of temperatures. See chart in technical manual. Change all sensors to be proactive and limit costly down time.

ICE SAMPLE PICTURES

ICE CUBE SHOULD BE JUST LARGER THAN A QUARTER AT THE BASE



ICE CUBE SHOULD NOT HAVE TAIL OR BE MIS-SHAPED.



12 proper size and shape ice cubes should be produced every 11-12 minutes once ice making starts. Time and inspect ice shape and size to ensure ice making process is within proper tolerance or sensors could be out of calibration.