

WL7 FIREWALLTM TECHNICAL MANUAL





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WL7 MANUAL

Congratulations on your choice of the *Waterlogic WL7 Water Treatment System*. The *WL7 Water Treatment System* model dispenses cold, ambient, sparkling and hot. Every *WL7 Water Treatment System* includes:



High Performance Multi-Stage Filtration



Bio-cote® Anti-Microbial Protection



Firewall Advanced Purification

The *Waterlogic WL7 Water Treatment System* provides exceptional quality and great tasting water with every use.

INTRODUCTION

Carefully read and follow all instructions to ensure proper and efficient operation of your *Water Purification System*. Contact *Waterlogic* or an *Authorized Waterlogic Dealer* if you have any questions.

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.

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

Products manufactured and marketed by *Waterlogic* and its affiliates are protected by patents.

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.

Waterlogic technical manuals cover voltages of both 120v and 220v for all our markets. Please ensure that you carefully read the information in this manual and for any parts specific to any market, refer to your technical agreement or specific part listing.

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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>ADANGER!</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.
- <u>CAUTION!</u> Indicates a situation which, when not avoided, results or has the potential to result in minor injury; and/or minor property damage.

SAFETY PRECAUTIONS

Basic safety precautions should be followed, including the following:

Ensure all local 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. Always read the entire operating instructions before using the appliance and save these instructions for future use. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

<u>Manger!</u> This product can cause death or severe injury if incorrectly operated, installed or maintained. The installation, maintenance, sanitising and any repair must be performed by qualified persons trained by Waterlogic International or their approved distributors only. Do not remove any panel or cover to protect against electrical shock and exposure to UV radiation.

<u>DANGER!</u> ELECTRICAL SHOCK HAZARD. Always use a dedicated and properly earthed outlet. Unit should be protected by residual current device (RCD) having a rated residual operating current not exceeding 30mA. Use only Waterlogic supplied power cord. Never use extension cords or power strips to connect unit. Do not use if the power supply cord is damaged. Always unplug from power supply prior to servicing.

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 aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

<u>MARNING!</u> 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.

<u>MARNING!</u> UV-C EMITTER (UV LAMP). This appliance contains a UV-C emitter (UV Lamp).

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UV-C radiation may, even in little doses, cause harm to the eyes and skin. Unintended use or damage to the housing may result in the escape of dangerous UV-C radiation. Never operate the UV-C emitter if damaged or removed from enclosure. Do not touch or look directly into the faucet.

<u>WARNING!</u> Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.

MARNING! Do not damage the refrigerant circuit.

<u>WARNING!</u> DO NOT OPERATE IF DAMAGED. Unplug for safety. Contact Waterlogic or authorized dealer for repair, service, and installation to avoid hazards.

<u>WARNING!</u> HOT WATER. Unit produces Hot Water in excess of 87°C. Water above 52°C can cause severe burns or scalding. Keep unauthorized people and children away from the unit to avoid accidental dispensing of hot water.

MARNING! 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 designed for the supplemental bactericidal treatment of public drinking water, or other drinking water, which has been tested and deemed acceptable for human consumption by the state or local health agency having jurisdiction. The system is designed to reduce normally occurring non-pathogenic or nuisance microorganisms only. System is not intended for treatment of contaminated water.

<u>WARNING!</u> TIP HAZARD. Dispenser could tip or fall causing serious injury. Always install unit on a firm, flat, and level surface and secure the WL7 Water Treatment System to the base cabinet with the screw provided to lock the components together. Secure unit to cabinet, wall, or floor if needed. Never place heavy items on top of unit and never climb, stand, or hang on unit or storage cabinet to prevent injury and damage.

<u>WARNING!</u> 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.

<u>WARNING!</u> 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. This appliance is intended to be used in household and similar applications such as: staff kitchen areas in shops, offices and other working environments; farm houses and by clients in hotels, motels and other residential type environments; bed and breakfast type environments, catering and similar non-retail applications. Never expose to direct sunlight, heat sources, or ambient air temperature above 30°C (86°F) or below 2°C (35°F). 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 50mm. Installs where the ambient temperature exceeds 25°C, require a minimum of 100mm clearance for proper heat dissipation and efficient operation.

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CAUTION! 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 2.5Bar to 3.5Bar. 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 25°C (77°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.

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WL7 FEATURES AND BENEFITS

Firewall™ UV Purification

Firewall proprietary technology purifies outgoing water at the point-of- dispense. Firewall keeps the dispense nozzle free from external contamination as well as purifying the outgoing water, making the safest water possible for every single dispense.

Cold, Ambient, Hot, Extra Hot and Sparkling Water Options

Cold and hot water temperature set points are programmable to meet a wide range of customer demands. High Capacity 4.5 Litre cold only, 3.8 Litre Cold and sparkling capacity, 0.5 Litre Sparkling Capacity, and a 1.5 Litre Hot Tank.

Premium Sparkling Water & High Capacity Cold Water Featuring Ice Bank Technology

Premium Sparkling Water produced in a stainless-steel carbonator with optimized technology. Ice Bank Technology provides limitless cold-water capacity. A stainless-steel drinking water coil and exclusive circulation system improves thermal dynamic efficiency.

BioCote® Anti-Microbial Protection

Key surfaces surrounding dispensing areas and drip tray are infused with an exclusive silver additive called BioCote[®]. Silver is a natural anti-microbial that inhibits the growth of microorganisms providing additional surface protection.



Large Pass-Through Dispense Area with Recessed Sanitary Faucet

10.75 inch dispense height, large removable BioCote® drip tray, back lighting in dispense area.

Leak Prevention

Extra inlet solenoid with timer provides redundant protection and reduces accident potential.

Customizable Programming

Settings for optimizing each WL7 include; Hot Temp Set Point, Extra Hot Temp Set Point, Filter Timer, Energy Saver (Heater Sleep) Mode, and Bottles Saved Counter.

Child Safeguard

Hot Water warning screen during selection followed by main dispense prevents accidental use. Screen automatically defaults back to cold selection to prevent accidental dispensing of hot water.

Intuitive User Interface with Bottles Saved Counter

State of the art user controls with in screen reminder for constant messaging of plastic bottles saved.

Advanced LCD Screen with Auxiliary Messaging

Brilliant 5" color display with interactive interface and programmable marketing messaging.

Speedy Care – Maintenance and Service System.

Smart design with quick access to all consumables through hinged front door. Quick Release Hot Tank System and improved serviceability with convenient side panel access.

Energy Saving Sleep Mode

Energy saving sleep mode can be programmed to turn off heater after 3 hours of inactivity yielding significant energy savings when unit is not in use.

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WL7 CERTIFICATIONS

We believe that performance testing and certifications validate *Waterlogic* as a world-leader in water treatment systems.

WL7 Water Treatment System Certifications Include



UL399 – Certified Drinking Water Cooler

Intertek Labs (ETL) Certified the *WL4 FW* Water *Treatment System* to ANSI/UL 399 Standard for Drinking Water Coolers. CSA C22.2 No.120 –CSA Standard for Refrigeration Equipment



BPA Free - **Waterlogic** tests for BPA and declares that all its products are Bisphenol-A FREE and contain no harmful BPA plastics.



Water Quality Association (WQA) are a certifying accredited organization for NSF standards.

NSF/ANSI-53 Lead and Cyst Reduction for 1 micron CBC Filters

NSF/ANSI-55 Class A – Ultraviolet Microbiological Water Treatment Systems

NSF P231 – Protocol for Microbiological Purifiers

The Waterlogic *Firewall™* components have been tested and certified by the WQA to NSF/ANSI-55 Class A – Ultraviolet Microbiological Water Treatment Systems, and to NSF P231 and USEPA Standard for Microbiological Water Purifiers.



Waterlogic manufacturing, Qingdao, is certified to ISO 9001:2015 — Quality Management Systems (3rd Party Certified by Intertek). ISO 9001 is the internationally accepted standard for well managed organizations that have adopted the key quality management principles to its operations to bring consistent quality products and a culture of continuous improvement.



Waterlogic Water Purification Systems have been tested, and certified to rigorous CE Standards.

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WL7 MODEL/PART DESIGNATIONS

BRAND NAME	DESCRIPTION	MODEL - PART NUMBER
	WL7 – Cold, Ambient, Hot, Extra Hot, Sparkling	xx-HCASFW
	F- 7FW/7FX-FS/M-HCAS-IB6-**-**	
	F- 7FW/7FX- FS/M-HCAS-IBE6-**-***	
	WL7 – Cold, Ambient, Hot, Extra Hot	xx-CAHFW
	F- 7FW/7FX-FS/M-HCA-IB6-**-**	
	F- 7FW/7FX- FS/M-HCA-IBE6-**-***	
WL7 Firewall	WL7 – Cold, Ambient	
	F- 7FW/7FX-FS/M-CA-IB6-**-***	xx-CAFW
	F- 7FW/7FX- FS/M-CA-IBE6-**-**	
	WL7 – Cold, Ambient, Sparkling	
	F- 7FW/7FX-FS/M-CAS-IB6-**-***	xx-CASFW
	F- 7FW/7FX- FS/M-CAS-IBE6-**-***	XX-CASEVV
	(** means enclosure color, *** means customer no. *=A-Z or 0-9)	

WL7 GENERAL SPECIFICATIONS

<u>ITEM</u>	<u>WL7</u>		
Cold Water Output	5°C Factory Set Point – 3.8 Litre Ice Bath with Stainless Drinking Coil		
Sparkling Water Output	5°C Factory Set Point – 0.5 Litre Stainless Steel Carbonation Tank		
Hot Water Output	87°C Factory Set Point – 1.5 Litre Stainless Tank Programmable 75°C, 87°C, 93°C		
Extra Hot Water Output	95°C Factory Set Point Programmable 80°C, 87°C, 95°C		
Output Flow	1.6Litres per minute - Firewall Purification Rating		
Input Connections	¼" Quick Connect Bulkhead for Water and CO2 Input		
Recommended Water Feed	2.5 – 3.5 Bar – Use Pressure Regulator		
Feed Water Temperature	25°C Maximum Water Feed		
Environmental Temperature	2°C - 37°C		
CO2 Supply Requirements	Food Grade CO2 Only Regulated to 3 Bar		
Refrigerant Gas	120v R134a, 220v R600a		
UV Lamp	13 Watt (Part Number: CT-2090-IB0-00)		
Energy Saver Settings	Programmable ON (Heater goes to Sleep after 3 hrs.) – OFF (Heater always ON)		
Filter Life Settings	Programmable 3 months, 6 months, 9 months, or None (OFF)		

WL7 SHIPPING SPECIFICATIONS

<u>ITEM</u>	WL7 Counter Top
Width/Depth/Height	399 mm x 519 mm x 427 mm (With Base Cabinet 399mm x 519mm x 1269mm)
Weight (dry)	31-34kg

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WL7 ELECTRICAL SPECIFICATIONS

ELECTRICAL SUPPLY	220-240V/50Hz or 120V/60Hz	220-240V/50Hz 13 Amp Service	120V/60Hz 15 Amp Service
COMPONENT	POWER (approximate)	AMP DRAV	V (approximate)
Heater	500 Watts	2.2 Amps	4.17 Amps
Compressor	222 Watts	1.0 Amps	1.85 Amps
Sparkling Pump	24 Watts	0.109 Amps	0.2 Amps
Fan Motor	24 Watts	0.109 Amps	0.2 Amps
Firewall UV System	13 Watts	0.05 Amps	0.11 Amps
WL7 TOTAL	783 WATTS	3.47 AMPS	6.53 AMPS

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INNOVATIVE USER DESIGN

Back-lit waterfall indicator

Allows precise dispensing and reduces accidental spillage

BioCote® treated key surfaces*

Restricting microbial growth around of the dispensing area, keeping it fresher and cleaner for longer



273 mm/10.74" height dispense gap

Accommodates sports bottles and tall water vessels





Bottles saver counter

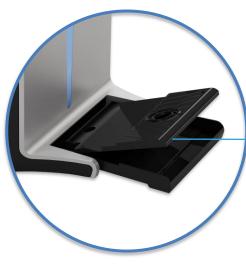
Live indicator of number of 500ml plastic bottles saved since using WL7 FW.

Rotating control knob

Easy selection of water options + BioCote® protection on the button

Dispense status bar

Indicates water being purified and/or heated



Drip tray design

Large capacity drip tray, BioCote® infused with an easy wipeable surface. Optional drain port and front overflow edge



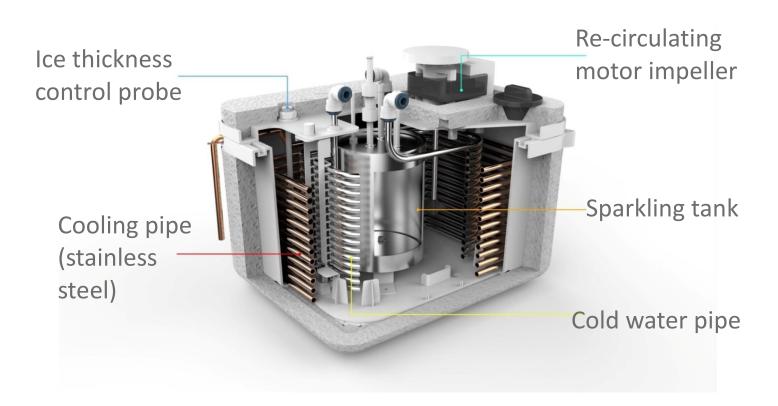
EXCLUSIVE FIREWALL PURIFICATION SYSTEM

Our breakthrough *Firewall*™ technology delivers 99.9999% bacteria free water right at the point of dispense. *Firewall*™ delivers the safest water possible right to your cup through a sanitary faucet.





HIGH EFFICIENCY ICE BANK COOLING SYSTEM



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OPERATING INSTRUCTIONS





DISPLAY SCREEN OPTIONS

Ambient Water:

Rotate Outer Ring of Control Knob to Green Ambient Icon (Room Temperature) and then Press Dispense Button.



Sparkling Water:

Rotate Outer ring of Control Knob to Purple Sparkling Icon and then Press Dispense Button.



Cold Water:

Rotate Outer Ring of Control Knob to Blue Cold Icon

and then Press Dispense Button.

Hot Water:

Rotate Outer Ring of Control Knob to Orange Hot

Icon and then Press Dispense Button.



Rotate Control Knob to Red Extra Hot Icon and Press Dispense Button to Activate the Extra Hot Cycle. Status will be displayed below Extra Hot Icon.



Ready Status indicates Hot Tank has reached Extra Hot Set Point Temperature.

Rotate Outer Ring of Control Knob to Orange Hot Icon and then Press Dispense Button to Dispense Extra Hot Water.

NOTE: Selector returns to Cold Water Default after 5 seconds of inactivity.



SERVICE REQUIREMENTS

<u>WARNING!</u> Only trained and qualified technicians should attempt to install, maintain, or service Waterlogic Equipment. Failure to follow the instructions in this manual could result in death, serious personal injury, or severe property damage.

<u>**DANGER!**</u> HIGH VOLTAGE ELECTRICAL HAZARD. Unplug before inspection and service.

- 1. Visually inspect power cord and all electrical and water connections for signs of wear or damage.
- 2. Empty and clean the Drip Tray.
- 3. Waterlogic recommends changing the Firewall UV Lamp every 6 months, or as required.
 - **WARNING!** ULTRAVIOLET RADIATION. Do not operate the UV-C emitter when it is removed from the appliance enclosure. Appliance contains a UV-C emitter. Unintended use of the appliance or damage to the housing may result in the escape of dangerous UV-C radiation. UV-C radiation may, even in little doses, cause harm to the eyes and skin. Appliances that are obviously damaged must not be operated. The replacement of the UV-C emitter by the user is not allowed, this must be done by Waterlogic technician.

<u>CAUTION!</u> UV LAMPS ARE HAZARDOUS. Lamps are considered Hazardous Waste and must be disposed of accordingly. Refer to Product MSDS sheet for details.

<u>DANGER!</u> R600a refrigerant is combustible materials and discarded refrigerators should be isolated from fire sources and cannot be burned. Please transfer the refrigerator to qualified professional recycling companies for processing to avoid damages to the environment or other hazards.

- 4. Clean the Dispensing Area with a non-abrasive cloth and mild cleaner or descaling solution. Clean exterior surface with mild cleaner or soap and water and a non-abrasive cloth.
- 5. Change Filters every 6 months, or as required to meet local water conditions.
- 6. Check the ice bank cooling water TDS level using inspection hole at left front of bath top cover. Add 1/2 teaspoon of baking soda if feeding with low TDS water (less than 100 ppm).



Side panel removes for access to less frequently serviced components

Hinged "front door" provides for easy access to frequently serviced components



Contact Waterlogic for assistance or help finding an Authorized Service Representative.

SERVICE SCREEN

- Unit Settings/Programming
- Self-Diagnostic Error Display
- QR Code for Troubleshooting
- Filter Life & Bottle Counter Reset



INSTALLATION RAIL

<u>WARNING!</u> ALWAYS USE INSTALL RAIL. It is required to use an installation rail for the installation of any Waterlogic Water Treatment System. Failure to use an installation rail can result in damage due to excessive pressures over a prolonged period of time and no additional leak protection. Please check local water bylaws, in some countries an installation rail is a legal requirement.

<u>CAUTION!</u> ALWAYS INSTALL VERTICALLY. Do not install installation rail horizontally as this will affect the performance of the water block.

Water inlet – 15mm compression fitting

Isolation valve – Quarter turn to isolate.





Double check valve – only allows water to flow one way, no adjustment needed.

Pressure Reducing Valve – Reduces the pressure from any high pressure down to 3bar +/- 0.5bar. The pressure reducing valve is an essential part of the installation rail and ensures that the Waterlogic Water Treatment System is not exposed to high pressures over a prolonged period of time.

Water block – The water block will shut the flow of water in the event that a leak has taken place. This works by measuring the velocity of water and shutting off water flow. Adjustment and reset can be made by pressing or turning the red dial located on the front face of the water block.



Adjustment Settings: 1.3 to 13.2 gallons(6-60Litres)

*Note Every notch increases the set volume by 1.5 +/- gallons
(5 +/- litres)

Pressure Requirements: 10 - 125 PSI (0.7 - 8.6 bar) Ambient Temperature: 35 - 140°F (2 - 60°C) Fluid Temperature: 35 - 158°F (2 - 70°C)

Flow Rate: 0.53 - 7.9 GPM (2 - 30 Lpm)

Resistance to Bursting: 725.19 PSI at 77°F (>50 bar at 25°C)

3/4" to 3/4" John Guest adaptor – Allows the connection of 3/4" John Guest PE pipework from the install rail to the bulkhead of the machine.





CO₂ INSTALLATION PROCEDURE

The following instructions are for all models which have a sparkling water option IMPORTANT INFORMATION

<u>MARNING!</u> Only competently trained people who fully understand the safety precautions associated with handling gas bottles should attempt to handle, connect or replace CO₂ gas bottles.

<u>Always</u> ensure the CO₂ gas bottle is 'Food Grade'.

<u>CAUTION!</u> The CO₂ gas bottle must have a strap or chain to secure the CO₂ gas bottle in position and fitted on a flat surface.

<u>DANGER!</u> Due to calibration reasons, it is advised that the CO₂ regulator is changed every 5 years

Connecting a CO₂ Gas Bottle on installation

- 1. Before starting, ensure the CO₂ gas bottle is food grade
- 2. Remove the dust cap (where fitted) from the CO₂ outlet on the bottle
- 3. Direct the outlet into a safe location, open the tap on the gas bottle for a second and close again, this will purge the gas which will clear any dust from the outlet
- 4. Connect the CO₂ pressure regulator and tighten with a spanner, ensuring that the O-ring seal is correctly located
- 5. Connect the pipework from the regulator to the cooler
- 6. Secure the gas bottle in position with a strap or chain so it will not fall over
- 7. Open the tap on the gas bottle and set the pressure as required for that model







8. Check for leaks using Leak Detection Fluid (LDF)



Replacing a CO2 Gas Bottle

- 1. Close the tap on the CO2 gas bottle currently fitted.
- 2. Release any pressure in pipework by either dispensing or pulling the pressure relief valve on the carbonation chamber.
- 3. Disconnect the CO2 pipework from the cooler
- 4. Remove CO2 gas bottle from strap or chain.
- 5. Remove the regulator using a spanner.
- 6. Give the customer their empty gas bottle to store in a safe location.
- 7. Check the new gas bottle is 'food grade' CO2
- 8. Remove the dust cap (where fitted) from the CO2 outlet on the bottle
- 9. Direct the outlet into a safe location, open the tap on the gas bottle for a second and close again, this will purge the gas which will clear any dust from the outlet
- 10. Connect the CO2 pressure regulator and tighten with a spanner, ensuring that the Oring seal is correctly located
- 11. Connect the pipework from the regulator to the cooler
- 12. Secure the gas bottle in position with a strap or chain so it will not fall over
- 13. Open the tap on the gas bottle and set the pressure as required for that model
- 14. Check for leaks using Leak Detection Fluid (LDF)

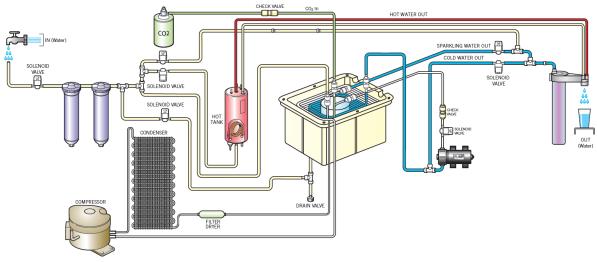
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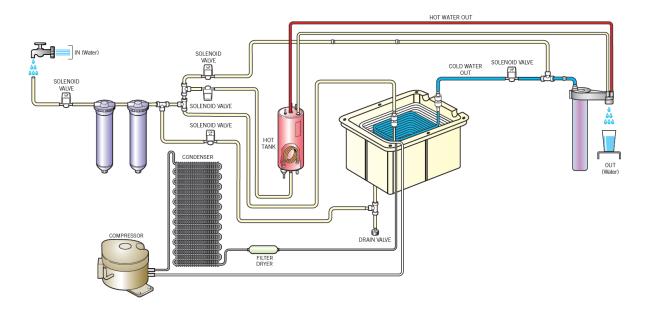


WL7 FLOW DIAGRAMS

Cold, Ambient, Hot and Sparkling



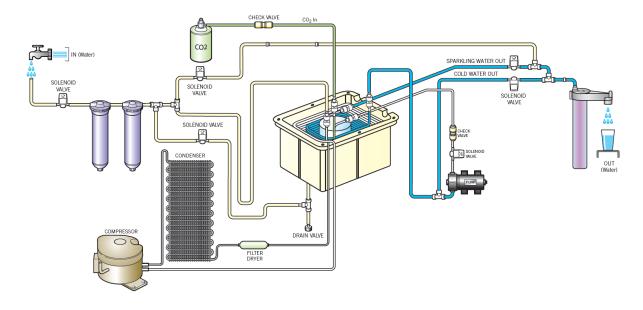
Cold, Ambient and Hot



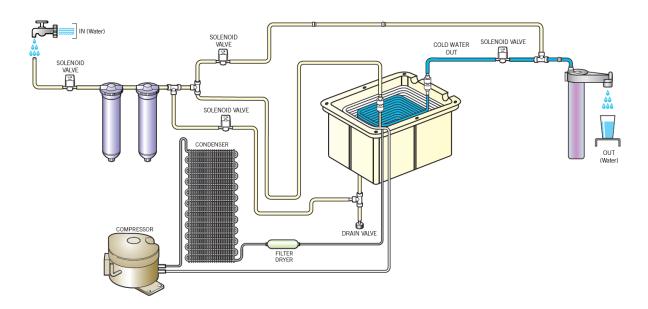
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Cold, Ambient and Sparkling



Cold and Ambient

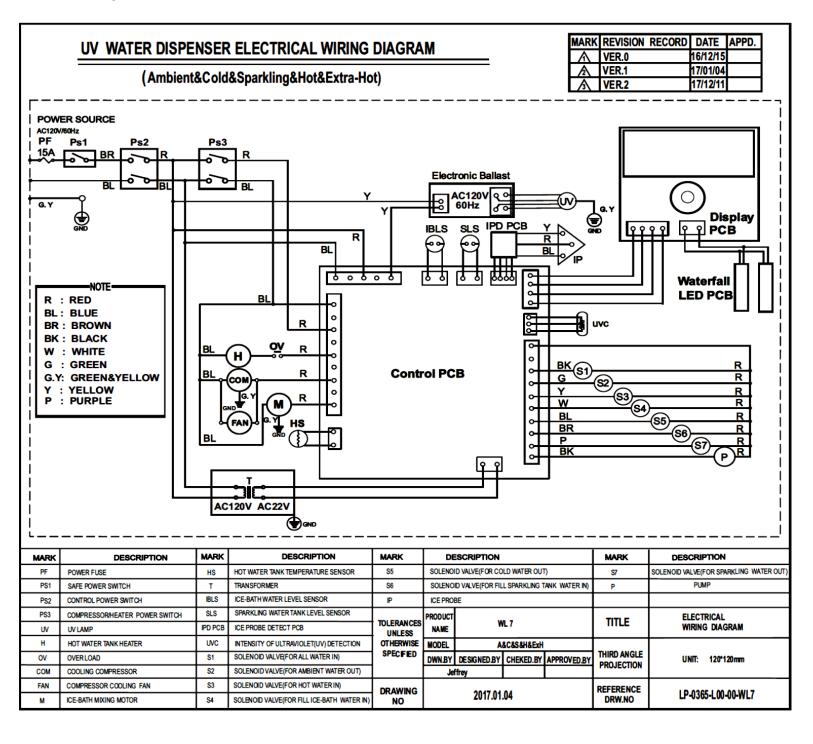




WL7 WATER TREATMENT SYSTEM ELECTRICAL DIAGRAM

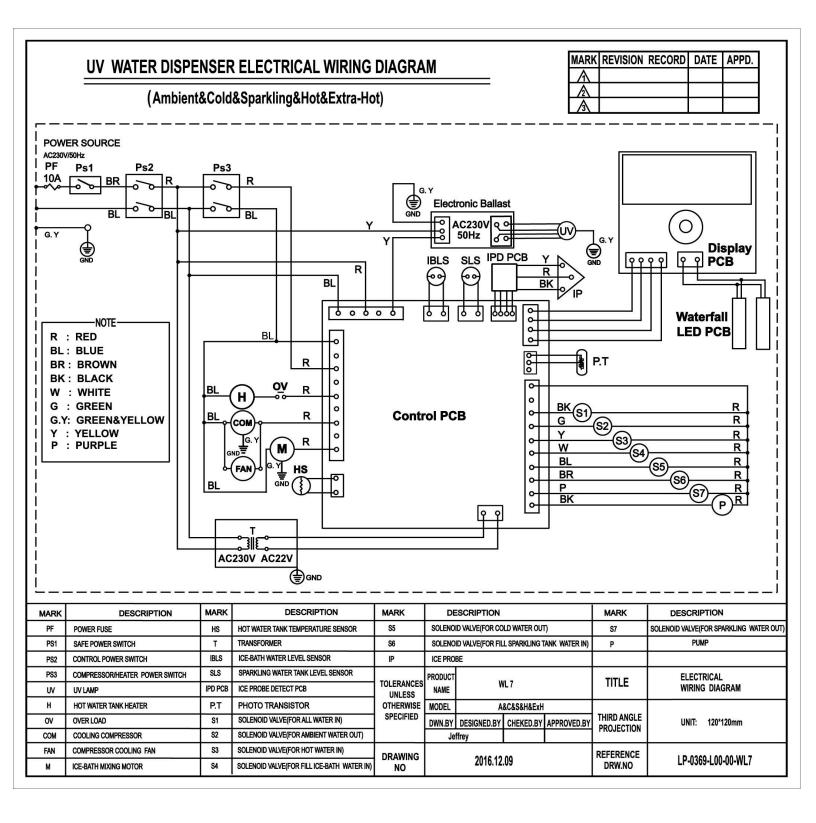
<u>DANGER!</u> HIGH VOLTAGE ELECTRICAL HAZARD. WL7 Unit and PCB (Printed Circuit Board) contain High Voltage Hazard. Only trained and qualified technicians should attempt live testing and troubleshooting.

120v





220-240v





PROGRAMMING INSTRUCTIONS

Access the *WL7* maintenance screen by selecting ambient product and tapping the dispense button 5 times within 5 seconds. The maintenance menu will appear as shown below:

To exit the maintenance mode: Tap the dispense button 5 times within 5 seconds.

MAINTENANCE SCREEN





MAINTENANCE MODE

The maintenance mode displays the status of all current program settings and any error codes that may be present. The maintenance screen allows you to reset the filter timer and reset the bottle counter. DIP switches on the main PCB control these settings. The main PCB is located behind the left side panel. See to Access Main PCB Instructions for details.



FILTER TIMER RESET

Enter maintenance screen. Press and hold the dispense button for approximately 5 seconds until you hear single beep. The filter icon will flash and the unit will beep one time to confirm timer reset.



BOTTLE COUNTER RESET

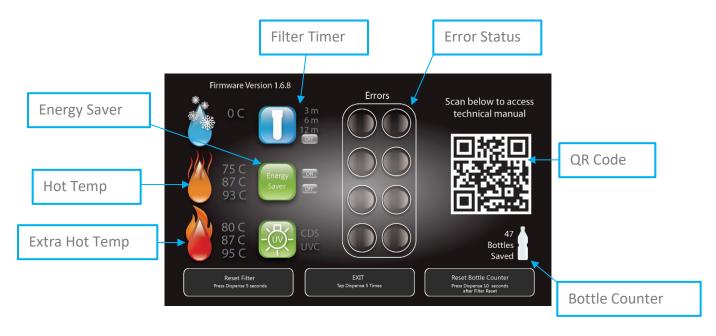
Enter maintenance screen. Press and hold the dispense button for approximately 15 seconds until the bottle counter flashes and you hear a double beep. The filter timer will reset after the first 5 seconds and you must continue to hold until dispense until double beep occurs to reset the bottle counter. Bottles Saved display counter will show zero after releasing the dispense button confirming the reset action.





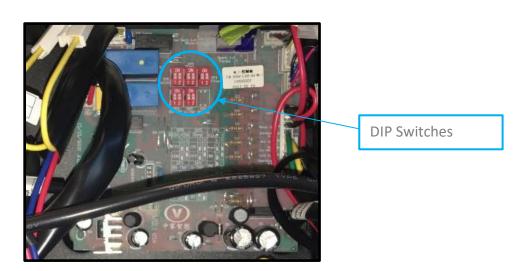
PROGRAMMING STATUS AND ERROR CODES

WL7 programming status is displayed in the maintenance screen as shown below:



WL7 programing is controlled using Dual Inline Package (DIP) Switches located on the Main PCB on the left side of the unit.

WL7 MAIN PCB



ACCESS MAIN PCB:

Remove safety screw near faucet to drop down front door latch access panel. Lift door hinge latch plate up and swing open the front door to access left side panel front retaining screws. Remove 3 front and 2 rear left side panel screws and slide out the panel to access main PCB.



ENERGY SAVING SLEEP MODE

All WL7 Water Purification Systems come from the factory with Energy Saving Sleep Mode enabled to meet the Energy Star Certification requirements. Energy Saving Sleep Mode disables the heater circuit when the unit has not been used for a continuous period of 3 hours.

The backlight and control knob lights are turned off and the display screen will dim and display the energy saver message be as shown.

Pressing and releasing the dispense button "wakes up" the **WL7** and turns the heater circuit and display back on. The hot tank will typically take less than 10 minutes to heat the water from ambient to the 85°C (185°F) set point. Status is displayed in the progress bar.



WL7 SLEEP SCREEN

The energy savings can be significant when the unit is idle and should be considered as part of your value proposition.

PROGRAMMING ENERGY SAVING SLEEP MODE

WL7 Energy Saving Sleep Mode status is displayed in the maintenance screen and can be changed by adjusting DP5, the Dual Inline Package (DIP) Switch 5 on the Main PCB.





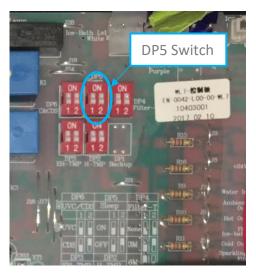
ENERGY SAVER ON







WL7 MAIN PCB DIP SWITCHES



SHOWN IN DEFAULT POSITION BOTH SWITCHES 1&2 OFF (DOWN)



HOT AND EXTRA HOT TEMPERATURE SET POINTS

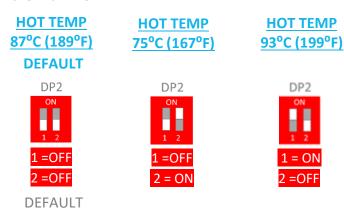


The *WL7* utilizes a programmable thermistor to control the temperature of the hot tank. Hot and extra hot set points can be changed by altering the dual inline package (DIP) switch positions on the Main PCB. DP2 controls the hot set point and the default is 87°C (189°F). DP3 controls the extra hot set point and the default is 95°C (203°F). The status of these settings is displayed on the maintenance screen. Always keep hot temperature at or below extra hot temperature to ensure logical operation.

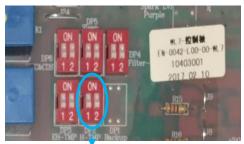
Elevations above 1200 meters (4000 feet) will require the extra hot temperature to be reduced to prevent boiling within the tank. To disable the hot tank, see model configuration instructions.

PROGRAMMING HOT TEMPERATURE SET POINT

WL7 Hot temperature set point is adjusted with DP2, the Dual Inline Package (DIP) Switch 2 on the Main PCB.



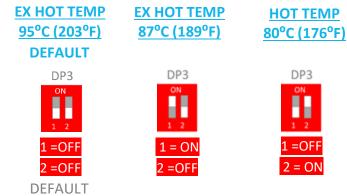
WL7 MAIN PCB DIP SWITCHES



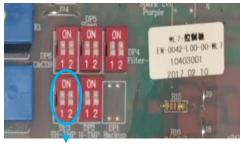
SHOWN IN DEFAULT POSITION
BOTH SWITCHES 1&2 OFF (DOWN)

PROGRAMMING EXTRA HOT TEMPERATURE SET POINT

WL7 Extra Hot temperature set point is adjusted with DP3, the Dual Inline Package (DIP) Switch 3 on the Main PCB.



WL7 MAIN PCB DIP SWITCHES



SHOWN IN DEFAULT POSITION BOTH SWITCHES 1&2 OFF (DOWN)

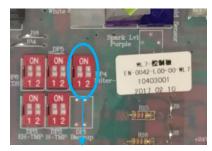


FILTER TIMER



WL7 is equipped with a filter timer system that can be turned on to alert the user when a filter change is due. Filter timer default is OFF and status is displayed in the maintenance screen. The Filter timer options are; OFF, 3, 6, or 12 months. Adjust Dual Inline Package (DIP) Switch 4 (DP4) on the Main PCB.

WL7 MAIN PCB DIP SWITCHES



SHOWN IN DEFAULT POSITION BOTH SWITCHES 1&2 OFF (DOWN)

FILTER TIMER OFF **DEFAULT**

DP4



1 = OFF 2 = OFF

DEFAULT

FILTER TIMER 3 MONTHS

DP4

1 = OFF

FILTER TIMER 6 MONTHS

FILTER TIMER 12 MONTHS

DP4

DP4

FILTER TIMER ICON



The filter timer alert icon will appear in the dispense screen and maintenance screens if timer is enabled and the specified time has elapsed.

Service Filter!

FILTER TIMER



RESET

Enter maintenance screen by selecting ambient and tapping dispense 5 times in 5 seconds.

Press and hold the dispense button for approximately 5 seconds until you hear single beep.

The filter icon will flash and the unit will beep one time to confirm filter timer reset.

Release the dispense button after beep confirming filter timer is reset or continue to hold if you wish to reset the bottle counter at the same time.

Tap dispense button 5 times in 5 seconds to exit maintenance mode and return to main dispenses screen.

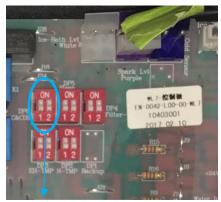


UV SENSOR MODE - UVC / CDS SETTING



WL7 Water Purification Systems contain exclusive patented Firewall technology to guarantee the safest water possible. The sensor of the Firewall system can be used in UVC or CDS mode. The UV sensor mode must remain in the factory setting and <u>must not</u> be altered. Dip Switch Pair 6 (DP6) located on the main PCB controls UV Sensor function and the position are shown below:

WL7 MAIN PCB DIP SWITCHES



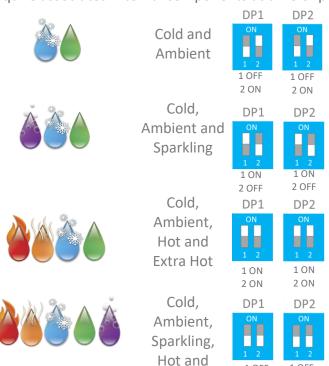
SHOWN IN DEFAULT POSITION BOTH SWITCHES 1&2 OFF (DOWN)





WL7 MODEL CONFIGURATION

WL7 model configuration can be altered by adjusting the paired Dual Inline Package (DIP) Switches DP1 and DP2 on the back side of the display PCB and cycling power. Hot and Sparkling models require associated internal components at time of purchase.



Extra Hot

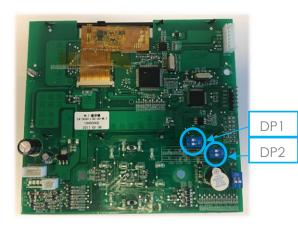
1 OFF

2 OFF

1 OFF

2 OFF

WL7 DISPLAY PCB (BACK VIEW)





WL7 PRINCIPLES OF OPERATION

WL7 DISPLAY AND DISPENSE

The *WL7 Water Purification System* is equipped with the latest technology including a modern user interface displayed on a full color LCD screen. The control knob outer ring rotates for product selection and the center button is depressed to purify and dispense product. This safe two-step process prevents accidental and inadvertent use.

The <u>STATUS BAR</u> at the bottom center of the screen indicates the status of the heating and refrigeration systems. A "flushing" or moving status bar indicates an active or on state.



WL7 LEAK PROTECTION

Leak protection is provided by a redundant inlet solenoid valve coupled with dispense time out logic. The user will be prompted to release the dispense button after any continuous 2 minutes dispense. This method provides ultimate protection and avoids unnecessary service calls for over full drip trays or inadvertently triggered leak detection alarms.

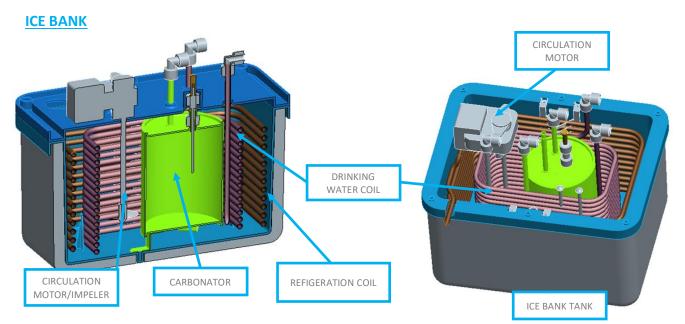


WL7 BOTTLES SAVED COUNTER



Dispense time of all product is monitored to estimate output. 20 seconds of dispense time is one bottle, which is equivalent to approximately ½ Litre.





It takes the *WL7 Water Purification System* approximately 10 minutes to heat 1.5 liters of water in the hot circuit and 2 hours to build a full ice bank in the cooling system. The *WL7* has an optional 500mL premium capacity sparkling water tank in the center of the ice bath.



Dispensing Cold Still Water from the WL7 Water Purification System

Rotate the control ring to the cold icon and press and hold the dispense button until purified water flows to the faucet. There will be a 2 second delay as the Firewall purifies the faucet. Cold dispense opens solenoids 1 and 5, which allows supply water to push through the stainless-steel drinking coil in the ice bath and Firewall purification system to the cup. The *WL7* defaults to cold water selection when idle as a safety feature. The circulation motor will be on for 4 minutes after every dispense.



<u>Dispensing Ambient (Room Temperature) Water from the WL7 Water Purification</u> System

To dispense ambient water, rotate the control ring to the ambient icon and press and hold the dispense button. This opens solenoids 1 and 2, which allows water to push through the Firewall purification system to the cup.



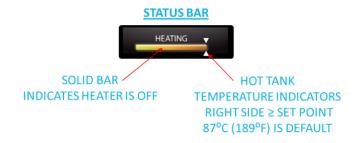
Dispensing Hot Water from the WL7 Water Purification System

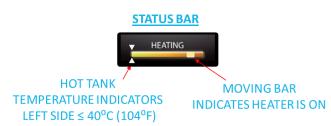
To dispense hot water, rotate the control knob to the hot icon and press and hold the dispense button. There will be a 2 second safety delay as hot warning appears in the display, continue to depress until hot water flows to faucet. Solenoid 1 and 3 will open to and allow water into the hot tank and hot water from the tank will flow to the faucet. Dispense defaults back to cold after 5 seconds of inactivity as a safety feature to prevent accidental dispensing of hot water. There will be a couple seconds of hot water carry on after releasing the dispense button as the hot tank depressurizes.



Hot Water Status







The heater switch must be on for hot water production. A flushing or moving status bar indicates the heater circuit is on and the arrows on the status bar reflect the temperature in the tank from 40°C (104°F) on left to hot set point on right of scale (default is 87°C or 189°F).



Dispensing Extra Hot Water from the WL7 Water Purification System

Extra hot water is available for steeping tea or making soups. To temporarily raise the hot water temperature in the hot tank, users can select extra hot product icon and press and release the dispense button to activate extra hot cycle. Extra hot set temperature is factory set to 95°C (203°F) and can also be programmed to 87°C (189°F), or 80°C (176°F) if desired.







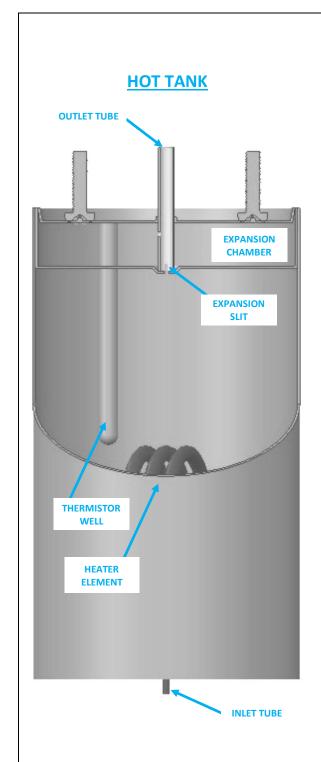
Activating extra hot cycles the heater on until extra hot set point is achieved. Extra hot ready will be displayed above the status bar and the extra hot temperature indicator arrows will be all the way to the right side of the scale. The extra hot product icon will display a small status bar below the icon validating the extra hot cycle is active and arrows on the status bar will indicate the temperature in the hot tank.



The status bar will be moving or flushing when heater is on. The arrow location will indicate temperature in the tank from 40°C (104°F) on left to extra hot set point on far right of scale (default is 95°C or 203°F). The hot tank will return to the hot temperature set point once the extra hot cycle is complete (temperature must reach extra hot set point).



PRINCIPLES OF OPERATION – HOT TANK



Waterlogic pressure fed hot tanks feature a built-in expansion chamber in the top of the hot tank.

This chamber allows for expansion of the water when it is heated so it will not drip from the faucet.

The chamber is created with a welded-in baffle.

Water always flows into the bottom of the tank and out the top center outlet to the faucet.

The hot tank outlet tube has a restrictor in its base to ensure the reservoir remains full.

There is a small slit in the bottom side of the tank outlet tube that allows air and water to pass into the expansion chamber as the reservoir it is heated.

Residual water in the expansion chamber is suctioned back through the outlet tube vent hole while hot water is dispensed to the faucet. Water flow must be great enough to produce adequate siphon action.

The slit in the outlet tube vent hole is susceptible to scale build up and is a key indicator that descaling of the hot tank is needed. Expansion of water as it is heated in the reservoir will push the water out the faucet creating a drip if outlet tube vent hole becomes plugged with debris or scale. It is critical to descale the hot tank including the expansion chamber and outlet vent hole on a regular basis to prevent this problem.

You can force descaling solution into the expansion chamber by pinching off the outlet line until descaling solution fills the expansion chamber and flows to the faucet thru the vent outlet line. Filling the expansion chamber from the top vent line is an alternate method of descaling the vent chamber and expansion slot.



WL7 RATE-OF-RISE HEATER PROTECTION





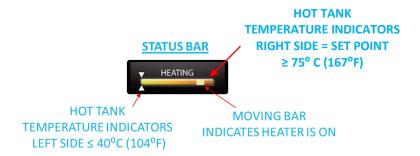
ADVANCED HOT TANK PROTECTION

WL7 utilizes a thermistor in the hot tank well to monitor temperature. This is a very accurate and reliable method of control which allows programable set points and advanced diagnostics.

Rate-of-Rise logic prevents the hot tank from dry heating and damaging the heater and hot tank controls. Tank temperature is monitored at start up and shuts down the heater when temperature increases too quickly. This advanced protection prevents tripping the hot tank overload when the tank is not filled with water.

The Hot Tank Heating Error message and icon will be displayed on screen. Hot and extra hot water icons will be ghosted in the display screen and the heater status bar will be blank.





COMMON TROUBLESHOOTING

To reset R-O-R fault; turn OFF Power (Red Switch) and Heater/Compressor (Green Switch). Wait 10 seconds and turn ON power (Red Switch) with Green Heater/Compressor Switch OFF. Follow instructions on the screen and ensure the hot tank is full of water by dispensing until a steady stream of water is flowing from the faucet. Turn ON Green Heater/Compressor Switch to activate the heater and move to Home Screen. Roll selection knob to Hot and check status bar to ensure heater is working (flushing bar) and temperature is rising per the status indicators. Wait for heater to reach hot set point and then cycle the Extra Hot to ensure complete function.

See Trouble Shooting Section is Hot Tank Heating Error repeats after reset.



WL7 HOT TANK OVERLOAD OR HIGH LIMIT RESET

1.	Turn OFF both Red (Power) and Green (Compressor/Heater) Switches. Switch lights should turn off. <i>O=OFF</i> position
2.	Unplug the power cord from rear of unit.
3.	Remove the locking screw under the front access panel near the faucet and swing access panel downward to clear the faucet. Unlatch the front door by raising the latch arm under access panel. Swing front door open to access the left-hand side panel.
4.	Remove left-hand side panel. Remove screws (5 ea.) from front and back of panel.
5.	Locate the hot tank and reset button. Reset button located between terminals of the overload. Press the reset button. The high limit should "click" back into the closed position if it were tripped open by over-heating inside tank.
6.	Verify continuity across the overload or high limit with multi-meter.
7.	Replace panels and plug in power cord.
8.	Turn ON the Both Red and Green Compressor/Heater Switch. I=ON position Switch LED should illuminate. The Hot and Cold tanks must be filled with water BEFORE turning on the Green Heater and Compressor Switch.
9.	Verify the hot system is fully operational and hot tank is heating water to proper set point for both hot and extra hot water

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WL7 HOT TANK DESCALING PROCEDURE

The hot tank requires removal of mineral deposits (descaling) on a regular basis depending upon local water conditions. Descaling should take place every 6 to 12 months to preserve long-term reliability when source water has high mineral content or high TDS. Descaling removes calcium deposits, or scale, that can build up inside a tank over time. Scale is non-toxic but left unattended will hinder your unit's performance and result a drip to the faucet as water expands in the hot tank while heating. Excess scale results in higher energy consumption and may cause premature failure of the hot tank. It is critical to descale the entire hot tank including the expansion or vent chamber to ensure proper operation. A random drip of hot water out the faucet is key indication the expansion chamber is not functioning properly and descaling may be needed.

Use non-toxic cleaner such as ScaleKleen, DEZCAL or 20% Citric Acid Solution to remove mineral deposits as directed by the manufacturer.

<u>WARNING!</u> PERSONAL PROTECTIVE EQUIPMENT REQUIRED. Always ensure proper ventilation and use rubber or nitrile gloves and eye protection when using chemicals. Refer to Material Safety Data Sheet for specific requirements of each product.

CAUTION! STAINLESS STEEL TANK DESCALING.

The Hot Tank is made from stainless steel. Ensure descaling solution is compatible with stainless and always flush the unit completely. Dispose all chemicals in an environmentally safe manner.

Materials Needed:

- Personal Protective Equipment. Rubber or Nitrile Safety Gloves and Protective Eyewear
- Phillips Screwdriver, Temperature Gauge
- Water Pitcher or Container to collect water dispensed from the faucet
- 20 Litre (5 gallon) container or a drain basin
- Scalekleen, DEZCAL or 20% Citric Acid Solution
- ¼" Plastic Tubing, at least 4 feet in length, and assorted ¼" quick connect fittings
- Inline Sanitizing Cartridge (Waterlogic Filter Sump without cartridge works well)
- 1. Turn off water supply and depressurize the circuit by dispensing to a container.
- 2. Add concentrated descale solution as per the manufacturer instructions for 1.5 litre hot tank and mix with hot water in a descaling cartridge.
- 3. Connect descaling cartridge in place of the CBC filter inside of the front door of the **WL7**. Turn on water supply.
- 4. Rotate knob to select hot water and depress dispense button until descaling solution (slightly discolored/grey water) comes out of the faucet. Proper insulated container and drain basin will be required to catch water from the faucet.
- **WARNING!** WATER MAY BE HOT. TAKE CAUTION AND USE PROTECTIVE GEAR.



- 5. Pinch off the hot water outlet line and dispense hot to fill the hot tank expansion chamber with descaling solution. Dispense descaling solution until it runs through the vent line to the faucet. See Hot Tank Principles of Operation Diagram and Instructions below for further details.
- 6. Ensure heater switch is on and allow descaling solution to remain in the hot tank for 15 minutes with heater on to assist in breaking down scale. (length of time may vary depending on water conditions and descaling solution requirements). Ensure basin is under faucet to catch descaling solution as it will push to faucet as tank heats and expands the water in a completely full tank.
- 7. Turn off water supply, depressurize the line, and remove sanitizing cartridge and reconnect the CBC filter. Turn on water supply.
- 8. Place a pitcher, catch basin, or other container under the faucet and dispense hot to flush the hot tank until water runs clear and descaling solution is thoroughly rinsed from the unit. Draining the hot tank from the bottom may be required if large scale particles have formed. The hot tank drain port is located inside the front door below the filters and solenoid bank.
- 9. A second descale may be required if scale particles do not clear. The hot tank should be replaced if excess scale is present as descaling will be uneconomical. Local water conditions and maintenance history will dictate.
- 10. Always test the water temperature and taste to ensure the **WL7 Water Purification System** is performing to the customer's satisfaction before leaving.
 - <u>WARNING!</u> HOT WATER. The WL7 Water Purification System produces Hot Water up to 95°C (203°F). Water above 52°C (125°F) can cause severe burns or scalding. Hot water should be dispensed carefully into properly insulated container to avoid injury.
 - <u>CAUTION!</u> MUST REPLACE HOT TANK 3-5 YEARS DEPENDING ON USAGE. The Hot Tank and its controls must be replaced a minimum of every three to five years to ensure efficient and dependable operation.
 - <u>WARNING!</u> REINSTALL ALL PANELS AND COVERS. Always reinstall all Panels, Protective Covers, and Fasteners after servicing equipment. Failure to do so could result in severe personal injury and will void the certifications and warranty of the equipment.

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WL7 PRE-INSTALLATION AND SANITIZATION PROCEDURES

<u>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.



! WARNING! ALWAYS SANITIZE BEFORE USE.

Sanitize before use to eliminate any potential microbiological contaminates in system.

Materials Needed:

- Personal Protective Equipment. Rubber or Nitrile Safety Gloves and Protective Eyewear
- Phillips Screwdriver, Temperature Gauge, TDS Meter and Chlorine Test Strips (optional)
- Container to collect water from the faucet and 16 Litre (5 gallon) container or drain basin
- Aguadosa Sanitizer or other 3% Hydrogen Peroxide
- ¼" Plastic Tubing, at least 1m in length, and assorted ¼" quick connect fittings
- Sanitizing Cartridge (Waterlogic Filter Housing without cartridge)
- 1. Unpack the Waterlogic WL7 Water Purification Systems and check exterior for damage.
- 2. Connect power, water, and CO2 supply to the unit. The WL7 comes standard with an inline sediment filter and carbon block filters installed.
- 3. Turn on the water supply and check for leaks.
- 4. Turn on the Red Power Switch and follow instructions the on the display screen. DO NOT turn on the Green Compressor & Heater Switch at this time. O=OFF

CAUTION! NEVER TURN ON HEATER BEFORE FILLING HOT TANK.

Green Heater & Compressor Switch must be in the O=OFF position when hot tank is empty. Damage could occur within one minute and the overload (high limit) will require manual reset if heater is turned on with an empty hot tank.

5. The unit will perform self-diagnostic checks and automatically fill the ice bath. The ice bath autofill will flush any excess carbon fines from the filter into the ice bath. This is completely acceptable as the drinking water circuit is isolated from the bath and this water is for cooling purpose only. The cooling water must have a minimum of 30 TDS to ensure proper function of the ice thickness sensor. If using RO supply with very low TDS (<30) add 2.5 grams (1/2 teaspoon) of Baking Soda (Sodium Bicarbonate) to the bath thru the top access hole.

Automatic Filter Flush

CAUTION! FILTER FLUSH REQUIRED.

WL7 Water Purification Systems are supplied with filters. Filters should be configured to optimize your system. Filters need to be configured and specified to do the job given for the local water conditions, usage, maintenance schedule, and placement restrictions.

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- 6. It should take approximately 2 minutes to fill the ice bath. Once the ice bath is fill is completed a confirmation screen will appear on the display.
- 7. The sparkling water tank (carbonator) fill will commence. It should take approximately 30-40 seconds for the sparkling water injection pump to fill the carbonator. Once the sparkling tank is full a confirmation screen will appear.

Fill the Hot Tank

8. The screen will now instruct to fill the hot tank by depressing the dispense button until water comes out the faucet validating the hot tank is full. Press and hold dispense button until water flows from faucet. This will ensure hot tank is full of water.

WARNING! HOT CIRCUIT IS NOT SANITIZED.

Water in the hot circuit is not sanitary until the temperature exceeds 77°C (171°F) for at least 5 minutes. Do not drink from hot circuit until installation is complete and hot tank active.

- 9. Turn ON the Green Compressor & Heater Switch as instructed. The home display screen will appear.
- 10. Turn off water supply and begin Sanitizing Process for the cold, ambient, and sparkling circuits.

Sanitizing

Sanitize using Aquadosa (3% Hydrogen Peroxide) or other approved cleaner throughout the cold and sparkling water circuits. Follow all instructions on the Material Safety Data Sheet and flush fresh water through the faucet until taste and odor are acceptable.

WARNING! USE PROPER PERSONAL PROTECTIVE EQUIPMENT

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).

- 11. Place 25ml of Aquadosa 3% Hydrogen Peroxide or alternative sanitizer as per directions in the Sanitizing Cartridge (Waterlogic Filter Sump without Cartridge). Ensure sanitizer is compatible with stainless steel and acetyl plastic.
- 12. Access the inline filters behind the front door of the WL7 and replace the Carbon Block Filter Assembly with a sump containing sanitizing solution. Utilize shut off valve at back of unit to isolate the water supply if needed or turn off at source.

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Fill the Cold and Ambient Circuits with Sanitizer

13. Once the sanitizing cartridge is installed, place container to catch the water under the faucet and rotate control knob to select cold and depress the dispense button for approximately 10 seconds to pull sanitizer into the cold circuit. Dispense Cold until sanitizer is flowing to faucet. Dispense Ambient (Room Temperature) until sanitizer if in this circuit and flowing to faucet.

<u>WARNING!</u> Use Personal Protective Equipment. Gloves and Eye Protection Required. The water will contain concentrated sanitizer. **Use extreme care!**

Fill the Sparkling Circuit with Sanitizer.

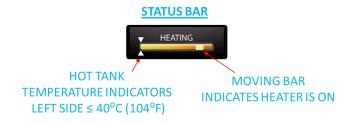
14. Ensure CO2 supply is on and dispense a full batch (500 mL) of Sparkling water thru the faucet until only gas is flowing (Sparkling Tank Regeneration). This will let the pump refill the tank with water that contains sanitizer solution.

Flush Sanitizer from the Machine

- 15. Turn off water supply and remove Sanitizing Cartridge and reinstall Pre-Flushed Carbon Filter.
- 16. Flush all circuits with ample fresh potable water to clear the sanitizer from the unit.
- 17. Place a pitcher, catch basin, or container under the faucet.
- 18. Flush the Cold System first. Run water through the faucet by dispensing cold water to dilute and remove the sanitizer from the cold circuit. You can use test strips to evaluate the water and ensure taste is acceptable.
- 19. Once the sanitizer odor/taste has been flushed out of the cold side of the machine the sanitization process for the Cold Circuit is now complete and you repeat process flushing for the ambient and sparkling water circuits. It may take 3 or 4 complete regenerations to flush the sanitizer from the sparkling water circuit.

Heater Test

20. Always ensure tanks are full of water before turning on the heater or the overload (high limit) will open and require manual reset. Turn ON the green heater/compressor switch. It will take the heater approximately 10 minutes to heat the water to the factory set point of 87°C (187°F). The hot status bar will pulse when



heater is on and be solid with heater off. The hot status bar arrows indicate tank temperature from below 40°C (104°F) on far left to set point on the far right.

Dispense a cup of hot water to ensure the temperature/odor/taste is acceptable.

MARNING! HOT WATER CAN BURN OR SCALD. The WL7 Water Purification System produces

Hot Water up to 95°C (203°F). Water above 52°C (125°F) can cause severe burns or scalding.

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

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Refrigeration / Compressor Test

21. Once the *WL7 Water Purification System* ice bath builds a complete ice ring in approximately 90 minutes depending upon environment. The compressor will shut off once the ice ring has reached thickness ice sensor.

The cold status bar will pulse when compressor is on and be solid with compressor off.



You can visually inspect the ice ring build through the access hole in the top of the ice bath if needed. The condenser at the rear of the unit will build heat as indication the refrigeration system is operation properly. Route all hose away from direct contract with heat from the condensing coils at the back of the unit.

Dispense a cup of cold water to ensure the temperature/odor/taste is acceptable.

Sparkling Water Test (when equipped)

22. The sparkling chamber (carbonator) must be completely regenerated (emptied) a few times once the ice bath has reached set temperature and the drinking water line and sparkling chamber are cold. Regeneration will clear the chamber of the initial air and water trapped during startup and ensure that premium sparkling water is produced. Always use 3 Bar (42.5 psi) supply of food grade CO2 and ensure bath has reached cold set point before regenerating sparkling water tank.

Dispense a cup of sparkling water to ensure the temperature/odor/taste is acceptable. Sparkling output (carbonation level) can be tested if needed.

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WL7 DRAINING INSTRUCTIONS

Draining Notes

Always drain the **WL7 Water Purification System** for transportation and storage.

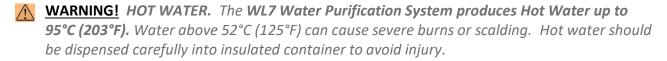


WARNING! STORE UNIT EMPTY. ALWAYS SANITIZE BEFORE REUSE.

The unit must be completely drained and sealed before storing to avoid stagnation and reduce microbial growth).

Disable Heater and Compressor

- 1. Turn off the Red Heater and Compressor Power Switch (O-OFF) to disable the Heater and Compressor.
- 2. Dispense 2 litres (½ gallon) of hot water to cool the hot tank and avoid burns.



Turn off Water Supply and Drain Sparkling Tank when equipped

- 3. Isolate the WL7 Water Purification System from feed water by turning off the water supply.
- 4. Dispense sparkling water until only gas flows from faucet.
- 5. Turn OFF Red Power Switch before releasing sparkling dispense button to prevent pump from refilling carbonator.
- 6. Open Front Cover and locate drains at bottom center of unit.

Drain hot tank and ice bath into basin. Pressing hoses over the drain ports to direct water to basin or bucket is recommended. 1.5 Litres from hot side and up to 4.5 Litres from bath when no ice



present. Reinstall drain caps once to prevent ice melt from dripping.



WL7 INSTALLATION PROCEDURES

Safety and Installation Guidelines

Ensure all Local 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.

- <u>WARNING!</u> ELECTRICAL SHOCK HAZARD. Always unplug (isolate from power supply) to prevent electrical shock except where electrical tests are specified.
- WARNING! IMPROPER SUPPLY OR CONNECTION CAN RESULT IN RISK OF SHOCK.

 Connect to a dedicated 15 amp 120V 60Hz or 10 amp 220V-240V 50Hz properly grounded outlet (use of an RCD is recommended). Ensure polarity is correct and always use the correct outlet. Consult a qualified electrician if you have any questions.
- WARNING! USE ONLY Waterlogic SUPPLIED POWER CORD. Locate system within 1.5m 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 earth connections 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 Warranty.
- ★ 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

Pre-installation and sanitization procedures as prescribed in this manual must be performed before installing the *WL7 Water Purification Systems*.

- 1. 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 2.5-3Bar and 2lpm (0.5gpm). Turn on the water supply and check for leaks.
- 2. Check to ensure that both Power (Red) and Heater/Compressor (Green) Switches are in the *O=OFF* position.





- **NOTE:** Switch has internal LED that illuminates when placed in *I=ON* position.
- 3. Connect the power cord to the back of the *Waterlogic WL7 Water Purification System* and to a 220V-240V 10 amp or 120v 15amp dedicated supply. RCD protection is recommended.
- 4. Turn ON the Main Power (Red) Switch. Leave Green Switch OFF.

CAUTION! NEVER TURN ON HEATER BEFORE FILLING HOT TANK.





Green Compressor/Heater Switch must be in the O=OFF position while the hot tank is empty. Damage could occur within one minute and the overload (high limit) will require manual reset if heater is turned on with an empty hot tank.

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5. **WL7** will be in **Start-Up Mode** whenever you turn ON the Main Power (Red) Switch and Heater/Compressor (Green) Switch is in the OFF position.

The start-up sequence should take approximately 5 minutes to complete when system is empty and status bar will flush indicating progress

Start-Up Mode process is as follows:

• Performs Self-Diagnostic Checks





• Fills ice bath with cooling water and flushes filters into the bath.





• Fills sparkling tank (if equipped). CO2 supply does not need to be connected.





• Display will prompt installer to fill the hot tank to complete start up





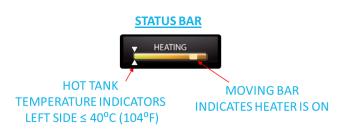
- 6. Follow instructions on the screen. The *WL7* will instruct installer to hold the dispense button until a steady stream of water is flowing to the faucet. This fills the Hot Tank.
- 7. The installer should then turn ON the Heater/Compressor (Green) Switch.



- 8. The *WL7* will now be in *Operational Mode* with both switches in the ON position
 - and the home screen will appear on the display.



- 9. Dispense cold into container until steady stream of water is present to remove any trapped air from the circuit and repeat for the ambient (room temperature) circuit.
- 10. Connect 3 Bar supply of food grade CO2 to the CO2 inlet bulkhead fitting on the back of the unit. Please see CO2 install procedure in this manual for reference. Dispense sparkling water unit only gas is flowing to the faucet to purge the system of trapped air. WL7 should automatically refill the carbonator in approximately 30 seconds once the dispense button is released. The injection pump will turn on 2 seconds after releasing sparkling dispense button. Premium Sparkling Water will not be produced until the system has reach cold set point.
- 11. It will take the heater approximately 10 minutes to heat the water to the factory set point of 87°C (187°F). The hot status bar will flush when heater is on and be solid with heater off. The hot



status bar arrows indicate tank temperature from below 40°C (104°F) on far left to set point on the far right.

Dispense a cup of hot water to ensure the temperature/odor/taste is acceptable.

<u>WARNING!</u> HOT WATER CAN BURN OR SCALD. The WL7 Water Purification System produces Hot Water up to 95°C (203°F). Water above 52°C (125°F) can cause severe burns or scalding. Hot water should be dispensed carefully into insulated container to avoid injury.

12. Once the *WL7 Water Purification System* ice bath builds a complete ice ring in approximately 90 minutes depending upon environment. The compressor will shut off once the ice ring has reached thickness ice sensor.

The cold status bar will flush when compressor is on and be solid with compressor off.

SOLID BAR

SOLID BAR

FLUSHING BAR

INDICATES COMPRESSOR

OFF

ON

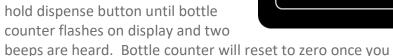
You can visually inspect the ice ring build through the access hole in the top of the ice bath if needed. The condenser at the rear of the unit will build heat as indication the refrigeration system is operation properly. Route all hose away from direct contract with heat from the condensing coils at the back of the unit.

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- 13. Dispense a cup of cold water to ensure the temperature/odor/taste is acceptable.
- 14. The sparkling chamber (carbonator) must be completely regenerated (emptied) a few times once the ice bath has reached set temperature and the drinking water line and sparkling chamber are cold. Regeneration will clear the chamber of the initial air and water trapped during startup and ensure that premium sparkling water is produced. Always use 3 Bar (42.5 psi) supply of food grade CO2 and ensure ice bath has reached cold set point before regenerating sparkling water tank.
- 15. Dispense a cup of sparkling water to ensure the temperature/odor/taste is acceptable. Sparkling output (carbonation level) can be tested if needed.
- 16. Move the *Waterlogic WL7 Water Purification System* into its final operating position. Be sure that a minimum of 50mm 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.
- 17. Level unit using the adjustable feet to level if necessary. Never install on incline.
- 18. When the unit has reached its Hot Temp Set Point, ensure the heater cycles off.
- 19. When the unit has reached its Ice Bath Set Point, ensure the compressor cycles off.
- 20. Once the unit is at the target temperature(s), sample the water to ensure water meets expectations and additional rinsing or adjustment is not required.
- 21. Check the *WL7 Water Purification System* for any leaks. External Leak Protection (Water block) is always recommended.
- 22. Confirm all program settings are correct and reset the Bottle Counter to Zero if needed. Enter maintenance mode and press and



release dispense button. Exit maintenance mode by tapping

RESET BOTTLE COUNTER
Hold Dispense Until 2 Beeps



dispense 5 times in 5 seconds.

Reference to the control of the co

Always adjust Hot and Extra Hot Setting down when installing at elevation to avoid boiling hot tank.

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WL7 ENHANCED FAULT CODES





SERVICE FILTER

Filter Timer is enabled and expired. Change filters and reset timer. See Service Filter Section.





UV ERROR

UV sensor did not detect UV light. The UV lamp will require changing





HOT SENSOR ERROR

Hot Sensor (Thermistor) Error. See Hot Sensor Error Section.





ICE DETECTION ERROR

Ice Thickness Sensor Error.
See Ice Detection Error Section.





SPARKLING WATER LEVEL ERROR

Sparkling Water Level Error or Pump Time Out. See Sparkling Water Level Error Section.





ICE BATH CIRCULATION ERROR

Ice Bath Circulation Motor Error.
See Ice Bath Circulation Error Section.





ICE BATH LEVEL ERROR

Ice Bath Level Error.
See Ice Bath Level Error Section.





HOT TANK HEATING ERROR

Hot Tank Heating or Rate of Rise Error. See Hot Tank Heating Error Section.





DISPENSE TIME OUT

2 Minute Continuous Dispense Notification. Release Dispense Button to continue. See Dispense Time Out Section.



WL7 UV ERROR





UV ERROR



Indicates a UV Error has been detected.

The UV sensor is not detecting UV light to ensure safe water. Cold, Sparkling, and Ambient (Room Temperature) icons will be ghosted and unpurified water will not dispense.

Check UV lamp, ballast, sensor and all connections in the circuit. Repair and replace as necessary. Ensure water is clear and UV quartz spiral is clean to allow UV sensor to monitor UV light. Cycle power to clear notification.



UV ERROR IN MAINTENANCE SCREEN





- 1. UV Lamp Status, Intensity, Connections, Replace
- 2. UV Ballast Status, Connections, Replace
- 3. UV Sensor Status, Condition (temperature), Location/Placement, Replace
- 4. Quartz Spiral Inspect Condition, Clean and Replace.
- 5. Water Quality Water must be clear with low turbidity and tannins to allow proper UV transmission.



WL7 HOT SENSOR ERROR





HOT SENSOR ERROR



Indicates an error with the hot sensor (thermistor).

The hot sensor error icon will appear in the dispense and maintenance screens if a hot sensor failure is detected. Hot sensor error message will appear for 3 seconds when selecting hot or extra hot. Heater will be shut off and hot and extra hot icons will be ghosted in the dispense screen.

Ensure the hot sensor (thermistor) is connected to the main PCB. Change the hot sensor and cycle power to reset error. Sensor must be fully inserted into the hot tank well. Error should disappear and hot and extra hot icons will be displayed in full color. Ensure that hot tank is full of water by dispensing hot to cup. Remember that both power switches must be ON to enable the heater.

HOT SENSOR ERROR IN MAINTENANCE SCREEN



- 1. Ensure thermistor is connected properly and fully installed in the hot tank well.
- 2. Replace thermistor (sensor).



WL7 ICE DETECTION ERROR





ICE DETECTION ERROR



Indicates the ice sensor has detected an error.

The ice detection sensor has a short circuit or open circuit. The ice detection system uses 3 probes in the bath to determine ice thickness. The error alert icon will appear in the lower left of the dispense screen. Ice detection error message will appear for 3 seconds when selecting cold or sparkling. The ice detection

symbol will be displayed in the maintenance screen. Refrigeration compressor will be shut off and cold and sparkling icons will be ghosted as shown above.

The ice bath cooling water must be able to conduct electrical signal between sensors. Check all connections and ensure the bath cooling water is above 30 ppm Total Dissolved Solids (TDS). Add 2.5 grams (½ teaspoon) baking soda (sodium bicarbonate) to the bath if TDS level is below 100 ppm and unit is supplied with very low TDS water typically produced by Reverse Osmosis (RO) systems.

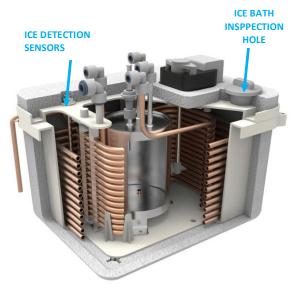
ICE DETECTION ERROR IN MAINTENANCE SCREEN



If TDS is adequate, check all connections to ensure conductivity.

Remove and inspect probes. The tips should be clean and able to conduct signal. Clean or replace as necessary.

Remove top cover to access ice bath and check TDS of cooling water thru inspection hole under plug shown:



ICE BATH COOLING SYSTEM LAYOUT



WL7 SPARKLING WATER LEVEL ERROR





SPARKLING WATER LEVEL ERROR



Indicates a sparkling water level or pump time out error.

The sparkling water level error icon will appear in the dispense screen and maintenance screens if the sparkling water injection pump cycles twice without filling carbonator. This logic protects the pump from damage if the sparkling water level sensor in the carbonation tank does not return a signal after two 3 minute

cycles. Sparkling icon will be ghosted in the dispense screen and sparkling water level error message will be displayed when selecting sparkling.

Ensure proper water supply and verify the CO2 pressure is at 3 Bar (42.5 psi). Limited water supply and excess CO2 pressure will prevent the pump from filling the carbonator and result in a sparkling water level error.

SPARKLING WATER LEVEL ERROR IN MAINTNEANCE SCREEN







COMMON TROUBLESHOOTING

- 1. Limited water supply. Dispense ambient water to validate water supply flow.
- 2. CO2 Pressure too high. Ensure 3 Bar (42.5 PSI) maximum.
- 3. Sparkling water level probe verify all connections from probe to PCB.
- 4. Remove and inspect sparkling water sensor probe. Clean and replace if needed.

WARNING! HIGH PRESSURE COMPRESSED GAS HAZARD. Isolate CO₂ gas supply and relieve pressure in tank by opening PRV (pressure relief valve) before attempting to remove the Level Sensor Probe or any other component under pressure.



WL7 ICE BATH CIRCULATION ERROR





ICE BATH CIRCULATION ERROR



Indicates the ice bath circulation motor has an error.

The circulation motor in the ice bath has faulted. The circulation motor comes on when dispensing and remains on for 4 minutes after dispense button is released. The circulation motor runs for 5 minutes for every 30 minutes when the machine has not been used.

ICE BATH CIRCULATION ERROR IN MAINTENANCE SCREEN

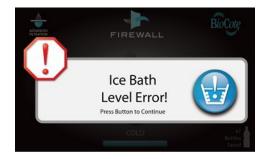


- 1. Cycle Power to ensure error repeats.
- 2. Check all wiring to ensure there is not an open circuit.
- 3. Replace circulation motor.



WL7 ICE BATH LEVEL ERROR





ICE BATH LEVEL ERROR



Indicates the ice bath level error has occurred.

The ice bath fill solenoid valve has been open for more than 10 minutes during start-up or more than 1 minute during normal operation.

ICE BATH LEVEL ERROR IN MAINTENANCE SCREEN



- 1. Check for leaks.
- 2. Ensure adequate water supply.
- 3. Check to make sure ice bath level sensor is properly connected.
- 4. Check ice bath fill solenoid valve.
- 5. Replace ice bath level sensor.



WL7 HOT TANK HEATING ERROR





HOT TANK HEATING ERROR



Indicates a hot tank heating or rate-of-rise error has been detected.

The hot tank has continuous rate-of-rise temperature monitoring to ensure it does not dry heat and trip the high limit (thermal overload) thermostat. The hot tank must be full of water for proper operation. The hot temperature sensor rate of change is monitored and will shut off the heater before any damage occurs.

HOT TANK HEATING ERROR IN MAINTENANCE SCREEN



ADVANCED HOT TANK PROTECTION

WL7 utilizes a thermistor in the hot tank well to monitor temperature. This is a very accurate and reliable method of control which allows programable set points and advanced diagnostics. Rate-of-Rise logic prevents the hot tank from dry heating and damaging the heater and hot tank controls. Tank temperature is monitored at start up and shuts down the heater when temperature increases too quickly. This advanced protection prevents tripping the hot tank overload when the tank is not filled with water.

The Hot Tank Heating Error message and icon will be displayed on screen. Hot and extra hot water icons will be ghosted in the display screen and the heater status bar will be blank.

COMMON TROUBLESHOOTING

Ensure hot tank is full of water by selecting hot product icon and dispense until steady stream of water flows to cup. Cycle power to heater/refrigeration by turning off/on green power switch on back of unit to clear error message.

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WL7 DISPENSE TIME OUT





DISPENSE TIME OUT



Indicates a 2-minute continuous dispense has been detected in operating mode.

Release the dispense button to clear alert message and continue use.

The WL7 has advanced leak prevention technology that continuously monitors the inlet solenoid valve and shuts down off water supply at the inlet valve and alerts the user anytime a 2-minute continuous dispense is detected. The inlet solenoid valve (SV 1) is located behind the water inlet bulkhead fitting must be open for water to flow into the unit. There are at least two solenoids in all flow paths for redundancy and all are fail safe (normally closed) requiring power to open.

Dispense time out logic is not active in startup mode (only red switch on) to allow automatic machine fill at startup. There is a 10-minute limit to ice bath fill that will prevent uncontrolled leaks or overfill when setting up the unit.

A 2-minute continuous dispense will produce approximately 3.2 litres (0.85 gallons) of water.

- 1. Release dispense button.
- 2. Damage to front dispense control knob. Replace front display PCB /control knob.
- 3. Moisture on front control knob PCB shorting signal to main PCB. Ensure PCB board and controls are dry and protective covers and seals are in place.
- 4. Wire short circuit. Inspect and check all harness and wiring for damage.