WL400

OPERATING, INSTALLATION, AND SERVICE MANUAL

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WL400 OPERATING, INSTALLATION, AND SERVICE MANUAL

Congratulations on your choice of the ***Waterlogic WL400*** water treatment system. The ***WL400*** model dispenses cold, and hot. Every ***WL400*** includes:

High Performance Multi-Stage Filtration

Bio-Cote Anti-Microbial Protection

Firewall Advanced Purification

The ***Waterlogic WL400*** provides exceptional quality and great tasting water with every use.

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WL400 FEATURES AND BENEFITS

Ambient, Cold, Hot, and Extra Hot Water

Pressure Fed Ambient, Cold, Hot, and Extra Hot Selections to meet a wide range of customer demands. Cold water temperature is adjustable

High Volume Storage and Water Capacity

The ***WL400*** has 4 liters of Cold Water Capacity and 1.2 Liters of Hot Water Capacity.

BioCote®Anti-Microbial Protection

Plastic 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 Dispense Area with Recessed Faucet

8.5 inch dispense height with BioCote® recessed faucet to protect from cross-contamination.

Leak Detection

WL400's are supplied with a Sensor in the Leak Tray that halts water supply to prevent overflow and sounds alarm to reduce accident potential.

Energy Saving Sleep Mode

Energy saving Sleep Mode can be programmed to turn off heater after 3, 6 or 12 hours of inactivity and can be shut off.

Firewall™

Firewall is proprietary technology that places the UV lamp at the point of dispense. This point of dispense purification keeps the dispense nozzle free from external contamination as well as purifying the water, making the freshest water possible.

WL400 CERTIFICATIONS

Waterlogic water treatment systems have been tested, approved, and certified by the world's top standards bodies such as NSF and ANSI. These organizations set and regulate national standards. We believe that performance testing and certifications validate ***Waterlogic*** as a world-leader in water treatment systems.

WL400 Certifications Include

NSF/ANSI-55 Class A –Ultraviolet Microbiological Water Treatment Systems
Water Quality Association is an international standards organization. Firewall™ Technology contains our latest, most innovative and patented breakthrough, "The Firewall™", the most comprehensive UV purification system for point-of-use water treatment systems ever developed. The Waterlogic Firewall components has been tested and certified by the Water Quality Association (WQA) to NSF/ANSI-55 Class A – Ultraviolet Microbiological Water Treatment Systems, and to NSF/P231 and the USEPA Standard for Microbiological Water Purifiers.

NSF P231 –Protocol for Microbiological Purifiers
The Public Health and Safety Organization establishes minimum requirements for health and sanitation characteristics of microbiological water purifiers. The requirements are based on the recommendations of the U.S. Environmental Protection Agency's Task Force Report.

UL399 – Certified Drinking Water Cooler
Intertek Labs (ETL) Certified the ***WL400*** to ANSI/UL 399 Standard for Drinking Water Coolers.

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

Energy Star Certified
The ***WL100*** has been tested and certified to the Energy Star, a US Environmental Protection Agency (EPA) program that helps our customers save money and protect our climate through superior energy efficiency.

Waterlogic manufacturing is certified to ISO 9001 – Quality Management Systems (certified by Moody International). 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.

Safe Drinking Water Act

Waterlogic water treatment systems conform to the Safe Drinking Water Act (SWDA) "lead-free" amendment effective January 4, 2014.

INTRODUCTION

Carefully read and follow all instructions to ensure proper and efficient operation of your ***WL400***. 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 treatment 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 issued or pending in the United States and other countries.

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.

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:

⚠ **DANGER!**
Indicates a situation which, when not avoided, results in death or severe injury.

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

⚠ **CAUTION!**
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:

⚠ **DANGER!** ***If incorrectly installed, operated or maintained, this product can cause death or severe injury.*** *Those who install, operate, or maintain this product should be trained in its proper use, warned of its dangers, and should read the entire manual before attempting to install, operate, or maintain this product.*

⚠ **WARNING!** ***Unit 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.***

⚠ **WARNING!** ***HOT WATER. Unit produces Hot Water up to 185°F.*** *Water above 125°F can cause severe burns or scalding. Keep unauthorized people and children away from the unit to avoid accidental dispensing of hot water. Children should not use without supervision.*

⚠ **DANGER!** ***ELECTRICAL SHOCK HAZARD.*** *Always unplug from power supply prior to servicing equipment to prevent electrical shock.*

⚠ **WARNING!** ***This system 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 before or after the system.*** *The system is designed for the supplemental bactericidal treatment of either treated and disinfected 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.*

⚠ **WARNING!** ***Dispenser Could Tip or Fall causing serious injury.*** *Always install unit on a firm, flat, and level surface and secure the* ***WL400*** *to the base cabinet with the screw provided to lock the components together. Never place heavy items on top of unit and never climb, stand, or hang on unit or storage cabinet to prevent injury and damage.*

⚠ **CAUTION!** ***INDOOR USE ONLY.*** *Do not install outdoors or where unit is in direct sunlight. Do not install where ambient temperature goes below 50F or above 97F. Avoid high humidity and moisture. Product life and performance will be impacted and warranty could be voided.*

MODEL/PART DESIGNATIONS

BRAND NAME	DESCRIPTION	MODEL – PART NUMBER
WL400 Counter Top	***Waterlogic WL400 Counter Top*** - Ambient, Cold, Hot and Extra Hot F-4FW-M-HCA-HC2P-SB-INN	10-WL4FW-SB
WL400 Base Cabinet	***Waterlogic WL400 Base Cabinet with RO*** F-4FW-M-HCA-HC2P-SB-INN	10-WL4BC

SPECIFICATIONS

ITEM	
Water Connection	¼" Quick Connect
Cold Water Temperature	Cold Water Temperature – Factory Set Point 41° - 5°C (Adjustable 34° - 54° F. (1.1° - 12.2°C)
Hot Water Temperature	Hot Water Temperature – Factory Set Point 185° F (85°C) (Adjustable from 158°F to 203°F)
Extra Water Temperature	Extra Hot Water Temperature – Factory Set Point 203° F (95°C)
Hot Water Manual Reset Overload	207° F (97°C)
Recommended Service Pressure	40-60 psi (275-414 kPa) – Use Pressure Regulator
Maximum Service Pressure	100 psi (689 kPa) – Use Pressure Regulator
Rated Service Flow	0.42 gallons per minute (1.6 Lpm)
Environmental Temperature	35° - 100°F (2° - 37°C)
UV Lamp	13 Watts
Heater	500 W
Refrigerant Gas	R134a, 75g, 2.65 ounces
R134a Pressures	High (230 psi), Low (90 psi)

SHIPPING SPECIFICATIONS

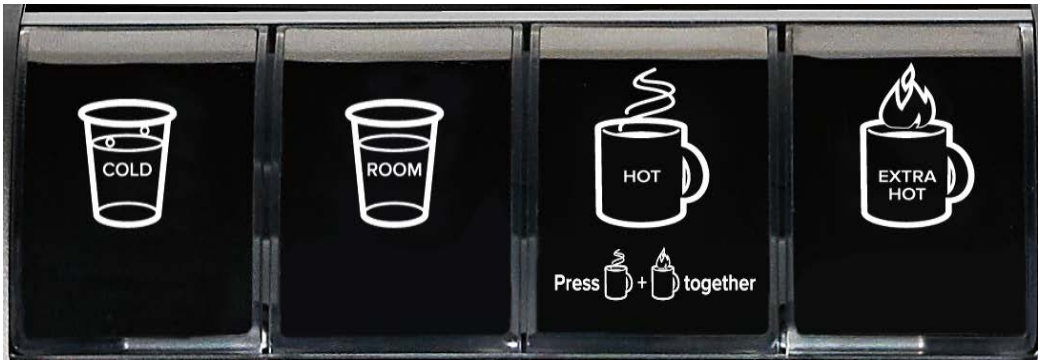
ITEM	***WL400* Counter Top**	***WL400* Base**	***WL400 Tower Combined***
Width/Depth/Height of Box	21" x 22" x 22" (53.5 cm x 56cm x 56cm)	21" x 22" x 22" (53.5 cm x 56cm x 89cm)	21" x 22" x 57" (53.5 cm x 56cm x 145cm)
Weight (dry) of Box	57 pounds (26 kg)	61 pounds (28 kg)	118 pounds (53.5 kg)
Ship per Pallet	Up to 8 per pallet		4 per pallet in 2 boxes

**WL400* Counter Top is 17.75 in. tall and may not fit between countertops and cabinets - Check installation to ensure adequate clearance.

ELECTRICAL SPECIFICATIONS

ELECTRICAL SUPPLY	120V/60Hz	15 Amp Service+
COMPONENT	**POWER (approximate)**	**AMP DRAW (approximate)**
Heater	500	4.2 Amps
Compressor	114	1 Amp
Fan	16	0.1 Amps
Controls	15	0.1 Amps
UV Lamp System	13	0.1 Amps
Pump	12	0.1 Amps
***WL400* TOTAL**	**670**	**5.5 Amps**

OPERATING INSTRUCTIONS



The above picture shows front dispensing panel for the ***Waterlogic WL400*** .

Button	Operational Use
	Press the Cold Water selection button. There may be a 2 second delay as FIREWALL UV lamp purifies the water and the FIREWALL Sensor ensures your safety. Blue light will illuminate the dispense area.
	Press the Room Temperature (Ambient) Water selection button. There may be a 2 second delay as FIREWALL UV lamp purifies the water and the FIREWALL Sensor ensures your safety. Green light will illuminate the dispense area.
	Press and hold both the Hot Water 189°F (87°C) and the Extra Hot Water selection buttons simultaneously for 2 seconds and hot water will dispense. This is a child safety feature. Red light will illuminate the dispense area.
	Press the Extra Hot Water Selection button to elevate the hot tank to 203°F. Allow a few minutes for the temperature to rise in the hot tank. Press and hold both the Hot Water and the Extra Hot Water selection buttons simultaneously for 2 seconds and hot water will dispense. This is a child safety feature. Red light will illuminate the dispense area. ⚠ **WARNING!** ***Unit produces Very Hot Water up to 203°F. Water above 125°F can cause severe burns or scalding. Keep unauthorized people and children away from the unit to avoid accidental dispensing of hot water. Children should not use without supervision.***

Dispensing your choice of water is very simple.

1. Place your cup centrally in the dispensing area. Always use a cup suitable for use with hot water. Never hold cup or place hands in dispensing area while dispensing hot water. Never try to fill more than one cup at a time.

2. Select the type of water you wish to be dispensed by press/touching the cold, ambient or hot water select icon until it illuminates.

⚠ **WARNING!** ***Unit produces Very Hot Water up to 203°F. Water above 125°F can cause severe burns or scalding. Keep unauthorized people and children away from the unit to avoid accidental dispensing of hot water. Children should not use without supervision.***

DISPLAY PANELS AND ICONS

UV Lamp Has Failed
See troubleshooting section of manual

The Hot Tank is heating up

Filter needs replacing

Extra hot water has been selected

The UV Lamp is operating

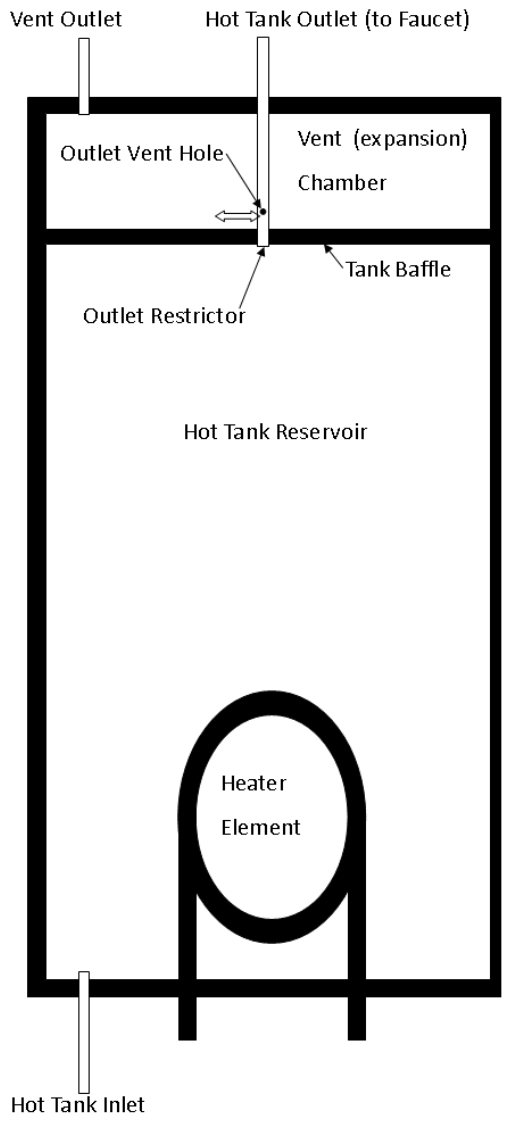
A leak has been detected - *See troubleshooting section of manual*

The Cold Tank is Chilling

The Drip Tray is Full – Please empty the tray

Sleep Mode - press any button to bring machine out of sleep mode

HOT TANK PRINCIPLES OF OPERATION



All ***Waterlogic*** Hot Tanks have a built in Vent or Expansion Chamber in the top of the tank except for WL270 (GF) units.

The Vent Chamber allows for expansion of the water when it is heated.

The chambers are separated by a welded-in tank baffle.

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

The hot tank outlet tube has a restrictor in its base. This ensures the reservoir is always full by allowing more water in than out.

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

Water in the vent chamber is suctioned back through the outlet tube vent hole when water is dispensed.

Expansion of water as it is heated in the reservoir will push the water out the faucet when the outlet tube vent hole becomes plugged with debris or scale.

The small Outlet Vent Hole is susceptible to scale build up and is a key indicator that descaling is required.

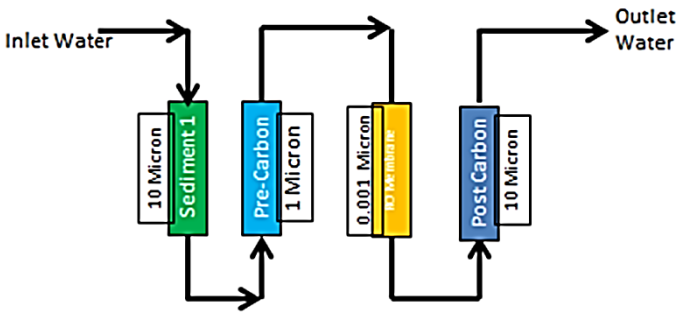
It is critical to descale the hot tank through the vent line and outlet line on a regular basis to prevent this problem.

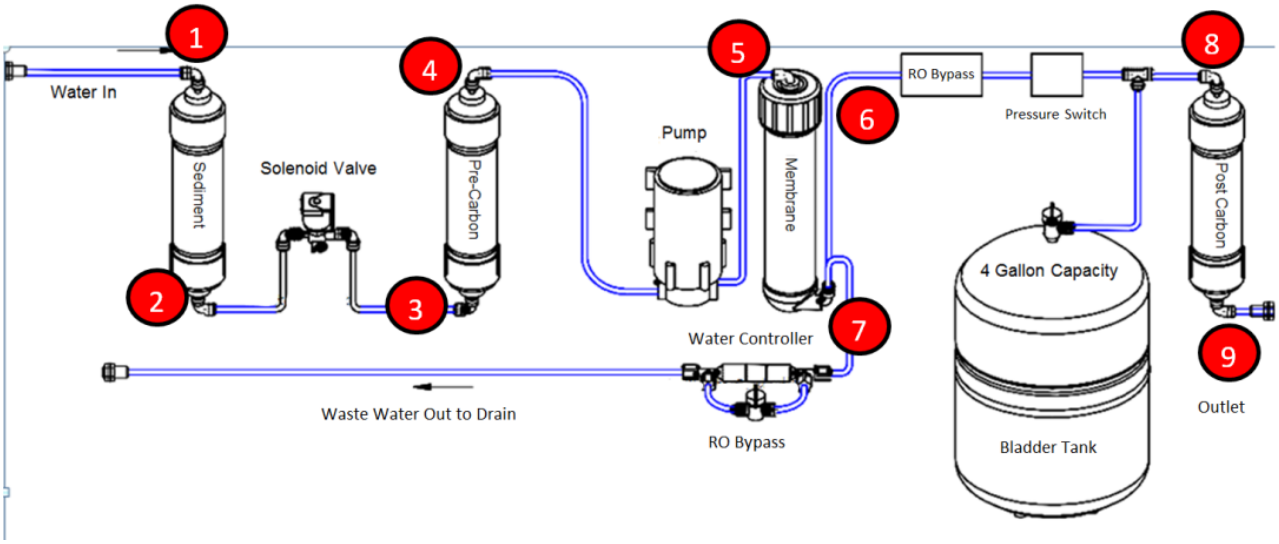
Descaling through the inlet and/or outlet lines only will not clean the vent chamber and outlet vent hole properly.

WL400 STANDARD WATER FLOW DIAGRAM

There is a 1.6 liter per minute (0.423 gallons per minute) flow restrictor inline after the Main Unit bulkhead inlet fitting on all ***WL400's***.

Flow Restrictor
Part Number AK-0014-B





RO QUICK GUIDE

The ***WL400*** contains a high capacity Reverse Osmosis Filtration System installed in the Base Cabinet.

Efficiency is improved by utilizing the on-board booster pump to optimize the osmotic pressure, and a 4 Gallon Bladder Tank is included in the Base Cabinet.

HIGH PERFORMANCE FILTRATION

FIREWALL ADVANCED PURIFICATION

The Filtration system has 4 Stages of Filtration with 100 Gallons per day capacity combined with exclusive Firewall Purification.

Stage 1 – Sediment Filter; Removes unwanted particles and particulates down to 10 micron.

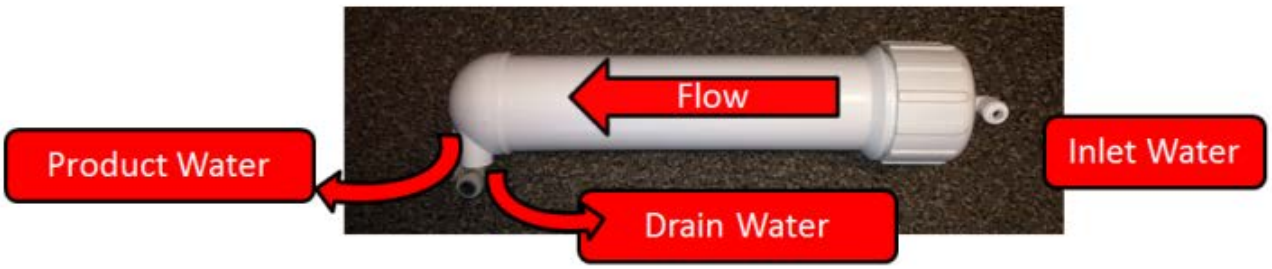
Stage 2 – Pre-Filter; Granular Filter removes unwanted chlorine, odor and bad taste

Stage 3 – RO Membrane; 0.001 Micron filtration to remove total dissolved solids from the water.

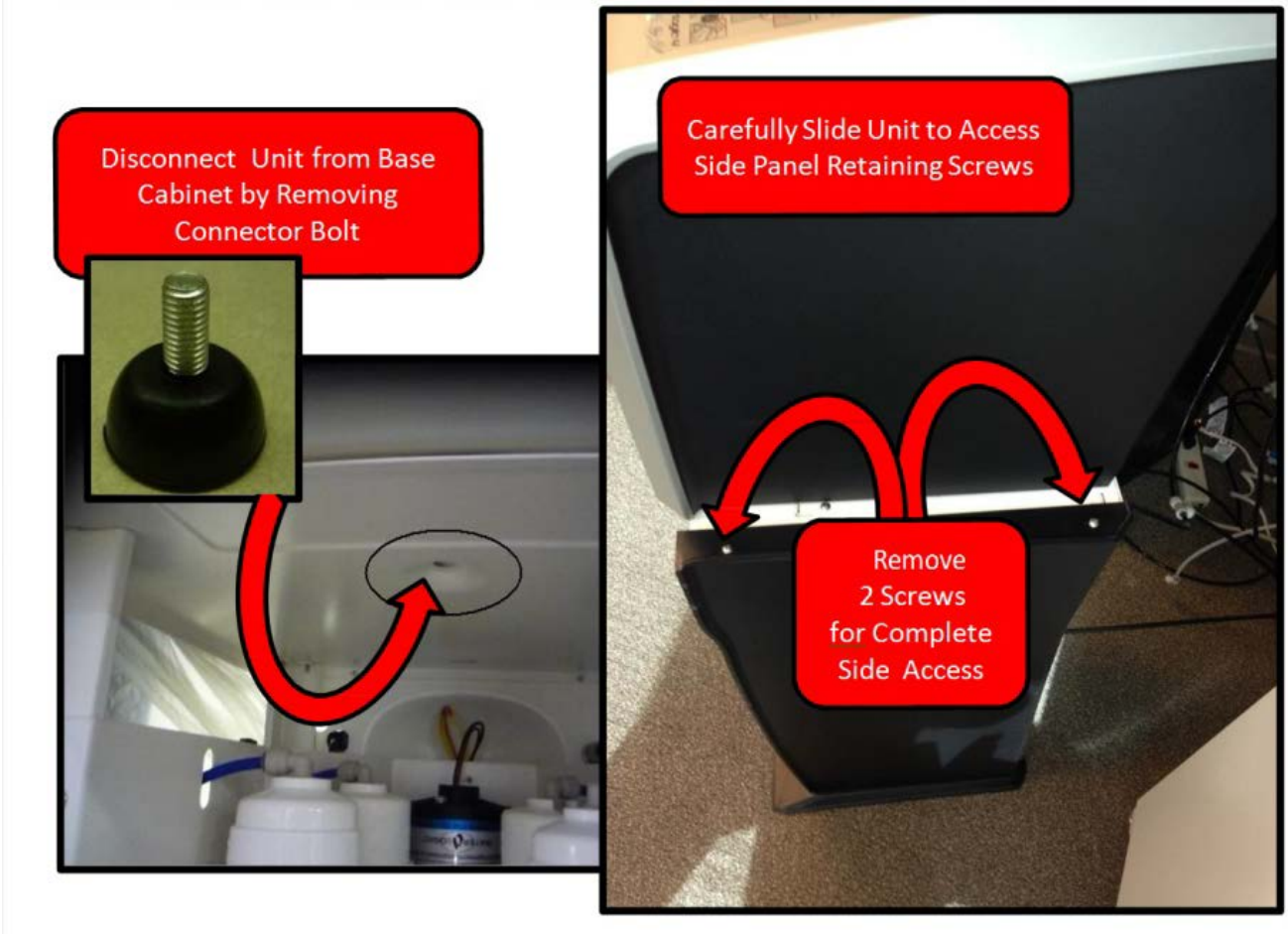
Stage 4 – Post Filter; Carbon "polishing filter" to improve the taste of the water.

Final Barrier – Firewall Advanced Water Purification; Acts as the Final Barrier at the Point of Use.

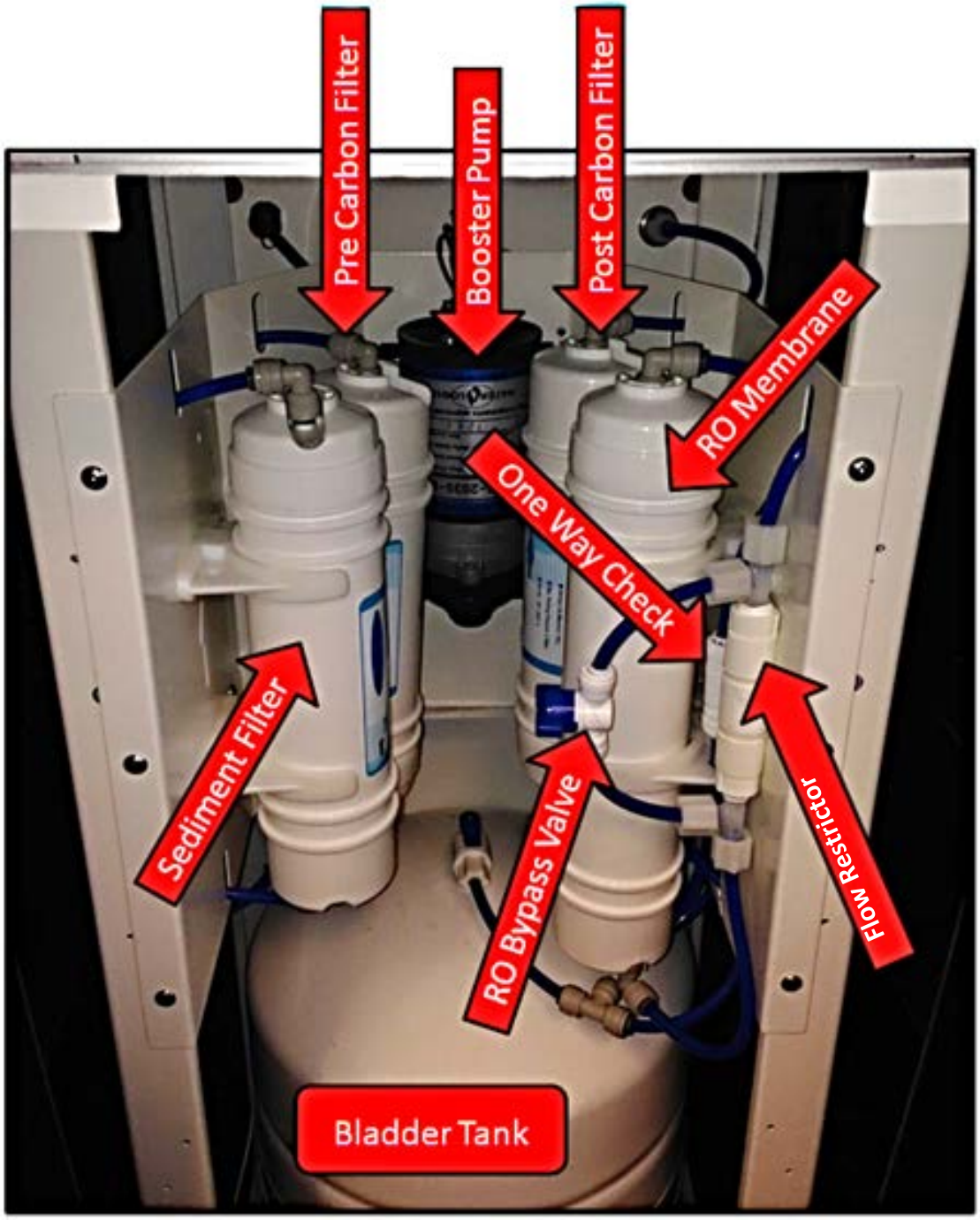
RO Membrane Part No. 15-3020



BASE CABINET SIDE REMOVAL



BASE CABINET CONFIGURATION

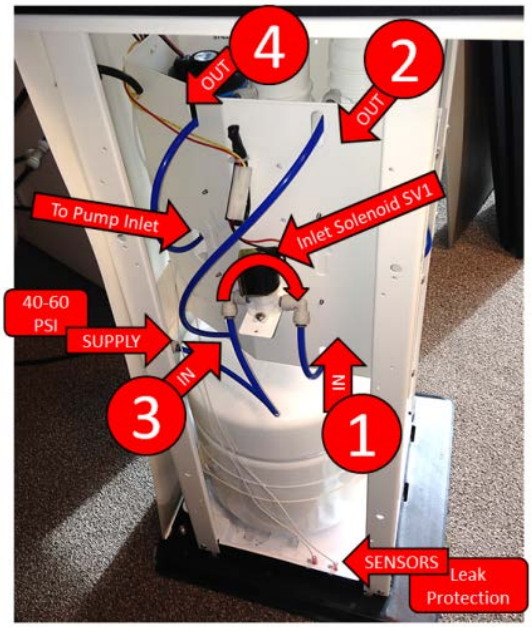


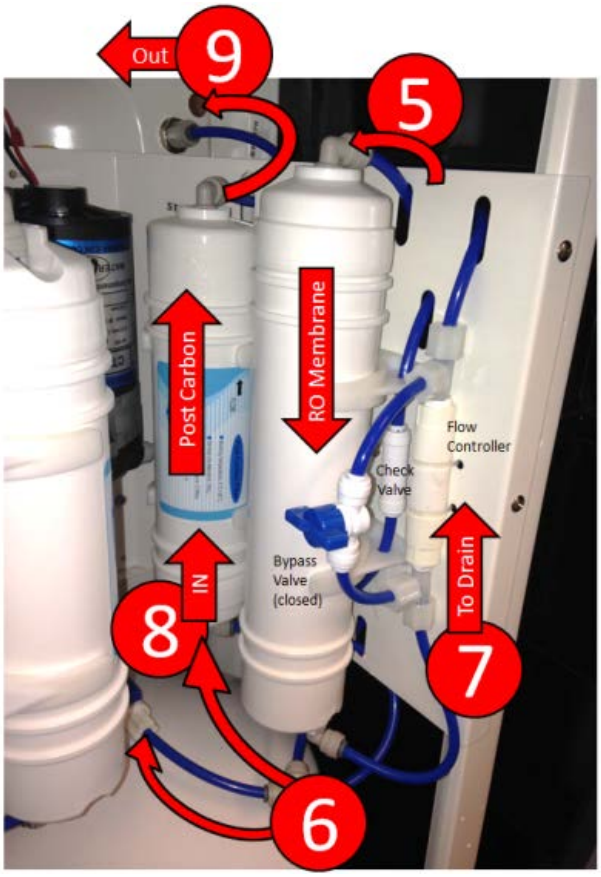
RO SETUP AND FILTER CHANGE INSTRUCTIONS

1. Remove Front Panel from Base Cabinet
2. Isolate Water Supply
3. Remove Pre-Carbon and Post-Carbon Filters and clear carbon fines by flushing 5 galls on water through each filter individually to drain.
4. Reinstall Pre-Carbon and Post-Carbon filters.
5. Close RO bypass valve and bladder tank valve (See photo)
6. Flush RO Membrane to drain for a minimum of 4 hours or until TDS reduction is at desired level (>90%). Water should be draining from both the water out line and drain line.
7. Open Bladder Tank Valve and turn on water supply. Ensure RO bypass valve stays in the Closed Position.
8. Allow up to 1 hour for empty bladder tank to fill if necessary.

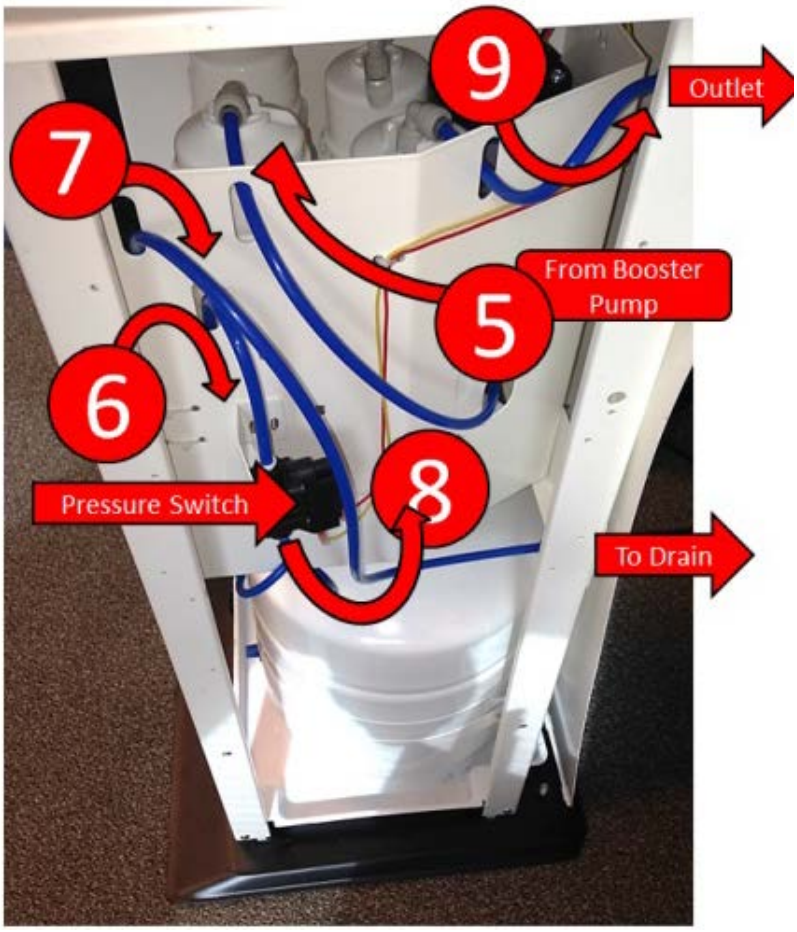
LEFT SIDE INSIDE CABINET

Left Side with Outside Panel Removed

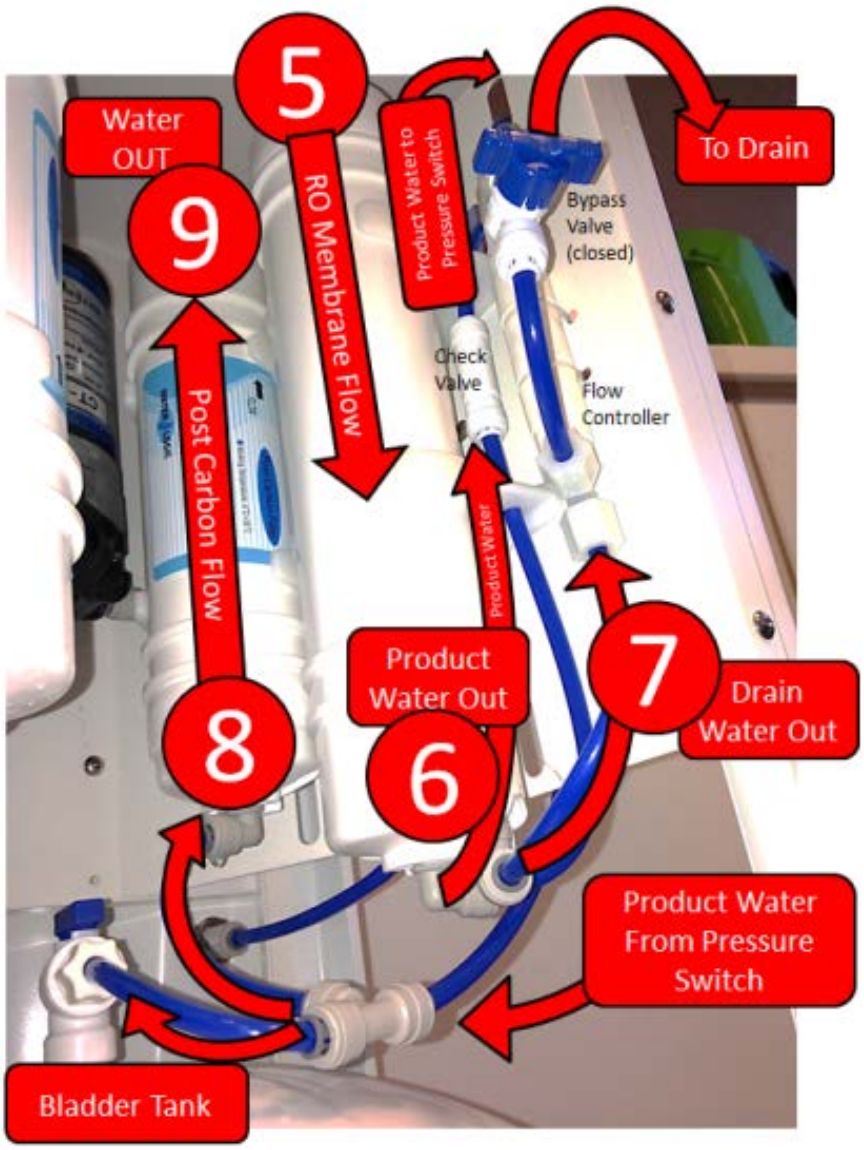




RIGHT SIDE PANEL REMOVED



RO MEMBRANE INSTALLED



REPLACING RO MEMBRANE

Original Filter Configuration

Part No	Description	WLUSA Part No
RO-0001A	Sediment Filter	10-8050
RO-0002A	Pre-Carbon Block	10-8055
RO-0004C	RO Membrane	10-8060
RO-0005A	Post Carbon Black	10-8065
CT-2090	13W UV Lamp	10-8075

Original RO Membrane
Part Number RO-004C
WLUSA Part Number 10-8060
One Piece 100 gpd RO Membrane

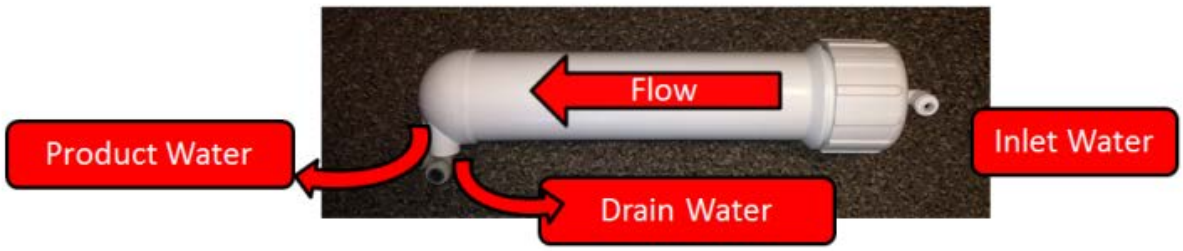
NEW RO Membrane Kit – P/N 10-8061
Kit 10-8061 consists of:

Quantity	WLUSA Part No	Description
1 each	15-3001	Dow Film Tec 50 gpd RO Membrane
1 each	15-3020	Ro Membrane Housing (2 piece)
3 each	JG 480821S	¼" Tube * 1/8" NPT Rigid Elbows
1 each		RO Membrane Instructions

Replacement Membrane Kit
WLUSA Part Number 10-8061
One Piece 100 gpd RO Membrane

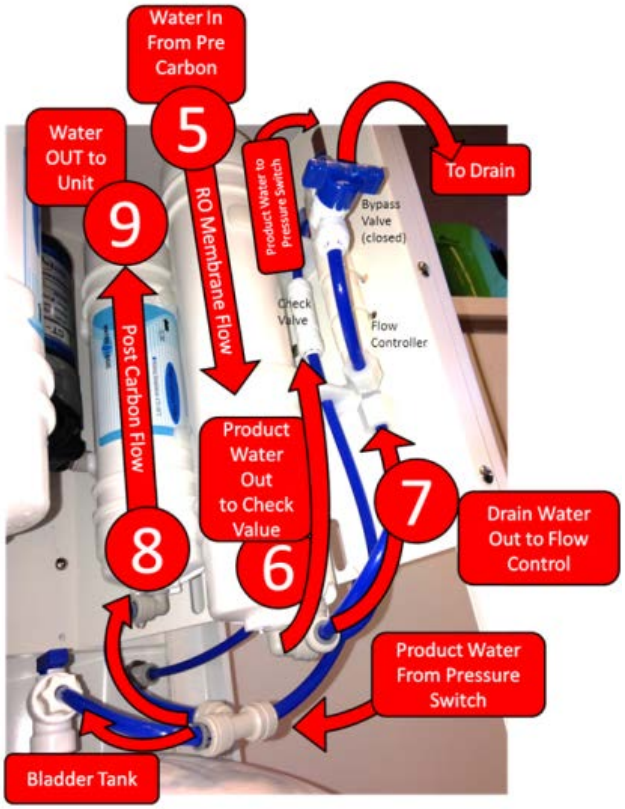
OLD RO Membrane # 10-8060 (RO-0004C)

NEW RO Membrane Kit # 10-8061 Installed

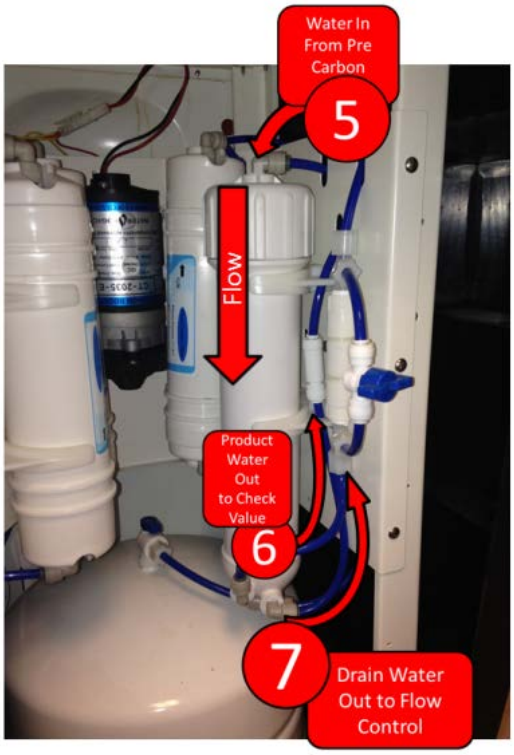


NEW RO Membrane # 15-3001

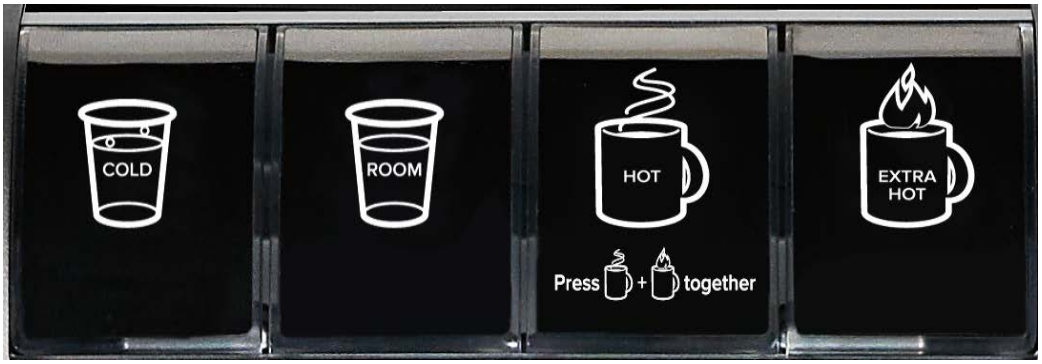
OLD RO Membrane # 10-8060 Installed



NEW RO Membrane # 10-8061 Installed



PROGRAMMING INSTRUCTIONS



The above picture shows front dispensing panel for the ***Waterlogic WL400*** .

Press and Hold all 4 dispensing buttons for 10 seconds.
There are 5 options in the menu.

Cold Button cycles down the menu

Ambient Button cycles up the menu

Hot Button Selects the Option

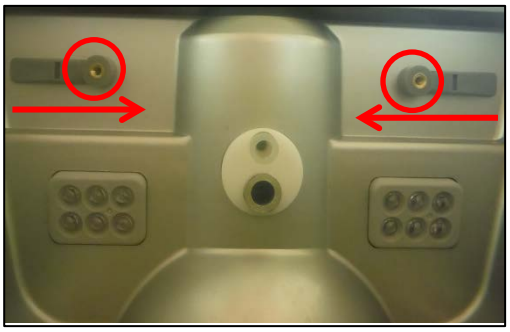
Extra Hot Button Exits the menu

Settings	Programming
F-S Filter Setting	Filter Setting can be adjusted between 1,000 to 9,000 gallons in 1,000 increments.
F-r Filter Resetting	Choices are Yes or No
C-S Cold Temperature Setting	Temperature Setting can be adjusted from 37°F to 54°F (2.7°C to 12.2°C)
H-S Hot Temperature Setting	Temperature Setting can be adjusted from 158°F to 203°F (70°C to 95°C)
S-S Sleep Mode	Choices are 3 Hour, 6 Hour, 12 Hour or No (Off)

OPENING TOP COVER

1. Remove screws from slide locks located near dispenser.

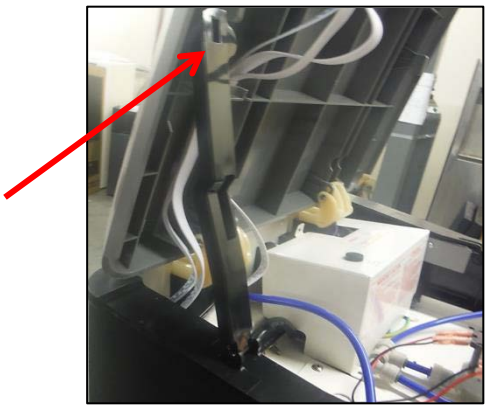
2. Push slide locks inward toward dispensing area.



3. Pull cover forward and lift from the front to open top cover.

4. Locate top cover support arm attached to left side panel.

5. Lift support arm from the front and align with top cover to hold top cover in place.



PRE-INSTALLATION PROCEDURES

⚠ **DANGER!** ***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.

Materials Needed:

- Personal Protective Equipment. Rubber or Nitrile Safety Gloves and Protective Eyewear
- Phillips Screwdriver
- Temperature Gauge
- Water Pitcher or Container to collect water from the faucet
- 5 gallon container or drain basin
- Sanitizer - Household Bleach (5.25% Sodium Hypochlorite) or Citric Acid Based Cleaner
- ¼" Plastic Tubing, at least 4 feet in length, and assorted ¼" quick connect fittings
- TDS Meter and Test Strips for measuring chlorine – Optional
- Sanitizing Cartridge

1. Unpack the ***Waterlogic WL400*** and check exterior for damage.

Sanitizing

Sanitize using a Household Bleach (5.25% Sodium Hypochlorite solution) or other approved cleaner throughout the cold and sparkling water circuits. Follow all instructions on the sanitizer and flush with fresh water through the faucet until odor and taste is 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).

2. Put 1 teaspoon of sanitizer per directions or use Bleach Solution (1 teaspoon = 1/6 oz. = 5 ml = ½ cap full) of household bleach (Sodium Hypochlorite 5 - 10% Concentration) in the Sanitizing Cartridge. Always ensure sanitizer is compatible with stainless steel and acetyl plastic.

3. Connect sanitizing cartridge to inlet water supply and connect to inlet bulkhead fitting on back of unit. Turn on water supply.

4. Connect power to ***WL400***. Turn on Red Power Switch. DO NOT TURN ON GREEN HEATER/COMPRESSOR SWITCH AT THIS TIME.

⚠ CAUTION! ***NEVER TURN ON HEATER BEFORE FILLING HOT TANK.***

Green Heater/Compressor 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.

Fill the Cold Circuit with Sanitizer

5. Depress the main dispensing button on the front control panel until cold water/sanitizing solution comes out the faucet. **NOTE:** Container and drain basin will be required to catch the water from the faucet.

   ⚠ **WARNING!** *Use Personal Protective Equipment. Gloves and Eye Protection Required. The first 2 or 3 gallons of water will contain concentrated sanitizer. Use extreme care!*

6. Turn off water supply and remove Sanitizing Cartridge from inlet water supply. Reconnect water supply to inlet bulkhead fitting.

Flushing the Sanitizer from the Machine

7. Flush thoroughly per filter manufacturers' recommendation with fresh water to drain.

8. Once flushed, install the filters. Following the flow direction on the filter.

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

9. Connect WL400 to power.

Flush Filters

⚠ **CAUTION!** ***FILTER 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 filter 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.

10. ⚠ CAUTION! ***NEVER TURN ON HEATER BEFORE FILLING HOT TANK.*** *Green Heater/Compressor 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.*

11. Remove Front Panel from Base Cabinet opening Top of Panel and Removing Slide Bar.

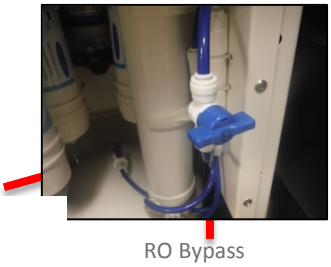
12. Attach ***WL400*** to base cabinet with locking bolt provided.

13. Connect wires (quick connect clips) on back of unit from Base Cabinet to ***WL400***.

14. Remove Pre-Carbon and Post Carbon filters and flush 5 gallons of water through each filter separately.

15. Reinstall Pre and Post Carbon Filters.

16. Close RO bypass and bladder tank.


RO Bypass

17. On Back of Cabinet, connect two pieces of tubing to the RO Drain and Water Out line and run to external drain.

18. Connect power cord to ***WL400*** and turn on Red Power Switch.

19. Connect power to ***WL400***. Turn on Red Power Switch. I=ON. DO NOT TURN ON THE GREEN HEATER/COMPRESSOR SWITCH

⚠ **CAUTION!** ***NEVER TURN ON HEATER BEFORE FILLING HOT TANK.*** *Green Heater/Compressor 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.*

20. Connect supply water to Water In fitting on back of cabinet. Turn on water supply and flush RO system to drain for 4 hours. Water should be draining from both Water Out line and the Drain Line.
21. After 4 hours of flushing, turn Off Incoming Water. Connect water line from the Base Cabinet to Water In fitting on ***WL400***.
22. Open bladder tank and turn on supply water.
23. Allow bladder tank to fill for 1 hour.
24. Fill hot tank for approximately 1 minute. Depress both the "Hot" and "Extra Hot" buttons to dispense. Red light should illuminate above the dispensing area after a 2 second delay.
25. Fill cold tank for approximately 2 minutes. The Blue Light should illuminate above dispensing area.
26. Turn on Green Heater/Compressor Switch.

Fill the Hot Tank

27. Press the Hot Water Select Button, followed by the main dispensing button to fill the hot tank. Water will dispense from the faucet once the hot tank is full. Flush until water is clear.

⚠ **WARNING!** ***HOT CIRCUIT IS NOT SANITIZED.***
Water in the hot circuit is not sanitary until the temperature exceeds 171°F for at least 5 minutes.

UV System Functional Test

⚠ **WARNING!** ***ULTRAVIOLET RADIATION.*** *Protect your skin and eyes against ultraviolet rays. Never look directly at an operating UV light. Disconnect wiring before removing.*

28. Remove UV Firewall Lamp from Firewall housing. Remove top cover from Firewall housing. Carefully remove quartz sleeve spiral from Firewall Housing and inspect for cracks or other damage. Reinsert quartz sleeve spiral, replace top cover of housing. Inspect UV lamp and reinsert into housing.
29. Press dispensing button and check for blue glow from top of Firewall Housing and at Faucet dispensing area to ensure UV lamp is operational.
30. Disconnect UV lamp to test UV lamp sensor operation. Unit should alarm and UV Icon on display will light.
31. Disconnect power to ***WL400***.
32. Reconnect UV lamp.
33. Connect power to ***WL400***.

Compressor Test

34. Switch Green Heater/Compressor to on *I=ON position*. Always ensure tanks are full of water before turning on the heater or the overload (high limit) will open and require manual reset. If the wire condenser at back of the unit is warm, the refrigeration system is working.

35. Once the machine reaches its target temperature, the compressor will shut off. Draw a glass of cold water and verify it is has been chilled to proper temperature.

Heater Test

36. Always ensure tanks are full of water before turning on the heater or the overload (high limit) will open and require manual reset. It will take the heater approximately 10 minutes to heat the water from ambient 75°F to the factory set point of 185°F. Dispense a cup of hot water to ensure the temperature/odor/taste is acceptable.

⚠ **WARNING!** ***VERY HOT WATER CAN BURN OR SCALD.***
Hot water should be dispensed carefully into insulated container to avoid

WL400 DRAINING INSTRUCTIONS

Draining Notes

Drain the ***WL400*** for transportation.

⚠ **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).

Prior to draining the hot tank, turn off the Red Compressor / Heater switch, and dispense 2 liters of hot water from the machine. As hot water is dispensed from the faucet of the unit, colder water will be introduced into the hot tank. Since Red Compressor / Heater switch is turned off, the heater will not energize and heat the incoming tap water. Following this precaution prevents exposing personnel and equipment (drains, catch basin, etc.) to scalding hot water.

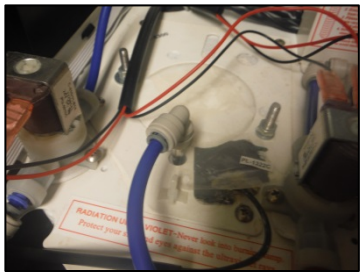
Disable Cold and Hot Tanks

1. Turn off the Green Heater / Compressor switch to disable the heater and compressor.
2. Dispense 1 liter of water through the hot tank to cool the water temperature in the hot tank and avoid burns.

⚠ **WARNING!** ***VERY HOT WATER CAN BURN OR SCALD.***
Hot water should be dispensed carefully into insulated container to avoid injury.

Turn off Water Supply and Bleed Water Pressure

3. Isolate the unit from feed water by turning off the supply.
4. Turn off Bladder Tank.
5. Dispense cold still water to relieve any pressure built up in the system.
6. Remove screws from Top Cover Access Locks (located under front cover adjacent to faucet.



7. Unlock both Locks and Open the ***WL400*** Top Cover.
8. Disconnect Cold Line from top of Cold Tank.
9. Remove Drain Caps and Plug from Cold Water Tank Drain on the back of the ***WL400***.
10. Open Bladder Tank.

11. After unit has finished draining, replace Plug and Drain Caps.

12. Reconnect tubing to Cold Tank.

13. Close lid, close locks and replace screws in Top Cover.

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.

⚠ **WARNING!** ***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 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.*

⚠ **WARNING!** ***USE ONLY Waterlogic SUPPLIED POWER CORD.*** *Locate system within 5 feet 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 Warranty.*

⚠ **CAUTION!** ***INDOOR USE ONLY.*** *Never expose to direct sunlight, heat sources, or ambient air temperature above 100°F (37°C) or below 35°F (2°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 2-inches. Installs where the ambient temperature exceed 80F, require a minimum of 4-inches clearance for proper heat dissipation and efficient operation.*

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

⚠ **CAUTION!** ***USE UV STABILIZED SUPPLY LINES.*** *Feed the unit with a potable ambient or cold water supply only. Feed water over 100° F (37°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.*

⚠ **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 ***WL400***.

Always install indoors and place the ***Waterlogic WL400*** on a firm, flat and stable surface.

1. Unpack the ***Waterlogic WL400*** and check exterior for damage.

2. Remove Front Panel from Base Cabinet opening Top of Panel and Removing Slide Bar.

3. Remove ***WL400*** from packaging and place on top of base cabinet.

4. Attach ***WL400*** to base cabinet with Locking Bolt provided.

    a) Remove screws from locking slides located under Front Cover adjacent to faucet.

    b) Unlock slides and open Top Cover of ***WL400***. Top cover slides forward and then lifts.

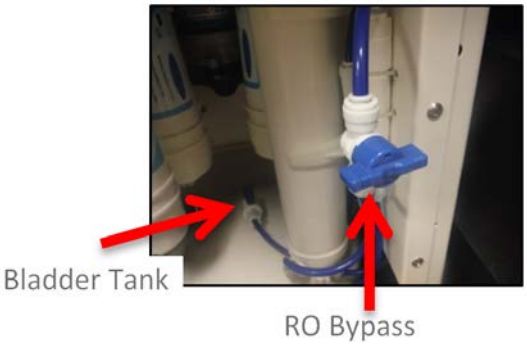
    c) Locate wires and run them through.

5. Connect Wires (Quick Connect Clips) on back of unit from Base Cabinet to ***WL400***.

6. Remove Pre-Carbon and Post-Carbon Filters and flush 5 gallons of water through each filter separately.

7. Reinstall Pre and Post Carbon Filters.

8. Close RO Bypass and Bladder Tank



9. On Back of Cabinet, connect 2 pieces of Tubing to RO Drain Line and Water Out Line and run to external drain.

10. Connect the power lead and insert it into the rear of the machine. Turn on the Red Power Switch I=ON. Do NOT turn on the Green Heater / Compressor Switch.

⚠ **CAUTION!** ***NEVER TURN ON HEATER BEFORE FILLING HOT TANK.***
Green Heater/Compressor 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.

11. Connect supply water to water in fitting on back of cabinet. Turn on the Water Supply and flush RO system to drain for 4 hours. Water should be draining from both Water Out Line and Drain Lines.

12. After 4 hours, turn off Incoming Water. Connect Water Out Line from Base Cabinet to drain water in fitting on ***WL400***.

13. Open Bladder Tank and turn on supply water.

14. Allow bladder tank to fill for 1 hour.

15. Fill Hot Tank (Approximately 1 minute). Must depress both Hot and Extra Hot Buttons to dispense. Red light should illuminate above dispensing area after 2 second delay.

16. Fill Cold Tank (Approximately 2 minutes). Blue light should illuminate above dispensing area.

17. Turn on Green Heater/Compressor Switch. I=ON.

SERVICE REQUIREMENTS

⚠ **WARNING!** ***Read and understand the contents of this manual before attempting to service WL400. 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 Waterlogic Equipment.***

1. Visually inspect all electrical and water connections for signs of wear or damage.

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

2. ***Waterlogic*** recommends changing the UV Lamp every 6 months.

   ⚠ **WARNING!** ***ULTRAVIOLET RADIATION.*** *Protect your skin and eyes against ultraviolet rays. Never look directly at an operating UV light. Disconnect before removing UV Lamp.*

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

3. Clean the spiral quartz sleeve that surrounds the UV lamp with a non-abrasive cloth, descaling solution, or ultrasonic bath if needed when changing UV lamps.

   ⚠ **CAUTION!** ***UV SYSTEM IS FRAGILE.*** *Never handle the UV lamp or Quartz Sleeve with bare hands. UV Lamp and quartz sleeve must be free of oils and contaminants to ensure proper operation. Use a soft non-abrasive cloth to clean.*

4. Sanitize the cold tank per instructions in the pre-installation procedures.

5. 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.

6. Remove and clean the Faucet. Replace as needed.

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

REPLACEMENT COMPONENTS

Component	Part No.	Frequency of Replacement
UV Light, 15 Watts	CT-2090-A	Every 6 months, or as required WLUSA Part No 10-8075
Spiral	FU-0007-A	Clean every 12 months, replace as needed WLUSA Part No 12-8080
Hot Tank 189°F (87°C)	HT-3041	Replace every 5 years WLUSA Part No 12-5615
Sediment Filter	RO-0001-A	Every 6-months, or as required. Local water conditions will determine proper filter type and maintenance schedule. WLUSA # 10-8050
Pre-Carbon Filter	RO-0002-A	Every 6-months, or as required. Local water conditions will determine proper filter type and maintenance schedule. WLUSA # 10-8055
RO Membrane Replacement Kit	NA	Every 6-months, or as required. Local water conditions will determine proper filter type and maintenance schedule. WLUSA # 10-8061
Post Carbon Filter	RO-0005-A	Every 6-months, or as required. Local water conditions will determine proper filter type and maintenance schedule. WLUSA # 10-8065

**** One pre-installed. One required for NSF-53 and NSF P231 Certification.***

Replacement parts can be obtained from *Waterlogic* or an *Authorized Waterlogic Dealer*.
See Parts Layouts, Drawings, and Lists for additional repair parts.

Hot Tank Service

Hot Tanks (with controls) must be replaced at least every 5 years. Descaling hot tank may be required on a regular basis depending upon filtration and local water conditions. See Service Section.

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.**

HOT TANK DESCALING INSTRUCTIONS

The hot tank requires removal of mineral deposits (descaling) on a regular basis. Typically descaling should take place every 6 to 12 months to preserve the long-term health of your unit.

Use non-toxic cleaner such as ScaleKleen, DEZCAL, 20% Citric Acid Solution, or Undiluted Vinegar Solution to remove mineral deposits as directed by the manufacturer depending upon filtration and local water conditions.

Descaling is an important process that removes calcium deposits, or scale, that can build up inside a tank over time. Calcium and scale is non-toxic but left unattended will hinder your unit's performance.

⚠ **WARNING!** ***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 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 from the faucet
- 5 gallon container or drain basin
- Citric Acid Based Cleaner
- ¼" Plastic Tubing, at least 4 feet in length, and assorted ¼" quick connect fittings
- Sanitizing Cartridge
- Food Coloring

1. Put descaler per directions and 3 drops of food coloring into the descaling cartridge.

2. Connect descaling cartridge to the inlet water supply and connect to inlet bulkhead fitting on the back of the unit. Turn on Water Supply.

3. Select Hot Water and depress the Main Dispensing Button on the Front Control Panel until descaling solution (colored water) comes out of the faucet. Container and drain basin will be required to catch water from the faucet.

4. Turn off water supply and remove sanitizing cartridge from inlet water supply. Reconnect water supply to inlet fitting.

5. Allow descaling solution to remain in the Hot Tank for 15 minutes (length of time may vary depending on water conditions).

6. Place a pitcher, catch basin or other container under the faucet of the ***WL400***.

7. Flush the Hot Tank until water runs clear.

8. Once clear Water dispenses from the faucet the Hot Tank has been descaled. Always ensure unit is performing to the customer's satisfaction.

⚠ **WARNING!** ***HOT WATER HAZARD.*** *Unit Produces Very Hot Water and Steam. Always use insulated and chemically compatible containers and let unit cool down before draining the hot tank to avoid injury.*

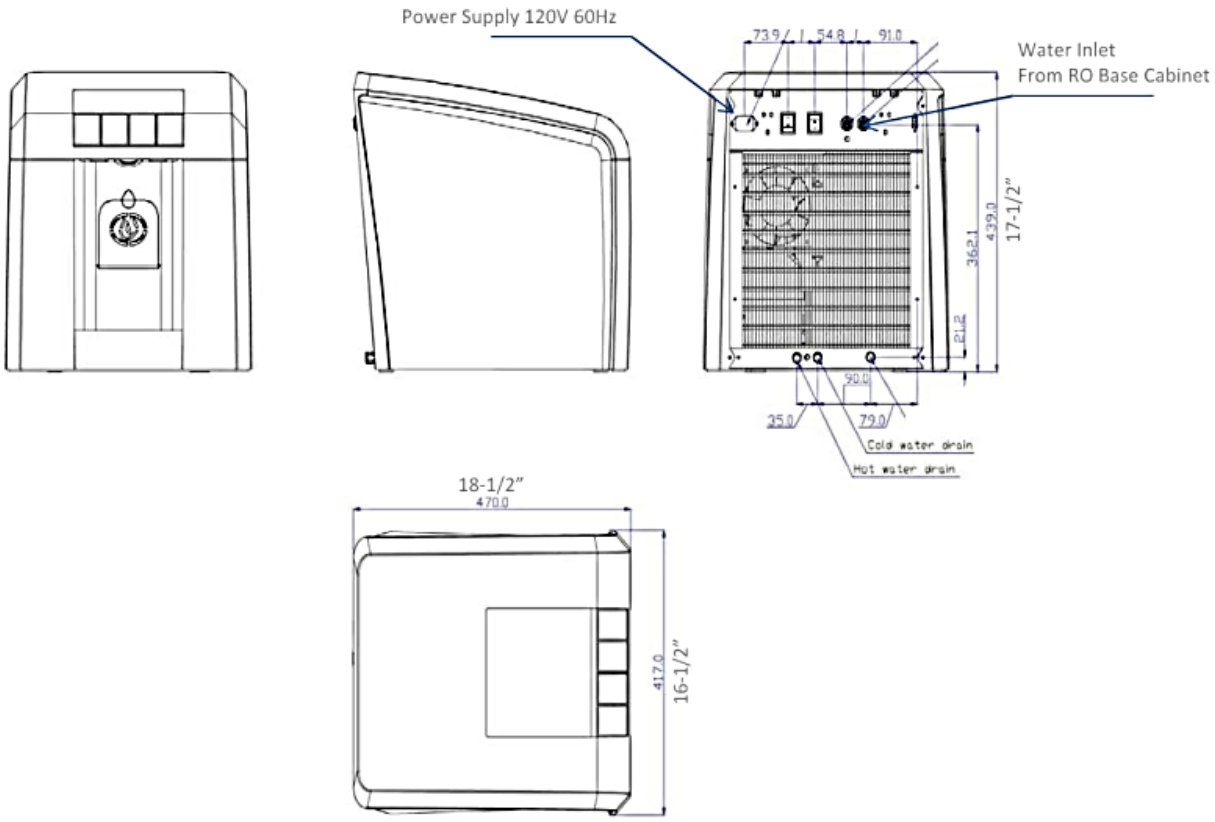
⚠ **CAUTION!** ***MUST REPLACE HOT TANK 5 YEARS****. The hot tank and its controls must be replaced a minimum of every five years to ensure efficient and dependable operation.*

⚠ **WARNING!** ***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.*

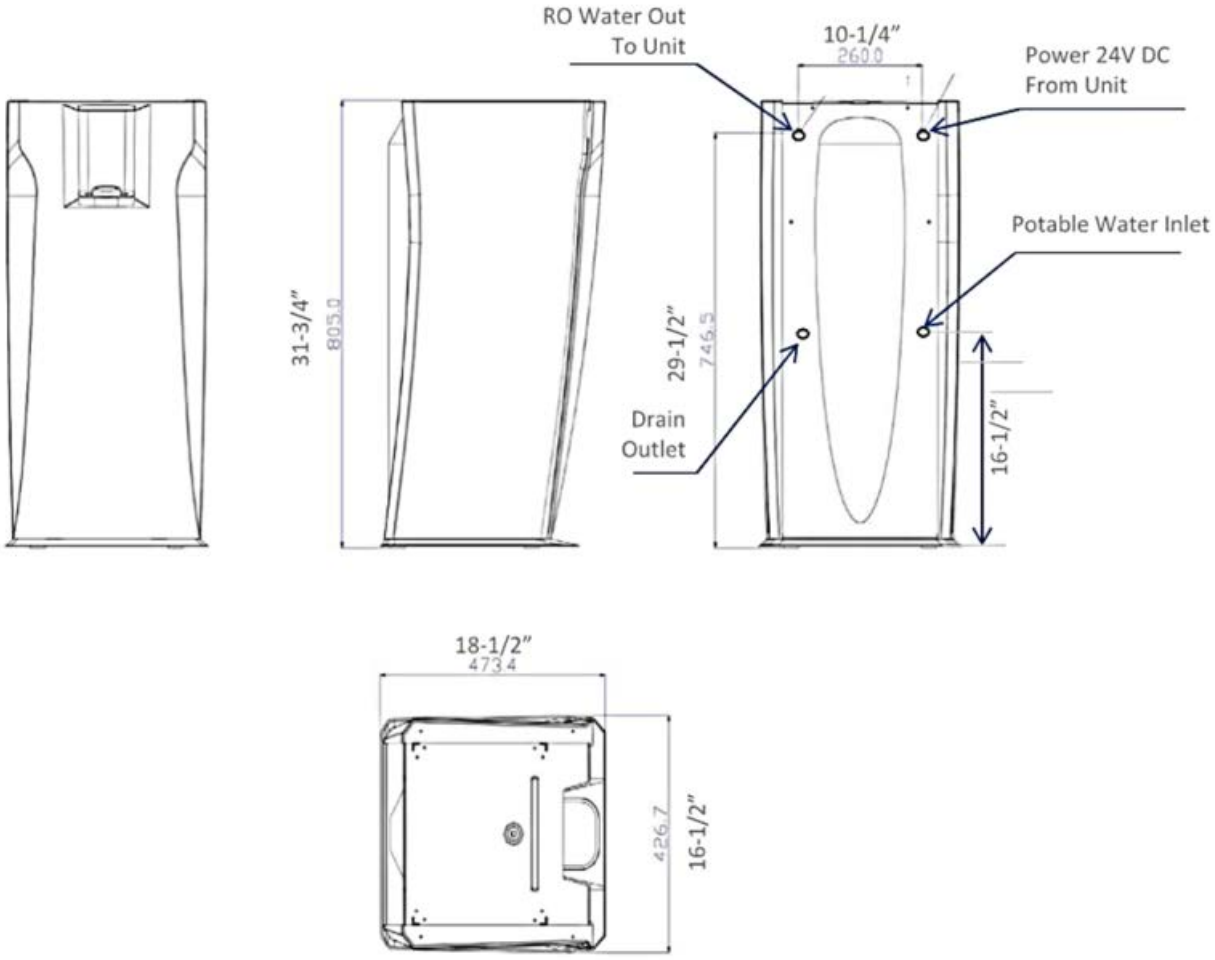
RESETTING THE OVERLOAD OR HIGH LIMIT SAFETY

1.	Turn off Green Heater/Compressor Switch on rear of unit. 
2.	Unplug the Power Cord from rear of unit.
3.	Remove the Tower Cover Locking Screws and open Slide Locks for Top Cover. 
4.	Unlock both locks. Slide Top Cover forward and lift in front of top cover to open.
5.	Remove the 2 Phillips Screws from Left Side Panel (when standing behind unit) and remove side panel. 
6.	Check and press both thermal overload buttons on Hot Tank. 
7.	Close, lock and replace Top Cover Screws
8.	Turn on Red Power Switch and Green Heater / Compressor Switch. *I=On* 

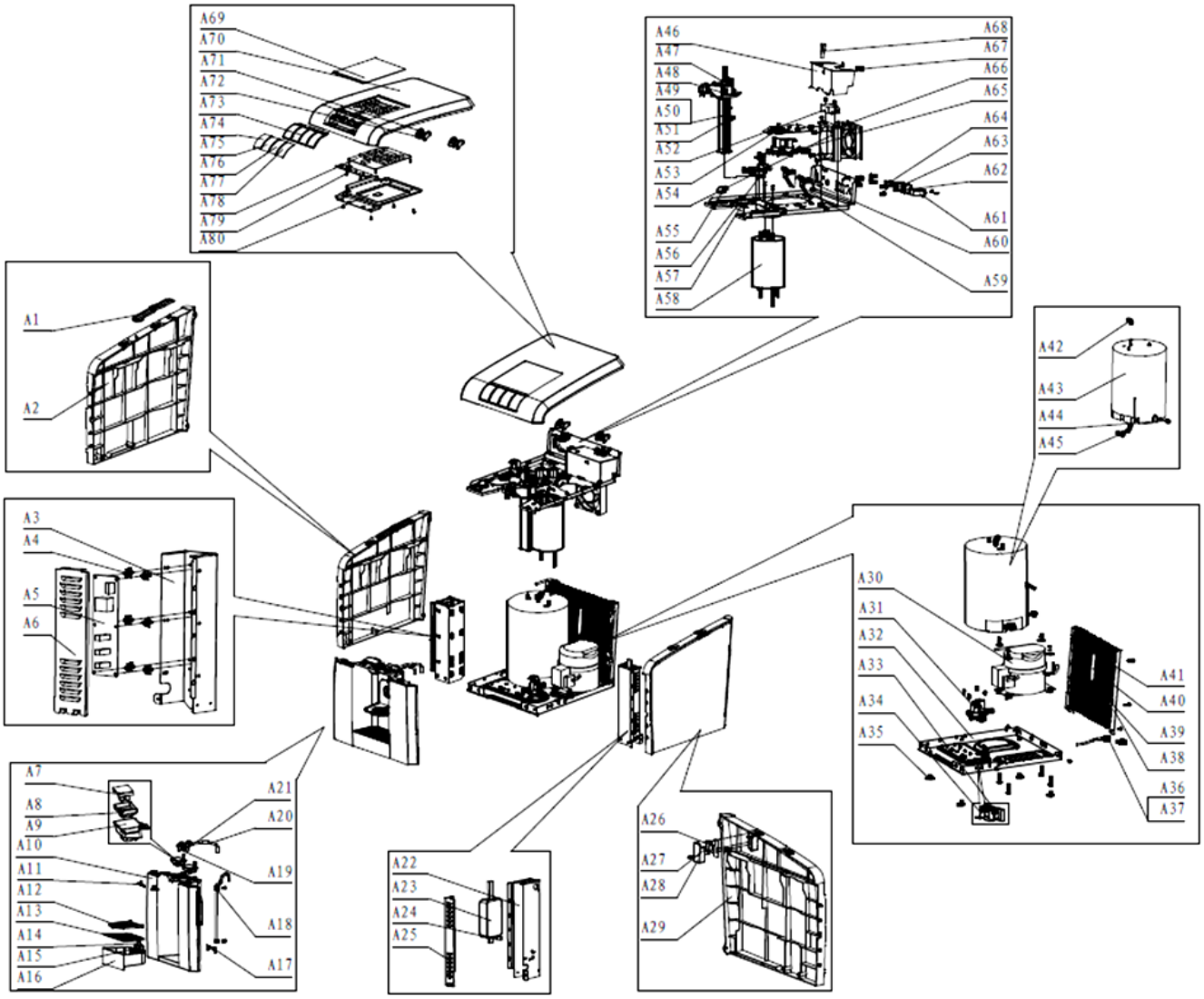
WL400 COUNTER TOP LAYOUT



WL400 BASE LAYOUT



WL400 COUNTER TOP MAIN PARTS DRAWING AND PARTS LIST

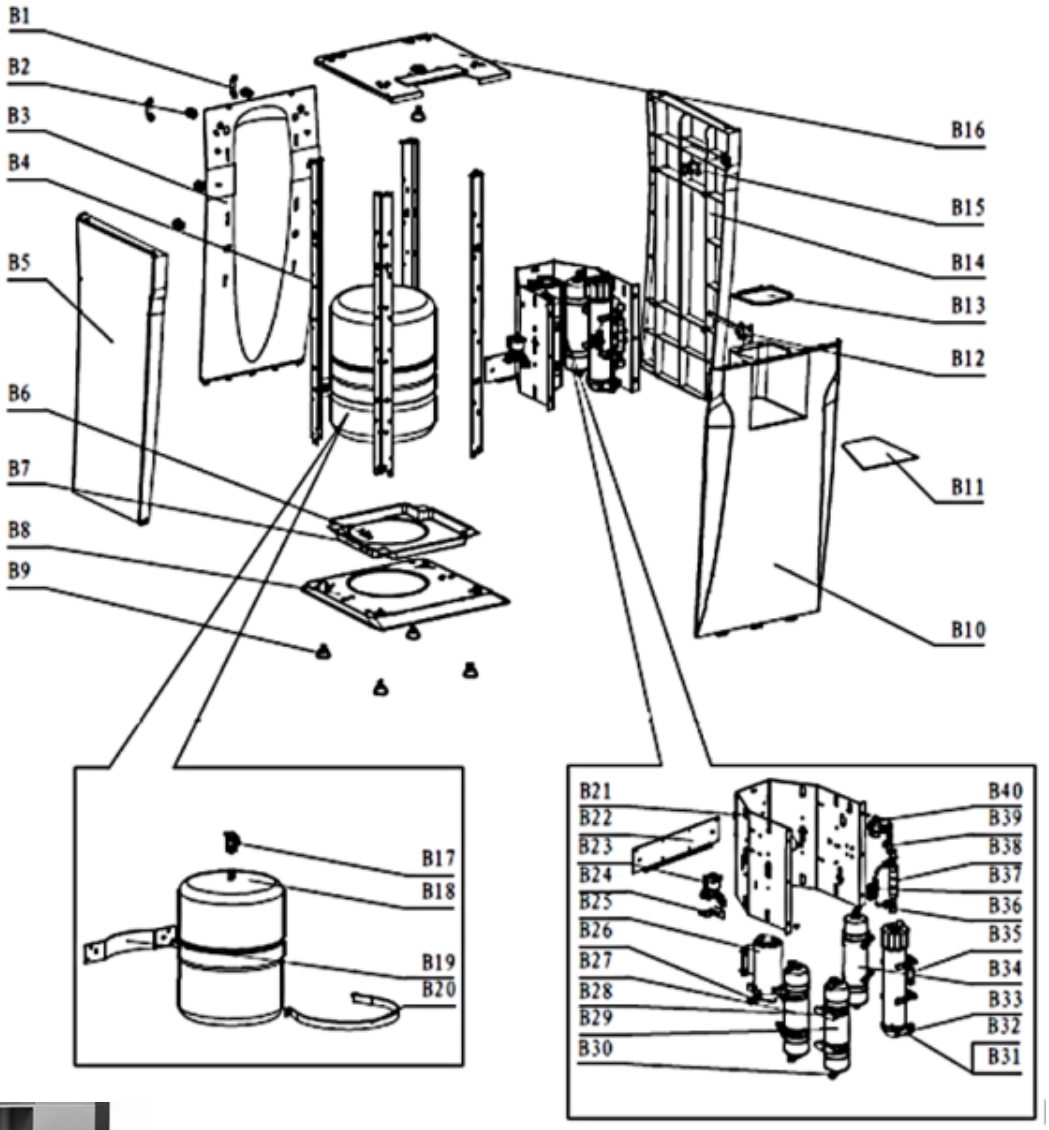


No	Part No	Description	WLUSA Part No
A1	PL-1321	Top Cover Safety Support	PL-1321
A2	PL-1328	Counter Left Top Side Panel	PL-1328
A3	ST-8260	PCB Holder Bracket	NA
A4	EN-6059	PCB Support	10-3017
A5	EN-6137	RO Main PCB	EN-6137
A6	ST-8285	Fan Bracket	NA
A7	EN-6119	PCB LED	EN-6119
A8	PL-1335	LED PCB Holding Sealing Rubber	PL-1335
A9	PL-1318	LED Hold Plate	NA
A10	PL-1312-C	Front Upper Panel – Silver	PL-1312-C
A11	PL-1317	Top Cover Lock with Screw Hole	PL-1317
A12	PL-1344-A	Adjustable Drip Tray Grill with BioCote®	PL-1344-A
A13	PL-1320-A	Drip Tray Grill Silver with BioCote®	PL-1320-A
A14	ST-8267-C	Drip Tray Sensor Pin – Left	ST-8267-A
A15	ST-8267-D	Drip Tray Sensor Pin – Right	ST-8267-B
A16	PL-1319-F	Drip Tray Body	PL-1319-P
A17	ST-8266	Drip Tray Sensor Holder	ST-8266
A18	CU-0055	Air Vent Clip	CU-0055
A19	PL-1354	Firewall Hot Water Faucet – Insert Pipe	PL-1354
A20	PU-4064	Silicone Tube 5/16” for Hot Water	10-7040
A21	PL-1354	Firewall Hot Water Faucet	PL-1354
A22	ST-8261	Adaptor Holder Bracket	NA
A23	EL-5128	Power Adaptor 2A Universal with ST-8264-A	EL-5128
A24	ST-8264-A	Adaptor Fixing Bracket	NA
A25	ST-8284	Adaptor Metal Cover	NA
A26	ST-8286	Micro SW Metal Cover	ST-8286
A27	EL-5027	Micro Door Lock S/W Only	NA
A28	PL-1329	Safety Micro Switch Cover	PL-1329
A29	PL-1327	Counter Top Side Panel – Right	PL-1327
A30	CO-9001-A	Compressor (R134a 1/8 HP) 110V/60Hz	10-2200
A31	PU-4016	Solenoid Valve DC24V	12-1500
A32	ST-8258	Counter Top Bottom Base	NA
A33	PL-1311	Leak Detector Sensor Bracket	PL-1311

A34	ST-8207CN	Leak Containment Tray Clip (Sensor 0.5mm)	12-3180
A35	PL-1251-CN	Unit Rubber Feet for Counter Top	12-3150
A36	CT-2028	Drain Valve Cap	CT-2028
A37	CT-2039-A	Drain Valve Body Only for ¼”	CT-2039-A
A38	ST-8256	Counter Top Front Support Frame	NA
A39	CO-9041	Wire Condenser	NA
A40	CO-9008	Filter Dryer	12-1001
A41	ST-8255	Counter Top Support Frame – Left	NA
A42	PU-4008	JG Equal Elbow Connector ¼” (PI0308S)	NA
A43	CT-2072-A	Firewall Cold Only Tank	NA
A44	PU-4140	JG End Stop ¼” (PI4608S)	NA
A45	PU-4011	JG Bulkhead Connector Union ¼” * ¼” (PI1208S)	NA
A46	ST-8283	Electronics Cover Bracket	ST-8283
A47	CT-2090	UV Lamp 13W	10-8075
A48	ST-8298-A	Firewall System Fixing Bracket to the Upper Shelf	ST-8298
A49	FU-0009-A	Firewall Assembly	FU-0009-A
A50	FU-0007-A	Firewall Spiral Quartz	10-8080
A51	CT-2089	UV Sensor – UVC Sensor (without Wire)	CT-2089
A52	EL-0010-L00-00	Ballast 110V – 13W	
A53	ST-8300	Firewall C&S Fixing Bracket to Upper Shelf	ST-8300
A54	ST-8265	Fan Bracket	NA
A55	CU-0001	Cushion for Solenoid Valve	CU-0001
A56	PL-1336	Upper Panel Wire Route Hole – Silicone Cover	PL-1336
A57	ST-8259-H	RO Countertop Upper Shelf / Back Panel	NA
A58	HT-3037-A	1.2L 120V 500W Hot Tank – Steel 189°F (87°C)	HT-3037-A
A59	PL-1330	Back Panel Hinge A-4	PL-1330
A60	PL-1331	Back Panel Hinge A-1	PL-1331
A61	EL-5016	Socket with EMI Filter	10-4013
A62	EL-5004	Red Power Switch	10-3008
A63	EL-5005	Green Heater/Compressor Switch	10-3009
A64	PU-4028	JG Bulkhead Connector Union ¼” * ¼” (PI1208S)	10-3067
A65	PU-4066	JG Stem Elbow Connector ¼” * ¼” – Acetyl (PI220808S)	NA
A66	CT-2011	Fan Motor 100V	10-1500
A67	EL-5122	Wire from Ballast to UV Lamp	EL-5122
A68	EL-5053	Fuse Holder and Fust 110V/15A with one wire	EL-5053

A69	PL-1337-E	RO LCD Cover Panel	PL-1337-E
A70	PL-1322-C	Top Cover	PL-1322-C
A71	PL-1332	Back Panel Hinge A-2	PL-1332
A72	PL-1333	Back Panel Hinge A-3	PL-1333
A73	PL-1323	4 Button Panel	PL-1323
A74	LP-7310	RO Cold Button Label – H/C/A	LP-7310
A75	LP-7311	RO Ambient button Label – H/C/A	LP-7311
A76	LP-7312	RO Hot Button Label H/C/A	LP-7312
A77	LP-7313	RO Extra Hot Button Label H/C/A	LP-7313
A78	EN-6136	RO Display PCB – H/C/A; H/C; C	EN-6136
A79	EN-6118	PCB Button	EN-6118
A80	PL-1334	PCB Cover	PL-1334

WL400 BASE MAIN PARTS DRAWING AND PARTS LIST



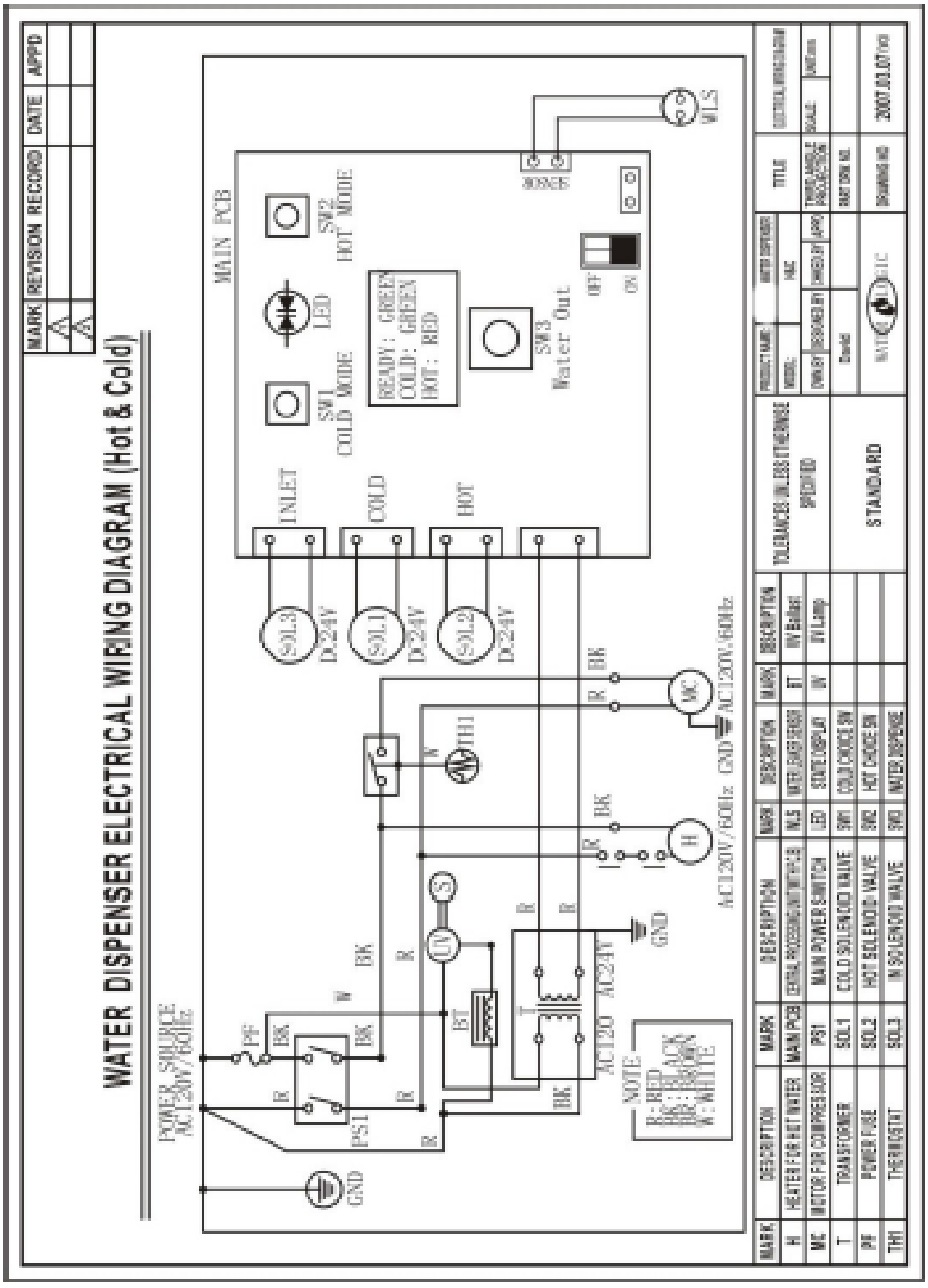
WL400 BASE LAYOUT DRAWING AND PARTS LIST

No	Part No	Description	WLUSA Part No
B1	ST-8342	Fixing Bracket – Base Cabinet Back Panel	NA
B2	PU-4028	JG Bulkhead Connector Union 1/4" * 1/4"(PI1208S)	10-3067
B3	ST-8273	Base Cabinet Back Panel	NA
B4	ST-8270	Base Cabinet Support Frame	NA
B5	PL-1339	Base Cabinet Plastic Side Panel-L	NA
B6	ST-8207CN	Leak containment tray Clip (sensor 0.5mm)	12-3180
B7	PL-1375	RO Base Cabinet Leak Containment Tray	PL-1375
B8	ST-8269	Base Cabinet Down Base	NA
B9	ST-8016	Unit Control Rubber Feet	10-3083
B10	PL-1341-A	Base Cabinet Front Down Panel Silver	PL-1341-A
B11	ST-8336	Cup Dispenser Hole Metal Cover	ST-8336
B12	ST-8272	Base Cabinet Door Lock Bracket	ST-8272
B13	PL-1343	Base Cabinet Cup dispenser Cover	PL-1343
B14	PL-1340	Base Cabinet Plastic Side Panel-R	PL-1340
B15	PL-1342	Base Cabinet Door Lock Cover	PL-1342
B16	ST-8268	Base Cabinet Upper Shelf	NA
B17	PU-4082	HG Shut Off Valve NPT 5/16” * ¼” (PPSV00822W)	12-6102
B18	CT-2056-A	RO Bladder Tank – 4 Gallons	CT-2056-A
B19	ST-8337	RO Bladder Tank (4 Gallon) holding bracket 1	ST-8337
B20	ST-8338	RO Bladder Tank (4 Gallon) holding bracket 2	ST-8338
B21	ST-8333	RO filter bracket	ST-8333
B22	ST-8334	RO filter bracket support	ST-8334
B23	PU-4017-B	Hot and Cold Solenoid Valve DC24 300mm Wire	PU-4017-B
B24	ST-8300	Firewall C&S Fixing Bracket to Upper Shelf	ST-8300
B25	CT-2035-E	Water Pressure Pump DC24	10-7235
B26	PU-4010	JG Equal Straight Connector 1/4"(PI0408S)	NA
B27	RO-0002-A	Pre-Carbon Filter – Micro	10-8055
B28	PU-4024	3” Filter Clip	10-3099
B29	RO-0001-A	Sediment Filter – Micro	10-8050

B30	PU-4008	JG Equal Elbow Connector 1/4" (PI0308S)	NA
B31	RO-0003-A	RO Housing Micro	RO-0003-A
B32	NA	RO Membrane 100 GPD – Micro Filter	NC
B33	RO-0006-A	1/4" Rigid Elbow for RO Housing Micro	RO-0006-A
B34	RO-0005-A	Post Carbon Filter – Micro	10-8065
B35	PU-4082	HG Shut Off Valve NPT 5/16” * ¼” (PPSV00822W)	12-6102
B36	RO-0009-A	T-Connect (2) Micro	RO-0009-A
B37	RO-0010-A	Flushing Valve – Micro	RO-0010-A
B38	RO-0011	Flow Restrictor – Micro	RO-0011
B39	PU-4011	JG Bulkhead Connector Union ¼” * ¼” (PI1208S)	NA
B40	RO-0024	High Pressure Switch	RO-0024

WL400 COUNTER TOP ELECTRICAL DIAGRAM

⚠**DANGER!** *HIGH VOLTAGE ELECTRICAL HAZARD. PCB (Printed Circuit Board) contains High Voltage. Only trained and qualified technicians should attempt live testing.*



FAULT CODES

FAULT CODE: Icon and Alarm on continuously

There are two leak detector sensors in the ***WL400***.

Possible Reason	Solution
Leak Sensor located inside the base cabinet on the right side.	Check for water in base cabinet by opening and removing front cover. If water is found in leak tray, dry out leak tray. Unplug unit to reset fault and determine where the leak is.
Leak sensor located inside the ***WL400*** on the right side	If no water is found in the base cabinet, open Top Cover of ***WL400*** and remove Right Side Panel to check for water. If water is found, dry out leak tray, unplug unit to reset fault and determine where the leak is.

FAULT CODES

FAULT CODE: Icon On Continuously, Alarm for 20 Seconds

Possible Reason	Solution
UV Lamp Alarm	Replace Lamp / Sensor to reset.

TROUBLESHOOTING

Irregular / Intermittent Dispensing

Possible Reason	Solution
Too much water pressure. Recommend 40 to 60 psi for ***WL400*** to operate properly.	Check water pressure at the inlet bulkhead with a water pressure gauge. Additional method of verification is to turn off water to unit and press the dispense button. Does the solenoid open without water pressure to the unit? Listen for solenoid to activate, not button "click". Adjust water pressure to 40-60 psi.
Dispensing button is broken on PCB	Check PCB for loose or damaged button. Replace PCB as necessary.

TROUBLESHOOTING

No Water is Dispensing from One Side – Cold or Hot

Possible Reason	Solution
Too much water pressure. Recommend 40 to 60 psi for ***WL400*** to operate properly.	Check water pressure at the inlet bulkhead with a water pressure gauge. Additional method of verification is to turn off water to unit and press the dispense button. Does the solenoid open without water pressure to the unit? Listen for solenoid to activate, not button "click". Adjust water pressure to 40-60 psi.
PCB	Switch the hot and cold wires on PCB (red and blue connections). If water now dispenses from the opposite side, this is an indication that there is a PCB problem. Replace PCB
Solenoid	If both the Water Pressure and PCB have been ruled out, then it is the Solenoid. Replace Solenoid.
See Green Flashing Light Fault Code Section of this Manual	Indicates the Firewall UV system is not detecting adequate dose of UV to ensure safe water.

TROUBLESHOOTING - Hot Water is not Hot (185° +/- 5° F)

NOTE: The ***WL400*** does NOT have Sleep or Power Saving Mode and the hot water should be a minimum of 185° F under normal operating conditions.

The Hot temperature set point is 185° and is controlled by a thermostat on the side of the tank.

There is a resettable overload or high limit safety above the thermostat on the side of the tank that will trip to prevent damage to the unit if the tank is dry heated (turned on without water in it).

The ***WL400*** does NOT have Extra Hot capability and the maximum hot temperature is 193°F.

It typically takes 10 minutes for the 500W to heat the 1.6 Liter of room temperature (ambient) water to the 185°F set point.

Possible Reason	Solution
Is unit in sleep mode?	If no water has been dispensed for 3 or more hours, unit goes into sleep mode. Dispense hot water, wait 5 minutes, check temperature. If unit still does not heat proceed to "No power to heater elements" below. **If unit does heat but you would like to disable sleep mode instructions are included in this manual.**
No power to heater elements	Check that the Green Heater / Compressor switch is on. *I = ON* 
Loose or improperly connected wire(s) to the heating element / hot tank.	Visually inspect wire leads gong to the hot tank; confirm proper connections to the heating elements. Hot tank life is 3-5 years, depending on usage. **Typically dealers swap out the hot tank at site, take back to the shop to repair.*
Overload Tripped *Overload is a safety feature to ensure the tank does not overheat.*	Overload will "click" when pushed. The overload is automatically reset when pressed. ***See Overload Reset Instructions Included in Manual**
Thermostat or overload "open" on Hot Tank	Turn Power off. Check OHM's resistance across terminals on each Thermostat and Overload separately. Good components will indicate a closed circuit or zero OHM's on the meter. Replace components as necessary.
Heating Coil not Working	Turn Power off; Drain hot tank; Use multi-meter to check heater element for approximately 26 OHM's resistance. Hot tank must be empty if you are checking for continuity. Replace Hot Tank as necessary.

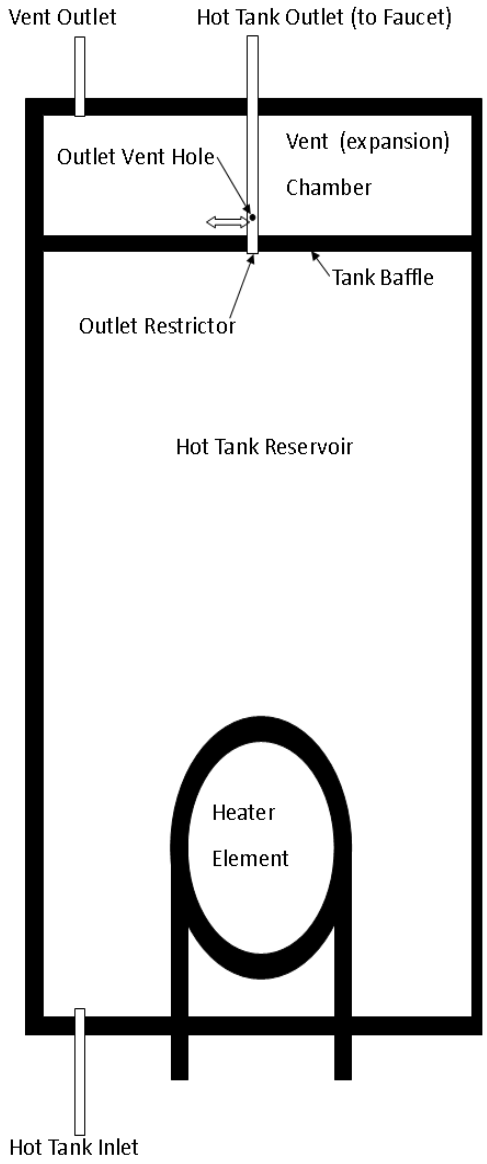
TROUBLESHOOTING

Hot Water or Steam Coming out of both the Faucet and Vent Hole

Possible Reason	Solution
Improper tubing attachment from the hot tank to faucet or vice versa.	Check that the tubing is connected from tank outlets to correct faucet attachments. Connect tubing to outlets as needed.

TROUBLESHOOTING

Hot Water Drip out of Faucet

Possible Reason	Solution
Small Outlet Vent Hole susceptible to scale build up.	Descale Tank. Descale Instructions are available as a separate section of this Manual and see the "How to Descale your Hot Tank" instructional video on the Partner Area of the new Waterlogic.com website for more information.
	All Waterlogic Hot Tanks have a built in Vent or Expansion Chamber in the top of the tank except for WL270 (GF) units. The Vent Chamber allows for expansion of the water when it is heated. The chambers are separated by a welded-in tank baffle. Water always flows into the bottom of the tank and out the top to the faucet. The hot tank outlet tube has a restrictor in its base. This ensures the reservoir is always full by allowing more water in than out. There is a small hole in the side of the tank outlet tube that allows air and water to pass into the vent chamber as it is heated. Water in the vent chamber is suctioned back through the outlet tube vent hole when water is dispensed. Expansion of water as it is heated in the reservoir will push the water out the faucet when the outlet tube vent hole becomes plugged with debris or scale. The small Outlet Vent Hole is susceptible to scale build up and is a key indicator that descaling is required. It is critical to descale the hot tank through the vent line and outlet line on a regular basis to prevent this problem. Descaling through the inlet and/or outlet lines only will not clean the vent chamber and outlet vent hole properly.

TROUBLESHOOTING

Hot Water Intermittently Forced Out Through the Faucet, or a Dual Stream Out of the Faucet

Possible Reason	Solution
Mineral deposits on the expansion slot inside the hot tank vent chamber which blocks the normal path of water to expand.	Descale Hot Tank – See Descaling Section of this Manual.

Hot Water Coming out of Faucet Vent Hole

Possible Reason	Solution
Improper tubing attachment from the tank to faucet or vice versa.	Verify tubing is connected properly from tank outlets to correct faucet attachments.
Hot Tank outlet hole is scaled over.	Inspect and descale or replace hot tank.
Expansion chamber is not sealed properly.	Replace the Hot Tank.

TROUBLESHOOTING

Restricted Flow of Hot Water

Possible Reason	Solution
Partially closed water supply valve to the unit.	Open water supply valve.
Hot Tank outlet hole is scaled over.	Remove outlet tube from hot tank to faucet. Add descaler to hot tank.
Tubing is creased or has a "kink" in it.	Inspect and replace tubing as necessary.
Faucet nipple screen mesh has obstruction(s)	Unscrew faucet nipple from faucet and remove any obstruction(s) from screen mesh.
Exhausted Filter	Replace the Filter
Solenoid connection to the Display PCB	Turn power off; unplug the unit and visually inspect solenoid connections into the Display PCB. Verify the soldering points on connections are secure into the board. Remove the PCB to inspect the front of the board.
Solenoid Valve is Malfunctioning	Inspect valve components for proper function. Replace as necessary.

TROUBLESHOOTING

Cold Water is not Cold (41° +/- 5° F)

Possible Reason	Solution
No power or refrigeration elements	Check that the Green Heater/Compressor switch is on. *I = ON* 
Tank has run out of cold water. *Cold tank capacity is 4 liters for Tower and 2 liters for Counter Top.*	Wait for cold tank to chill water to temperature prior to dispensing more cold water. A greater capacity of ***Waterlogic*** Water Systems is available.
Cold Water Thermostat	Check continuity of thermostat with multimeter. Replace thermostat as required.
Refrigerant has run out	Run compressor for at least ten minutes. If condenser is not warm then refill the refrigerant.
Compressor problem	If compressor is not running, repair or replacement is needed.

TROUBLESHOOTING

Steady Drip Out of Faucet

Possible Reason	Solution
Debris in Solenoid	Inspect Solenoid for debris and clean out as needed.

TROUBLESHOOTING

Dispenses Hot and Cold Water at the same time

Possible Reason	Solution
Hot or Cold solenoid is stuck open.	Remove top cover. Check Hot Solenoid: Dispense cold water and visually inspect tubing for water flow from both tanks. Check Cold Solenoid: Disconnect elbow from outlet of cold solenoid. Select hot water and dispense (quickly releasing dispensing button to avoid much water coming out of cold solenoid. Replace solenoid as necessary.

TROUBLESHOOTING

No Cold Water Available

Possible Reason	Solution
Closed Water Supply Valve	Open the Water Supply Valve
Cold Water Solenoid Valve malfunction	Inspect the valve components for proper functionality.
Green Heater and Compressor Switch on unit is off.	Turn Green Heater/ Compressor Switch on. *I = ON* 
Loose connection(s) on the Display PCB	Turn power off; unplug the unit and visually inspect solenoid connections into the Display PCB. Verify the soldering points on connections are secure into the board. Remove the PCB to inspect the front of the board.
Exhausted Filter	Replace filters as needed.

TROUBLESHOOTING

Water is not being heated or chilled

Possible Reason	Solution
Green Heater and Compressor Switch on unit is off.	Turn Green Heater / Compressor Switch on. *I = ON* 

TROUBLESHOOTING

No Cold or Hot Water will dispense from unit.

Possible Reason	Solution
Closed water supply valve	Open the water supply valve.
The unit is not properly plugged into electrical outlet	Check electrical outlet connection, or for blown circuit breaker.
Green Heater and Compressor Switch button on unit is in the off position	Turn Green Heater / Compressor Switch on. *I = ON* 
15 Amp Fuse Blown	Replace the 15 Amp Fuse as needed.
Water is present in the bottom tray, causing the leak detection to trigger.	Remove the top cover and front panel. Tip the unit slightly to drain, dry bottom tray completely.
Hot and Cold Solenoid connections into the Displace PCB are loose.	Turn power off; unplug the unit and visually inspect solenoid connections into the Display PCB. Verify the soldering points on connections are secure into the board. Remove the PCB to inspect the front of the board.
Exhausted Filter	Replace filters as needed.

TROUBLESHOOTING

Cold Water Dispenses from Faucet and Vent Outlet Simultaneously

Possible Reason	Solution
Improper tubing attachment from the tank to faucet or vice versa	Verify tubing is connected properly from tank outlets to correct faucet attachments.
Scale has formed inside cold tank outlet tube.	Remove cold water outlet tube from tank to faucet. Pour some scale remover into cold tank.
Expansion chamber in Cold Tank is not sealed properly.	Replace Cold Tank.

TROUBLESHOOTING

Compressor runs but does not chill

Possible Reason	Solution
Condenser is dirty	Clean the condensing coil of any obstructions or dust.
Reduction of airflow into unit.	Make sure unit is not under minimum ventilation requirements (2 to 4 inches).
Compressor is running very hot.	Low or lost refrigerant. Refrigerant recharge required.

TROUBLESHOOTING

Compressor is Not Running

Possible Reason	Solution
Green Heater / Compressor Switch button on unit is in the off position	Turn Green Heater/Compressor r switch on. *I = ON* 
Compressor Starting Circuit	Turn Green Heater/Compressor switch off. *O = OFF.*  Remove the compressor cap on side of the compressor; Disconnect the black and red terminal connectors; Inspect the starter and overload relay for any defects. Replace components(s) as needed. Turn Green Heater/Compressor switch on *I = O and* retest compressor operation.

TROUBLESHOOTING

Small Amount of Water Periodically Dispenses from Faucet Automatically

Possible Reason	Solution
Cold or Hot Water solenoid valve malfunction	Inspect valve components for proper function. Replace as necessary.
Obstruction in solenoid housing is preventing proper sealing of component.	Pre-determine whether water being dispensed is hot / cold. Isolate the water supply; push the DISPENSE button to release the line pressure, and remove the coil affixed to the solenoid stem. Remove the stem from the solenoid housing and allow water from the tank to flush out the contaminant(s).

TROUBLESHOOTING

Dispense Buttons Stick

Possible Reason	Solution
Dirt or Foreign material is filling the gap around the push-buttons.	Inspect the push buttons and clean surrounding area. Inspect faucet assembly inside the unit and clean as necessary.

TROUBLESHOOTING

Run On

"Run On" or "Carry On" is present in all Waterlogic pressure fed units without outlet solenoids.

"Run On" is defined as the amount of water that continues to dispense out of the faucet after releasing the dispense button.

Run On exists because the tanks pressurize as water is being dispensed. Every Waterlogic tank has an outlet restrictor to ensure the tanks remain full of water and water is controlled as it is released to the faucet. The inlet solenoid controls flow into the tanks. The tanks will "depressurize" once the dispense button is released the inlet solenoid closes. A small amount of water will "Run On" through the faucet as the tank depressurizes to atmospheric conditions.

Typical "Run On" is 2-3 seconds.

"Run On" can be reduced by installing a pressure limiting device.

The amount of inlet or supply pressure directly impacts the amount of "Run On" as quantified below.

WLCP Lab Testing of Rn On 7-31-2013				
Pressure	Pressure	Time	Flow Rate	Run On
Static PSI	Dynamic PSI	4 Liters	l/min	Seconds
68	40	61	2.9508197	3
50	30	72	2.5	2.5
32	20	92	1.956217	2
Pressure measured at inlet line to unit. Static with unit closed. Dynamic with unit dispensing cold water.				
No filters were installed in unit.				

WATERLOGIC MANUFACTURED WATER TREATMENT SYSTEM LIMITED WARRANTY
UNITED STATES AND CANADA ONLY

Waterlogic water treatment systems are guaranteed to the original purchaser to be free of defects in materials and workmanship for a period of three (3) years from the date of purchase, but in no event longer than forty-eight (48) months from the date of manufacture. Waterlogic Commercial Products, LLC ("Waterlogic") based in the U.S.A. and its affiliated companies are not liable for any cost of removal, installation, transportation, or any other charges which may arise in connection with a warranty claim.

This warranty does not cover damage or wear to products caused by abnormal operating conditions, accident, abuse, misuse, unauthorized or improper alteration or repair, damage caused by or resulting from shipping or accident, damage caused by hot water, freezing, flood, fire, or acts of God. The effects from chlorine corrosion, scaling and normal wear are specifically excluded from this warranty. This warranty does not cover products used outside the countries where the unit was purchased, and does not cover products that were not installed in accordance with Waterlogic printed installation and operating instructions obtained in training or from www.waterlogic.us. Failure to follow all instructions for operation and maintenance voids the warranty. This warranty is not transferable.

To obtain warranty repairs or replacement, you must obtain a Return Authorization from Waterlogic. To obtain a Return Authorization, you must submit a Return Authorization form with supporting documentation to Waterlogic for evaluation. The form is available at www.waterlogic.us. Supporting documentation must include, but is not limited to; proof of purchase, installation date, failure date, and supporting installation and maintenance data. After you submit a Return Authorization form and supporting documentation, Waterlogic will determine whether a reasonably apparent defect in materials or workmanship covered by this limited warranty exists. If Waterlogic determines the claimed defect is covered by this warranty, Waterlogic will, at its sole discretion, determine whether to correct the defect or replace the unit, free of charge to you. If Waterlogic determines that the unit should be returned for warranty service, Waterlogic will approve of return in writing and will issue a Return Authorization which you must obtain prior to shipping the product. You are responsible for the cost of freight in to Waterlogic.

Waterlogic and its affiliated companies hereby limit the duration of any and all implied warranties to a maximum period of three (3) years from the date of purchase including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Consequential and incidental damages are not recoverable under this warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

New Warranty Policy issued by Waterlogic Commercial Products LLC, USA - January 10, 2014

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