

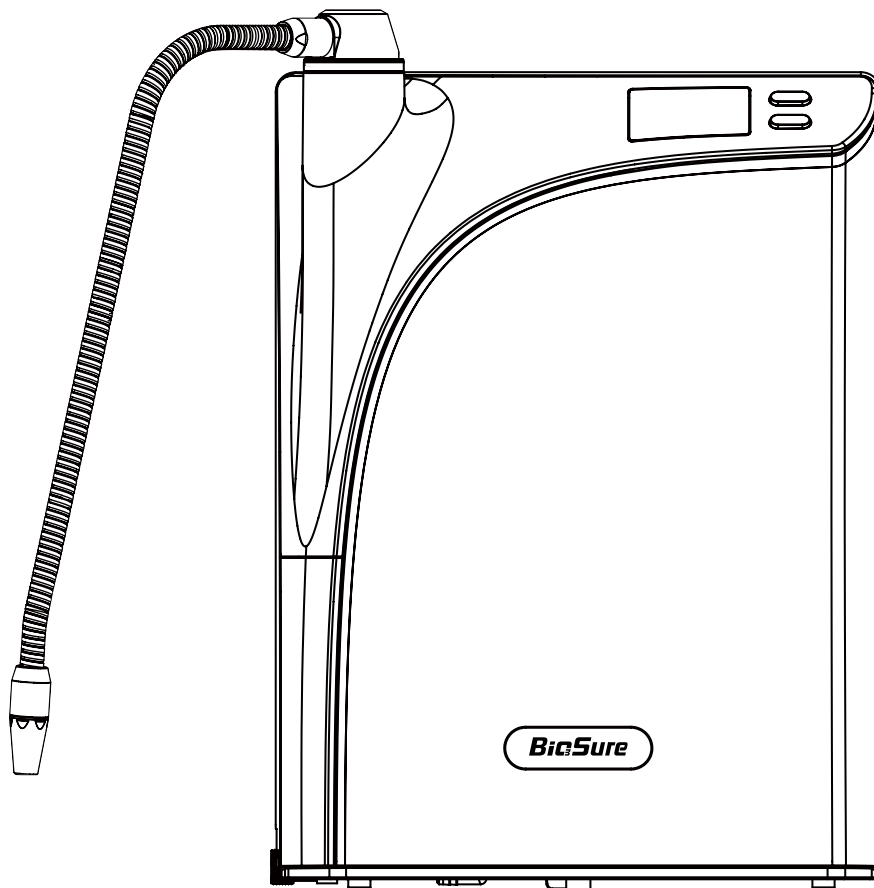
# **BioSure**

## **PROFESSIONAL**

### **CDU Plus**

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#### **Model EOS7131-OW Installation & Operation Manual**



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#### **Thank you for purchasing BioSure product**

Please read the instructions carefully and follow the safety precautions when using this product. Before using this product please pay special attention to the "IMPORTANT SAFETY INFORMATION" (P. 5~6).

# PREFACE

Described in this manual is the BioSure CDU Plus with model and version of engineering detailed as follows:

<b>Product Code</b>	<b>Model No.</b>	<b>Program Code</b>
CDU Plus	EOS7131-OW	V302

BioSure is a division of Biotek Environmental Science Ltd. (BES Group). BES Group is a global leading electrolytic product manufacturer with pioneering ozone application technology and currently holds over 60 patents for its electrolytic ozone generators and products worldwide.

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Manual Number: 1st edition, November 2019

## DISCLAMATION

The information contained in this document is subject to change without notice.

BES Group shall not be liable for any direct, indirect, incidental, consequential, or other damage alleged in connection with the furnishing or use of this information. BES Group is not liable for damages on any contact materials due to result of oxidation.

BES Group makes no warranty of any kind with respect to this information. BES GROUP SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

This product does not have a build-in dissolved ozone concentration monitor in the system. Concentration display is provided by system's simulation program, developed according to thousands of internal lab testing results. The concentration data is provided for users as a reference for safety and performance information only.

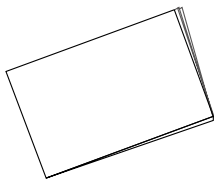


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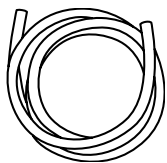
Your CDU Plus comes with the following accessories. Check that all items are present. If anything is missing, please contact your dealer.



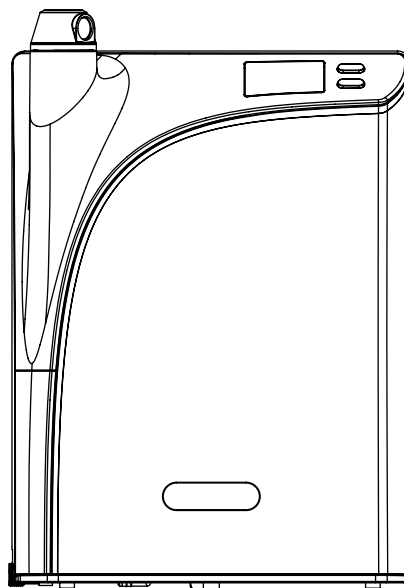
**Owner's Manual ( x1 )**



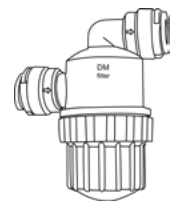
**Water Outlet Tube (x1)**



**Input Hose  
( PE, white, 1.5 m )**



**CDU Plus Main Device (x1)**



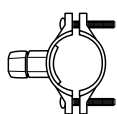
**Cleaning Kit**



**Drain Hose  
( PVC, black, 1.5 m )**



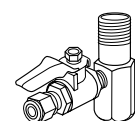
**Plumber's Tape ( x1 )**



**Drain Clamp**



**Mounting Bracket ( x1 ) with Screws ( x2 )**



**Connecting Adapter**

# IMPORTANT SAFETY INSTRUCTIONS

## **WARNING**

Please read these pages carefully. They contain very important information to protect you and the valuable warranty on your unit. Please make sure you are familiar with all the safety warning and precautions associated with this unit.

## **DANGER**

**Could cause personal injury or have an adverse effect on health.**

1. Never drink ozonated water. (Ozone water is for disinfection only, not for drinking.)
2. Only use potable drinking water in your CDU Plus. It is recommended that you use filtered potable municipal water as source water (input water).
3. Poor water quality may have negative effects on your health and your CDU Plus! Most potable municipal water sources will be fine in your unit. If on hard water please ask about pre-treatment options.
4. Well water and water from smaller system should be checked, and may require pre-filtering. Your CDU Plus is not under warranty for any damage or required cleaning by hard or poor quality water deposits.
5. Do not move the unit by the front cover. Move the unit by putting both hands underneath it. This will prevent the unit from falling during movement.

## **CAUTION**

**Could cause damage to CDU Plus and possibly void the warranty.  
Risk of Fire and Electric Shock**

1. Never run hot water through this unit. Connecting it to a hot water (>40°C) source could damage the iEOG cell or other parts of the CDU Plus.
2. Protect your unit from freezing temperatures or from direct sunlight.
3. Keep the unit and power cord away from hot surfaces or appliances – failure to do so may result in electric shock or fire!
4. To reduce the risk of electric shock, do not remove cover; no user-serviceable parts inside. Refer servicing to qualified service personnel. Remove the cover will void the warranty.
5. Do not try to fix the unit yourself. Call the dealer to have it fixed by a qualified technician.
6. Do not use if the power cord is damaged or in a loose power outlet.
7. If the power cord develops a break or short, stop using the unit and call customer service to have it replaced.
8. Do not reconnect or splice a defective power cord as it could result in electric shock or become a fire hazard.
9. Do not pull the power cord. Never touch power cord or power outlet with wet hands.
10. Do not use power surge protectors with this unit. Use unit with its own dedicated power source.
11. Do not forcibly bend, squeeze, damage or crush the power cord under heavy objects.
12. Do not use the unit in a dusty place. This may cause the unit to malfunction.

# IMPORTANT SAFETY INSTRUCTIONS

13. Do not spray water on the main unit. Do not clean with a damp cloth or any chemicals, which may leak into the unit.
14. Do not place this unit on an uneven surface. Do not drop or use excessive force on this unit.
15. Place this product near a sink and always allow water to drain into the sink and drain.
16. When moving the unit, please be sure not to drag by the power cord as this could cause electric shock.
17. Please be sure to keep the power cord dust free.
18. Do not place ANY objects on top of this unit regardless of how small.
19. In case water leaks out of the unit (other than hoses) or unit is standing in a puddle of water, shut off the water supply, unplug the power cord and refer servicing to qualified service personnel.
20. In the event that water gets into power supply, unplug the power cord and completely dry power outlet.
21. In case of strange noises, burning odor or smoke, unplug the power cord immediately and refer servicing to qualified service personnel.
22. Replace pre-filter at least every 12 month or follow the recommendation from manufacturer in order to optimize the purification performance of this unit even if the replacement indicator light isn't turned on.
23. Do not poke or scratch the touch pad or LCD display with sharp objects.
24. Keep original packaging for storage or unit transportation.

***These safety precautions and warnings are provided at YOUR benefit to your health, for the safe and proper use of this unit and can prevent danger, bodily harm and/or possible damage due to misuse.***

***Please make sure you are familiar with all the safety precautions and warnings associated with this unit.***

***BioSure is not responsible for any damage or injury caused by not adhering to these precautions and warnings.***

**SAVE THIS MANUAL FOR FUTURE REFERENCE**

# GENERAL INFORMATION

## Product Description

BioSure CDU Plus is a disinfection system with ozonated water in supply designed specifically for dental applications, offering the benefits of ozone in cold water in an effective and safe manner for integration with, and improvements of applications in dental disinfection protocols. We take our commitment to quality seriously in order to ensure we are providing the highest standard of quality ozone disinfection solutions available.

We provide concentrated ozonization treatment into water that flows through our systems, so as to provide for your applications with dissolved ozone in water at effectively high levels. With stabilized ozone production and constant dissolution capacity, the concentrations of dissolved ozone can be guaranteed, ensuring the given water flow with dissolved ozone levels on demand at “Right on Spec” performance to your applications.

The unit not only provides ozonated water for disinfection, but also saturated hydrogen water for drinking.

The BioSure CDU Plus incorporates Indirect Electrolytic Ozone Generation (iEOG) technology with electronic control and full-time performance monitoring. Inside this advanced cell, driving force from the electric current and proton exchange energy split water into pure hydrogen gas ( $H_2$ ) and high portion ozone ( $O_3$ ) contained oxygen gases ( $O_3+O_2$ ) without using any chemicals. Then, the hydrogen water and ozonated water are to be created by dissolving these gaseous streams in water individually once usage is requested.

***Therefore, you can choose between Ozone Water for Disinfection Use (upper sensor) and Hydrogen Water for Drinking (lower button):***



### **Ozone Water**

This is the natural bactericidal agent and disinfectant, effective against infestation of harmful bacteria and virus as well as dangerous chemical and pesticide residues. It is highly effective, efficient and free of residues, which enables clinic professionals to improve infection control and risk management.



### **Hydrogen Water**

High-reducing power hydrogen water helps neutralize harmful free radicals, which further helps with health improvement, anti-oxidation and anti-aging.



# INFORMATION

## Product Specifications

Model: EOS7131-OW

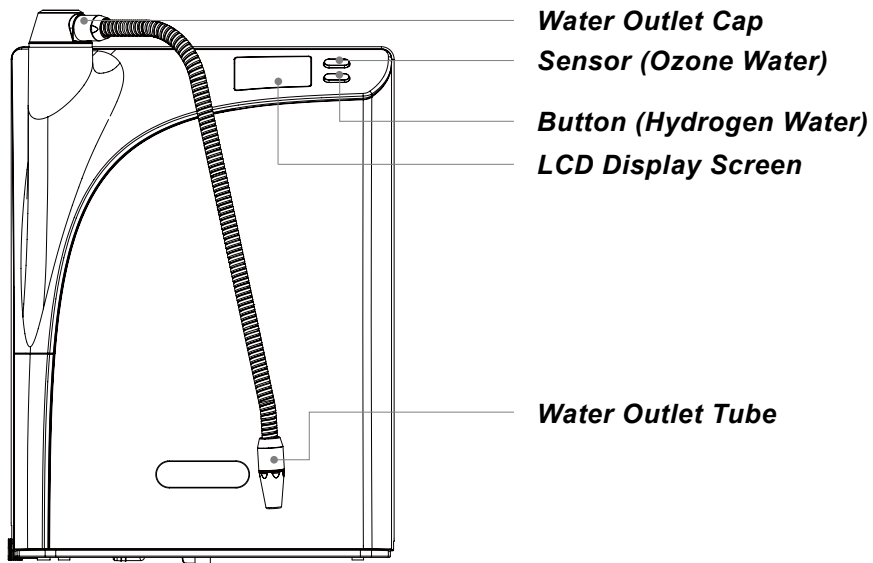
Output Features	Ozone Water		Hydrogen Water
Activation method	Sensor 1s (30min output)	Sensor 3s (20sec output)	Touch Button 0.2s (5min output)
Output flow	210L/hr (3.5L/min)	120L/hr (2.0L/min)	90L/hr (1.5L/min)
Concentrations	4.0-0.5 ppm (Dissolved Ozone)	4.0-1.0 ppm (Dissolved Ozone)	1000-1200ppb (Dissolved Hydrogen)
ORP	-		-518 ~ -558mv
Output pH	Neutral (No pH change to the incoming water)		
Applicable water quality at the source	Cold tap water that meets quality criteria for drinking water (Water temperature <40°C / 104°F, conductivity of <500 µs/cm, hardness of <200 ppm CaCO <sub>3</sub> , residual chlorine of <0.1 ppm, pH6.8~8.0)		
Applicable incoming water pressure	2~7kg/cm <sup>2</sup> (3kg/cm <sup>2</sup> is optimal.)		
Required voltage	AC 100 ~ 240V / 50 ~ 60Hz		
Consumed power	60W (In standby≤30W)		
External dimension	300(W) x 165(D) x 400(H) [mm]		
Net Weight	7.5kg (Around 9.5 kg at a full level)		

**NOTE:** The ozone concentration may vary due to intervals of usage, water quality, and influences from input pressure and temperature.

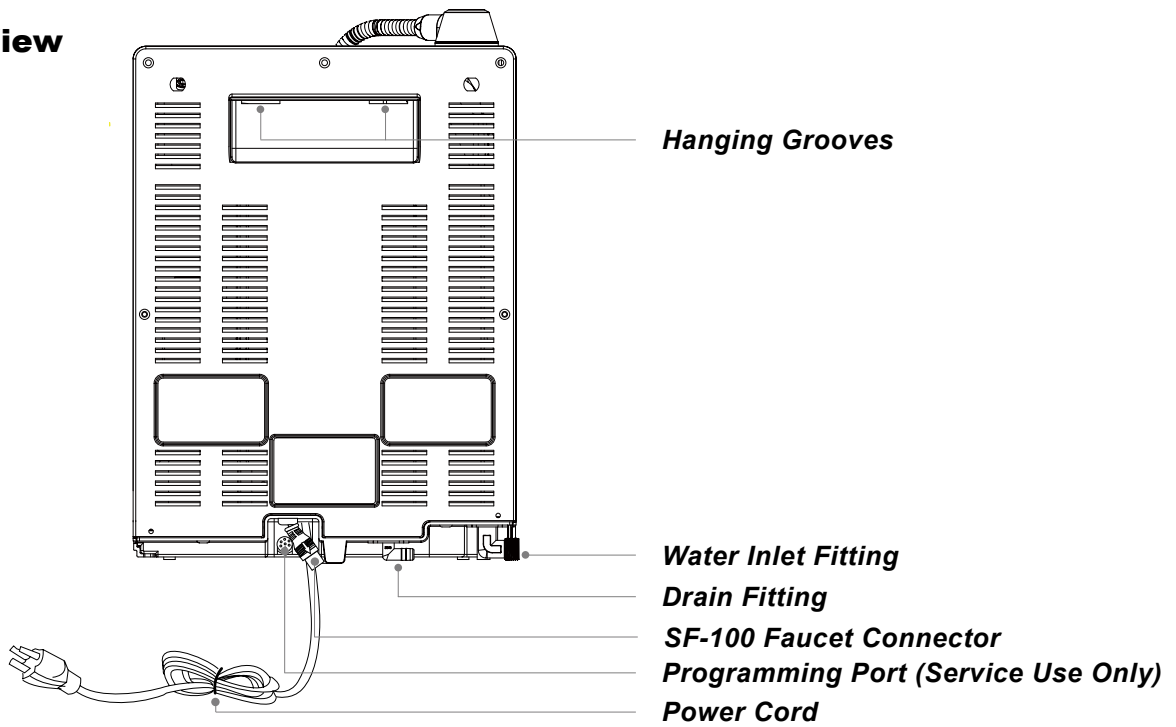
# INSTALLATION

## Unit Overview

### Front View



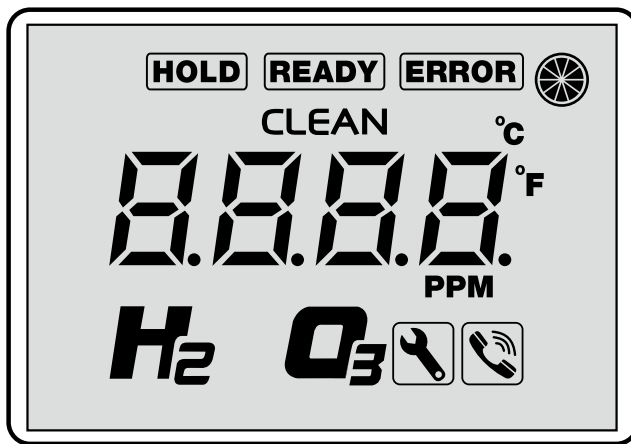
### Rear View



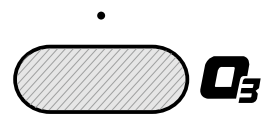
Note: The Water Outlet Cap comes with a removable plug that needs to be removed prior to Water Outlet Tube installation. Please see page 19 for further instruction.

# INSTALLATION

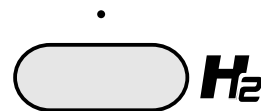
## LCD Display & Control Panel



*Disinfection*



*Drinking*



### **HOLD**

#### **Waiting Indicator**

The waiting indicator indicates to wait for certain amount of time before functions can become available. This waiting requirement can be indicated by two modes - light on/blinking under following conditions:

#### **Light On:**

- First time start-up - The waiting icon will stay on until system preparation (iEOG water filling process) gets ready (30 to 55 minutes based on input pressure).

#### **Blinking:**

- Drinking pre-flush - The waiting icon will remain flashing during the first 5 sec of hydrogen water output.
- Automatic internal cleaning - The waiting icon will remain flashing during the cleaning is in process.
- Re-start - The waiting icon will remain flashing until a compulsory time out period for re-start protection is completed (30 minutes).

### **READY**

#### **Ready Indicator**

The ready indicator shows the system is ready and output functions are available for use.

### **ERROR**

#### **Error Indicator**

When the system displays a flashing red error icon, this means there is a detectable error or problem, which has caused the system to stop function normally. Conditions which can attribute to an error could include the following:

- E45, Water Input Failure (iEOG water filling process timeout)

# INSTALLATION

## CLEAN

### *Internal Cleaning Indicator*

CLEAN shows that the system is processing internal cleaning. All functions are suspended and little noise is normal during this cleaning period. This function is available both for automatic and manual. In manual mode the water will be discharged from the output.

## °C / °F

### *System Temperature*

System's temperature is measured and displayed during normal standby for user's reference. Standard display is in Degrees Celsius; Degrees Fahrenheit is optional. Please refer to page 21.

## H<sub>2</sub> / O<sub>3</sub>

### *Output Feature Indicator*

Lighting up when specific function is selected. **H<sub>2</sub>** blinks during drinking pre-flush.



## PPM

### *Parts Per Million Display*

PPM stands for Parts Per Million (or mg/L), referring to the dissolved ozone concentration of the ozone water output/ or the dissolved hydrogen concentration of hydrogen water output.



### *Ozone Performance Meter*

The performance icon shows the performance charge level, from full  to empty  when using continuously, filling to full in standby. When the meter shows that every segment is filled, the system is ready with peak performance on standby.



Full

Performance at peak



Vanished/Appeared

Consuming or recharging performance



Empty

Performance at baseline

# INSTALLATION



## **Service Notification**

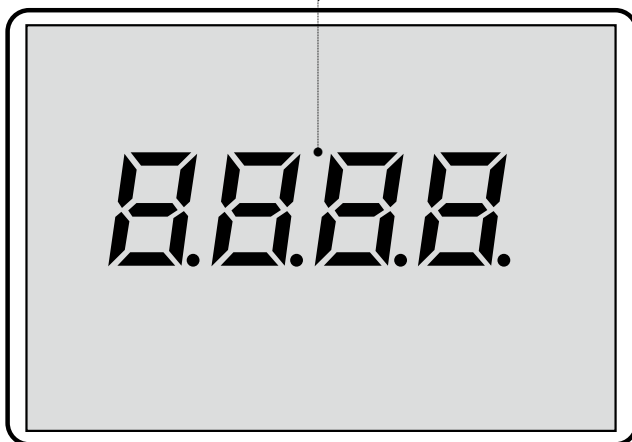
- This icon is displayed when:
  - Service due.



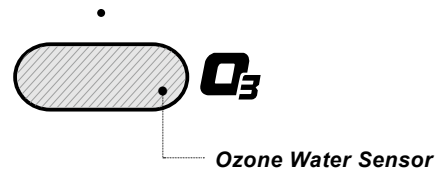
## **Call customer service notification**

- This icon is displayed when:
  - Error detected.

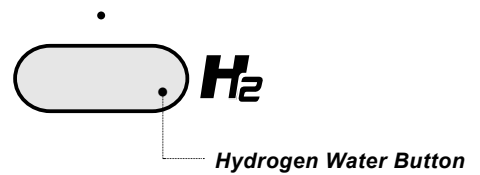
*Level Indicator*



## **Disinfection**



## **Drinking**

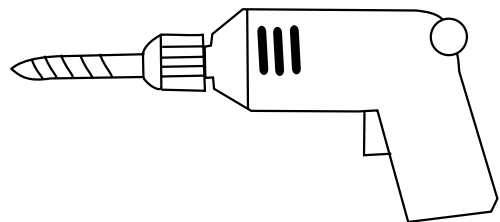
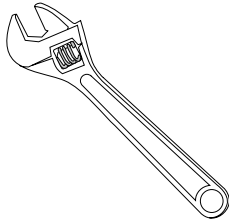


# INSTALLATION

## How to Install the Unit

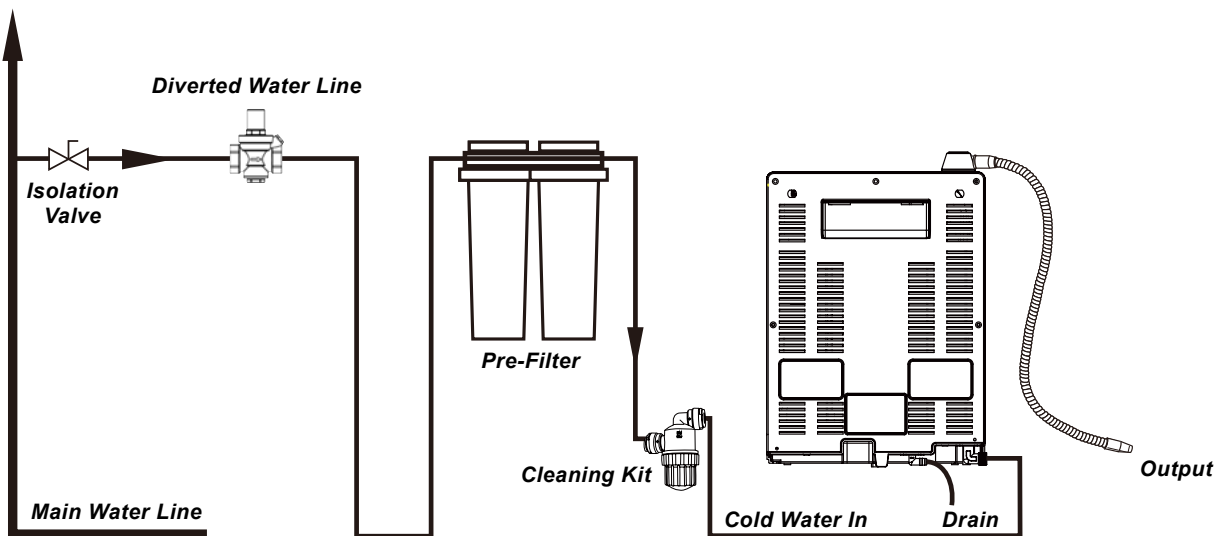
Consult your local Biosure dealer for installation arrangements. The instructions described below for the installation is intended for operator's reference only.

### Tools You Will Need



### Plumbing and Installation Instructions

A typical scheme for installation of CDU Plus is shown below. Please follow all local plumbing and construction codes in setting up the unit and all required water input, output and drain plumbing in accordance with the scheme.



**NOTE:** Use a pressure regulator after the isolation valve in case the input water pressure may exceed 7kg/cm<sup>2</sup> (100 psi)

# INSTALLATION

## Typical Scheme of Installation

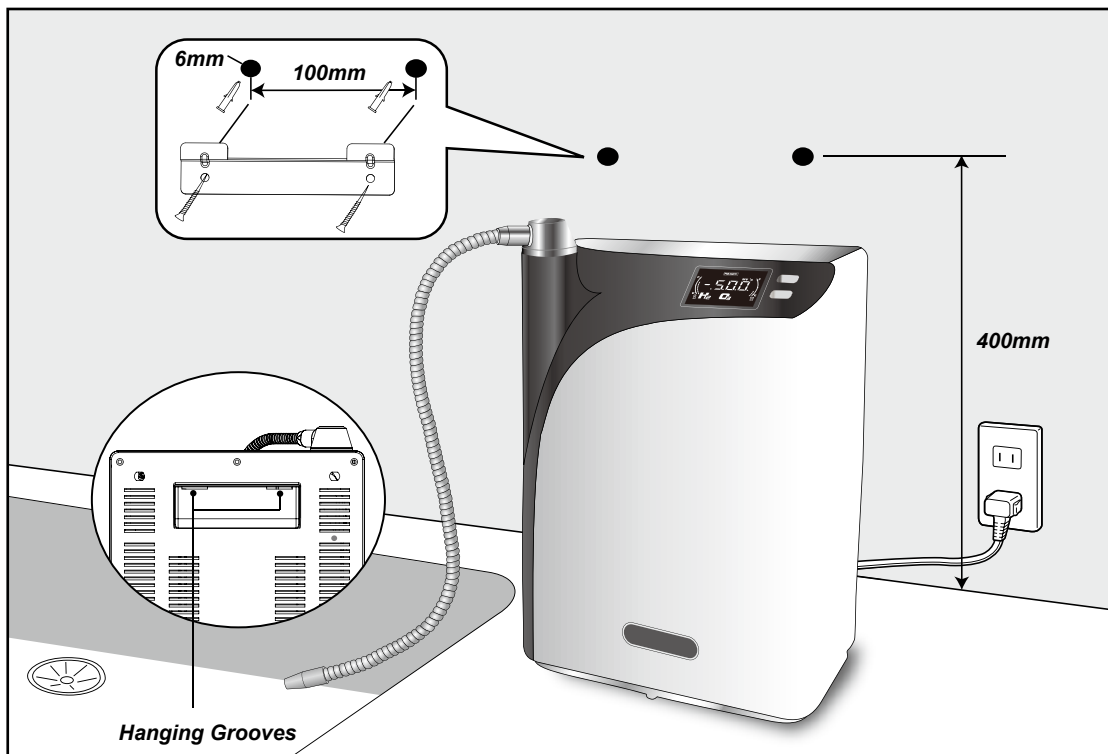
1. Unit location and setup
2. Locate a source for input water
3. Setup input water pre-filter & install cleaning kit
4. Connect input water and drain hoses
5. Setup and connect the water output

## Instruction 1 – Location

### Counter-top or Wall-mount

Determine if you will place your unit simply on a stable counter or mount it on a wall near and above a sink. To mount the CDU Plus, please follow the directions below:

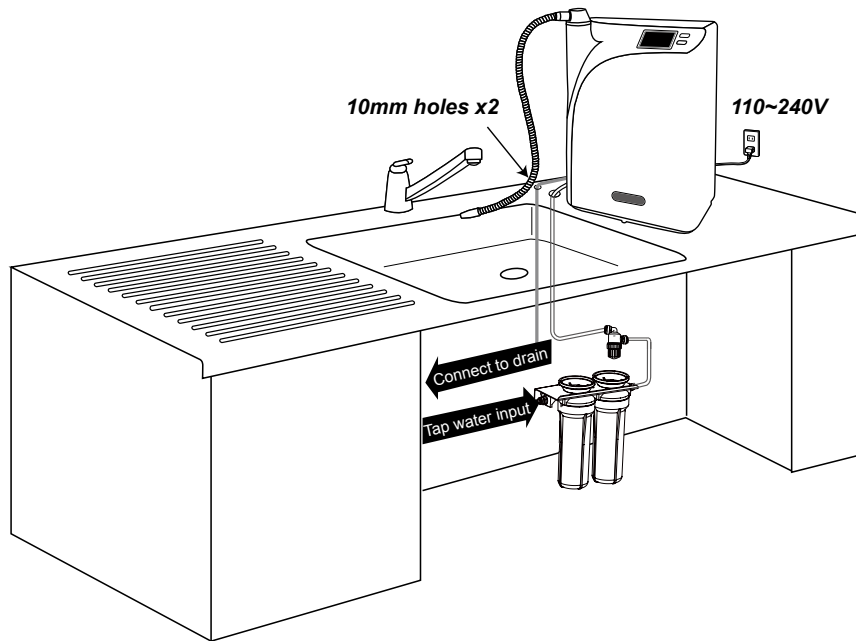
1. Drill two 6 mm holes with 30 mm in depth in the wall 400 mm above the top of the sink or counter. The distance between the 2 holes must be 100 mm.
2. Press the plastic anchor inserts into the holes as pictured below. Push the plastic anchor insert so that the opening is flush with the wall.
3. Place the mounting bracket on the wall and fix with screws as pictured below. Hang the unit on the mounting bracket.



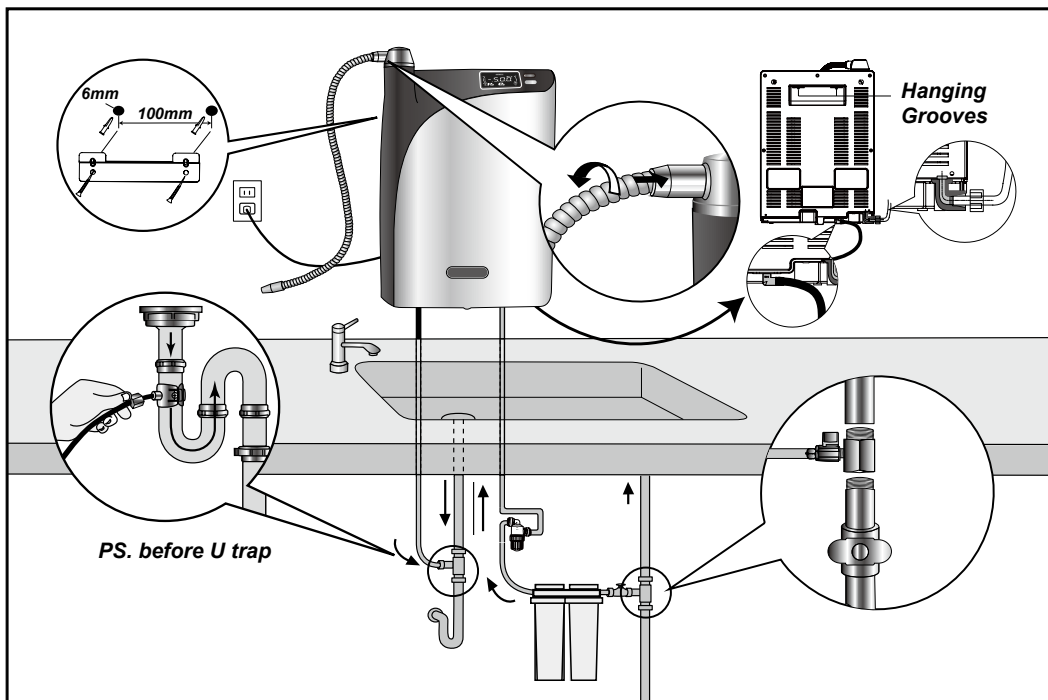
# INSTALLATION

## Important:

For counter-top installation, two 10 mm holes on the counter will be required for passing the input water and drain hoses through the surface. This is in order to allow the connections from the back of the unit to under sink area for input water and drain.



Below drawing shows the installation and relevant plumbing as installed with a counter-top scheme:



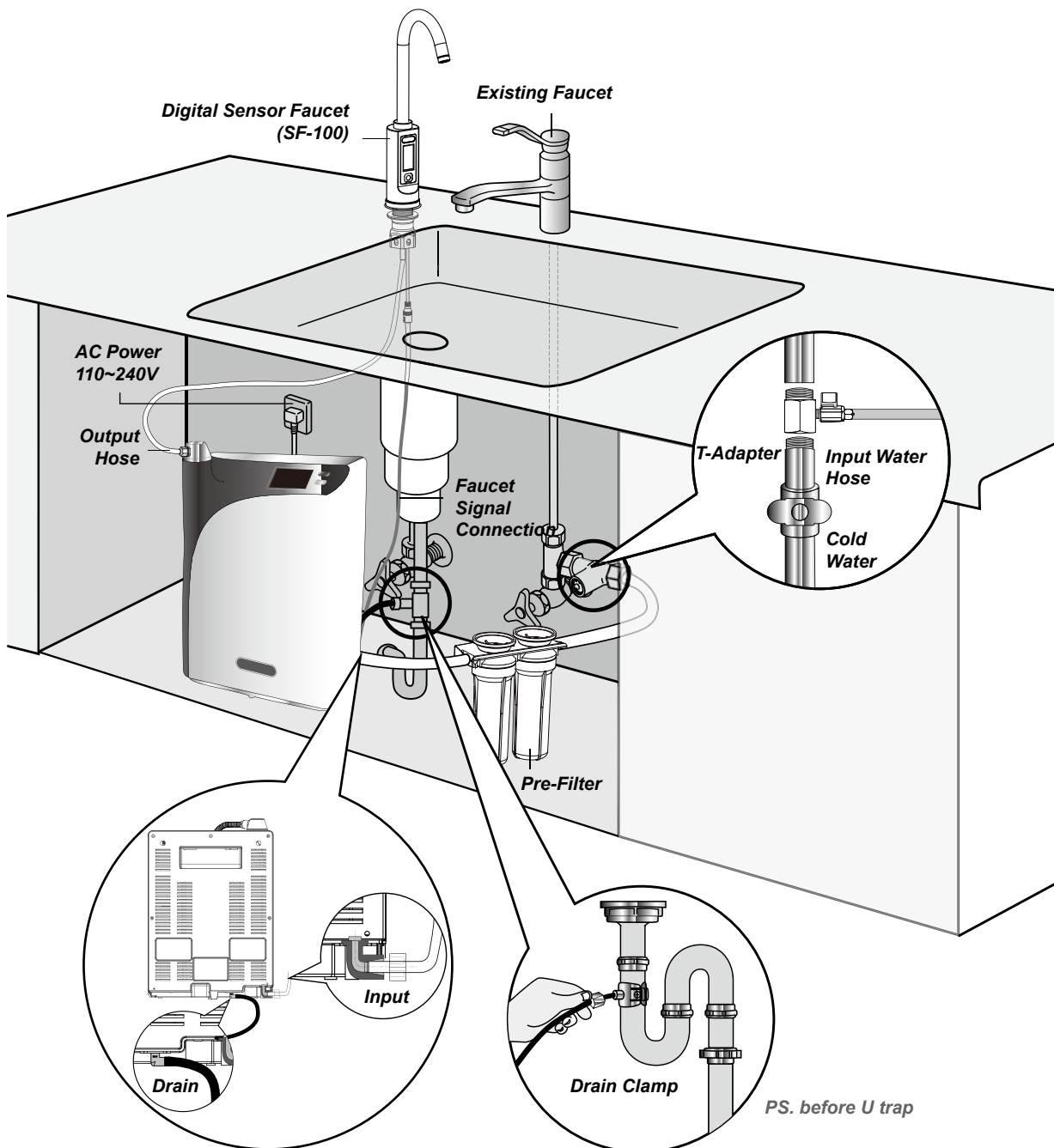


# INSTALLATION

## Under-Counter

For under-counter installation, a digital sensor faucet designed exclusively for the unit will be required in order to accomplish the control of output from counter-top. The CDU Plus main device will be located under the sink. While the connections of the input water and drain are accessible directly under the sink, the outlet will be connected to the faucet for output.

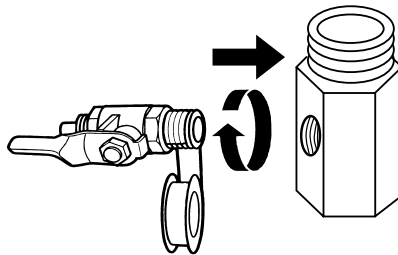
Below drawing shows the installation and relevant plumbing schemes for under-counter installation:



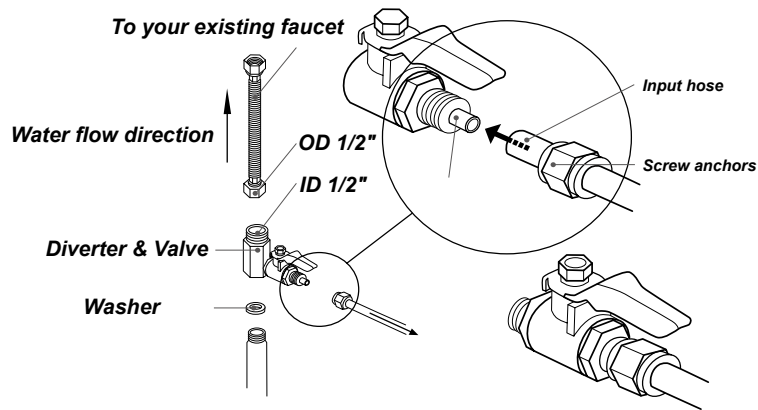
# INSTALLATION

## Instruction 2 – Input Water Setup

1. Find the 1/2" to 3/8" Ball Valve T-Adapter (diverter & valve) in the accessory box. Assemble and seal the threaded connection with the plumber's tape included in the accessory box:



2. Locate the cold water supply under the sink. Shut off water supply.
3. Connect the adapter to the cold water line between the wall and the sink faucet as follows:



4. Connect the unit to the cold water line with input water pre-filter in between.

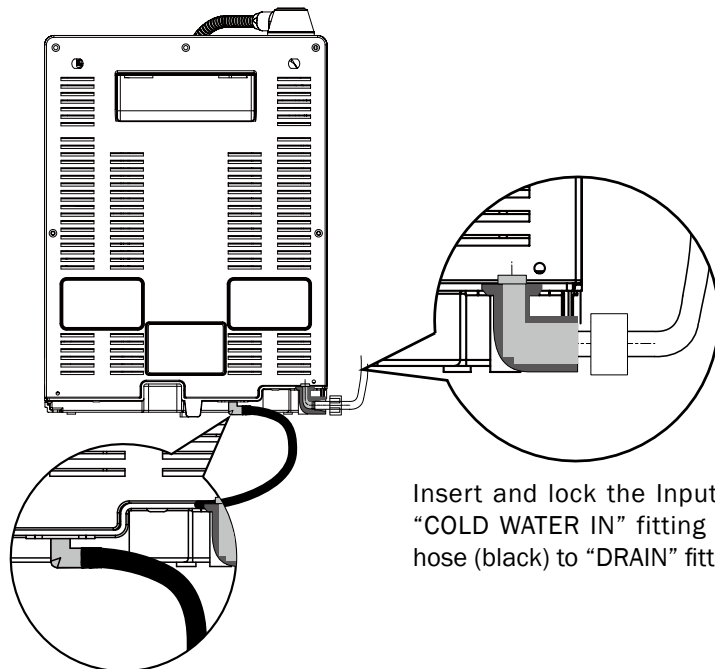
## Instruction 3 – Setup Input Water Pre-Filter and Cleaning Kit

Select an easy-to-access location and install your input water pre-filter and cleaning kit between cold water supply and the unit (ex. under the sink). It should be noted that after filtration water quality must meet your local standards for drinking water requirements. The directional cleaning kit must be located between the pre-filter and the unit following the direction arrow on the kit.

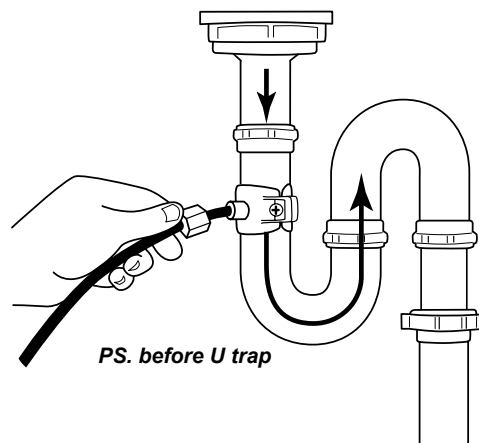
# INSTALLATION

## Instruction 4 – Input & Drain Connection

1. Remove the joint tube from the unit's inlet and outlet fittings on the back of the unit. This joint tube is used for shipping purposes only.
2. Find the input hose (white) and drain hose (black) in the accessory box.
3. Insert the input hose into the unit's fitting (COLD WATER IN). Tightly screw the nut onto the fitting to secure the hose into place. Then, attach the drain hose to the unit's drain fitting (DRAIN).



4. For counter-top installation, two 10 mm holes on the counter will be required for passing the input water and drain hoses through the surface.
5. Setup the drain hose under-sink connection:  
Drill a 10 mm hole into the sink drainpipe and install the drain hose with the drain clamp (included accessory) in accordance with the below scheme.

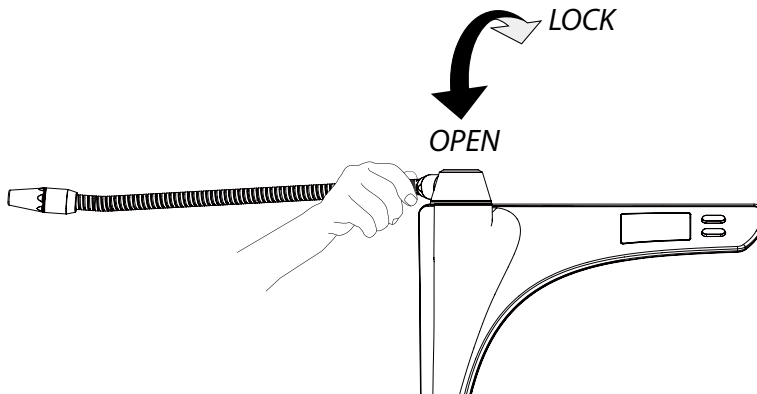


# INSTALLATION

## Instruction 5 – Connect Water Output

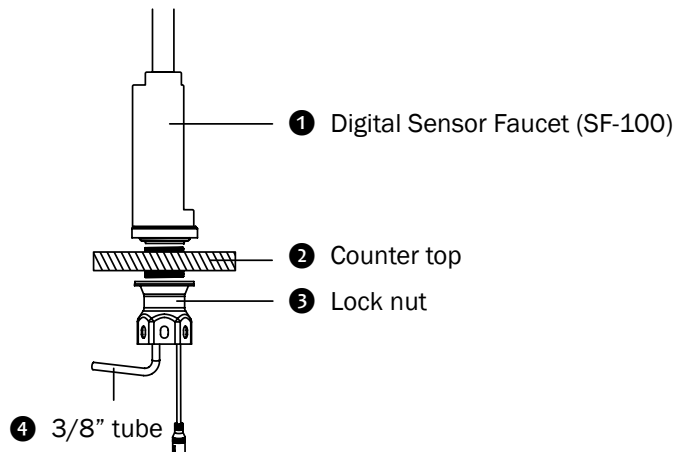
### Counter-top or Wall-mount

1. To locate the water outlet, remove the plastic cap positioned at the top of the unit (rotating water output cap). Find the flexible water outlet tube in the accessory box. Screw the tube anticlockwise into the water outlet until there is no gap. Do not over tighten.



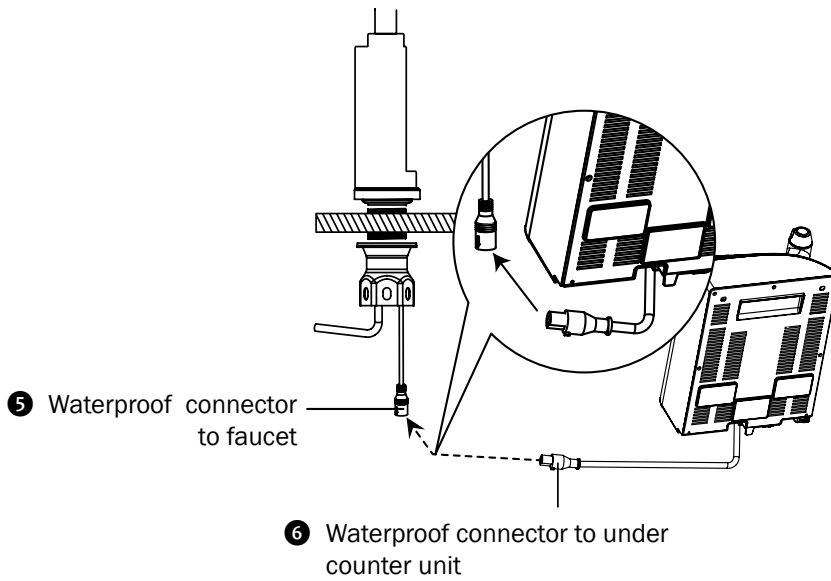
### Faucet connection for under-counter

1. For under-counter installation, install the SF-100 Digital Sensor Faucet and connect it with CDU Plus according to the following instructions:



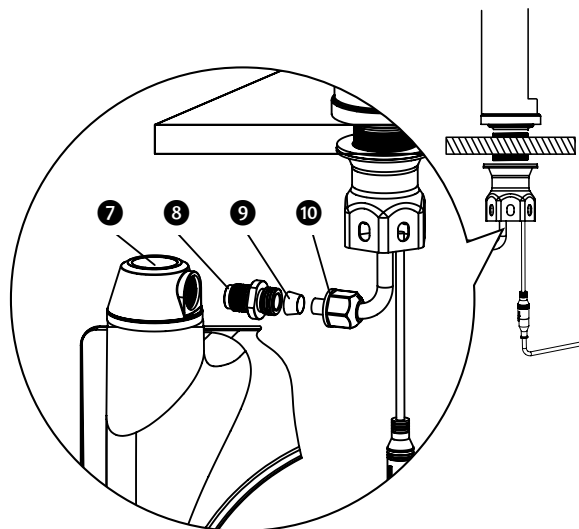
# INSTALLATION

2. Connect the faucet and under counter unit and wire the waterproof connectors.



3. Connect the faucet and under counter unit and assemble the tubing as shown.

- 7 Unit water outlet cap
- 8 Faucet adapter and union converts M14 anti-clockwise thread to M14 clockwise (use the M14 anti-clockwise thread to connect to the unit water outlet cap)
- 9 Ferrule (for 7x9 mm tube)
- 10 M14 lock nut



# OPERATION & USE

## Unit Start-Up

### Connection Check

Confirm all below points prior to start-up:

1. All inputs, output and drain are correctly installed to their corresponding connections.
2. Ensure that the unit is connected to cold water supply input.
3. The power supply meets the requirements as indicated in the product specifications.
4. Input water pressure is 2.0~7.0 kg/cm<sup>2</sup> (29~100psi).

### Initial Start-Up

The unit is switched ON by plugging the cord into wall outlet (power supply). There is no ON/OFF control switch. Before plugging unit into wall outlet, all plumbing works should be completely set up.

To use the machine at the first time, connect the unit to power to switch on and the system preparing indicator “ **HOLD** ” will light up on the display panel. At this point, the unit is in preparation stage refilling water for iEOG start-up. This process will take about 30~55 minutes according to water pressure.

**Note: Draining during this stage is normal.**

Once this preparation phase is complete, the “ **HOLD** ” will go out automatically, and “ **READY** ” will light up, indicating the unit is now ready for use. At this point, the panel displays the detected internal system temperature on the display panel, too.

### Conditionally Shut-Down

The CDU Plus is intended for constant power-on, unless in necessary situations, such as before machine servicing activities.

The following sequence of steps must be followed for manual shut-down:

1. Shut off water supply.
2. Turn off the system by un-plugging the cord from the wall outlet.

### Re-Start & 30 Minutes Re-Start Protection

The unit can be switched OFF by un-plugging the cord from wall outlet (power supply). Before shutting down the unit, the water supply to the unit should be completely turned off.

To re-start the unit, connect the unit to power to switch on. In system re-starting, all functions are suspended for 30 minutes along with “ **HOLD** ” flashing slowly (blink/0.5 sec). During this waiting period, maintenance program is running at background for self-check.

# OPERATION & USE

## Directions for Product Use

Select a desired water mode: you can choose between Ozone Water for disinfection or Hydrogen Water for drinking following the below instructions:

### Control Panel

#### To Dispense Ozone Water

##### 1. 30 MIN Ozone Water Outflow

###### Disinfection



1 SECOND

Sensor 1 SEC to activate 30 Min ozone water output; Sensor 1 sec again to stop. " **O<sub>3</sub>** " icon is displayed during output.

##### 2. 20 SEC Ozone Water Outflow

###### Disinfection



3 SECOND

Sensor 3 SEC to activate 20 Sec ozone water output; Sensor 1 sec again to stop. " **O<sub>3</sub>** " icon is displayed during output.

#### To Dispense Hydrogen Water

##### 1. 5 MIN Hydrogen Water Outflow

###### Drinking



0.2 SECOND

The specific " **H<sub>2</sub>** " icon is displayed during output. If the button is not pressed again, the unit will automatically stop after 5 minutes of water outflow.

**Note: a LIGHT PRESS is all that is required when pressing the button.**

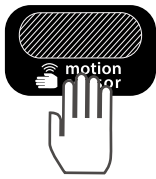
Press once on the lower button and again to stop

# OPERATION & USE

## Digital Sensor Faucet (SF-100)

### To Dispense Ozone Water

#### 1. 30 MIN Ozone Water Outflow



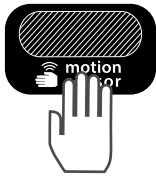
SENSOR 1 SECOND

SENSOR 1 SEC to activate 30 min ozone water output; Sensor 1 sec again to stop. "  $O_3$  " icon is displayed during output.

Flow rate / conc.

---

#### 2. 20 SEC Ozone Water Outflow



SENSOR 3 SECOND

SENSOR 3 SEC to activate 20 Sec ozone water output; Sensor 1 sec again to stop. "  $O_3$  " icon is displayed during output.

Flow rate / conc.

### To Dispense Hydrogen Water

#### 1. 5 MIN Hydrogen Water Outflow



0.2 SECOND

The specific "  $H_2$  " icon is displayed during output. If the button is not pressed again, the unit will automatically stop after 5 minutes of water outflow.

**Note: a LIGHT PRESS is all that is required when pressing the button.**

Press once on the lower button and again to stop



# OPERATION & USE

## Temperature Display Setting / Parts Life Check / Firmware Check

### Temperature Display Setting

Remain product under standby mode to proceed setting functions.

**Step 1** Press and hold lower button for 15 seconds to enter the Temperature Display Setting.



**Step 2** Use upper sensor to select between degrees Celsius (°C) and degrees Fahrenheit (°F).

**Step 3** Wait 30 seconds and the system will save the setting and resume standby mode automatically, or you may press lower button to save the setting and proceed to enter the Parts Life Check.

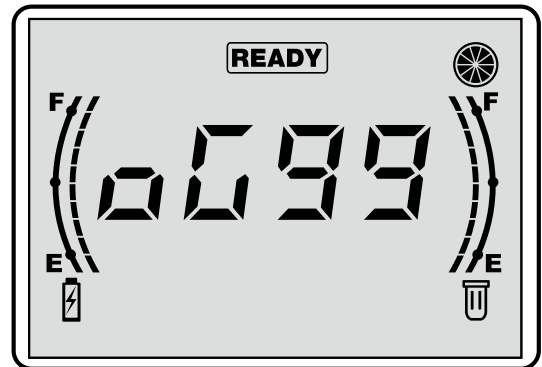
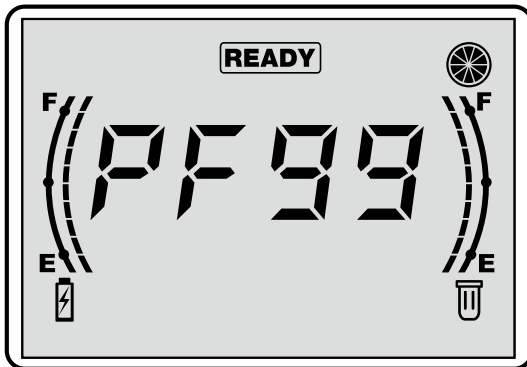
### Parts Life Check

Remain product under standby mode to proceed setting functions.

**Step 1** Press and hold lower button for 15 seconds to enter the Temperature Display Setting.

**Step 2** Press lower button to skip the Temperature Display Setting and enter the Parts Life Check.

**Step 3** Use upper button to switch between the display of parts remaining life including pre-filter cartridge and iEOG cell. The remaining life is expressed in percentage (%).



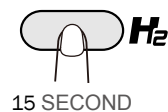
The first two codes represent the part and the following two indicate the Remaining Life Cycle in percentage (%).

**Step 4** Wait 30 seconds and the system will resume standby mode automatically, or you may press lower button to resume standby mode immediately.

### Firmware Version Check

Remain product under standby mode to proceed setting functions.

**Step 1** Press and hold lower button for 15 seconds to enter the Temperature Display Setting.



**Step 2** Press lower button twice to skip the Temperature Display Setting, Parts life check and enter the Firmware Version check.

**Step 3** Wait 30 seconds and the system will resume standby mode automatically, or you may press lower button to resume standby mode immediately.

# OPERATION & USE

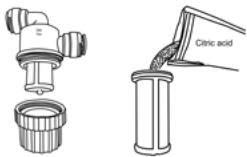
## Manual Internal Waterline Cleaning and Disinfection

Remain product under standby mode to proceed setting functions

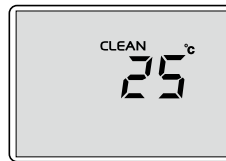
**Step 1** Turn off the water supply.

**Step 2** Open the cleaning kit (installed in the input waterline) and fill in Citric Acid powder.

**Step 3** Close the cleaning kit and turn on the water supply.



**Step 4** Press and hold lower button for 20 seconds to activate the Internal Cleaning and Sanitation process. The process will take 30 minutes to complete and “CLEAN” icon will light on for indication.



**Step 5** All functions are suspended during this process. After the process is completed, water will be discharged both from the drain and the dispenser.

**Step 6** Run  $O_3$  water for 1-2 minutes.

# OPERATION & USE

## Drinking pre-flush

Drinking pre-flush lasts 5 seconds and is performed during hydrogen water outflow after more than 20 minutes of non-operation, or each time if ozonated water outflow has been used previously within the 20 minutes.

“ **HOLD** ”, and “ **H<sub>2</sub>** ” will blink slowly on the display panel of the unit, indicating this flushing mode.

After 5 seconds, the selected “ **H<sub>2</sub>** ” water mode will be dispensed.

If an "internal waterline cleaning (described below)" was performed within previous 20 min, the period of "Drinking Pre-flush" will be extended, up to 25 sec.

## Internal waterline cleaning and disinfection

### Automatic

Internal waterline cleaning and disinfection will be performed automatically once a day . Icon “ **CLEAN** ” will light on as an indication. Internal tubing will be washed and sanitized by ozonated water and the water will be discharged through the drain. All functions are suspended during this cleaning and disinfection process !

### Manual (applied with Citric Acid)

It is recommended that the manual waterline cleaning and disinfection be performed every once a year for standard water quality. If hard water is used as your input, please perform the manual cleaning and disinfection every 3-6 month. Please follow the instruction on page 25.

# OPERATION & USE

## Recommendations for Using this Unit

### Application of Ozone Water

- Hand wash
- Instrument pre-rinse
- Feeding dental unit water bottles

### Benefits of Ozone Water

1. Pure ozone and oxygen obtained from pure water electrolysis are used to prepare ozonated water at high concentrations with the process of gas storage, nebulization and efficient pressurization and saturated dissolution. It is safe and reliable in effectively killing bacteria and disinfection.
2. The ozonated water prepared with the pure ozone from pure water electrolysis by electrolytic hydrogen and ozone generator is free from hazardous, or even carcinogenic, toxins such as nitrogen oxides (NO<sub>x</sub>), nitrates (NO<sub>3</sub>) and nitrites (NO<sub>2</sub>).
3. Gained approval from U.S. Food and Drug Administration (FDA): pure ozone and ozonated water can be used as bactericidal agents for foods as well as surface disinfectants.
4. Gained approval from U.K. Campden BRI: the application can be used as bactericidal agents for terminal disinfectants.
5. The design conforms with the requirements of UL (U.S.), CE (Europe), PSE (Japan) and SAA (Australia) certifications.

### Ozone is the most powerful bactericidal agent in the nature.

#### It becomes oxygen after it's reaction with the following features:

1. Ozone water achieves rapid and effective disinfection and bacteria elimination. Certified by Campden BRI in UK and SGS: 5 log kill in 10~20 seconds when used against E. coli, Salmonella spp., Staphylococcus aureus, P. aeruginosa and C. albicans. (i.e., 99.999%)
2. Rinsing vegetables and fruits directly with ozonated water rapidly and effectively degrades pesticide residues as tested by SGS: it removes pesticide residue in 1~2 minutes and makes the "shelf life" longer.
3. Rinsing fish, shrimp, meat and poultry directly with ozonated water is associated with rapid and effective disinfection, bacteria elimination as well as pollutant removal.
4. Ozone water rapidly and effectively eliminates any "fishy smell" and odors when used for direct rinsing.
5. Ozone water has wide disinfecting and bactericidal applications in daily life: hand-washing, tableware, household utensils, knives and forks, bowls and chopsticks, cutting board, cleaning rag, towels as well as baby's pacifiers, feeding bottles and diapers.

# OPERATION & USE

## Hydrogen & Hydrogen Water

1. Drinking Hydrogen Water helps the selective scavenging of harmful ROS such as hydroxyl and peroxynitrites and preserving the good ROS required.
2. Hydrogen is the newest antioxidant that is capable of increasing the cells and organs' antioxidant, anti-inflammatory and anti-apoptotic abilities. Meanwhile it protects DNA and ensures cell survival by its effect against the possible cellular damages and/or deaths induced by hydroxyl radicals.
3. Hydrogen molecules as a powerful antioxidant can quickly penetrate the biofilm and then diffuse into the cell membrane. It is therefore capable of resisting oxidative damage and promoting cell activation, enabling anti-aging, aging prevention, and health improvement.
4. Drinking Hydrogen Water, through a reducing effect, neutralize the increasing excess free radicals formed as a result of body acidification, effectively suppresses the symptoms and improve physical fitness after acidification and restores health.

## Hydrogen is a new antioxidant and is found to be better than currently known anti-oxidants with following features:

1. Hydrogen molecules are small and can quickly penetrate the biofilm and then diffuse into tissues, cytoplasm, mitochondria and nuclei.
2. The effective dose of hydrogen molecules is not toxic. There is no concern about the safety problem of excessive use of hydrogen.
3. Hydrogen is a moderate antioxidant, which does not interfere with the oxidation-reduction reaction of metabolism.
4. Comparing to other antioxidants, hydrogen molecules has better compatibility with tissues and organs. This is the reason that deep-sea divers tend to use hydrogen to replace oxygen to avoid lung damage. In addition, no matter by orally or injection, hydrogen molecules can easily move to the lungs for easy metabolism. This is extremely safe.

# SERVICE & MAINTENANCE

## Consumable Parts

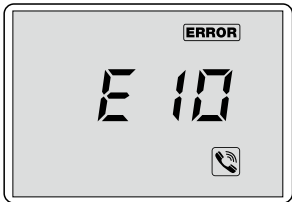
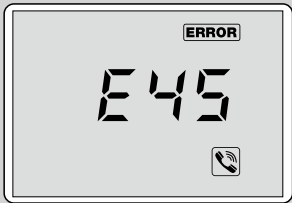
### *Consumable Parts Life Cycle*

<b><i>Name of Parts</i></b>	<b><i>Servicing Cycle</i></b>
<b>Pre-filter</b>	<b>1 year (depending on usage)</b>
<b>Deionization ( DI ) Assembly</b>	<b>Approx. 2 years</b>
<b>Off-Gas Destructor</b>	
<b>iEOG Cell</b>	
<b>Reverse Osmosis ( RO ) Assembly</b>	
<b>System Cooling Fan</b>	

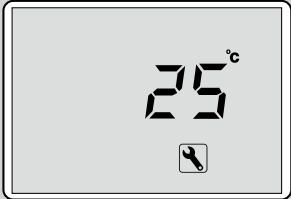
# SERVICE & MAINTENANCE

## Troubleshooting Guide

Please check out the following troubleshooting suggestions before calling for repair.



<i>Symptom</i>	<i>Possible Cause</i>	<i>Resolution</i>
Display panel does not light up.	Is the power cord plugged in correctly to an active outlet?	Plug the power cord in properly.
	Electronic failure.	Unplug the unit and contact your dealer to arrange service.
Water does not flow out or the unit has stopped functioning.	Is the source water valve line closed?	Turn the water supply valve on.
	Is the source water line connected?	Be sure the water supply hose is connected properly.
	Is the hose bent?	Be sure the water line is not bent.
	Is the water pressure too low?	Replace the pre-filter. Contact your dealer to arrange service.
Water is leaking from the hose at the attachment.	Check to see if the hose is disconnected.	Connect the hose to the attachment.
Water is leaking from inside of the unit.	Unknown.	Unplug the unit and contact your dealer to arrange service.
The water has a strange odor or tastes bad.	Has the unit been unused for a long time?	Let ozonated water flow through the unit for 5 minutes or more. If the water does not improve, contact your dealer to arrange service.
There is a strange noise coming from the unit.	Unknown.	Unplug the unit and contact your dealer to arrange service.
Display Code: E45 All functions suspended. 	iEOG Cell fails.	Contact your dealer to arrange service.
Display Code: E45 All functions suspended. 	iEOG water refilling timeout by low water pressure.	Correct input water pressure and then re-start the unit.
	iEOG water refilling timeout by iEOG Pre-filter jammed.	Clean or replace as needed and then re-start the unit.
	Unknown.	Contact your dealer to arrange service.

# SERVICE & MAINTENANCE

Symptom	Possible Cause	Resolution
	Service due.	Contact your dealer to arrange service. If you already finish the maintenance, please follow instructions described below to cancel the icon.

## About " " symbols:

CDU Plus contains external pre-filter and internal consumable parts that need to be replaced regularly. To ensure that the unit is maintained at its best, it is recommended to replace pre-filter every 12 months and replace all consumable parts every 24 months.


According to the time the product connected to the power, it will display a "  " symbol on the panel every 11 months, indicating the service is due. If you have completed the maintenance, you can cancel the "  " symbol in the following ways:

**Step 1** Sense the upper sensor for 5 seconds to enter the Service Notification Settings. The panel will displays 0000.



**Step 2** Press the lower button to move the cursor and sense the upper sensor to adjust the value to "0101".

**Step 3** The remain life of pre-filter (in %) will display on the panel at the forth time you touch the lower button.

**Step 4** Press the lower button to reset the life. The "  " symbol will be cancelled and the next 11-month counting starts.

\* If the input code is incorrect, the system will return to standby mode.









# ***BioSure*** ***PROFESSIONAL***

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