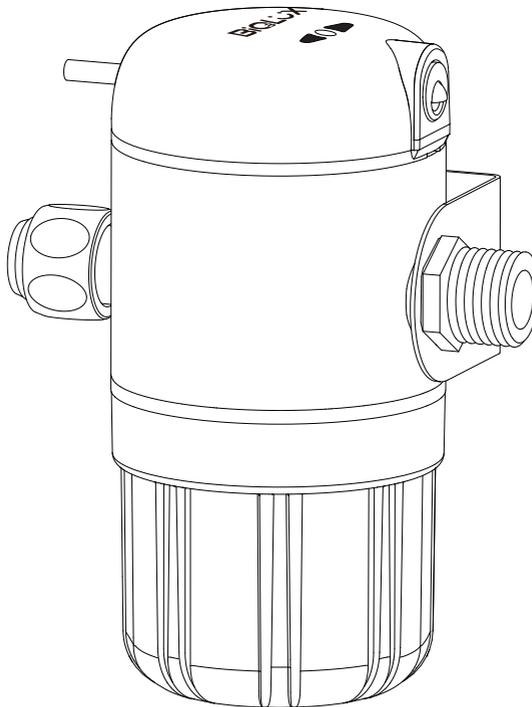


# BiOLUX

WATER SANITATION SYSTEM

# WSS120S

Model EOS7211-QS



## INSTALLATION & OPERATION MANUAL

BIOTEK ENVIRONMENTAL SCIENCE LTD.  
[www.besgroups.com](http://www.besgroups.com)



# PREFACE

This manual contains important information of Biolux Water Sanitation System WSS120S (Model: EOS7211-QS). Only the correct operation and maintenance of this equipment can make your system perform its best. **Be sure to understand the correct installation, operation and maintenance methods before using this equipment.**

This manual contains important safety information, basic installation, operation, and maintenance instructions. Please read this manual carefully to optimize your application. For additional guidance, consult **Biotek Environmental Science Ltd. (BES Group) Customer Service or your BioSure local authorized dealer.**

## DISCLAIMER

The information contained in this document is subject to change without notice. BES 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 is not liable for damages on any contact materials due to result of oxidation.

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

## COPYRIGHT

© 2025 Biotek Environmental Science Ltd, and its subsidiaries (BES Group)  
All Rights Reserved.

Reproduction, adaptation, or translation without prior written permission is prohibited, except as allowed under the copyright laws.

---

**Biolux** is a division of Biotek Environmental Science Ltd. ("**BES Group**"). **BES Group** is a global leading electrolytic technology developer and product manufacturer with pioneering ozone application knowledge and currently holds many exclusive patents for its electrolytic ozone generators and products worldwide.

---

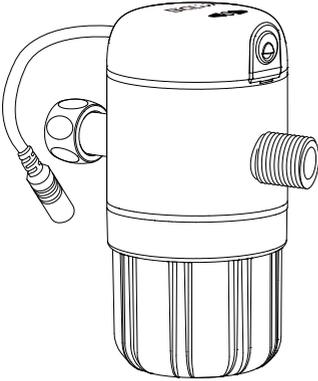
# TABLE OF CONTENTS

<b>PREFACE</b>	1
<b>PACKAGING CONTENTS</b>	3
<b>IMPORTANT SAFETY INFORMATION</b>	4
<b>1. PRODUCT INFORMATION</b>	
1.1 PRODUCT DESCRIPTION	7
1.2 PRODUCT FEATURES	7
1.3 KEY COMPONENTS	8
1.4 SPECIFICATIONS	10
<b>2. INSTALLATION</b>	
2.1 PRECAUTIONS BEFORE INSTALLATION	11
2.2 INSTALLING THE UNIT	12
<b>3. OPERATION</b>	
3.1 CONTROL KEYS & INDICATORS	16
3.2 STARTING YOUR WSS120S	18
<b>4. MAINTENANCE</b>	
4.1 REPLACEMENT CYCLE OF EOG CELL	19
4.2 CELL CARTRIDGE REPLACEMENT	19
4.3 CELL CARTRIDGE CLEANING PROCEDURE	21
<b>5. TROUBLESHOOTING</b>	22
<b>WARRANTY INFORMATION</b>	25

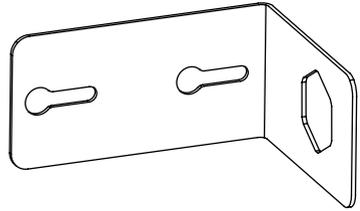
# PACKAGING CONTENTS

In order to ensure that the products can be delivered to consumers completely, BES Group will confirm the integrity of accessories and packaging through quality control before the products are sold. After you receive the product, please check whether there are any packaging defects, cracks, joint damage, etc., to confirm that there is no damage during transportation.

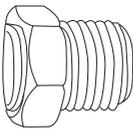
If you find any damage, please notify your freight forwarder and BES Group immediately.



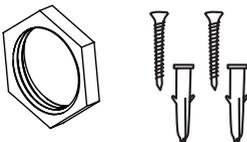
**Main Device**



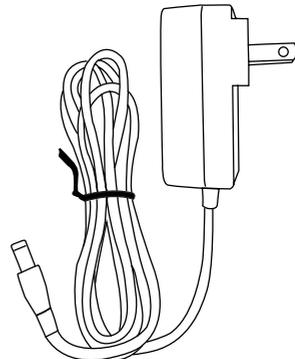
**Wall-Mount**



**Check Valve**



**Hex nuts (x1)  
Phillips Screws (x2)  
& Plastic Wall Anchors (x2)**



**Power Supply**  
AC100-240V  
Wire Length 1.5m

# IMPORTANT SAFETY INFORMATION

To avoid personal injury or property damage to the user or others, please follow the following safety instructions :

## Explanation of Safety and Notice Symbols

 **WARNING** WARNING indicates a hazardous situation which, if not avoided, COULD result in death or serious injury.

 **CAUTION** CAUTION indicates a hazardous situation which, if not avoided, COULD result in injury or property damage.

**NOTICE** NOTICE is used to address practice that is required and must be followed.

----- **READ AND SAVE THESE STRUCTIONS** -----

## Electrical Safety and Basic Safeguards

### **WARNING**

- All service work must be performed by a qualified and authorized technician. **NEVER** attempt to disassemble, repair, or remodel the unit yourself. Doing so will void your warranty and can lead to fire or electric shock. If the product malfunctions or has been damaged in any manner, unplug the unit and contact the BES service department or its authorized local service agent or dealer to arrange service or repair.
- Do **NOT** damage the Power Supply and Power Plug Cord. A damaged Power Supply or Power Plug Cord can cause fire or electric shock.
- Do **NOT** plug or unplug the Power Supply or Power Plug if your hands are wet. Doing so can cause electric shock or injury.
- Do **NOT** use the product if the power connector is loose or damaged.
- Keep the product and power cord away from heated or hot surfaces including space heaters, stoves, and similar electrical appliances. ( > 100 cm)

- Stop using the product immediately if you notice any of the following symptoms indicating abnormality or malfunction:
  - The Body of product is abnormally hot or deformed.
  - Smoke coming from the product or there is burning smell.
  - Some part of the product is cracked, loose, or unstable.
  - The product makes strange noises.
  - The display is abnormal.
- If any of the above issues occur, unplug the product immediately and return to authorized agent or dealer for service and repair. Continued use of the product may cause a fire, electric shock, or injury.

## NOTICE

- The power cord of this product is 1.5m. Extension cord should only be used if care is exercised.
  - Do not place the socket of the extension cord where it is easily splashed by water.
  - The extension cord should not be suspended from the countertop or tabletop, otherwise it may cause tripping.

### Specific Safety Information

- If the power plug is loose, do not use this product. A loose power plug may cause fire, electric shock, or short circuit. Before use, make sure the power plug is securely and fully inserted into the power outlet.

## CAUTION

- Before connecting the unit to power supply, ensure all plumbing connections are secured and leak-free, from shut-off valve to outlet.
- To maintain cosmetic integrity, protect this unit from direct prolonged sunlight exposure.
- Do not immerse the product in water or splash water on it, as this may cause damage to the product. Choose a place to avoid rain or splash water when installing.
- For your safety, **DO NOT** operate the device with any panels or covers removed.

- all original parts or components are correctly reinstalled and in proper working condition.
- **Do not** use inappropriate tools, procedures, or methods, as this may damage product components.
- **Do not** discard any loose parts on the product, as they may be necessary for safe and proper installation and operation.
- Keep the product away from fire sources (at least 100 cm or more).
- **Do not** attempt maintenance when the product is wet. Always disconnect all power before performing any maintenance, as failure to do so may result in serious injury or death.
- Ensure that the power supply and water source meet the product's specified requirements. Failure to install, operate, or maintain the product according to the manual may void the warranty and cause personal injury or product damage.

## 1.1 PRODUCT DESCRIPTION

The WSS120S is an easy to use, on demand ozone disinfection and purification system. It can be widely applied in kitchens and bathrooms, as well as various environments and spaces, to achieve effective disinfection, deodorization, and purification.

This product adopts advanced electrolytic ozone technology (EOG Technology), which safely and efficiently generates ozone in real time, providing stable and reliable antibacterial and disinfecting performance, and consistently delivering a cleaner and safer experience.

## 1.2 PRODUCT FEATURES

### • **Instant Start**

- No waiting time. The unit transforms tap water into antibacterial ozone water instantly.

### • **Two Working Modes**

- **Faucet Mode:**  
Preset mode. Suitable for faucets in kitchen and bathroom.
- **Laundry Mode:**  
Use with the washing machine at home to improve the overall laundry quality.

### • **Alarm Warning**

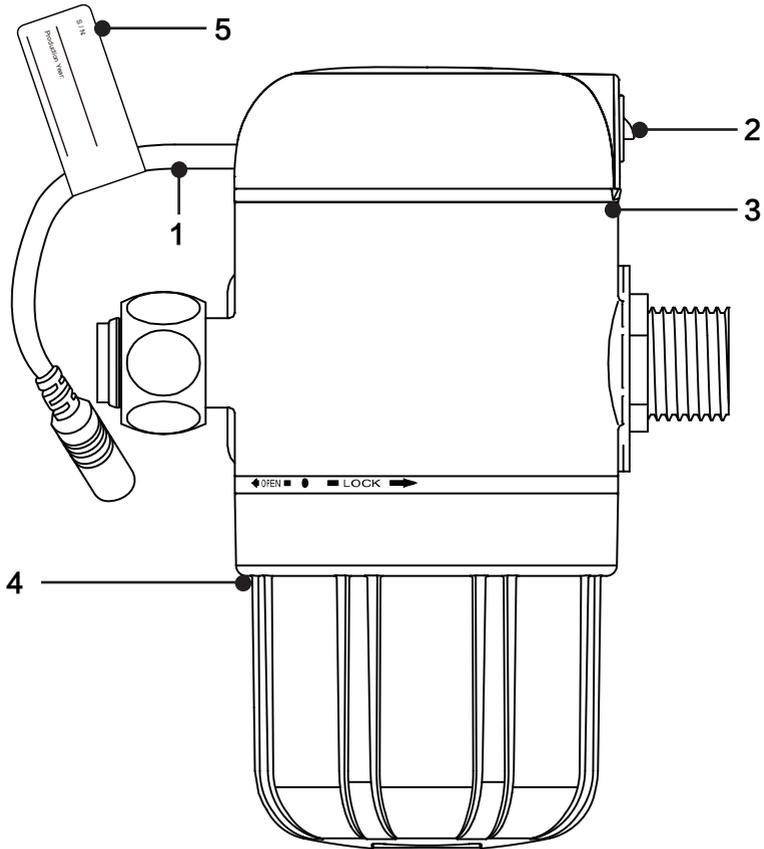
When the efficiency of EOG cell decrease, the recommended replacement cycle of the EOG cell, or the system runs abnormally, the unit will alarms with lights and buzzer.

\* Please refer to Chapter 3 and Chapter 5 for more details.

### • **Descaling**

Our electrolytic ozone generator features a descaling function that automatically performs polarity reversal to prevent mineral scale buildup on the electrodes, ensuring optimal ozone generation performance.

## 1.3 KEY COMPONENTS



---

### Side View

---

1. Power Cord and Power Socket

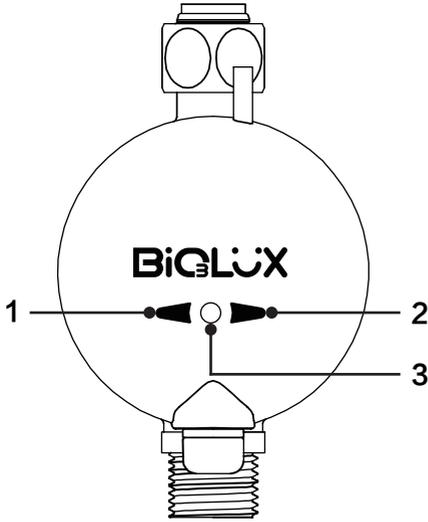
2. Programming Port (USB-C)

3. EOG Status Indicator

4. Electrolytic Ozone Generator (EOG) Cell Cartridge

5. Product Serial Number Label

---

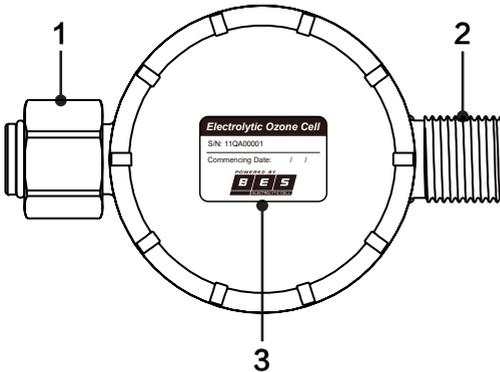



---

### Top View

---

- 1. Control Button - Mode
  - 2. Control Button - Reset
  - 3. Status Indicator
- 




---

### Bottom View

---

- 1. Water Inlet  
(G1/2" Movable Nut (Female))
  - 2. Water Outlet  
(G1/2" External Thread (Male))
  - 3. EOG Serial Number Sticker
-

## 1.4 SPECIFICATIONS

<b>Model</b>		<b>EOS7211-QS</b>
<b>Output</b>		Ozonated Water
<b>Ozone Production</b>		Approx. 120 mg/hr <sup>*1</sup>
<b>WATER TUBE SPEC. (INPUT/OUTPUT)</b>		1/2" Movable Nut (Female) / 1/2" External Thread (Male)
<b>DIMENSIONS</b>		Φ73 x W118 x H148 mm
<b>WEIGHT (Net)</b>		473 g
<b>IP CLASS</b>		IP54
<b>WATER SUPPLY</b>	<b>Quality</b>	Clean or Filtered Water <sup>*2</sup>
	<b>Flow</b>	≥ Max. up to 1450 LPH <sup>*3</sup> (Water pressure 3 kg/cm <sup>2</sup> , 1/2" pipe)
	<b>Pressure</b>	≤ 7.0 kg/cm <sup>2</sup> (100 psi)
	<b>Optimal Temp.</b>	5 - 40°C
<b>Power</b>	<b>Adaptor Input</b>	AC 100-240V, 50/60Hz
	<b>Adaptor Output</b>	DC5-15V / 2.0A (Constant Current)
<b>Rate Power</b>		30W
<b>AMBIENT TEMP.</b>		5 - 40°C
<b>AMBIENT RELATIVE HUMIDITY</b>		0 - 90% R.H. non-condensing

\*1. Environment: 1 atm, 25°C; Water : filtered to 1µm, 25°C, TDS = 60 ppm. Actual performance concentrations may vary from the listed data due to operating conditions (water flow, pressure, temperature, and water quality).

\*2. Recommended water quality: filtered ≤ 1µm, TDS 30-250 ppm, Hardness < 180 ppm (as CaCO<sub>3</sub>).

\*3. The minimum flow required to activate the function must be ≥ 30 LPH.

## 2.1. PRECAUTIONS BEFORE INSTALLATION

This device is designed and engineered for easy integration into existing water systems. Please check the device for damage or shortage before installation and be sure you have the tools.

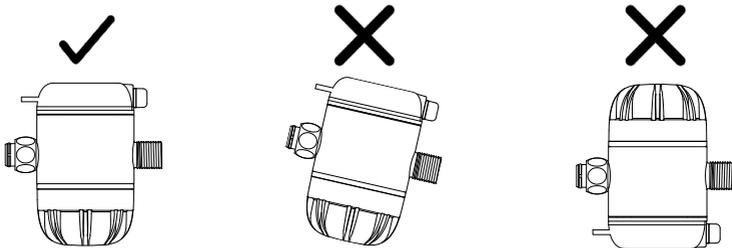
If any parts are damaged, contact your supplier **IMMEDIATELY**. **Do NOT** install damaged parts.

### Tools Needed For Installation:

- Pipe wrench
- Plumber's Tape
- Pipe Clamp (As needed)
- Adjustable wrench
- Adjustable joints (As needed)
- Electric Drill

### • INSTALLATION PRECAUTIONS

1. For best results, clean and sanitize the water line before installing the unit.
2. Select a location for the unit so:
  - Mount the system after all water filtration processes.
  - It will be in an upright position  
(You can use the wall mount attached to fix the unit)

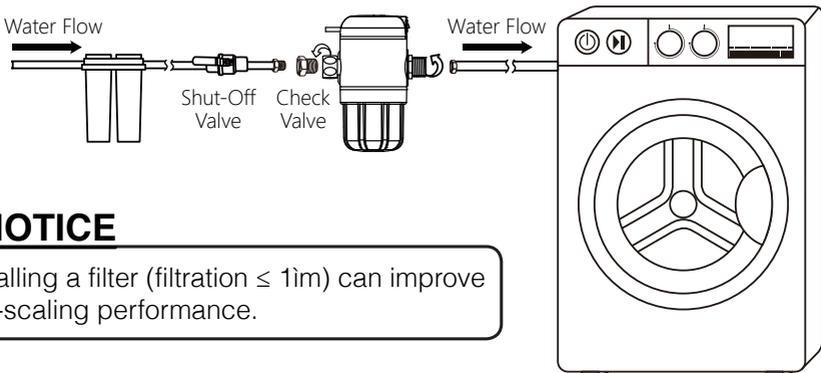
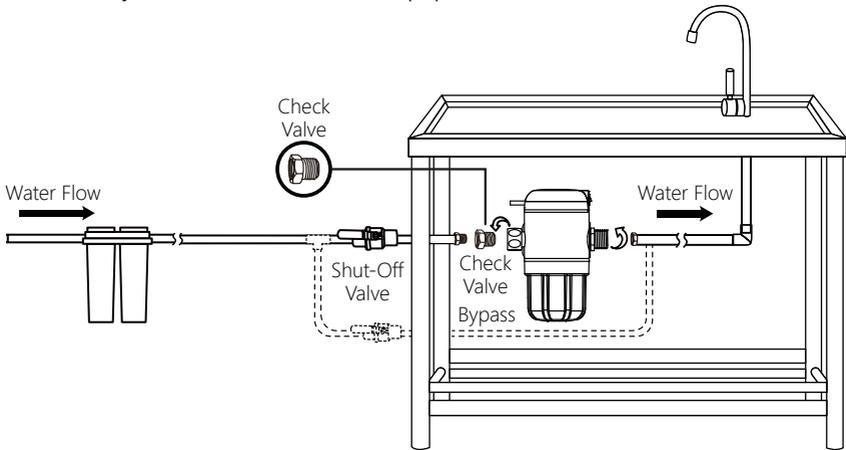


- Indicator lights and cartridge are visible and accessible.
  - Allow sufficient access for cartridge replacement.
  - Other equipment or objects should not lean on or press against the device.
  - Be sure there is a power socket within 1.5m around the installation position.
3. It is highly recommended that a water shut-off valve be installed before and near the unit.
  4. Ensure that adequate hammer arrestors is provided to comply with regional standards and regulations.
  5. If it is used with a washing machine, please disconnect the power supply of the washing machine before installation. A bypass pipeline is recommended to keep the normal operation of the washing machine during future maintenance.

## 2.2. INSTALLING THE UNIT

### • IMPORTANT INFORMATION

- The diameter of water inlet and outlet is 1/2" (female inlet /male outlet). Installation position of the equipment must be placed after the water filters.
- A shut-off valve in front of the water inlet is recommended to facilitate future maintenance or replacement of the EOG cell cartridge.
- In case an adjustable joint is used, it's suggest to use plumber's tape and a hose clamp to avoid water leakage. It's recommended to reserve the length of the water pipe for moving or removing the device in the future - the inlet and outlet connectors are designed as one male and one female, which can be directly connected after the equipment is removed.



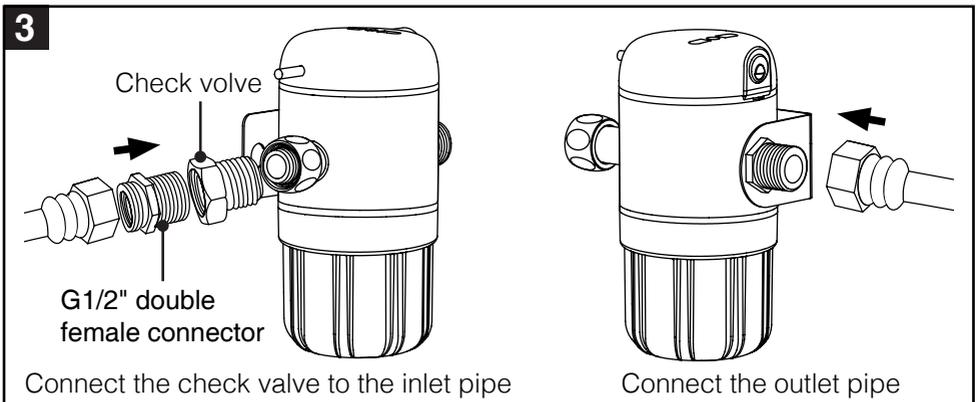
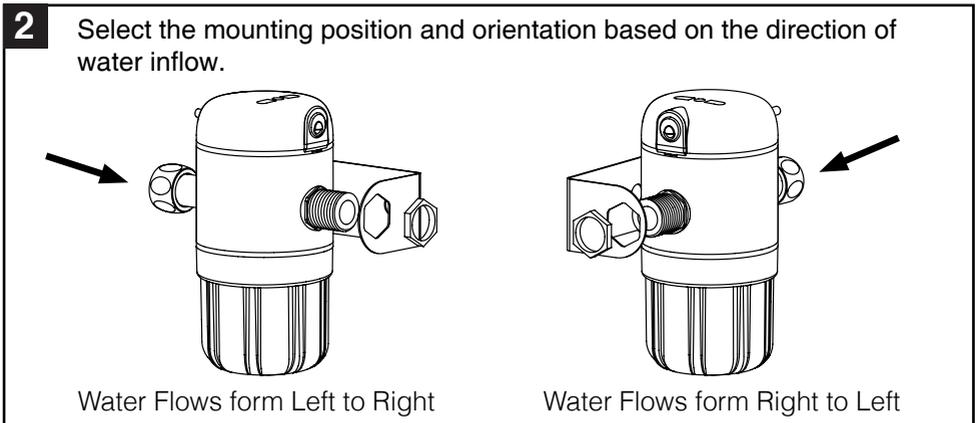
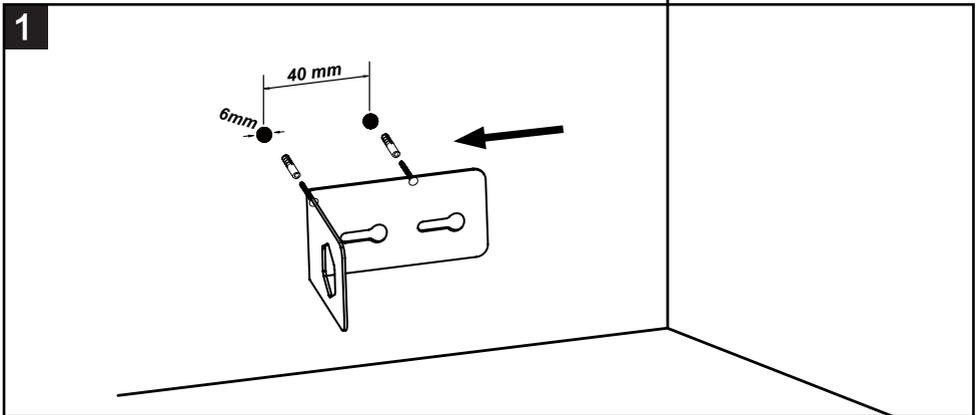
### ! NOTICE

Installing a filter (filtration  $\leq 1\mu\text{m}$ ) can improve anti-scaling performance.

Typical Scheme of Installation

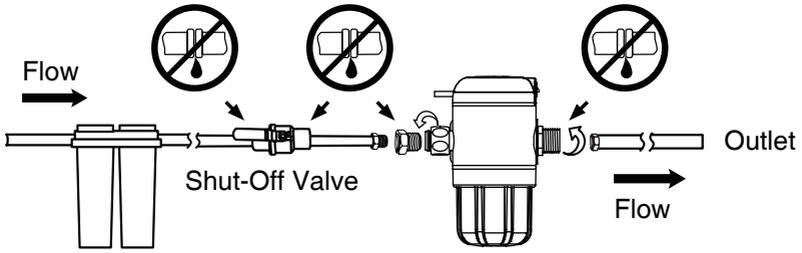
## • MOUNTING THE UNIT

You can fix the device on the wall by a wall-mount (Attachment). Please follow the previous section "Precautions before installation" to select an appropriate location, and follow descriptions below to secure the device.



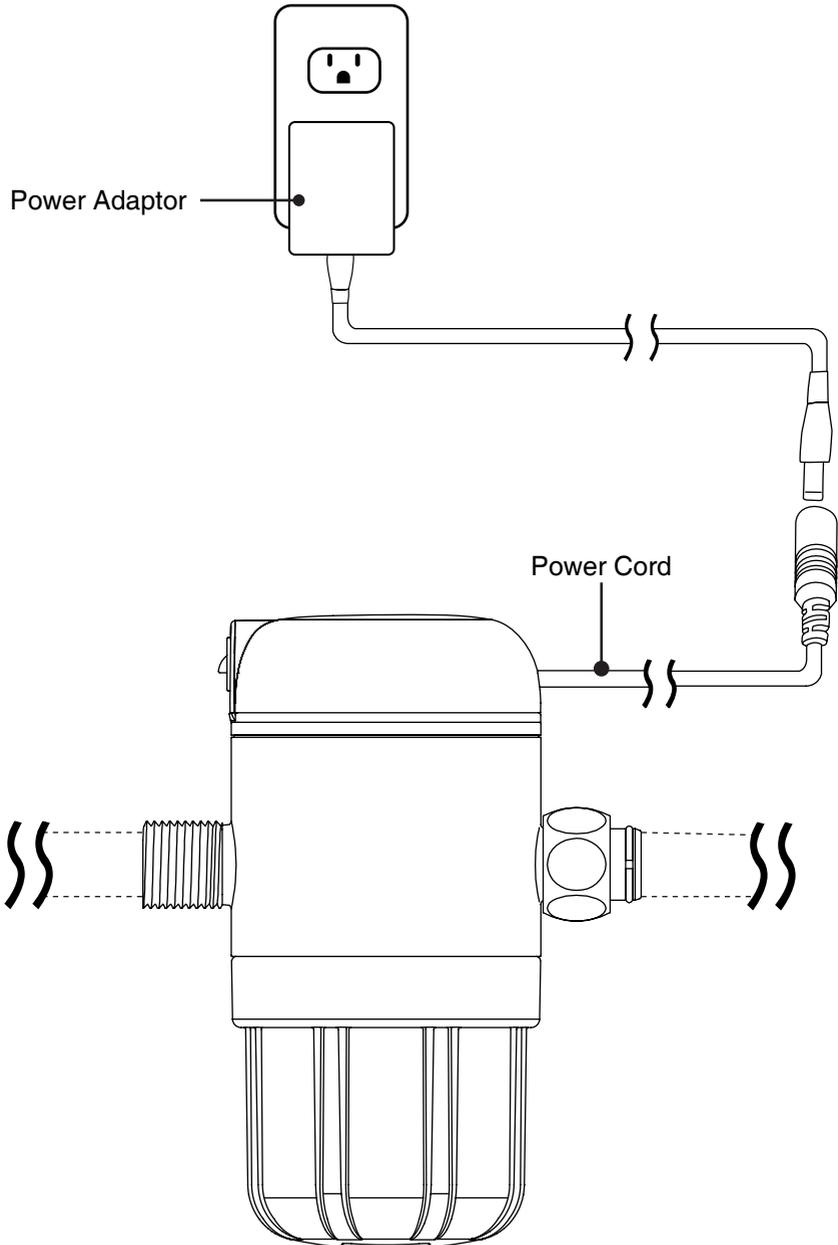
**4**

Turn on the water supply and check each connection point for leaks.

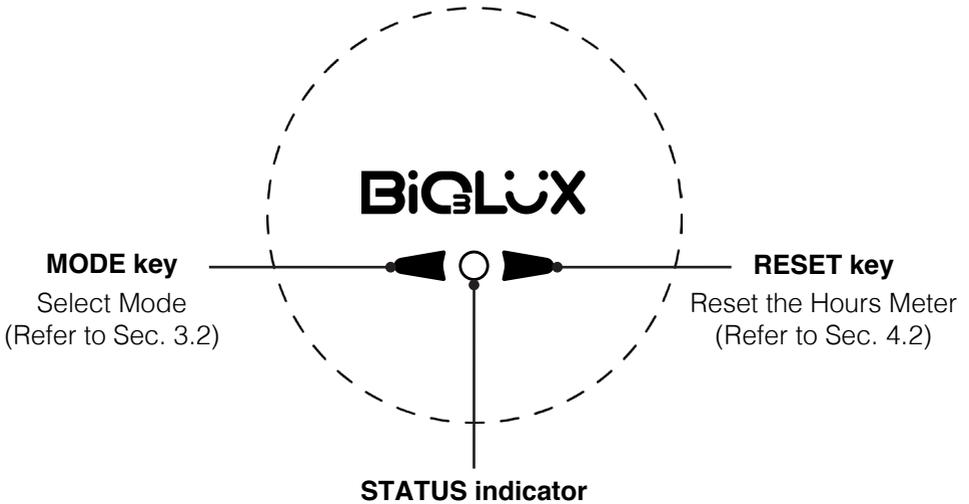


## • STARTING YOUR WSS120S

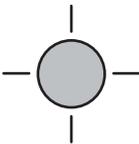
Connect the power adaptor plug with the power socket of the device. Ensure all plumbing connections are secured and leak-free. Plug the power adaptor into the wall electricity outlet to switch on the device.



### 3.1 CONTROL KEYS & INDICATORS



#### · Status Indicator



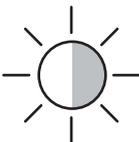
**Blue light blinking slowly**

- Faucet Mode



**Blue light steady on**

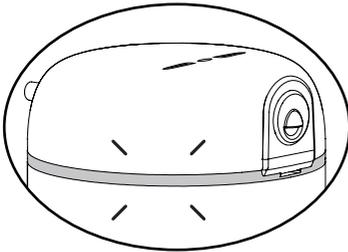
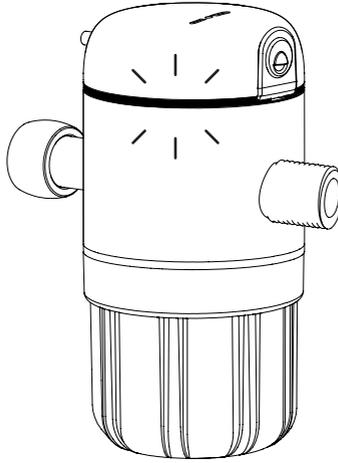
- Laundry Mode



**Blue / white light blinking fastly**

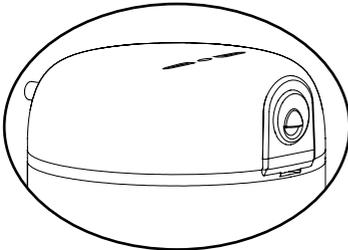
- EOG cell abnormal

## · EOG Status Indicator



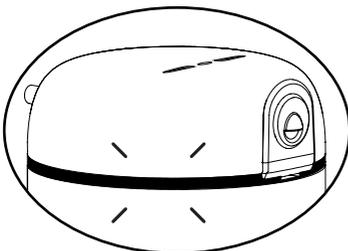
### **Blue light flashing slowly**

- The system performs a 30-second selfcheck during startup.



### **No light displayed**

- Normal standby status



### **Blue light steady on**

- Product operating normally,  
triggered by water flow

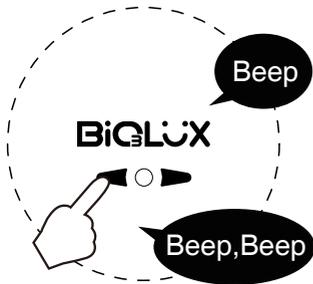
## 3.2 START YOUR WSS120S

There is no ON/OFF control switch with the unit. The unit is switched ON by connecting the power supply cord into a wall electrical outlet (power supply). All water pipeline connections should be completed before the device powered on. After the unit is powered on, the buzzer will beep once, a 30-second system self-check will be performed. During this period, the control buttons cannot be operated. After 30 seconds, the system enters standby mode, user can operate control buttons at this time.

### IMPORTANT!

Operating the device under no water or low water level will activate an alarm.

#### · SELECT MODE



Default setting is "**Faucet**" mode. You can press and hold the "MODE" key for **10** seconds to switch to the "**Laundry**" mode.

When you hear the buzzer beeps **twice**, the mode is switched successfully.

**Faucet Mode:** Status Indicator slowly blinking

**Laundry Mode:** Status Indicator steady ON

\* Control keys won't function when the EOG cell is working.

### ! NOTICE

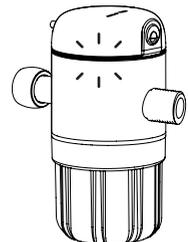
When the unit detects that the water flow has reached the activation flow rate of 1.4L/min ( 30LPH), ozone water production will be triggered:

**Faucet Mode:** Once the water flow is turned on, ozone water production will continue until the water is turned off.

**Laundry Mode:** Once the water flow is turned on, ozone water production is triggered. After the water flow is stopped, ozone water production will continue for 3 minutes before stopping, maintaining ozone concentration for more frequent usage.

#### · SYSTEM SELF-CHECK

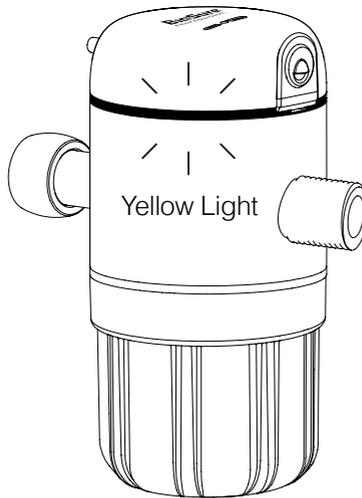
After each powered on, the device will perform a self-check for about 30 seconds and the EOG status indicator will blink slowly in blue. Control keys cannot be operated at this time.



## 4.1 REPLACEMENT CYCLE OF EOG CELL

For optimal performance, it is recommended to replace the EOG electrolytic generator after 1,000 operating hours\*. This product is equipped with a built-in timer that will alert you when the recommended replacement time is reached: the EOG status indicator light will blink yellow slowly, and when the EOG is generating ozonated water, the EOG status indicator light will remain steadily yellow. When this alert is noticed, please replace the EOG as soon as possible\*\*.

In addition, be careful that hard water or high mineral content water (TDS > 250 ppm or  $\text{CaCO}_3 > 180$  ppm) will accumulate scale and could affect the EOG performance.



\* 1000 working hours are the actual EOG working hours for ozone water production, which is about 2-3 years in general use.

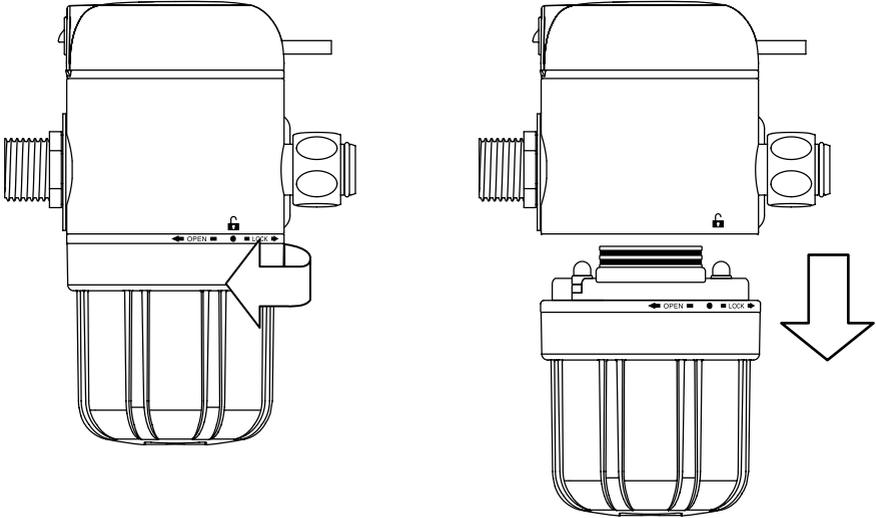
\*\* The unit can still operate after the warning is issued, but the efficiency of making ozone water will keep on reducing in a certain extent.

## 4.2 EOG CELL CARTRIDGE REPLACEMENT

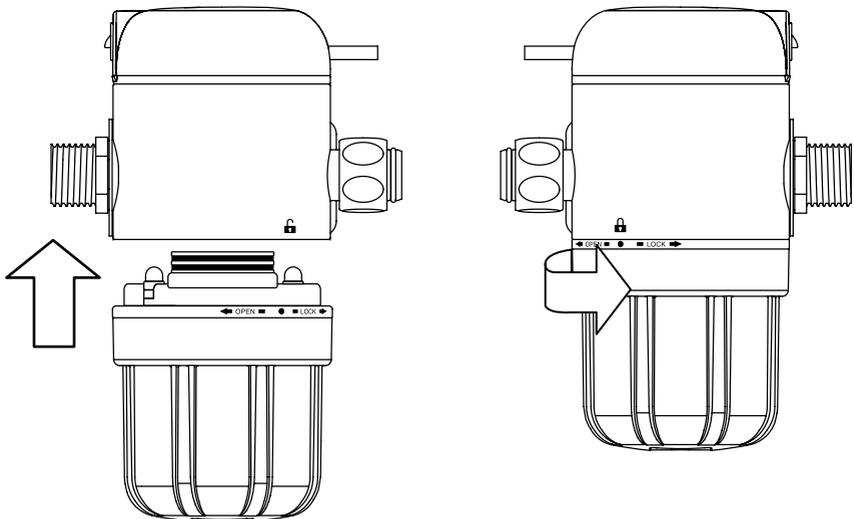
The EOG cell cartridge can only be obtained from Biolux or BES Group authorized distributors. Please confirm the product model and serial number before ordering.

1. Disconnect power supply.
2. Close the water shut-off valve or disconnect input water.

3. Hold body of device steady, and twist the EOG cell cartridge clockwise till the dot on the metal ring lines up the unlock icon  on the device. Pull the cartridge carefully to remove for replacement, and dispose of appropriately.

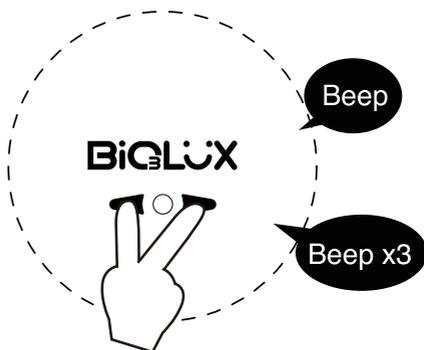


4. Reverse the new EOG cell cartridge, write down the date on the serial number sticker in permanent marker. Reverse the procedures described above and make sure the dot on the metal ring lined up the lock icon  on the device.



5. **Reset the timer:** Follow the method below to reset the timer so that you can get the replacement alarm at correct time in the future. **During stand-by period, press and hold both "MODE" and "RESET" key for 8 seconds\***. The timer is reset successfully when you hear 3 beeps, and the slowly blinking red light gone simultaneously.

\* The status indicator will start to display blue/white light blinking alternately.



### 4.3 EOG CELL CARTRIDGE CLEANING PROCEDURE

Decreased EOG cell generation efficiency may be caused by scale build up on its electrodes. Please follow the steps below to clean it:

#### 1. Power off the Unit

#### 2. Fill the EOG Cell Cartridge with Scale Cleaner

Close the shut-off valve in front of the unit, detach the EOG cartridge as described in section 4.2. Fill the cartridge with scale cleaner.

\* Scale cleaner could be: 20-50% vinegar concentrate or 50% citric acid.

#### 3. Wait for Reaction

Wait for a while according to the instruction of the scale cleaner (at least 30min).

#### 4. Pour out the Solution in the Cartridge and Rinse it with Clean Tap Water

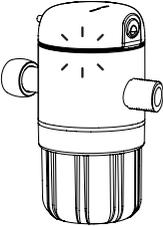
Rinse the cartridge with clean tap water at least 3 times.

#### 5. Follow the instructions in section 4.2 to reinstall the EOG cell cartridge and switch-on the shut-off valve to complete the cleaning procedures.

Reference the following guide to self-check your problems before requesting repairs. If you come into a conclusion that problem has occurred, do NOT attempt to disassemble and repair the product yourself, but contact BES Group or your dealer for support. Please have the model number and serialnumber of the device available when calling for support.

**Sometimes suspected problem is remedied by disconnecting the power plug and then re-connecting it.**

### CHART OF LIGHT FOR SYSTEM ABNORMAL

		CAUSE / STATUS
Standby: Yellow light blinking slowly  Operating: Yellow light steady on	Display according to default mode	Ozone generator reaches recommended replacement cycle
Operating: Blue light blinking slowly	Blue / white lights blinking alternately	Ozone generator Issue 2 (reduced efficiency)
Yellow light steady on		Ozone generator Issue 3 (overcurrent), all functions disabled

## Troubleshooting Reference Table

Sometimes suspected problem is remedied by disconnecting the power plug and then re-connecting it.

<b>Problem 1</b>	<b>No sign of power. Light effects are absent.</b>
Possible Cause	<ol style="list-style-type: none"> <li>1. Power Supply is inoperable</li> <li>2. Master control board (PCB) out of order</li> </ol>
Corrective Action	<p>Check if the power socket on the wall functions normally. Check if the power connection between power adaptor and the unit correctly.</p> <p>If the symptom remains, contact your maintenance person or authorized service agency.</p>

<b>Problem 2</b>	<b>Status indicator shows blue light slowly blinking and the mode indicator shows blue/white light blinking alternately.</b>
Possible Cause	<p>The EOG cell efficiency decreased. The reason could be:</p> <ol style="list-style-type: none"> <li>1. Input water quality doesn't fit the requirement (TDS too low)</li> <li>2. Scale accumulated on the electrodes of the EOG cell.</li> <li>3. Incorrect Installation Direction of EOG Cell.</li> </ol>
Corrective Action	<ol style="list-style-type: none"> <li>1. Check the water quality. If the TDS is lower than the requirement, adjust the input water TDS.</li> <li>2. If the issue happens after the device has been worked for a period of time, scale accumulate could be the reason. Please clean the EOG cell according to Sec. 4.3. If the symptom remains, contact your maintenance person or authorized service agency.</li> <li>3. Confirm the installation of the EOG cell is correct. Please Refer to Sec. 4.2.</li> </ol>

<b>Problem 3</b>	<b>EOG status indicator shows red light steady ON and the status indicator shows blue / white light blinking alternately. All function suspended.</b>
Possible Cause	An overcurrent occurs in the EOG cell, it could be some conductivity foreign materials stuck between the electordes of the EOG.
Corrective Action	Flush it's inner space with clean tap water to remove the foreign materials. If the symptom remains, contact your maintenance person or authorized service agency.

<b>Problem 4</b>	<b>The EOG status indicator blinks slowly in Yellow during stand-by period. When the EOG cell is producing ozone water, the EOG status indicator lights steady Yellow.</b>
Possible Cause	Recommended replacement cycle of the EOG cell cartridge is due.
Corrective Action	Replace a new EOG cell cartridge (Refer to. Sec. 4.2) * Contact your Biolux dealer for the EOG cell cartridge.

<b>Problem 5</b>	<b>There is no water output, but the EOG cell is activated to produce ozone water and shut down within seconds .</b>
Possible Cause	There exists water hammer effect within the water line.
Corrective Action	Install a water hammer arrester or reduce the water pressure.

# WARRANTY INFORMATION

## LIMITED WARRANTY

Equipment manufactured by Biotek Environmental Science Ltd. has been constructed of the finest materials available and manufactured to high quality standards. When installed in accordance with manufacturer's recommendations, and under normal use and service, new Biolux WSS120S units are warranted to be free of defects due to poor materials or workmanship for the period of time listed below (following the date of purchase):

- Main Body: 1 years (Consumables not included)
- EOG Cell Cartridge: 6 months or the day that recommended replacement cycle is due (whichever comes first)

## EXCLUSIONS

This warranty may be voided in the case of:

1. Defects caused by improper system installation, storage or handling prior to placing of the equipment into service.
2. Attempted to repairs or installation by unauthorized service agencies or personnel .
3. Expense of normal maintenance, calibration, or regular adjustments as specified in operating and maintenance instructions of this manual, and/or labor involved in moving adjacent objects to gain access to the equipment.
4. Damages due to alterations, abuse, fire, flood, or acts of nature.
5. Failure to follow BES Group instructions for use, care, or maintenance.
6. Removal, alteration, or defacing of BES Group-affixed serial number and other labels.
7. Man-made structural damage.
8. Use of fluids other than clean, potable water.

This warranty is conditional upon Biotek Environmental Science Ltd. receiving notice of any defect subject to this warranty within thirty (30) days of its original discovery by the User/Buyer.

Biotek Environmental Science Ltd. reserves the right to make changes in design or add any improvements on any product. The right is always reserved to modify equipment due to factors beyond our control and continuous product development.

If shipment is damaged in transit, the purchaser should make a claim directly upon the carrier. Careful inspection should be made of the shipment as soon as it arrives and visible damage should be noted upon the carrier's documentation. Damage should be reported to the carrier. This damage is not covered under this warranty. Prices and specifications are subject to change without notice.

# **BiOLUX**

## **CONTACT INFORMATION**

BES Group / Biotek Environmental Science Ltd.

[info@besgroups.com](mailto:info@besgroups.com)

[www.besgroups.com](http://www.besgroups.com)