

01

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02

Product Overview

Main Body

SLB-120	1 ea
Flow Regulator	1 set
Prefilter	1 ea
Booster Pump	1 ea
Power Cable	1 ea
Connecting Tube	5 m
Chlorine Test Paper	1 ea

Make sure to check there is no damage caused by external shock to the box before opening the package.

03

Safety Cautions

Thank you for choosing ecoTree™ HOCI Generation System.

Please read this user's manual before installation to ensure proper use and maintenance.

If there are any problems while using this device, please refer to user's manual for troubleshooting.

The contents of this manual are subject to change.

This manual provides safety information for intended use of this device and for protecting the users from unexpected injuries or damages.

Please read carefully the guidelines and warnings herein before installation and operation.

Warning

Indicates a hazardous situation which could result in death or serious injury.

Caution

Indicates a situation which could result in slight physical injury or damage to the device.

Attention

Indicates important information for first aid.

Precautions for Installation

1. Install the HOCl storage tank in a well ventilated place. Avoid direct sunlight. (If you want to install the device outdoors, please contact your local seller.)
2. Do not install in humid place. (Avoid places where condensation may occur, especially during winter.)
3. Water supply condition: Temperature: 10~40°C(50°F~104°F), Flow Rate : 1.3~2.0 L/min, Water Pressure : 3 - 5 bar
4. Check the pH of the water before installation.
5. Do not block the HOCl outlet.
6. When installing on a table, install it horizontally on a stable table.
7. For the optional specifications, contact your local seller.
8. If re-location is needed after installation, contact your local seller.



Warning

1. Do not install in an enclosed place without ventilation. (Install in a well-ventilated area.)
2. Do not install in areas of explosion hazard or flammable material.
3. Do not install in high temperature areas (over 40°C(104°F)) and keep away from direct water drop or water splashing.
4. Use only the power cable supplied with the device.
5. Do not change or replace the fuse of the power socket arbitrarily.

Cautions for Use

Caution

- This device is for single-phase
AC 100~240V, 50~60Hz only.
- Hold the power plug when unplugging.
- Please contact your local seller
for repair of the power plug.

Warning

1. If the main unit is submerged, it may cause an electric shock. Unplug the power plug from the electric outlet, pull up the main unit and ask your local seller to repair it.
2. If the electric outlet is wet, unplug the power plug and dry it completely before use.
3. Do not use damaged power plug or loose socket outlets.
This may cause a fire or electric shock.
4. Do not pull the power cord.
This may cause a fire or electric shock.
5. Do not touch the power plug with wet hands.
6. Do not twist or press the power cord and make sure it is not broken.
7. Be sure to unplug the power plug when moving, repairing, or inspecting the device.
8. If not in use for a long time, close the water supply valve and unplug the power plug.
9. Do not use multiple electrical appliances in one outlet at the same time.
10. Do not attempt to repair or modify the power cord arbitrarily.
11. In case of a power failure, unplug the power plug of the device before power is back on.

Cautions during Operation

1. If the device is not in use for a long time, remove the HCl solution bottle from the device and keep it separately.
2. For HCl replacement, refer to the user's manual. (p.17)
3. For other components replacement, contact your local seller.



Warning

1. When detecting strong chlorine odor, stop operation immediately, ventilate the area and contact your local seller.
2. Ensure there is adequate ventilation while using the device.
3. Do not operate if there is a leakage.
4. Do not operate with wet hands.
5. Do not modify or disassemble the device arbitrarily. Any damage or device failure caused by improper, incorrect and unintended use is not covered with warranty.

HOCl Cautions

1. HOCl must be kept in a storage tank made of PE, PVC or FRP.
2. When HOCl is exposed to organic materials, it may reduce the sterilizing ability.
3. Note that the sterilizing ability of HOCl will decrease rapidly when HOCl is exposed to light.
4. When using stored HOCl, check the pH and chlorine concentration before use.



Warning

1. Do not add anything to HOCl. If any chemicals added, this may generate chlorine gas.
 2. Do not use HOCl at 50°C (122°F) or higher.
 3. Do not use HOCl in enclosed places.
 4. Do not place HOCl storage tank nearby the inflammables.
- ※ For more information, please refer to the Safety Data Sheet (SDS) provided by your local seller.

Precautions for handling 3% HCl Solution

1. Use only the 3% HCl solution supplied with the device.
2. When handling, wear protective goggles, gloves and clothes if necessary. Also wash your hands thoroughly after handling.
3. If the 3% HCl is spilled on metal, rinse with sufficient amount of water.
4. Do not subdivide or transport into other containers.
5. Do not reuse the container. Used container should be washed with water before disposal.
6. Make sure to ventilate when using. Chlorine gas may be generated.
7. When spilled on the floor or appliances, wash it with plenty of water.
8. Keep away from direct sunlight.
9. Handle carefully during transportation as it may leak.



Warning

1. 3% HCl solution is highly corrosive.
 2. Skin contact may cause burns or inflammation.
 3. Inhalation or ingestion may cause irritation.
 4. Do not mix with other chemicals.
 5. Eye contact may cause blindness.
 6. Use it only for intended use.
- ※ For more information, please refer to the Safety Data Sheet (SDS) provided by your local seller.

Attention

The following situations require first aid.

- | | |
|------------------------------|--|
| Skin contact | ▶ Immediately wash skin with plenty of water. |
| Contact on clothing or shoes | ▶ Remove contaminated clothing or shoes and wash skin with plenty of water.
Do not try to neutralize the acid with alkaline solution. |
| Eye contact | ▶ Do not rub your eyes and wash immediately with running water for at least 15 minutes. |
| Ingestion | ▶ Drink plenty of water and immediately contact a doctor. |
| Inhalation | ▶ Move to a place where there is fresh air. |

04

Mechanism of HOCl Generation

ecoTree SLB-120

ecoTree SLB-120 uses un-divided electrolytic cell system.

It generates Hypochlorous acid (HOCl) through electrolysis of 3% HCl and dilution with water.

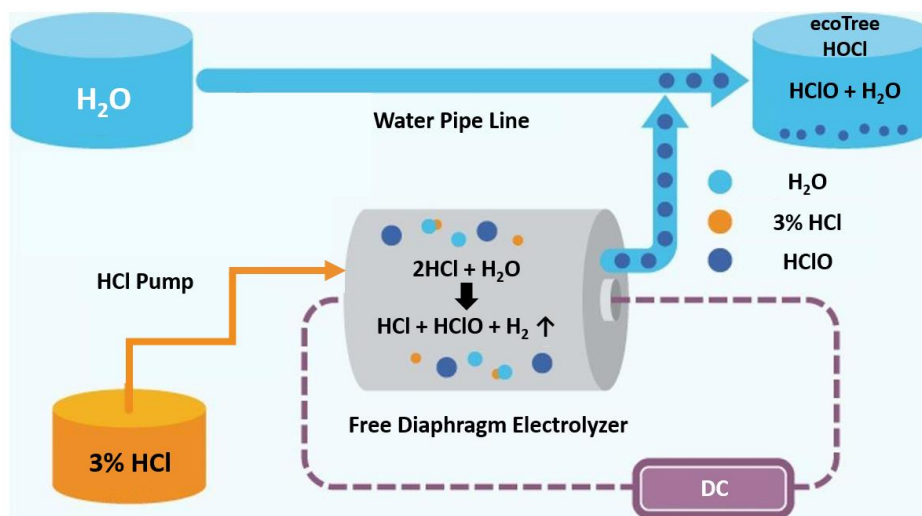
Electrolysis

In general, electrolysis refers to the oxidation-reduction reaction of an electrolyte using electric current. HOCl, widely known as an eco-friendly disinfectant, is generated by this mechanism.



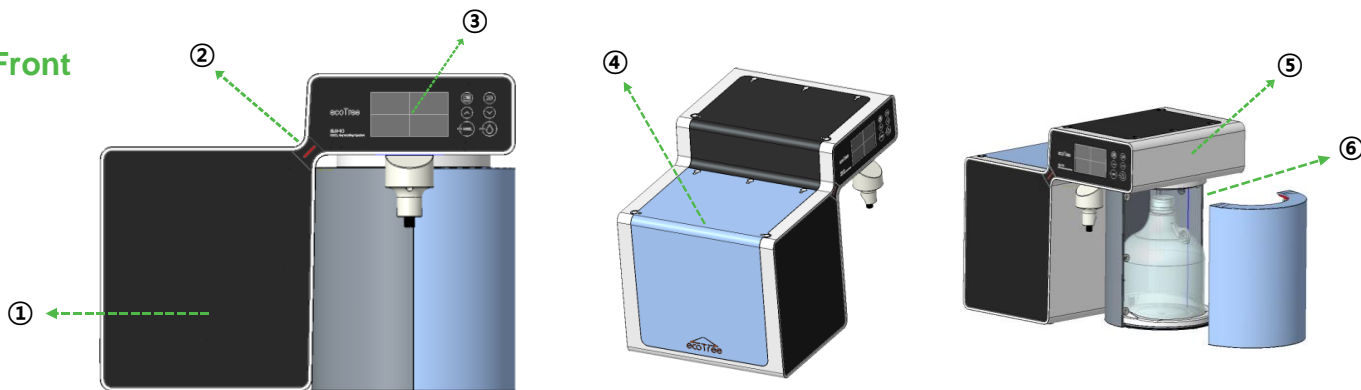
SLB-120
HOCl Generating System

HOCl Generation Process

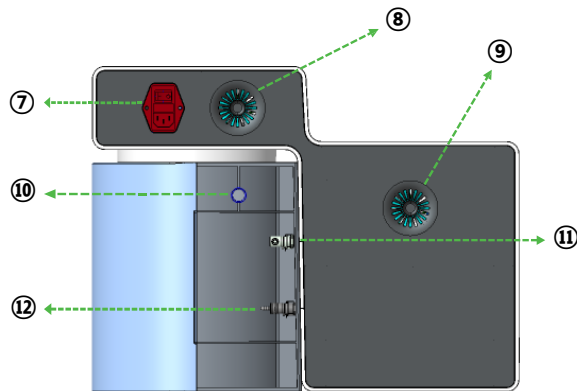


Chlorine Concentration : 20 ~ 40 ppm
HOCl Solution pH : 5.0 ~ 6.5

Front



Rear









- ① Main body
- ② Power button
- ③ Display
- ④ Mechanical compartment
- ⑤ Control panel
- ⑥ Raw material container
- ⑦ Power connection
- ⑧ Control panel vent
- ⑨ Mechanical compartment vent
- ⑩ Level sensor connection
- ⑪ HOCI outlet
- ⑫ Water supply connection

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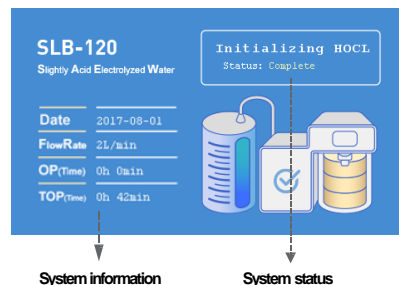
Component Identification

Front control panel



Button	Description
	Press 1~2 seconds to enter system menu.
	Press to return to the previous menu .
	Press to move to the next menu or the lower line.
	Press to move to the previous menu or the upper line.
 	Press 1~2 seconds to start and stop HOCL generation.

User interface



Menu	Description
Date	Displays the date information.
Flow rate	Displays the current water flow rate.
OP(Time)	Operation: Displays the current running time after power on.
TOP(Time)	Total Operation: Displays total running time.

06

Installation

HOCl Generation System

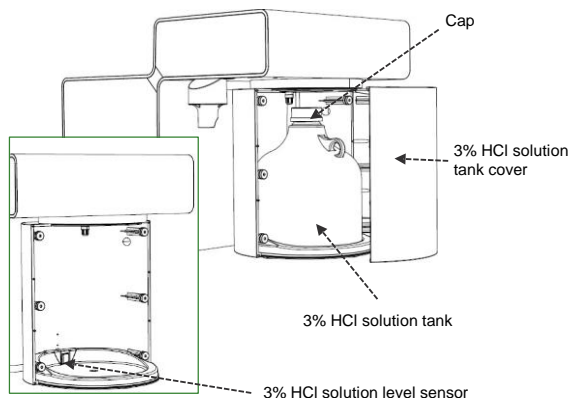
SLB-120 Installation and Operation



Installation of 3% HCl solution tank

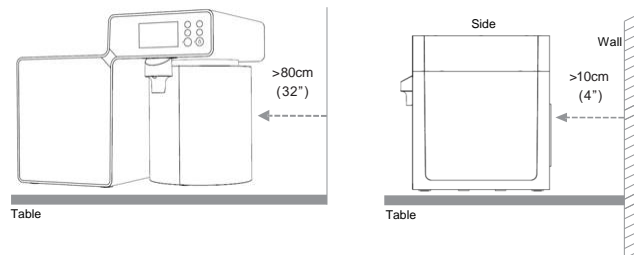
Use supplied 3% HCl for ecoTree™ only.

The specifications of the tank shall be changed depending on the local conditions and purpose of use.



- ① Open the 3% HCl solution tank cover.
- ② Open the cap of 3% HCl solution tank.
- ③ Fill up the 3% HCl solution in the 3% HCl solution tank.
- ④ Close the cap of 3% HCl solution tank.
- ⑤ Adhere the 3% HCl solution tank to the 3% HCl solution level sensor.
- ⑥ Close the 3% HCl solution tank cover. (Close the tank cover carefully.)

Installation site & Connection







- ① Install the device on a horizontal table.
- ② In order to replace the 3% HCl solution tank, secure at least 80cm(32") space from the wall.
- ③ On the back side, secure at least 10cm(4") from the wall to ensure proper ventilation.
- ④ Using tap water is recommended for HOCl quality.
- ⑤ Check the flow rate of water is 2 L/min. Please contact your local seller if it is less than 2 L/min.
- ⑥ Single-phase 110v or 220v is required.

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How to use

Menu Button

Button	Description
	Press 1~2 seconds to enter system menu.
	Press to return to the previous menu.
	Press to move to the next menu or the lower line.
	Press to move to the previous menu or the upper line.

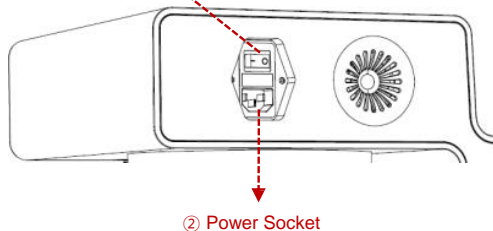
Menu Screen



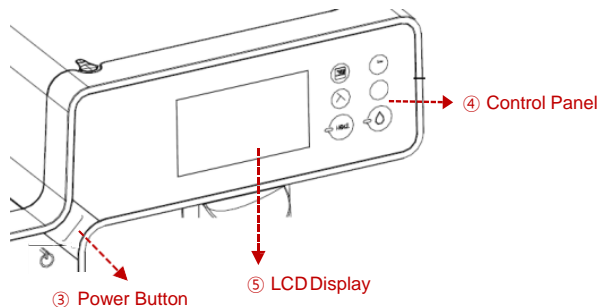
Date & Time	Set the date and time.
Language	Select English or Korean.
Backlight Brightness	Adjust LCD brightness.
Log Book	Record and store the operation history.
Diagnosis	Self-check for normal operation.
Service	Only for a qualified technician.

[Rear]

① Power Switch



[Front]



After Installation

1_ Connect the power plug into ② Power Socket and turn on ① Power Switch to operate.

2_ The ③ Power Button lights on in red.

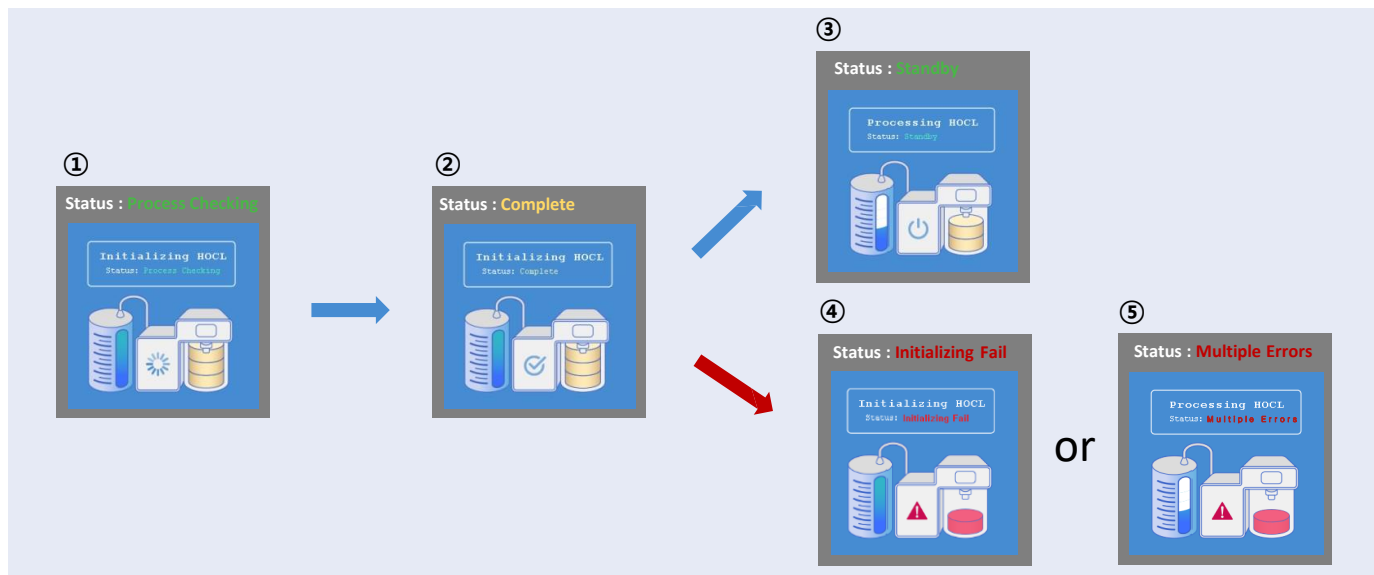
3_ When press ③ Power Button for 1-2 seconds, it turns to blue.



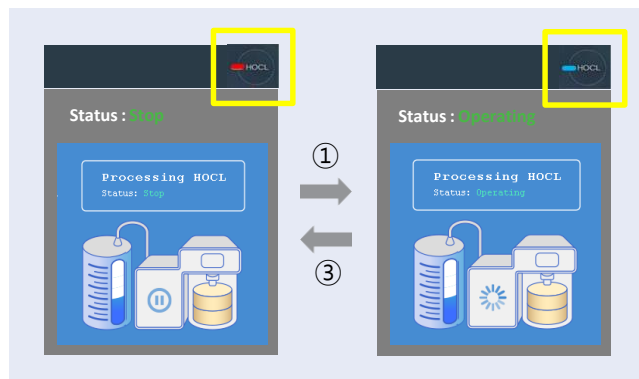
4_ The self-diagnosis starts automatically.

Starting System [Graphic User Interface]

- When the system is powered on, the HOCl Generation System automatically checks internal components.
- ① **Process Checking** message is shown on the display and then, ② **Complete** message is displayed.
- If there is no error, ③ **Standby** message is displayed.
- If either ④ **Initializing Fail** or ⑤ **Multiple Errors** is displayed, check the troubleshooting section.



Start/stop HOCl generation



- ① When the system initializing is completed, press the HOCl button for 1 – 2 seconds to change red LED to blue LED, then HOCl generation starts.
- ② The generated HOCl will be stored in a storage tank.
- ③ To stop the HOCl generation, press HOCl button for 1 – 2 seconds.

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Troubleshooting

Processing HOCl / Status

: **Initializing Fail**

If 1 out of the error message in this manual occurs.

Processing HOCl / Status

: **Multiple Errors**

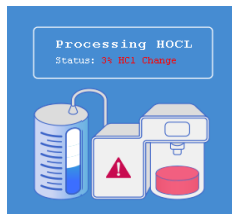
If more than 1 error message in this manual occurs.

[Action]

Check the Log Book.

Refer to troubleshooting and take correct actions for each case.

[HCl level Sensor error message]



Processing HOCl / Status

: **3% HCl Change**

[Cause] 1

The level of 3% HCl solution is too low.

[Action] 1

Refill with the new 3% HCl solution tank.

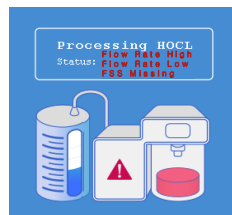
[Cause] 2

The 3% HCl solution tank is not adherent to the 3% HCl solution level sensor.

[Action] 2

Tightly adhere the 3% HCl solution tank to the 3% HCl solution level sensor.

[Flow Rate error message]



Processing HOCl / Status

: **Flow Rate High / Low / FSS Missing**

[Cause] 1

The flow rate is low.

[Action] 1

Make sure the water pipe is fully opened.

[Cause] 2

The flow rate is high.

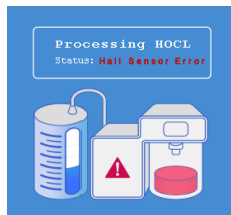
[Cause] 3

Flow Sensor Signal (FSS) is missing.

[Action] 2 & 3

Please contact your local seller.

[Hall Sensor error message]



Processing HOCL / Status
: Hall Sensor Error

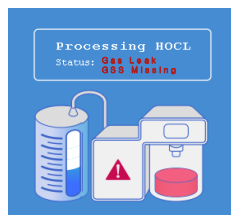
[Cause] 1

The 3% HCl solution pump motor does not work.

[Action] 1

Please contact your local seller.

[Gas Sensor error message]



Processing HOCL / Status
: Gas Leak / GSS Missing

[Cause] 1

Gas Leak

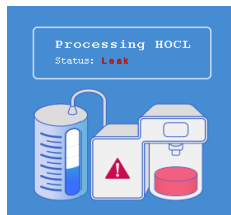
[Cause] 2

GSS Missing (Gas Sensor Signal Missing)

[Action] 1 & 2

Please contact your local seller.

[Leak Sensor error message]



Processing HOCL / Status
: Leak

[Cause] 1

Water Leak

[Action] 1

Please contact your local seller.

09

Specification

PARAMETER	SPECIFICATION
Power	AC 100-240 50/60Hz
Power Consumption	1KW
Dimensions (mm)	W510 x H350 x D390
Weight (Kg)	6
Exterior Construction Material	PC-ABS
HOCl Production Volume (L/hr.)	120 ± 10%
Required for HOCl Production	3% Hydrochloric Acid Solution
HOCl Solution pH	5.0-6.5
Chlorine Concentration (ppm)	20-40
Operating Temperature (°C)	5-40
Operating Relative Humidity (%)	<80

Precautions

1. Depending on water supply condition, production volume and chlorine concentration may vary.
2. Specifications may be changed without prior notification to improve the performance of the product.
3. The life cycle of the electrolyzer may vary depending on water quality, environment condition, and frequency of use.

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Limited Warranty

Limited Warranty cover

Within that one (1) year period from the original purchase, SeoulIn Bioscience will, at its option, repair/replace the product without charge, if the product fails or does not perform as warranted solely due to a manufacturing defect within the warranty period, subject to the limitations and exclusions set forth in this Limited Warranty. This Limited Warranty only applies when the product is used, stored, handled, fabricated and/or installed in the manner recommended by SeoulIn Bioscience in the SLB-120 User's Manual.

Non-covered defects

1. Damages incurred by fire, flood, earthquake, water, wind, lightning or other natural disasters.
2. Damages incurred from physical abuse (e.g. dropping the product) of the product.
3. Damages incurred from any use of the product in any application other than the intended use.
4. Any damage or device failure due to use of 3% HCl that is not provided or not guaranteed by your local seller is not covered under warranty.

SLB - 120

HOCl Generation System

