

User
Manual



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1.0 General

1.1 Installation of this system

The installation and commissioning of this system should only be carried out by qualified Centrego technicians or fully trained partners.

Any questions relating to the installation and commissioning of these systems should be directed to Centrego Ltd.

1.2 Introduction and intended use

Congratulations on the purchase of your Centrego device. Before using this unit for the first time, please read the instruction manual carefully and keep all information for future reference. These instructions will show you how to use the device safely and protect you from danger or from damaging the unit.

This device produces mixed oxidant disinfection solution on site from salt and water.

1.3 Design and compliance

The ECA solution produced by the machine has the following compliance listings. The compliance listings for the machine are on the last page of this manual.

SYSTEM CERTIFICATION
European Chemicals Agency (ECHA) listed
UK Health & Safety Executive (HSE) listed
US Environmental Protection Agency Approved
CE Certified


1.4 Symbols and meanings


Below are explanations of symbols and meanings used in this manual.

DANGER - is reserved for conditions and actions that are likely to cause serious or fatal injury

WARNING - Is reserved for conditions and actions that can cause serious or fatal injury

CAUTION - is reserved for conditions and actions that can cause injury or instrument damage

	CAUTION - Potentially Hazardous Situation
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	DANGER - Electric shock risk
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2.0 Safety



2.1 Caution Use Only As Directed


- Use solution only for disinfection and cleaning.
- DO NOT use in an enclosed space. Use only in a well-ventilated area.
- DO NOT spray into your eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- DO NOT swallow the activated solution. If swallowed, seek medical advice.
- DO NOT use this unit and activated solution near fire or extreme heat.
- Wash hands after use. People with sensitive or damaged skin should avoid prolonged contact with the product.
- Keep out of the reach of children and pets.

2.2 Directions for Safe Use

- DO NOT move the unit during operation.
- STORE SOLUTION SAFELY – Do not keep the activated ECA solution in the refrigerator or kitchen, catering areas where it can be confused with drinking water.
- Produce only as much fluid as necessary and use as instructed. Use activated solutions within 1 week – sterilising and deodorising power is reduced gradually over time.
- Unused solutions can be disposed of with care.
- Avoid direct exposure of the unit to the sun or central heating. This might cause fire or damage.
- DO NOT use ground water, polluted water or excessively hard water with the machine.
- DO NOT use any other input apart from normal mains/tap water.
- ALWAYS use a ball filter with the brine tank.

2.3 Water quality

- The water supply MUST be from potable tap water with limited hardness.
- If in a hard water area, a water softener is recommended.
- Low calcium water is recommended.
- DO NOT use ground water, polluted water or excessively hard water.

	CAUTION - Always use a filter for the brine input. Never have a direct input into the device without a filter.
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2.4 General safety

- After 5 to 7 days pour the solution away and simply make some more
- After use, carefully wipe surfaces and leave to dry
- Always use the power cable and plug supplied

It is manufactured by Centrego Limited, of Unit N4 Marshall Way, Frome, Somerset, BA112FB, United Kingdom.

KEEP OUT OF REACH OF CHILDREN AND UNAUTHORISED PERSONNEL

3.0 Machine overview

3.1 Machine description

This Centrego SOS device produces ECA (Electro chemically activated) disinfection solution on-site using salt and water. ECA disinfectant solution is an eco-alternative to most disinfection products.

This Centrego SOS device is capable of producing 20 litres of solution every hour. This comprises of the active substances Hypochlorous acid generated at the Anode at one solution output, and separately Sodium hydroxide generated at the Cathode at the other solution output.

The device will take table salt and granulated salt mixed with water (brine).

3.2 Intended use of device

This device is intended to be used in field environments such as remote health clinics, disaster relief and battlefield.

3.3 Intended use of ECA solution

The intention of using ECA solution for disinfection is an environmentally responsible system in that it can reduce a company's carbon footprint due to negating the need for disposable disinfection products and the plastic that comes with it. It also means that users are safer due to the solution being hypoallergenic and not harmful to the skin.

4.0 Solution certification

SOLUTION CERTIFICATION	
EN14476	EN13727
EN16777	EN13624
EN13697	EN1656 (Cefas Aquaculture approved)
EN1650	EN1500
EN14348	EN17126
EN14675 (Cefas Aquaculture approved)	EN1276
	EN 16615

4.1 Technical details

Production capacity	20ls/hr
Active Substances Generated	Hypochlorous acid (HOCl) @16-17ls/hr, and Sodium Hydroxide (NaOH) @3-4ls/hr
Concentration Free Available Chlorine (FAC)	500ppm
Concentration NaOH	800ppm
pH HOCl	pH6.8 – pH7.2
pH NaOH	pH12.00 – pH12.5
Additive	Salt (NaCl)
Salt consumption	2grms per litre
Power supply and usage	90-264vac, 900W
Water supply	Softened water, or potable water. Maximum 70ppm TDS, conductivity 140uS/cm
Dimensions	380mmW x 170mmD x 280mmH
Weight	5kgs
Ancillary equipment (optional)	5l brine tank and filter. Dimensions 270mmW x 150mmD x 200mmH

SYSTEM TECHNOLOGY

Electrochemical Activation (ECA) membrane cell system generating pH-neutral anolyte hypochlorous acid (HOCl) and pH10.5 sodium hydroxide (NaOH) for in-situ biocide and cleaning solution generation.

The [System name] is designed for easy portable use in emergency environments such as disaster response, battlefield field hospitals, and remote access locations for health clinics and hospitals.

The [system name] requires potable water and salt, plus low-level mains or generator power to generate clinical-grade disinfectant for wound treatment and care, hand and skin disinfection, sanitisation of hard surfaces and instruments, water disinfection, and fabric cleaning and disinfection.

5.0 Device layout

5.1 Front and back detail

- 1 - Carry handle
- 2 - lid catches
- 3 - Lid
- 4 - Digital screen
- 5 - Lid hinges
- 6 - Varios bolts - (Do not adjust)



CAUTION: Do not adjust or remove the bolts on the back of this device. Electric shock or damage to the device may occur.

5.2 Right side detail

- 1 - Carry handle
- 2 - Air vent/fan
- 3 - Lid
- 4 - Power input
- 5 - On/Off button
- 6 - Brine Input
- 7 - Catholyte Output
- 8 - Anolyte output
- 9 - Water Input



5.3 Left side detail

- 1 - Carry handle
- 2 - Air vent/Fan
- 3 - Structural bolts (do not adjust)
- 4 - Lid



5.4 Connection detail

- 1 - Air vent
- 2 - On/Off switch
- 3 - Power input
- 4 - Catholyte output
- 5 - Brine Input
- 6 - Water Input
- 7 - Anolyte Output
- 8 - Water input adjustment valve



DANGER - Electric shock risk. Do not handle electrical components with wet hands. Or if there is any moisture on the work surface.



6.0 Daily use

6.1 Digital screen use

1 - Voltage indicator (red text)

2 - Ampage indicator (green text)

To maintain correct solution output performance from the device. The voltage needs to be close to 20v, set at the power supply.

The amps needs to be between 12-14. To adjust the amps to achieve between 12-14, you will need to adjust the flow valve that is connected to the water input. This is shown on the device layout on page's 12-13 identified as point 8.

To adjust the flow valve:

- If Amps are too high:

Turn the water input flow adjuster anti-clockwise slightly and then wait to see if this changes the amperage value on the screen. Always make small changes and wait a minute between changes.

- If Amps are too low:

Turn the water input flow adjuster clockwise slightly and then wait to see if this changes the amperage value on the screen. Always make small changes and wait a minute between changes.

Only adjust the water input flow adjuster for this function located on the device (Pages 12-13 identified as point 8).

Do not adjust any other part of the device.



CAUTION: Do not clean any part of this device with an abrasive material. The digital screen will scratch if it is cleaned with any abrasive material.


7.0 Opening the device


We do not recommend opening the device and adjusting or changing anything. It is important to keep this closed when moisture is present otherwise you may get an electric shock.

It is worth being aware that the PH Adjuster is as shown on this diagram (labeled 1). This is to adjust the PH of the solution output.

We do not recommend opening or adjusting this without speaking to a Centrego member of staff first. If you are advised to adjust the PH valve or PH adjuster then this serves to help locate this part of the device.



	<p>DANGER - Electric shock risk. Do not handle the power cable or internal components without full training from the manufacturer. Failure to do may cause electricution.</p>
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	<p>DANGER - Do not open device when connected to power or fluids. Do not open device unless advised to by Centrego Ltd.</p>
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8.0 Handling

8.1 Handling the product

ALWAYS - make sure that the device is clean at all times to reduce possible salt build up on all surfaces on and near the device.

DANGER - Do not get the power cable wet in any way before during or after use.

DANGER - Do not handle any electrical contact or power adapter with wet hands.

DANGER - Do not use abrasive chemical to clean the machine.

When handling the device:

Do not touch or use the device without full training from Centrego trained personel.

When installing or relocating the device:

Do not install or relocate this device unless fully trained by the manufacturer. If this is done without full training the machine may be damaged and injury may occur, and it may invalidate the warranty.

When using the device:

Ensure that your hands are free from moisture before touching the power cable, and mains plug. Handling electrical components with wet or moist hands can cause electrical shock.


8.2 Transportation


This device is designed to be portable.

However, ensure all connections have been removed before transportation.

Do not used machine if dropped.

Be aware that after use, moisture may drip from the flid connections when being moved.

	CAUTION - Be aware that during transportation, moisture may drip from the connection holes. Ensure that the device does not introduce moisture to any electrical component or cable.
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	DANGER - Electric shock risk.
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SCAN FOR WEBSITE



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