LogicWater®

CleanIt

USER MANUAL · INSTALLATION & OPERATION

CleanIt300

Compact HOCl generator for kitchens, clinics, hotels and small sites



30–300
ppm FAC

240 L/h
max. production

150 W
power

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Contents

1 Introduction and safety

2 Specifications and site requirements

3 Parts list

4 Installation

5 Control panel, operating modes and settings

6 Preparing the additive and refilling

7 Controlling and measuring concentration

8 Alarms and troubleshooting

9 Maintenance, descaling and support

Before you start. Read section 1 (Introduction and safety) completely before installing or operating the CleanIt300, and keep this manual near the equipment.

1 Introduction and safety

The Logicwater CleanIt300 is a compact, wall- or bench-mounted generator that makes hypochlorous acid (HOCl) sanitizing solution on site from water, food-grade salt and electricity. It produces 30 to 300 ppm of free available chlorine (FAC) on demand, so there is no need to buy, ship or store bottled disinfectant.

Read this manual completely before installing or operating the unit, and keep it near the equipment.

Who may operate this unit. The CleanIt300 must be installed, operated and maintained by a designated person who has been trained on this manual. The owner is responsible for making sure every operator understands the risks below.

Gas and ventilation

- Electrolysis releases small amounts of hydrogen gas (H2). Hydrogen that collects in a closed space can ignite. Install the unit only in a ventilated room.
- The product contains free chlorine. If the solution becomes strongly acidic (below about pH 4), it can release chlorine gas (Cl2), which irritates and can injure the lungs. Never mix the product or the additive with other acids, bleach or cleaning chemicals.
- Keep the unit away from open flames and heat sources above 400 °C.

Electrical safety

- Connect only to a properly earthed, certified outlet. An outlet protected by an RCD/RCCB (residual-current device, also called GFCI) is strongly recommended.
- Do not install the unit where it can be splashed, sprayed or submerged.
- Do not run the unit if the power cord is damaged.
- Do not operate where relative humidity exceeds 95%.
- In case of electric shock, smoke or fire, disconnect the power supply immediately.

Chemical handling

- Wear chemical-resistant gloves and eye protection when preparing any additive that contains hydrochloric acid (HCl).
- Always add acid to water, never water to acid.
- Label and store additive containers out of reach of children.

2 Specifications and site requirements

Specification	CleanIt300
Model	CleanIt300
Mounting	Wall-mounted or bench-top
Dimensions (W x D x H)	31 x 16 x 42 cm
Weight	11.8 kg
Enclosure	316 stainless steel
Product	Hypochlorous acid (HOCl) solution
Output concentration	30 to 300 ppm free available chlorine (FAC); production up to 240 L/h
Power supply	AC 100–240 V, 50/60 Hz, 150 W, 2 A
Cell current setting	13 to 22 A
Dosing pump setting	0 (fastest) to 19 (slowest)
Electrolysis cell	Single-cell electrolyzer

Site requirement	Value
Room temperature	5 to 50 °C
Feed water and brine temperature	10 to 30 °C
Feed water hardness	Below 80 ppm (4.5 °dH) — harder water scales and damages the cell
Relative humidity	Below 96% RH
Minimum feed flow	1 L/min
Maximum feed pressure	3.4 bar (50 psi)

If your water is harder than 80 ppm, fit a softener or RO unit upstream of the CleanIt300.

3 Parts list

Check the contents against this list before you start. Items marked *optional* are recommended but not required for operation.

Ref	Part	Qty
1	Water supply shut-off valve, 1/2" FPT (supplied by customer)	1
2	3/8" push-fit x 1/2" MPT adapter	1
3	3/8" OD LLDPE tubing, clear (cut to length)	6 ft
4	3/8" push-fit check valve	1
5	3/8" push-fit tee	2
6	Inline sediment filter (fitted in parallel)	2
7	Inline filter clip	2
8	3/8" push-fit ball valve (flow control, blue handle)	1
9	3/8" stem x 3/8" push-fit elbow (inlet)	1
10	CleanIt300 unit	1
11	1/2" stem x 1/2" push-fit elbow (outlet)	1
12	1/2" OD LLDPE tubing, red (product line, cut to length)	6 ft
13	1/2" push-fit x 1/2" MPT adapter	1
14	Flexible dispensing spout with mount, screws #8 x 1-1/2" and anchors (3 each)	1 set
15	Wall bracket with screws #14 x 1-1/4" and anchors (4 each)	1 set
16	PTFE thread seal tape	1
17	Additive (brine) tank with cap and suction line, inside the unit	1

Optional accessories: 3/8" push-fit coupling and elbow; 3/8" and 1/2" compression brass tees for tapping an existing line; 1/2" tubing clamps with screws and anchors (6 each); dual float switch kit for Level mode.

Tools needed: tube cutter, adjustable or groove-joint pliers, Phillips screwdriver, electric drill with masonry bits.

4 Installation

Feed water enters through the lower port on the left side of the unit; HOCl solution leaves through the upper port. Wrap every threaded joint with 3–4 turns of PTFE tape, and cut tubing square so it seats fully in push-fit connectors.

4.1 Mount the unit

1. Choose a ventilated, dry location near a sink or drain, within reach of a protected power outlet and a cold-water line.
2. Hold the wall bracket level, mark the four holes, drill and insert the anchors.
3. Screw the bracket to the wall, then hang the CleanIt300 on it. For bench use, place the unit on a flat, stable surface.

4.2 Connect the feed water (inlet)

The water path runs in this order: shut-off valve → check valve → twin sediment filters → flow-control valve → unit inlet.

1. Close the building's water supply. Fit the 1/2" FPT shut-off valve (Ref 1) to the cold-water line, or use a compression tee to tap an existing line.
2. Screw the 3/8" push-fit x 1/2" MPT adapter (Ref 2) into the shut-off valve.
3. Connect a short length of 3/8" tubing to the check valve (Ref 4), with its flow arrow pointing toward the unit.
4. Mount the two sediment filters (Ref 6) on the wall with their clips (Ref 7). Join them in parallel using a push-fit tee (Ref 5) on each side.
5. Run tubing from the outlet tee to the blue-handled flow-control valve (Ref 8), then to the inlet elbow (Ref 9).
6. Push the inlet elbow into the lower port of the CleanIt300 until it locks.

4.3 Connect the product outlet

1. Push the 1/2" outlet elbow (Ref 11) into the upper port of the unit.
2. Run the red 1/2" tubing (Ref 12) to the dispensing spout (Ref 14), joined with the 1/2" adapter (Ref 13). Fix the spout above the sink with its three screws. Secure long tubing runs with tubing clamps.
3. The outlet may also feed an open storage tank. **The outlet must always discharge freely.** Never fit a closed valve, nozzle or pressurised line on the outlet — back pressure damages the cell.

4.4 Fill the additive tank and start up

1. Prepare a 2-litre batch of additive as described in section 6 and place the tank in the storage compartment.
2. Fit the cap and push the suction line to the bottom of the tank.
3. Open the water supply and the flow-control valve. Check every joint for leaks.
4. Plug in the unit and press the power button. Set the flow rate and current as described in section 5, then check the output concentration (section 7).

5 Control panel, operating modes and settings

No.	Control	Function
1	4-digit LED display	Shows readings, settings and error codes
2	RUN lamp	Lit while the unit is producing
3	CHECK lamp	Lit when an alarm is active — read the code on the display
4	Power button	Starts and stops production
5	MODE	Steps through readings and settings
6	SET	Enters settings menu; increases a value
7	RESET	Clears an alarm; decreases a value

5.1 Operating modes

Mode	Display	When to use	How to select
Standard	ECo	Default. Use unless a holding tank with float switches is connected.	Hold SET 3 s → press RESET once → hold MODE 3 s
Level	LE--	Unit feeds a holding tank fitted with the dual float switch kit; it starts and stops automatically with the tank level.	Hold SET 3 s → press SET once → hold MODE 3 s

5.2 Viewing readings and changing settings

To enter the menu, hold **SET** for 3 seconds until the display blinks, then press **MODE** to step to the item you want. To save a change, hold **MODE** for 3 seconds.

Item	Type	Range	Effect
Flow rate (L/min)	Reading	—	Set with the blue flow-control valve. More flow = lower ppm; less flow = higher ppm.
Cell voltage (V)	Reading	—	For monitoring only; not adjustable.
Cell current (A)	Setting	13 to 22 A	SET raises, RESET lowers. Higher current = higher ppm.
Pump speed (PS)	Setting	0 (fastest) to 19 (slowest)	SET speeds up, RESET slows down. Faster pump = more brine into the cell. Keep in mid-range for most uses.

6 Preparing the additive and refilling

The additive is a strong salt brine that the dosing pump feeds into the cell. Choose one of three recipes; the more acidic the brine, the larger the share of chlorine present as HOCl, the most effective form.

Use only pure food-grade sodium chloride (NaCl) with no iodine, anti-caking agents or other additives. Use tap, RO or distilled water with hardness below 80 ppm.

Recipe	Ingredients for a 2-litre tank	Product pH	HOCl share	Rating
1 — Salt	550 g salt + 1,400 mL water	7–8	over 25%	Good
2 — Salt + vinegar	550 g salt + 1,400 mL food-grade 5% white distilled vinegar	6–7	over 70%	Better
3 — Salt + acid	380 g salt + 1,440 mL water, then 180 mL hydrochloric acid	4.5–6	over 95%	Best

Mixing: add the salt first, then the liquid, and shake until the salt is fully dissolved. For Recipe 3, dissolve the salt completely before slowly adding the acid, wearing gloves and eye protection.

Acid grade for Recipe 3: technical-grade HCl (32%) is acceptable for general sanitation. For any food-contact use, use food-grade (FCC) HCl, 30–37%.

Refilling the tank

Refill before the tank runs empty. If the brine runs out the unit stops and shows **Err 2**.

1. Switch the unit off with the power button.
2. Lift the storage-compartment door, then swing it open.
3. Remove the suction line and the cap from the tank.
4. Pour in freshly prepared additive.
5. Refit the cap and the suction line.
6. Switch the unit on and press **RESET**.

7 Controlling and measuring concentration

Three adjustments set the output strength: **flow rate** (blue valve — less flow raises ppm), **cell current** (higher current raises ppm) and **pump speed** (more brine raises ppm, within limits). Start from the table below, then fine-tune and confirm with a measurement.

Typical output, ppm FAC

Flow rate	Recipe 1, 17 A	Recipe 1, 22 A	Recipe 2, 17 A	Recipe 2, 22 A	Recipe 3, 17 A	Recipe 3, 22 A
1 L/min	120	180	124	194	220	278
2 L/min	96	140	108	154	198	243
3 L/min	85	100	94	127	143	202
4 L/min	74	80	86	102	121	184
5 L/min	52	65	71	91	89	137
6 L/min	39	50	58	69	71	108

Actual output varies with water quality, salt quality and water temperature, so always verify on site.

Measuring the output

- **Chlorine test strips** give a quick check at 10, 50, 100 and 200 ppm.
- **A high-range chlorine photometer** gives an accurate reading and covers the full output range. Use it for setting up and for food-contact applications.

Test strips and photometers are available from Logicwater.

8 Alarms and troubleshooting

When the CHECK lamp lights, the unit stops and the display shows an error code. Correct the cause, then press **RESET** to resume.

Code	Fault	What to do
Err 1	Low flow	Check that the supply valve and blue flow valve are open and the sediment filters are not blocked. Restore flow above 1 L/min, then press RESET.
Err 2	Low current	Usually an empty tank or weak brine. Refill with freshly mixed additive, let the salt dissolve completely, refit the tank and press RESET. Also check that the suction line is not blocked or kinked.
Err 3	High current	Brine too strong or mixed incorrectly. Replace with freshly mixed additive per section 6, then press RESET.
Err 4	Low voltage	Supply voltage is abnormally low. Contact Logicwater service.
Err 5	Fan fault	The cooling fan has stopped. Switch off and contact Logicwater service.

If an alarm returns after RESET, switch the unit off and contact Logicwater service.

Symptom	Likely cause	Remedy
Output weaker than expected	Flow too high, current too low, scaled cell, weak brine	Lower flow, raise current, check brine; descale if actual current is below 90% of set current (section 9)
Output too strong	Flow too low or current too high	Open the flow valve or lower the current
Water leaking at a fitting	Tube not fully seated or cut at an angle	Depressurise, recut the tube square and push in fully

9 Maintenance, descaling and support

With feed water below 80 ppm hardness, scale builds very slowly and the cell may run for years without descaling. Hard water or the wrong salt causes scale quickly, which reduces the current the cell can draw.

When to descale: when the actual current reading drops below 90% of the set current (for example, below 19.8 A at a 22 A setting).

How to descale: run the unit on Recipe 3 (salt + hydrochloric acid). The acid dissolves the mineral deposits. Keep running until the actual current returns to the set value — this takes from about 30 minutes to several hours, depending on the amount of scale. If the current does not recover, contact Logicwater; the cell may need replacing.

Routine checks

Interval	Task
Daily	Check brine level; confirm RUN lamp and no alarm; check output with a test strip
Weekly	Inspect fittings for leaks; compare actual and set current
Monthly	Verify output with a photometer; inspect sediment filters and replace when flow drops
As needed	Descale the cell when current falls below 90% of setting

Logicwater support

- Email: info@logicwater.in
- Web: www.logicwater.in

Record your unit's serial number here for service calls: _____