



SPECIFICATION AND MANUAL

Model EC-4 wall-mounted Off-Line Ozone Generator



The Ecozone EC-4 generator is used for treating odorous air flowing out from a ventilation duct before the air is emitted outside. The EC-4 generator is installed Off-Line the ventilation pipe/duct.

EC-4 series main specifications

Model EC-4:

Input Voltage: 230V; 50Hz.

Power Consumption: 400W.

Ozone output: 30g/h

Air flow-rate: 600m³/h (Min.) ~ 800m³/h (Max).

Inlet and Outlet diameters: 101mm

Enclosure Dimensions:

75cm (H) x 54cm (W) x 30cm (D).

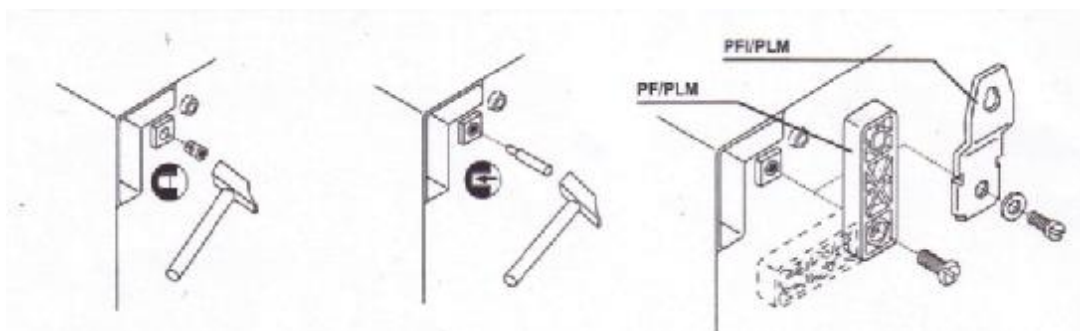
Main Features

Main Switch;
Door safety switch;
2 Light Indicators (ON - Green; Fault - Red);
4 dust Filters;
4 Singlet PentaRod core generating units.
2 Differential Pressure Switches;
Automatic Overload Current Protector Switch (6A);
Time (Hours) counter (for maintenance use).

EC-4 Installation

Mechanical:

- (1) Carefully unpack the EC-4 machine.
- (2) Mount the machine onto the wall using the 4 mounting spigots supplied with it (see illustration below).



Warning:

The Singlet core units inside the generator are very delicate devices;
Accordingly, they must be carefully protected during all installation stages.

- (3) Connect the 101mm dia. Outlet-pipe of the generator to an external air fan using the a connecting pipe with the shortest possible length.

Note: The air fan must be connected to the Outlet pipe of the EC-4 generator such that air is drawn out from the machine's Outlet!

Electrical connections

(1) Mains cable:

1.1 Connect the mains 230V; 50Hz single-phase cable to the input connectors denoted by #P, #N and #G (designated: G=ground; N=neutral; P=phase) on the electrical panel. The minimum 3-wires diameter is 1.5mm.

1.2 Connect the electrical cable plug to the mains.

Warnings:

1.3 Before plugging the cable to the mains, make sure the generator's main switch is OFF.

1.4. Electrical connections to the mains should be made such that the electricity will be supplied to the generator only if the external air-fan is running and there is sufficient air to feed to the generator.

(2) Input cable:

Connect the 2 wires from the external-feedback or from the remote-control switch (located outside the ozone treatment room) to the open contacts denoted by #3 & #4 on the electrical panel. The connecting wires should be rated for 10A.

(3) Output cable:

Connect the 2 wires from the remote light-indication (located outside the ozone treatment room) to the "dry"-relay-contacts denoted by #1 & #2 on the electrical panel.

Note: The connectors designated: 1 & 2 are voltage-free and normally-opened contacts which will be closed during ozone generation. These contacts can be used for connecting external light indicators for indication that ozone generation is ON.

Operation

- (1) Make sure that the front door is tightly closed.
- (2) Insure that the external air-blower is running and air is fed through the generator.
- (3) Turn the main switch ON and confirm the Green light is turned ON.

Note: If the Red (Fault) light is turned ON, this indicates either that the front door is not tightly closed and / or the flow-rate of the feeding-air to the generator is too low or too high with respect to the optimum level.

- (4) If Green light is turned ON, then the PS2 Differential Pressure Switch should be set to the right pressure level (see below).

Notes

4.1 The PS2 provides indication that the air filters (on the front door) are blocked and should be replaced!

4.2 The PS2 should be set to the level at which that the generator will stop its operation when the air filters (on the front door) are blocked between 50% to 60% of their area.

4.3 Details for the setting procedure of the PS2 are given in as follows.

Warnings: Do not change the setting of PS1 Differential Pressure Switch inside the generator. This PS1 setting insures the minimum flow-rate of feeding-air through the generator which is required to allow a proper and effective operation of the generator.

Setting the Differential Pressure Switch PS2 in EC-4.

The PS2 Differential Pressure Switch indicates that the air filters (on the front door) are blocked and should be replaced.

The PS2 should be set to the level at which that the generator will stop its operation when the air filters (on the front door) are blocked between 50% to 60% of their area.

Setting procedure for PS2:

(1) During machine operation, please block (by Nylon sheet) in a progression manner, a partial area of all the air-filters (on the front door), starting from 10% total area to a maximum of 60% of total area.

(2) In case the generator has stopped its operation and the Red light was turned ON while the filter blockage was between 50% - 60% of total area, the PS2 is well set and should not be changed.

(3) In case the generator has stopped its operation and the Red light was turned ON.

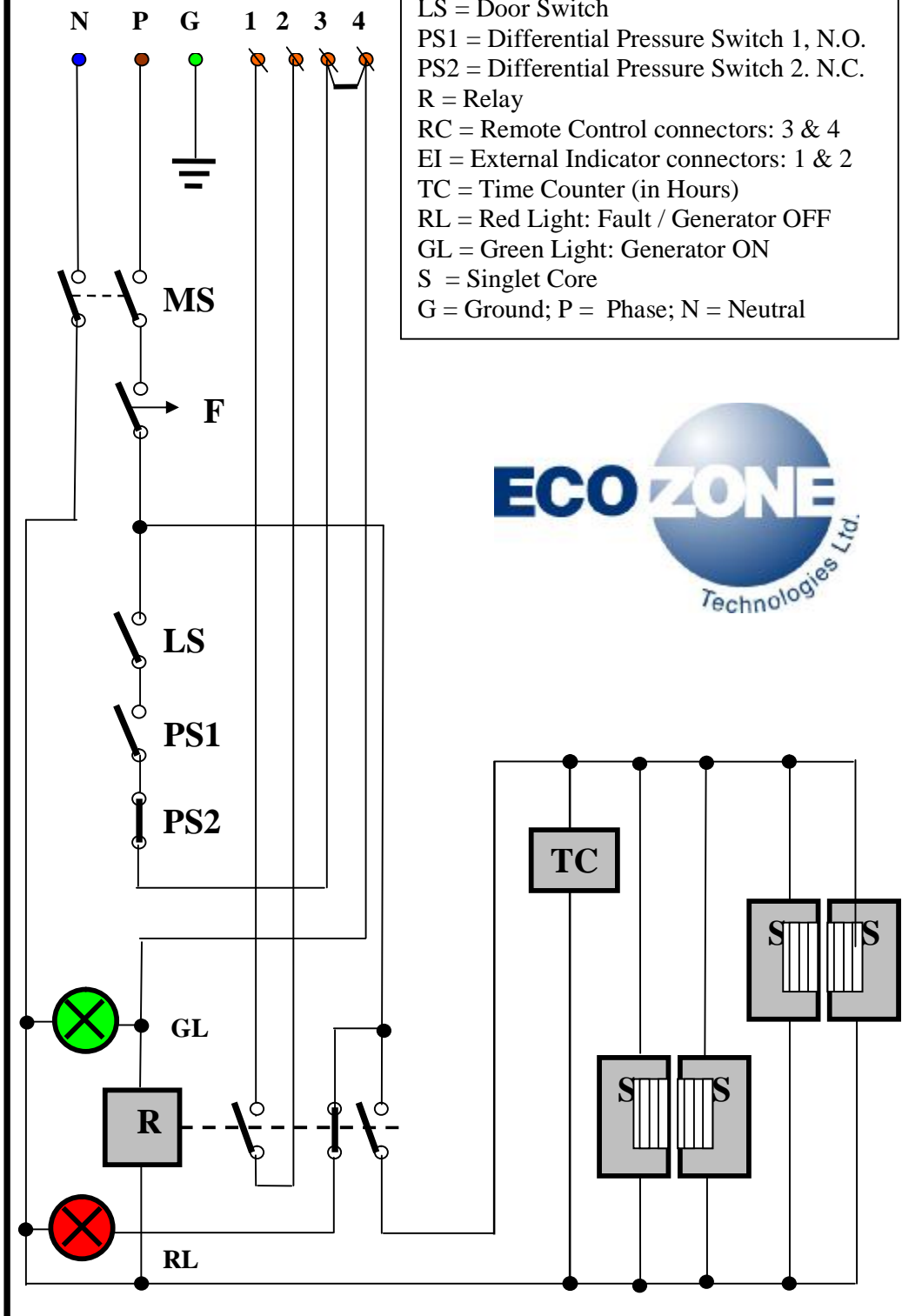
while the filter blockage was below 50% of total area, then the PS2 level should be increased by step of 10Pa. This should be repeated in increment steps of 10Pa (each step) until the generator has stopped its operation within the required blockage range of 50% - 60%.

(4) In case the generator has not stopped its operation while the filter blockage was at 60% (or above) of total area, then the PS2 level should be decreased by step of 10Pa. This should be repeated in decrement steps of 10Pa (each step) until the generator has stopped its operation within the required blockage range of 50%-60%.

EC-4: Ecozone Technologies, Ltd.

Input Voltage: 230V; 50Hz

- MS = Main Switch
- F = Over-Load Switch (10A)
- LS = Door Switch
- PS1 = Differential Pressure Switch 1, N.O.
- PS2 = Differential Pressure Switch 2, N.C.
- R = Relay
- RC = Remote Control connectors: 3 & 4
- EI = External Indicator connectors: 1 & 2
- TC = Time Counter (in Hours)
- RL = Red Light: Fault / Generator OFF
- GL = Green Light: Generator ON
- S = Singlet Core
- G = Ground; P = Phase; N = Neutral



Periodic Maintenance

To maintain continuous and long-term operation of the ECIL-2 ozone generator it is required to perform the following periodic maintenance. It is required to perform the maintenance at least on a monthly basis.

Warning: Before performing the maintenance, you must stop the generator's operation and disconnect it from the electric source.

1. Replace the 4 dust filters located on the front door

2. Cleaning the Singlet PentaRod (ozone generating) Cores:

- Open the generator's front door.
- Disconnect the electrical connector of each Singlet.
- Unscrew two nuts holding each Singlet and remove the Singlet from main panel. Handle the Singlet with care!
- Use normal tap water to wash the singlet. You may use a soft brush to better remove all dirty layers from the glass tubes and body.
- Dry the Singlet cores with a cloth or a towel.
- Re-mount the Singlet cores back onto their places on the main panel.
- Screw the two nuts for each Singlet.
- Re-connect the electrical connector for each Singlet.
- Close the Generator's front door.

Note: It is essential to perform periodic* maintenance in order to avoid faults and to insure a smooth and long-term continuous operation. Incomplete or non regular maintenance will result in cancellation of the warranty.

(*) At least once a month; It depends on the actual conditions of the emission duct.

Declaration of Conformity

This machine fully complies with CE & FCC rules of EMC regulations.
EN 61000-61, EN 61000-62, EN 61010-1, EN 5501 EMC, FCC Part 15
Safety of Low Voltage Directive 73/23/EEC as Amended: EN 61010-1.



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