Wall-i CO$_2$

CO$_2$ sensor

USER MANUAL

Wall-i CO$_2$

$C\epsilon$

European Low Voltage Directive (LVD) 2014/35/EU
European Electromagnetic Compatibility Directive (EMC) 2014/30/EU

WARNING

We strongly recommend that you read the entire manual before putting the **Wall-i** CO_2 into operation for the first time.

PACKAGE CONTENTS

- 1 **Wall-i** CO_2 Unit.
- 1 Box bracket
- 1 Micro USB type B power supply with universal plug.
- 1 fixing set (nylon plugs + screws).

TABLE OF CONTENTS

SECTION 1 - **GENERAL INFORMATION**

1.1   SAFETY INSTRUCTIONS

- **READ THESE INSTRUCTIONS THOROUGHLY** and strictly follow the chronological order of installation and start-up operations.

- The device must be used at temperatures from +5°C to +35°C, with relative non-condensing humidity lower than 99%, with dust levels of less than 0.1 mg/m^3.

- Do not allow any liquid to penetrate the device.

- When cleaning, only use a dry cloth.

- Do not place the device near a heat source.

- Do not block the vents of the box while in operation.

- Do not twist, stretch or damage the power supply cable.

- Make sure the power pack is accessible so that it can be disconnected if necessary.

- Only connect the device to earthed sockets that meet legal requirements and are inspected periodically.

- Unplug the device when not in use for extended periods.

- Avoid knocks as they could damage the device.

IMPORTANT: BEFORE CARRYING OUT ANY WORK ON AN ELECTRICAL COMPONENT, SWITCH OFF THE DEVICE BY DISCONNECTING IT FROM THE MAINS.

IMPORTANT: WORK ON **WALL-I** CO_2 (INCLUDING ELECTRICAL CIRCUITS, ELECTRONIC CARDS) MUST ONLY BE CARRIED OUT BY **airinspace**® MAINTENANCE PERSONNEL OR DULY TRAINED PERSONNEL.

1.2 REGULATORY STANDARD

Wall-i CO$_2$ devices are CE-marked and comply with European regulations:

ϵ **European Low Voltage Directive (LVD) 2014/35/EU**
European Electromagnetic Compatibility Directive (EMC) 2014/30/EU

1.3 NORMATIVE STANDARDS

- NF EN 61010-1 (2011). Safety requirements for electrical equipment for measurement, control and laboratory use. Part 1: General requirements.

- EN 61326-1 (2013). Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements

- NF S 90351 (2013). Healthcare establishments - Clean rooms and associated controlled environments. Requirements relating to the control of airborne contamination.

1.4 CLASSIFICATION

Type of protection against electric shocks	**Class III** The unit operates on SELV (5Vcc).
Level of protection of applied parts against electric shocks	**No applied parts**
Degree of protection against water and solids	**IP 20**
Operating mode	**Continuous service** Operation under normal conditions of an unlimited duration without exceeding operating temperature limits.
Level of safety when used in the presence of flammable anaesthetics mixed with air, oxygen or nitrous oxide	**Device not suitable for use with flammable anaesthetics mixed with air, oxygen or nitrous oxide.** **Wall-i CO$_2$** is not an AP or APG category medical device. It must always be kept more than 25 cm from the point where there is a mixture of flammable anaesthetic with air, oxygen or nitrous oxide. The user is therefore responsible for positioning **Wall-i CO$_2$** accordingly in the room to be treated.
Electromagnetic interference	**EN 61326-1 class B standard for conducted and radiated disturbances.** **Wall-i CO$_2$** is suitable for operation in an environment consisting of devices which meet equivalent criteria.

1.5   DESCRIPTION OF THE DEVICE

1.5.1 OVERVIEW

1	Painted plastic housing
2	Touchscreen
3	Air intake vents
4	USB power supply

1.5.2 MARKINGS AND WARNINGS

Label	Description	Position
Product – serial number	**WALL-i CO₂** **Model: WALL-i CO2** P/N: CP20004 S/N: 20004 - 0001 made in France airinspace™ - 14 rue Jean Monnet Elancourt 78990 - FRANCE	On the back of the product

1.6 FUNCTIONAL DESCRIPTION OF THE DEVICE

1.6.1 INTENDED USE

The **Wall-i CO$_2$** is a sensor that measures CO_2 concentration. It is used in buildings where air quality needs to be controlled, such as schools, offices, meeting rooms and, as a result, gives an indication as to the level of CO_2 in the room where it is installed. It constitutes a health measure that supplements protective measures.

1.6.2 OPERATING PRINCIPLES

The **Wall-i CO$_2$** is mounted to the wall or placed on a flat surface. CO_2 molecules are collected and counted, and the screen displays an indicative value in ppm (parts per million). The colour of the screen (green, yellow, red) tells the user whether the CO_2 concentration complies with "recommended" thresholds.

1.6.3 PHYSICAL CHARACTERISTICS

Power supply	90-264V; 47-63 Hz / 5.1V -13W 2.5A	
Water/solids protection index	Complete device	IP20
	Control panel	
Overall dimensions	H 87.5 x W 60.8 x D 26 mm	
Weight	70g	
Environmental operating range	Temperature	+5 °C to +35 °C
	Relative humidity	< 95% non-condensing
Environmental storage range	Temperature	0°C to 45°C
	Relative humidity	20% to 90%
	Dust level	< 1 mg/m^3

> **Note:** The information contained in this table is for information only. For any information on measurements and tolerance intervals, please contact **airinspace**® at the address given at the end of this document.

1.7 INSTRUCTION

The unit must be protected from direct sunlight, heat sources, frequent changes in temperature and humidity, potentially corrosive chemicals or other products.

1.8 DISPOSAL

This product is covered by European Directive 2012/19/EU of 4 July 2012 on waste electrical and electronic equipment (WEEE) and falls within category 6. "Electrical and electronic tools" as defined in annex I to this directive.

Disposal of this product and the recovery of the resultant waste must respect regulations arising from the application of the European directive by the different member states, as well as any local regulations that complement it.

SECTION 2 - **INSTALLATION/USE**

2.1 INSTALLATION

The **Wall-i CO₂** is initially designed to be mounted to a wall. It can however be placed on a support (shelf, cabinet, desk, etc.)

Wall bracket installation procedure: Screw fastening

The unit comes with a fixing kit including 2 nylon plugs for concrete, plaster or plasterboard walls and 2 screws.

- Using a drill and a 5mm diameter concrete drill bit, drill two holes in the desired location, 50 millimetres apart. Or use the bracket as a template
- Install the plugs using a hammer
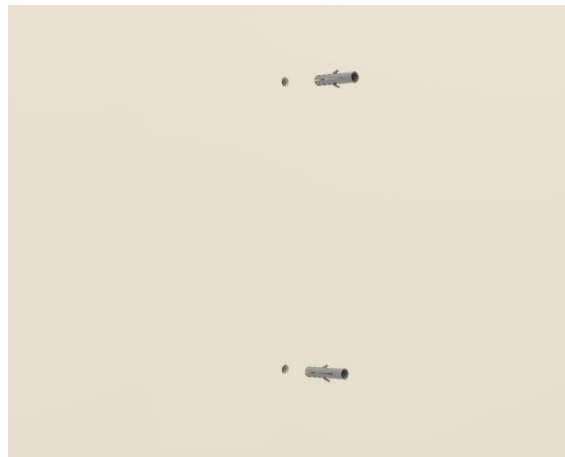
- Loosen the safety screw of the box supplied to secure the bracket to the wall.

- Position the box bracket opposite the drilling holes and tighten the screws until they are flush with the box.
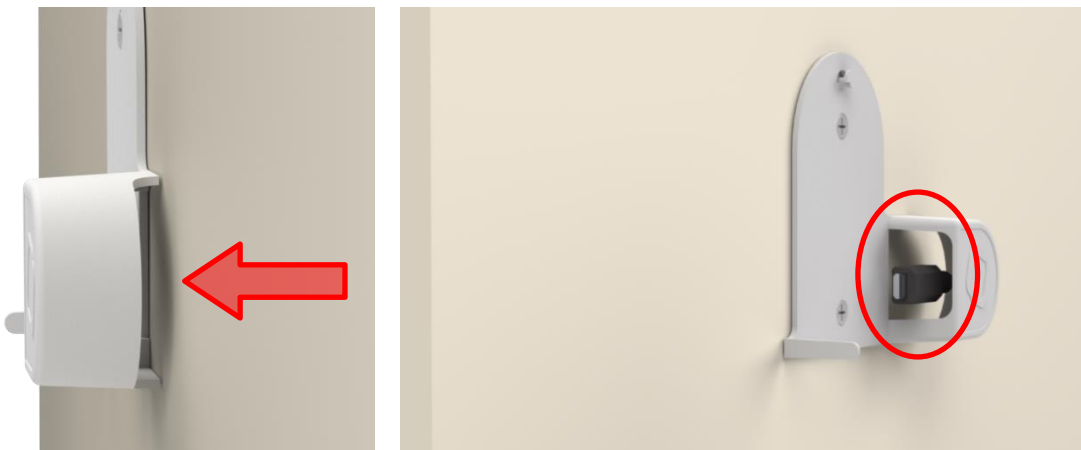
Wall bracket installation procedure: Double-sided fastening.

- Apply double-sided tape to the back of the bracket in order to fix it to the wall in the desired location.
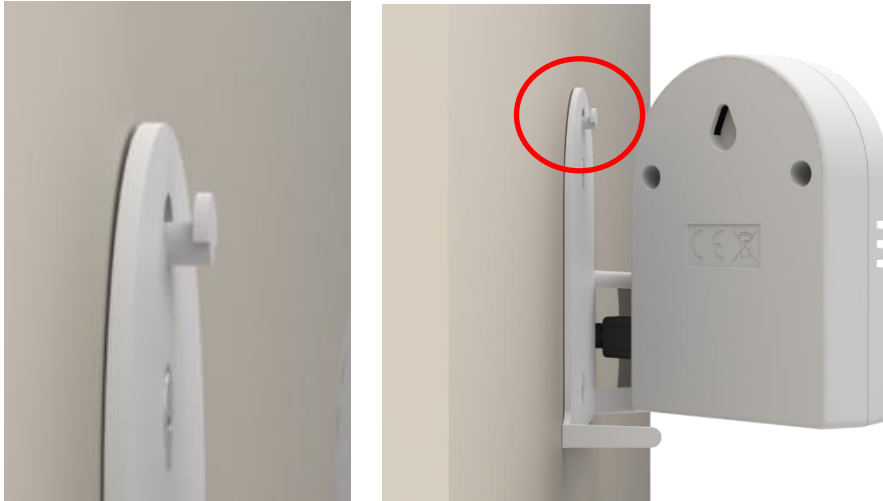
Once the wall bracket has been fastened,
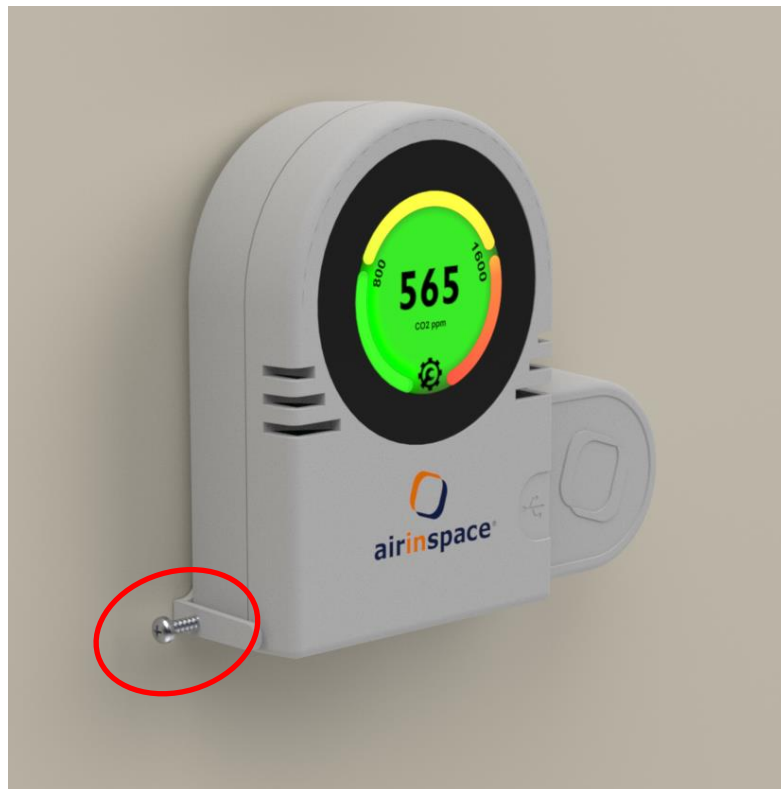- Run the cable through the cut-out, and pull it out towards the inside of the bracket.

- Connect the USB cable to the box and place the **Wall-i CO$_2$** on the cut-out of the bracket provided for this purpose.

- Tighten the tamper-resistant screw to secure the **Wall-i CO₂** to its bracket.

2.2   START-UP

Connect the transformer in the **Wall-i CO₂** package to a mains socket: 100-240V ~ 50/60 Hz.

Connect the USB cable to the box.

IMPORTANT: THE POWER PLUG MUST COMPLY WITH REGULATORY REQUIREMENTS AND BE PERIODICALLY CHECKED.

2.2.1 USE

On starting up, the main screen displays the CO_2 concentration value of the room via a ppm counter. This counter is in green as long as the CO_2 rate indicated is below 800 ppm; it turns yellow once the rate exceeds 800 ppm, which means that the room must be ventilated and action must be taken in terms of air change and/or reducing the number of people in the room. If the red threshold is exceeded, it is recommended to evacuate the room.
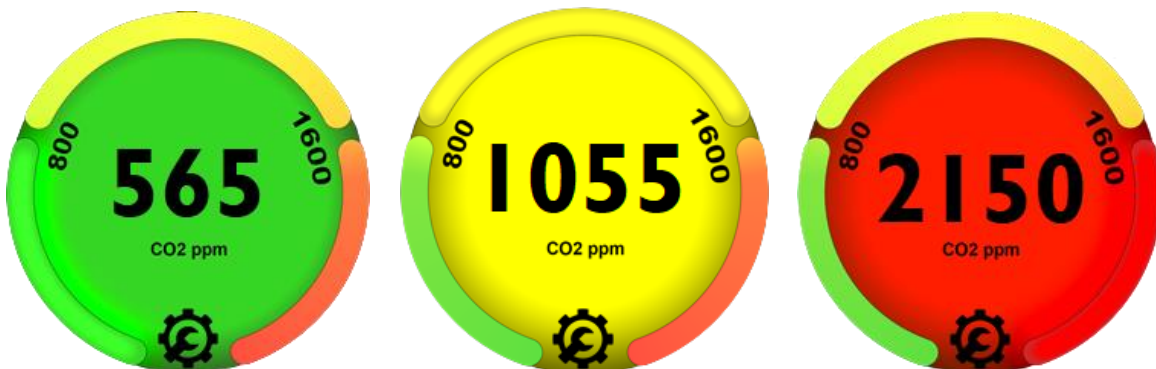
2.2.2 CALIBRATION PROCEDURE

The **Wall-i CO$_2$** can be calibrated on this screen.

To display the secondary screen, press the ⚙ icon. Press the [Start] button to launch the calibration, which will take 10 minutes.
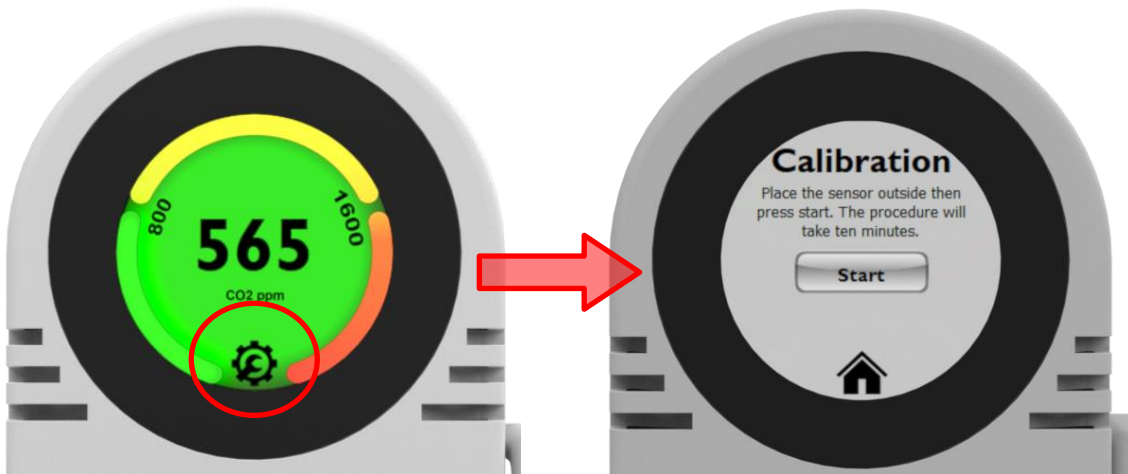
IMPORTANT: DO NOT OBSTRUCT THE AIRFLOW OUTLET, OTHERWISE YOU MAY OBTAIN INCORRECT RESULTS AND THE UNIT MAY BE DAMAGED.

Note: The **Wall-i CO$_2$** is factory-calibrated and an automatic calibration is performed every week. Only perform the calibration procedure if there is any doubt about the values displayed.

2.3 DISTRIBUTOR WARRANTY

Contact your local **airinspace®** dealer.
Note: any problems arising from an unauthorised repair attempt, modification, fall, use at incorrect voltage or operations that do not comply with the instructions in the User Manual are not covered by the warranty.

2.4 MODEL IDENTIFICATION

When contacting **airinspace**® or a dealer, please provide the **Wall-i CO$_2$** unit's serial number and date of purchase:

CONTACT airinspace®

airinspace® S.E.

14, Rue Jean Monnet
78990 Elancourt
France

(+33 1 30 07 01 01

 +33 1 30 07 01 02

contact@airinspace.com
www.airinspace.com