

**AIR PURIFICATION
IONIZATION
SANIFICATION**

**propacare[®]
JoyBion400**

**USER MANUAL AND
MAINTENANCE**



Engineered by SOLS

Made in Switzerland



ISO 9001
ISO 10014
ISO 14001



The JoyBion 400 is manufactured in Switzerland exclusively for Propacare and SOLS by

PERISO^{SA}
technology that evolves

Periso SA manufactures and designs innovative technologies for medical and industrial applications, able to improve everyone's quality of life. For over three decades, Periso SA has specialized in the sectors of biomedicine, energy, industrial assembly and air treatment, providing ground-breaking and unique technological developments driven by a strong commitment to research and Swiss quality.

🌐 www.periso.ch

propacare®
JoyBion400

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1. Benefits of the Technology

Quality of life is of crucial importance in the consideration of public and private spaces, to optimize and protect the wellbeing of the people who live or work there.



In order to achieve the optimal conditions of wellbeing and health to ensure that most people can live in the best possible manner, over time various environmental guidelines and regulations have been defined to control and focus on indoor **pollutants**, their **actions on health**, the **environmental quality standards** to be pursued and the **best building and engineering procedures and technologies** to obtain them in high efficiency.

From over 30 years of research, air **ionization combined with purification and sanitation**, has shown to be a leading parameter that acquires more and more importance from the environmental point of view, due to the biological effects it entails, and for the wide range of applications.

The technology of **controlled bipolar ionization** has a positive result for the health of people as it has a beneficial influence on human health, stress and cognition. Bipolar ionization is a well-researched and utilized technology often found in schools, hospitals, airports, restaurants and many commercial and industrial air systems.

The JoyBion's controlled bipolar ionization simultaneously generates both negative and positive ions, using Periso SA's patented control process to make sure that the amount of positive and negative ions are most similar to the generation that occurs naturally in healthy outdoor environments. These charged ions attach and deactivate harmful substance in the air and environment like **bacteria, mold, allergens, viruses and VOC (Volatile Organic Compounds)**.

It is a natural process which is both bolstering and revitalizing, that also involves the respiratory system, representing a valid line of defense against problems related to **allergies, asthma and infections**.

The **ozone on-demand** feature provides an additional and powerful layer of security for your environment, allowing a sanitization effect to occur with the space.

The positive bactericidal effect of the technology increases defenses against **germs**, becoming a valid means to neutralize odors, which are absorbed thanks to the action of activated oxygen ions.

The **JoyBion 400** can be used as an air purifier combined with a 2-step prefiltration process – electrostatic and activated carbon filters - enhanced by controlled bipolar ionization.



Thanks to the unique emission of ions, the electrostatic filter removes from the air solid impurities up to a diameter of 0.1 µm. The activated carbon filter assists to remove VOC's, as well as unpleasant odors, from the environment.

Simultaneously the addition of positive ions and negative ions to the air in the room, allows to neutralize and remove unwanted particles from the air, revitalizing the air in a natural way.



The bipolar ionization metering system is the subject of an **international patent by Periso SA**, and allows to reproduce the natural ionization which happens in nature, where the air is fresh and clean.

The **SOLS Magma 13 Bionomic Module** is a Swiss technology, designed by SOLS, that generates nanomechanical vibration which in turn diffuse the energization and harmonization process. This module increases the natural ambient energy produced by the unit.

The **JoyBion 400** is designed by SOLS and produced by Periso exclusively for the Propacare Division of Propagroup.

2. Reference Directives and Regulations

Periso SA declares that the device has been designed and built-in accordance with the necessary reference standards according to the Swiss and European Directive on Safety.

DICHIARA CHE
/ DECLARE THAT

il prodotto/
the product

E' CONFORME
/ FULFILLS

alle seguenti Direttive Europee:
/ the requirements of the Directive:

alla Direttiva 2014/35/UE relativa alla bassa tensione / LVD directive
alla Direttiva 2014/30/UE relativa alla compatibilità elettromagnetica / EMC directive

norme applicate/applied standards

EN 60335-1

Sicurezza degli apparecchi elettrici d'uso domestico e similare — Norme generali (LVD)

EN 60335-2-65

Sicurezza degli apparecchi elettrici d'uso domestico e similare (LVD)

Norme particolari per gli apparecchi per la purificazione dell'aria

EN 61000-6-3

Compatibilità elettromagnetica (EMC)

Prescrizioni per gli elettrodomestici, gli utensili elettrici e gli apparecchi similari — Emissione

EN 61000-6-1

Compatibilità elettromagnetica — Requisiti di immunità per gli elettrodomestici, gli utensili elettrici e gli apparecchi similari — Immunità

EN 61000-3-2

Compatibilità elettromagnetica (EMC)

Limiti per le emissioni di corrente armonica

EN 61000-3-3

Compatibilità elettromagnetica (EMC)

Limitazione delle variazioni di tensioni, fluttuazioni di tensione

Altre direttive europee applicate:

/ other directives applied:

Direttiva RAEE 2012/19/UE sui Rifiuti di Apparecchiature Elettriche ed Elettroniche

/ Directive on Waste Electrical and Electronic Equipment (WEEE)

Direttiva ROHS 2011/65/CE sul divieto di utilizzo di determinate sostanze nelle apparecchiature Elettriche ed Elettroniche

/ Directive on restriction of certain Hazardous Substances (ROHS)

Into Electrical and Electronic Equipment

Product:

- Room air purifier and ionizer with ozone on-demand

Periso SA declares that the device has been designed and built-in accordance with the necessary reference standards according to the Swiss and European Directive on Safety.



DECLARATION OF CONFORMITY

Periso SA - Isonne (CH) declares in good faith, under its own responsibility to have carefully followed every possible precaution for electrical safety and that the appliance:

Models:	JoyBion 400
Year of manufacture:	2020
Electrical characteristics:	220-240VAC, 50-60 Hz
Degree of protection:	IPX0
Classification:	Class I

Conforme

alla Direttiva 2014/35/UE relativa alla bassa tensione / LVD directive
alla Direttiva 2014/30/UE relativa alla compatibilità elettromagnetica / EMC directive

Direttiva RAEE 2012/19/UE sui Rifiuti di Apparecchiature Elettriche ed Elettroniche
/ Directive on Waste Electrical and Electronic Equipment (WEEE)

Direttiva ROHS 2011/65/CE sul divieto di utilizzo di determinate sostanze nelle apparecchiature Elettriche ed Elettroniche

/ Directive on restriction of certain Hazardous Substances (ROHS)

Into Electrical and Electronic Equipment

The electrical measurements and safety tests were performed using the following certified instrument: **CE MultiTester METREL MI2094.**

The company operates with a certified quality system according to:
EN ISO 9001:2015 e EN ISO 14001:2015.

3. Warnings

Attention must be paid from people with reduced physical, sensory and mental capacities; as well as people with little experience and knowledge in the operations of the device. In these instances, use only when instructed on the safe use of the device, and understand the dangers that could derive from improper use.

Do not allow children to play with the appliance. The cleaning and maintenance of the device by children must be supervised and controlled by an adult.

ATTENTION: the original packaging must be kept for future shipment to the manufacturer.

IDENTIFICATION OF RISKS

High voltage:

Inside the devices, there are elements operating in high voltage.

Do not open or tamper with the ionizer while it is electrically powered and in operating mode.

Don't touch the electrodes (see point 5) with device switched on.

Temperature:

Do not bring the ionizer devices near open flames or other high temperature sources.

Humidity:

Do not use the ionizing devices in excessively humid environments that may compromise correct operation of the device.

Ozone:

Thanks to Periso's patented Technology for Sanification with Controlled Ozone, the levels of produced ozone will always be within a safe range for human exposure. However, during ozone sanification phase, it is suggested that there be no people and / or animals inside the environment, as ozone can be a respiratory irritant. At the end of the sanitization, allow the rooms to air for a few minutes before the room is again occupied by people and / or animals.

4. Instructions for Use

The device has been designed for continuous operation.

Energy consumption is minimal.

The ideal location to place the **JoyBion 400** device is on a table and not directly against a wall, and spaced at least 20 cm.

To achieve an optimal purifying action effects of the unit, the **JoyBion 400** should be placed at least 2 m away from televisions, computers, humidifiers and heat sources.

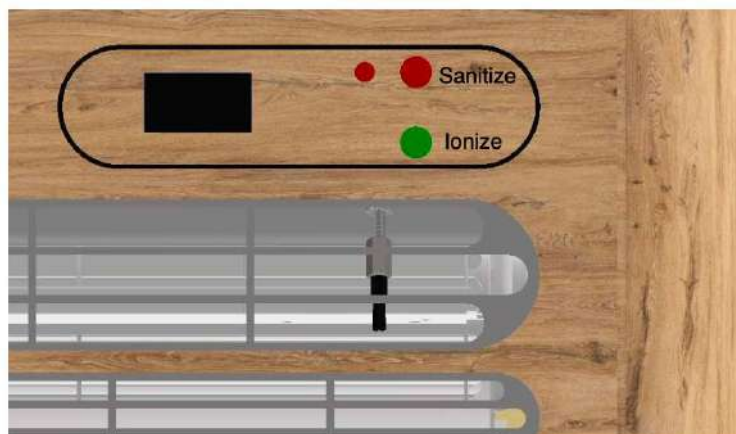
The **JoyBion 400** can be put into operation immediately. Its use is very simple.

- a. Insert the plug into a power outlet with voltage 220-240VAC / 50-60 Hz.
- b. Position the ignition switch on the back of the device on "I".
The device is now in "stand by" mode

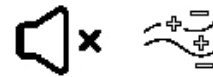
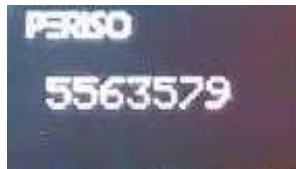


On the front of the device, there is a:

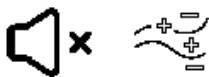
- LCD screen
- Red button (Sanitize) for ozone activation
- Green button (Ionize) for speed adjustment
- Red LED that signals the production of ozone



When the device is turned on, the LCD screen displays the wording "PERISO" and the serial number of the command module (left photo). This will let you know that the patented bipolar ionization is in effect. Subsequently, the message "ALL OFF" appears. To activate the fan, press the green button (Ionize) and the first speed that appears is the silent mode (right image).



To change the fan speed, the green button (Ionize) must be used in sequence. The fan modes are "Silent", "Min", "Med", and "Max", the relative icons are shown below.



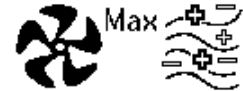
Silent mode of the appliance



Minimum Fan Speed



Medium Fan Speed

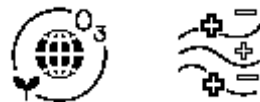


Maximum Fan Speed

Using the green button (Ionize). it is possible to turn off the ionization and the icon that appears on the screen is the following:

ALL OFF

To activate ozone production, use the red button (Sanitize). When ozone production is active, the red LED lights up and the fan speed is automatically set to medium level. The following icon appears on the screen:



The time also appears on the screen, set using the red button (Sanitize) which activates the production of ozone. The time can be 15, 45, 90, 180 minutes and the countdown appears on the screen and when the time reaches 0 (Zero), the device goes back to operating in the ionization mode that was previously set, including the ALL position OFF, and the red led turns off.

To exit the ozone function, you can either press the red button (Sanitize) or the green button (Ionize).

5. Maintenance

For a correct functioning of the appliance and to guarantee its maximum purification efficiency, the following maintenance is recommended:

- a) Filter replacement
- b) Cleaning of carbon fiber electrodes
- c) Cleaning glass electrodes

CAUTION:

Before cleaning the electrodes and before replacing the filters, make sure to switch off the device using the rear button and to disconnect it from the power supply network.

The unit is equipped with a kit containing:

- 1 electrostatic filter (white)
- 1 activated carbon filter (black)
- 1 ESD brush for cleaning the electrodes
- 1 M3 key (Allen key) to open the grille containing the filters

a. Electrostatic Filter and Activated Carbon Filter

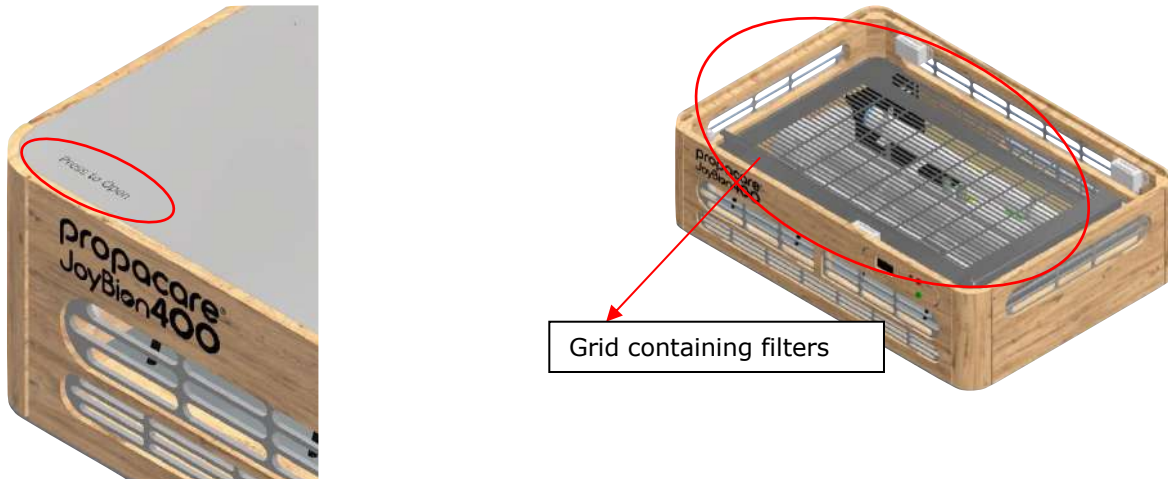
Replace the device filters by removing the top cover by pressing on "Press to Open".

Electrostatic filter (white) should be changed **2-4 times per year** and **activated carbon filter** (black) should be changed **twice a year** (*). Failure to replace the filters entails the deposit of dust and dirt inside the device, with possible risk of damage to the fan with increased noise emitted.

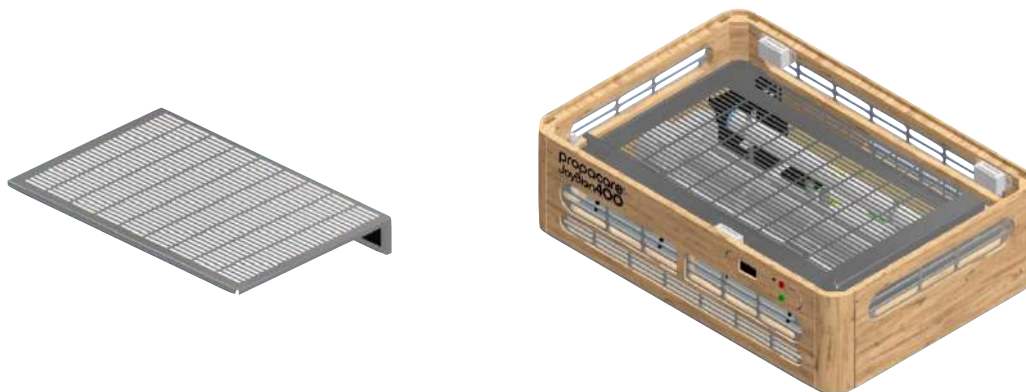


(*): The environmental conditions in which the device is placed may be such that as to suggest the user to **change the filter more frequently** than as indicated by the manufacturer. In some environments particularly characterized by **suspended particles**, including **dust**, it is suggested to change the **electrostatic filter** (white) more frequently. The presence of **strong organic smells** or considerable particles in suspension (**smoke**), may require a more frequent replacement of the filters to ensure the efficiency of the ionizing system. A significant increase **of noise** caused by internal ventilation may depend on the fact that the filters are saturated and must be replaced.

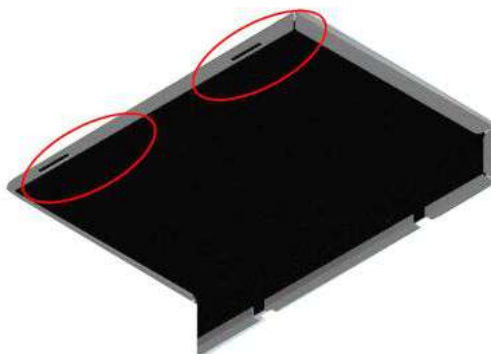
To replace the filters, remove the upper cover by pressing on "Press to Open".



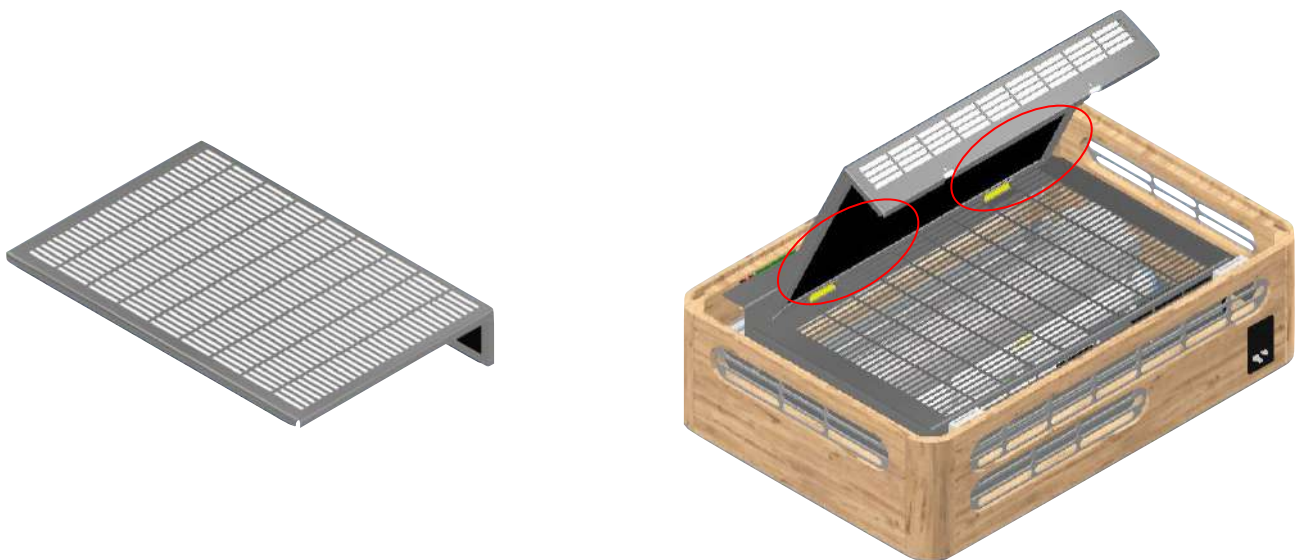
Remove the grill containing the filters by lifting it sideways from the rear



Remove the filters and replace the new ones by inserting them correctly and in the same order.



Riposizionare la griglia contenente i filtri all'interno dell'apparecchio: avendo cura di insert the two slots (indicated in the red circles in the previous image) in the fins on the internal grid (indicated by the red circles in the right image), then lower the grid onto the base to ensure the spring lock.



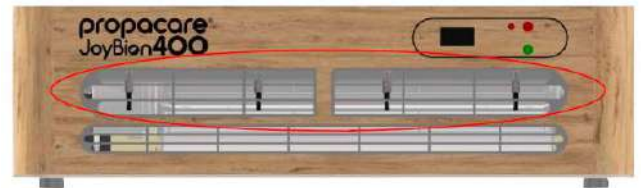
Close the device by placing the top cover.



b. Carbon fiber electrodes

It is recommended not to obstruct the front of the appliance for a correct bipolar ionization emission.

Inside the duct, 4 carbon fiber electrodes are visible that have the purpose of emitting positive and negative ions in a correct proportion.



It is recommended to keep the electrodes clean using only the antistatic brush (ESD) supplied. When the device is switched off, only touch the electrodes with the specially designed brush (ESD) very gently in order to avoid damages or electrode fibers bending.

In order to guarantee the efficiency of bipolar ionization, **it is necessary to remove the dust that can accumulate on the ionizing fibers 1-2 times per month.** Environments with higher levels of dust should clean the electrodes **every 15 days.**

c. Glass Electrodes

It is recommended once a year to clean the glass electrodes to remove the dust that has settled.

The operations to be performed are as follows:

Remove the top cover by pressing on "Press to Open"

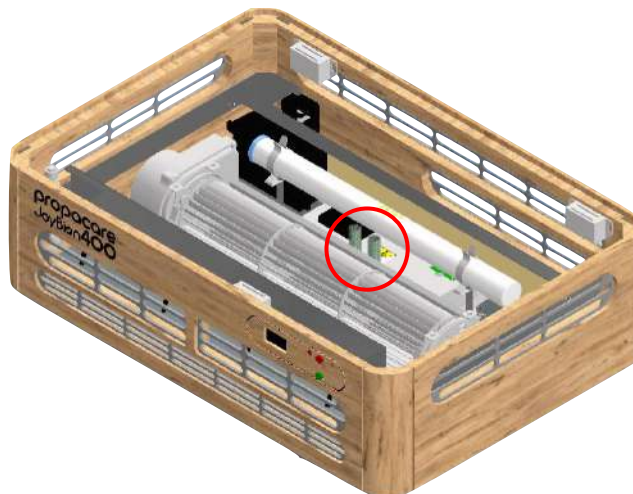


NB: In dusty environments, more frequent cleaning may be required.

Remove the grille containing the filters by lifting it sideways from the rear part.



Remove the internal grid, unscrewing the 4 fixing screws with an M3 wrench, moving it forward a few millimeters and finally lifting it



Clean the glass electrodes (indicated by the red circle in the previous image) and the motor (without force on the blades) with the **supplied antistatic brush (ESD)**, taking care not to damage any component.

Repeat the operations in reverse to reassemble the appliance.

6. Technical Data

Supply	220-240VAC / 50-60 Hz
Consumption	With ventilation at maximum 15 Watt (0.015 KW/h)
Fuse:	Fuse 20 x 5 mm 1A (T)
Type of ionization:	Bipolar with carbon fiber electrodes
Ionization voltage:	~5.0 kV negative ~5.0 kV positive
Sanitation efficiency:	Up to 90 m ²
Ionization strength:	~280'000 ions/cm ³ * ventilation at min. ~390'000 ions/cm ³ * ventilation at max. For rooms up to 100 m ²
Nominal Air flow:	220m ³ /h at max.
Fan:	Tangential fan, suitable for continuous operation (ball bearings)
Filters:	1 Electrostatic filter and 1 Activated carbon filter (replaceable)
Dimensions:	482 x 332 x 140 mm (LxWxH)
Weight:	~8 kg
Command:	Manual
Installation:	Portable

* Measurements were made at a distance of 1 meter distance between JoyBion 400 and the ION-METER PN-2001.

7. Warranty

The **JoyBion 400** has a two (2) year Warranty for the (from the time of initial purchase) against manufacturing defects in material or workmanship.

This warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, accident, neglect, exposure to excess moisture, fire, lightning, power surges, or other acts of nature. To maintain the device warranty, the JoyBion must be used in accordance with the use and maintenance instructions within this user manual.

Periso SA, SOLS SA and/or Propagroup SpA will repair or replace, at its discretion, any unit meeting these limited warranty conditions that is found to be defective within the scope of normal and appropriate use and are within the two (2) Year Warranty period.

Warranty claims must include receipt of purchase to validate warranty, and optimally the original box of the unit for shipping. Please have this information available when contacting customer service.

For warranty service in the European Union, visit the following pages of the Propacare website in the desired language:

Italiano www.propa.care/it/assistenza
English www.propa.care/uk/assistance
Español www.propa.care/es/asistencia
Français www.propa.care/fr/assistance
Deutsche www.propa.care/de/unterstuetzung

For service within Switzerland, contact SOLS customer service (sales@solsociety.swiss or 41 (0)91 228 0640). Instructions will be given for the repair or return of the device.

Date of Purchase: _____

Purchased From: _____

