



INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS



NOTE: Read all instructions and data in this manual before operating.

Negative Air Pressure Machine and Air Purifier

OptiClean™
39UV

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Declaration of Conformity UE

This unit complies with the provisions of European Directives:

- 2006/42/EC (Machinery)
- 2014/30/EU (EMC)
- 2011/65/EU (RoHS)

The illustrations in this document are for illustrative purposes only and not part of any offer for sale or contract. The manufacturer reserves the right to change the design at any time without notice.

1 - A NOTE ABOUT SAFETY

Any time you see these symbols  and/or  in manuals, instructions and on the unit, be aware of the potential for personal injury. There are three levels of precaution:

WARNING identifies the most serious hazards which will or could result in severe personal injury or death.

CAUTION is used to identify unsafe practices which would result in minor personal injury or product and property damage.

NOTE is used to highlight suggestions which will result in enhanced installation, reliability, or operation.



WARNING :

PERSONAL INJURY OR PROPERTY DAMAGE HAZARD

Failure to follow this warning could result in personal injury or property damage.

Improper installation, adjustment, alteration, service, maintenance, or use can cause conditions which may cause personal injury or property damage. Consult a qualified installer or your distributor for information or assistance. Read and follow all instructions and warnings, including labels shipped with or attached to unit before operating.

Children must not be allowed to play with the unit. User cleaning and maintenance must not be performed by children.



WARNING :

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death. Disconnect all electrical power to the unit before removing access panels to perform any maintenance.



WARNING :

PORTABLE UNIT AND METAL SHARP EDGES HAZARD

Failure to follow this Warning could cause personal injury or death. This unit must be used in a location where unsupervised children are not allowed to play. The unit is portable, and areas inside and under the unit could cause personal injury. Always use cut-resistant gloves when using/cleaning the unit.



WARNING :

CORRECT FUNCTIONING OF THE DEVICE

Do not cover / Do not place anything on the top of the unit.

Do not use any other power cord than the one provided.



WARNING :

TIP OVER HAZARD

Failure to follow this warning could result in personal injury and/or property damage.

Unit must be on a smooth, solid and flat horizontal surface.

When moving the unit:

- make sure the path is free of obstacles
- make sure the wheels are unlocked
- place hands around the center of the unit and move slowly
- to avoid the risk of tipping, be 2 people to move the unit, especially when removing the transport pallet.
- be sure not to walk on the cord, to avoid any risk of falling or tripping
- be sure not to manipulate or position the unit on steps

2 - ABOUT THE NEGATIVE AIR PRESSURE MACHINE/AIR PURIFIER

OptiClean™ uses highly efficient filters and a heavy duty, to remove contaminated air from the room. When ducting the unit, the resulting negative air pressure, or "vacuum effect," helps limit the spread of air-based contaminants into surrounding areas. OptiClean™ is a portable solution designed to help convert normal hospital rooms into Airborne Infectious Isolation Rooms (AIIR).

If negative pressure is not required, such as in an open-air temporary hospital, business or home, the machine can be used as an air purifier pulling air in, removing many contaminants, and discharging cleaner air back into the room.

OptiClean™ Negative Air Pressure Machine features:

- Long-life HEPA H13 (or H14 in option) filter according to EN 1822.
- Standard M5 / Coarse 70% pre-filter according to EN 779/ ISO EN 16890
- 3 available units :1000, 1800 & 2500 m³/h (nominal)
- Vertical design for smaller footprint
- Portable and adaptable to nearly any location
- Heavy duty locking casters for easy and smooth transport
- Red lighted indicator to alert user when filters are overloaded
- 2,5 meters long power cord (access from behind the unit)
- 230V single phase - 50 / 60Hz
- Galvanized steel, powder paint fully insulated cabinet
- Options:
 - Exhaust transition plate Ø250 mm for round ducting
 - Diffuser
 - UV Lamp

During normal use, this unit is intended to operate under the following site conditions:

- **Maximum altitude: 2000 m,**
- **Minimum and maximum storage temperature: -20°C/+65°C,**
- **Minimum and maximum operating temperature: 0°C/+40°C,**
- **Indoor return air maximum humidity level: 27°C DB (dry bulb) at 65% RH (Relative Humidity),**
- **Clean interior environment (no corrosive substances present).**

The unit requires protection from any form of impact during use.

This unit is designed to operate in an overvoltage category II and pollution degree 2 environment, in accordance with IEC standard 664. To ensure a pollution degree 2 environment, the unit must be protected from water and oil splashes, and the dust allowed to settle on it must be limited.

NOTE: the unit must be used indoor only. Keep away from sources of moisture, heat, flames.

This unit is not designed for Atex areas.

3 - UNPACKING YOUR SYSTEM

Carefully remove your unit from its packaging. Inspect for damage. If damage is noted, contact your shipping carrier and file a claim.

Assemble the Unit

1. Use a 13 mm nut wrench to remove the 2 mounting lugs under the unit from the transport pallet.
 2. Carefully move the unit down from the transport pallet. Be 2 people.
 3. Before operating on the unit, be sure it is turned off and the cord is unplugged from the wall.
 4. Put on Personal Protective Equipment.
 5. For negative-air setup, do these steps. If used as an air purifier, skip to step 6.
 - a. Fix the transition plate on the top of the unit using the provided screws.
 - b. Use a compression clamp to attach Ø 250 mm round flexible ducting (supplied by your local dealer) to the transition plate.
 - c. Run the flexible ducting as recommended by the mechanical plan and attach to a transition piece (ceiling register box, etc., purchased or fabricated on site) to complete a path for the air to exhaust from the negative-air pressure area. Caulk or tape all seams. Run the flexible duct per applicable codes and requirements, with no hard bends or obstructions.
 6. Remove the bottom door panel on the left side of the unit.
 7. Inspect the filters and make sure they are well stacked and have not been dislodged or damaged during shipping. Make sure the filter locking system is well tight.
 8. Replace the door panel.
 9. Plug the unit into a grounded outlet.

Fig. 2 - ON/OFF switch / C14 Cable plug



Fig. 3 - Control Panels



Fig. 4 - Transition plate

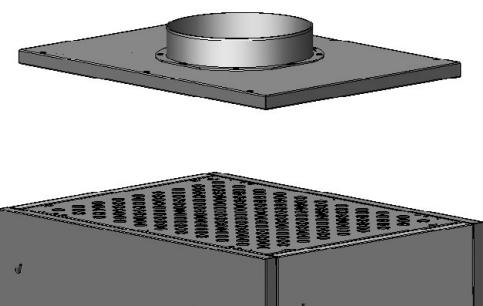
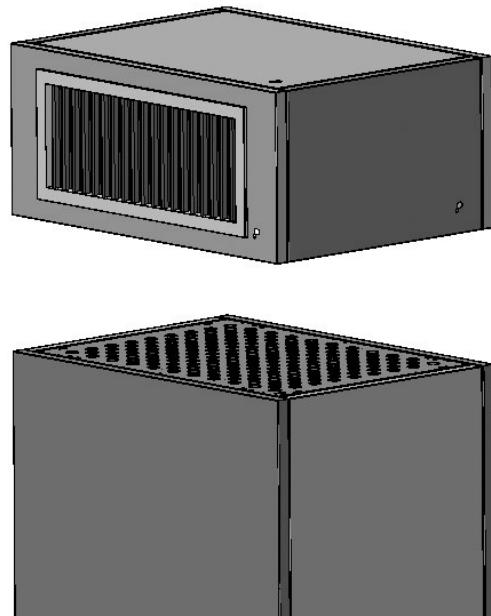


Fig. 5 - Diffuser



4 - OPERATING INSTRUCTIONS

IMPORTANT: Always lock the casters during operation.

IMPORTANT: Make sure there are no paper or lightweight loose objects near the floor by the unit that could be sucked into the bottom air intake. We recommend that you regularly clean or sweep the floor around the unit to extend the life of the pre-filter.

1. Make sure the casters are locked.
2. Locate the ON/OFF switch on the rear side (Fig. 2).
3. Rock the ON/OFF switch up to the ON (I) position. It should illuminate.
4. Set the flow control on the desired airflow.
5. Observe the unit running for a short time to make sure there are no unusual noises, that air is freely flowing through the transition and ducting, and the unit is not shifting position.

5 - ROUTINE MAINTENANCE



WARNING :

Risk of releasing hazardous material if maintenance is not performed.

5.1 - Daily

Inspect the unit:

1. power cord is not broken, frayed or worn, and the plug is fully engaged at the wall outlet.
2. casters are locked.
3. red filter/obstruction indicator is not illuminated.
4. unit operates without excessive vibration or unusual noises.
5. flexible exhaust ducting (if used) is not kinked or damaged, and securely attached at both ends.

5.2 - Cleaning

Routinely clean any dust and contaminants from the exterior of the unit and power cord with a mild cleaner. Do not use excessive liquid neither running or high pressured water. Decontaminate as necessary with a facility -and EPA- approved disinfectant.

5.3 - Filter Replacement



CAUTION :

PERSONAL PROTECTION

Consider the filters contaminated. Wear appropriate Personal Protective Equipment (gown, gloves, respirator, glasses, etc) when changing filters, and seal them immediately in plastic bags for disposal.

Filter cells are flammable products, the risk of fires increases depending on the elements filtered by the media.

Keep the filters away from flames.



WARNING :

MOVING PARTS & SHARP EDGES HAZARD

Failure to follow this warning could result in personal injury. Do not place objects on top of the discharge plenum.

Keep hands and face away.

Rotating blower wheel can cause serious injury. Always use cut-resistant gloves when handling.

NOTE: Before replacing filters, check to make sure there is nothing impeding the airflow into the unit. Check under the unit for paper, rubbish, etc., that may be trapped on the intake side.

NOTE: If your facility already has a procedure in place for replacing filters, follow your procedure. If guidance is needed, then follow these instructions.

5.4 - Pre-Filter

The pre-filter must be replaced every 90 days.:

1. Put on Personal Protective Equipment.
2. Move the power switch to the OFF (O) position.
3. Unplug the power cord from the unit, and from the wall outlet.
4. Listen to make sure the blower wheel has stopped spinning, then remove the side door panel.
5. Remove the filter holding frame on top of filters (Fig. 7).
6. Remove the HEPA filter and immediately put it inside an approved containment bag.
7. Remove the pre-filter from cabinet and immediately put it inside an approved containment bag. Dispose as ordinary industrial waste.

8. Replace the pre-filter (See P.10 for reference). Note the air-flow arrows on the filter and make sure they point up. Replace the bottom front door panel. Replace the HEPA filter
9. Position the new HEPA filter into the unit with the gasket on the filter facing up, on the discharge side of the filter. Make sure the HEPA filter is centered and the edges align with the pre-filter for a complete seal.
10. Replace the filter holding frame (Fig. 7).
11. Inspect the filter for a complete and tight fit.
12. Replace the door panel.
13. Plug in the unit and rock the power switch up to the ON (I) position.

5.5 - HEPA Filter

If the red indicator light is illuminated and did not extinguish after prefilter replacement, order a new filter within 2 weeks maximum. See P.10 for reference.

1. Put on Personal Protective Equipment.
2. Move the power switch to the OFF (O) position.
3. Unplug the power cord from the unit, and from the wall outlet.
4. Listen to make sure the blower wheel has stopped spinning, then remove the side door panel.
5. Remove the filter holding frame on top of filters (Fig. 7).
6. Remove the HEPA filter and immediately put it inside an approved containment bag. Dispose as ordinary industrial waste.
7. Position the new HEPA filter into the unit with the gasket on the filter facing down, on the discharge side of the filter. Make sure the HEPA filter is centered and the edges align with the pre-filter for a complete seal.
8. Replace the filter holding frame (Fig. 7).
9. Inspect the filter for a complete and tight fit.
10. Replace the door panel.
11. Plug in the unit and rock the power switch up to the ON (I) position.

Fig. 6 - Filters

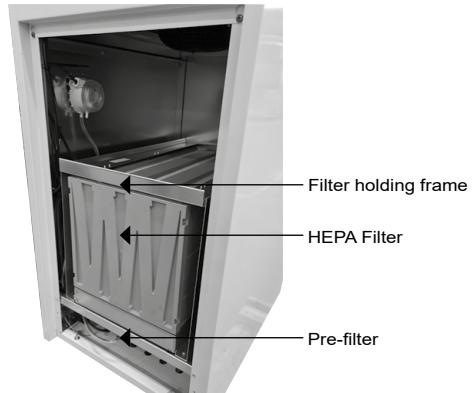


Fig. 7 - Filter holding frame



5 - ROUTINE MAINTENANCE

5.6 - Fuses replacement

1. Move the power switch to the OFF (O) position.
2. Unplug the power cord from the unit, and from the wall outlet.
3. Use a small flat screwdriver to gently push on the 2 small plastic clips on each side of the cable plug. These are fragile parts, take care not to broke them!
4. Gently remove the fuse holder
5. Replace the 2 fuses with new 4 A fuses (see P10 for reference)
6. Put back the fuse holder
7. Plug in the unit and rock the power switch up to the ON (I) position.

Fig. 8 - ON/OFF switch / C14 Cable plug

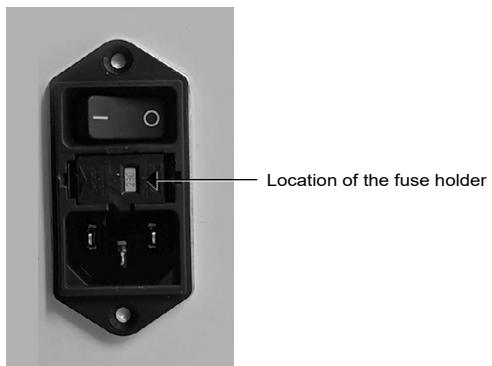
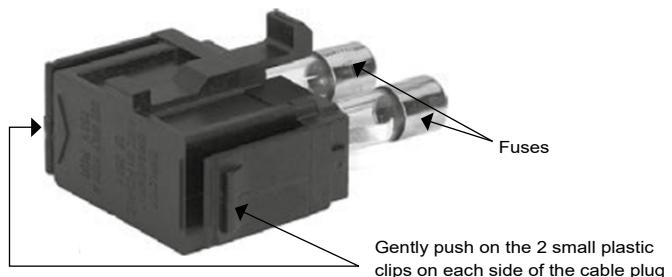


Fig. 9 - Removed fuse holder



6 - TROUBLESHOOTING

Before you request dealer service, check for these easily solved problems:

1. Check fuses (4 A) on the C14 plug on the unit rear side if the unit does not turn on.
2. Make sure the unit is plugged in to a working electrical outlet.
3. Check for sufficient airflow. Filters should be clean and unobstructed.

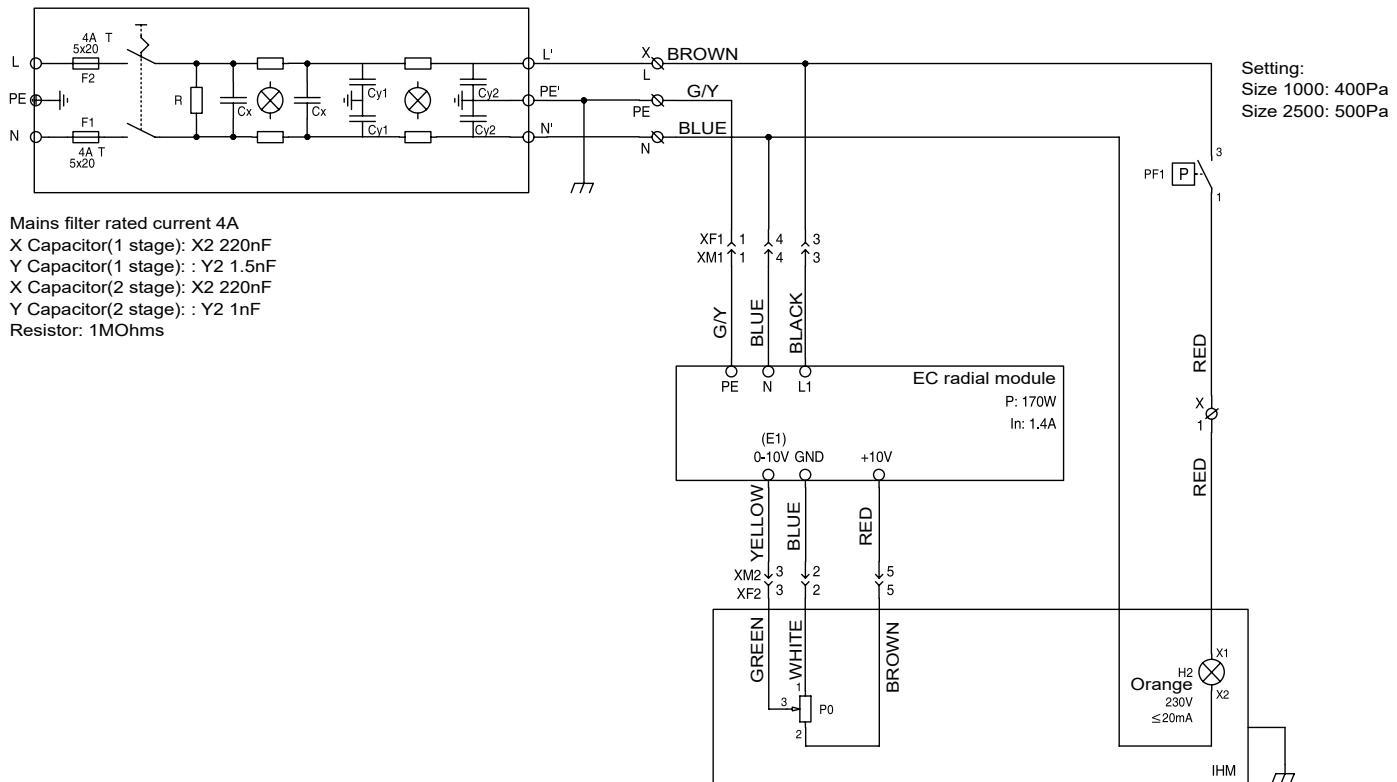
If you need to contact your authorized dealer for troubleshooting and/or repairs, be sure to have the model and serial numbers of your equipment available.

7 - SPECIFICATIONS

Table 1 - Electrical Specifications

Voltage	230
Hertz	50 / 60
Amps (without UV option)	
Nominal flow rate: 1000 m ³ /h	1.4 A / 20mA filter LED
Nominal flow rate: 1800 m ³ /h	2.2 A / 20mA filter LED
Nominal flow rate: 2500 m ³ /h	3.3 A / 20mA filter LED
Speed	Variable

Fig. 10 - Model Wiring Diagram



8 - SPARES REFERENCES

Table 2 - Spare parts

Nominal flow rate	1000 m ³ /h	1800 m ³ /h	2500 m ³ /h
Pre-filter M5	7588972		7588979
HEPA Filter H13	7588973		7588980
HEPA Filter H14	7588974		7588981
Transition plate	7588959		7590632
Diffuser	7588960		7590633
Fuses		7588986	

Please contact your local Carrier organization to order.

