VORT HRI
# PHANTOM BP/ PHANTOM BP H

UK CA C E
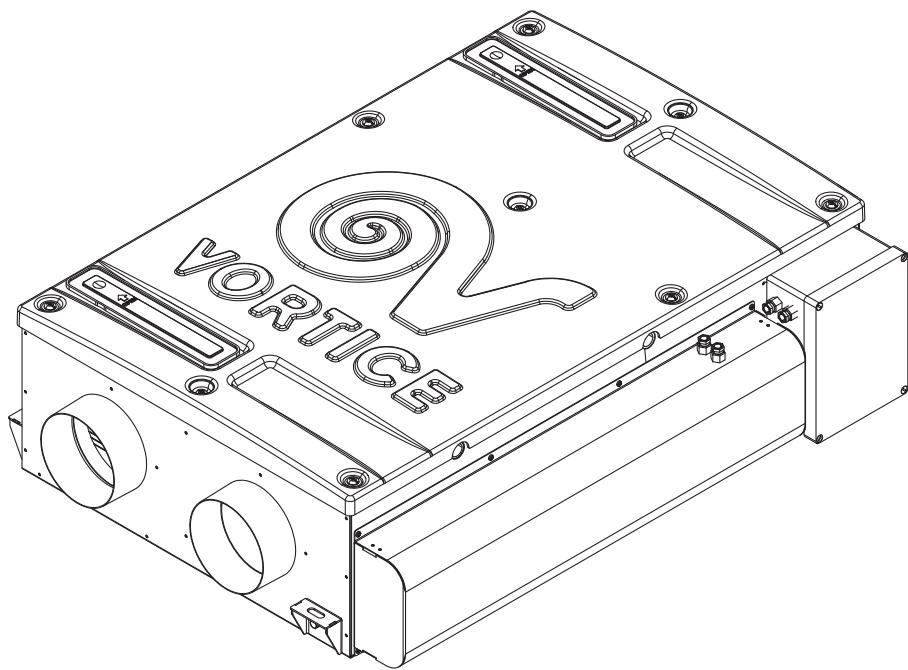
Description and use

Vort HRI Phantom (hereinafter "the appliance") is a highly energy-efficient central ventilation system with heat recovery, which can be installed horizontally in a false ceiling. The appliance is controlled by a hi-tech electronic management system and equipped with fan units that utilise energy-saving EC brushless motors.

A heat exchanger (enthalpy exchanger for models H) is fitted inside the appliance to guarantee heat exchange high efficiency levels.

The appliance is available in 2 models offering different performance features:

Vort HRI Phantom B.P. (200 and 350): version equipped with additional Bypass function. also manually activable

(See "Use" for a more detailed description of the various functions).

Safety

⚠ **Warning:**
this symbol indicates that care must
be taken to avoid injury to the user

• Follow the safety instructions to prevent any harm to the user.
• Do not use this appliance for purposes other than those described in this manual.
• Having removed the appliance from its packaging, make sure that it is intact and undamaged. If in doubt, consult a professional or contact a Vortice Authorised Technical Support Centre.
• Do not leave packaging within reach of children or individuals with disabilities.
• Certain fundamental rules must be observed when using any electrical appliance:
  never touch the appliance with wet or damp hands;
  never touch the appliance while barefoot.
• Do not operate the appliance in the presence of flammable substances or vapours, such as alcohol, insecticides, petrol, etc.
• If the appliance is to be disconnected from the power supply and no longer used, store it out of reach of children and individuals with disabilities.
• This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
• These appliances are designed for use in residential and commercial properties.
• The appliance must be installed by a professionally qualified electrician.
• The electrical system to which the product is connected must be in compliance with applicable regulations.

① **Caution:**
this symbol indicates that care must
**be taken to avoid damaging the appliance**

• Do not make modifications of any kind to this appliance.
• The maintenance instructions must be followed to ensure the appliance does not suffer damage and/or excessive wear.
• Do not expose this appliance to the elements (rain, sun, etc.).
• Do not stand objects on the appliance.
• The inside of the appliance must be cleaned only by a skilled professional.
• Regularly inspect the appliance for visible defects. If the appliance is defective in any way, do not use it, and contact a Vortice authorised Technical Support Centre without delay.
• If the appliance does not function correctly or develops a fault, contact a Vortice authorised Technical Support Centre without delay. Ensure that only genuine original Vortice spares are used for any repairs.
• If the power supply cable is damaged, have it replaced without delay by a Vortice authorised Technical Support Centre.
• Should the appliance be dropped or suffer heavy impact, have it checked without delay by a Vortice authorised Technical Support Centre.
• The appliance must be installed in such a way as to ensure that under normal operating conditions, no one can come into contact with any moving parts or live electrical components.
• Should you need to:
  dismantle the appliance, using the proper tools;
  remove the heat exchanger;
  remove the motor module;
  the appliance must first be switched off and disconnected from the electrical power supply.

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- Connect the appliance to the electrical power supply/socket only if the rated power of the supply is compatible with the maximum rated power of the appliance. If not, contact a professional electrician without delay.
- Switch off the system's main switch:
  if an operating fault is detected;
  before cleaning the outside of the appliance;
  if the appliance is not going to be used for any length of time.
- The appliance cannot be used to pilot the operation of water heaters, stoves, etc.; neither must it drain into the hot water ducts of such appliances.
- The appliance must expel air directly to the outside through a single dedicated duct.
- The flow of extracted air must be clean (i.e. free of grease, soot, chemical and corrosive agents and explosive or flammable mixtures).
- Keep the air intake and outlet ports of the appliance free of obstructions, to ensure optimum air flow.
- Maximum operating temperature: 45°C.
- Specifications for the power supply must correspond to the electrical data on ID plate A (Fig. 1).

- An omnipolar switch with a contact opening distance of 3 mm or higher should be provided for installation, enabling complete disconnection under overvoltage category III conditions.
- Products equipped with three-phase wiring (T) engines ALWAYS require connection to 380-415V (or only 400V where required) three-phase lines, or also 220-240V (or only 230V where required). Any kind of modification shall be considered as product tampering and shall nullify the relative warranty.
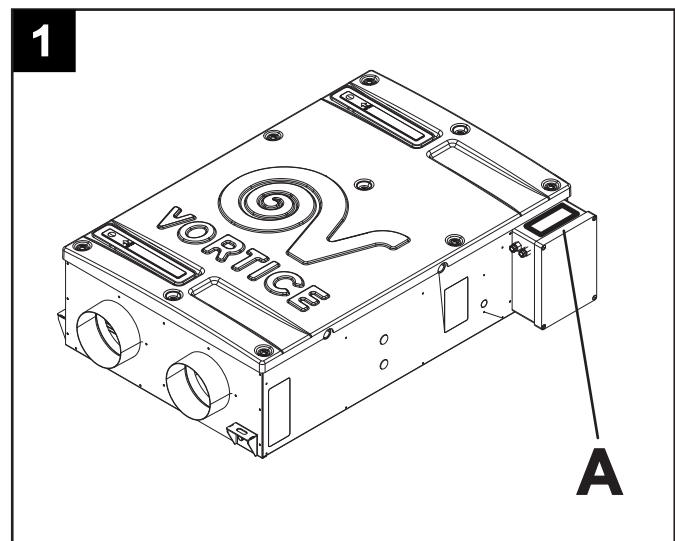
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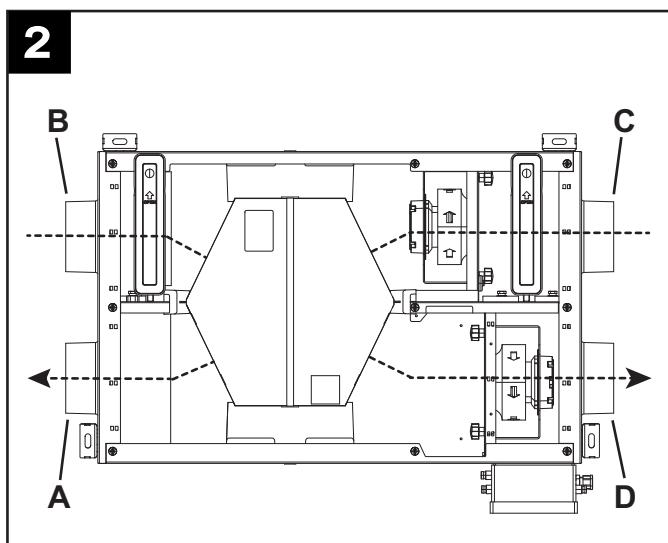
The main parts of the appliance are:
- an outer casing made using galvanised steel;
- a polystyrene counterflow type heat exchanger, featuring a special geometry designed to guarantee the highest possible efficiency in terms of heat exchange; H models are equipped with an enthalpy exchanger, which is also able to transfer the humidity present in the air.
- two energy-saving variable-speed brushless motors (4 preset speeds);
- an electronic controller supervising the power input, regulation and control of the appliance;
- two thermal actuators controlling bypass valve opening (only B.P. models);
- remote control panel;
- 3 temperature sensors;
- 2 x M5 filters;
- 4 brackets for ceiling application.

Key to air connections (fig.2)

A: Clean air outlet inside the room
B: Stale air intake from room
C: Fresh air intake from outside
D: Stale air outlet to outside

Installation

N.B.
The appliance is not suitable for outdoor installation.
The appliance must be installed in accordance with current safety regulations in the destination country, and with the instructions in this booklet. The appliance must be fitted to an interior surface or wall of the dwelling that is structurally sound enough to take its weight (25 kg max. mod. 200, 38 kg max. mod. 350).
Ensure that connections to the appliance are optimised and simplified by strategic positioning of the junction box, from which the wires emerge (Fig.3).
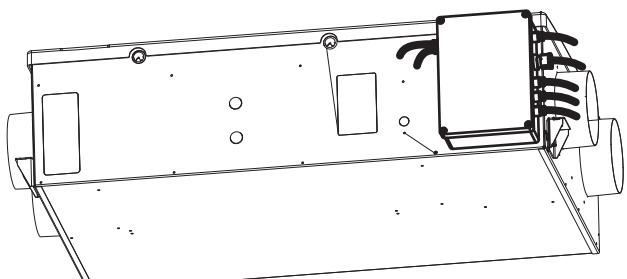
Ceiling installation
Various mounting options are available: Vortice recommends fixing the appliance to the ceiling, using the special brackets supplied (Fig.4).
In any event, after mounting the appliance, check that it is perfectly level in order to ensure faultless operation. The ducts used for conveying air must be of the correct size.
The ducts to and from the outdoors must be thermally insulated and not subject to vibration.
The 125 mm (mod. 200) and 150 mm (mod. 350) standard diameter inlet and outlet pipes must be secured to the corresponding ports of the appliance by means of clips or other suitable fastening systems.
If stale air is exhausted via the roof, the outlet must be designed so as to prevent the formation of condensate and the entry of rain water.
If fresh air enters via the roof, the intake must be designed so as to prevent the formation of condensate and the entry of rain water.

Condensate drain
During normal operation, condensate collects at the bottom of the appliance in a double tray provided with two drain outlets.
The connection points are located on the bottom of the appliance (Fig. 5). The condensate drain can be provided by connecting the drain outlets to two flexible hoses with an internal diameter of 19 mm approx.
To avoid the formation of air bubbles, create a siphon trap in the hose connected to the outlet on the appliance denoted 1, as illustrated in Fig. 5b.
Cut the end of the hose obliquely.
N.B.
The siphon must be created observing the dimensions indicated in Fig. 5c; otherwise, correct operation of the appliance cannot be guaranteed.
Condensate can also be drained off through the waste plumbing system of the building.

5a

NO

5b

OK

5c

$\triangle h > 50$ mm

≥ 60 mm
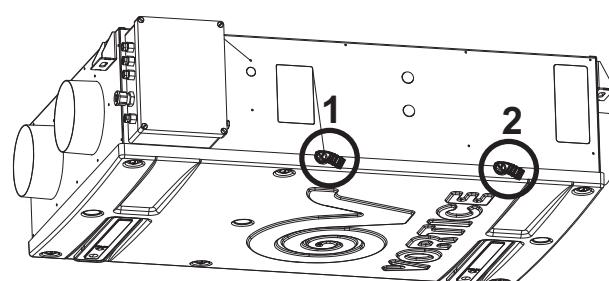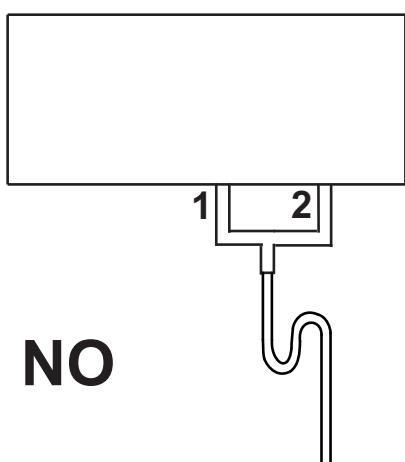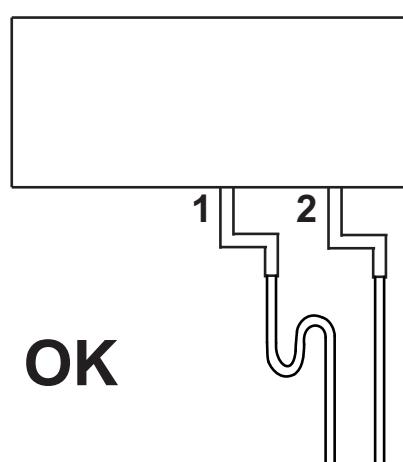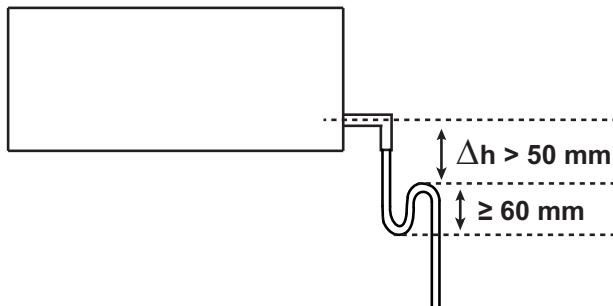
Accessibility

The appliance must be easily accessible for servicing/maintenance purposes. In particular, the false ceiling in which the appliance is installed must have a suitably proportioned inspection hatch, providing access to the flap enclosing the electrical/electronic parts and the filters. This means the appliance does not have to be removed from the false ceiling during routine maintenance (filter replacement), nor even some non-routine procedures (e.g. motorised fan or electronic controller replacement).

Junction box inputs

Fig 6A

1: Preheater (to connect the preheater, open the electronic unit, plug in the grey connectors and configure the software (installer access only)

2: Switches

4: Power Supply

5: Display

Fig. 6B

6.7: Thermal actuators bypass

6

A

1
2
3
4
5

B

6,7
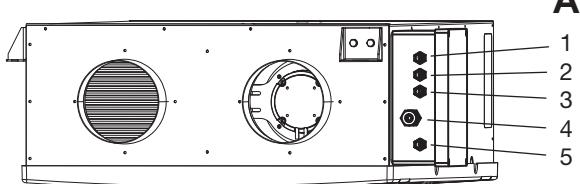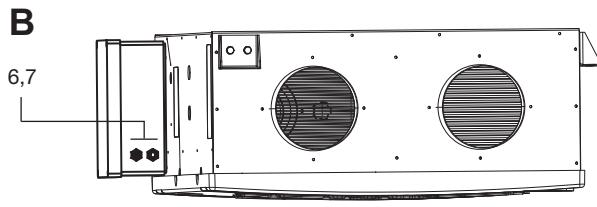
Vort HRI Phantom electrical connections:

7

1	**Mains 2 poles switch**	
2	**Preheater** (remote 220-240Vac ~50Hz relay coil)	
3	**Dry contact (remote switch / relay)**	
4	**Remote HMI**	
5	**Remote Modbus Master Unit**	

Wires color code

BK=black
BU=blu
BN=brown
GNYE=yellow/green
RD=red
WH=white
YE=yellow
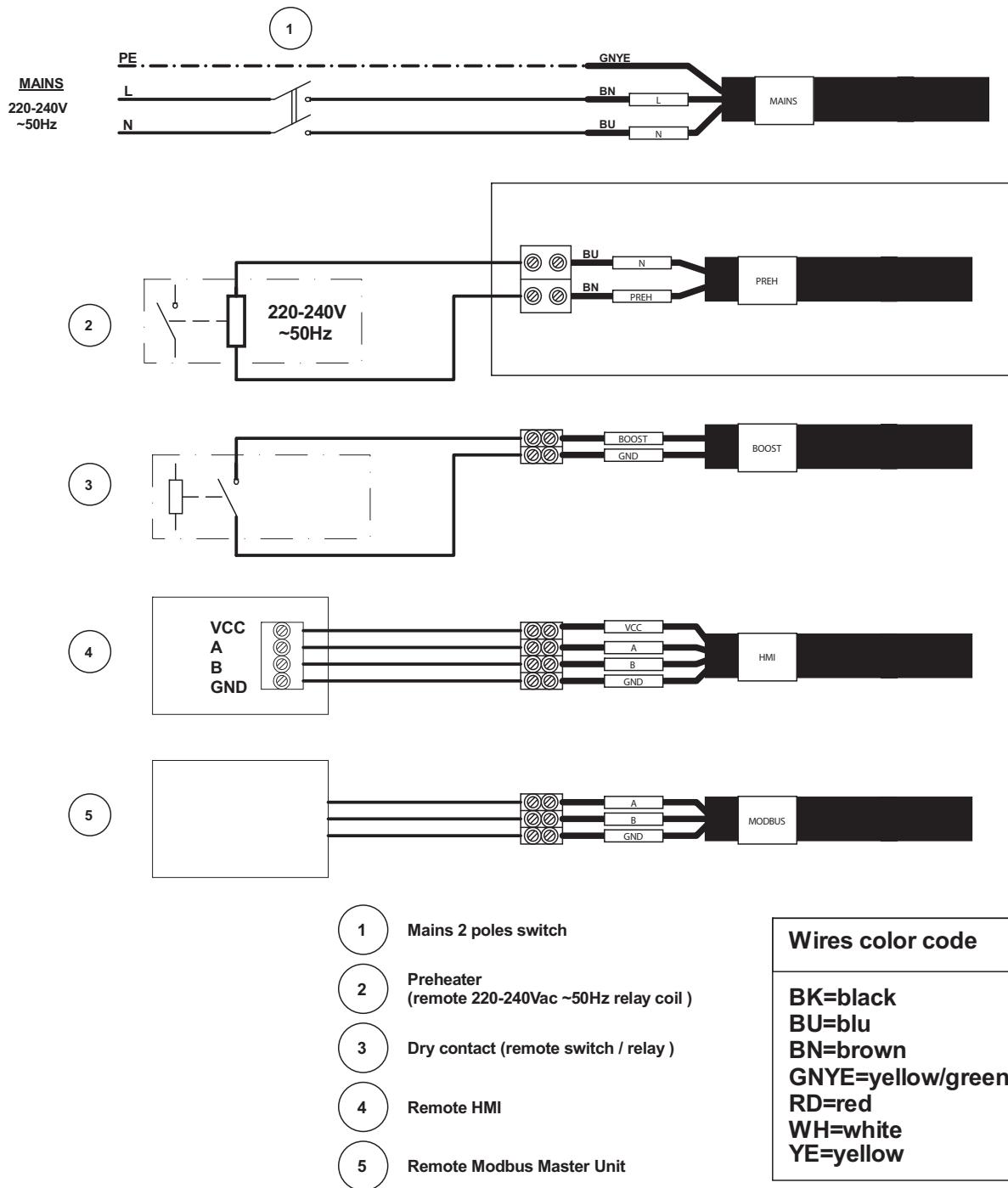
• The power cord must be PVC sheathed cord (model 60227 IEC 53 (RVV), meet the requirements of GB/T 5023.5-2008/IEC 60227-5:2003, with CCC certificate for chinese market).
• The three power cable conductors must have a nominal cross-section of no less than 0.75 mm^2 and a yellow-green core connected to the earthing terminal of the device.
• To connect the HMI remote display or the remote modbus master unit to the machine, use cables with a section between 0.35 mm^2 and 2.5 mm^2. Max length 30 m. Given that the display connection cable should be kept separate or away from the power cables, if there are problems of electromagnetic interference from other devices installed in the environment (which produce malfunction of the display), it is recommended to use shielded cables.
• To connect the pre-heater and post-heater, use cables with a minimum section of 0.5 mm^2.

HMI installation

Installation boxes for the HMI remote display can be ordered together with the machine.
Here are the boxes available depending on the model chosen.

	22732 - SCP503		22462 - PSC-W **white color** to be combined with boxes 22732 or 22461
	22461 - SCI503		22463 - PSC-B **black color** to be combined with boxes 22732 or 22461

8

7
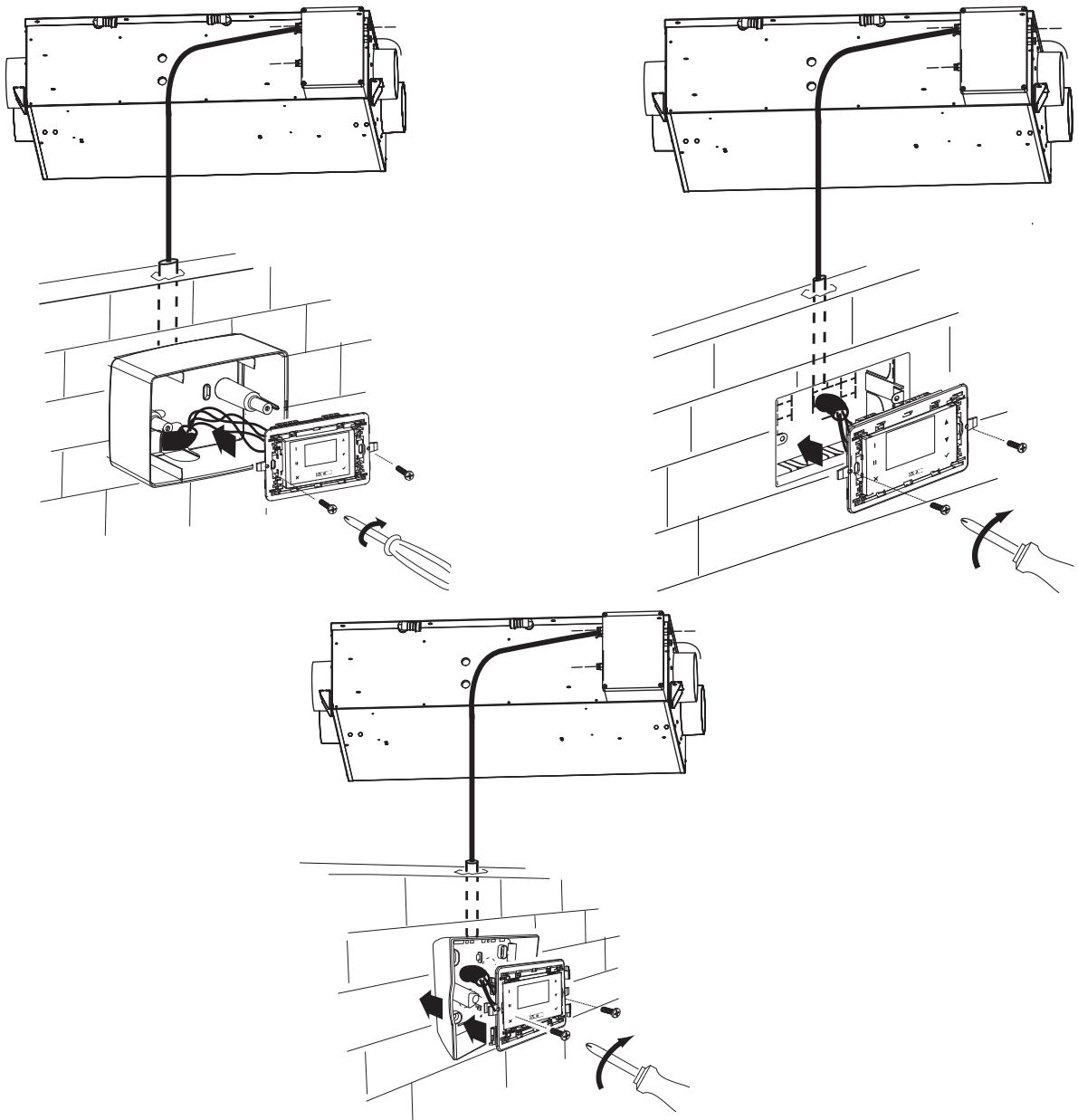
8a Preheater cable connection

1

2

3

4

5

6
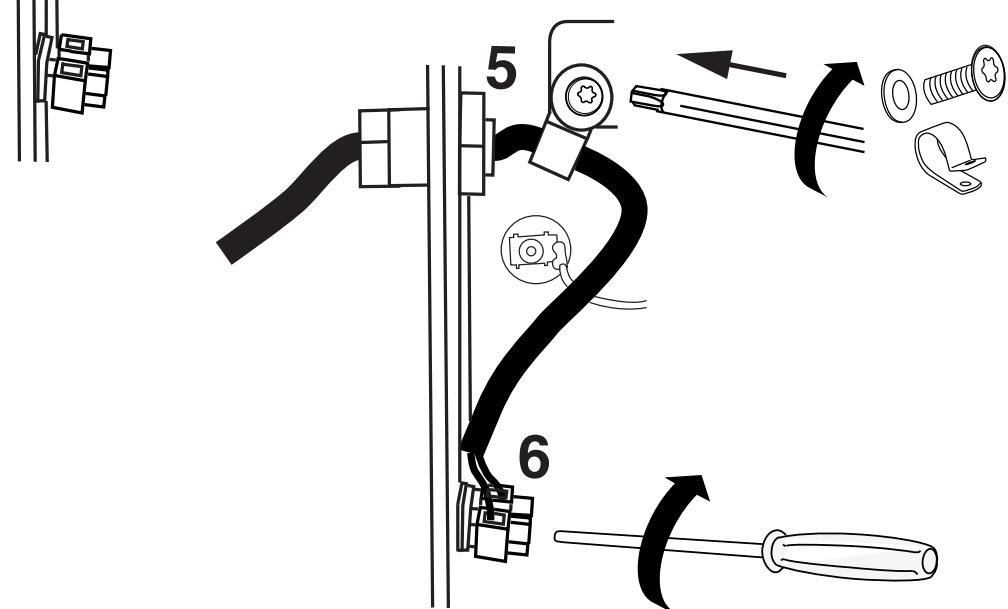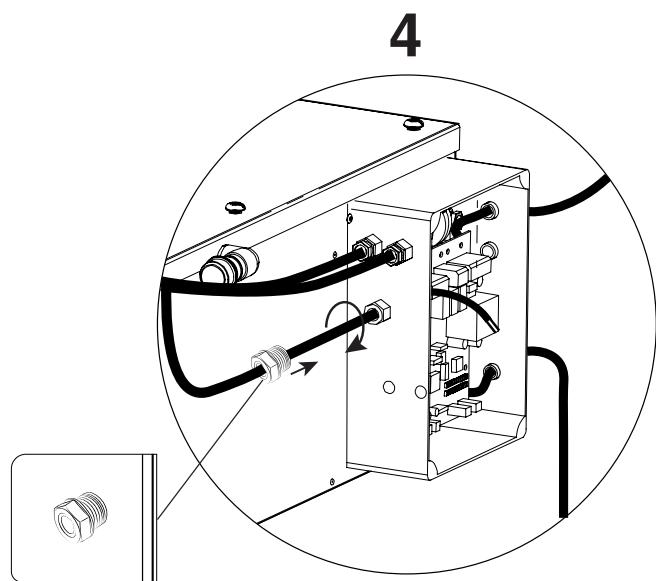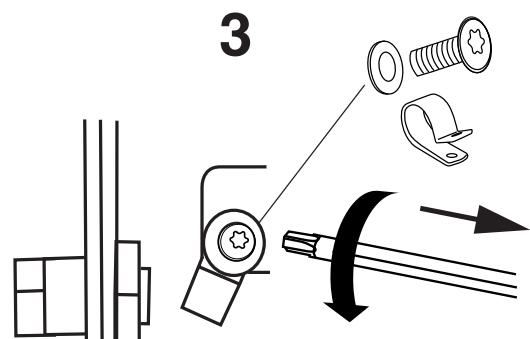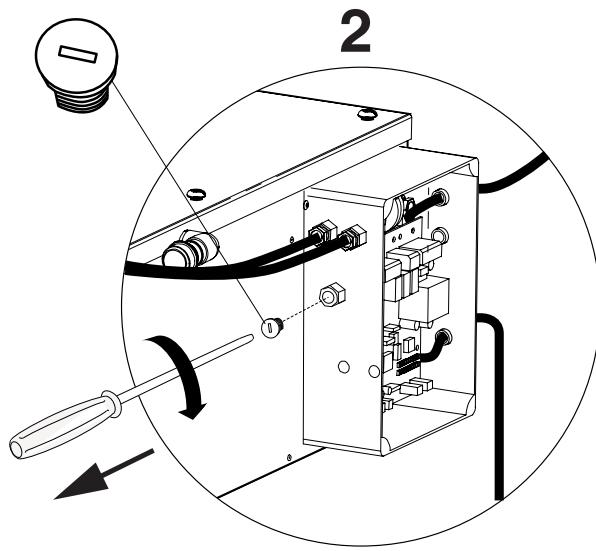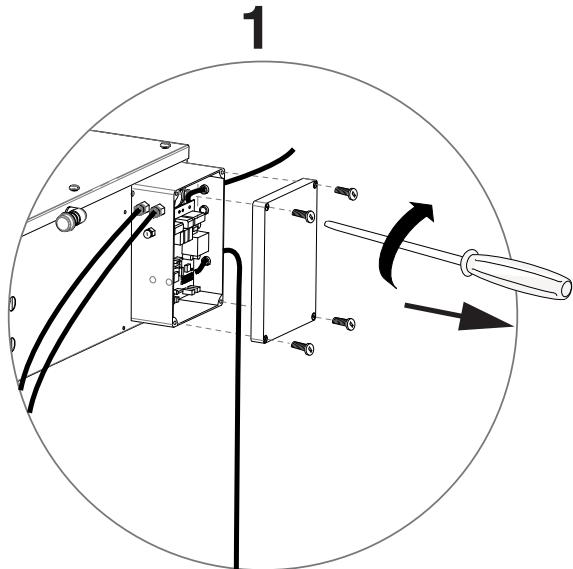
Use

Appliance is automatically managed by an electronic control system. Appliance can automatically choose the most suitable operating mode, depending on the outside temperature.
When the appliance is switched on, both motors will run at a really slow speed for 3 minutes to allow repositioning of the by-pass valve. After, motors will start up again. **NOTE**: this is a normal system procedure and should not be perceived as a malfunction.

The appliance is wired to a special dedicated control panel, the functions of which are described further on.
This model can be used in combination with a Vortice preheater, which must be fitted and set up by the installer.
The minimum distance of the preheater from the appliance is 500 mm.

"Heat recovery" Function
Fig. 3
This kind of function is normally actived, except when:
- automatic functions: "No-Frost", "By-Pass" and "Post-ventilation" are active;
- the manual function: "By-Pass MAN" is active.
Stale air (B) is expelled outside by means of an outside duct (D) while, at the same time, renewed air (A) is also extracted from the outside. This renewed air is heated by the combined action of the air/air heat exchange. The renewed air enters into the room by the Cleaned air duct (C).

"No-Frost" Function
The function is activable if 2 minutes are left after Appliance turning On.
"No-Frost" function is automatically active when the Appliance check a too low External air temperature, for a certain time.
When the function is active:
- the message "No-Frost" appears on the display;
- User can not change ventilation Speeds;
- "Program" function is NOT enabled.
The main scope of the "No-Frost" function is to avoid appliance damaging, because of too low temperatures.
When the message "Alarm!" and "Lock!" appears on the display: it rapresent a "no-frost timeout".
This means that "No-Frost" procedure has proved insufficient and the appliance goes into protected mode for one hour, with the motors off, following which it will restart automatically.
NOTE: Restarting is automatic and don' t need User presence.

"By-Pass" Function
Fig. 3
This type of operation is automatically set and it is usefull to ventilate the apartment without heat transfer. With the bypass valve open, air can be extracted directly from inside (B), without passing through the heat exchanger. The flow of the introduced (C) air vented continues to pass through the heat exchanger which will no longer be effective.

"By-Pass air Temperature" rapresent the "Desidered air temperature": according to this, the Appliance activates/deactivates the bypass valve. User can select the "By-Pass air Temperature" into a range of temperatures:
from 15°C to 30°C. The preset "By-Pass air Temperature" value is 18°C (default).
NOTE: The "By-Pass" automatic function is deactivated when:
- External air temperature is less than 15°C;
- "No-Frost" function is active.

Example: Autumn case (sunny afternoon)
External air Temperature = 23°C;
Indoor air Temperature = 20°C;
Bypass air Temperature = 24°C.
Appliance extracts the External air (hot) without heat exchanging with the Indoor air (cold). In this way, thanks to environmental conditions, a "free heating" is provided.

Example: Spring case (morning)
External air Temperature = 16°C;
Indoor air Temperature = 20°C;
Bypass air Temperature = 18°C.
Appliance extracts the External air (cold) without heat exchanging with the Indoor air (hot). In this way, thanks to environmental conditions, a "free cooling" is provided.

"By-Pass" Valve check

A Valve check is performed:

1) When the appliance is switched	both motors will run at a really slow speed to allow repositioning of the by-pass valve. After, motors will return to normal speed.
2) After 24 h from the last By-Pass valve opening	Appliance forces a By-pass activating to check the effective position of the valve: - if the valve is opened, force the opening; - if the valve is closed, force the closing.

This is a normal system procedure and should not be perceived as a malfunction.

NOTES
- Every time, during By-Pass opening and closing (max 180 sec), Appliance automatically reduces fan-ventilators speeds to the 20%, in order to help the By-Pass valve movement.
- In case of Temperature sensors anomalies, By-Pass valve will stay preventively closed.

When the function is active, the message "By-Pass" appears on the display: see "Home Page" in the "Operation" and use ".

"Post-ventilation" Function
This kind of function is automatically activate after:

- every time Pre-Heater is turned off (if Pre-Heater installed)	both motor-fans active (about 3 minutes) to avoid overheating;
- every time you turn the Appliance off	indoor air is extracted at the max speed (about 2 minutes) to avoid condensate presence on the heat exchanger.

This is a normal system procedure and should not be perceived as a malfunction.

"Program" Function
Special mode of operation: manually enabled and allows the user to program weekly air speeds. In fact, it allows you to assign up to 6 time bands with different speeds, including stopping the equipment. When the function is active, the message "Progr." Appears on the display: see "Home Page" in the "Operation and Use" section. However, the speeds can be manually changed even at specified intervals: in this case the word "Prg" will flash for 30 minutes and after it will go back to the setted speed of the weekly time band. If in this 30 min any other function will change the speed, this 30 min timer will go back to 0.
For more details on setting the time slots and dates, see "PRG Crono" in the "Operation and Use" section. For details on how to activate / deactivate the function, see "Activating / deactivating Program" in the "Operation and Use" section.

"Holiday" Function
Special mode of operation: manually enabled and useful if the user leaves the room for a longer period of time.
Operation includes:
- fixed "30% less than the Minimum " speed (no other speeds, no OFF equipment);
- environment sensors not enabled (remote inputs not actived);
- bypass always closed.
When the mode is active, the message "Holiday" appears on the display: see "Home Page" in the "Operation and Use" section.
NOTE: Activating the Mode "Holiday" will be deactivate other product functionings/selections.
To re-activate other product functionings/selections, need to deactivate the Mode "Holiday" before.
For more details on how to activate / deactivate the function, see "Activating / deactivating Holiday" in the "Operation and Use".

"By-Pass MAN" Function
Special mode of operation: manually enabled and useful if you want to force air replacement without heat recovery.
The operating principle is the same as: "By-Pass" function.
NOTE: If manually enabled, the "By-Pass MAN" function will remain active for 12 h. After this period, the "By-Pass MAN" function will come back to: Not enabled.
NOTE: (In case of "By-Pass MAN" Enabled) However you can manually deactivate the function, setting "NO" on "By-Pass MAN Menu". After Deactivating, the operating principle will be come back the same of "By-Pass" function.
NOTE: In case of "No-Frost" function active, you can not manually activate the "By-Pass MAN" function.
When the function is active, the message "By-Pass" flashing appears on the display: see "Home Page" in the "Operation" and use ". For details on how to activate/deactivate the function, see "Activating/deactivating By-Pass MAN" in the paragraph "Operation and Use".

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"Quiet" Function
Special mode of operation: manually enabled and usefull if the user needs a certain period during the day where the heat recovery unit needs to emit low noises (For example during the night).

Outer Display (HMI)

User interface
The user interface is used by means of a graphic display and some keys as shown in the figure below.
The following operations can be performed through the user interface:
- Operating mode selection.
- Temperatures control.
- Alarms management.
- Speed adjustment.

Key and display backlighting remains active for about two minutes after the last key is pressed. When backlighting is off, you can switch it back on again without activating any function by pressing any key.

I	Function 1 recall key.
II	Function 2 recall key.
X	Key to exit from the displayed page.
▲	Key to: increase speed / move to the upper line or value.
▼	Key to: decrease speed / move to the lower line or value.
✓	Confirmation key (OK).

| I	Display	▲
II		▼
X		✓

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"HOME" page

When turned on, the message "WAIT ..." appears on the screen. It then goes to the "HOME" page.

This page allows you to view various data useful for controlling equipment. The data and information that the page can display are indicated in the figures and table below.

The figure below represents the areas of the display:

1	• Normally blank display area.
2	• "Bypass", in case its function is active; • "No-Frost", in case its function is active.
3	• Equipment operating status display area: "Off" + Speed: "1", "2", "3" e "Boost". • In the event of alarm: - with the unit lock: "Alarm!" Message alternating with "Block!"; - without the unit lock: "Alarm!" Message. See "Alarms" in the "Operation and Use" section. • "Holiday", in case its function is active.
4	• "Ext' Value of the outside air temperature (Example: Ext +5°C) after pushing the button [II]. See Fig. 3, letter (A)
5	• "Int' Value of the indoor air temperature (Example: Ext +22°C) after pushing the button [II]. See Fig. 3, letter (B) • "Progr." if weekly programming has been activated, after pushing the button [I] • The message "Prog."flashing will appear if during weekly programming the user manually varies the speed. • "Quiet" if the QUIET function has been activated in the Installer "Use Menu". • The word "Man" is displayed when programming is not activated.
6	• "Exh' Value of the exhaust air temperature (Example: Ext +18°C) after pushing the button [II]. See Fig. 3, letter (D) • Date (example 03/04/2017), after pushing the button [I].
7	• Time of day (for example 12:30), after pushing the button [I].

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Some examples of the HOME screen are shown below.

	Bypass		
1			
Ext -3°C	Int 22°C		
Ext 5°C	Sup 18°C		

	NoFrost		
2			
27/03/2022	12:30		

Alarm!			
27/03/2022	12:30		

Equipment start-up/shut-down

If the equipment is switched off, the "HOME" page will display "Off" at the centre.

To access equipment: from the "HOME" page, press the [▲] key.

To switch off the equipment: from the "HOME" page, press the [▼], until the following text appears: "Off". **ATTENTION**: After selecting the Appliance off, indoor air is extracted at the max speed (about 2 minutes) to avoid condensate presence on the heat exchanger. During this period, "Off" still be displayed and the User can not apply modifications.

1		

OFF		

Selecting speed

To increase the speed: from the "HOME" page, press the [▲] key until one of the following texts is displayed: "1", "2", "3" or "Boost". Each text displayed corresponds to a different fan speed and thus a different air flow rate.

To decrease the speed: from the "HOME" page, press the [▼], key until is displayed: "1".

2		

BOOST		

"Main menu" page

Press the [✓], , button from the "HOME" page to go to the "Main Menu" page.

From this new screen you can manage:
• Operations menu (allows some devices or some functions to be activated).
• Alarms (enables verification and management of any alarms).
• Configuration (enables date and time configuration).
• Info (enables viewing of software versions).

Use the [▲] and [▼] keys to move from one line to another. The selected line is highlighted in black.

Use the [✓] key to go to the highlighted page.

Use the [X]: key: To exit from a page without saving.

MAIN MENU
USE MENU
ALARM
SETUP
INFO

MAIN MENU
USE MENU
ALARM
SETUP
INFO

⊙ **Warning:**
After 2 minutes and no keys being pressed, the display returns to the "Home" page without saving any changes.

"Operations menu" page

To access the User menu or the Installer menu: from the "Main menu," select the line "Operations menu" and press the [✔]. key. You will be asked to enter a password to access the User menu or Installer menu.

The credentials for access to them are as follows:

- • 013 USER
- • 023 INSTALLER

User "Operations menu" page

Enter the password as shown in the figure to access the user "Operations menu."

From this new page you can manage:

- • By-pass MAN   12 h forced activation of the function: "By-pass";
- • Holiday   activating "Holiday" function: appliance always operating at Min speed;
- • Act Prog   activating programmed function: during pre-set intervals

Use keys [▲] and [▼] to move from one row to another. The selected row is highlighted in negative contrast.

Use the key [✔] to activate or deactivate the function or device highlighted.

Use key [X] to exit from the current screen and return to the previous screen without saving any changes.
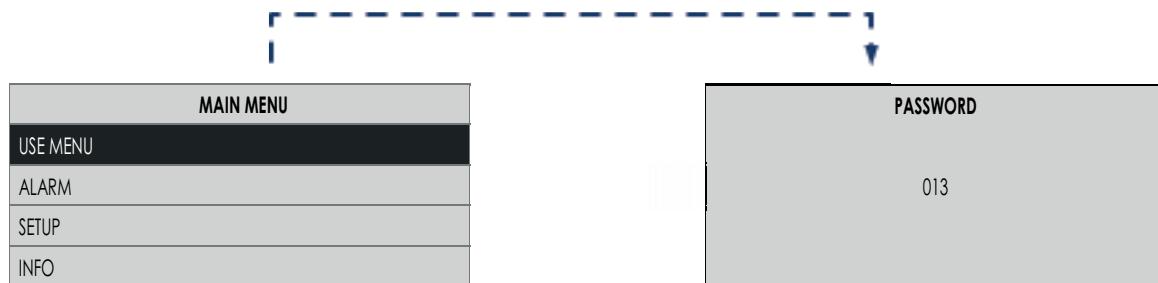
MAIN MENU
USE MENU
ALARM
SETUP
INFO

PASSWORD
013

⊙ **Warning:**

After 2 minutes with no keys being pressed, the display returns to the "Home" page without saving any changes.

USE MENU	[✔]
BYPASS MAN	NO
HOLIDAY	NO
ACT PROG	NO

[✔] YES
[✔] [✔]
NO
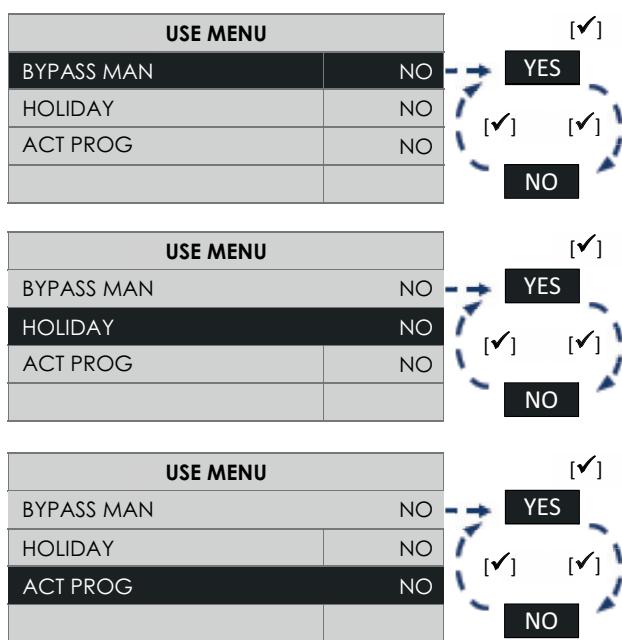
Activating / deactivating "Bypass Man" Function

Use keys [▲] and [▼] to select "BYPASS MAN": push the botton [✔]:

- select [YES] to activate;
- select [NO] to deactivate.

USE MENU	[✔]
BYPASS MAN	NO
HOLIDAY	NO
ACT PROG	NO

[✔] YES
[✔] [✔]
NO

Activating / deactivating "Holiday" Function

Use keys [▲] and [▼] to select "HOLIDAY": push the botton [✔]:

- select [YES] to activate;
- select [NO] to deactivate.

USE MENU	[✔]
BYPASS MAN	NO
HOLIDAY	NO
ACT PROG	NO

[✔] YES
[✔] [✔]
NO

Activating / deactivating "Act Prog" Function

NOTE: before activating it is necessary to make sure that the "Vacation" mode is deactivated.

Use keys [▲] and [▼] to select "ACT PROG": push the botton [✔]:

- select [YES] to activate;
- select [NO] to deactivate.

Installer "Operations menu" page
Enter the password as shown in the figure to access the installer "Operations menu."

MAIN MENU
USE MENU
ALARM
SETUP
INFO

PASSWORD
023

TECHNIC.
SETP BYP.
LIFE TIME
RESET FIL
MBUS ID
SPEED
LANGUAGE
NO FROST
QUIET
QUIET PR.
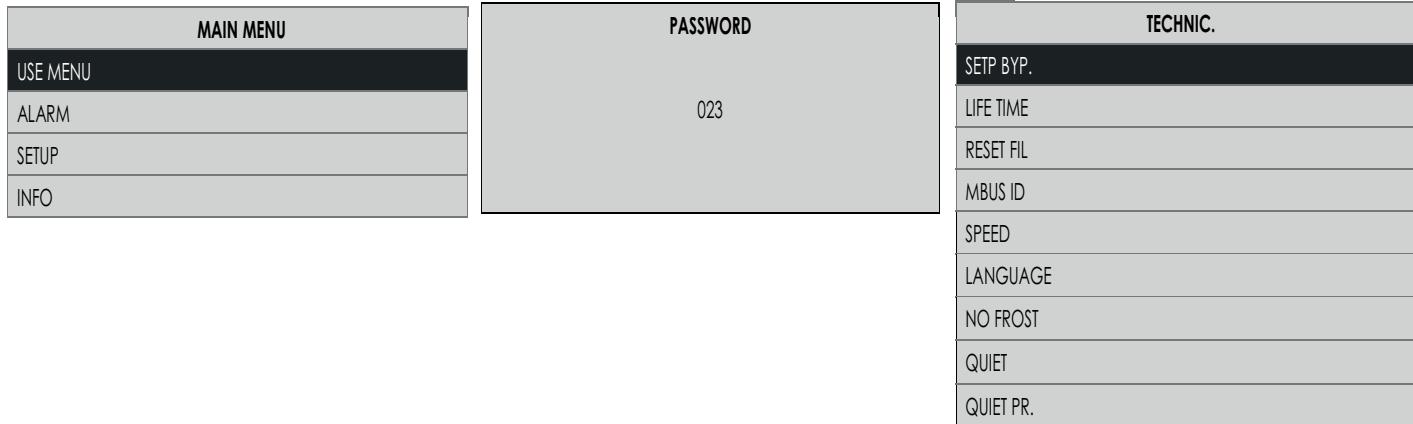
From this new page you can manage:

• Setp Byp.
"By-pass" function activation depends on the "Setp Byp" temperature. "Setp Byp" is selectable into a variable range between: 15°C & 30°C (default value = 18°C).

SETP BYP.	[▲]
018	[▼]
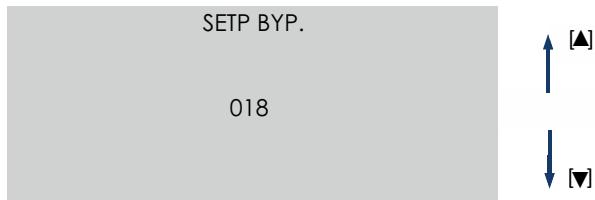
• Lifetime
Is shown the duration of Filters Pre-Alarm.
(See "Pre -alarm: Filters checking"):
- after 3 or 6 or 12 months;

LIFE TIME	[▲]
003	[▼]

• Reset Fil
In case of Filters replacing, you need to reset the Filters Timer manually:
- select [YES] to reset;
- select [NO] to not resect.

RESET FIL	[▲]
YES	[▼]
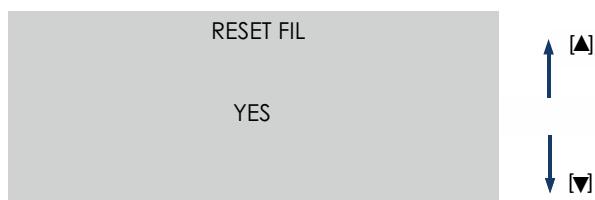
• Modbus ID
In the presence of another HMI user interface installed in remote, you can configure an address other than that set by default which is "160" (for code 12106) or "1" (for code 12107). (page 39)

MODBUS ID	[▲]
160	[▼]
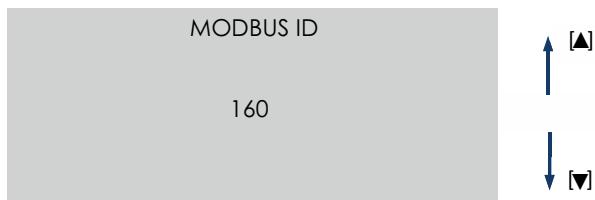
• Speed
See Fig. 3
From "Installer menu" page, selecting "Speed", you can join to "Setting speed". Here, you can set motorfan speeds:
(C) Clean air outlet inside the room;
**(D)** Stale air outlet to outside.
For more details on setting "Speed", See:
"Setting Speed Menu"

| SPEED	[▲]
VSUP1	
VEXH1 ←	
VSUP2	
VEXH2	[▼]
VSUP3	
VEXH3	
VSUP B	
VEXH B	

15
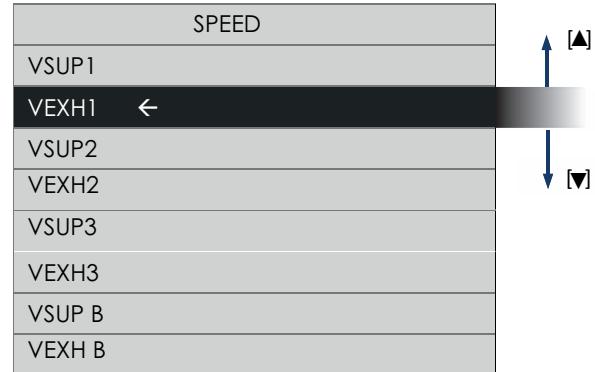
• No Frost
From "Installer menu" page, selecting "No Frost", you can join to "Setting No Frost Menu". From this new page, is now possible to choose desidered "No Frost functions" during the "No Frost" process. For more details on setting "No Frost functions", See: "Setting No Frost Menu".

NO FROST	
UN-BALAN.	
HEATER ←	
HEAT FORC	

[▲]
[▼]
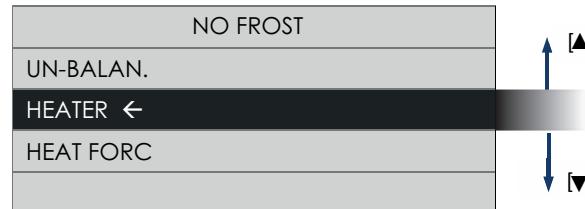
• Language
Language selection
NOTE: after selecting the desired language, it is necessary to remove and restore the power supply.

LANGUAGE
ENG

[▲]
[▼]
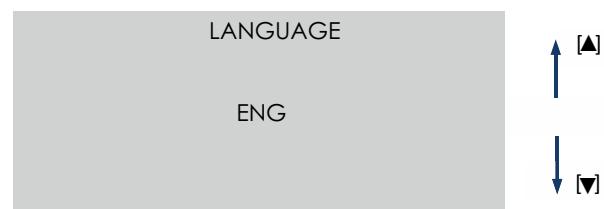
• Quiet
Select "Quiet" from the Installer "Use menu" to access the menu where you can turn the Quiet function on/off. The default setting is "No".

QUIET
NO

[▲]
[▼]

• Quiet Pr.
Select "Quiet Pr." from the Installer "Use menu" to access the menu where you can set the time interval during which the machine will operate at minimum speed. The default start and end time values are 20:00 and 9:00 because the function has been designed for night use, but the interval can be set to any time.

QUIET PR.	
20:00 ←	
09:00	

[▲]
[▼]
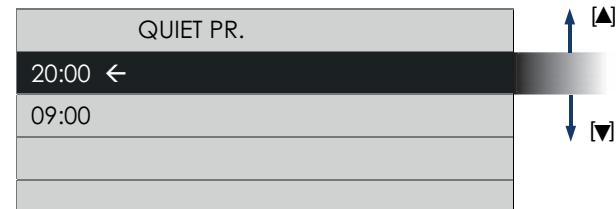
"Modbus ID" page

If more than one HMI control is installed, it is necessary to set the Modbus of each external display like described here below.
1. Change the "MBUS ID" so that it is different than 1 and also different from the value of other HMI controls: insert for example the number 2 and press √.
2. Disconnect the HRU from the power grid.
3. Connect the additional HMI control.
4. Reconnect the HRU to the power grid.
5. Wait for about 30sec - 1min: the led with the symbol "√" will start flashing.
6. At the end of the process the HRU will go back to normal functioning.
7. Repeat points from 2 to 6 for each HMI control, remember always to set a different MBUS ID for each HMI.

NOTA: after the first start up with the second HMI control connected it is necesary to disconnect the equipment from the power grid and then connect it back.

"No Frost menu" page

Select "No Frost" from the Installer "Use menu" to access the "No Frost Menu."
Press the [✔] key and the following will appear:

NO FROST
UN-BALAN.
HEATER ←
HEAT FORC

[▲]
[▼]
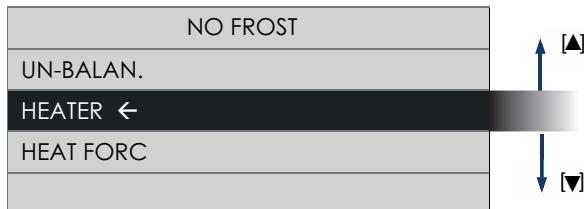
Factory default conditions	
UN-BALAN.	NO (disabled)
HEATER	YES (enabled)

From this page, you can select the "No Frost" functions that you wish to Activate/Deactivate:

- **Un-Balan.:** when the outside temperature is too cold, the fans are automatically activated according to pre-set programs if this function is enabled. The device will attempt different ventilation procedures that make use of the Extracted (hot) air temperature to self-heat.
CAUTION: The default device setting is with the "Un-Balan." function: Disabled (factory default conditions) To Activate/Deactivate this function, see: "Activate/Deactivate the Un-Balan. Function".

- **Heater:** (only where combined with the Pre-Heater accessory)
when the outside temperature is too cold, the electric heater (Pre-heater) is activated for a certain amount of time if this function is enabled. The device will attempt to heat up making use of the electric coil installed on the suction duct (See Figure 2, letter (C)).
CAUTION: The default device setting is with the "Heater" function: Enabled (factory default conditions).
CAUTION: If the "Heater" function is Deactivated, the electric heater (Pre-Heater) will not activate, even if wired.
CAUTION: If the electric heater (Pre-Heater) is not installed, the Active status of the "Heater" function will produce a fault on "No Frost" function behaviour.

- **Heat Forc:** (only where combined with the Pre-Heater accessory)
upon electric heater (Pre-Heater) installation, a "correct operation test" can be performed on the heater itself, forcing its activation.
If "Heat Forc" is Activated, the device will activate the electric heater for 15 seconds; after which, the "Heat Forc" function will Deactivate.

NO FROST
UN-BALAN. ←
HEATER
HEAT FORC

[▲]
[▼]

YES
[✔] [✔]
NO
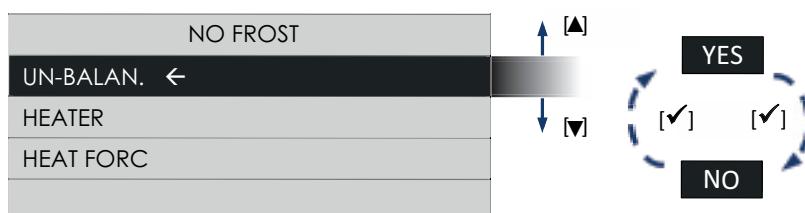
Activate/deactivate "Un-balan." function
With the keys [▲] and [▼] select "UN-BALAN.":
press the [✔] key:

- to activate choose [YES];
- to deactivate choose [NO].

NO FROST
UN-BALAN.
HEATER ←
HEAT FORC

[▲]
[▼]

YES
[✔] [✔]
NO
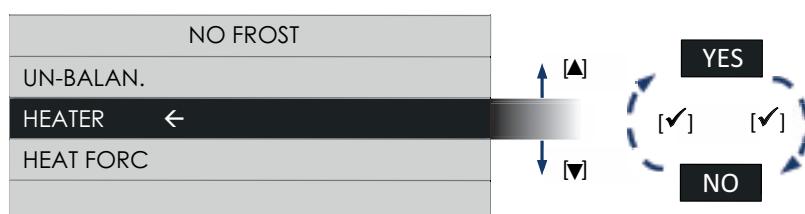
Activate/deactivate "Heater" function.
With the keys [▲] and [▼] select "HEATER":
press the [✔] key:

- to activate choose [YES];
- to deactivate choose [NO].

NO FROST
UN-BALAN.
HEATER
HEAT FORC ←

[▲]
[▼]

YES
[✔] [✔]
NO

Activate/deactivate "Heat Forc" function.
With the keys [▲] and [▼] select "HEAT FORC":
press the [✔] key:

- to activate choose [YES];
- to deactivate choose [NO].

"Speed Adjustment Menu" page
Select "Speed" from the Installer "Use menu" to access the speed adjustment menu.
Pressing the [✓] key will display:

SPEED
VSUP1
VEXH1
VSUP2
VEXH2
VSUP3
VEXH3
VSUPB
VEXHB

[▲]

[▼]

035

[▲]

[▼]
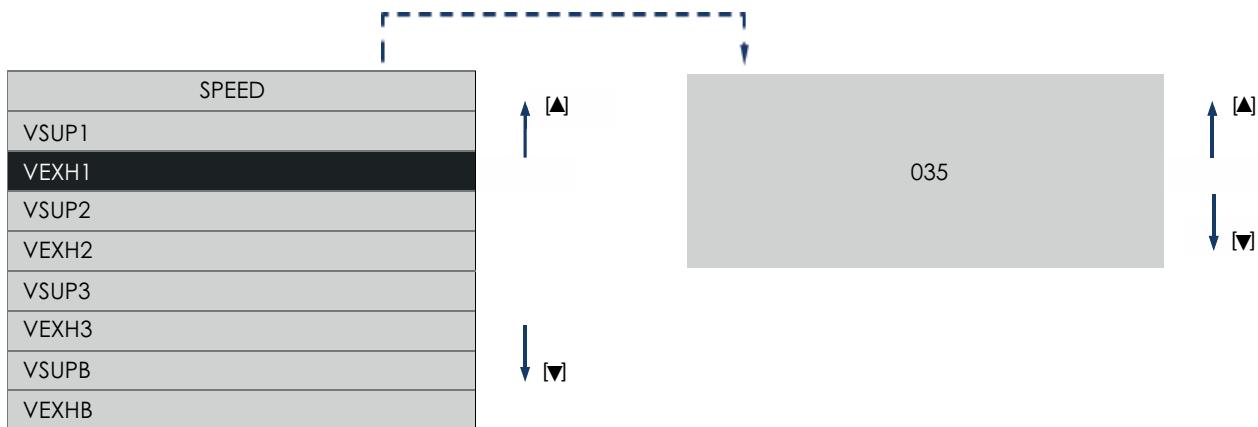
Motor speed can be adjusted depending on the system flow rates, selecting:

VSUP1 = Clean air outlet inside the room (minimum speed '1')   **VEXH1** = Stale air outlet to outside.
VSUP2 = Clean air outlet inside the room (speed '2')   **VEXH2** = Stale air outlet to outside.
VSUP3 = Clean air outlet inside the room (speed '3')   **VEXH3** = Stale air outlet to outside.
VSUPB = Clean air outlet inside the room (maximum speed - 'Boost')   **VEXHB** = Stale air outlet to outside.
Clean air outlet inside the room: see A fig. 2 / Stale air outlet to outside: see D fig.2.

"Alarms" page
Access the "Alarm" page only if the machine detects one of the problems detailed below:
• Alarm: Supply air temperature <5°C   occurs with machine block (manual reset).
• Alarm: No Frost - Wait an hour   occurs with machine block (manual reset).
• Alarm : Ext Probe fault   occurs without blocking the machine (No Frost, Bypass: deactivated).
• Alarm : Int Probe fault   occurs without blocking the machine. ("By-pass": deactivated).
• Alarm : Exh Probe fault   occurs without blocking the machine. (No Frost: deactivated).

Alarm with machine block: the messages "Alarm!" and "Block!" appear alternately on the "HOME" page.
Alarm without blocking the machine: on the "HOME" page, the message "Alarm!" Appears.

In the presence of alarms: select the "ALARM" line on the "MAIN MENU" page and press the [✓] key.
The dialogue window opens with the instructions on how to resolve the problem.

Ⓘ **Warning:**
After 2 minutes with no keys being pressed, the display returns to the "Home" page without saving any changes.

| MAIN MENU |
|---|
| USE MENU |
| ALARM |
| SETUP |
| INFO |

[▲]

[✓]

[▼]
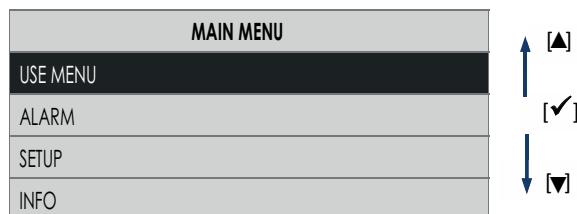
Pre-alarm: "Filters checking"
After the preset time has elapsed, "Alarm" appears in "HOME" and the note "Check clean filter" in the "Alarms" page.
To replace the filters, follow the instructions in "Maintenance and Cleaning".
NOTE: If the filters are replaced during the Pre-alarm, it is possible to reset the alarm by simply accessing the specific "Filter reset" function. in the "Installer use" menu.
Pressing the [✓] key will display:

Alarm
Filters

Filters
Check
clean
filter

[▲]
[▼]
[✓] [✓]
SI
NO
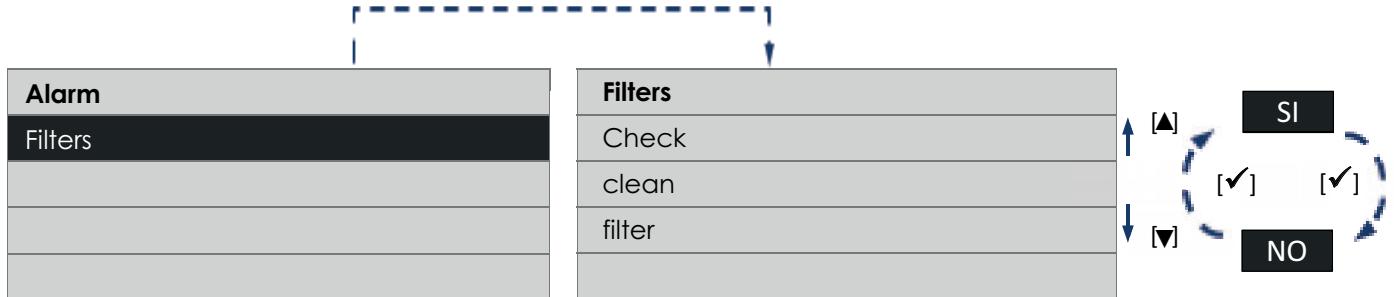
Alarm: "Filters replacing"
After the preset time has elapsed, "Alarm" appears in "HOME" and the note "Replace Filter. Reset?" in the "Alarms" page.
To replace the filters, follow the instructions in "Maintenance and Cleaning".
Pressing the [✓] key will display:

| Alarm |
|---|
| Filters |
| |
| |
| |

Filters
Replace
filter
Reset?

[▲]
[▼]
[✓] [✓]
SI
NO
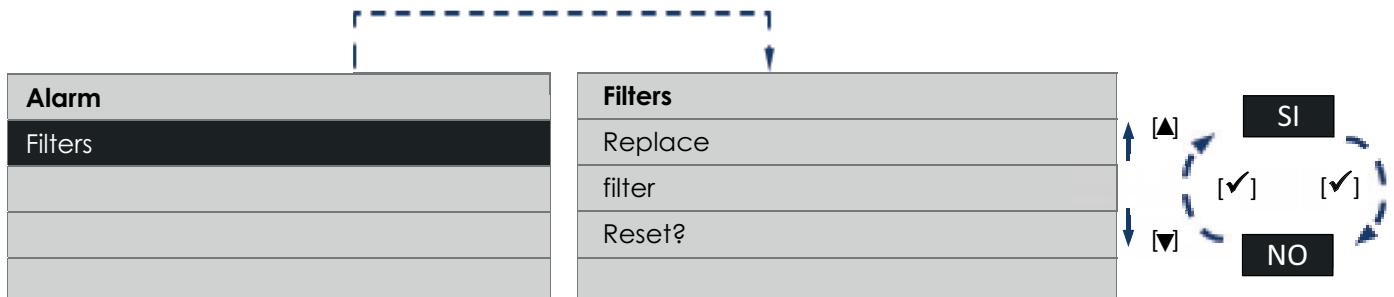
NOTE Resetting filters timer (See: Operation and Use: "Installer operation menu", "Reset fil") is resetted also the counter.

Alarm: No Frost - Wait one hour
The device is provided with temperature probes which measure air temperature.
If temperatures are too low, "No Frost", "Alarm!" "Block!" appear on the "HOME" page and the following note appears on the "Alarm" page: "Wait 1 hour". Press the [✔] appare:

| Alarms		No frost			
No Frost		Wait		[▲]	SI
		1 Hour			[✔] [✔]
				[▼]	NO
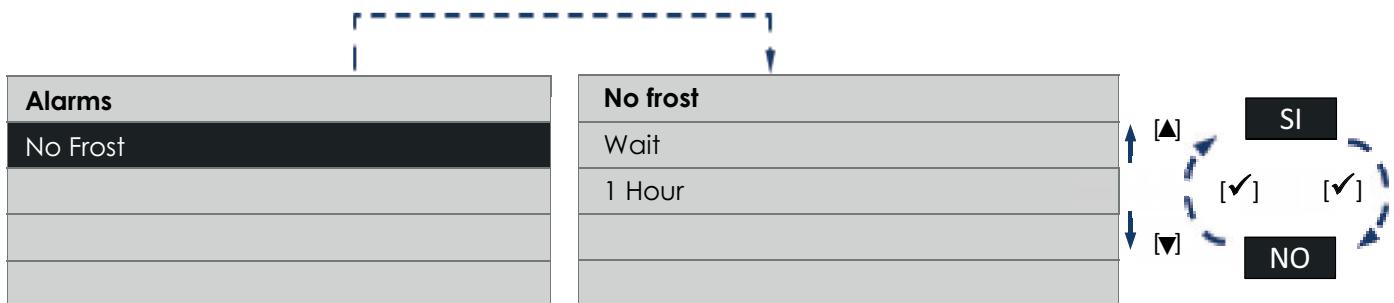
Alarm: "Ext Probe fault"
Equipment is provided with a temperature probe which measures the temperature of air incoming from the outside. The probe fault causes the message "Alarm!" to appear on the "HOME" page and the following note appears on the "Alarms" page: "Ext Probe call service". Press the [ ] key and the following will appear:

ALARM			
Ext probe		[▲]	YES
Call			[✔] [✔]
Service	NO		
		[▼]	NO
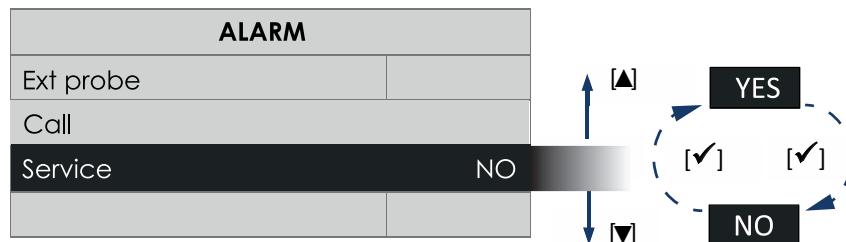
Call Customer service to request assistance from technical personnel.

Alarm: Int Probe fault
The device is provided with a temperature probe which measures the temperature of air being released inside. The probe fault causes the message "Alarm!" to appear on the "HOME" page and the following note appears on the "ALARM" page: "Int probe Call Service". Press the [✔] key to access the "ALARM' menu and the following will appear:

ALARM			
Int probe		[▲]	YES
Call			[✔] [✔]
Service	NO		
		[▼]	NO
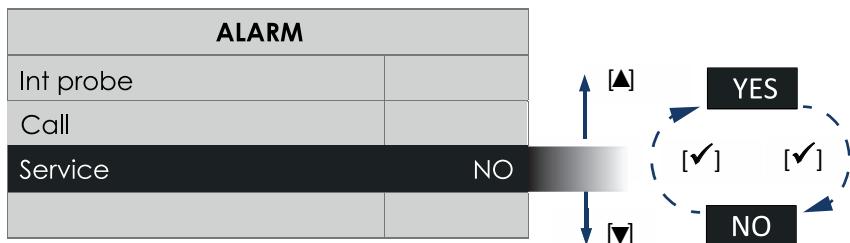
Alarm: Exh Probe fault
The device is provided with a temperature probe which measures the temperature of air expelled from the inside.
Press the [✔] key to access the "ALARM' menu and the following will appear:
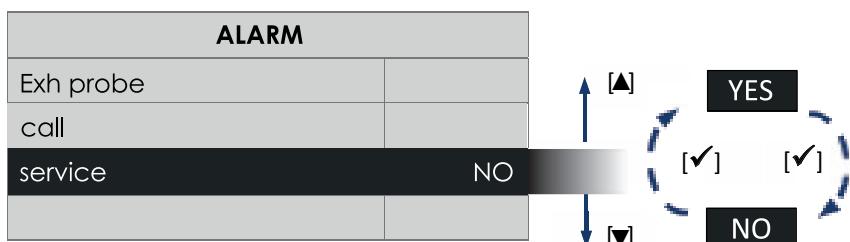
ALARM			
Exh probe		[▲]	YES
call			[✔] [✔]
service	NO		
		[▼]	NO

Call Customer service to request assistance from technical personnel.

"Configuration" page
Go to the "Configuration" row on the "Main menu" and press the key [✓] to go to a new page as shown in the figures below.

MAIN MENU
USE MENU
ALARM
SETUP
INFO

| SETUP |
|---|
| **DATE&HOUR** |
| PROGRAM |
| |
| |
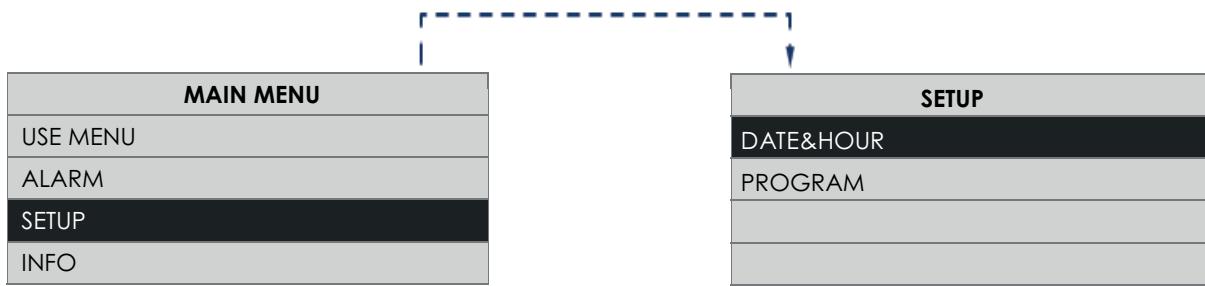
From this new page you can manage:
- Date & Time;
- Program.

"Date & Time" page
You can set the day of the week and the current time on this page. Go to the "Date & Time" row on the "Configuration" page and press the key [✓] to go to a new page as shown in the figures below.

SETUP
DATE&HOUR
PROGRAM

| DATE&HOUR |
|---|
| **THURSDAY** |
| dd: 03 |
| mm: 04 |
| yy: 17 |
| hh: 11 |
| mm: 22 |

[▲] YES
[✓] [✓]
[▼] NO
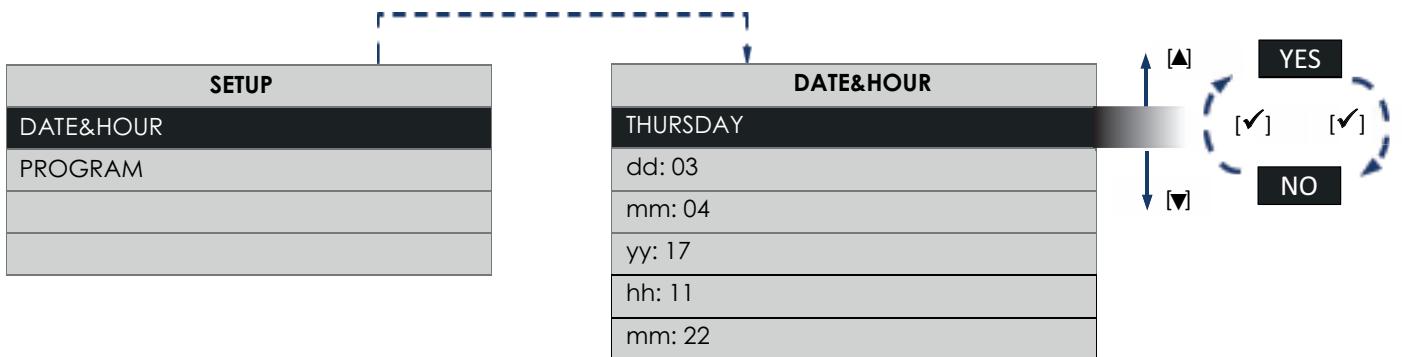
Use the keys [▲] and [▼] to move within the line. Press the key [✓] to enable editing of the selected item.
Press key [✓] again to exit from the edit page and return to the "Date & Time" page.
Press the [X] key to return to the "Configuration" page.

"Program" page
You can set air speed for six different time slots from this page.
Go to the "Programming" line on the "Configuration" page and press the [✓] key to go to a new page as shown in the figures below. Press the [▲] or [▼] key multiple times to scroll all the days from Monday to Sunday up to the pre-set intervals Monday-Friday, Saturday-Sunday.

SETUP
DATE&HOUR
PROGRAM

PROGRAM
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Mon ÷ Fri
Sat ÷ Sun
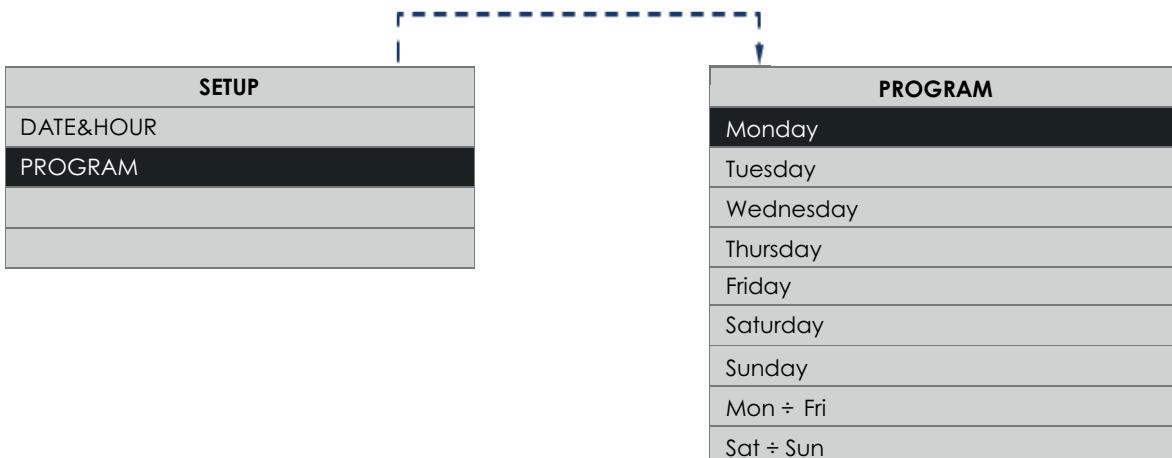
ENGLISH

Press the [✔] key to confirm:

PROGRAM
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Mon ÷ Fri
Sat ÷ Sun

Sat ÷ Sun
Time slot 1
Time slot 2
Time slot 3
Time slot 4
Time slot 5
Time slot 6

Sat ÷ Sun   Time slot 1
00:00
07:30
OFF
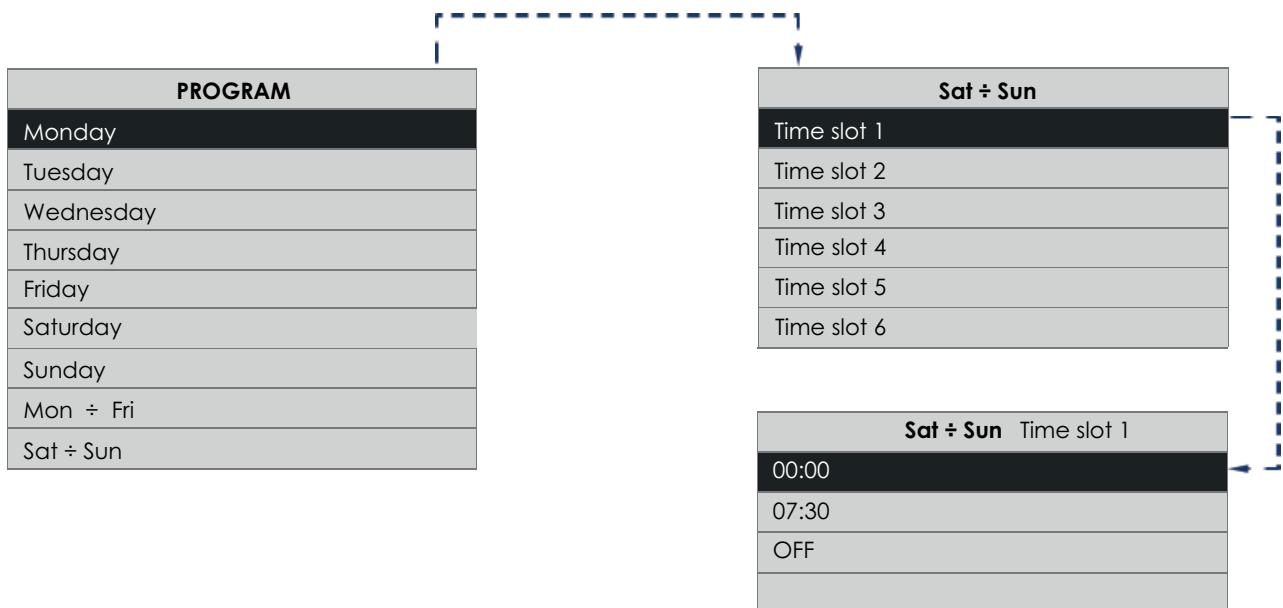
Press the [✔] key to confirm:
The "Program" page allows you to assign up to 6 time intervals with different speeds, including equipment shut-down. Press the [▲] or [▼] key multiple times to scroll all the intervals.

NOTA
The time bands of MON / FRI or SAT / SUN overwrite the single days, during the setting change first the general time bands, and then set the daily ones. If they are subsequently changed again, the LUN / VEN and SAB / DOM bands will overwrite the daily ones.

NOTE
At the specified intervals, however, the speeds can be changed manually in the "HOME" page, in that case: the message "Prg" will flash for 30 minutes after which it will return to work at the speed set in the hourly programming, if during the 30 min any other function that modifies the speed intervenes, the 30 min count is reset.

"Info" page

Go to the "Info" line on the "Main menu" and press the [✔] key to go to a new page as shown in the figures below.
The "Info" page contains the following information from top to bottom:
• User interface firmware version
• Electronic control board firmware version

MAIN MENU
USE MENU
ALARM
SETUP
INFO

S: 0.9   2.5
M: 0.9 2.5
CFG: 2.5
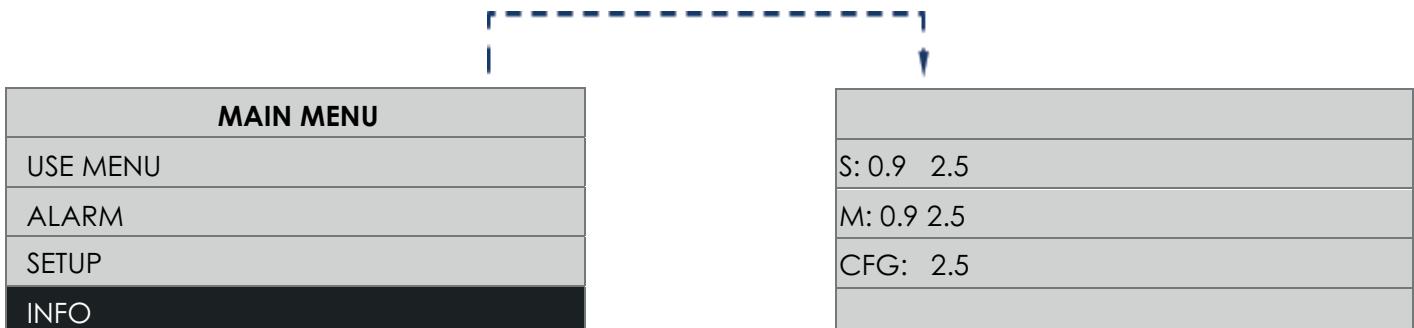
Maintenance / cleaning

Before commencing any servicing operation, make sure that the appliance is disconnected from the electrical power supply. Dismantling and assembly are special maintenance operations and must be entrusted to professional technicians.

Filters

Recommended maintenance intervals:

because levels of air pollution depend typically on geographical location and are variable, the life of the filters will be similarly variable. With this general consideration in mind, the following filter maintenance intervals are recommended: Inspect filters: every 50/60 days; replacement of filters: after 3/24 months (depending on the value set by the installer) a pre-alarm message will appear on the display to remind the user of the need for the filters to be replaced. The filters must be replaced within 2 months after this message appears; at the end of the 2 months, the filters clogged alarm (**Filt**) will be activated. When the error is reset (as described in "View alarm menu" paragraph), the counter will also be reset.

N.B. Failure to clean or replace filters can seriously affect system efficiency, causing: - increased pressure losses in the air circulation system and reduced airflow; - drop in system performance and comfort levels caused by pressure losses.

N.B. Clogged air filters are the most frequent cause of the appliance locking up: (**Filt**)

Removing the filters from Vort HRI Phantom models: fig 9
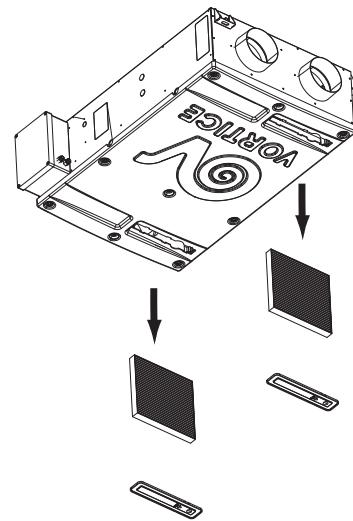
Heat exchanger

Checking and any cleaning of the exchanger must be carried out by professionally qualified personnel, preferably every 3 years. For cleaning, use a vacuum cleaner; for the H models the enthalpy exchanger can be cleaned using lukewarm water, not at high pressure, and a detergent; rinse well after washing.

Disposal

This product complies with Directive 2012/19/EU on the management of waste electrical and electronic equipment (WEEE).

The crossed-out wheeled bin symbol on the appliance indicates that, at the end of its life, the product should not be discarded together with household waste but must be taken to a separate collection point for electrical and electronic equipment. This will avoid negative effects on the environment and health, and will encourage correct treatment, disposal and recycling of the materials from which the product is made.

Contact the municipal authority for the location of this type of facility. Alternatively, the distributor is obliged to take back the appliance to be disposed of free of charge in exchange for the purchase of an equivalent appliance.

Error codes

Nome/ Name	Codice/ Code	Descrizione / Description / Description / Beschreibung / Descripción	
ErrRegProbe	Er01	**IT**: ntc indoor guasta **EN**: ntc indoor faulty **FR**: ntc intérieur défectueux	**DE**: ntc Innenraum defekt **ES**: ntc interior defectuoso
ErrOutdoorProbe	Er02	**IT**: ntc outdoor guasta **EN**: ntc outdoor faulty **FR**: ntc outdoor défectueux	**DE**: ntc outdoor fehlerhaft **ES**: ntc exterior defectuoso
ErrSkwProbe	Er03	**IT**: ntc LCD guasta **EN**: ntc LCD faulty **FR**: LCD ntc défectueux	**DE**: ntc LCD fehlerhaft **ES**: LCD ntc defectuoso
ErrExaustProbe	Er04	**IT**: ntc exhaust guasta **EN**: ntc exhaust faulty **FR**: échappement ntc défectueux	**DE**: ntc exhaust faulty **ES**: escape ntc defectuoso
ErrSupplyProbe	Er05	**IT**: ntc suply guasta **EN**: ntc suply faulty **FR**:ntc suffisamment cassé	**DE**: ntc suply kaputt **ES**: ntc suply roto
KeyboardAlarm	Er06	**IT:** pannello LCD non presente (e parametro selezionato attivo) **EN:** LCD panel not present (and selected parameter active) **FR:** Panneau LCD absent (et paramètre sélectionné actif)	**DE:** LCD-Panel nicht vorhanden (und ausgewählter Parameter aktiv) **ES:** Panel LCD no presente (y parámetro seleccionado activo)
Heater_Alarm	Er07	**IT:** errore pre-heater non funzionante o non presente **EN:** pre-heater error not working or not present **FR:** erreur de préchauffage ne fonctionne pas ou n'est pas présente	**DE:** Vorheizfehler funktioniert nicht oder ist nicht vorhanden **ES:** error de precalentador no funciona o no está presente
HighTempOutdoor	Er08	**IT**: temperatura outdoor >45° **EN**: outdoor temperature >45° **FR**: température extérieure >45°	**DE:** Außentemperatur >45° **ES**: temperatura exterior >45°
HighTemoInlet	Er09	**IT**: temperatura inlet >45° **EN**: inlet temperature >45° **FR**: température d'entrée >45°	**DE:** Einlasstemperatur >45° **ES**: temperatura de entrada >45°
Filters_Alarm	Er10	**IT**: filtri da sostituire **EN**: replace filters **FR**: remplacer les filtres	**DE:** Filter ersetzen **ES**: reemplazar filtros
Parameter_Alarm	Er11	**IT**: parametri non caricati **EN**: parameters not loaded **FR**: paramètres non chargés	**DE**: Parameter nicht geladen **ES**: parámetros no cargados

GARANZIA CONVENZIONALE - ITALIA

1. DIRITTI DEI CONSUMATORI

1.1 Il consumatore dispone per legge, a titolo gratuito, di rimedi per i difetti di conformità dei prodotti nei confronti del venditore che non sono pregiudicati dalla presente garanzia convenzionale aggiuntiva del produttore.
1.2 La presente garanzia convenzionale offerta da VORTICE S.p.A., con sede in Strada Cerca 2, Frazione di Zoate, 20067, Tribiano (MI) non pregiudica, pertanto, i diritti dei consumatori che sono previsti dalla Direttiva (UE) 2019/771 (c.d. "direttiva garanzia") e dalla relativa legislazione nazionale di attuazione e recepimento nei paesi membri della UE (in Italia v. Codice del Consumo D.lgs. 206/2005).

2. DURATA DELLA GARANZIA CONVENZIONALE

2.1 VORTICE S.p.A. offre la presente garanzia convenzionale su tutti i propri prodotti per il periodo di 2 anni.
2.2 Per i soli prodotti appartenenti alla famiglia Nordik HVLS Superblade, la garanzia convenzionale offerta da VORTICE S.p.A. ha durata di 5 anni per le parti meccaniche ed il motore e di 3 anni per l'inverter.
2.3 La garanzia convenzionale decorre, in tutti i casi previsti, dalla data di acquisto dei prodotti che deve essere comprovata dall'acquirente per mezzo di idoneo documento fiscale rilasciato dal venditore (scontrino o fattura), che deve indicare la data di acquisto ed il modello di prodotto acquistato.

3. CONDIZIONI DELLA GARANZIA CONVENZIONALE - ESCLUSIONI

3.1 Nel periodo di garanzia previsto, VORTICE S.p.A. si impegna, attraverso la propria rete di assistenza e dopo aver effettuato le opportune valutazioni tecniche, a riparare o a sostituire il prodotto o le parti del prodotto stesso che risultino affette da difetti originari di fabbricazione. I rimedi della sostituzione o della riparazione sono posti in essere senza spese per il soggetto qualificabile come Consumatore a norma di legge.
3.2 Sono esclusi dalla garanzia convenzionale tutti i difetti e/o i guasti derivanti da:
a) normale usura del prodotto o dei componenti del prodotto medesimo;
b) utilizzo non corretto o improprio del prodotto, in difformità rispetto alle istruzioni ed alle avvertenze fornite da VORTICE S.p.A. unitamente al prodotto medesimo;
c) installazione del prodotto in difformità rispetto alle istruzioni fornite da VORTICE S.p.A. o comunque in difformità rispetto alla regola dell'arte vigente in materia di istallazione di prodotti elettrici;
d) errato allacciamento alla rete di alimentazione elettrica o da tensione di alimentazione diversa da quella prevista per l'apparecchio, ovvero diversa dal limite stabilito dalla norma CEI (+/- 10% del valore nominale);
e) manutenzione errata e/o carente e/o effettuata in difformità rispetto alle istruzioni fornite da VORTICE S.p.A.;
f) manutenzione e/o altri interventi effettuati da personale non abilitato o da soggetti non autorizzati da VORTICE S.p.A.;
g) guasti derivanti da errate condizioni di trasporto o di magazzinaggio del prodotto non imputabili a VORTICE S.p.A.;
h) modifica del prodotto da parte di soggetto diverso da VORTICE S.p.A. o non espressamente autorizzato per iscritto da quest'ultimo.

4. PROCEDURA DI VALIDAZIONE DELLA GARANZIA CONVENZIONALE - INTERVENTI

4.1 Per fare valere la garanzia convenzionale il consumatore dovrà inviare il documento fiscale comprovante la data di acquisto unitamente alla presente pagina, contenente l'indicazione del numero di matricola del prodotto, agli indirizzi indicati nel successivo paragrafo 4.2.
4.2 Modalità di esecuzione degli interventi e indirizzi e-mail di contatto:
- per prodotti ATEX: gli interventi saranno eseguiti presso la Sede VORTICE S.p.A; scrivere un'e-mail all'indirizzo postvendita@vortice.it o contattare il numero 0290699395;
- per i prodotti Climatizzazione: gli interventi saranno eseguiti presso il domicilio del cliente per i prodotti che necessitano di installazione e per quelli che non sono facilmente trasportabili, oppure in tutti gli altri casi presso uno dei Centri di Assistenza Tecnica autorizzati da VORTICE S.p.A.; scrivere un'e-mail all'indirizzo postvendita@vortice.it o contattare il numero 0290699395;
- per tutti gli altri prodotti: gli interventi saranno eseguiti presso uno dei Centri di Assistenza Tecnica autorizzati da VORTICE S.p.A., identificabili contattando il numero verde 800.555.777.
La prestazione eseguita in garanzia non prolunga il periodo di validità della garanzia stessa. Pertanto, in caso di sostituzione del prodotto o di un suo componente, sul bene o sul singolo componente fornito in sostituzione non decorre un nuovo periodo di garanzia a partire dal momento dell'effettuazione dell'intervento, in quanto si deve tener conto esclusivamente della data di acquisto del prodotto originario.

5. ESTENSIONE TERRITORIALE

La presente garanzia è valida su tutto il territorio italiano.

CONF.		COLL.

WARRANTY - OTHER COUNTRIES

The consumer has by law, free of charge, the legal guarantee of conformity with the seller, as described in Directive (EU) 2019/771 in force since January 1, 2022. In EU member countries also refer to local regulations.

5.199.084.214

PAÍSES DE AMÉRICA LATINA
GARANTÍA ESTÁNDAR VORTICE LATAM S.A.

1. DERECHOS DEL CONSUMIDOR

1.1 El consumidor dispone por ley, de forma gratuita, recursos por la falta de conformidad de los productos frente al vendedor que no se ven afectados por esta garantía estándar adicional del fabricante.

2. DURACIÓN DE LA GARANTÍA ESTÁNDAR

2.1 VORTICE LATAM S. A. ofrece esta garantía estándar por un período de 2 años.
2.2 Para productos de la familia Nordik HVLS Superblade, la garantía estándar ofrecida por VORTICE LATAM S.A. tiene una duración de 5 años para las partes mecánicas y motor y de 3 años para el inversor.
2.3 La garantía estándar comienza, en todos los casos previstos, a partir de la fecha de compra de los productos que deberá ser acreditada por el comprador mediante un documento fiscal emitido por el vendedor (recibo o factura), que debe indicar la fecha de compra y el modelo del producto adquirido.

3. CONDICIONES DE LA GARANTÍA ESTÁNDAR - EXCLUSIONES

3.1 Durante el período de garantía, VORTICE LATAM S. A. se compromete, a través de su red de asistencia y previa realización de las oportunas valoraciones técnicas, a reparar o reemplazar el producto o partes del producto que estén afectadas por defectos de fabricación originales. La sustitución o las reparaciones se realizan sin costo adicional para la persona calificada como consumidor según la ley.
3.2 Quedan excluidos de la garantía estándar todos los defectos y/o fallas derivados de:
   a) desgaste normal del producto o de sus componentes.
   b) uso incorrecto o inadecuado del producto, contrario a las instrucciones y advertencias proporcionadas por VORTICE LATAM S. A. junto con el producto mismo.
   c) instalación del producto no conforme a las instrucciones proporcionadas por VORTICE LATAM S.A. o en cualquier caso no conforme a la normativa vigente en instalación de productos eléctricos.
   d) conexión incorrecta a la red de alimentación eléctrica o a una tensión de alimentación diferente de la prevista para el equipo.
   e) mantenimiento incorrecto y/o deficiente y/o realizado de forma contraria a las instrucciones proporcionadas por VORTICE LATAM S. A.
   f) mantenimiento y/u otras intervenciones realizadas por personal no autorizado por VORTICE LATAM S. A.
   g) fallas derivadas de condiciones incorrectas de transporte o almacenamiento del producto no imputables a VORTICE LATAM S. A.
   h) modificación del producto por persona ajena a VORTICE S. p. A. o no autorizada expresamente por escrito por éste.

4. PROCEDIMIENTO DE VALIDACIÓN DE LA GARANTÍA ESTÁNDAR – REPARACIONES

4.1 Para hacer efectiva la garantía estándar, el consumidor deberá enviar el documento fiscal que acredite la fecha de compra junto con esta hoja a VORTICE LATAM S.A., indicando el número de serie del producto.
4.2 Las intervenciones se realizarán en uno de los Centros de Asistencia Técnica autorizados por VORTICE LATAM S.A. El servicio realizado bajo garantía no extiende el período de validez de la garantía. Por lo tanto, en caso de sustitución del producto o de uno de sus componentes, no se inicia un nuevo período de garantía sobre el bien o sobre el componente individual suministrado como sustitución a partir del momento en que se realiza la intervención, ya que sólo debe indicarse la fecha teniendo en cuenta la compra del producto original.
   Procedimiento para la realización de las intervenciones y direcciones de correo electrónico de contacto:
   - para productos ATEX: las reparaciones se realizarán en la sede de VORTICE LATAM S. A.; Escriba un email al correo   info@vortice-latam.com o comuníquese al número + (506) 87346996;
   - para los productos que requieren instalación y para los que no son fácilmente transportables las reparaciones se realizarán en el domicilio del cliente; Escriba un email a info@vortice-latam.com o comuníquese al número + (506) 87346996;
   - Para todos los demás productos: las reparaciones se realizarán en uno de los Centros de Asistencia Técnica Autorizado por VORTICE LATAM S. A. identificable comunicándose con el número + (506) 87346996.

5. EXTENSIÓN TERRITORIAL

Esta garantía es válida en todos los países de América Latina donde se vende este producto.

GARANTÍA - OTROS PAÍSES

El consumidor tiene por ley, de forma gratuita, la garantía legal de conformidad con el vendedor, tal y como se describe en la Directiva (UE) 2019/771 en vigor desde el 1 de enero de 2022. En los países miembros de la UE también consulte las normativas locales.

VORTICE GROUP COMPANIES

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