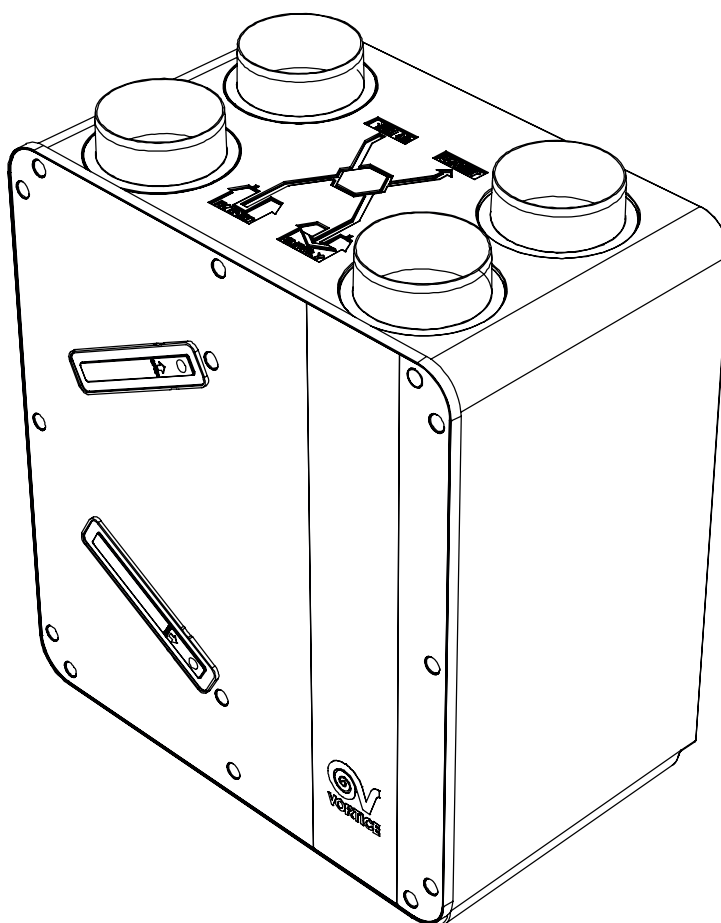




VORT HR 350 AVEL

UK
CA CE



Description and use

Vort HR 350 Avel (hereafter “the appliance”) is a heat recovery unit for residential use, featuring high heat exchange efficiency, low power consumption and compact size. The appliance is controlled by a hi-tech electronic management system and equipped with fan units that utilize EC brushless motors. A heat exchanger is fitted inside the appliance to guarantee heat exchange efficiency levels >85%. The appliance is equipped with an automatic by-pass function and integrated antifreeze protection.

(See “Operation and use” for a more detailed description of the various functions).

These appliances have been designed for use in residential and commercial properties.

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 certain it is intact and undamaged. If in doubt, consult a professional or contact a Vortice Technical Support Centre.
- Do not leave packaging within reach of children or individuals with disabilities.
- Certain basic rules must always be observed when using any electrical appliance: never touch the appliance with wet or damp hands; never touch the appliance when 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.
- Take precautions to avoid any backdraught of gases into the room from the flue or from other open flame appliances.
- To avoid any risks associated with the accidental resetting of the thermal cutout, this appliance should not be powered using an external switching device, such as a timer, or connected to a circuit that is powered up and shut off on a regular basis.
- 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.



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.
- Inspect the appliance periodically for visible defects. If the appliance is defective in any way, do not use it; contact a Vortice Technical Support Centre without delay.
- If the appliance does not function correctly or develops a fault, contact a Vortice Technical Support Centre without delay. Ensure that only original Vortice replacement parts are used for any repairs.
- If the power cable is damaged, have it replaced without delay by a Vortice Technical Support Centre.
- Should the appliance be dropped or suffer heavy impact, have it checked without delay by a Vortice Technical Support Centre.

ENGLISH

- 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.
- In the event of: dismantling the appliance, with the appropriate tools; removing the heat exchanger; removing the motor module; the appliance must first be switched off and then disconnected from the mains electricity supply.
- The electrical system to which the appliance is connected must comply with current regulations.
- 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.
- Turn off the appliance at the main switch: if the appliance does not function correctly; 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).
- **Products equipped with single-phase wiring (M) engines ALWAYS require connection to 220-240V (or only 230V where required) single-phase lines. Any kind of modification shall be considered as product tampering and shall nullify the relative warranty.**
- The appliance must be installed by a professionally qualified technician.
- The appliance must be wired to the power supply by way of a multi-pole isolating switch with a gap of at least 3 mm between contacts.

Items supplied

Fig. 2

Product components:

- ① Insulated outer casing, made in plastic material;
- ② Front panel, made in thermoplastic material;
- ③ Cross and counter flow heat exchanger, with ultra high efficiency in terms of heat exchange(>85%);
- ④ Motorfans, brushless type, low consumption and selectable speeds (+ presetted speeds);
- ⑤ Electronic manages:
 - power input, monitoring and control of the appliance;
 - bypass and no-frosting, thanks to temperature sensors;
- ⑥ Remote control (externally wired: wall mounted);
- ⑦ Filters for Fresh air **(A)** and Exhaust air **(B)**:
 - filtering class G3 ;
 - filtering class F5 (optional);
 - filtering class F7 (optional);
- ⑧ Brackets Kit (No.3) for Wall mounting (supplied with product);
- ⑨ Brackets Kit (No.2) for Suspended Floor mounting (optional).

Fig. 3

Key to air connections:

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

Installation

NOTE 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 installed on an internal surface or wall of the home structurally suited to holding its weight (max. 50 kg). To mount the appliance, use Brackets kit for Wall mounting (supplied with product) or Brackets kit for Suspended floor mounting (optional). **IMPORTANT:** The appliance cannot be positioned and secured in place using only adhesives.

Expected mountings

- On wall: using Brackets kit for Wall mounting;
- On suspended floor (on hollow space): using Brackets kit for floor mounting;

Wall Mounting

Fig. 4-5

Verify the minimum distance to the floor: the space must be enough to correctly mount condensate drain siphons (see paragraph: "Connecting to condensate drain duct").

Fig. 6

Positioning the wall bracket on the wall and marking (on wall) holes positions using pencil.
Important: respecting the hole wheelbase as shown.

Fig. 7

Verify vertical and horizontal alignment between holes.

Fig. 8

On wall, create fixing holes.

Fig. 9

We recommend to mount the appliance tilting it few degrees to the wall.
Tilting don't have to be excessive, to ensure the correct functioning of the appliance.

Fig. 10

On the wall, fixing lateral brackets using screws (Installer have to choose: screw and dowel depending on the wall type)

Fig. 11

Managing the front panel, remove screws manually using: Torx screw driver, type T25.
IMPORTANT: Don't use drill, but remove screws only manually.

Fig. 12

Removing the front panel.

Fig. 13

Positioning product, having care to verify the correct alignment on wall brackets.

Fig. 14

On the lateral brackets, fix the front bracket using screws + washers (supplied with product).

Fig. 15

Mounting the front panel.

Fig. 16

Managing the front panel, apply manually the screws, using: Torx screw driver, type T25, torque 1,0 N/m.
IMPORTANT: Don't use drill, but apply screws only manually.

Mounting on Suspended floor

Fig. 4-5

Verify the accessible space for drain systems (under suspended floor): the space must be enough to correctly mount condensate drain siphons (see paragraph: "Connecting to condensate drain duct").

Fig. 17

Positioning the floor bracket on the floor and marking (on floor) back holes positions (2 holes) using pencil.

Fig. 18

On floor, create fixing holes (2 holes).

Fig. 19

Using screw, fix the 2 back holes on the floor (Installer have to choose: screw and dowel depending on the floor type).

Fig. 20

Managing the front panel, remove screws manually using: Torx screw driver, type T25.

IMPORTANT: Don't use drill, but remove screws only manually.

Fig. 21

Removing the front panel.

Fig. 22

Positioning the product on the floor bracket, as shown.

Fig. 23

Inserting the front bracket and marking (on floor) hole position (1 hole) using pencil.

Fig. 24

On floor, create fixing holes (1 hole).

Fig. 25

On floor, fix the front bracket using screws (Installer have to choose: screw and dowel depending on the floor type).

Fig. 26

Mounting the front panel.

Fig. 27

Managing the front panel, apply screws manually, using: Torx screw driver, type T25, torque 1,0 N/m.

IMPORTANT: Don't use drill, but apply screws only manually.

Connecting air ducts

Ducts used for conveying air must be of the correct size. Ducts (to the outdoors and from the outdoors) must be thermally insulated and not subject to vibration. The 150 mm standard diameter inlet and outlet ducts must be secured to the corresponding spigots of the appliance by means of clips or other suitable fastening systems.

In case of connecting to the roof:

- the Stale air outlet duct;
- or, the Fresh air intake duct;

you have to use tools and solutions to avoid condensate and the entry of rain water.

Connecting the Pre-heater optional

On the Stale air outlet duct (See Fig. 3, letter (A)), you can connect the Vortice Pre-Heater optional, which must be fitted and set up by the installer. The minimum distance of the preheater from the appliance is 500 mm.

For more details to wire Pre-Heater, See: "Electrical connections", "Pre-heater".

Connecting the condensate drain duct

During normal operation, condensate is collected at the bottom of the appliance in a double tray provided with two drain outlets. Drain spigots are located at the back of the appliance, towards the bottom.

To condensate draining, you can connect two flexible ducts (19mm diameter approx) to drain spigots.

NOTE: A siphoned duct must be performed to avoid air bubbles

IMPORTANT:

Fig. 4

- Winter operating: high probability of condensate forming; drain hoses must be connected, with a siphon trap. "a".
- Summer operating: probability of condensate forming; drain hoses should be connected, with a siphon trap. "b".

Fig. 5

The siphon must be created observing indicated dimensions, otherwise correct operation of the appliance cannot be guaranteed.

NOTE

We recommend to cut obliquely the end of the hose.

Condensate can also be drained off through the waste plumbing system of the building.

Accessibility

Fig. 35-36

In case of Ordinary Maintenance, you can Replace filters removing filters closing caps from the front panel (see: "Maintenance and cleaning").

Fig. 11-12

Otherwise, the product is easily accessible removing the front panel. Front panel removing have to be performed:

- During product installation: see "Expected mountings";
- Extraordinary Maintenance: for technical personnel, you must call the Service.

Electrical connections

Equipment must be powered by means of an external electrical mains. Installation of the electrical system can be carried out with:

- a trace system (built-in);
- or, surface mounted by means of an external wall channel.

CAUTION!:



After completing electric connections, all terminal blocks and cable connections have to be accessible using tool only. So, the User can not open the wiring box with hands, but User need to use a screwdriver or other tool. To ensure this, we advise to fix the wiring box cap using screws. If tool is necessary to access to wiring box, other solutions could be performed.

CAUTION!:



Equipment connection must be carried out by professionally qualified personnel.

CAUTION!:



The electrical power line to which the equipment will be connected must be protected by a suitable differential thermal magnetic switch.

Fig. 28

Electric connections are easily available thanks to external cables, sited on the product back.

Available electric connections:

- Main supply Fig. 29
- Remote control Fig. 30;
- Pre-heater Fig. 31;
- Environmental sensors: Fig. 32 (C HCS); Fig. 33 (C TEMP / C SMOKE / C PIR); Fig. 34 (C TIMER).

For more details to connect the Remote control, see the Remote control Instruction booklet supplied with the Remote control: paragraph "Electrical connections".

CAUTION!: The length of the connection cables for the PRE-HEATHER and the REMOTE CONTROL must be a maximum of 80 m.

CAUTION: To connect the HMI remote display to the machine, use cables with a section between 0.35 mm² and 2.5 mm². 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.

CAUTION: To connect the product power supply, use a cable with a minimum section of 3X0.75 mm² H05VV-F.

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, both motors will reduce 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.

“Heat recovery” Function

Fig. 3

This kind of function is normally activated, 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 checks 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 represents 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 doesn't need User presence.

“By-Pass” Function

Fig. 3

This type of operation is automatically set and it is useful 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 air vented to the outside (C) continues to pass through the heat exchanger, that will not be effective anymore.

“By-Pass air Temperature” represents the “Desired 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 on

both motors will reduce speed to allow repositioning of the by-pass valve. After, motors will start up again.

ENGLISH

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.

"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% of the Minimum " speed (no other speeds, no OFF equipment);
- environment sensors not enabled (remote inputs not activated);
- 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".

"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).

Operation and use

User interface

The following operations can be performed through the user interface:

- Temperature control;
- Air speed adjustment;
- Alarms management.

The below table shows functions related to each key on the interface.

| | |
|----|--|
| 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 row or value. |
| ▼ | Key to: decrease speed / move to the lower row or value. |
| ✓ | Confirmation (OK). |

| | | |
|----|---------|---|
| I | Display | ▲ |
| II | | ▼ |
| X | | ✓ |

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. This means that, to turn the display back on, press any key and then press the desired key again

"HOME" page

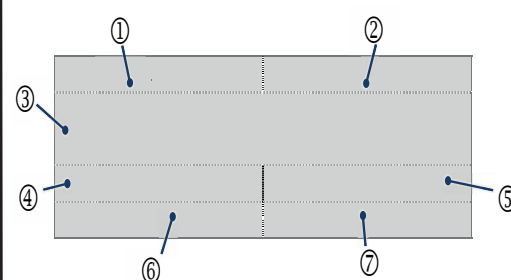
Upon start-up, the display shows the manufacturer's logo for about 10 seconds, then it goes to the "HOME" page.

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 figure and table below.

| | |
|---|---|
| 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: "Speed: "1", "2", "3". • 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) |
| 6 | • "Exh" Value of the exhaust air temperature (Example: Ext +18°C) after pushing the button [II]. See Fig. 3, letter (D) |
| 7 | • Time of day (for example 12:30), after pushing the button [I]. |

The following picture shows display areas:



ENGLISH

Some examples of the HOME screen are shown below.

| | |
|-----------|-----------|
| Bypass | |
| 1 | |
| Ext +5°C | Int +22°C |
| Exh +18°C | |

| | |
|------------|-------|
| NoFrost | |
| 2 | |
| Progr | |
| 03/04/2017 | 12:30 |

Selecting speed

To increase the speed: from the "HOME" page, press the [▲] key until one of the following texts is displayed: "1", "2", "3". 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".

| | |
|---|--|
| 1 | |
|---|--|

"Main menu" page

Press the [✓] button from the "HOME" page to go to a new page entitled "Main Menu."

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 (lets you run weekly programming)
- Info (enables viewing of software versions)

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

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

Use the key [X], to exit from a page without saving any changes.

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

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



Warning:

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

"Operations menu" page

On the "Main menu" page, go to the "Operations menu" row and press the [✓] button. You will be asked to enter a password which will enable access to a user menu and an 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."

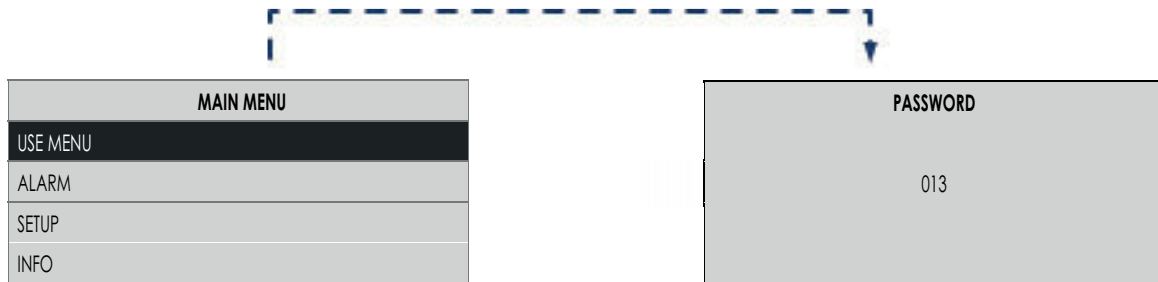
From this new page you can manage:

- By-pass MAN 12 h forced activation of the function: "By-pass";
- Holiday activating "Holiday" function: appliance always operating at Min speed;

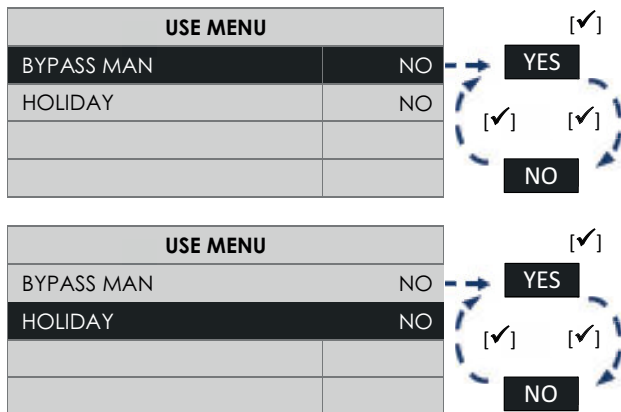
Use keys [▲] and [▼] to move from one row to another. The selected row is highlighted in negative contrast.

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.



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



Activating / deactivating "Bypass Man" Function

Use keys [▲] and [▼] to select "BYPASS MAN":
push the button [✓]:

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

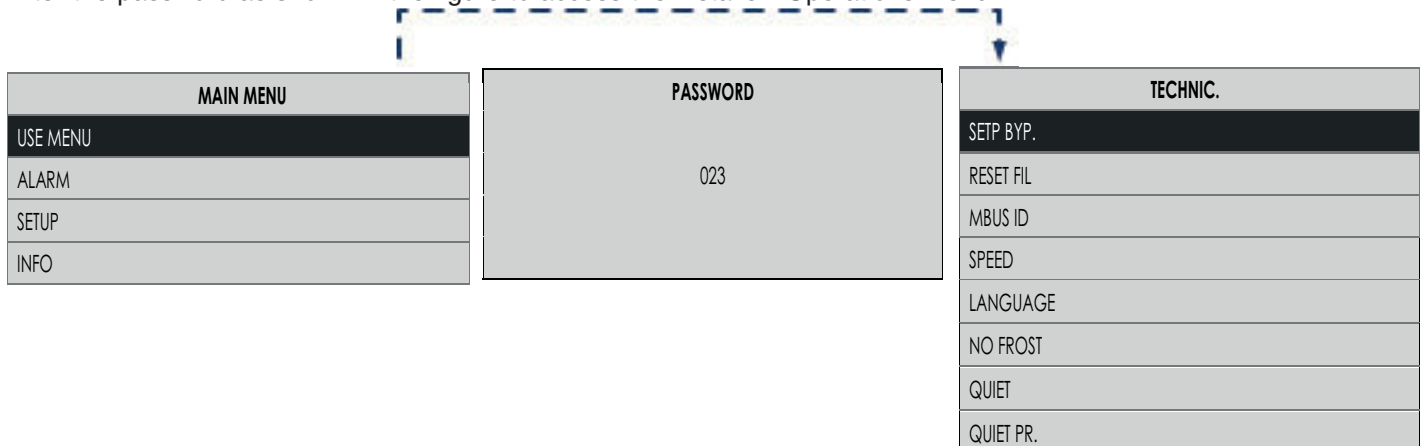
Activating / deactivating "Holiday" Function

Use keys [▲] and [▼] to select "HOLIDAY":
push the button [✓]:

- 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."



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

It 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 reset.

| | |
|-----------|---|
| RESET FIL | ▲ |
| YES | ▼ |

• Modbus ID

In the presence of another installed remote HMI user interface, you can configure a different address than the default one (which is “160”). (pag 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 | |

• Language

Language selection

| | |
|----------|---|
| LANGUAGE | ▲ |
| ENG | ▼ |

• 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 desired “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 | |

ENGLISH

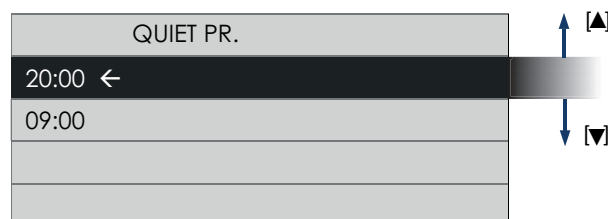
• Quiet

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 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.



“Setting No Frost Menu” Page

From “Installer menu” page, you can select “No Frost”, in order to join to “Setting No Frost”.

Pressing the [✓] key will display:

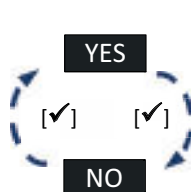
| | |
|-----------|--|
| NO FROST | |
| UN-BALAN. | |
| HEATER ← | |
| HEAT FORC | |

| Pre-set values | |
|----------------|------------------|
| UN-BALAN | NO (not enabled) |
| HEATER | YES (enabled) |

From “Setting No Frost Menu” page, you can choose desired “No Frost functions” in order to keep them Enabled/Not enabled:

- Un-Balan: when the air external temperature is too cold, if the function is Enabled, motor-fans automatically start to run, following pre-set ventilation programs. Appliance will try to use different ventilation procedures that take advantage of extracted air (warm) to self-heating.
ATTENTION: The appliance is default setted with “Un-Balan”: Not Enabled (factory production). To Activating/deactivating the function, see: “Activating/deactivating the function Un-Balan”.
- Heater: (only in case of installing the Pre-Heater optional)
when the air external temperature is too cold, if the function is Enabled, the Pre-Heater starts to run, for a certain time. Appliance will try to heat using the electric heater installed on the Fresh air duct (See Fig. 3, Letter (A)).
ATTENTION: The appliance is default setted with “Heater”: Enabled (factory production). So, in case of not installing a Pre-Heater, the Installer have to manually deactivate the function. To Activating/deactivating the function, see: “Activating/deactivating the function Heater”.
ATTENTION: In case of “Heater” function NOT Enabled, the Pre-Heater will not works, also if correctly wired.
ATTENTION: In case of NOT Installed Pre-Heater, keeping “Heater” Enabled, will produce abnormalities on “No Frost” function.
- Heat Forc: (only in case of installing the Pre-Heater optional)
when installing the Pre-Heater, a “working test” is possible forcing Pre-Hater activation. In case of “Heat Forc” Enabled, the Pre-Heater will run for 15 seconds; So after that, the function “Heat Forc” will come back “NOT Enabled”.

| | |
|-------------|--|
| NO FROST | |
| UN-BALAN. ← | |
| HEATER | |
| HEAT FORC | |

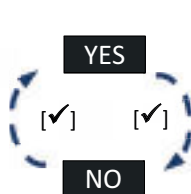


Activating / deactivating “Un-Balan” Function

Use keys [▲] and [▼] in order to select “UN-BALAN”:
push the button [✓]:

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

| | |
|-----------|--|
| NO FROST | |
| UN-BALAN. | |
| HEATER ← | |
| HEAT FORC | |

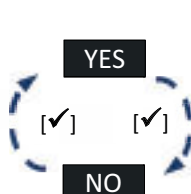


Activating / deactivating “Heater” Function

Use keys [▲] and [▼] in order to select “HEATER”:
push the button [✓]:

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

| | |
|-------------|--|
| NO FROST | |
| UN-BALAN. | |
| HEATER | |
| HEAT FORC ← | |



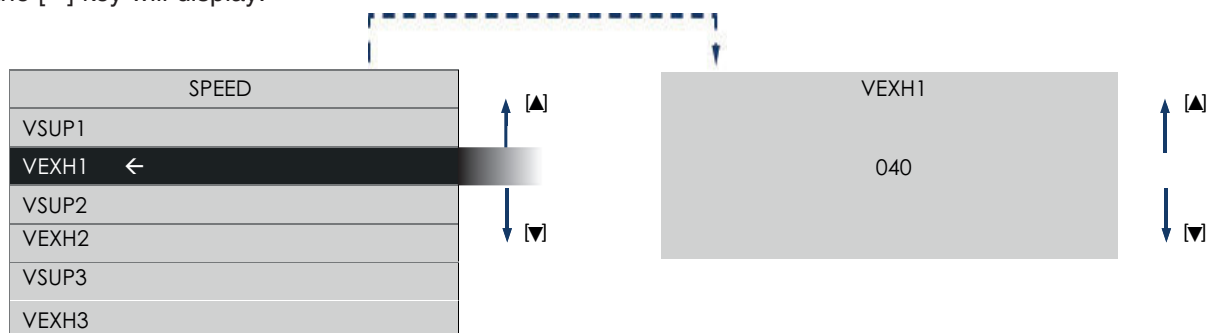
Activating / deactivating “Heat Forc” Function

Use keys [▲] and [▼] in order to select “HEATER FORC”:
push the button [✓]:

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

"Setting speed Menu" Page

From "Installer menu" page, you can select "Speed", in order to join to "Setting speed".
Pressing the [✓] key will display:



According to air-system required airflows, you can set the following motors speeds:

VSUP = **(C)** Fresh air intake from outside (see Fig. 3)

VEXH = **(D)** Stale air outlet to outside (see Fig. 3)

VSUP1 = speed 1

VEXH1 = speed 1

VSUP2 = speed 2

VEXH2 = speed 2

VSUP3 = speed 3

VEXH3 = speed 3

Default configurations are the same for both motors, as shown in the following table:

| Default values | | |
|----------------|----------|-----|
| Speed | Airflow | SET |
| 1 | 165 m³/h | 37 |
| 2 | 276 m³/h | 62 |
| 3 | 365 m³/h | 80 |

"Alarms" page

Access the "Alarms" page only if the machine detects one of the problems detailed below:

- Pre-alarm: Filters checking without blocking the machine;
- Alarm: Filters replacing without blocking the machine;
- Alarm: No Frost - Wait one hour occurs with the machine lock;
- Alarm: Ext probe damaged without blocking the machine (No Frost, By-pass: not enabled);
- Alarm: Int probe damaged without blocking the machine ("By-pass" not enabled);
- Alarm: Exh probe damaged without blocking the machine (No Frost not enabled);

Alarm with machine lock: On the "HOME" page, are alternated shown the words "Alarm!" And "Block!".

Alarm without locking the machine: On the "HOME" page, is shown the word "Alarm!".

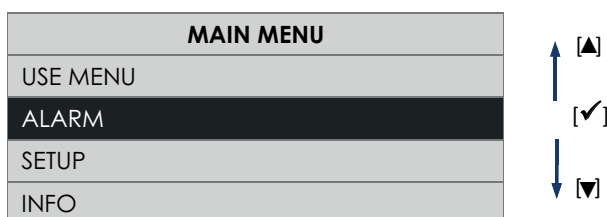
In case of alarms: From the "Main Menu" page, choose the "Alarms" row and press the [✓] key.

A new descriptive page shows the specific alarm text and troubleshooting instructions.



Warning:

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



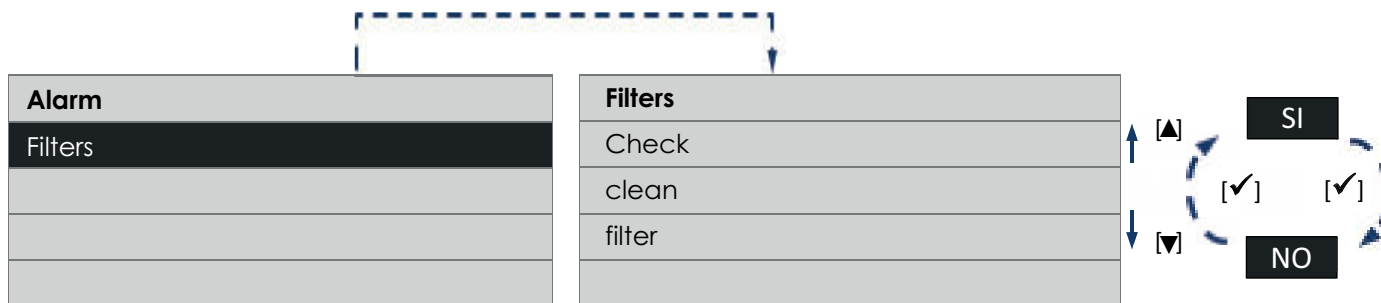
ENGLISH

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.

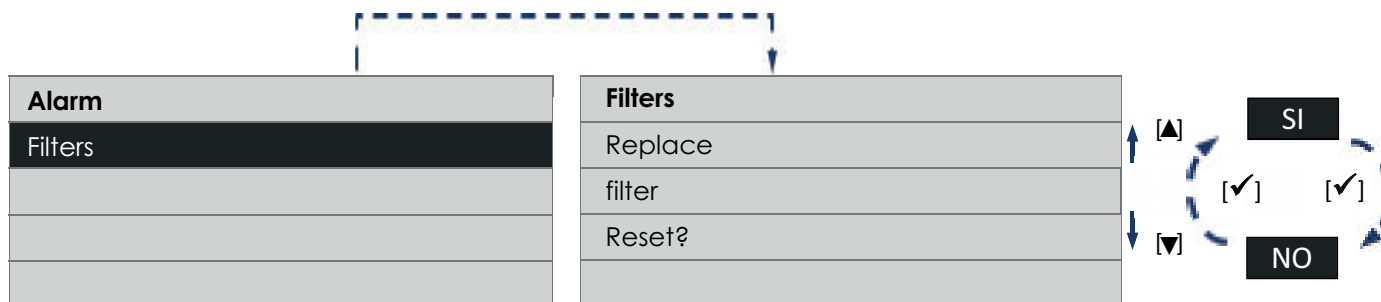
Pressing the [✓] key will display:



Alarm: "Filters 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:

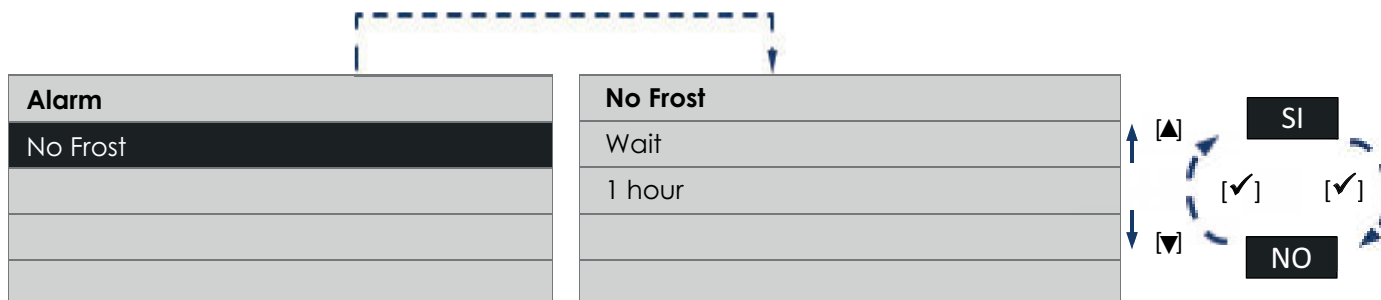


NOTE Resetting filters timer (See: Operation and Use: "Installer operation menu", "Reset fil") is resetted also the counter.

Alarm: No Frost - Wait one hour

The equipment is equipped with temperature probes that measure the air temperatures.

In case of too low temperatures, No-frost alarm reports in "HOME" the message "Alarm!" "Lock!" and in the "Alarms" page the note "Wait 1 hour". Pressing the [✓] key will display:



ENGLISH

Alarm: "Ext Probe" damaged

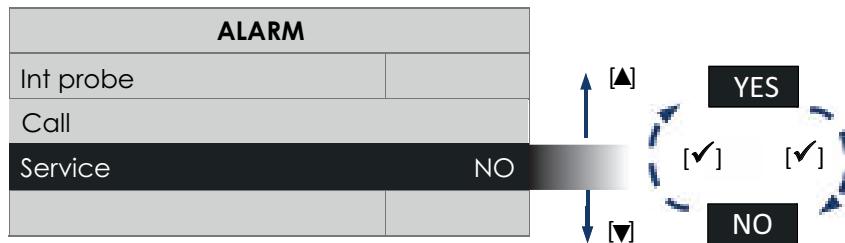
The equipment is equipped with an External temperature probe that measures the air temperature extracted from outside. The Probe Fault reports in "HOME" the message "Alarm!" "Lock!" and in the "Alarms" page the note "Ext probe Call Service". Pressing the [✓] key will display:



For technical personnel, you must call the Service.

Alarm: "Int Probe" damaged

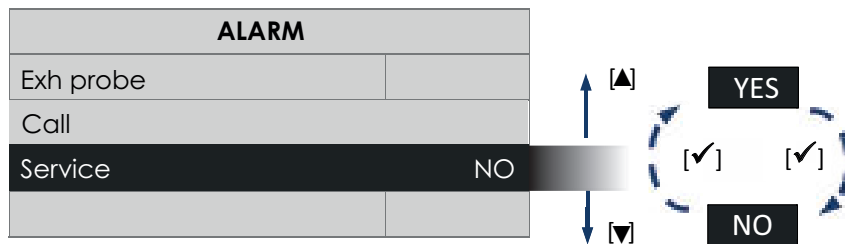
The equipment is equipped with an Indoor temperature probe that measures the air temperature supplied to indoor. The Probe Fault reports in "HOME" the message "Alarm!" "Lock!" and in the "Alarms" page the note "Int probe Call Service". Pressing the [✓] key will display:



For technical personnel, you must call the Service.

Alarm: "Exh Probe" damaged

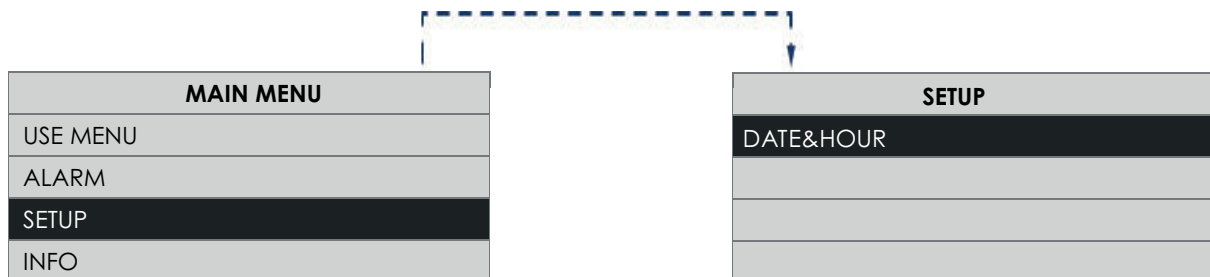
The equipment is equipped with an Exhaust temperature probe that measures the air temperature extracted to the outside environment. The Probe Fault reports in "HOME" the message "Alarm!" "Lock!" and in the "Alarms" page the note "Exh probe Call Service". Pressing the [✓] key will display:



For technical personnel, you must call the Service.

"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.



From this new page you can manage:

- Date & Time;
- Program.

ENGLISH

"Modbus ID" Page

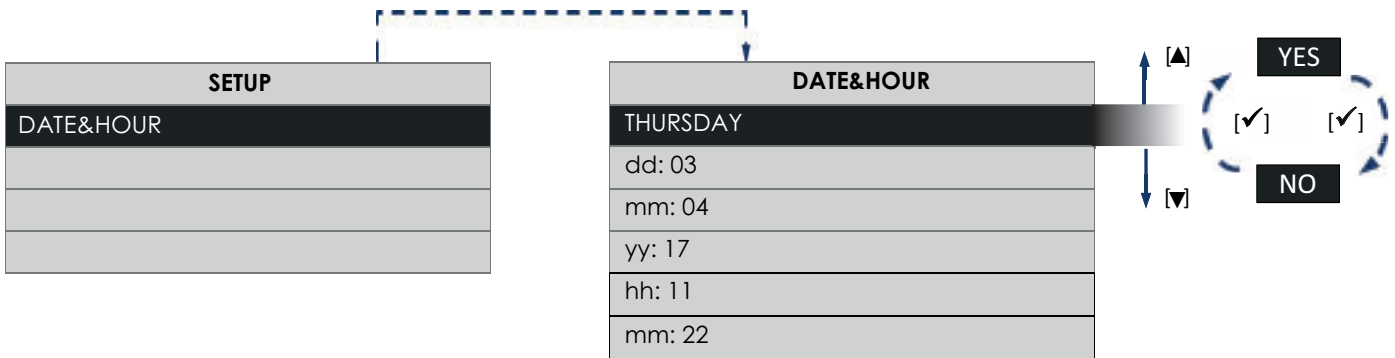
If more than one remote control HMI are installed , it is necessary to set the value of them like shown here below.

1. Change the "MBUS ID" so that it is different than 160 and also different from the value of other remote controls, for example , insert the number 161 and press √
2. Disconnect the HRU from the electrical grid
3. Connect the other HMI remote control
4. Reconnect the HRU to the electrical grid
5. Wait 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 remote control, remember always to set a different MBUS ID for each HMI remote control.

NOTA: after the first star up with the second remote HMI control connected it is necessary to disconnect the machine from electricity and then connecting it back.

"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.



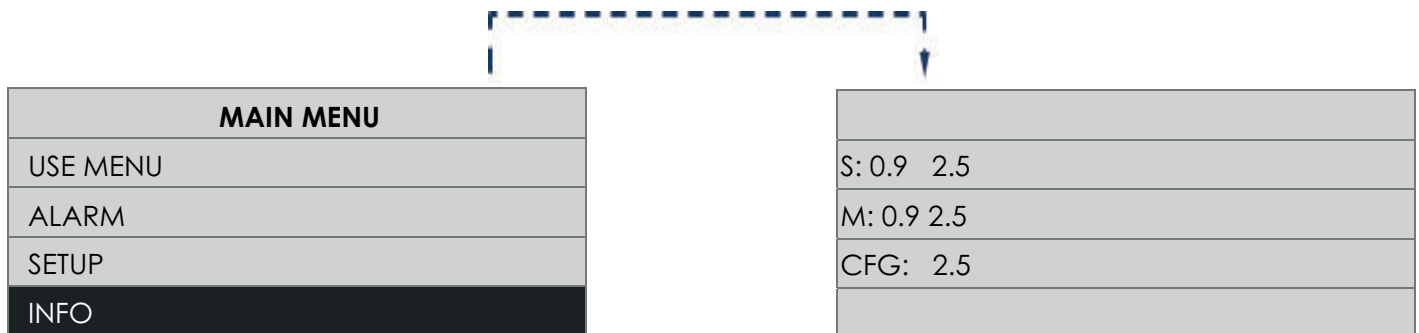
Use the keys [▲] and [▼] to move within the line. Press the key [✓] to enable editing of the selected item. Press key [✓] again to exit from the edit page and return to the "Date & Time" page. Press the [X] key to return to the "Configuration" page.

"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



ENGLISH

Maintenance and cleaning

Fig. 35-36

Ordinary maintenance - 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, check following alarms for filter maintenance:

- **Pre-alarm**: activates the notice about filters checking and cleaning (See: Operation and Use: Pre-alarm: "Checking filters")
- **Alarm**: activates the notice about clogged filters (See: Operation and Use: Alarm: "Filters replacing")

Resetting filters timer (See: Operation and Use: "User operation menu", "Resetting filters timer") is resetted also the counter.

NOTE 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.

In case of filters cleaning or filters replacing

Fig. 35 - Filters removing

To join to filters case: managing the front panel, you need to remove filters closing caps before.

To remove filters closing caps: you have to swipe caps with your hand, following the direction shown on closing caps.

Now filters are available to be removed: extracting with your hand is sufficient to remove filters.

Fig. 36 - Filters mounting

Insert filters with hands, into referred cases (sited on the front panel).

To replace filters correctly, you have to fix filters closing caps on the front panel.

To fix filters closing caps: you need to swipe with your hand, following the opposite direction to what is shown on closing caps.

Extra-ordinary maintenance - Removing the front panel

Before any activity, please verify that the product is disconnected to the power supply.

Removing front panel and Mounting front panel, are considered Extra-ordinary maintenance and must be carried out by professionally qualified personnel.

Fig. 11-12

Removing the front panel

Managing the front panel, remove screws manually using: Torx screw driver, type T25.

IMPORTANT: Don't use drill, but remove screws only manually.

Fig. 15-16

Mounting the front panel

Managing the front panel, apply screws manually, using: Torx screw driver, type T25, torque 1,0 N/m.

IMPORTANT: Don't use drill, but apply screws only manually.

ENGLISH

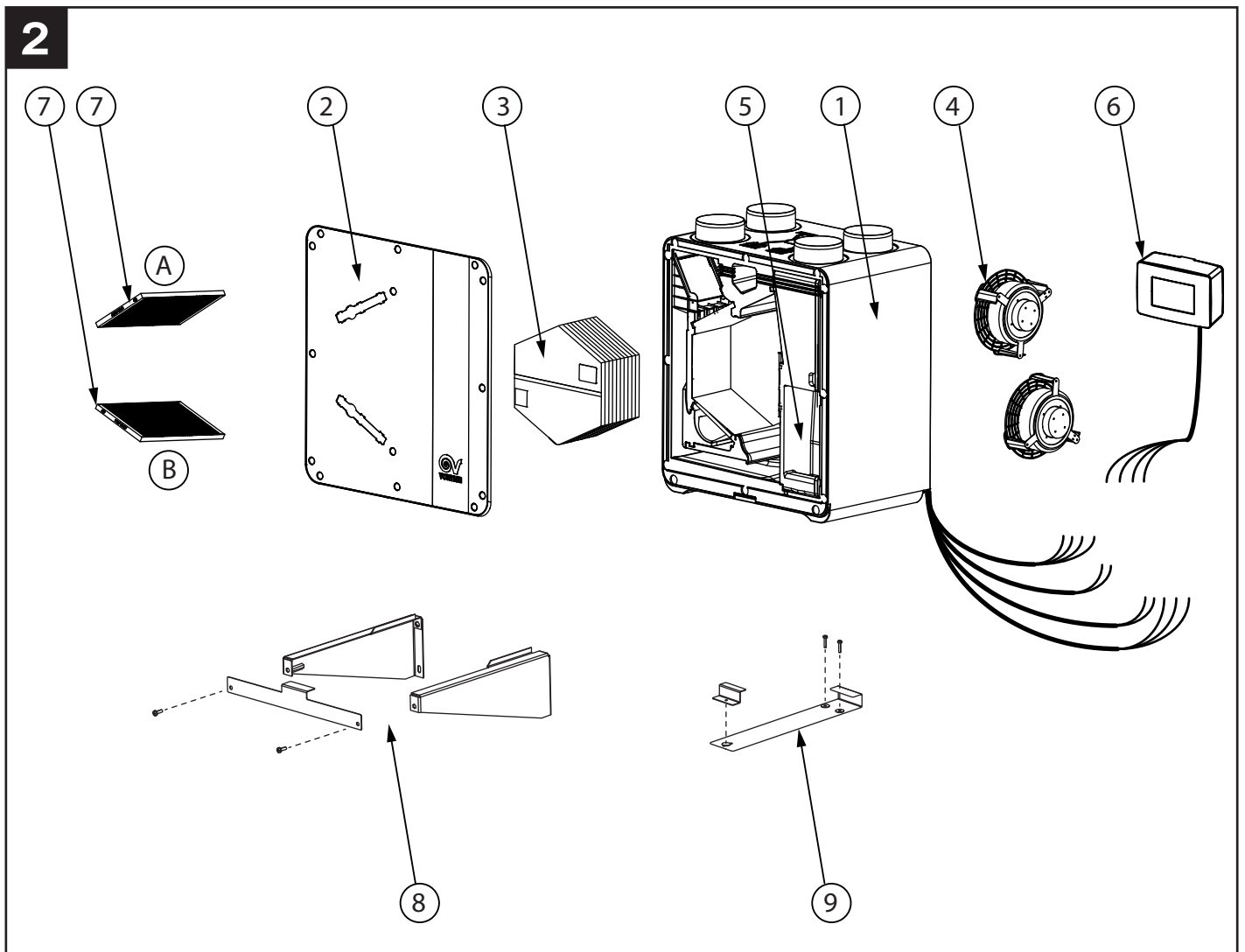
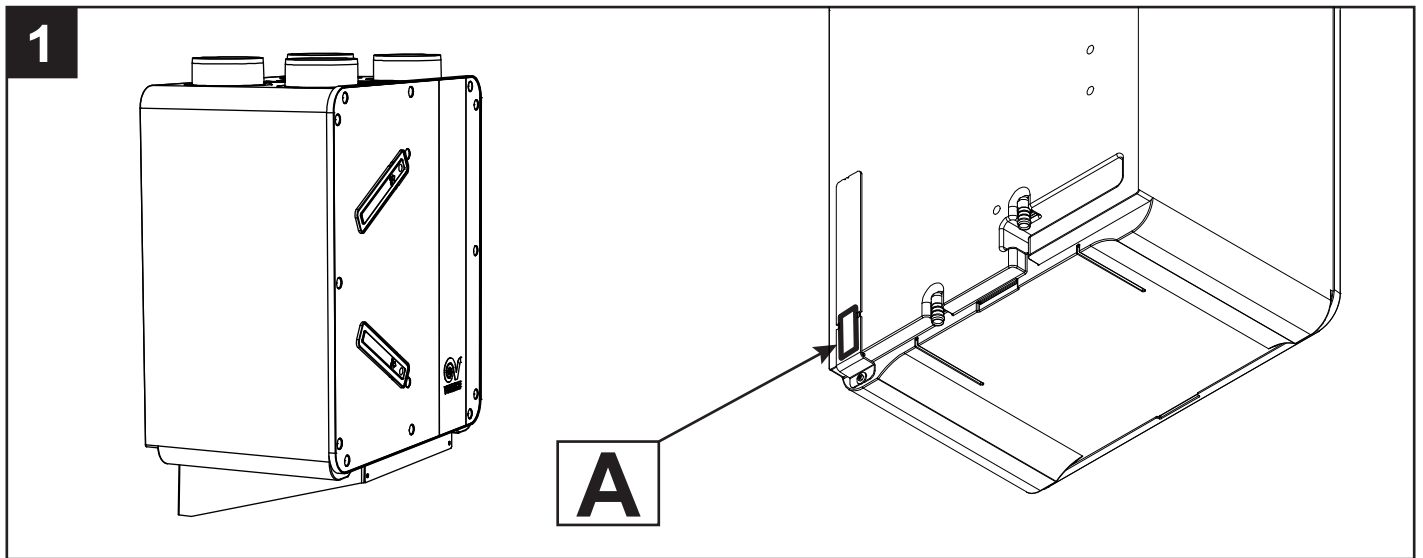
Important information concerning the environmentally compatible disposal

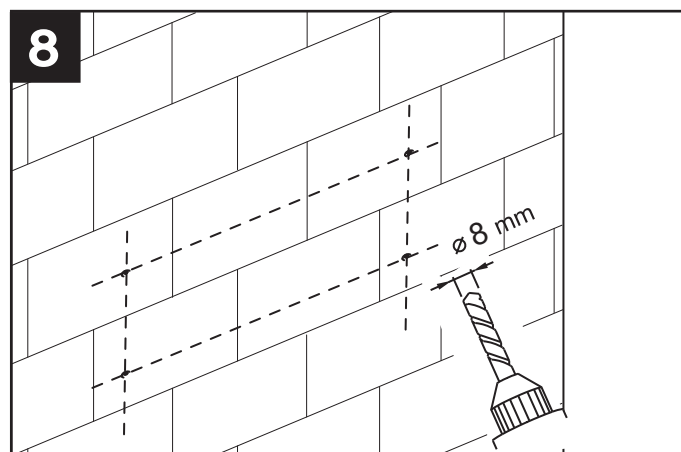
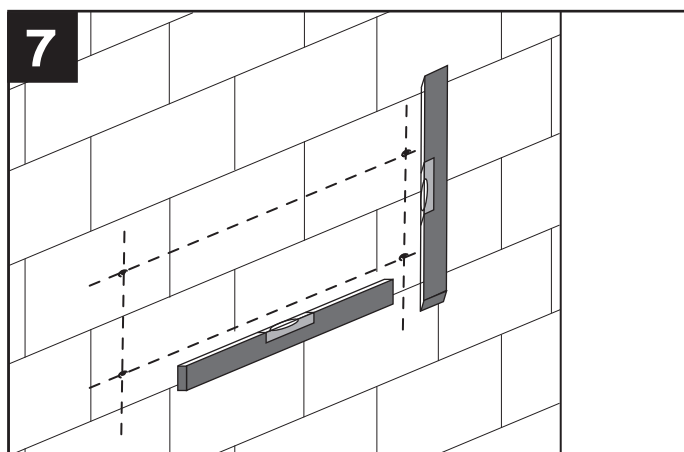
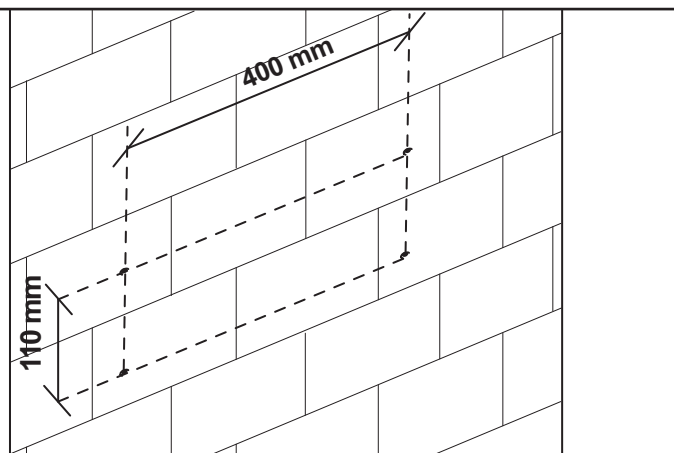
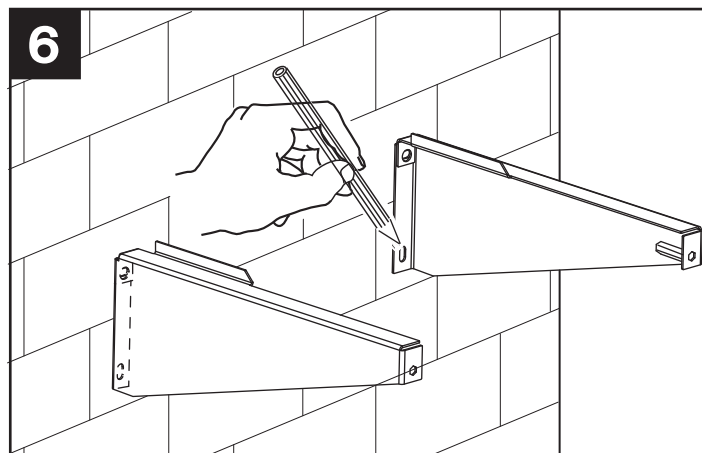
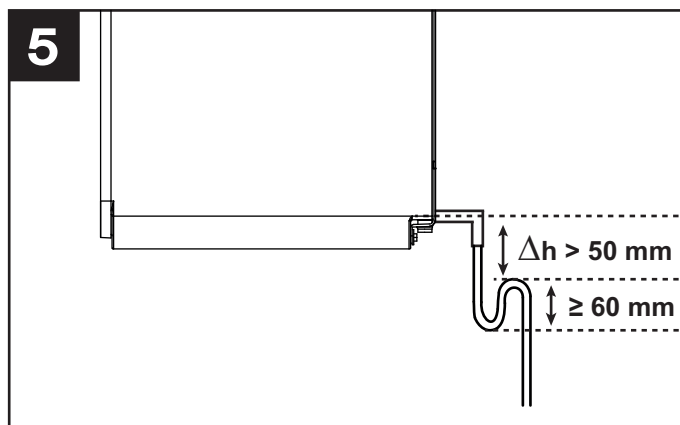
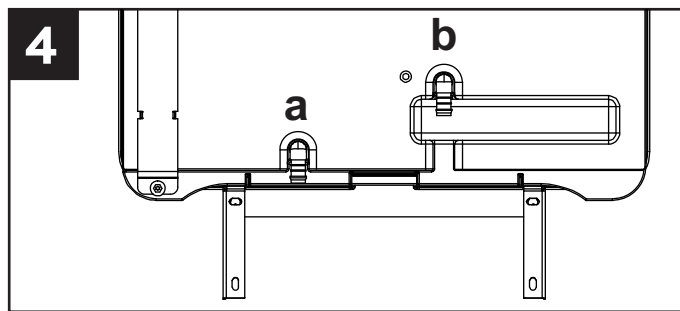
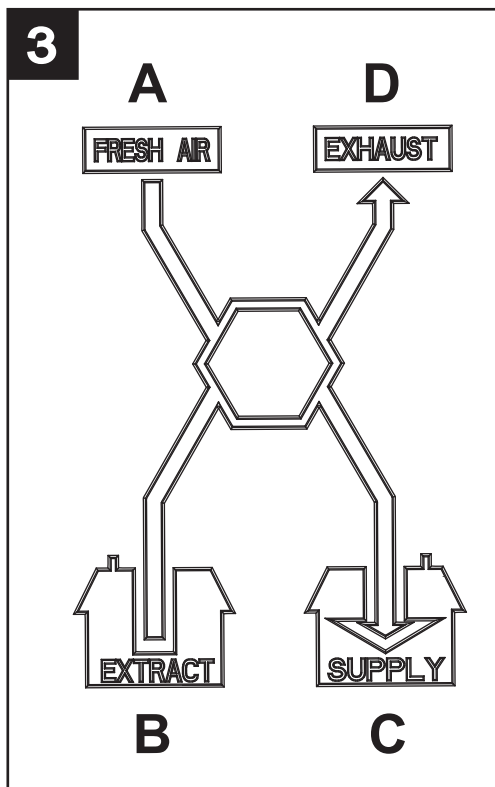
This product complies with Directive 2012/19/EU on the management of waste electrical and electronic equipment (WEEE).

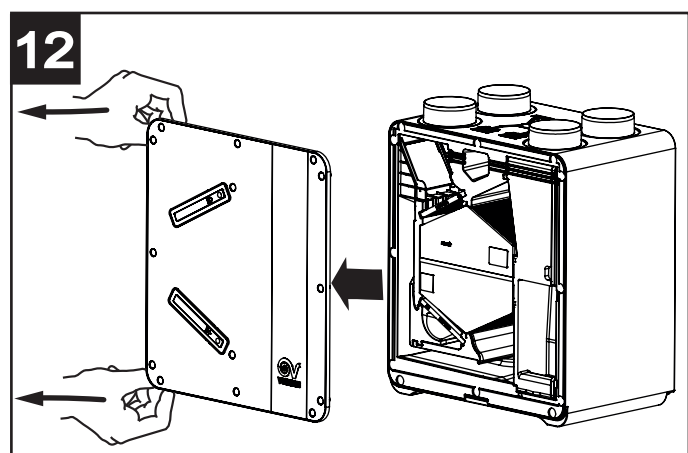
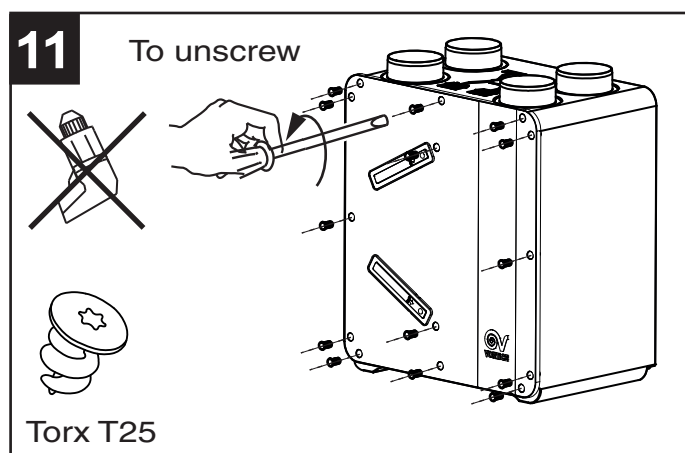
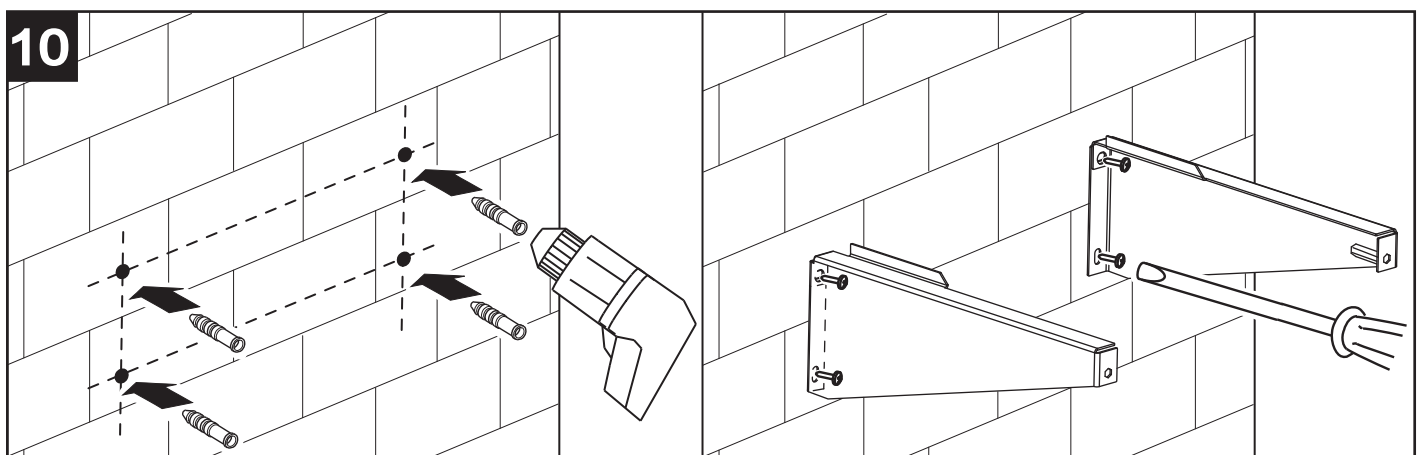
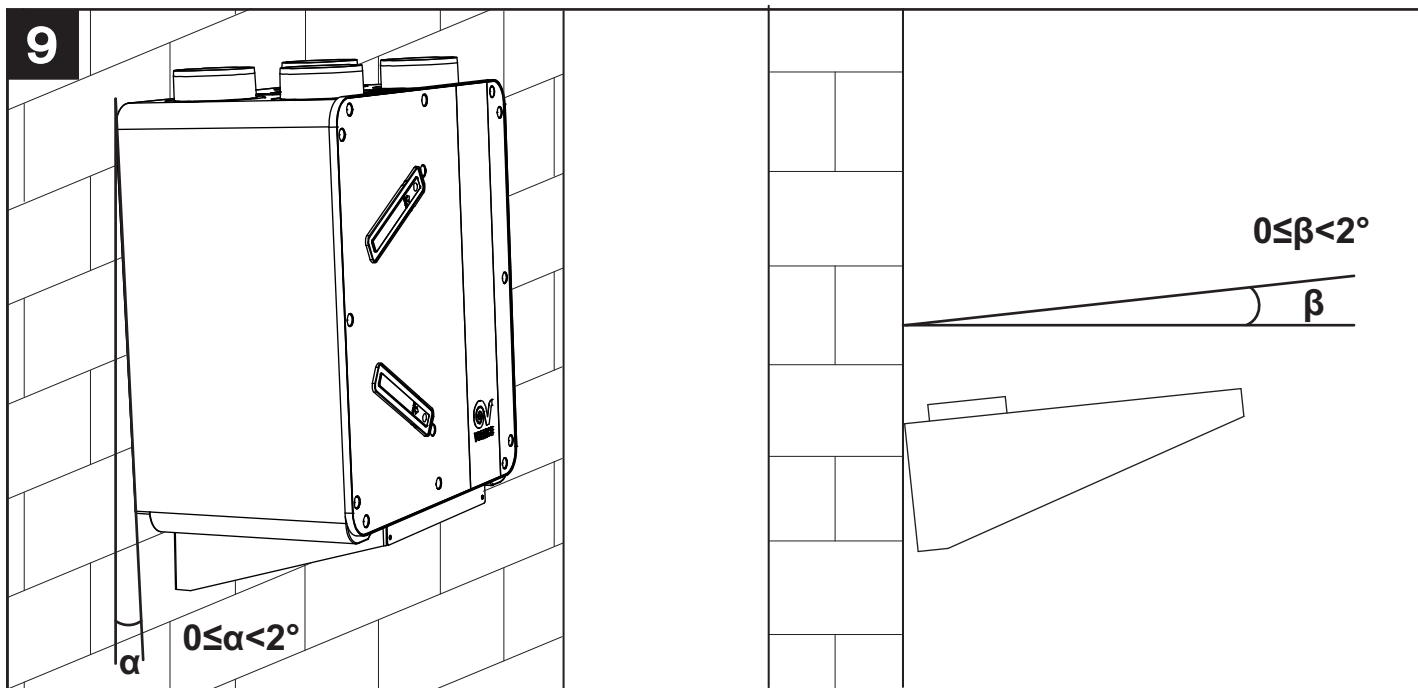
The crossed-out wheeled bin symbol on the appliance indicates that, at the end of its life, the product should not be discarded together with household waste but must be taken to a separate collection point for electrical and electronic equipment. This will avoid negative effects on the environment and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

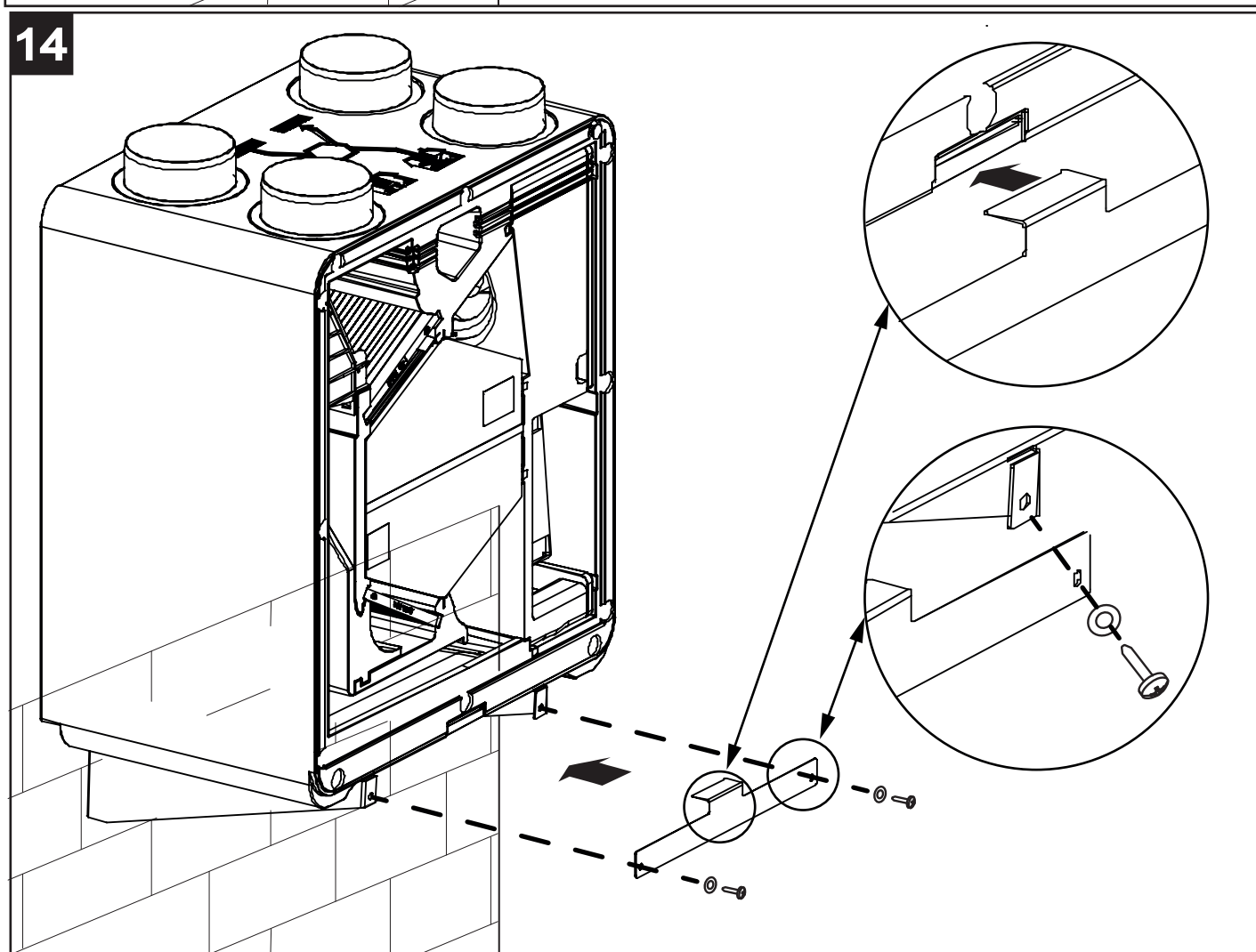
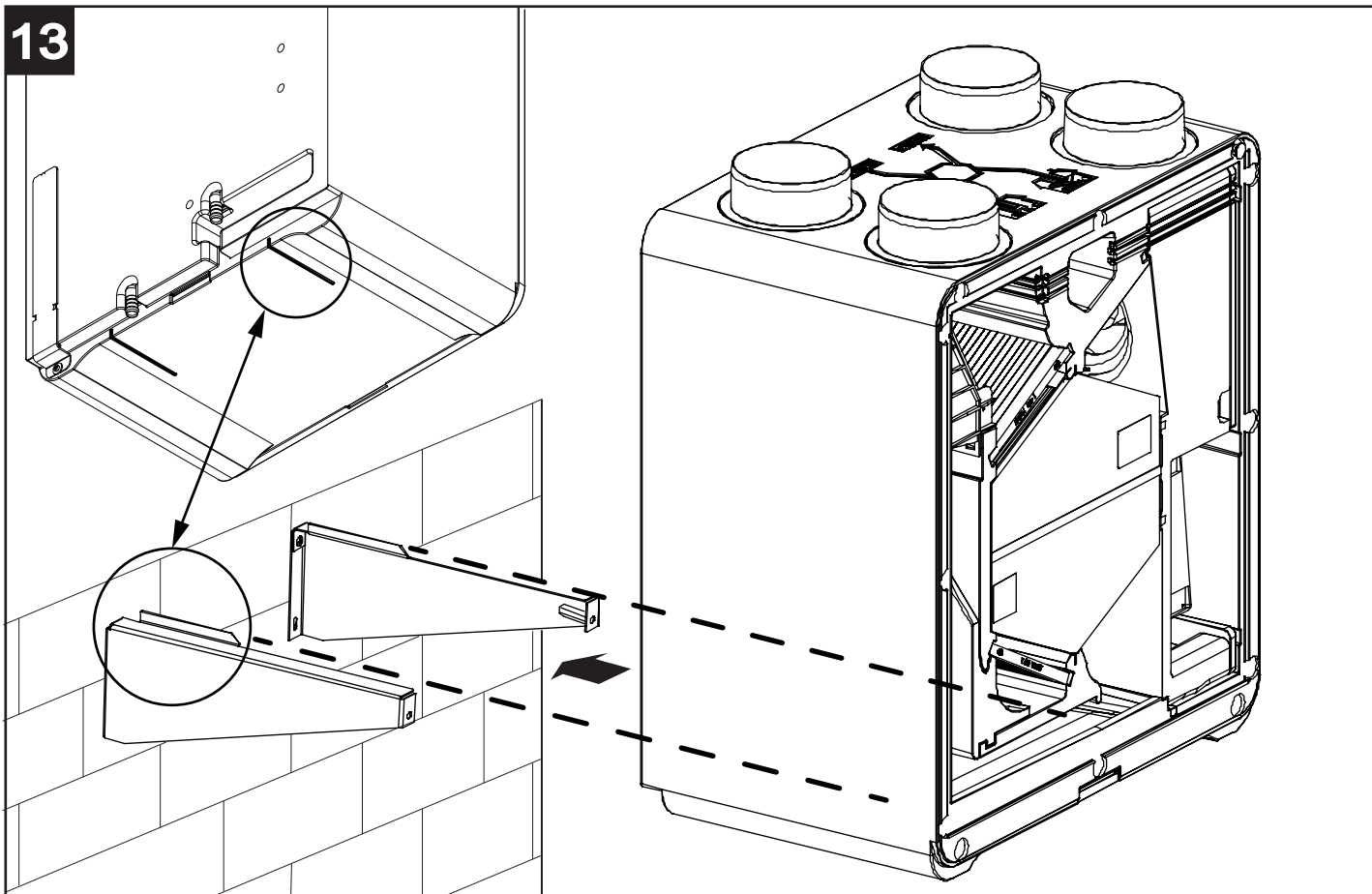


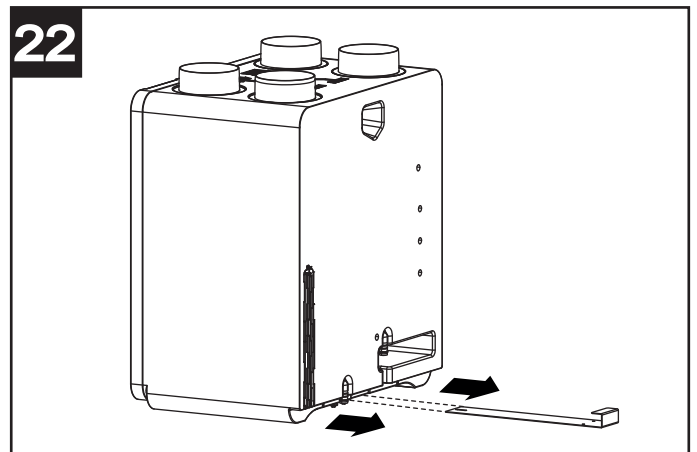
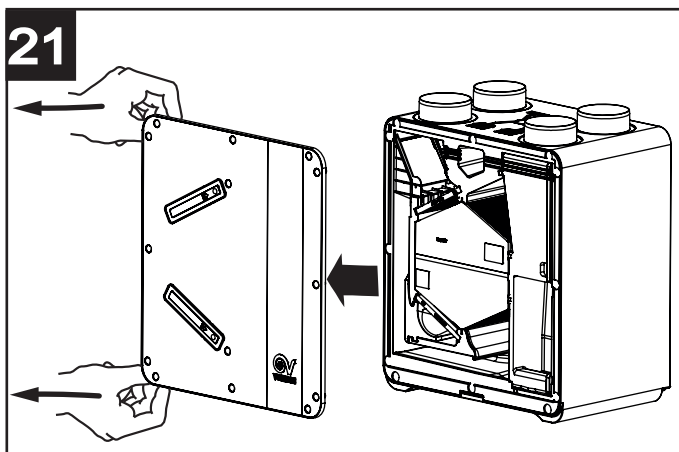
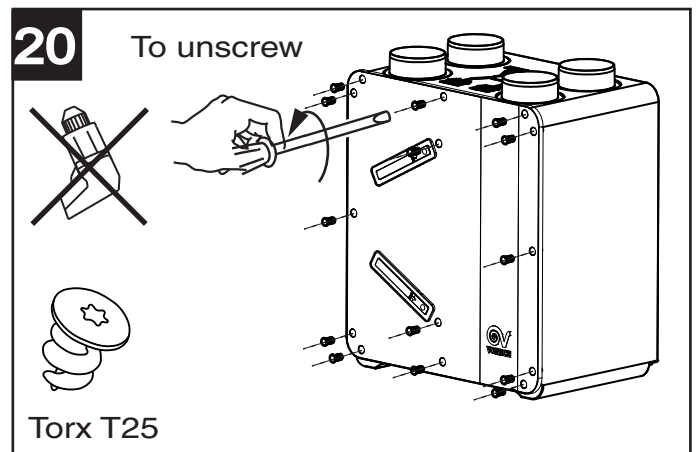
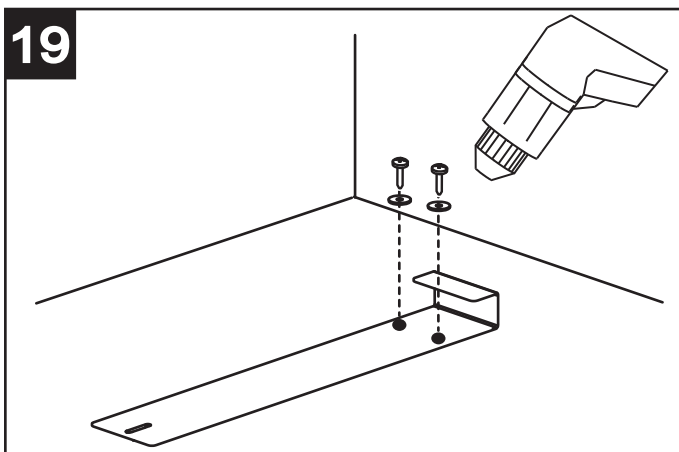
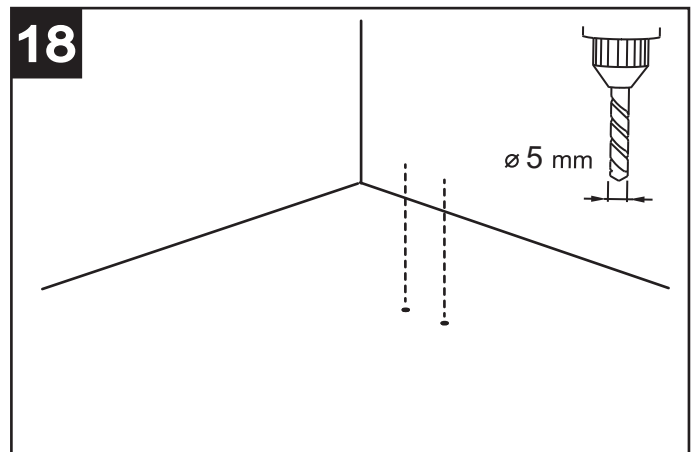
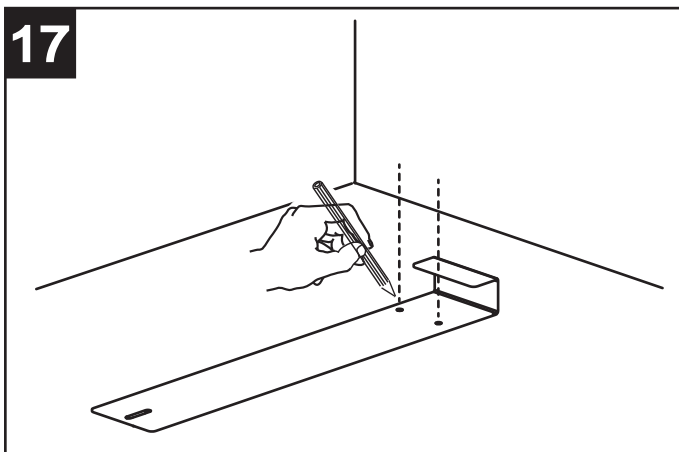
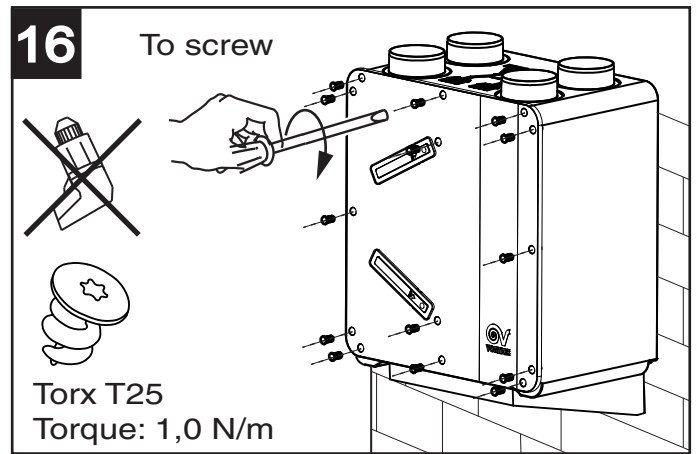
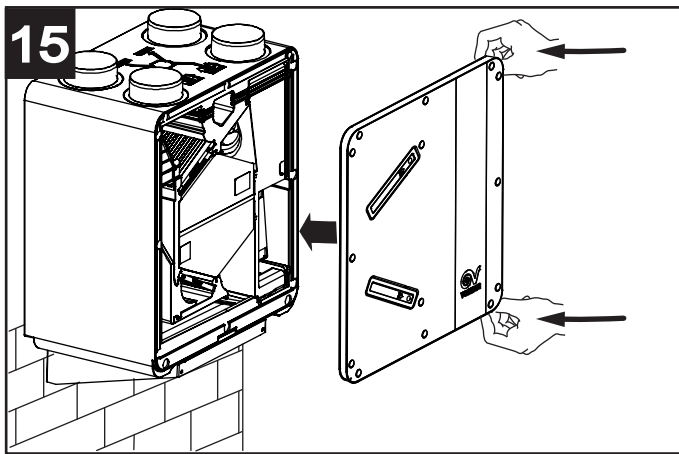
Contact the municipal authority for the location of this type of facility. Alternatively, the distributor is obliged to take back the appliance to be disposed of free of charge in exchange for the purchase of an equivalent appliance.

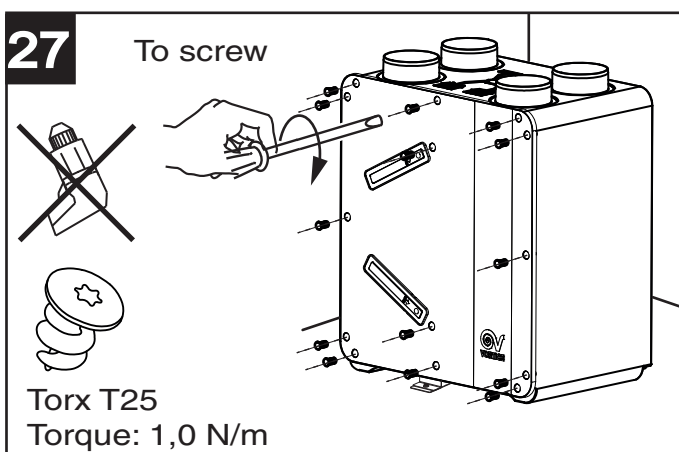
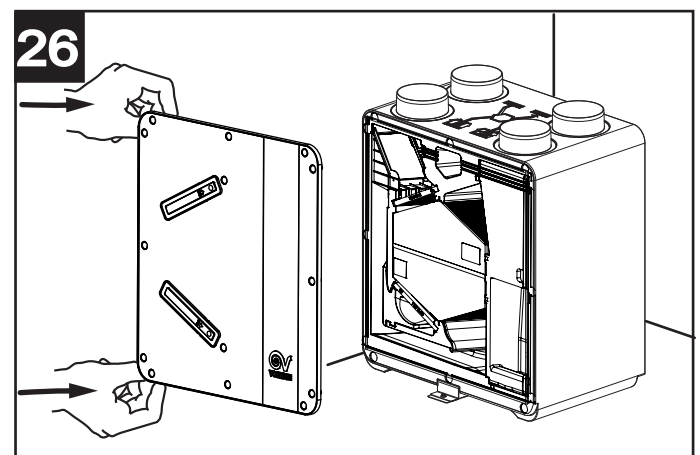
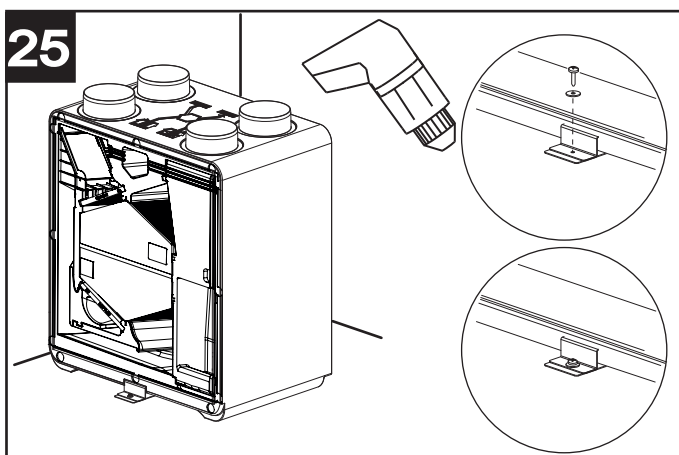
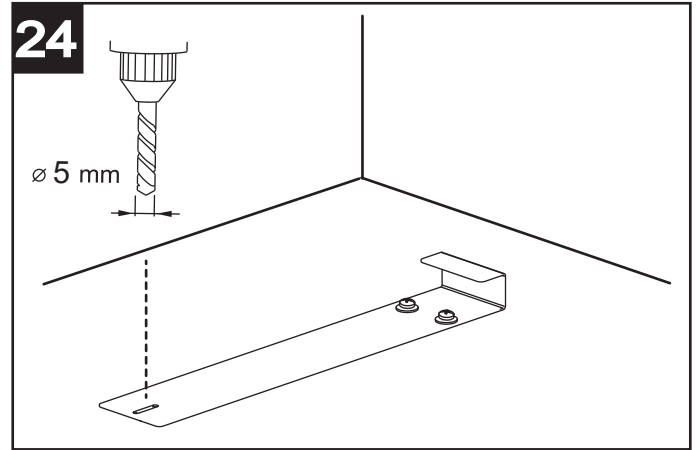
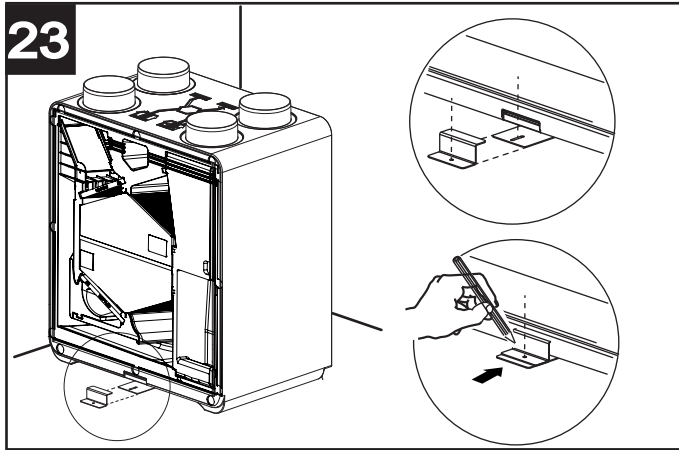




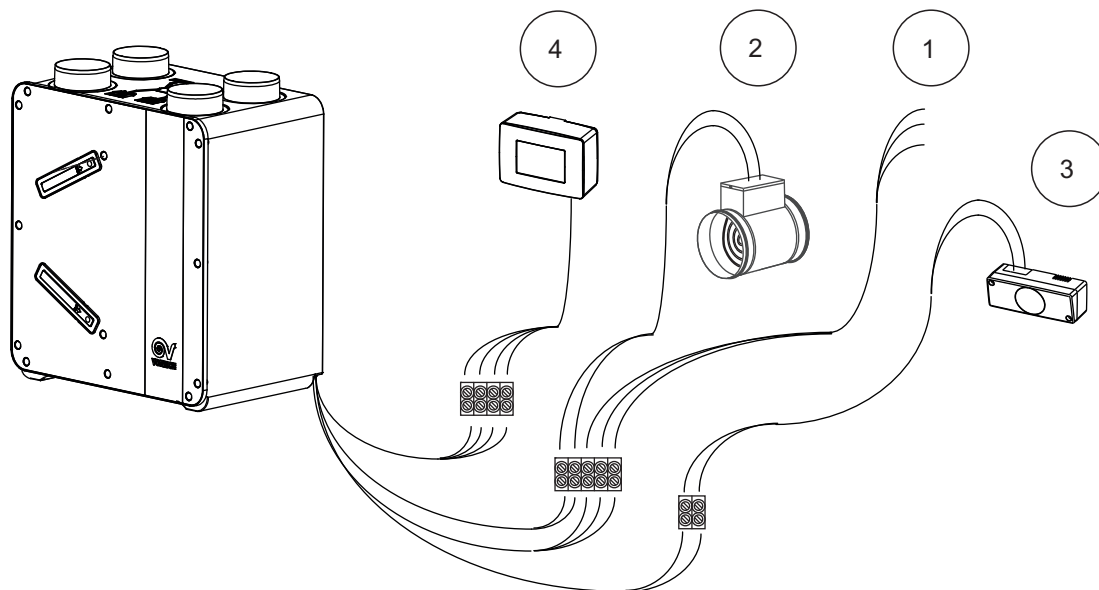








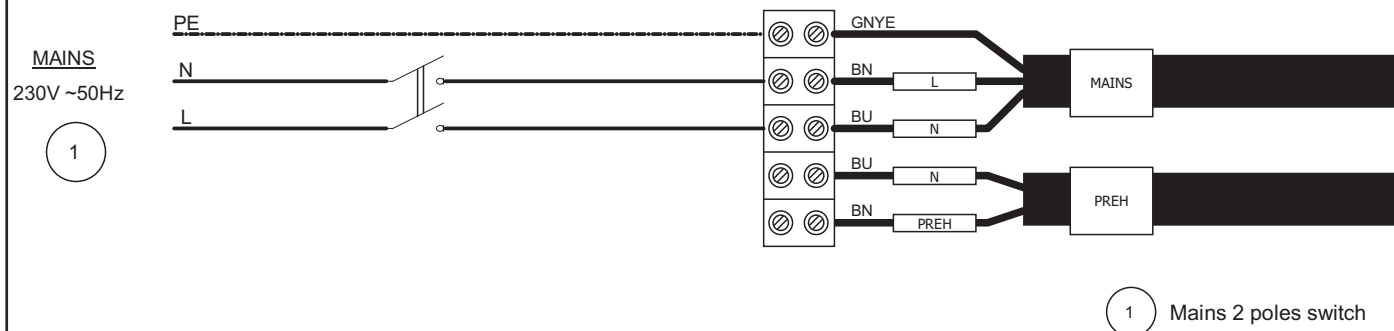
28



- 1 Mains 2 poles switch
- 2 OPTIONAL: Preheater (remote 230Vac relay coil)
- 3 OPTIONAL: Dry contact (remote switch / relay)
- 4 Remote HMI

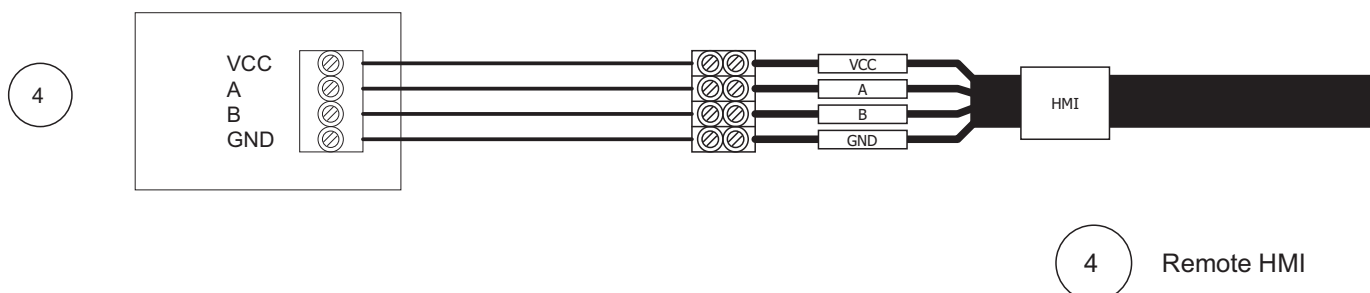
29

POWER SUPPLY



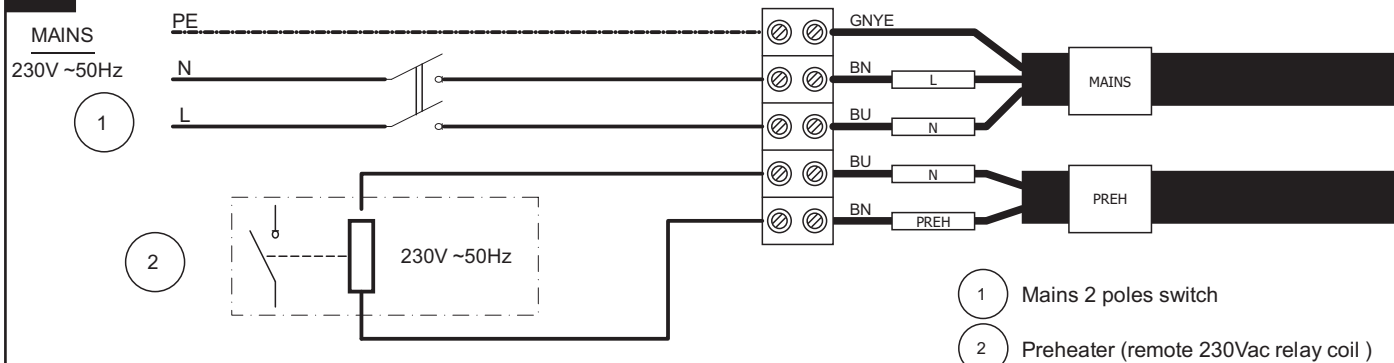
30

REMOTE CONTROL



31

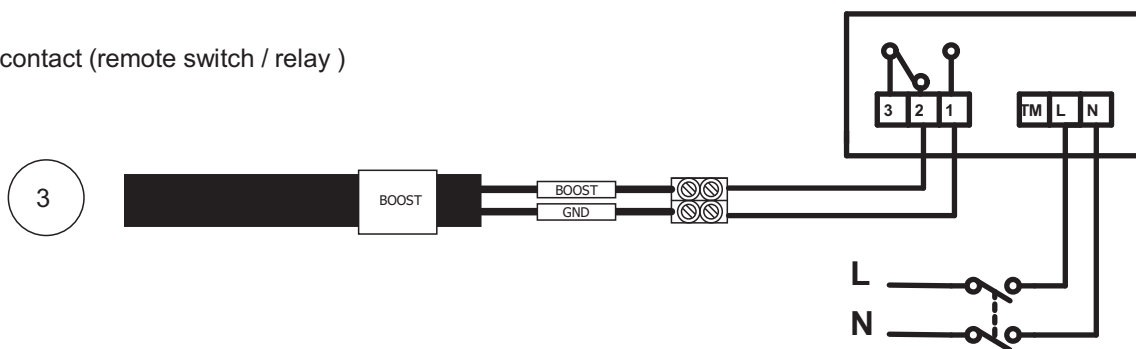
POWER SUPPLY + PRE-HEATER



32

C HCS cod. 12.994

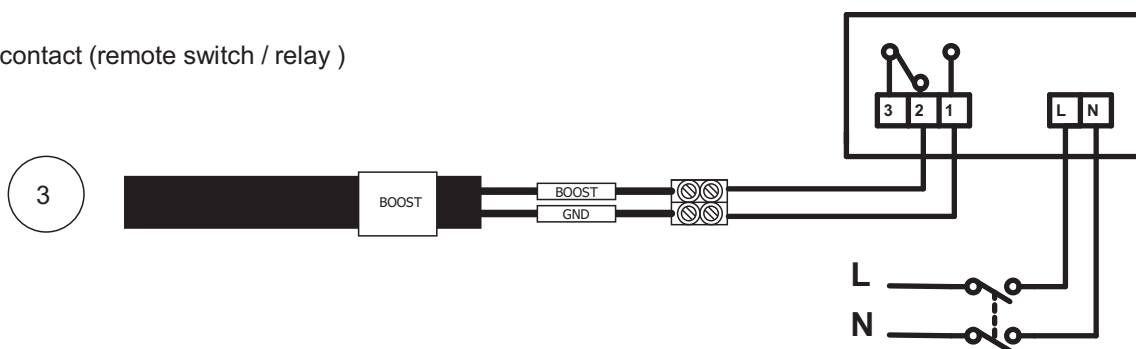
3 Dry contact (remote switch / relay)



33

C TEMP cod. 12.992 C PIR cod. 12.998
C SMOKE cod. 12.993

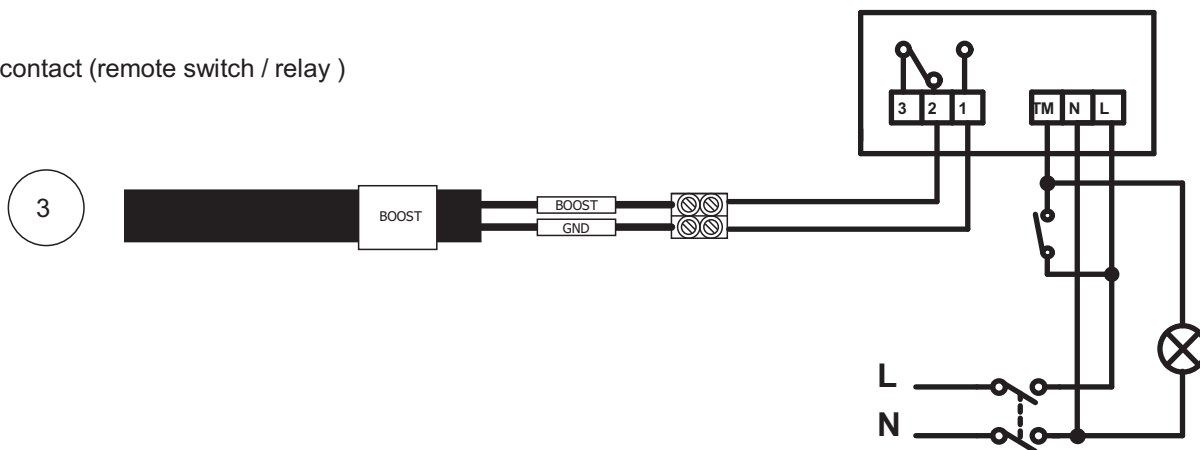
3 Dry contact (remote switch / relay)



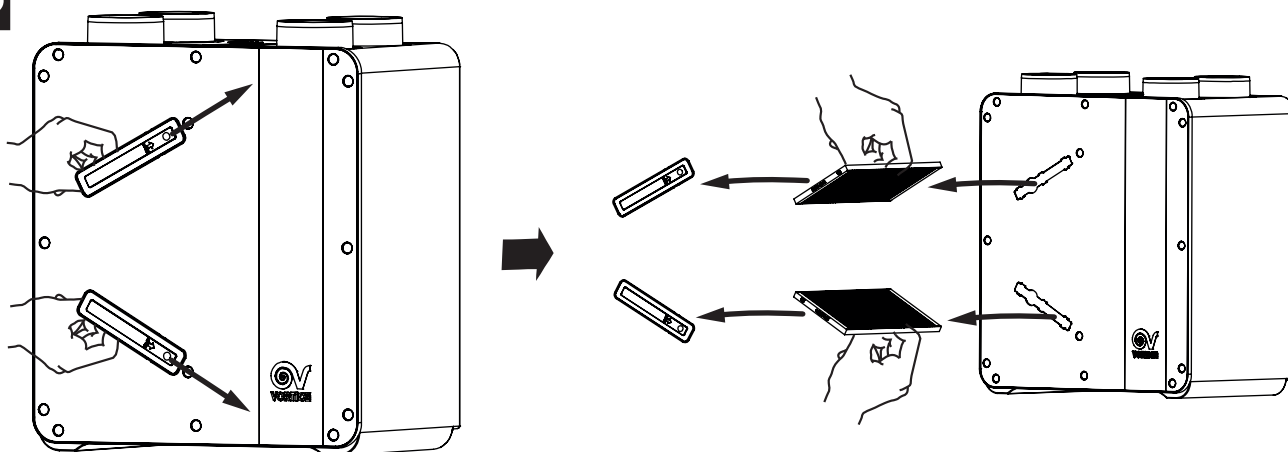
34

C TIMER cod. 12.999

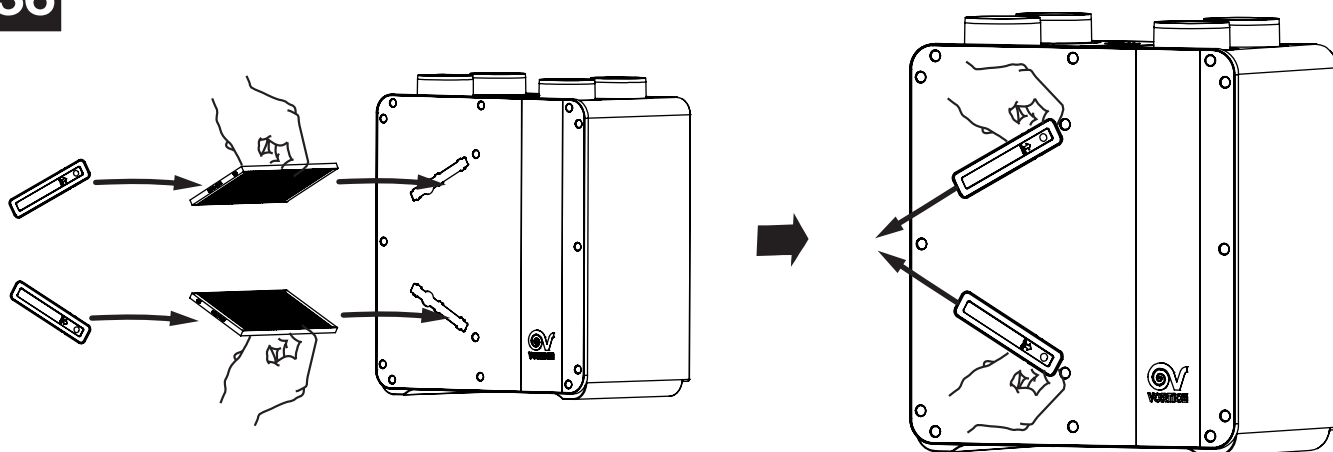
3 Dry contact (remote switch / relay)



35



36



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 S.p.A. si riserva il diritto di apportare tutte le varianti migliorative ai prodotti in corso di vendita.
VORTICE S.p.A. reserves the right to make improvements to products at any time and without prior notice.
VORTICE S.p.A. se réserve le droit d'apporter toutes les variations afin d'améliorer ses produits en cours de commercialisation.
VORTICE S.p.A. behält sich vor, alle eventuellen Verbesserungsänderungen an den Produkten des Verkaufsangebots vorzunehmen.
VORTICE S.p.A. se reserva el derecho a hacer cambios en los productos para su mejora en cualquier momento sin previo aviso.
VORTICE S.p.A. 公司 股份有限公司 保留在产品销售期间进行产品改良的权利。

VORTICE GROUP COMPANIES

VORTICE S.p.A.
Strada Cerca, 2 - frazione di Zoate
20067 - Tribiano (MI)
Tel. +39 02-90.69.91
ITALY
vortice.com
postvendita@vortice-italy.com

VORTICE INDUSTRIAL Srl
Via B. Brugnoli, 3
37063 - Isola della Scala (VR)
Tel. +39 045 6631042
ITALY
vorticeindustrial.com
info@vorticeindustrial.com

VORTICE VENTILATION SYSTEM (CHANGZHOU) CO.LTD
Building 19, No.388 West Huanghe Road, Xinbei District,
Changzhou, Jiangsu Province CAP:213000
CHINA
vortice-china.com
vortice@vortice-china.com

VORTICE LIMITED
Beeches House-Eastern Avenue
Burton on Trent - DE 13 0BB
Tel. +44 1283-49.29.49
UNITED KINGDOM
vortice.ltd.uk
sales@vortice.ltd.uk

VORTICE LATAM S.A.
Bodega #6
Zona Franca BES Alajuela - Alajuela 20101
Tel. (+506) 2201 6934
COSTA RICA
vortice-latam.com
info@vortice-latam.com

CASALS VENTILACIÓN INDUSTRIAL IND., S.L.
Ctra. Camprodon, s/n
17860 - Sant Joan de les Abadesses (Girona)
SPAIN
casals.com
ventilacion@casals.com