Read the instructions contained in this booklet carefully before using the appliance.
Joule cannot assume any responsibility for damage to property or personal injury resulting from failure to abide by the instructions given in this booklet.
Following these instructions will ensure a long service life and overall electrical and mechanical reliability.
Keep this instruction booklet in a safe place.

Index

Description and use ........................................ 3
Safety ........................................................ 3
Items supplied .............................................. 4
Installation .................................................... 5
Electrical connections ...................................... 7
Use ............................................................. 8
Operation and use .......................................... 10
Maintenance/cleaning ...................................... 20
Important information regarding eco-compatible disposal ........................................ 21
**Description and use**

INVAVENT 350 (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**

- 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 Joule 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 no less than 8 years of age and by individuals with limited physical, sensory or mental capacities, or by inexperienced or untrained individuals, provided that they are supervised or have been instructed in safe use of the appliance and understand the associated risks. Children must not play with the appliance. Cleaning and maintenance procedures - for which the user is responsible - must not be carried out by children unless supervised.

- 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 Joule Technical Support Centre without delay.
- If the appliance does not function correctly or develops a fault, contact a Joule Technical Support Centre without delay. Ensure that only original Joule replacement parts are used for any repairs.
If the power cable is damaged, have it replaced without delay by a Joule Technical Support Centre.

Should the appliance be dropped or suffer heavy impact, have it checked without delay by a Joule 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.

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 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.

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).

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 (UK);
   - filtering class M5 (NO UK);
   - 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 Joule 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:

- 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”.

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

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

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.

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:
  - C HCS Cod. 12.994 Humidity sensor; Fig. 32;
  - C TEMP Cod. 12.992 Temperature sensor; Fig. 33;
  - C SMOKE Cod. 12.993 Smoke sensor; Fig. 33;
  - C PIR Cod. 12.998 Passive infrared sensor; Fig. 33;
  - C TIMER Cod. 12.999 Adjustable over-run timer; Fig. 34.

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

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.

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.
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 stop 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 30 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 represent 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 introduced directly from outside, without passing through the heat exchanger. The flow of air vented from inside continues to pass through the heat exchanger.

“By-Pass air Temperature” represent 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 stop to allow repositioning of the by-pass valve. After, motors will start up again.
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 120 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 3 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 (only NOT UK Markets)**
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. At unspecified intervals the equipment will operate at the speed set off the Program. 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 message “Man.” appears on the display.

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 “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".
**Operation and use**

**User interface**

The following operations can be performed through the user interface:

- Temperature control;
- Air speed adjustment;
- Weekly air speed programming (only NOT UK Markets);
- Alarms management.

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

<table>
<thead>
<tr>
<th></th>
<th>Function 1 recall key.</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>Function 2 recall key.</td>
</tr>
<tr>
<td>X</td>
<td>Key to exit from the displayed page.</td>
</tr>
<tr>
<td>▲</td>
<td>Key to: increase speed / move to the upper row or value.</td>
</tr>
<tr>
<td>▼</td>
<td>Key to: decrease speed / move to the lower row or value.</td>
</tr>
<tr>
<td>✓</td>
<td>Confirmation (OK).</td>
</tr>
</tbody>
</table>

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:
   - UK Market: "Speed: "1", "2", "3" e "Boost".
   - NOT UK Market: "Off" + Speed: "1", "2", "3" e "Boost".
4. 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.
5. "Holiday", in case its function is active.
6. "Ext‘ Value of the outside air temperature (Example: Ext +5°C) after pushing the button [II]. See Fig. 3, letter (A)
7. "Int‘ Value of the indoor air temperature (Example: Ext +22°C) after pushing the button [II]. See Fig. 3, letter (B)
8. "Progr." if weekly programming has been activated, after pushing the button [I] (NOT UK Market).
9. The message "Man." will appear if during weekly programming the user manually varies the speed (NOT UK Market).
10. "Exh‘ Value of the exhaust air temperature (Example: Ext +18°C) after pushing the button [II]. See Fig. 3, letter (D)
11. Date (example 03/04/2017), after pushing the button [I]. (NOT UK Market).
12. Time of day (for example 12:30), after pushing the button [I].
Some examples of the HOME screen are shown below.

<table>
<thead>
<tr>
<th>Bypass</th>
<th>NoFrost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Ed +5°C, Int +22°C</td>
<td>Progr</td>
</tr>
<tr>
<td>Exh +18°C</td>
<td>03/04/2017</td>
</tr>
<tr>
<td></td>
<td>12:30</td>
</tr>
</tbody>
</table>

**Equipment start-up/shut-down (only NO UK markets)**

Only NOT UK: 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. **ATTENTION:** When the appliance is switched, both motors will stop to allow repositioning of the by-pass valve. After, motors will start up again. During this period, "Off" still be displayed and the User can not apply modifications.

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 3 minutes) to avoid condensate presence on the heat exchanger. During this period, "Off" still be displayed and the User can not apply modifications.

**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”.

**"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.

⚠️ **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;
• Act Prog (only for NOT UK Market) 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.

**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.

(NOT UK Markets)
### Activating / deactivating “Act Prog” Function
Use keys [▲] and [▼] to select “ACT PROG”:
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).

- **Lifetime (NO UK)**
  Is shown the duration of Filters Pre-Alarm.
  (See “Pre -alarm: Filters checking”):
  - Markets NON UK = after 3 or 6 or 12 months;

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

- **Modbus ID**
  In the presence of another installed remote user interface, you can configure a different address than the default one (which is “1”).

- **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”.

- **Language**
  Language selection

- **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”.

**TABLE:**

<table>
<thead>
<tr>
<th>SETP BYP.</th>
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<table>
<thead>
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<table>
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</table>

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<th>VEXH B</th>
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<table>
<thead>
<tr>
<th>NO FROST</th>
<th>UN-BALAN.</th>
<th>HEATER</th>
<th>HEAT FORC</th>
</tr>
</thead>
</table>
**“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:

<table>
<thead>
<tr>
<th>NO FROST</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-BALAN.</td>
<td></td>
</tr>
<tr>
<td>HEATER</td>
<td>▼</td>
</tr>
<tr>
<td>HEATER FORC</td>
<td>▲</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pre-set values</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN-BALAN</td>
</tr>
<tr>
<td>HEATER</td>
</tr>
</tbody>
</table>

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”: 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”: NOT Enabled (factory production). So, in case of Installing Pre-Heater, the Installer have to manually activate 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”.

**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.

**Activating / deactivating “Heater” Function**
Use keys [▲] and [▼] in order to select “HEATER”:
push the button [✓]:
- select [YES] to activate;
- select [NO] to deactivate.

**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
VSUP2 = speed 2
VSUP3 = speed 3
VSUP BOOST = boost speed

VEXH1 = speed 1
VEXH2 = speed 2
VEXH3 = speed 3
VEXH BOOST = boost speed

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

<table>
<thead>
<tr>
<th>Speed</th>
<th>Airflow (m³/h)</th>
<th>SET</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>165</td>
<td>37</td>
</tr>
<tr>
<td>2</td>
<td>276</td>
<td>62</td>
</tr>
<tr>
<td>3</td>
<td>365</td>
<td>80</td>
</tr>
<tr>
<td>Boost</td>
<td>387</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Speed</th>
<th>Airflow (m³/h)</th>
<th>SET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>1</td>
<td>161</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>255</td>
<td>59</td>
</tr>
<tr>
<td>3</td>
<td>340</td>
<td>95</td>
</tr>
<tr>
<td>Boost</td>
<td>360</td>
<td>100</td>
</tr>
</tbody>
</table>

"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 occurs with the machine lock;
• Alarm: No Frost - Wait one hour without blocking the machine (No Frost, By-pass: not enabled);
• Alarm: Ext probe damaged without blocking the machine (By-pass not enabled);
• Alarm: Int probe damaged without blocking the machine (No Frost 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.
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".
Pressing the [✓] key will display:

<table>
<thead>
<tr>
<th>Alarm</th>
<th>Filters</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Filters</td>
<td>Check</td>
<td>clean</td>
</tr>
<tr>
<td></td>
<td>filter</td>
<td></td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Alarm</th>
<th>Filters</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Filters</td>
<td>Replace</td>
<td>filter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reset?</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Alarm</th>
<th>No Frost</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No Frost</td>
<td>Wait</td>
<td>1 hour</td>
</tr>
</tbody>
</table>
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.
"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.

"Program" page (NOT UK Markets)
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.

Press the [✓] key to confirm:
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.

**NOTE**
At the unspecified intervals, the equipment operates at the speed that is set manually on the "HOME" page.

**NOTE**
At the specified intervals, however, the speeds can be changed manually, and in this case the word "Man" appears in the "HOME" 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

<table>
<thead>
<tr>
<th>MAIN MENU</th>
<th>S: 0.9 2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>USE MENU</td>
<td>M: 0.9 2.5</td>
</tr>
<tr>
<td>ALARM</td>
<td>CFG: 2.5</td>
</tr>
<tr>
<td>SETUP</td>
<td></td>
</tr>
<tr>
<td>INFO</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NOT UK Markets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Off</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>Boost</td>
</tr>
</tbody>
</table>
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**: actives the notice about filters checking and cleaning (See: Operation and Use: Pre-alarm: “Checking filters”)

• **Alarm**: actives 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 disconnetted 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.
Important information concerning the environmentally compatible disposal

IN CERTAIN EUROPEAN UNION COUNTRIES THIS PRODUCT DOES NOT FALL WITHIN THE REQUIREMENTS OF THE NATIONAL LAWS IMPLEMENTING DIRECTIVE WEEE, AND IN THESE COUNTRIES THE PRODUCT IS NOT SUBJECT TO SEPARATE DISPOSAL OPERATIONS AT THE END OF ITS WORKING LIFE.

This product conforms to EU 2012/19/EC

This appliance bears the symbol of the barred waste bin. This indicates that, at the end of its useful life, it must not be disposed of as domestic waste, but must be taken to a collection centre for waste electrical and electronic equipment, or returned to a retailer on purchase of a replacement.

It is the user’s responsibility to dispose of this appliance through the appropriate channels at the end of its useful life. Failure to do so may incur the penalties established by laws governing waste disposal.

Proper differential collection, and the subsequent recycling, processing and environmentally compatible disposal of waste equipment avoids unnecessary damage to the environment and possible related health risks, and also promotes recycling of the materials used in the appliance.

For further information on waste collection and disposal, contact your local waste disposal service, or the shop from which you purchased the appliance.

Manufacturers and importers fulfil their responsibilities for recycling, processing and environmentally compatible disposal either directly or by participating in collective systems.
9  
\[0 \leq \alpha < 2^\circ\]

10

11  To unscrew

12
To screw
Torx T25
Torque: 1,0 N/m

To unscrew
Torx T25
To screw

Torx T25
Torque: 1,0 N/m
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**

    1. Mains 2 poles switch

30. **REMOTE CONTROL**

    4. Remote HMI
31 POWER SUPPLY + PRE-HEATER

1 Mains 2 poles switch
2 Preheater (remote 230Vac relay coil)

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)
JOULE IE

mail Kylemore Park West, Ballyfermont, Dublin 10
tel +353 (1) 623 7080
fax +353 (1) 626 9337
eml info@joule.ie
web www.joule.ie

JOULE UK

mail Unit 17C&D Power Road, Plantation Bus. Pk.
Bromborough, Wirral, CH62 3RN
tel +44 (0) 1513 551 094
fax +44 (0) 1513 568 336
eml info@jouleuk.co.uk
web www.jouleuk.co.uk

JOULE PL

mail 23-200 Kraśnik, ul. Towarowa 34
tel +48 (0) 128811171
fax +48 (0) 814709046
eml biuro@joule-pl.pl
web www.joule-pl.pl
This guarantee is offered as an extra benefit and does not affect your legal rights. All electrical appliances produced by Joule are guaranteed by the Company for 2 years against faulty material or workmanship.

If any part is found to be defective in this way within the first twenty-four months from the date of purchase or hire purchase agreement, we, or our authorised service agents, will replace or at our option repair that part without any charge for materials or labour or transportation, provided that the appliance has been used only in accordance with the instructions provided with each appliance and has not been connected to an unsuitable electricity supply, or subjected to misuse, neglect or damage or modified or repaired by any person not authorised by us.

The correct electricity supply voltage is shown on the rating plate attached to the appliance.

This guarantee is normally available only to the original purchaser of the appliance, but the Company will consider written applications for transfer. Should any defect arise in any Joule product and a claim under guarantee become necessary, the appliance should be carefully packed and returned to your approved Joule stockist.

This portion of the guarantee should be attached to the appliance.

---

**UK-IRELAND**

Send the guarantee in sealed envelope to:

Joule
Kylemore Park West,
Ballyfermot,
Dublin 10

☐ I authorize Joule to include my personal details within their database, which they use, via a third party for the despatch of advertising material, at any time, in accordance with the regulations in force within my country. I can have access to my details and can request changes, or prohibit the usage of my details. This will be done by addressing my request directly to:

Joule
Kylemore Park West,
Ballyfermot,
Dublin 10

☐ I do not authorize (please tick if required)

---

**OTHER COUNTRIES**

Please send the guarantee to the retailer’s address in the country where the appliance has been purchased.

☐ I authorize Joule and its local distributors to include my personal details within their database and they can use it through a third party for the despatch of advertising material. At any time, in accordance with the regulations in force within my country, I can have access to details and can ask to make changes, or prohibit the usage of my details. This will be done by addressing my request directly to the headquarters of the local distributor where the appliance has been bought.

☐ I do not authorize (please tick if required)
GUARANTEE
TO BE RETAINED

Purchase date

This warranty must be attached to the appliance should it need to be returned for servicing.
N.B. Guarantee is only valid if all details are completed correctly.

Stamp of supplier

Mailing date

GUARANTEE
TO SEND
(within 8 days from the date of purchase)

Purchase date

CUSTOMER DATA

name

surname

street

post code

town

I have read and understood the terms and conditions of this guarantee and I authorize the processing of my personal details (see overleaf).

Signature

Stamp of supplier

Mailing date