

# INSTRUCTION, OPERATING AND MAINTENANCE MANUAL

## **VESTA 80 series**

Isothermal dehumidifiers

**VESTA 80 FVI:** Vertical version for exposed recessed

**VESTA 80 HI:** Horizontal ductable version

**This appliance must be installed only by qualified technicians.**

Thank you for choosing and installing the **VESTA 80** dehumidifier, an appliance that will ensure lasting benefits when used with radiant panel air conditioning systems, coupled with the maximum reliability, efficiency, quality and safety.

This booklet is designed to provide you with all the information you need for correct and easy installation, assuming you are in possession of the necessary skills and technical know-how.

We wish you every success in this work, and thank you again for choosing this product.

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|   |                          |
|---|--------------------------|
| The following symbols appear in this handbook:  |                          |
|  | <b>Warning</b>           |
|  | <b>Prohibited</b>        |
|  | <b>Installer</b>         |
|  | <b>User</b>              |
|  | <b>Technical Support</b> |

## DECLARATION OF CONFORMITY



We hereby declare, under our own responsibility, that the supplies described below comply fully with the following directives and technical standards. The supplied products have been manufactured, tested and checked in compliance with the prescriptions and procedures of our Quality System.

### VESTA 80 FVI - VESTA 80 HI

#### EEC Directives:

- Machinery directive 2006/42/EC
- Low Voltage Directive 2014/35/EC;
- Electromagnetic compatibility Directive 2014/30/EU

#### Standards:

- EN 60204-1:2006 and rev. Safety machinery-electrical equipment of machines -Part 1: General requirements
- EN 55014-1:2006 Electromagnetic compatibility – Rules for households, electric tools and similar apparatus
- UNI EN ISO 12100:2010 Safety of machinery - Basic concepts, General principles for design. Specifications and technical principles
- UNI EN ISO 13857:2008 Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs
- EN 349:2008 Safety of machinery - Minimum gaps avoid crushing of parts of the human body

## WARNINGS

-  After removing the packing materials, make sure the contents are in good condition and complete in all parts. If you notice any damage or missing parts, contact the Dealer from whom you purchased the appliance.
-  This appliance is designed for air dehumidification and it must be installed indoors.
-  This appliance must be utilised exclusively for its intended purpose. All other uses are construed as improper and potentially dangerous. The manufacturer cannot be held liable for any damage deriving from improper, incorrect or unreasonable use of the appliance.
-  The appliances are supplied without grilles or cabinet. Protective elements must be installed such as to prevent accidental contact with the appliance.
-  This handbook must be kept safe because it is an integral part of the appliance and must therefore ALWAYS accompany it, also when it is transferred to a new owner or user or when it is relocated for use in a different system. If the handbook is damaged or lost, order a replacement copy from your local Technical Support Service.
-  Repairs and maintenance work must be carried out by the Technical Support Service or by qualified personnel in compliance with the prescriptions set down in this handbook.
-  The technical dataplate shows the technical and performance data of the appliance. If the technical dataplate is lost or misplaced, order a duplicate from the Technical Support Service. Tampering with, removal of, or absence of the Technical Dataplate or any other items, such that prevents unequivocal identification of the appliance, will hinder installation and maintenance procedures.
-  In the case of faults and/or malfunctioning of the appliance, switch it off and do not attempt to repair it yourself. For repairs always contact the technical service centres authorized by the manufacturer and insist on the use of genuine original replacement parts. Failure to comply with the above prescriptions will impact negatively on the safety of the appliance.
-  Do not use extension cables when working in bathrooms or shower areas except with the utmost caution.  
Do not install the appliance in rooms in which the air may be contaminated with gas, oil mist or sulphur or close to sources of heat
-  If you decide you no longer wish to use the appliance, make it inoperative by unplugging it from the mains supply and cutting off the power cable. Make safe all parts of the appliance that may constitute a source of danger, especially for children who may attempt to play with the appliance

## SAFETY PRESCRIPTIONS

Note that the use of electrically powered products calls for compliance with a series of basic safety rules:

-  Do not place heavy or hot objects on the appliance.
-  Do not allow children or unassisted differently abled persons to use the appliance.
-  Do not touch the appliance if you have bare feet or when any parts of your body are wet.
-  Do not attempt to service or clean the appliance until you have disconnected it from the mains supply and set the main electrical power breaker to "off".
-  Do not attempt to alter safety or control devices without the express authorisation and instructions of the manufacturer.
-  Do not spray water directly onto the appliance.
-  Do not pull, disconnect or twist the electrical cables connected to the appliance, even when the appliance is disconnected from the mains supply.
-  Do not stand on the appliance and/or place any objects on it.
-  Do not poke pointed instruments through the air intake and outlet grilles.
-  Do not open the covers providing access to internal parts of the appliance until you have set the main electrical power breaker to "off".
-  It is prohibited to disperse the packing materials in the environment or leave them within reach of children. Discarded packing materials can constitute a source of danger.

## APPLIANCE DESCRIPTION

VESTA 80 dehumidifiers are utilised for summer dehumidification of rooms with radiant panel cooling systems.

VESTA 80 is designed and built exclusively for indoor installation. Outdoor installation of the unit is strictly prohibited.

The appliance is available in three versions:

- VESTA 80 FVI - Vertical recessed exposed unit  
The dehumidifier is recessed into the wall utilising a wood frame.
- VESTA 80 HI- Horizontal ductable unit  
In this configuration the airflow at the outlet can be routed directly into a duct and then diffused into the room through an outlet vent.



In the VESTA 80HI versions the ducts, vents (intake and outlet) and room air intake filter must be supplied by the installer.

The structure is made of galvanized steel sheet. The fan unit is composed of a centrifugal fan with six-speed motor that assures high performance, efficiency, and low noise operation.

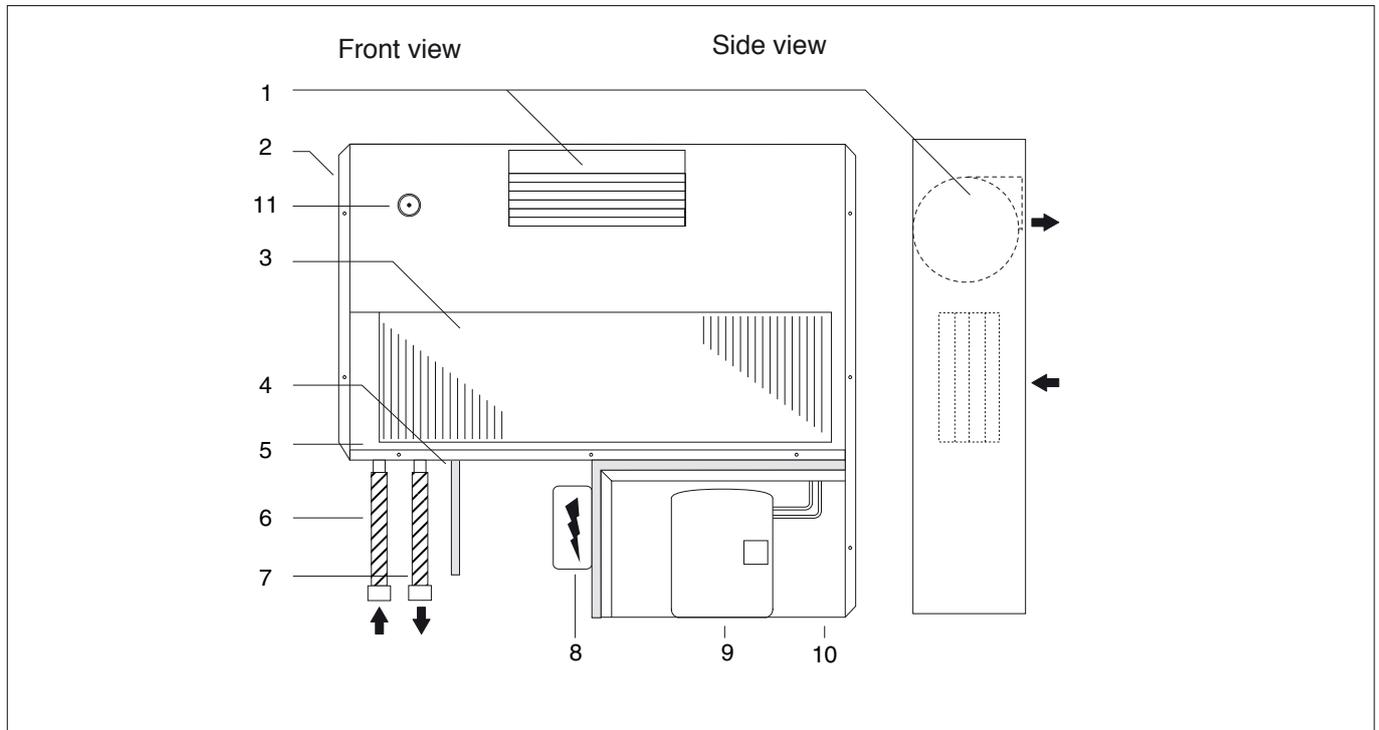
Air treatment is provided by a refrigerant circuit composed of pre and post-treatment coils made of copper tube with aluminium fins, a reciprocating compressor mounted on antivibration supports or springs (VESTA 80V ), a capillary expansion tube and a filter-dryer.

VESTA 80 delivers air at neutral temperature with respect to the room air. This characteristic is assured by the presence in the unit of a post-cooling coil through which water from the radiant panels system can be circulated.

VESTA 80 is controlled by the regulation and control system, also when several units are installed in parallel.

Optimal installation for all types of system is guaranteed by a range of optional accessories.

### VESTA 80 FVI - vertical recessed exposed version

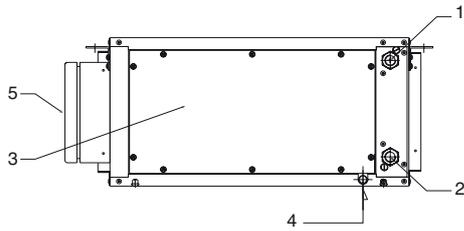


|   |  |
|---|--|
| 1 | Centrifugal fan  |
| 2 | Sheet steel structural frame   |
| 3 | Air treatment coils assembly   |
| 4 | Condensate drain (rubber hose with inside Ø of 15 mm)                |
| 5 | Stainless steel condensate collection tray                           |
| 6 | Union for pre and post-treatment coil: 3/8" GAS female (WATER INLET) |

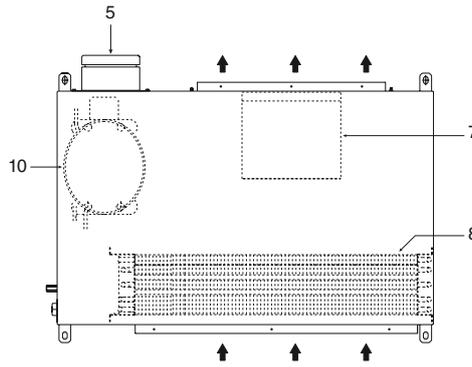
|    |   |
|----|---|
| 7  | Union for pre and post-treatment coil: 3/8" GAS female (WATER OUTLET)         |
| 8  | Electrical junction box: connections for power input and unit control circuit |
| 9  | Compressor  |
| 10 | Acoustically insulated compressor compartment                                 |
| 11 | Air bleed valve for pre and post-treatment coils                              |

## VESTA 80 HI - horizontal ductable version

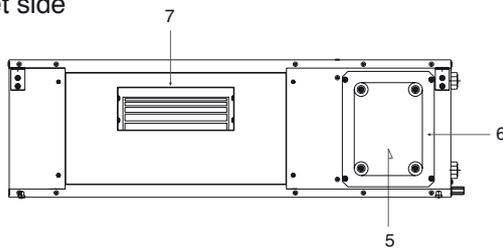
Side view (water and condensate drain connections side)



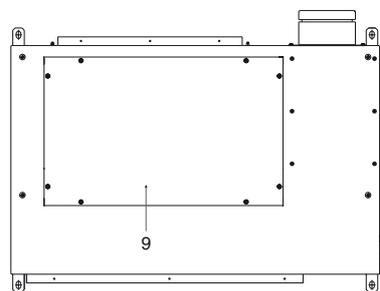
Top view (with internal layout of the main unit components)



View of outlet side



Bottom view



|   |  |
|---|--|
| 1 | Pre- and post-treatment coils water outlet (1/2" GAS female)     |
| 2 | Pre- and post-treatment coils water inlet (1/2" GAS female)      |
| 3 | Removable compressor access panel                                |
| 4 | Metal manifold for condensate drain (14 mm outside diameter)     |
| 5 | Electrical panel for unit power input and control enable signal. |

|    |  |
|----|--|
| 6  | Removable panel  |
| 7  | Fan  |
| 8  | Coils assy. (pre-treatment, evaporator, condenser, post-treatment) |
| 9  | Fan access panel   |
| 10 | Compressor   |

## IDENTIFICATION

VESTA 80 dehumidifiers can be identified by:

### - Packing label

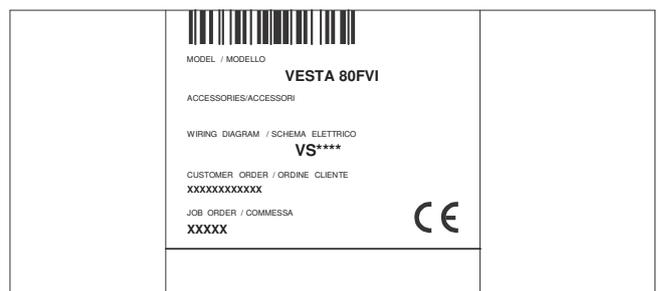


### - Technical dataplate

Shows the technical and performance data of the appliance. If the technical dataplate is lost or misplaced, order a duplicate from the Technical Support Service.



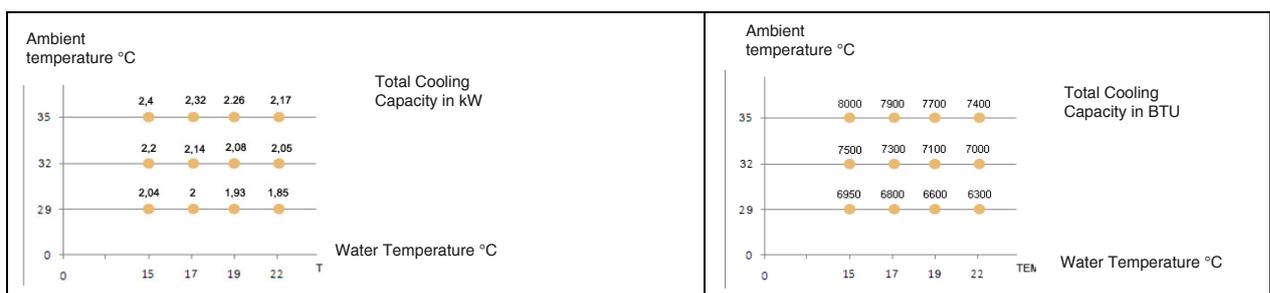
Tampering with, removal of, or absence of the Technical Dataplate or any other items that prevent unequivocal identification of the appliance will hinder installation and maintenance procedures



## TECHNICAL DATA

| <b>Thermal and technical data</b>  |                            |                   |
|--|----------------------------|-------------------|
| Guideline treatable volume   | 200/300                    | m <sup>3</sup>    |
| Human occupancy (1)  | 6÷8                        |                   |
| Nominal condensing capacity (2)  | 0,8                        | l/h               |
| Nominal airflow  | 250                        | m <sup>3</sup> /h |
| Nominal total water flow rate to pre- and post-treatment coils (coils connected in parallel) | 210                        | l/h               |
| Nominal total cooling capacity absorbed by the air pre- and post-treatment coils             | 800                        | W                 |
| Air pre- and post-treatment coils ΔP   | 6,8                        | kPa               |
| <b>Electrical / general data</b>   |                            |                   |
| Electrical power supply  | 230/1/50                   | (V/ph/Hz)         |
| Nominal current input (3)  | 2                          | A                 |
| Maximum current input  | 2.6                        | A                 |
| Nominal power consumption (3)  | 370                        | W                 |
| Maximum power consumption  | 400                        | W                 |
| Electrical box protection rating   | IP54                       |                   |
| Centrifugal fan  | selectable 3-speed control |                   |
| <b>Weight</b>  |                            |                   |
| VESTA 80 FVI (unit only)   | 37                         | Kg                |
| VESTA 80 H   | 40                         | Kg                |
| <b>Dimensions</b>  |                            |                   |
| VESTA 80 FVI version without frame and front panel (WxDxH)                                   | 695x201x695                | mm                |
| Frame (WxDxH)  | 750x230x740                | mm                |
| Version VESTA 80 HI (WxDxH)  | 593x800x250                | mm                |
| <b>Pre- and post-treatment coils hydraulic connections</b>                                   |                            |                   |
| VESTA 80 FVI   | no. 2 3/8" GAS female      |                   |
| Version VESTA 80 HI  | no. 2 1/2" GAS female      |                   |
| Total sound pressure in open field at 1,5 m distance   | 38,5                       | dBA               |
| <b>Operating limits</b>  |                            |                   |
| Pre-/post-treatment coils water temperature  | 18 ÷ 25                    | °C                |
| Intake air d.b. temperature  | 15 ÷ 35                    | °C                |
| Relative humidity  | 45 ÷ 90                    | %                 |
| Integration (3)  | 2,4                        | kw                |

- (1) Value that depends on the level of metabolic activity and the average radiant temperature in the room.
- (2) At the following conditions:  
Nominal airflow; intake air 25°C ... 65%; nominal water flow rate; pre- and post-treatment coils water inlet temperature: 15°C.
- (3) At the following conditions: Nominal airflow; intake air 25°C ... 65%; nominal water flow rate; pre- and post-treatment coils water inlet temperature: 15 °C.



### Available pressure of the fan

The speed regulating system of the fan allows the balance of the pressure drop, which is due to the different lengths of the ducts.

VESTA80I is equipped with refrigerating system with air condensing.

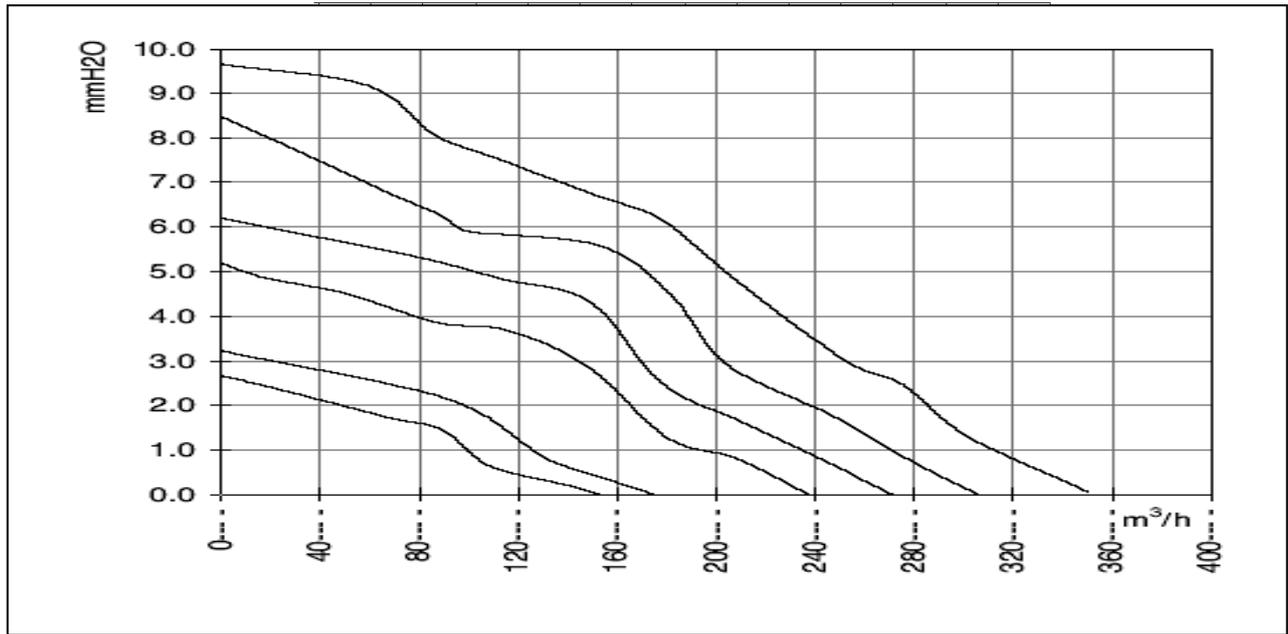
A condenser working with air is used (Isotherm mode) when the environment air is under 28° C;

A condenser working with water is used (Integration mode) when the environment air is over 28° C.

The air flow rate must be set on a parameter the closer to the nominal air flow rate (which is 250 m<sup>3</sup>/h), in order to avoid the risk of a reduction of the performance and/or malfunctioning of the unit.

⚠ The airflow value must remain within a tolerance range of + or - 20% from the nominal air flow range.

⚠ The ducts must be set on the correct parameters, in order to avoid their pressure drop to over cross the pressure head that the fan can supply.



For pressure drops across the filter, refer to the following data:

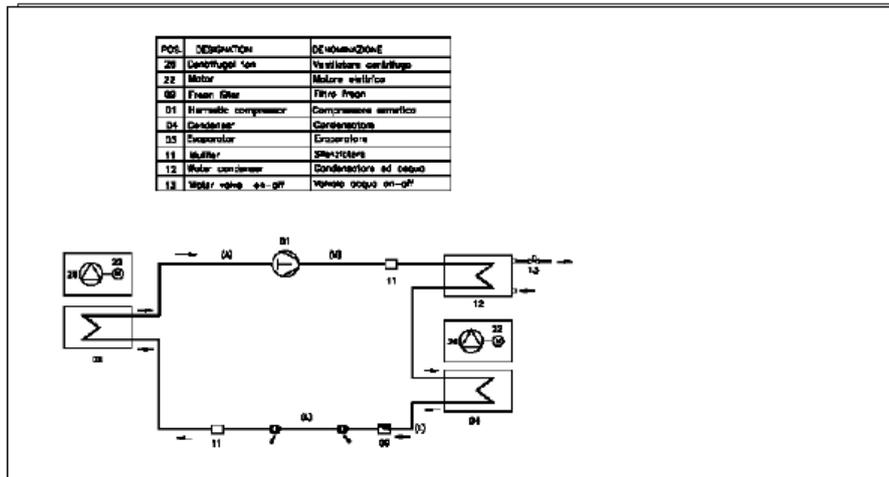
|                               |                         |
|-------------------------------|-------------------------|
| airflow 200 m <sup>3</sup> /h | pressure drop 10.0 [Pa] |
| airflow 230 m <sup>3</sup> /h | pressure drop 11.6 [Pa] |
| airflow 250 m <sup>3</sup> /h | pressure drop 13.0 [Pa] |
| airflow 270 m <sup>3</sup> /h | pressure drop 14.8 [Pa] |

## ACCESSORIES

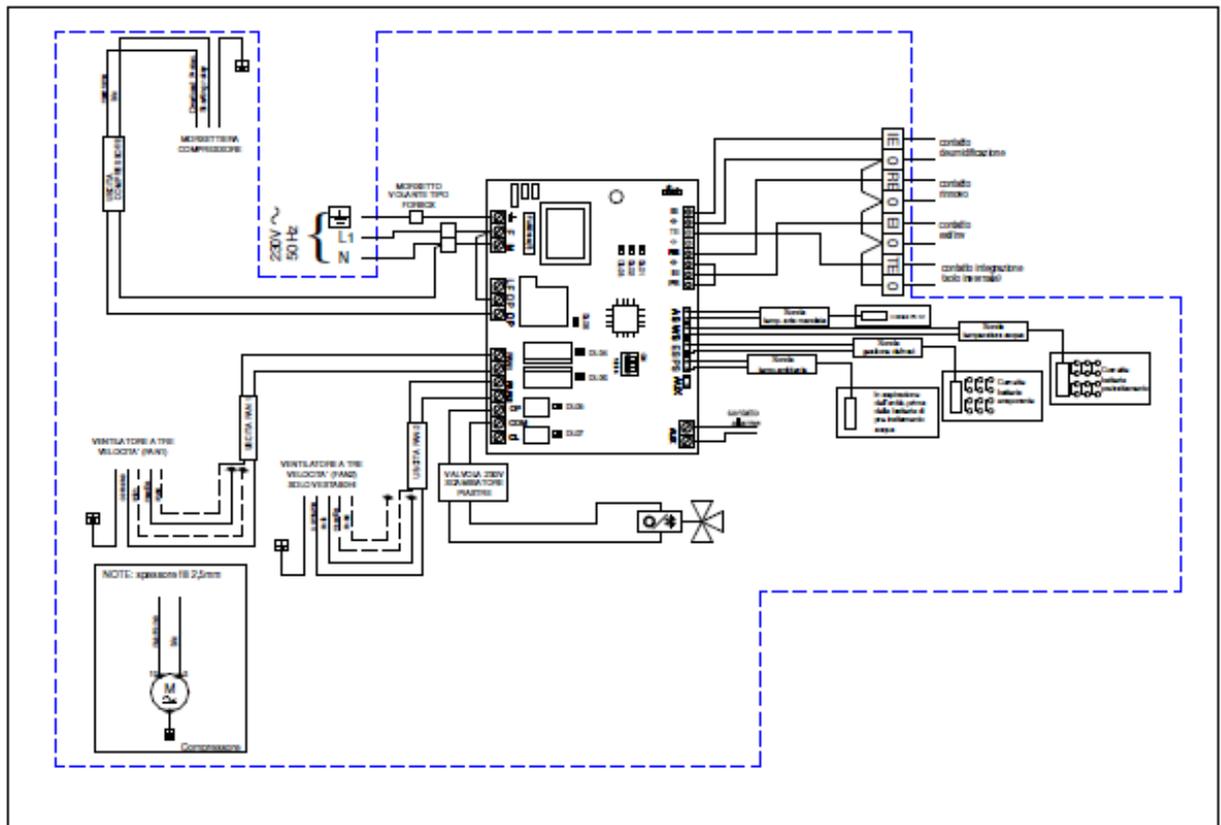
The following accessories can be ordered separately

| Code   | Accessory   | Compatibility              |
|--------|---|----------------------------|
| WPK    | Frame + wood front panel                              | VESTA 80 FVI               |
| MPK    | Frame + metal front                                   | VESTA 80 FVI               |
| HCP    | Wall-mounting electromechanical hygrostat with sensor | VESTA 80 FVI - VESTA 80 HI |
| HCP-EV | Evolution Electronic Hygrostat                        | VESTA 80 FVI - VESTA 80 HI |

# REFRIGERANT CIRCUIT



# ELECTRICAL DIAGRAM



## PRODUCT RECEPTION

VESTA 80 dehumidifiers are supplied in a single pack.  
The unit is supplied complete with the following items:

Standard Unit:

- Installation, operating and maintenance manual;
- VESTA 80 FVI : no. 5 frame fixing screws.
- VESTA 80 HI : no.4 brackets, no.8 fixing screws.
- Serial number label.

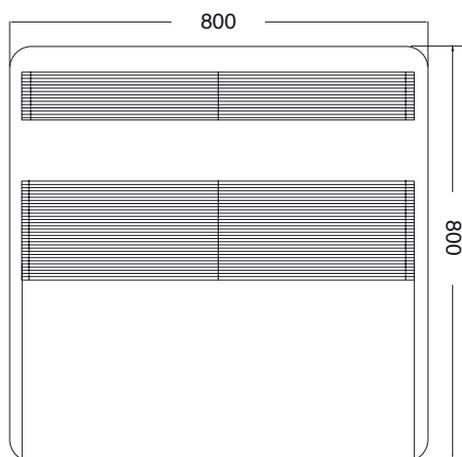
 The instruction handbook is an integral part of the appliance. Please read it carefully and keep it safe.

 Remove the packing material only when the unit has been moved to the point of installation.

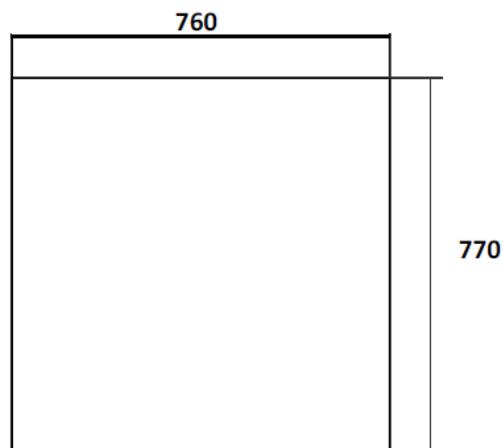
 It is prohibited to disperse the packing materials in the environment or leave them within reach of children. Discarded packing material is potentially dangerous

## DIMENSIONS

VESTA 80 VI – Vertical recessed exposed version

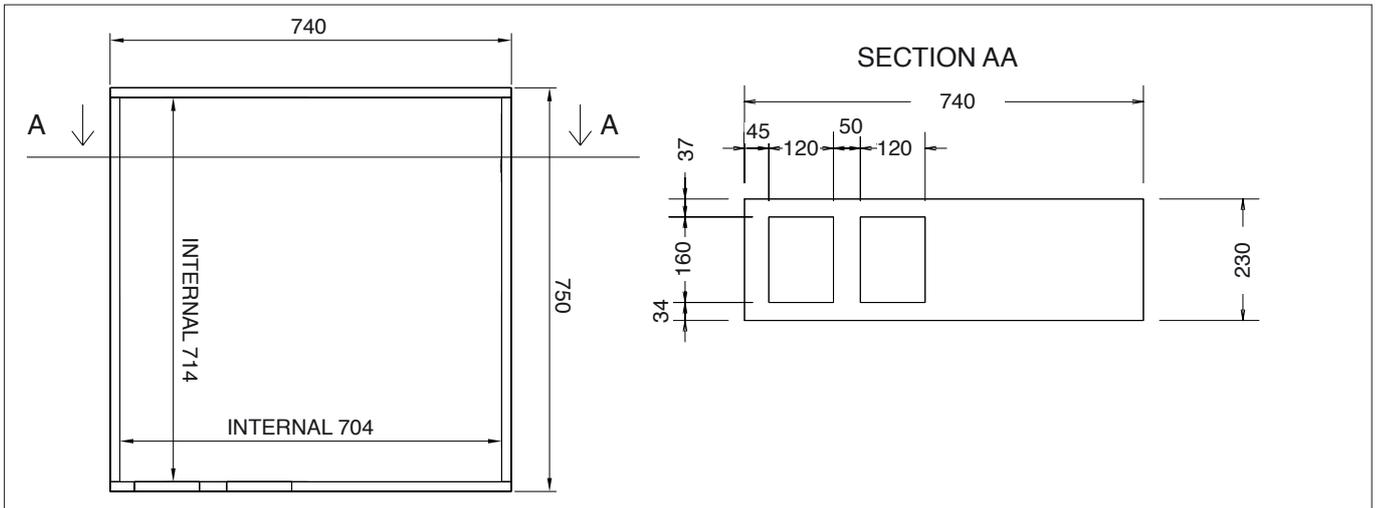


Wood front panel WPK

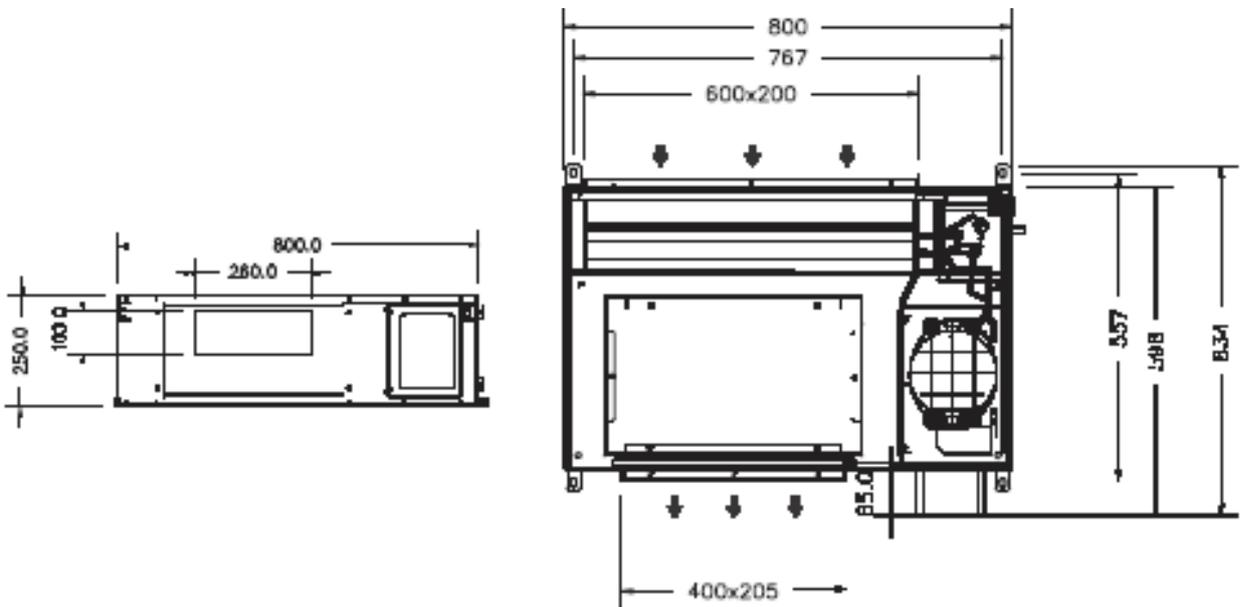


Front panel MPK

VESTA 80 FVI - frame dimensions



VESTA 80 HI – Horizontal ductable version



**HANDLING**

After removing the packing the unit must be handled by qualified personnel having suitable handling equipment in relation to the weight of the appliance.



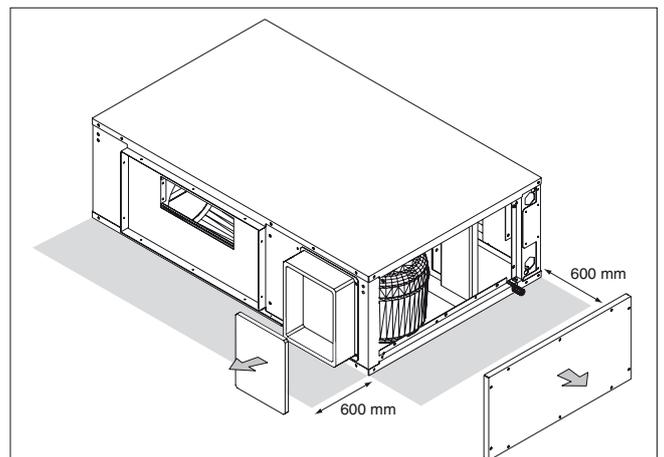
Keep the appliance vertical during transportation and handling (check indication on the pack).

**SITING**

The installation site of VESTA 80 appliances must be established by the system designer or a suitably skilled technician and must take account of technical requirements, technical standards, and compliance with statutory legislation.

VESTA 80 appliances must be:

- Positioned on a level surface that is sufficiently strong to bear the weight of the unit;
- Positioned on a sufficiently rigid floor slab or plinth that will not transmit vibration to lower floors or adjacent rooms.



## INSTALLATION

The installation site must be established by the system designer or a suitably skilled technician and must take account of technical requirements, technical standards, and compliance with statutory legislation.

Installation of the dehumidifier must be entrusted to a qualified installer, in compliance with Italian Law 5 March 1990.

VESTA 80 dehumidifiers are designed for vertical recessed exposed installation (VESTA 80 FVI), horizontal ducted installation in a ceiling void (VESTA 80 HI).

### VERTICAL RECESSED EXPOSED INSTALLATION (VESTA 80 FVI)

- Make a wall recess of the following dimensions: (W x H x D) 745 x 755 x 235 (depth) for insertion of the frame;

⚠ Allow extra clearance for fixing mortar.

- Fit the frame into the recess;

⚠ Clean the recess carefully before inserting the frame.

⚠ Before routing the various pipes into the dehumidifier installation recess, fit the frame in such a way as to be able to identify the exact connection points of hydraulic lines and electrical wiring.

⚠ The base of the frame must be at least 60 mm above the FINISHED floor surface level or higher.

⚠ Allow for the subsequent installation of trims (skirting panels, etc.).

- Fit the appliance into the frame after cleaning the recess carefully;

- Secure the appliance to the frame using the supplied self-tapping screws;

⚠ Fix the frame to the wall and insert the unit, paying attention to the hydraulic system pipes, the condensate drain hose and the electrical cables located in the frame.

⚠ If the frame has already been prepared, remove the fixing tabs and wooden shims of the panel before inserting VESTA 80 into the frame.

Installation of the appliance must be such as to allow circulation of the treated airflow throughout the room and compliance with the minimum necessary clearances to allow unimpeded access for technical servicing and maintenance.

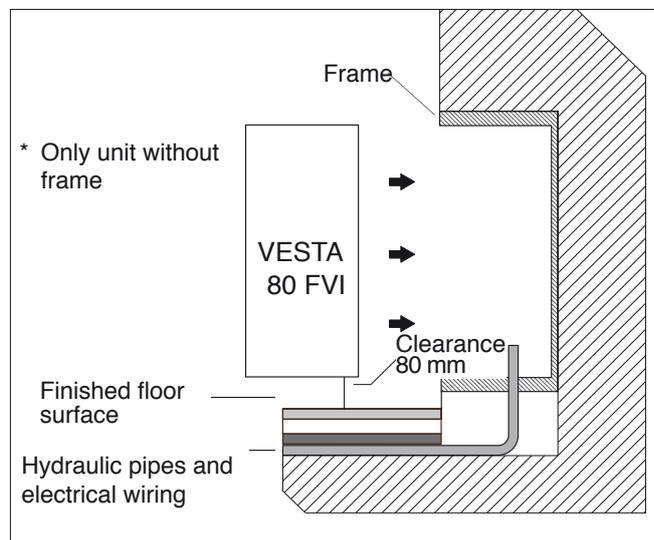
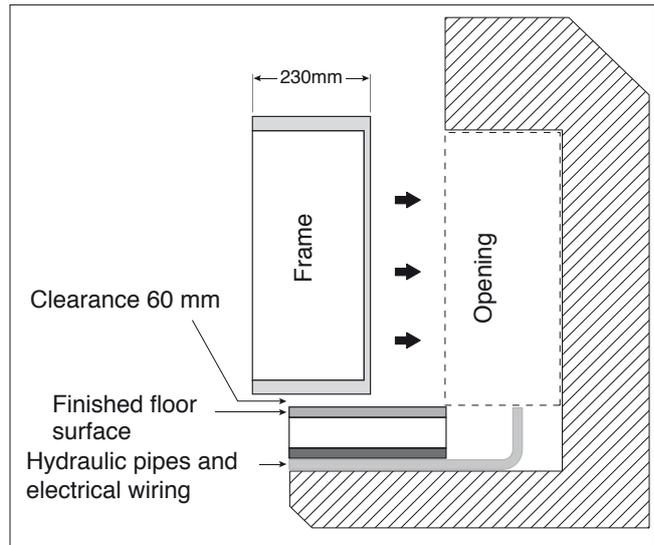
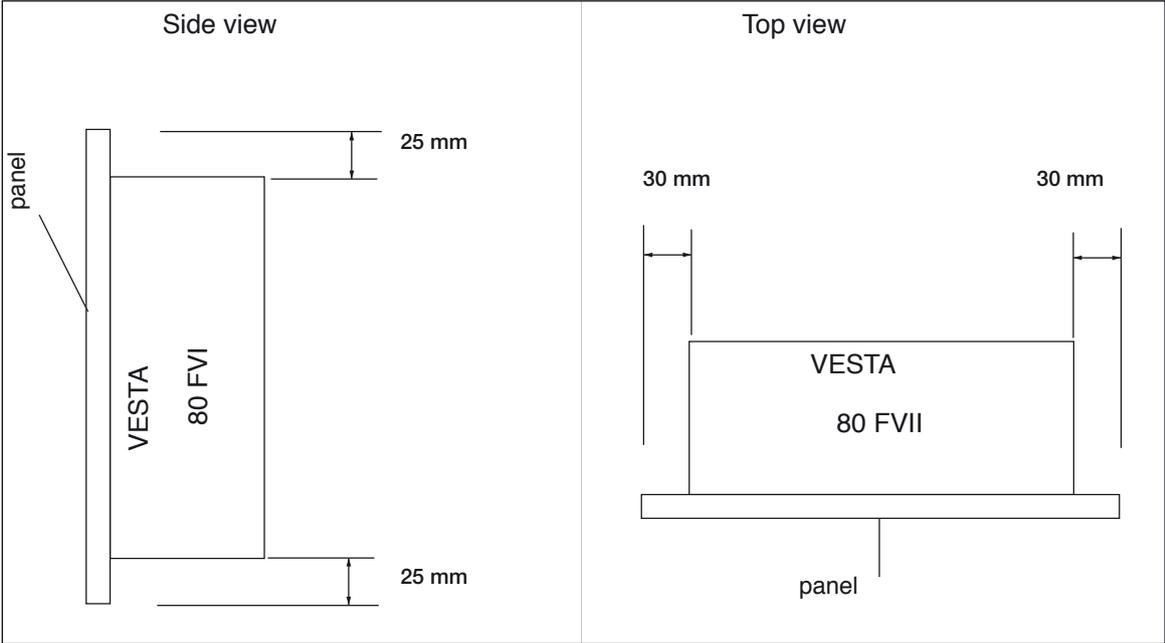
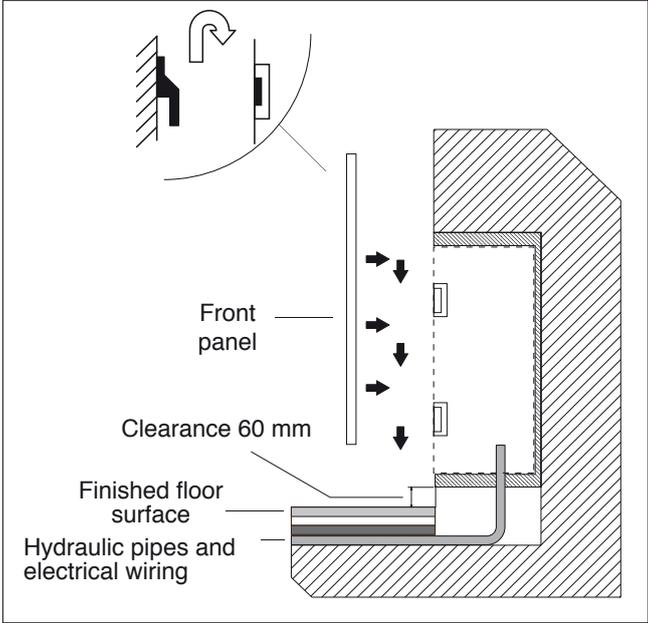


Diagram for WPK wood front panel



- Attach the front panel as shown in the figure.



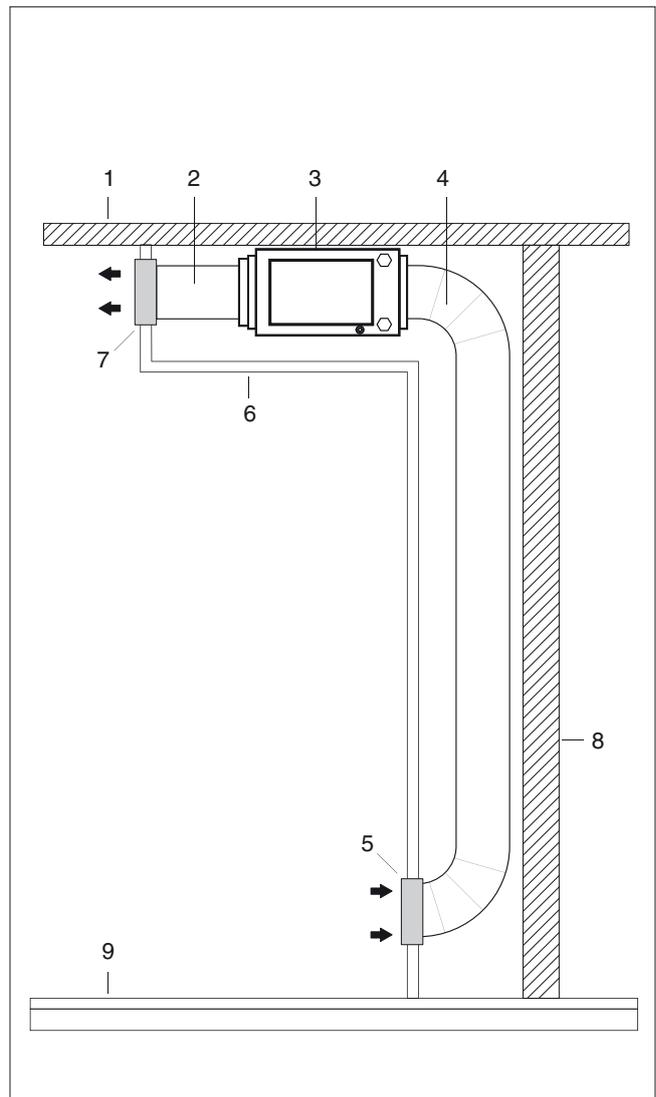
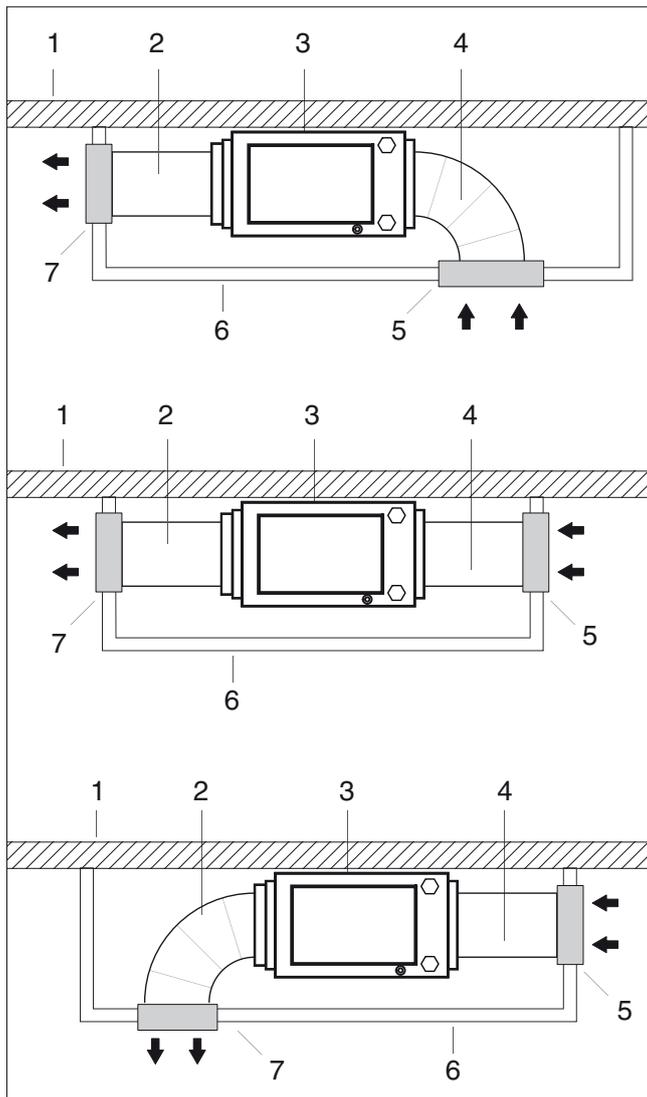
## HORIZONTAL DUCTABLE INSTALLATION (VESTA 80 HI)

Possible installation solutions of the version for ceiling voids

⚠ Sizing of the ducts must be carried out by the system designer or a suitably skilled technician and must take account of technical requirements, technical standards, and compliance with statutory legislation.

⚠ Check pressure drops of the air outlet/intake grilles and any ducts in relation to the performance curves of the appliance.

|   |                                    |
|---|------------------------------------|
| 1 | Ceiling                            |
| 2 | Outlet duct                        |
| 3 | VESTA 80 HI                        |
| 4 | Intake duct                        |
| 5 | Intake grille complete with filter |
| 6 | Suspended ceiling                  |
| 7 | Outlet vent                        |



Model VESTA 80 HI is suspended by means of the four brackets supplied, mounted at the corners of the unit.

Model VESTA 80 HI can be installed in various different configurations:

- suspended from the ceiling;
- mounted on the suspended ceiling structural beams;
- mounted on beams

**!** Take care to ensure that the unit is perfectly level or slightly tilted in such a way as to facilitate the drainage of condensate through the metal manifold.

**Suspended from ceiling (side view)**

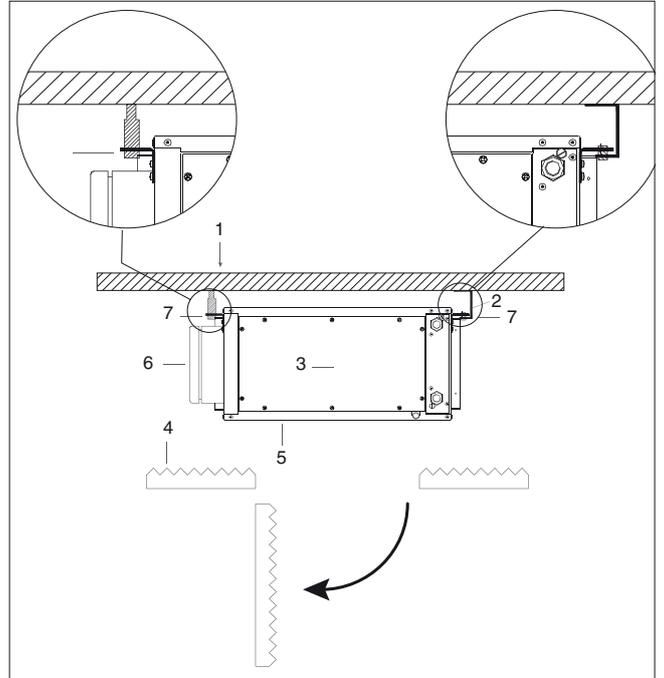
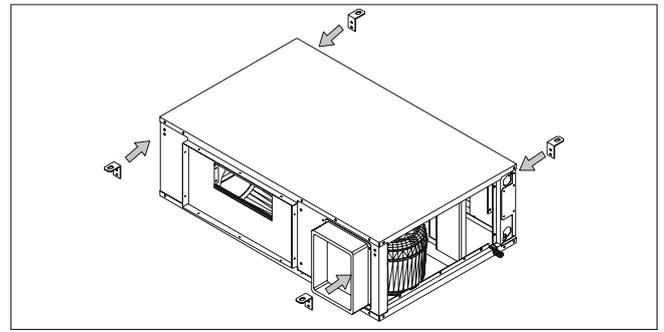
The figure alongside shows two methods of ceiling installation; on the left, with the use of traction type antivibration mounts, on the right with the use of compression type antivibration mounts.

**!** Choose antivibration mounts in compliance with the weight of the appliance and ensure they are installed correctly.

**!** The suspended ceiling must be internally clad with sound insulating material and must have at least one access opening to allow the execution of checks and routine / supplementary maintenance of the appliance.

**!** Provide an access opening in the suspended ceiling of sufficient size to allow the unit to be removed completely (for major compressor maintenance procedures). This will serve to minimise the expense associated with removal and re-installation of the suspended ceiling.

**!** In the case of installation in poorly accessible places, we might not be able to provide assistance under the terms of the warranty.

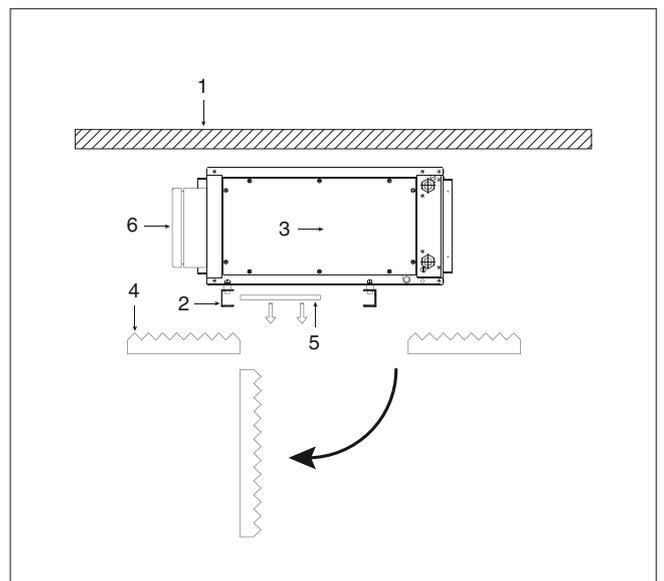


|   |   |
|---|---|
| 1 | Ceiling                                 |
| 2 | Traction type antivibration coupling    |
| 3 | Removable compressor access panel       |
| 4 | Suspended ceiling                       |
| 5 | Lower cover for fan maintenance access  |
| 6 | Electrical panel                        |
| 7 | Compression type antivibration coupling |

**Mounted on beams inside the ceiling void (side view)**

The figure alongside shows installation mounted on brackets or steel beams.

|   |  |
|---|--|
| 1 | Ceiling  |
| 2 | Beam with compression type antivibration mount to be provided by the installer |
| 3 | Removable compressor access panel  |
| 4 | Suspended ceiling  |
| 5 | Lower cover for fan maintenance access   |
| 6 | Electrical panel   |



 Choose antivibration mounts in compliance with the weight of the appliance and ensure they are installed correctly.

 VESTA 80 HI is equipped as standard with four M6 threaded inserts on the base for fixing antivibration mounts to the unit.

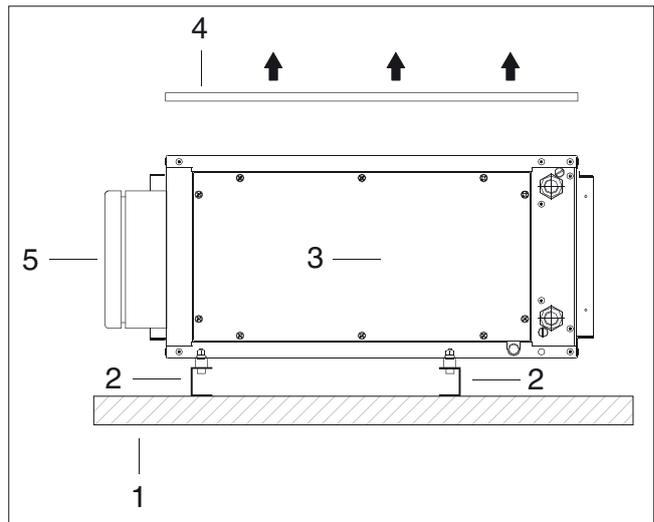
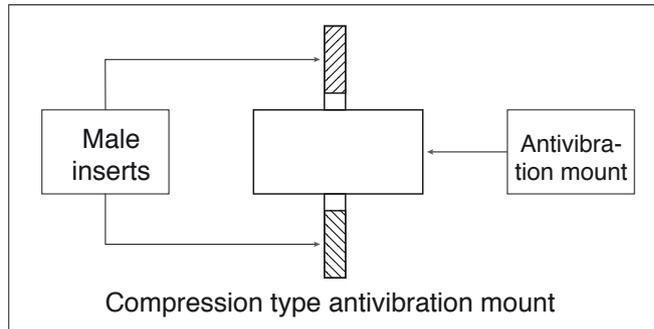
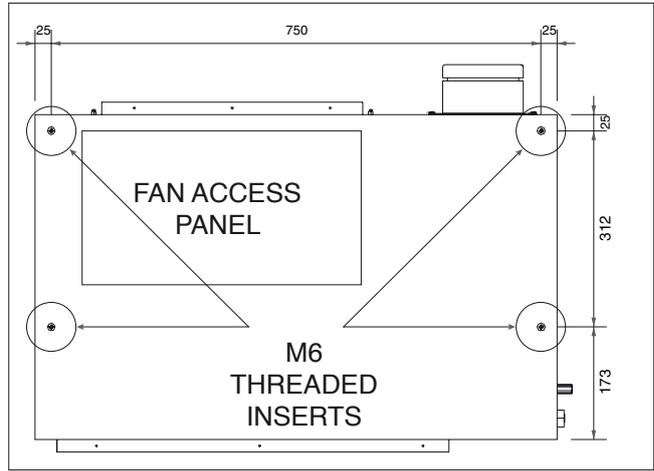
**Mounted on beams**

The figure alongside shows installation of the appliance on a flat surface.

 Choose antivibration mounts in compliance with the weight of the appliance and ensure they are installed correctly.

 Opening of the unit cover (at the top in this case) for fan maintenance can be performed from the top with ease.

|   |  |
|---|--|
| 1 | Floor or flat support  |
| 2 | Beam with compression type antivibration mount to be provided by the installer |
| 3 | Removable compressor access panel  |
| 4 | Removable cover  |
| 5 | Electrical panel   |



**HYDRAULIC CONNECTIONS**

The hydraulic connections of VESTA 80 FVI and vesta 80 HI dehumidifiers are for the air pre and post-treatment coils and the condensate drain hose.

 The choice and installation of the system components are at the discretion of the installer, who must work in compliance with best technical practices and statutory legislation.

 The coils supply line must not be dependent on the zone isolator valves.

### VESTA 80 FVI To make

the connections:

- Secure the unions, locking the dehumidifier connection using two wrenches.



Seal the threads using plumber's hemp and thread seal paste. Do not use Teflon thread sealing tape if the circuit contains antifreeze.

### VESTA 80 HI

To make the connections:

- Remove the plastic caps from the hydraulic connections.
- Secure the unions, locking the dehumidifier connection using two wrenches.



Seal the threads using plumber's hemp and thread seal paste. Do not use Teflon thread sealing tape if the circuit contains antifreeze.

### Condensate drain

VESTA 80 dehumidifiers are equipped with a condensate collection tray to be connected to a drain hose that must be routed to a suitable drainage point.

- Connect an insulated drain hose to the tray outlet connection and route it to a suitable drainage position.



The loop on the rubber drain hose of the VESTA 80 FVI unit serves as a siphon and must be retained during the connection procedure.



Check that water is drained out efficiently by pouring water into the collection tray. The drain hose must follow a downward angle of 2% towards the drainage position.



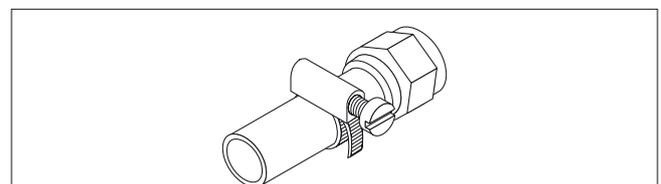
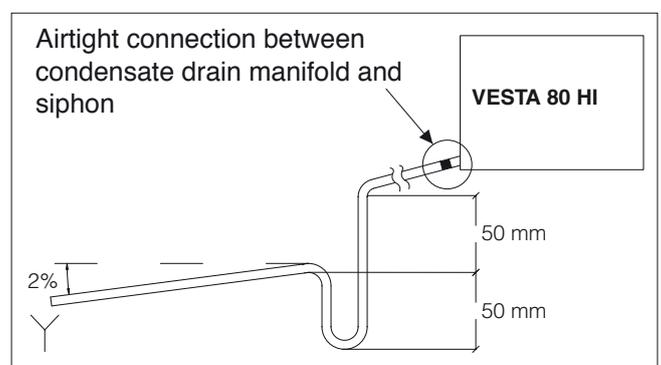
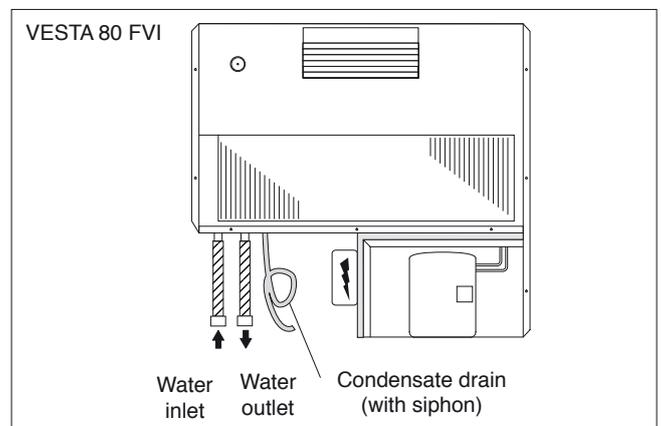
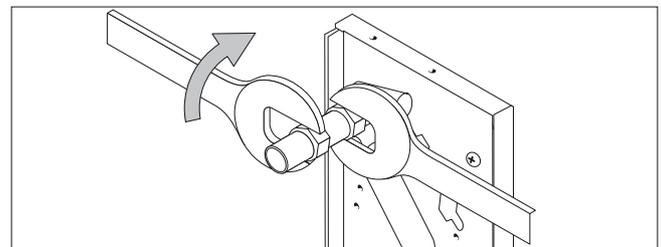
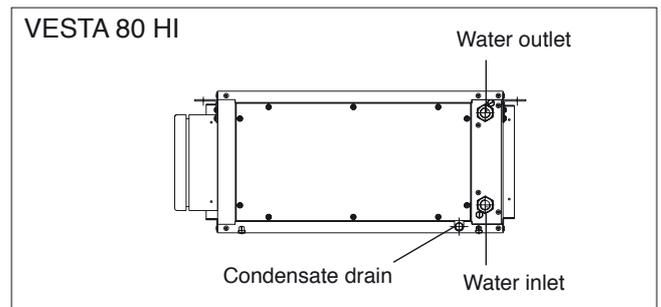
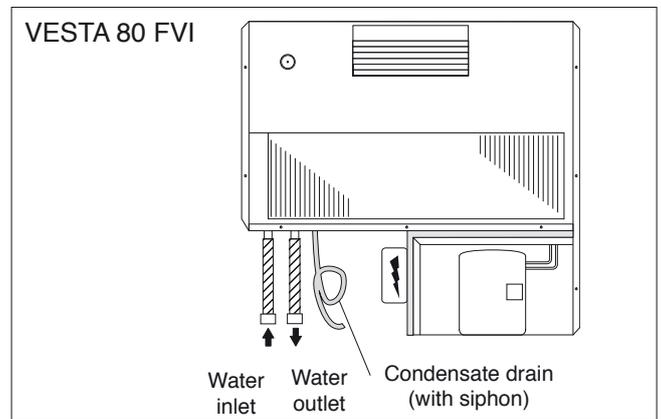
Make sure all the seals are watertight.



Lag coupling points with heat insulation material.



During periods of disuse of the unit the siphon may dry out. If you notice unpleasant odours, pour a little water into the condensate collection tray.



## AERAUIC CONNECTIONS

VESTA 80 HI is prearranged for connection to insulated ducts for air intake and delivery of treated air into the room.

For connection:

- Position the duct on the opening as shown
- Secure the duct using screws that are suitable in relation to the existing holes.

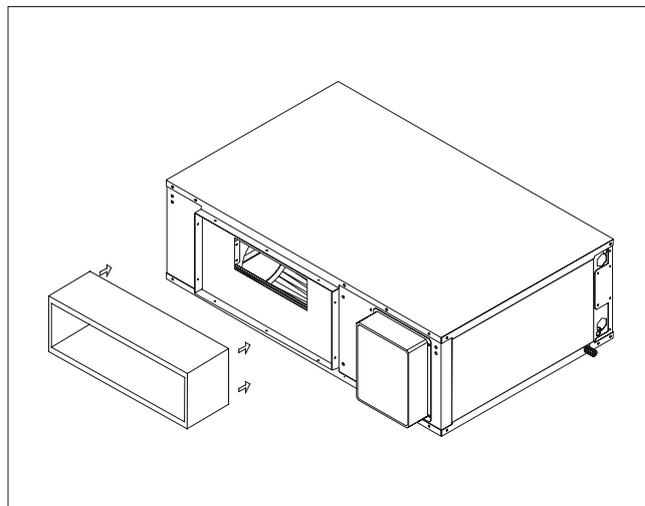
⚠ Sizing of the ducts must be entrusted to competent and qualified technical personnel.

⚠ Check pressure drops of the duct, the grille and the filter in relation to the performance curves of the fan.

⚠ Interpose an antivibration coupling between duct and unit.

⚠ Use a duct clad with anti-condensation material of adequate thickness.

⚠ Lag coupling points with heat insulation material.



## ELECTRICAL CONNECTIONS

Our dehumidifiers leave our factory fully wired and requiring only:

- connection to the electrical mains supply and to the room humidity control system, if present

We also recommend checking that:

- the characteristics of the electrical supply are suitable in relation to the power consumption data shown in the following table, considering also any other appliances that are operating simultaneously.
- the power input voltage complies with the rated value +/- 10%.

It is mandatory:

To fit an all-pole delayed trip thermal-magnetic cut-out and padlockable line disconnect in compliance with CEIEN standards (contact gap of at least 3 mm); the device must be installed in a position that is close to the appliance.

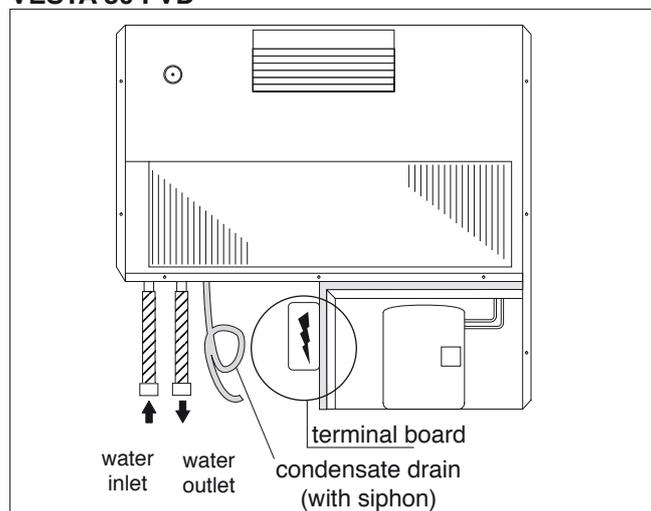
Do not earth the appliance by connecting it to gas or water pipes.

The manufacturer cannot be held liable for damage caused by the lack of an efficient earth connection or failure to comply with the indications of the electrical circuit diagrams.

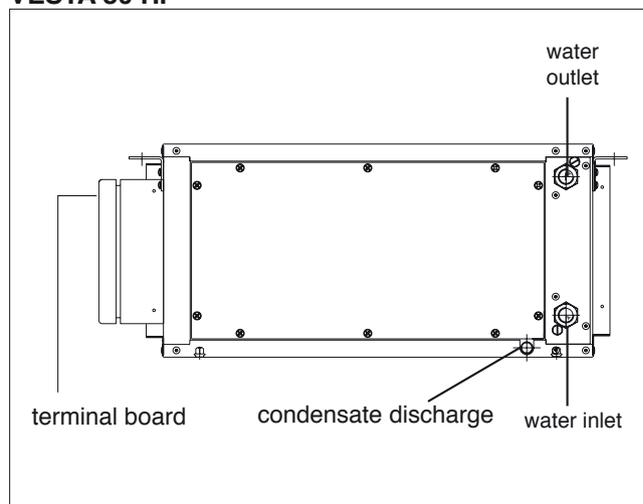
| Model        | Power supply (V/Ph/Hz) | Max. power consumption (W) | Max current input (W) | Delayed action line fuse (A) | Power input conductor cross section (mm <sup>2</sup> ) | Earth conductor cross section (mm <sup>2</sup> ) |
|--------------|------------------------|----------------------------|-----------------------|------------------------------|--|--|
| VESTA 80 HI  | 230/1/50               | 400                        | 2.6                   | 6                            | 1.5  | 2  |
| VESTA 80 FVD | 230/1/50               | 400                        | 2.6                   | 6                            | 1.5  | 2  |

Access the terminal board to make the connections.

### VESTA 80 FVD

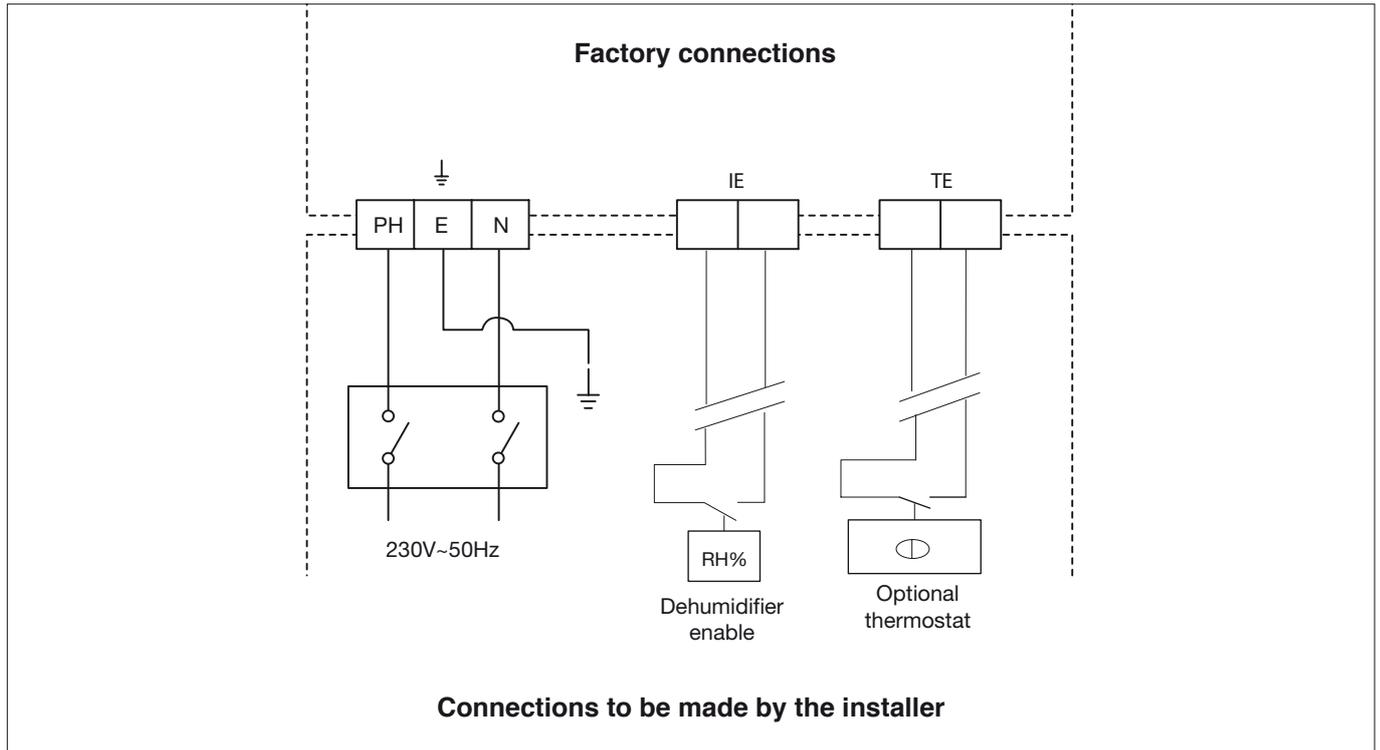


### VESTA 80 HI



## VESTA 80

- Make the connections as shown in the figure.



## CHECKS DURING AND FOLLOWING COMMISSIONING

When the unit is set in operation for the first time, check that:

- The compressor is not emitting anomalous noise.
- 10 minutes after first start-up check that the air temperature in the room is close to the temperature of the treated air outlet. If it is not, adjust the flow rate of water to the pre and post-treatment coils
- The compressor current input is below the maximum rating shown in the Technical Data table.

- The unit is operating within the recommended operating conditions (see Operating Limits table).
- There are no air pockets in the hydraulic circuit.
- The refrigerant compressor stops and subsequently restarts.

## PROLONGED DISUSE OF THE APPLIANCE

To switch off the dehumidifier, irrespective of its current operating status, use exclusively the Control panel.

After switching off the dehumidifier:

- Set the remote switch to "Off" (if present)
- Switch off the terminal units by setting the switch on each appliance to "Off"
- Set the main electrical breaker to "Off"
- Close the water shut-off cocks.



If the room temperature might fall below zero this means there is a risk of freezing.

In this case the hydraulic circuit must be emptied, or it must be protected by adding antifreeze (such as ethylene glycol) in the amounts recommended by the antifreeze producer.

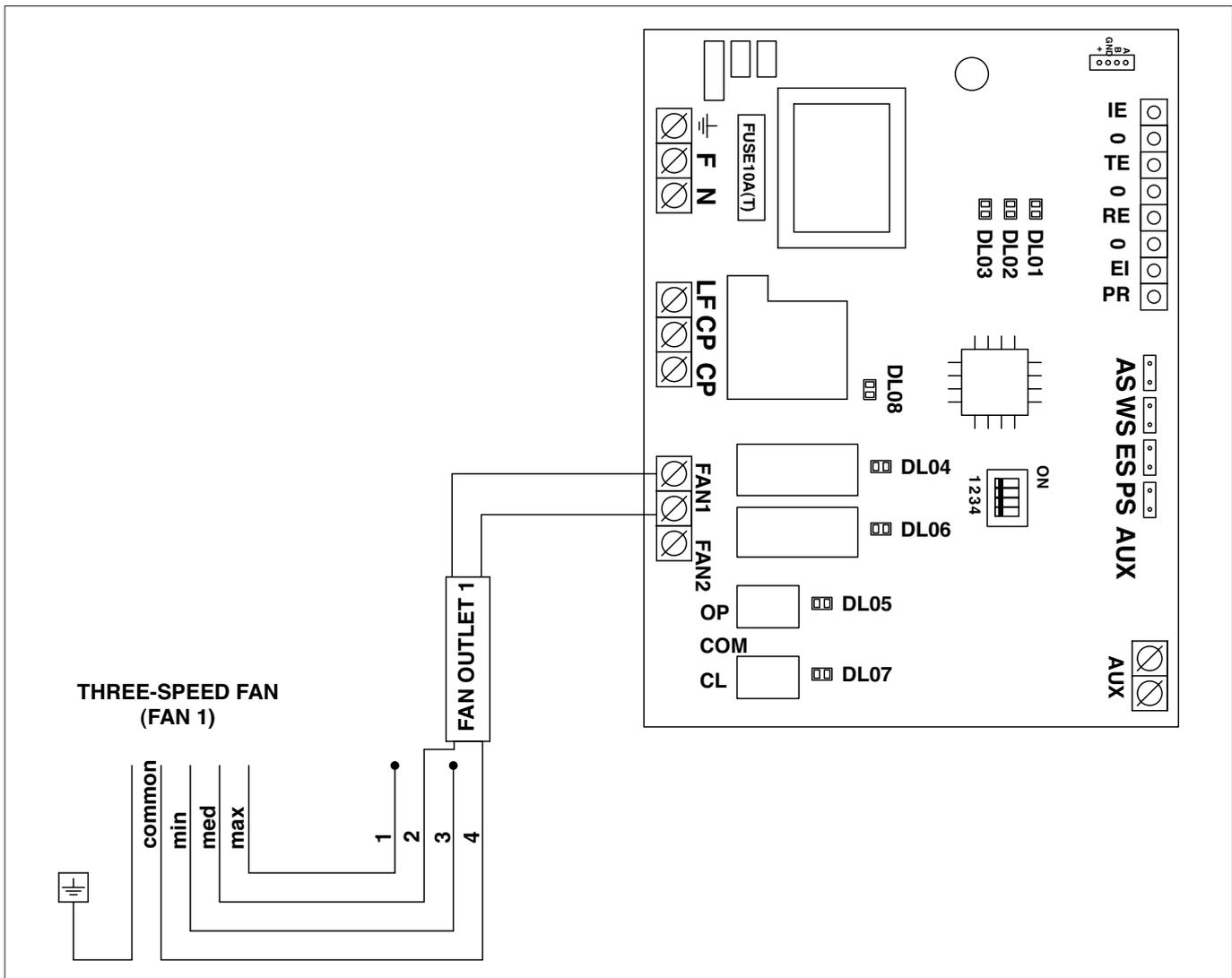
## SELECTING THE FAN SPEED

Model VESTA 80 is equipped with a centrifugal fan having six selectable speeds.

The first three speeds can be set from the electrical panel by connecting the wire from the fan corresponding to the required speed (see the figure below). The other three speeds can be obtained by changing the connection wires in the motor autotransformer.

**⚠** Before changing the fan speed **DISCONNECT THE MAINS SUPPLY** to the appliance

- 3 is Minimum speed, for plastic and metal fan is Red
- 2 is Medium speed (default), for metal fan is Orange, for Metal fan is Blue
- 1 is Maximum speed, for plastic and metal fan is Black
- 4 is common , for plastic fan is Blu, for metal fan is White



## FILLING AND EMPTYING THE SYSTEM

### FILLING

- Before filling the system set the mains breaker switch to "off".
- Check to ensure that the circuit drain cock is closed.

VESTA 80 FVI are internally equipped with a manually operated valve that serves to bleed air from the pre and post-treatment coils.

This operation is possible for VESTA 80 H by acting directly (using a screwdriver) on the water outlet connection from the coils (which is equipped with a specific air bleed screw).

- Start filling the circuit by gradually opening the system water supply cock located externally to the appliance
- When water starts to flow from the appliance bleed valves, close them and continue filling up to the pressure value specified for the system.

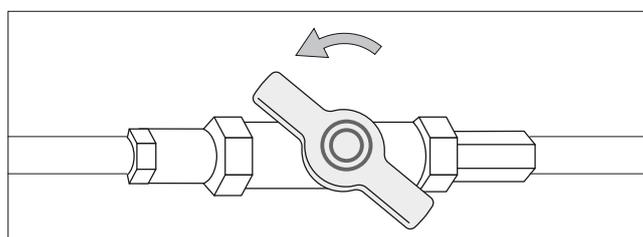
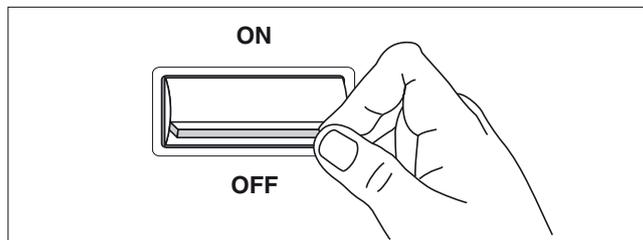
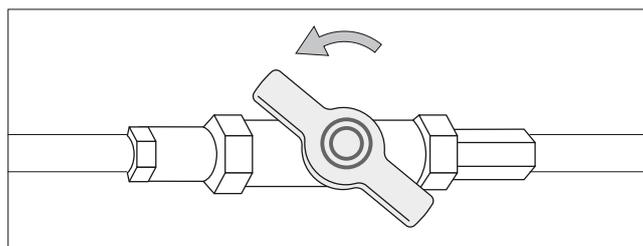
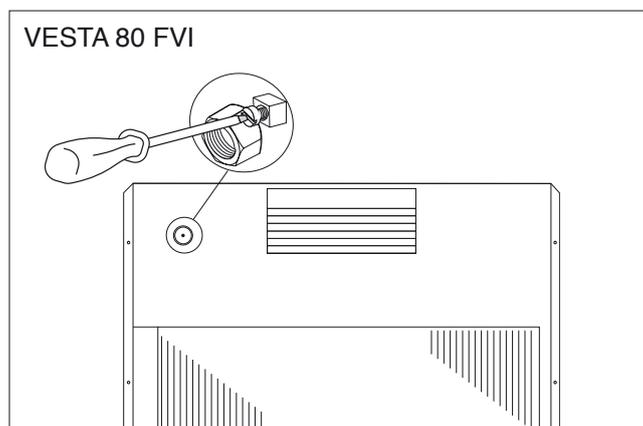
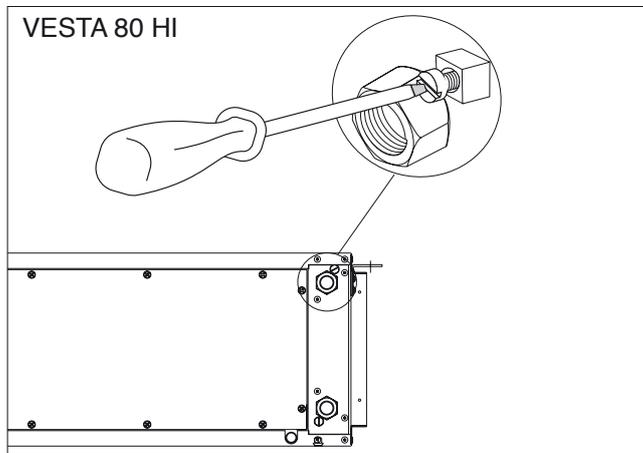
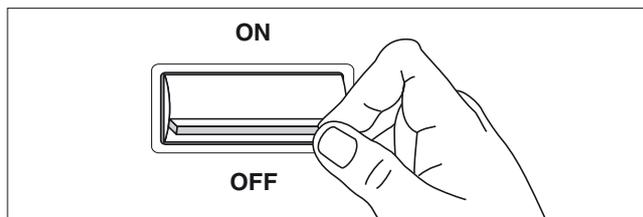
 Check that the hydraulic unions are watertight.

 This operation should be repeated after the appliance has been in operation for several hours; it is also advisable to periodically check the system pressure value.

### EMPTYING

- Before emptying the system set the mains breaker switch to "off"
- Check to ensure that the circuit filling cock is closed
- Open the circuit drain cock and all the bleed valves of the fan coils.

 If the circuit contains antifreeze, it should not be drained freely because these chemicals are classified as pollutants. The contents of the circuit should be collected and reused if possible.



## PREPARATION FOR COMMISSIONING

Before starting up and checking the operation of the VESTA 80 dehumidifier it is essential to check that:

- The appliance is correctly positioned;
- The hydraulic circuit shut-off cocks are open;
- The electrical, hydraulic and condensate drain connections have all been made correctly;
- The water pressure with the circuit cold is as prescribed and the circuit has been bled of air.

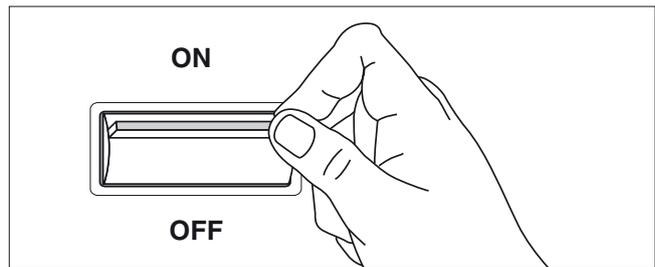


Before starting the unit make sure that all the panels are correctly fitted and secured with the specific screws. Operation without the panels correctly fitted can lead to malfunctioning of the unit (poor efficiency, difficulty in draining condensate with consequent dripping water from the unit...).

## COMMISSIONING

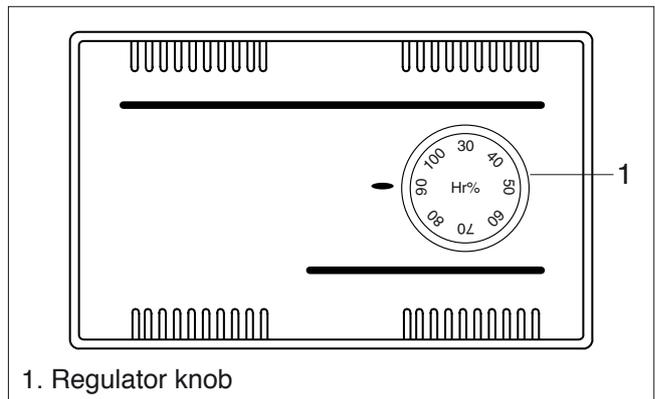
Switch the unit on/off from the control panel.

- Set the main electrical supply breaker to "On"



## CONTROL PANEL

VESTA 80 dehumidifiers are supplied without control panels. In order to use these appliances they must be connected to a room humidity regulator, which can be supplied by the installer, or which may be the model we supply as an accessory.



1. Regulator knob

## SWITCHING ON AND OFF

Commissioning of the dehumidifier must be carried out by the Technical Support Service; after this operation the appliance can operate automatically. The user is subsequently only required to switch the unit on or off by means of the room humidity control panel.

- Set the main electrical supply breaker to "On".

### OPERATIONS POSSIBLE ON THE ROOM CONTROL PANEL (Supplied by the installer)

Activation

- Set the main switch to "On"
- Switch on the appliance by following the instructions supplied with the room control panel you are using.

Deactivation

- Switch off the appliance by following the instructions supplied with the room control panel you are using.

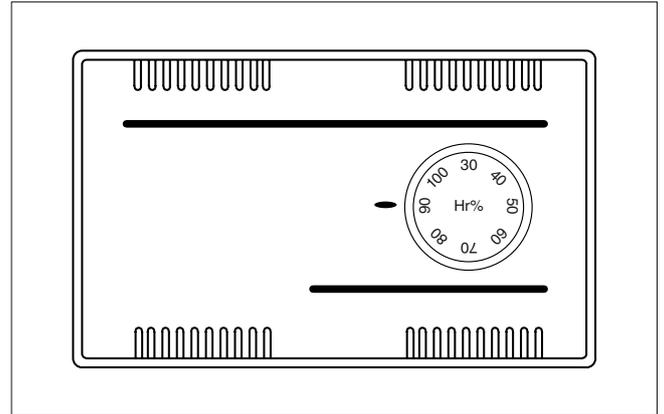
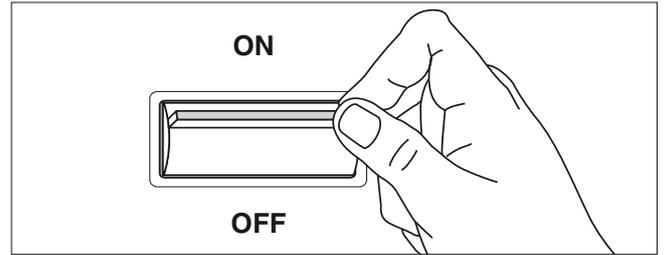
### OPERATIONS POSSIBLE ON THE ROOM CONTROL PANEL (Accessory)

Activation

- Set the main switch to "On"
- Set the required room humidity value by means of the regulator knob.

Deactivation

- Switch off the appliance by setting the main switch to off.



## MAINTENANCE

Periodic maintenance is indispensable to keep the product working properly, safely, and reliably through time. Maintenance can be carried out once every six months, for certain tasks, and one a year for others,

by the Technical Support Service, whose personnel are technically qualified and trained and which will be able to supply any genuine original replacement parts that may be required.

|               |  |
|---------------|--|
| <b>Vendor</b> |  |
| <b>Street</b> |  |
| <b>Tel.</b>   |  |

|                          |  |
|--------------------------|--|
| <b>Technical Service</b> |  |
| <b>Mr.</b>               |  |
| <b>Street</b>            |  |
| <b>Tel.</b>              |  |

|                  |  |
|------------------|--|
| <b>Installer</b> |  |
| <b>Mr.</b>       |  |
| <b>Street</b>    |  |
| <b>Tel.</b>      |  |

| <b>Date</b> | <b>Job</b> |
|-------------|------------|
|             |            |
|             |            |
|             |            |
|             |            |
|             |            |
|             |            |

## ROUTINE MAINTENANCE

Periodic routine maintenance is essential to keep the VESTA 80 dehumidifier working perfectly in terms of operation and power consumption.

The maintenance plan that the Technical Support Service is required to comply with, on an annual basis, envisages the following tasks and checks:

- Filling of water circuit
- Presence of air in water circuit
- Proper operation of safety devices
- Power input voltage
- Power consumption
- Tightness of electrical connections

At the start of each summer season the maintenance technician must:

- Clean the coils air intake filter with a jet of compressed air or by washing the filter in running water.
- Check that the hose clip securing the condensate hose is tightly fastened to the drainage tray connection.
- Check that the VESTA 80 unit is effectively connected to the electrical supply.

During maintenance operations it may be necessary to remove the compressor access panels.

- Unscrew the fixing screws and remove the panels.

When the maintenance procedures have been completed:

- Refit the door and panels by performing the removal procedures in reverse sequence.



For all communications, requests for technical service or replacement parts, always quote: model and serial number shown on the identification dataplate.

## CLEANING THE FILTER

The air filter is part of the standard equipment only of model VESTA 80FM.

Keeping the filter clean will allow the dehumidifier to function in optimal conditions and guarantee high quality of the treated air.

To clean the filter:

- Switch off the appliance from the control panel (if present)
- Set the appliance main switch to “Off”
- Remove the front panel
- Remove the mesh filter;
- Remove accumulated dust with a vacuum cleaner.

If the filter is very dusty, wash it in warm water (max 40°C) and neutral detergent, rinse well, and dry away from direct sunlight.

- Refit the filter by performing the removal steps in reverse sequence
- Refit the front panel



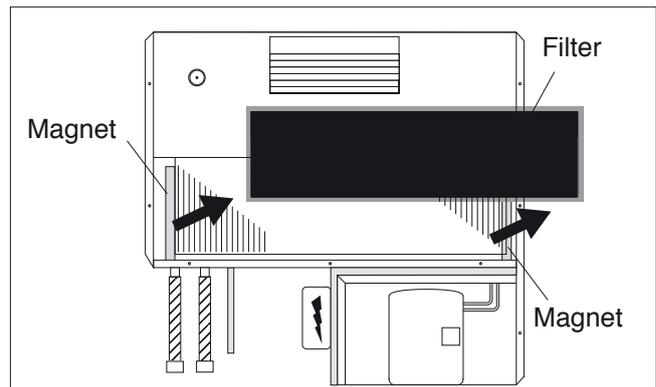
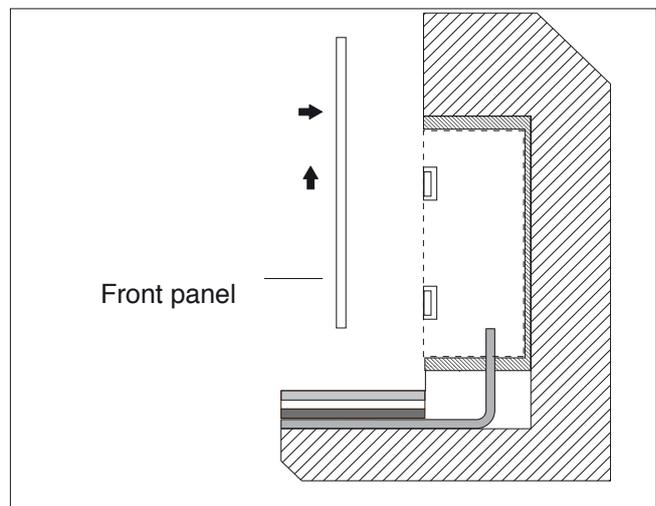
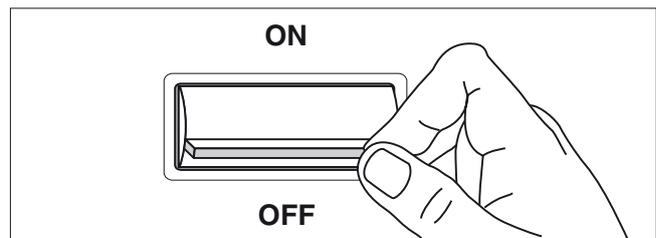
Exposing filters to direct sunlight or washing them in water above 40 °C can cause them to shrink.



Clean the filter once a month.



Do not attempt to clean the appliance until you have disconnected it from the mains supply and set the main electrical power breaker to “off”.

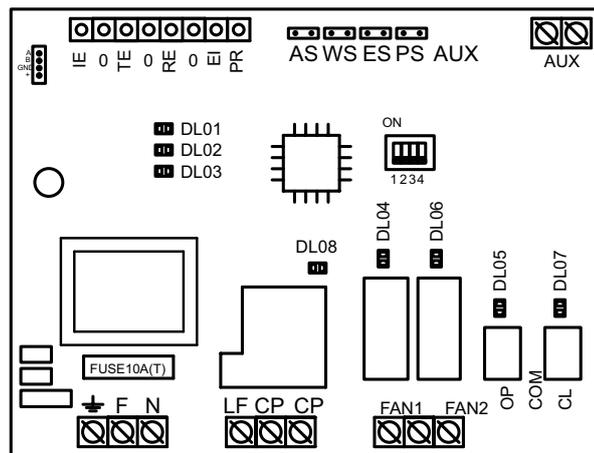


## TROUBLESHOOTING

Possible operating faults are signalled by flashing of the indicator LEDs on the electronic circuit board.

The signals are composed of a series of flashes having the following meaning:

| Signals of the circuit board LEDs |                   |                         |  |
|-----------------------------------|-------------------|-------------------------|--|
| LED                               | OFF               | ON steady               | ON flashing  |
| DL01<br>green                     | board not powered | board powered           | ON flashing: CP operating; ON with 2 flashes and pause: fan ON, CP OFF   |
| DL02<br>red                       | no alarms         | WaterT or AirT too high | ON flashing: defrost; ON with 2 flashes and pause: water or air too cold |
| DL04<br>green                     | fan OFF           | fan ON                  | ---  |
| DL08<br>green                     | CP OFF            | CP ON                   | ---  |



CP : Compressor

| Problem  | Solution  |
|--|---|
| Dehumidification performance of unit is unsatisfactory | Contact Technical Service   |
| Fan blocked  | Contact Technical Service   |
| Compressor blocked or excessively noisy                | Contact Technical Service   |
| Water leaks from pre and post-treatment coils          | Check correct connections between water unions and pre and post-treatment coil pipes  |
| Appliance emits odours                                 | Check tightness of condensate drain hose, correct functioning of the siphon and whether the filter is clean   |
| Unit emits excessive noise                             | Check that the wall recessed installation has been performed correctly  |
| Excessive fan noise                                    | Check that the correct fan speed has been selected (in accordance with the type of installation and the pressure drops of the ducts, if present) and that the filter is clean |
| Low outlet airflow                                     | Make sure the air filter is clean   |

## SCRAPPING THE APPLIANCE AND SORTING THE COMPONENTS

If the VESTA 80 appliance is to be scrapped, it must be disassembled and the parts sorted according to their construction material by personnel specialised in health and safety, environmental protection and energy efficiency.

The various parts must be disposed of separately in compliance with statutory legislation.

For example, the R134a refrigerant, oil, filter dryer, and insulating material must be recovered and reused and/or disposed of properly at the time of maintenance interventions, repairs, or scrapping of the appliance.







