

MANUALE D'USO E INSTALLAZIONE
USER AND INSTALLATION MANUAL
MANUEL D'UTILISATION ET D'INSTALLATION
BEDIENUNGS- UND INSTALLATIONSANLEITUNG
MANUAL DE USO E INSTALACIÓN

VENTILCONVETTORE PER INSTALLAZIONE CANALIZZATA, ORIZZONTALE E VERTICALE
HORIZONTALLY AND VERTICALLY DUCTED INSTALLATION FAN COIL UNITS
VENTILO-CONVECTEUR POUR INSTALLATION HORIZONTALE ET VERTICALE AVEC CANAUX
GEBLÄSEKONVEKTOR FÜR DIE HORIZONTALE UND VERTIKALE INSTALLATION MIT KANÄLEN
VENTILOCONVECTOR PARA INSTALACIÓN HORIZONTAL Y VERTICAL CON CANALES

VED_I

VED 030 I	VED 230 I	VED 530 I	VED 532 I
VED 040 I	VED 240 I	VED 540 I	VED 541 I
VED 130 I	VED 330 I	VED 730 I	VED 732 I
VED 140 I	VED 340 I	VED 740 I	VED 741 I



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OPERATING LIMITS of the unit:

Maximum entering water temperature:
80°C

Maximum operating pressure:
8bar

Space temperature limits (Ta):
0°C < Ta < 40°C

Space relative humidity limits (%RH):
%RH < 85%

Power supply:
230V (±10%) ~ 50Hz

Protective rating:
IP20

1. GENERAL WARNINGS

The AERMEC VED_I units are manufactured in accordance with recognised technical standards and safety regulations. They are designed for the renewal and treatment of ambient air, and they must be used for the purpose for which they are intended and their performance characteristics. All contractual and extra-contractual liabilities causing damage to persons, animals or objects or through errors of installation, control or maintenance or from improper use are excluded by the Company. Any uses not expressly indicated in this manual are not permitted.

1.1. CONSERVATION OF DOCUMENTATION

Consign the instructions with all the complementary documentation to the user of the accessory who will assume responsibility for the conservation of the instructions so that these are always available in case of need.

Carefully read this document. The execution of all the works must be carried out by qualified personnel, in accordance with the national regulations.

It must be installed in such a way to make maintenance and/or repair functions possible.

Do not modify or tamper with the accessory as this may cause danger for which the manufacturer will not accept any responsibility for damages caused. The warranty is voided if the above instructions are not followed.

1.2. SAFETY WARNINGS AND INSTALLATION STANDARDS

2. PRODUCT IDENTIFICATION

The VED fan coil units are identified by:

- PACKING LABEL
that records the product identification data.
- NAMEPLATE

- The unit must be installed by a competent and qualified technician, and in accordance with the legislation applicable in the country of installation. Aermec assumes no responsibility for damage caused by failure to observe these instructions.
- Instructions essential for the proper installation of the equipment are shown here. The final details to all the operations are left to the experience of the installer in accordance with the specific needs.
- Before commencing any works it is necessary to CAREFULLY READ THE INSTRUCTIONS AND MINIMISE ANY RISKS BY TAKING APPROPRIATE SAFETY PRECAUTIONS.
- All relevant personnel must be made aware of the procedures and possible risks that may arise at the time of installation of the unit.
- The unit must be installed in such a way as to make easy ordinary maintenance (filter cleaning) and special maintenance as well as access to the heat exchanger.

–WARNING! : It is absolutely forbidden to operate the unit without connecting to the ducting system.

– DANGER : The fan is located immediately beneath the nozzles. It is absolutely forbidden to insert hands or objects. Power the unit only after connecting to the ducting system.



WARNING: The tampering, removal or absence of the identification label renders difficult any operation of installation or maintenance.

3. OPERATING RANGE

VED		030I	040I	130I	140I	230I	240I	330I	340I
Maximum recommended entering water temperature (main coil)	°C	65							
Minimum flow rate (main coil)	l/h	150	150	150	150	150	150	300	400
Maximum flow rate (main coil)	l/h	1500	1500	1500	1500	1500	1500	3000	4000
Minimum flow rate (heating only coil accessory)	l/h	50	-	50	-	50	-	100	-
Maximum flow rate (heating only coil accessory)	l/h	500	-	500	-	500	-	1000	-

VED		530I	540I	532I	541I	730I	740I	732I	741I
Maximum recommended entering water temperature (main coil)	°C	65							
Minimum flow rate (main coil)	l/h	300	300	300	300	300	300	300	300
Maximum flow rate (main coil)	l/h	3000	3000	3000	3000	4500	4500	4500	4500
Minimum flow rate (heating only coil accessory)	l/h	-	-	200	100	-	-	300	300
Maximum flow rate (heating only coil accessory)	l/h	-	-	2000	1500	-	-	2500	3000



The earth leakage of several units connected to one circuit breaker is added. It is recommended to check the rating of the circuit breaker and it may be

necessary to split the installation into several circuits, each having its own circuit breaker.

Water temperature

In order to avoid air stratification and therefore achieve better mixing it is advised not supply the fan coil unit with water hotter than 65°C.

The use of very hot water could cause creaking due to the thermal expansion of the different components (plastics and metals). This does not cause damage to the unit if the maximum operating temperature is not

exceeded.

Minimum average water temperature

If the fan coil unit operates continuously in cooling mode in a room with high relative humidity, condensate might form on the air discharge and unit casing. This condensate might be deposited on the floor and on any objects underneath. To prevent the formation of condensation on the exterior of the unit while the fan is operating, the average water temperature should not drop below the operating

limits shown in the table below, determined by the room ambient conditions.

These limits refer to unit operation with fan at minimum speed.

In the case of prolonged periods with the fan switched off and cold water passing through the coil the formation of condensate on the unit casing is possible.

In this case the installation of the 3 way valve accessory is recommended.

MINIMUM AVERAGE WATER TEMPERATURE [°C]		Ambient dry bulb temperature					
		21	23	25	27	29	31
Ambient wet bulb temperature	15	3	3	3	3	3	3
	17	3	3	3	3	3	3
	19	3	3	3	3	3	3
	21	6	5	4	3	3	3
	23	-	8	7	6	5	5

4. INFORMATION

During the phases of installation, maintenance and cleaning provide suitable Personal Protective Equipment (PPE). The unit must not be used as a store or for spare parts. Any use not detailed in this manual can cause danger and is forbidden. The unit must be installed by a qualified technician in accordance with the local legislation and standards and whilst respecting the minimum clearance dimensions for maintenance.

Before the installation ensure that the unit has not suffered any damage during transport:

- use of a damaged unit may be dangerous
- the support structure must be able of supporting the weight of the unit.

Note:

For any future reference or communication with AERMEC S.p.A. it is necessary to state the unit serial number.

4.1. MOVEMENT

WARNING!

During the movement phase provide suitable Personal Protective Equipment (PPE).

Before installation and use it is recommended to completely remove the packaging of the unit and all the components supplied loose.

4.2. TRANSPORT

To safely transport the unit refer to the weight data shown on the nameplate. In all events transport must be carried out with the following precautions:

- the unit and any accessories must not be subjected to any violent shocks to avoid compromising the integrity of the unit and its internal components.
- the unit and any accessories must be securely mounted on the method of transport using ropes or any other

means that prevents movement.

- the unit and any accessories must be protected from shocks during transportation.
- the unit and any accessories must always be protected from the weather during transportation or storage.

4.3. CHECKS ON RECEPTION

On receipt of the unit carry out an initial visual check to ensure:

- the transportation documents correspond with the order documents.
- the integrity of the packaging
- that all components are present.

If any damage or missing components are found then this must be indicated on the transportation documents.

4.4. INSTALLATION

It is recommended to carefully follow the instructions provide in the following paragraphs for the installation. The paragraphs are arranged chronologically in order to facilitate each stage of installation. The unit is designed for installation internally and not externally.

Before carrying out the installation check the clearance spaces required:

- for the operator to complete the installation
- for the intake and discharge ducting
- to the condensate drainage
- to the cleaning of the filter
- to the cleaning of the coil.

To ceiling or wall mount the unit it is necessary to use the four mounting hoes provided in the unit frame.

4.5. CONTROL DEVICE

(not included)

Use a control device with thermostat and speed control of the fan with a 0-10V out-

put and with characteristics compatible with the fan coil unit.

Aermec provides control panels that permit the control of a single unit or of a unit inserted into a system with multiple units. For the selection refer to the unit manuals and the control panel accessories and the VMF System.

5. UNIT DESCRIPTION

5.1. SCOPE OF THE VED FAN COIL UNITS WITH INVERTER MOTOR

- The fan coil is a terminal unit for the winter and summer conditioning of air in a space. The fan VED_I, designed to fit any type of plants channeled devices are not accessible to the public.
- The possibility of integration into the VMF system allows the control from each fan coil unit with accessories up to the management of the VED inserted into a network of fan coil units and their accessories.

5.2. SIZES AVAILABLE

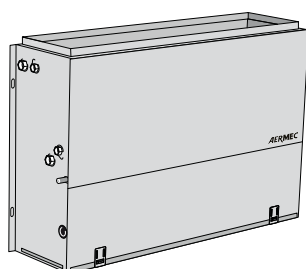
The fan coil units from the VED series are available for:

2 pipe systems	
VED 030 I	Standard coil
VED 040 I	Oversized coil
VED 130 I	Standard coil
VED 140 I	Oversized coil
VED 230 I	Standard coil
VED 240 I	Oversized coil
VED 330 I	Standard coil
VED 340 I	Oversized coil
VED 530 I	Standard coil
VED 540 I	Oversized coil
VED 730 I	Standard coil
VED 740 I	Oversized coil

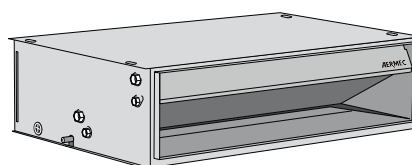
4 pipe systems	
VED 030 I	With VCF heating coil available as an accessory
VED 130 I	With VCF heating coil available as an accessory
VED 230 I	With VCF heating coil available as an accessory
VED 330 I	With VCF heating coil available as an accessory
VED 532 I	Standard coil + oversized heating coil
VED 541 I	Oversized coil + standard heating coil
VED 732 I	Standard coil + oversized heating coil
VED 741 I	Oversized coil + standard heating coil

5.3. MAIN CHARACTERISTICS OF THE VED_I FAN COIL UNIT

- Fan coil unit for vertical wall mounted or horizontal ceiling mounted installation.
- Versions for 2 pipe system with standard or oversized main coil.
- Versions for 4 pipe systems also with standard or oversized heating only coils.
- Low pressure drop coils.
- Field reversible connections.
- Wide range of accessories to connect the fan coil unit to any type of air ducting.
- Requires an external control device (accessory).
- Prepared for installation into the VMF system.
- Wide range of controls and accessories.
- Wide possibility of different available static pressures.
- Fan with brushless motor with dedicated inverter.
- Centrifugal fan designed for low noise levels.
- G3 class filter.
- Air intake filter easily extracted for periodic cleaning.
- 3 way 4 port connection accessory valve.
- 2 way valve accessory for variable flow system.
- Class 1 internal insulation.
- Full compliance with safety standards.
- Ease of installation and maintenance.
- Discharge flange unit mounted.



Vertical installation



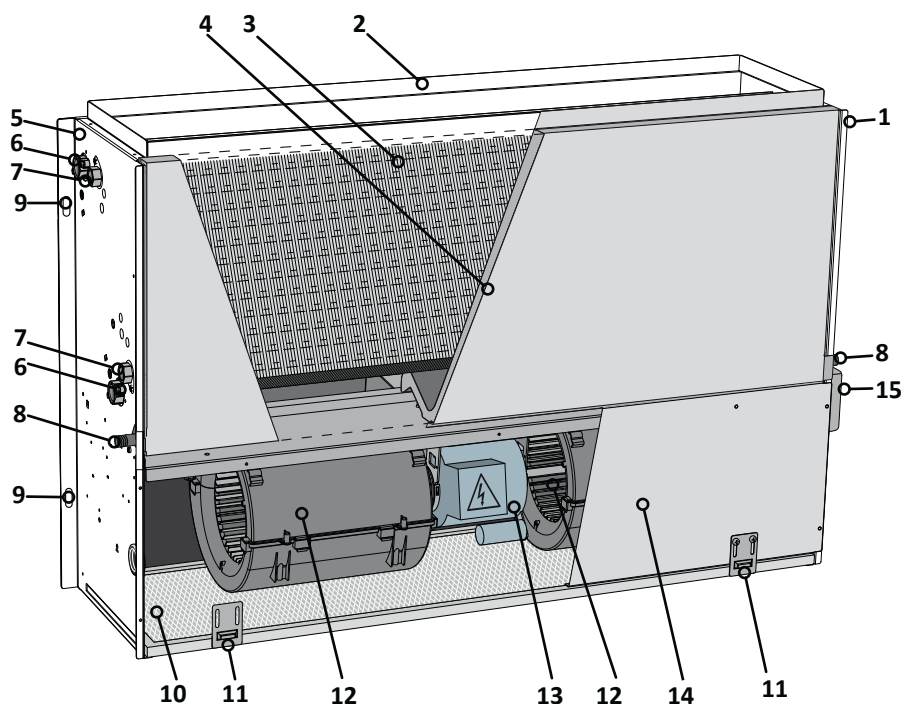
Horizontal installation

6. MAIN COMPONENTS

- | | | |
|---|-----------------------------|----------------------------------|
| 1 Right side (load bearing) | 7 Hydraulic connections | 14 Front panel enclosure (lower) |
| 2 Discharge air flange | 8 Condensate discharge | 15 Electrical connections |
| 3 Heat exchanger coil | 9 Mounting slot | |
| 4 Condensate drain tray / Front panel enclosure (upper) | 10 Air filter (intake) | |
| 5 Left side (load bearing) | 11 Filter lock | |
| 6 Coil vent/drain | 12 Centrifugal fan | |
| | 13 Brushless inverter motor | |

Example:

VED532I



6.1. COMPONENT DESCRIPTION

SYSTEM TYPES

The fan coil units are designed for 2 and 4 pipe systems with constant or variable flow

For 2 pipe systems versions are available with:

- standard main coil
- oversized main coil.

For 4 pipe systems versions are available with:

- standard and oversized main coil for hot water heating only
- standard and oversized main coil for cooling only
- hot water heating only coil supplied as an accessory for the sizes VED030I, VED130I, VED230I and VED330I.

AIRFLOW

The variable airflow must be controlled from a device with a 0-10V output compatible with the unit (not included). Aermec provides the control devices as an accessory.

HEAT EXCHANGER COIL

Low pressure drop coils with copper tubes mechanically expanded into wavy aluminium fins. The headers are fitted with female connections and air vents at high points.

FILTER SECTION

Air intake filter, easily extracted for periodic cleaning. Manufactured from cleanable materials and can be vacuum cleaned. Filtration class G3. Flame retardant to M1 NF F 16-101.

BRUSHLESS ELECTRIC MOTOR WITH INVERTER CONTROL

The electric motor "brushless with Hall effect sensors" and the control system used by the AERMEC VED fan coil units provide the most sophisticated mechanical and electronic technology developed internally within the company. This is a permanent magnet motor with low starting current and easy speed control. It does not create electromagnetic disturbances. By not having brushes there is less friction and wear.

Through the dedicated inverter device it is possible to continuously control the speed and torque on the rotor by simply acting on the current of the stator.

The motor is isolated with elastic supports and the steel shaft is mounted on bushings, salt spray test is in accordance with ASTM B117/64.

The electric motor "brushless with Hall

effect sensors" from AERMEC offer many advantages over traditional alternating current motors and hybrid motors with inverter (without Hall effect sensors) normally used on other variable flow fan coil units:

- Reduced wear
- Possibility to control rotational speed precisely (0-100%)
- Higher energy efficiency
- Higher reliability and lifetime
- Low magnetic noise
- Continuous position control of the rotor meaning higher efficiency and guaranteed and controlled starting
- Guaranteed minimum speed of 90 rpm (for thermodynamic reasons with limit is raised to 200 rpm).

The electric motor is isolated with elastic supports.

STRUCTURE

Manufactured in galvanised sheet steel of adequate thickness. Class 1 internal insulation.

Posterior part has fixing holes for installation.

Intake and discharge openings are designed to connect the fan coil unit to

any type of air ducting.
The fan coil assembly is enclosed by a metal panel at the front.
The discharge opening includes a connection flange.

CONDENSATE DRAIN

Each unit is supplied with a condensate drain pan for either vertical or horizontal installation. The fan coil drain pan has condensate discharges on both left and right sides. It is recommended to use the condensate discharge connection on the side of the hydraulic connections.

HYDRAULIC CONNECTIONS

The female hydraulic connections are located on the left side. The coil can be rotated on site to move the connections to the right side.

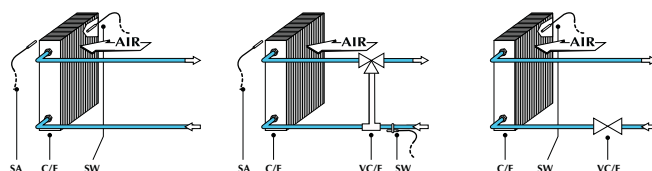
7. SYSTEM EXAMPLES

Legend:

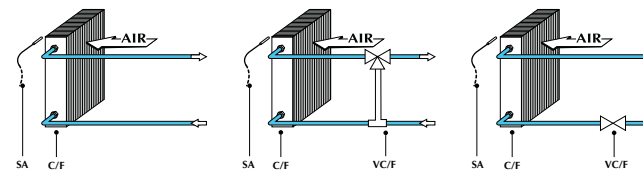
SW Water temperature sensor
VC/F Valve (Heating/Cooling)
VC Valve (Heating)

SA Ambient temperature sensor
C/F Coil (Heating/Cooling)
C Coil (Heating)

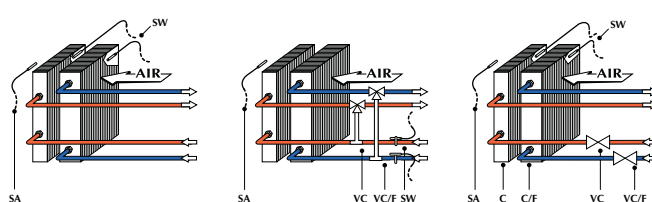
2 pipe system with water sensor



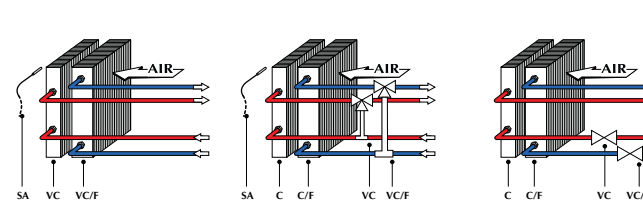
2 pipe system without water sensor



4 pipe system with water sensor



4 pipe system without water sensor



8. INSTALLATION

8.1. PRELIMINARY FUNCTIONS

Prepare the installation for an electrical power supply and connection for the wired control panel.
Prepare a suitable condensate drain system.

8.2. UNIT INSTALLATION

INSTALLATION OF THE AIR OUTLET FLANGE VED 030 040 130 140 230 240 330 340

When using the flange, supplied with the machine, do the following:

Take out the bag containing the components supplied with the fan compartment by removing the air filter in advance, as indicated in the instructions

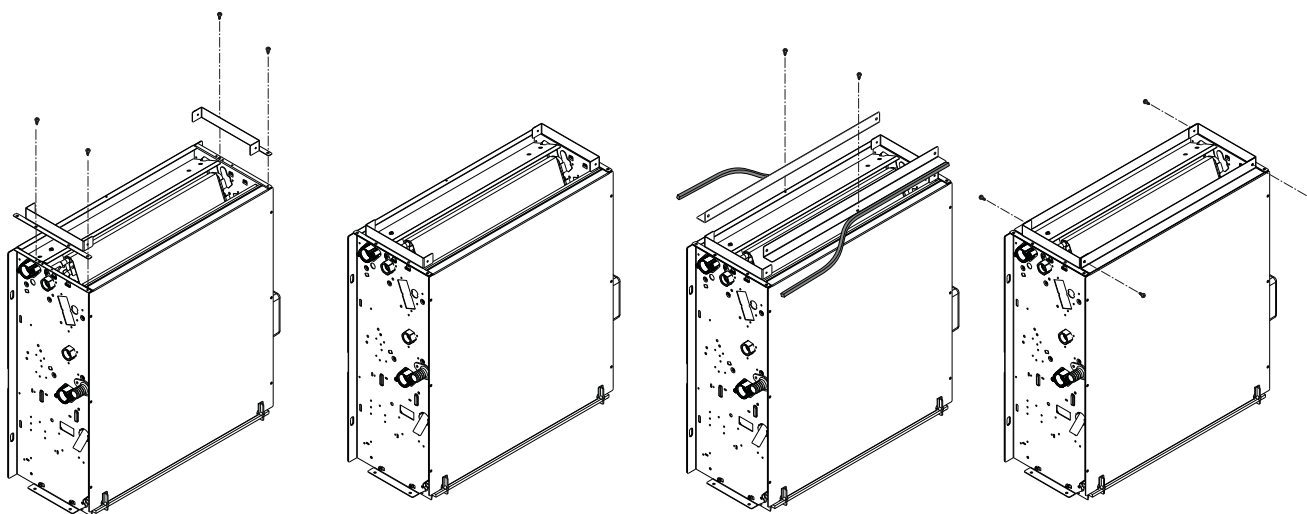
Fit first the two side bars using four

screws in the bag supplied screwing them into the 4 holes in the sides of the unit

Paste the / The adhesive strips in the lower part of front and rear cross-members,

Lay the two crosspieces to the car and through the remaining 4 screws to fix

the cross to those previously placed
Note in the event of non-use of the flange, however, extract the bag of accessories out of the car.



To install the unit proceed as follows.

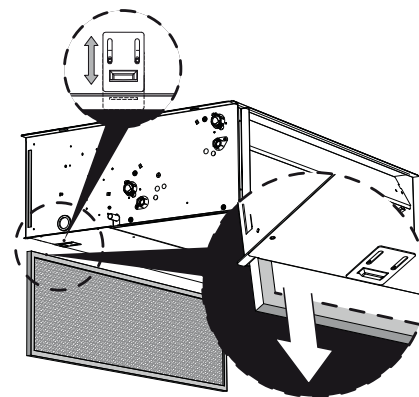
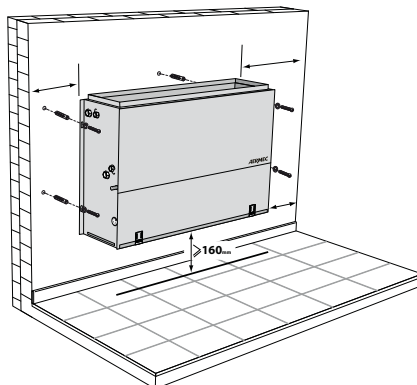
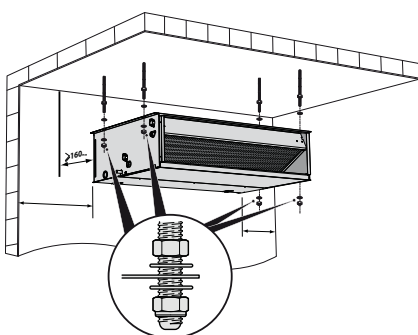
- For wall mounted installations maintain a minimum distance of 160 mm from the floor.
- For ducted installations provide the duct connections to the unit and refer to the drawing for dimensional data. The discharge is provided with a connection flange.
- For wall or ceiling installations use expansion plugs (not provided) and ensure the unit is installed level.
- For ceiling hung installations use four M8

threaded rods to support the frame. Fix the unit to the threaded rods using eight nuts of which four are self locking nuts. Adjust the nuts to ensure that the unit is installed level.

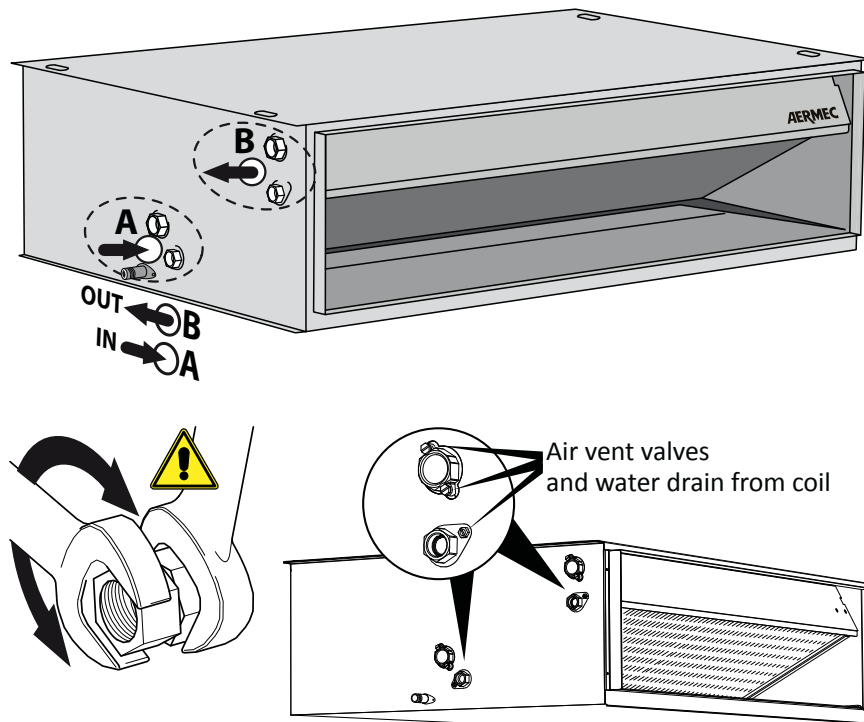
- WARNING: The fan coil unit must be installed perfectly level otherwise the condensate may not discharge correctly.
- Carry out the hydraulic connections as detailed in the relevant chapter. It is recommended that the water piping is properly insulated.
- Carry out the condensate discharge

connection as detailed in the relevant chapter. Fan coil units operating as heating only do not require a condensate discharge.

- Carry out the electrical connections as detailed in the relevant chapter and as shown on the electrical wiring diagrams.
- Carry out the installation and connection of any accessories.
- Start the fan coil unit and check the operation of the components and all the functions.



8.3. HYDRAULIC CONNECTIONS



- Make the hydraulic connections.

ATTENTION: Always use a wrench and counter-wrench to fix the pipes.

The position, type and diameter of the hydraulic connections are specified in the dimensional data.

It is recommended to insulate water pipelines and/or to install the suitable auxiliary condensate collection tray, available as an accessory, in order to avoid dripping during cooling operation.

During installation check the seal of the connections.

Attention: Discharge the hydraulic system. The vent valves are positioned on the top of the coil close to the hydraulic fittings.

Attention: to drain the unit, use the discharge valves placed at the bottom of the coil close to the hydraulic fittings.

8.4. ELECTRIC CONNECTIONS

The unit must be connected directly to an electrical outlet or to a separate circuit.

Operations performed by persons without the required technical skills can lead to personal injury to the operator or damage to the unit and surrounding environment.

Supply the fan coil only with voltage 230V ~ 50Hz.

The fan coil may be permanently damaged if a different electric power supply is used.

ATTENTION: it is mandatory to connect the Phase (L) and the Neutral (N) power supply cables to the relative clamps. Do not reverse the connections. Follow the wiring diagram. Install a device, master switch or electric plug that allows the unit's power supply to be completely disconnected.

To protect the unit against short circuits, fit an omnipolar magnet circuit breaker switch (4Ac, C-type intervention features) to the power supply line with a minimum contact opening distance of 3 mm.

We recommend using differential devices suitable for intervening for currents of different type:



sinusoidal AC and pulsating DC currents suddenly applied or slowly rising.



sinusoidal AC with frequency up to 1000 Hz

The following measures must be considered for installations with three-phase power supply:

1. In the presence of 3P + N isolators or magnet circuit breakers, the release current must be at least 170% of the value absorbed by the overall load of the fan coils for each phase.
2. The neutral wire section must be sized considering a working current equal to 170% of

the value absorbed by the overall load of the fan coils for each phase.

SPECIFICATIONS OF THE CONNECTION CABLES

Use H05V-K or N07V-K power cables with 300/500 V insulation enclosed inside a pipe or trough.

Use a cable with a minimum cross-section of 1 mm².

All the cables must be enclosed inside a pipe or trough until they are inside the fan coil.

The cables at the outlet of the pipe or cable trough must be positioned in a way not to undergo traction or twisting stress and be however, protected from external agents.

Cables with strand can only be used with crimped connectors. Make sure that the strands are well inserted.

The wiring diagrams are subject to constant updating and it is therefore mandatory to refer to those on the unit.

The unit must be combined with a control device to be purchased separately.

Refer to the wiring diagram and instructions in this manual before making the connections.

The control panel can be fitted on a metal wall, unless it is permanently connected to the earth plug.

Carefully read the instructions and, if necessary, carry out the configuration as indicated, before installing the control device. Some control devices must be combined with components supplied as accessories, verify their availability.

ATTENTION: Verify that the control device is compatible with the electrical features of the fan coil.

In combining the control devices, follow the

relative wiring diagram and the instructions in this manual.

If present, connect the valve and the probe to the terminal board according to the positions specified in the wiring diagram. In installations with three-way valve, the minimum temperature probe of the water must be moved from its seat in the coil, to the flow pipe upstream of the valve.

Follow the wiring diagram.

ATTENTION: verify whether the installation has been carried out correctly. Follow the verification procedures indicated in the manuals of the control devices.

ATTENTION: Then run an operating test.

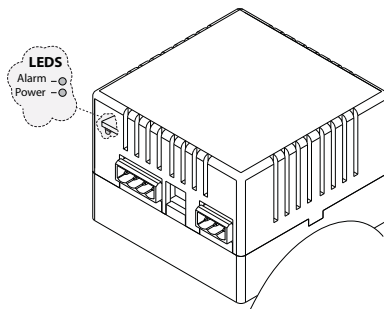
ATTENTION: In case of malfunction, refer to the Alarm Code Table to interpret the signals of the 2 LED (Alarm/Power) indicating the functioning status of the unit. The Inverter board is found inside the unit.

DANGER! Only qualified maintenance personnel can access it.

8.5. ALARM CODE

This section is reserved to the After-sales Service Centres only. The board is found inside the unit and requires disassembly.

DANGER! Only qualified maintenance personnel can access it. On the Inverter board there are 2 LED (Alarm/Power) indicating the functioning status of the unit. The following table indicates how to decode the messages.



VED 030 I

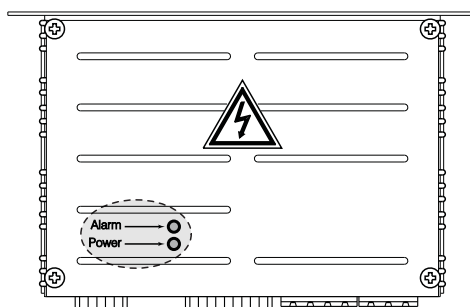
VED 040 I

VED 130 I

VED 140 I

VED 230 I

VED 240 I



VED 330 I

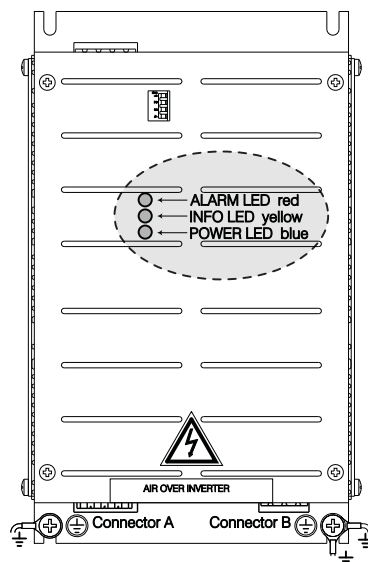
VED 340 I

VED 530 I

VED 540 I

VED 532 I

VED 541 I



VED 730 I

VED 740 I

VED 732 I

VED 731 I

ALARM TYPE	INDICATIONS	ANOMALY	NOTES
High temperature	Flashing ALARM led 3sec ON / 0.5sec OFF After 1.5 min the ALARM led is permanently on	Motor off	Auto-Restart alarm If the conditions persist after 1.5 min, the alarm becomes permanent: - Alarm led on - led ON - the system switches off
Overvoltage			
Undervoltage			
Overcurrent			
Overload	Flashing ALARM led 0.5sec ON / 0.5sec OFF	Speed reduction	Power limitation
Safety control			Temperature limitation
STOP	Alarm led permanently ON	Motor off	To reset the alarms: Set 0V ON INPUT (disconnect voltage and switch on again)

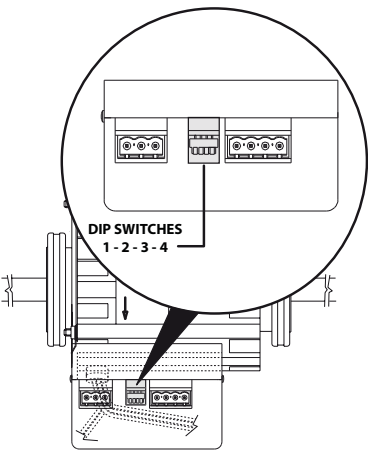
8.6. DIP SWITCH SETTING - ONLY FOR UNITS WITH DUCTED INSTALLATION

In ducted installations, to allow adjusting the static pressure provided by the fan coil to the pressure drops of the same duct, it is possible to increase the

maximum speed in the VED I fan coils. To increase fan speed, modify the settings of the dip switches located on the VED I motor and driver.

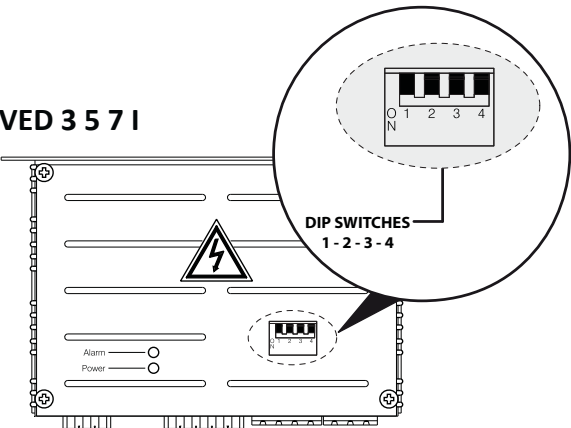
Attention!: Follow the settings indicated in the table for each size of VED I.

VED 0-1-2 I



VED0_I	ON	1 2 3 4	STD
	ON	1 2 3 4	MAX
VED1_I	ON	1 2 3 4	STD
	ON	1 2 3 4	MAX
VED2_I	ON	1 2 3 4	STD
	ON	1 2 3 4	MAX
VED3_I	ON	1 2 3 4	STD
	ON	1 2 3 4	MAX

VED 3 5 7 I



VED5I	ON	1 2 3 4	STD
VFD7I		1 2 3 4	

8.7. CONTROL DEVICE (NOT INCLUDED)

CONTROL DEVICE 0V - 10V

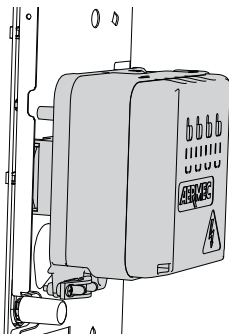
Use a control device with thermostat and speed control of the fan with a 0-10V output and with characteristics compatible with the fan coil unit.

For the installation consult the unit manual

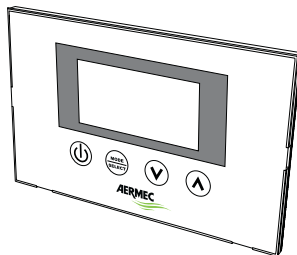
and the accessory manual.

VMF System CONTROL DEVICE

VMF-E18



VMF-E4



With thermostat VMF-E18 and with control panel VMF-E4 or VMF-E4D.

- The thermostat kit VMF-E18 includes the cables for connection to the Inverter Command Module. The cables are terminated with connectors for a rapid connection. The installation of the VMF-E18 kit requires that the standard terminal block and the connection cables to the Inverter Command Module are removed from the fan coil unit (Signal e Supply).

- Mount the thermostat box on the side of the fan coil unit, on the connections that were used for the terminal block.

- Remove the cover to the thermostat box.

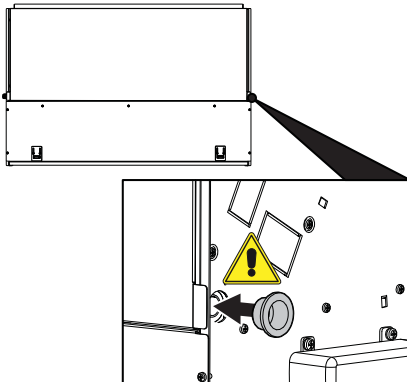
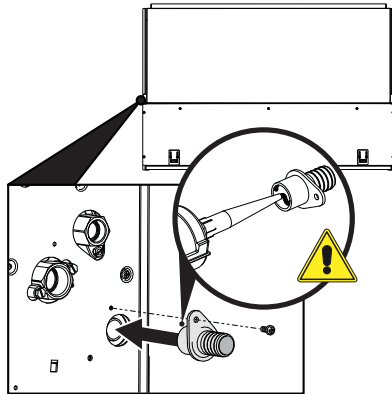
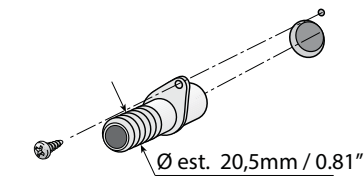
- Connect the Inverter Command Module to the VMF-E18 thermostat using the

cables provided with the VMF-E18 kit. Check the connections with the wiring diagram.

- Connect with the wired control panel VMF-E4 or VMF-E4D.

- Complete the connections as shown in the VMF-E18 thermostat manual.

8.8. CONDENSATE DISCHARGE CONNECTION



The fan coil unit drain pan has two condensate discharge outlet (left and right side).

It is recommended to use the condensate drain connection on the side of the hydraulic connections.

Mount the condensate discharge drain connection provided loose. Care should be taken to seal the fitting between the drain pan and the drain connection with silicone sealant.

Seal the drain not used.

Connect the drain pan fitting to the condensate drain system. Use a drain tube that must be connected to the condensate discharge fitting. The condensate drains are designed to be connected only by flexible tubes of adequate internal diameter, avoid imposing additional load and do not use them for any other purposes.

Ensure that the drain not used is sealed

and has no leaks.

The condensate drain system must be appropriately sized and the piping positioned in such a way to maintain a slope (min. 1%).

To avoid unpleasant smells a trap is recommended if the condensate is connected to the sewage system.

Carry out a functional and leak test of the installation by pouring water into the drain pan.

8.9. DUCT CONNECTIONS TO THE UNIT

The VED unit is designed for ducted connections.

To identify the duct connections refer to the drawings.

Connect the ducting to the connections using straps.

Ensure that the filter is always mounted on the unit during operation, otherwise the

dust in the air will dirty the coil.

8.10. ROTATION OF THE COIL

If the hydraulic connections require the rotation of the coil, then after removal of the frontal enclosure panel proceed as follows:

- Remove the condensate drain pan.
- Remove the coil sealing cover undoing the screws.
- Remove the screws that fix the coil and extract the coil.
- Remove the knock-outs on the right side.
- **WARNING!** Before rotating the coil refer to the coil rotation drawing.

It is important that the coil is correctly rotated and installed.

Correctly rotate the coil and fix with the screws previously removed. The spaces between drain pan and the hole on the side must be completely filled and closed with insulating material.

– Refit the coil sealing cover and fix with the screws.

– Close with insulating material the holes

left empty from the hydraulic connections on the left side.

– Refit the condensate drain pan. The condensate drain pan is designed to drain the condensate on both sides. It is recommended to use the drain connection on the side of the hydraulic connections. Ensure the condensate drain not used is closed and has no leaks.

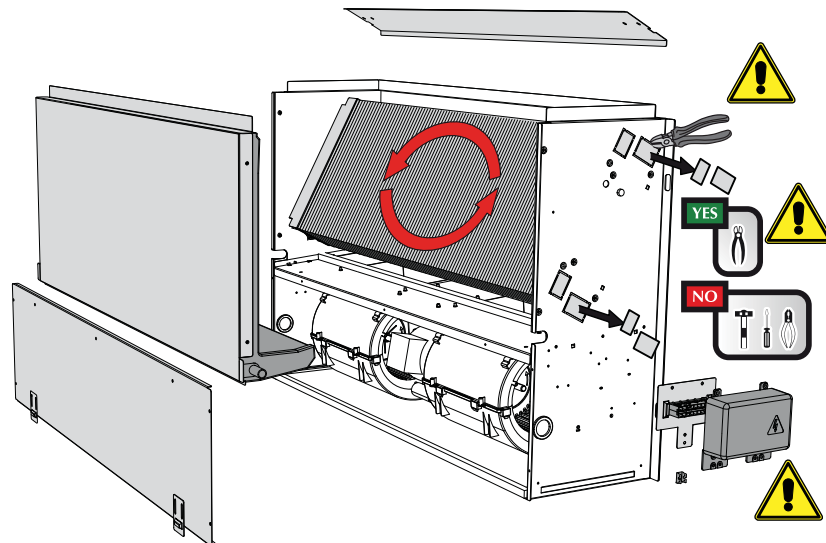
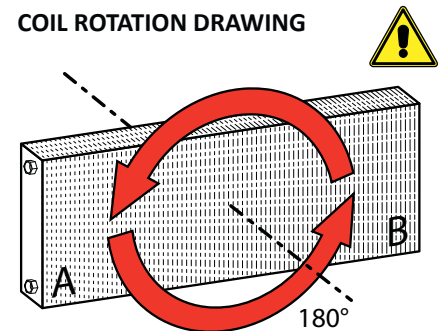
– Remove the electrical connections from the right side.

– Move the electrical connections to the left side passing through the grommet.

– Move the support plate, terminal block, the earthing connection and any electrical devices from the left to the right side.

– Refit the frontal enclosure panel.

COIL ROTATION DRAWING



9. MAINTENANCE AND PRECAUTIONS FOR USE

DO NOT USE TOO HOT WATER

Use a soft cloth or sponge with water at a maximum of 40 °C to clean the fan coil unit. Do not use chemical products or solvents on any parts of the fan coil unit. Do not splash water on interior or exterior surfaces of the fan coil unit (it could cause short circuits).

PERIODIC FILTER CLEANING

Frequent filter cleaning ensures a better operating efficiency.

Check if the filter is very dirty: in this case increase the cleaning frequency.

Clean frequently by removing the accumulated dust with a vacuum cleaner.

When the filter is clean refit it to the fan coil unit reversing the removal procedure.

SPECIAL CLEANING

The possibility of removing the fan coil unit inspection panels (carried out only by personnel suitably qualified) allows detailed cleaning of the internal parts, particularly for installations with high occupancy or requiring elevated hygiene standards.

DURING OPERATION

Always leave the filter in the fan coil unit during operation otherwise dust in the air will dirty the surfaces of the coil.

WHAT IS NORMAL

During cooling, water vapour may be present in the air discharge.

During heating it might be possible to

hear a slight hiss around the fan coil unit. Sometimes the fan coil unit might give off unpleasant smells due to the accumulation of substances from the air of the room (especially if the room is not ventilated regularly. Clean the filter more often).

During operation, there could be noises and creaks inside the unit, due to the thermal expansion of the various components (plastic and metallic), but this does not indicate a malfunction and does not cause damage to the unit unless the maximum input water temperature is exceeded.

OPERATING FAULTS

In the event of an operating fault disconnect and reconnect power to the unit and proceed with restarting the device.

WARNING! Do not attempt to repair the unit as this is very dangerous!

If the problems persists immediately call the local After-Sales Service.

DO NOT PULL THE ELECTRICAL CABLE

It is very dangerous to pull, tread on or crush the electrical power cable or fix it with nails or drawing pins.

A damaged power cable can cause short circuits and personal injury.

DO NOT PUT ANYTHING IN THE AIR OUTLET

Do not put anything at all in the air outlet slots.

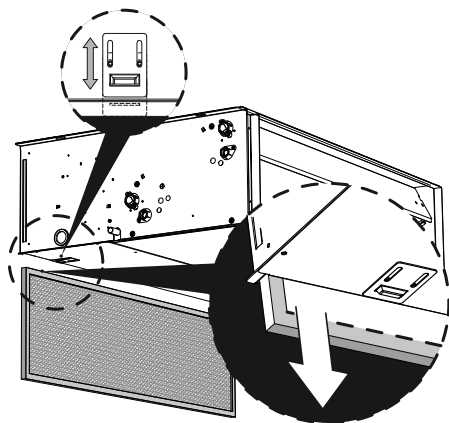
This could cause injury to people and dam-

age to the fan.

WARNING

The device can be used by children aged under 8 years, and persons with reduced physical, sensory or mental capabilities, or lack of experience or knowledge required, provided under supervision or after the same has received instructions relating to 'to ensure safe operation and understanding of the dangers inherent in it. Children should not play with the appliance.

Cleaning and maintenance is intended to be performed by the user should not be performed by children without supervision. please note that the boiler should not be used by children as a play



9.1. PROBLEMS AND SOLUTIONS

PROBLEM	PROBABLE CAUSE	REMEDY
Feeble air discharge.	Wrong speed setting on the control panel.	Select the speed on the control panel.
	Blocked filter.	Clean the filter.
It does not heat.	Obstruction of the air flow (inlet and/or outlet).	Remove the obstruction.
	Poor hot water supply.	Control the boiler.
It does not cool.	Wrong setting on control panel.	See control panel settings.
	Poor chilled water supply.	Control the chiller.
The fan does not turn.	Wrong setting on control panel.	See control panel settings.
	No current.	Control the power supply.
	The water has not reached operating temperature.	Please check up the boiler or the chiller. Check up the thermostat settings.
Condensation on the unit cabinet.	The limit conditions of temperature and humidity indicated in "MINIMUM AVERAGE WATER TEMPERATURE" have been reached.	Increase the water temperature beyond the minimum limits indicated in "MINIMUM AVERAGE WATER TEMPERATURE".

For anomalies don't hesitate, contact the aftersales service immediately.