AERMEC
air conditioning

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

VENTILCONVETTORE
PER INSTALLAZIONE CANALIZZATA, ORIZZONTALE E VERTICALE

FAN COIL
FOR HORIZONTAL AND VERTICAL DUCTED INSTALLATION

VENTILO-CONVECTEUR
POUR INSTALLATION CANALISÉE, HORIZONTALE ET VERTICALE

GEBLÄSEKONVEKTOR
FÜR KANAL-, HORIZONTAL- UND VERTIKALEINBAU

FAN COIL
PARA INSTALACIÓN CANALIZADA, HORIZONTAL Y VERTICAL

VED

Variable Multi Flow

VMF

VED 430
VED 440
VED 530
VED 540
VED 630
VED 640
VED 730
VED 740

VED 432
VED 441
VED 532
VED 541
VED 632
VED 641
VED 732
VED 731

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Made with materials of superior quality in strict compliance with safety regulations, VED is easy to use and will have a long life.

The range of VED fan coils are designed for integration in the VMF system.

The VMF (Variable Multi Flow) system is able to intelligently manage a complete hydronic system, made up of chiller/heat pump, a boiler, a network of fan coils (multi-speed or continuous modulation of the speed) divided into zones (up to 64), circulation pumps (up to 12) and heat recovery units with air quality sensor (up to 3), optimising conditioning and heating performance to ensure comfort and energy savings.

INDEX

IMPORTANT INFORMATION AND MAINTENANCE

WARNING: the fan coil is connected to power supply and hydraulic circuit. Operations performed by people without the required technical skills can lead to personal injury to the operator or damage to the unit and surrounding objects.

ONLY POWER THE FAN COIL AT 230V ~ 50Hz

Any other type of power supply could permanently damage the fan coil.

DO NOT USE THE FAN COIL IMPROPERLY

Do not use the fan coil for animal husbandry applications (e.g. incubation).

AIR THE ROOM

Periodically air the room in which the fan coil has been installed. This is particularly important if the room is occupied by many people, or if gas appliances or sources of odours are present.

ADJUST TEMPERATURE ADEQUATELY

The external temperature should be adjusted in order to provide maximum comfort to the people in the room, especially if they are elderly, children or sick people; avoid differences over 7°C between the outdoor temperature and the temperature inside the room in summer.

In summer, a temperature that is too low causes higher electrical consumption.

CORRECTLY ADJUST THE AIR JET

Air coming out from the fan coil must not reach people directly; in fact, even if the air is warmer than the room temperature, it could cause a cold sensation and result in discomfort.

DO NOT USE EXCESSIVELY HOT WATER

Clean the fan coil with a soft cloth or sponge soaked in water not over 40°C. Do not use chemical products or solvents to clean any part of the fan coil. Do not spray water on the outer or inner surfaces of the fan coil (this might cause short circuits).

CLEAN THE FILTER PERIODICALLY

Cleaning the filter frequently guarantees enhanced operating efficiency.

Check whether the filter is very dirty: in this case, clean it more often.

Clean frequently; remove the accumulated dust with a vacuum cleaner.

Once the filter is clean, refit it on the fan coil following the removal instructions but in reverse order.

SUPPLEMENTARY CLEANING

The fact that the blades of examinable shrouds can be removed (operation done only by adequately skilled technicians) ensures a thorough cleaning of the internal components, which is particularly important when installing the unit in crowded areas or venues requiring high hygiene standards.

DURING OPERATION

Always leave the filter fitted on the fan coil during operation (otherwise dust in the air could soil the coil surface area).

WHAT IS NORMAL

In the cooling operation, water vapour may be present in the air delivery of the fan coil.

In the heating operation, a slight hiss might be heard close to the fan coil. Sometimes the fan coil might give off unpleasant smells due to the accumulation of substances present in the air of the room (clean the filter more often, especially if the room is not ventilated regularly).

While the unit is functioning, there could be noises and creaks inside the device due to the various thermal expansions of the elements (plastic and metal), but this does not indicate any malfunction and does not damage the unit unless the maximum input water temperature is exceeded.

MALFUNCTIONING

In case of malfunction, cut off power to the unit, then energise it again and restart the device.

WARNING! Do not attempt to repair the unit alone, this is extremely dangerous!

If the problem occurs again, call the local Aftersales Service immediately.

DO NOT TUG THE ELECTRIC CABLE

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

A damaged power cable can cause short circuits and injure people.

DO NOT OBSTRUCT THE AIR OUTLETS BY PLACING OBJECTS INTO THEM

Never insert objects of any kind in the air delivery and outlet.

This could injure people and damage the fan.

WARNING

Avoid that the device is used by children or incompetent persons without appropriate supervision; also note that the unit should not be used by children as a game.

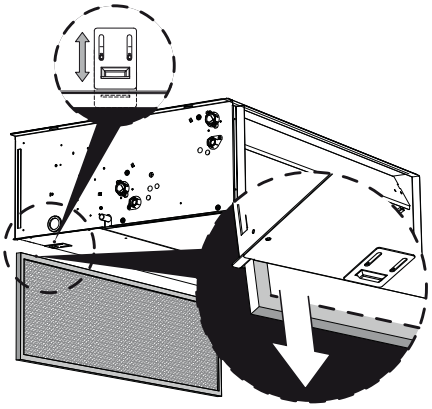
AIR FILTER REMOVAL AND REPLACEMENT

The air filter must be removed from the fan coil for cleaning.

The cleaned or new air filter (for replacement) must be correctly fitted and secured in its housing in the fancoil.

To remove the air filter:
- loosen the screws of the two filter clips
- slide the two filter retainers until they stop
- remove the filter from its housing

To reassemble the air filter:
- insert the air filter into its housing,
- slide the two filter clips until the filter is secured,
- tighten the screws of the two filter clips,
- make sure the filter is secured in its housing.



PACKAGING

The fan coils are sent in standard packaging made of foam polystyrene and cardboard.

USE

Consult control panel manual for installation and use instructions.

DESCRIPTION OF THE UNIT

PURPOSE OF THE VED FANCOILS

The fan coil is a room air treatment terminal unit for both winter and summer operation. The VED fancoils are designed to fit any ducted type system.

In particular, the possibility to be integrated into the VMF system allows the control of a single fancoil with accessories and the management of the VED introduced in complex fancoil networks and their accessories.

AVAILABLE SIZES

VED fan coils are available in:

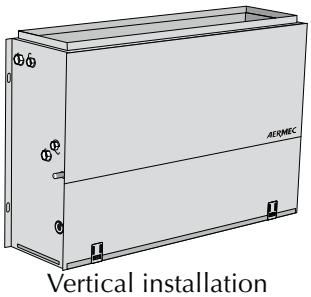
8 sizes for 2-pipe systems	
VED 430	**(3 row coil)**
VED 440	**(4 row coil)**
VED 530	**(3 row coil)**
VED 540	**(4 row coil)**
VED 630	**(3 row coil)**
VED 640	**(4 row coil)**
VED 730	**(3 row coil)**
VED 740	**(4 row coil)**

8 sizes for 4-pipe systems	
VED 432	**(3 row + 2 Row coil)**
VED 441	**(4 row + 1 Row coil)**
VED 532	**(3 row + 2 Row coil)**
VED 541	**(4 row + 1 Row coil)**
VED 632	**(3 row + 2 Row coil)**
VED 641	**(4 row + 1 Row coil)**
VED 732	**(3 row + 2 Row coil)**
VED 741	**(4 row + 1 Row coil)**

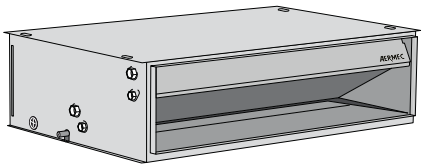
English

Main features of the VED fancoils

- Fancoil for both vertical wall installation and horizontal false ceiling installation
- Main coil with 3 and 4 rows
- Versions for 4-pipe systems also with heating-only coil of 1 or 2 rows
- Low pressure drop coils
- Couplings reversible onsite
- Wide range of accessories to connect the fan coil to each type of air ducting
- Requires external control panel (accessory)
- Designed to fit in the VMF system
- Wide range of controls and accessories
- High possibility of having different useful static pressures
- 5-speed fan motor, 3 preferred speeds of which can be selected.
- Centrifugal fans with fans designed for low noise emission
- Filter filtration class G3
- Air intake filter, easily removable for periodic cleaning
- Accessories for 3-way valve with 4 connections
- Accessories 2-way valve for the systems to variable water flow rate
- Internal insulating, class 1
- Full compliance with the accident prevention standards
- Ease of installation and maintenance
- Discharge flange incorporated in the unit



Vertical installation



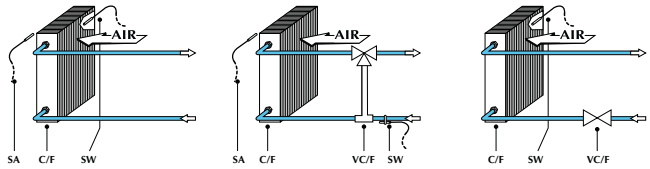
Horizontal installation

SYSTEM EXAMPLE

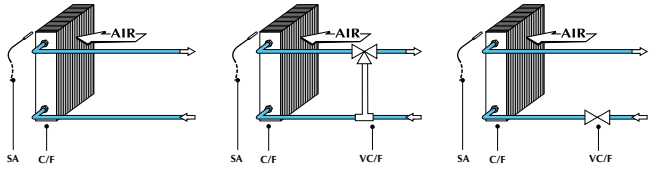
Key:

SW	Water temperature sensor
VC/F	Valve (Heating / cooling)
VC	Valve (Heating)
SA	External temperature sensor
C/F	Coil(Heating / Cooling)
C	Coil(heating)

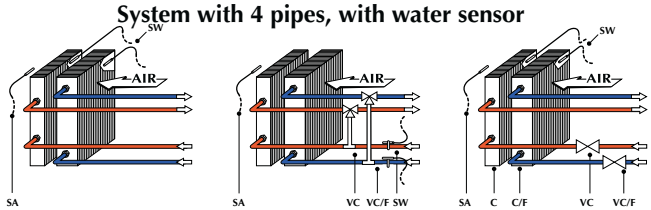
System with 2 pipes, with water sensor



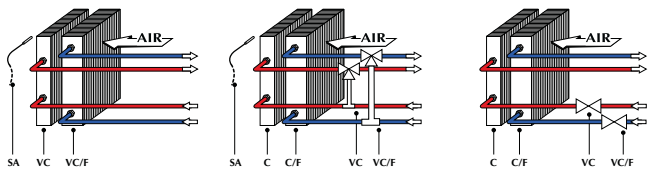
System with 2 pipes, without water sensor



System with 4 pipes, with water sensor



System with 4 pipes, without water sensor



OPERATING ENVIRONMENT

The units are designed for installation in closed environments in conditions of 'urban', non-marine atmosphere with non-corrosive and non-dusty characteristics.
Under no circumstances the following concentrations of pollutants in the air, in which the unit must operate, shall be exceeded:

SO_2	<0,02 ppm
H_2S	<0,02 ppm
NO,NO_2	<1 ppm
NH_3	<6 ppm
N_2O	<0,25 ppm

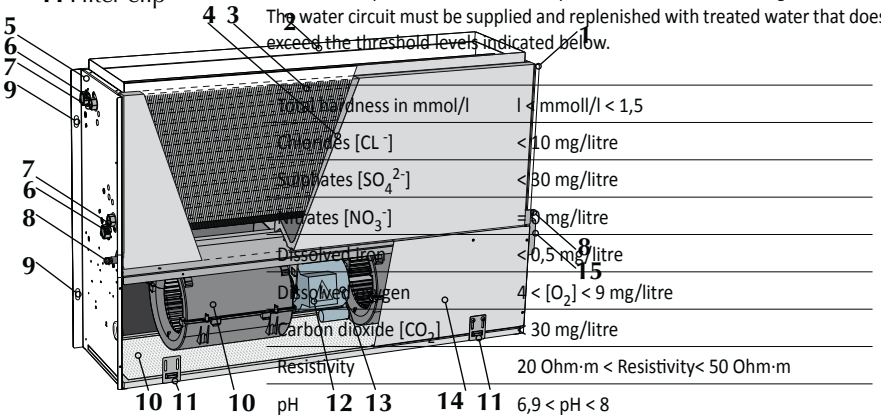
The unit should not be installed in locations characterized by the presence of flammable gases or acidic or alkaline substances.
Otherwise the coils and the internal components of the equipment could suffer serious and irreparable damage from corrosion.

English

MAIN COMPONENTS

1 Right side (load-bearing structure)
2 Air delivery flanges
3 Heat exchange coil
4 Condensate collection tray / Front panel (upper)
5 Left side (load-bearing structure)
6 Vents / discharges on the coil
7 Hydraulic connections
8 Condensate drain
9 Fixing slots
10 Air filter (suction)
11 Filter clip
10 Centrifugal fan
12 Electric motor electrical box
13 Electric motor
14 Front closure panel (lower)
15 Electrical wiring

VED



WARNINGS FOR THE QUALITY OF THE WATER CIRCULATING IN THE COILS

It is recommended to perform an analysis of the water circulating in the coil focusing on the research of the possible presence of bacteria (detection of iron bacteria and micro-organisms that can produce H2S or that oxidize or reduce sulphates) and on the chemical composition of the water, to prevent corrosion and fouling inside the tubes. The water circuit must be supplied and replenished with treated water that does not exceed the threshold levels indicated below.

Total hardness in mmol/l	1 < mmoll/l < 1,5
Chlorides [CL^-]	< 10 mg/litre
Sulphates [SO_4^{2-}]	< 30 mg/litre
Nitrates [NO_3^-]	< 5 mg/litre
Dissolved iron	< 0,5 mg/litre
Dissolved oxygen	4 < [O_2] < 9 mg/litre
Carbon dioxide [CO_2]	< 30 mg/litre
Resistivity	20 Ohm·m < Resistivity< 50 Ohm·m
pH	6,9 < pH < 8

DESCRIPTION

System types
The fancoils are designed for 2 and 4 pipe systems with fixed or variable flow rate, in versions:
- 3 Rows and 4 Rows;
- 3 Rows with 2-row hot water coil for heating-only.
- 4 Rows with 1-row hot water coil for heating-only.

Ventilation
Ventilation is controlled via a control panel (accessory).
The 5-speed fan motor can connect the control panel to 3 speeds that produce the optimum useful static pressure for the system.

HEAT EXCHANGE COIL

Main coil with 3 and 4 rows Heating-only coil with 1 or 2 rows Battery with low pressure drops, in copper piping and corrugated aluminium fins, blocked via mechanical expansion of the tubes. The collectors are fitted with female hydraulic connections and air vents in the upper part of the coil.

FILTERING SECTION

Air intake filter, easily removable for periodic cleaning Built with renewable materials and can be cleaned with a vacuum cleaner.
Filtration class G3. Behaviour to flames M1 NF F 16-101.

ELECTRIC FAN UNIT

Double suction centrifugal fans with fans designed for low noise emission.
The fans are directly coupled with the shaft of the electric motor.
The 5-speed fan motor allows you to choose the 3 preferred speeds by changing the settings on the electrical box on the motor.
The electric motor is cushioned with elastic supports.

Structure
Made of galvanised sheet iron of a suitable thickness. Internal insulation in Class 1.
The installation slots are positioned at the rear.
The inlets and outlets are designed to connect the fancoil to all types of air ducting.
The outlet includes the coupling flange.

CONDENSATE DISCHARGE

Every device is equipped with a condensate collection tray for both vertical and horizontal installation. The fan coil drip tray has got 2 condensate discharges (on the right and left hand side).
It is recommended to use the condensate discharge on the water connections.

HYDRAULIC CONNECTIONS

The connections, located on the left hand side, are female. The coil can be rotated onsite to reverse the fittings onto the right side.

Control panel
There are several control panels available to choose the most suitable for the system.
The full potential of the VED units can be exploited by combining the control panels, thermostats and other accessories of the VMF series.
The thermostats of the VMF series allow to:
- Control a single unit and the accessories.
- Control a network of 6 units, including a master with thermostat and control panel plus 5 slave units equipped with thermostat, which operate independently based on the ambient conditions.
- Control of the VED unit in a complex network of up to 64 zones with 6 fancoils (up to 384 fancoils with a single VMF-E5 control board).

OPERATIONAL LIMITS

VED		430	440	530	540	432	441	532	541
Maximum water inlet temperature	°C	80							
Maximum recommended water inlet temperature	°C	65							
Maximum operating pressure	bar	8							
Minimum water flow rate (Main coil)	l/h	300	300	300	300	300	300	300	300
Maximum water flow rate (Main coil)	l/h	3000	3000	3000	3000	3000	3000	3000	3000
Minimum water flow rate (Heating Only Coil)	l/h	-	-	-	-	200	100	200	100
Maximum water flow rate (Heating Only Coil)	l/h	-	-	-	-	2000	1500	2000	1500
External temperature limits (Ta)	°C	0° < Ta < 40°							
Relative humidity limits in the room (R.H.)		R.H. < 85%							
Power supply		230V (±10%) ~ 50 Hz							
Protection level	IP	20							

VED		630	640	730	740	632	641	732	741
Maximum water inlet temperature	°C	80							
Maximum recommended water inlet temperature	°C	65							
Maximum operating pressure	bar	8							
Minimum water flow rate (Main coil)	l/h	300	300	300	300	300	300	300	300
Maximum water flow rate (Main coil)	l/h	4500	4500	4500	4500	4500	4500	4500	4500
Minimum water flow rate (Heating Only Coil)	l/h	-	-	-	-	300	300	300	300
Maximum water flow rate (Heating Only Coil)	l/h	-	-	-	-	3000	3000	2500	3000
External temperature limits (Ta)	°C	0° < Ta < 40°							
Relative humidity limits in the room (R.H.)		R.H. < 85%							
Power supply		230V (±10%) ~ 50 Hz							
Protection level	IP	20							

The leakage current to earth of several devices placed under the same circuit breaker is summed, so attention should be paid to the calibration of the circuit breaker and possibly consider the division of the installation into several circuits each of which protected by its own circuit breaker.

Water temperature

In order to prevent air stratification in the room, and therefore to achieve improved mixing, it is advisable not to supply the fan coil with water at a temperature over 65°C.

The use of water at high temperatures could cause squeaking due to the different thermal expansions of the elements (plastics and metals), this does not however cause damage to the unit if the maximum operating temperature is not exceeded.

Minimum average water temperature

If the fan coil is working in continuous cooling mode in an environment where the relative humidity is high, condensate might form on the air delivery and on the outside of the device. This condensate might be deposited on the floor and on any objects underneath.

To avoid condensate on the external structure of the apparatus with the fan in operation, the average temperature of the water must not be lower than the limits shown in the table below, that depend on the thermo-hygrometric condition of the air in the environment.

The limits mentioned above refer to operation while the fan is set to its minimum speed level.

In the event of prolonged fan inactivity and with cold water passing through the coil, condensate may form on the external case of the unit. **As a result, we recommend including the 3-way valve accessory.**

MINIMUM AVERAGE WATER TEMPERATURE [°C]		Ambient air temperature with dry bulb					
		21	23	25	27	29	31
Ambient air temperature with wet bulb	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

INSTALLATION INFORMATION

WARNING: check that the power supply is disconnected before carrying out any procedures on the unit.

WARNING:before carrying out any work, put the proper individual protection equipment on.

WARNING: the device must be installed in compliance with the national plant engineering rules.

WARNING: electrical wirings, installation of the fan coils and relevant accessories should be performed by a technician who has the necessary technical and professional expertise to install, modify, extend and maintain systems, and who is able to check the systems for the purposes of safety and correct operation.

WARNING: install a device, main switch, or electric plug so you can fully disconnect the device from the power supply.

WARNING: Consult all documentation before starting the installation.

The essential indications to install the device correctly are given here.

The installer's experience will be necessary however, to perfect all the operations in accordance with the specific requirements.

The water, condensate discharge and electrical circuit ducts must be provided for.

The fan coil must be installed in such a position that the air can be distributed throughout the room and so that there are no obstacles (curtains or objects) to the passage of the air from the suction inlet and delivery outlet.

The fan coil should be installed in such a way as to facilitate routine (filter cleaning) and special maintenance operations, **as well as access to the air drain valve on the side of the unit frame (connections side).**

Do not install units in rooms where there are inflammable gases or acid or alkaline substances that could irretrievably damage the aluminium-copper heat exchanger or the internal plastic parts.

Do not install the unit in workshops or kitchens where the oil vapours mixed with the treated air can be deposited on the exchange coils, reducing their performance, or on the parts inside the unit, damaging the plastic parts.

The VED unit is prepared for connection with air ducting.

The VED fancoils are equipped with 5 speed motors, 3 operating speeds of which can be selected by changing the connections in the electrical box of the motor. The fancoils are provided with connections to the standard speed. See the wiring diagram before changing the motor connections.

If a three-way valve is installed, the minimum water temperature sensor can be installed in two locations:

- in its housing in the coil;
- on the delivery pipe up stream of the valve.

Check the thermostat manual before choosing the location of the minimum water temperature sensor, according to the preferred control logic. The thermostat may need the settings of the dip-switches changed.

WARNING: After completing the installation check the operation of the condensate discharge system, the seal of the hydraulic fittings, insulation of ducts and pipes. Then perform a functional test.

Danger! Only qualified service personnel can accessit.

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

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

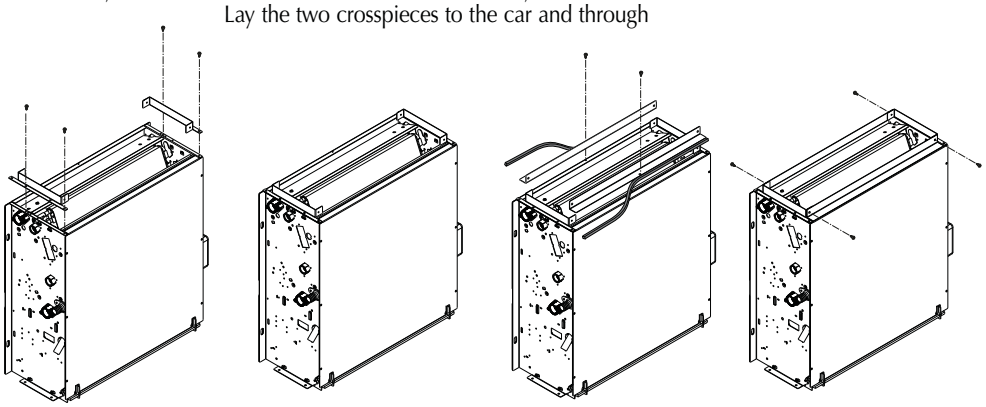
Take out the bag containing the components supplied with the fan compartment by removing the air filter in advance, as indicated in the instructions

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

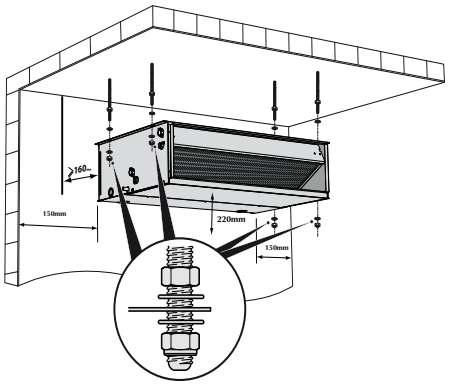
Note in the event of non-use of the flange, however, extract the bag of accessories out of the car.

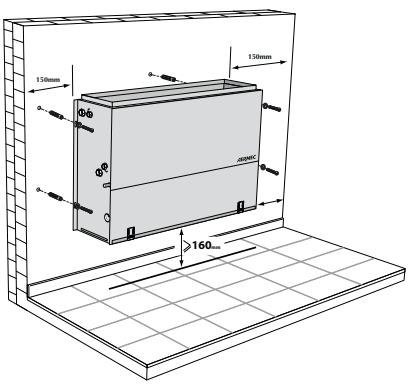


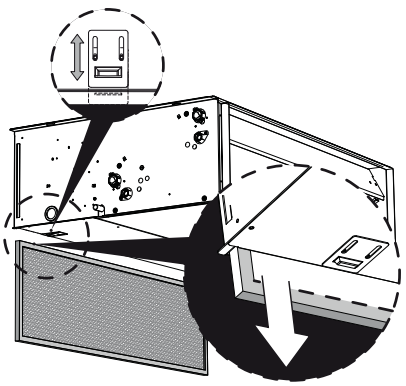
UNIT INSTALLATION

To install the unit, proceed as follows:

- For wall mounting, maintain a minimum distance of 160mm from the floor;
- For ducted installation, provide the fitting of the channels to the unit, see the drawing with the dimensional data. The outlet is already provided with coupling flange.
- Use expansion bolts (not supplied) for wall or ceiling installation, finally make sure that the unit is installed horizontally.
- For installation suspended from the ceiling, use four M8 threaded rods to support the frame. Secure the unit to the 4 threaded rods using 8 nuts of which 4 self-locking nuts. Use the nuts to adjust the height of the unit; finally, check that the unit is installed in a horizontal position
- WARNING: The fan coil must be installed in a horizontal position, otherwise the correct discharge of condensate can not be guaranteed.
- Make the hydraulic connections as described in the relative chapter.
- Make the condensate discharge connection as described in the relative chapter. The fan coils that work in heat mode only do not require condensate discharge.
- Make the electrical wirings as shown in the relative chapter and in the wiring diagrams.
- Install and connect any accessories.
- Start up the fan coil and check all the components and functions are operating correctly.







HYDRAULIC CONNECTIONS

- Make the hydraulic connections.

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

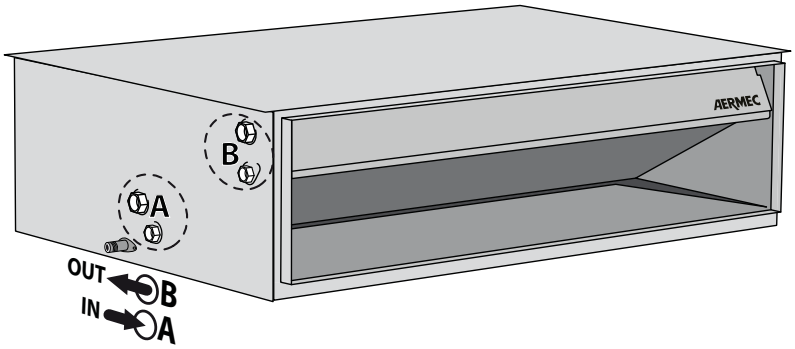
Refer to the size data for the position, type and diameter of the hydraulic connections.

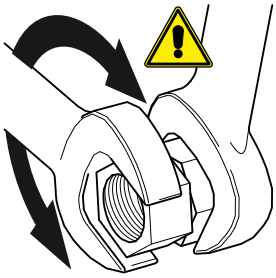
You are advised to adequately insulate water lines and/or fit the auxiliary condensate drain tray (available as an accessory), to prevent dripping during the cooling function.

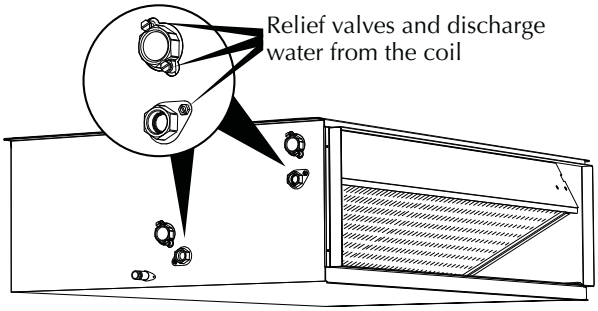
After installing, check the seal on the connections.

Warning: Bleed the hydraulic system. The relief valves are positioned at the top of the coil near the hydraulic fittings.

Warning: To discharge the unit, use the exhaust valves located in the lower part of the coil near the hydraulic fittings.







English

ELECTRICAL WIRINGS

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

WARNING: it is compulsory to connect the power cables Phase (L) and Neutral (N) to the respective terminals, do not to reverse the connections, and observe the wiring diagram.

Install a device, main switch, or electric plug so you can fully disconnect the device from the power supply.

To protect the unit against short circuits, fit an omnipolar thermal-magnetic trip 2A 250V (IG) to the power line with a minimum contact opening distance of 3mm.

For installations with three-phase power supply, the following precautions should be considered:

1. In the presence of breakers or thermomagnetic switches 3P + N, the triggering current must be at least 170% of the total load absorbed by the fan coils for each phase.
2. The section of the neutral wire must be of a dimension taking into consideration the operating current equal to 170% of the total load absorbed by the fan coils for each phase.

CHARACTERISTICS OF THE CONNECTION CABLES

Use H05V-K or N07V-K type cables with 300/500V with insulation, piped or ducted.

Use a cable with a minimum section of $1mm^2$.

All the cables must be piped or ducted until they are inside the fan coil.

The cables leaving the pipe or raceway must be so positioned that they are not pulled or twisted and are anyway protected from outside agents.

Stranded cables can only be used with crimping terminals. Check the wire strands are well inserted.

The wiring diagrams are subject to continuous updates, so it is essential to use those on the machine as your reference.

The control panel may not be fitted on a metal wall unless this is permanently connected to an earthed outlet.

Before installing the control panel, read the instructions carefully and configure the panel if necessary. Some control panels require the combination with components supplied as accessories, check availability.

WARNING: Make sure the control panel supports the load of the electric motor, otherwise placed an SIT3 interface accessory between the fan and the control panel.

WARNING: The units that are equipped with VMF series thermostats must be combined with an VMF-SIT interface accessory.

When combining to control panels, the relative wiring diagram must be respected.

If present, connect the valve and sensor to the control board, in the positions indicated in the wiring diagram. In installations with a 3-way valve, the minimum water temperature sensor must be relocated from its standard mounting in the coil assembly to the delivery hose upstream of the valve.

If the highest speeds of the motor are required, change the connection to the control board on the electric motor. Follow the wiring diagram.

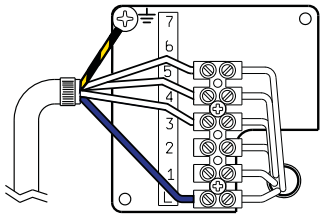
WARNING: check whether the installation has been carried out correctly. FOLLOW THE CHECKING PROCEDURES indicated in the control panel manuals.

VED is supplied with connections to terminals 5 - 4 -3.

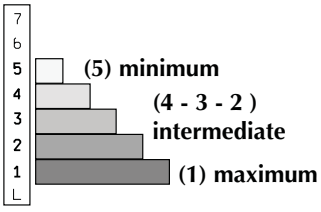
To make use of the higher speeds (terminals 2 and 1), disconnect the wires from the terminals of the default speeds and connect them to the terminals of the desired speed.

The three speeds must always be adjacent.

Motor control board



The 5 speeds of the motor



CONDENSATE DISCHARGE

The fan coil drip tray has got 2 condensate discharges (on the right and left hand side).

It is recommended to use the condensate discharge on the water connections.

Fit the condensate discharge connection supplied with the unit. Please make sure you seal together with silicone the drip tray and the connection.

Seal the drain that is not used.

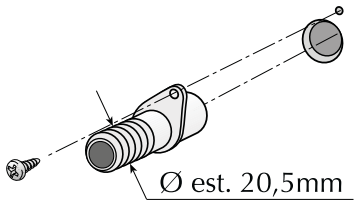
Connect the tray connection to the condensate drainage system, using a hose fixed to the tray connection. The drain connections are designed to be connected to flexible hose only of suitable internal diameter, avoid applying higher loads and do not used for other purposes.

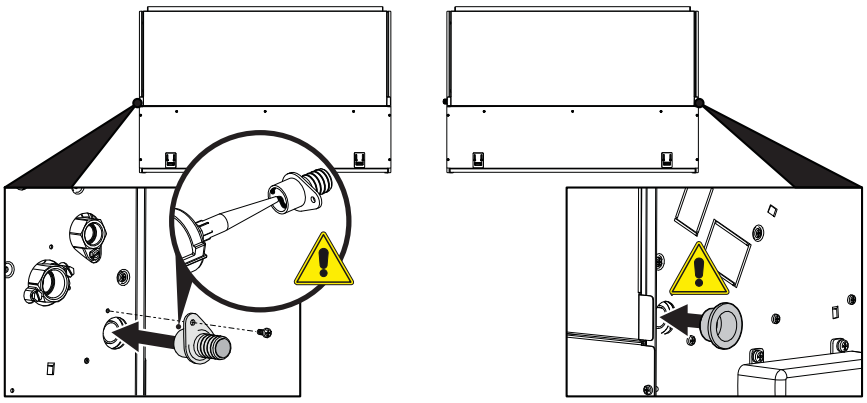
Make sure the discharge that is not used is closed and not leaking.

The condensate drain network must be properly scaled and the piping situated in such a way as to keep an adequate slope along the route (min. 1%).

If condensate is discharged into the sewage system, install a siphon to prevent the return of unpleasant odours into the room.

Carry out a functioning and seal test of the condensate drain system by pouring water into the tray.





COIL ROTATION

If the hydraulic connections require the rotation of the coil, remove the front closure panel and proceed as follows:

- Remove the condensate drip tray;
- Undo the screws and remove the coil cover;
- Remove the screws securing the coil, then remove the coil;
- Remove the push-outs on the right-hand side;
- WARNING! Consult the coil rotation diagram before rotating the coil.

It is important that the coil is installed and rotated in the right direction.

Rotate the coil correctly and secure it with the previously removed screws; The spaces between the collector and the hole on the side must be completely sealed and filled with insulating material.

Reassemble the coil cover and fix it with the screws;

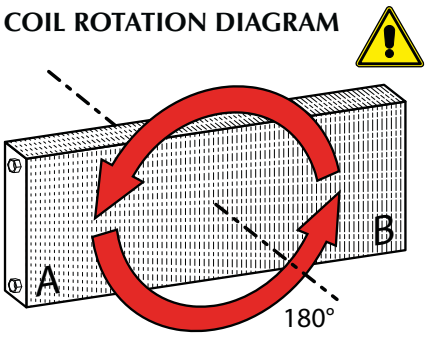
- Block the holes left open by the hydraulic connections on the left side with insulating material.
- Reassemble the condensate drip tray; The tray is designed to drain the condensate on both sides. The condensate drain connection should ideally be used on the hydraulic connection side.

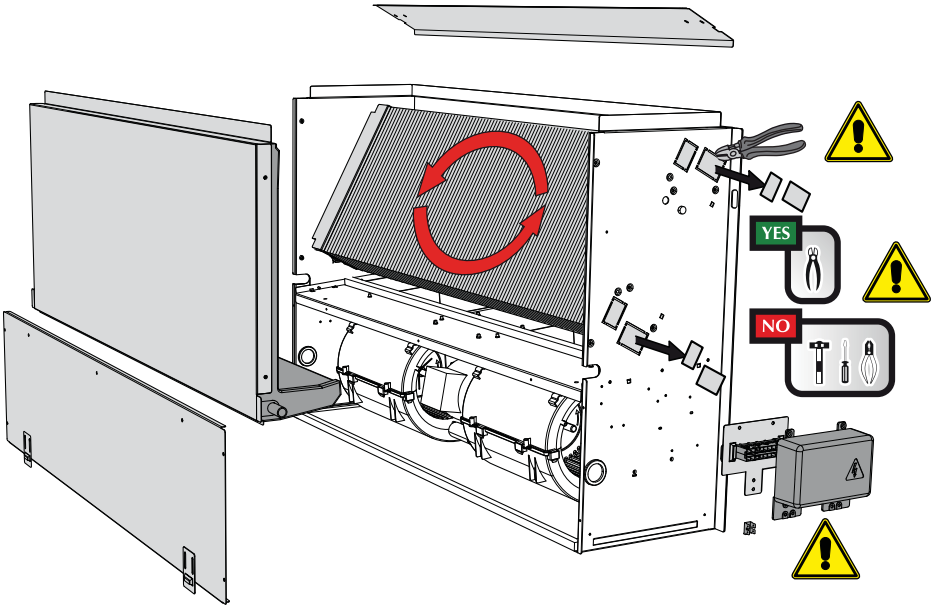
Make sure the discharge that is not used is closed and not leaking.

- Pull the electrical connections out of the right side.
- transfer the electrical wirings to the left side through the cable grommet;
- Move the support plate, the control board, the earthing u-bolt and any electric devices from the right side to the left side.

- Reassemble the front closure panel;

COIL ROTATION DIAGRAM





PROBLEMA • PROBLEM PROBLEME • PROBLEM PROBLEMA	PROBABILE CAUSA • PROBABLE CAUSE CAUSE PROBABLE • MÖGLICHE URSACHE CAUSA PROBABLE	SOLUZIONE • REMEDY SOLUTION • ABHILFE SOLUCIÓN
Poca aria in uscita. Feeble air discharge. Il y a peu d'air en sortie. Schwacher Luftstrom am Austritt. Poco aire en salida.	Errata impostazione della velocità sul pannello comandi. Wrong speed setting on the control panel. Mauvaise préselection de la vitesse sur le panneau de commandes. Falsche Geschwindigkeitseinstellung am Bedienpaneel. Programación errada de la velocidad en el tablero de mandos.	Scegliere la velocità corretta sul pannello comandi. Select the speed on the control panel. Choisir la vitesse sur la panneau de commandes. Die Geschwindigkeit am Bedienpaneel wählen. Elegir la velocidad correcta en el tablero de mandos.
	Filtro intasato. Blocked filter. Filtre encrassé. Filter verstopft. Filtro atascado.	Pulire il filtro. Clean the filter. Nettoyer le filtre. Filter reinigen. Limpiar el filtro.
Non fa caldo. It does not heat. Pas de chaleur. Keine Heizung. No hace calor.	Ostruzione del flusso d'aria (entrata e/o uscita). Obstruction of the air flow (inlet and/or outlet). Obstruction du flux d'air (entrée/sortie). Luftstrom behindert (Eintritt bzw. Austritt). Obstrucción del chorro del aire (entrada y/o salida).	Rimuovere l'ostruzione. Remove the obstruction. Enlever l'objet faisant obstruction. Verstopfung beseitigen. Quitar la obstrucción.
	Mancanza di acqua calda. Poor hot water supply. Il n'y a pas d'eau chaude. Kein Warmwasser. Falta de agua caliente.	Controllare la caldaia. Control the boiler. Verifier la chaudière. Kaltwasserseitigen Wärmeaustauscher kontrollieren. Comprobar el calentador.
Non fa freddo. It does not cool. Pas de froid. Keine Kühlung. No hace frío.	Impostazione errata del pannello comandi. Wrong setting on control panel. Mauvaise présélection sur le panneau de commandes. Falsche Einstellung am Bedienpaneel. Programación errada del tablero de mandos.	Impostare il pannello comandi. See control panel settings. Présélectionner au panneau de commandes. Richtige Einstellung am Bedienpaneel vornehmen. Programar el tablero de mandos.
	Mancanza di acqua fredda. Poor chilled water supply. Il n'y a pas d'eau froide. Kein Kaltwasser. Falta de agua fría.	Controllare il refrigeratore. Control the chiller. Vérifier le réfrigerateur. Kaltwasserseitigen Wärmeaustauscher kontrollieren. Comprobar el refrigerador.
Il ventilatore non gira. The fan does not turn. Le ventilateur ne tourne pas. Ventilator Arbeitet nicht. El ventilador no gira.	Impostazione errata del pannello comandi. Wrong setting on control panel. Mauvaise présélection sur le panneau de commandes. Falsche Einstellung am Bedienpaneel. Programación errada del tablero de mandos.	Impostare il pannello comandi. See control panel settings. Présélectionner au panneau de commandes. Richtige Einstellung am Bedienpaneel vornehmen. Programar el tablero de mandos.
	Mancanza di corrente. No current. l n'y a pas de courant. Kein Strom. Falta de corriente.	Controllare la presenza di tensione elettrica. Control the power supply. Contrôler l'alimentation électrique. Kontrollieren, ob Spannung anliegt. Comprobar la presencia de tensión eléctrica.
	L'acqua non ha raggiunto la temperatura d'esercizio. The water has not reached operating temperature. L'eau n'a pas atteint la température de service. Das Wasser hat die Betriebstemperatur nicht erreicht. El agua no ha alcanzado la temperatura de ejercicio.	Controllare la caldaia o il refrigeratore. Controllare il settaggio del termostato. Please check up the boiler or the chiller. Check up the thermostat settings. Contrôler la chaudière ou le refroidisseur. Contrôler le réglage du thermostat. Das Heiz- oder Kühlaggregat überprüfen. Die Einstellungen des Temperaturreglers überprüfen. Comprobar el calentador o el refrigerador. Comprobar la programación del termostato.
Fenomeni di condensazione sulla struttura esterna dell'apparecchio. Condensation on the unit cabinet. Phénomènes de condensation sur la structure exterieure de l'appareil. Kondenswasserbildung am Gerät. Fenómenos de condensación en la estructura externa del aparato.	Sono state raggiunte le condizioni limite di temperatura e umidità descritte in "MINIMA TEMPERATURA MEDIA DELL'ACQUA". The limit conditions of temperature and humidity indicated in "MINIMUM AVERAGE WATER TEMPERATURE" have been reached. On a atteint les conditions limite de température et d'humidité indiquées dans "TEMPERATURE MINIMALE MOYENNE DE L'EAU". Erreichen der maximalen Temperatur- und Feuchtigkeitswerte (siehe Abschnitt "DURCHSCHNITTLICHE MINDEST - WASSERTEMPERATUR"). Se han alcanzado las condiciones límites de temperatura y humedad descritas en "MÍNIMA TEMPERATURA MEDIA DEL AGUA".	Innalzare la temperatura dell'acqua oltre i limiti minimi descritti in "MINIMA TEMPERATURA MEDIA DELL'ACQUA". Increase the water temperature beyond the minimum limits indicated in "MINIMUM AVERAGE WATER TEMPERATURE". Elever la température de l'eau audelà des limites minimales indiquées dans "TEMPERATURE MINIMALE MOYENNE DE L'EAU". Wassertemperatur über die um Abschnitt "DURCHSCHNITTLICHE MINDEST - WASSERTEMPERATUR" angegebenen min. Werte erhöhen. Aumentar la temperatura del agua por encima de los límites descritos en "Mínima temperatura media del agua".

Per anomalie non contemplate, interpellare tempestivamente il Servizio Assistenza.
For anomalies don't hesitate, contact the aftersales service immediately.
Pour toute anomalie non répertoriée, consulter le service après-vente.
Sich bei hier nicht aufgeführten Störungen umgehend an den Kundendienst wenden.
En el caso de anomalías no contempladas, ponerse en contacto de inmediato con el Servicio de Asistencia.