# VEC

## Coanda-effect fan coil for cassette installation

- **Very quiet**
- **Total comfort in every season**



## DESCRIPTION

Thanks to a special air intake and flow grid, these units allow a coanda-effect air flow to be generated, parallel to the ceiling, creating optimal circulation inside the room to be air-conditioned.
They are suitable to be installed inside a suspended ceiling.

## FEATURES

### Ventilation group

Comprised of a dual intake centrifugal fan that is particularly silent, statically and dynamically balanced and directly coupled to the motor shaft.
In addition to the traditional three-speed asynchronous motor for the "VECs", every unit can be supplied with a "VEC_I" Brushless-type inverter motor controlled by an inverter board.

### Heat exchanger coil

With copper pipes and aluminium louvers, the main heat exchanger has female gas water connections on the left side and the manifolds have air vents.
Units are available with a standard coil (20-50) and a larger coil (24-54). Only units with the standard coil can be combined with an additional electric or water coil with 1 row, both available as an accessory.
The coil is not suitable for use in corrosive atmosphere or in environments where aluminium may be subject to corrosion.

*The hydraulic connections can be inverted during installation.*

### Air filter

Fire resistance class **1** air filter.

## ACCESSORY COMPULSORY

**VEC_GL:** Air intake and flow grid with adjustable Coanda-effect vents (white M9016 = lacquered white similar to Ral 9016).

### Control panels and dedicated accessories

**AER503IR:** Flush-mounting thermostat with backlit display, capacitive keypad and infrared receiver, for controlling both brushless fan coils and those with an asynchronous motor. In 2-pipe systems, the thermostat can control standard fan coils or those equipped with an electric heater, with air purifying devices (Cold Plasma and germicidal lamp), with radiant plate or with FCZ-D twin delivery (Dualjet). In addition, it can control systems with radiant panels or mixed (fan coil and radiant floor) systems. Being equipped with an infrared receiver, it can, in turn, be controlled by the VMF-IR remote control.
**FMT10:** Electronic thermostat for fan coil in to 2/4 pipe systems.
**PRO503:** Wall box for AER503IR and VMF-E4 thermostats.
**SA5:** air probe kit (L = 15 m) with probe-locking cable grommet.
**SIT3:** Thermostat Interface Card allowing the creation of a network of fan coils (max. 10) commanded by a central control panel (selector or thermostat). Commands the 3 fan speeds and must be installed on each fan coil within the network; receives the commands from the selector or the SIT5 card. In case you decide to install Aermec thermostats and current absorbed by the unit exceeds 0.7 A, you're obliged to include SIT3 accessory.
**SIT5:** Thermostat Interface Card allowing the creation of a network of fan coils (max. 10) commanded by a central control panel. Commands the 3 fan speeds and up to 2 valves (four pipe systems); sends the thermostat's commands to the fan coil network.
**SW3:** Water probe (L = 2.5 m) for controlling the minimum and maximum and to allow automatic seasonal switching for electronic thermostats fitted with water side changeover.
**SW5:** water probe kit (L = 15m) with probe-holder connection point, fixing clip and probe-holder from heat exchanger.
**TX:** Wall-mounting thermostat for controlling either brushless fan coils or those with asynchronous motors for 2/4 pipe. In 2-pipe systems, the thermostat can control standard fan coils or those equipped with an electric heater, with air purifying devices, radiant plate or FCZ-D twin delivery (Dualjet).
**WMT10:** Electronic thermostat, white, with thermostated or continuous ventilation.
**WMT16:** Electronic thermostat with thermostated ventilation.
**WMT16CV:** Electronic thermostat with continuous ventilation.

### AerSuite

The AerSuite application is used to remotely control the DI24 user interface, with VMF-E19/VMF-E19I thermostats, using Smart Devices with iOS and Android operating systems.
This is an application for Smartphones and Tablets with which the user can access and control the system operation remotely.
For more information about the use of the application and the available functions, refer to the respective documentation on the website.




## VMF Components

**DI24:** Flush-mounted interface (503 box) with 2.4" touch screen display to be combined with VMF-E19, VMF-E19I accessories. It allows you to regulate and monitor the temperature inside rooms precisely and on time; in addition to accessing and interacting with your system's operating information, parameters and alarms, it allows you to set time slots. Thanks to its Wi-Fi connection, DI24 in combination with the AerSuite APP (available for Android and iOS) can also be remotely controlled. All programming and most functions are done in a simple and intuitive way using the APP. To allow for customization of the interface so that it seamlessly integrates with the style of any home, DI24 is compatible with switch plates from major brands available on the market. For more information, please refer to our documentation. However, a switch plate with its graphite gray support, DI24CP, is also available as a separate accessory in our catalog.

**VMF-DSK:** User interface with an easy-to-read light display that provides clear information on room temperature, programming settings and more. Thanks to the ergonomic ring nut switch, adjusting the desired temperature is very easy. The knob allows precise and immediate adjustments, offering a classic but highly effective control mode. Not only functional, but also aesthetically pleasing. Our interface features a modern, compact design that fits perfectly in any environment, adding a touch of style to your home or office. It is available in white (VMF-DSK) and black (VMF-DSKD).

**VMF-E19:** Thermostat to be secured to the side of the fan coil, fitted as standard with an air probe and a water probe.

**VMF-E3:** Wall-mounted user interface, also controllable via VMF-IR control.

**VMF-E4X:** Wall-mounted user interface. Light grey front panel PANTONE COOL GRAY 1C.

**VMF-IR:** User interface compatible with AER503IR, VMF-E3 thermostat.

**VMF-SW:** Water probe (L = 2.5m) used if required in place of the standard unit supplied with the VMF-E19 and VMF-E19I thermostats for mounting it upstream of the valve.

**VMF-SW1:** Additional water probe (L = 2.5m) to be used if required for 4-pipe systems with the VMF-E19 and VMF-E19I thermostats for maximum control in the cold range

**VMHI:** The VMHI panel can be used as a user interface. What determines the function to be performed by the user interface is determined by its correct parametrisation and by following the electrical connections between interface and thermostat or interface and plenum.

## Common accessories

**BV:** Hot water heat exchanger with 1 row.

**RX:** Armoured electric coil with safety thermostat.

**VCFD:** Motorized 2-way valve kit without insulating shell, can be installed on the main or secondary battery or a battery that is only warm. The kit is made up of a valve, actuator and relative hydraulic fittings. It can be installed on fan coils with connections on the right and on the left.

**VCF41 - 42 - 43 - for main heat exchanger:** 3-way motorised valve kit for the main coil. The kit is made up of a valve with its insulating shell, actuator and relative hydraulic fittings. It can be installed on fan coils with both right and left connections. If the valve is combined with the BCZ5 or BCZ6 condensate drain pan, to ensure a better housing it is possible to remove the insulating shell.

**DSC:** Condensate drainage device.

**BC:** Condensate drip.

**VCF44 - 45 - for secondary heat exchanger:** The 3-way motorised valve kit for the secondary coil heat only. The kit consists of a valve with its insulating shell, actuator and relevant water fittings; it is suitable to be installed on the fan coils with right and left water connections.

**PCR:** Galvanised plate protection for the controls and the electrical element.

# ACCESSORIES COMPATIBILITY

## Accessories mandatory

**Intake grid and distribution of the air**

| Accessory | VEC20 | VEC24 | VEC30 | VEC34 | VEC40 | VEC44 | VEC50 | VEC54 |
|---|---|---|---|---|---|---|---|---|
| VEC20GL (1) | • | • | | | | | | |
| VEC30GL (1) | | | • | • | | | | |
| VEC40GL (1) | | | | | • | • | • | • |

(1) Mandatory accessory.

## Control panels and dedicated accessories

| Accessory | VEC20 | VEC24 | VEC30 | VEC34 | VEC40 | VEC44 | VEC50 | VEC54 |
|---|---|---|---|---|---|---|---|---|
| AER503IR (1) | • | • | • | • | • | • | • | • |
| FMT10 | • | • | • | • | • | • | • | • |
| PRO503 | • | • | • | • | • | • | • | • |
| SA5 (2) | • | • | • | • | • | • | • | • |
| SIT3 (3) | • | • | • | • | • | • | • | • |
| SIT5 (4) | • | • | • | • | • | • | • | • |
| SW3 (2) | • | • | • | • | • | • | • | • |
| SW5 (2) | • | • | • | • | • | • | • | • |
| TX (5) | • | • | • | • | • | • | • | • |
| WMT10 (5) | • | • | • | • | • | • | • | • |
| WMT16 (5) | • | • | • | • | • | • | • | • |
| WMT16CV (5) | • | • | • | • | • | • | • | • |

(1) Wall-mount installation.
(2) Probe for AER503IR-TX thermostats, if fitted.
(3) Cards for AER503IR-TX thermostats, if present, to be installed if the unit absorption exceeds 0,7 Ampere.
(4) Probe for AER503IR-TX thermostats, if fitted.
(5) Wall-mounting. If the unit intake exceeds 0.7A, or several units need to be managed with a single thermostat, board SIT3 and/or SIT5 is required.

**VMF Components**

| Accessory | VEC20 | VEC24 | VEC30 | VEC34 | VEC40 | VEC44 | VEC50 | VEC54 |
|---|---|---|---|---|---|---|---|---|
| DI24 | • | • | • | • | • | • | • | • |
| DI24CP | • | • | • | • | • | • | • | • |
| VMF-DSK | • | • | • | • | • | • | • | • |
| VMF-E19 (1) | • | • | • | • | • | • | • | • |
| VMF-E3 | • | • | • | • | • | • | • | • |
| VMF-E4X | • | • | • | • | • | • | • | • |

| Accessory | VEC20 | VEC24 | VEC30 | VEC34 | VEC40 | VEC44 | VEC50 | VEC54 |
|---|---|---|---|---|---|---|---|---|
| VMF-IR | • | • | • | • | • | • | • | • |
| VMF-SW | • | • | • | • | • | • | • | • |
| VMF-SW1 | • | • | • | • | • | • | • | • |
| VMHI | • | • | • | • | • | • | • | • |

(1) Also the accessory VMF-SIT3V is mandatory if the unit exceeds 0.7 Amperes.

## Common accessories

### Electric coil

| Accessory | VEC20 | VEC30 | VEC40 | VEC50 |
|---|---|---|---|---|
| RX22 (1) | • | | | |
| RX32 (1) | | • | | |
| RX42 (1) | | | • | |
| RX52 (1) | | | | • |

(1) Requires a thermostat with heater management. Not available for sizes with an oversized main coil. The PCR1 PCR2 or PCR1V appliance must also be provided depending on the unit.

### Protection for controls and electric resistance

| Accessory | VEC20 | VEC30 | VEC40 | VEC50 |
|---|---|---|---|---|
| PCR1V | • | • | • | • |

### Water coil with 1 row

| Accessory | VEC20 | VEC30 | VEC40 | VEC50 |
|---|---|---|---|---|
| BV122 (1) | • | | | |
| BV132 (1) | | • | | |
| BV142 (1) | | | • | • |

(1) Not available for sizes with oversized main coil.

### 3-way valve kit - main coil or accessory BV coil

| | VEC20 | VEC24 | VEC30 | VEC34 | VEC40 | VEC44 | VEC50 | VEC54 |
|---|---|---|---|---|---|---|---|---|
| **Main coil** | VCF41 - VCF4124 | VCF42 - VCF4224 | VCF41 - VCF4124 | VCF42 - VCF4224 | VCF42 - VCF4224 | VCF42 - VCF4224 | VCF42 - VCF4224 | VCF42 - VCF4224 |
| **Additional coil "BV"** | VCF44 - VCF4424 | - | VCF44 - VCF4424 | - | VCF44 - VCF4424 | - | VCF44 - VCF4424 | - |

### 2-way valve kit - main coil or accessory BV coil

| | VEC20 | VEC24 | VEC30 | VEC34 | VEC40 | VEC44 | VEC50 | VEC54 |
|---|---|---|---|---|---|---|---|---|
| **Main coil** | VCFD1 - VCFD124 | VCFD2 - VCFD224 | VCFD1 - VCFD124 | VCFD2 - VCFD224 | VCFD2 - VCFD224 | VCFD2 - VCFD224 | VCFD2 - VCFD224 | VCFD2 - VCFD224 |
| **Additional coil "BV"** | VCFD4 - VCFD424 | - | VCFD4 - VCFD424 | - | VCFD4 - VCFD424 | - | VCFD4 - VCFD424 | - |

Valves ending with **24 ex. VCFD124,** are 24V.

### Condensate drip

| Accessory | VEC20 | VEC24 | VEC30 | VEC34 | VEC40 | VEC44 | VEC50 | VEC54 |
|---|---|---|---|---|---|---|---|---|
| BCZ5 (1) | • | • | • | • | • | • | • | • |

(1) For horizontal installation.

### Condensate drainage

| Accessory | VEC20 | VEC24 | VEC30 | VEC34 | VEC40 | VEC44 | VEC50 | VEC54 |
|---|---|---|---|---|---|---|---|---|
| DSC4 (1) | • | • | • | • | • | • | • | • |

(1) DSC4 cannot be mounted if even just one of these accessories is also installed: AMP - AMPZ valve VCZ1-2-3-4 X4L/R and all the condensate collection trays.

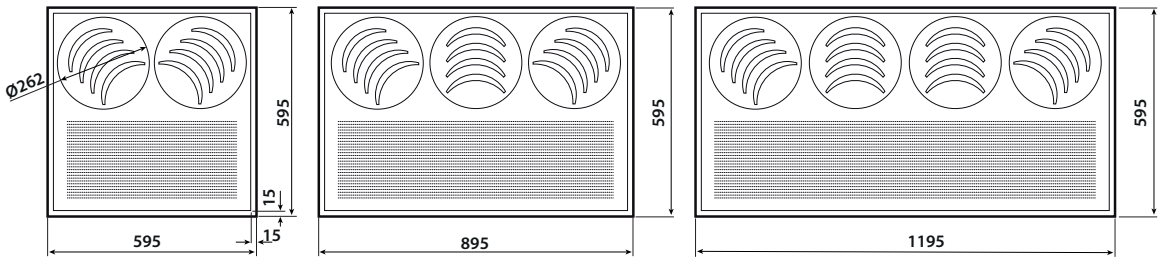
## PERFORMANCE SPECIFICATIONS VEC

**2-pipe**

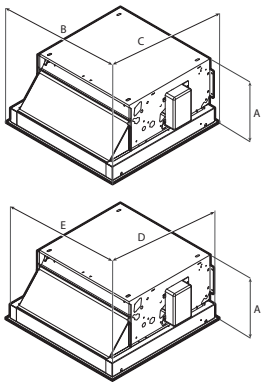
| | | VEC20 | | | VEC24 | | | VEC30 | | | VEC34 | | | VEC40 | | | VEC44 | | | VEC50 | | | VEC54 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 |
| | | L | M | H | L | M | H | L | M | H | L | M | H | L | M | H | L | M | H | L | M | H | L | M | H |
| **Heating performance 70 °C / 60 °C (1)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heating capacity | kW | 1,87 | 2,54 | 3,10 | 2,07 | 2,50 | 3,42 | 3,03 | 3,64 | 4,31 | 4,31 | 53,18 | 6,14 | 4,21 | 5,21 | 6,29 | 5,41 | 6,68 | 8,07 | 4,76 | 6,34 | 7,16 | 6,06 | 8,08 | 9,18 |
| Water flow rate system side | l/h | 164 | 223 | 272 | 181 | 219 | 300 | 266 | 319 | 378 | 378 | 454 | 538 | 369 | 457 | 551 | 474 | 586 | 708 | 417 | 556 | 628 | 532 | 709 | 805 |
| Pressure drop system side | kPa | 2 | 4 | 6 | 1 | 2 | 3 | 9 | 13 | 17 | 5 | 7 | 9 | 6 | 9 | 12 | 9 | 14 | 19 | 7 | 11 | 14 | 9 | 15 | 19 |
| **Heating performance 45 °C / 40 °C (2)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heating capacity | kW | 0,95 | 1,26 | 1,54 | 1,20 | 1,40 | 1,70 | 1,50 | 1,81 | 2,14 | 2,15 | 2,57 | 3,05 | 2,09 | 2,59 | 3,12 | 2,69 | 3,30 | 4,01 | 2,37 | 3,15 | 3,56 | 3,02 | 4,02 | 4,54 |
| Water flow rate system side | l/h | 163 | 217 | 265 | 206 | 241 | 292 | 258 | 311 | 368 | 370 | 442 | 525 | 359 | 445 | 537 | 463 | 568 | 690 | 408 | 542 | 612 | 519 | 691 | 781 |
| Pressure drop system side | kPa | 3 | 5 | 7 | 2 | 3 | 4 | 9 | 13 | 17 | 5 | 7 | 9 | 6 | 9 | 13 | 10 | 14 | 20 | 7 | 12 | 14 | 17 | 15 | 19 |
| **Cooling performance 7 °C / 12 °C (3)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling capacity | kW | 0,80 | 1,07 | 1,31 | 0,88 | 1,21 | 1,52 | 1,35 | 1,61 | 1,91 | 1,79 | 2,14 | 2,47 | 1,99 | 2,47 | 2,99 | 2,55 | 3,34 | 3,91 | 2,35 | 3,17 | 3,61 | 3,00 | 4,00 | 4,28 |
| Sensible cooling capacity | kW | 0,64 | 0,87 | 1,07 | 0,67 | 0,90 | 1,14 | 1,03 | 1,25 | 1,49 | 1,26 | 1,51 | 1,78 | 1,58 | 1,98 | 2,41 | 1,91 | 2,42 | 2,74 | 1,68 | 2,27 | 2,59 | 2,09 | 2,83 | 3,04 |
| Water flow rate system side | l/h | 138 | 184 | 225 | 151 | 208 | 261 | 232 | 277 | 329 | 308 | 368 | 425 | 342 | 425 | 514 | 439 | 574 | 673 | 404 | 545 | 621 | 516 | 688 | 736 |
| Pressure drop system side | kPa | 3 | 4 | 6 | 1 | 2 | 3 | 6 | 11 | 13 | 5 | 6 | 8 | 6 | 9 | 12 | 11 | 17 | 22 | 7 | 12 | 15 | 17 | 27 | 30 |
| **Fan** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type | type | Centrifugal | | | | | | | | | | | | | | | | | | | | | | | |
| Fan motor | type | Asynchronous | | | | | | | | | | | | | | | | | | | | | | | |
| Number | no. | 1 | | | 1 | | | 2 | | | 2 | | | 2 | | | 2 | | | 2 | | | 2 | | |
| Air flow rate | $m^3/h$ | 130 | 194 | 247 | 130 | 167 | 247 | 241 | 309 | 383 | 241 | 309 | 383 | 306 | 406 | 511 | 306 | 406 | 511 | 371 | 529 | 613 | 371 | 529 | 613 |
| Input power | W | 19 | 22 | 25 | 19 | 22 | 25 | 25 | 33 | 44 | 25 | 33 | 44 | 30 | 43 | 57 | 30 | 43 | 57 | 34 | 46 | 67 | 34 | 46 | 67 |
| Electrical wiring | | V1 | V2 | V3 | V1 | V2 | V3 | V1 | V2 | V3 | V1 | V2 | V3 | V1 | V2 | V3 | V1 | V2 | V3 | V1 | V2 | V3 | V1 | V2 | V3 |
| **Fan coil sound data (4)** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sound power level | dB(A) | 35,0 | 42,0 | 48,0 | 35,0 | 42,0 | 48,0 | 37,0 | 43,0 | 49,0 | 37,0 | 43,0 | 49,0 | 38,0 | 43,0 | 48,0 | 38,0 | 43,0 | 48,0 | 43,0 | 50,0 | 53,0 | 43,0 | 50,0 | 53,0 |
| Sound pressure level | dB(A) | 27,0 | 34,0 | 40,0 | 27,0 | 34,0 | 40,0 | 29,0 | 35,0 | 41,0 | 29,0 | 35,0 | 41,0 | 30,0 | 35,0 | 40,0 | 30,0 | 35,0 | 40,0 | 35,0 | 38,0 | 45,0 | 35,0 | 38,0 | 45,0 |
| **Diametre hydraulic fittings** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Main heat exchanger | Ø | 1/2" | | | 3/4" | | | 1/2" | | | 3/4" | | | 3/4" | | | 3/4" | | | 3/4" | | | 3/4" | | |
| **Power supply** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Power supply | V/Ph/Hz | 230V~50Hz | | | | | | | | | | | | | | | | | | | | | | | |

(1) Room air temperature 20 °C d.b.; Water (in/out) 70 °C/60 °C
(2) Room air temperature 20°C d.b.; Water (in/out) 45°C/40°C; EUROVENT (listing FCU AERMEC 2025)
(3) Room air temperature 27 °C d.b./19 °C w.b.; Water (in/out) 7 °C/12 °C; EUROVENT (listing FCU AERMEC 2025)
(4) Aermec determines the sound power value on the basis of measurements taken in accordance with standard UNI EN 16583:15, respecting the Eurovent certification.

## GRID DIMENSIONS (MANDATORY ACCESSORY)




## DIMENSIONS




**Dimensions and weights of the unit with grid (maximum dimensions)**

| Size | | 20 | 24 | 30 | 34 | 40 | 44 | 50 | 54 |
|---|---|---|---|---|---|---|---|---|---|
| **Dimensions and weights** | | | | | | | | | |
| A | mm | 283 | 283 | 283 | 283 | 283 | 283 | 283 | 283 |
| B | mm | 595 | 595 | 895 | 895 | 1195 | 1195 | 1195 | 1195 |
| C | mm | 595 | 595 | 595 | 595 | 595 | 595 | 595 | 595 |
| Empty weight | kg | 16 | 16 | 21 | 21 | 25 | 25 | 25 | 25 |
| Weight of the grid | kg | 3,7 | 3,7 | 5,7 | 5,7 | 7,0 | 7,0 | 7,0 | 7,0 |

**Dimensions of the unit with grid (dimensions for installation)**

| Size | | 20 | 24 | 30 | 34 | 40 | 44 | 50 | 54 |
|---|---|---|---|---|---|---|---|---|---|
| **Dimensions and weights** | | | | | | | | | |
| A | mm | 283 | 283 | 283 | 283 | 283 | 283 | 283 | 283 |
| D | mm | 574 | 574 | 574 | 574 | 574 | 574 | 574 | 574 |
| E | mm | 574 | 574 | 874 | 874 | 1174 | 1174 | 1174 | 1174 |

Aermec reserves the right to make any modifications deemed necessary. All data is subject to change without notice. Aermec does not assume responsibility or liability for errors or omissions.

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