

# 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 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-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, to be combined with accessories VMF-E19, VMF-E19I, with grids GLF\_N/M or GLL\_N, can be controlled with VMF-IR control.

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

### ACCESSORIES COMPATIBILITY

#### Accessories mandatory

##### Intake grid and distribution of the air

Model	Ver	20	24	30	34	40	44	50	54
VEC20GL (1)	.	*	.						
VEC30GL (1)	.			*	*				
VEC40GL (1)	.					*	*	*	*

(1) Mandatory accessory.

#### Control panels and dedicated accessories

Model	Ver	20	24	30	34	40	44	50	54
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

Model	Ver	20	24	30	34	40	44	50	54
DI24	.	*	*	*	*	*	*	*	*
VMF-E19 (1)	.	*	*	*	*	*	*	*	*
VMF-E3	.	*	*	*	*	*	*	*	*
VMF-E4X	.	*	*	*	*	*	*	*	*
VMF-IR	.	*	*	*	*	*	*	*	*
VMF-SW	.	*	*	*	*	*	*	*	*
VMF-SW1	.	*	*	*	*	*	*	*	*

**VMF-IR:** User interface compatible with the AER503IR, VMF-E3 thermostat and with all the grids of cassettes equipped with the infrared receiver compatible with the VMF system.

**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 for VMF-E19/E19I thermostats, GLFxN/M or GLLxN grids, or as an interface for the MZC system. 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.

Model	Ver	20	24	30	34	40	44	50	54
VMHI	.	*	*	*	*	*	*	*	*

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

### Common accessories

#### Electric coil

Model	Ver	20	24	30	34	40	44	50	54
RX22 (1)	.	*	*						
RX32 (1)	.			*	*				
RX42 (1)	.					*	*		
RX52 (1)	.							*	*

(1) It requires a thermostat with heater management and the units without a housing also require the PCR1 or PCR2 accessory, depending on the unit. The heater is not available for sizes with a larger main battery.

#### Protection for controls and electric resistance

Model	Ver	20	24	30	34	40	44	50	54
PCR1V	.	*	*	*	*	*	*	*	*

#### Water coil with 1 row

Model	Ver	20	24	30	34	40	44	50	54
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
<b>Main coil</b>	VCF41 - VCF4124	VCF42 - VCF4224	VCF41 - VCF4124	VCF42 - VCF4224	VCF42 - VCF4224	VCF42 - VCF4224	VCF42 - VCF4224	VCF42 - VCF4224
<b>Additional coil "BV"</b>	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
<b>Main coil</b>	VCFD1 - VCFD124	VCFD2 - VCFD224	VCFD1 - VCFD124	VCFD2 - VCFD224	VCFD2 - VCFD224	VCFD2 - VCFD224	VCFD2 - VCFD224	VCFD2 - VCFD224
<b>Additional coil "BV"</b>	VCFD4 - VCFD424	-	VCFD4 - VCFD424	-	VCFD4 - VCFD424	-	VCFD4 - VCFD424	-

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

#### Condensate drip

Ver	20	24	30	34	40	44	50	54
.	BC5 (1)	BC5 (1)	BC5 (1)	BC5 (1)	BC5 (1)	BC5 (1)	BC5 (1)	BC5 (1)

(1) For horizontal installation.

#### Condensate drainage

Ver	20	24	30	34	40	44	50	54
.	DSC4	DSC4	DSC4	DSC4	DSC4	DSC4	DSC4	DSC4

## PERFORMANCE SPECIFICATIONS VEC

### 2-pipe

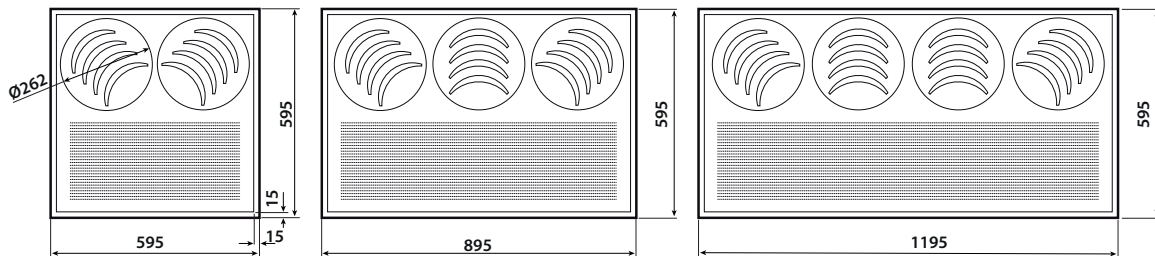
	VEC20			VEC24			VEC30			VEC34			VEC40			VEC44			VEC50			VEC54								
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3						
	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H	L	M	H						
<b>Heating performance 70 °C / 60 °C (1)</b>																														
Heating capacity	kW			1,87	2,54	3,10	2,07	2,50	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			
<b>Heating performance 45 °C / 40 °C (2)</b>																														
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			
<b>Cooling performance 7 °C / 12 °C</b>																														
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			
<b>Fan</b>																														
Type	type			Centrifugal																										
Fan motor	type			Asynchronous																										
Number	no.			1			1			2			2			2			2			2								
Air flow rate	m³/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	V1	V2	V3
<b>Fan coil sound data (3)</b>																														
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	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			
<b>Diameter hydraulic fittings</b>																														
Main heat exchanger	Ø			1/2"			3/4"			1/2"			3/4"			3/4"			3/4"			3/4"			3/4"					
<b>Power supply</b>																														
Power supply	230V~50Hz																													

(1) Room air temperature 20 °C d.b.; Water (in/out) 70 °C/60 °C

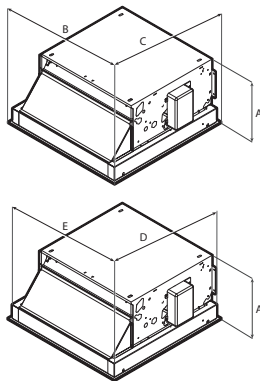
(2) Room air temperature 20 °C d.b.; Water (in/out) 45 °C/40 °C; EUROVENT

(3) 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
<b>Dimensions and weights</b>								
A	. mm	283	283	283	283	283	283	283
B	. mm	595	595	895	895	1195	1195	1195
C	. mm	595	595	595	595	595	595	595
Empty weight	. kg	16	16	21	21	25	25	25
Weight of the grid	. kg	3,7	3,7	5,7	5,7	7,0	7,0	7,0

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

Size	20	24	30	34	40	44	50	54
<b>Dimensions and weights</b>								
A	. mm	283	283	283	283	283	283	283
D	. mm	574	574	574	574	574	574	574
E	. mm	574	574	874	874	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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