

VEC-I

Coanda-effect fan coil for cassette installation



- **Very quiet**
- **Electric saving equal to 50% with respect to a fan coil with 3-speed motor**
- **Total comfort: reduced variations in temperature and relative humidity 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.

The Brushless electric motor with 0-100% continuous speed variation, which allows precise adaptation to the real demands of the internal environment without temperature fluctuations.

Continuous air flow rate variation is made possible by a 0-10V signal generated by Aermec adjustment and control commands or by independent regulation systems.

This lowers noise and generates a better response to heat loads and a higher stability in the desired temperature inside the room.

The high efficiency even with low speed, makes it possible to reduce power consumption (more than 50% less than fan coils with traditional motors).

Apart from the inverter motor of the "VEC-I" models, each unit can be supplied with a single-phase asynchronous "VEC" motor.

Heat exchanger coil

With copper pipes and aluminium louvers, the main coil 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

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.

SA5: air probe kit (L = 15 m) with probe-locking cable grommet.

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).

VMF Components

VMF-E19I: Thermostat for inverter unit to be fixed on the side of the fan coil, fitted as standard with an air and water probe.

VMF-E4DX: Wall-mounted user interface. Grey front panel PANTONE 425C (METAL).

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

VMF-SW: Water temperature probe.

VMF-SW1: Extra water probe to be used for 4-pipe systems.

Common accessories

BV: Single row hot water heat exchanger.

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 coil: 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.

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

ACCESSORIES COMPATIBILITY

Accessories mandatory

Intake grid and distribution of the air

Accessory	VEC24I	VEC30I	VEC34I	VEC40I	VEC44I	VEC50I	VEC54I
VEC20GL	*						
VEC30GL		*	*				
VEC40GL				*	*	*	*

Control panels and dedicated accessories

Accessory	VEC20I	VEC24I	VEC30I	VEC34I	VEC40I	VEC44I	VEC50I	VEC54I
AER503IR	*	*	*	*	*	*	*	*
PRO503	*	*	*	*	*	*	*	*
SA5	*	*	*	*	*	*	*	*
SW5	*	*	*	*	*	*	*	*
TX	*	*	*	*	*	*	*	*

VMF Components

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

Common accessories

Electric coil

Accessory	VEC20I	VEC24I	VEC30I	VEC34I	VEC40I	VEC44I	VEC50I	VEC54I
RX22	*	*						
RX32			*	*				
RX42					*	*		
RX52							*	*

Protection for controls and electric resistance

Accessory	VEC20I	VEC24I	VEC30I	VEC34I	VEC40I	VEC44I	VEC50I	VEC54I
PCR1V	*	*	*	*	*	*	*	*

Water coil with 1 row

Accessory	VEC20I	VEC30I	VEC40I	VEC50I
BV122	*			
BV132		*		
BV142			*	*

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

	VEC20I	VEC24I	VEC30I	VEC34I	VEC40I	VEC44I	VEC50I	VEC54I
Main coil	VCF41 - VCF4124	VFC42 - VCF4224	VCF41 - VCF4124	VFC42 - VCF4224	VFC42 - VCF4224	VFC42 - VCF4224	VFC42 - VCF4224	VFC42 - VCF4224
Additional coil "BV"	VCF44 - VCF4424	-	VCF44 - VCF4424	-	VCF44 - VCF4424	-	VCF44 - VCF4424	-

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

	VEC20I	VEC24I	VEC30I	VEC34I	VEC40I	VEC44I	VEC50I	VEC54I
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	VEC20I	VEC24I	VEC30I	VEC34I	VEC40I	VEC44I	VEC50I	VEC54I
BCS	*	*	*	*	*	*	*	*

Condensate drainage

Accessory	VEC20I	VEC24I	VEC30I	VEC34I	VEC40I	VEC44I	VEC50I	VEC54I
DSC4

PERFORMANCE SPECIFICATIONS VEC

2-pipe

	VEC20I			VEC24I			VEC30I			VEC34I			VEC40I			VEC44I			VEC50I			VEC54I					
	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	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	5,31	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			Inverter																							
Number	no.			1			1			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			4	9	14	4	9	14	11	16	35	11	16	35	16	20	26	16	20	26	18	27	34	18	27	34
Signal 0-10V	%			48	70	90	48	70	90	58	66	90	58	66	90	54	72	90	54	72	90	56	78	90	56	78	90
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	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
Diameter hydraulic fittings																											
Main coil	Ø			1/2"			3/4"			1/2"			3/4"			3/4"			3/4"			3/4"					
Power supply																											
Power supply	230V~50Hz																										

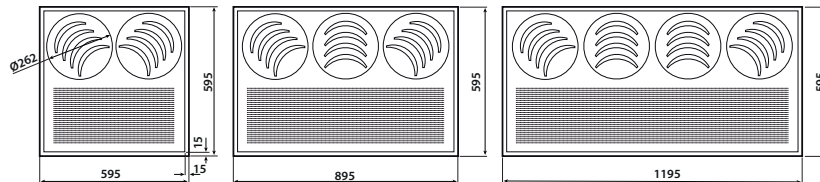
(1) Room air temperature 20 °C d.b.; Water (in/out) 70 °C/60 °C

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

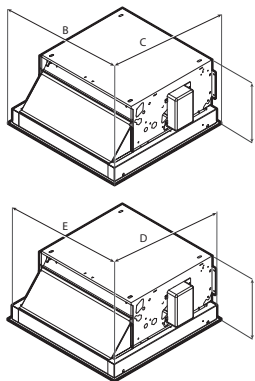
(3) Room air temperature 27°C d.b./19°C w.b.; Water (in/out) 7 °C/12 °C; EUROVENT

(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
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
Dimensions and weights								
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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