

VEC - VEC-I

Coanda-effect fan coil for box installation



- **Very quiet**
- **Total comfort in every season**
- **Electric saving in the inverter units is equal to 50% compared to a fan coil with a multi-speed motor**



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.

By continuously changing the air flow rate, the room temperature can be controlled and regulated more accurately, saving over 50% in electricity compared to traditional fan coils and reducing the average perceived sound level.

Adjustment and control via a 1-10 V signal can be executed with accessories supplied by Aermec or third parties.

The scroll that protects the fan can be extracted and inspected, for easy and effective cleaning.

Heat exchanger coil

With copper pipes and aluminium fins, 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.

ACCESSORIES 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

AER503: Wall-mounted panel.

FMT10: Electronic thermostat for fan coil in to 2/4 pipe systems.

PX2: Commutator switch.

PX2C6: Commutator switch. Kit to 6 pz.

SA5: Air temperature probe.

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.

SIT5: 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 up to 2 valves (four pipe systems); sends the thermostat's commands to the fan coil network.

SW3: Water temperature probe. Allows automatic season change on electronic controllers supplied with water-side change over.

SW5: Water temperature probe.

SWAI: External air or water temperature probe.

TPF: Electronic thermostat, black, with thermostated or continuous ventilation.

TPFW: Electronic thermostat, white, with thermostated or continuous ventilation.

WMT05: Electronic thermostat with thermostated ventilation.

WMT06: Electronic thermostat with continuous ventilation.

WMT10: Electronic thermostat, white, with thermostated or continuous ventilation.

WMT21: Electronic thermostat for inverter fancoils.

VMF Components

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-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-E5B: White recessed panel with backlit graphic LCD display and capacitive keypad for centralised command/control of a complete hydronic system.

VMF-E5N: Black recessed panel with backlit graphic LCD display and capacitive keypad for centralised command/control of a complete hydronic system.

VMF-E6: Wall user interface.

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.

ACCESSORIES COMPATIBILITY

Accessories compulsory

Intake grid and distribution of the air

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

(1) Compulsory accessory.

Control panels and dedicated accessories - VEC

Control panels and dedicated accessories - VEC

Model	Ver	20	24	30	34	40	44	50	54
AER503	.	*	*	*	*	*	*	*	*
FMT10	.	*	*	*	*	*	*	*	*
PX2	.	*	*	*	*	*	*	*	*
PX2C6 (1)	.	*	*	*	*	*	*	*	*
PXAE	.	*	*	*	*	*	*	*	*
SA5	.	*	*	*	*	*	*	*	*
SIT3 (2)	.	*	*	*	*	*	*	*	*
SIT5 (2)	.	*	*	*	*	*	*	*	*
SW3 (3)	.	*	*	*	*	*	*	*	*
SW5	.	*	*	*	*	*	*	*	*
TPF	.	*	*	*	*	*	*	*	*
TPFW	.	*	*	*	*	*	*	*	*
TX	.	*	*	*	*	*	*	*	*
WMT05	.	*	*	*	*	*	*	*	*
WMT06	.	*	*	*	*	*	*	*	*
WMT10	.	*	*	*	*	*	*	*	*

(1) Only wall-mount installation

(2) Cards for PXAE-PXAR-AER503-TX thermostats if present.

(3) Cards for PXAE-PXAR-AER503-TX thermostats if present.

VMF Components - VEC

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

Probes and accessory for control panels - VEC_I

Model	Ver	20	24	30	34	40	44	50	54
AER503	.	*	*	*	*	*	*	*	*
SA5	.	*	*	*	*	*	*	*	*
SW5	.	*	*	*	*	*	*	*	*
SWAI (1)	.	*	*	*	*	*	*	*	*
TX	.	*	*	*	*	*	*	*	*
WMT21	.	*	*	*	*	*	*	*	*

(1) Probe for thermostat WMT21.

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 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.

DSC: Condensate drainage device.

BC: Condensate drip.

VCF44 - 45 - for the secondary coil: The 3-way motorised valve kit for the secondary coil or an optional heat only coil. 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.

PCR1: Galvanised plate protection for the controls and the electrical element.

VMF Components - VEC_I

Model	Ver	20	24	30	34	40	44	50	54
VMF-E19J
VMF-E4DX
VMF-E4X
VMF-SW
VMF-SW1

Common accessories**Electric coil**

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

(1) Requires a thermostat with heater management.

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	.	.							
BV132	.			.					
BV142	.					.		.	

3 way valve kit

Model	Ver	20	24	30	34	40	44	50	54
VCF41 (1)	.	.		.					
VCF4124 (2)	.	.		.					
VCF42 (3)
VCF4224 (4)

(1) Power supply 230V - Hydraulic connections Ø 1/2"

(2) Power supply 24V - Hydraulic connections Ø 1/2"

(3) Power supply 230V - Hydraulic connections Ø 3/4"

(4) Power supply 24V - Hydraulic connections Ø 3/4"

2 way valve kit

Model	Ver	20	24	30	34	40	44	50	54
VCFD1 (1)	.	.		.					
VCFD124 (2)	.	.		.					
VCFD2 (3)
VCFD224 (4)
VCFD424 (4)	
VCFD4 (3)	

(1) Power supply 230V - Hydraulic connections Ø 1/2"

(2) Power supply 24V - Hydraulic connections Ø 1/2"

(3) Power supply 230V - Hydraulic connections Ø 3/4"

(4) Power supply 24V - Hydraulic connections Ø 3/4"

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

Model	Ver	20	24	30	34	40	44	50	54
DSC4 (1)

(1) The accessory cannot be mounted if the AMPZ accessory and / or the VCZ1-2-3-4 X4L / R valve is also provided.

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			161	220	265	295	389	292	152	171	368	372	447	525	363	450	537	467	577	690	411	547	612	523	697	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	0,87	1,31	0,88	0,90	1,52	1,35	1,25	1,91	1,79	1,51	2,47	1,99	1,98	2,99	2,55	2,42	3,91	2,35	2,27	3,61	3,00	2,83	4,28
Sensible cooling capacity	kW			0,64	1,22	1,07	0,67	0,89	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	2,44	3,04
Water flow rate system side	l/h			138	187	225	138	387	261	284	358	329	308	368	425	341	425	514	439	574	673	404	545	621	515	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			On-Off																							
Number	no.			1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	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	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	V1 V2 V3	V1 V2 V3	V1 V2 V3	V1 V2 V3	V1 V2 V3	V1 V2 V3	
Sound data fan coils (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"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	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 sound power values on the basis of measurements made in accordance with UNI EN 16583:15, as required for Eurovent certification.

PERFORMANCE SPECIFICATIONS VEC_I

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			
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			161	220	265	295	389	292	152	171	368	372	447	525	363	450	537	467	577	690	411	547	612	523	697	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	0,87	1,31	0,88	0,90	1,52	1,35	1,25	1,91	1,79	1,51	2,47	1,99	1,98	2,99	2,55	2,42	3,91	2,35	2,27	3,61	3,00	2,83	4,28
Sensible cooling capacity	kW			0,64	1,22	1,07	0,67	0,89	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	2,44	3,04
Water flow rate system side	l/h			138	187	225	138	387	261	284	358	329	308	368	425	341	425	514	439	574	673	404	545	621	515	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	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	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			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
Sound data fan coils (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	42,0	45,0	35,0	42,0	45,0
Diameter hydraulic fittings																											
Main coil	Ø			1/2"	3/4"	1/2"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"		
Power supply																											
Power supply	230V~50Hz																										

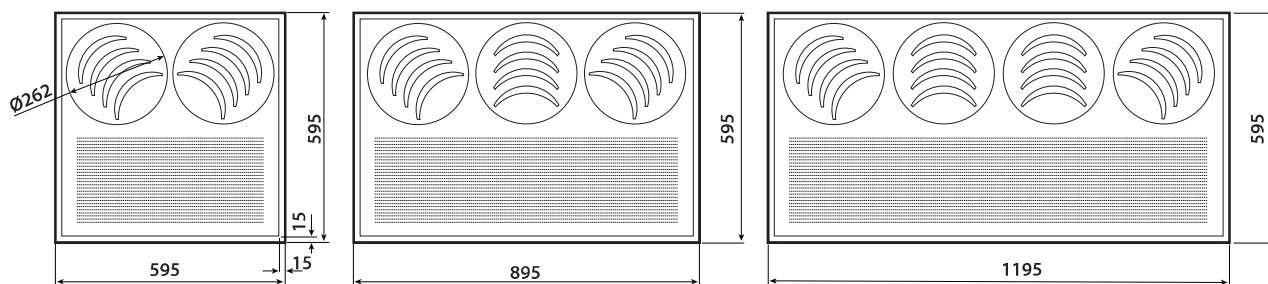
(1) Room air temperature 20 °C d.b.; Water (in/out) 70 °C/60 °C

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

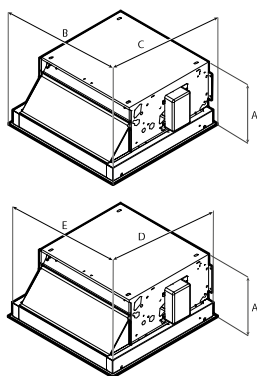
(3) Room air temperature 27 °C d.b./19 °C w.b.; Water (in/out) 7 °C/12 °C; EUROVENT

(4) Aermec determines sound power values on the basis of measurements made in accordance with UNI EN 16583:15, as required for 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
Weight empty	. 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.

Aermec S.p.A.
Via Roma, 996 - 37040 Bevilacqua (VR) - Italia
Tel. 0442633111 - Telefax 044293577
www.aermec.com