

VES-I-030-340

Fan coil unit with Inverter brushless motor for ducted installations

Cooling capacity 1,25 ÷ 5,70 kW
Heating capacity 1,8 ÷ 10,9 kW

- Horizontal or vertical installation
- Heat exchanger developed to optimize the performance sensitive
- Versions for 2/4 pipe systems
- Large range of available static pressure



EUROVENT LCP

DESCRIPTION

Ducted fan coil with inverter technology, for heating, cooling and dehumidifying, specific to work in sensible environment.

Equipped with inverter Brushless motor for an high efficiency and a continuous air flow rate modulation in order to increased comfort and guarantee electric saving. The inverter motor allows a better air temperature regulation based on the real indoor environment requirements without swinging temperature.

The fan unit at available working pressures, brought internal insulation, ensure excellent acoustic comfort levels.

The small dimensions and easy installation make the fan coil designed for 2 and 4-pipe applications.

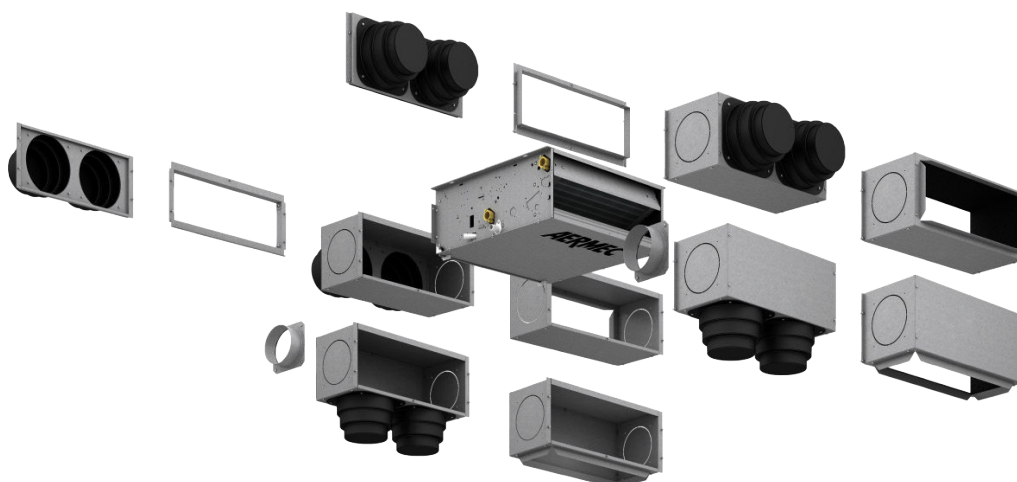
The main coil, reversible during installation, is designed to ensure an high heat transfer, ideal for applications in sensible environment.

FEATURES

- Main standard coil or increased for 2-pipe systems
- Main standard coil and additional heating coil (accessory) for 4-pipe system

- 3-way valve accessory
- 2-way valve accessory for variable flow systems
- Fan assembly, high useful head, with aerofoil designed for high performance and simultaneously low-noise comfort
- Centrifugal fans plastic material, in order to reduce power consumption by increasing the ventilation efficiency
- Compatible with the VMF system
- Large range of controllers
- Large range of accessories to satisfy all installation requirements
- Discharge connection supplied loose
- Air filter Class G3, for easy removal and cleaning
- Internal insulation in fire Class 1
- Protective rating IP20
- Fan housing in plastic material removable for easy and useful cleaning
- Easy of installation and maintenance
- Full compliance with safety standards.

ACCESSORIES



Control panel

A range of dedicated controllers, wall-mounted or on the machine, is available but it is essential to choose between these panels for simple and complete tuning, for more details please refer to the dedicated sheet.

Probes and accessories for control panels

WMT21: Electronic thermostat with LCD display (wall installation).

SWAI: Water temperature probe for WMT21 control panels. Cable length L=2m.

VMF system

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

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

VMF-E19I: Thermostat accessory for inverter units to be secured to the side of the fan coil, fitted as standard with an air probe and a water probe.

VMF-IO: Expansion board that expands the availability of Digital Inputs and Outputs.

VMF-LON: Expansion that allows interfacing with a thermostat with BMS systems using the LON protocol.

VMF-SW: water probe to be used, if necessary, to replace the one supplied as standard with VMF-E0X, VMF-E19 and VMF-E19I thermostats, for installation upstream of the valve

VMF-SW1: extra water probe to be used for 4-pipe systems with VMF-E19 and VMF-E19I thermostats for overall control in the cold range

Hot water coil

BV: Single row hot water heat exchanger.

Valve kit

VCZ_X4: Valve kits for single coil units, installed in 4 pipe systems with totally separated "Cooling" and "Heating" circuits. The kit consists of 2 valves with 3-way 4 port connection complete with electro-thermal actuators, insulating shells for the valves and associated hydraulic piping. Version_X4L valve kit allows left side connection. Version_X4R valve kit allows right side connection. Power supply 230V ~ 50Hz

VCF: kit containing a motorised 3-way valve with insulating shell plus coupling and pipes in insulated copper. Applicable for standard or oversized main coil. Available with 230V and 24V~50Hz power supply.

VCFD: Kit consisting of powered 2-way valve, copper couplings and pipes applicable for standard or oversized main coil. Available with 230V and 24V~50Hz power supply.

VJP/VJP_M: Control and balancing combination valve for 2 and 4 pipe systems to install outside the unit, supplied without fittings and hydraulic components. The valve, which can guarantee a constant water flow rate in the terminal, within its operating range, is available with 230V and 24V~50Hz power supply.

The VJP is controlled by on-off logic with compatible control panels (accessories)

The VJP_M is controlled by modulating logic with panels not supplied by Aermec

The design water flow rate is crucial to refine the selection of the valve shown in the compatibility table.

Accessory for Installation

AMP: kit for the wall mounting installation.

BC: Auxiliary condensate drip tray.

DSC4: Condensate drainage device for use when natural run-off is not possible.

SE: External air shutter with manual control

Ducting Accessories:

RDA_V: Straight intake connection with rectangular flange.

RDAC_V: Straight intake connection with circular flanges.

RPA_V: Intake plenum with rectangular flange.

RDMC_V: Straight discharge with circular flanges. Internally insulated.

PA_V: Intake plenum with circular flanges. Flanges in plastic material.

RPM_V: Discharge plenum with rectangular flange. Internally insulated.

PM_V: Discharge plenum with circular flanges. Internally insulated. Flanges in plastic material.

KFV10: Circular flanges kit for intake/discharge plenum.

Grid

GA: Intake grid with fixed louvers.

GAF: Intake grid with fixed louvers with filter.

GM: Flow grid with adjustable louvers.

■ For more details on the control panels and VMF system refer to the dedicated sheet

ACCESSORIES COMPATIBILITY

Size		030	040	130	140	230	240	330	340
Probes and accessories for control panels									
TX		*	*	*	*	*	*	*	*
WMT21		*	*	*	*	*	*	*	*
SWAI		In combination with WMT21							
VMF System									
VMF-E4X		*	*	*	*	*	*	*	*
VMF-E4DX		*	*	*	*	*	*	*	*
VMF-E19I		*	*	*	*	*	*	*	*
VMF-IO		*	*	*	*	*	*	*	*
VMF-LON		*	*	*	*	*	*	*	*
VMF-SW		*	*	*	*	*	*	*	*
VMF-SW1		*	*	*	*	*	*	*	*
Additional coil (heating only)									
BV030		*							
BV130				*					
BV230						*			
BV162								*	
Water valves									
Valve Kit for 4 pipe systems with Main coil									
VCF3X4L-R		*	*	*	*	*	*	*	*
3 way valve kit									
VCF43/4324	(1)	*	*	*	*	*	*	*	*
2 way valve kit									
VCFD3/324	(1)	*	*	*	*	*	*	*	*
3 way valve kit for heating coil only									
VCF45/4524	(1)	*		*		*		*	
2 way valve kit for heating coil only									
VCFD4/424	(1)	*		*		*		*	
Combined adjustment and balancing valve independent of pressure									
VJP060/060M		*	*	*	*				
VJP090/090M						*	*		
VJP150/150M								*	*
Accessories for installation									
AMP		*	*	*	*	*	*	*	*
DSC4	(2)	*	*	*	*	*	*	*	*
ZX7		*	*	*	*	*	*		
ZX8								*	*
Auxiliary condensate drip tray									
BC4		*	*	*	*	*	*	*	*
BC6		*	*	*	*	*	*	*	*
BC9		*	*	*	*	*	*	*	*

VJP / VJP_M The compatibility of the hot water valves with the designed air flow in a four-pipe installation is to be verified.

(1) The VCF / VCFD valve kits and the BC4 tray cannot be installed at the same time on the same fancoil.

(2) DSC4 It's not available with AMP and BC4 - BC6 - BC9 and VMF-System

VCF4324-VCFD324-VCF4524-VCFD424-VJP060M-VJP090M-VJP150M are 24V

Size		030	040	130	140	230	240	330	340
Grid									
GA22		*	*						
GA32				*	*				
GA42						*	*		
GA62								*	*
GAF22		*	*						
GAF32				*	*				
GAF42						*	*		
GAF62								*	*
GM22		*	*						
GM32				*	*				
GM42						*	*		
GM62								*	*
SE20X	(3)	*	*						
SE30X	(3)			*	*				
SE40X	(3)					*	*		
SE80X	(3)							*	*
Plenum for duct installation									
RDA000V		*	*						
RDA100V				*	*				
RDA200V						*	*		
RDA300V								*	*
RPA000V	(4)	*	*						
RPA100V	(4)			*	*				
RPA200V	(4)					*	*		
RPA300V	(4)							*	*
RDAC000V		*	*						
RDAC100V				*	*				
RDAC200V						*	*		
RDAC300V								*	*
PA000V	(4)	*	*						
PA100V	(4)			*	*				
PA200V	(4)					*	*		
PA300V	(4)							*	*
PM000V	(4)	*	*						
PM100V	(4)			*	*				
PM200V	(4)					*	*		
PM300V	(4)							*	*
RPM000V	(4)	*	*						
RPM100V	(4)			*	*				
RPM200V	(4)					*	*		
RPM300V	(4)							*	*
RDMC000V		*	*						
RDMC100V				*	*				
RDMC200V						*	*		
RDMC300V								*	*
KFV10		*	*	*	*	*	*	*	*

(3) The accessory SE require pairing with ZX

(4) All the Plenums (RPA_V; PA_V; RPM_V; PM_V) have a circular push-outs (Ø=150mm) on both sides, which can be removed, All the can have intake/discharge either straight or downwards (straight or downwards with reference to horizontal installation).

TECHNICAL DATA

Size		030			040			130			140			230			240			330			340		
Fan speed		H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L
Heating Performance																									
2 pipe configuration																									
Heating capacity (70°C)	(1) kW	3,69	3,37	1,82	3,92	3,57	2,37	6,29	5,83	4,40	6,58	6,09	4,52	7,16	6,50	5,35	7,91	7,14	5,80	10,51	9,34	7,81	10,95	10,02	8,31
Water flow rate	(1) l/h	323	296	160	343	313	207	552	512	386	577	534	396	628	570	469	694	626	509	921	819	685	960	878	729
Pressure drops	(1) kPa	9,0	7,0	3,0	12,0	10,0	4,0	26,0	22,0	13,0	18,0	16,0	9,0	37,0	30,0	27,0	32,0	26,0	18,0	16,0	13,0	9,0	32,0	28,0	22,0
Heating capacity (50°C)	(2) kW	1,83	1,67	0,92	1,94	1,78	1,18	3,14	2,90	2,19	3,30	3,02	2,25	5,56	3,23	2,65	3,93	3,55	2,88	5,22	4,64	3,88	5,45	4,98	4,13
Water flow rate	(2) l/h	383	350	189	406	370	245	660	612	461	682	632	469	743	674	555	820	741	602	1090	969	810	1136	1039	862
Pressure drops	(2) kPa	9,0	7,5	2,5	12,5	10,5	5,0	27,5	24,0	14,5	18,5	16,0	10,0	39,0	32,5	23,0	32,0	26,5	18,5	16,5	13,5	10,0	30,3	19,5	18,5
Cooling Performance																									
Total cooling capacity	(3) kW	1,91	1,75	1,26	2,00	1,89	1,30	3,12	2,87	2,20	3,31	3,10	2,43	3,95	3,56	2,84	4,10	3,37	3,39	5,24	4,81	3,99	5,71	5,12	4,46
Sensible cooling capacity	(3) kW	1,35	1,24	0,89	1,45	1,32	0,86	2,34	2,17	1,59	2,38	2,20	1,68	2,89	2,61	2,12	3,02	2,73	2,34	3,86	3,44	2,84	4,09	3,66	3,18
Latent cooling capacity	(3) kW	0,56	0,51	0,37	0,55	0,57	0,44	0,78	0,70	0,61	0,93	0,90	0,75	1,06	0,95	0,72	1,08	0,64	1,05	1,38	1,37	1,15	1,62	1,46	1,28
Water flow rate	(3) l/h	151	138	98	136	88	57	244	228	173	262	242	192	309	283	225	333	300	270	445	397	349	461	416	354
Pressure drops	(3) kPa	24,5	21,0	11,5	35,5	30,5	16,0	56,5	49,0	30,0	29,0	23,0	16,5	102,0	84,5	56,0	57,0	48,5	40,5	30,5	25,0	18,0	50,0	41,0	32,0
Total cooling capacity	(4) kW	0,88	0,80	0,57	0,78	0,51	0,33	1,42	1,32	1,00	1,52	1,40	1,11	1,80	1,64	1,30	1,93	1,74	1,57	2,58	2,30	2,03	2,68	2,41	2,05
Sensible cooling capacity	(4) kW	0,88	0,80	0,57	0,78	0,51	0,33	1,42	1,32	1,00	1,52	1,40	1,11	1,80	1,64	1,30	1,93	1,74	1,57	2,58	2,30	2,03	2,68	2,41	2,05
Water flow rate	(4) l/h	151	138	98	136	88	57	244	228	173	262	242	192	309	283	225	333	300	270	445	397	349	461	416	354
Pressure drops	(4) kPa	4	4	2	5	2	1	10	9	5	5	4	3	18	15	10	9	7	6	6	4	3	8	6	5
Fans																									
Fans - Centrifugal	n°	1			1			2			2			2			2			3			3		
Air flow rate	m³/h	285	256	161	277	249	160	434	397	287	420	386	280	590	524	417	570	509	406	805	704	572	775	685	563
High static pressure	Pa	61	50	21	61	50	21	60	50	26	60	50	26,4	64	50	32	63	50	32	66	50	33	64	50	34
Sound data																									
Sound power level (inle+radiator)	(5) dB(A)	54	52	44	54	52	44	55	53	47	55	53	47	57	54	49	57	54	49	58	55	49	58	55	49
Sound power level (outlet)	dB(A)	50	48	40	50	48	40	50	48	42	50	48	42	52	49	44	52	49	44	54	51	45	54	51	45
Diameter connections																									
Standard coil	Ø	3/4"			3/4"			3/4"			3/4"			3/4"			3/4"			3/4"			3/4"		
Additional coil	Ø	-			-			-			-			-			-			-			-		
Electrical Features																									
Absorbed power	W	36	29	12	36	29	12	45	33	17	45	33	17	53	40	24	53	40	24	86	60	35	86	60	35
Signal 0-10V	%	90	80	54	90	80	54	90	82	58	90	82	58	90	78	66	90	80	62	90	78	62	90	78	66
Power supply		230V~50Hz																							

H max. speed; M med.speed; L min.speed

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

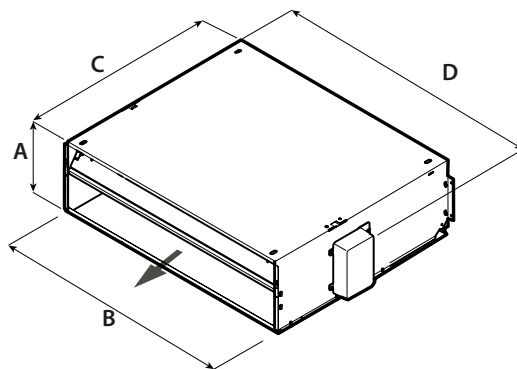
(2) Room air 20°C b.s.; Water (in/out) 50°C/45°C;

(3) Room air 27°C b.s./19°C b.u.; Water (in/out) 7°C/12°C (EUROVENT)

(4) Room air 27°C b.s./19°C b.u.; Water (in/out) 13°C/18°C

(5) Sound power: Aermec determines sound power values on the basis of measurements made in accordance with UNI EN 16583:15, as required for Eurovent certification.

DIMENSIONS



Size		030	040	130	140	230	240	330	340
Dimensions and weight									
A	mm	217	217	217	217	217	217	217	217
B	mm	550	550	781	781	1001	1001	1122	1122
C	mm	584	584	584	584	584	584	584	584
D	mm	576	576	807	807	1027	1027	1148	1148
Weight	Kg	20	21	23	24	29	32	32	34

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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