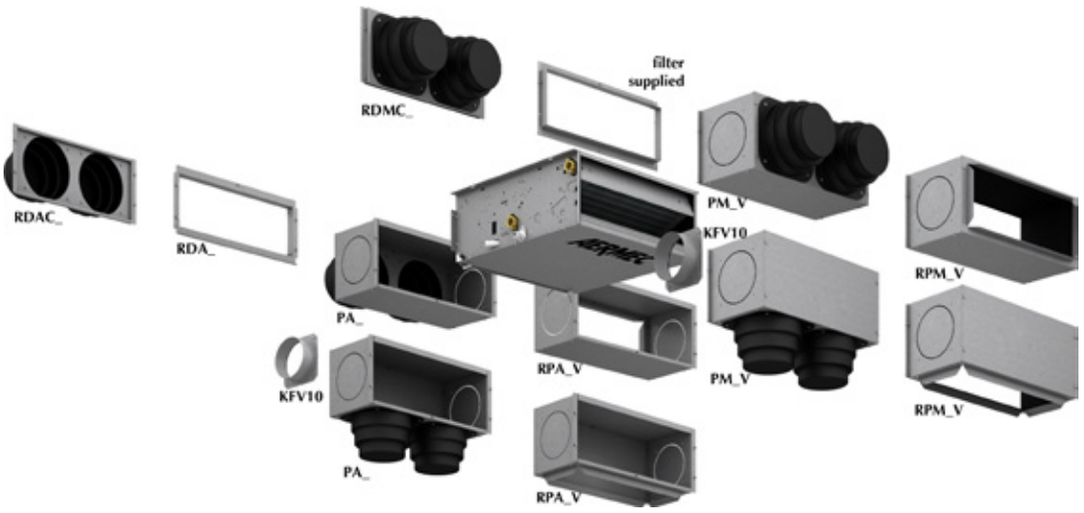
VES_I

Fan coil unit with Inverter brushless motor
For ducted installations
Cooling capacity from 1.25 to 5.70kW
Heating capacity from 1.09 to 10.9kW

INVERTER TECHNOLOGY

Variable Multi Flow

VMF



- **HORIZONTAL OR VERTICAL INSTALLATION**
- **HEAT ESCHANGER DEVELOPED TO OPTIMIZE THE PERFORMANCE SENSITIVE**
- **VERSIONS FOR 2/4 PIPE SYSTEMS**
- **LARGE RANGE OF AVAILABLE STATIC PRESSURE**

Features

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 effciency and a continuos 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 environement requirements without swinging temperature.
The fan unit at available working pressures, trought 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.

- 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-E4**: Wall mounted user interface allowing control via a capacitive touch keyboard.
- **VMF-E5**: Wall recessed panel allowing control of a complete hydronic system via a capacitive touch keyboard.
- **VMF-E18**: Thermostat for serial communication
- **VMF-SW**: water sensor replacing that supplied with VMF-E1 thermostats for installation upstream of the valve.
- **VMF-SW1:** additional water sensor for 4-pipe systems with E1 thermostats offering maximum control in the cooling range.

Hot water coil

- **BV**: Single row hot water heat exchanger.

Valve kit

- **VCF_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. The VCF1X4L valve kit allows left side connection.
- **VCF4_C**: **Kit made up from motorised 3-way valves** with isolating shell, fittings and isolated copper pipes. For main coils. 230V~50Hz power supply
- **VCF4_H**: **Kit made up from motorised 3-way valves**, fittings and isolated copper pipes. For heating only coils. 230V~50 Hz power supply
- **VCF25C: Kit made up from motorised 2-way valves**, with fittings and isolated copper pipes. For main coils. 230V~50 Hz power supply
- **VCF25H: Kit made up from motorised 2-way valves,** with fittings and copper pipes. For heating only coils. 230V~50 Hz 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.

Ducting Accessories:

- **MZC:** Plenum with motor-driven dampers
- **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

VES_I		030	040	130	140	230	240	330	340
Probes and accessories for control panels									
WMT21		•	•	•	•	•	•	•	•
SWAI		In combination with WMT21							
VMF System									
VMF-E18		•	•	•	•	•	•	•	•
VMF-E4		•	•	•	•	•	•	•	•
VMF-E5		•	•	•	•	•	•	•	•
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		•		•		•		•	
2 way valve kit for heating coil only									
VCFD4/424		•		•		•		•	
Combined adjustment and balancing valve independent of pressure									
VJP060/060M	(1)	•	•	•	•				
VJP090/090M	(1)					•	•		
VJP150/150M	(1)							•	•
Accessories for installation									
AMP		•	•	•	•	•	•	•	•
DSC4	(2)	•	•	•	•	•	•	•	•
ZX7		•	•	•	•	•	•		
ZX8								•	•
Auxiliary condensate drip tray									
BC4	(3)	•	•	•	•	•	•	•	•
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.**

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

(1) VCF4324-VCFD324-VCF4524-VCZD424-VJP060M are 24V

(2) DSC4 It's not available with AMP - BC -VMF system.

(3) BC4 is not available with valve VCZ-VCZD / VCF-VCFD

Accessory

VES_I		030	040	130	140	230	240	330	340
Grille									
GA22		•	•						
GA32				•	•				
GA42						•	•		
GA62								•	•
GAF22		•	•						
GAF32				•	•				
GAF42						•	•		
GAF62								•	•
GM22		•	•						
GM32				•	•				
GM42						•	•		
GM62								•	•
SE20X	(4)	•	•						
SE30X	(4)			•	•				
SE40X	(4)					•	•		
SE80X	(4)							•	•
Plenum for duct installation									
MZC220		•	•						
MZC320				•	•				
MZC530						•	•		
MZC830								•	•
RDA000V		•	•						
RDA100V				•	•				
RDA200V						•	•		
RDA300V								•	•
RPA000V	(5)	•	•						
RPA100V	(5)			•	•				
RPA200V	(5)					•	•		
RPA300V	(5)							•	•
RDAC000V		•	•						
RDAC100V				•	•				
RDAC200V						•	•		
RDAC300V								•	•
PA000V	(5)	•	•						
PA100V	(5)			•	•				
PA200V	(5)					•	•		
PA300V	(5)							•	•
PM000V	(5)	•	•						
PM100V	(5)			•	•				
PM200V	(5)					•	•		
PM300V	(5)							•	•
RPM000V	(5)	•	•						
RPM100V	(5)			•	•				
RPM200V	(5)					•	•		
RPM300V	(5)							•	•
RDMC000V		•	•						
RDMC100V				•	•				
RDMC200V						•	•		
RDMC300V								•	•
KFV10		•	•	•	•	•	•	•	•

(4) The accessory SE require pairing with ZX

(5) 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

VES_I			30			40			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	7	3	12	10	4	26	22	13	18	16	9	37	30	27	32	26	18	16	13	9	32	28	22
Heating capacity (50°C)	(2)	kW	1,83	1,68	0,92	1,95	1,77	1,18	3,13	2,90	2,19	3,27	3,03	2,25	3,56	3,23	2,66	3,93	3,55	2,88	5,22	4,65	3,89	5,45	4,98	4,13
Water flow rate	(2)	l/h	318	291	157	338	308	204	544	503	379	568	525	390	618	561	462	683	616	500	907	806	674	945	865	717
Pressure drops	(2)	kPa	9	7	2	12	10	5	27	24	14	18	16	9	39	32	23	32	26	18	16	13	9	30	26	18
Cooling Performance																										
Total cooling capacity	(3)	kW	1,91	1,75	1,25	2,75	1,89	1,30	3,11	2,87	2,20	3,30	3,08	2,43	3,95	3,57	2,85	4,08	3,76	3,40	5,36	4,82	4,00	5,71	5,12	4,46
Sensible cooling capacity	(3)	kW	1,36	1,24	0,88	1,46	1,32	0,86	2,34	2,17	1,59	2,38	2,21	1,68	2,90	2,62	2,13	3,01	2,73	2,35	3,85	3,44	2,85	4,09	3,66	3,18
Water flow rate	(3)	l/h	330	302	215	360	325	224	535	496	379	569	530	419	679	614	491	702	646	584	922	829	689	982	880	768
Pressure drops	(3)	kPa	24	21	11	36	30	15	56	49	30	29	25	17	101	85	57	56	48	40	30	25	18	50	41	32
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																										
Fan (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	28	12	35	28	12	45	35	16	44	34	16	62	52	33	61	52	34	86	61	40	84	63	41
Max. input current		A	0,37			0,37			0,41			0,41			0,58			0,58			0,66			0,66		
Signal 0-10V		%	54	80	90	54	80	90	58	82	90	58	82	90	66	80	90	62	80	90	62	78	90	66	78	90
Power supply		V/ph/Hz	230V~50Hz																							

H velocità massima; **M** velocità media; **L** velocità minima

(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;

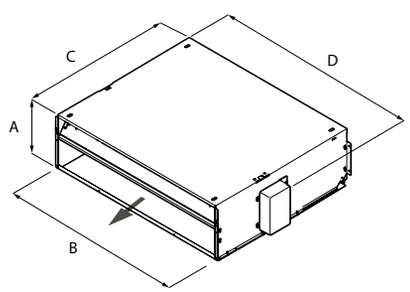
(3) Room air 27°C b.s./19°C b.u.; Water (in/out) 7°C/12°C (EUROVENT)

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

(5) Sound power level on the basis of measurements made in compliance with Eurovent 8/2

Dimensional data (mm)

VES_I		030	040	130	140	230	240	330	340
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



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