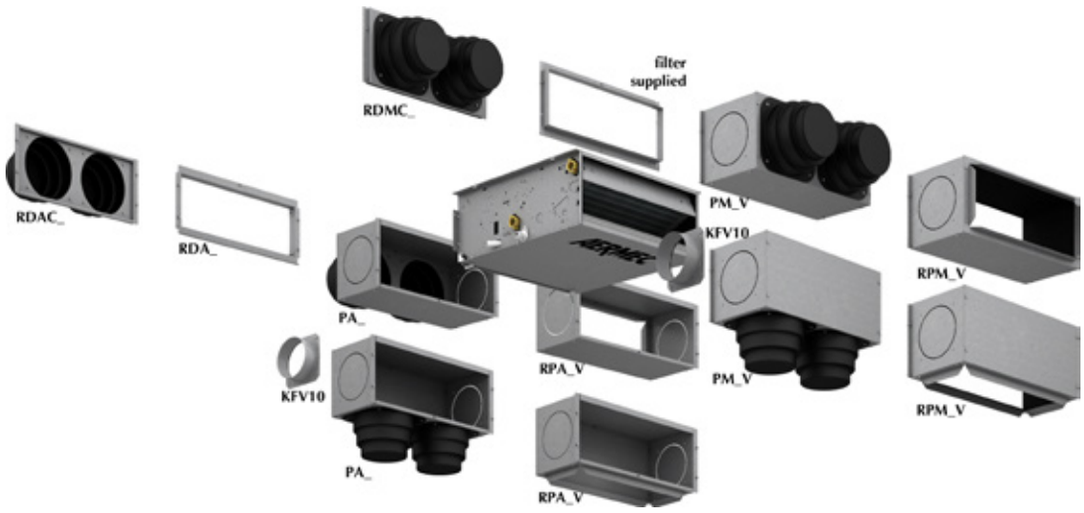
VES

Fan coil unit
For ducted installations
Cooling capacity from 1,82 to 5,70kW
Heating capacity from 1,25 to 10,95kW

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, for heating, cooling and dehumidifying, specific to work in sensible environment.
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 accessory for control panels

- **SW3:** water temperature probe allowing automatic season change on electronic controllers supplied with water-side change over
- **SWA:** external probe accessory (length = 6m). The probe detects the temperature of the ambient air if connected to the connector (A) on panel FMT21; the ambient air temperature probe incorporated in the panel is automatically deactivated. Detects the temperature of the water in the system, for ventilation consent, if connected to the connector (W) of the FMT21 panel. Two SWA probes can be simultaneously connected to the panel FMT21.
- **SIT 3 - 5**: Thermostat Interface Card allowing the creation of a network of fan coils (max. 10) commanded by a central control panel (selector or thermostat).
  SIT3: 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: commands the 3 fan speeds and up to 2 valves (four pipe systems); sends the thermostat's commands to the fan coil network.

VMF system

- **VMF-E0:** Thermostat accessory to be mounted on the side of the fancoil, equipped with air and water sensors as standard; controls 2 pipe, 4 pipe,
  2 pipe + Plasmacluster, 2 pipe + UV lamps,
  2 pipe + electrical heater systems. Equipped with external contact to be used as low voltage remote ON-OFF. This thermostat can create a single fancoil zone through 2-wire serial communication (1 master + maximum 5 slaves). The thermostat is fuse protected.
- **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-E1**: 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. Not available for versions with Plasmacluster.

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. The VCF1X4L valve kit allows left side connection.
- **VCZ or 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.
- **VCZD or 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.
- **PA**: Galvanised sheet steel intake plenum equipped with intake fittings for circular section ducts.
- **PA-F**: Intake plenum, which allows recovery and flow on the same side. It is suitable for all those installations outside air-conditioned rooms, in order to minimise noise and facilitate maintenance operations.
- **PM**: Galvanised sheet steel flow plenum, externally insulated, equipped with plastic flow fittings for ducts and circular sections.
- **RD**: Straight flow fitting for ducting.
- **RDA**: Straight intake fitting for ducting.
- **RP**: 90° flow fitting for ducting
- **RPA**: 90° intake fitting for ducting.

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

VES		030	040	130	140	230	240	330	340
Probes and accessories for control panels									
KTLP		•	•	•	•	•	•	•	•
PX-PX2-PX2C6	(1)	•	•	•	•	•	•	•	•
PXAE		•	•	•	•	•	•	•	•
PXAR		•	•	•	•	•	•	•	•
TPF		•	•	•	•	•	•	•	•
WMT05-06-10		•	•	•	•	•	•	•	•
FMT10		•	•	•	•	•	•	•	•
FMT21		•	•	•	•	•	•	•	•
SWA		In combination with FMT21							
SW3		In combination with PXAE or PXAR							
SIT3		In combination with FMT21 or PXAE or PXAR or PX2 or PX or PX2C6 WMT05*-06-10							
SIT5		In combination with FMT21 or PXAE or PXAR							
VMF System									
VMF-E0		•	•	•	•	•	•	•	•
VMF-E1		•	•	•	•	•	•	•	•
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	(2)	•	•	•		•		•	•
VCF43S/4324S	(2)				•		•		
2 way valve kit									
VCFD3/324	(2)	•	•	•	•	•	•	•	•

For more details on the control panels and VMF system refer to the dedicated sheet.
* WMT05 is not available with additional coil (heating only) BV
(1) **Only for wall installation;** (PX2C6 panel PX2 in multiple 6 pz.)
(2) VCF4324-VCFD324-VCF4524-VCZD424-VJP060M are 24V
(3) DSC4 It's not available with AMP - BC -VMF system

Accessories

VES		030	040	130	140	230	240	330	340
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	(2)	•	•	•	•				
VJP090/090M	(2)					•	•		
VJP150/150M	(2)							•	•
Accessories for installation									
AMP		•	•	•	•	•	•	•	•
DSC4	(3)	•	•	•	•	•	•	•	•
ZX7		•	•	•	•	•	•		
ZX8								•	•
Auxiliary condensate drip tray									
BC4	(4)	•	•	•	•	•	•	•	•
BC6		•	•	•	•	•	•	•	•
BC9		•	•	•	•	•	•	•	•
Grille									
GA22		•	•						
GA32				•	•				
GA42						•	•		
GA62								•	•
GAF22		•	•						
GAF32				•	•				
GAF42						•	•		
GAF62								•	•
GM22		•	•						
GM32				•	•				
GM42						•	•		
GM62								•	•
SE20X	(5)	•	•						
SE30X	(5)			•	•				
SE40X	(5)					•	•		
SE80X	(5)							•	•
Plenum for duct installation									
RDA000V		•	•						
RDA100V				•	•				
RDA200V						•	•		
RDA300V								•	•
RPA000V	(6)	•	•						
RPA100V	(6)			•	•				
RPA200V	(6)					•	•		
RPA300V	(6)							•	•
RDAC000V		•	•						
RDAC100V				•	•				
RDAC200V						•	•		
RDAC300V								•	•
PA000V	(6)	•	•						
PA100V	(6)			•	•				
PA200V	(6)					•	•		
PA300V	(6)							•	•
PM000V	(6)	•	•						
PM100V	(6)			•	•				
PM200V	(6)					•	•		
PM300V	(6)							•	•
RPM000V	(6)	•	•						
RPM100V	(6)			•	•				
RPM200V	(6)					•	•		
RPM300V	(6)							•	•
RDMC000V		•	•						
RDMC100V				•	•				
RDMC200V						•	•		
RDMC300V								•	•
KFV10		•	•	•	•	•	•	•	•

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

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

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

(4) For vertical installation. BC4 is not available whith valve VCZ-VCZD / VCF-VCFD

(5) The accessory SE require pairing with ZX

(6) 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).

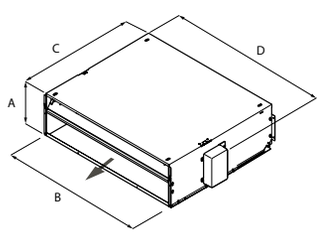
Technical data

VES			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	2,22	2,03	1,09	2,36	2,15	1,42	3,79	3,52	2,65	3,96	3,67	2,72	4,31	3,92	3,22	4,77	4,30	3,49	6,33	5,63	4,71	6,60	6,04	5,01
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	13	10	4	17	14	6	39	34	20	25	22	13	54	44	39	48	38	26	22	18	13	45	39	32
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																										
Centrifugal Fan		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	59	38	23	58	38	23	76	53	34	75	52	34	93	57	43	92	57	43	104	75	63	103	74	63
Max. input current		A	0,37			0,37			0,41			0,41			0,58			0,58			0,66			0,66		
Electrical wiring			V6	V4	V1	V6	V4	V1	V6	V4	V1	V6	V4	V1	V6	V3	V1	V6	V3	V1	V7	V3	V1	V7	V3	V1
Power supply			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

Dimensions and weight

VES		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	22	24	25	33	33	34	35	34



* maximum dimensions

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All specifications are subject to change without prior notice. Although every effort has been made to ensure accuracy, Aermec does not assume responsibility or liability for eventual errors or omissions.

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