

VED 430-741

Fan coil unit for ducted installations



- **Horizontal and vertical installation**
- **Ventilation group to 5 speed**
- **Large range of available static pressure**
- **Inspectable ventilation group**



DESCRIPTION

Ducted fan coil, for heating, cooling and dehumidifying. Designed to maintain the set temperature over time, ensuring very low sound levels. Can be installed in any 2/4 pipe system and operates with any heat generator even at low temperatures. Thanks to the availability of various options, with standard or increased coil, for horizontal or vertical installation, it is easy to choose the optimal solution for any need.

FEATURES

Case

Unit for internal installation. The casing is in aluminum with internal class 1 fire insulation and IP20 protection degree.

Ventilation group

Centrifugal fans in anti-static plastic material with aerofoil profile designed to achieve high airflows and pressures whilst at the same time producing low noise. Their characteristics permit energy savings compared to conventional fans.

They are statically and dynamically balanced and directly coupled to the motor shaft.

The electric motor is single-phase multi-speed (3 selectable), mounted on anti-vibration supports and with a permanently inserted capacitor. Fan housing in plastic material removable for easy and effective cleaning.

Heat exchanger coil

With copper pipes and aluminium louvers, the main coil has female gas hydraulic connections and is fitted with air vents. 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.*

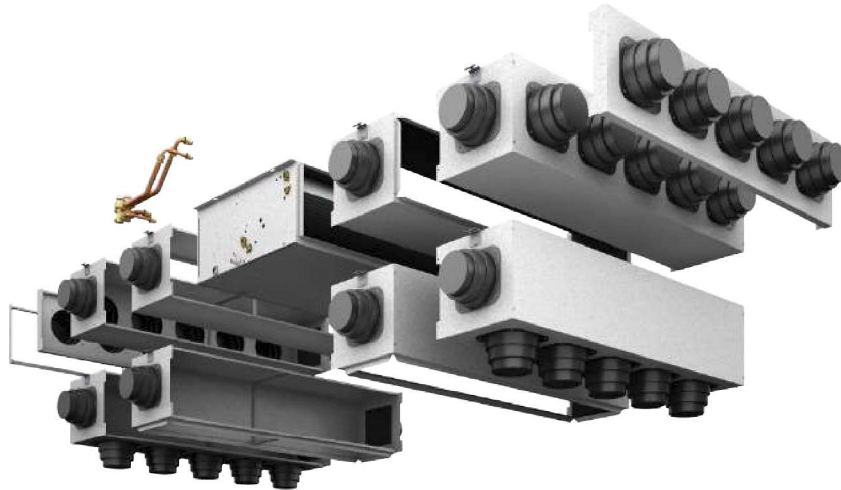
Air filter

Air filter Class G3, for easy removal and cleaning.

Controls and Accessoires

There is a wide selection of controls and a huge choice of accessories, to meet every system requirement. The unit is supplied with the delivery connection supplied.

ACCESSORIES



AER503: Wall-mounted panel.

PXAE: Electronic thermostat with thermostated or continuous ventilation.

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.

SW5: Water temperature probe.

WMT05: Electronic thermostat with thermostated ventilation.

WMT06: Electronic thermostat with continuous ventilation.

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

VMF-E0X: Thermostat to be secured to the side of the fan coil, fitted as standard with an air probe and a water probe.

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-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-IO: Expansion board that extends the availability of digital inputs and outputs (configured via the dip switches).

VMF-LON: Expansion allowing the thermostat to interface with BMS systems that use the LON protocol.

VMF-SIT3: Interface card that permits connecting the VMF-E19 thermostats to a fan coil with a high power motor.

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

VJP: 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.

VCT: These are 2-way ball valves made of bronze, with female/female connections Ø 1" 1/2. That can be servo-activated via servo commands.

The valves do not have fittings and pipes for water connections, which are the installer's responsibility.

VCT: These are 3-way ball valves made of bronze, with female/female connections Ø 1" 1/2. That can be servo-activated via servo commands. The valves do not have fittings and pipes for water connections, which are the installer's responsibility.

VCTA 230V: The VCT series valves can be combined with the actuators On-Off 230V. The actuator must be selected according to the type of system/adjustment provided.

VCTA 24V: The VCT series valves can be combined with the actuators 24V modulating. The actuator must be selected according to the type of system/adjustment provided.

VCF45C - 47C - for main coil: Motorized 3-way valve kit for main coil. The kit consists of a 4-way 4-way valve with its insulating shell, the actuator and the relative hydraulic fittings, it is suitable for installation on both fan coil units with hydraulic connections on the right and left.

VCF45H - 47H - for heating only coil: Motorized 3-way valve kit for hot only coil. The kit consists of a 3-way 4-way valve, the actuator and its hydraulic fittings, it is suitable for installation on both fan coil units with hydraulic connections on the right and left.

VCF25C - for main coil: 2-way motorized valve kit for main coil. The kit consists of a valve with its insulating shell, the actuator and the relative hydraulic fittings, it is suitable for installation on both fan coil units with hydraulic connections on the right and left.

VCF25H - for heating only coil: 2-way motorized valve kit for hot only coil. The kit consists of a valve, actuator and relative hydraulic fittings, it is suitable for installation on both fan coils with hydraulic connections on the right and left.

MZC: Plenum with motorised dampers.

RDA_V: Straight intake connection with rectangular flange.

RPA_V: Suction plenum with rectangular flange; both sides have a circular push-out Ø 150mm that can be removed.

PA_V: Suction plenum with circular plastic flanges; both sides have a circular push-out Ø 150mm that can be removed.

PM_V: Internally insulated delivery plenum with circular flanges; both sides have a circular push-out Ø 150mm that can be removed.

RPM_V: Internally insulated delivery plenum with rectangular flange; both sides have a circular push-out Ø 150mm that can be removed.

KFV10: Circular flanges kit for plenum.

Configurator

Field	Description
1,2,3	VED
4	Size 4, 5, 6, 7
5	Main coil
3	3-row coil
4	4-row coil
6	Secondary coil
0	Without coil
1	1-row coil for heating only
2	2-row coil for heating only

ACCESSORIES COMPATIBILITY

Control panels and dedicated accessories

Model	Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
AER503
PXAE
SAS
SIT3 (1)
SIT5 (1)
SWS
WMT05
WMT06
WMT10

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

VMF system

Model	Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
VMF-EOX
VMF-E19
VMF-E4DX
VMF-E4X
VMF-I0
VMF-LON
VMF-SIT3 (1)
VMF-SW1

(1) For the selection, consult the documentation for the thermostat and the fan coil.

Water valves

3 way valve kit

Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
.	VCF45C (1)	VCF45C (1)	VCF45C (1)	VCF45C (1)	VCF45C (1)	VCF45C (1)	VCF45C (1)	VCF45C (1)	VCF47C (1)	VCF47C (1)	VCF47C (1)	VCF47C (1)	VCF47C (1)	VCF47C (1)	VCF47C (1)	VCF47C (1)

(1) 230V power supply - Hydraulic connection Ø 3/4"

3-way valve kit for heating only coil

Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
.	-	VCF45H (1)	-	VCF45H (1)	-	VCF45H (1)	-	VCF45H (1)	-	VCF47H (1)	-	VCF47H (1)	-	VCF47H (1)	-	VCF47H (1)

(1) Power supply 230V - Hydraulic connections Ø 1/2"
The accessory cannot be fitted on the configurations indicated with -

2 way valve kit

Model	Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
VCF25C (1)

(1) 230V power supply - Hydraulic connection Ø 3/4"

2-way valve for heating only coil

Model	Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
VCF25H (1)

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

2-way globe valves actuator excluded

Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
.	VCT102	VCT102	VCT102	VCT102	VCT102	VCT102	VCT102	VCT102	VCT202	VCT202	VCT202	VCT202	VCT202	VCT202	VCT202	VCT202

3-way globe valves actuator excluded

Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
.	VCT103	VCT103	VCT103	VCT103	VCT103	VCT103	VCT103	VCT103	VCT203	VCT203	VCT203	VCT203	VCT203	VCT203	VCT403	VCT403

Actuator 230V

Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
.	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230	VCTA230

Actuator 24V

Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
.	VCTA24M	VCTA24M	VCTA24M	VCTA24M	VCTA24M	VCTA24M	VCTA24M	VCTA24M	VCTA24M	VCTA24M	VCTA24M	VCTA24M	VCTA24M	VCTA24M	VCTA24M	VCTA24M

Combined adjustment and balancing valve cold side

Model	Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
VJP150 (1)
VJP150M (2)
VJP270M (2)

(1) 230V~50Hz

(2) 24V

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

Accessories for intake*Intake straight with rectangular flanges*

Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
.	RDA450V	RDA450V	RDA450V	RDA450V	RDA450V	RDA450V	RDA450V	RDA450V	RDA670V	RDA670V	RDA670V	RDA670V	RDA670V	RDA670V	RDA670V	RDA670V

Intake plenum with rectangular flanges

Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
.	RPA450V	RPA450V	RPA450V	RPA450V	RPA450V	RPA450V	RPA450V	RPA450V	RPA670V	RPA670V	RPA670V	RPA670V	RPA670V	RPA670V	RPA670V	RPA670V

Intake plenum with circular flanges

Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
.	PA450V	PA450V	PA450V	PA450V	PA450V	PA450V	PA450V	PA450V	PA670V	PA670V	PA670V	PA670V	PA670V	PA670V	PA670V	PA670V

Delivery accessories*Plenum with motor-driven dampers*

Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
.	MZC5040	MZC5040	MZC5040	MZC5040	MZC5040	MZC5040	MZC5040	MZC5040	MZC7050	MZC7050	MZC7050	MZC7050	MZC7050	MZC7050	MZC7050	MZC7050

Delivery plenum internally insulated, with rectangular flanges

Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
.	RPM450V	RPM450V	RPM450V	RPM450V	RPM450V	RPM450V	RPM450V	RPM450V	RPM670V	RPM670V	RPM670V	RPM670V	RPM670V	RPM670V	RPM670V	RPM670V

Delivery plenum internally insulated, with circular flanges

Ver	430	432	440	441	530	532	540	541	630	632	640	641	730	732	740	741
.	PM450V	PM450V	PM450V	PM450V	PM450V	PM450V	PM450V	PM450V	PM670V	PM670V	PM670V	PM670V	PM670V	PM670V	PM670V	PM670V

Circular flanges kit for plenum

Ver	030	040	130	140	230	240	330	340
.	KFV10	KFV10	KFV10	KFV10	KFV10	KFV10	KFV10	KFV10

PERFORMANCE SPECIFICATIONS

2-pipe

	VED430			VED440			VED530			VED540			VED630			VED640			VED730			VED740								
	1	3	5	1	3	5	2	4	5	2	4	5	1	3	5	1	3	5	1	3	5	1	3	5						
	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			10,47	13,85	15,97	11,45	15,36	18,11	13,80	16,47	17,57	15,38	18,59	19,91	18,63	22,67	27,02	22,45	27,74	32,69	21,18	25,36	29,00	22,88	27,65	31,71			
Water flow rate system side	l/h			918	1214	1401	1004	1347	1588	1210	1444	1541	1349	1630	1746	1634	1988	2369	1969	2433	2867	1857	2224	2543	2007	2425	2781			
Pressure drop system side	kPa			9	14	19	11	18	24	13	15	21	18	25	29	30	43	58	19	29	38	38	55	67	26	36	46			
Heating performance 45 °C / 40 °C (2)																														
Heating capacity	kW			5,20	5,88	7,94	5,69	7,64	9,01	6,86	8,19	8,74	7,45	9,24	9,90	9,26	11,20	13,40	9,88	12,40	14,80	10,50	12,60	14,20	11,30	13,70	15,70			
Water flow rate system side	l/h			894	1183	1366	979	1314	1550	1180	1409	1503	1281	1589	1703	1593	1926	2305	1699	2133	2546	1806	2167	2442	1944	2356	2700			
Pressure drop system side	kPa			9	14	19	11	18	24	14	19	21	21	25	30	30	42	58	16	24	32	38	52	66	26	36	35			
Cooling performance 7 °C / 12 °C (3)																														
Cooling capacity	kW			4,54	5,98	6,72	5,21	6,88	7,79	5,99	7,16	7,49	7,26	8,31	8,70	8,67	10,43	12,19	10,20	12,50	14,80	10,17	11,92	13,48	11,73	13,95	13,71			
Sensible cooling capacity	kW			3,40	4,54	5,13	3,65	4,86	5,51	4,55	5,48	5,75	4,87	5,90	6,18	7,00	8,48	9,96	7,02	8,62	10,30	8,25	9,71	11,07	8,11	9,69	10,95			
Water flow rate system side	l/h			781	1029	1156	896	1183	1340	1030	1232	1288	1249	1429	1496	1491	1794	2097	1754	2150	2546	1749	2050	2319	2018	2399	2702			
Pressure drop system side	kPa			8	13	17	10	17	22	12	19	21	19	25	28	26	36	48	24	34	47	35	46	58	27	37	45			
Fan																														
Type	type			Centrifugal																										
Fan motor	type			On-Off																										
Number	no.			2			2			2			2			3			3			3			3					
Air flow rate	m ³ /h			790	1130	1350	780	1100	1340	1120	1400	1520	1100	1380	1500	1380	1800	2210	1567	2004	2440	1640	2040	2410	1600	2000	2350			
High static pressure	Pa			24	50	72	-	50	63	32	50	70	32	50	56	30	50	75	30	50	75	32	50	69	32	50	64			
Input power	W			137	175	228	135	178	222	175	232	270	172	230	267	220	271	340	220	293	340	234	285	371	234	285	371			
Electrical wiring				V1	V3	V5	V1	V3	V5	V2	V4	V5	V2	V4	V5	V1	V3	V5	V1	V3	V5	V1	V3	V5	V1	V3	V5	V1	V3	V5
Duct type fan coil sound data (4)																														
Sound power level (inlet + radiated)	dB(A)			51,0	57,0	61,0	51,0	57,0	61,0	53,0	59,0	62,0	53,0	59,0	62,0	61,0	64,0	68,0	61,0	64,0	68,0	62,0	66,0	68,0	62,0	66,0	68,0			
Sound power level (outlet)	dB(A)			47,0	53,0	57,0	47,0	53,0	57,0	49,0	55,0	58,0	49,0	55,0	58,0	57,0	60,0	64,0	57,0	60,0	64,0	58,0	62,0	64,0	58,0	62,0	64,0			
Diameter hydraulic fittings																														
Main coil	Ø			3/4"																										
Secondary coil	Ø			-																										
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.

4-pipe

	VED441			VED541			VED641			VED741					
	1	3	5	2	4	5	1	3	5	1	3	5			
	L	M	H	L	M	H	L	M	H	L	M	H			
Heating performance 65 °C / 55 °C (1)															
Heating capacity	kW			5,53	6,68	7,30	6,70	7,62	7,89	9,65	11,00	12,30	10,50	11,80	12,90
Water flow rate system side	l/h			475	574	627	576	655	678	829	946	1057	903	1014	1109
Pressure drop system side	kPa			14	20	23	20	25	26	15	19	24	18	22	25
Cooling performance 7 °C / 12 °C (2)															
Cooling capacity	kW			5,35	7,05	8,00	7,46	8,56	8,94	10,40	12,70	15,20	11,90	14,20	16,10
Sensible cooling capacity	kW			3,79	5,03	5,74	5,07	6,14	6,42	7,26	8,92	10,70	8,37	9,96	11,30
Water flow rate system side	l/h			920	1212	1376	1283	1472	1537	1788	2184	2614	2046	2442	2769
Pressure drop system side	kPa			12	19	24	21	27	29	24	35	48	27	37	46
Fan															
Type	type			Centrifugal											
Fan motor	type			On-Off											
Number	no.			2			2			3			3		
Air flow rate	m ³ /h			750	1060	1253	1060	1360	1453	1340	1730	2120	1600	2000	2358
High static pressure	Pa			25	50	70	32	50	57	30	50	75	32	50	69
Input power	W			121	175	215	170	229	265	224	264	341	224	288	373
Electrical wiring				V1	V3	V5	V2	V4	V5	V1	V3	V5	V1	V3	V5
Duct type fan coil sound data (3)															
Sound power level (inlet + radiated)	dB(A)			51,0	57,0	61,0	53,0	59,0	62,0	61,0	64,0	68,0	62,0	66,0	68,0
Sound power level (outlet)	dB(A)			47,0	53,0	57,0	49,0	55,0	58,0	57,0	60,0	64,0	58,0	62,0	64,0
Diameter hydraulic fittings															
Main coil	Ø			3/4"											
Secondary coil	Ø			1/2"											
Power supply															
Power supply				230V~50Hz											

(1) Room air temperature 20 °C d.b.; Water (in/out) 65 °C/55 °C;

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

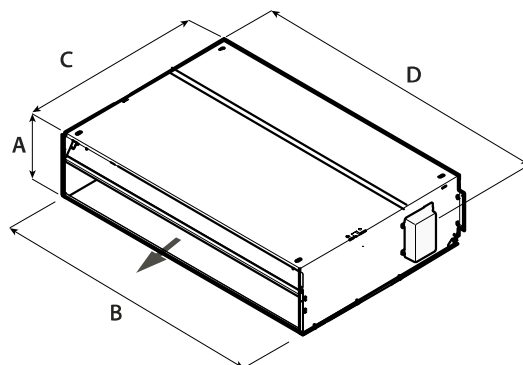
(3) Aermec determines the sound power value on the basis of measurements taken in accordance with standard UNI EN 16583:15, respecting the Eurovent certification.

VED		From VED 430 to 741				
Fan speed	V1	V2	V3	V4	V5	
Motor connection	L5	L4	L3	L2	L1	

The speed of associates may differ from the standard factory configuration.

For more information refer to the selection program and to the dedicated documentation.

DIMENSIONS



		VED430	VED432	VED440	VED441	VED530	VED532	VED540	VED541
Dimensions and weights									
A	mm	300	300	300	300	300	300	300	300
B	mm	1133	1133	1133	1133	1133	1133	1133	1133
C	mm	737	737	737	737	737	737	737	737
D	mm	1158	1158	1158	1158	1158	1158	1158	1158
		VED630	VED632	VED640	VED641	VED730	VED732	VED740	VED741
Dimensions and weights									
A	mm	351	351	351	351	351	351	351	351
B	mm	1533	1533	1533	1533	1533	1533	1533	1533
C	mm	489	789	789	789	789	789	789	789
D	mm	1558	1558	1558	1558	1558	1558	1558	1558

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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