VES 030-340

Fan coil unit for ducted installations

- **Horizontal and vertical installation**
- **Large range of available static pressure**
- **Heat eschanger developed to optimize the performance sensitive**

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.
Internally insulated structure with class 1 fire resistance and IP20 protection.

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 heat exchanger has female gas water connections on the left side and the manifolds have air vents.

- *The heat eschanger, reversible during installation, is designed to ensure high heat transfer, ideal for applications in a sensitive environment.*
- *The coil is not suitable for use in corrosive atmosphere or in environments where aluminium may be subject to corrosion.*

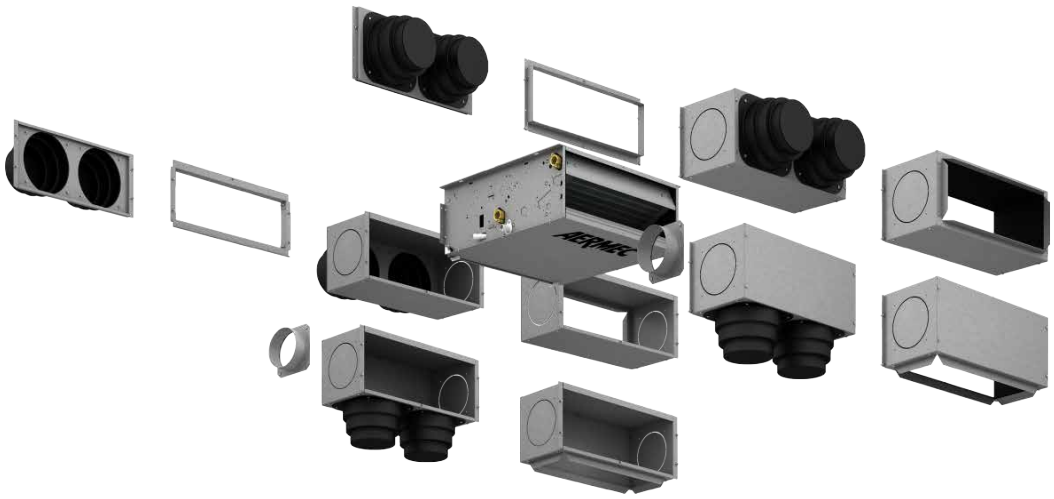
Air filter

Air filter Class COARSE 25%, 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



Control panels

AER503IR: Flush-mounting thermostat with backlit display, capacitive keypad and infrared receiver, for controlling both brushless fan coils and those with an asynchronous motor. In 2-pipe systems, the thermostat can control standard fan coils or those equipped with an electric heater, with air purifying devices (Cold Plasma and germicidal lamp), with radiant plate or with FCZ-D twin delivery (Dualjet). In addition, it can control systems with radiant panels or mixed (fan coil and radiant floor) systems. Being equipped with an infrared receiver, it can, in turn, be controlled by the VMF-IR remote control.
PRO503: Wall box for AER503IR and VMF-E4 thermostats.
SA5: air probe kit (L = 15 m) with probe-locking cable grommet.
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. In case you decide to install Aermec thermostats and current absorbed by the unit exceeds 0.7 A, you're obliged to include SIT3 accessory.
SIT5: Thermostat Interface Card allowing the creation of a network of fan coils (max. 10) commanded by a central control panel. 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 probe (L = 2.5 m) for controlling the minimum and maximum and to allow automatic seasonal switching for electronic thermostats fitted with water side changeover.
SW5: water probe kit (L = 15m) with probe-holder connection point, fixing clip and probe-holder from heat exchanger.
TX: Wall-mounting thermostat for controlling either brushless fan coils or those with asynchronous motors for 2/4 pipe. In 2-pipe systems, the thermostat can control standard fan coils or those equipped with an electric heater, with air purifying devices, radiant plate or FCZ-D twin delivery (Dualjet).
WMT10: Electronic thermostat, white, with thermostated or continuous ventilation.
WMT16: Electronic thermostat with thermostated ventilation.
WMT16CV: Electronic thermostat with continuous ventilation.

VMF Components

DI24: Flush-mounted interface (503 box) with 2.4" touch screen display to be combined with VMF-E19, VMF-E19I accessories. It allows you to regulate and monitor the temperature inside rooms precisely and on time; in addition to accessing and interacting with your system's operating information, parameters and alarms, it allows you to set time slots. Thanks to its Wi-Fi connection, DI24 in combination with the AerSuite APP (available for Android and iOS) can also be remotely controlled. All programming and most functions are done in a simple and intuitive way using the APP. To allow for customization of the interface so that it seamlessly integrates with the style of any home, DI24 is compatible with switch plates from major brands available on the market. For more information, please refer to our documentation. However, a switch plate with its graphite gray support, DI24CP, is also available as a separate accessory in our catalog.
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-E3: Wall mounted user interface, to be combined with accessories VMF-E19, VMF-E19I, with grids GLF_N/M and GLL_N, can be controlled with VMF-IR control.
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: Manage the unit exclusively from a centralized VMF control panel without area control panel.
VMF-IR: User interface compatible with the AER503IR, VMF-E3 thermostat and with all the grids of cassettes equipped with the infrared receiver compatible with the VMF system.
VMF-SIT3V: Relay interface board. Mandatory accessory on units where motor absorption exceeds 0.7 A. The relay interface board is supplied with a 2A fuse to protect the fan coil. If the fan coil absorbs more than 2A and up to 4A, the fuse inside must be replaced with a 4A fuse supplied.
VMF-SW: Water probe (L = 2.5m) used if required in place of the standard unit supplied with the VMF-E19 and VMF-E19I thermostats for mounting it upstream of the valve.
VMF-SW1: Additional water probe (L = 2.5m) to be used if required for 4-pipe systems with the VMF-E19 and VMF-E19I thermostats for maximum control in the cold range
VMHI: The VMHI panel can be used as a user interface for VMF-E19/E19I thermostats, GLFxN/M or GLLxN grids, or as an interface for the MZC system. What determines the function to be performed by the user interface is determined by its correct parametrisation and by following the electrical connections between interface and thermostat or interface and plenum.

Valves and additional water coil

BV: Hot water heat exchanger with 1 row.
VCF_X: 3-way valve kit for fan coils with single heat exchanger and hydraulic connections on the left side, for installation in 4-pipe systems. The kit is composed by 2 insulated 3-way valves and 4 connections complete with electrothermal actuators, insulating shells for the valves and with hydraulic fittings. 230V power supply. Hydraulic connections: Valve body Ø G 3/4" Male; Valve side connection pipes Ø G 3/4" Female; Unit side connection pipes Ø G 3/4" Male.
VCF41 - 42 - 43 - for main heat exchanger: 3-way motorised valve kit for the main coil. The kit is made up of a valve with its insulating shell, actuator and relative hydraulic fittings. It can be installed on fan coils with both right and left connections. If the valve is combined with the BCZ5 or BCZ6 condensate drain pan, to ensure a better housing it is possible to remove the insulating shell.
VCF44 - 45 - for secondary heat exchanger: The 3-way motorised valve kit for the secondary coil heat only. 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.
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.

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.

Installation accessories

AMP: Wall mounting kit
BCZ: Condensate drip. If the valve is paired with the BCZ5 or BCZ6 condensate drip tray, the insulating shell can be removed to ensure better housing.
DSC: Condensate drainage device.

Accessories for intake

GA: Intake grid with fixed louvers
GA_Z: Intake grid with fixed louvers in RAL 9003 colour.
GAF: Intake grid with filter and fixed louvers
GAF_Z: Intake grid with filter and fixed louvers in RAL 9003 colour.
SE_X: External air shutter with manual control.
RDA_V: Straight intake connection with rectangular flange.
RDA_C: Straight intake connection with circular flanges.
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.

Delivery accessories

GM: Flow grid with adjustable louvers.
GM_Z: Outlet grid with fixed louvers in RAL 9003 colour.
MZC: Plenum with motorised dampers.
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.
RDM_C: Straight discharge internally insulated, with circular flanges.
KFV: Circular flanges kit for plenum.

ACCESSORIES COMPATIBILITY

Control panels and dedicated accessories

Model	Ver	030	040	130	140	230	240	330	340
AER503IR (1)	.	•	•	•	•	•	•	•	•
FMT10	.	•	•	•	•	•	•	•	•
PX2	.	•	•	•	•	•	•	•	•
SA5 (2)	.	•	•	•	•	•	•	•	•
SIT3 (3)	.	•	•	•	•	•	•	•	•
SIT5 (4)	.	•	•	•	•	•	•	•	•
SW5 (2)	.	•	•	•	•	•	•	•	•
SWA	.	•	•	•	•	•	•	•	•
TX (5)	.	•	•	•	•	•	•	•	•
WMT10 (5)	.	•	•	•	•	•	•	•	•
WMT16 (5)	.	•	•	•	•	•	•	•	•
WMT16CV (5)	.	•	•	•	•	•	•	•	•

(1) Wall-mount installation.
(2) Probe for AER503IR-TX thermostats, if fitted.
(3) Cards for AER503IR-TX thermostats, if present, to be installed if the unit absorption exceeds 0,7 Ampere.
(4) Probe for AER503IR-TX thermostats, if fitted.
(5) Wall-mounting. If the unit intake exceeds 0.7A, or several units need to be managed with a single thermostat, board SIT3 and/or SIT5 is required.

VMF system

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
VMF-E0X	•	•	•	•	•		•	•
VMF-E19	•	•	•	•	•		•	•
VMF-E4DX	•	•	•	•	•	•	•	•
VMF-E4X	•	•	•	•	•	•	•	•
VMF-SW	•	•	•	•	•	•	•	•
VMF-SW1	•	•	•	•	•	•	•	•

(Heating only) additional coil

Accessory	VES030	VES130	VES230	VES330
BV030	•			
BV130		•		
BV162				•
BV230			•	

Water valves

Valve Kit for 4 pipe systems with main coil

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
VCF3X4L	•	•	•					
VCF3X4LS				•	•	•	•	•
VCF3X4R	•	•	•					
VCF3X4RS				•	•	•	•	•

3 way valve kit

	VED030	VED040	VED130	VED140	VED230	VED240	VED330	VED340
3 way valve kit								
Main heat exchanger	VCF43-VCF4324	VCF43-VCF4324	VCF43-VCF4324	VCF43S-VCF4324S	VCF43-VCF4324	VCF43S-VCF4324S	VCF43-VCF4324	VCF43-VCF4324
Additional coil "BV"	VCF45-VCF4524	-	VCF45-VFC4524	-	VCF45-VCF4524	-	VCF45-VCF4524	-

VCF43 - 45 Power supply 230V, VCF4324-4524 Power supply 24V - Hydraulic connections Ø 3/4"

2 way valve kit

	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
2 way valve kit								
Main heat exchanger	VCFD3-VCFD324	VCFD3-VCFD324	VCFD3-VCFD324	VCFD3-VCFD324	VCFD3-VCFD324	VCFD3-VCFD324	VCFD3-VCFD324	VCFD3-VCFD324
Additional coil "BV"	VCFD4-VCFD424	-	VCFD4-VCFD424	-	VCFD4-VCFD424	-	VCFD4-VCFD424	-

VCFD3 Power supply 230V, VCFD324 Power supply 24V - Hydraulic connections Ø 3/4"
VCFD4 Power supply 230V, VCFD424 Power supply 24V - Hydraulic connections Ø 1/2"; For additional coil (heating only) BV.

Combined adjustment and balancing valve cold side

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
VJP060	•	•	•	•				
VJP060M	•	•	•	•				
VJP090					•	•	•	•
VJP090M					•	•	•	•
VJP150							•	•
VJP150M							•	•

Installation accessories

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
AMP	•	•	•	•	•	•	•	•

Condensate drip

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
BCZ4	•	•	•	•	•	•	•	•
BCZ6	•	•	•	•	•	•	•	•

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
BC9	•	•	•	•	•	•	•	•

BCZ4 For vertical installation.
BCZ6 For horizontal installation.
BC9 For horizontal installation.

Accessories for intake

Intake grids

Accessory	VED030	VED040	VED130	VED140	VED230	VED240	VED330	VED340
GA22	•	•						
GA32			•	•				
GA42					•	•		
GA62							•	•

Model	Ver	030	040	130	140	230	240	330	340
GA200Z (1)	.	•	•						
GA300Z (1)	.			•	•				
GA400Z (1)	.					•	•		
GA600Z (1)	.							•	•

(1) In order to be used on the units, the following accessories require a connection (duct) to be made by the user depending on the distance between the position of the unit and the positioning of the intake/outlet grilles. The grilles cannot be directly coupled to the unit.

Intake grid with filter and fixed louvers

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
GAF22	•	•						
GAF32			•	•				
GAF42					•	•		
GAF62							•	•

Model	Ver	030	040	130	140	230	240	330	340
GAF200Z (1)	.	•	•						
GAF300Z (1)	.			•	•				
GAF400Z (1)	.					•	•		
GAF600Z (1)	.							•	•

(1) In order to be used on the units, the following accessories require a connection (duct) to be made by the user depending on the distance between the position of the unit and the positioning of the intake/outlet grilles. The grilles cannot be directly coupled to the unit.

External air shutter with manual control

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
SE20X	•	•						
SE30X			•	•				
SE40X					•	•		
SE80X							•	•

Intake straight with rectangular flanges

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
RDA000V	•	•						
RDA100V			•	•				
RDA200V					•	•		
RDA300V							•	•

Intake straight internally insulated, with circular flanges

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
RDAC000V	•	•						
RDAC100V			•	•				
RDAC200V					•	•		
RDAC300V							•	•

VES

Intake plenum with rectangular flanges

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
RPA000V	•	•						
RPA100V			•	•				
RPA200V					•	•		
RPA300V							•	•

Intake plenum with circular flanges

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
PA000V	•	•						
PA100V			•	•				
PA200V					•	•		
PA300V							•	•

Delivery accessories

Flow grid with adjustable louvers

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
GM22	•	•						
GM32			•	•				
GM42					•	•		
GM62							•	•

Model	Ver	030	040	130	140	230	240	330	340
GM200Z (1)	.	•	•						
GM300Z (1)	.			•	•				
GM400Z (1)	.					•	•		
GM600Z (1)	.							•	•

(1) In order to be used on the units, the following accessories require a connection (duct) to be made by the user depending on the distance between the position of the unit and the positioning of the intake/outlet grilles. The grilles cannot be directly coupled to the unit.

Plenum with motor-driven dampers

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
MZC220	•	•						
MZC320			•	•				
MZC530					•	•		
MZC830							•	•

VES

Delivery plenum internally insulated, with circular flanges

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
PM000V	•	•						
PM100V			•	•				
PM200V					•	•		
PM300V							•	•

Delivery plenum internally insulated, with rectangular flanges

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
RPM000V	•	•						
RPM100V			•	•				
RPM200V					•	•		
RPM300V							•	•

Delivery straight internally insulated, with circular flanges

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
RDMC000V	•	•						
RDMC100V			•	•				
RDMC200V					•	•		
RDMC300V							•	•

Straight delivery coupling

Circular flanges kit for plenum

Accessory	VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
KFV10	•	•	•	•	•	•	•	•

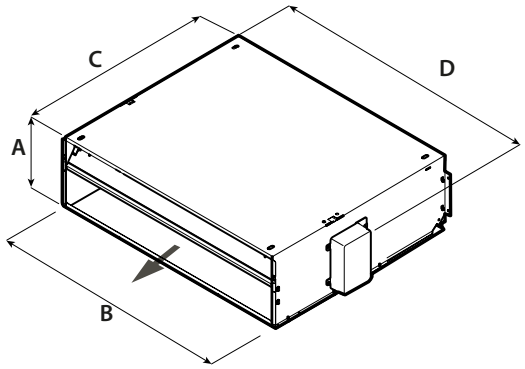
PERFORMANCE SPECIFICATIONS

2-pipe

		VES030			VES040			VES130			VES140			VES230			VES240			VES330			VES340		
		1	4	6	1	4	6	1	4	6	1	4	6	1	3	6	1	3	6	1	3	7	1	3	7
		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	1,82	3,37	3,69	2,37	3,57	3,92	4,40	5,83	6,29	4,52	6,09	6,58	5,35	6,50	7,16	5,80	7,14	7,91	7,81	9,34	10,51	8,31	10,02	10,95
Water flow rate system side	l/h	160	296	323	207	313	343	386	512	552	396	534	577	469	570	628	509	626	694	685	819	921	729	878	960
Pressure drop system side	kPa	3	7	9	4	10	12	13	22	26	9	16	18	27	30	37	18	26	32	9	13	16	22	28	32
Heating performance 50 °C / 45 °C (2)																									
Heating capacity	kW	1,09	2,03	2,22	1,42	2,15	2,36	2,65	3,52	3,79	2,72	3,67	3,96	3,22	3,92	4,31	3,49	4,30	4,77	4,71	5,63	6,33	5,01	6,04	6,60
Water flow rate system side	l/h	189	350	383	245	370	406	461	612	660	469	632	682	555	674	743	602	741	820	810	969	1090	862	1039	1136
Pressure drop system side	kPa	4	10	13	4	14	17	20	34	39	13	22	25	39	44	54	26	38	48	13	18	22	32	39	45
Cooling performance 7 °C / 12 °C																									
Cooling capacity	kW	1,25	1,75	1,91	1,30	1,89	2,75	2,20	2,87	3,11	2,43	3,08	3,30	2,85	3,57	3,95	3,40	3,76	4,08	4,00	4,82	5,36	4,46	5,12	5,71
Sensible cooling capacity	kW	0,88	1,24	1,36	0,86	1,32	1,46	1,59	2,17	2,34	1,68	2,21	2,38	2,13	2,62	2,90	2,35	2,73	3,01	2,85	3,44	3,85	3,18	3,66	4,09
Water flow rate system side	l/h	215	302	330	224	325	360	379	496	535	419	530	569	491	614	679	584	646	702	689	829	922	768	880	982
Pressure drop system side	kPa	11	21	24	15	30	36	30	49	56	17	25	29	57	85	101	40	48	56	18	25	30	32	41	50
Cooling performance 13 °C / 18 °C (3)																									
Cooling capacity	kW	0,57	0,80	0,88	0,33	0,51	0,78	1,00	1,32	1,42	1,11	1,40	1,52	1,30	1,64	1,93	1,57	1,74	1,93	2,03	2,30	2,58	2,05	2,41	2,68
Sensible cooling capacity	kW	0,57	0,80	0,88	0,33	0,51	0,78	1,00	1,32	1,42	1,11	1,40	1,52	1,30	1,64	1,93	1,57	1,74	1,93	2,03	2,30	2,58	2,05	2,41	2,68
Water flow rate system side	l/h	98	138	151	57	88	136	173	228	244	192	242	262	225	283	333	270	300	333	349	397	445	354	416	461
Pressure drop system side	kPa	2	4	4	1	2	5	5	9	10	3	4	5	10	15	9	6	7	9	3	4	6	5	6	8
Fan																									
Type	type	Centrifugal			Centrifugal			Centrifugal			Centrifugal			Centrifugal			Centrifugal			Centrifugal			Centrifugal		
Air flow rate	m^3/h	161	256	285	160	249	277	287	397	434	280	386	420	417	524	590	406	509	570	572	704	805	563	685	775
High static pressure	Pa	21	50	61	21	50	61	26	50	60	26	50	60	32	50	64	32	50	63	33	50	66	34	50	64
Sound power level (inlet + radiated)	dB(A)	44,0	52,0	54,0	44,0	52,0	54,0	47,0	53,0	55,0	47,0	53,0	55,0	49,0	54,0	57,0	49,0	54,0	57,0	38,0	55,0	58,0	38,0	55,0	58,0
Sound power level (outlet)	dB(A)	40,0	48,0	50,0	40,0	48,0	50,0	42,0	48,0	50,0	42,0	48,0	50,0	44,0	49,0	52,0	44,0	49,0	52,0	45,0	51,0	54,0	34,0	51,0	54,0
Input power	W	12	38	59	-	38	58	-	53	76	-	52	75	-	57	93	-	57	92	-	75	104	-	74	103
Electrical wiring		V1	V4	V6	V1	V4	V6	V1	V4	V6	V1	V4	V6	V1	V3	V6	V1	V3	V6	V1	V3	V7	V1	V3	V7
Diametre hydraulic fittings																									
Main heat exchanger	Ø	3/4"			3/4"			3/4"			3/4"			3/4"			3/4"			3/4"			3/4"		
Secondary heat exchanger	Ø	-			-			-			-			-			-			-			-		
Fan																									
Input current	A	0,4			0,4			0,4			0,4			0,6			0,6			0,7			0,7		
Power supply																									
Power supply		230V~50Hz			230V~50Hz			230V~50Hz			230V~50Hz			230V~50Hz			230V~50Hz			230V~50Hz			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) 50 °C/45 °C
(3) Room air temperature 27 °C d.b./19 °C w.b.; Water (in/out) 13 °C/18 °C;

DIMENSIONS



		VES030	VES040	VES130	VES140	VES230	VES240	VES330	VES340
Dimensions and weights									
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

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