

VED 430-741 US

Fan coil unit for ducted installations



- **Horizontal installation**
- **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. 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.

VERSIONS

US Ducted installation

OPTIONS

Without options

T With electronic control board

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 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 easily removed and cleaned.

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.

CONFIGURATOR

Field	Description
1,2,3	VED
4	Size 4, 5, 6, 7
5	main heat exchanger
3	3-row coil
4	4-row coil
6	Secondary heat exchanger
0	Without coil
1	1-row coil for heating only (1)
2	2-row coil for heating only (2)
7,8,9,10	Power supply
/220	220 V
11,12	Version
US	Ducted installation
13	Options
.	Without options
T	With electronic control board

(1) 1-row secondary coil is available with 4-row main coil only

(2) 2-row secondary coil is available with 3-row main coil only

ACCESSORIES

Control panels

TX24: Wall-mounting thermostat for controlling either brushless fan coils motors for 2/4 pipe. In 2-pipe systems, the thermostat can control standard fan coils or twin delivery FCZI-D (Dualjet).

Installation accessories

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.

BCV: Condensate drip.

ACCESSORIES COMPATIBILITY

Control panels and dedicated accessories

Accessory	VED430US	VED440US	VED530US	VED540US	VED630US	VED640US	VED730US	VED740US
TX24

Accessory	VED441US	VED541US	VED641US	VED741US
TX24

Accessories for intake

Straight suction coupling

Accessory	VED430US	VED440US	VED530US	VED540US	VED630US	VED640US	VED730US	VED740US
RDA450V
RDA670V

Accessory	VED441US	VED541US	VED641US	VED741US
RDA450V
RDA670V

Intake plenum with rectangular flanges

Accessory	VED430US	VED440US	VED530US	VED540US	VED630US	VED640US	VED730US	VED740US
RPA450V
RPA670V

Accessory	VED441US	VED541US	VED641US	VED741US
RPA450V
RPA670V

Delivery accessories

Condensate drip

Accessory	VED430US	VED440US	VED530US	VED540US	VED630US	VED640US	VED730US	VED740US
BCV45
BCV67

Accessory	VED441US	VED541US	VED641US	VED741US
BCV45
BCV67

PERFORMANCE SPECIFICATIONS

2-pipe

	VED430US			VED440US			VED530US			VED540US		
	1	3	5	1	3	5	2	4	5	2	4	5
	L	M	H	L	M	H	L	M	H	L	M	H

Heating performance 158 °F / 140 °F (1)

Heating capacity	MBH	35.7	47.3	54.5	39.1	52.4	61.8	47.1	56.2	59.9	52.5	63.4	67.9
Water flow rate system side	gpm	4.0	5.3	6.2	4.4	5.9	7.0	5.3	6.4	6.8	5.9	7.2	7.7
Pressure drop system side	ft H ₂ O	3.01	4.68	6.36	3.68	6.02	8.03	4.35	52.86	7.03	6.02	8.36	9.70

Heating performance 113 °F / 104 °F (2)

Heating capacity	MBH	17.7	20.1	27.1	19.4	26.1	30.7	23.4	27.9	29.8	25.4	31.5	33.8
Water flow rate system side	gpm	3.9	5.2	6.0	4.3	5.8	6.8	5.2	6.2	6.6	5.6	7.0	7.5
Pressure drop system side	ft H ₂ O	3.01	4.68	6.36	3.68	6.02	8.03	4.68	6.36	7.03	7.03	8.36	10.04

Cooling performances 44.6 °F / 53.6 °F (3)

Cooling capacity	MBH	15.5	20.4	22.9	17.8	23.5	26.6	20.4	24.4	25.6	24.8	28.3	29.7
Sensible cooling capacity	MBH	11.6	15.5	17.5	12.4	16.6	18.8	15.5	18.7	19.6	16.6	20.1	21.1
Water flow rate system side	gpm	3.4	4.5	5.1	3.9	5.2	5.9	4.5	5.4	5.7	5.5	6.3	6.6
Pressure drop system side	ft H ₂ O	2.68	4.35	5.69	3.35	5.69	7.36	4.01	6.36	7.03	6.36	8.36	9.37

Fan

Type	type	Centrifugal			Centrifugal			Centrifugal			Centrifugal		
Fan motor	type	Asynchronous			Asynchronous			Asynchronous			Asynchronous		
Number	no.	2			2			2			2		
Air flow rate	cfm	465	665	795	459	647	789	659	824	895	647	812	883
High static pressure	in wg	0.10	0.20	0.29	0.10	0.20	0.28	0.13	0.20	0.23	0.13	0.20	0.22

Duct type fan coil sound data (4)

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
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

Diameter hydraulic fittings

Main heat exchanger	Ø	3/4"			3/4"			3/4"			3/4"		
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Power supply

Power supply		120V~60Hz			120V~60Hz			120V~60Hz			120V~60Hz		
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	VED630US			VED640US			VED730US			VED740US		
	1	3	5	1	3	5	1	3	5	1	3	5
	L	M	H	L	M	H	L	M	H	L	M	H

Heating performance 158 °F / 140 °F (1)

Heating capacity	MBH	63.6	77.4	92.2	76.6	94.6	111.5	72.3	86.5	98.9	78.1	94.3	108.2
Water flow rate system side	gpm	7.2	8.8	10.4	8.7	10.7	12.6	8.2	9.8	11.2	8.8	10.7	12.2
Pressure drop system side	ft H ₂ O	10.04	14.39	19.40	6.36	9.70	12.71	12.71	18.40	22.42	8.70	12.04	15.39

Heating performance 113 °F / 104 °F (2)

Heating capacity	MBH	31.6	38.2	45.7	33.7	42.3	50.5	35.8	43.0	48.4	38.5	46.7	53.6
Water flow rate system side	gpm	7.0	8.5	10.1	7.5	9.4	11.2	8.0	9.5	10.8	8.6	10.4	11.9
Pressure drop system side	ft H ₂ O	10.04	14.05	19.40	5.35	8.03	10.71	12.71	17.40	22.08	8.70	12.04	11.71

Cooling performances 44.6 °F / 53.6 °F (3)

Cooling capacity	MBH	29.6	35.6	41.6	34.8	42.6	50.5	34.7	40.7	46.0	40.0	47.6	53.6
Sensible cooling capacity	MBH	23.9	28.9	34.0	23.9	29.4	35.1	28.1	33.1	37.8	27.7	33.1	37.4
Water flow rate system side	gpm	6.6	7.9	9.2	7.7	9.5	11.2	7.7	9.0	10.2	8.9	10.6	11.9
Pressure drop system side	ft H ₂ O	8.70	12.04	16.06	8.03	11.37	15.72	11.71	15.39	19.40	9.03	12.38	15.05

Fan

Type	type	Centrifugal			Centrifugal			Centrifugal			Centrifugal		
Fan motor	type	Asynchronous			Asynchronous			Asynchronous			Asynchronous		
Number	no.	3			3			3			3		
Air flow rate	cfm	812	1,059	1,301	806	1,042	1,283	965	1,201	1,418	942	1,177	1,383
High static pressure	in wg	0.12	0.20	0.30	0.12	0.20	0.30	0.13	0.20	0.28	0.13	0.20	0.28

Duct type fan coil sound data (4)

Sound power level (outlet)	dB(A)	55.0	60.0	64.0	57.0	60.0	64.0	58.0	62.0	64.0	58.0	62.0	64.0
Sound power level (inlet + radiated)	dB(A)	59.0	64.0	68.0	62.0	64.0	68.0	62.0	66.0	68.0	62.0	66.0	68.0

Diameter hydraulic fittings

Main heat exchanger	Ø	3/4"			3/4"			3/4"			3/4"		
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Power supply

Power supply		120V~60Hz			120V~60Hz			120V~60Hz			120V~60Hz		
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(1) Room air temperature 68 °F d.b.; Water (in/out) 158 °F/140 °F

(2) Room air temperature 68 °F d.b.; Water (in/out) 113 °F/104 °F

(3) Room air temperature 80.6 °F d.b./66.2 °F w.b.; Water (in/out) 44.6 °F/53.6 °F

(4) Aermec determines the sound power value on the basis of measurements taken in accordance with standard UNI EN 16583.

The unit is supplied with nipples for hydraulic connections.

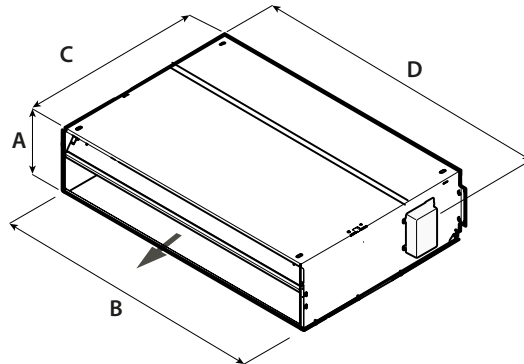
4-pipe

		VED441US			VED541US			VED641US			VED741US		
		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 149 °F / 131 °F (1)													
Heating capacity	MBH	18.9	22.8	24.9	22.9	26.0	26.9	32.9	37.5	42.0	35.8	40.3	44.0
Water flow rate system side	gpm	2.1	2.5	2.8	2.5	2.9	3.0	3.6	4.2	4.7	4.0	4.5	4.9
Pressure drop system side	ft H ₂ O	4.68	6.69	7.69	6.69	8.36	8.70	5.02	6.36	8.03	6.02	7.36	8.36
Cooling performances 44.6 °F / 53.6 °F (2)													
Cooling capacity	MBH	18.2	24.0	27.3	25.4	29.2	30.5	35.5	43.3	51.9	40.6	48.4	54.9
Sensible cooling capacity	MBH	12.9	17.2	19.6	17.3	20.9	21.9	24.8	30.4	36.5	28.6	34.0	38.5
Water flow rate system side	gpm	4.1	5.3	6.1	5.6	6.5	6.8	7.9	9.6	11.5	9.0	10.8	12.2
Pressure drop system side	ft H ₂ O	4.01	6.36	8.03	7.03	9.03	9.70	8.03	11.71	16.06	9.03	12.38	15.39
Fan													
Type	type	Centrifugal			Centrifugal			Centrifugal			Centrifugal		
Fan motor	type	Asynchronous			Asynchronous			Asynchronous			Asynchronous		
Number	no.	2			2			3			3		
Air flow rate	cfm	441	624	737	624	800	855	789	1,018	1,248	942	1,177	1,388
High static pressure	in wg	0.10	0.20	0.28	0.13	0.20	0.23	0.12	0.20	0.30	0.13	0.20	0.28
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 heat exchanger	∅	3/4"			3/4"			3/4"			3/4"		
Secondary heat exchanger	∅	1/2"			1/2"			1/2"			1/2"		
Power supply													
Power supply		120V~60Hz			120V~60Hz			120V~60Hz			120V~60Hz		

- (1) Room air temperature 68 °F d.b.; Water (in/out) 149 °F/131 °F
- (2) Room air temperature 80.6 °F d.b./66.2 °F w.b.; Water (in/out) 44.6 °F/53.6 °F
- (3) Aermec determines the sound power value on the basis of measurements taken in accordance with standard UNI EN 16583.

The unit is supplied with nipples for hydraulic connections.

DIMENSIONS



		VED430US	VED440US	VED530US	VED540US	VED630US	VED640US	VED730US	VED740US
Dimensions and weights									
A	in	11.8	11.8	11.8	11.8	13.8	13.8	13.8	13.8
B	in	44.6	44.6	44.6	44.6	60.4	60.4	60.4	60.4
C	in	29.0	29.0	29.0	29.0	31.1	31.1	31.1	31.1
D	in	45.6	45.6	45.6	45.6	61.3	61.3	61.3	61.3
Net weight	lbs	90	95	93	104	126	132	128	134

		VED441US	VED541US	VED641US	VED741US
Dimensions and weights					
A	in	11.8	11.8	13.8	13.8
B	in	44.6	44.6	60.4	60.4
C	in	29.0	29.0	31.1	31.1
D	in	45.6	45.6	61.3	61.3
Net weight	lbs	101	104	132	141

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.

Aermec S.p.A.
 Via Roma, 996 - 37040 Bevilacqua (VR) - Italia
 Tel. 0442633111 - Telefax 044293577
 www.aermec.com