

AIR-TO-AIR HEAT PUMPS WITHOUT EXTERNAL UNIT

UNICO VERTICAL-NK

[EVAN/EVANX]



Size	35
Energy class	A
Technology	inverter
Refrigerant	R32
Electric heater	



Recessed installation, with integrable HRV

To allow perfect integration between the heat pump and the building architecture, the unit is supplied without a casing and it is compatible with different types of recessed installation (custom-made or with a metal panel). This specific installation method also allows for the integration of additional features, such as air renewal with heat recovery. Thanks to the optional dedicated kit (B1031), it is possible to install a dual flow HRV unit in the top part, with a high-efficiency enthalpy heat exchanger, featuring cross-flow, counter-current operation. In addition to traditional cooling and heating functions, Unico Vertical can also guarantee air renewal, improving indoor air quality and overall system efficiency.

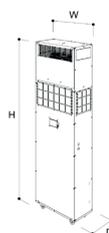
Integrated electric heater in the EVANX version

Below a certain outdoor temperature value, the unit (in the EVANX version) automatically switches from heat pump to electric heating to ensure comfort even in the coldest outdoor temperatures. The switching temperature can be set during installation (factory default is 4°C). The electric resistance has a modulating operation, the power output varies with the set ventilation speed.

TECHNICAL INFO

- Condensate drain mandatory at all times (even when used only for cooling). See the installation manual for details.
- Electrostatic filter with anti-dust function.
- Dry contact for enable or energy boost.
- Condensate basin heating cable as standard.
- There is an RS485 port prepared for controlling the unit with external BMS in Modbus RTU language.

DIMENSIONS AND WEIGHT



		EVAN	EVANX
W	mm	517	517
H	mm	1585	1585
D	mm	255	255
WEIGHT	kg	69	70

- Cooling**
- Heating**
- Dehumidification**
- Ventilation**
- Auto Mode**
- Eco Mode**
- Silent Mode**
- Timer**

COMPATIBLE ACCESSORIES

B0999	Wireless control for radiators	
B1029	Wireless thermostat	
B1030	IAQ wireless thermostat	
B1128	Relay wireless	
B0984	Kit for preparing holes with a diameter of 200 mm	
B1032	Wall recess kit	
B1033	Wall recess kit with HRV kit	
B1031	HRV kit	
B0998	Kit for 160mm grille for HRV installation	
B0984	Kit for preparing holes with a diameter of 200 mm	



TECHNICAL DATA

				Unico Vertical-NK 35 HP EVAN	Unico Vertical-NK 35 HP EVANX
Product code				02557	02556
EAN code				8021183025576	8021183025569
Nominal cooling capacity	Pnominale	(1)	kW	❄️ 3,1	❄️ 3,1
Output power in cooling mode (min/rated/max)		(1)	kW	1,8 / 3,1 / 3,5	1,8 / 3,1 / 3,5
Cooling power with Silent Mode function			kW	1,8	1,8
Absorbed power in cooling mode (min/rated/max)		(1)	kW	0,5 / 0,8 / 1,5	0,5 / 0,8 / 1,5
Absorption in cooling mode (min/nom/max)		(1)	A	2,8 / 5,7 / 7,2	2,8 / 5,7 / 7,2
Energy consumption for double-duct equipment - cooling	QDD	(1)	kWh/h	1,2	1,2
Energy efficiency class in cooling		(1)		A	A
Indoor air flow rate in cooling mode (min/average/max)			m³/h	290/390/440	280 / 380 /430
Outdoor air flow rate in cooling mode (min/average/max)			m³/h	190 / - / 640	190 / - / 640
Dehumidification capacity			l/h	1,1	1,1
EER	EERd	(1)		2,6	2,6
Nominal heating capacity	Pnominale	(1)	kW	🔥 2,4	🔥 2,4
Output power in heating mode (min/rated/max)		(1)	kW	1,7 / 2,4 / 3,2	1,7 / 2,4 / 3,2
Heating power with Silent Mode function			kW	1,7	1,7
Absorbed power in heating mode (min/rated/max)		(1)	kW	0,3 / 0,8 / 1,4	0,3 / 0,8 / 1,4
Absorption in heating mode (min/nom/max)		(1)	A	2,5 / 3,7 / 6,8	2,5 / 3,7 / 6,8
Energy consumption for double-duct equipment - heating	QDD	(1)	kWh/h	0,8	0,8
Energy efficiency class in heating mode		(1)		A	A
Indoor air flow rate in heating mode (min/average/max)			m³/h	290/390/440	280 / 380 /430
Outdoor air flow rate in heating mode (min/average/max)			m³/h	190/640	190/640
COP	COPd	(1)		3,1	3,1
Electrical heating resistance (min/med/max)			kW	-	- / - / 2,0
Maximum power consumption with electric resistance heating			kW	-	2,0
Maximum absorption with electric resistance heating			A	-	8,7
Indoor air flow rate with electric resistance in heating mode (min/med/max)			m³/h	-	280 / 380 /430
Internal sound pressure (min/max)		(2)	dB(A)	🔊 36-44	🔊 36-44
Internal sound pressure in Silent Mode			dB(A)	38	38
Energy consumption in "thermostat off" mode	PTD		W	21	21
Energy consumption in "standby" mode (EN 62301)	PSB		W	0,5	0,5
Supply voltage			V-F-Hz	230-1-50	230-1-50
Supply voltage (min/max)			V	198 / 264	198 / 264
Power cable (N° pole x section mmq)				3 x 1,5	3 x 1,5
Internal ventilation speed				3	3
External ventilation speed				5	5
Diameter wall holes		(3)	mm	202	202
Maximum wall hole depth			m	1	1
Degree of protection of casing				IP20	IP20
Refrigerant gas		(4)	Type	R32	R32
Refrigerant gas charge			kg	0,4	0,4
Global warming potential	GWP			675	675
Maximum operating pressure			MPa	4,28	4,28
Maximum remote control range (distance/angle)			m / °	8 / ±80°	8 / ±80°
Dimensions (WxHxD) (without packaging)			mm	517x1585x255	517x1585x255
Dimensions (WxHxD) (with packaging)			mm	593x1727x328	593x1727x328
Weight (without packaging)			kg	69	70
Weight (with packaging)			kg	72	75

LIMITS OF OPERATING CONDITIONS

Outdoor environment	Operating temperatures in cooling mode (min/max)	- / DB 43°C	- / DB 43°C
	Operating temperatures in heating mode (min/max)	DB -15°C / DB 24°C	DB -15°C / DB 24°C
Indoor environment	Operating temperatures in cooling mode (min/max)	DB 18°C / DB 35°C	DB 18°C / DB 35°C
	Operating temperatures in heating mode (min/max)	- / DB 27°C	- / DB 27°C

(1) Test conditions: the nominal data refers to the EN14511 Standard - HEATING MODE: Temperature: outdoor environment DB 7°C / WB 6°C; indoor ambient DB 20°C / WB 15°C - COOLING MODE: Temperature: outdoor environment DB 35°C / WB 24°C; indoor environment DB 27°C / WB 19°C. The energy efficiency classes refer to a range between A+++ and D.

(2) Declaration of test data in a semi-anechoic chamber at a distance of 2m, minimum pressure in ventilation only.

(3) Machine supplied with grilles for 202 mm wall holes.

(4) Hermetically sealed equipment containing fluorinated gas with GWP equivalent 675.

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UNICO VERTICAL

[EVAN/EVANX]

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Electric heater	



Professional performance, with compact overall dimensions

Up to 3.5 kW power in cooling mode and 3.2 kW in heating mode, to meet the needs of even large environments, with reduced overall dimensions. The vertical layout allows for a high-power heat pump to be enclosed in a particularly compact geometry, perfect for bringing comfort to areas where any other installation would be impossible, such as the corner of a room or the space between two windows.

Integrated electric heater in the EVANX version

Below a certain outdoor temperature value, the unit (in the EVANX version) automatically switches from heat pump to electric heating to ensure comfort even in the coldest outdoor temperatures. The switching temperature can be set during installation (factory default is 4°C). The electric resistance has a modulating operation, the power output varies with the set ventilation speed.

DIMENSIONS AND WEIGHT



		EVAN	EVANX
W	mm	523	523
H	mm	1590	1590
D	mm	260	260
WEIGHT	kg	84	85

-  **Cooling**
-  **Heating**
-  **Dehumidification**
-  **Ventilation**
-  **Auto Mode**
-  **Eco Mode**
-  **Silent Mode**
-  **Timer**

COMPATIBLE ACCESSORIES

B0999	Wireless control for radiators	
B1029	Wireless thermostat	
B1030	IAQ wireless thermostat	
B1128	Relay wireless	
B0984	Kit for preparing holes with a diameter of 200 mm	

TECHNICAL INFO

- Condensate drain mandatory at all times (even when used only for cooling). See the installation manual for details.
- Electrostatic filter with anti-dust function.
- Dry contact for enable or energy boost.
- Condensate basin heating cable as standard.
- There is an RS485 port prepared for controlling the unit with external BMS in Modbus RTU language.



TECHNICAL DATA

				Unico Vertical 35 HP EVAN	Unico Vertical 35 HP EVANX
Product code				02559	02558
EAN code				8021183025590	8021183025583
Nominal cooling capacity	Pnominale	(1)	kW	❄️ 3,1	❄️ 3,1
Output power in cooling mode (min/rated/max)		(1)	kW	1,8 / 3,1 / 3,5	1,8 / 3,1 / 3,5
Cooling power with Silent Mode function			kW	1,8	1,8
Absorbed power in cooling mode (min/rated/max)		(1)	kW	0,5 / 0,8 / 1,5	0,5 / 0,8 / 1,5
Absorption in cooling mode (min/nom/max)		(1)	A	2,8 / 5,7 / 7,2	2,8 / 5,7 / 7,2
Energy consumption for double-duct equipment - cooling	QDD	(1)	kWh/h	1,2	1,2
Energy efficiency class in cooling		(1)		A	A
Indoor air flow rate in cooling mode (min/average/max)			m³/h	290/390/440	280 / 380 /430
Outdoor air flow rate in cooling mode (min/average/max)			m³/h	190 / - / 640	190 / - / 640
Dehumidification capacity			l/h	1,1	1,1
EER	EERd	(1)		2,6	2,6
Nominal heating capacity	Pnominale	(1)	kW	🔥 2,4	🔥 2,4
Output power in heating mode (min/rated/max)		(1)	kW	1,7 / 2,4 / 3,2	1,7 / 2,4 / 3,2
Heating power with Silent Mode function			kW	1,7	1,7
Absorbed power in heating mode (min/rated/max)		(1)	kW	0,3 / 0,8 / 1,4	0,3 / 0,8 / 1,4
Absorption in heating mode (min/nom/max)		(1)	A	2,5 / 3,7 / 6,8	2,5 / 3,7 / 6,8
Energy consumption for double-duct equipment - heating	QDD	(1)	kWh/h	0,8	0,8
Energy efficiency class in heating mode		(1)		A	A
Indoor air flow rate in heating mode (min/average/max)			m³/h	290/390/440	280 / 380 /430
Outdoor air flow rate in heating mode (min/average/max)			m³/h	190/640	190/640
COP	COPd	(1)		3,1	3,1
Electrical heating resistance (min/med/max)			kW	-	- / - / 2,0
Maximum power consumption with electric resistance heating			kW	-	2,0
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Internal sound pressure in Silent Mode			dB(A)	38	38
Energy consumption in "thermostat off" mode	PTD		W	21	21
Energy consumption in "standby" mode (EN 62301)	PSB		W	0,5	0,5
Supply voltage			V-F-Hz	230-1-50	230-1-50
Supply voltage (min/max)			V	198 / 264	198 / 264
Power cable (N° pole x section mmq)				3 x 1,5	3 x 1,5
Internal ventilation speed				3	3
External ventilation speed				5	5
Diameter wall holes		(3)	mm	202	202
Maximum wall hole depth			m	1	1
Degree of protection of casing				IP20	IP20
Refrigerant gas		(4)	Type	R32	R32
Refrigerant gas charge			kg	0,4	0,4
Global warming potential	GWP			675	675
Maximum operating pressure			MPa	4,28	4,28
Maximum remote control range (distance/angle)			m / °	8 / ±80°	8 / ±80°
Dimensions (WxHxD) (without packaging)			mm	523x1590x260	523x1590x260
Dimensions (WxHxD) (with packaging)			mm	593x1727x328	593x1727x328
Weight (without packaging)			kg	84	85
Weight (with packaging)			kg	87	90

LIMITS OF OPERATING CONDITIONS

Outdoor environment	Operating temperatures in cooling mode (min/max)	- / DB 43°C	- / DB 43°C
	Operating temperatures in heating mode (min/max)	DB -15°C / DB 24°C	DB -15°C / DB 24°C
Indoor environment	Operating temperatures in cooling mode (min/max)	DB 18°C / DB 35°C	DB 18°C / DB 35°C
	Operating temperatures in heating mode (min/max)	- / DB 27°C	- / DB 27°C

(1) Test conditions: the nominal data refers to the EN14511 Standard - HEATING MODE: Temperature: outdoor environment DB 7°C / WB 6°C; indoor ambient DB 20°C / WB 15°C - COOLING MODE: Temperature: outdoor environment DB 35°C / WB 24°C; indoor environment DB 27°C / WB 19°C. The energy efficiency classes refer to a range between A+++ and D.

(2) Declaration of test data in a semi-anechoic chamber at a distance of 2m, minimum pressure in ventilation only.

(3) Machine supplied with grilles for 202 mm wall holes.

(4) Hermetically sealed equipment containing fluorinated gas with GWP equivalent 675.

Installation specifications

Vertically developed air-to-air heat pumps without external unit are easily integrated into the building architecture and offer a complete solution to manage the climate comfort of any room



Perfect architectural integration

As with all air-to-air heat pumps without an external unit, Unico Vertical and Unico Vertical-NK must be installed on a perimeter wall, aligned with the respective 20 cm diameter holes. Positioning the unit indoors is easy, thanks to a particularly compact geometry, which allows for even a corner of a room to be used, or the space between two windows, often unused.

Depending on the architectural characteristics of the environment, it is also possible to choose between free-standing floor installation or recessed installation (custom-built or with the optional metal panel): the latter option also allows the integration of a HRV unit in the top part, which will require two additional 16 cm diameter holes in the perimeter wall.

Free-standing installation

The Unico Vertical 35 HP EVAN (02559) and Unico Vertical 35 HP EVANX (02558) models feature an all-metal casing and can be installed on the floor in free-standing configuration.



Recessed installation

The Unico Vertical-NK 35 HP EVAN (02557) and Unico Vertical-NK 35 HP EVANX (02556) models are without aesthetics and can be embedded in the wall, using the optional metal panel (B1032 for the heat pump and B1033 for the HRV unit, if any). If no external control system, mandatory installation of a wireless thermostat (B1029 or B1030).



Custom built-in installation

The Unico Vertical-NK 35 HP EVAN (02557) and Unico Vertical-NK 35 HP EVANX (02556) models feature no aesthetic casing and can be recessed into the wall, creating a custom-made cabinet. The installation of a wireless thermostat (B1029 or B1030) is recommended for easier access to the control panel.

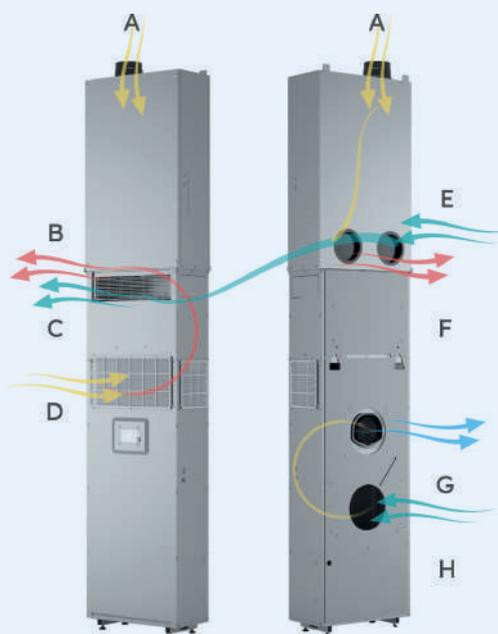


Integrable HRV

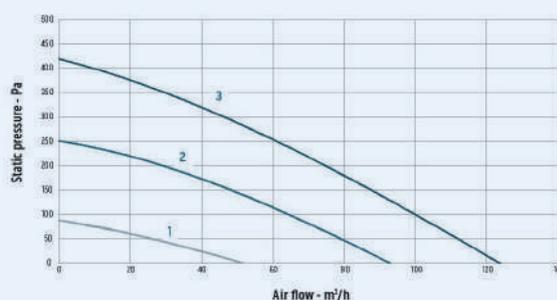
How to convert air-to-air heat pumps without an external unit into complete air treatment units

The special-purpose kit (cod. B1031) allows for a double-flow HRV unit with heat recovery can be integrated into Unico Vertical-NK. In addition to traditional cooling and heating functions, Unico Vertical can also guarantee effective and efficient air renewal, improving indoor air quality and overall system efficiency. The HRV unit is in fact equipped with a high-efficiency enthalpy heat exchanger, featuring cross-flow, counter-current operation.

- A) HRV air intake
- B) Heating/cooling air delivery
- C) HRV air supply
- D) Heating/cooling air return
- E) HRV external air intake
- F) HRV exhaust
- G) External air exhaust in heating/cooling mode
- H) External air intake - heating/cooling



Maximum flow rate @100 Pa	m ³ /h	103
Electrical power consumption (at the maximum flow rate)	W	58
SEC class (local demand control)		A
SEC control (central environment control)		NA
SEC class (manual control - No demand control ventilation)		B
Thermal efficiency		77%
Reference flow rate	m ³ /h	72
Reference pressure difference	Pa	0
Specific power consumption (SPI)	W/m ³ /h	0.389
Sound power level (LWA)	dB(A)	56
Electrical power supply	V/F/Hz	220-240/1/50-60
IP protection rating		X2
Sound pressure @2m(1)	dB(A)	29
Max room temperature	°C	40
HRV kit dimensions (W x H x D)	mm	508 x 932 x 234
Unico + HRV kit dimensions (W x H x D)	mm	517 x 2517 x 255



	Speed%	m ³ /h max
1	40	52
2	70	93
3	100	124

(1) Sound pressure level at 2 m in free field, speed 40%, reported for comparison purposes only.