

Vasco 275/350/425/500 Boost (H)

Description

The 275/350/425/500 Boost (H) are ventilation units with heat recovery for residential applications (HRVU). They mechanically supply fresh air to the home and mechanically extract polluted air from the home using integrated fans. The heat is recovered from the extracted air and transferred to the supplied air, with the "H" version also recovering moisture thanks to its enthalpy heat exchanger.

These units are approved in accordance with:

- ✓ EN13141-7:2021 and for Belgium this is also in accordance with EN 308 with Annex G, whereby the device is included in the EPB product database '4.4 fan and ventilation unit' with code 4.4.2 Double air flow with heat recovery.
- ✓ BCRG quality declaration and declaration of equivalence for the Netherlands.

The ventilation units bear the CE mark and comply with the following directives: 2014/53/EU (Radio Equipment Directive), 2011/65/EU (RoHS), 2009/125/EU (ErP Directive).

Design

Connections:	<p>Air duct connections on both the top and bottom in EPP (expanded polypropylene) Ø180 mm (connection sleeve).</p> <ul style="list-style-type: none"> ✓ 4 top connections: <ul style="list-style-type: none"> Supply from outside Exhaust to outside Supply to home Exhaust from home ✓ 2 bottom connections: <ul style="list-style-type: none"> Supply to home Exhaust from home <p>The air duct connection for supply and exhaust on the building side can be connected at the top or bottom. Both configurations are possible.</p> <p>Insulated air ducts can be fitted directly to the connections, provided that the necessary reduction/connection sleeves are used. This ensures a condensation-free and airtight connection.</p>
Reversibility:	By rotating the ventilation unit 180° and mounting the suspension on the correct side, both a left and right configuration of the house side is possible.
Mounting:	Vertical wall mounting, spirit level, wall bracket included as standard. Vertical free-standing via the optional mounting bracket.
Frost protection:	Ensures frost-free operation of the ventilation unit by temporarily limiting the speed of the supply fan. This guarantees good ventilation during the winter period.
Variant:	An optional electric preheating element prevents the heat exchanger from freezing and avoids temporary imbalances, resulting in increased comfort and a more efficient system.
Variant:	Version with enthalpy heat exchanger (type 'H'), which recovers moisture in addition to heat and cold, thereby increasing comfort in the home.

Material

Casing:	High-quality painted metal, black (RAL9005) and white (RAL9016) side panels.
Inner side:	Thermally insulating and airtight expanded polypropylene (EPP), which prevents thermal bridges. PP (polypropylene), ABS (acrylonitrile butadiene styrene) and high-quality (Sendzimir) galvanised metal.

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Technical specifications

Dimensions:	Height:	724 mm
	Width:	764 mm
	Depth:	554 mm
Weight:	275 Boost	43.6 kg
	275 Boost H	41.7 kg
	350 Boost	43.6 kg
	350 Boost H	41.7 kg
	425 Boost	44.0 kg
	425 Boost H	42.1 kg
	500 Boost	44.2 kg
	500 Boost H	42.3 kg
Supply voltage:	230V AC, 50 Hz, equipped with a 1.8 m cord with earth connection / Euro plug.	
Maximum power consumption:	275 Boost (H)	120 W (2x 59 W) at 275 m ³ /h – 175Pa
	350 Boost (H)	170 W (2x 83 W) at 350 m ³ /h – 175Pa
	425 Boost (H)	240 W (2x 115 W) at 425 m ³ /h – 200Pa
	500 Boost (H)	340 W (2x 169 W) at 500 m ³ /h – 200Pa
Maximum air flow rate:	275 Boost (H)	275 m ³ /h – 175 Pa Adjustable from 185 m ³ /h to 275 m ³ /h in increments of 15 m ³ /h
	350 Boost (H)	350 m ³ /h – 175 Pa Adjustable from 260 m ³ /h to 350 m ³ /h in increments of 15 m ³ /h
	425 Boost (H)	425 m ³ /h – 175 Pa Adjustable from 335 m ³ /h to 425 m ³ /h in increments of 15 m ³ /h
	500 Boost (H)	500 m ³ /h – 175 Pa Adjustable from 410 m ³ /h to 500 m ³ /h in increments of 15 m ³ /h
Efficiency values:	275 Boost	91.4% according to EN13141-7:2021 85% at 223 m ³ /h / 84% at 250m ³ /h / 83% at 273 m ³ /h according to EN308 Annex G
	275 Boost H	82.2% / 70.3% (moisture recovery) according to EN13141-7:2021 79% at 195 m ³ /h according to EN308 Annex G
	350 Boost	90.0% according to EN13141-7:2021 87% at 250 m ³ /h / 86% at 295 m ³ /h / 84% at 350 m ³ /h according to EN308 Annex G
	350 Boost H	78.4% / 63.4% (moisture recovery) according to EN13141-7:2021 76% at 249 m ³ /h according to EN308 Annex G
	425 Boost	88.8% according to EN13141-7:2021 84% at 370 m ³ /h / 83% at 400 m ³ /h / 82% at 425 m ³ /h according to EN308 Annex G
	425 Boost H	75.8% / 60.2% (moisture recovery) according to EN13141-7:2021 74% at 298 m ³ /h according to EN308 Annex G
	500 Boost	87.7% according to EN13141-7:2021 81% at 394 m ³ /h / 79% at 452 m ³ /h / 79% at 494 m ³ /h according to EN308 Annex G
	500 Boost H	74.6% / 57.1% (moisture recovery) according to EN13141-7:2021 71% at 352 m ³ /h according to EN308 Annex G
Energy class:	A A+ with 2 optional RF CO ₂ or RH (humidity) switches	
Fans:	EC (Electronically Commutated) radial fans with robust, backward-curved blades for easy cleaning. The fans are vertically mounted in a metal housing. Electrical connectors are splash-proof and comply with protection class IP57.	
Heat exchanger:	The cross-flow heat exchanger is characterised by low resistance, which also contributes to minimal noise levels and energy consumption. It is made of polystyrene, whose smooth surface minimises the accumulation of dirt or water. This ensures efficient and reliable operation. The 'H' types are equipped with an enthalpy heat exchanger, also made of polystyrene.	

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Noise level:	275 Boost (H)	
	Sound power unit emission	46.0 dB(A) at 70% Qmax at 50 Pa
	Sound power supply channel	54.0 dB(A) at 70% Qmax at 50 Pa
	Sound power of drainage channel	43.0 dB(A) at 70% Qmax at 50 Pa
	350 Boost (H)	
	Sound power unit emission	47.5 dB(A) at 70% Qmax at 50 Pa
	Sound power supply channel	57.5 dB(A) at 70% Qmax at 50 Pa
	Sound power of drainage channel	46.0 dB(A) at 70% Qmax at 50 Pa
	425 Boost (H)	
	Sound power unit emission	49.0 dB(A) at 70% Qmax at 50 Pa
	Sound power supply channel	63.0 dB(A) at 70% Qmax at 50 Pa
	Sound power of drainage channel	50.0 dB(A) at 70% Qmax at 50 Pa
500 Boost (H)	Sound power unit emission	50.5 dB(A) at 70% Qmax at 50 Pa
	Sound power supply channel	67.5 dB(A) at 70% Qmax at 50 Pa
	Sound power of drainage channel	50.0 dB(A) at 70% Qmax at 50 Pa
Air filters:	Equipped as standard with ISO16890 Coarse 65% (= G4 according to EN779) for both supply and exhaust air. Optionally available: ISO16890 ePM1 55% (=F7 according to EN779).	
	The filters are easily accessible by removing the rubber filter caps. The filters have a replacement interval of 6 months, which is automatically indicated by, among other things, the standard RF 3-position switch supplied.	
Condensate drainage:	A 5/4" connection is provided at the bottom of the ventilation unit for condensate drainage. This must be connected frost-free and airtight to the indoor drainage system via a water trap. A dry siphon is supplied as standard and can be installed either horizontally or vertically.	
	For units equipped with an enthalpy heat exchanger (version "H"), the condensate drainage may be omitted in certain cases, for example when a connection is technically not feasible. In such cases, reliable operation of the ventilation system is only guaranteed if the relative humidity remains below 65%. The condensate outlet must then be properly and watertight sealed.	
Features		
Regulation / control:	The ventilation units are equipped as standard with automatic, pressure-independent speed control for constant air flow. The set air volume is automatically and continuously regulated, regardless of the resistance in the air duct system and contamination of the air filters.	
Internal moisture sensor:	The ventilation unit has automatic control based on relative humidity. An internal humidity sensor measures the moisture content in the air extracted from the home and adjusts the air flow rate depending on the moisture content.	
Bypass:	The bypass operates fully automatically based on indoor and outdoor temperature measurements. When there is no need for heat exchange, the bypass directs the air around the heat exchanger. There are two modes that guarantee maximum indoor climate comfort with minimum energy consumption.	
	"Free-Cooling" When the outside temperature is lower than the inside temperature, the filtered outside air will be fed directly into the home without heat exchange (natural cooling).	
	"Free-Heating" When the outside temperature is higher than the inside temperature, the filtered outside air will be fed directly into the home without heat exchange (natural heating).	
Filter contamination indicator:	The ventilation unit is equipped with a time-based automatic filter contamination indicator. As soon as the filters need to be replaced, the LED will flash orange twice when the standard RF 3-position switch is operated. The filter contamination indicator can then be reset using the RF 3-position switch.	
	Both the indicator and its reset can also be done via other optional controls.	
Frost protection:	Ensures frost-free operation of the ventilation unit by temporarily limiting the speed of the supply fan. This guarantees good ventilation during the winter period.	
	An optional electric preheating element prevents the heat exchanger from freezing and avoids temporary imbalances, resulting in increased comfort and a more efficient system.	

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Controls

RF 3-position switch:

Included as standard, equipped with a 3V Lithium CR2450N battery, with an average lifespan of 10 years. Communication with the ventilation unit is wireless. To be mounted on a wall under construction by means of screw or adhesive mounting.

The switch has the following functions:

- ✓ Operating the ventilation mode (1, 2, 3, Timer)
- ✓ Setting the maximum air flow rate
- ✓ Resetting the filter dirt message
- ✓ LED feedback for error messages

Dimensions:

H: 83 mm
W: 83 mm
D: 15 mm

Housing: plastic**3 positions contact:**

The ventilation unit can be controlled in 3 positions via contact X9 on the circuit board. Position 1 provides 25% air flow, position 2 provides 50% air flow and position 3 provides the maximum set air flow.

1-10V contact:

Via contact X26 on the circuit board, the ventilation unit can be continuously controlled by means of a 1-10V signal. 1V corresponds to the minimum ventilation flow rate of the ventilation unit and 10V to the maximum.

Modbus contact:

Via contact X510 on the circuit board, the ventilation unit can be controlled and read out with the RS-485 Modbus protocol. This protocol enables advanced control and monitoring of the ventilation unit via a building management system.

Relay contact error:

Error messages can be read via contact X8 on the circuit board of the ventilation unit. This so-called fault relay is a normal open (NO) potential-free contact that closes as soon as an error message occurs or when the filters need to be replaced.

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Accessories:

RF CO₂ switch (surface-mounted): For automatically controlling and regulating the air flow rate of the ventilation unit based on the CO₂ level in the room. The switch must be connected to a supply voltage of 230V+N and the communication with the ventilation unit is wireless. To be mounted on a wall in construction by means of screw mounting.

The switch has the following functions:

- ✓ Operating the ventilation mode (1, 2, 3, Eco, Comfort)
- ✓ 2 automatic modes (Eco = 950 ppm and Comfort = 800 ppm)
- ✓ LED feedback for error messages
- ✓ Automatic self-calibrating

Dimensions:

H: 100 mm
W: 100 mm
D: 28 mm

Housing: plastic

RF CO₂ switch (built-in): For automatically controlling and regulating the air flow rate of the ventilation unit based on the CO₂ level in the room. The switch must be connected to a supply voltage of 230V+N and the communication with the ventilation unit is wireless. To be mounted on a wall in a flush-mounted box by means of screw mounting.

The switch has the following functions:

- ✓ Operating the ventilation mode (Home, Away, Timer)
- ✓ 2 automatic modes (Eco = 1050 ppm and Comfort = 800 ppm)
- ✓ Adjustable CO₂ level
- ✓ LED feedback for error messages
- ✓ Automatic self-calibrating

Dimensions:

H: 83 mm
W: 83 mm
D: 15 mm

Housing: plastic

RF RH Switch: For automatic control and regulation of the air flow rate of the ventilation unit based on the relative humidity (%) in the room. The switch is equipped with 2 alkaline batteries 1.5V AA for power supply and communication with the ventilation unit is wireless. To be mounted on a wall in construction by means of screw mounting.

The switch has the following functions:

- ✓ Operating the ventilation mode (1, 2, 3, Eco, Comfort)
- ✓ 2 automatic modes (Eco = 60 min setting 2 and Comfort = 30 min position 3)
- ✓ LED feedback for error messages

Dimensions:

H: 100 mm
W: 100 mm
D: 28 mm

Housing: plastic

RF Control Display: For operating and reading the ventilation unit via a display. The switch must be connected to a supply voltage of 230V+N and the communication with the ventilation unit is wireless. To be mounted on a wall in a flush-mounted box by means of screw mounting.

The switch has the following functions:

- ✓ Operating the ventilation mode (1, 2, 3, Timer)
- ✓ Automatic weekly program
- ✓ Status of bypass, electric preheating element, among others
- ✓ Display of error messages

Dimensions:

H: 83 mm
W: 83 mm
D: 15 mm

Housing: plastic

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Gateway:

For operating and reading the ventilation unit via the Vasco Climate Control App. The Gateway must be connected via the supplied micro-USB cable + adapter to a 230V+N socket and the communication with the ventilation unit is wireless. The connection to the modem (LAN) is done via the supplied UTP cable. To be mounted on a wall.

The gateway has the following functions:

- ✓ Operating the ventilation mode (1, 2, 3, Timer, Auto, Away, Party, Vacation, Fireplace)
- ✓ Automatic weekly program
- ✓ Status of bypass, electric preheating element, etc.
- ✓ Display of error messages
- ✓ Setting parameters (e.g. ventilation flows, temperature bypass)

Dimensions:

H: 105 mm
W: 81 mm
D: 28 mm

Housing: plastic**Electric preheater:**

Prevents the heat exchanger from freezing and prevents the defrost cycle from activating (temporary imbalance), resulting in increased comfort and a more efficient system.

Surface-mounted type, Ø180mm, insulated.

Installed in the outdoor air intake duct. Must be connected to an external power supply via a 230V + N socket. Communication with the unit is wired via the supplied control cable, which transmits a modulating signal from the ventilation unit's circuit board to the relay of the electric preheating element.

There are two variants with different power ratings: 700W and 1400W.

Mounting bracket:

For free-standing installation of the ventilation unit. Made from high-quality (Sendzimir) galvanised metal. Equipped with adjustable rubber feet to achieve a height adjustment between 390 mm and 430 mm, even on uneven floors.

CO₂ ZoneControl:

For demand-controlled and zoned ventilation based on the measured CO₂ level in specific zones, using 2x plastic air flaps, Ø160mm, which regulate the flow rate to the specific zones and 2x RF CO₂ switches (built-in), which measure the CO₂ level in the specific zones.

The Master air valve must be connected via the included micro-USB cable + adapter to a 230V+N socket and the communication with the ventilation unit, as well as the RF CO₂ switches is wireless.