

CMEV air handling unit

VEX330H1

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One of the most compact air handling units with counter flow heat exchanger on the market. Optimised design in terms of temperature efficiency, airflow and energy consumption.



PRODUCT BENEFITS

- Compact, high-performance unit
- Same unit, Left/Right
- EXact2, advanced control system

REGLEMENTATIONS AND COMPLIANCES

Eurovent Certification no. : 10.12.505

Principles of operation

In principle, EXHAUSTO VEX units are designed for use in comfort ventilation - i.e. under ordinary operating conditions.

Where ventilation solutions are required for rooms with high air humidity - e.g. due to humidification, we recommend you make a test calculation with one of our calculation programs. If the calculation shows a risk of condensation after the heat exchanger, an assessment must be made whether the operating conditions can be changed, or whether the unit must be modified to allow condensate to drain off. This is particularly relevant for VEX100CF.

Contact EXHAUSTO for advice on this.

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VEX330H1**VEX330H1****Product description**

One of the most compact air handling units with counter flow heat exchanger on the market. Optimised design in terms of temperature efficiency, airflow and energy consumption. Despite being very compact in size, ease of servicing is a key feature.

The VEX330H is ideal for residential ventilation, where the air is separated via the ventilation system, removing the risk of odours and humidity being transferred.

Accessories

Désignations	Variants
Base for VEX330H	MSV330H
Closing damper, Ø315	LS31524
Closing damper, Ø315 OD	LS31524OD
Closing damper with spring-return, Ø 315 mm	LSR31524
Closing damper with spring-return ,Ø315 OD	LSR31524OD
Modbus communications module for analogue and digital inputs and outputs	MIO
Motion sensor for override at comfort level (MIO)	PIRB-AS
Motion sensor for override at comfort level (Modbus)	MIOPIR
HW050X08002U0UL	MIOTSRROOM
Temperature sensor for duct incl. modbus communications module	MIOTSDUCT
CO2 sensor – room (MIO)	MIOCO2ROOM
CO2 sensor duct (MIO)	MIOCO2DUCT
RH sensor, room (MIO RH-ROOM)	MIORHROOM
Touch panel 3.5	MHI2-350-TOUCH
Pressure sensor for constant pressure regulation	MPTDUCT
CO2 room sensor analogue 0–10 V (can be reprogrammed)	CO2ROOM
CO2 room sensor analogue 0–10 V	RCO2
HW050X08002U0UL	RCO21000
CO2 duct sensor analogue 0–10 V (reprogrammable)	CO2DUCT
CO2 duct sensor analogue 0–10 V	KCO2
HW050X08002U0UL	KCO21000
Air quality sensor - excl. MIO	RLQ
Motion sensor - digital - excl. MIO	PIR
RH sensor for room - analogue 0-10 V (0-100 % RH)	RFF
V330OD	V330OD
MIO2 module	MIO2-MODUL
Syphon heating electric heating wire, 2 metres	SIPHONHE02
Syphon water trap, overpressure	SIPHONOP
SIPHONUP	
SR1K1	SIPHONUP
SR1K3	
Manual override to comfort mode excl. MIO - incl. cable	TIMERBUTTON3

Filters

Désignations	Variants
Panel filter for VEX330H – ePM1 55%	FP330HF7
Panel filter for VEX330H – ePM1 80%	FP330HF9
Panel filter for VEX330H – Corase 85%	FP330HM5

General data

Regulation	Variable via motor control (MC)
Control signal with control system	Modbus
Control signal with third party control system	0-10 V DC
Fluid temperature (air)	-40°C+40°C
Ambient temperature range	-30°C+50°C

Fan data

Max. Total efficiency (A-D) (%)	60,1
Efficiency level requirements	62N (2015)
ECO efficiency level during optimal operating point	78,7N
Overload protection	Built-in

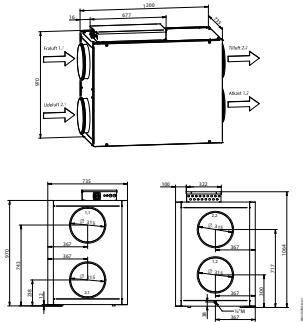
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Dimensional data

Weight (kg)	153
Weight for transport	143 kg (without a removable panel)



Airflow data

Minimum airflow	70
Max. airflow ErP (m³/h)	830
Max. airflow (m³/h)	900

Electrical datas

Frequency (Hz)	50
Max. electrical output of unit (kW)	0,6
Voltage (V)	1x230
Maximum current - unit (A)	3,1
Power consumption (kW)	0,17

Installation



MECHANICAL PERFORMANCE:
 According to DS/EN 1886 and certified by Eurovent:
 > Strength of the unit casing: D1 (M)
 > Leakage at -400 Pa negative pressure: L1 (M)
 > Leakage at +700 Pa positive pressure: L1 (M)
 > Filter bypass leakage: F9 at negative and positive pressure
 > Thermal transmission: T2 (M)
 > Thermal bridging factor: TB3

Cabinets are made from Aluzinc® AZ185 class C4 in accordance with EN/ISO12944-2 and insulated with 50 mm mineral wool. This results in low noise emissions to the surrounding environment/installation room.

The panel design minimises the formation of thermal bridges in the unit.

The motor sections are mounted in vibration dampers, which reduces noise in the ducts and eliminates the need to fit flexible connections between the unit and the duct system.

The motors are of type EC and are extremely efficient. They comply with the requirements of the Ecodesign Directive.

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VEX300H is equipped with an optimised centrifugal fan impeller with backwards curved vanes. The impeller design delivers high output with low energy consumption.

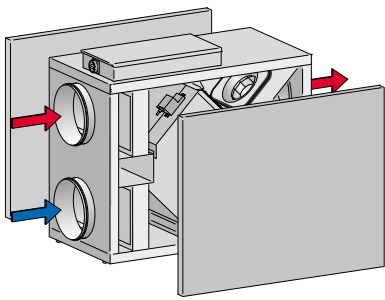


The easily accessible connection box with built-in switch disconnecter ensures easy access for connecting and adjusting.



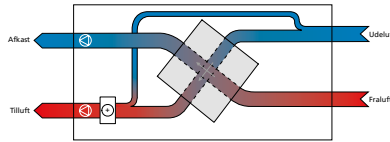
Panel filters are easy to replace and can be ordered as Coarse 85% (M5) or ePM1 55% (F7) in acc. with EN779.

Filter size: 340 x 630 x 96 mm

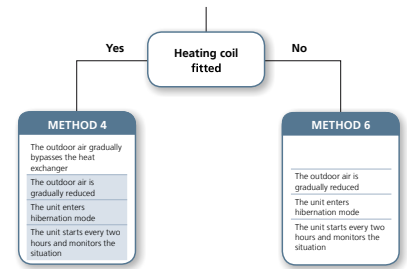


The side panels on both sides of VEX330H models can be removed (easy access). This allows the unit to function as both a LEFT and RIGHT version.

The unit can also be ordered as an outdoor model. The outdoor unit has a fitted cover that protects it against wind and weather.



The VEX330H is designed with de-icing bypass. If there is a risk of icing, then a certain amount of outdoor air will bypass the heat exchanger and go directly to the after heating coil. This increases the demands on the heating coil's output. However, it avoids a costly preheating coil. The drawing below is an example of a de-icing situation, where 20% of outdoor air is directed through the bypass damper.

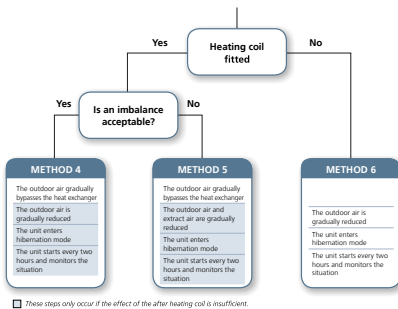


These steps only occur if the effect of the after heating coil is insufficient.

The control system has temperature-controlled frost protection as standard. It is an inexpensive solution and provides sufficient frost-protection in some situations.

A temperature sensor is fitted inside the heat exchanger and if the temperature falls to a pre-set value, de-icing begins. This temperature level is factory set to 0 °C but it can also be changed to a new value via the control system.

Temperature-controlled frost protection triggers the de-icing process even if there is no ice in the heat exchanger.



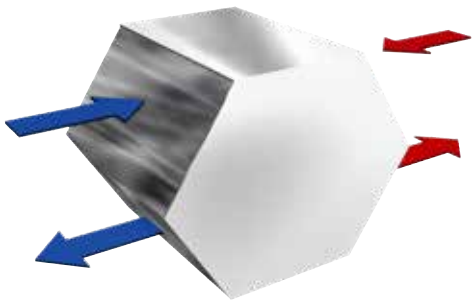
These steps only occur if the effect of the after heating coil is insufficient.

The control system monitors the actual airflow and also the pressure drop across the heat exchanger. If ice forms in the heat exchanger, the pressure drop across the heat exchanger will increase and when it exceeds a pre-set value, de-icing begins.

Pressure-controlled frost protection only starts de-icing when ice has actually formed, regardless of whether there are sub-zero temperatures.

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The VEX330 has an aluminium counterflow heat exchanger. Its design ensures the ratio between heat recovery and pressure drop is optimally distributed. I.e. extremely high temperature efficiency is achieved at low levels of energy consumption.

The combination of modern EC motors and an optimised centrifugal impeller delivers extremely low energy consumption and greater output at the same time.

An energy label that states the energy class of the air handling unit in relation to defined operating conditions is available via our product calculation programs.

- Efficiency without condensation: 80 - 85%
- Up to 94% efficiency with condensation
- Heat transfer area: 30.3 m²
- Weight: 1 x 14.5 kg

Curve

