Air handling unit

VEX160V

VEX160, vertical version

Compact unit that can be put together to match the given requirements for process ventilation

PRODUCT BENEFITS

- Compact units
- Built-in electric or water heating coil
- Flexible spigot positions

REGLEMENTATIONS AND COMPLIANCES

Eurovent Certification no. : 10.12.505

Principles of operation

VEX100 brings fresh, filtered air into the building and recovers heat from the extract air by means of its highly efficient heating heat exchanger. The incoming air can be heated and/or cooled using a complete range of heating/cooling coils.

VEX100 is suitable for tasks not covered by the Ecodesign Directive and where there is no need for such a high efficiency rating. For instance, for ventilating kitchens, bakeries, etc., where there is typically a surplus of heat but also a requirement for pre-heated supply air to the location.

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Product description

VEX100 range

VEX140, 150 and 160 can be ordered in either a Horizontal or Vertical version, whereas VEX170 can only be ordered in Horizontal.

This is a very flexible range of air handling units, which can be ordered as LEFT or RIGHT versions and with spigot locations in the side, top or bottom.

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

Accessories

Désignations	Variants
VEX160OD	VEX160OD
Closing damper LS Ø500 24V	LS50024
SIPHONUP SR1K1 SR1K3	SIPHONUP
Syphon heating electric heating wire, 2 metres	SIPHONHE02
Closing damper LS Ø500 24V for outdoor	LS50024OD
Closing damper with spring-return Ø500 24V	LSR50024
Closing damper with spring return, Ø500 24V for outdoor	LSR50024OD
Base for VEX160H and VEX160CFH	MSV160H
Base for VEX160V	MSV160V
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	MIOTSROOM
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
Syphon water trap, overpressure	SIPHONOP
Condensation drain for VEX100CF	V100CFCONTUBE
Manual override to comfort mode excl. MIO - incl. cable	TIMERBUTTON3

Filters

Désignations	Variants
Panel filter for VEX160/-CF – ePM1 55%	FP1602F7
Panel filter for VEX160/-CF – Coarse 85%	FP1602M5

General data

Motor class in accordance with IEC TS 60034-30-2	IE5 (Ultra Premium Efficiency)
Voltage input	1 x 230 V
Regulation	Variable via motor control (MC)
Control signal with control system	Modbus
Control signal with third party control system	0-10 V DC

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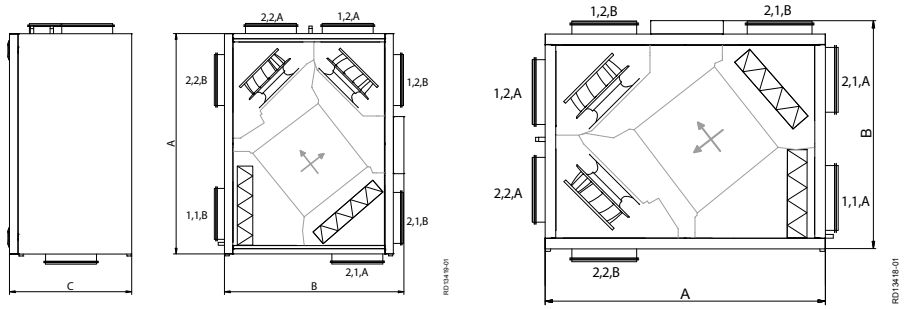
Fan data

Max. Total efficiency (A-D) (%)	57,1
Efficiency level requirements	62N (2015)
ECO efficiency level during optimal operating point	67,2N
Overload protection	Built-in

Dimensional data

A (mm)	1820
B (mm)	1495
C (mm)	940
Ø connection (fresh air or exhaust) (mm)	500
Ø connection (discharge or air supply) (mm)	500
Weight (kg)	> with cross-flow heat exchanger type A: 360 kg > with standard cross-flow heat exchanger: 355 kg
Weight for transport	202 kg (excl. doors, heat exchanger and fan sections)



Dimensional drawings for VEX100H = horizontal version and VEX100V– vertical version respectively – both shown with round ducts.

Airflow data

Minimum airflow	600
Max. airflow (m³/h)	4480
Débit minimum (l/s)	167
Débit max (l/s)	1245

Electrical datas

Frequency (Hz)	50
Max. power of electrical coil 1 (kW)	14,4
Max. electrical output of unit (kW)	4,8
Voltage (V)	3x400
Max. power of electrical coil 2	21,6
Maximum current - unit (A)	15,5
Maximum current - first coil (A)	36,5
Maximum current - second coil (A)	46,7
Power consumption (kW)	2,359
Max current of zero (A)	23,5

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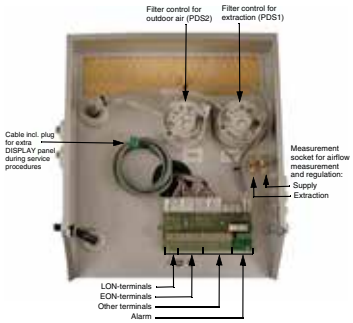
Installation

MEKANISK YDEEVNE: In accordance with ds/en 1886 and certified by Eurovent
In accordance with ds/en 1886 and certified by Eurovent:
> Strength of unit housing: D1 (M)
> Tightness at negative pressure of -400 Pa: L1 (M)
> Tightness at positive pressure of +700 Pa: L1 (M)
> Filter bypass leakage: F9 at negative and positive pressure
> Thermal transmittance: T2 (M)
> Thermal bridging factor: TB3

The cabinets are made of Aluzinc AZ185 class C4 according to EN/ISO 12 944-2 and insulated with 50 mm mineral wool. This results in a low noise level to the surroundings/setup room.
The panel construction minimizes the formation of thermal bridges in the unit.

The motor sections are mounted in vibration dampers, which means less noise and vibration in the ducts, and there is no need to install flexible connections between the unit and the duct system.
The motor sections are retractable for easier service.
The motors are EC type with very high efficiency, meeting the requirements of the EcoDesign directive.



The aggregate is equipped with EXHAUSTO's EXstream impeller, one of the market's leading impellers in terms of low energy consumption and low noise level.

The easily accessible connection box with built-in supply isolator and circuit breakers ensures easy access for connection and adjustment.

The filter panels are easy to replace and can be ordered as filter class Coarse 85% (M5) or ePM1 55% (F7) according to ISO 16890.

VEX100-serien leveres med integreret eftervarmeflade, enten til vand eller el

VEX140 - VEX160:
Montagesokkel med fødder, der kan justeres i højden - 130 - 160 mm.
Montagesoklen er standard for VEX170.

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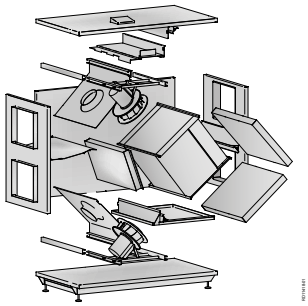
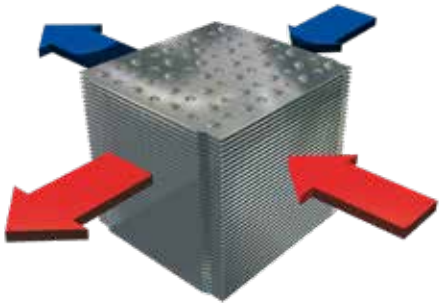


VEX100 IS AVAILABLE AS A SPLIT VERSION.
With some projects, limited space means that internal transport of the air handling unit is difficult or impossible. This is why the VEX100 is available as a split version. It means that the air handling unit can be assembled and tested at the factory as normal – just without sealant. The air handling unit can therefore be easily taken apart at the installation site, transported as single sections, assembled, sealed and commissioned.

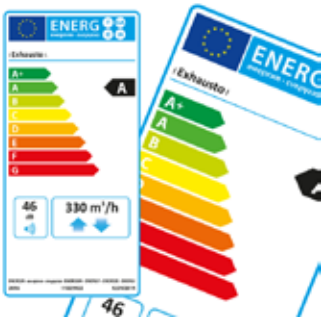
The table below shows the dimensions of the largest section (crossflow heat exchanger) and largest cabinet section, so that it can easily be determined whether there is sufficient space to allow internal transport.



Cross-flow heat exchanger in aluminium with moderate pressure drop and high temperature efficiency. The crossflow heat exchanger ensures full separation of airways, preventing transfer of odours or pollutants to the supply air.

The crossflow heat exchanger makes the unit suitable for process ventilation, though not in a corrosive environment.

The combination of modern EC motors and the EXHAUSTO motor controller delivers extremely low energy consumption and with the EXstream impeller, a high output is achieved.



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.

Curve