CMEV air handling unit

VEX140H

VEX140, horizontal version

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

VEX140

VEX140V

PRODUCT BENEFITS

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

REGULATIONS AND COMPLIANCES

Eurovent Certification no. : 16.01.020

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

Description	Variants
Touch panel 3.5	MHI2-350-TOUCH
VEX140 kit for outdoor fitting	VEX140OD
Base for VEX140H and VEX140CFH	MSV140H
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
FLF315-Ø315, flex connection	FLF315
Cover, Belimo damper OD	ACTUATORBVOD
SIPHONUP SR1K1 SR1K3	SIPHONUP
Syphon heating electric heating wire, 2 metres	SIPHONHE02
Syphon water trap, overpressure	SIPHONOP
CW31504U0UC	CW31504U0UC
CW31504R0IC	CW31504R0IC
HW050X08002U0UL	AFC100E2
Pressure controlled frost protection	DEP
Control system for CCW – with modbus	MCCW
Module for control of external changeover cooling/heating coil	MCOCW
Module for control of external cool/heat pump	MXHP
Return water sensor for external mounting (extra)	RPTX
Return water sensor for external mounting – external for retrofitting	RPTX-AS
Modbus communications module for analogue and digital inputs and outputs	MIO
Connection cable for direct connection of analogue input signal	AICABLE
Motion sensor for override at comfort level (MIO)	PIRB-AS
Motion sensor for override at comfort level (Modbus)	MIOPIR2
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
Pressure sensor for constant pressure regulation	MPTDUCT
Motion sensor - digital - excl. MIO	PIR2
HYRK, room humidity sensor	HYRK
Manual override to comfort mode excl. MIO - incl. cable	TIMERBUTTON3
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
RH sensor for room - analogue 0-10 V (0-100 % RH)	RFF
Web server incl. interface modbus RTU and BACnet MSTP/IP	WEBE
Exact WAP KIT	4000785

Filters

Description	Variants
Panel filter for VEX140/-CF – ePM1 55%	FP1402F7
Panel filter for VEX140/-CF – Coarse 85%	FP1402M5

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General data

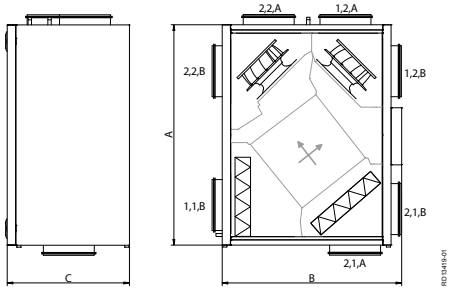
Motor class in accordance with IEC TS 60034-30-2	IE5 (Ultra Premium Efficiency)
Voltage input	1 x 230 V
Regulation	Variable via motor control (MC)
Control signal with control system	Modbus
Control signal with third party control system	0-10 V DC
Fluid temperature (air)	-40°C...+40°C
Ambient temperature range	-30°C....+50°C

Fan data

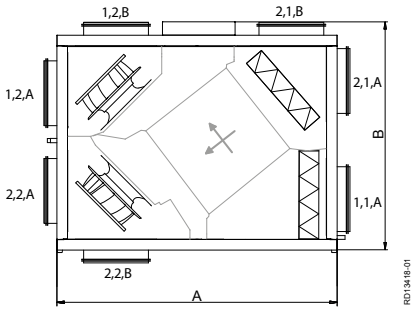
Max. Total efficiency (A-D) (%)	58,1
Efficiency level requirements	62N (2015)
ECO efficiency level during optimal operating point	76,2N
Overload protection	Built-in

Dimensional data

A (mm)	1365
B (mm)	1145
C (mm)	750
Ø connection (mm)	315
Weight (kg)	190
Weight for transport	105 kg (excl. doors, heat exchanger and fan sections)



Målskitse, VEX100 vertikal model



Målskitse, VEX100 horisontal model

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

Airflow data

Minimum airflow	250
Max. airflow (m³/h)	1780

Electrical datas

Voltage (V)	1x230
Frequency (Hz)	50
Max. power of electrical coil 1 (kW)	7,2
Max. power of electrical coil 2	14,4
Maximum current - unit (A)	12,5
Max. electrical output of unit (kW)	1,6
Power consumption (kW)	0,674

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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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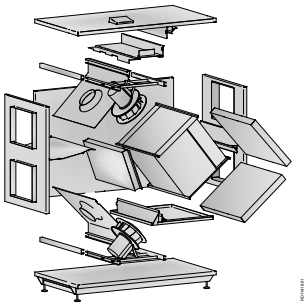
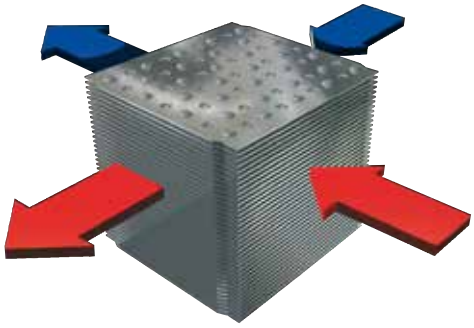


VEX100 IS AVAILABLE AS A SPLIT VERSION.
With some projects, limited space means that internal transport of the air handling unit is difficult or impossible. This is why the VEX100 is available as a split version. It means that the air handling unit can be assembled and tested at the factory as normal – 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.

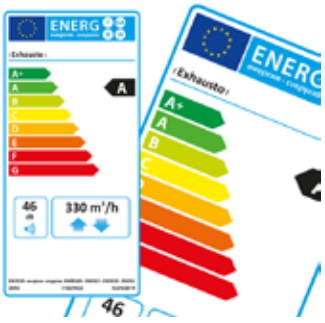
The table below shows the dimensions of the largest section (crossflow heat exchanger) and largest cabinet section, so that it can easily be determined whether there is sufficient space to allow internal transport.

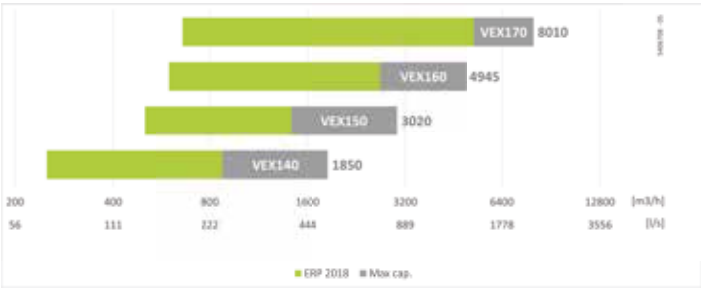


Cross-flow heat exchanger in aluminium with moderate pressure drop and high temperature efficiency. The crossflow heat exchanger ensures full separation of airways, preventing transfer of odours or pollutants to the supply air.

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