

New series of TOP air  
handling units

## **VEX300T**

Extremely compact  
design and optimum  
energy performance

**VEX350T** : 400-3.900 m<sup>3</sup>/h

**VEX340T** : 300-2.650 m<sup>3</sup>/h

**VEX330T** : 250-2.250 m<sup>3</sup>/h

**VEX320T** : 200-1.390 m<sup>3</sup>/h

**VEX310T** : 90-620 m<sup>3</sup>/h



# VEX300T

## COMPACT AIR HANDLING UNIT WITH TOP CONNECTIONS

VEX300T is an extremely compact VEX unit in which all airways enter or exit at the top. A top-connected unit is very space-saving, both because all ducts are connected at the top or front and because the unit is constructed with integral heating- or cooling coils.

### COMPACT DESIGN

Compact design is the key feature of the VEX300T construction.

The unit takes up minimal floor space and has no side connections, so it is easily installed, even where space is tight. The only space needed is for installation and service access in front of the unit.

All cooling- or heating coils are integrated in the unit, so they take up no space in the ducts. VEX300T has circular connections (standard dimensions), thus avoiding expensive transition pieces during installation.

It goes without saying that the units can be transported through a normal door opening (900 mm). In addition, all units can be supplied as a SPLIT version.



## EASY ACCESS

The unit is designed for easy servicing and maintenance. All servicing and maintenance is performed via the door on the front of the VEX300T.

## PRE-FILTRATION

Close attention is paid to adjusting the indoor climate on the basis of the particles in the outdoor air. VEX300T is constructed with panel filters. As a new feature, these have options for pre-filtration of outdoor air in order to achieve better filtration and lower operating costs, in accordance with ISO 16890 and DS/EN 16798-3.



## INSTALLATION

- All connections from top and front
- Standard connection dimensions
- Integral coils only
- Water connections at the top
- Condensate drain at the front

## SERVICING

- All control systems in one location
- Easy to clean
- Easy removal of fan/motors
- Easy removal of heat exchanger
- Filters in filter rails with brush inserts for easy removal and replacement
- Brush inserts for leak prevention

## LOW OPERATING COSTS

- Counterflow heat exchanger - High temperature efficiency
- Low power consumption

## STANDARD DUCT CONNECTIONS

- No expensive transition pieces

## LOW SOUND LEVEL

## CALCULATION SOFTWARE

## EXCLUSIVE ACCESSORIES

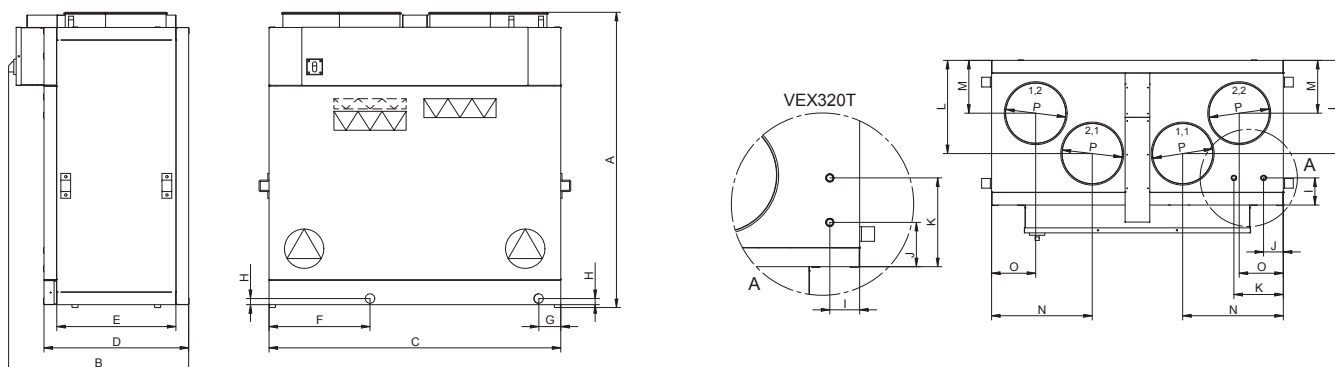
- Water heating coil (HW - 2 sizes)
- Electric heating coil (HE - 2 sizes)
- Cooling coil (CW - 2 sizes)
- Cooling/heating coil (DX - 1 size)

For more information please contact us.

# VEX300T

## ENERGY-SAVING SOLUTION PROVIDES HEALTHY INDOOR CLIMATE

With low energy consumption and high temperature efficiency (up to 94%), neither your wallet nor the environment will suffer. Separated airways protect against odour and humidity transfer and ensure a healthy indoor climate. With VEX300T, our selection of compact air handling units is complete!



VEX	Height (A)*	Width (B)	Length (C)	Connection. (mm)	Weight
VEX310T	1215	754	1200	250	157
VEX320T	1215	1024	1200	315	204
VEX330T	1474	1092	1500	315	265
VEX340T	1775	1092	1900	400	345
VEX350T	1825	1149	2400	500	530

\* When installed on a stand + 105-135 mm

### COMPLETE COUNTERFLOW RANGE

With the VEX300T-series, we can confidently say that our compact range is complete. With the three strong VEX series, all with compact design, optimum energy performance and advanced systems for optimum control, we now have a top range.



### VEX300

The VEX300 series now consists of just about 20 air handling units with counterflow heat exchanger and airflows of up to 9200 m<sup>3</sup>/h – all developed with a special focus on compact design. All units\*) can be transported through an ordinary door opening (900 mm) and are thus particularly suitable for sites where space and access conditions are limited and where every square metre needs to be used.

In addition to horizontal units, we also have ceiling units for mounting in/under ceilings, and most units can also be supplied for outdoor installation

**For more information please contact us.**

\*) VEX370 only in SPLIT version



## **GUARANTEED PERFORMANCE EUROVENT - VDI – RLT**

### **CERTIFICATIONS**

When choosing a product, it is important that you as a customer can trust that the data you are given is correct. The VEX300T series is certified for guaranteed performance:

#### **Eurovent certification**

- D1 (M) - Deflection Class of casing
- L1 (M) - Leakage rate at -400 and +700 Pa
- F9 (M) - Filter bypass leakage
- T2 (M) - Isolation class - Thermal transmission
- TB3 (M) - Thermal bridging factor

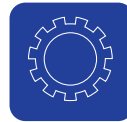
#### **RLT**

VEX300T is RLT certified and as part of the certification process, the data in EXselect is verified. The certification applies to units with airflow above 1000 m<sup>3</sup>/h.

#### **VDI6022**

VEX300T has been developed in accordance with the German Hygiene Standard VDI6022.

- Easy access for cleaning and service
- No sharp edges
- Condensate tray has fall from all sides to drain



## **SIMPLE CONTROL ADVANCED OPTIONS**

### **EXACT2 CONTROL**

Behind the simple operating panel, the advanced EXact2 control system ensures optimum operating economy. The control system is easily matched to the daily rhythms of the user location, e.g. school, office, hotel or home.

#### **EXACT2 CONTROL SYSTEM FEATURES**

- Simple operation
- Three user modes, two of which require access codes (technician and specialist)
- Several indoor climate levels, with options such as on-demand ventilation via the integral weekly timer
- See several more selected functions in the function overview on [www.exhausto.com](http://www.exhausto.com)

### **SPLIT**

#### **– No access route is too narrow**

All our compact units can also be offered as a SPLIT solution, so the unit can be transported to installation sites with very narrow access routes.

With a SPLIT solution, the unit is either delivered in parts or prepared for separation at the installation site. EXHAUSTO also offers assembly by authorised personnel.

**For more information please contact us.**



# VEX300T

## WITH PRE-FILTRATION

## FOR OPTIMUM INDOOR CLIMATE

ISO 16890, the new filter standard, and DS/EN 16798-3 have a close focus on better indoor climate, adapted to the particles in the outdoor air.



### ODA (Out Door Air)

In most towns, the outdoor air quality lies in outdoor air (ODA) classes 1 and 2. To guarantee supply air quality, pre-filtration is thus necessary.

Category	Description
ODA1	Outdoor air which may be only temporarily dusty (e.g. pollen)
ODA2	Outdoor air with high concentrations of particulate matter and/or gaseous pollutants
ODA3	Outdoor air with very high concentrations of gaseous pollutants and/or particulate matter

### INDOOR CLIMATE

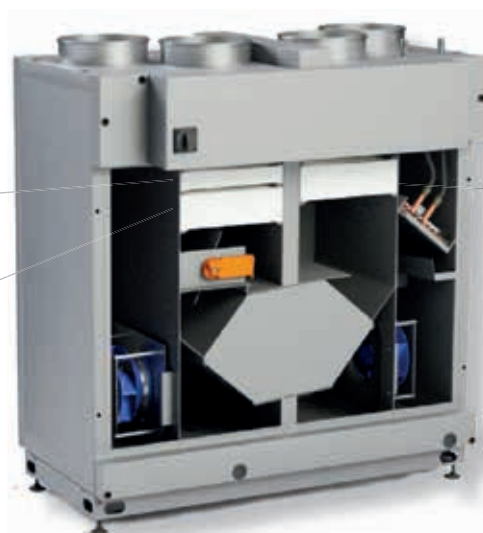
Pre-filtration gives an extra filtration of the outdoor air before the air is blown in. This ensures that even small polluting particles are filtered out – giving optimum indoor climate and also increasing the service life of the filters in the air handling unit.

### Pre-filter

- Coarse 65% - (G4)
- ePM<sub>10</sub> 65% - (M5)
- ePM<sub>1</sub> 55% - (F7)

### Supply air filter

- ePM<sub>10</sub> 65% - (M5)
- ePM<sub>1</sub> 55% - (F7)
- ePM<sub>1</sub> 80% - (F9)



### Extract air filter

- Coarse 65% - (G4)
- ePM<sub>10</sub> 65% - (M5)
- ePM<sub>1</sub> 55% - (F7)



## GUIDE FOR CHOOSING FILTER

Based on the assumed outdoor air quality (ODA) and the desired air quality (SUP), we have made it easy to choose the right filter from the tables below.

Outdoor air quality - ODA		
Category	PM <sub>2,5</sub>	PM <sub>10</sub>
ODA1	≤ 10	≤ 20
ODA2	≤ 15	≤ 30
ODA3	> 15	> 30

### Desired supply air quality

Category	Description
SUP1	Supply air with very low concentration of particulate matter and/or gases
SUP2	Supply air with low concentration of particulate matter and/or gases
SUP3	Supply air with medium concentration of particulate matter and/or gases
SUP4	Supply air with high concentration of particulate matter and/or gases
SUP5	Supply air with very high concentration of particulate matter and/or gases

### SUP (Supply air)

When the outdoor air quality (ODA) and desired supply air (SUP) have been established, the table below shows which requirements are to be made on the filtration capacity of particles (PM) in size below 1,0µm, 2,5µm og 10µm respectively.

Supply air quality - SUP					
	SUP1*	SUP2*	SUP3**	SUP4	SUP5
	PM <sub>2,5</sub> ≤ 2,5 PM <sub>10</sub> ≤ 5	PM <sub>2,5</sub> ≤ 5 PM <sub>10</sub> ≤ 10	PM <sub>2,5</sub> ≤ 7,5 PM <sub>10</sub> ≤ 15	PM <sub>2,5</sub> ≤ 10 PM <sub>10</sub> ≤ 20	PM <sub>2,5</sub> ≤ 15 PM <sub>10</sub> ≤ 30
Category	ePM <sub>1</sub>	ePM <sub>1</sub>	ePM <sub>2,5</sub>	ePM <sub>2,5</sub>	ePM <sub>10</sub>
ODA1	60%	50%	60%	60%	50%
ODA2	80%	70%	70%	80%	60%
ODA3	90%	80%	80%	90%	80%

\* The minimum requirement for filter PM<sub>1</sub> 50% refers to the final filter step til sidste filtertrin.

\*\* The minimum requirement for filter PM<sub>2,5</sub> 50% refers to the final filter step.

## The indoor climate is our priority

### The key to a good indoor climate

In our desire to bring down energy consumption, buildings are becoming ever more airtight. But what is good for energy consumption may be bad for indoor climate. Airtight construction makes it hard to evacuate humidity, and humidity provides good growth conditions for mould. Mould not only damages the actual building, but also leads to an unhealthy indoor climate which affects our health and well-being.

At the same time, especially in cities and industrial areas, we are increasing subject to a polluted outdoor environment. This outdoor environment indirectly affects the indoor environment, as particles are brought into the building with the supply air.

With the VEX300T-series, we are therefore introducing an option for pre-filtration – an extra filtering of the outdoor air for minimising transfer of harmful particles before the air is led into the building.

### This is how particles (PM) affect us:



Size PM ~< 10µm  
Coarse particles  
**Upper respiratory tract**



Size PM ~< 2,5µm  
Fine particles  
**Lower respiratory tract**



Size PM ~< 1µm  
Inhalable particles  
**Alveoli**



Size PM ~< 0,1µm  
Ultra fine particles  
**Bloodstream/  
entire body**

### New filter standard ISO16 890

- Test carried out with 0.3–10 µm particles
- Classification is based on results for the particle sizes PM<sub>1</sub>, PM<sub>2,5</sub> and PM<sub>10</sub>
- Static electricity in the filter is discharged during the test
- Dust load using ISO "fine dust" to find the pressure drop

# COMFORT VENTILATION FOR ALL PURPOSES



## COMPACT UNITS



**VEX200**  
RANGE  
ROTARY  
HEAT EXCHANGER

The **VEX200** range comprises compact units for heat recovery with efficient rotary heat exchangers, which ensure economic performance by virtue of low energy consumption. The units for the series provide airflow from 200 to 18.370 m<sup>3</sup>/h.

Airflow up to: 18.370 m<sup>3</sup>/h

Efficiency up to: 90%



**VEX300-400-500-600**  
RANGES  
COUNTER FLOW HEAT  
EXCHANGER

The **VEX300,400,500 and 600** ranges comprise extremely efficient and energy-effective compact units for heat recovery with counter flow heat exchanger. The units for the series provide airflow from 90 to 9.200 m<sup>3</sup>/h. VEX320C and VEX330C up to 1.490 m<sup>3</sup>/h is designed for mounting over a suspended ceiling.

Airflow up to: 9.200 m<sup>3</sup>/h

Efficiency up to: 94%

## MODULAR UNITS



**VEX4000**  
RANGE  
MODULES

The **VEX4000 series** consists of highly energy-efficient modular air handling units with efficiencies often extending above 90%. The units are compact and can be assembled with a high degree of flexibility. The many possible variations allow great freedom for customising individual with airflows ranging from 1.050 to 36.000 m<sup>3</sup>/h.

Airflow up to: 36.000 m<sup>3</sup>/h

Efficiency up to: 90%



**VEX5000**  
RANGE  
MODULES

**VEX5000** is a series of high-performance and energy-efficient air-handling units which are both compact and can be assembled with a high degree of flexibility because they are composed of modular ventilation components. VEX5000 supplies ventilation for every purpose, being designed for comfort ventilation, for industrial plants with air quality requirements and for settings with high environmental requirements.

Airflow up to: 54.000 m<sup>3</sup>/h

Efficiency up to: 90%

**ALDES also offers solutions to process ventilation and decentralized ventilation. For further information please contact us.**



To find out more about our solutions,  
contact your Aldes sales advisor or visit [aldes.com](http://aldes.com),  
or find us on    