

## Modul

### VEX4000-FX

#### VEX4000 – FAN WITH FILTER

The combined fan and filter module contains plenum fans with total efficiencies up to 70% as well as pre- and main filters in different classes



#### PRODUCT BENEFITS

- EC motors class IE5 with high efficiency
- 100% recyclable composite wheels
- Fan mounting with vibration dampers
- Bag filter on special frames that meet the requirements of ISO16850

#### Principles of operation

The plenum fan provides great flexibility with respect to installation location and spigot position.

This fan type is generally suitable for moderate to high duct pressure drops. The fan creates a static pressure in the plenum chamber, with the outlet opening located in the end or top (size 4010-4050 only) of the unit. On the outside, flanges can be mounted for fitting ducts.

#### Operating costs

Total efficiency rates of up to 70 % can be achieved with EC motors, allowing operation at optimum rotational speeds. This secures favourable operating costs.

#### Design options

Units with plenum fans are dimensioned in EXselectPRO.

For each unit size, two motor dimensions are available, allowing optimum operation to be achieved over the whole capacity range.

The filter units are supplied mounted in special frames. They are of bag filter type. The filters meet the requirements of ISO 16850.

Depending on requirements for cleanness and separation, the filters can be supplied in different classes:

- ePM10 50% (M5)
- ePM1 65% (F7)
- ePM 1 65% (FC7) "Pocket City Flo" (filter with carbon, which can remove odours)
- ePM1 85% (F9)

The air handling unit configuration has a pre-filter option. If this option is selected, a 48 mm panel filter can be inserted in front of the bag filter - see the image.

Placing a coarser filter in front of a finer filter reduces soiling on the finer filter. Depending on the outdoor air and the desired quality of the supply air, this can be a good idea/option.

Pre-filters (48 mm) are available in the following classes:

- Coarse 60% (G4)
- ePM10 80% (M5)
- ePM1 50% (F7)

Pressure drop, etc. can be calculated in the product selection programme EXselectPRO.

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#### Product description

The plenum fans in VEX4000 units consist of energy-optimised and directly driven centrifugal fans without fan housing and with backward curved blades.

#### Fan

The fan consists of a fan impeller mounted directly on the shaft journal. The fan impeller is made of 100% recyclable material.

#### Fan suspension

The motor and fan are mounted in a fan suspension with oscillation dampers which can be pulled out on rail sections in the base of the unit for servicing and cleaning.

#### Motor

The motor is a flange motor connected via a terminal box, and EC motors of class IE5 for optimum overall efficiency.

#### Vibration-free

On the suction side, the inlet funnel has been fitted against the suction chamber. Metal contact is avoided by means of a flexible rubber gasket, which ensures that the fan works without transferring vibrations to the rest of the unit.

#### Reference arguments

Fan (FAN) with filter (FX)

#### FUNCTION AND APPLICATION

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## Curve

