

# 1 CENTRALIZED VENTILATION

## Ventilation box fan

### FSB50041EC2

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Fire gas fan approved for temperatures up to 400°C for 120 min (400/2H) and approved as both operating and evacuation fan in accordance with EN12101-3:2015.



### PRODUCT BENEFITS

- Certified combustion gas fan
- Operation and evacuation fan F400/2H
- Low energy consumption
- Low operating costs

### Product description

FSB combustion gas fan is a box fan approved for temperatures up to 400°C for 120 min (400/2H). FSB combustion gas fan is approved as both a general operations fan and an evacuation fan in accordance with EN12101-3:2015.

As a general operations fan, FSB is a low-energy box fan, as it is fitted with an EC motor and fan impellers with backward curved blades. FSB is available in 4 sizes, covering the capacity range 350 - 7 300 m<sup>3</sup>/h.

### Accessories

| Description                          | Variants |
|--------------------------------------|----------|
| MAC12 constant pressure regulator    | MAC12    |
| EFC1P2, Electronical speed regulator | EFC1P2   |

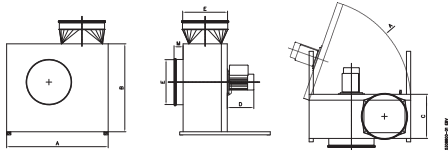
### Fan data

|   |  |
|---|--|
| Max. Total efficiency (A-D) (%)                     | 71,5   |
| Ventilation energy class - Average climate          | D  |
| Efficiency level requirements                       | 64, N(2015)  |
| ECO efficiency level during optimal operating point | 89,6   |
| Optimum operating point                             | Optimalt driftspunkt:<br>> Optaget effekt: 824 W<br>> Luftmængde: 4252 m <sup>3</sup> /h<br>> Totaltryk: 499 Pa<br>> Omdrejningstal: 1261 omdr./min. |
| Nominal speed (RPM)                                 | 1420   |
| Power supply  | 1x230 - 50 Hz  |
| Overload protection                                 | Indbygget i motorstyng   |
| Engine power (kW)                                   | 1,1  |

## Ventilation box fan

**FSB50041EC2****FSB50041EC2****Dimensional data**

|             |     |
|-------------|-----|
| A (mm)      | 990 |
| B (mm)      | 880 |
| C (mm)      | 425 |
| G (mm)      | 850 |
| E Ø (mm)    | 500 |
| Weight (kg) | 88  |



The box fan can be mounted in various positions. Note, however, that the fan must not be positioned with the motor turned downwards.

Standard installation: A

Alternative installation options: B, C and D

During installation, consideration must be given to opening the door for servicing and for access to door screws (see dimensions table on pages 7 and 15 in the product instructions where opening radius R is given). There should also be enough space to insulate the ducts.

In installation options B and D, with the door facing upwards, special fittings must be used to hold the door (accessory).

The box fan should not be screwed onto the supporting base. The base must be stable and vibration free, with no sagging.

**Electrical datas**

|  |           |
|--|-----------|
| Frequency (Hz)                               | 50        |
| Max. power                                   | 1,23      |
| Max. current (A)                             | 8,5       |
| Engine power (kW)                            | 1,1       |
| ErP-effektivitetsgrad i optimalt driftspunkt | 89,6      |
| Motor Amp/kW                                 | 8,5 / 1,1 |

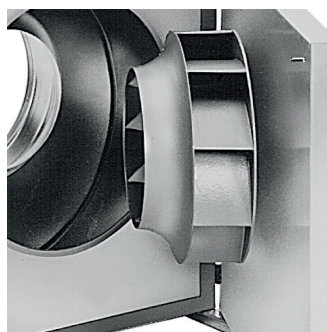
**Regulatory data**

|  |   |
|--|---|
| Ventilation energy class - Average climate | D |
|--|---|

**Installation**

FSB box fans are made from Aluzinc® AZ185 class C4 in accordance with EN/ISO12944-2 and insulated with 50-mm mineral wool.

FSB has been tested and approved both as a general operations fan and as an evacuation fan F400/2h in accordance with EN12101-3:2015



The fan impeller is a B-impeller made from cast aluminium.

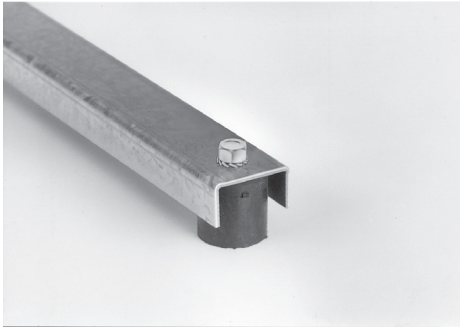
It has backward curved blades, thus ensuring low energy consumption and the further advantage that less dirt is attracted, with impaired impeller efficiency as a result.



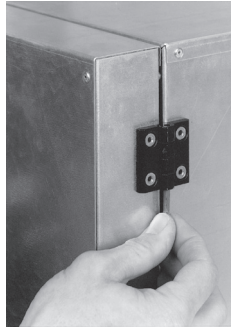
The spigots on FSB have rubber gaskets, with a transition piece on the extract side specially developed for minimum pressure drop.

Ventilation box fan

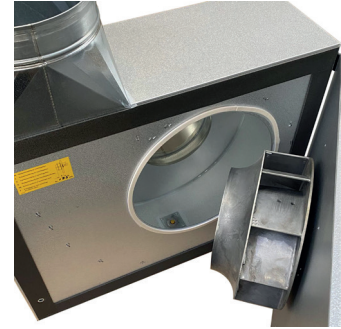
**FSB50041EC2**  
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To minimise noise and vibration, the box fan is fitted as standard with efficient vibration dampers mounted on brackets.



The FSB box fan is mounted with split hinges, which enable the door to be removed for installation and servicing, even in very confined conditions or for transport to difficult locations.



The FSB box fan is designed to transport air with an air humidity of less than 80% RH.

FSB is available as a special model with a condensation outlet for air with over 80% RH



The FSB box fan is a low-energy fan in which cabinet, centrifugal impeller and motor all work together as one technology.

All FSB box ventilators fulfil both the 2015 requirements laid down in the Ecodesign Directive EC327/2011 and those indicated as future 2020 requirements.

FSB box fans are fitted with a single-phase EC motor, directly connected to the fan impeller.

The EC motor for FSB is a permanent-magnet motor of class IE5 with motor control for 1 x 230 V connection. The motor control and the motor are protected from overloading, blocking, over and under voltage, and over heating.

The motor control is factory programmed by EXHAUSTO for optimal operation of the fan. It only requires mains connection and a control signal from an EXHAUSTO EFC1P2 or MAC12 controller or a 0-10V signal.

The motor controls also provide a Modbus interface for fan control and alarm read-offs etc.

Curve

