

FRESHBOX E2-150 K



Single-room heat recovery unit

Air flow up to 88 CFM
Heat recovery efficiency up to 79 %



FRESHBOX E2-150 K

FRESHBOX E2-150 K is a single-room energy-efficient supply and exhaust unit intended for decentralised ventilation of social and commercial spaces as well as apartments and houses.

The best solution for creating simple yet highly efficient ventilation systems in newly erected and renovated spaces without requiring ducting installation.



FEATURES

- Single-room heat recovery air handling units with air flow up to 88 CFM.
- High-efficient EC fans.
- Integrated PM2.5 air quality sensor.
- Two integrated supply air filters with MERV8 and MERV14 filtration rate ensure air filtration up to 99 %.
- Air recirculation provides additional air filtration. H11 filter is optionally available.
- Balanced energy-saving single-room ventilation of apartments, residential houses, public and commercial buildings.
- Ideal ventilation solution for existing and renovated premises.
- Controllable air exchange provides individual microclimate.

DESIGN

Casing

The casing is made of polymer-coated steel. The outer removable casing enables easy service access for maintenance of the unit. The unit design is compatible with any interior design.

Fans

The unit is equipped with high-efficient external rotor EC motors and centrifugal impellers with forward curved blades for air supply and exhaust. Low energy demand due to implemented EC technology. The fan motors have integrated overheating protection and ball bearings for a long service life.

Air dampers

The automated supply air damper prevents air drafts during the unit shutdown.

Recirculation

The supply air damper closes during activation of the air cleaning function. The recirculation damper opens. The air from the room circulates through the filters and the purified air comes back to the room.

Air filtration

The supply and recirculated air flows are filtered with the MERV8 and MERV14 panel filters. To meet more stringent air purity requirements the MERV14 filter can be replaced with an H11 (PM2.5 > 95 %) (purchased separately). Extract air is filtered with the MERV8 panel filter.



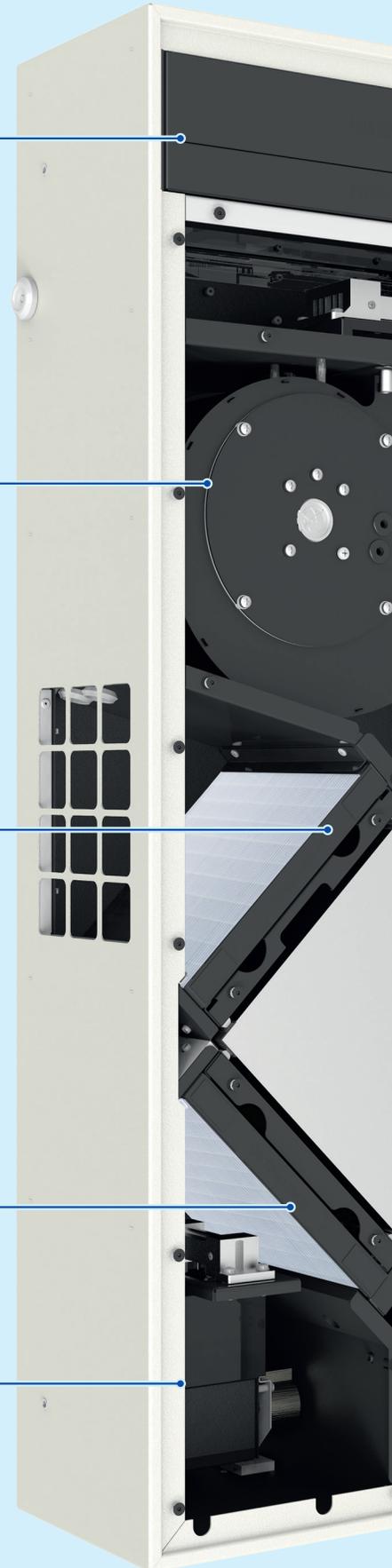
HEPA supply filter (option)

Supply fan

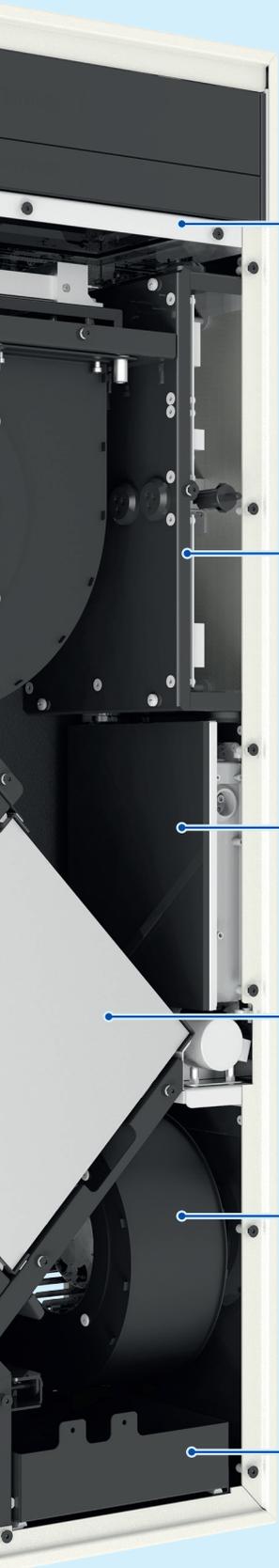
MERV8 extract filter

MERV8 supply filter

Supply air damper



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MERV14 supply filter

Control unit

Recirculation damper

Cross-flow heat recovery core

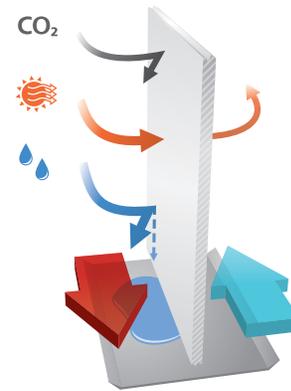
Extract fan

Drain pan

Heat recovery

The unit is equipped with a plate cross-flow aluminium heat recovery core.

The drain pan under the heat recovery core is used for condensate collection and drainage.



Heat recovery is based on extract air heat recovery for warming up of supply air. In the cold season, the cold intake air absorbs the heat contained in the warm extract air. Heat recovery significantly minimizes ventilation heat losses and costs for space heating. In the warm season, the heat recovery core performs reverse: the supply air is cooled down due to cool extract air. This reduces operation load for the air conditioners and decreases electricity consumption.

OPERATION MODES

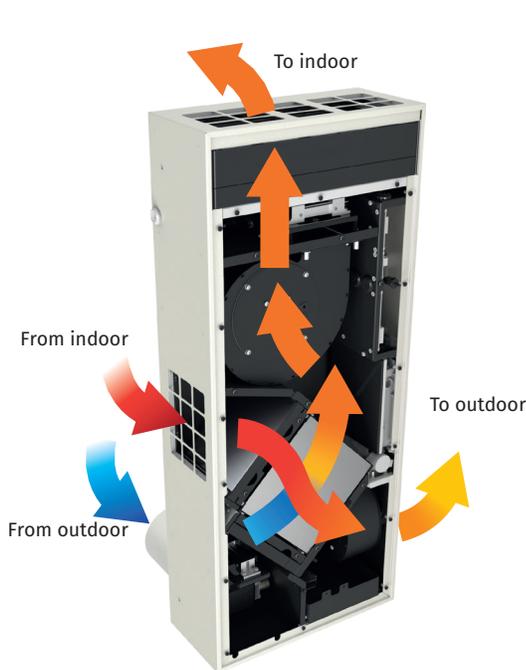
Heat recovery operation mode

The **cold outdoor air** passes through the filters and the heat recovery core and then is delivered to the serviced space by the supply centrifugal fan.

Warm stale air from indoors passes through the filter and the heat recovery core and is discharged outdoors by the centrifugal fan.

The supply and exhaust air flows are fully separated

which helps eliminate the possibility of odour or microbial transfer between the streams.



Recirculation operation mode

The supply and exhaust air dampers are closed, the recirculation damper is open. The room air circulates through the filters. Then it is returned back to the room **purified**.

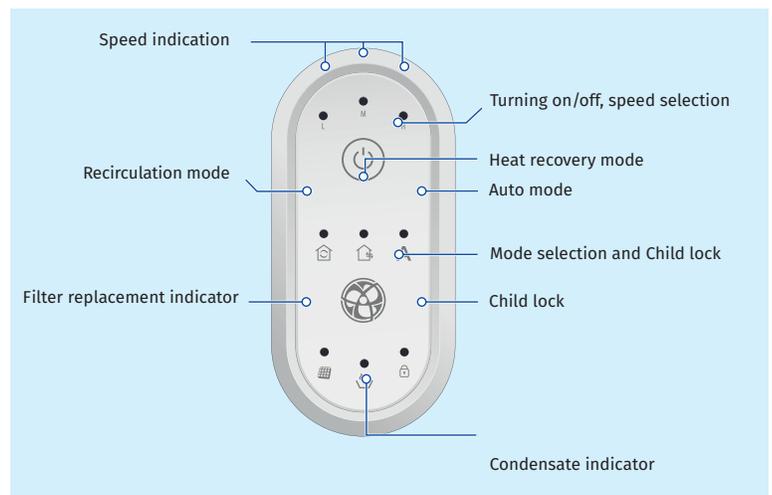


CONTROL AND AUTOMATION

Functions:

- Speed switch
- Operation mode selection: heat recovery, recirculation, auto
- Filter replacement indicator
- Condensate indicator
- Child lock

Auto mode: the units are equipped with a PM2.5 sensor. The PM2.5 sensor triggers if air pollution exceeds the set level. The recirculation damper closes and the extract air flows through the filters once again and then it is supplied to the room again.

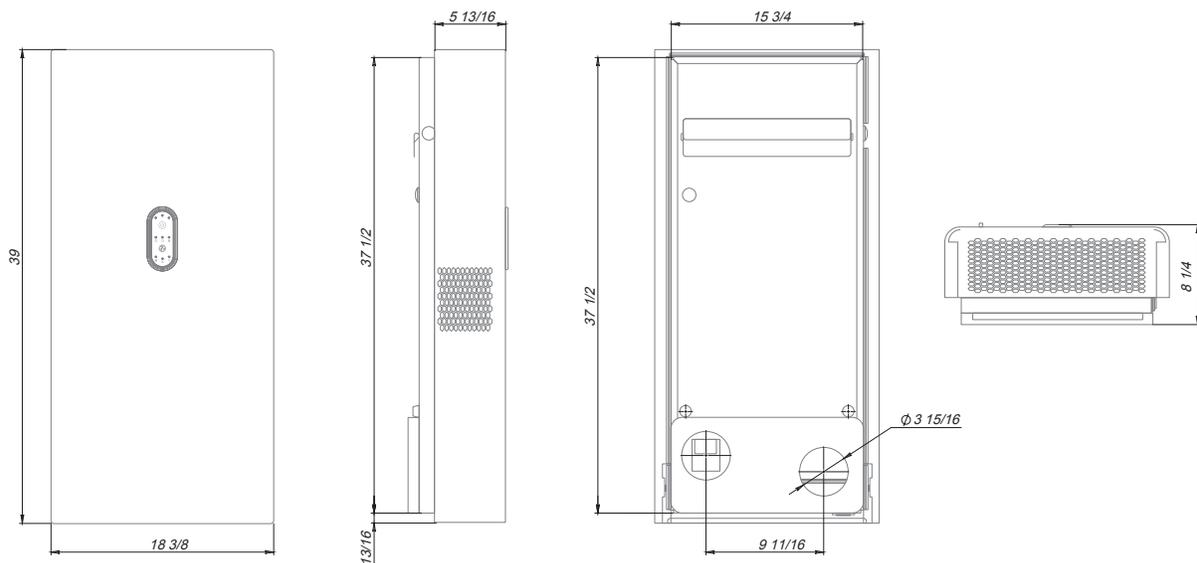


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TECHNICAL DATA

Parameters	Freshbox E2-150 K
Voltage [V / 50-60 Hz]	1~220-240
Max. unit power [W]	65
Integrated electric preheater power [W]	100
Integrated electric reheater power [W]	400
Max. unit current [A]	0.5
Maximum air flow [CFM]	88
RPM, min ⁻¹	2800
Heat recovery efficiency [%]	up to 79
Operating temperature [°F]	-13 ... +122

Overall dimensions [in]



APPLICATION EXAMPLE



Blauberg Ventilatoren
174 N. 36th Street
Lafayette, IN 47905
tel.: +1 765 780 7139

info@blauberg.us
www.blauberg.us
www.blaubergventilatoren.de

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