

## FRESHBOX 100 ERV BLACK

### Single-room air handling units

#### Features

- **Freshbox 100 ERV Black** is a single room energy recovery ventilator suitable for larger rooms, such as apartments or small commercial places.
- No need to connect to air duct system.
- It provides a great solution for simple and efficient single room heat recovery applications.
- Low-energy EC fans.
- Silent operation.
- Five year warranty.

#### Design

- Polymer coated metal casing decorated with an acrylic front panel. Heat and noise insulation is ensured by a layer of 10 mm cellular synthetic rubber.
- The front panel provides convenient access for filter maintenance and has a lock for extra security.
- The unit has two Ø3 15/16" pipes for fresh air intake and stale air extraction outside. The third Ø3 15/16" pipe (included in the scope of delivery) can be additionally fitted to the unit to connect the exhaust air duct from the bathroom.

#### Fans

- The units feature efficient electronically commutated (EC) motors with an external rotor and impellers with forward curved blades. These state-of-the-art motors are the most advanced solution in energy efficiency today.
- EC motors are characterised with high performance and optimum control across the entire speed range. In addition to that the efficiency of electronically commutated motors reaches very impressive levels of up to 90 %.

#### Air dampers

- The unit is equipped with supply and exhaust air dampers which activate automatically to prevent drafts while the unit is off.

#### Air filtration

- Supply air cleaning is provided by the MERV8 and MERV14 panel filters (PM2.5 > 75 %). To meet more stringent air purity requirements the MERV14 filter can be replaced with an HEPA Filter type C (PM2.5 > 95 %) (purchased separately). Exhaust air is cleaned by the panel filter MERV8.



#### Energy recovery

- The **Freshbox 100 ERV Black** units are equipped with a counter-flow energy recovery core with an enthalpy membrane at the core.
  - In the cold season the exhaust air heat and moisture are transferred to the supply air stream through the enthalpy membrane reducing the heat losses through ventilation.
  - Consequently, it is the intake air heat and moisture transferred to the extract air stream through the enthalpy membrane in the warm season. This allows for a considerable reduction of the supply air temperature and humidity which, in turn, reduces the air conditioning load.



#### Control

- The unit is equipped with a control panel.
- The remote control is supplied as standard.

#### Freeze protection

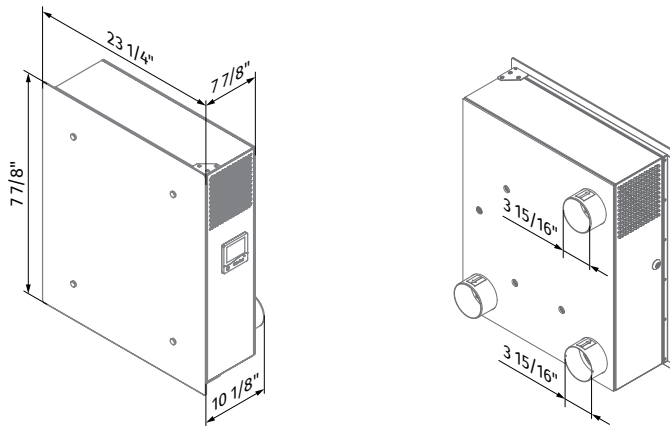
- **Freshbox 100 ERV Black** features an exhaust air temperature sensor downstream of the heat exchanger which disables the supply fan to let the warm extract air warm up the heat exchanger. After that the supply fan is turned on and the unit reverts to the normal operation mode.

**Technical data**

| Parameters                          | Freshbox 100 ERV Black                                     |            |            |
|-------------------------------------|--|------------|------------|
| Speed                               | I  | II         | III        |
| Voltage [V / 50 (60) Hz]            |  | 1~120      |            |
| Max. power [W]                      | 12   | 21         | 45         |
| Max. current consumption [A]        |  | 0.35       |            |
| Maximum air flow [CFM (l/s)]        | 18<br>(8)  | 35<br>(17) | 59<br>(28) |
| SFP [W/l/s]                         | 1.44   | 1.26       | 1.62       |
| RPM [min <sup>-1</sup> ]            |  | max 2200   |            |
| Sound pressure level at 10 ft [dBA] | 13   | 27         | 39         |
| Transported air temperature [°F]    |  | -13...+122 |            |
| Casing material                     | polymer coated steel                                       |            |            |
| Insulation thickness [in]           | 3/8"   |            |            |
| Extract filter                      | MERV8  |            |            |
| Supply filter                       | MERV8 + MERV14 (Option: MERV14 Carbon; HEPA Filter type C) |            |            |
| Connected air duct diameter [mm]    | 100  |            |            |
| Weight [lb]                         | 68.3   |            |            |
| Heat recovery efficiency [%]*       | 90   | 86         | 80         |
| Energy recovery core type           | counter-flow   |            |            |
| Energy recovery core material       | enthalpic membrane   |            |            |
| SEC class                           | A  |            |            |

\*Heat recovery efficiency is specified in compliance with EN 13141-8.

**Overall dimensions [in]**



| MODEL | QUANTITY | COMMENTS | PROJECT       |
|-------|----------|----------|---------------|
|       |          |          | location:     |
|       |          |          | architect:    |
|       |          |          | engineer:     |
|       |          |          | contractor:   |
|       |          |          | submitted by: |