

## FRESHBOX 100 BLACK

### Single-room air handling units

#### Features

- **Freshbox 100 Black** is a single room heat 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

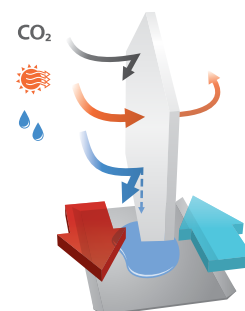
- The unit is equipped with supply and exhaust air dampers which activate automatically to prevent drafts while the unit is off.

#### 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.

#### Heat recovery

- The **Freshbox 100 Black** units are equipped with a counter-flow heat recovery core with a polystyrene core.
  - In the cold season the exhaust air heat is captured and transferred to the supply air stream which reduces the ventilation-generated heat losses.
  - Some condensate may form during heat recovery. The condensate is collected in the drain pan and is removed from the exhaust air duct.
  - In the warm season the intake air heat is transferred to the extract air stream. This allows for a considerable reduction of the supply air temperature 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

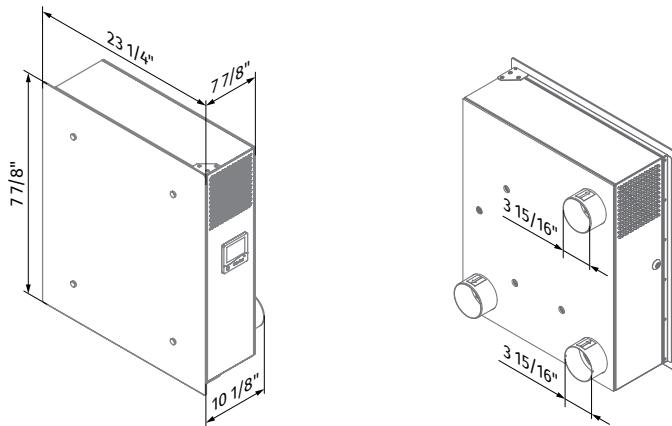
- **Freshbox 100 Black** features an exhaust air temperature sensor downstream of the heat exchanger which disables the supply fan to let the warm extract air warm up the heat exchanger. After that the supply fan is turned on and the unit reverts to the normal operation mode.

**Technical data**

Parameters	Freshbox 100 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 (8)	35 (17)	59 (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 [%]*	96	92	87
Heat recovery core type	counter-flow		
Heat recovery core material	polystyrene		
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: