

# FRESHBOX 110



DECENTRALIZED HEAT  
RECOVERY VENTILATION

2

# FRESHBOX 110

## DECENTRALIZED SUPPLY AND EXHAUST UNIT WITH HEAT RECOVERY



120 m<sup>3</sup>/h



from 10 dB(A)



up to 93 %



## FEATURES

High efficiency ventilation of a single room or a small apartment.

Flush or surface mounting option.

Optional connection of supply and extract 75 mm semi-rigid air ducts for flush mounted Freshbox 110 K1 unit.

Optional connection of 100 mm extract air duct for surface mounted Freshbox 110 unit.

Low noise level from 10 dB(A) at 3 m.

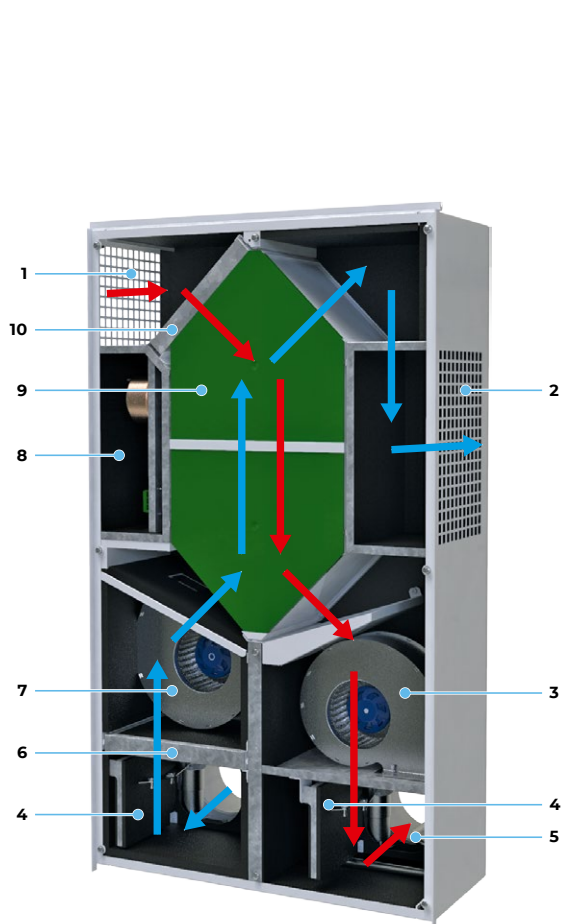
High level of wind protection.

Clean air with an F7 supply filter.

Easy installation

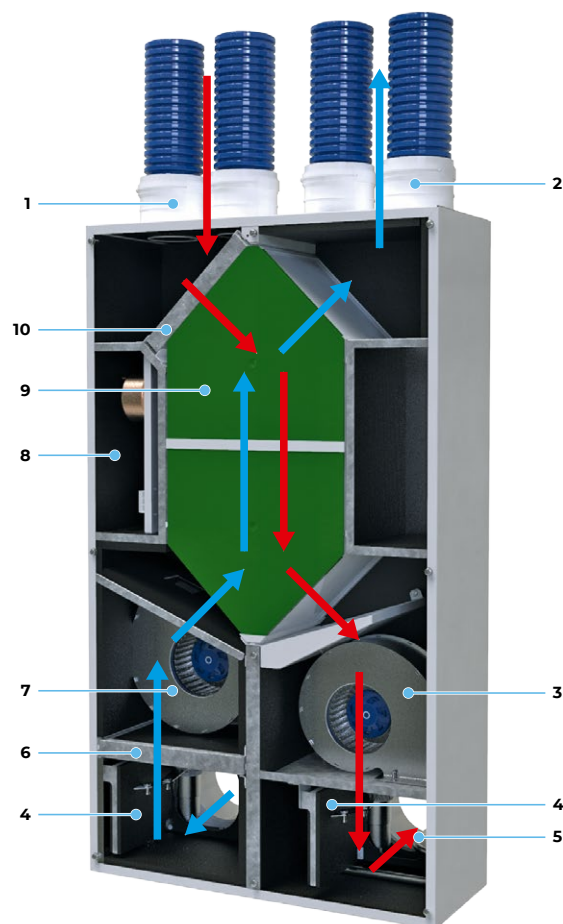
## Designation key

Series	Rated air flow [m <sup>3</sup> /h]	Mounting	Heat exchanger type
<b>Freshbox</b> – decentralized ventilation unit	110	– surface mounting <b>K1</b> – flush mounting	– heat recovery <b>ERV</b> – heat and humidity recovery



**Freshbox 110 (wall surface mounting)**

1. Extract grille;
2. Supply grille;
3. Exhaust fan;
4. Automatic air shutter;
5. Drain pipe (HRV version);
6. Supply filter;
7. Supply fan;
8. Controller;
9. HRV or ERV core;
10. Extract filter.



**Freshbox 110 K1 (wall flush mounting)**

1. Extract ducts;
2. Supply ducts;
3. Exhaust fan;
4. Air shutter (option);
5. Drain pipe (HRV version);
6. Supply filter;
7. Supply fan;
8. Controller;
9. HRV or ERV heat exchanger;
10. Extract filter.

## Casing

The casing is made of sheet metal, painted white, with a layer of heat and sound insulation. The modern design allows Freshbox 110 to fit harmoniously into any interior. The front panel opens easily for filter maintenance. The unit is equipped with two 100 mm spigots for air intake and exhaust.

## Air dampers

An automatic supply and exhaust air dampers are provided to prevent drafts when the unit is switched off.



## Fans

The unit is equipped with high-efficient electronically commutated (EC) motors with an external rotor equipped with impellers with forward-curved blades. Such motors are currently the most advanced solution in the field of energy saving. EC motors are characterized by high performance and optimal control over the entire range of speeds. The undoubted advantage of electronically commutated motors is high efficiency (up to 90%).

## Air filtration

Supply air is cleaned by a Coarse 90 % / G4 cassette filter. An ePM1 65 % / F7 filter can be installed as an option.

Extract air purification is performed by a Coarse 90 % / G4 cassette filter.

## Heat exchanger

Freshbox 110 units are equipped with a counter-flow heat exchanger.

Freshbox 110 ERV units are equipped with a heat exchanger, which is made of enthalpy membrane and transfers heat and moisture.

In the cold season the extract air heat and moisture are transferred to the supply air stream through the enthalpy membrane reducing the heat losses through ventilation.

In the warm season, the heat and moisture of fresh intake air are transferred through the enthalpy membrane to the extract air. This allows for a considerable reduction of the supply air temperature and humidity which, in turn, reduces the air conditioning load.

## Mounting



Wall surface mounting



Wall flush mounting

## Automation and control

Control panel on the side surface of the unit.

### FUNCTIONS:

- On / off
- LED indication:
- Filter maintenance;
- Alarm;
- Speeds: 1 / 2 / 3
- Heat recovery mode
- Summer cooling mode

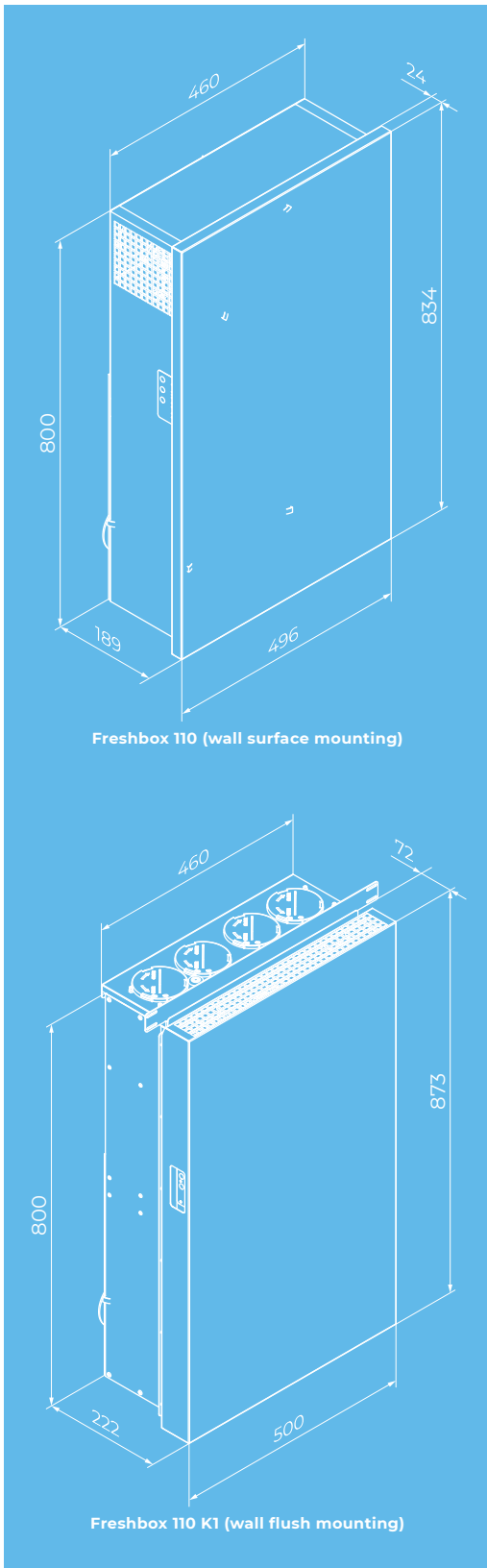
## Technical data







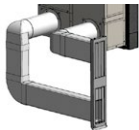
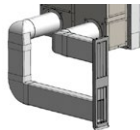
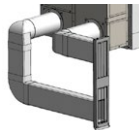





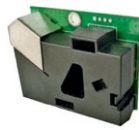


	Freshbox 110			Freshbox 110 K1			Freshbox 110 ERV			Freshbox 110 K1 ERV		
<b>Speed</b>	1	2	3	1	2	3	1	2	3	1	2	3
<b>Air flow [m<sup>3</sup>/h]</b>	30	60	100	30	60	100	30	60	100	30	60	100
<b>Voltage [V / 50-60 Hz]</b>	1~230			1~230			1~230			1~230		
<b>Power [W]</b>	10	15	31	10	15	31	10	15	31	10	15	31
<b>Max current [A]</b>	0.26			0.26			0.26			0.26		
<b>RPM [min<sup>-1</sup>]</b>	3200			3200			3200			3200		
<b>Sound power level L<sub>WA</sub> to environment [dB(A)]</b>	31	41	51	31	41	51	31	41	51	31	41	51
<b>Sound pressure level L<sub>pA</sub> to environment at 1 m distance [dB(A)]</b>	20	30	40	20	30	40	20	30	40	20	30	40
<b>Sound pressure level L<sub>pA</sub> to environment at 3 m distance [dB(A)]</b>	10	21	31	10	21	31	10	21	31	10	21	31
<b>Operating temperature [°C]</b>	from -15 to +40			from -15 to +40			from -15 to +40			from -15 to +40		
<b>Case material</b>	polymer coated steel			polymer coated steel, galvanized steel			polymer coated steel			polymer coated steel, galvanized steel		
<b>Insulation [mm]</b>	10			10			10			10		
<b>Extract filter ISO 16890 / EN 779:2012</b>	Coarse 90 % / G4			Coarse 90 % / G4			Coarse 90 % / G4			Coarse 90 % / G4		
<b>Supply filter ISO 16890 / EN 779:2012</b>	Coarse 90 % / G4 Optional: ePM1 65% / F7			Coarse 90 % / G4 Optional: ePM1 65% / F7			Coarse 90% / G4 Optional: ePM1 65% / F7			Coarse 90% / G4 Optional: ePM1 65% / F7		
<b>Connected air duct diameter [mm]</b>	2×100 mm + optional 1×100 mm			2×100 mm + optional 4×75 mm			2×100 mm + optional 1×100 mm			2×100 mm + optional 4×75 mm		
<b>Weight [kg]</b>	20			23			20			23		
<b>Heat recovery efficiency [%]*</b>	93	87	84	93	87	84	85	80	72	85	80	72
<b>Humidity recovery efficiency [%]*</b>	-	-	-	-	-	-	45	39	29	45	39	29
<b>Heat exchanger type</b>	counter-flow			counter-flow			counter-flow			counter-flow		
<b>Heat exchanger material</b>	polystyrene			polystyrene			enthalpic			enthalpic		
<b>SEC class</b>	A			A			A			A		

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

## Overall dimensions [mm]

## Accessories



 <p><b>FP 176x160x22</b> Coarse 90% / G4 Extract filter</p>	 <p><b>FP 203x150x22</b> Coarse 90% / G4 Supply filter</p>	 <p><b>FP 203x150x22</b> ePM1 65% / F7 Supply filter option</p>
 <p><b>MS Freshbox 110</b> Mounting kit</p>	 <p><b>MS Freshbox 110 white</b> Mounting kit</p>	 <p><b>MS Freshbox 110 chrome</b> Mounting kit</p>
 <p><b>MSI Freshbox 110</b> Mounting kit for corner mounting of the grille in the window opening</p>	 <p><b>MSI Freshbox 110 white</b> Mounting kit for corner mounting of the grille in the window opening</p>	 <p><b>MSI Freshbox 110 chrome</b> Mounting kit for corner mounting of the grille in the window opening</p>
 <p><b>AH Freshbox 110</b> Supply and exhaust hood</p>	 <p><b>AH Freshbox 110 white</b> Supply and exhaust hood</p>	 <p><b>AH Freshbox 110 chrome</b> Supply and exhaust hood</p>
 <p><b>CD-1</b> CO<sub>2</sub> sensor</p>	 <p><b>CD-2</b> CO<sub>2</sub> sensor</p>	 <p><b>CD-3</b> CO<sub>2</sub> sensor</p>
 <p><b>HR-S</b> Humidity sensor</p>	 <p><b>EH Freshbox</b> Heater</p>	





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The manufacturer reserves the right to make any changes due to the need for production, without prior notice.

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