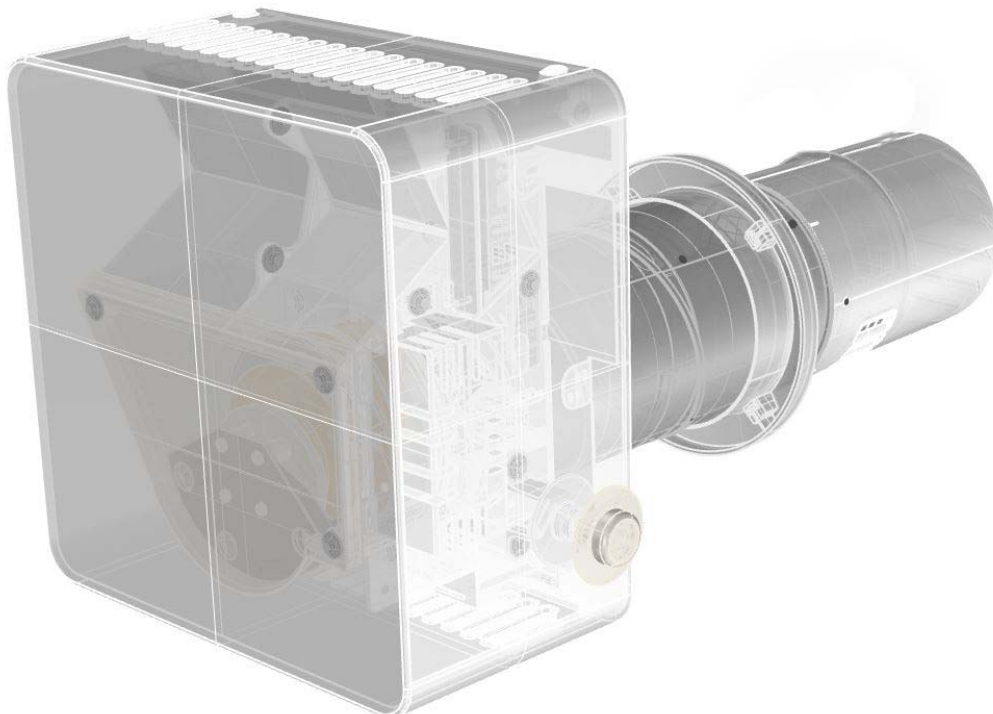


Operation and maintenance manual

Easy Air



Rev. 2021.10.02

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1. System description

1.1 Purpose

The purpose of Easy Air is to create balanced ventilation with heat recovery by means of mechanical injection and extraction.

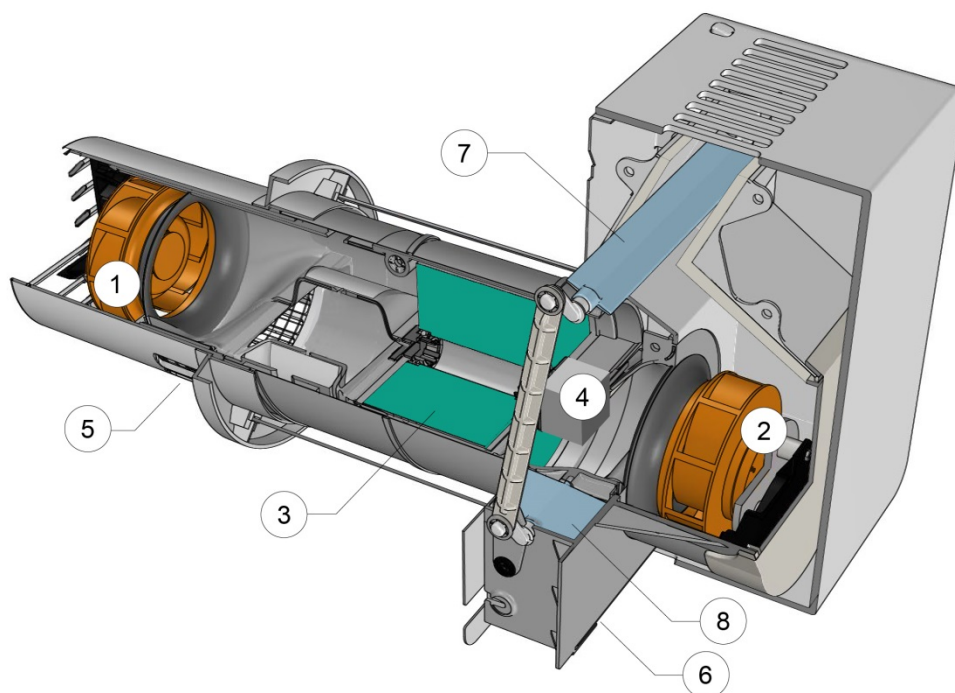
1.2 Supply area

Easy Air is a decentralised system for the supply of one room.

1.3 Operation

Easy Air is a ventilation system for balanced mechanical ventilation in which the driving forces are electrically powered fans. The system consists of mechanical extraction and injection air as well as a heat recovery unit. Filters and dampers are used to treat the air.

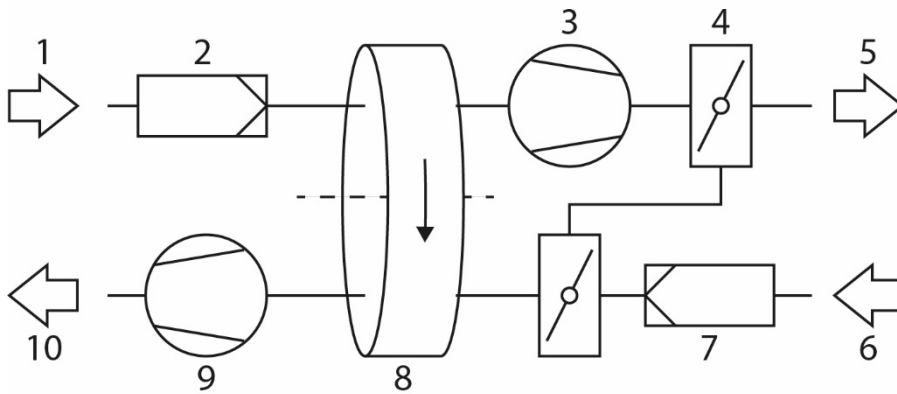
2. Component overview



1. Extraction fan
2. Injection fan
3. Rotating heat exchanger
4. Motor for heat exchanger
5. Extraction filter
6. Injection filter
7. Closing damper for injection air
8. Closing damper for extraction air

3. Operation

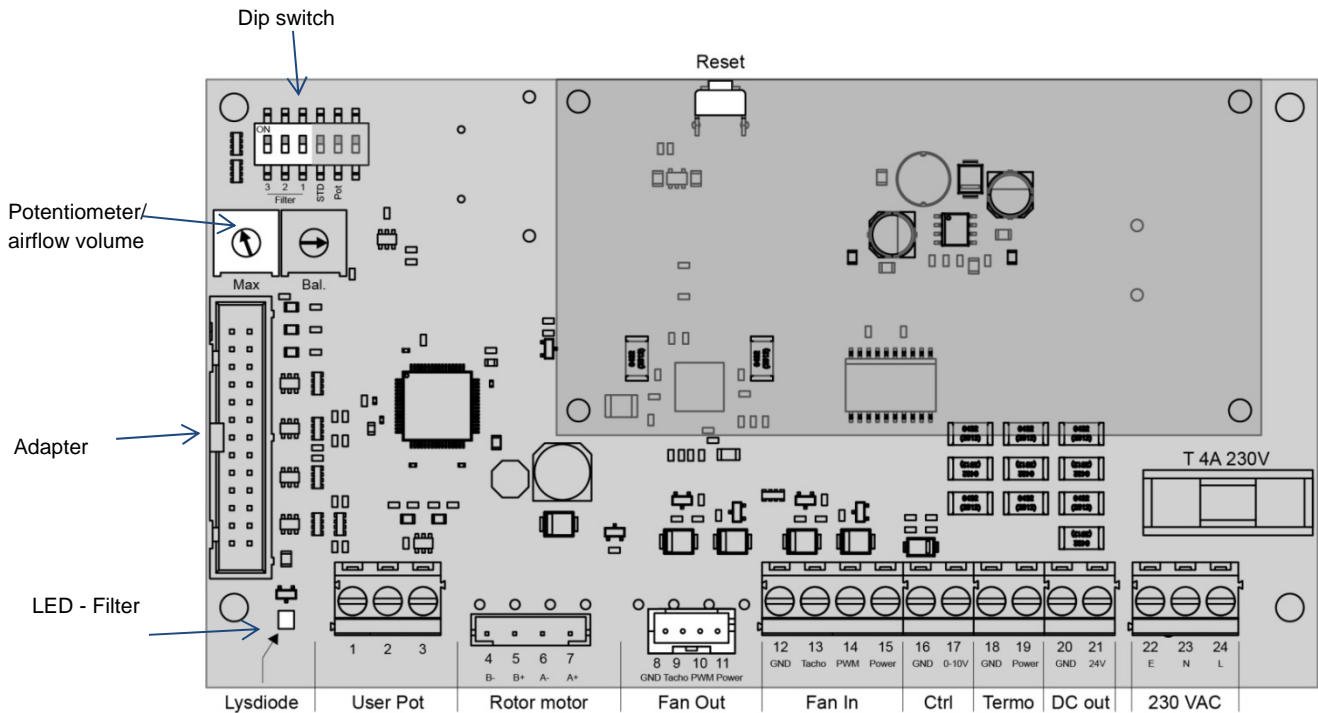
3.1 Operational diagram



3.2 Description

The outside air (1) is drawn in through the filter (2) and the heat recovery unit (8) by means of the fan (3), after which it is blown into the room (5). The inside air (6) is drawn by the fan (9) through the filter (7) and the heat recovery unit, after which it is blown outside (10).

3.3 Settings print



3.3.1 Potentiometer

Easy Air is equipped with 2 potentiometers on the print. The max. potentiometer turns the airflow volume up and down and the factory setting is 54 m³/h at 35 dB(A). The airflow volume may be increased by turning the potentiometer clockwise. At max., the airflow volume is 100 m³/h at 52 dB(A). The balance potentiometer (Bal.) is set and does not require further adjustment.

3.3.2 LED - Filter

A timer indicates when it is time to inspect the filter. The LED "Filter" flashes when the specified time has passed (only counts when the fans are switched on). The LED may be switched off by pressing the button "Reset" which also resets the counter. By means of a dip switch, the timer may be set to off, 3 ,6 ,9 and 12 months, respectively.

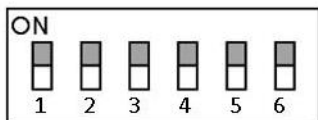
3.3.3 Ctrl, 0-10V input

A 0-10V input (GND + signal) may be used to switch on and adjust fan speed. 0V = switched off. 1V-10V = adjustment of speed, however, limited by max. potentiometer setting on the print.

3.3.4 Adapter PCB

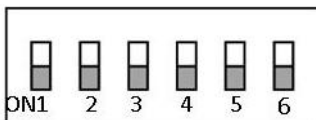
Allows for the connection of expansion print.

3.4 Dip switch - main print



Nr	
1	Filter timer 12 mdr.
2	Filter timer 6 mdr.
2+3	Filter timer 9 mdr.
3	Filter timer 3 mdr.
4	Control from network 0-10 volts.
5	No potmeter on the unit
6	Basic ventilation 25% speed

3.5 Expansion print



				Potmeter scale
1	RHT	Humidity sensor	P1	40-100 %
2	Temp	Frost protection	P2	0-12°C
3	Timer	With potential free contact set	P3	0-30 min.
4	No/Nc	Turn contact function on timer		
5	Co ²	Co ² sensor		500-1000 ppm
6		Not in use-must be OFF		

4. Maintenance instructions

This chapter sets out the requirements and intervals for component inspections and maintenance. The interval for unit inspections must not exceed one year.

4.1 Filter change

A timer indicates when it is time to inspect the filter. The LED "Filter" flashes when the specified time has passed (only counts when the fans are switched on). The LED may be switched off by pressing the button "Reset" which also resets the counter. By means of a dip switch, the timer may be set to off, 3 ,6 ,9 and 12 months, respectively.

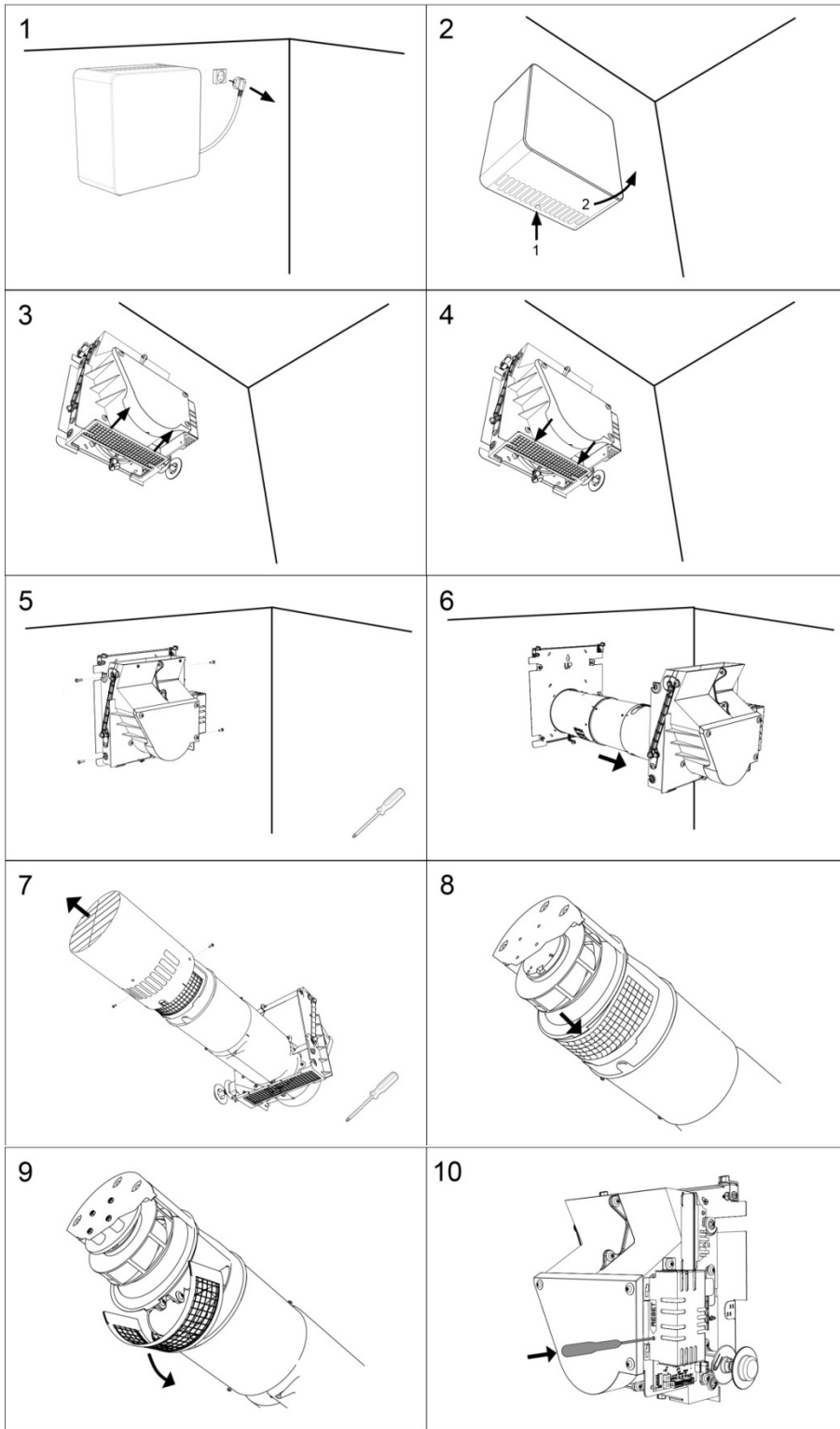
4.1.1 Internal filter

The filter is changed when required or at filter alarm.

4.1.2 External filter

The external filter is changed when required or at filter alarm.

4.1.3 Step-by step guide to filter change



4.2 Cleaning

The plastic components of the unit are made from ABS and may be cleaned with clean water or soapy water and a soft cloth.

4.3 Service

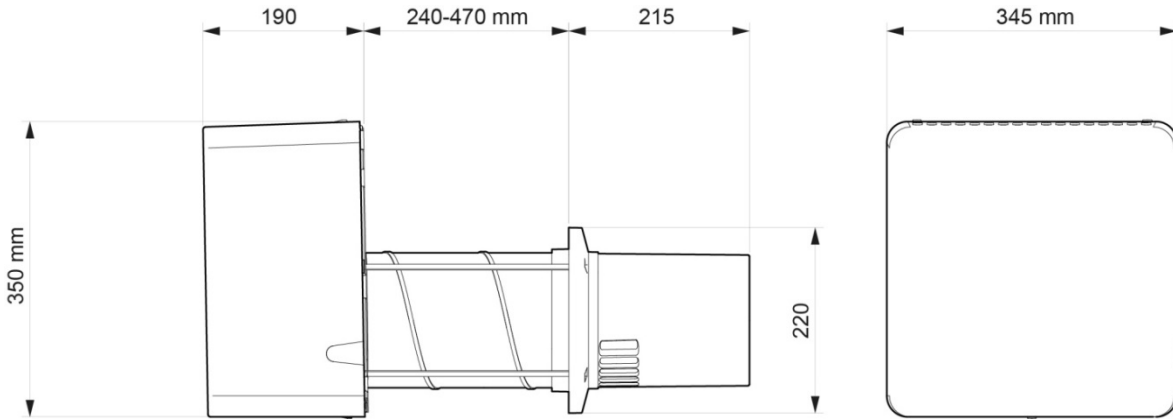
It is recommended to carry out one annual service (by agreement). The exchanger and the fans are soiled by airborne dust and dirt. When these components are soiled, the airflow volume is reduced as is the efficiency of the heat recovery.

4.4 Device error - red flashing diode

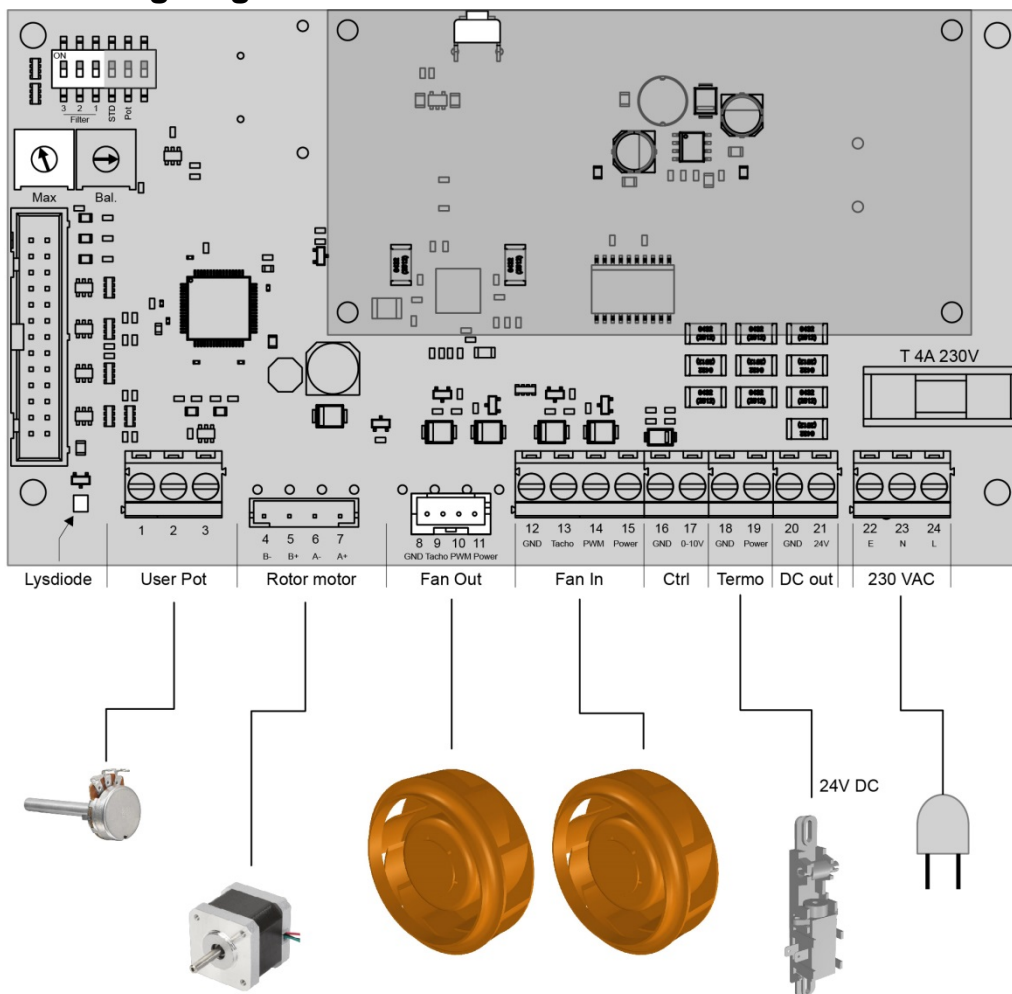
- 2 flashes with red LED when time has elapsed for filter timer (Filter-reset switch, located under power supply, through small hole)
- 3 flashes with red LED, frost protection alarm.

5. System drawings

5.1 Dimensioned drawing



5.2 Wiring diagram

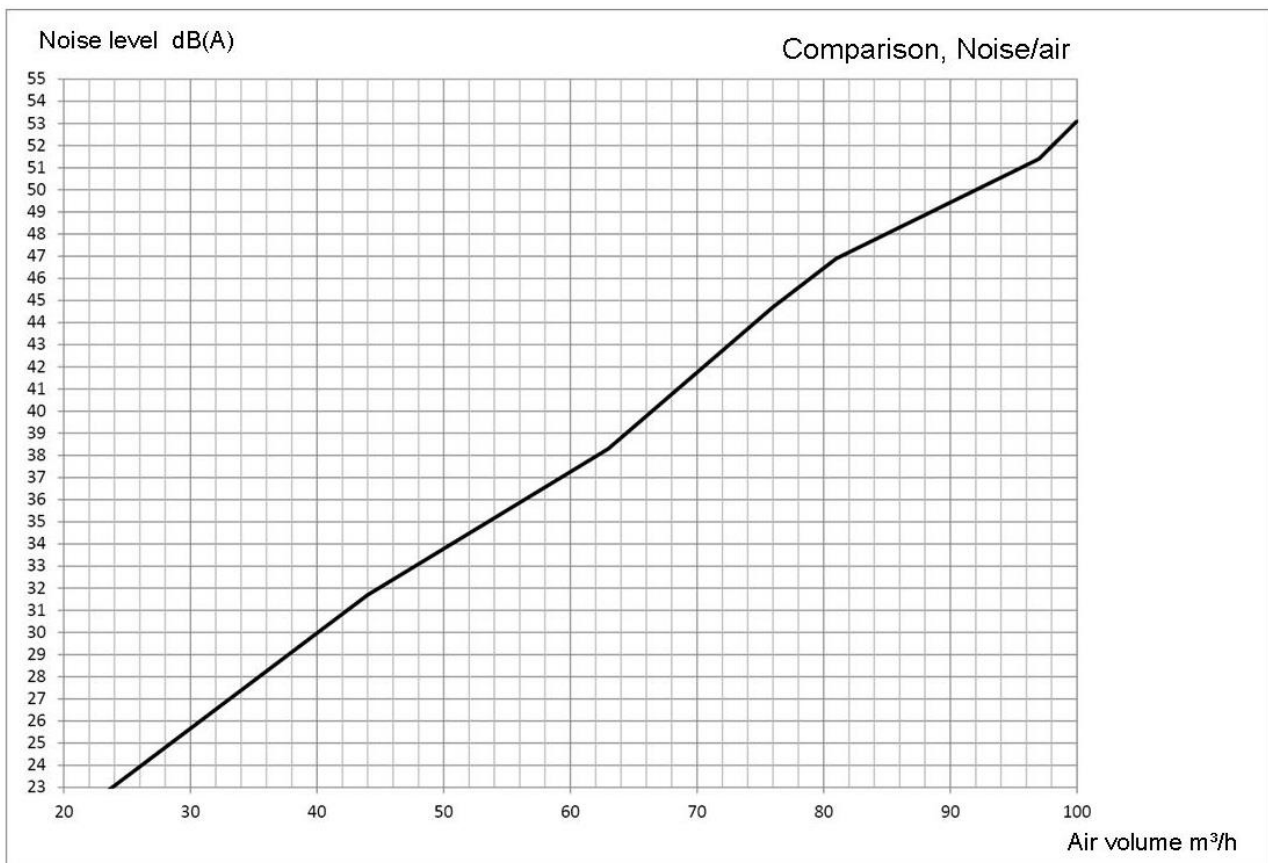


6. Technical data

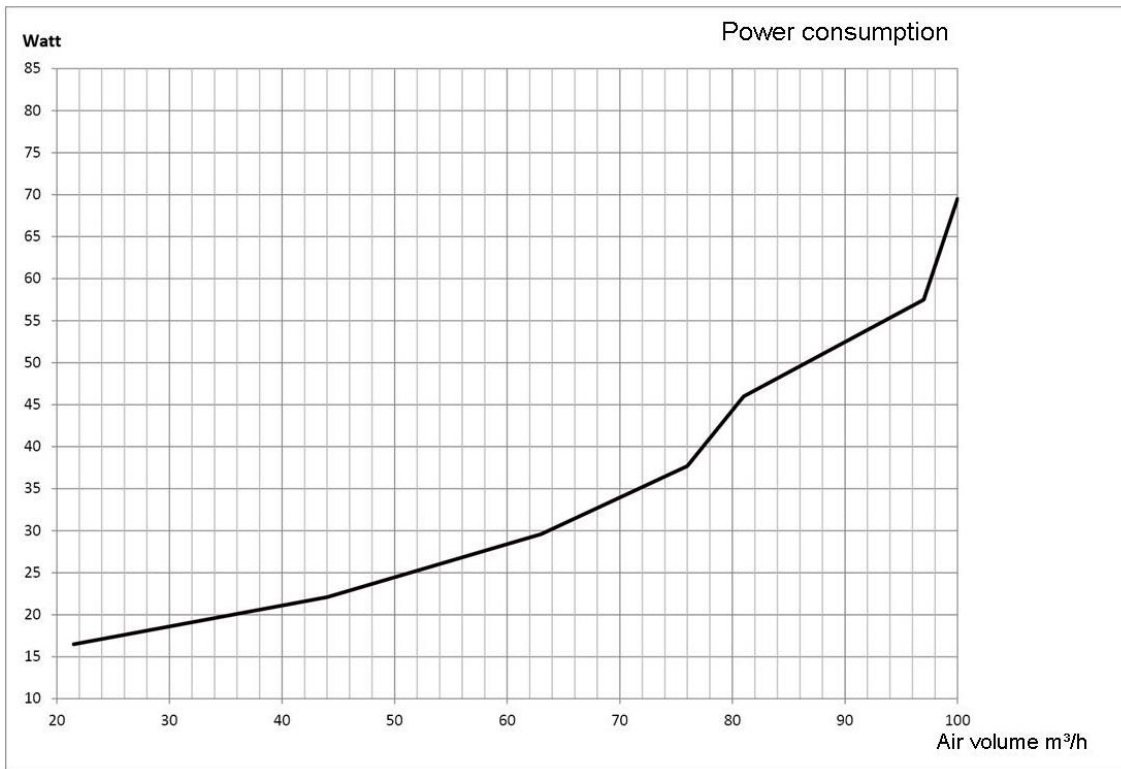
6.1 Factory settings, etc.

	Factory settings	*User adjustment
Air volume	20 – 54 m ³ /h	20 – 100 m ³ /h
Power consumption	17 – 27 Watt	17 – 63 Watt
Standby	1.2 Watt	1.2 Watt
Noise level	20 – 35 dB(A)	20 – 52 dB(A)
Heat recovery	81 – 74%	81 – 64%
Dimensions, inner (WxHxD)	345x350x190mm	
Dimensions, outer	Ø160x215mm	
Weight	10 kg	
Channel lead-in	Ø180mm	
Filter type	Mono-filtered mesh, polyamide	

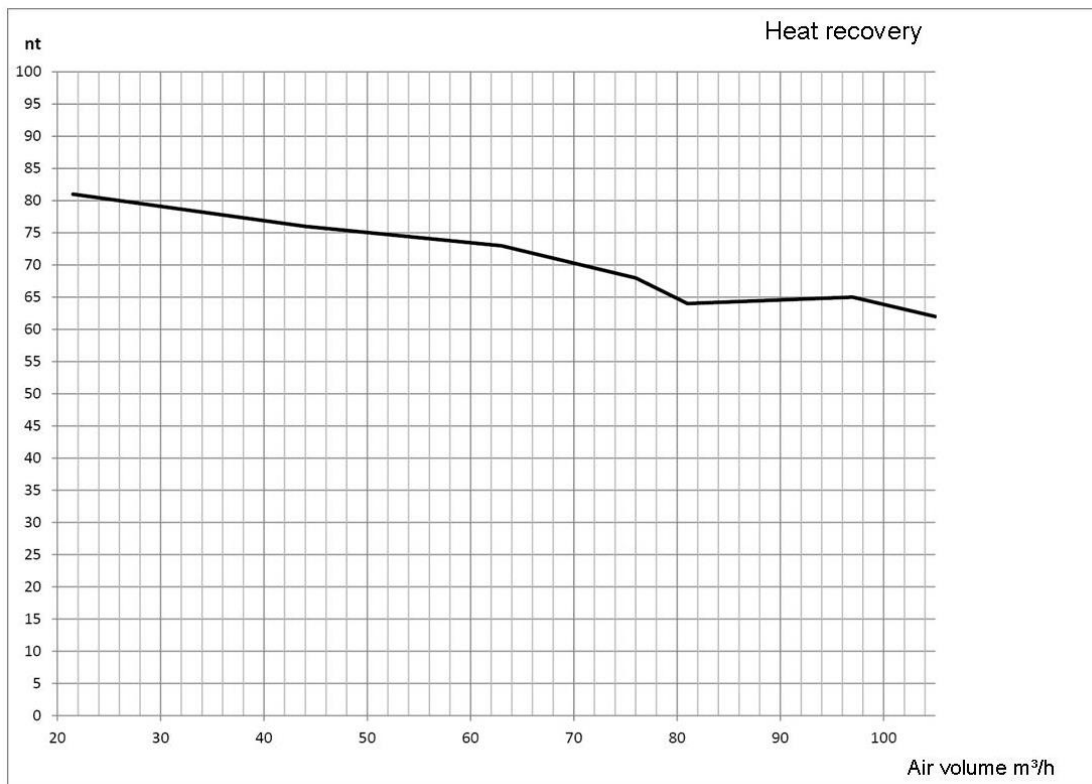
6.2 Comparison, Noise/air



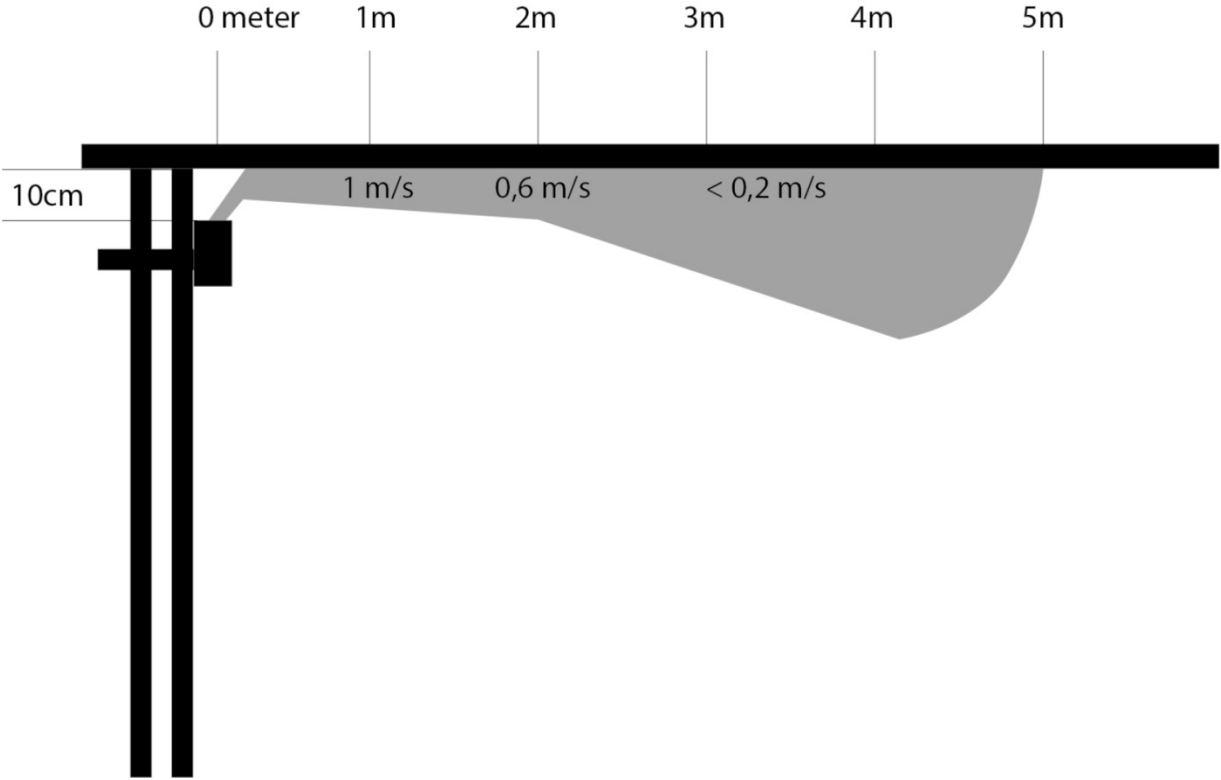
6.3 Power consumption



6.4 Heat recovery



6.5 Injection length



7 Declaration of conformity

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EC DECLARATION OF CONFORMITY

The undersigned, a representative of
Turbovex A/S

whose manufacturing plant is located at the address:
**Industrivej 45
DK-9600 Aars**

hereby declares that the product
Easy Air

meets the requirements of
**2006/42/EC Machinery Directive of 17 May 2006
2014/35/EU Low-Voltage Directive of 26 February 2014
2014/30/EU EMC Directive of 26 February 2014**

and that the following other standards and specifications have been applied:

DS 447:2013

(Ventilation for buildings – Mechanical, natural and hybrid ventilation systems)

DS 428:2019

(Code of practice for technical measures for fire protection of ventilation systems)

DS 452:2013

(Thermal insulation of technical service and supply systems)

DS/EN 308:1997

(Heat exchangers – Test procedures for establishing performance
of air to air and flue gases heat recovery devices)

DS/EN 13053:2019

(Ventilation for buildings – Air handling units – Rating and performance for units, components and sections)

This declaration shall only apply if no modifications or changes have been made to the unit.

Aars 04.05.2020

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