

ATMOS 175 DC

PASSIV HAUS COMFORT VENTILATION 'MVHR' UNIT IN TWO SPECIFICATIONS

 **PAUL**
WÄRMERÜCKGEWINNUNG



PASSIVE
HOUSE
compliant
COMPONENT
Dr. Wolfgang Feist



Heat recovery:
heat recovery rate
[effective]: 88% ¹⁾
Electrical efficiency: 0.32 Wh/m³ ²⁾

¹⁾ results may vary according to the test methods used, e. g. with or without condensation
²⁾ best efficiencies in the German market today

Models

- Intake & exhaust duct connection side top; supply & extract duct connection side bottom [picture on the right]
- Intake & exhaust duct connection rear bottom; supply & extract duct connection on top [picture on the left]

PRODUCT DESCRIPTION

The PAUL heat recovery (MVHR) unit atmos 175 DC is designed for air flows in the range between 150 and 300 m³/h for balanced mechanical ventilation in homes. It features a novel counter-flow channel-type heat exchanger (protected by German and European patents). The two available specifications save space and allow for optimised ducting routes. Thanks to its broad range of performance, it can be used in most types of single-family houses.

This MVHR system meets the challenges of high energy efficiency and ease of use. The electronically commutated (EC) radial fans have constant-flow characteristics. They can be controlled via a three-step switch, step 1 & 3 step can be independently set, step 2 being the mid point. Alternatively, the fans can be controlled by a bus system via an actuator (multiple switch output) integrated in a building automation system, or can be directly controlled via a 0 – 10 V control signal. Another option is to use a sealed keypad providing: 7-step control of air flows, intake/exhaust balancing, boost function, supply-only or extract-only (summer ventilation), automatic frost protection, and filter monitor function. An additional boost switch and a weekday timer can be connected. Negative pressure prevention for fireplaces can also be integrated.

The PAUL MVHR unit is a fully soundproofed and heat-insulated design avoiding thermal bridges. It includes 40 mm thick heat insulation with no thermal bridges. The vibration-damped electronically commutated radial fans with integrated electronics provide very low noise levels and high energy savings.

Intake air is cleaned via a G4 filter or, optionally a F8 pollen filter. On the extract side, a G4-class filter protects the MVHR heat exchanger from contamination. The MVHR unit atmos 175 DC is certified to Passiv Haus standard by the Passivhausinstitut.



3-step switch
surface or flush mounted



Membrane keypad
for manual control
with weekday timer (option)
matching the PEHA switch
programmer

alternative option:
system BUS actuator

atmos 175 DC

Unit dimensions:
Control dimensions:

TECHNICAL DATA

H x W x D [mm]: 1600 x 552 x 442
L x W x D [mm]: 340 x 300 x 80

Installation:

Raise by 100 to 200 mm from floor for condensate discharge

Place of installation:

frost free, preferably > 10°C

Duct connections:

4 x air 160 mm in dia.

Condensate:

3/4" hose connection
(spec. 1)

3/4" male thread connection
(spec. 3)

Material:

Housing: galvanised steel plate, white powder coated, 40 mm heat insulation, no thermal bridges.
Heat exchanger: plastic

Weight:

62 kg

Filters:

Intake air: G4 or F8 (pollen filter).
Extract air: Spec. 1: G4
Spec. 3: G3

Electrical connection:

230 V, 50 Hz, ready for connection – no cable

Cable lengths:

- power cord (230 V): by customer
- MVHR unit to controller unit: 3 m
- controller unit to programmer: max. 15 m (by customer)

Control:

- 3-step switch, or
- manual via membrane keypad, or
- actuator of BUS system

Protection:

IP 41

Ventilators:

2 EC radial fans with integrated electronics and constant-flow characteristic

Power input:

15 W to 125 W

Flow / available pressure:

see chart 1

Heat recovery rate:

approx. 85 to 95%

Sound pressure level:
acc. to DIN 3743-1
(3-m distance in dB(A))

Step (in%)	30	60	100
Lp	18	22	27

Temperature range of heat exchanger:

can be used between -20°C and 40°C

Summer operation:

- manual summer bypass, or
- extract-only (manual control)

Frost protection:

- optional frost protection heater
- optional ground to air heat exchanger
- continuous slowing down of supply air fan¹⁾ (with membrane keypad)
- hardware adjustable to fireplaces in case of 3-step switch or bus actuator control

¹⁾ with fireplace option

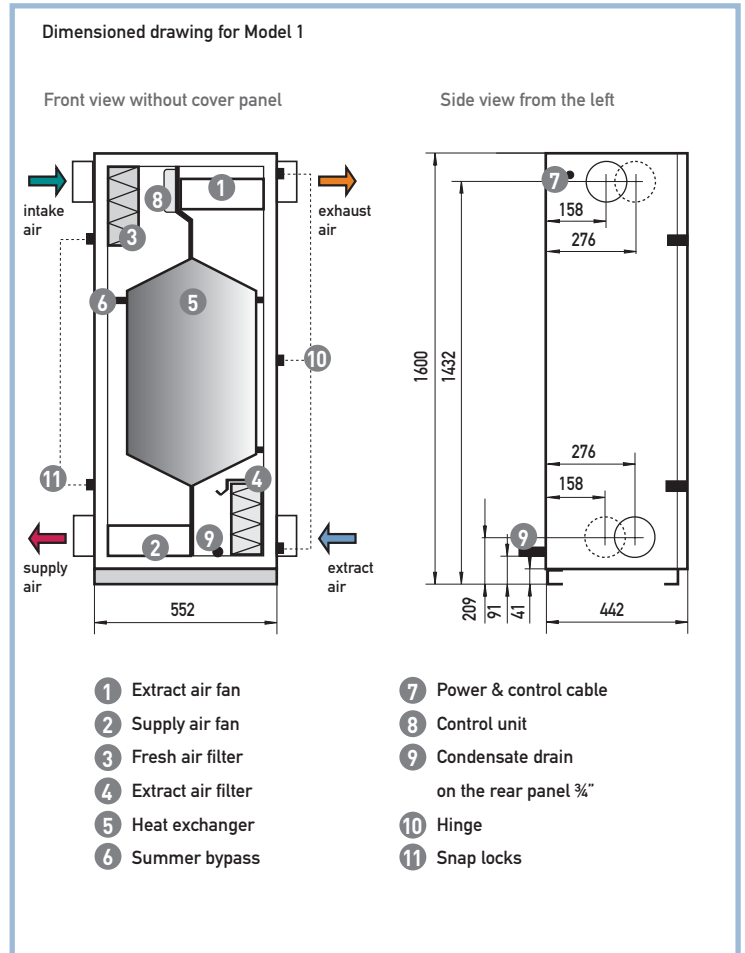
Back-up heating:

- hot water duct heater as external unit
- electric duct heater as external unit

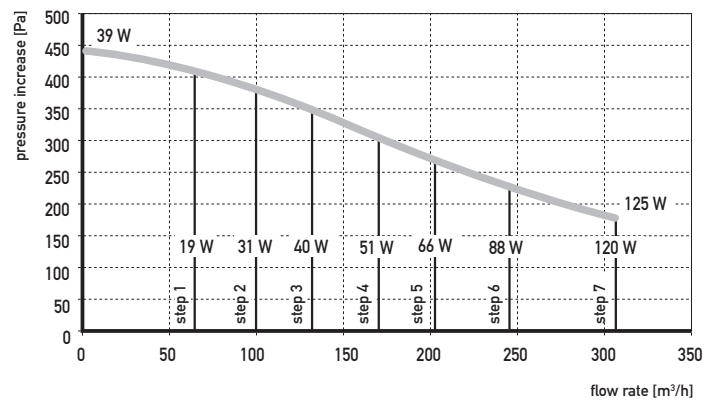
Information:

Subject to change in the interest of technical progress.

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Characteristic of atmos 175 DC



- Environment award
- Innovation awards
- European and German patents
- Product of the Year award
- First Passiv Haus certified MVHR system
- Environment Oscar award
- INTEC award for Saxony

PAUL Comfort Ventilation obtained innovation awards both on the German state and Saxony regional levels, and received the German Environment Award (European-wide competition), as well as the Product of the Year and Environment Oscar awards.

PAUL offers equipment for controlled residential ventilation with efficiencies of up to 99% – groundbreaking in the industry.

Our motto is "New ideas in ventilation" – for fresh and healthy air in homes with energy saving systems for safeguarding the integrity of the environment.