

NOVUS 300

UNIVERSAL MECHANICAL VENTILATION
HEAT RECOVERY (MVHR) UNIT
• MADE IN GERMANY •

WITH HUMIDITY
RECOVERY



LED control unit
Listed in PEHA switch range



colored TFT touchscreen panel

PASSIVE
HOUSE
certified
COMPONENT
Dr. Wolfgang Feist



Heat recovery:
Heat recovery rate
(effective): 93% / 94.4%^{1) 2)}
Electric efficiency: 0.23 Wh/m³ / 0.24 Wh/m^{3 2)}

¹⁾ results may vary according to the test methods and air volume flow used
²⁾ corresponds to at present best values world-wide

TECHNICAL DESCRIPTION

The PAUL MVHR unit novus 300 is used for controlled room ventilation (air flow rate: 80 to 300 m³/h). It is equipped with a highly efficient reverse flow duct heat exchanger (European patent). Its broad range of performance allows a use in all residential areas with a living space up to 220 m². The various installation alternatives – vertical or horizontal on mounting base or vertical or horizontal wall mounting – help to save space. A right or left side version of the unit is available for optimizing the routing of air ducts.

The standard heat exchanger can optionally be replaced by a membrane moisture heat exchanger, which can reclaim a high percentage of the air humidity of the extract air. The standard intake and extract air filters are G4 filter class filters. Optionally, the intake air can be cleaned by a F7 pollen filter. An automatic bypass control with motorized 100%-bypass flap ensures the summer bypass mode. The housing consists of galvanized, powder-coated sheet steel. The interior lining, made of high quality polypropylene, assures a high degree of heat- and sound insulation.

The system can either be controlled by a LED control unit or a colored TFT touchscreen panel with intuitional menu navigation, which assures an ideal communication with the ventilation unit.

The MVHR unit meets the high demands of energy efficiency and comfortable installation both because of the patented PAUL heat exchanger, the constant flow fans and the intuitional colored TFT touchscreen panel.

The intelligent control management offers the following functions:

- Ventilation steps: OFF, ABSENT, STEP 1, STEP 2, STEP 3 *
- Ventilation steps: OFF, ABSENT, STEP 1 to STEP 7 **
- „Only supply air“ or „only exhaust air“ ** („only exhaust air“ with enterprise with fire place closed)
- Individual programming per ventilation step in 1% increments for intake and extract air (60–300 m³/h) *
- Weekly time programmes configurable individually *
- Automatic control system for external air quality sensors *
- Digital communication interface for peripheral equipment
- Filter runtime control
- Freeze protection regulation (including frost protection for downstream hot water duct heater)
- Control internal summer winter bypass
- Equipment prepares for the common enterprise with a fire place
- power input in standby-function 1 W

* control function not with LED control unit
** control function only with LED control unit

Optional (additional module)

- Control of an external defroster heating
- Control of heating circuit
- Control of electric regulating flap at GHX

novus 300

TECHNICAL DATA

Distribution by:

- Dimensions: H x W x D (mm): 978 x 792 x 601
- Installation:
 - vertical or horizontal on mounting base
 - Wall mounting, vertical or horizontal
- Place of installation: Frost protected, preferably > 10 °C
- Duct connections: 4 air ducts Ø 160 mm
- Condensate: Male thread 1¼"
- Material:
 - Housing: Galvanized steel, powder-coated
 - Thermal bridge free heat insulation
 - Heat exchanger:
 - Plastic (counter flow channel type heat exchanger)
 - Cellulose (moisture heat exchanger)
- Weight: 50 kg
- Filters:
 - Intake air: G4 or F7 (pollen filter)
 - Extract air: G4
- Electrical connection: 230 V, 50 Hz, ready for connection, with plug
- Cable lengths:
 - Mains cable (230 VAC): 2 m
 - CAT-5-cable: 1.5 m
 - Variable between RJ-45 wall outlet and control modules/external components, by customer
- Control: Universal control
- Protection: IP 40
- Fans: EC radial fans with integrated electronics, V-constant control

Flow rate / Externally available pressure / Power input:

Characteristics see Chart 1

Flow rat [m³/h]	Externally available pressure [Pa]	Power input [W]
100	51	17
97	105	25
199	101	45
207	148	58
297	100	86
282	201	117

Table 1: Selected performance data

- Heat recovery rate: to 95%
- Sound pressure level: acc. to DIN EN ISO 3744 (3-m distance)

to 95%

Flow rat [m³/h]	Sound pressure level [dB(A)]
200	21
300	26

Table 2: Sound data equipment radiation

- Application limits: Can be used between -20 °C to 40 °C
- Summer operation: Sensor controlled summer bypass
- Frost protection:
 - Frost protection control or
 - Defroster heater (optional) or
 - Ground heat exchanger (by customer)
- Backup heating:
 - Hot water backup duct heater or
 - Electric duct heater (each as external unit)
- Information: Subject to change in the interest of technical progress.

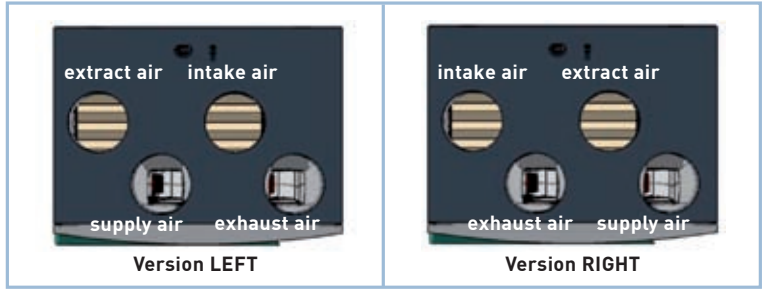


Image 1: Versions

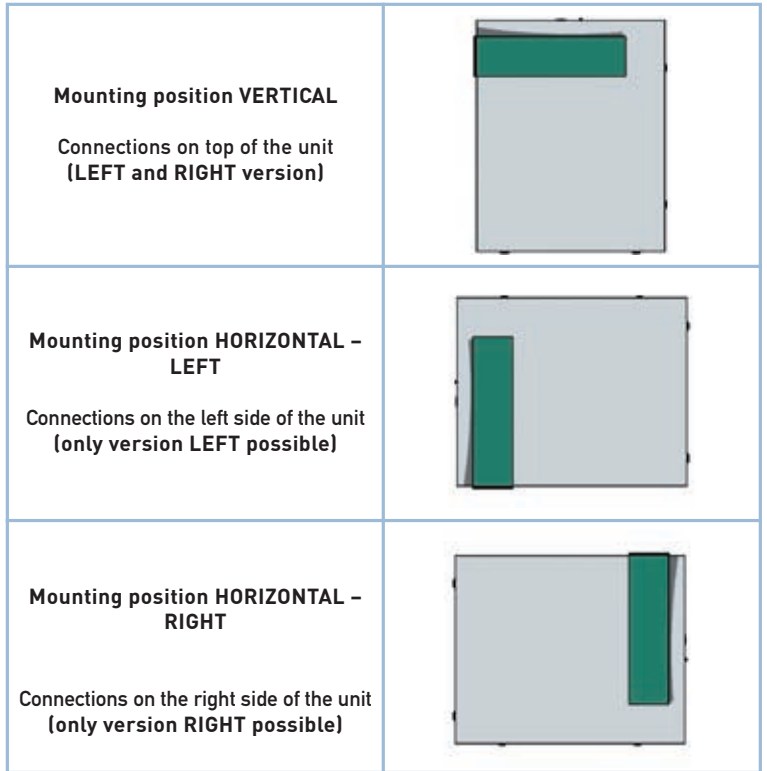


Image 2: Mounting positions: wall mounting or mounting base installation

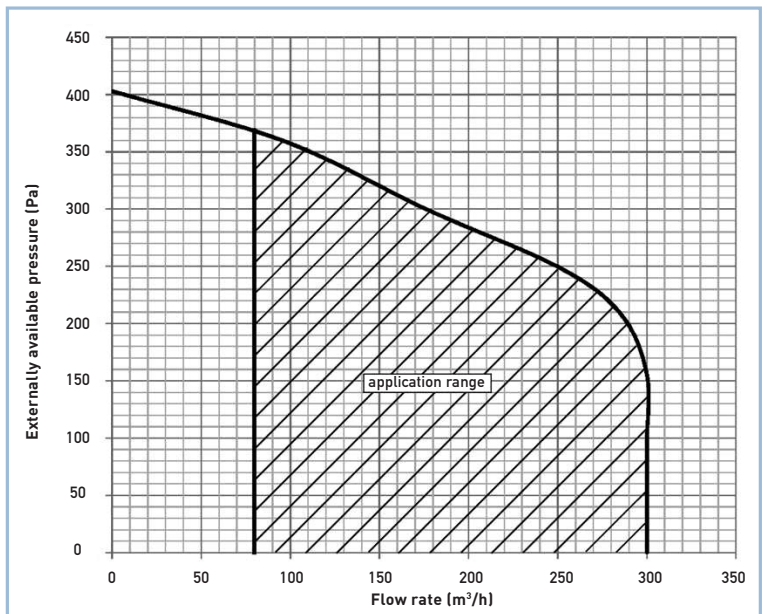


Chart 1: Characteristics for flow rate / externally available pressure

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

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

PAUL heat recovery offers equipment for controlled residential ventilation with efficiencies of up to 99%, which is groundbreaking in the industry.

“New ideas in ventilation” is our vision - for fresh and healthy air in apartments with energy-saving technology for safeguarding the integrity of the environment.

