

# FOCUS (F) 200

Central ventilation device with heat recovery

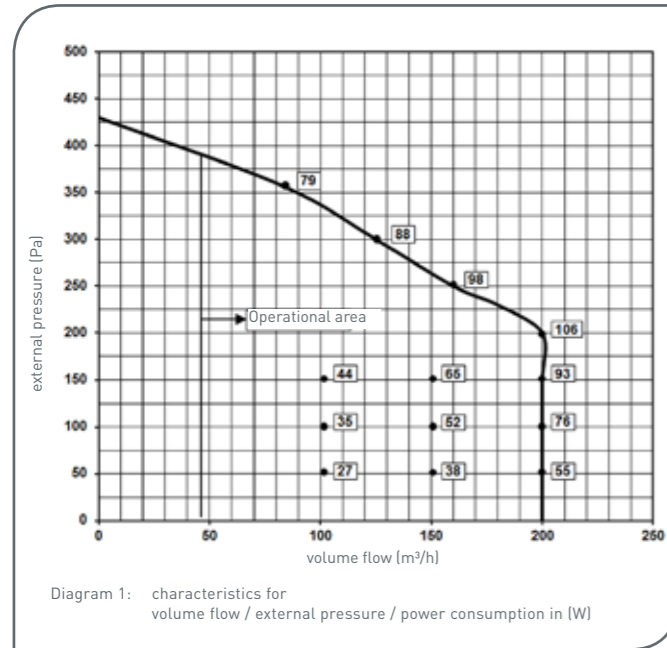


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## Characteristics



### Note:

The figured number values in the diagram of the p-V-characteristic curve give the power consumption in [W] in the corresponding operating points and are valid for FOCUS 200 respectively with standard heat exchanger.

## Other instructions

### Connection of control panels and components:

- Delivery contains 1,5 m CAT-5 cable for the connection between RJ-45-jack at the ventilation device and RJ-45-jack of the adapter board
- For the installation of the control panels the flush mounted box is necessary
- Control line: J-Y(St)Y 2x2x0,6 screened, max. 25 m
- Flush mounted box, data cable, terminal box by customer

### Adjustment values of the fan speeds at the LED control panel in relation to the nominal value setting:

Fan speeds LED control panel	nominal value setting [%]
1	17
2	25
3	40
4	53
5	68
6	83
7	100

## PAUL . The passive activists



Since the foundation by Grad.-Engineer Eberhard Paul in the year 1994, the company is among the pioneers and technology leaders in the ventilation sector. The starting point was already, at the beginning of the nineties, the idea of a new heat exchanger in counter flow channel principle. From the beginning, the west saxonian company has committed itself as specialist of high-efficient heat recovery in the living spaces ventilation and already in 1996 presented the first ventilation unit with heat recovery. Many innovative product developments, patents and distinctions succeeded. For the living space ventilation device THERMOS PAUL received in 2002, as a first company in Germany, the certificate „passive house adequate components“ of the Passive house Institute Dr. Wolfgang Feist in Darmstadt. In 2009 moved into today's head office in Reinsdorf in Zwickau. Consequently, following the company philosophy, the new administration wing was erected in passive house building method. In the year 2010, with the new NOVUS 300, PAUL brought to the market the device with today's best passive house certificated heat recovery. PAUL offers Europe-wide a range of high quality, passive house certified devices Made in Germany and is among the sector leaders in the segment living spaces ventilation. In 2014, the around seventy members team of the „passive activists“, celebrates the 20th anniversary of the foundation.

## Technical description

- Compact heat recovery unit for the central comfort ventilation
- for dwellings up to 150 m<sup>2</sup> floor area
- Volume flow rate: 45 up to 200 m<sup>3</sup>/h
- Passive house certified heat recovery rate up to 91 % in an electric efficiency of 0,31 Wh/m<sup>3</sup> (FOCUS 200)
- optional with humidity recovery (enthalpy exchanger)
- summer ventilation function
- Assembly versions: wall hanging or standing on assembly frames, respectively as left or right device version
- Equipped as standard with intake air filter and extract air filter of the filter class G4, optional pollen filter F7
- control panel: TFT touch panel with colour display, optional: LED control panel
- Casing of galvanised powder-coated sheet steel, high quality polypropylene internal lining for high heat insulation and good device noise protection



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### TFT touch panel with colour display

#### Function keys:

- Stand by (shaded display), power consumption <1W
- Fan speeds 1 - 3 (in 1 % steps programmable)
- Absence mode (interval controlled fan speeds 1)
- Boost ventilation (duration between 15 to 120 min, individually adjustable)
- Automatic mode operation time controlled (individually adjustable weekly time program in 15 min. steps for every day of the week)
- Sensor automatic mode, optional with external sensors (CO<sub>2</sub>, humidity, air quality)
- Menu (access to information, adjustment and set up menus)
- Password protected key lock for inactive display surface

#### Displays:

- Text and symbol driven menu representation
- Filter change control display (days of the remaining run-time of the filter)
- Error message through message symbol
- Info error display in the menu informations

### LED control panel

#### Function keys:

- Stand by (no LED display of the fan speeds), power consump. <1W
- Fan speeds 1 to 7 (fixed adjusted values)
- Boost ventilation (duration 15 min, level 7 fixed adjusted)
- Operating mode „only supply air“ or „only exhaust air“
- Reset for filter change

#### Displays:

- Filter change control display (LED display through button reset filter change)
- Error message by means of LED codification

## Control



WxHxD: 102x78x14mm (stainless steel frames)



WxHxD: 80x80x12mm (PEHA switch program)

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## Technical data

- Device dimensions: Width x Height x Depth (mm): 752 x 566 x 355
- Possible mounting positions:
- horizontal wall-hanging
  - horizontal on assembly frames (optional), frames height adjustable 280 - 320mm
- Installation location: Frost-free interior area; ambient conditions < 70 % r. h. in 22 °C
- Tube connections: 4 air duct connectors DN 125 (sleeve dimensions)
- Condensate: Basin valve external thread 1¼"
- Material: Casing: galvanised steel plate, powder-coated, RAL 7016 (anthracite grey)  
Internal lining: expanded polypropylene EPP for heat and sound insulation
- Heat exchanger type:
- Standard: Counter flow channel heat exchanger of plastic (patent PAUL), Freezing limit < 0°C
  - Optional (model „F“ or as accessory): Enthalpy exchanger (humidity heat exchanger) with washable polymer membrane, freezing limit < -8°C
- Weight: 25 kg
- Filter: Outside air: G4 or optional F7 (pollen filter), exhaust air: G4
- Electrical connection: 230 Vac, 50-60 Hz, ready-for-connection, cable with plug connection of a low power device
- Connection power: 0,14 kW
- Cable lengths:
- Power cable (230 Vac): 2 m (scope of delivery)
  - CAT-5 cable: 1,5 m (scope of delivery)
  - variable between RJ-45 wall socket and control modules/external components (by customer)
- Control: Universal control
- Protection class & type: Protection class I (according to EN 60335), protection type IP 30 (according to DIN 40050)
- Ventilators: EC radial ventilators with integrated electronic, V constant controlled
- Volume flow, external pressure, Power consumption: Volumen flow area: 45-200 m³/h (characteristic curves see diagram 1)

Volume flow [m³/h]	External pressure [Pa]	Power consumption [W]
80	50	25
100	100	40
140	100	51
198	60	66

Table 1: selected operating parameters

Efficiency criteria: (according to passive house certificate) 0,31 Wh/m³ (in 135 m³/h and 100 Pa)

Heat supply rate: (according to passive house certificate) 91 % (in 135 m³/h and 100 Pa)

Sound pressure level according to DIN EN ISO 3743-1 (distance 3m)

Volume flow [m³/h]	Sound pressure level [dB(A)]
155	30
200	24

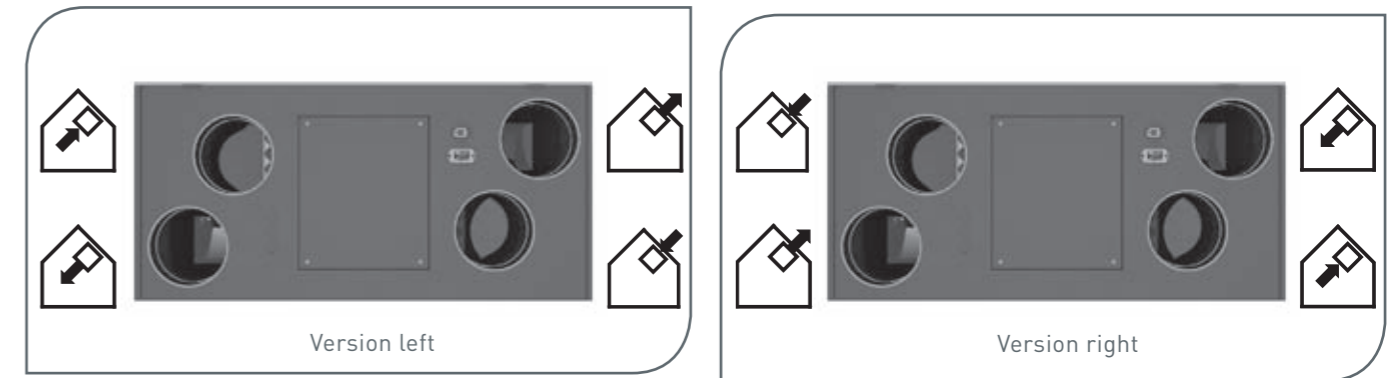
Table 2: noise data device radiation

Limitations of use: -20 °C to 40 °C (concerns electronic modules integrated in heat recovery unit)

- Freezing protection:
- Frost protection control or
  - external defrost heating (option) or
  - geothermal heat exchanger (by customer)
- Air supplementary heating:
- Warm water supplementary heater battery or
  - electrical supplementary heater battery (optional respectively as external unit)

- Options control:
- digital I/O interface (e.g. contact for OFF of external)
  - Connecting possibility boost ventilation sensing device
  - Control external defrost heating, heat circuit or air-supplementary heater battery, as well as electrical regulating flap at geothermal heat exchanger (additional module necessary)

## Construction types



## Dimension drawings

