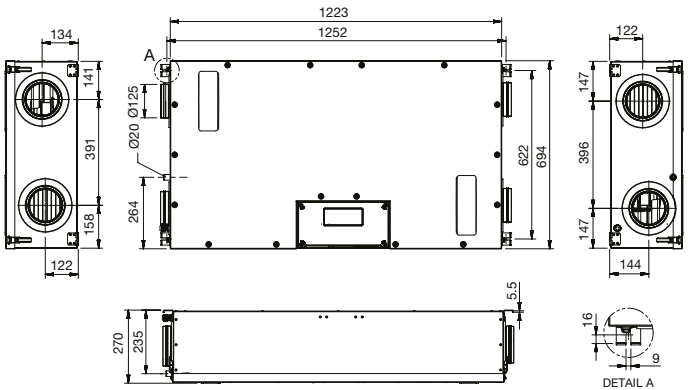
NEMBUS 210



Certified Passive House
Passive House Institute

construction

Technical parameters

Cabinet
is made of durable, high-density EPP. The front metal panel and the sides are powder coated white. The Ø 125 mm round sockets are fitted on the sides of the enclosure. The necks are fitted with a double-edged gasket. The inspection access is from the front side of the unit.

Fans
The unit contains two radial fans with rearward curved blades with EC engine.

Engines
are single-phase EC with low power consumption, 230 V / 50 Hz. Protection IP21.

Recuperation
Counter-current heat exchanger with efficiency up to 93 %. The heat exchanger is accessible by opening the front panel.

Filters
The unit is fitted with two G4 class (ISO coarse 65 %) plate filters for both the intake and exhaust.

Replacement filters:
- AFR-NEMBUS 210 filter set G4/G4
- AFR-NEMBUS 210 filter set F7/G4

Electrical connection
The unit is designed for direct connection via mains plug. Power supply 230 V / 50 Hz.

Regulation
The unit is equipped with a fully automatic control system with flow rate regulation according to relative humidity without the need for any further intervention in the control of the unit. The unit is equipped with four combined temperature and relative humidity sensors. The performance characteristics for each speed are indicated in the performance characteristics. The designer wired controller allows the setting of fan speed, manual control of the by-pass, activation of the BOOST function, activation of the automatic operation and filter clogging indication. Other unit settings are made using the DIP switches and potentiometers on the unit's control board when the front cover is removed. For automatic mode, a weekly program can be set. The frost protection system allows operation of the unit up to outdoor temperature -10 °C without the need for additional preheating or reheating. NEMBUS 210 can be supplemented with NEMBUS-VOC modules and a module for constant air flow rate SABIK-NEMBUS-SF. Connection to Connectair (cloud S&P).

Construction
The unit is designed for horizontal mounting ceiling or vertical wall mounting indoors. Required temperature ambient temperature is between 10 and 50 °C. Unit must be mounted in such a way as to ensure sufficient space for removing the unit face, change filters, connect the condensate drain to the waste with a siphon odour trap SF-P 138 and to carry out periodic wiring inspections. In case of installation the unit above the ceiling, an inspection hole is required for the operator.

Accessories
- **ED Flex® System** circular ducting
- **AIRSENS-CO2** spatial CO_2 sensor
- **NEMBUS-PH** integrated preheating
- **NEMBUS-VOC** integrated VOC sensor
- **SONOULTRA** flexible muffler
- **SABIK-NEMBUS-SF** module for constant air flow rate

Instructions
The unit is not equipped as standard its own heater. If required preheating is required, an integral NEMBUS-PH module or external piping MBE and MBW heaters with corresponding control elements. After basic setup by the installer, the unit does not require any further adjustment. The filters are changed recommended at least once a year. Designing the air handling system and its use in buildings with gas Category B appliances (gas boilers and open chamber water heaters) or open-fire appliances for solid or liquid fuels with flue gas extraction to the chimney are governed by the applicable regulations. Ventilation shall comply with the prescriptive regulations for fire safety in buildings.

Information
Comprehensive ventilation system with a small unit designed for ventilation of apartments, apartment buildings and family houses. The unit is designed for permanent operation.

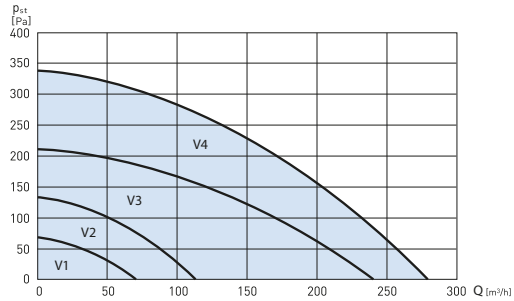
NEMBUS-VOC – integrated sensor VOC

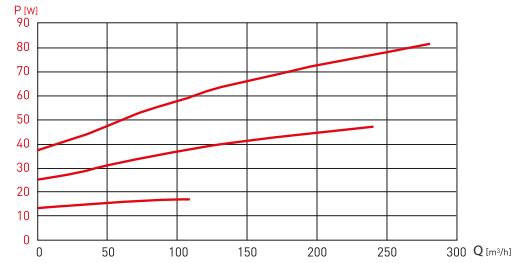
NEMBUS-PH – integrated preheating

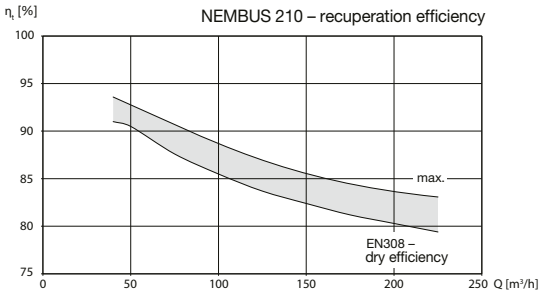
Type	flow rate (100 Pa) [m³/h]	tension [V]	max. input [W]	power input preheating NEMBUS-PH [W]	acoustic level power* [dB(A)]	max. efficiency [%]	mass [kg]
NEMBUS 210	230	230	75	750	47	93	33

* acoustic power level at reference flow (70 % max. flow) and external static pressure 50 Pa

Characteristics







Performance characteristics

p_{st}	static pressure in Pa
Q	flow rate v m³/h
P	power in W

Recovery efficiency

Q	flow rate v m³/h
η_t	efficiency recuperation in %

V1	area of the power curves corresponding to the minimum operating speed of the unit
V2	area of the power curves corresponding to the medium operating speed of the unit
V3	area of the power curves corresponding to the high operating speed of the unit*
V4	area of the power curves corresponding to the highest operating speed of the unit**

EASY VENT selekční program

For information on the acoustic performance at the throat and casing at the required operating point, please use our web-based design program EASYVENT.

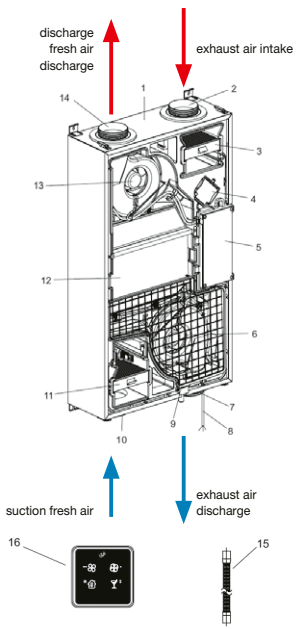
* value of the set power when the unit is put into operation V3, the other values are derived from it (V1 – 30 %, V2 – 70 %, V4 – 130 %)

** Power level V4 can be called up by switching on an external switch (button) or by setting intensive ventilation directly on the controller. In automatic mode, when the ventilation intensity is controlled according to integrated RH sensors or external air quality sensors, the unit speed is regulated only between curves V1 to V3 and power level V4 can only be called up by switching on an external button.

Plug & play

93% maximum efficiency recuperation

Supplementary image



Package contents of the NEMBUS 210

1. recovery unit NEMBUS 210
2. exhaust air intake (ETA)
3. filter G4 (ISO coarse 65%) for suction
4. motor bypassu
5. terminal block
6. fan for suction
7. exhaust air pressure (EHA)
8. power cable
9. condensate drain
10. fresh air intake (ODA)
11. filter G4 (ISO coarse 65%) on the output
12. recovery exchanger
13. fan on the output
14. fresh air discharge into the room (SUP)
15. condensate drain hose (150 mm)
16. unit driver (including 5 m cable)

unit driver 90 × 90 × 20 mm

module SPCM

SABIK-NEMBUS-SF – module for constant air flow rate

Connectair ®
www.connectairapp.com

remote unit management using the SPCM module

Connectair ®

www.connectairapp.com

Connectair®

A platform for remote management of Soler & Palau devices. Allows management via a web interface or mobile application.

Features

- easy and intuitive operation
- clear visualisation
- monitoring of air quality in the home
- air flow rate control
- safe location in the Cloud (secure internet storage)
- filter health check
- operation history and more

Remote maintenance

Remote access to the unit can be used by service companies. After approval by the user of each device, it is possible to monitor multiple ventilation units at once.

Connectair® Platform