

Enervent Pelican Z HP (D)



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General

Enervent ventilation units with an extract air heat pump enable efficient supply and extract ventilation, heating and cooling through ventilation, as well as dehumidification and humidification. In addition, their energy efficiency is excellent, as two systems are used for heat recovery.

The **Enervent Pelican Z HP (D)** ventilation unit is best suited for large detached houses and public spaces such as offices. The Pelican Z is the smallest unit in our range that can be equipped with an extract air heat pump. All heating and cooling coils and the heat pump are built into the unit. Equipped with a built-in heat pump, the Pelican Z HP (D) cools and heats the air efficiently when needed. Cooled and heated air is evenly distributed around the building along ventilation ducts (no local distribution point as in traditional heat pumps).

Easy solution

The ventilation unit with a built-in heat pump is an easy-to-use and versatile solution that produces a very high-quality indoor climate. Solution features

- Fresh and clean indoor air
- Heating and cooling with a heat pump
- No indoor units - air is evenly distributed using the ducting
- No outdoor units - allows installation even if there are strict facade restrictions in the area

- Intelligent control system with quick functions
- Double heat recovery
- The unit can handle part of the heating demand
- Suitable for use alongside all types of heating systems
- Two separate appliances are replaced by one
- Built-in heat pump saves space
- No coolant installation work on site

More than heating and cooling

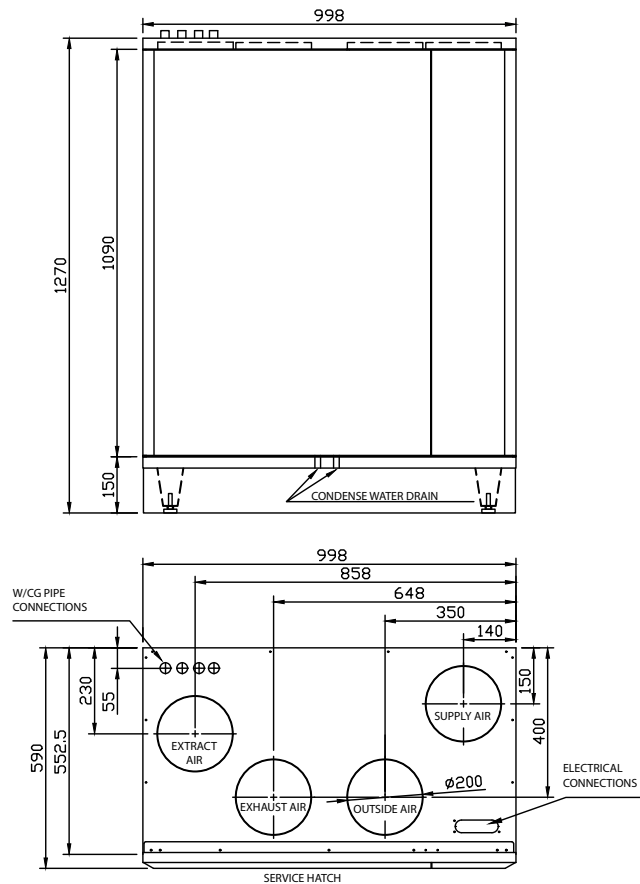
Enervent ventilation solutions can be used to control the indoor climate according to the absolute humidity level of the indoor air. In rooms where it is essential to maintain the humidity level, the air handling unit can keep the humidity at the desired level (g/kg). Using heat pump technology in the units moisture can be removed from the outside air before the air is blown into the building. In this case, the heat pump cools the air to remove moisture from the air and to keep the supply air temperature at a comfortable level, the air is heated to the desired temperature before it is blown into the building. An external humidifier can be controlled via the Enervent ventilation system.

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Technical data

Max airflow @100 Pa	152 l/s
Min air flow	104 l/s
Dwelling size heating (1–2 l/s/m ²)	80–160 m ²
Dwelling size cooling (1–3 l/s/m ²)	60–160 m ²
Fans	169 W, 1.35 A, 50 Hz
Duct diameter	Ø 200 mm
Weight	165 kg
Standard filters	ePM1 60%/ePM1 60% (F7/F7)
Over heating protection	Yes
Sound level in supply air duct @ reference air flow 106 l/s	66
LPA, dB(A), 10 m ² sound absorption	50
Voltage	230 V~ / 50 Hz
Fuse	16 A slow
Heat pump refrigerant	R410A, 1,5 kg
Rated compressor power	0,98 kW
Heat pump COP according to stan- dard EN14511 @ outdoor temp. +7°C and air flow +106/-106 l/s	3.5
Condensation water connection	2 x Ø 32 mm
Compressor control	30–100 %

Dimension drawings



Heating power

The heating power of a Pelican Z HP(D) is calculated as follows:

$$\text{Heating power} = \rho_i \times c_{pi} \times q_v \times \Delta T$$

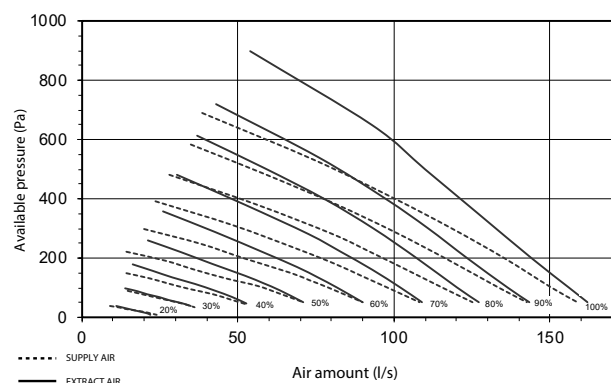
$$= 1,2 \text{ kg/m}^3 \times 1 \text{ kJ/(K} \times \text{kg)} \times 120 \text{ l/s} \times 9 \text{ }^\circ\text{C} = 1\,296 \text{ W}$$

ABBREVIATIONS

ρ_i	air density, 1,2 kg/m ³
c_{pi}	specific heat capacity of air, 1,0 kJ/(kgK)
q_v	air flow, l/s
ΔT	surplus heat, °C (in addition to room temp.)

Characteristic curves

Pelican Z HP (D) supply and extract air characteristic curves with ePM1 60%/ePM1 60% (F7/F7) filters



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