# Enervent Pallas

## COMPREHENSIVE TECHNICAL DETAILS

enervent

# Enervent Pallas

The Enervent Pallas is best suited for public spaces, such as offices, coffee shops, schools, industrial facilities, in addition to blocks of flats. Pallas can be used as a single unit, if the efficiency allows, or as a part of a de-centralized ventilation system, i.e. as a fire zone specific unit. In blocks of flats, Pallas is well suited as a floor or stairway specific unit.
Whenever possible a rotating heat exchanger is used for heat recovery. If local regulations require otherwise, a fluid heat exchanger with a heat pump is used as heat recovery method.
Pallas can be fitted with a built-in extract air heat pump (HP). All heating and cooling coils, as well as the heat pump unit, are built-in to the unit. The Pallas HP with a built-in heat pump effectively cools and heats the air on demand. The cooled and heated air is evenly distributed throughout the building via the ventilation ducts (not local point formed distribution, as in traditional heat pumps). In addition, the heat pump offers the unique feature of heating water (Aqua). The water can be used as domestic hot water or in a water-borne heating system.
Enervent EnergyBUS (pat.pend.) is an ideal solution for a de-centralized ventilation system. With EnergyBUS, the building's energy flow and energy consumption can be optimized by moving energy in time and space. This is enabled by a network of ventilation units with built-in heat pumps connected to each other.

Enervent Pallas is a 'non-residential ventilation unit' (NRVU) according to the EU Commission Regulation No 1253/2014. Ventilation units with maximum flow rate between 250 and 1 000 $m^3/h$ which the manufacturer has not declared intended as being exclusively for a residential ventilation application are called non-residential.
Non-residential ventilation units (NRVUs) are excluded from EcoDesign labelling.
Our calculation software Energy Optimizer, located on our website www.enervent.com, reports whether the chosen NRVU unit fulfills the EcoDesign requirements or not for the intended project.

## Technical details

**General information**

| | |
|---|---|
| Air volume flow | 720...2 160 $m^3/h$ |
| Pressure difference | 40 to 300 Pa |
| Leakage | external < 2% (test pressure 250Pa)<br>internal < 4% |
| Duct size | Exhaust air: 300 x 600<br>Supply air: 300 x 600<br>Fresh air: 300 x 600<br>Waste air: 300 x 600 |
| Weight | 450 … 500 kg |
| Standard filters, 2 x bag filter<br>Filter dimensions (WxHxD) | F7/M5<br>Supply 340 x 810 - 305 mm<br>Extract 340 x 700 - 340 mm |
| Alternative filter 2x bag filter<br>Filter dimensions (WxHxD) | F7/F7<br>Supply 340 x 810 - 305 mm<br>Extract 340 x 700 - 340 mm |
| IP class | IP44 (external control IP20) |
| Nominal voltage | 400 V (AC) 3~ |
| Nominal current | Motors 3.2 A total<br>Electrical after heating 3x7,5 A |

**Fans**

| | |
|---|---|
| Supply and exhaust air fan type | Ebm-Papst |
| Supply and exhaust air motor type | K3G280-AU11-C2 |
| Nominal voltage | 400 V (AC) 3~, EC-type with external electronics |
| Type of fan blade | Radial forward |
| Nominal power | 1 000 W |
| Fan control MD control | Stepless (supply and exhaust running separately) |

**Heat exchanger**

| | |
|---|---|
| Heat exchanger type | Rotating heat exchanger |
| Material | Aluminium |
| Heat exchanger surface | 175 $m^2$ |
| Heat exchanger dimensions | 720 x 200 mm (60 µ) |
| Heat exchanger motor | 54 W |
| Heat exchanger efficiency | 75 – 85 % p.a. |

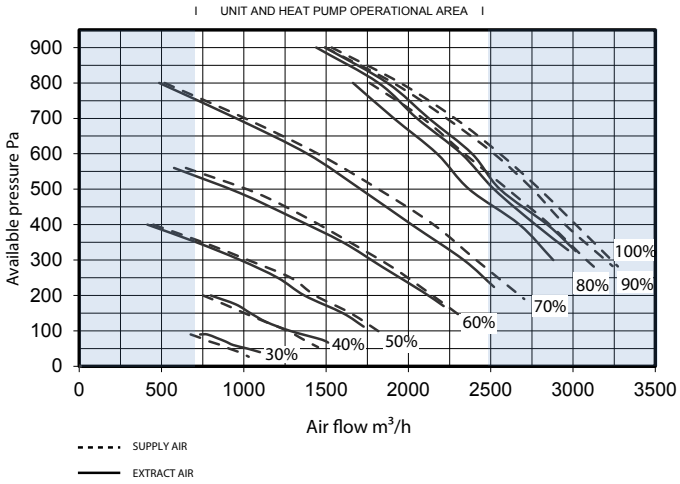
**Other information**

| | |
|---|---|
| Material inside cover<br>Material outside cover | Steel sheet, zinc coated<br>Steel sheet, zinc coated |
| Standard electric after heater efficiency | 9 000 W |
| Positioning of a cooling coil | Built-in |

| Sound levels | $L_w$ | $L_{wA}$ |
|---|---|---|
| Supply air duct | 75,7 dB | 73,4 dB(A) |
| Extract air duct | 65,4 dB | 56,2 dB(A) |
| Outdoor air duct | 62,6 dB | 54,0 dB(A) |
| Exhaust air duct | 76,0 dB | 74,4 dB(A) |
| Through casing | 68,6 dB | 60,6 dB(A) |
| -> 10 $m^2$ absorption $L_{pA}$ | 56,6-- dB(A) | |

## Characteristics

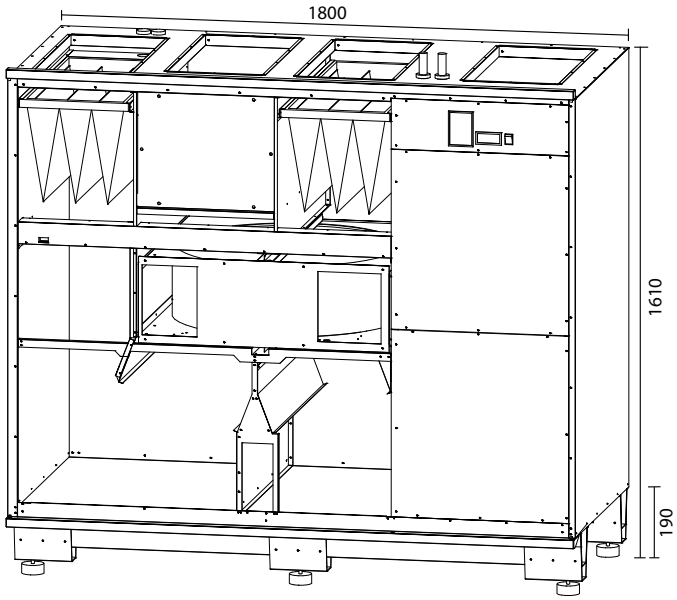
Pallas HP Aqua KI-W supply and extract air characteristic curves with F7/M5 filters

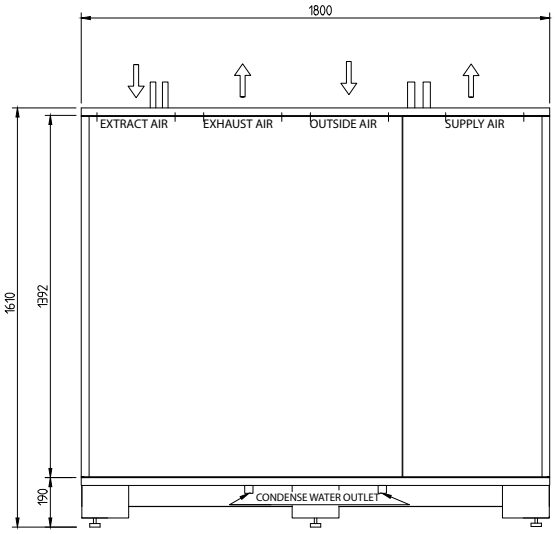


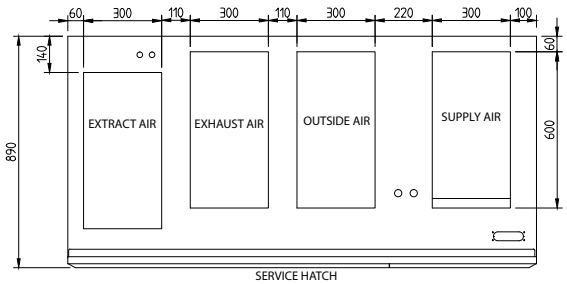

## Installation

| | | | | | |
|---|---|---|---|---|---|
| Mounting | Floor | X | Wall | | Ceiling |
| Frame alternatives | | | Right | X | Left |

## Dimension drawings



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