

## ELECTRIC PRE-HEATING BATTERY ENERGY PLUS

#### **DESCRIPTION**

Besides the standard anti-freeze strategy of the Vasco Energy Plus, the electric pre-heating battery can also ensure balanced ventilation by the Energy Plus ventilation unit when the outside temperatures drop. It prevents the heat exchanger from freezing which could happen when the warm and moist discharge air from inside comes into indirect contact with the supply of cold outside air entering the heat exchanger. This ensures maximum efficiency of the ventilation system and constant comfort levels.



### **OPERATION**

For system control it is necessary to reposition the PT1000 sensor which is installed on this outside air (T1) (See technical drawing under chapter 'Dimensional Drawing and Connections') to ensure that this is located before the electric pre-heating battery. This PT1000 sensor is supplied with the battery. The electric pre-heating battery is switched on and controlled by the modulating PWM control signal in the following conditions:

- DIP-switch 2 is ON (on the printed circuit board of the Energy Plus)
- DIP-switch 3 is OFF (on the printed circuit board of the Energy Plus)
- Outside air temperature < -3°C AND discharge air temperature < 4°C OR discharge air temperature < 1°C</li>

The electric pre-heating battery switches off in the following conditions:

• Outside air temperature > 0°C **or** Discharge air temperature > 6°C

If the outside temperatures become too cold, the Energy Plus ventilation unit can also be completely switched off. This occurs in the following conditions:

 $\bullet \quad \text{Outside air temperature} < -3^{\circ}\text{C AND discharge air temperature} < 1^{\circ}\text{C} \quad \text{OR} \quad \text{outside air temperature} < -20^{\circ}\text{C}$ 

### **TECHNICAL SPECIFICATIONS**

- To be fitted externally, in the air duct with airflow 'from outside'
- Pipe section of high-quality galvanised sheet steel
- Modulating control by PWM control signal
- Electric control in housing
- Dual safety thermostat with automatic and manual reset
- Safety class IP43

		ENY-P1	ENY-P2	ENY-P3	ENY-P4
Nominal electric power	kW	2,1	3,0	6,0	9,0
Supply voltage	V/Hz/f	230V 50Hz 1f+PE		400V 50Hz 3f+PE	
Power consumption	А	9,1	13,0	8,7	13,0
Connection (ø)	mm	250	250	355	400
Minimum airflow	m³/h	270	300	600	690

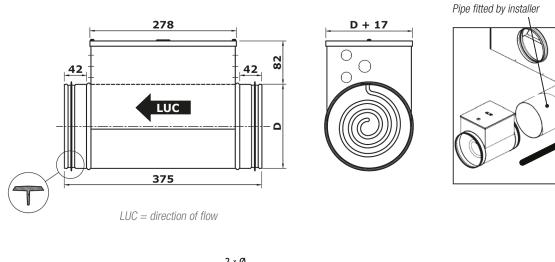


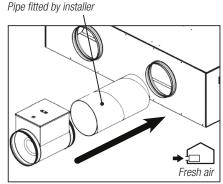


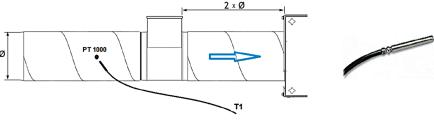
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### DIMENSIONAL DRAWING AND CONNECTIONS

Dimensions in mm







### **DIAGRAM**

### Pressure losses by electric pre-heating battery

