

Description

GE Energy 3 is a heat recovery ventilation unit equipped with a counter flow heat exchanger with a recovery rate up to 95%. The ventilation unit has supply air and extract air fans with energy saving EC motors and backward curved fan blades. GE Energy 3 is equipped with modulating bypass.

The unit is delivered with F7 filter on the fresh air and G4 filter on the exhaust air side (F8 is an option). GE Energy 3 is delivered with an Optima 250 control.

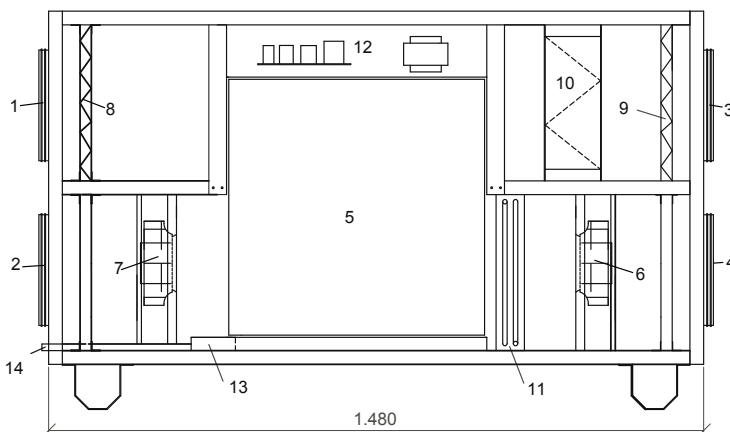
GE Energy 3 can be delivered with the following options:

- Water or electrical heating element for duct mounting Ø250 (water heating element can be build in the unit)
- Water frost sensor
- Motor valve for water heating element
- Fan guard and filter guard
- Fresh air and exhaust air, motor driven for duct mounting Ø250
- Hygrostat for need based ventilation

Dimensions

GE Energy 3 (right)

Dimensions in mm



Minimum distance above unit for electrical connection 300 mm

- | | | | | |
|----------------|--------------------------------|-----------------------|---------------------------|------------------------------------|
| 1: Fresh air | 4: Supply air | 7: Extract air fan | 10: Bypass valve | 13: Condensation tub |
| 2: Exhaust air | 5: Counter flow heat exchanger | 8: Fresh air filter | 11: Water heating element | 14: Condensation connection Ø15 mm |
| 3: Extract air | 6: Supply air fan | 9: Extract air filter | 12: Electrical box | |

Suitability

GE Energy 3 is used for ventilation systems in the domestic area, when high temperature efficiency and a low energy consumption are requested. This means that new demands for low energy consumption can be held

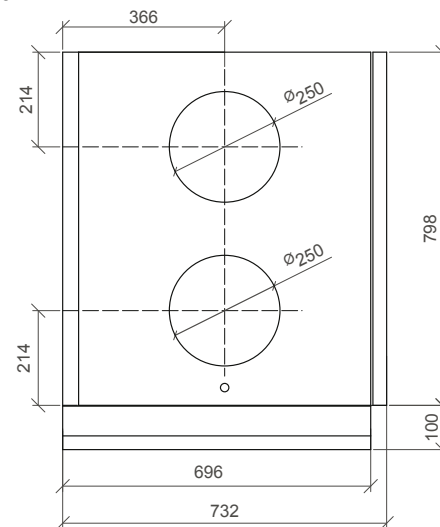
GE Energy 3 is normally used in homes with an area up to 944 square metres (at an average room height at 2.4 m and an air exchange rate of 0,3 1/h).

Air exchange/h	Max. capacity m³/h	Living area m²*
0.3	680	944
0.4	680	708
0.5	680	566

* The power consumption is not included when calculating the living area

Types

GE Energy 3 can be delivered either as a right hand or a left hand version.



Bypass:

Modulating bypass is as standard built-in GE Energy 3



Technical data

Electrical connection:

1 x 230 V + N + PE, 10 A, 50 Hz

Fans:

R3G 220 AE 50

Motor

EC motor with integrated electronic

Isolation class:

B

Class:

IP 44

Motor capacity (Max. per motor):

3510 Rpm

Current input (Max. per motor):

157 W

Power consumption (Max. per motor):

1.10 A

Construction

Size:

(h x l x d) excl. connections

898 x 1480 x 732 mm

Cabinet:

Double plated galvanized steel plate with 30 mm Isolation

Duct connection:

Ø250 mm with double rubber ring seal

Front:

To parts with quick locks for filter service

Back plate:

Mounted with 6 mm bolts

Heat exchanger:

See water resistant aluminium

Condensation tub:

Stainless steel

Condensating drain:

Ø15 mm stainless steel

Filters:

F7 + G4 filters (Standard)

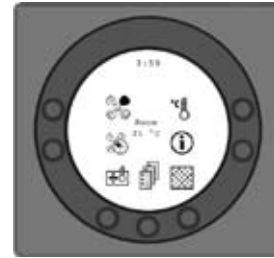
Weight:

200 kg

Automatics

GE Energy 3 is delivered with Optima 250 automatics. Optima 250 DESIGN is delivered with factory setting which means that the unit can be started without setting up the menu. The factory settings are standard settings that can be changed to specific needs and demands of your living area.

Control panel



Speed (1)

Use this function to set the fan speed to levels 0-1-2-3-4.



Extended operation (2)

Use this function to set the timer to forced operation from 0 to 9 hours.



After-heat (3)

Use this function to turn on or off the supplementary after-heat.



Main menu (4)

Use this function to enter the main menu and access the sub-items date, calendar, user menu, display, information menu and service menu.



Filter (5)

Use this function to un-set the filter alarm.



Information (6)

Use this function to get a good overview of the device's current operating condition, e.g. temperature, fan setting, relay status/functions, alarm, timer etc.



Temperature (7)

Use this function to set the room temperature.

Sound data

Measuring point	1 m in front of the unit			Extraction duct			Supply duct			
	Airflow	1	2	3	1	2	3	1	2	3
		Lo dB			Lwu dB			Lwi dB		
63 Hz	53	62	67	57	63	65	62	71	76	
125 Hz	59	68	73	60	66	68	68	77	82	
250 Hz	55	64	69	58	61	63	64	73	78	
500 Hz	45	55	60	56	62	64	55	64	69	
1000 Hz	42	52	57	51	62	64	52	61	66	
2000 Hz	39	48	54	51	61	63	49	58	63	
4000 Hz	26	35	40	43	53	55	36	45	50	
8000 Hz	24	33	38	33	-20	49	34	43	48	
Average		Lo dB(A)			Lwu dB(A)			Lwi dB(A)		
	50	69	65	58	67	69	60	69	74	

- 1: Measured at 40% and an airflow of 175 m³/h
- 2: Measured at 80% and an airflow of 590 m³/h
- 3: Measured at 100% and an airflow of 675 m³/h



Capacity

The capacity lines are based on an average of the supply and extract air volume in a unit with filters.

Max. Capacity:

At 100 Pa the max. capacity is: 680 m³/h.

With an average room height of 2.4 m, the living area is calculated as follows:

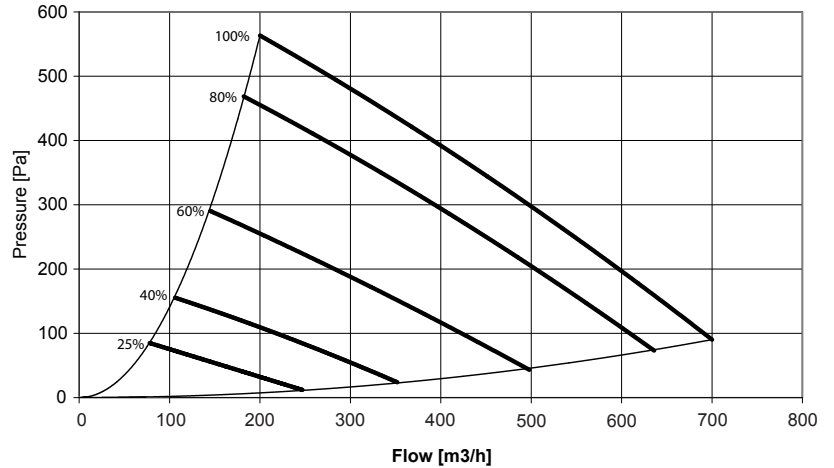
Living area (m²) x Room height (m) x Air exchange/h = Max. capacity

$$\text{Living area (m}^2\text{)} = \frac{\text{Max. capacity (m}^3\text{/h)}}{\text{Room height (m)} \times \text{Air exchange (h}^{-1}\text{)}}$$

Example:

$$\text{Living area (m}^2\text{)} = \frac{680 \text{ m}^3\text{/h}}{2.4 \times 0.5 \text{ h}^{-1}} = 567 \text{ m}^2 *$$

* The power consumption is not included when calculating the living area

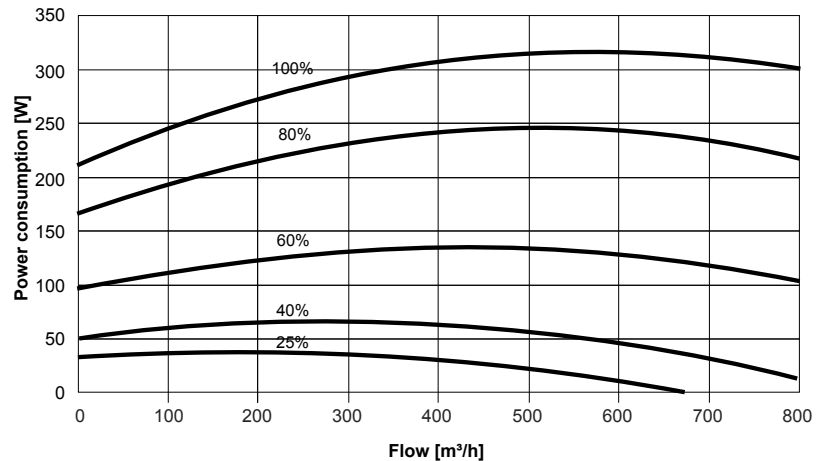


At a max. air volume the available pressure is 30 Pa higher with G4 (25 mm), than the displayed curves

Total power consumption

For both fans and control.

- 1 = 100 %
- 2 = 80 %
- 3 = 60 %
- 4 = 40 %
- 5 = 25 %



Heat recovery rate

Heat recovery rate, flow m_{in} = m_{out}

Icing of the heat exchanger at low outdoor temperatures has been left out of account.

- 1 = Temp.: -12 °C
RF.: 50%
- 2 = Temp.: 4 °C
RF.: 50%

