

Description

GE Energy 1 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.

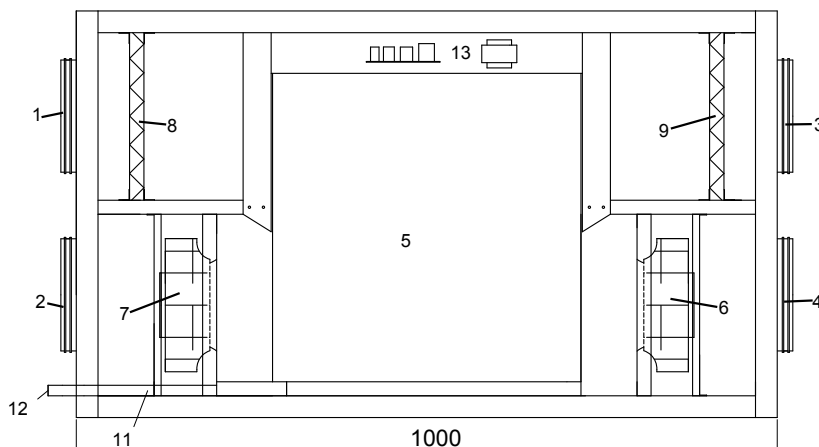
The unit is delivered with F7 filter on the fresh air and G4 filter on the exhaust air side. GE Energy 1 is delivered with an Optima 250 control.

GE Energy 1 can be delivered with the following options:

- Filter F8
- Modulating bypass
- Water or electrical heating element for duct mounting Ø160
- Water frost sensor
- Motor valve for water heating element
- Fan guard and filter guard
- Fresh air and exhaust damper, motor driven for duct mounting Ø 160.
- Hygrostat for need based ventilation

Dimensions

GE Energy 1 (right)
Dimensions in mm

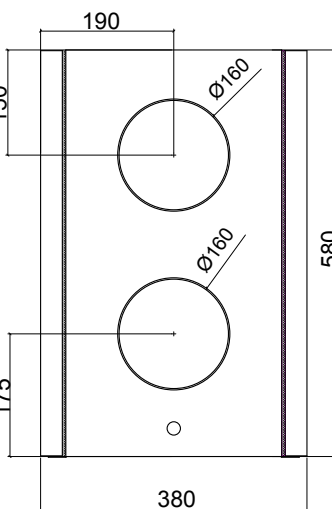


Minimum distance above unit for electrical connection 300 mm

- 1: Fresh air
- 2: Exhaust air
- 3: Extract air

- 4: Supply air
- 5: Counter flow heat exchanger
- 6: Supply air fan

- 7: Extract air fan
- 8: Fresh air filter
- 9: Extract air filter



Bypass:

With bypass mounted the width expands with 70 mm to 450 mm.

- 11: Condensation tub
- 12: Condensation connection Ø15 mm
- 13: Electrical box

Suitability

GE Energy 1 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 1 is normally used in homes with an area up to 486 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 m ³ /h	Living area m ² *
0.3	350	486
0.4	350	365
0.5	350	291

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

Types

GE Energy 1 can be delivered either as a right hand or a left hand version, by switching the front and the back hatch (not when bypass is mounted).



Technical data

Electrical connection:

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

Fans:

R3G 190

Motor:

EC motor with integrated electronics

Isolation class:

B

Class

IP 44

Motor capacity (Max. per motor):

3320

Current input (Max. per motor):

71 W

Power consumption (Max. per motor):

0.50 A

Construction

Size:

(h x l x d) excl. connections
580 x 1000 x 380 mm

Cabinet:

Double plated galvanized steel plate with 30 mm Isolation

Duct connection:

Ø160 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

Condensating tub:

Stainless steel

Condensating drain:

Ø15 mm stainless steel

Filters:

F7 + G4 filters (Standard)

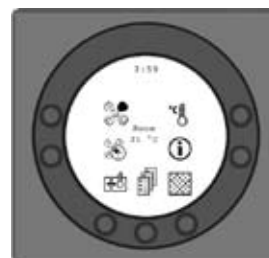
Weight:

55 kg

Automatics

GE Energy 1 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			Extract duct			Supply duct			
	Airflow	1	2	3	1	2	3	1	2	3
		Lo dB			Lwu dB			Lwi dB		
63 Hz	46	53	56	44	55	58	48	55	58	
125 Hz	55	62	66	48	59	62	60	67	71	
250 Hz	53	57	66	40	51	54	55	62	71	
500 Hz	51	55	63	38	49	52	53	60	68	
1000 Hz	34	41	51	34	45	48	36	43	53	
2000 Hz	33	40	50	34	45	48	35	42	52	
4000 Hz	30	37	45	25	36	39	32	39	47	
8000 Hz	25	32	36	17	28	30	27	34	38	
Average		Lo dB(A)			Lwu dB(A)			Lwi dB(A)		
		50	55	63	41	52	55	52	59	67

- 1: Measured at 40% and an airflow of 75 m³/h
- 2: Measured at 80% and an airflow of 290 m³/h
- 3: Measured at 100% and an airflow of 350 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: 350 m³/h.

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

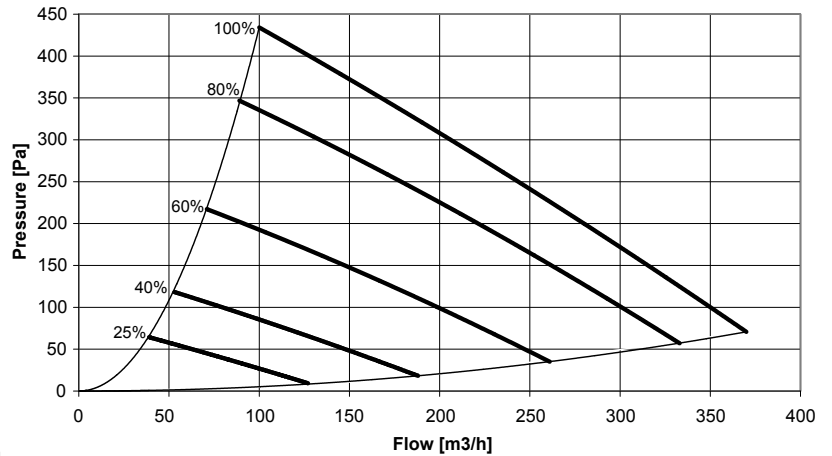
Living area (m²) x Room height (m) x Air exchange/h
= Max. capacity

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

Example:

$$\text{Living area (m}^2\text{)} = \frac{350 \text{ m}^3\text{/h}}{2.4 \times 0.5/\text{h}} = 291 \text{ m}^2$$

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

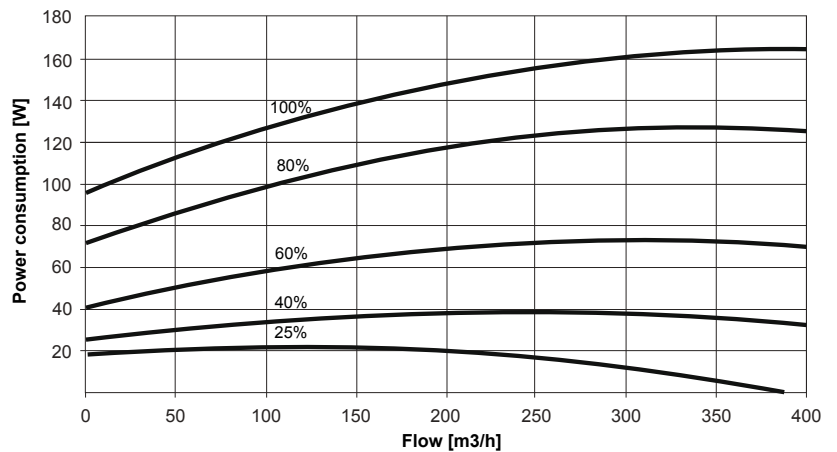


At a max. air volume the available pressure is 30 Pa higher with G4 (25 mm), than the displayed curves

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%

