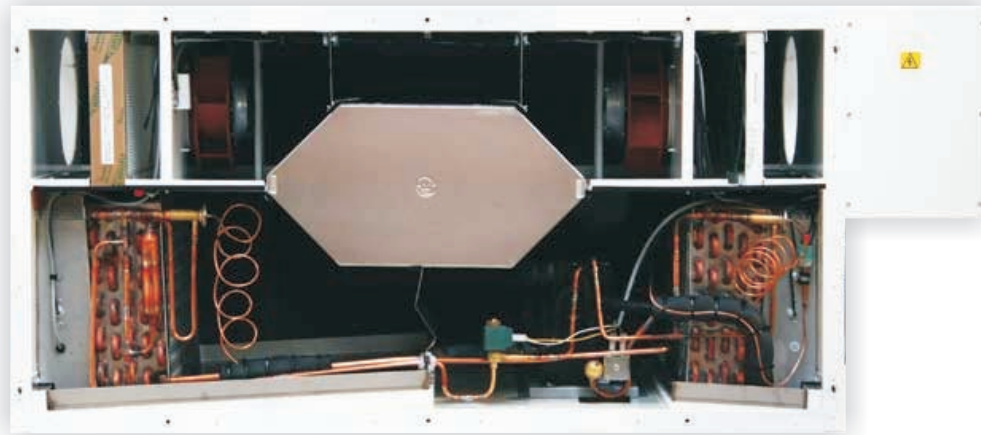




GE Premium 1/1L



Description

A heat recovery ventilation appliance consisting of a counter-current heat exchanger, an integral heat pump with heating and cooling, supply and extract air fans, F7 pollen supply air filter, G4 extract air filter and Optima 300 Design controller.

The GE Premium 1/1L can be supplied with the following options:

- Water frost sensor
- Fresh air and extract air damper with motor for Ø160mm duct
- Water and electrical heating element for Ø160mm duct
- Thermostat and motor valve

Suitability

The GE Premium 1/1L is used when mechanical balanced ventilation is needed. Energy from the extract air is recovered and delivered to the supply air.

At first the energy is recovered in the counter-current heat exchanger and then further heat is supplied to the air by the heat pump, providing comfort heating for the residence.

The heat pump can also cool the supply air during the summer.

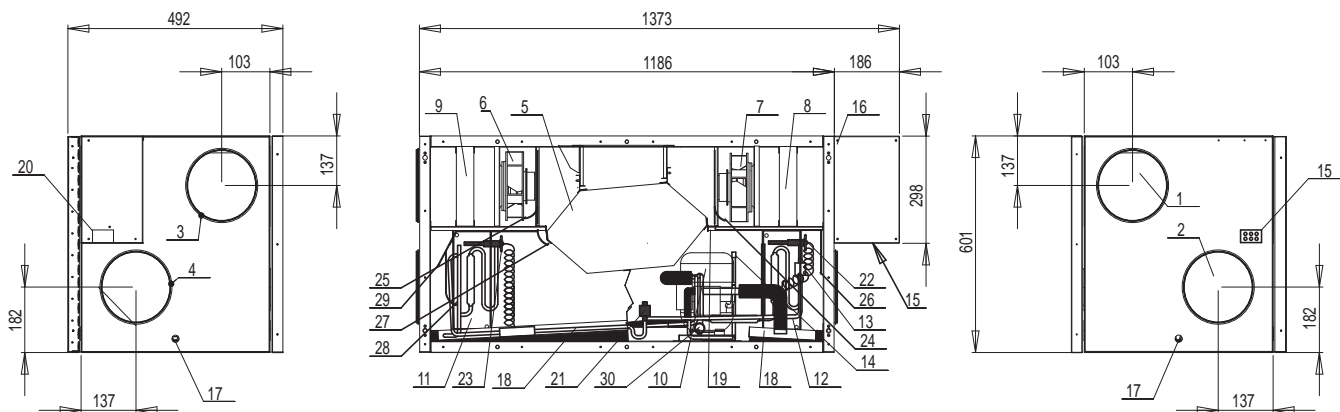
It is suitable for homes with an area up to 262m² at an average room height of 2.4m but with a minimum air change of 100m³/h (Premium 1) or 150m³/h (Premium 1L) at 125 Pa.

Air exchange/h	Max. capacity m ³ /h	Living area m ² *
0.5	315	262

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

Dimensions

GE Premium 1/1L



- | | | | | |
|------------------------------|----------------------|-----------------------|------------------------------|------------------------------|
| 1 Fresh air | 7 Extract air fan | 13 High pressure gov. | 19 Supply boss at back | 25 Fresh air sensor |
| 2 Exhaust air | 8 Extract air filter | 14 Process valve | 20 Switch | 26 Supply air sensor |
| 3 Extract air | 9 Supply air filter | 15 Cable entry | 21 Magnetic valve defrosting | 27 Before cooling air sensor |
| 4 Supply air | 10 Compressor | 16 Electrical box | 22 Thermo valve condenser | 28 Cooling coil sensor |
| 5 Counter current heat exch. | 11 Evaporator | 17 Condensat.conn | 23 Thermo valve evaporator | 29 Exhaust air sensor |
| 6 Supply air fan | 12 Condensor | 18 Condensation tray | 24 Extract air sensor | 30 Four-way valve |



Technical data

Electrical connections:

Without electrical heating and preheating coil

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

With electrical heating and preheating coil

Max 1.2 + 1.0 kW

1 x 230V + N + PE + 16 A, 50 Hz

Fans:

R3G 190

Motor:

EC motor with integrated electronics

Insulation class

B

Protection class

IP 44

Fan speed (Max. per motor):

3,320 Rpm

Fan power input (Max. per motor):

71 W

Fan current (Max. per motor):

0.50 A

Fan speed control:

Individually the fans can be set to 3 different speeds

Temperature working range of the heat pump:

-15°/+35°C

Compressor:

NB 6165 GK / NE 6210 GK (1/1L)

Min. air volume:

100/150m³/h (1/1L)

Max. compressor power input:

331/585W (1/1L)

Max. compressor current:

1.9/3.14A (1/1L)

Average compressor power output:

895/1,363W (1/1L)

Average compressor power input

295/425W (1/1L)

Refrigerant:

R134a

Refrigerant weight

1,100g

Automation

GE Premium 1/1L is supplied with an Optima 300 Design controller with factory settings, so that the appliance can be started, without setting-up the menu. The settings are standard and can be changed to the specific requirements of your living area.

Control panel



Speed (1)

This sets the fan speed to levels 0-1-2-3-4.



Extended operation (2)

This sets the timer to forced operation from 0 to 9 hours.



After-heat (3)

This turns the supplementary after-heat on or off.



Temperature (7)

This sets the room temperature.



Information (6)

This gives a good overview of the appliance's current operating condition.



Filter (5)

Use this function to reset the filter alarm.

Sound data

Measuring point	1 m in front of the unit			Extract air duct			Supply air duct		
	1	2	3	1	2	3	1	2	3
Airflow									
	Lp dB			Lwu dB			Lwi dB		
63 Hz	53	46	52	93	95	98	85	89	93
125 Hz	47	52	54	87	95	97	81	88	91
250 Hz	43	50	53	84	91	95	78	83	87
500 Hz	33	37	44	66	77	84	60	73	83
1000 Hz	-	-	34	60	70	76	58	68	73
2000 Hz	-	-	30	57	68	73	54	63	68
4000 Hz	-	-	-	44	61	67	43	50	55
8000 Hz	-	-	-	32	49	58	39	40	43
Average	Lp dB(A)			Lwu dB(A)			Lwi dB(A)		
	37	43	47	77	85	89	71	78	84

1: Measured at 40% of max. speed with compressor on

2: Measured at 70% of max. speed with compressor on

3: Measured at 100% of max. speed with compressor on



Capacity

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

Max. Capacity:

At 125 Pa the max. capacity is: 315m³/h.

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

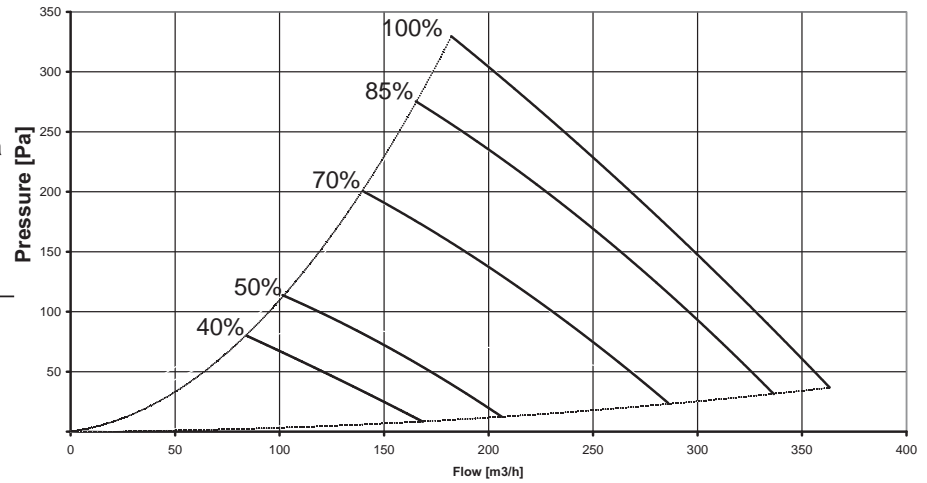
Living area (m²) x Room height (m) x Air exchange/h = Max. capacity

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

Example:

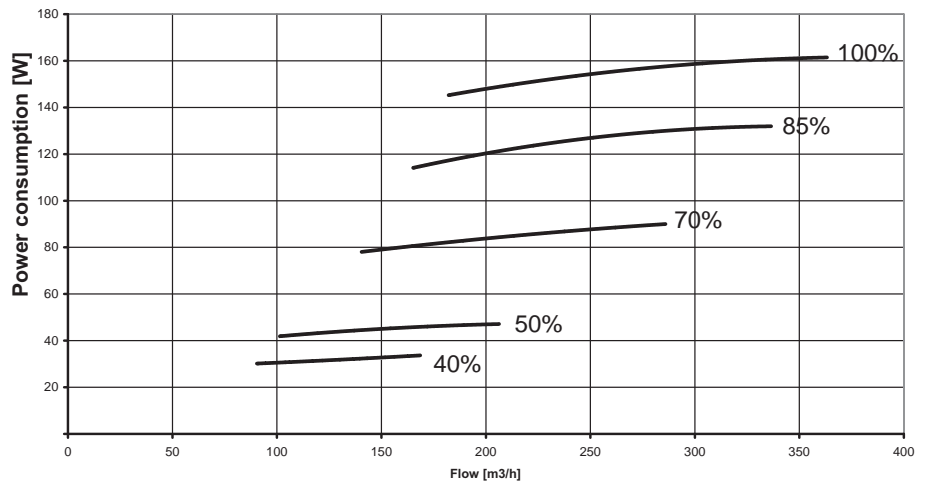
$$\text{Living area (m}^2\text{)} = \frac{315 \text{ m}^3\text{/h}}{2.4 \times 0.5/\text{h}} = 262 \text{ m}^2 *$$

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



Total power consumption:

For both fans and controller.



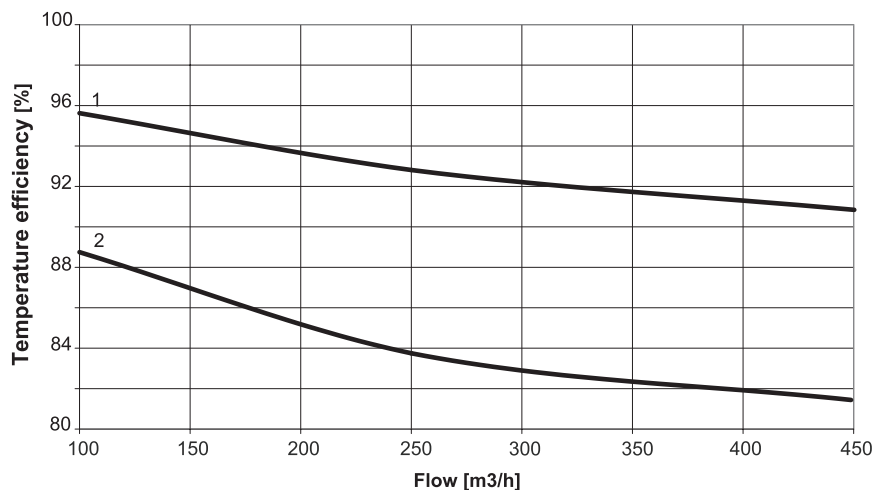
Heat recovery rate

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

There has been no consideration taken for any freezing of the heat exchanger at low outdoor temperatures.

1 = Temp.: -12 °C
RF: 50%

2 = Temp.: 4 °C
RF: 50%



GE Premium 1/1L



Construction

Size:

(h x l x d) ex. connecting pieces and electric box
601 x 1,186 x 492mm

Cabinet:

Fully closed hot galvanised plate with 30mm insulation.
Plastic-coated white RAL 9010.

Duct connection:

Ø160mm with rubber ring seal
Ø100mm supply air connection pieces (back)

Front:

Front with quick locks for filter service

Heat exchanger:

Salt-water resistant aluminium

Condensation tray:

Stainless steel

Condensation connection:

Stainless steel Ø15mm

Filters:

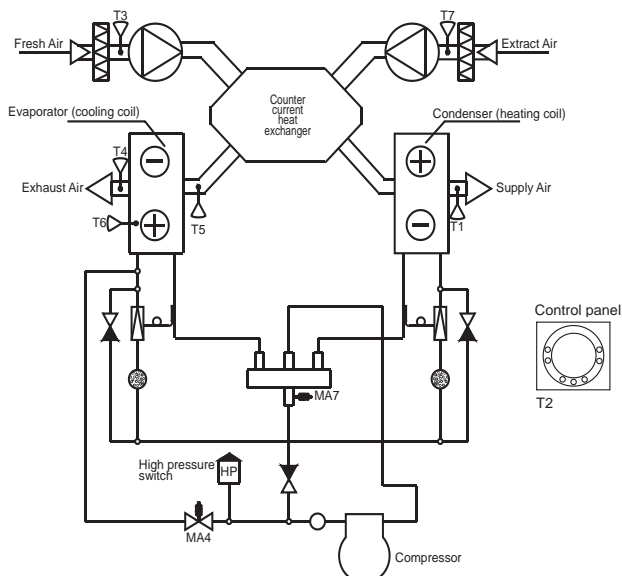
Fresh air: F7 filter

Exhaust air: G4 filter

Weight:

105kg

Flow diagram



Sensors:

- T1: Supply air
- T2: Room
- T3: Fresh air
- T4: Extract air
- T5: Before the cooling coil
- T6: Cooling coil
- T7: Exhaust air

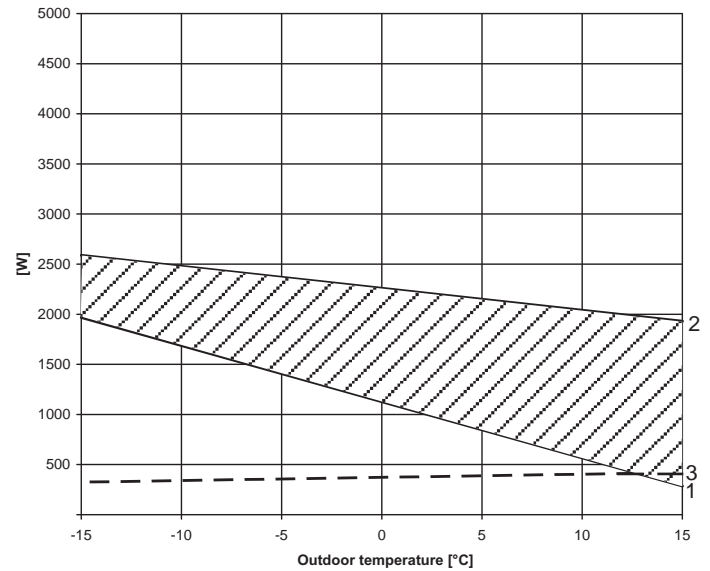
Magnetic valve:

- MA4: Defrosting
- MA7: Heat/cooling

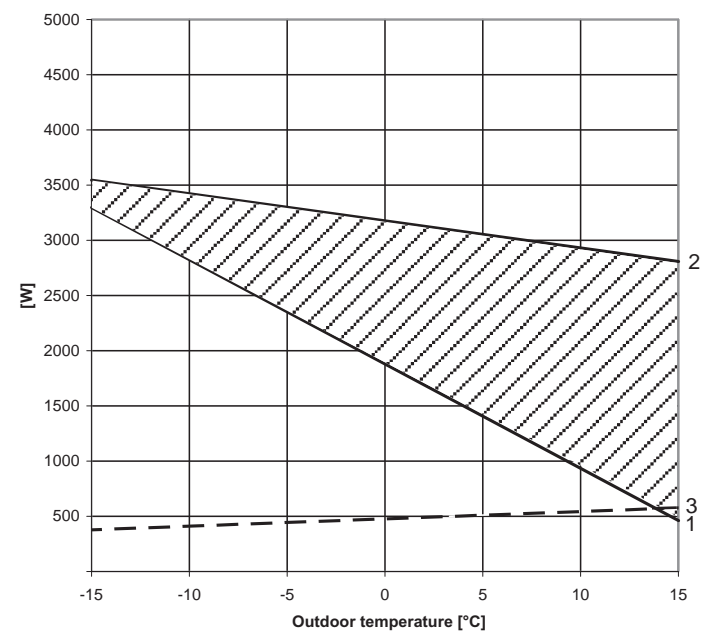
Capacity

The GE Premium 1/1L capacity varies with air quantity and outdoor air temperature.

Airflow 159m³/h. (GE Premium 1)



Airflow. 259m³/h. (GE Premium 1L)



- 1) Energy consumption for heating supply air to room temperature 20°C.
- 2) Total capacity of the appliance
- 3) Power input with compressor running

The hatched area is GE Premium 1/1L's contribution for room heating.

Cooling capacity:

With an outside temperature of 26°C, relative humidity of 45% and full speed, the cooling power output is 685/1,040W. (1/1L)