

GE 840 VP is a ventilation unit containing a cross-flow plate-type heat exchanger, heat pump, air supply and exhaust fans, EU7 air supply bag filter, EU7 exhaust bag filter and complete Optima 300 AC automatic control with control panel. GE 840 VPK has an additional automatic control for cooling.

GE 840 VP/VPK are available with the following accessories:

- Water-based or electric reheating coil for  $\varnothing 250$  mm duct
- Water frost thermostat
- Fresh air and exhaust air dampers with motor for  $\varnothing 250$  mm duct
- Electric preheating coil
- Thermostatic valve or motorised valve
- Fan monitor



## Use

GE 840 VP is used for ventilation systems where exhaust and air supply are required and the energy in the exhaust air is to be used to heat the supply air.

The energy is recovered first via the cross-flow plate-type heat exchanger and then the residual energy is recovered by the heat pump, which also contributes to heating the home. GE 840 VPK is used if the heat pump is required to cool the supply air during warm periods.

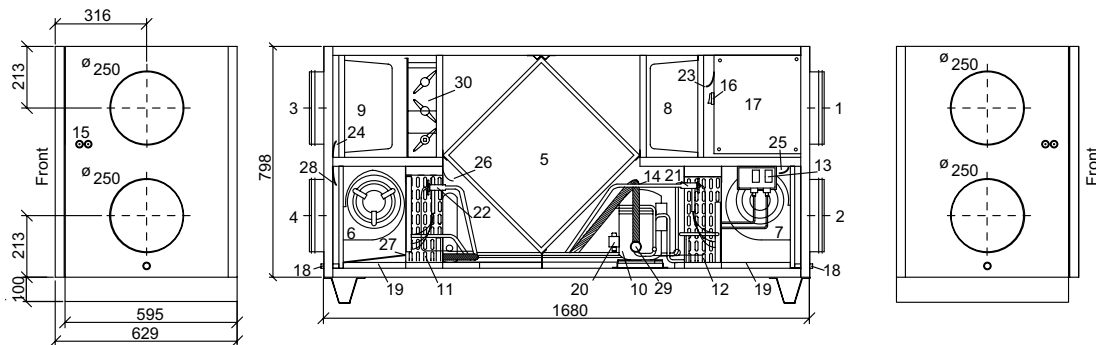
GE 840 VP/VPK are normally used in homes with an area from 300 to 450 m<sup>2</sup> and a minimum air exchange of 330 m<sup>3</sup>/h.

## Types

- GE 840 VP - H (right-hand)
- GE 840 VP - V (left-hand)
- GE 840 VPK - H (right-hand - as shown)
- GE 840 VPK - V (left-hand)

## Dimensioned sketch

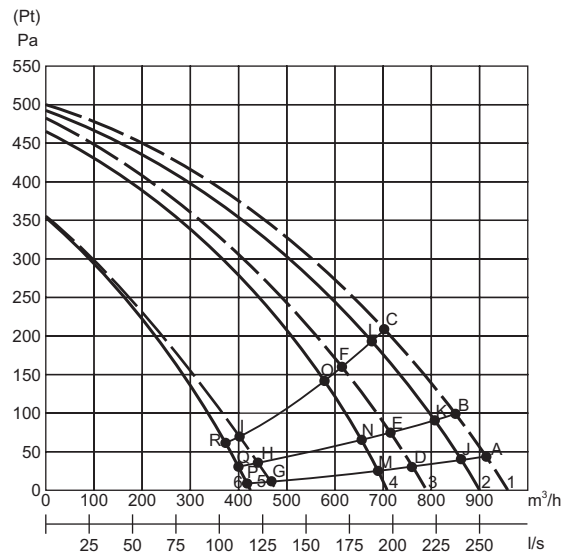
GE 840 VP/VPK  
Dimensions in mm



- |                              |                            |                               |  |                        |
|------------------------------|----------------------------|-------------------------------|--|------------------------|
| 1: Extract air               | 8: Plainfilter Extract Air | 15: Cable entry               | 22: Thermostat Evaporator              | 28: Sensor Exhaust air |
| 2: Supply air                | 9: Bagfilter Supply Air    | 16: Powerswitch               | 23: Sensor Extract air                 | 29: Fourway valve      |
| 3: Incoming air (fresh air)  | 10: Compressor             | 17: Terminal box              | 24: Sensor Incoming air                | 30: Air dampers        |
| 4: Exhaust air               | 11: Evaporator             | 18: Drain $\varnothing 15$    | 25: Sensor Supply air                  |                        |
| 5: Cross-flow heat exchanger | 12: Condenser              | 19: Drip Tray                 | 26: Sensor upstream of Cooling surface |                        |
| 6: Extract fan               | 13: High-pressure governor | 20: Magnetic valve Defrosting | 27: Sensor Cooling surface             |                        |
| 7: Supply fan                | 14: Process valve          | 21: Thermostat Condenser      |  |                        |

## Output

The output diagram shows the disposable pressure ( $P_t$ ) for the duct system, both on the exhaust and supply side. Pressure loss from the unit has been deducted.



- Zuluft mit Taschenfilter: 2 = 100%, 4 = 70%, 6 = 40%
- - Abluft und Zuluft mit Taschenfilter: 1 = 100%, 3 = 70%, 5 = 40%

Optagen effekt indblæsning med posefilter

	A	B	C	D	E	F	G	H	I
Watt	260	260	230	240	240	220	160	160	160

Optagen effekt udsugning og indblæsning med posefilter

	J	K	L	M	N	O	P	Q	R
Watt	270	260	240	250	240	230	160	160	160

## Technical Data

### Electrical Connection

**Without electric reheating coil and electric preheating coil**

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

**With electric reheating coil and electric preheating coil**

max. 2 x 1.2 + 2 x 1.2 kW

3 x 400V + N + PE 16A, 50 Hz

### Fans with directly coupled motors

D2E 146

### Capacitor

8 µF

### Motors, 230V AC:

**Standard motors**

IEC 38

### Insulation class

B

### Degree of protection

IP 44

### Motor size (2 motors):

**RPM**

2050

### Power input (max. per motor)

300 W

### Current consumption (max. per motor)

1.31 A

The fans can be individually set variably in all 3 speedsteps.

### Working range of heat pump

-15°C/+35°C

### Compressor

J9226GK

**Power input (max.)** 1325 W

**Current consumption (max.)** 5.8 A

**Average output** 3380 W

**Average power consumption** 995 W

**Refrigerant** R407c

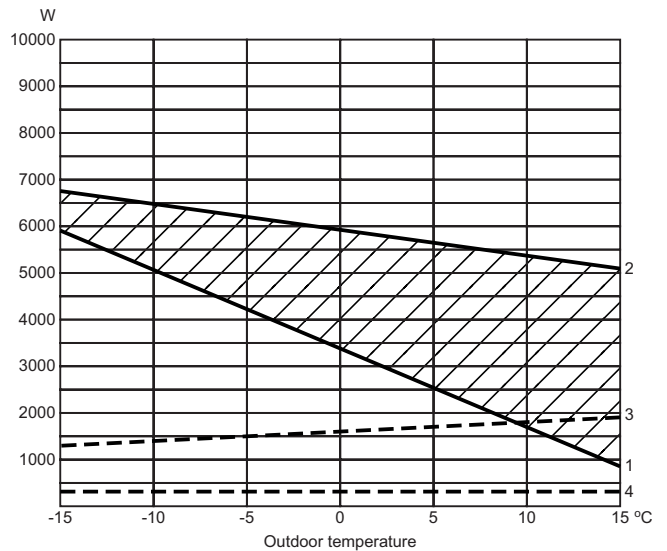
**Charge 840 VP/VPC**

2000/2000 g

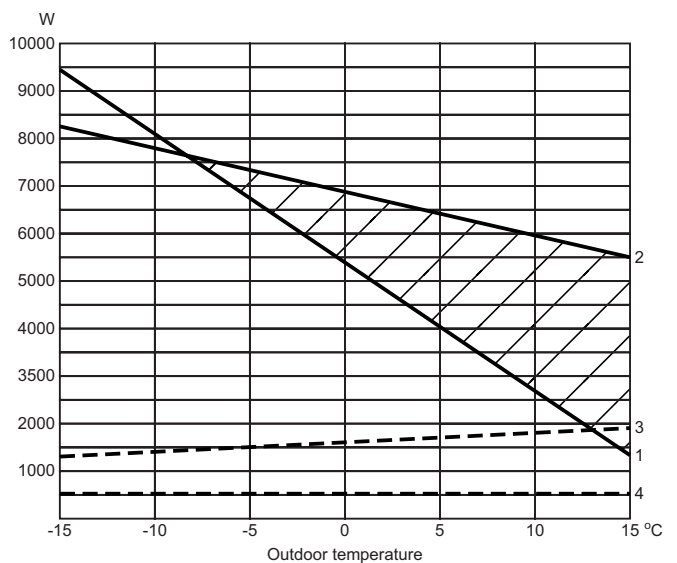
## Capacity

The capacity of GE 840 VP/VPC vary with the airflow and fresh air temperature.

Airflow. 500 m<sup>3</sup>/h.



Airflow 800 m<sup>3</sup>/h.



- 1) Energy consumption for heating outdoor air (fresh air) to room temperature 20°C.
- 2) Capacity of the unit.
- 3) Power input with compressor running.
- 4) Power input without compressor running.

The hatched area is the GE 840 VP/VPC's contribution to the roomheating.

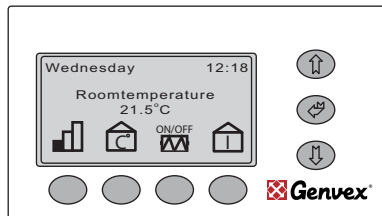
### Cooling:

With a outside temperature of 26°C, relative humidity of 45 % and 1/1 speed, the cooling power output is 2780W.

## Automatic Control

GE 840 VP/VPC are supplied with complete automatic control - Optima 300 AC together with a control panel and display which show the equipment's operating mode and permit easy change of operating settings.

## Control panel



Use this button to change speed between low, medium and high. (Level 1, Level 2, Level 3), or to stop the unit. To stop the unit press the button (3 - 4 seconds) until all levels are switched off. The reheating surface will turn off immediately while the fans will run for about 2 minutes to cool down the reheating surfaces.



Use this button to change the desired room temperature.



Heat pumps of types VP and VPC can be supplied with preheating and reheating surfaces and extra cooling (VPC). Enabling will allow these heating and cooling surfaces to switch ON if it proves necessary.



Use this button to see all the temperatures in the unit, and press arrow down to see which relays are in operation. This will allow you to gain a quick overview of the unit's operation (see page 4).



If you wish to change the operating settings, press "Arrow up, Arrow down, Enter" to enter the operating menu where these changes can be made.



Press "Arrow down" to change from one menu point to the next. Press "Arrow up" to change from one menu point to the previous one.



If you want to quickly page through the operating menu, you can press "Enter", and this will change the whole page to the next set of menu points.

To change the clock from winter to summer-time hold "Enter" and press "Arrow up" (+1 hour).

To change the clock from summer to winter-time hold "Enter" and press "Arrow down" (-1 hour).

## Sound data

Measuring point	1 m in front of unit			Extract duct			Supply duct			
	Airflow rate	1	2	3	1	2	3	1	2	3
		Lo dB			Lwu dB			Lwi dB		
63 Hz	70	70	68	88	95	96	92	96	96	
125 Hz	57	56	56	80	90	92	91	94	96	
250 Hz	57	57	55	73	84	86	90	92	92	
500 Hz	45	46	43	67	77	80	79	85	86	
1000 Hz	32	34	36	57	68	73	71	78	82	
2000 Hz	28	32	36	55	61	66	66	75	79	
4000 Hz	24	32	37	46	50	58	60	71	75	
8000 Hz	26	30	35	43	44	47	52	66	72	
Mean	Lo dB(A)			Lwu dB(A)			Lwi dB(A)			
	50	50	49	69	79	82	83	87	88	

1: Measured at 40% of max. speed with Compressor

2: Measured at 70% of max. speed with Compressor

3: Measured at 100% of max. speed with Compressor

## Construction

### Main dimensions:

(h x l x d ) excl. bosses  
798 x 1680 x 629 mm

### Cabinet structure:

Double-enclosed hot-dip galvanised sheet with 30 mm insulation.  
External and internal red powder coating, RAL 3002.

### Duct connection:

ø250 mm (nipple dimension) with rubber ring seal

### Door:

6 mm screws

### Cross-flow plate-type heat exchanger:

Seawater-resistant aluminium

### Condensate trays:

Stainless steel

### Condensation drain:

Stainless pipe ø15 mm (ext.)

### Filters:

#### Air supply:

EU7 bag filter

#### Exhaust:

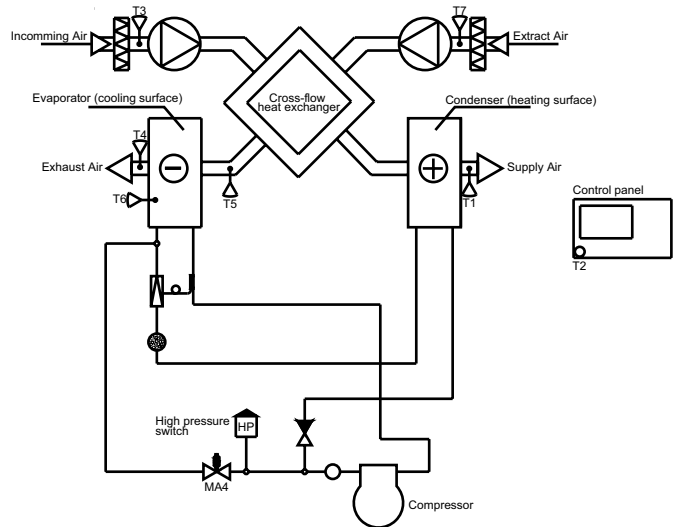
EU7 bag filter

### Weight:

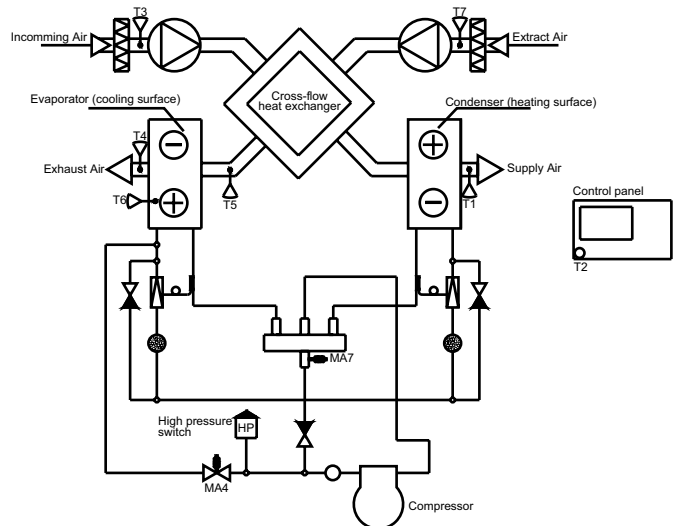
225 kg

## Flow diagram

Flowdiagram VP



Flowdiagram VPC



### Sensors:

T1: Supply air  
T2: Room  
T3: Fresh air  
T4: Exhaust air  
T5: Upstream of cooling surface  
T6: Cooling surface  
T7: Extract air  
T8: Freezing water (For water reheating surface)

### Solenoid Valves:

MA4: Defrosting  
MA7: Heating/cooling

## Accessories

Water-based and electric heating coils and dampers.