

GE 315 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, EU4 exhaust flat filter and complete Optima 300 automatic control with control panel. **GE 315 VPC** has an additional automatic control for cooling.

GE 315 VP/VPC are available with the following accessories:

- Water-based or electric reheating coil for $\varnothing 160$ mm duct
- Water frost thermostat
- Fresh air and exhaust dampers with motor for $\varnothing 160$ mm duct
- Electric preheating coil
- Thermostatic valve or motorised valve
- Fan monitor

Use

GE 315 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 315 VPC is used if the heat pump is required to cool the supply air during warm periods.

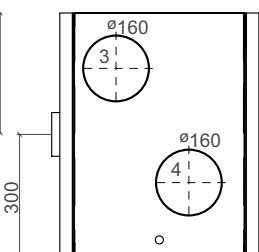
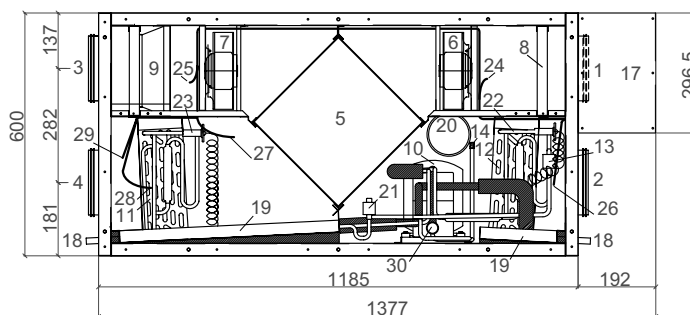
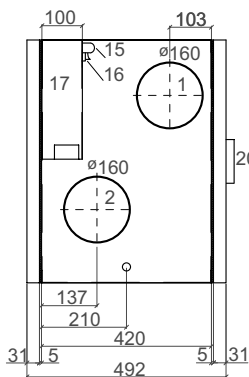
GE 315 VP/VPC are normally used in homes with an area from 100 to 160 m² and a minimum air exchange of 145 m³/h.

Types

- GE 315 VP - H (right-hand)
- GE 315 VP - V (left-hand)
- GE 315 VPC - H (right-hand - as shown)
- GE 315 VPC - V (left-hand)

Dimensioned sketch

GE 315 VP/VPC
Dimensions in mm

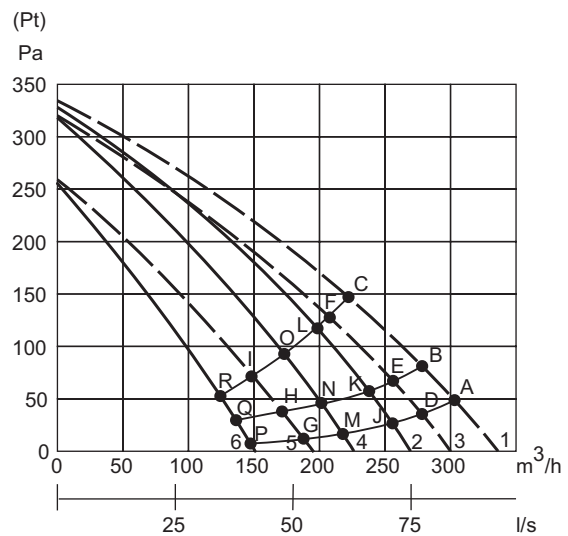


- | | | | |
|------------------------------|----------------------------|---|--|
| 1: Extract air | 9: Bagfilter Supply Air | 17: Terminal box | 24: Sensor Extract air |
| 2: Supply air | 10: Compressor | 18: Drain $\varnothing 15$ | 25: Sensor Incoming air |
| 3: Incoming air (fresh air) | 11: Evaporator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



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.



- Supply Air with Bagfilter: 2 = 100%, 4 = 70%, 6 = 40%
- — Extract and Supply Air with Plainfilter: 1 = 100%, 3 = 70%, 5 = 40%

Input current (per ventilator)

	A/J	B/K	C/L	D/M	E/N	F/O	G/P	H/Q	I/R
Watt	58	58	57	57	56	55	43	42	41

Technical Data

Electrical Connection

Without electric reheating coil and electric preheating coil

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

With electric reheating coil and electric preheating coil

max. 1.2 + 1.0 kW

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

Fans with directly coupled motors

R2E 190

Capacitor

2 µF

Motors, 230V AC:

Standard motors

IEC 38

Insulation class

B

Degree of protection

IP 44

Motor size (2 motors):

RPM

2500

Power input (max. per motor)

58 W

Current consumption (max. per motor)

0.26 A

The fans can be individually set to any speed in all 3 speed-levels.

Working range of heat pump

-15°C/+35°C

Compressor

NE 6210GK

Power input (max.) 590 W

Current consumption (max.) 3.3 A

Average output 1365 W

Average power consumption 425 W

Refrigerant R407c

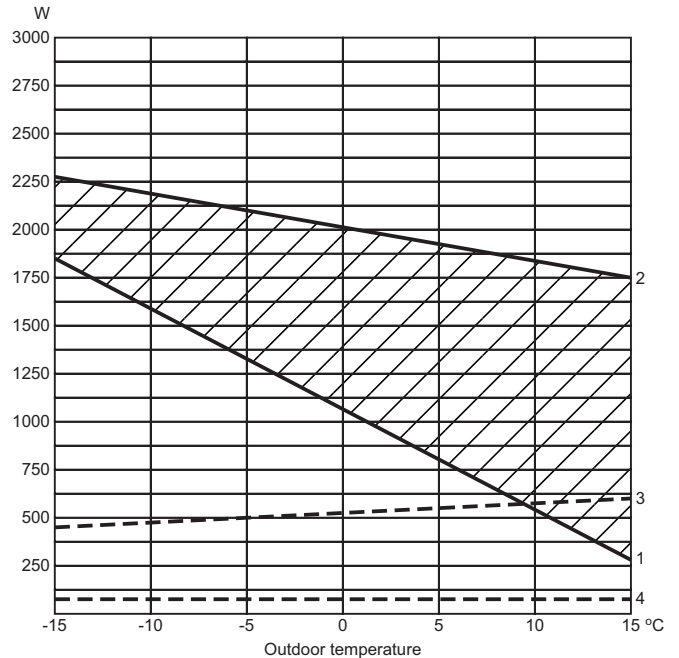
Charge 315 VP/VPC

820/1000 g

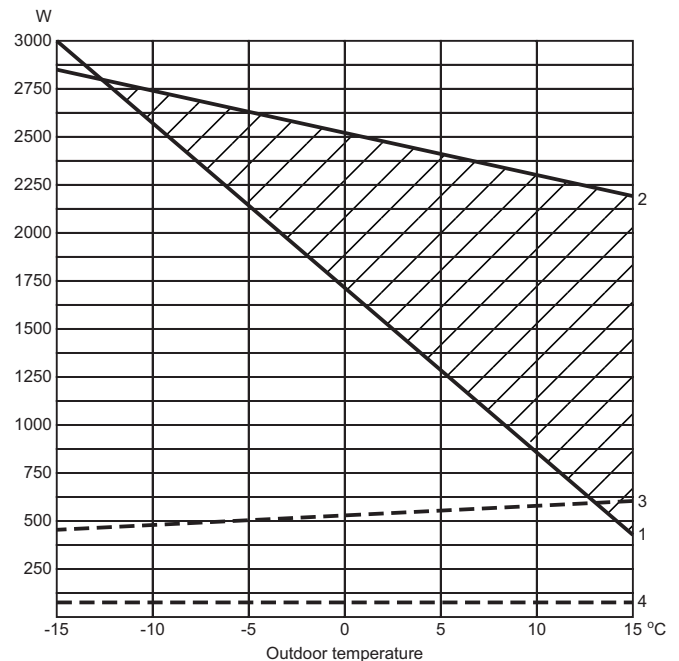
Capacity

The capacity of GE 315 VP/VPC vary with the airflow and fresh air temperature.

Airflow. 150 m³/h.



Airflow. 250 m³/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 315 VP/VPC's contribution to the roomheating.

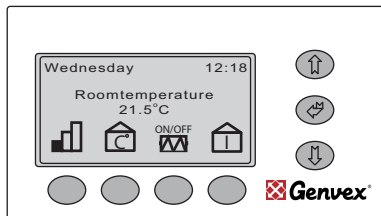
Cooling:

With a outside temperature of 26°C, relative humidity of 45 % and 1/1 speed, the cooling power output is 1040W.

Automatic Control

GE 315 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. Enabling will allow 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		
	1	2	3	1	2	3	1	2	3
Airflow rate	Lo dB			Lwu dB			Lwi dB		
63 Hz	51	51	51	84	91	92	76	81	82
125 Hz	52	53	54	84	88	89	78	82	82
250 Hz	46	46	46	75	85	85	69	77	79
500 Hz	35	35	36	63	73	76	65	69	69
1000 Hz	26	27	28	58	66	68	54	58	60
2000 Hz	23	24	26	55	64	65	46	54	56
4000 Hz	-	-	-	43	57	59	46	47	49
8000 Hz	-	-	-	32	47	49	44	45	45
Mean	Lo dB(A)			Lwu dB(A)			Lwi dB(A)		
	39	40	40	70	78	80	66	71	73

- 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 and electrical box
600 x 1185 x 492 mm

Cabinet structure:

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

Duct connection:

ø160 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:

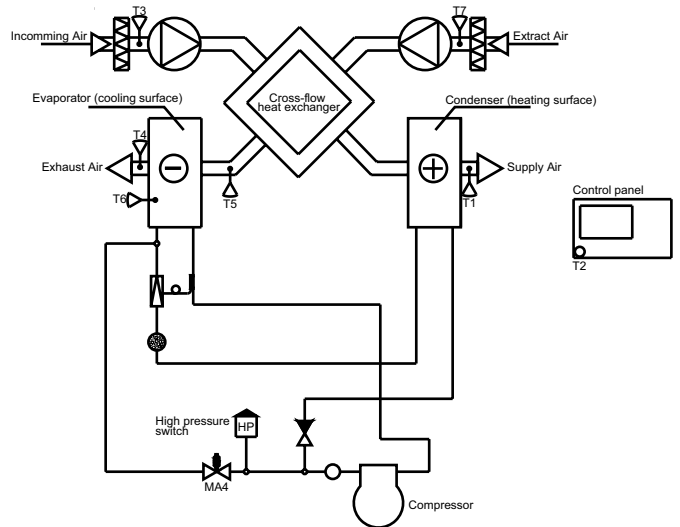
EU4 flat filter

Weight:

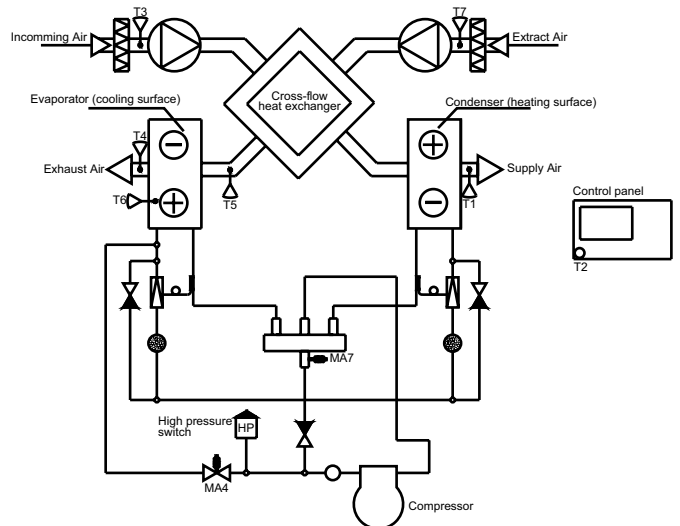
105 kg

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.