GE 525 VP/VPC

GE 525 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 525 VPC has an additional automatic control for cooling.

GE 525 VP/VPC are available with the following accessories:
- Water-based or electric reheating coil for ø200 mm duct
- Water frost thermostat
- Fresh air and exhaust dampers with motor for ø200 duct
- Electric preheating coil
- Thermostatic valve or motorised valve
- Fan monitor

Use

GE 525 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 525 VPC is used if the heat pump is required to cool the supply air during warm periods.

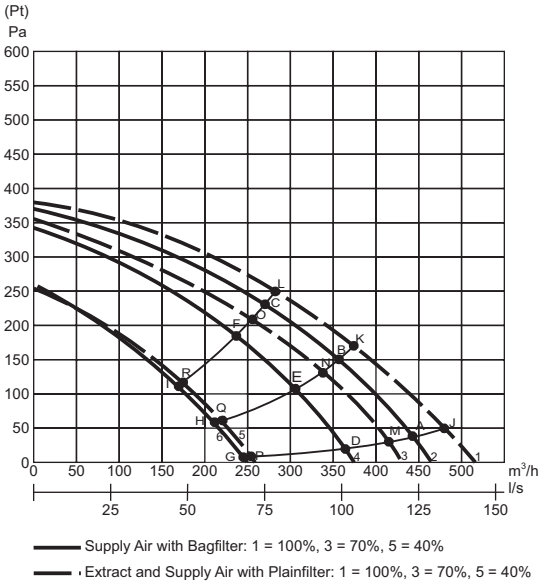
GE 525 VP/VPC are normally used in homes with an area from 230 to 300 m² and a minimum air exchange of 230 m³/h.

Types

GE 525 VP - H (right-hand)
GE 525 VP - V (left-hand)
GE 525 VPC - H (right-hand - as shown)
GE 525 VPC - V (left-hand)

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.



Input current (Supply Air with Bagfilter)

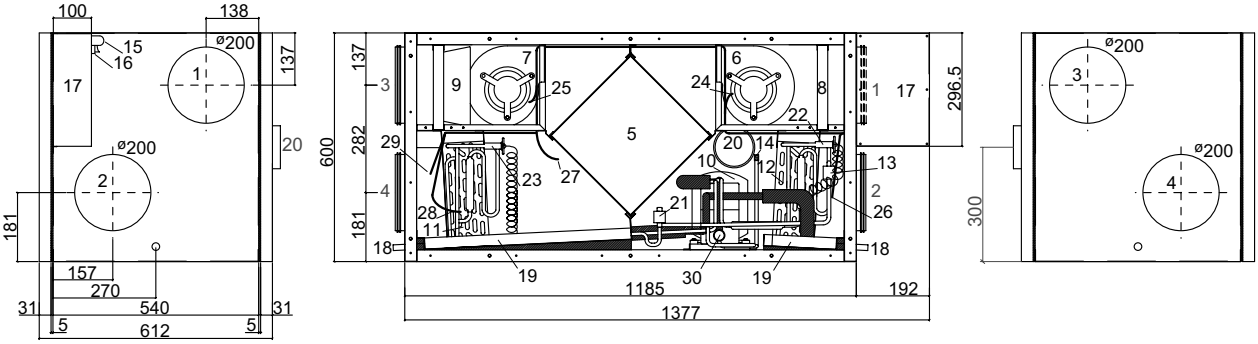
	A	B	C	D	E	F	G	H	I
Watt	134	122	114	121	113	110	86	80	76

Input current (Extract and Supply Air with Plainfilter)

	J	K	L	M	N	O	P	Q	R
Watt	143	133	125	127	122	119	87	85	84

Dimensioned sketch

GE 525 VP/VPC
Dimensions in mm



1: Extract air
2: Supply air
3: Incomming air (fresh air)
4: Exhaust air
5: Cross-flow heat exchanger
6: Extract fan
7: Supply fan
8: Plainfilter Extract Air
9: Bagfilter Supply Air
10: Compressor
11: Evaporator
12: Condenser
13: High-pressure governor
14: Process valve
15: Cable entry
16: Powerswitch
17: Terminal box
18: Drain ø15
19: Drip Tray
20: Supply connection duct on rear side
21: Magnetic valve Defrosting
22: Thermovalve Condenser
23: Thermovalve Evaporator
24: Sensor Extract air
25: Sensor Incomming air
26: Sensor Supply air
27: Sensor upstream of Cooling surface
28: Sensor Cooling surface
29: Sensor Exhaust air
30: Fourway valve

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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
D2E 133

Capacitor
4 µF

Motors, 230V AC:
Standard motors
IEC 38

Insulation class
B

Degree of protection
IP 44

Motor size (2 motors):
RPM
1700

Power input (max. per motor)
175 W

Current consumption (max. per motor)
0.77 A

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

Working range of heat pump
-15ºC/+35ºC

Compressor
T6220GK
Power input (max.) 1104 W
Current consumption (max.) 5.1 A

Average output 2690 W
Average power consumption 870 W

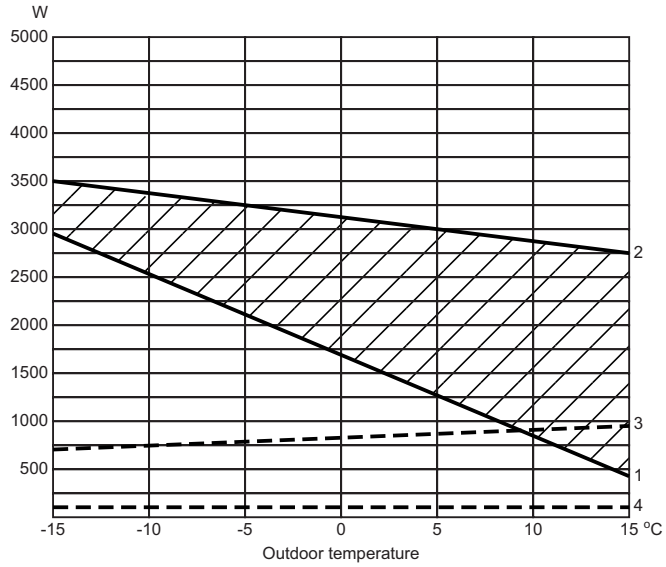
Refrigerant R407c

Charge 525 VP/VPC
950/1200 g

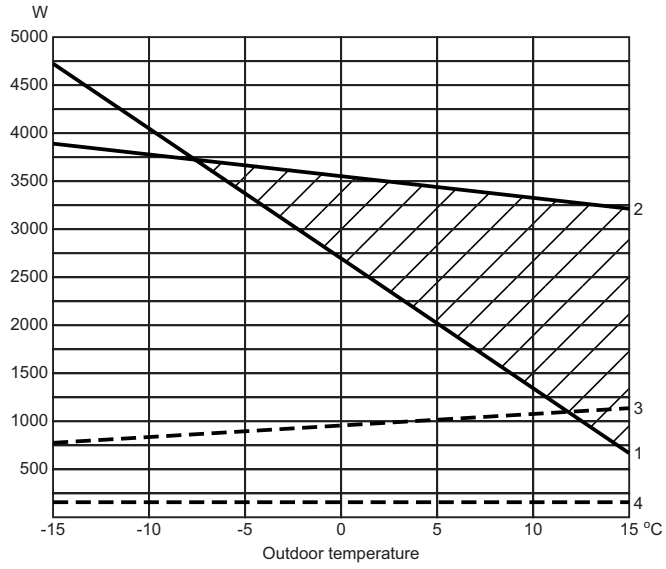
Capacity

The capacity of GE 525 VP/VPC vary with the airflow and fresh air temperature.

Airflow. 200 m³/h.



Airflow 320 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 525 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 2160 W.

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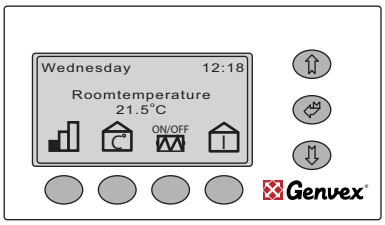
Automatic Control

GE 525 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 tostop 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 minuts 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 these heating and cooling surfaces to switch in 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	64	65	65	80	92	92	89	90	92
125 Hz	52	52	51	79	84	85	75	82	84
250 Hz	51	50	49	67	73	75	70	75	78
500 Hz	39	28	41	63	69	72	66	68	69
1000 Hz	26	27	27	54	62	65	58	60	62
2000 Hz	24	25	25	49	60	64	55	56	58
4000 Hz	-	18	18	42	55	60	48	51	53
8000 Hz	-	-	-	29	46	53	42	45	46
Mean	Lo dB(A)			Lwu dB(A)			Lwi dB(A)		
	42	42	44	67	72	74	67	71	73

1: Measured at 40% of max. speed with Compressor
2: Measured at 70% af max. speed with Compressor
3: Measured at 100% af max. speed with Compressor

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Contruction

Main dimensions:
(h x l x d) excl. bosses and electrical box
600 x 1185 x 612 mm

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

Duct connection:
ø200 mm (nipple dimension) with rubber ring seal

Door:
6 mm screws

Cross-flow plate-type heat exchanger:
Seawater-resistant aluminium

Condensate trays:
Stainless steel

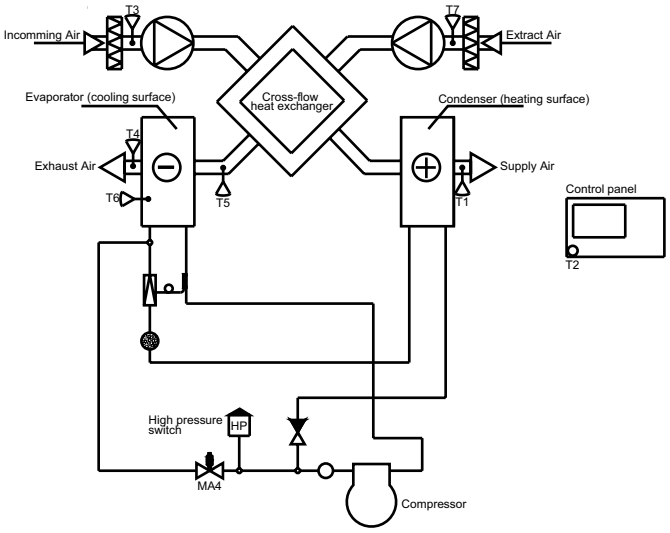
Condensation drain:
Stainless pipe ø15 mm (ext.)

Filters:
Air supply:
EU7 bag filter
Exhaust:
EU4 flat filter

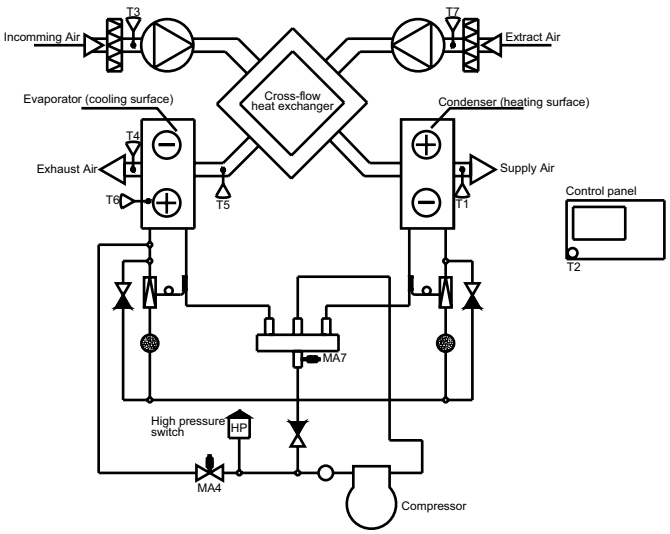
Weight:
128 kg

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.

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