

GB

Installations Manual

Active Ventilation

Heat pump

- *GES Premium 1/1L*
- *GE Premium 1/1L*
- *GE Premium 2*
- *GE Premium 3*

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Subject to Technical Modifications

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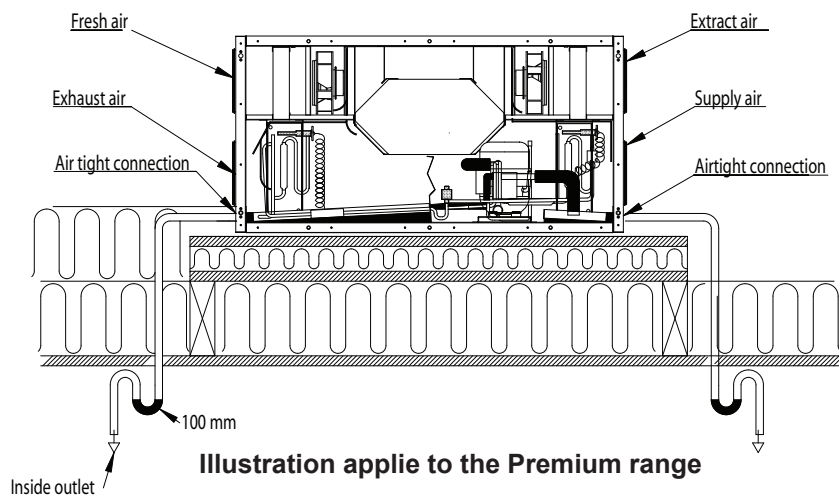
When installing GENVEX Premium-series and Premium range, please follow these instructions:

- 1) Make sure that the machine is in plumb.
- 2) Install an airtight water trap on a non-freezing location to compensate for fan pressure.
- 3) The height of the water trap must be at least 100 mm.
- 4) Make sure that the drain flows downwards all the way from the unit.
- 5) Pour some water into the drip tray of the unit to verify that it functions properly.
- 6) If freezing of the water trap may occur, it is necessary to install a thermostat and an electrical heater to prevent freezing when the

- temperature drops below +2C°.
- 7) Air flow adjustments must be made on both the supply and exhaust side prior to normal use of the machine. It is important to have a balance between supply and exhaust air volumes
 - 8) It is recommended to keep the ducts closed until the unit is adjusted and working.

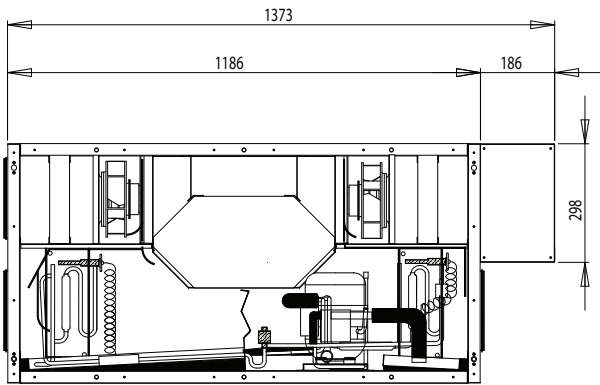
This instruction must be followed. If the drain is not made according to this instruction GENVEX A/S cannot be made responsible for any additional damages, which have nothing to do with the GENVEX unit.

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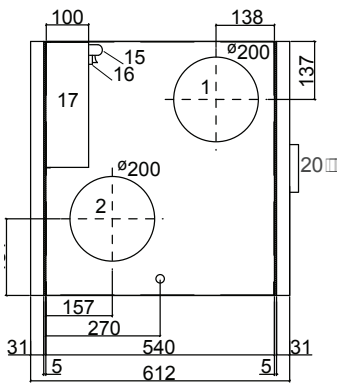
Installation

Dimensions in mm



This illustration applies to the Premium range

GE Premium 2



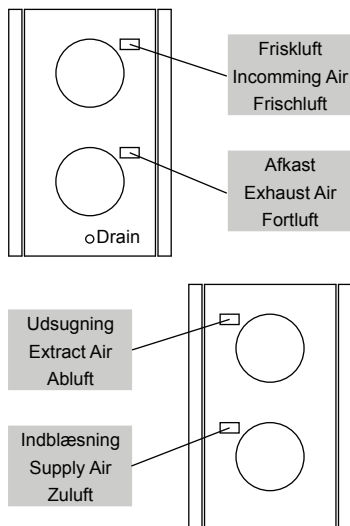
Installation

The GE Premium range is available with supply air on the right-hand side (as shown) or supply air on the left-hand side and as a reversible cool/heat exchanger.

When it is a left-hand version the unit is build laterally reversed, which means that the power connection is placed on the left-hand side.

Because it is a reversible heat pump the unit has two condensate drains. At all times the condensation from the heat pump will appear. Both outlets must be connected to a suitable drain on site.

The unit must be positioned on a surface so that vibrations from the unit cannot be transferred through ceiling and walls and so that the condensate drain with the necessary water trap can be led to an inside drain without danger of freezing in cold weather. In the winter period the unit may produce up to 5-8 litres of condensate each day. To allow access for service and maintenance, there must be a space of a minimum of 600 mm in front of the unit and a current floor. If the unit is located in the loft space, there must be free access to the unit from the loft hatch.



Duct connection

At all duct connections there is a yellow sticker indicating which ventilation duct to be connected.

Connect the supply air duct:

Duct system from the unit to the supply outlet in the living room

Connect the extract air duct:

Duct system from wet rooms to the unit.

Connect the fresh air duct:

Duct system from fresh air roof cowls/external grills to the unit

Connect the escaping air duct:

Duct system from unit to the escaping roof cowls/external grills.

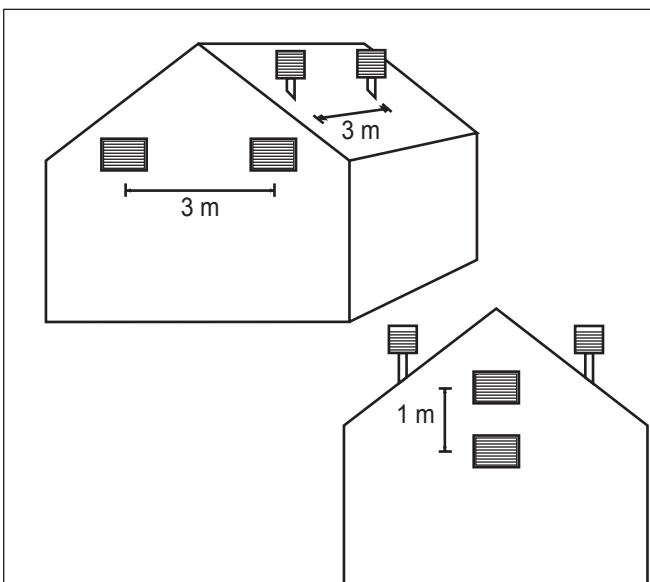
Duct system

It is recommended that the duct system is made of spiral ducting with rubber ring seal fittings in order to provide a tight and durable duct system. To achieve a satisfactory low sound level from the unit, silencers must always be fitted to the supply and extract air duct system between the unit and the first supply and extract valves.

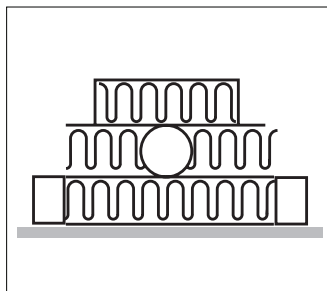
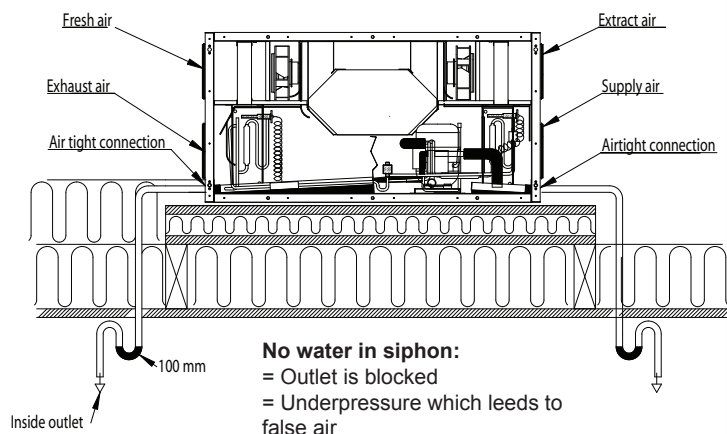
It is recommended that the air speed in the ducts are dimensioned at a sufficiently low level to prevent noise from the supply and extract valves.

When positioning fresh air and extract roof cowls/grills, make sure that the two air flows do not intercept causing escaping air to be drawn in again. It is recommended that grills are placed on the north or east side of the house to ensure optimum comfort.

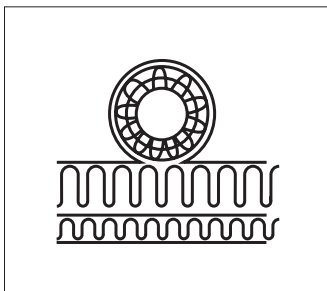
In flats/houses where it is not possible to provide a sufficient distance between the fresh air and the escaping.



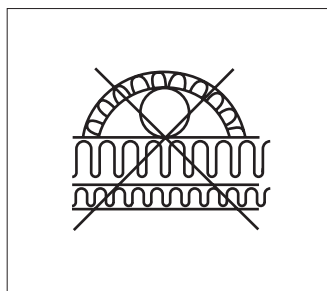
Installation



Duct insulation, alt. B



Duct insulation, alt. A



Faulty duct insulation

Condensate drain

The unit produces up to 5-8 litres of condensate per day. It is therefore important that the condensate drain is correctly made and that the unit has a slight fall towards the condensate drain. The condensate drain pipe must be mounted with the necessary gradient and be led to an internal outlet. The condensate drain must be fitted with a water trap as there is negative pressure in the air chamber in which the condensate tray is mounted.

If the unit is installed in a cold loft space, the condensate drain pipe must be insulated to prevent freezing of the condensate in the pipe.

However, it is recommended that the water trap is installed in a heated space to ensure that the water does not freeze.

If installation problems make it impossible to secure the condensate drain pipe from freezing by insulation, it will be necessary to mount a thermostat-controlled heating coil round the condensate drain pipe.

Insulation of ducts in cold loft spaces

In order to high recovery rate of the unit, it is necessary to insulate the ducts correctly. Supply and extract ducts:

Supply and extract air duct :

To minimize heat losses from the duct system in cold loft spaces, the supply and extract ducts must be insulated with minimum a 100 mm insulation mat. If insulation type A is chosen, it is recommended that it is done with two layers of 50 mm mats wropped with paper or foil on the outside and with staggered joints between the two layers. If the ducts are positioned on the rafter foot, type B may be chosen. The insulation must always be tightly wrapped round the ducts.

Fresh air and exhaust air ducts in cold spaces :

It is recommended that fresh air and exhaust air ducts are insulated with a minimum of 50 mm insulation. The fresh air duct is insulated to prevent warm air in the loft in summer from heat up the fresh air. Make sure to seal the termination where the escaping duct is led through the roof or through the gable end in order to avoid condensation damage.

Insulation of ducts in warm spaces

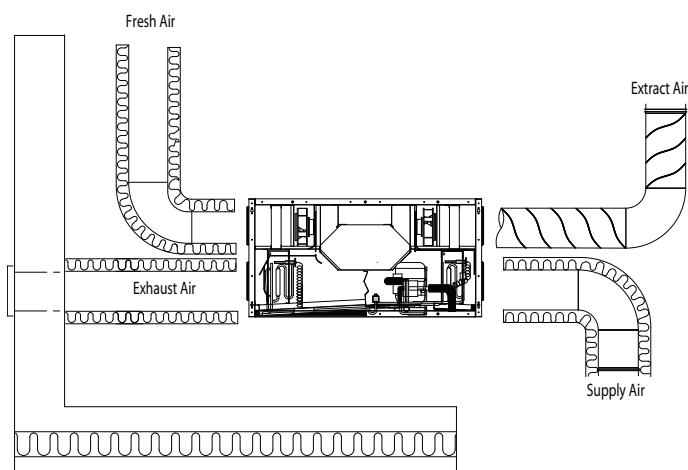
Supply and extract air ducts:

In warm spaces the supply and extract channels must be insulated with 50 mm insulation.

Supply and extract ducts in heated spaces do not require insulation.

Fresh air and exhaust air ducts:

In warm loft spaces and warm rooms the fresh and exhaust air ducts must be insulated with minimum 50 mm insulation. In addition, plastic or aluminium foil must be wrapped around the insulation in order to avoid condensate in the insulation.



Electrical connections

The electrical connection must be carried out by an authorised electrician.

See the electrical diagram.

The cable between the unit and the control panel is a 4-conductor 0.25 mm² cable with a maximum length of 50 m.



Commissioning of the unit

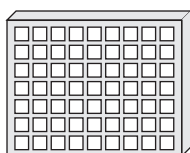
To achieve optimal running of the unit it must be adjusted with air measuring equipment.

If you wish to start up the unit before adjustment, do as follows.

Before starting up the unit:

- 1: Make sure that the Genvex unit is correctly mounted and that all ducts are insulated as required.
- 2: Make sure that inspection doors can be opened so that service and maintenance of the unit can be carried out.
- 3: Make sure that filters are clean (may be dirty from installation work).
- 4: Make sure that the condensate drain is correctly mounted with a water trap and is protected from freezing. Pour 1 litre water into the condensate tray and make sure that it can run through the condensate drain pipe without hindrance.
- 5: Adjust all the supply valves so that the valve closest to the unit is opened three turns from closed position, while the furthest is open eight turns from closed position. Open the valves in between 4-7 turns depending on how far they are from the unit.

The unit can now be started up and run until adjustment with air measurement equipment has been carried out.



- G4 = Standard filter
(Coarse filter class G4)
F5 = Fine filter (Fine filter class F5)
F7 = Pollen filter (Fine filter class F7)

Optimal commissioning of the ventilation system

Air measuring equipment is necessary for commissioning. Before starting adjusting the system make sure that the 5 points in the section commissioning of the unit have been carried out. Then start up the unit.

The basic ventilation value adjustment is to be done on speed 2. To reduce energy consumption as much as possible, start by adjusting the main air volumes to the desired air volume by changing the voltage outlet on the transformer.

Then adjust the supply and extract air valves with air measuring equipment (when adjusting the supply and extract air valves, remember to lock them and to turn the guide plate in the supply air valves so the air blows in the right direction).


Then measure the main air volumes again and do the final adjustment of the main air volumes with the fresh and extract air dampers (Remember to lock the dampers after commissioning).

Maintenance of the unit

Filters:

When the red lamp on the control panel flashes, the filters must be changed/cleaned. Stop the unit on the switch on the unit or the electrical panel. Open the front cover and take out the filter. When the filter has been changed or cleaned by shaking it and by removing the worst dirt, and mounted again switch on the unit and press the enter button on the control panel for 10-15 seconds until the Genvex logo starts flashing again and the equipment is back in normal operation.

 **Careful handling of the plates is required. They have sharp edges and must not be damaged.**

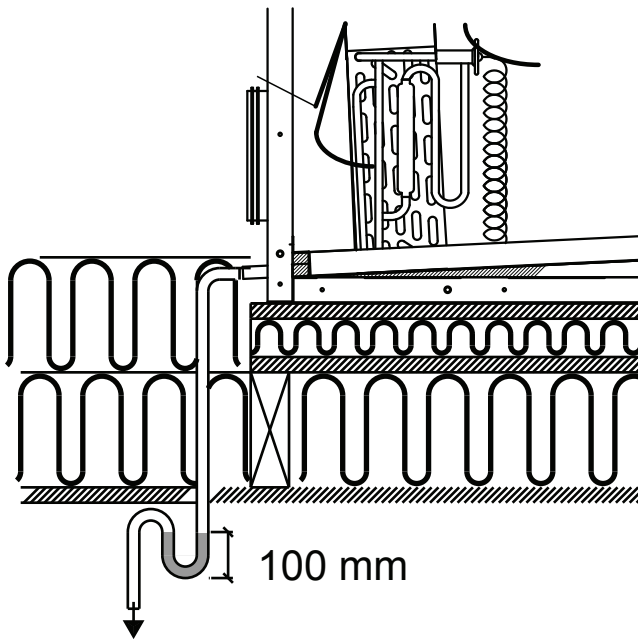
 **Do not vacuum or clean at high air pressure. It will damage the filter!**

 **Remember: do not open the unit, before it has been disconnected from the electricity**

Condensate drain:

When changing the filter in August/September, before outside temperatures fall to 5°C, measure that the condensate drain is not blocked by dirt and make sure that there is water in the water trap.

Pour 1 litre of water into the condensate tray and make sure it runs off without hindrance. If the condensate drain does not work, this could lead to water damage in the dwelling.



Counter current heat exchanger:

Inspect the countercurrent heat exchanger every years. If it is dirty, remove it and wash in warm soap water and then rinse, if possible in the bathroom using the shower head.

Fans:

Every year check the two fan wheels for dirt. If they are dirty they may be cleaned with a brush, bottle washer etc.

Supply and extract valves:

Clean the valves by wiping them with a dry cloth. Make sure the valve does not rotate causing a change in the air volume.

Service:

If you are unable to maintain your unit yourself, you can sign a service agreement with the Genvex service department. If any faults arise in the unit, contact the Genvex service department.

Installation

Fault finding

Unit has stopped:

No light in any of the lamps on the control panel, even though both buttons are pressed.

Fault:

- The fuse on electrical panel has blown, no power to unit
- One of the fuses on the circuit board has blown
- Loose wire, no power to unit
- Loose wire between unit and control panel
- Faulty or incorrectly set clock (units with clocks installed).

Red lamp on the control panel is constantly on:

Fault:

- Frost protection thermostat disconnected (units with water reheating surfaces).
- Defect sensor in unit
- Defect sensor in control panel
- If no supply sensor has been mounted, this has been replaced by a resistance which is faulty
- Loose sensor wire or loose jumper in terminal row on control circuit board.

Condensate running out of appliance:

Fault:

- Condensate drain blocked by dirt
- No water in the water trap
- Condensate drain blocked by ice.
Drain is insufficiently insulated.

No supply air to living rooms:

Fault:

- Defect fan
- Blocked filter
- Fresh air grill is blocked by dirt and leaves in the autumn or snow and ice in the winter.
- Fuse on control circuit board has blown

No extract air from wet rooms:

Fault:

- Defect fan
- Blocked filter
- Fuse on control circuit board has blown

Cold supply air:

Fault:

- Countercurrent heat exchanger blocked by dirt or ice.
- Extract air fan is defective
- Extract air filter is blocked
- Electrical reheating surface disconnected through the fire thermostat.
(Only units with an electrical reheating surface mounted).
- No hot water circulation to water reheating surface.
(Only units with a water reheating surface mounted).
- Blocked circulation pump, air in heating pipe, defect thermostat/motor valve, incorrect setting of control panel.

The display shows:

Data fault:

- no communication between the display and controller.
- cable between display and circuit board is too long

Version fault:

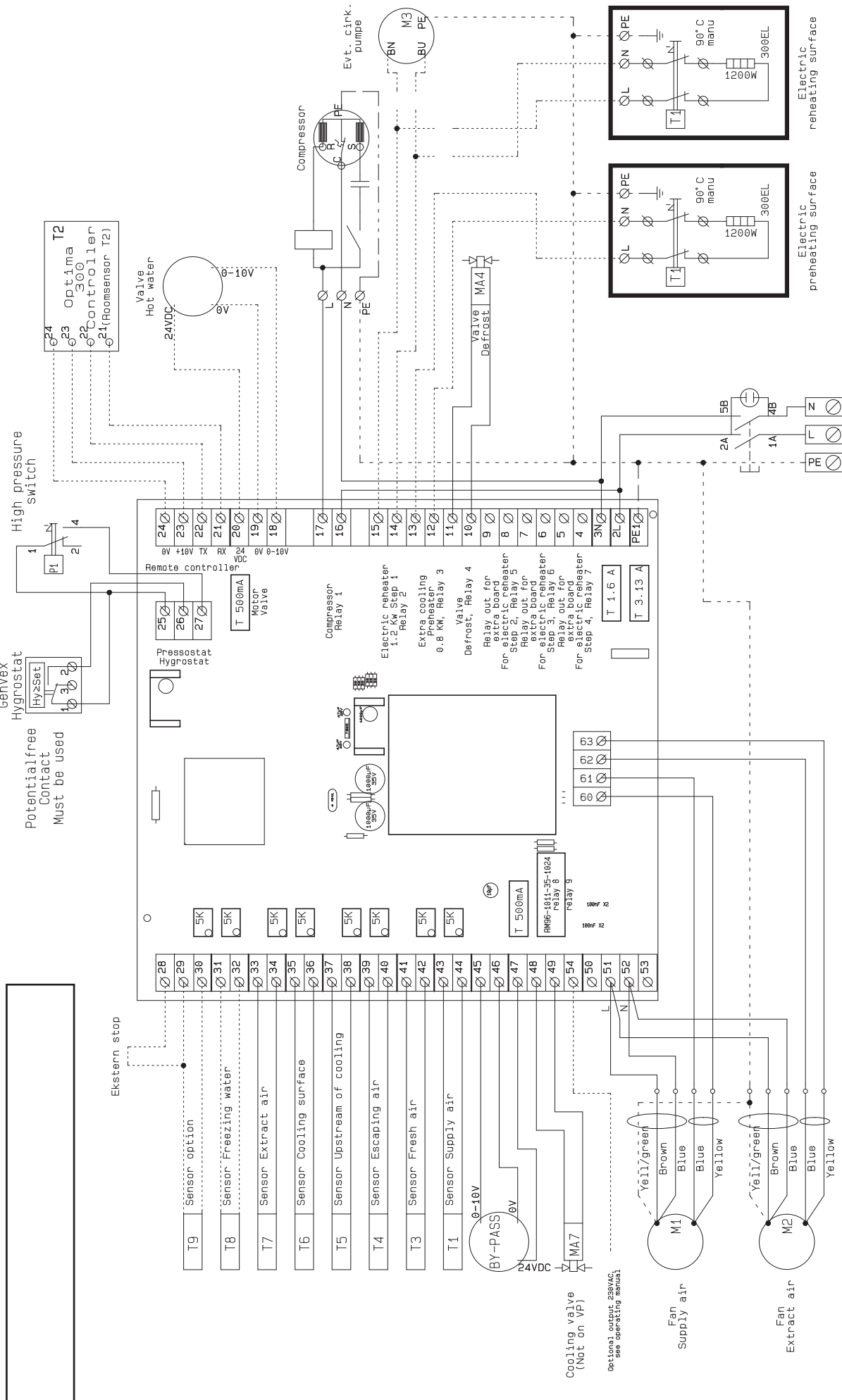
- The program version is not the same as that of the print board

Change filter:

- the filters have to be changed

Hold ON-OFF:

- the filters have not been changed within the last 14 days. The unit has stopped

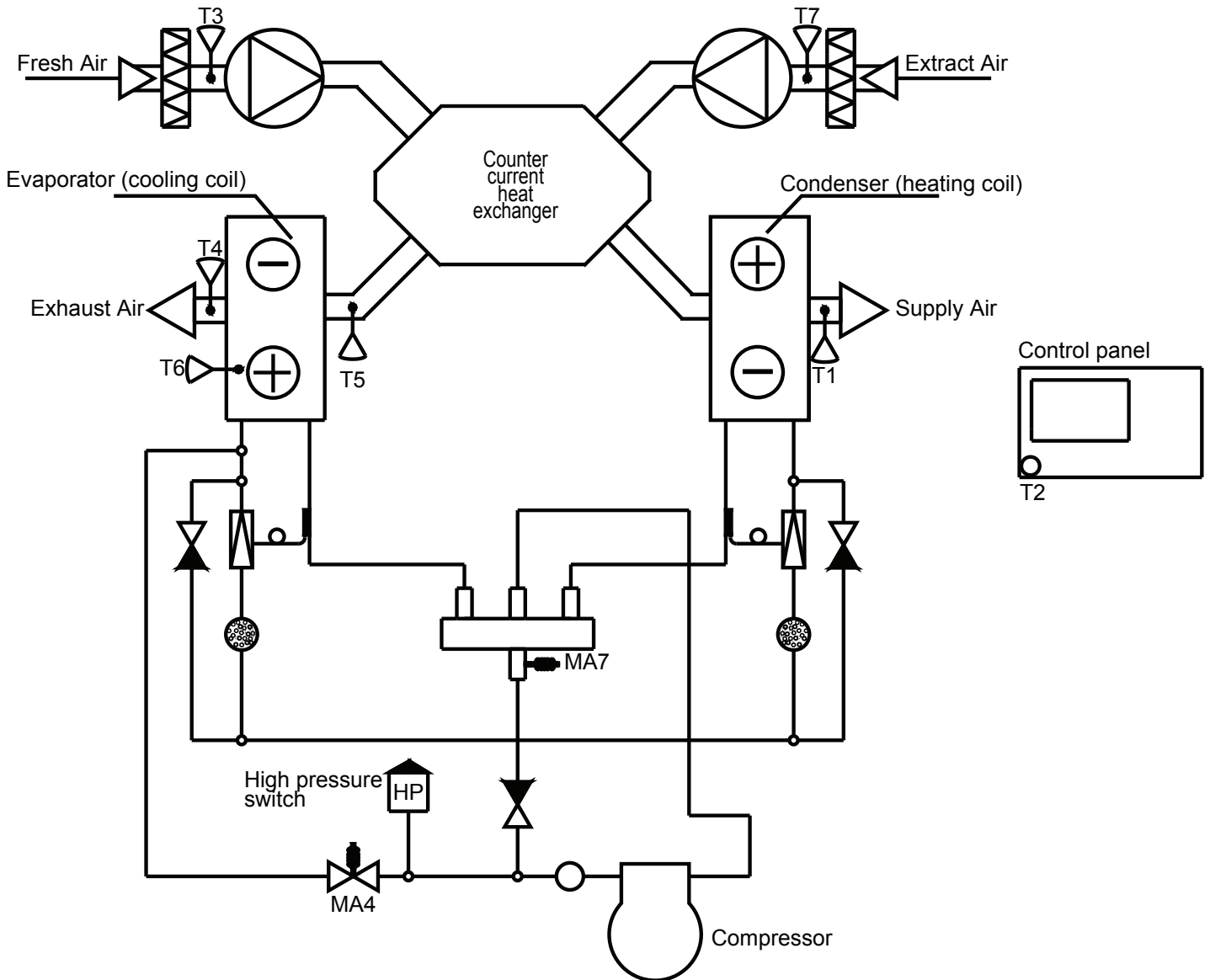


Mains 1x230VAC, 50Hz
MAX FUSE 16A
Must be connected to ground.

Customer:	Type: GES Premium I and 2 EC	Serial:	
Yours ref.:	Our ref.:	Page: 1	of 1
Construct.: KS	Order no.:	Rev.:	Date: 23-02-20



Flow diagram GE Premium range



Notes:

Notes:

Notes:

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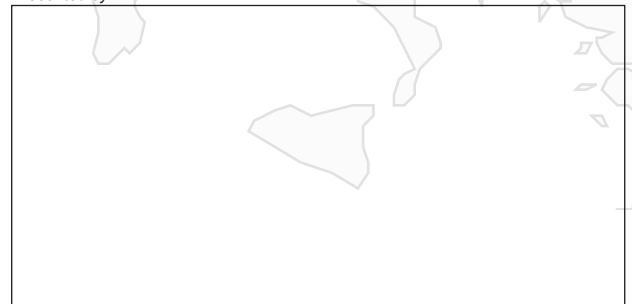
Genvex

Hamburg

Intelligent ventilation system from Genvex

As ventilation specialists, we offer a product range that covers all aspects of modern ventilation equipment, from passive ventilation units with highly effective counter current exchangers to units with integrated heat pumps that are extremely power efficient for heating or cooling. We can also provide units for ceiling mounting for installation in existing office buildings, high-rise buildings and industrial buildings.

Presented by:



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