

OPERATING INSTRUCTIONS



OPTIMA 260

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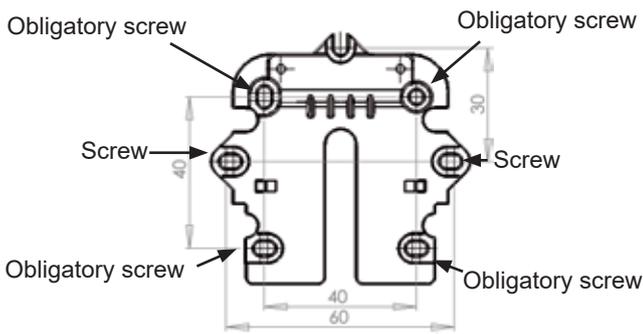
1. INSTALLATION OF OPTIMA 100 DESIGN

1.1 Installation of the Control Panel

The control panel is designed to be mounted onto a level wall.

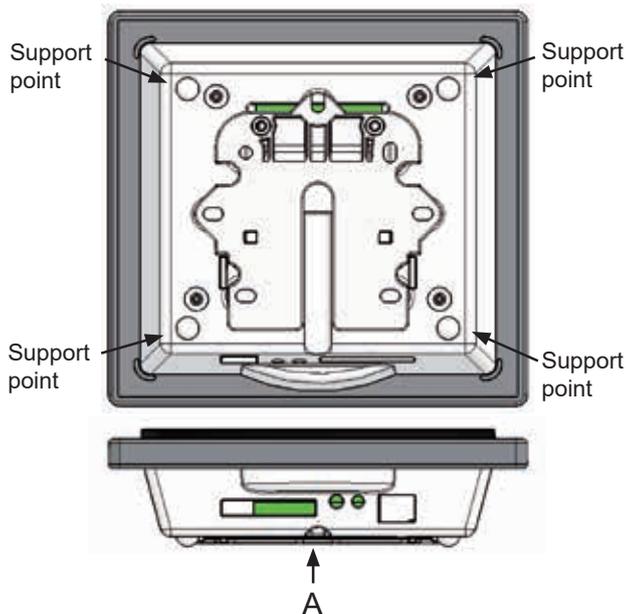
1.2 Installation

Find the installation place for the control panel, mark off the holes and screw the fixture securely onto the wall. Use at least 4 screws for securing the panel, two at the top and two at the bottom.



Hold up the wall frame against the wall and mark off the holes for fastening the frame. Drilling of holes, hole size and suitable screws for fixing the panel all depend on the wall material.

Place the control panel in the fixtures and tilt it in against the wall. The four support points in the corners of the display must touch the wall to keep the display stable.



Underneath the control panel there is access for the:
A: Terminal block. Connection to main circuit board

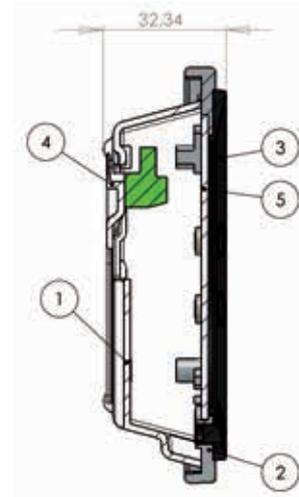
Fit a 8 x 0.25 mm² low-current cable between the unit and the control panel. The maximum cable length is 50 m. The voltage drop for cable lengths over 50 m is too high and can cause operating errors.

Method of Installation of the Wall Fixture

First screw the fixture securely onto a level wall and then guide the cable visibly up from below.

Connect the low-current cable to the terminal block. Check that the cable is connected to the same numbers at both ends. (Between the control panel and the main circuit board in the unit.)

Clip the control panel to the wall fixture by guiding it down from above, slightly slanting out at the bottom. Finish by pressing it in at the bottom so that it is flat against the wall. To disassemble, pull the control panel slightly slanting out at the bottom and lift up.

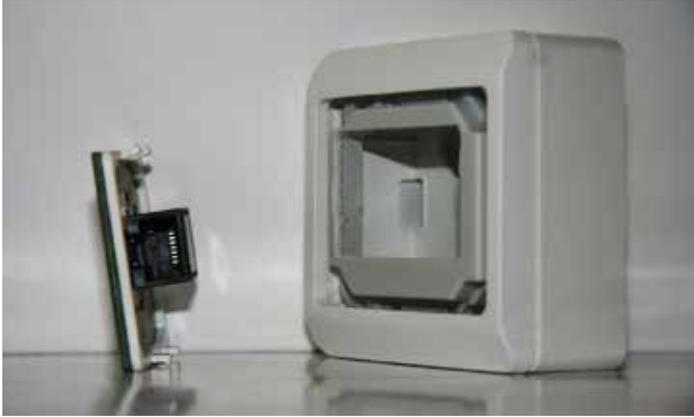


Pos.	Description
1	Panel housing
2	Front of panel
3	Pressure plate for display
4	Wall fixture
5	Glass for the display

2. INSTALLATION OF OPTIMA 100 OPUS

2.1 Installation of the Control Panel

The control panel is designed for being mounted to an Opus type power socket.



2.2 Installation

Find the installation place for the control panel, connect the wires and click the control panel into place.

Fit a $8 \times 0.25 \text{ mm}^2$ low-current cable between the ventilation unit print circuit board and the control panel. The maximum cable length is 50 m.

The voltage drop for cable lengths over 50 m is too high and can cause operating errors.

Check that the low-current cable is connected to the same numbers at both ends. (Between the control panel and the main circuit board in the unit.)

The key on the left of the control panel is K3, and the key on the right of the control panel is K5.



3. OPERATION

All Genvex ventilation units with Optima 260 control system can be operated with an Optima 100 display.

The Optima 100 control system has the following setup options:

- Fan speed
- Filter alarm
- Reheater activation/deactivation

The control system comes factory-preset, which means that the unit can be put into operation without changing the operating settings. The factory setting is only a basic setting that can be adapted to the operating desires and demands for the dwelling in question to make it possible to achieve optimal utilisation and operation for the system.

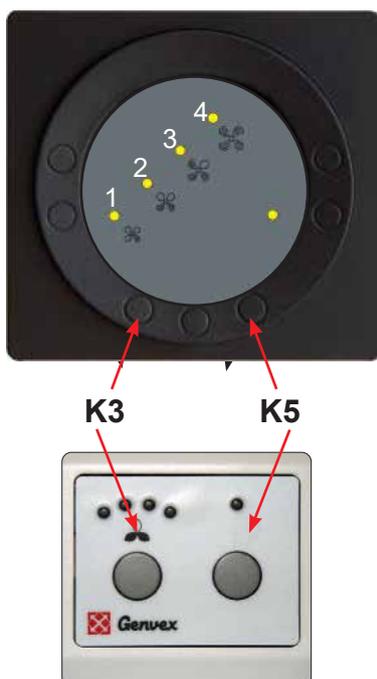
3.1 Operating and Changing Settings

Optima 100 Design is operated with the K3 and K5 keys. Optima 100 Opus is operated with the K3 and K5 keys.

The K3 key is used to change fan speed. To turn off the ventilation unit, press and hold the K3 key for approx. 5 seconds (the unit will shut down after an afterflow period of approx. 3 minutes).

Note: the "turn off ventilation" feature must first be enabled in the control system via Genlog.

The K5 key is used to reset the filter alarm (press and hold for 10 seconds). Individual push of the key activates/deactivates a possible electric reheater, if mounted.



4. DATA LOGGER

Data logging equipment

There are two ways to adjust set points and program the Optima 260 control system.

1. Programming via Genvex Genlog software using a USB connected to the Optima 260 main circuit board.
2. Programming via Genvex Genlog software and outputting set points to the SD card. (Use the "save to SD card" function in the Set Point Management menu.)

Note on method 1

To be able to initiate communication with Optima 260, use data logger equipment with a 4-pin connector. Connect the 4-pin connector to the main circuit board and the USB connector to the PC. These are accessories that can be purchased directly from Genvex.

Note on method 2

To use method 2 to initialise a Genvex unit with an Optima 260 control system, we recommend that you remove the SD card of the main circuit board again after starting up the unit (start-up and input of data take approx. 2 minutes) as Optima 260 will input the preprogrammed data on the SD card every time there is a power outage. You can replace with advantage the programming SD card with an empty SD card in order to take advantage of the automatic data logging feature.

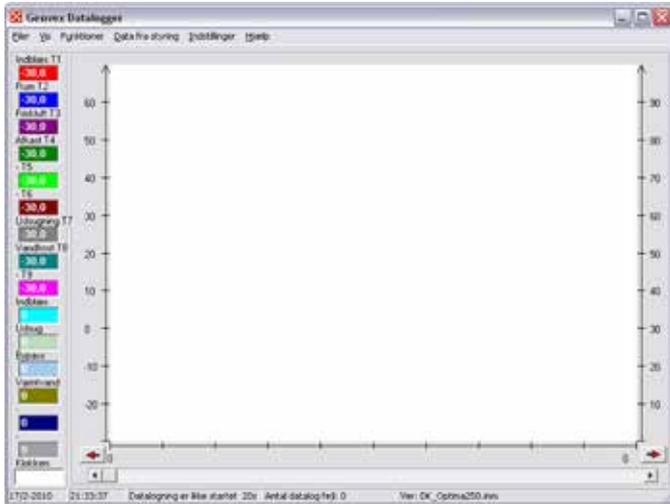
The latest version of the Genvex Genlog software can be ordered from Genvex by telephone +45 73532700.



Genvex item no. 022031
- USB/Optima communication cable for PC

Functional Description of Data Logger

The data logger software is designed for configuring and monitoring Genvex devices. The data logger can be connected to all Genvex Optima control systems. The instructions presuppose a correct and functioning setup of the software.



The user interface in Genvex Data Logger

The data logger can be used for several different purposes:
 Setup of parameters in the control system.
 Setup and changes to the clock program in the control system.
 Reading of the data logger in the control system for the past three years.

“Live” logging of the current operation of the device.
 Subsequent analysis of the operation of a device.

User interface

The program is structured with the primary image in the middle of the screen. This is where the graphs that represent the information collected from the control system are displayed. The menu line for the various settings is placed at the top.

Values that are read “here and now” or values that lie below the read line are displayed on the left side. The red line appears when you click a random place on the display. The figures in the left column will then represent all the values that lie on the line. The colours of the curves in the logging area correspond to the colours displayed on the left-hand side. The exact time of logging will be displayed in the field at the very bottom.

Tip: Click on the clock field to change the field to display “LOG NO.” This can be useful if you want to refer to a certain logging.

There is an area with grey and white lines at the top of the logging area itself on the screen. These lines will be red if relay function is active. Hold the mouse cursor over the line for a moment, and a small help text will appear.

The left y-axis is a scale for temperatures. The right-hand side of the logging area is the scale for percentages, e.g. for fan speeds. The x-axis represents the time line.

A logging can contain a good many pages. This is why there is a page number in the right/left corner next to the red arrows. To flip between pages, click the red arrows.

Press and hold the left mouse button for a moment over the red arrow to open a dialogue box. Here you can enter the page number you want to scroll to.

There is a status menu located at the bottom of the screen. This line displays the date and time, if the data logging has started or stopped, the number of data log files and which control system the software is configured for (this is changed in “Settings”).

Menus



Files

Retrieve data*

– Retrieves data saved previously on the hard drive (.txt files)

Import of SD card files* – Imports data saved on the Optima Design control panel (.dal files)

Save data – Saves the current logging

Save window – Saves only the current window

Save data Excel – save the data to comma separated value file

Print – Prints the current window

Exit – Exits the software

*The data logger works with .txt files, whereas the control panel works with .dal files.

View

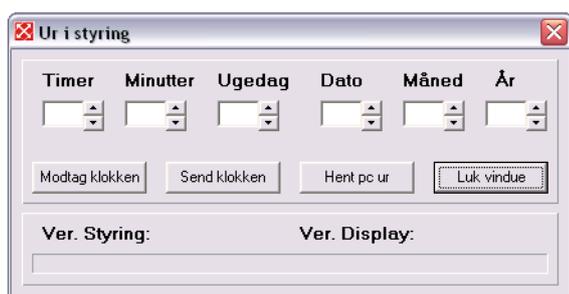
View graphs – Opens a check box. This provides the opportunity to select or deselect the graphs displayed on the screen, usually to provide an overview.



Data logging in control system (not for systems with SD card for datalog) – Here you can retrieve the saved logging in the control panel to the program. Change the time, if possible, if the time of the last logging deviates from the selected time. This is done out of consideration for the time line at the bottom of the screen. This can be relevant, for example, if the logging is retrieved from a transmitted loose SD card or the like.



Click on "Receive data" to input the data. Note that this can take up to 10 minutes. While the data is being loaded, the control panel and the control system of the device will not be able to communicate.



Clock in control system – An easy way to set the clock in the control system.

Settings

Comport control – Here you select the Comport which will be used for the data logger.



General setup – Here you can choose language, model as well as folder for the log files.

For instance, it can be a good idea to create a folder for logs under "Documents" and set up the program to suggest this folder as default.

General Information

Note that:

- Loggings are not linked to setup. In other words, even if the loggings are retrieved from the hard drive or the control panel, they do not necessarily match the selected control system. You therefore run the risk of analysing a logging from a Combi, but viewing the values as if they come from an Energy.
- The software is set up by default in Danish. This can be changed in "Settings".
- Certain antivirus programs will regard the log files as viruses when they are sent by email.

Connection to PC – Optima 260

In order for the Optima 260 to be able to communicate directly with the Genlog software, use data logger equipment that can be connected directly to the Optima 260 printed circuit board. For details see page 5.

5. GENLOG SET POINTS

Calendar

Use this function to configure the setting for each day of the week. Each day can be configured to run with different fan speeds, as required. You can copy the configuration from one day to another. Here you can choose ON or OFF. If, for example, there is nobody home for some time, the daily settings can be turned off and the system will run according to a manual setting, e.g. level 1.

01 - Calendar

Choose between controlling the system manually or controlling the speed (air exchange) and temperature automatically according to a fixed weekday program. If the menu item is set to OFF, the system will be controlled manually according to the speed and temperature selected.

If the menu item is set to ON, the system will be controlled according to the day programs entered in menu items 02 to 08.

Setting option: ON/OFF.

Example: Monday

Up to 10 switching times can be entered for one day. The times can be entered in a random order. Enter hours in the first, minutes in the second and speed in the third column. Use the fourth column to enter the temperature difference with which the temperature should be lowered.

Example: If the temperature is set to 21°C and you enter - 2.0°C, the system will aim at 19°C.

If the speed has been changed manually with the key under daily operation, the program will return to the weekday program once the next switching time has been passed.

Examples of a weekday program:

01 07:30 H3 -0.0
02 09:15 H1 -1.0
03 17:00 H3 -0.0
04 18:00 H2 -0.0
05 23:30 H2 -2.0

It is not necessary to use all switching times. If the line is marked with 0, the control system will skip it.

Thursday to Sunday:

These days can be filled in individually in the same way as under the example for Monday.

Weekday

Monday	1
Tuesday	2
Wednesday	3
Thursday	4
Friday	5
Saturday	6
Sunday	7

Month

January	1
February	2
March	3
April	4
May	5
June	6
July	7
August	8
September	9
October	10
November	11
December	12

User menu

01 - Temperature

Set your desired temperature between 10 and 30°C. Item 19 of the Service menu allows you to choose between supply air regulation or extract air regulation.

Setting option: between 10 and 30°C.

02 - Preheating

If a preheater is fitted to the outdoor air duct, the set point must be configured to ON. Enter the desired preheating temperature in item 20 of the Service Menu. If a refrigerant device is installed in the supply air duct instead, the set point must be set to OFF. (It is not possible to control a preheater and a refrigerant device at the same time).

If both types of optional equipment are installed, the set point must be configured manually in the spring and in the autumn. If none of the help functions in item 27 of the Service Menu are used, help function 4 can be used to control the additional cooling.

Setting option: ON/OFF.

03 - Reheating

If there is a reheater fitted to the system, you can choose if the reheater should operate. If the set point is set to OFF, the heater will not operate, even when this is necessary. If the set point is set to ON, the heater will start, as required. It regulates in accordance with the temperature set in item 1 of the User Menu.

Setting option: ON/OFF.

04 - Timer levels 3 and 4

At speeds 3 and 4, the system will automatically reconnect to speed 2 after the number of hours set in item 17 of the Service Menu by setting the set point to ON. If the set point is set to OFF, the system will run at speed 3 or 4 until it is manually changed to another speed.

Setting option: ON/OFF.

05 - Change filter

There is a built-in filter timer which counts how long the system has been running since the last change of filter. The set point can be set between 1-12, which corresponds to 12 months. It is recommended that the set point be initially set to 3, which corresponds to 3 months (if 0 is entered, the filter timer is off and will not give filter warning).

If the filters are too dirty after the set period, set the set point to a lower number. If it is not necessary to change the filters after the configured period, the set point can be set to a higher number.

When the timer reaches the set value for filter change, the filter change alarm will flash on the display.

Once the filters are changed, return to the screen with the daily operating options and press and hold down the filter indicator key until the diode switches off. The device will then change back to normal operation.

Setting option: between 1 and 12 months. set point = 0 will disable the filter timer (Be careful when using this setting - Genvex disclaims any responsibility for faults in the ventilation unit caused by a clogged filter).

06 - Humidity control

Here you turn on humidity control. It must be set to ON in order to be active.

Setting option: ON/OFF.

Service Menu

10 - Level 1 Supply air

Level 1, which is the lowest speed, is usually used when there is nobody home. Both fans can be configured independently of each other for all levels so that the air flow in the supply air and in the extract air is equal, which provides optimal operation.

The adjustment of the system must be performed with specialised air measuring equipment and can be done without using the main regulating damper.

Configuring the air flows without expert advice is not recommended. Incorrect configuration can lead to major energy consumption or unpleasant indoor climate.

Setting option: between 0 and 100%.

11 - Level 2 Supply air

Level 2 is the recommended speed of the system for providing optimal indoor climate. It should be adjusted to the ventilation requirement of the dwelling.

Setting option: between 0 and 100%.

12 - Levels 3 and 4 Supply air

Level 3 is the highest speed that can be configured. It is used, e.g. if there are many guests or there is a lot of activity in the kitchen.

Setting option for level 3: between 0 and 100%.
Factory setting for level 3: 75%.

Level 4 is used mainly in the summer for lowering indoor temperature. Remember that a higher air exchange rate increases energy consumption.

Setting option for level 4: Cannot be configured.

13 - Level 1 Extract air

The fan speed is adjusted until the same air flow is achieved as the supply air on level 1.

Setting option: between 0 and 100%.

14 - Level 2 Extract air

The fan speed is adjusted until the same air flow is achieved as the supply air on level 2.

Setting option: between 0 and 100%.

15 - Levels 3 and 4 Extract air

The air flow of level 3 is adjusted to the same air flow as the supply air on levels 3 and 4 (item 12).

Setting option for level 3: between 0 and 100%.
Factory setting for level 3: 75%.

Setting option for level 4: Cannot be configured.

16 - Not relevant

17 - Timer levels 3 and 4

If automatic reconnection is used for speeds 3 or 4, you can enter how many hours the system should run on level 3 or 4 before it automatically returns to level 2. The set point can be configured to between 1 and 9 hours.

Setting option: between 1 and 9 hours.

18 - Filter/stop

To ensure that the filters are changed when the filter change alarm flashes on the screen of the control panel, the set point can be set to ON. The system will then stop automatically after 14 days if the filters have not been changed in the meantime.

If this precaution is not required, the set point can be set to OFF and the system will continue to operate.

Setting option: ON/OFF.

19 - Method of regulation

There are 2 options:

0. Cannot be used
1. Supply air regulation (T1 sensor)
2. Extract air regulation (T7 sensor)

If the system is used in a dwelling, supply air regulation is the normal choice. The set point is set to 1. For extract air regulation, set the set point to 2.

Setting option: between 0 and 2

20 - Preheating

If preheating is set to ON in item 2 of the User Menu, the set point must be configured to the outdoor air temperature, at which the preheater should kick in.

Setting option: between -15 and 0°C.

21 - Bypass open

Here you set the temperature at which the bypass should be 100% open. You set a temperature differential, which means that if you want the bypass to be 100% open at e.g. 23°C and if the set temperature in User Menu item 1 is 20°C, this menu item should be set to 3°C.

The bypass will open, provided that:

1. The extract air temperature is higher than the outdoor air temperature.
2. The outdoor air temperature is above the set temperature in Service Menu item 29.

Units with modulating bypass

If the temperature rises by 0.5°C above the temperature set in User Menu item 1, the bypass damper will begin to open. The bypass is 100% open when the temperature reaches the set point in User Menu item 1 + the temperature differential set in this menu item.

To get a smooth opening of the bypass, the temperature at which the bypass is fully open should be set to approx. 3 °C above the set temperature in Use Menu item 1.

Units with on/off bypass (e.g. ECO190/ECO 375)

The bypass opens when the temperature reaches the set point in User Menu item 1 + the temperature differential set in this menu item.

Setting option: between 1 and 10°C.

22 - Regulation water

If a water reheater with a motor-operated valve is installed in the system, it may be necessary to adjust the regulation time.

The less regulation time, the faster the motor-operated valve will regulate.

Setting option: between 1 and 250 seconds.

23 - Regulation electricity

If an electrical preheater or an electrical reheater is installed, it may be necessary to adjust the regulation time.

Setting option: between 1 and 30 minutes.

24 - Frost reduction

To avoid icing of the counter current heat exchanger, the supply air flow can be reduced gradually, once the discharge air temperature after the counter current heat exchanger has fallen below the set temperature. This function gradually reduces the supply air flow until the set value is reached.

Caution: May cause under-pressure in the house!

Setting option: Between 0 and 10 °C. The function is disabled if set to 0°C.

25 - Frost protection

If a water reheater with motor-operated valve is installed in the system, a frost protection sensor must be fitted to the water reheater and the set point must be set to ON.

If no frost protection sensor is installed, the set point must be set to OFF.

Setting option: ON/OFF.

26 - Frost protection temperature

If frost protection in item 25 is set to ON, the frost protection temperature must be set to the temperature where the system should stop and the motor-operated valve open completely for the flow of hot water.

Setting option: between 0 and 10°C.

27 - Help function

This function can be used for the following:

Set point	Function
0	The relay is off.
1	The relay is on when the system is running. This can, e.g. be used to open and close the outdoor air damper and the discharge air damper.
2	The relay is on when extra heat is required or when the circulating pump should run when heating with water reheating is required.
3	The relay is on when the "Change filter" alarm is active. This can be used to activate an external alarm.
4	The relay is on when extra cooling is required. This function is used if a preheater is also fitted to the system.
5	The control can handle an earth heat exchanger using a damper. The relay will be on if one of the following two conditions are met: <ul style="list-style-type: none">• The outdoor temperature, sensor T9, is lower than the value configured in item 26 (frost protection temperature, typically set at 5°C).• The outdoor temperature, sensor T9, is more than 1° above the temperature configured in item 1 and 1 ° above the current room temperature.

Setting option: between 0 and 5.

28 - System stop

Here you choose if it should be possible to stop the system by pressing the key for speed (K1) in the operating menu for 3-4 seconds. If the set point is OFF, the system cannot be turned off.

Setting option: ON/OFF

29 - Turn off bypass

To prevent the bypass damper from opening at low outdoor air temperatures and from blowing cold, unheated air into the dwelling, use this function to configure the lowest outdoor air temperature, at which the damper must be closed. The value is an expression of the greatest difference that may exist between the temperature configured in item 1 and the lowest outdoor air temperature.

Setting option: Between 0 and 20 °C. If 0°C is selected, the function is turned completely off.

30 - Modbus Mode

See separate description for MODBUS.
Setting option: 0-2.

0 = Modbus OFF

1 = 9600 Baud

2 = 19200 Baud

31 - Modbus Address

See separate description for MODBUS.
Setting option: 1-247.

32 - Humidity max. temperature

Setting the end point for outside temperature-compensation (T3), see the X-axis on the graph.

Setting option: 5-25°C.

33 - Humidity max. value

Setting the end point for outside temperature compensation, see the Y-axis on the graph (desired max. humidity value).

Setting option: 35-85%.

34 - Humidity fan speed

Setting of how much the fan speed may differ in relation to the desired fan speed. See menu items 11, 12, 14 and 15.

Setting option: 5-30%.

Examples

Set point 34 = ± 15%

With a desired fan speed of 3, the fan speed will be able to fluctuate by ± 15%. Since fan speed 3 is set at 75% in Service Menu 12 and 15, the fan speed will be max. 90% and min. 60%.

The same applies to fan speed 2. Since fan speed 2 is set at 50% in Service Menu 11 and 13, the fan speed will be max. 65% and min. 35%.

Fan speed is regulated by ±1% once every 10 min.

Setting option: See item 35

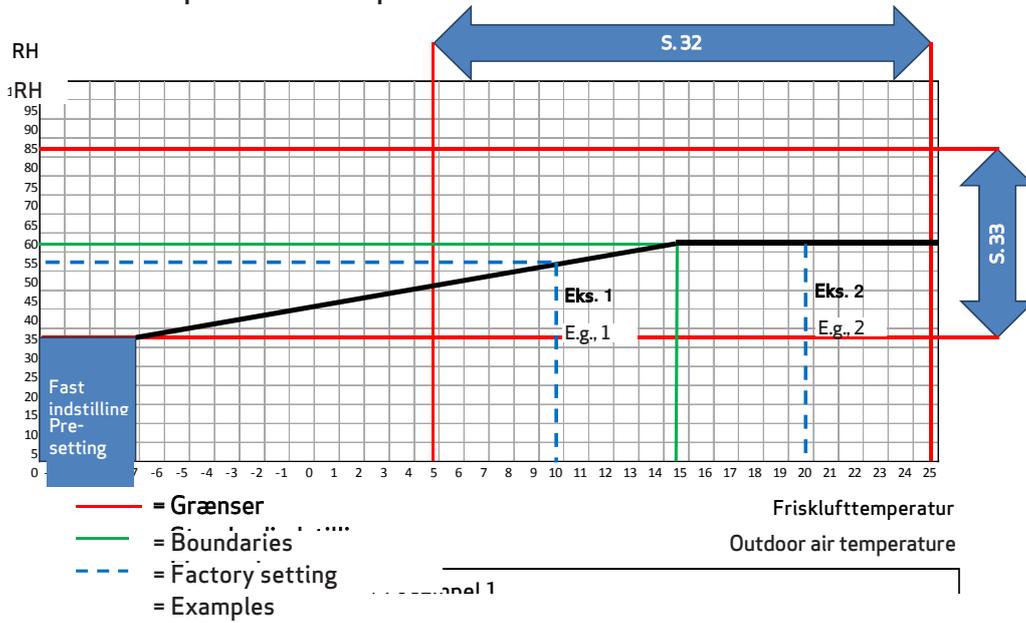
35 - Humidity regulating frequency

Setting of desired frequency for how often the fan speed may be changed.

The function is defined as 1% per unit of time.
 When humidity regulation is activated, the current humidity is continuously measured via the integrated humidity sensor in the ventilation unit, which is placed in the extract air duct.

Setting option: 1-60 min.

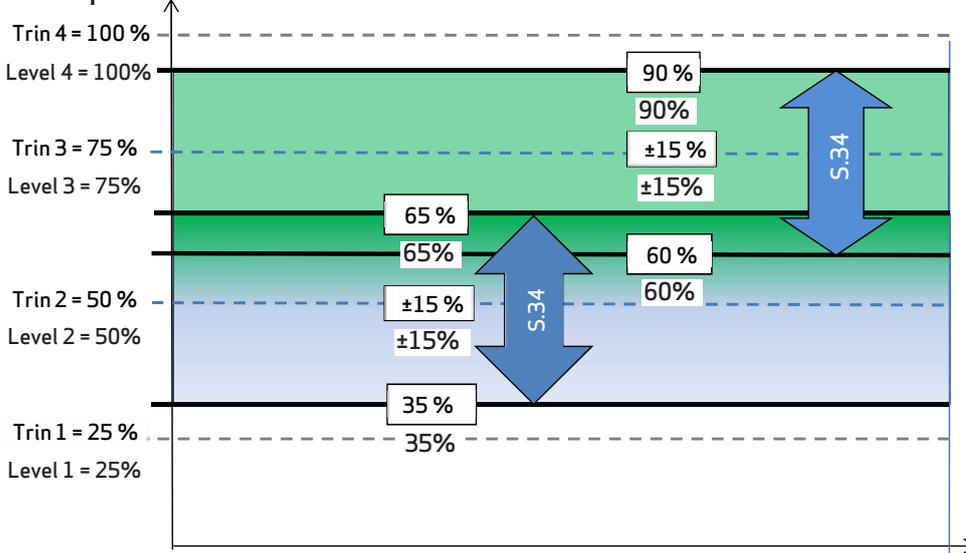
Outside temperature compensation curve



Example 1
 The RH value at an outdoor air temperature of 10°C is 55%.

Example 2
 The RH value at an outdoor air temperature of 20°C is 60%.

Fan speed



36 - Right/Left (only relevant for ECO 190)

NOTE: THIS FUNCTION SHOULD ONLY BE ADJUSTED BY AN AUTHORISED VENTILATION CONTRACTOR.

ECO 190 is delivered by default in a right-configured version. If the unit needs to switch to left-configured design, reconfigure the temperature sensors for this by setting this function to 1.

Note that you will continue to have to undertake hardware changes, e.g. proper connection of condensation drain, tipping of exchangers, moving of humidity sensor. Contact Genvex if you need more detailed information.

37 - Preheat PI P

P-band for the PI controller for the electrical modulating preheater. The P-band controls the amplification of the controller following a deviation from the set point (speeder)

38 - Preheat PI I

I-band for the PI controller for the electrical modulating preheater. The function controls how quickly the controller adapts to a deviation of the set point (brake).

39 - Preheat Reg

The Preheat Cycle function works, as follows:
E.g. necessary output 50% and cycle = 60 sec means that the controller will switch the preheater on for 30 sec and off for 30 sec.

Note: Please refer to your country-specific regulations on limitations when adjusting this function.

The modulating preheater function refers to the value adjusted in set point no. 20. The preheater will try to maintain a steady fresh air temperature according to this set point. When the modulating preheater is used, the existing outdoor air temperature sensor (T3), which is built into the ventilation unit, can be used as reference. No extra temperature sensor is required.

40 - Reheat offset

Offset for reheater with reference to the set point for the requested temp on the display (user menu 01).
E.g. requested temp = 20°C
Offset value = 2 reheater aims to maintain a supply temperature of 18°C

41 - Reheat PI P

P-band for the PI controller for the electrical modulating reheater. The P-band controls the amplification of the controller following a deviation from the set point (speeder).

42 - Reheat PI I

I-band for the PI controller for the electrical modulating preheater. The function controls how quickly the controller adapts to a deviation of the set point (brake).

43 - Reheat Reg

The Reheat Cycle function works, as follows: E.g. necessary output 50% and cycle = 60 sec means that the controller will switch the reheater on for 30 sec and off for 30 sec.

Note: Please refer to your country-specific regulations on limitations when adjusting this function.

The modulating reheater function refers to the value adjusted in set point no. 40. The reheater will try to maintain a steady supply air temperature according to this set point.

When using the modulating reheater, it will be necessary to replace the inlet air temperature sensor (T1) in the ventilation unit with a new temperature sensor installed upstream of the reheater.

44 - Display Model

This is where you choose which external display is selected together with the Optima 260 control system.

0 = No display

1 = OPT100 Design/OPT100 Opus

2 = Boost button

45 - Boost time 1 (only relevant if a boost button is purchased)

This is where you choose how many minutes of pressing the boost button will lead to forced operation - when the button is pressed once

46 - Boost time 2 (only relevant if a boost button is purchased)

This is where you choose how many minutes of pressing the boost button will lead to forced operation - when the button is pressed twice

47 - Boost time 3 (only relevant if a boost button is purchased)

This is where you choose how many minutes of pressing the boost button will lead to forced operation - when the button is pressed three times

48 - Calendar on/off

This is where you can activate calendar functions. See a more detailed description under the item "calendar".

49 - Demand control

This function offers the opportunity for coupling up external 0-10 volt signals which can force control the fans up in speed by increasing the signal. The function is only active in fan steps 2 and 3 and requires humidity control to be deactivated (user menu 06).

The factory setting is 0%, which deactivates the demand control. The workspace for permitted increase of the fan speed can be limited via settings from 0-100%.

For example, workspace 100% here, 5 volts will increase the speed by +50%.

For example, workspace 50% here, 5 volts will increase the speed by +25 %.

Tuesday

Schedule for week program

	Hours	Minutes	Speed	Red. T2
1)				
2)				
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				

	Hours	Minutes	Speed	Red. T2
1)				
2)				
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				

	Hours	Minutes	Speed	Red. T2
1)				
2)				
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				

	Hours	Minutes	Speed	Red. T2
1)				
2)				
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				

	Hours	Minutes	Speed	Red. T2
1)				
2)				
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				

	Hours	Minutes	Speed	Red. T2
1)				
2)				
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				

	Hours	Minutes	Speed	Red. T2
1)				
2)				
3)				
4)				
5)				
6)				
7)				
8)				
9)				
10)				

Red. T2 = Reduced room temperature (Night set-back)

6. FUNCTION

6.1 Regulation of Optima 260

Regulation of room temperature

There are 2 methods of regulation – see Service Menu item 19. If supply air regulation has been selected, the controller will blow in air with the temperature set, provided that a reheater is fitted to the system. The supply air temperature is regulated by the supply air sensor, T1.

When using extract air temperature control, we recommend that the supply air temperature be configured 2-3°C below the room temperature.

Relay R8

When the system is running at levels 1, 2, 3 or 4, the relay will be turned on. This function can be used to e.g. control an optional fresh air damper or the discharge air damper.

6.2 Extra heating and cooling

Water reheating

For systems with water reheaters, the motor-operated reheater will begin to regulate (PI regulation) when the temperature has fallen 1°C below the set temperature.

Electrical reheating on/off version

For systems with electrical reheaters, the reheater will connect when the temperature has fallen 1°C below the set temperature. If the regulation time is set to, e.g. 3 minutes, temperature sensor T1 will measure if the temperature is now above or below the temperature set after 3 minutes. If the temperature is still below the set temperature, the reheating will keep running. When the temperature reaches the set value, the electrical reheater will disconnect.

Electrical reheater (modulating)

As regards systems with a modulating electrical reheater, the electrical reheater will automatically adapt to changes in airflow and temperatures maintaining a constant temperature according to the requested set point.

The controller will be adjusting the electrical output of the reheater automatically.

Extra cooling

If an extra cooling device is fitted to the system, such a device will turn on when the bypass motor is open completely and turn off again when the bypass motor begins to turn off again.

Systems with an electrical preheater will regulate in the same way as an electrical reheater.

7. MAINTENANCE

Follow the following instructions to achieve optimal performance:



Before you open the unit, turn off the power/ pull out the plug and wait until the fans have stopped completely.

A couple of days after the primary installation, check that the condensation outlet is working.

Environmental requirements

When repairing or dismantling the unit, statutory environmental regulations must be observed regarding recycling and destruction of various materials.

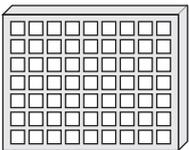
7.1 Unit

Filters

When the alarm flashes in the control panel display, the filters must be changed. Stop the system using the circuit breaker of the unit or the circuit breaker on the terminal board. Open the front cover/filter drawers and remove the filters. Once the filters are changed, reset the filter timer.



There is a danger of cuts from sharp edges. The edges must not be damaged. Vacuum cleaning or using pressurised air on the filters is not recommended as it can impair filter performance.



G4 = Standard filter
F5 = Fine filter
F7 = Pollen filter

Condensation drain:

When changing the filter in August/September, before the outside temperature falls to 5°C, check that the condensation drain is not blocked by dirt and make sure that there is water in the water trap. Pour 1 litre of water into the condensation tray and make sure that it runs off freely. If the condensation drain does not work, this could lead to water damage at your home.

Heat exchanger:

Inspect the heat exchanger every year. If it is dirty, remove it and:

- Alu-exchanger: Wash in lukewarm soapy water and rinse using a hand shower, if necessary.
- Plastic exchanger: No cleaning with solvents – use only clean water and carefully remove dust from air intake surfaces with a household vacuum cleaner.

Fans

Inspect the two fan wheels for dirt every year. If they are dirty, they can be washed with a brush, bottle cleaner, etc.

Supply air and extract air valves

Clean the valves by wiping them with a dry cloth.

Make sure that the valves do not turn causing changes to the air volume.

7.2 Alarms

Filter timer

The control has a filter timer to guarantee that the filter is changed and that optimal operation is achieved. When the timer reaches the set value, a key will flash in the display until the filters have been changed.

Once the filters are changed, press and hold down the filter indicator key until the diode switches off.

7.3 Dismantling/taking the system out of service

Do as follows:

Disconnect the power supply, i.e. the power cables. Disconnect the condensation outlet and power cables for any reheaters/preheaters. Disconnect the cables to the control panel and dismantle ducts.

If the system should be taken out of service, the ducts must be dismantled to avoid condensed water in the system and in the ducts. Close all supply air and extract air valves.

8. TROUBLESHOOTING

8.1 Safety thermostat in electrical heater (optional equipment)

If an electrical heater suffers from a fault, the safety thermostat will disconnect. The heater is equipped with a fire thermostat that automatically cuts off the power supply if the temperature exceeds 50°C. If the temperature falls, the heater automatically re-engages.

As an additional safety measure, there is a built-in thermal cut-out, which disengages if the temperature exceeds 100°C. Re-engaging must be done manually.

This does not apply to PTC electrical heaters.

Cold supply air:

Possible error:

- Clogged heat exchanger
- Faulty extract air fan
- Clogged extract air filter
- The electrical reheater is disconnected from the overheating thermostat (only units with electrical reheater installed).
- Air in the heating pipes, faulty thermostat/motor valve, incorrect setting of control panel

8.2 The system is not running

Unit stopped:

Possible error:

- Fuse in main board has blown, no power to unit
- One of the fuses on the circuit board of the unit has blown
- Loose wire, no power to unit
- Loose wire between unit and control panel
- Faulty or incorrectly set week program
- Filter timer has switched the system off

Condensed water is leaking from the unit

Possible error:

- Condensation outlet blocked by dirt
- The condensation outlet is not adequately protected against freezing at low outdoor temperatures.

8.3 Air faults

No supply air:

Possible error:

- Faulty supply air fan
- Clogged supply air filter
- Clogged outdoor air grill due to dirt and leaves during the fall and snow and ice during the winter.
- Fuse on the circuit board has blown
- The unit is in defrost mode (supply air fan stops)
- Incorrect value set in User Menu item 2

No extract air:

Possible error:

- Faulty extract air fan
- Clogged extract air filter
- Fuse on the circuit board has blown

8. TABLE OF FACTORY SETTINGS

Item	Headline	Factory setting	Configuration area	Date	Date	Date	Date
(5.5) 01	Temperature	21°C	10 - 30°C				
02	Preheating	OFF	ON/OFF				
03	Reheating	OFF	ON/OFF				
04	Timer levels 3 and 4	OFF	ON/OFF				
05	Change filter	3 months	1 - 12 months				
06	Humidity control	OFF	ON/OFF				
(5.8) 10	Level 1 Supply air	30%	0 - 100%				
11	Level 2 Supply air	50%	0 - 100%				
12	Level 3 and 4 Supply air	75%	0 - 100%				
13	Level 1 Extract air	30%	0 - 100%				
14	Level 2 Extract air	50%	0 - 100%				
15	Level 3 and 4 Extract air	75%	0 - 100%				
16	Not applicable	OFF	± 5 - 0°C				
17	Timer levels 3 and 4	3 hours	1 - 9 hours				
18	Filter/stop	OFF	ON/OFF				
19	Method of regulation	2	0 - 2				
20	Preheating	± 3°C	± 15 - 0°C				
21	Bypass open	3°C	1 - 10°C				
22	Regulation water	20 sec.	1 - 250 sec.				
23	Regulation electricity	3 min.	1 - 30 min.				
24	Frost reduction	0°C	0 - 10°C				
25	Frost protection	OFF	ON/OFF				
26	Frost protection temperature	5°C	0 - 10°C				
27	Help functions	0	0 - 5				
28	System stop	OFF	ON/OFF				
29	Turn off bypass	4°C	0 - 20°C				
30	Modbus Mode	2	0 - 2				
31	Modbus Address	1	1 - 247				
32	Humidity max. temperature	15°C	5 - 25°C				
33	Humidity max. value	60%	35 - 85%				
34	Humidity fan speed	15%	5 - 30%				
35	Humidity regulating frequency	10 min.	1 - 60 min.				
36	Right/Left	0	0-1				
37	Preheat PI P	5	1-255				
38	Preheat PI I	200	1-255				
39	Preheat Reg	40	10-120				
40	Reheat offset	-2	0-20				
41	Reheat PI P	5	1-255				
42	Reheat PI I	200	1-255				
43	Reheat Reg	40	10-120				
44	Display Model	1	0-2				
45	Boost time 1 (min)	15	0-250				
46	Boost time 2 (min)	30	0-250				
47	Boost time 3 (min)	60	0-250				
48	Calendar on/off	0	0-1				
49	Demand control	0	0-100				

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A

An original Genvex system is built by skilled, experienced technicians and has a service life that in many cases is measured in decades. Our units are approved according to all applicable standards and are also easy to operate and service on a daily basis. Last, but not least, all Genvex systems are produced with a focus on compact installation dimensions and ease of installation and can be installed discreetly and beautifully in all types of homes.

We are part of the NIBE Group - a family of companies specialised in delivering hot water, heating and home comfort to homeowners all over the world.



Genvex - the Original Danish Ventilation System

Genvex is a genuine Danish original. We invented our ventilation system more than 40 years ago, and we are still ahead of the pack when it comes to development and production of the strongest and most durable ventilation systems on the market.

Our units are installed in thousands of Danish homes and deliver fresh, clean air, which is completely free from pollen, dust and harmful particles. This helps extend the service life of the house and creates a healthy and pleasant indoor climate for thousands of people. At the same time, our system is an important element when it comes to saving energy at home and in society as a whole - a Genvex system actually allows you to recover up to 95% of the heat energy.

A list of our dealers is available at www.genvex.com

