

OPERATING INSTRUCTIONS



OPTIMA 314
SW 1.4

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1. INSTALLATION

1.1 Installation of the Optima Touch control panel

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

1.2 Mounting

Find the location on the wall where you will fix the control panel and mark the screw-hole positions. A min. of four screws must be used to fix the display fixture to the wall. Drilling of holes, hole size and the corresponding screws for fixing the panel depends on the wall material.

When the display fixture has been securely installed to the wall. Take the Optima Touch display which comes with a preinstalled wire connected and clip the display carefully on the fixture. Ensure that the cable is carefully positioned as indicated on the picture before fitting the display.

NOTE: if the preinstalled 1,8 meter length is not sufficient, it is possible to replace this with a 4 wire twisted pairs 0,25 mm² cable with a maximum length of 50 meters.

To remove the display, carefully push the plastic clip (locking mechanism) as indicated on the picture.

For additional information on connecting the control panel to Optima 314 – please refer to the electrical diagram in the installation manual.



Important information

Safety information

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision. Rights to make any design or technical modifications are reserved.

2. PROGRAMMING THE OPTIMA 314 CONTROLLER

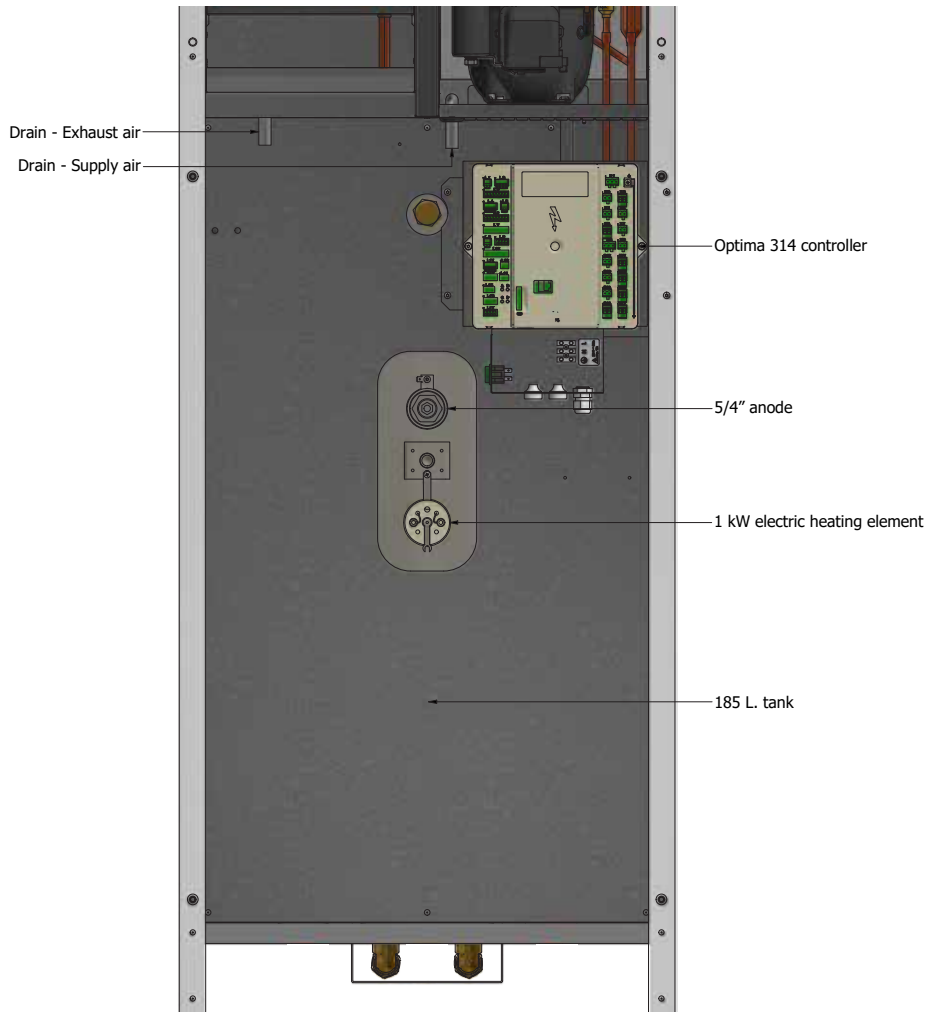
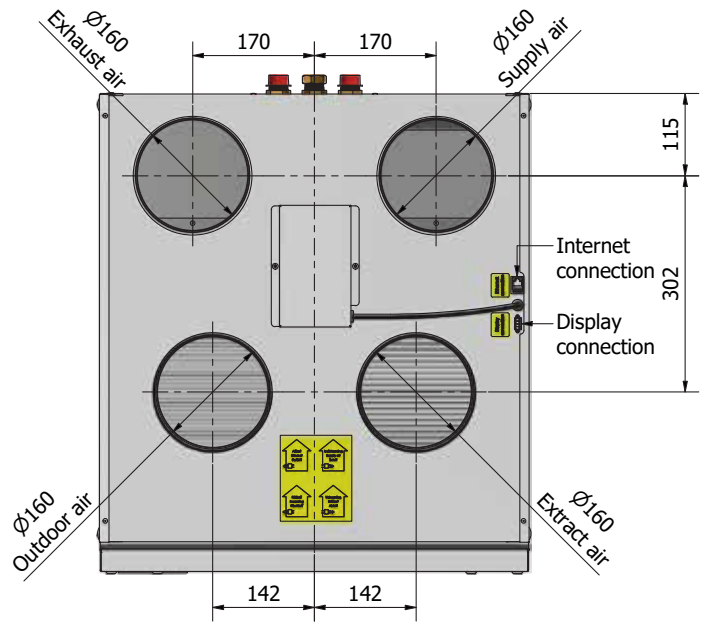
The control system comes factory-preset, which means that the unit can be put into operation without changing the operating settings. The factory setting is only a basic setting that can be adapted to the operating desires and demands for the dwelling in question to make it possible to achieve optimal utilisation and operation for the system. Depending on the product configuration it will be possible to either connect the Optima display directly to the Display connector on top of the machine or (connectors marked with “display”) or directly on the Optima 314 Controller PCB.

The Optima 314 controller PCB connection interface includes terminals for connecting both Modbus Master (for example building management systems) and Modbus Slave devices (for example mixing valve controller - or fire box PCB).

2.3. Installation with Optima Touch display

2.3.1. Connect an Optima Touch controller to the Optima 314 and adjust settings as necessary.

NOTE: The Optima 314 controller parameters can be saved to the Optima Touch for 1 ventilation unit and be transferred to a similar system by using the “EA1 Save” and “EA2 load settings”.



3. DISPLAY

Userinterface Optima Touch – main screen

Touch to change room temperature setpoint (influences opening of summer bypass for room cooling etc.)
If menu EI5 is set to zone 2 and 3, the zonecontrol temperature setpoint will be indicated next to the general room temperature setpoint.

Touch to activate green light indicating that active cooling operation is allowed if required. If no green light is shown active cooling is disabled. If EH2 is set to 0 the icon will be removed from the display.

Touch to access the status information, alarms and event log menu.

Touch to change fan speed
The actual fan speed will be indicated by colored fans indicating fan speed 1-4
Standby will only be shown when menu EC3 is set to ON. Please notice that fans will have a delay of 3-4 minutes until they are switched off.

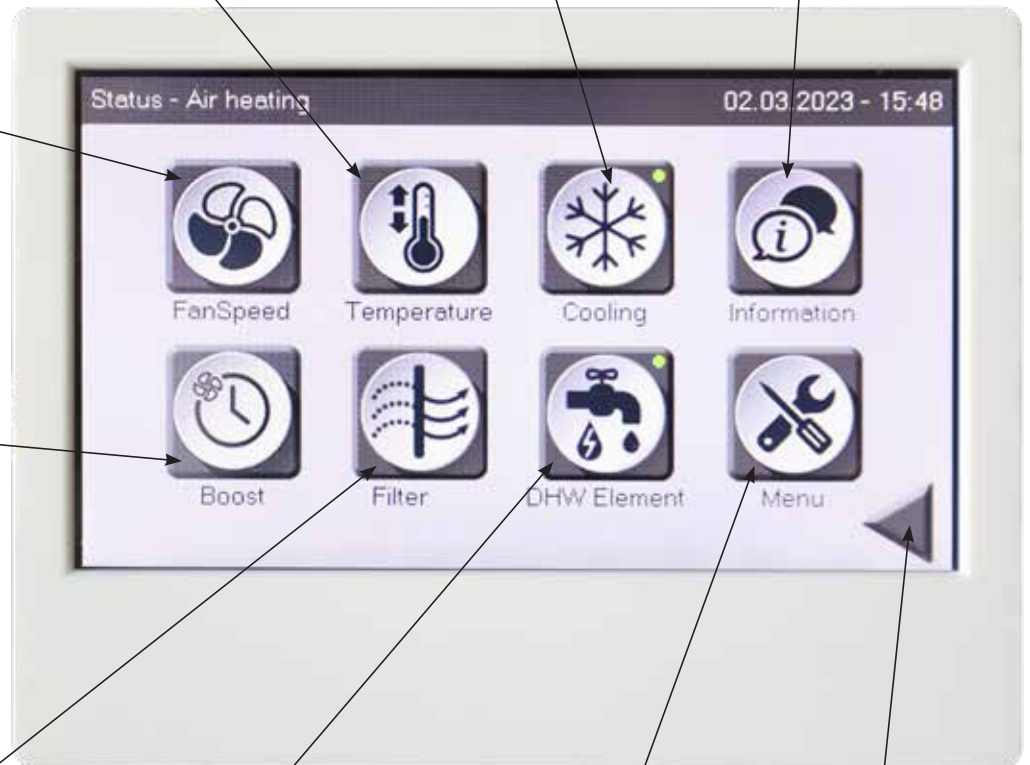
Touch to increase fan speed to step 3 for 30 minutes (time adjustable in menu A5).

Touch to access filter menu.
Here the filter timer can be reset and the actual number of hours the filters has been in operation can be read.
Note - the filter timer will only be shown if D3 lockscreen time has been set to 0, otherwise lockscreen timer will be visible.

Touch to activate green light indicating that DHW electrical heating operation is allowed if required. If no green light is shown the DHW electrical heating is disabled.
If EH5 is set to 0 the icon will be removed from the display.

Touch to access the user and service menu.

Touch to go back to previous menu.



Tap to change the room temperature setting (affects the opening of the bypass for room cooling, etc.).

At the bottom of the display:
*Micro USB interface for PC programming of Optima 314 controller parameters.

*micro sd card – card reader for firmware update of controller and display.

4. START-UP

4.1 Userinterface Optima Touch – initial start up

During initial start up of the Optima 314 ventilation controller and with the Optima Touch connected to the controller, the following information will be shown.

Please wait approximately 1 minute for the initial boot sequence to complete.

Software version controller: actual software version of Optima 314 controller.

Software version display: actual software version of display.

Device ID: the ID of the internet connection secure protocol device in the controller.

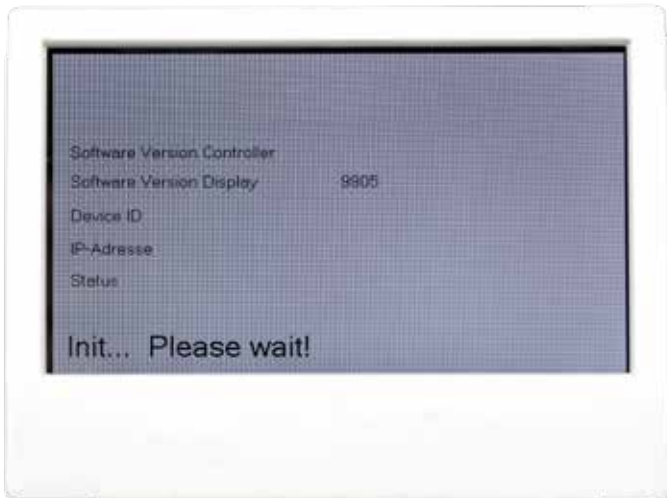
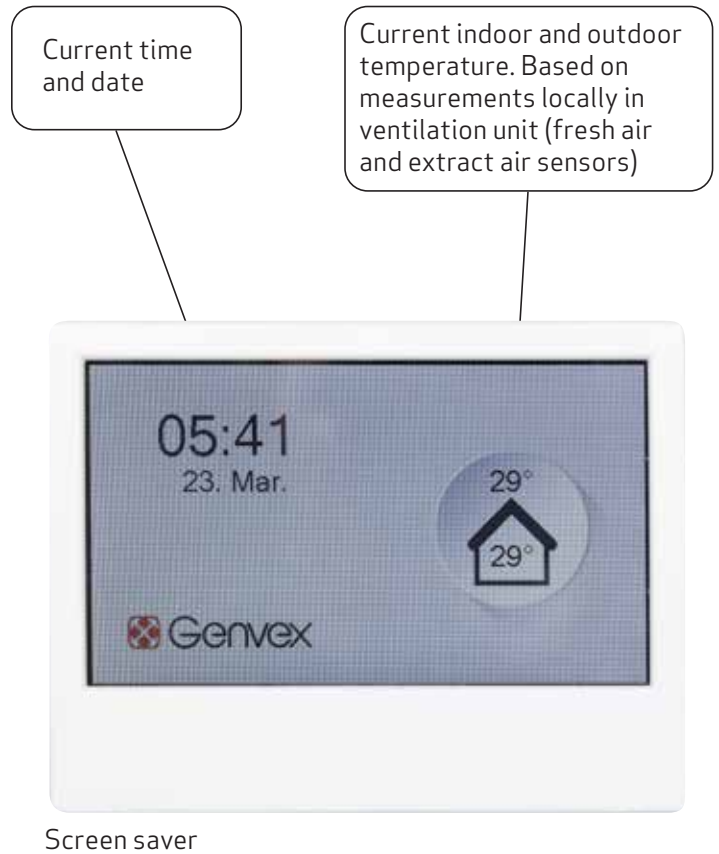
IP address: will only be shown if the ventilation unit has been connected to a router via RJ45 connection

Internet connection status: will indicate whether internet connection status is connected or disconnected. If status indicates “disconnected” no connection through Genvex Connect app or remote monitoring/ remote service can be done.

4.2 Userinterface Optima Touch – screen saver

Depending on the screen saver settings in menu D – display. The current screen displayed will switch back to screen saver mode after 2 minutes. If D2 is set to 0 then the screensaver will be permanently active. If a time is set in D2 the screensaver will switch to blank screen according to the time set.

To reenter the main menu – touch the screen gently for 2 seconds until the screen reactivates.



5. CONTROLLER MENU

5.1 Structure, user and service menu in Optima Touch

The user and service menu structure in the Optima Touch display is organized in the following sections

- A. User: main user settings
- B. Scheduler: calendar schedules for change of fan speeds and temperature setpoints
- C. Date/time: date and time settings for info screen and for time stamping event log
- D. Display: settings related to display and access to parameters
- E. Service: service menu – please note that this menu should primarily be used by technicians with knowledge of the machine operation.

6. CONTROLLER SETTINGS

Menu	Description	Factory setting and (max./min. values)
A1 - 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.	A1: On (On-Off)
A2 - Humidity control	Here you turn on humidity control. It must be set to ON in order to be active.	A2: On (On/Off)
A3 - DHW temperature	Here the domestic hot water temperature controlled by the heat pump can be set. The temperature setpoint is related to the bottom temperature sensor of the DHW cylinder	A3: 52 °C (0-60 °C)
A4 - DHW element	Here the domestic hot water temperature controlled by the electrical immersion heater can be set. The temperature setpoint is related to the temperature sensor located in the middle of the DHW cylinder.	A4: 50 °C (0-65 °C)
A5 - Boost time	Set the desired time for temporarily increased fan speed, activated via the boost button on the main display.	A5: 30 min. (1-120 min.)
A6 - Timer levels 3 and 4 - on/off	When switching the ventilation unit to fan speed 3 and 4, the system will automatically return to fan speed 2 after the number of hours set in A5 when adjusting this set point to ON. If the set point is set to OFF, the system will run at speed 3 or 4 until the fan speeds are manually changed.	A6 : On (On-Off)
A7 - Timer levels 3 and 4 - hours	If A6 is set to on , you can enter how many hours the system should run on level 3 or 4 before it automatically returns to level 2.	A7: 2 hours (1-9 hours)
B1- Fan scheduler	Here four separate timers per day can be set for change of fan speeds. The scheduler can be adjusted separately for each weekday if required. If the same values shall be used for all weekdays - the schedule can be copied by touching the button "apply to all days"	B1: Not used (Not used/level 1-4 / Standby)
B2 - Temperature scheduler	Here four separate timers per day can be set for change to a low-ered setpoint temperature (eg. for earlier opening of bypass in summertime in nighttime). The scheduler can be adjusted separately for each weekday if required. If the same values shall be used for all weekdays - the schedule can be copied by touching the button "apply to all days"	B2: Not used (Not used/Alternative temp (B5) Normal)
B3 - DHW scheduler	Here four separate timers per day can be set for change to a lowered setpoint temperature. The scheduler can be adjusted separately for each weekday if required. If the same values shall be used for all weekdays - the schedule can be copied by touching the button "apply to all days"	B3: Not used (Not used/Alternative DHW temp (B6)/ Normal)

Menu	Description	Factory setting and (max. / min. values)
B4 - Enable scheduler	Here it is possible to activate/deactivate the fan schedule set in B1 the temp schedule set in B2 and DHW scheduler set in B3	B1 Fan scheduler: Off (On-Off) B2 Temp. scheduler: Off (On-Off) B3 DHW scheduler: Off (On-Off)
B5 - Alternative temperature	Here it is possible to adjust the lowered temperature setpoint selected in B2. The temperature selected here will be an off-set to the temperature selected in the main menu "requested temperature"	B5: 0 °C (-10 °C to +10 °C)
B6 - Alternative DHW temperature	Here it is possible to adjust the lowered temperature setpoint selected in B3. The temperature selected here will be an off-set to the temperature selected in the main menu "requested temperature"	B6: -10 °C (-50 °C to +50 °C)
C1 - Time	Adjustment of actual time (important for error handling)	-
C2 - Date	Adjustment of actual date (important for error handling)	-
C3 - Daylight saving timer	Automatic switch over from summer/winter time ON/OFF	C3: On
D1- Language	Display language can be changed	D1 : English (English/ Dansk/Deutsch/ Dutch)
D2 - Screensaver time	Idle time before screensaver activate. 0 = screensaver off	D2: 10 min. (0-600 min.)
D3 - Display lock time	Lock time active when touching lock symbol on main screen If set to 0 seconds - the filtermenu will be displayed instead of the lock screen icon on the main screen.	D3: 5 sec. (0-120 sec.)
D4 - Password	Main menu password: Choose password for locking main menu access. If password is selected - the next time the user trying to access the main menu will be prompted for entry of password. To deactivate password prompt use 0000 as password Service menu password: Choose password for locking service menu access. If password is selected - the next time the user trying to access the Service menu will be prompted for entry of password. To deactivate password prompt use 0000 as password	D4: 0000 (0000-9999)
D5 - Firmware update	Optima 314 controller and display can be firmware updated by use of a micro-SD card inserted into the SD card reader of the Optima touch display. Touch "start update" when the SD card containing the latest firmware has been inserted into the card reader to update the controller and display.	-

Menu	Description	Factory setting and (max./min. values)
EA - Save/load settings	EA1 - Save settings Saves the settings from the Optima314 controller to the display EA2 - Load settings Loads settings stored in EA1 and transfers data to a new Optima 314 PCB	-
EB - Fan speed levels	EB1 - 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%. EB2 - 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%. EB3 - Level 3 Supply air is typically configured to a level with high activity in the house EB 4 - Level 4 supply air is typically configured to 100 % airflow for a quick replacement of air in the entire house. Remember that a higher air exchange rate increases energy consumption. EB5 - Level 1 Extract air The fan speed is adjusted until the same air flow is achieved as the supply air on level 1. EB6 - Level 2 Extract air The fan speed is adjusted until the same air flow is achieved as the supply air on level 2. EB7 - Level 3 extract air The air flow of level 3 is adjusted to the same air flow as the supply air on levels 3 . EB8 - Level 4 Extract air The fan speed is adjusted until the same air flow is achieved as the supply air on level 4. EB9 - min. air volume mode If set to on, the supply and extract fans will automatically increase fan speed to the values set in EB10 and EB11 - when the heat pump activates. This function will ensure that the Combi unit will have the most optimal operating conditions. If EB9 is set to off - the fans will not automatically increase fan speed and if a fan speed is selected which has lower fan speed values than EB10 and EB11 - the heat pump will not activate.	EB1: 15% (0-100%) EB2: 30% (0-100%) EB3: 45% (0-100%) EB4: 60% (0-100%) EB5: 15% (0-100%) EB6: 30% (0-100%) EB7: 45% (0-100%) EB8: 60% (0-100%) EB9: On (on/off)

Menu	Description	Factory setting and (max./min. values)
EB - Fan speed levels	EB10 – min. air volume extract Minimum fan speed % for extract air fan. If EB9 is on then this will be the fan speed when the heat pump is running. If EB9 is off then lower fan speeds than this value will prevent the heat pump from starting. EB11 – min. air volume supply Minimum fan speed % for supply air fan. If EB9 is on then this will be the fan speed when the heat pump is running. If EB9 is off then lower fan speeds than this value will prevent the heat pump from starting. EB12 - RPM Alarm Off = RPM feedback from fans are not used actively On = If RPM feedback from fans reach 0 and fans are expected to run , the MVHR unit will shut down and show alarm. EB13 - Reset RPM Alarm Activate this function to reset RPM alarm once the problem has been fixed EB14 - Balancing mode If activated the fans will run in the set fan speed 1 to 4 continuously which is useful during commissioning of airflow to ensure stable operating conditions. The Fan level service mode activation will automatically deactivate after approx 6 hours. if 0 is not selected by the user.	EB10: 50% (0-100 %) EB11: 50% (0-100 %) EB12: On (on/off) EB13: Off (on/off) EB14: Off (Off, Fan speed 1, Fan speed 2, Fan speed 3, Fan speed 4)
EC - Regulator	EC1 - Frost protection Off = no frost protection active T3 preheat = electrical preheater controlled by fresh air temperature sensor (T3) T5 preheat = electrical preheater controlled by temperature sensor (T5) mounted in the discharge of the heatexchanger Fan reduction = supply air fan speed is reduced gradually to maintain discharge air temperature sensor (T5) at setpoint value EC2 EC2 - Frost reduction Adjustable setpoint for frost protection strategy EC1 EC3 – Release system stop If this setpoint is set to off, it will not be possible to switch off the fans of the machines. If the setpoint is on , the fans can be switched off. Please be aware that shutting off the ventilation for longer periods of time in cold ambient temperatures, can lead to condensation in the ductwork EC4 – Factory reset Reset (-fans) = reset all controller values to factory settings except fan speeds Reset all = reset all controller values to factory settings.	EC1: T3 Preheat (Off/T3 Preheat/ T5 Preheat/ Fan reduction) EC2: 8 °C (-10 - +10 °C) EC3: Off (On/off) EC4: Off (Reset -fans/ Reset all)

Menu	Description	Factory setting and (max./min. values)
EC - Regulator	EC5 – H3 relay options. Preheat = the relay will activate a preheater connected to the relay H3. Adjust setpoint EC1 to T3 preheat or T5 preheat. Reheat = the relay will activate a reheater connected to the relay H3. The reheater connected to H3 will activate if the extract air temperature is setpoint – 1 °C and keep running until the extract air temperature reaches the setpoint temperature. Please be aware that the H3 relay will switch off when the units is in heat pump deicing mode. Always on = the relay will be on continuously. EC6 – AUX Relay H9 0 : off 1 : The relay is on when the fans are active. 2: The relay is on when there is a need for additional roomheating. Please note that Menu A1 needs to be on as well. 3: The relay is on when a filterchange is required. 4: The relay is on when additional cooling is required. Please note that Menu EH2 needs to be on as well. To enable cooling activate the green light in the cooling icon on the main screen. 5: The control unit can handle an earth heat exchanger using a damper or brine circuit. The relay will be on in case of one of the following two conditions: If The outdoor temperature, sensor T9, is lower than 5 °C. (preheating of air by brine) Or if the outdoor temperature, sensor T9 > 15 °C and the room temperature is > setpoint + 1°C (precooling of air) 6: Floor heating control – The relay is switched on when the sensor in the tank bottom (T8) is greater than 30°C 7: Floor heating control – The relay is switched on when the sensor in the tank bottom (T8) is greater than 40°C 8: The relay is switched on when the L1 terminal is short-circuited/ activated (e.g. kitchen hood). This feature can be used with an on/ off damper connected to the H9 relay which shuts off towards the bathroom when the kitchen hoods is activated to direct the airflow on the kitchen hood. 9: It is possible to connect a solar pump controlled according to EC8 to the relay H9. The relay is off when T8 domestic hot water temperature reaches 52 °C. 10: It is possible to connect a solar pump controlled according to EC8 to the relay H9. The relay is off when T8 domestic hot water temperature reaches 65 °C 11: The relay is on if there is no error on the fire control system set in menu EJ1 connected to the Combi unit.	EC5: Preheat (preheat/reheat/ always on) EC6: 2 (0-13)

Menu	Description	Factory setting and (max./min values)
EC - Regulator	12: Zone control valve for zone 2. ; when activated the relay will turn on/off according to the requested temperature in Zone 2. This function may be used to control a zone valve. 13: Zone control valve for zone 3 ; when activated the relay will turn on/off according to the requested temperature in Zone 3. This function may be used to control a zone valve. EC7 - AUX Relay H10 0 : off 1 : The relay is on when the fans are active. 2: The relay is on when there is a need for additional roomheating. Please note that Menu A1 needs to be on as well. 3: The relay is on when a filterchange is required. 4: The relay is on when additional cooling is required. Please note that Menu EH2 needs to be on as well. To enable cooling activate the green light in the cooling icon on the main screen. 5: The control unit can handle an earth heat exchanger using a damper or brine circuit. The relay will be on in case of one of the following two conditions: If The outdoor temperature, sensor T9, is lower than 5 °C. (preheating of air by brine) Or if the outdoor temperature, sensor T9 > 15 °C and the room temperature is > setpoint + 1 °C (precooling of air) 6: Floor heating control – The relay is switched on when the sensor in the tank bottom (T8) is greater than 30°C 7: Floor heating control – The relay is switched on when the sensor in the tank bottom (T8) is greater than 40°C 8: The relay is switched on when the L1 terminal is short-circuited/ activated (e.g. kitchen hood). This feature can be used with an on/off damper connected to the H9 relay which shuts off towards the bathroom when the kitchen hoods is activated to direct the airflow on the kitchen hood. 9: It is possible to connect a solar pump controlled according to EC8 to the relay H10. The relay is off when T8 domestic hot water temperature reaches 52 °C 10: It is possible to connect a solar pump controlled according to EC8 to the relay H9. The relay is off when T8 domestic hot water temperature reaches 65 °C 11: The relay is on if there is no error on the fire control system set in menu EJ1 connected to the Combi unit. 12: Zone control valve for zone 2. ; when activated the relay will turn on/off according to the requested temperature in Zone 2. This function may be used to control a zone valve. 13: Zone control valve for zone 3 ; when activated the relay will turn on/off according to the requested temperature in Zone 3. This function may be used to control a zone valve.	EC7: 12 (0-13)

Menu	Description	Factory setting and (max./min. values)
EC - Regulator	EC8 - Solar Hysteresis If a solar collector is connected to the coil of the boiler, use this option to input the temperature difference between the temperature in the solar collector (T9) and the domestic water temperature (T8) that should be reached before the solar pump starts. The solar pump will not stop until T9 is equal to T8. The solar pump will stop under all circumstances once T8 has reached a temperature of 60 °C.	EC8: 5 (0-5 °C)
ED - Electrical heating	ED1 - Regulation electricity If an electrical preheater or an electrical reheater is installed, it may be necessary to adjust the regulation time. ED2 - Preheating temperature Setpoint temperature for frost protection preheater - see menu EC1 for reference temperature sensor ED3 - 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) ED4 - 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). ED5 - 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 EC1. The preheater will try to maintain a steady fresh air temperature according to this set point. When the modulating preheater is used, the existing fresh air temperature sensor (T3), which is built into the ventilation unit, can be used as reference. No extra temperature sensor is required. ED6 - Reheat offset Offset for reheater with reference to the set point for the requested temperature. E.g. requested temp = 20°C Offset value = 2 reheater aims to maintain a supply temperature of 18°C ED7 - 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). ED8 - 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).	ED1: 3 min. (1-30 min.) ED2: +3 °C (-15 to +10°C) ED3: 5 (1-255) ED4: 200 (1-255) ED5: 40 sec. (10-120 sec.) ED6: -2 °C (-10 to +10°C) ED7: 5 (1-255) ED8: 200 (1-255)

Menu	Description	Factory setting and (max./min. values)
ED - Electrical heating	ED9 - 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 selected temperature and chosen sensor for control (see EC3). To allow the reheater to operate adjust set point A1=on;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.	ED9: 40 sec. (10-120 sec.)
EE - Bypass	EE1 - Bypass open offset Here you set the temperature at which the bypass should 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 room set temperature 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 EE2. The bypass opens when the temperature reaches the requested temperature + the temperature differential set in this menu item. EE2 - 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 requested temperature and the lowest outdoor air temperature (offset). Setting option: Between 0 and 20 °C. If 0°C is selected, the function is disabled. EE3 - Bypass time minimum on Bypass will be open minimum according to the setpoint	EE1: 2 °C (1-10 °C) EE2: 4°C (0-20°C) EE3: 5 min. (0-60 min.)
EF - Filter	EF1 - Reset filter timer select this option to reset filter timer to 0 days The current counter value will display current days since last filterreset EF2 - Filter timer Setpoint for adjusting months until filteralarm will activate 0 months = filter timer deactivated.	EF1: reset filter EF2: 3 months (0-12 months)

Menu	Description	Factory setting and (max./min. values)
EF - Filter	EF3 - Filter/stop To ensure that the filters are changed when the filter change alarm is active, 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.	EF3: Off (On/Off)
EG - Humidity control	EG1 - Humidity max temperature Setting the end point for outside temperature compensation (T3), see the X-axis on the graph. EG2 - Humidity max value Setting the end point for outside temperature compensation, see the Y-axis on the graph (desired max. humidity value). EG3 - Humidity fan speed Setting of how much the fan speed may differ in relation to the desired fan speed. Examples Set point fan speed level 2 (EB2 / EB6) = $\pm 15\%$ EG4 - Humidity regulation 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.	EG1: 15 °C (0-25 °C) EG2: 60 % (35-85 %) EG3: 15 % (5-30 %) EG4: 10 min. (1-60 min.)
EH - Heat pump settings	EH1 - Priority water/air Choosing water will prioritize water heating first before switching to room heating and vice versa. EH2 - Release cooling Choosing on will enable the cooling icon on the display from where the cooling can be activated. (green light in the cooling icon on the main screen means automatic activation of cooling enabled) Note: Choosing off will remove the cooling icon from the main menu. EH3 - Cooling activation Additional offset to EE1 (bypass offset) from when active cooling will start. e.g. requested room temperature 20 °C EE1 set to 20 + 3 °C the active cooling will turn on when the extract air temperature reaches 20 + 3 + 3 = 26 °C Please notice that the bypass damper will close when running active cooling to maximize efficiency.	EH1 : water (water/air) EH2 : on (on/off) EH3: 2 °C (0-5 °C)

Menu	Description	Factory setting and (max./min. values)
EH – Heat pump settings	EH4 – Min. outdoor cooling To prevent the cooling function to activate at low fresh air temperatures and from blowing cold, unheated air into the dwelling, use this function to configure the lowest fresh air temperature at which cooling may be enabled.	EH4: 15 °C (0-20 °C)
	EH5 – DHW element Enable the DHW element icon on the main screen of the touch panel. (green light in the DHW icon on the main screen means automatic activation of DHW element enabled). Note: Choosing off will remove the DHW icon from the main menu.	EH5: On (On/Off)
	EH6 – Legionella on/off Selecting on will enable automatic legionella protection which will heat up the DHW cylinder to 65 °C once a week, according to the calendar EH7, EH8	EH6: On (On/Off)
	EH7 – Legionella start day Choose day to start legionella disinfection	EH7: Monday (Monday-Sunday)
	EH8 – Legionella start hour Choose hour to start legionella disinfection	EH8: 01 (00-23)
	EH9 – stop defrost temp The defrosting period ends by default when the evaporator reaches a temperature of 10 °C, which is the standard setting. Setting this value lower will reduce the deicing cycle but may lead to build-up of ice on the evaporator.	EH9: 10 °C (0-15 °C)
	EH10 – Balanced defrost Choosing on will maintain the current fan speed on both supply and extract air fans – but may lead to longer deicing periods. Choosing off will stop the supply air fan during the deicing cycle which will typically be the most efficient deicing strategy.	EH10: off (On/Off)
	EH11 – Constant on/off If the home's other heating systems are not connected to the heat pump system, the home's other heating systems, e.g. a wood-burning stove, can stop the heat pump so that the heat pump system with heat exchanger only blows preheated air into all rooms. This may cause increasing problems with draught as the temperature drops outside. Setting EH11 will run the heat pump continuously independent of the extract air temperature. Choosing on, will switch off the heat pump when the desired room temperature has been reached.	EH11: off (On/Off)
	EH12 – Constant @ temp If EH11 is set to on, set the outdoor air temperature here to when the heat pump will need to run continuously to heat the supply air.	EH12: 5 °C (0-10 °C)

Menu	Description	Factory setting and (max./min. values)								
EH – Heat pump settings	EH13 – External override - Scheduler = the calendar programme will determine the operation of the Combi unit. - Solar Panel = the solar panel input determines the operation of the Combi unit. - Smart grid = the smart grid input determines the operation of the Combi unit. <i>See SG functions below</i> <table><tr><td>OFF</td><td>The SG ready function can be activated by the installer here. Three possible modes can be selected. This function allows the start of the heat pump from an external access (terminal L9 on PCB). SG ready is not active if there is not external input (SG1 OFF, SG2 OFF).</td></tr><tr><td>(SG BOOST)</td><td>The heat pump and electric heater must start, if below the max water temperature allowed in the tank. Both Heat Pump and Electric heater are forced to operate (SG1 ON and SG2 ON).</td></tr><tr><td>(SG ECO)</td><td>The heat pump operates minimizing costs, only the heat pump is activated (SG1 OFF, SG2 ON).</td></tr><tr><td>(SG BLOCK)</td><td>The unit can be stopped even if there is a need for hot water (SG1 ON, SG2 OFF).</td></tr></table>	OFF	The SG ready function can be activated by the installer here. Three possible modes can be selected. This function allows the start of the heat pump from an external access (terminal L9 on PCB). SG ready is not active if there is not external input (SG1 OFF, SG2 OFF).	(SG BOOST)	The heat pump and electric heater must start, if below the max water temperature allowed in the tank. Both Heat Pump and Electric heater are forced to operate (SG1 ON and SG2 ON).	(SG ECO)	The heat pump operates minimizing costs, only the heat pump is activated (SG1 OFF, SG2 ON).	(SG BLOCK)	The unit can be stopped even if there is a need for hot water (SG1 ON, SG2 OFF).	EH13: Scheduler (scheduler/solar panel/ smart grid)
	OFF	The SG ready function can be activated by the installer here. Three possible modes can be selected. This function allows the start of the heat pump from an external access (terminal L9 on PCB). SG ready is not active if there is not external input (SG1 OFF, SG2 OFF).								
	(SG BOOST)	The heat pump and electric heater must start, if below the max water temperature allowed in the tank. Both Heat Pump and Electric heater are forced to operate (SG1 ON and SG2 ON).								
	(SG ECO)	The heat pump operates minimizing costs, only the heat pump is activated (SG1 OFF, SG2 ON).								
	(SG BLOCK)	The unit can be stopped even if there is a need for hot water (SG1 ON, SG2 OFF).								
	EH14 – PV panel low set Set voltage input from solar inverter where surplus electricity will activate the heat pump to produce DHW to a higher temperature setpoint according to setpoint B6.	EH14: 1V (0.1-10V)								
	EH15 – PV panel high set Set voltage input from solar inverter where surplus electricity will activate both the heat pump and immersion heater to produce DHW to a higher temperature setpoint according to B6.	EH15: 5 V (1-10V)								
	EH16 – PV panel delay Time delay before switching between operating modes when signal from solar inverter fades/increases above threshold value.	EH16: 15 min. (0-60 min.)								
	EH17 – Compressor hysteresis The default temperature difference between start/stop compressor is ± 0.4 °C. Changing the temperature difference is recommended only under special operating conditions	EH17: 0.4 °C (0,1 – 1,0 °C)								
	EH18 – Compressor mode Choose Auto to let the Combi automatically switch on/off the heat pump. Choose off to enable ventilation and DHW production with immersion heater (e.g. when compressor is damaged and awaits service).	EH18: Auto (Auto/Off)								

Menu	Description	Factory setting and (max./min. values)
EH - Heat pump settings	EH19 - Regulation sensor (zone 1) Select the temperature sensor controlling the main heat pump operation and climate control. Factory setting is the built in T2 temperature sensor in the extract air duct. CO2 1-5 are optional Modbus/Wireless sensors containing also a temperaturesensor. MB1-MB3 are sensors connected to the Multibox for zone 1,2 and 3. T9 is the free optional temperature sensor input on the main PCB.	EH19: T2 (T2, CO2 sensor 1-5, MB1-MB3, T9)
	EH20 - Temperature min. Limitation for lowest allowed temperature setting in the temperature setting menu on main screen.	EH20: 10 °C (10-20 °C)
	EH21 - temperature limit max. Limitation for highest allowed temperature setting in the temperature setting menu on main screen.	EH21: 30 °C (20-30 °C)
	EH22 - Domestic hot water hysteresis Adjustable hystereses for activation of heat pump for example EH22 = 5 °C Setpoint DHW = 50 Heat pump will start heating hot water when temperature in tank reaches 50-5 = 45 °C Heat pump will stop heating hot water when reaching setpoint temperature 50 °C.	EH22: 5 °C (1-20 °C)
EI - Demand control	EI1 - CO2 control On = activates external sensors for demand control (if available) Off = no external sensors for demand control available	EI1: Off (On/Off)
	EI2 - CO2 setpoint setpoint for desired CO2 level in PPM. If CO2 level increase above setpoint, the fans will increase speed in steps to maintain CO2 level at setpoint.	EI2: 800 PPM (400-2000 PPM)
	EI3 - CO2 level time setpoint in minutes for time between increase/decrease fan speed in steps according to CO2 level (see setpoint EI2)	EI3: 30 min. (0-1000 min.)
	EI4 - Number of RF CO2 sensors Select number of wireless CO2 sensors connected. Make sure that the dip switches in the CO2 sensors are set correct according to separate documentation.	EI4: 0 (0-5)

Menu	Description	Factory setting and (max./min. values)
EI - Demand control	EI5 - Zone temperature control If set to Zone 1 the temperature control see the entire house as one temperature zone and no relays for damper controls will be active. If set to Zone 1+2 the temperature control will add one extra temperature zone to the controller which enables different temperatures for zone 1 and 2. typically an air damper connected for zone 2 will switch between heating and cooling for zone 2. (see also EC06 / EC07). It will also be possible to control an external 230 volt heating source connected to a multibox independently of the damper controls (see EI9) If set to Zone 1+2+3 the temperature control will add two extra temperature zones to the controller which enables different temperatures for zone 1 , 2 and 3. typically an air damper connected for zone 2 and 3 will switch between heating and cooling for the zones. (see also EC06 / EC07). It will also be possible to control an external 230 volt heating source connected to a multibox independently of the damper controls (see EI9). Each Zone will have an individual adjustable requested room temperature setpoint.	EI5: Zone 1 (Zone 1, Zone 1+2, Zone 1+2+3)
	EI6: Zone temperature hysteresis Hysteresis for control of the temperature in the selected zone.	
	EI7: Zone 2 temperature sensor Select which type of temperature sensor is active for zone 2.	
	The following options are available: Combined CO₂ and temperature sensor (to be activated in EI4). Please be aware that the DIP switch setting in the sensor shall be identical to the value selected. If MB1-3 is selected ensure that the Multibox is activated in menu EI9. The Multibox contains temperature sensor inputs for three different wired temperature sensors. select the sensor input terminal which is used for zone 2. If T9 is selected the T9 temp sensor input on the main PCB is used to measure the temperature in Zone 2.	

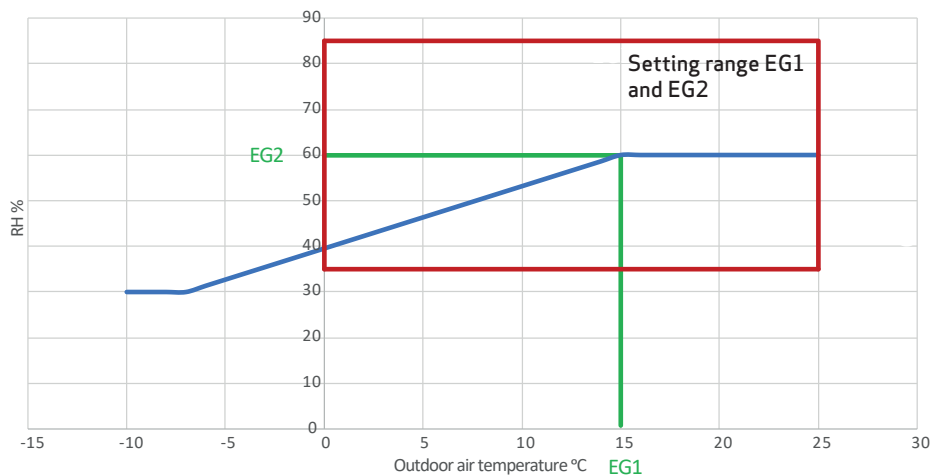
Menu	Description	Factory setting and (max./min. values)
EI - Demand control	EI8: Zone 3 temperature sensor Select which type of temperature sensor is active for zone 3. <i>The following options are available:</i> Combined CO2 and temperature sensor (to be activated in EI4). Please be aware that the DIP switch setting in the sensor shall be identical to the value selected. If MB1-3 is selected ensure that the Multibox is activated in menu EI9. The Multibox contains temperature sensor inputs for three different wired temperature sensors. Select the sensor input terminal which is used for zone 3. If T9 is selected the T9 temp sensor input on the main PCB is used to measure the temperature in Zone 3. EI9: Enable Multibox If a Multibox is connected via the modbus communication system on the main PCB, activate communication by selecting ON in the menu. EI10: Heat pump temperature activation If set to off - the unit will heat using the compressor according to the temperature selected in EI19 If set to one of zones - the unit will heat using the compressor if there is a heatdemand from any of the activated zones in EI5 If set to all of zones - the unit will only heat using the compressor if all of the activated zones selected in EI5 has a heatdemand.	EI8: MB3 (CO2 sensor 1-5, MB1-3, T9) EI9: Off (Off/On) EI10: Off (Off, one of zones, all of zones)
EJ - Fire control	EJ1 - Number of fire dampers Setpoint for number for fire dampers connected to the system which need to be monitored 0 = fire control system inactive 1-4 = number of dampers connected EJ2 - Fire test/Reset Off = automatic mode, damper will be tested once a month according to schedule Test = test system now, with this function a function test of the fire damper will be force started and the result shown in the display (N.B. there will be a delay of up to 240 seconds from when the test is started until the test is carried out). Reset = reset fire alarm, in case of error during damper test, error in damper/smoke detector or lack of communication, the ventilation unit will shut down and an alarm symbol will be shown on the display. To restart the unit, a reset of the fire automation must be carried out. EJ3 - Fire test date Schedule for when automatic monthly fire/smoke damper test shall be conducted EJ4 - Fire test hour Schedule for when automatic fire/smoke damper test shall be conducted.	EJ1: 0 (0-4) EJ2: Off (Off/Test/Reset) EJ3: 1 (1 - 31 day) EJ4: 12 (0-23 hour)

Menu	Description	Factory setting and (max./min. values)
EK - Mixing valve control	PLEASE NOTE: If no external outdoor air temperature sensor has been connected the controller, the built in fresh air temperature sensor in the MVHR is used as reference for calculating weathercompensation temperature setpoints. EK1 - Heating mode Off = no external heating circuit connected Floor = underfloor heating circuit connected Radiator = radiator heating circuit connected EK2 - Outdoor temp. Comp. At -12 °C Setpoint for flow temperature at -12 °C outdoor temperature EK3 - Outdoor temp comp at 20 °C Setpoint for outdoor temperature when flow temperature is 20 °C An outdoor air temperature exceeding the setpoint in EK3 will close the heating circuit (summer stop) EK4 - Compensation curve offset Setpoint in °C where heating curve compensation set in EK5 will have maximum influence EK5 - Compensation curve Heating curve can be increased in steps of 0-5 °C with max influence according to value set in EK4 EK6 - Max flow temperature Flow temperature will be limited to maximum 45 °C if underfloor heating is selected in EK1 Flow temperature will be limited to 90 °C if radiator heating is selected in EK1 EK7 - Valve time (sec.) Time for 3-point control valve from fully closed to fully open (depends on actuator and valve stem configuration). Please refer to valve supplier manual for this information. EK8 - Max return temperature If max return temperature exceeds the temperature setpoint, then the valve will close incrementally until the return temperature setpoint is achieved. EK9 - Neutral Zone Hysteresis for temperature control via PID.	EK1: Off (Off/Floor/Radiator) EK2: 45 °C (20 - 90 °C) EK3: 20 °C (15 - 25 °C) EK4: 2 °C -10 - +10 °C) EK5: 2 °C (0 - 5 °C) EK6: 45 °C (20-65 °C) EK7: 150 sec. (1-255 sec.) EK8: 50°C (25 - 70°C) EK9: 1°C (0-10°C)

Menu	Description	Factory setting and (max./min. values)
EK - Space heating control	EK10 - Heating PI P PI controller P-band By increasing this value the controller will try to reach the setpoint temperature faster (with a risk of overshooting the setpoint)	EK10: 20 (0-255)
	EK11 - Heating PI I (x10) PI controller I-band By increasing this value the controller will try to reduce overshooting / offset of temperatures (with a risk of slowing the controller down)	EK11: 50 (0-255)
	EK12 - Heating regulation time PI controller regulation time By increasing this value the controller will be slowed down as time between recalculation of valve position will be increased	EK12: 5 sec. (1-120 sec.)
EL - Modbus	EL1 - Modbus adress Modbus slave adress of unit	EL1: 20 (1-247)
	EL2 - Modbus baud rate choose either 9600 or 19200 baud depending on the application type	EL2: 19200 baud (9600 baud/19200 baud)
	EL3 - Modbus Parity choose odd or even depending on the application type	EL3: Even (None/Even/Odd)
	EL4 - Modbus Modify choose off or on depending on the application type	EL4: On (On/Off)
EM - Manual overridel	Enter password for entering relay test program (only for installers)	
OEM	Enter password for entering OEM program (only for installers)	

7. FURTHER EXPLANATIONS OF HUMIDITY AND DISTRICT HEATING CONTROL

7.1 Humidity control explanation



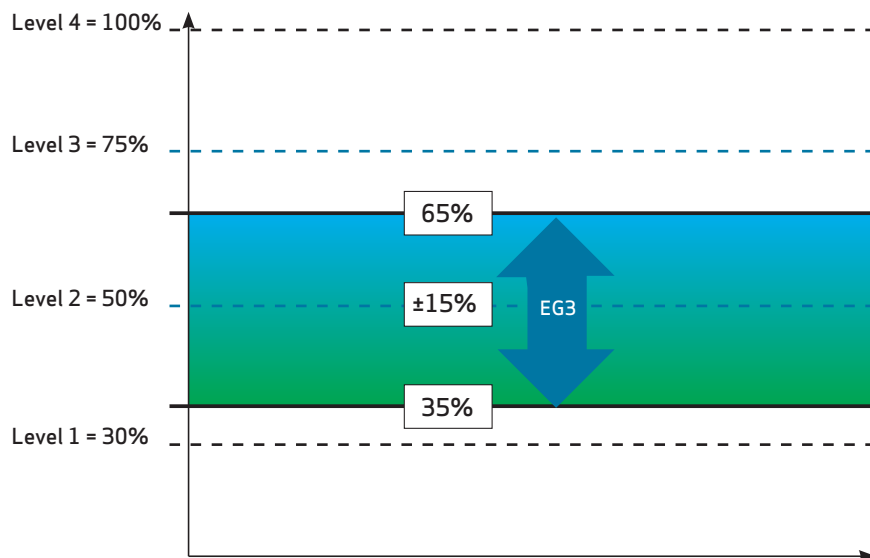
Example 1:

At a fresh air temperature of 10°C the RH-control aims for 55 % humidity measured in the extract air.

Example 2:

At a fresh air temperature of 20°C the RH-control aims for 60 % humidity measured in the extract air.

EG1 and EG2 is used to change the characteristics of the humidity control values by moving the compensation curve (indicated by the green line on the graph).



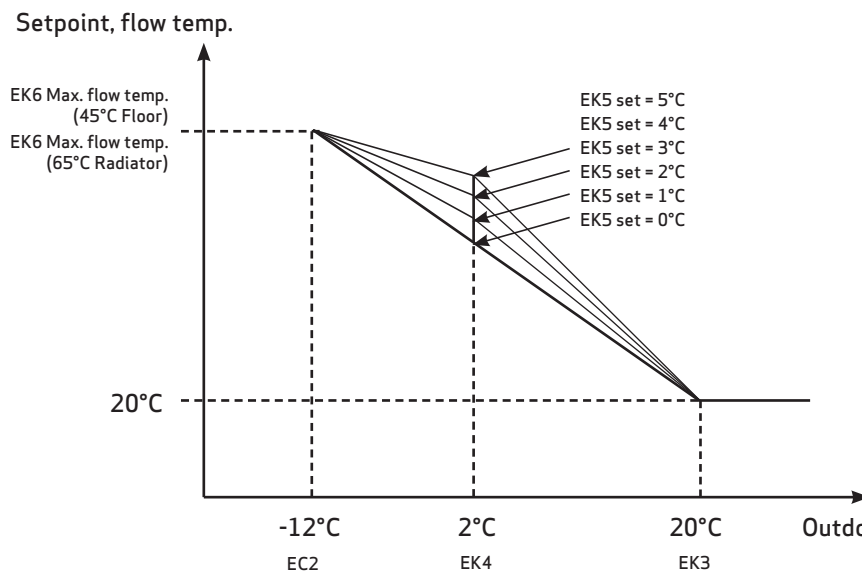
Example:

Set point = $\pm 15\%$ (EG3)

With a desired fan speed of 2 set to 50 %, the fan speed will be able to fluctuate from 35 % to 65 % Humidity control is only available in fan speed 2 and will automatically be deactivated running in any other fan speed mode.

Regulation of the fan speed takes place $\pm 1\%$ for every 10 min. (factory setting EG4).

7.2 Mixing valve control explanation



The district heating control system will automatically adjust the flow temperature of the heating system according to the outdoor air temperature.

The characteristic of the heating curve can be adjusted by EK2 and EK3

EK2 adjust the requested flow temperature at outdoor air temperature -12 °C

EK3 adjust the requested outdoor temperature when the flow temperature is 20 °C

To increase heating capacity of the heating system at a specific outdoor air temperature. EK4 and EK5 can be used to offset the heating curve characteristics

8. MAINTENANCE

8.1 Replacing Filters

When the filteralarm is displayed, the filters must be changed. Stop the system by the circuit breaker of the unit or by the circuit breaker on the terminal board. Open the front cover/filter drawers and remove the filters. After having changed the filters, reset the filter timer. The time interval for cleaning/ changing the filters can be adjusted in the operating menu. Based on normal environmental conditions with clean air – a filter change is recommended every 6 months for optimal working conditions. Vacuum cleaning or using pressurised air on the filters is not recommended.

Recommended filters to be used: Original Genvex filters in quality Coarse / G4 = Standard filter (typically used on extract air side) ; ePM10 / F5 = Fine filter ; ePM1 / F7 = Pollen filter (typically used on fresh air side)

Please note that the following recommended annual service of the ventilation unit internal components should be done by an installer.

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 with dirt and make sure that there is water in the water trap. Pour 1 litre of water into the condensation tray and make sure it runs off freely. If the condensation drain does not work, this could lead to water damage in the 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 carefully only careful dust removal from air intake surfaces with a household vacuum cleaner.

Fans

Inspect the two fan wheels for dirt each year. If they are dirty, they can be washed using a brush, bottle cleaner, etc. Supply air and extract air valves: Clean the valves by wiping with a dry cloth. Be careful that the valves do not turn, so that the air volume changes.

8.2 Dismantling/taking the system out of service

Generally it is recommended to maintain a constant airflow through the ventilation unit at all times to prevent condensation in the ductwork.

In case of the ventilation system not being used for weeks.

The following must be done: The power supply, i.e. the power cables, must be disconnected. Disconnect the condensation outlet and power cables for any reheater/ preheater. Disconnect cables for the control panel and dismantle ducts. If the system should to 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.

9. TROUBLESHOOTING

9.1 Safety thermostat in electrical heater (optional equipment)

If an error occurs on an electrical heater, 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 decreases, the heater automatically re-engages. As an additional security there is a built-in thermal cut-out, which disengages if the temperature exceeds 100 °C. Re-engaging must be done manually. Does not apply to PTC electrical heaters.

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 is 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.
- If EB10 = on, check fans to ensure operation. If fans are expected to run and RPM feedback = 0 then ventilation unit will shut down and indicate alarm

No supply air

Possible error

- Faulty supply air fan
- Clogged supply air filter
- Clogged fresh air grill due to dirt and leaves during the fall and snow and ice during the winter.
- Fuse on the circuit board is blown.
- The unit is in defrost mode (supply air fan stops)

No extract air

Possible error

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

Cold supply air

Possible error

- Clogged heat changer.
- Faulty extract air fan.
- Clogged extract air filter.
- Electrical reheater is disconnected at the over heating thermostat (only units with electrical reheater installed).
- Air in the heating pipes, faulty thermostat / motorvalve, incorrect setting of control panel.

9.2 Error codes

Error messages will be written in clear text on the Optima Touch display.

In case of the error message "defrost alarm," it indicates that the defrosting process is taking longer than expected. Check the placement of temperature sensor T6 on the evaporator surface.

In case of low pressure alarm the compressor will stop and restart after 10 minutes. If low pressure alarm reoccur within 24 hours the machine will stop and indicate the alarm "low pressure transmitter". The same features apply for the high pressure switch

If the zone control feature is active and the Combi unit will not be able to read a temperature from the zone control sensor - an alarm will be displayed and the Combi will fall back to T2 temperature control. If the signal to the external sensor is restored that error will automatically be cleared and the Combi will run according to the external sensor.

Optima 314

Main menu	Factory settings	Possible settings
A - User		
A1 - Reheating	On	On-Off
A2 - Humidity control	On	On-Off
A3 - DHW temperature	52 °C	0-60 °C
A4 - DHW Element Temp	50 °C	0-65 °C
A5 - Boost time	30 min.	1-120 min.
A6 - Timer levels 3 and 4	On	On-Off
A7 - Timer levels 3 and 4	2 hours	1-9 hours
B - Schedulers		
B1 - Fan Scheduler	Not used	Not used/level 1-4/standby
B2 - Temperature scheduler	Not used	Not used/Alternative temp (B5)/Normal
B3 - DHW scheduler	Not used	Not used/Alternative DHW temp (B6)/Normal
B4 - Enable scheduler	Off	On-Off (B1-B2-B3)
B5 - Alternative Temp.	0,0 °C	-10 °C - +10 °C
B6 - Alternative DHW Temp	-10 °C	-50 °C - +50 °C
C - Date / Time		
C1 - Time		
C2 - Date		
C3 - Daylight Saving Time	On	On-Off
D - Display		
D1 - Language	English	English/Dansk/Deutsch/Dutch
D2 - Screensaver time	10 min.	0-600 min.
D3 - Display Lock time	5 sec.	0-120 sec.
D4 - Password	0000	0000-9999
D5 - Firmware Update		
EA - Save/Load Setting		
EA1 - Save settings		
EA2 - Load settings		
EB - Fan level		
EB1 - Level 1 Supply air	15%	0-100%
EB2 - Level 2 Supply air	30%	0-100%
EB3 - Level 3 Supply air	45%	0-100%
EB4 - Level 4 Supply air	60%	0-100%
EB5 - Level 1 Extract air	15%	0-100%
EB6 - Level 2 Extract air	30%	0-100%
EB7 - Level 3 Extract air	45%	0-100%
EB8 - Level 4 Extract air	60%	0-100%
EB9 - Min. air volume mode	On	On-Off
EB10 - Min. air volume extract	50%	0 - 100%
EB11 - Min. air volume supply	50%	0 - 100%
EB12 - RPM Alarm	On	On-Off
EB13 - Reset RPM Alarm	Off	On-Off
EB14 - Balancing mode	Off	Off, Fan speed 1, Fan speed 2, Fan speed 3, Fan speed 4

Optima 314

Main menu	Factory settings	Possible settings
EC – Regulator		
EC1 – Frost protection	T3 preheat	Off/T3 preheat/T5 preheat/Fan Reduction
EC2 – Frost reduction	8 °C	-10 °C - +10 °C
EC3 – Release system stop	Off	On-Off
EC4 – Factory reset	Off	Off - Reset (%fans) - Reset all
EC5 – H3 relay options	Preheat	Preheat - Reheat - Always on
EC6 – AUX Relay H9	2	0-13
EC7 – AUX Relay H10	12	0-13
EC8 – Solar Hysteresis	5 °C	0-5 °C
ED – Electric heating		
ED1 – Regulation electricity	3 min.	1-30 min.
ED2 – Preheating temperature	3 °C	-15 °C - +10 °C
ED3 – Preheat PI P	5	1-255
ED4 – Preheat PI I	200	1-255
ED5 – Preheat reg.	40 sec.	10-120 sec.
ED6 – Reheat offset	-2 °C	-10 °C - +10 °C
ED7 – Reheat PI P	5	1-255
ED8 – Reheat PI I	200	1-255
ED9 – Reheat reg.	40 sec.	10-120 sec.
EE – Bypass		
EE1 – Bypass open offset	3 °C	1-10 °C
EE2 – Turn off bypass	4 °C	0-20 °C
EE3 – Bypass Time min. on	5 min.	0-60 min.
EF – Filter		
EF1 – Reset filter timer		
EF2 – Filter timer	3 mth	0-12 month
EF3 – Filter/stop	Off	On-Off
EG – Humidity control		
EG1 – Humidity max temp	15 °C	0-25 °C
EG2 – Humidity max value	60 %	35-85 %
EG3 – Humidity fan speed	15 %	5-30 %
EG4 – Humidity reg. Freq.	10 min.	1-60 min.
EH – Combi Settings		
EH1 – Priority water / air	Water	Water-Air
EH2 – Release cooling	On	On-Off
EH3 – Cooling activation	2 °C	0-5 °C
EH4 – Min. outdoor cooling	15 °C	0-20 °C
EH5 – DHW element	On	On-Off
EH6 – Legionella on/off	On	On-Off
EH7 – Legionella start day	Monday	Monday-Sunday
EH8 – Legionella start hour	01	00-23
EH9 – Stop defrost temp	10 °C	0-15 °C

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Main menu	Factory settings	Possible settings
EH - Combi Settings		
EH10 - Balanced defrost	Off	On-Off
EH11 - Constant on/off	Off	On-Off
EH12 - Constant @ temp	5°C	0-10°C
EH13 - External override	Scheduler	Scheduler/solar panel/Smart Grid
EH14 - PV panel low set	1V	0.1-10V
EH15 - PV panel high set	5V	1-10V
EH16 - PV panel delay	15 min.	0-60 min.
EH17 - Compressor hysteresis	0.4°C	0.1-1.0°C
EH18 - Compressor mode	Auto	Auto-Off
EH19 - Regulation sensor	T2	T2, CO ₂ sensor 1-5, MB1-MB3, T9
EH20 - Temperature min.	10 °C	10-20 °C
EH21 - Temperature limit max.	30 °C	20-30 °C
EH22 - Domestic hot water hysteresis	5 °C	1-20 °C
EI - Demand Control		
EI1 - CO ₂ control	Off	On-Off
EI2 - CO ₂ setpoint	800 PPM	400 - 2000 PPM
EI3 - CO ₂ level time	30 min.	0-1000 min.
EI4 - no. CO ₂ Sensors	0	0-5
EI5 - Zone temperature control	Zone 1	Zone 1/Zone 1+2/Zone 1+2+3
EI6 - Zone temperature hysteresis	0.4 °C	0.1-2 °C
EI7 - Zone temperature sensor	MB2	CO ₂ sensor 1-5, MB1-MB3, T9
EI8 - Zone 3 temperature sensor	MB3	CO ₂ sensor 1-5, MB1-MB3, T9
EI9 - Enable Multibox	Off	Off/On
EI10 - Heat pump temperature activation	Off	Off, one of zones, all of zones

Optima 314

EJ – Fire Control

EJ1 – No. Of fire dampers	0	0-4
EJ2 – Fire test/reset	Off	Off/Test/Reset
EJ3 – Fire test date	1	1-31 day in month
EJ4 – Fire test hour	12	0-23 time

EK – Mixing valve

EK1 – Heating mode	Off	Off/Floor/Radiator
EK2 – Temperature compensation at -12°C	45 °C	20-90 °C
EK3 – Temperature compensation at 20°C	20 °C	15-25 °C
EK4 – Compensation curve offset	2 °C	-10 °C - +10 °C
EK5 – Compensation curve	2 °C	0-5°C
EK6 – Max flow temp.	45 °C	20-65 °C
EK7 – Valve time	150 sec.	1-255 sec.
EK8 – Max Return temperature	50 °C	25-70 °C
EK9 – Neutral Zone	1 °C	0-10 °C
EK10 – Heating PI P	20	0-255
EK11 – Heating PI I (x10)	50	0-255
EK12 – Heating regulation time	5 sec.	1-120 sec.

EL – Modbus

EL1 – Modbus address	20	1-247
EL2 – Modbus baud rate	19200 baud	9600/19200 baud
EL3 – Modbus parity	Even	None/Even/Odd
EL4 – Modbus modify	On	On-Off

EM – Manually override

OEM

THE AIR WE BREATHE

All
Genvex
systems are
rated with
energy label
A

As of 1 January 2025, Genvex has merged with our parent company METRO THERM into one company under the name METRO THERM A/S.

With the merger, both physical addresses will be retained: The head office and production for METRO THERM will remain in Helsingør, while administration and production for Genvex and KVM-Conheat will remain at the Haderslev address as a subdivision.

The three strong brands – METRO THERM, Genvex and KVM-Conheat – remain unchanged and will continue to be treated as independent brands under METRO THERM A/S.



Genvex – the original Danish ventilation system

Genvex is a true Danish original. We started producing ventilation systems in 1978 and are still the front runners when it comes to development and production of the most innovative and durable ventilation systems on the market.

Our units are installed in thousands of homes, providing clean, fresh air free from pollen, dust and harmful particles. They help lots of families with maintaining a healthy and comfortable indoor climate and prolong the longevity of the house itself. With very high heat recovery rates, a Genvex system lets you recover and reuse up to 95 % of the heat inside your home. As a result, our units provide a strong contribution to energy savings in both in family homes and in society as a whole.

Please visit www.genvex.com to see a list of our distributors

