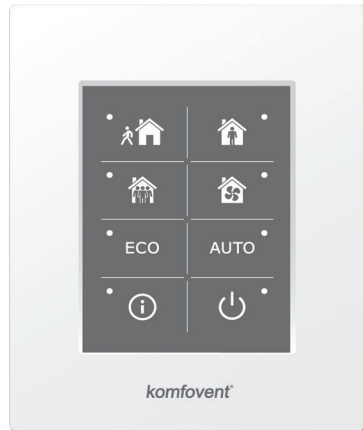


C6.1



C6.2

## Content





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This symbol indicates that this product is not to be disposed of with your household waste, according to the WEEE Directive (2002/96/EC) and your national law. This product should be handed over to a designated collection point, or to an authorised collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, approved WEEE scheme or your household waste disposal service.



## 1. ELECTRICAL INSTALLATION INSTRUCTIONS

The installation can only be performed by qualified personnel. It is necessary to follow the requirements below during the installation.

-  It is recommended to lay the control cables separately from the power cables, at a minimum distance of 20 cm.
-  The connector connection is performed strictly according to the wiring diagram numbering, or with adequate markings (see the principal wiring diagram of the unit).
-  When removing the unit parts, do not pull on the connecting wires and cables!
-  Before performing any work inside the equipment, make sure that the air handling is switched off and disconnected from the mains power supply.


### 1.1. Power supply connection

The unit is designed for a supply voltage of 230 V AC, or 50 Hz; therefore, you must install a socket with an earthing of the corresponding capacity next to it (see the wiring diagram). The power cable type is indicated in the wiring diagram.

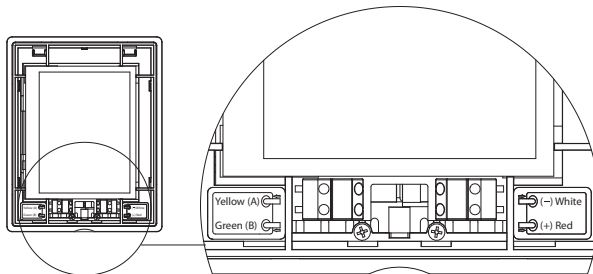
-  The unit must be connected to the stationary installation using a 16 A circuit breaker with 30 mA current leakage protection (type B or B+).
-  The air handling unit is designed to connect only to a neat outlet, with protective grounding meeting all the electrical safety requirements.



### 1.2. Control panel installation

1. The control panel must be installed in the premises under the following conditions:
  - at an ambient temperature of 0 °C... 40 °C;
  - relative humidity ranging from 20%... 80 %;
  - protection from accidentally falling water drops (IP X0).
2. Control panel connection through the hole in the back or in the bottom.
3. The control panel can be mounted on a flush mounting box or in any other place, simply by screwing it to the surface through the two holes on the fastening surface.
4. The control panel is connected to the controller box. The length of installation cable for the control panel may not exceed 150 m.

-  Do not use any other type or size screws but those that are packed together for control panel mounting. Wrong screws may damage electronics board.

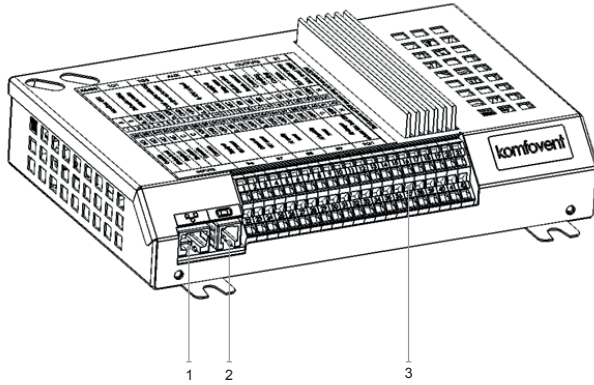
### Control panel connection



-  The cable thicknesses for the panel connection and others are specified in the wiring diagram!
-  Remove protective screen tape, before mounting front cover on the control panel!

### 1.3. Connection of external elements

The air handling unit has external connection terminals in the control box, inside the air handling unit. They are used to connect all the external control elements.




- 1. Ethernet connection of computer network or Internet
- 2. Controller panel connection
- 3. Connection of external elements

Fig. 1.3 a. Controller with the connection terminals


| RS485      | TG1                         | DX                    | AUX                   | B1                      | B5                        | OUTPUTS                               | S1                                   |
|------------|-----------------------------|-----------------------|-----------------------|-------------------------|---------------------------|---------------------------------------|--------------------------------------|
| Modbus RTU | Water mixing valve actuator | External DX unit      | 24V DC; 0-10V output  | Supply air temp. sensor | Return water temp. sensor | Common<br>Heating<br>Cooling<br>Alarm | Water pump<br>Max. load 100W         |
| A          | B                           | 0..10V<br>GND<br>+24V | 0..10V<br>GND<br>+24V | NTC<br>10k              | NTC<br>10k                | C<br>NO<br>NO<br>NO                   | ~230V<br>N                           |
| 1          | 2                           | 3                     | 4                     | 5                       | 6                         | 7                                     | 8                                    |
| 9          | 10                          | 11                    | 12                    | 13                      | 14                        | 15                                    | 16                                   |
| 17         | 18                          | 19                    | 20                    | 21                      | 22                        | 23                                    | 24                                   |
| 25         | 26                          | 27                    | 28                    | 29                      | 30                        | 31                                    | 32                                   |
| 33         | 34                          | 35                    | 36                    | 37                      | 38                        | 39                                    | 40                                   |
| 41         | 42                          |                       |                       |                         |                           |                                       |                                      |
| NO         | NO                          | NO                    | NC                    | C                       | 0..10V<br>GND<br>+24V     | 0..10V<br>GND<br>+24V                 | ~230V<br>N                           |
| Override   | Kitchen hood                | Fireplace             | Fire alarm            | Common                  | Supply air VAV sensor     | Exhaust air VAV sensor                | Air quality or humidity sensor 1     |
|            |                             |                       |                       |                         |                           |                                       | Air quality or humidity sensor 2     |
|            |                             |                       |                       |                         |                           |                                       | Air damper actuator<br>Max. load 15W |
| INPUTS     |                             | B6                    | B7                    | B8                      | B9                        | FG1                                   |                                      |


Fig. 1.3 b Connection diagram for external elements

 The total power of all the external elements, powered from a 24 V voltage, must not exceed 30 W.

**1.4. Temperature sensor installation**

Supply air temperature sensor B1 (Fig. 1.4 a) must be installed in the duct of supplied air to the premises, past all the additional air heating/cooling equipment (if any). It is recommended to install the sensor in the straight segment of the air duct within the distance of 5 duct diameters in front and after the sensor (Fig. 1.4 c).

 Supply air temperature sensor B1 is not necessary if CAV or DCV airflow control is not enabled (more details in section 2.4.6.5) and internal electrical\* or duct mounted air heater or cooler is not used.

 The flat part of sensor must be directed perpendicularly to the airflow for sensing element would be well blown.

The water temperature sensor B5 (Fig. 1.4 b.) is mounted on the return water pipe, by screwing it into the provided hole. The sensor must be thermally insulated!

**Supply air temperature sensor B1**



Fig. 1.4 a

**Water temperature sensor B5**



Fig. 1.4 b

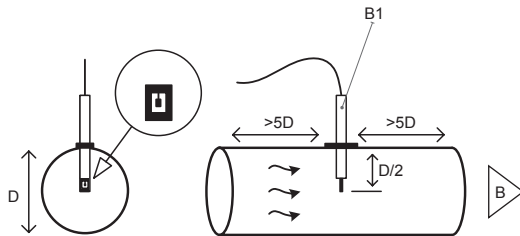


Fig. 1.4 c

\* exception R300V unit.

## 2. OPERATING MANUAL

### 2.1. Unit control with the control panel

The air handling unit can be operated by one of the following panels (Fig. 2.1).

C6.1 – panel with a touch screen for parameters of air handling unit setting and indication. The panel has integrated thermometer and hygrometer for indoor climate monitoring.

C6.2 – panel with touch-sensitive buttons is intended for main air handling unit parameters setting.

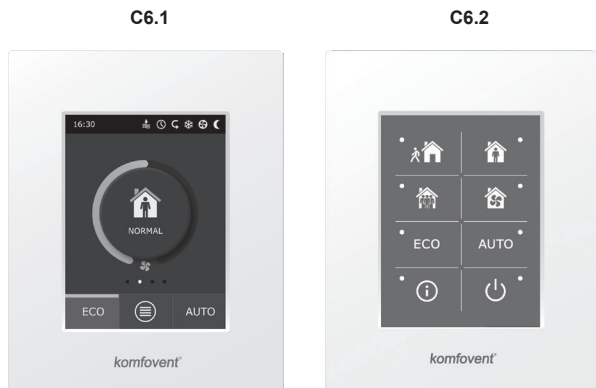


Fig. 2.1. Choice of control panels

### 2.2. Unit operation via a web browser

Not only the control panel, but also a computer can be used to monitor the operation of unit and its components, as well as changing the settings and activating additional functions. You only have to connect the unit separate with the network cable, to a computer, local network or Internet.



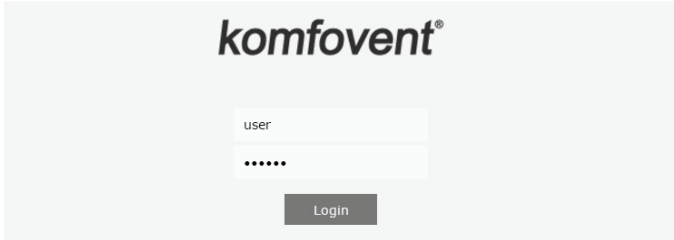
Procedure for the direct connection to the computer:

1. Plug one end of the cable into the network socket in the controller (see Fig. 1.3 a.), and the other into the computer.
2. On the computer, in the manual setting box of the computer's network card, enter the IP address, e.g., 192.168.0.200 and a subnet mask: 255.255.0.0.
3. Run the Internet browser on the computer and disable the use of all Proxy servers in the settings.
4. In the web browser address bar, enter the default IP address of the air handling unit, 192.168.0.60; but this can be changed at any time in the panel (in the Advanced Settings menu), and on-line via a web browser (see the login interface settings).




**Tip:** Before using, it is recommended to update your web browser to the newest version.

5. If the connection was successful, a window will open where you will have to enter a user name and login password:



**Tip:** The user's login name is "user". The initial password is also "user", but the user can later change this to any other password (see the user interface settings).

 Should you forget a changed password, it can be reset to the initial "user". To do this, you must restore the factory settings for the air handling unit.

### 2.3. Unit control with a smartphone

After connecting the air handling unit to a computer network or the Internet, it can be controlled with your smart phone with an iOS or Android operating system. Download and install the mobile app and, depending on whether the air handling unit will be available in the internal or external computer network, enter the appropriate settings (described in more detail in the "Mobile applet installation instructions").



To download the applet, scan the necessary link, or just search for it in the **GooglePlay** or **iTunes** stores.

**Tip:** The applet user interface and the control capabilities are fully consistent with the C6.1 control.

## 2.4. Control Panel C6.1

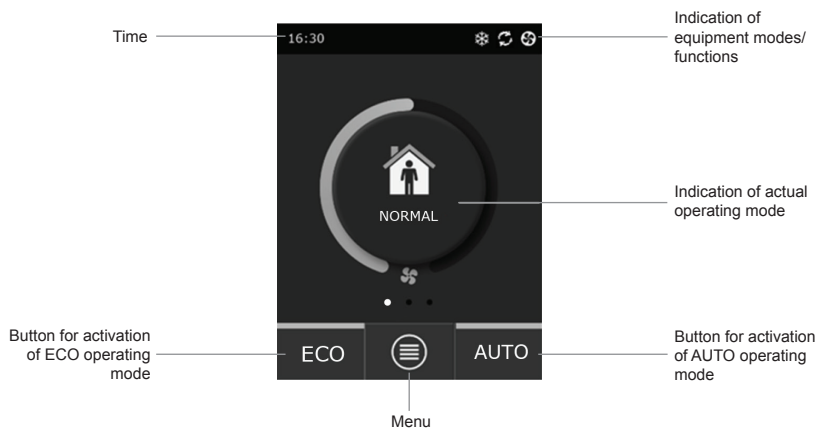


















Fig. 2.4. C6.1 panel main window

### 2.4.1. Displayed symbols on the panel

|   |  |   |  |
|---|--|---|--|
|    | Fan operation  |    | ECO mode on <sup>2</sup> . Free heating operation. |
|    | Energy recovery operation  |    | Alarm signal (see the troubleshooting section)     |
|    | Air heater operation   |    | Supply air   |
|    | Air cooler operation <sup>1</sup>  |    | Exhaust air  |
|  | There is a heating demand, but it is being blocked by the ECO mode <sup>2</sup>  |  | Outside air temperature                            |
|  | There is a cooling demand, but it is being blocked by the ECO modes <sup>2</sup> |  | Air filters  |
|  | ECO mode on <sup>2</sup> . Air flow reduction.                                   |  | Instant heat recovery of the air handling unit     |
|  | ECO mode on <sup>2</sup> . Free cooling operation.                               |  | Instant power consumption of the air handling unit |

\* The air handling unit has the air cooling function, but it requires the following additional components which should be ordered in advance: DCW duct coil (for water cooling) or DCF duct coil with outdoor DX unit (for DX cooling).

\*\* For more about the ECO mode, read Section 2.4.4.



**2.4.2. Review of the parameters**

Main unit parameters: air flow, temperature and filter clogging are displayed in the second window, and the energy parameters – energy recovery and power consumption – are displayed in the third panel window.

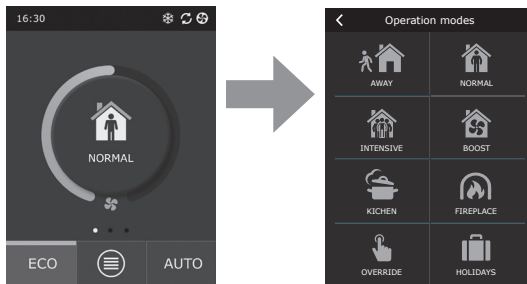


**Tip:** For window scrolls, swipe your finger on the screen to the appropriate side.


All other air handling unit parameters are presented in the “Overview” menu item (see Section 2.4.6.1.).


**2.4.3. Operation mode selection**


There is provided four usual operation and four special operation modes. User can choose one of them from the main panel window by clicking on the center button.




**Usual operation modes**

- 

**Away.** The recommended choice when you are not at home or when there are fewer people inside the premises than usual. The ventilation intensity will be 20%.
- 

**Normal.** Recommended when there is the usual number of people inside the premises. The ventilation intensity will be 50%.
- 

**Intensive.** The recommended choice when there are more people inside the premises than usual. The ventilation intensity will be 70%.
- 

**Boost.** The recommended choice when it is necessary to quickly ventilate the premises. The ventilation will run at its maximum intensity.

## Special operation modes



**Kitchen.** Recommended during cooking, when running the kitchen hood. This mode increases the efficiency of the hood, as the air handling unit will increase the air flow to the premises by up to 80%, and the discharge is reduced to a minimum intensity of 20%.



**Fireplace.** The recommended choice when lighting a fireplace. This mode improves the suction of the smoke through the chimney, causing a small overpressure in the room, because the unit supplies fresh air at a 60% intensity and removes the air from the premises at a 50% intensity.



**Override.** This mode activates the air handling unit at the set intensity of 80%, despite the other mode settings. This mode has the highest priority over the other modes, and will run even after the air handling unit has been turned off.



**Holidays.** The recommended choice when leaving home for a longer period of time. The premises will be ventilated periodically in 30 min. cycles (several times a day) at the minimum intensity.

Any special operating modes can be activated in the panel and by using a mobile phone or computer. When you select a special mode, you will need to enter the duration of its operation, after which the air handling unit will return to the previous mode. KITCHEN, FIREPLACE and OVERRIDE modes are set for time range from 1 to 300 min. In HOLIDAY mode, the time interval can be set from 1 day to 90 days, or a specific date can be selected.



The KITCHEN, FIREPLACE and OVERRIDE special modes can be activated by the external control contacts (Fig. 1.3 b). Modes activation by the contacts has a priority.

The parameters for all eight modes are preset at the factory, but each of them can be modified individually. This requires selecting the desired mode and touching the icon for five seconds. In the window that opens, you can change the air flow, temperature and deactivate the electric heater in the unit:

| ← NORMAL        |                       |
|-----------------|-----------------------|
| Supply flow     | 250 m <sup>3</sup> /h |
| Extract flow    | 250 m <sup>3</sup> /h |
| Air temperature | 20°C                  |
| Electric heater | On                    |
| Reset settings  |                       |

### 2.4.4. ECO mode

ECO – an energy-saving mode to minimize the power consumption of the air handling unit. The ECO mode has three-fold operation effects:


- Blocking the electric heater operation in the air handling unit, and blocking of all external air heating/cooling elements.
- Activation of the Free cooling function, which at some point blocks the heat recovery process, if the outdoor coolness has to be used in an energy-efficient way. Cooling with the outdoor air automatically starts if the room air temperature is above a set value, and the outdoor air temperature at that time is lower than that in the room but not below the set min. value. Similarly, in the case of the opposite temperature conditions. Free heating is carried out.
- As the temperature control with heat recovery alone will not be ensured at all times, in the case of an extreme conditions, when the supply air temperature is below the specified minimum value (in winter) or exceeds the maximum value (in summer), the unit will try to maintain the temperature by decreasing the ventilation intensity. If the temperature does not reach the required min./max. limits over a long period of time, the air volume can be reduced to the lowest possible value (20%).

| ← ECO mode              |      |
|-------------------------|------|
| Heater blocking         | On   |
| Cooler blocking         | On   |
| Free cooling            | On   |
| Min. supply temperature | 15°C |
| Max. supply temperature | 25°C |
| Reset settings          |      |

The ECO mode settings are preset at the factory, but the operation mode can be modified. This requires push and hold for five seconds the ECO button in the initial start-up window. In the window that opens, you can change the default settings.

## 2.4.5. AUTO mode

AUTO – an automatic operation mode when the unit is operating and changing the ventilation intensity based on the chosen (pre-set) weekly operating schedule.



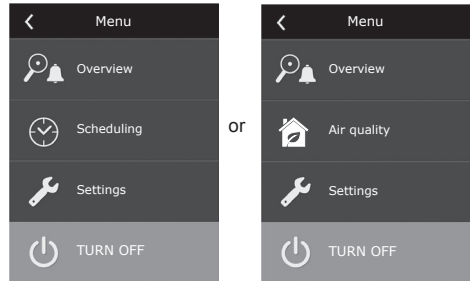
However, if at least one air quality sensor is connected to the air handling unit, the AUTO key will activate the automatic air quality control function. Then, the ventilation intensity is adjusted, not according to the schedule, but according to the current air pollution in the room.

See more details in Section 2.4.6.3.

## 2.4.6. Menu

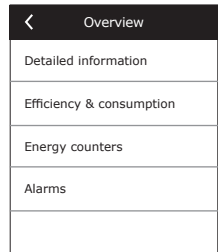
The settings menu consists of four points, where you can view the relevant user information, choose the operating schedule, change the settings or turn off the unit.

If to the air handling unit is connected the air quality or humidity sensor, then the “Scheduling” menu item will disappear and instead of it, you will see “Air Quality”. See more details in Section 2.4.6.3.

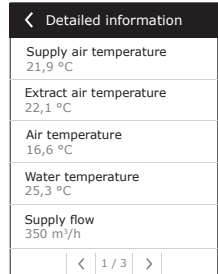


### 2.4.6.1. Overview

The user can view the main air handling unit settings in the start-up windows (see Section 2.4.2.). However, all other information related to the operation of the unit, as well as to malfunctions and efficiency states, is provided in a detailed review of the menu item.



**Detailed information.** All temperature sensor readings, functioning of separate air handling unit elements and other detailed information is available in this menu





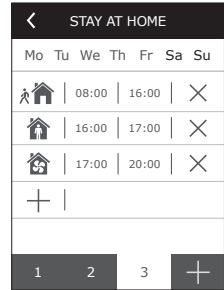
The schedules are preset at the factory, but each of them can be modified individually, or the user can create his own schedule. To do this, select the preferred schedule and touch the schedule in the centre of the screen for five seconds.

All of the above schedules can have up to four different operation programs. Each program can be made of five events.


To start the program, or the event, click "+" – and to cancel it click "X".

To view the programs (if there are several of them), click on the figures in the bottom of the application bar: 1, 2, 3 or 4.

After adding a new event, first choose the days of the week in the program, then continue to set the operation modes: AWAY, NORMAL, INTENSIVE or BOOST and the operation start and end times.



To disable the air handling unit, you can set the STANDBY mode, or when setting the program's events just make a break at the times when the unit must not operate.

 In order for the air handling unit to operate according to the selected weekly schedule, press the AUTO button on the main window (Fig. 2.4).

## Factory set schedules

### STAY AT HOME

| Program No. | Days of the week | Event start time | Event end time | Mode   |
|-------------|------------------|------------------|----------------|--------|
| 1           | Mo - Su          | 00:00            | 08:00          | AWAY   |
|             |                  | 08:00            | 22:00          | NORMAL |
|             |                  | 22:00            | 24:00          | AWAY   |

### WORKING WEEK

| Program No. | Days of the week | Event start time | Event end time | Mode      |
|-------------|------------------|------------------|----------------|-----------|
| 1           | Mo - Fr          | 00:00            | 06:00          | AWAY      |
|             |                  | 06:00            | 08:00          | NORMAL    |
|             |                  | 08:00            | 16:00          | STANDBY   |
|             |                  | 16:00            | 22:00          | NORMAL    |
|             |                  | 22:00            | 24:00          | AWAY      |
| 2           | Sa               | 00:00            | 09:00          | AWAY      |
|             |                  | 09:00            | 16:00          | NORMAL    |
|             |                  | 16:00            | 20:00          | INTENSIVE |
|             |                  | 20:00            | 23:00          | NORMAL    |
| 3           | Su               | 00:00            | 09:00          | AWAY      |
|             |                  | 09:00            | 22:00          | NORMAL    |
|             |                  | 22:00            | 24:00          | AWAY      |

### OFFICE

| Program No. | Days of the week | Event start time | Event end time | Mode      |
|-------------|------------------|------------------|----------------|-----------|
| 1           | Mo - Fr          | 07:00            | 08:00          | AWAY      |
|             |                  | 08:00            | 12:00          | NORMAL    |
|             |                  | 12:00            | 17:00          | INTENSIVE |
|             |                  | 17:00            | 18:00          | AWAY      |

### 2.4.6.3. Air quality

When the external air quality or humidity sensors are connected to the control terminals, automatically activates the air quality control, and the “Scheduling” menu item is replaced by “Air Quality”.

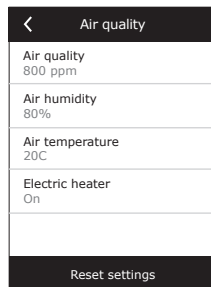
Operation of air handling unit according to the air quality sensors ensures the maximum comfort with the minimum consumption, i.e. the user does not need to plan the schedule because the ventilation intensity is adjusted automatically, depending on indoor air pollution.



To activate the air quality mode, click the AUTO button on the main control panel window (Fig. 2.4).

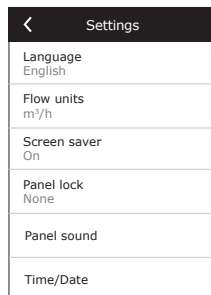


In the “Air Quality” settings menu item, the user can set the maintained air quality or humidity value, as well as the maintained temperature, and can deactivate the electric heater in the unit, if necessary.



### 2.4.6.4. Settings

This menu item is used for the user interface basic settings. You can use it to change the menu language, measurement units, time and date, enable panel blocking or turn off control panel sound signal for the alarm messages.

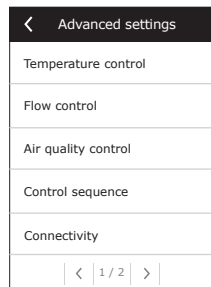



### 2.4.6.5. Advanced settings

Additional air handling unit settings are provided in a deeper menu screen. To open the advanced settings window, press the “Settings” menu button for five seconds.

**Temperature control.** The air handling unit has several temperature maintenance methods:


- **Supply.** The unit provides the air at the user-defined temperature.
- **Extract.** The unit automatically supplies the air at a temperature so that the set temperature of the extract air is maintained.
- **Room.** The unit control the ambient temperature, according to the temperature sensor in the panel.
- **Balance.** The temperature control value of the supply air is automatically set on the basis of the current extract air temperature, i.e. what temperature air will be removed from the premises, the same temperature air will be supplied back.




 After selecting the "Balance" mode, the temperature setting will disappear.


**Flow control.** By default unit operates without airflow control and fans run constant speed which was selected by the user. In case if the airflow control is needed, user can select one of the following:

- CAV – constant air flow control mode. The unit supplies and exhausts a constant air volume set by the user, regardless of the pollution condition of the air filters and the ventilation system changes.

 When activating the air handling unit for the first time, the air flow statements may differ from the real flow until the end of the air flow calibration process. The adaptation process may take up to one hour before all the parameters become stable.


When CAV (or DCV) airflow maintenance mode is selected, there is the possibility to correct the delivered and exhaust airflows by +/-30% for actual air quantity developed by device after automatic calibration wouldn't coincide with those set in the control panel.


 Correction of airflow may be entered only if operation mode of ventilation device is steady. It is recommended to enter the correction when the ventilation intensity level is not less than 50%

 To have a correct airflow control in CAV (or DCV) mode, supply temperature sensor B1 must be installed according instructions stated in 1.4 paragraph.


| ← Airflow maintenance           |                     |
|---------------------------------|---------------------|
| Airflow maintenance mode        | CAV                 |
| Correction of delivered airflow | 0 m <sup>3</sup> /h |
| Correction of exhaust airflow   | 0 m <sup>3</sup> /h |
|                                 |                     |

- VAV – variable air volume control mode. The unit will supply and exhaust the air volume depending on the ventilation needs in different rooms, i.e., the constant pressure in the system will be maintained by the variable air volumes. After selecting the VAV flow control, the user will have to set the pressure maintained by the ventilation system for each of the four modes.

 This function requires additional VAV sensors, which must be ordered separately. The connection of the sensor is shown in Fig. 1.3b.

 If you select the VAV flow regime, the automatic air quality support will be disabled. The AUTO button will activate the weekly operation schedule.

- DCV – Directly Controlled Volume). The air handling unit will operate similarly as in the CAV mode, but air volumes will be maintained directly in accordance with the values of the B6 and B7 analog input signals of controller. After giving the signal 0... 10 V to the appropriate input, it will be converted according to the current determined air volume. For example, if the maximum air flow of the unit is 500 m<sup>3</sup>/h, setpoint in the panel – 250 m<sup>3</sup>/h, and the B6 input value – 7 V, the unit will supply constant air volume of 175 m<sup>3</sup>/h, i. e., 70 % of the set value. The same applies to the exhaust air only by B7 input.

 With special modes (KITCHEN, FIREPLACE, OVERRIDE and HOLIDAYS) the unit will always operate only in the CAV mode, regardless of the selected flow control.

| Air quality control |     |
|---------------------|-----|
| Status              | On  |
| Sensor 1            | CO2 |
| Sensor 2            | RH  |
| Min. intensity      | 20% |
| Max. intensity      | 70% |
| Check period        | 2h  |

**Air quality control.** Air quality control is activated by default. In order for the unit to operate in the AUTO mode not according to the air quality, but according to the weekly schedule, this function can be deactivated.

Air quality control is provided with the several sensors. Their types are configured as follows:

CO2 – Carbon dioxide concentration sensor [0...2000 ppm];

VOC – Air quality sensor [0... 100%];

RH – relative humidity sensor [0... 100%].

The air quality control will automatically regulate ventilation intensity in the range of 20...70%. If necessary, the range may be adjusted.

If the minimum ventilation intensity is set to 0%, the air handling unit will be allowed to turn off when the air quality in the room meets the required value. However, the unit will turn on for a short time periodically every 2 hours (this is configurable), to check the air quality in a room. If after checking, the air pollution does not exceed the set value, the air handling unit is switched off. However, if after checking the air quality is poor, the air handling unit will continue its operation until the room is ventilated.

| Control sequence      |                  |
|-----------------------|------------------|
| 1 Stage               | Electric heater  |
| 2 Stage               | External coil    |
| 3 Stage               | External DX unit |
| External coil type    | Hot water        |
| Irrigation protection | On               |
| Room humidity         | Auto             |

**Control sequence.** In the “Control sequence” advanced settings you can set up to 3 levels of control, which will control the supply air temperature, i.e. first starts Stage 1, if it is not enough then Stage 2, and then Stage 3. Only the default Stage 1 control is activated in the factory for an electric heater – but you can activate additional heaters/coolers, to coordinate their operating sequences with each other or to completely turn them off.

To activate the additional hot water duct heater, you will need to select the “external coil” and set its type to “hot water”. Selecting the “cold water” type of external coil will activate the water cooling control. The external coil control signal is output through the TG1 terminals (Fig. 1.3 b).



After activating the water heater, you must additionally connect the water temperature sensor B5 to the controller terminals.

Selecting “External DX unit” as a controllable feature will activate the control of external outdoor DX unit. The control signal is output through the controller terminals DX (Fig. 1.3 b).

The devices with the counterflow disc heat exchanger have the automatic protection against the icing which turns on the primary electric heater in case of the low outside temperature and high humidity in the room. This heater uses alternating power which depends on the outside air temperature, the humidity level in the room (humidity ratio in g/kg), and the actual air quantity in the ventilation device. The integrated primary electric heater operates on demand only as much as needed and as long as needed. When the inside humidity is low the heater may stay off even in the case of low outside temperatures.

Protections against icing:

- **On** – preset automatic protection with the integrated primary electric heater.
- **Off** – the protection may be turned off however the ventilation device will operate only in the specific range of the outside temperatures. As soon as the outside temperatures drop below -4°C the device will turn off after the preset time.
- **Outside heat exchanger** – this option allows activation of protection by outside heat exchanger which is installed in front of ventilation device in the outside air airduct instead of internal integrated protection. The control of the protective outside heat exchanger is provided via 0...10V signal which is sent using AUX terminals 9, 10 of controller.

The humidity of the room:

- **Auto** – the humidity of the room is set automatically using the humidity sensor in the control panel and/or outside humidity sensors connected to the controller's terminals B8, B9.
- **10...90%** - it is possible to set the fixed setting of the room humidity if the control panel is installed in the inappropriate place (or isn't used) and no outside humidity sensors are connected..



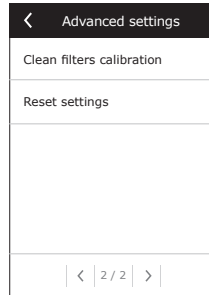
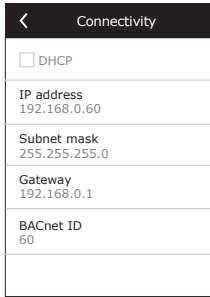
In case of entering the incorrect room humidity setting, there is the risk of incorrect operation of the protection against icing and of freezing of the counterflow heat exchanger.



**Connectivity.** Upon connecting the unit via a web browser, you must configure the computer's network settings: IP address and subnet mask. If needed, additionally other network parameters can be changed: DHCP, Gateway and BACnet ID.

**Clean filters calibration.** Resets dirty filter timer, after replacing air filters.

**Reset settings.** Resets all the user settings and restores factory configuration.



## 2.5. Control Panel C6.2

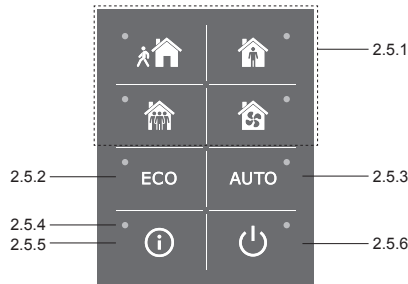





Fig. 2.5. C6.2 panel view


### 2.5.1. Operating mode selection

In the control panel C6.2, the user can choose only one of the usual operation modes:

- 

**Away.** The recommended choice when you are not at home or when there are fewer people inside the premises than usual. The ventilation intensity will be 20%.
- 

**Normal.** Recommended when there is the usual number of people inside the premises. The ventilation intensity will be 50%.
- 

**Intensive.** The recommended choice when there are more people inside the premises than usual. The ventilation intensity will be 70%.
- 

**Boost.** The recommended choice when it is necessary to quickly ventilate the premises. The ventilation will run at its maximum intensity.

The operation mode parameters are preset at the factory. For the modification of each of the mode parameters, if you have to change the temperatures or the air flows, you must have a connection to a computer network or the Internet (see Sections 2.2, 2.3). Then the modifications can be performed with a smart phone or computer.

For more about the choice of modes, read Section 2.4.3.

### 2.5.2. „ECO“

An energy-saving mode to minimize the power consumption of the air handling unit. See more details in Section 2.4.4..

### 2.5.3. AUTO mode

AUTO – automatic operation mode when the unit is operating and changing ventilation intensity based on the chosen (pre-set) weekly operating schedule (for more details, see Section 2.4.6.2). If you connect air quality sensors to the unit, then by pressing AUTO, the ventilation is automatically adjusted according to the current air pollution in the room (see Section 2.4.6.3.).

### 2.5.4. Warning indicator

The indicator informs the user about dirty air filters or ventilation unit malfunctions.



### 2.5.5. Reset button

After the failure elimination or replacing the air filters, press the reset button and hold it for 5 seconds to remove the fault message. If the fault message cannot be removed and the unit is not working, then follow the instructions in the troubleshooting tables (Section 2.6.).

### 2.5.6. Turning the unit on/off

Pressing the OFF button turns off the air handling unit. To activate the unit, press the same on/off button, or choose one of the modes directly.

### 2.5.7. Keypad lock

By pressing the keys   simultaneously and holding them for 5 sec., the keypad is locked and all keys will become inactive. To unlock the keypad, perform a similar procedure.

### 2.5.8. Control panel alarm message sound signal enable / disable

When alarm appears, control panel makes a beeping sound. Sound can be temporarily switched off by pressing reset button or deleting alarm message.

To disable alarm message sound permanently:

- Press and hold ON/OFF button for 5s. until short beep will be heard and red indication light will be blinking.
- If control panel starts beeping and reset button indicator is lighting red – alarm message sound can be disabled by pressing reset button once.
- If control panel do not beep and reset button indicator is off – alarm message sound can be enabled by pressing reset button once.
- In order to save changes hold ON/OFF button for 5s. until short beep will be heard. To exit without saving changes, press ON/OFF button once.

## 2.6. Troubleshooting

If the unit is not working:


- Make sure that the unit is connected to the power supply network.
- Check all the automation fuses. If necessary, replace burned out fuses with new fuses that have the same electrical parameters (the fuse types are listed in the principal wiring diagram).
- Make sure there is no fault message or indication in the control panel. If there is a problem, you must first remove the fault. To remove the fault, follow the instructions in the troubleshooting tables.
- If nothing is shown on the control panel, check for damage to the cable that connects the remote panel to the unit.


**Table 2.6.1. Alarms displayed in the C6.1 control panel, their possible causes and elimination methods**


| Code      | Notification                     | Possible cause  | Elimination   |
|-----------|----------------------------------|---|---|
| F1        | Low supply air flow              | Too high resistance of the ventilation system   | Check the air valves, air filters or ventilation system for clogging.   |
| F2        | Low extract air flow             |   |   |
| F3        | Return water temperature low     | The temperature of the return water in the water heater has dropped below the acceptable limits | Check the condition of the circulation pump on the heating system, and the mixing valve actuator.                     |
| F4        | Low supply air temperature       | Unlisted or uncontrollable heating unit or insufficient power                                   | Check the heating unit  |
| F5        | High supply air temperature      |   |   |
| F6        | Electric heater overheat         | The heater has overheated due to a too low air flow   | After the heater has cooled down, restore the protection by pressing the RESET button                                 |
| F7        | Heat exchanger failure           | Blocked or not rotating rotor, bypass damper failure  | Check the drive condition of the rotary or the plate heat exchanger.  |
| F8        | Heat exchanger icing             | Icing may occur in low outdoor temperatures and in high room humidity                           | Check the operation and protection system of the initial electric heater.   |
| F9        | Internal fire alarm              | Risk of fire in the ventilation system  | Check the ventilation system. Find the source of the heat.  |
| F10       | External fire alarm              | Fire alarm from the building's fire protection system   | Once the fire alarm signal disappears, the unit needs to be restarted immediately from the control panel.             |
| F11 – F22 | Temperature sensor(s) failure(s) | Disconnected or faulty temperature sensor(s)  | It is necessary to check the sensor connections or to change the sensor.  |
| F23 – F27 | Controller failure               | Inner main controller failure   | Replace the main controller.  |
| W1        | Clogged air filters              | It is time to replace the air handling unit air filters   | Change the filters after turning off the unit. After filter replacement start clean filter calibration (see page 17). |
| W2        | Service mode                     | A temporary mode, which can be activated by the service personnel                               | The service mode is switched off by simply deleting the alert message.  |

**Table 2.6.2. Alarms displayed in the C6.2 control panel, their possible causes and elimination methods**

| Indication                        | Operation                 | Possible cause  | Elimination  |
|-----------------------------------|---------------------------|---|--|
| Red light warning indicator       | The unit is operating     | Dirty air filters   | Change the filters after turning off the unit.   |
| Flashing red warning indicator    | The unit is operating     | A temporary mode, which can be activated by the service personnel                               | The service mode is switched off by simply deleting the alert message.                 |
| Flashing red warning indicator    | The unit is not operating | Critical failure(s) for which the unit is stopped   | More details about the fault can be viewed online using the computer or a smart phone. |
| All panel indicators are flashing | N/A                       | Damaged or incorrectly connected connection cable between the remote control panel and the unit | Check the control panel connection   |

- 

Reset the emergency electric heater overheating protection system using the RESET button, only after clarifying the cause of the overheating and eliminating it.
- 

Before performing any work inside the equipment, make sure that the machine is switched off and disconnected from the mains power supply.
- 

Once the failure has been eliminated, activate the power supply and erase the error message. However, if a fault is not eliminated, the device will either start again and then stop, or will not start and the error message will continue to be displayed.

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