komfovent®

DOMEKT
User Manual

CONTENT

1. INTRODUCTION

The air handling unit is designed to ensure good ventilation of premises. Air handling unit removes indoor air containing carbon dioxide, various allergens or dust, while replacing it with filtered fresh air from outside. As the outside air is usually colder or warmer than the air within the premises, an integrated recuperator collects thermal energy from the indoor air and transfers the majority of it to the supply air.

When a recuperator is not capable of reaching a desired temperature, heaters or coolers may be additionally activated.[1]

⚠	Heat exchangers and heaters (or coolers) are designed to compensate for heat/cool losses during ventilation, therefore, we do not recommend using the unit as the main heating/cooling source. The unit may not reach a user-defined supply air temperature when the actual room temperature differs significantly from the desired room temperature. This will lead to inefficient operation of a heat exchanger.	⚠
⚠	Make sure that the unit is installed in a designated location, all ducts and wires are connected before turning it on. Check for foreign objects, debris or tools inside the unit. Make sure that air filters are installed and condensate drainage is connected (if necessary). If in doubt, contact your installer or "Komfovent" representative to make sure that the unit is operational.	⚠
⚠	We recommend that you always keep your device turned on; when no ventilation is required, you shall operate the unit in a minimum mode (20%). This will ensure good indoor climatic conditions and will reduce humidity condensation inside the unit, that may damage electronic components.	⚠
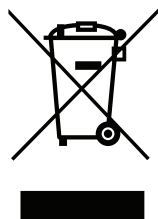
This symbol indicates that this product is not to be disposed of with your household waste, according to the WEEE Directive (2002/96/EC) and your national law. This product should be handed over to a designated collection point, or to an authorised collection site for recycling waste electrical and electronic 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]   Depends on the equipment supplied.

2. AIR HANDLING UNIT FUNCTIONS

To create a comfortable home environment, you can adjust ventilation intensity and air temperature as well as to create a weekly ventilation schedule. Various additional functions facilitate control of all ventilation processes and reduce electricity consumption.

2.1. Air flow control

Fan speed of air handling units is adjusted by the selected air flow control method:
- **CAV** – constant air volume control. Fan speed is adjusted by measuring air flow and comparing it against the set value. Fan rotates exactly at a speed required to reach the set air volume, regardless of pressure changes. For example, when air filters get contaminated, the fan speed will be automatically increased to reach the same volume of air as during operation with clean filters. In operating modes, the user sets a desired air volume for each fan separately. Air volume is set and measured in m^3/h or l/s.
- **VAV** – variable air volume control mode. This mode allows maintaining constant air pressure in ducts while the fan speed is adjusting according to pressure changes in the ventilation system. Air pressure in ducts is measured with optional VAV pressure sensors installed in supply and exhaust air ducts and connected to B6 and B7 terminals of the main controller (see "Installation Manual"). User sets a desired air pressure value for supply and extracted air individually in operating modes. Air pressure is set and measured in Pa.
- **DCV** – direct air volume control mode. This mode is quite similar to the CAV mode, but additionally allows adjustment of fan speed by connecting a 0..10 V control signal to terminals B6 and B7 of the main board (see "Installation Manual"). As the control signal voltage changes, fan speed is adjusted accordingly, i.e. 10V corresponds to the set air volume value, whereas, 2V corresponds to 20% of the fan power.

Selection of air flow control is described in chapter "Control and Settings".

2.2. Temperature control

Temperature in the air handling unit is maintained by measuring the actual temperature and comparing it to the user-defined temperature. Then, depending on whether the supply air requires heating or cooling, heat exchanger or additional heaters/coolers are activated. Available temperature control methods:
- **Supply** air temperature control – the unit supplies air of user-defined temperature.
- **Extract** air temperature control – the unit automatically selects the supply air temperature to ensure that the extract air temperature is reached and maintained as quickly as possible. Room air temperature is measured by an integrated extract air temperature sensor.
- **Room** temperature control – the unit automatically selects the temperature of supply air to ensure that the room temperature is reached and maintained as measured by the sensor integrated in a remote controller. Control panel must be installed in a room where temperature maintenance is required.
- **Balance** – Supplied air temperature will be maintained to be the same as extracted air temperature, therefore, selecting a desired temperature is not possible. Extract air temperature is measured by an integrated extract air temperature sensor.

Selection of temperature control is described in chapter "Control and Settings".

2.3. Standard operating modes

4 standard operating modes are available on your air handling unit. Each operating mode has preset air volume and desired temperature values:

	AWAY	NORMAL	INTENSIVE	BOOST
Ventilation intensity	20%	50%	70%	100%
Set temperature	20°C	20°C	20°C	20°C

These settings may be changed (see "Control and Settings").

2.4. Special operating modes

4 special operating modes are available on your air handling unit. During activation, KITCHEN, FIREPLACE and OVERRIDE modes are set for operation from 1 min. to 300 min. In HOLIDAY mode, operation time is set from 1 to 90 days or for a specific date. KITCHEN, FIREPLACE and OVERRIDE modes may also be activated by short-cutting designated terminals on the main board, i.e. by connecting a switch, cooker hood or a motion sensor (see "Installation Manual"). Each operating mode has preset air volume and desired temperature values:

	KITCHEN	FIREPLACE	OVERRIDE	HOLIDAYS
Intensity of supplied air	80%	60%	80%	Ventilation unit will turn on for 30 minutes several times a day. At other times, the ventilation unit is switched off. Ventilation intensity 20%.
Intensity of extract air	20%	50%	80%	
Set temperature	20°C	20°C	20°C	20°C

These settings may be changed (see "Control and Settings").

2.5. ECO mode

ECO – an energy saving mode intended for minimizing power consumption. Power consumption is reduced by turning off heating/cooling devices, making maximum use of outdoor air or decreasing fan speed. During ECO mode:
• Electrical heater is blocked, all other external air heating/cooling devices are switched off.
• Rooms are cooled/heated with the outside air without a recuperator when the outside air temperature falls within the set temperature range.
• When supply air temperature is below a set minimum value (in winter) or exceeds a maximum value (in summer), the unit attempts to maintain the air temperature by decreasing ventilation intensity.

Setting the temperature range, switching off recuperation or heating/cooling devices may be done in the ECO mode settings (see chapter "Control and Settings").

2.6. AUTO mode

During AUTO mode, ventilation intensity is adjusted by a weekly schedule or air quality in the premises, i.e. ventilation is activated only when necessary or desired.

2.6.1. Weekly operation schedule

If you want the unit to operate when you need it, you can create a weekly operation schedule. The unit has 3 default weekly operation schedules tailored to different situations. Also, you can create your own schedule:

Working week	Office	Stay at home
At night the unit operates in *AWAY* operation mode, and in the morning or evening it switches to *NORMAL* operation mode. The unit is switched off during the working day.	The unit operates only during the working days: in *NORMAL* operation mode until noon and in *INTENSIVE* mode in the afternoon. The unit is switched off during nights and weekends.	The unit operates all the time: in *AWAY* operation mode during the night and in *NORMAL* operation mode during the day.

Programs, times and days of a schedule may be changed (see chapter "Control and Settings").

2.6.2. Air quality control function

Air quality control function activates ventilation only when necessary, i.e. when the air quality is poor. If the indoor air quality is good, the unit will ventilate at minimum speed or stop. Air quality in the premises may be controlled by impurity or humidity sensors connected to B8 and B9 terminals of the main board (see "Installation Manual").

> ⚠️ Air quality control function is not available in VAV air flow control mode (see "Air Flow Control"). In this case, the unit will operate by a weekly operation schedule in AUTO mode. ⚠️

As air impurity and humidity control methods slightly differ, the air quality control function is divided into:

- **Impurity control**
  Impurity function is controlled via the following sensors:
  CO2 – carbon dioxide concentration sensor [0...2000 ppm];
  VOC – air quality sensor [0...100 %];

Air impurity function automatically selects ventilation intensity in the range of 20–70%, based on air quality readings. If air pollution is within the user-defined limits, fans will operate at minimum speed; as level of pollution increases, the unit will increase ventilation speed and supply more fresh air to the premises. It is also possible to stop the unit when air pollution is low. For this purpose, change a minimum ventilation intensity limit to 0% (see "Control and Settings"). Then the unit will turn on periodically (every 2 hours by default) to inspect the air quality, and will ventilate until pollution is reduced, if necessary.

Type of connected sensors and range of ventilation intensity may be modified (see "Control and Settings").

- **Humidity control**
  Humidity control function allows dehumidification of air in the premises. Possible ways of dehumidification:
  1. If outdoor humidity is measured via an additional humidity sensor, air in the premises will be dehumidified when humidity level outdoors is lower than indoors. Indoor humidity is monitored by a separate sensor connected to a controller board or integrated in a control panel. In the settings: set sensor type RH and select one of the connected sensors for measuring outdoor humidity (see "Control and Settings"). In AUTO mode fans are running at minimum speed as long as the indoor humidity is lower than the setpoint (see "Impurity Control"). When humidity outdoors is lower than indoors and dehumidification of the premises is necessary, the fan speed will be increased gradually and drier air will be supplied.

2. If no outdoor humidity sensor is used, "Humidity Control" function operates the same way as the "Impurity Control" function but instead of an air quality sensor, optional humidity sensor connected to the controller or integrated in the control panel is used.

3. If an external DX unit or a water cooler is used (activated in "Control Sequence Settings"), additional dehumidification is possible by cooling supply air. In this case, the supply air temperature setpoint is ignored and colder but drier air is supplied until the desired indoor humidity level is reached. If an outdoor humidity sensor is used and the outdoor air is drier, the unit will attempt lowering the indoor humidity by supplying drier outdoor air before activating cooling units. Dehumidification with cooling devices is possible both in AUTO and standard ventilation modes.

To use a DX unit or a water cooler for dehumidification of supply air, activate an option "Allow dehumidifying with cooling" (see "Control Sequence Settings"). An option to enter a value for desired humidity will appear in the settings of standard ventilation modes.

3. CONTROL AND SETTINGS

Ventilation unit may be conveniently controlled via the following ways:
- Remote controller
- Mobile app
- Web browser

Air handling unit (based on its equipment) may have one of the following control panels:
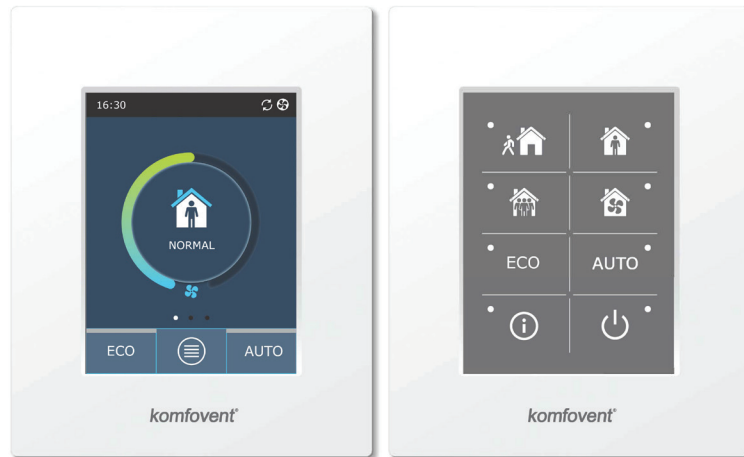
C6.1   **C6.2**

3.1. Control panel C6.1

Panel with a colour touch-sensitive display. This control panel is designed for indication and changing of various functions and settings of the unit. If the unit is connected to the mains, the control panel will display home screen or a screen saver that you can switch off with a single tap. Touch-sensitive display reacts to soft taps, therefore, do not use any sharp tools (screwdrivers or pens), also do not apply excessive force as it may damage the display.

Screen saver   **Main screen**

16:30

22,0 °C

30 % RH

Function icons

Fan intensity

Icon of an activated mode

NORMAL

ECO   AUTO

Time   ECO   Menu   AUTO
        function   button function
        button   button

Menu window

Return to a previous window

Parameter modification window

Parameter to be changed
Maximum possible value
Increase
Current setting
Decrease
Minimum possible value

Confirm   Cancel

Displayed symbols on the panel

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

3.1.1. Parameter overview

Swipe the main window to the side to see various parameters: air flow, temperatures, filter contamination, energy recovery and power consumption.
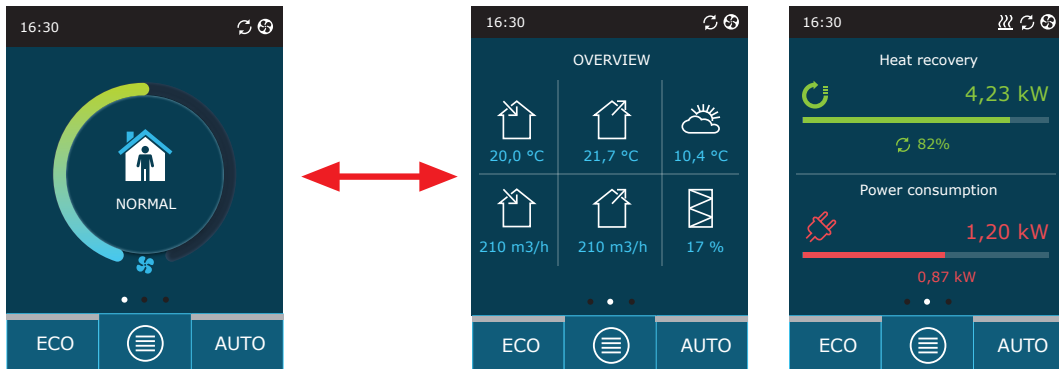
See menu section "Overview" for more parameters.
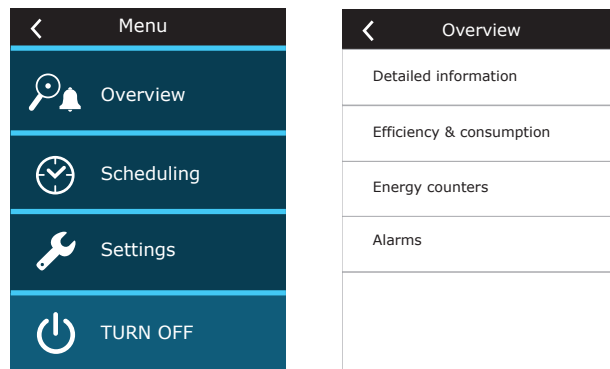
3.1.2. Turning on

The unit must be switched on to operate by a selected ventilation mode, schedule or air quality.
To turn on your air handling unit:
1. Press the ON/OFF button in the centre of the home screen.
2. Confirm the message that appears.
3. A symbol will appear in the centre of the home screen indicating an operating mode which will start soon.
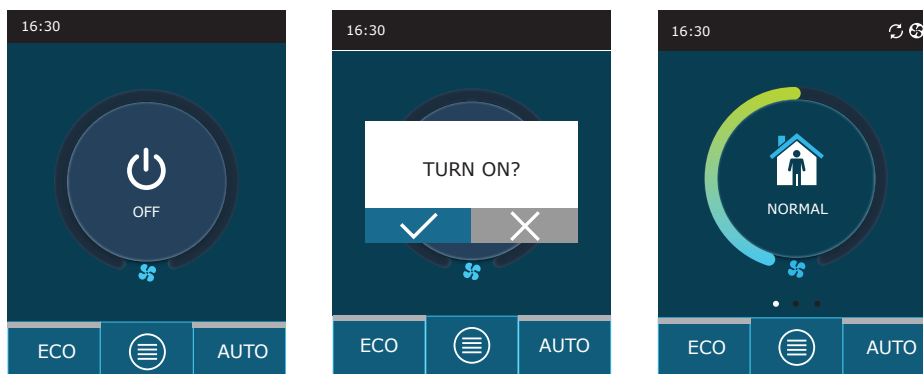
3.1.3. Turning off

If you want your device to stop working, regardless the operation schedule and other functions, you can turn it off.
To turn off the device:
1. Press "Menu" button at the bottom of the home screen.
2. Press the ON/OFF button at the bottom of the menu window.
3. Confirm the message that appears.
4. Press a return icon at the top of the window to return to the main screen.
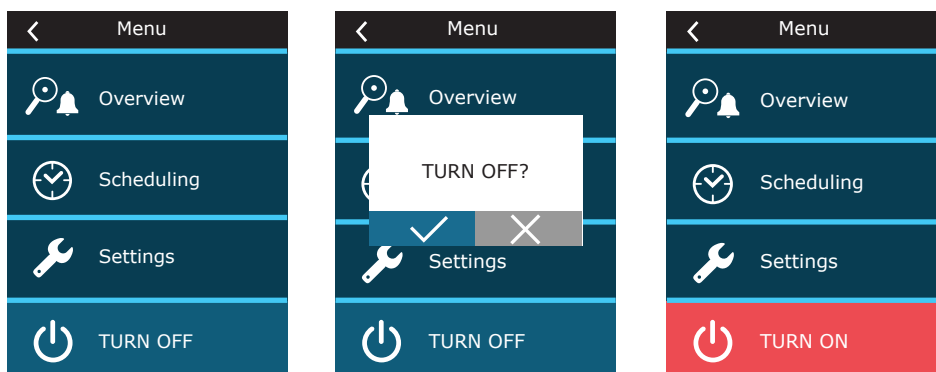
3.1.4. Mode change

To turn on a standard ventilation mode:
1. Press an icon indicating the current operation mode in the middle of the home screen.
2. Select and press a desired operation mode.
3. An icon for the selected operation mode appears in the middle of the home screen.
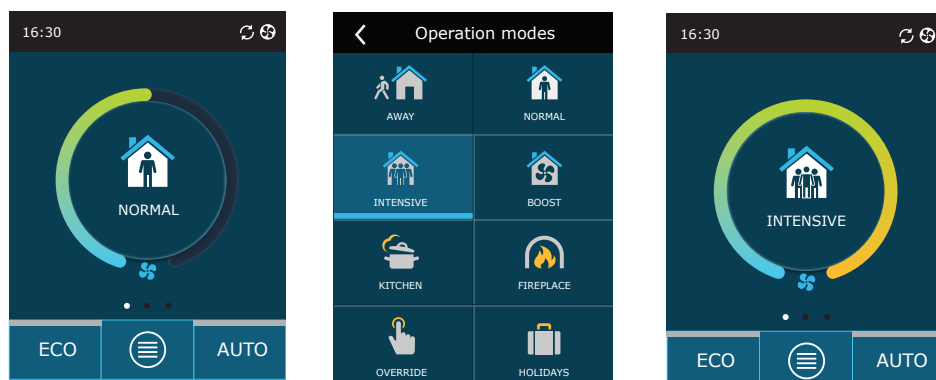
To turn on a **special ventilation mode**:
1. Press an icon indicating the current operation mode in the middle of the home screen.
2. Select and press a desired special operation mode.
3. Use the arrows to select desired operation duration and press to confirm.
4. Press the return icon at the top of the screen to return to the home screen.

EN

When operating in a special mode, air flow is maintained by CAV method, regardless the selected air flow control method.

To activate ventilation by a weekly schedule[1]:
1. Press "Menu" button at the bottom of the home screen.
2. Press "Planning" button in the menu window.
3. Use the arrows at the bottom of the window to select a desired weekly schedule.
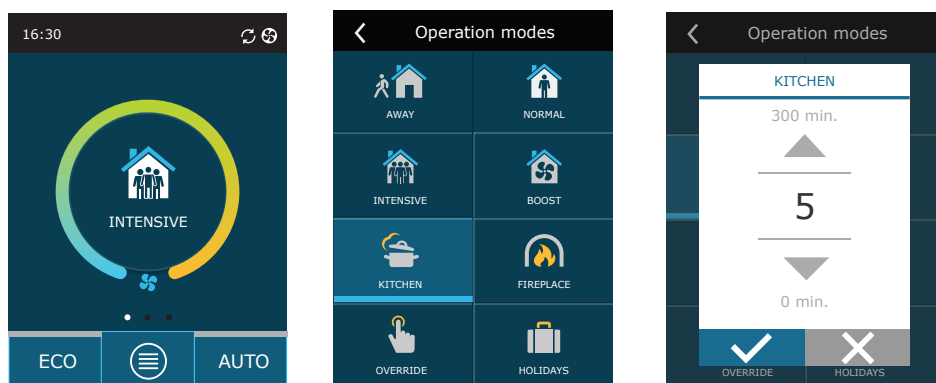4. Press a return icon at the top of the window twice to return to the home screen.
5. Press AUTO button to activate scheduled ventilation.
6. Information about upcoming changes in the schedule is displayed at the top of the screen.
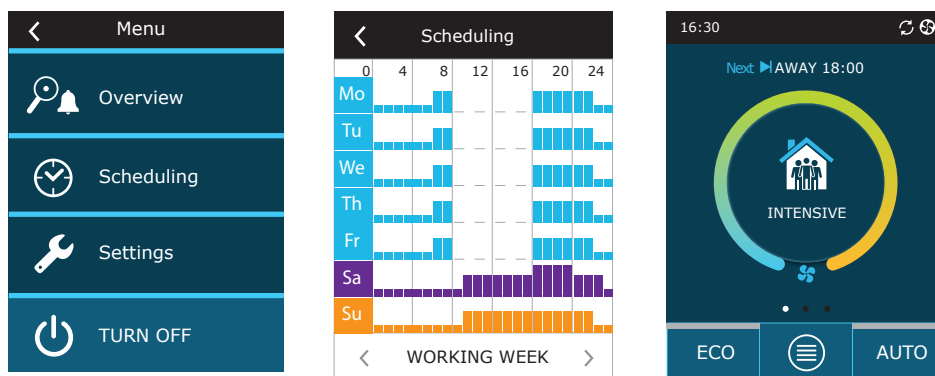
3.1.5. Air quantity and temperature settings

You can set air flow for supply and exhaust air, desired temperature and turn off/on an electric heater for each ventilation mode. If turned off, the heater will not turn on even when the desired temperature is not reached. If turned on, the heater will operate only when a heat exchanger alone cannot reach the set temperature.

To change the ventilation mode settings:
1. Press an icon indicating the current operation mode in the middle of the home screen.
2. Press a desired mode button and hold it for 5 seconds.
3. Press a parameter you want to change.
4. Use the arrows to select a desired value and press to confirm.
5. Press a return icon at the top of the screen to return to the home screen.
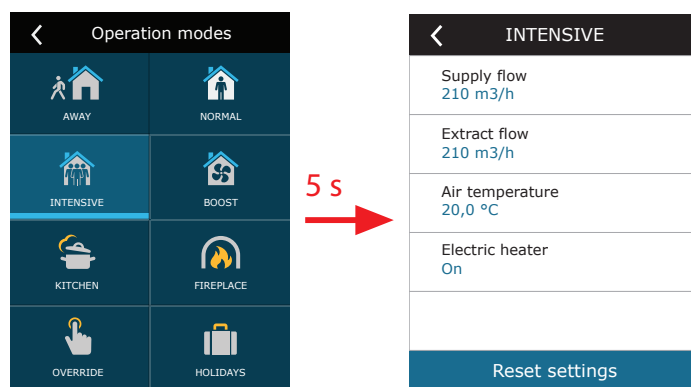
[1] Ventilation by a weekly schedule is not possible when air quality control function is activated.
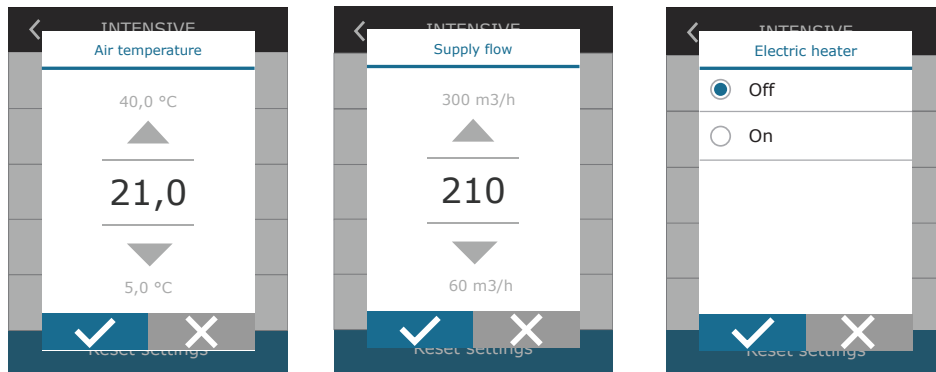
3.1.6. Air quality control mode activation and settings

If air quality sensors are connected to the main board or impurity control/moisture control function is activated (see "Advanced Settings"), button "Scheduling" appears instead of "Air quality" button. For more information about the air quality control function see chapter "Air Quality Control Functions".

To enter desired limits and turn on ventilation by air quality:
1. Press "Menu" button at the bottom of the home screen.
2. Press "Air quality" button.
3. Select a parameter you want to change.
4. Use the arrows to select a desired value and press to confirm.
5. Press a return icon at the top of the screen to return to the home screen.
6. Ventilation by air quality is turned on by pressing AUTO button while the unit is operating in any ventilation mode.
7. If the unit was stopped, pressing AUTO button will call up a message, the confirming of which will activate ventilation by air quality.
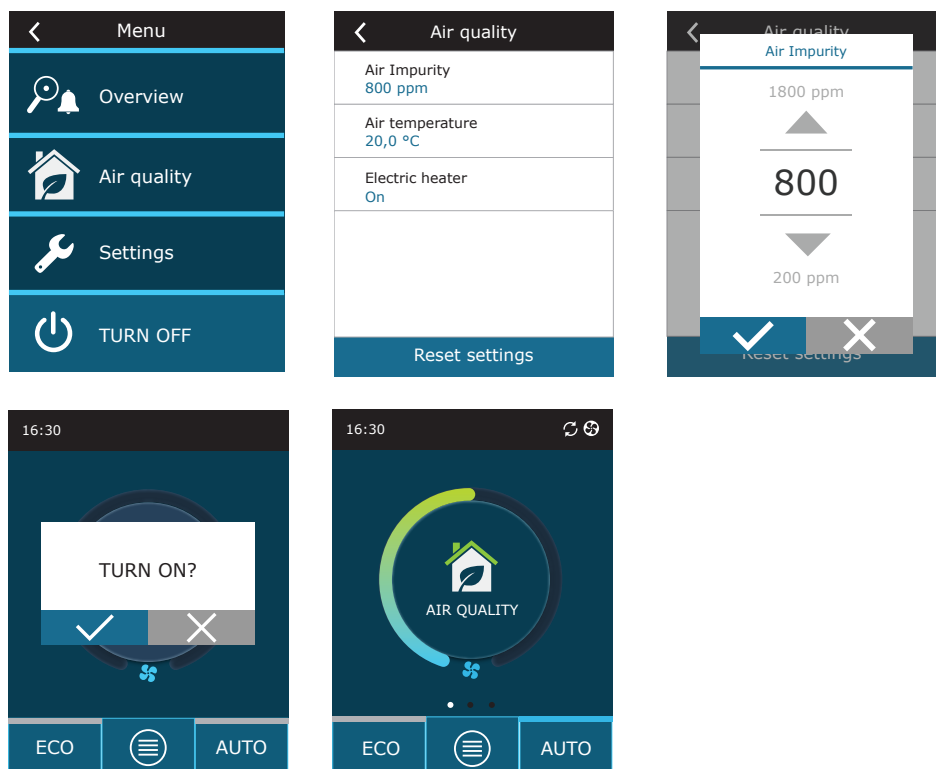
3.1.7. ECO mode activation and settings

ECO mode may be activated in any ventilation mode by pressing ECO button at the bottom of the home screen. For more information about the ECO mode see chapter "Air Quality Control Functions".

To change the ECO mode settings:
1. Press ECO button and hold it for 5 seconds.
2. Press a parameter you want to change.
3. Select a desired option or set a desired value using arrows.
4. Confirm your selection.
5. Press a return icon at the top of the window to return to the home screen.
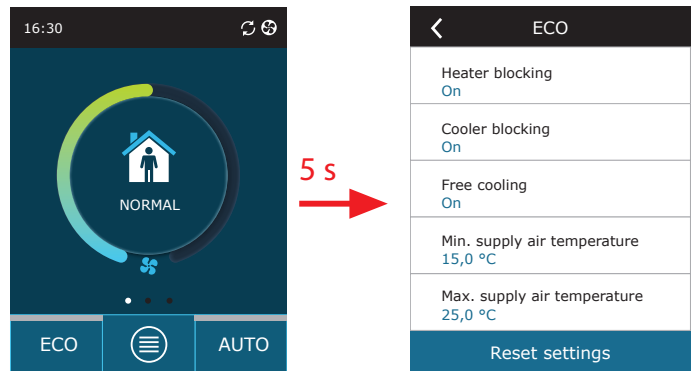
3.1.8. Creating a weekly operation schedule

You can modify ventilation modes, operation time and day for all default operation schedules.

To modify settings of a default schedule:
1. Select a weekly schedule as shown in Chapter "Mode Change".
2. Press the centre of the schedule window and hold for 5 seconds.
3. By pressing the weekday row you can select which days of the week this schedule sheet is valid for.
4. Pressing the ventilation mode icon on the left will allow selecting a desired ventilation mode.
5. Press time of a specific ventilation mode to change the operation start and end times.
6. Press X on the right to delete a row (ventilation mode and operation start/end times) from a schedule.
7. To add an additional row, press + under the last scheduled row (maximum 5 rows). If the last event ends at 24:00, you will have to delete it to add a new row.
8. To add another sheet, press + at the bottom of the window (maximum 4 sheets).

Add a row

Delete a row (event)

Add a sheet
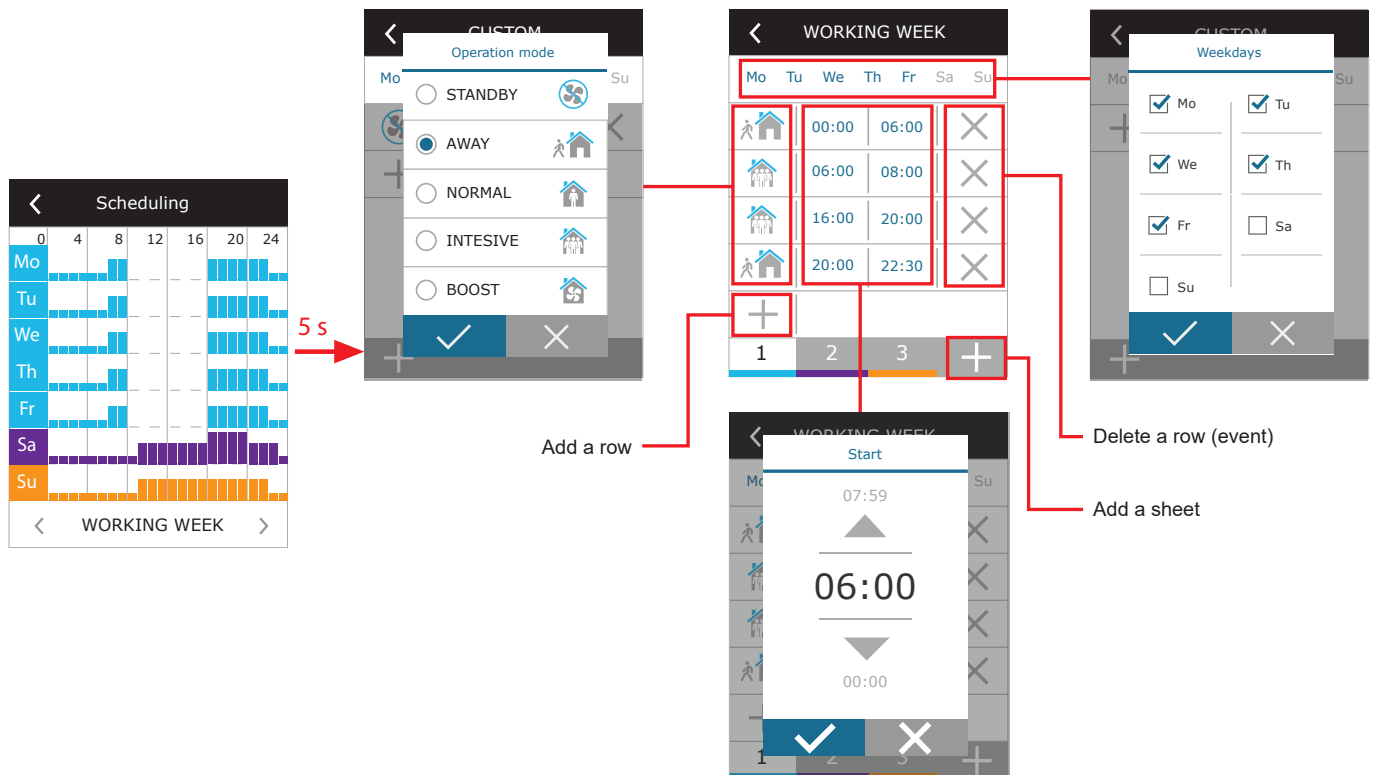
To create a weekly operation schedule:
1. Select a weekly schedule "My week" as shown in Chapter "Mode Change".
2. Press the centre of the schedule window and hold for 5 seconds.
3. Press the weekday row to select which days of the week this schedule sheet is valid for.
4. Press + symbol and add a new row.
5. Press the ventilation mode icon on the left to select a desired ventilation mode. There is no need to include a STAND-BY mode in the schedule for intervals when the unit will not operate. The unit will be stopped during any intervals for which no ventilation mode is assigned.
6. Set the start and end time for a ventilation mode. If you need 24-hour ventilation, set the start time for 0:00 and the end time for 24:00.
7. To add an additional row, press + under the last scheduled row (maximum 5 rows). If the last event ends at 24:00, you will have to delete it to add a new row.
8. To add another sheet, press + at the bottom of the window (maximum 4 sheets).
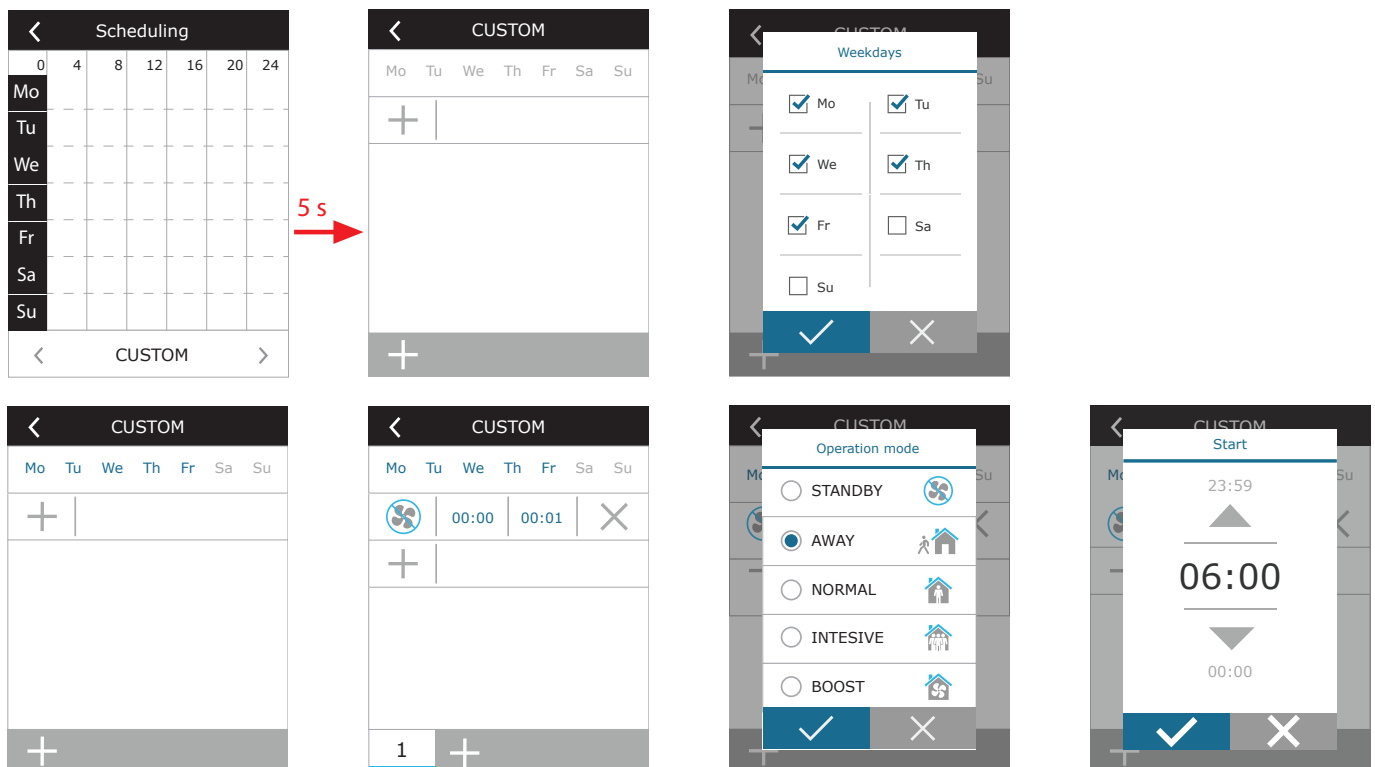
3.1.9. Main settings

In the menu point SETTINGS you can modify the main user interface settings:
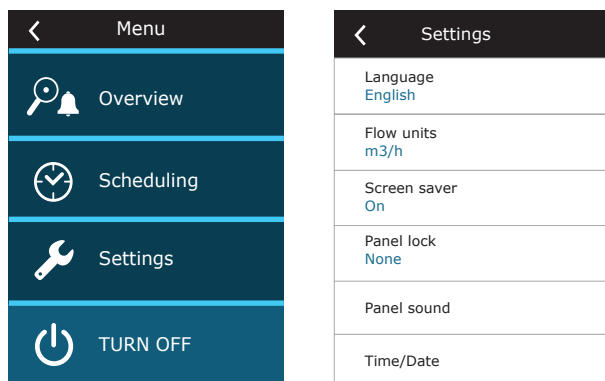
Language – set a desired control panel language using arrows.
Flow measurement units – select units for air flow measurement.
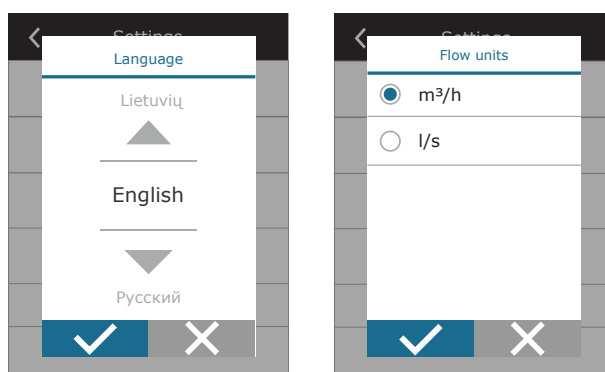
Screen saver – turn the screen saver on/off. Screen saver activates when a control panel is not used for longer than 1 min. You may select brightness of a screen saver, as well as settings and the order in which they are displayed. If a screen saver is deactivated, the control panel display turns off if not used for longer than 1 min. Tap a screen to wake-up.

Panel lock – partial or full panel lock is available. Partial lock allows turning on/off an air handling unit and selecting desired ventilation mode but does not allow any ventilation settings to be changed. Full panel lock prevents the user from using the control panel. To unlock the panel, you have to enter your four-digit PIN code. When the lock is on, the panel will lock every time the screen saver is activated.
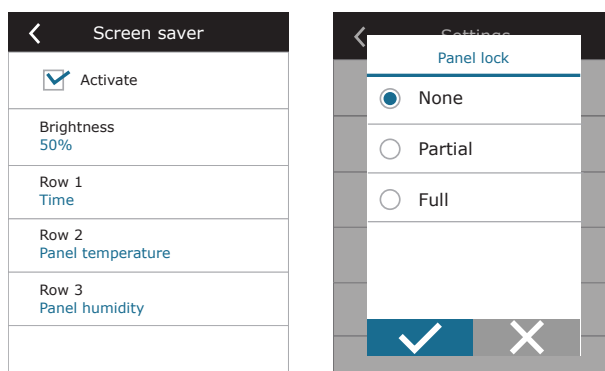
Panel sound – turning on/off touch and message sounds.

Time/Date – setting the time and date that are used for a weekly operation schedule or other functions.

Panel sound	Time/Date
Touch sound: Click	Time: 14:02
Alarms sound: On	Month/Day: 12/10
	Year: 2018
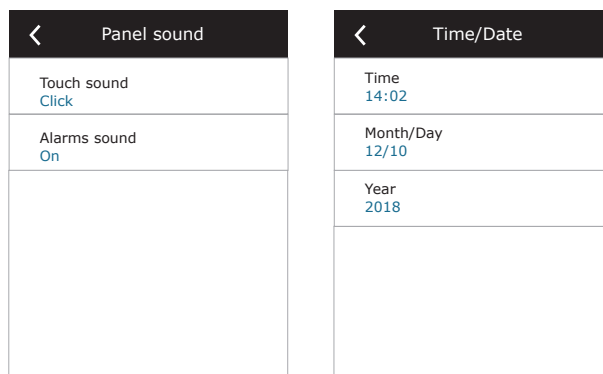
3.1.10. Advanced settings

To access the advanced settings, press and hold the SETTINGS button for 5 seconds.

Menu: Overview, Scheduling, Settings, TURN OFF

5 s →

Advanced settings (1/2): Temperature control, Flow control, Air quality control, Control sequence, Connectivity

Advanced settings (2/2): Clean filters calibration, Reset settings
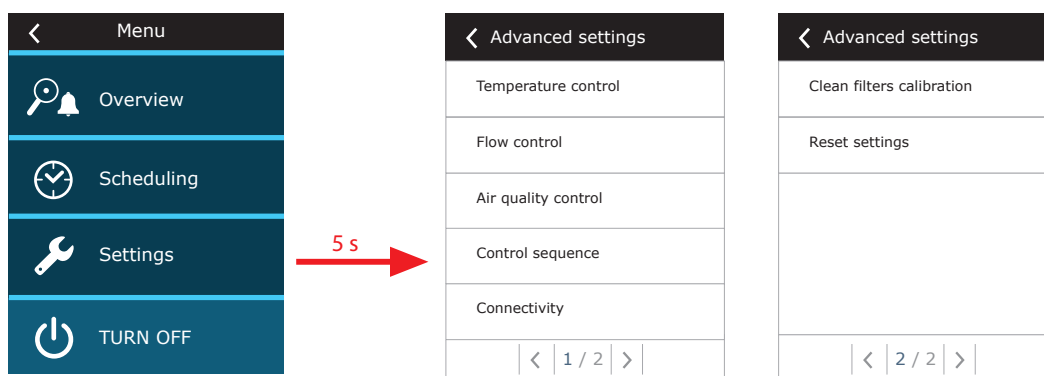
Temperature control – select a method for temperature control (see Chapter 2.2).

Temperature control: Supply

Temperature control options: Supply, Extract, Room, Balance
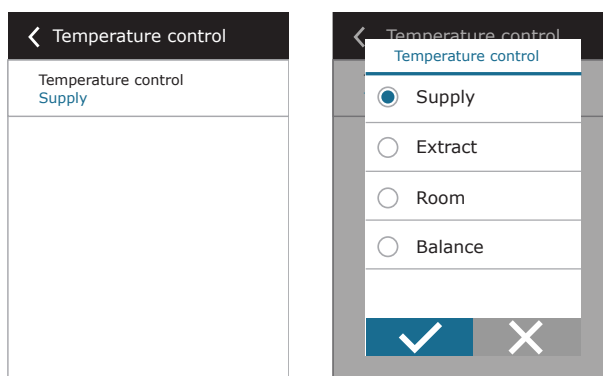
Flow control – select a method for air flow control (see Chapter 2.1). Selected CAV or DCV air flow control allows additional corrections of supply and extract air measurements, when the measured air volume does not match the actual one. This may also be due to design features of the duct system, for example, wrong diameter ducts, excessive number branches or elbows, or installation without following the installation recommendations. When a VAV mode is selected, a measurement range of pressure sensors connected to the main board must be additionally entered (see "Installation Manual"), i.e. maximum pressure Pa that the sensor is measuring by 10V output (measurement range is specified in the VAV sensor manual).

Flow control	Flow control mode	Flow control	Max. supply pressure
Flow control mode
CAV	◉ CAV	Flow control mode
VAV	1000 Pa
Supply flow correction
0 m3/h	○ VAV	Max. supply pressure
300 Pa	▲
Extract flow correction
0 m3/h	○ DCV	Max. extract pressure
300 Pa	300
			▼
	✓ ✕		0 Pa
			✓ ✕
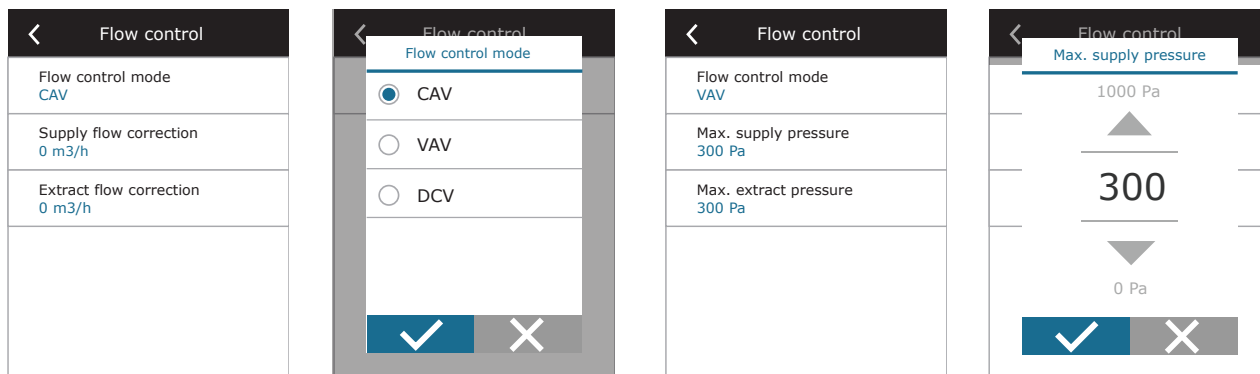
Air quality control – here you can activate and set-up air quality control which will be used in AUTO mode (see Chapter 2.6.2).

Air quality control	Air quality control
Impurity control
On	Minimum intensivity
0 %
Humidity control
On	Maximum intensivity
70 %
Sensor 1
CO2	Check period
2h
Sensor 2
RH	
Outdoor humidity
None	
‹ 1 / 2 ›	‹ 2 / 2 ›

- **Impurity control** – turning on/off an impurity control function. At least one CO2 or VOC sensor must be connected to the controller board to activate this function (see Chapter 2.6.2.). If ventilation by a weekly schedule is required, this function must be turned off.
- **Humidity control** – turning on/off a humidity control function. Humidity control function requires a humidity sensor. If no humidi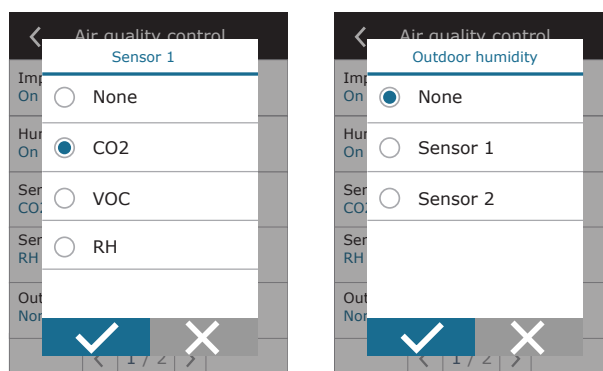ty sensor is connected to the controller board, sensor integrated in a control panel will be used for this purpose (see Chapter 2.6.2.).
- **Sensor 1** – specify the type of the sensor connected to a terminal B8 (see "Installation Manual"). If this sensor is not available, select "None".
- **Sensor 2** – specify the type of the sensor connected to a terminal B9 (see "Installation Manual"). If this sensor is not available, select "None".
- **Outdoor humidity** – this option appears when one of the sensors is of RH type (humidity sensor). If any of the connected sensors are installed in the outdoor air flow, specify which one. If none of the installed humidity sensors measure the outside humidity, select "None".

Air quality control	Sensor 1	Air quality control	Outdoor humidity
Imp
On	○ None	Imp
On	◉ None
Hun
On	◉ CO2	Hun
On	○ Sensor 1
Ser
CO2	○ VOC	Ser
CO2	○ Sensor 2
Ser
RH	○ RH	Ser
RH	
Out
Nor		Out
Nor	
	✓ ✕		✓ ✕

- **Minimum intensity** – select ventilation intensity at which the unit will operate when air quality (impurity or humidity) is good. If 0% is selected, the unit will stop when air impurity level is low.
- **Maximum intensity** – select ventilation intensity limit, under which the unit will operate when air quality (impurity or humidity) exceeds a defined value.
- **Check period** – specify how often the unit shall turn on to check air quality, when minimum intensity is set to 0%.

Control sequence – here you can activate additionally connected duct-mounted heating or cooling devices (see "Installation Manual") that will operate only when a heat exchanger or electrical heater alone cannot reach a desired temperature.

Numbers indicate the order of activation. All units have an integrated electrical heater, therefore it is factory-assigned as Stage 1. You can also assign an "external coil" (duct-mounted water heater/cooler) or an "external DX unit" (direct evaporation heat exchanger) as a stage. If an external coil is selected, you also must specify its type: "Hot water" (used for heating), "Cold water" (used for cooling) or AUTO (both for heating and cooling). If AUTO type is selected, heating or cooling operations are decided by an external signal connected to the controller board terminals (see "Installation Manual"). If additional heating/cooling devices are not available, you do not want to use them or an electrical heater, select "None".

> ⚠ If you turn off an electric heater and do not activate a duct-mounted heater, the desired air temperature may not be reached when the outside air is cold. ⚠

- **Antifreeze protection** – this setting is only available in units with counter-flow plate heat exchangers. These units are equipped with electric pre-heaters which heat the outdoor air and protect a heat exchanger from freezing. Power of a heater is regulated according the outside air temperature, indoor humidity and actual flow of ventilated air. Integrated electric pre-heater operates on demand only when there is a risk of heat exchanger to freeze. Under very low indoor humidity conditions, it is unlikely that the heat exchanger would freeze even at very low outdoor temperatures.

The following antifreeze protection settings are available:
ON – automatic protection with an integrated pre-heater is activated by default.
OFF – protection may be switched off, but the unit will also be turned off when the outside air temperature drops below -4 °C.
External coil – when an external heater, connected to AUX terminals of the main board, is used instead of an integrated pre-heater (see "Installation Manual").

- **Indoor humidity** – this setting is necessary for estimating power of a pre-heater.

Possible settings:
Auto – indoor humidity is set automatically using an integrated humidity sensor and/or external humidity sensors connected to B8 and B9 terminals of the controller (see "Installation Manual").
10...90 % – setting a fixed indoor humidity value is possible when a control panel is installed in inappropriate location (or is not used) and no outside humidity sensors are connected.
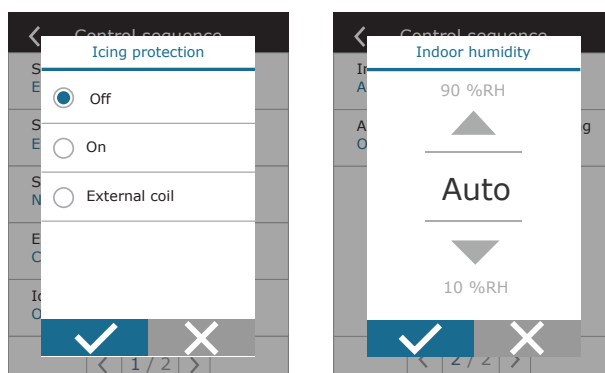
⚠ Wrong value of indoor humidity may cause antifreeze protection to malfunction and a counter-flow heat exchanger to freeze. ⚠

- **Allow dehumidification with cooling** –this setting must be enabled to use a DX unit or duct-mounted water cooler to dehumidify the supply air. An option to enter a value for desired humidity will appear in the settings of standard ventilation modes (see Chapter 2.6.2).

Connectivity – you can configure your PC network settings for remote use via web browser: IP address and subnet mask. You may also change other network parameters, if necessary: Gateway and BACnet ID. DHCP option automatically assigns a free IP address in the local network (do not use this option if you connect your computer directly to the unit).

Clean filters calibration – after replacement, you must reset a filter timer by clicking this button.
Reset settings – allows restoring factory settings.
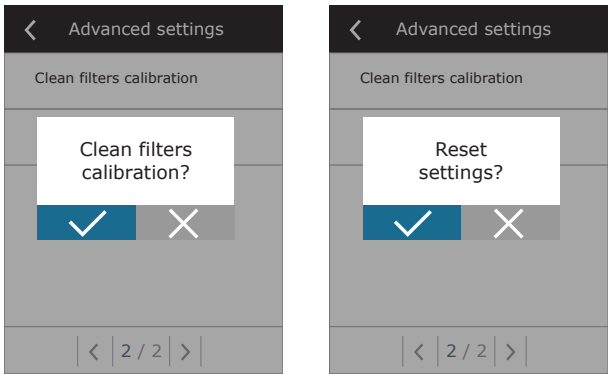
3.1.11. Alarms

Messages appearing during operation are indicated by a red warning symbol in the home screen. Device operation may be stopped given the severity of a fault message. To read a message, press OVERVIEW section in the menu. You can also delete current alarms or view a recorded history of faults (up to 50 recent messages).
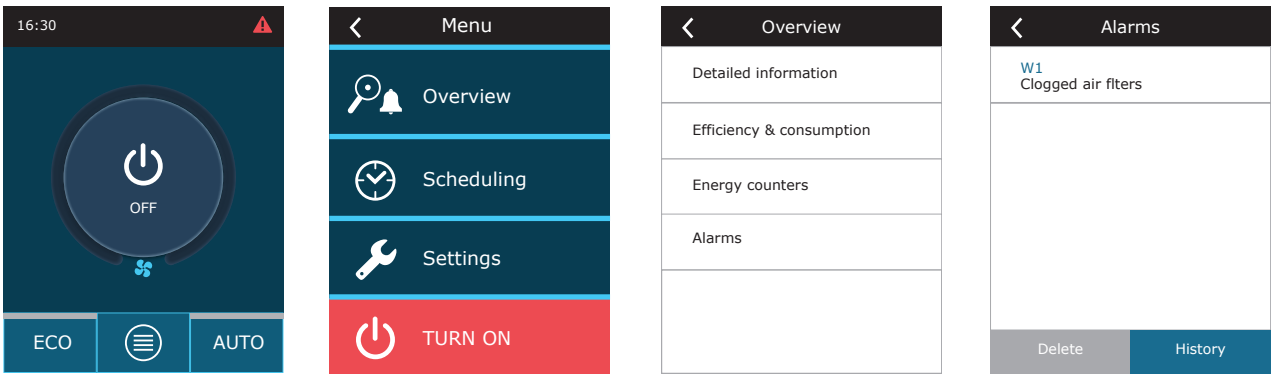
For more information and tips on alarms see Chapter "Troubleshooting".

3.2. Control panel C6.2

Simple and user-friendly control panel for intuitive navigation and control of the unit. This control panel offers 4 standard operation modes (see Chapter 2.3) and switching ON/OFF with a touch of a button without any additional settings (settings are pre-set in the factory). This control panel is recommended for application when the user is not allowed to change any device settings or air temperature (for example, in the children's room). To change operating settings you will have to connect a C6.1 control panel, computer or smart phone to the unit.

3.2.1. Turning on/off and changing operation modes

Red indication lamp lights up near the ON/OFF button if the unit is connected to the mains and currently is stopped.
To turn on/off the unit or to select an operation mode:
1. Press a button of a desired operation mode and the unit will start working.
2. A blue indicator light will turn on near the activated operation mode.
3. To turn off the device, press the ON/OFF button.
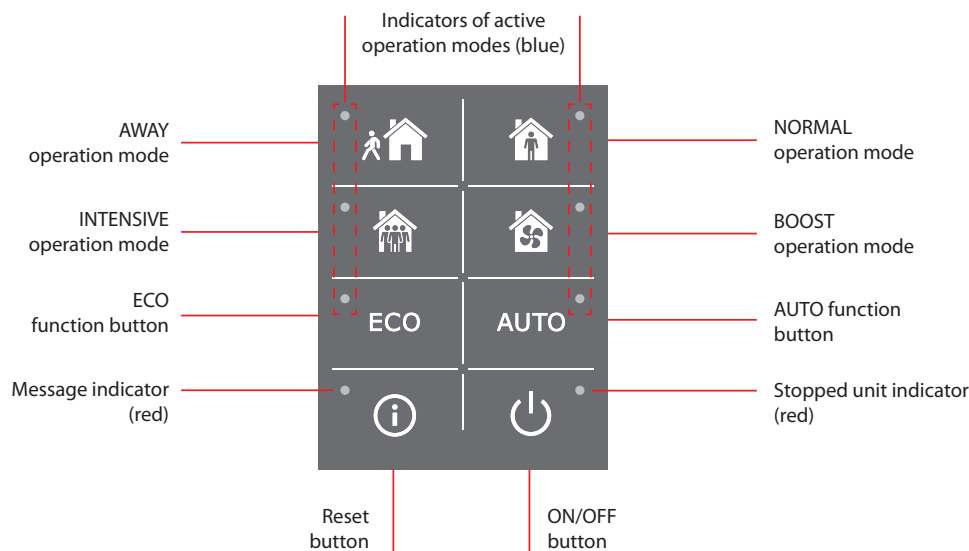4. Once the unit is stopped, a red indicator light will turn on near the ON/OFF button.

3.2.2. Messages

In case of any fault messages during operation of the unit, a red indication lamp will light up near the reset button. Depending on the message type, the indicator may light up or blink (see Chapter "Troubleshooting"). To delete the message, press and hold the reset button for 5 seconds.

3.2.3. Control panel sounds

When a message appears, the control panel notifies the user with a beep. You may temporarily disable an audible alarm by pressing the reset button or deleting a fault message.
To disable audible alarms perform the following:
1. Press the ON/OFF button and hold for 5 seconds until you hear a beep and a red indicator light starts blinking.
2. If you hear a fault alarm and the reset button lights up in red, briefly press the reset button to turn off an audible alarm.
3. If the fault alarm is not audible and the reset indicator does not light up, briefly press the reset button to turn on an audible alarm.
4. To save your changes, press the ON/OFF button and hold it for 5 seconds until you hear a beep. Briefly press the ON/OFF button to return without saving.

3.2.4. Keypad lock

Control panel may be locked to protect against unauthorized access. Pressing the reset and ON/OFF buttons at the same time and holding for 5 seconds will inactivate the keypad. Perform the same procedure to unlock the keypad.

3.3. Control via smartphone

"Komfovent Home" or "Komfovent Cloud" app allows remote control of your air handling unit via mobile devices. "Komfovent Home" app is designed for connection to your home network, "Komfovent Cloud" – for connection via internet. Control of an air handling unit via your mobile device is almost the same as with a C6.1 control panel. Screens and settings are so similar that you can follow the chapter "C6.1 Control Panel" to perform necessary changes or settings. The app language is automatically selected according to the language used in your mobile device and can differ from the language of your air handling unit.
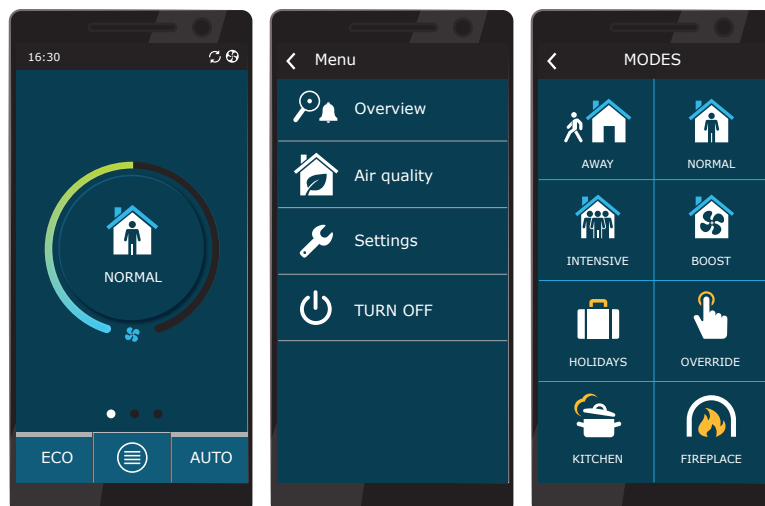
3.3.1. Connection to the air handling unit with a "Komfovent Home" app

Connect to the network router and activate DHCP settings in the control panel (see Advanced Settings - > Connectivity) to assign a free IP address. New IP address for your air handling unit is shown in the same window of the control panel. Connect your mobile device to the internal network via Wi-Fi and run the "Komfovent Home" app. Launched for the first time, "Komfovent Home" app will attempt connecting to default IP address (192.168.0.60) (if not changed); after a while a home screen for the air handling unit will appear on the mobile phone screen. If the IP address was changer after activation of DHCP and you failed to connect to the air handling unit, you must change the connection settings:
1. Press "Settings" button at the bottom of the app.
2. Press "Add new" button.
3. Enter your device name and new IP address.
4. Enter port number 502 and confirm settings.
5. Select a row with newly entered settings and press the return button.
6. Restart application to apply changes.
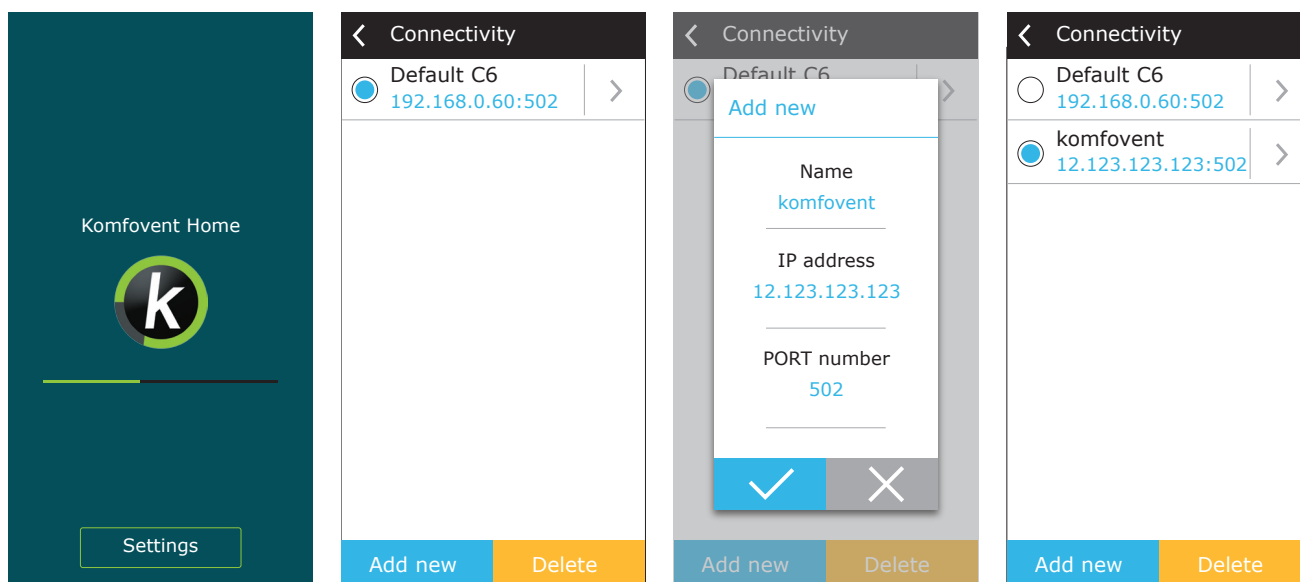
3.3.2. Connection to the air handling unit with a "Komfovent Cloud" app

Connect to the network router with Internet access and activate DHCP settings in the control panel (see Advanced Settings - > Connectivity) to assign a free IP address. Launch a "Komfovent Cloud" app in your smartphone (phone must have Internet access). When connecting for the first time, you will have to enter the device ID number or scan a QR code located on the front of the controller board (see "Installation Manual").
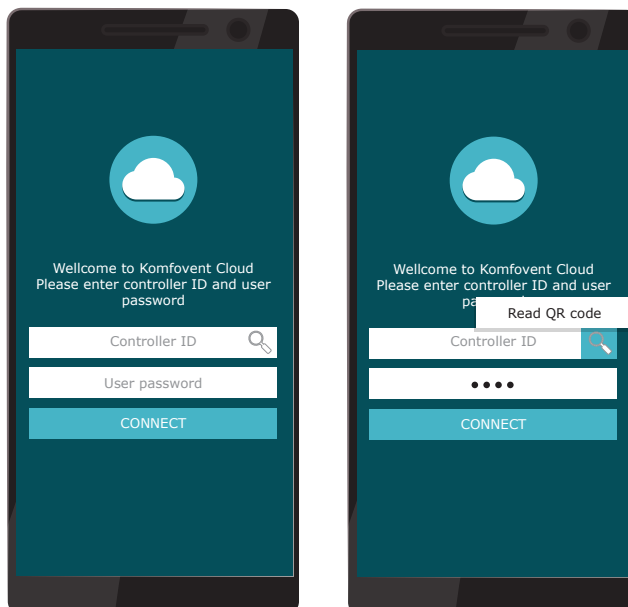
Press the search symbol and "Read QR code" button to scan a QR code. Smartphone camera is activated. Then simply point the camera to the QR code and the unit ID will appear automatically. Enter the password *user* in the second row. If you have changed the user password in the computer, use the new password also for the "Komfovent Cloud" app. Enter all the required data, press CONNECT and wait for the device to connect.

3.4. Control via computer

The unit may be controlled via computer using a web browser. For information on connecting the unit to an internal network or directly to a computer, see the "Installation Manual".

Enter the device IP address in your web browser (IP address is displayed in the control panel) (see Advanced settings -> Connectivity):

Connect to the C6 control panel interface: enter the user name *user*, password *user*[1] and press CONNECT.
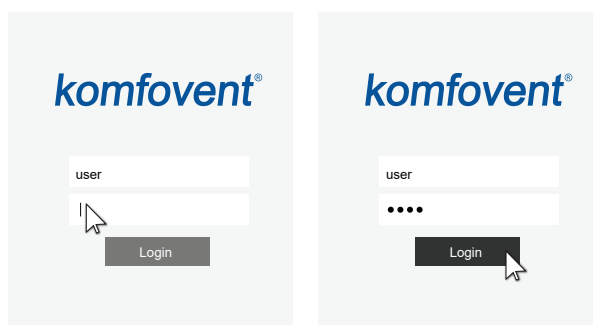
If the login was successful, you will be taken to the main window.

---

[1]   If the password was changed, use the changed password.

komfovent®

user | Logout

⚙ | ⚠ ALARMS | ⚙ SETTINGS | ⏻ TURN OFF

CONTROL

OPERATION MODES

AWAY | NORMAL | **INTESIVE** | BOOST

KITCHEN | FIREPLACE | OVERRIDE | HOLIDAYS
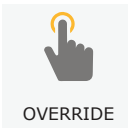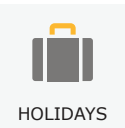
MODIFY >

OPERATION CONTROL

ECO | AUTO

MODIFY >

OVERVIEW

Supply temperature	Supply flow	Extract temperature	Extract flow
🏠 20.2 °C	🏠 207 m³/h	🏠 21.7 °C	🏠 212 m³/h
20.0 °C	210 m³/h	21.0 °C	210 m³/h

Ventilation level	Air quality	Outdoor temperature	Filter clogging
INTESIVE	⌀ 632 ppm	☁ 10.4 °C	17 %
	800 ppm		290x205x46

DETAILED >

EFFICIENCY & CONSUMPTION

Heat recovery	Power consumption	Heating power	Heat exchanger efficiency
🔄 0 W	🔌 140 W	〰 0 W	📈 --.- %
Actual	Actual	Actual	Actual

Recovered energy	Consumed energy	Heating energy	Specific power (SPI)
0.05 kWh	2.12 kWh	1.20 kWh	0.28
Day | Month | Total	Day | Month | Total	Day | Month | Total	Actual | Day

SCHEDULING

OPERATION PROGRAM

WORKING WEEK | STAY AT HOME

OFFICE | CUSTOM

SCHEDULE

	4:00	8:00	12:00	16:00	20:00	24:00
I						
II						
III						
IV						
V						
VI						
VII						

3.4.1. Turning on/off and changing operation modes

Press any ventilation mode button to turn on the device. The unit starts operating and the button of the activated mode changes its colour. To stop the device, press the TURN OFF at the top of the main window:

CONTROL

OPERATION MODES

AWAY	NORMAL	INTESIVE	BOOST
KITCHEN	FIREPLACE	OVERRIDE	HOLIDAYS

MODIFY >

OPERATION CONTROL

ECO   AUTO

MODIFY >

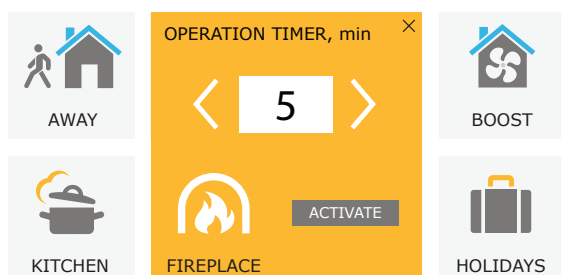If you select a special operation mode, you will need to select the duration of operation. ECO and AUTO modes are activated by pressing buttons on the right side of the window. Button of a selected mode will change its colour:

CONTROL

OPERATION MODES

AWAY

OPERATION TIMER, min   ×

< 5 >

FIREPLACE   ACTIVATE

BOOST

KITCHEN

HOLIDAYS

MODIFY >

OPERATION CONTROL

ECO   AUTO

MODIFY >

3.4.2. Parameter overview

OVERVIEW section displays the following parameters: temperatures, air volumes and filter contamination. To see more, press "Detailed Information".

OVERVIEW_____

Supply temperature	Supply flow	Extract temperature	Extract flow
⌂ 20.2 °C	⌂ 207 m³/h	⌂ 21.7 °C	⌂ 212 m³/h
20.0 °C	210 m³/h	21.0 °C	210 m³/h

Ventilation level	Air quality	Outdoor temperature	Filter clogging
🌀 ▪▪▪▪▮▮▮▮	⬭ 632 ppm	⛅ 10.4 °C	▨ 17 %
INTESIVE	800 ppm		290x205x46
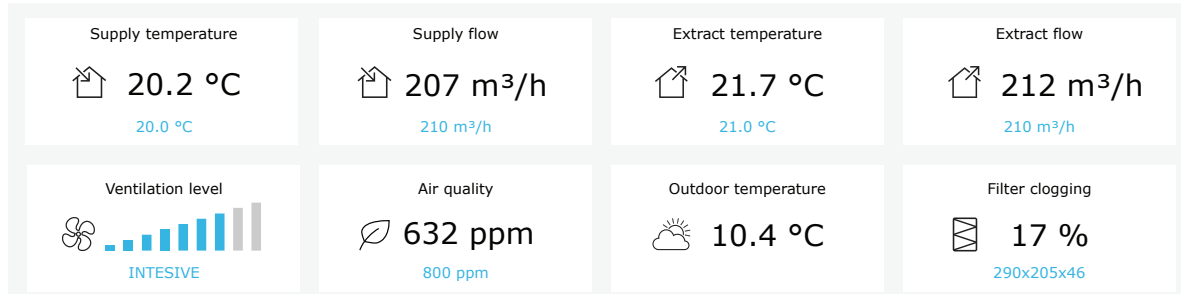
DETAILED >

Section EFFICIENCY & CONSUMPTION displays measured and calculated power, power consumption and efficiency parameters. Daily, monthly, or total energy recovery and consumption is displayed by pressing buttons under a desired parameter.

EFFICIENCY & CONSUMPTION_____

Heat recovery	Power consumption	Heating power	Heat exchanger efficiency
↻ 0 W	🔌 140 W	≋ 0 W	⩙ --.- %
Actual	Actual	Actual	Actual

Recovered energy	Consumed energy	Heating energy	Specific power (SPI)
0.05 kWh	2.12 kWh	1.20 kWh	0.28
Day	Month	Total	Day	Month	Total	Day	Month	Total	Actual	Day
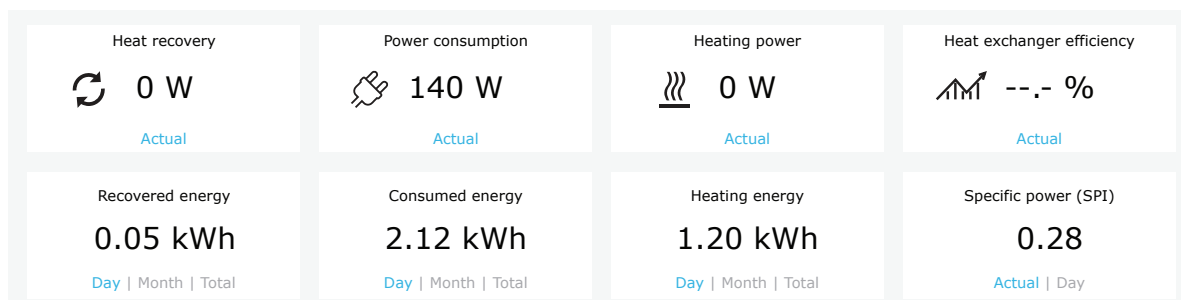
3.4.3. Air quantity and temperature settings

You can set air flow of supply and exhaust air, desired temperature and turn off/on an electric heater for each ventilation mode. If turned off, the heater will not turn on even when the desired temperature is not reached. If turned on, the heater will operate only when the heat exchanger alone cannot reach the set temperature. Press "Modify" to modify operation mode settings. After changing the settings, press "Save changes" button at the bottom of the window. Press the return symbol at the top to return to the main window.

◁ CONTROL

OPERATION MODES

AWAY
Supply flow, m³/h	64
Extract flow, m³/h	64
Temperature, °C	20.0
Electric heater	✔

NORMAL
Supply flow, m³/h	160
Extract flow, m³/h	160
Temperature, °C	20.0
Electric heater	✔

INTENSIVE
Supply flow, m³/h	210
Extract flow, m³/h	210
Temperature, °C	20.0
Electric heater	✔

BOOST
Supply flow, m³/h	300
Extract flow, m³/h	300
Temperature, °C	20.0
Electric heater	✔

KITCHEN
Supply flow, m³/h	260
Extract flow, m³/h	64
Temperature, °C	20.0
Electric heater	✔

FIREPLACE
Supply flow, m³/h	190
Extract flow, m³/h	160
Temperature, °C	20.0
Electric heater	✔

OVERRIDE
Supply flow, m³/h	260
Extract flow, m³/h	260
Temperature, °C	20.0
Electric heater	✔
Activate by contact	
All time	
Delayed start, min	0
Delayed stop, min	0

HOLIDAYS
Temperature, °C	20.0
Electric heater	✔
Micro-ventilation	
4 t. per day	
Period	
2018-12-24 / 2019-01-02	

SAVE CHANGES

RESTORE TO DEFAULT

3.4.4. ECO and AUTO mode settings

You can change the settings of these modes by pressing the "Modify" button below the ECO and AUTO buttons. More information on these function see in Chapters 2.5 and 2.6. After changing the settings, press "Save changes" button at the bottom of the window. Press the return symbol at the top to return to the main window.

3.4.5. Ventilation by a weekly schedule

To activate ventilation by a weekly schedule, press AUTO[1] and select a desired operation schedule in the SCHEDULING section. Button of the selected schedule will change its colour.

---

[1]   Ventilation by a weekly schedule is not possible when air quality control function is activated.

3.4.6. Creating a weekly schedule

You can modify a weekly schedule or create your own schedule by pressing the button "Modify" in the main window next to the section "Scheduling". In the window that opens, you can choose from pre-programmed weekly programs or may as well create a new one. You may program 4 different days in each operation schedule and 5 different events for every day. Each day should be assigned a day of the week for which the program is valid. Start and end times as well as operation mode to be activated must be specified for each event. Selecting a standby mode is not necessary, as the unit will be stopped during the intervals for which no ventilation mode is assigned. To add an additional day, press "Add new"; to add an additional event - press +. Press "Save changes" button. Press the return symbol at the top to return to the main window.

SCHEDULING

OPERATION PROGRAM

| WORKING WEEK | STAY AT HOME | OFFICE | CUSTOM |

I II III IV V VI VII ✕

| AWAY ▼ | NORMAL ▼ | STANDBY ▼ | NORMAL ▼ | AWAY ▼ |
| 00:00 - 06:00 | 06:00 - 08:00 | 08:00 - 17:00 | 17:00 - 22:00 | 22:00 - 24:00 |

I II III IV V **VI** VII ✕

| AWAY ▼ | NORMAL ▼ | INTESIVE ▼ | NORMAL ▼ | AWAY ▼ |
| 00:00 - 09:00 | 09:00 - 17:00 | 17:00 - 20:00 | 20:00 - 23:00 | 23:00 - 24:00 |

I II III IV V VI **VII** ✕

| AWAY ▼ | NORMAL ▼ | AWAY ▼ | + |
| 00:00 - 09:00 | 09:00 - 22:00 | 22:00 - 24:00 | |

| ADD NEW |
| SAVE CHANGES |
| RESTORE TO DEFAULT |

3.4.7. Alarms

In case of any fault messages during operation of the unit, a red exclamation mark will appear near the "Alarms" button. Device operation may be stopped given the severity of a fault message. Press the button ALARMS to read a message. You can also delete current messages or view a recorded history of faults (up to 50 recent messages). Press the return symbol at the top to return to the main window.

‹ ALARMS

ACTUAL ALARMS

W1: Clogged air filters

F1: Low supply air flow

RESET CURRENT ALARMS

ALARM HISTORY

19-12-2018	12:12:07	W1: Clogged air filters
18-12-2018	22:10:58	F1: Low supply air flow

3.4.8. Settings

Most of the settings are performed in the SETTINGS window. You can access this window by pressing SETTINGS button at the top of the window.

komfovent®

| user | Logout |

| ⚠ ALARMS | ⚙ SETTINGS | ⏻ TURN OFF |

‹ SETTINGS

USER INTERFACE

Language	English ▼
Flow units	m³/h ▼
AHU name	Komfovent

DATE/TIME

| Day - month - year | 01 | 06 | 2018 |
| Time | 12 | 15 |

CONNECTIVITY

DHCP	☑ Off	☐ On
IP address	192	168	0	60
Subnet mask	255	255	255	0
Gateway	192	168	0	1
BACnet ID	60
Modbus ID	254
RS-485	19200 baud ▼	8E1 ▼

INFORMATION

C6 ID	ANMP8-Nx4gXr-3OdgVn-GIA
Main module firmware	C6 1.3.18.21
Control panel firmware (1)	C6 1.1.3.14
Control panel firmware (2)	*.*.*.*
Log	Download
Settings file	Save	Load

| SAVE CHANGES |
| RESTORE TO DEFAULT |

LOGIN PASSWORD

| Enter new password | |
| Confirm new password | |

CONTROL MODE

Flow control mode	CAV ▼
Supply flow correction	0 m³/h
Extract flow correction	0 m³/h
Temperature control mode	Extract ▼

CONTROL SEQUENCE

Icing protection	On ▼
Indoor humidity	--.- % Auto ☑
Stage 1	Electric heater ▼
Stage 2	External coil ▼
External coil type	Cold water ▼
Stage 3	None ▼
Allow dehumidifying with cooling	☑

AIR QUALITY

Impurity control	☑
Humidity control	☑
Sensor 1	CO2 ▼
Sensor 2	RH ▼
Outdoor humidity	None ▼
Minimum intensivity	20 %
Maximum intensivity	70 %
Check period	2 h

FILTERS

| Clean filters calibration | Confirm |

After changing any settings, press SAVE CHANGES to apply new values.
To discard changes, return to the start window by pressing the return button.
Button RESTORE SETTINGS restores all settings to the factory defaults. Be careful not to press this button accidentally.

The following sections are displayed in the settings window:

USER INTERFACE – you can use it to change the menu language, flow measurement units as well as enter the device name:

- Selected **language** will be applied to a web browser and a control panel.
- **Possible flow measurement units** – m³/h or l/s. These units will be applied while operating in CAV or DCV flow control modes (see Chapter 2.1). Changing measurement units for VAV mode is not allowed; they are automatically changed to Pa.
- **Device name** is displayed at the top of the web browser window. If one computer is used to control several air handling units, we recommend naming every device differently (for example, by room, address, etc.).

DATE/TIME – setting the time and date that are used for weekly operations schedules or other functions.

CONNECTIVITY – allows configuring the network, Modbus and BACnet settings.

INFORMATION – overview of the controller and control panel firmware versions.

- For detailed performance analysis, you may download a **device logbook** which contains weekly operation data. To open a logbook, you will need a "Log plotter" app that you can download from the "Komfovent" website. This data may also help in the event of a failure and may facilitate repair procedures, therefore, we recommend downloading an operation logbook and handing it over to the authorised service personnel.
- **User-made device settings** may be saved in a settings file (for example, saving a weekly schedule or desired air volumes and temperature). This allows easy transfer of settings to another unit of the same type.

LOGIN PASSWORD – here you can change your password used for connecting to the unit via web browser. The default password is *user*, but it may be changed to any other password, having at least 4 characters.

CONTROL MODE – allows changing the flow and temperature control modes (see Chapters 2.1 and 2.2).

- **Available air flow control modes**: CAV, VAV and DCV.
- **Flow corrections** can be done with CAV or DCV airflow control, in cases where the unit's measured air volume does not match the actual airflow. This may also be due to design features of the duct system, for example, wrong diameter ducts, excessive number branches or elbows, or installation without following the installation recommendations. When the VAV mode is selected, the measurement limit for pressure sensors connected to the main board must be additionally entered instead of the flow correction (see "Installation Manual"), i.e. maximum pressure Pa that the sensor is measuring by 10V output (measurement limits are specified in the VAV sensor manual).
- Select a **temperature control mode** from "Supply", "Extract", "Room" and "Balance" (see Chapter 2.2).

CONTROL SEQUENCE – here you can activate duct-mounted heating or cooling devices (see "Installation Manual") and configure antifreeze protection of a plate heat exchanger.

- **Antifreeze protection** – this setting is only available in units with counter-flow plate heat exchangers. These devices are equipped with pre-heaters which heat the outdoor air and protect a heat exchanger from freezing. Power of a heater depends on the outside air temperature, indoor humidity and actual flow of ventilated air. Integrated pre-heater operates only when there is a risk of heat exchanger to freeze. Under very low indoor humidity conditions, it is unlikely that the heat exchanger would freeze even at very low outdoor temperatures.

The following antifreeze protection settings are available:

ON – automatic protection with an integrated pre-heater is activated by default.

OFF – protection may be switched off, but the unit will also be turned off when the outside air temperature drops below -4°C.

External coil – when an external heater, connected to AUX terminals of the main board, is used instead an integrated pre-heater (see "Installation Manual").

- **Indoor humidity** – this setting is necessary for estimating efficiency of a pre-heater. When "Auto" setting is selected, indoor humidity will be set automatically using an integrated humidity sensor and/or external humidity sensors connected to B8 and B9 terminals of the controller (see "Installation Manual"). If the control panel is installed in an inappropriate location (or is not used) and no outside humidity sensors are connected, uncheck the AUTO box and enter the indoor humidity in the range of 10...90 %.

| ⚠ | Wrong value of indoor humidity may cause antifreeze protection to malfunction and a counter-flow heat exchanger to freeze. | ⚠ |

- **Numbers indicate** the order of activation. All units have an integrated electrical heater, therefore it is factory-assigned as Stage 1. You can also assign an "external coil" (duct-mounted water heater/cooler) or an "external DX device" (direct evaporation unit) as a stage. If an external coil is selected, you also must specify its type: "Hot water" (used for heating), "Cold water" (used for cooling). If additional heating/cooling devices are not available, you do not want to use them or an electric heater, select "None".

> ⚠️ If you turn an electric heater off and do not use a duct-mounted heater, the desired air temperature may not be reached when the outside air is cold. ⚠️

- **Allow dehumidification with cooling** – this setting must be enabled to use a DX unit or duct-mounted water cooler to dehumidify the supply air. An option to enter a value for desired humidity will appear in the settings of standard ventilation modes (see Chapter 2.6.2).

  AIR QUALITY – here you can activate and set-up air quality control which will be used in AUTO mode (see Chapter 2.6.2):
- **Impurity control** – turning on/off an impurity control function. At least one CO_2 or VOC sensor must be connected to the controller board to activate this function (see Chapter 2.6.2.). If ventilation by a weekly schedule is required, this function must be turned off.
- **Humidity control** – turning on/off a humidity control function. Humidity control function requires a humidity sensor. If no humidity sensor is connected to the controller board, sensor integrated in a control panel will be used for this purpose (see Chapter 2.6.2.).
- **Sensor 1** – specify the type of the sensor connected to a terminal B8 (see "Installation Manual"). If this sensor is not available, select "None".
- **Sensor 2** – specify the type of the sensor connected to a terminal B9 (see "Installation Manual"). If this sensor is not available, select "None".
- **Outside humidity** – this option appears only if one of the sensors is of RH type (humidity sensor). If any of the connected sensors are installed in the outdoor air flow, specify which one. If none of the installed humidity sensors measure the outside humidity, select "None".
- **Minimum intensity** – select ventilation intensity at which the unit will operate when air quality (impurity or humidity) is good. If 0% is selected, the unit will stop when air impurity level is low.
- **Maximum intensity** – select ventilation intensity limit, under which the unit will operate when air quality (impurity or humidity) exceeds a defined value.
- **Check period** – specify how often the unit shall turn on to check air quality, when minimum intensity is set to 0%.

  FILTERS – once filters are replaced, calibrate new filters and confirm replacement in the unit.

4. TROUBLESHOOTING

Device automation continuously monitors the operation of various components and function algorithms. If something goes wrong, the device informs you with a message and an audible alarm from a control panel (alarm may be disabled). Messages are divided into critical alarms and notifications. Critical alarms occur when the device cannot continue operation without intervention of the user or an authorised service representative. Notifications are used to warn the user about possible faults or small discrepancies but they do not stop the device.

In case of a message, perform the following actions:
- Read the message and note its number displayed on screen (control panel, computer, smartphone).
- Stop the unit. If heating/cooling devices were running at that time, pressing the OFF button will keep the unit running for a few minutes until heater/cooler temperature is stabilized.
- Once the unit stops, unplug it from the mains.
- Find tips in the "Message Table" by the message number (see Chapter 4.1).
- If possible, eliminate the cause. If a fault cannot be resolved, contact an authorized service representative.
- After troubleshooting, make sure no foreign objects, debris or tools are left inside the unit, and only then close the unit door.
- Connect the unit to the mains and delete all alarms from the message window.
- If a fault is not resolved, depending on its nature, the device may not start or may start and display an alarm after a while.

⚠️
- Before performing any work inside the unit, make sure that the device is stopped and unplugged.
- After stopping the unit, wait a few minutes for the fans to stop rotating and the heating devices to cool down before opening the door. ⚠️

4.1. Table of messages

Below is a list of messages and recommended actions to resolve faults. These messages are displayed in the C6.1 control panel, mobile app or a computer. F stands for critical alarms, W – for notifications.

Code	Message	Possible cause	User's actions
F1	Low supply air flow	1. Contaminated air filters. 2. Excessive resistance of ducts. 3. VAV air flow control selected but pressure sensors are not connected. 4. Supply air fan not working.	1. Check air filters and replace, if needed. 2. Check air dampers, air inlet/exhaust openings. 3. If VAV air flow control is required (see Chapter 2.1), install and connect duct-mounted pressure sensors. If VAV mode not necessary – select CAV or DCV in the settings. 4. Contact authorised service.
F2	Low extract air flow	1. Contaminated air filters. 2. Excessive resistance of ducts. 3. VAV air flow control selected but pressure sensors are not connected. 4. Extract air fan not working.	1. Check air filters and replace, if needed. 2. Check air dampers, air inlet/exhaust openings. 3. If VAV air flow control is required (see Chapter 2.1), install and connect duct-mounted pressure sensors. If VAV mode not necessary – select CAV or DCV in the settings. 4. Contact authorised service.
F3	Return water temperature low	1. No hot water in the water heater system. 2. Circulation pump not working. 3. Water control valve or actuator not working. 4. Return water temperature sensor is faulty or installed incorrectly.	1. Check if hot water is in the system. 2. Check if a circulation pump is working. 3. Check if a water control valve is opening. 4. Check whether a return water sensor is installed according to the directions specified in "Installation Manual". Contact your installer or authorized service.
F4	Low supply air temperature	1. Integrated heaters not working. 2. Additional heating/cooling devices faulty or installed incorrectly. 3. Faulty air temperature sensor.	1. Contact authorised service. 2. Contact the company that installed or sold additional heating/cooling equipment. 3. Contact authorised service.
F5	High supply air temperature	1. Integrated heaters malfunctioning. 2. Additional heating/cooling devices malfunctioning or installed incorrectly. 3. Faulty air temperature sensor.	1. Contact authorised service. 2. Contact the company that installed or sold additional heating/cooling equipment. 3. Contact authorised service.

Code	Message	Possible cause	User's actions
F6	Electric heater overheat	1. Supply air flow too low at high heating demand. 2. Power failure during operation of the electric heater; the heater could not cool down. 3. Electric heater malfunctioning.	1. a. Check air filters and air ducts. 1. b. Decrease the desired temperature. 1. c. Increase ventilation intensity. 2. Check whether the unit is connected to the mains. 3. Contact authorised service. Once the fault is eliminated, reset an overheating protection thermostat before restarting the unit. Look for a yellow sticker with the word "Reset" inside the unit that marks an overheating protection fuse. Depending on the model, the button may have a black round cap or it may be integrated inside the heater housing and accessible with a long pointed object (e.g., pencil) through a specially designed opening.
F7	Heat exchanger failure	1. Rotor heat exchanger not rotating (only for DOMEKT R devices). 2. Air bypass damper of the counter-flow heat exchanger malfunctioning (only for DOMEKT CF units).	1. Check for foreign objects or debris preventing rotation of the rotor drum. Check if the rotor belt is not torn. 2. Contact authorised service.
F8	Heat exchanger icing	1. Antifreeze protection of the heat exchanger is malfunctioning. 2. Antifreeze protection is switched off and outside air temperature is below -4 °C.	1. Check the antifreeze protection settings. Check if an external pre-heater is working, if used. 2. Check antifreeze protection settings. If an integrated or external pre-heater is not used, you will not be able to use a device with a counter-flow heat exchanger when the outside temperature drops below -4 °C.
F9	Internal fire alarm	1. Internal air temperature is above 50°C 2. Faulty temperature sensor.	1. Locate the heat source in the ductwork or unit. 2. Contact authorised service.
F10	External fire alarm	A fire alarm was received from the building fire system.	Once fire alarm is removed, the unit must be started using a control panel, computer or a smartphone.
F11-F22	Temperature sensor failure	Temperature sensor(s) faulty or not connected.	Contact authorised service.
F23-F27	Controller failure	Controller main board malfunction.	Contact authorised service.
F28	Temperature sensor failure	No signal from temperature sensor located in the control panel.	Check control panel wiring and cables. Replace the control panel, if necessary.
F29	Humidity sensor failure	No signal from humidity sensor located in the control panel.	Check control panel wiring and cables. Replace the control panel, if necessary.
F30	Humidity sensor failure	Faulty or disconnected air humidity sensor by which the unit is operating.	Check the sensor wiring, replace the sensor or indicate that this sensor is not used in the settings.
F31	Impurity sensor failure	Faulty or disconnected impurity sensor by which the unit is operating.	Check the sensor wiring, replace the sensor or indicate that this sensor is not used in the settings.
F32	Air flow sensor failure	Disconnected or faulty air flow sensor(s)	It is necessary to check the sensor connections or to change the sensor.
W1	Clogged air flters	Replacement of air filters is necessary.	Switch off the device and replace air filters. Delete the message after replacement.
W2	Service mode	Temporary special operating mode that can only be activated by a service specialist.	If the unit has been recently repaired, contact the person who repaired the unit to determine if service mode can be disabled. Service mode is turned off by deleting the message.
W3	Return water temperature low	Warning that the water temperature is lower than that required to heat the supply air.	Check the condition of a circulation pump and the heating system as well as operation of a heating damper actuator.
W4	Humidity sensor failure	One of the two humidity sensors is faulty or not connected. Device is operating by another connected sensor.	Check the control panel wiring, replace the sensor or select that this sensor is not used in the settings.
W5	Impurity sensor failure	One of the two air quality sensors is faulty or not connected. Device is operating by another connected sensor.	Check the control panel wiring, replace the sensor or select that this sensor is not used in the settings.
W6	Low heat exchanger efficiency	1. Message may appear when air is extracted through an additional branch, and, as a result, the heat exchanger efficiency has decreased (only for DOMEKT R devices). 2. Supply air volume significantly exceeds the extract air volume. 3. The unit door is not fully closed and different air flows are mixed.	1. If additional extraction is not used, the fifth branch must be closed. Check if an air closing damper installed in the auxiliary extraction duct is completely closed. 2. If such air flow difference is not required, unify air flow settings. 3. Check that the unit door is pressed firmly and that gaskets are not worn.

4.2. Table of light indicators of the C6.2 control panel

Since the C6.2 control panel does not have a display, it notifies about operation or malfunctions by means of indicator LEDs. Layout and description of indication LEDs is presented in Chapter 3.2. Different blinking and colour indicates different messages.

Indication	Operation	Possible cause	User's actions
Indicator near ON/OFF button lights up in red.	Device not working	Device stopped.	Press ON/OFF button to turn on/off the device.
Blue indicator near one of ventilation mode buttons is blinking	Device not working	The unit will soon start in a ventilation mode the indicator of which is blinking.	No actions required.
Blue indicator light next to AUTO button lights up	Device not working	The device is stopped according to a weekly schedule or because of the air quality function.	If you want the unit to operate continuously, not by a schedule or air quality, press AUTO button.
Blue indicator near one of ventilation mode buttons lights up	Device is working	The unit operates in a ventilation mode the indicator of which is on.	No actions required.
Red indicator for messages and blue indicator for ventilation mode light up.	Device is working	Contaminated air filters or other notifications are present.	To read the exact notification, connect a computer or a smartphone to the unit. Follow the table of messages in Chapter 4.1.
Red indicator for messages and blue indicator for ventilation mode are blinking.	Device is working	Temporary special operating mode that can only be activated by a service specialist.	If the unit has been recently repaired, contact the person who repaired the unit to determine if service mode can be disabled. Service mode is turned off by deleting a message.
Red message indicator is blinking	Device not working	Critical fault messages are present that prevent the unit form working.	To read the exact critical fault message, connect a computer or a smartphone to the unit. Follow the table of messages in Chapter 4.1.
All panel indicators are blinking	Not important	Cable between the device and the panel is damaged or connected incorrectly.	Check the control panel wiring following the "Installation Manual" or contact your installer or authorised service representative.
Keypad buttons are inactive	Not important	1. Panel lock activated (see Chapter 3.2.4). 2. Faulty panel.	1. To unlock the control panel, press ON/OFF button and the reset button at the same time and hold for 5 seconds. 2. Contact authorised service.

5. PERIODICAL MAINTENANCE

For proper operation of the air handling unit, it should be periodically inspected, the air filters replaced in due time and the interior of the unit cleaned. Some of the maintenance works can be performed by the user and others only by a qualified specialist.

> ⚠
> - Before performing any work inside the unit, make sure that the device is stopped and unplugged.
> - After stopping the unit, wait a few minutes for the fans to stop rotating and heating devices to cool down before opening the door.
> - Open the door of flat ceiling mounted devices carefully, do not let them swing freely on the hinges. Also, be careful, as the filters may fall out when the door is opened.
> ⚠

The following table provides recommended regular maintenance intervals for the unit. Actual frequency of maintenance works depends on operating conditions, amount of dust and impurities in the ventilated air as well as environment in which the unit is installed. Locations of all the mentioned device components and notes indicated in the "Installation Manual".

Task	Frequency	Performed by
Check filters; change, if necessary	3 months	User
Change filters	6 months	User
Clean dust inside the unit	6 months	User
Check the rotor belt for wear and tension (only for DOMEKT R devices)	12 months	User
Replacement of a worn rotor belt	If necessary	Service representative
Check the rotor wheel brushes for tightness and wear (only for DOMEKT R devices)	12 months	Service representative
Replace worn rotor wheel brushes	If necessary	Service representative
Check the rotor wheel for contamination with dust/other materials (only for DOMEKT R devices)	6 months	User
Clean the rotor wheel	If necessary	Service representative
Check the plate heat exchanger for contamination with dust/other materials (only for DOMEKT CF devices)	6 months	User
Clean the plate heat exchanger	If necessary	Service representative
Check if the rotor wheel rotates freely and at the required speed (only for DOMEKT R devices)	12 months	Service representative
Check operation of an air bypass damper of the plate heat exchanger (only for DOMEKT CF units)	12 months	Service representative
Check if dampers open/close fully (if available)	6 months	User
Rotate fans by hand to check for any obstructions, extraneous noise and vibrations	12 months	User
Check fan operation and clean impellers	12 months	Service representative
Check operation of heating/cooling devices	12 months	Service representative
Check automation and safety devices	12 months	Service representative
Check tightness of the doors and state of gaskets	12 months	Service representative
Clean piping and siphon of the condensate drainage (only for DOMEKT CF units)	12 months	User

The inside of the air handling unit can be cleaned with a vacuum cleaner and/or a damp cloth. When cleaning, prevent water from entering electrical components of the unit. Make sure all surfaces are completely dry before starting the unit.
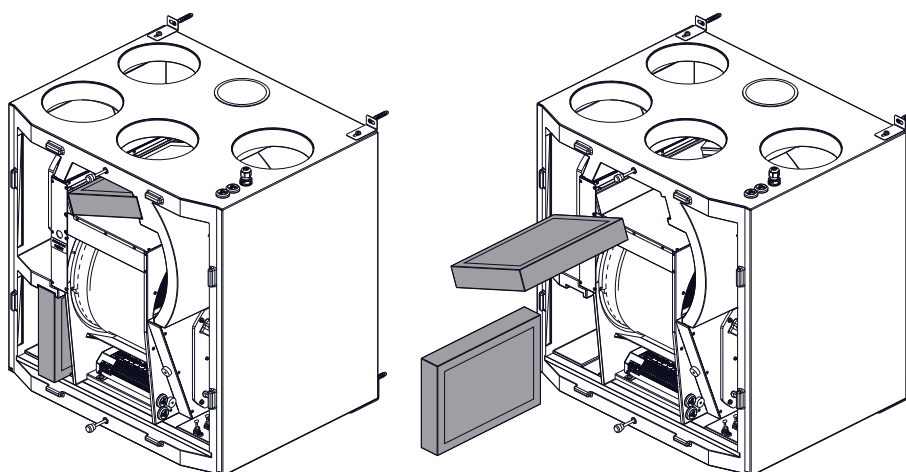
5.1. Filter inspection and replacement

Check if filters are not damaged, torn or dampened. Filter replacement time depends on environmental contamination, season of the year, for example, during spring and summer filters may be contaminated with pollen, fluff or insects, therefore change intervals are shorter. Replace filters if they are visibly dirty even though it is not time yet. When replacing filters earlier, be sure to perform a clean filter calibration as described in Chapter 3. When filters are replaced upon a filter replacement message, calibration is not required. Contaminated filters increase pressure loss of the unit, reduce purification efficiency and increase power consumption.

The pictures below show the location of filters on different models of devices. Because the devices are manufactured with the right and left access sides, and the images show only one access side, your device may look different from the one shown. Layout of filters and components presented in the "Installation Manual".
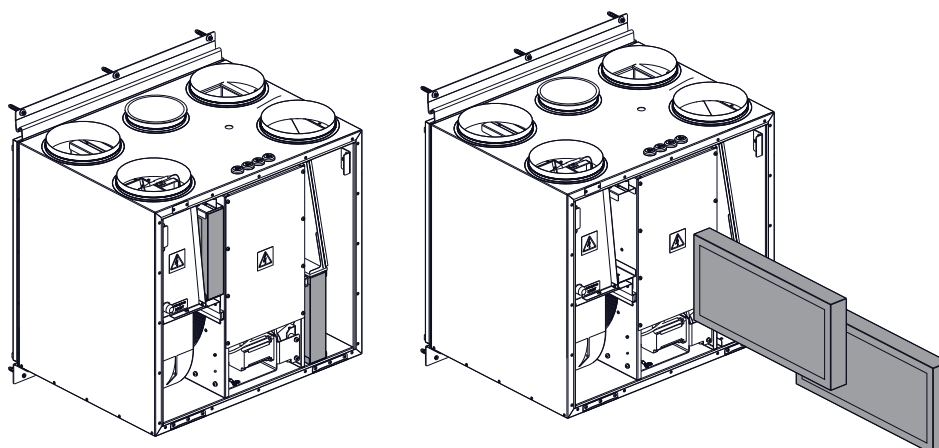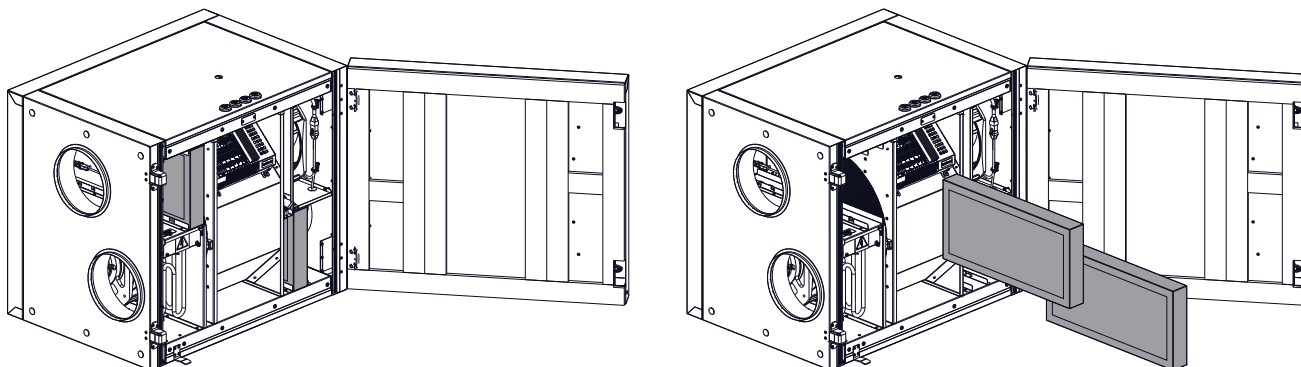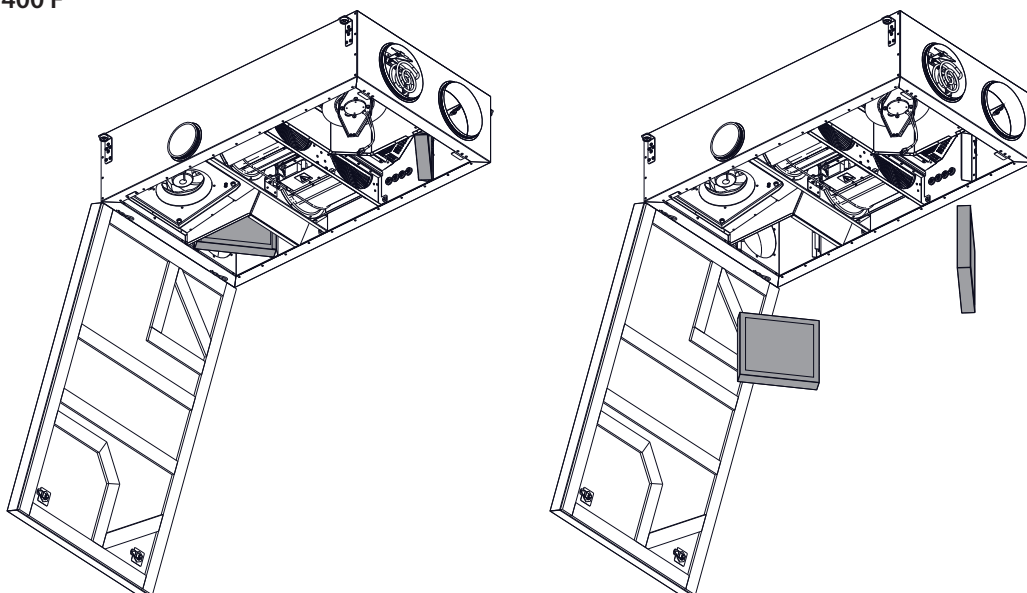
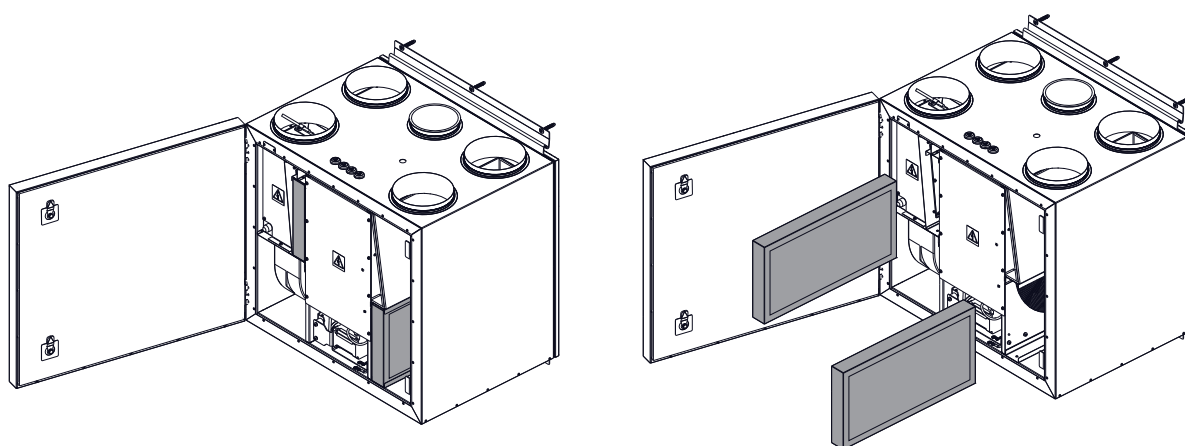**Domekt R 250 F**
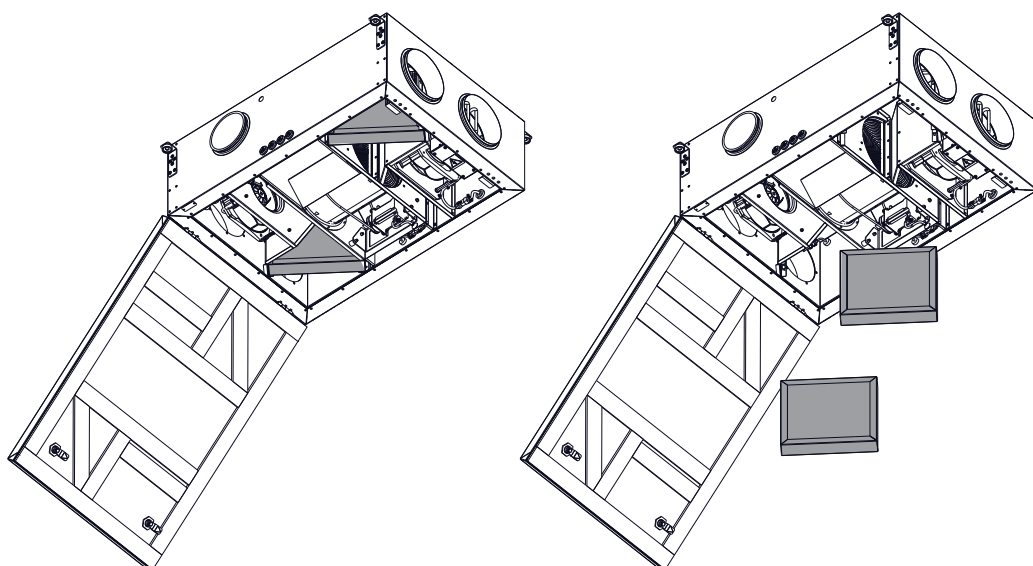
Domekt R 300 V

Domekt R 400 V

Domekt R 400 H

Domekt R 400 F

Domekt R 450 V

UAB KOMFOVENT we reserve the right to make changes without prior notice
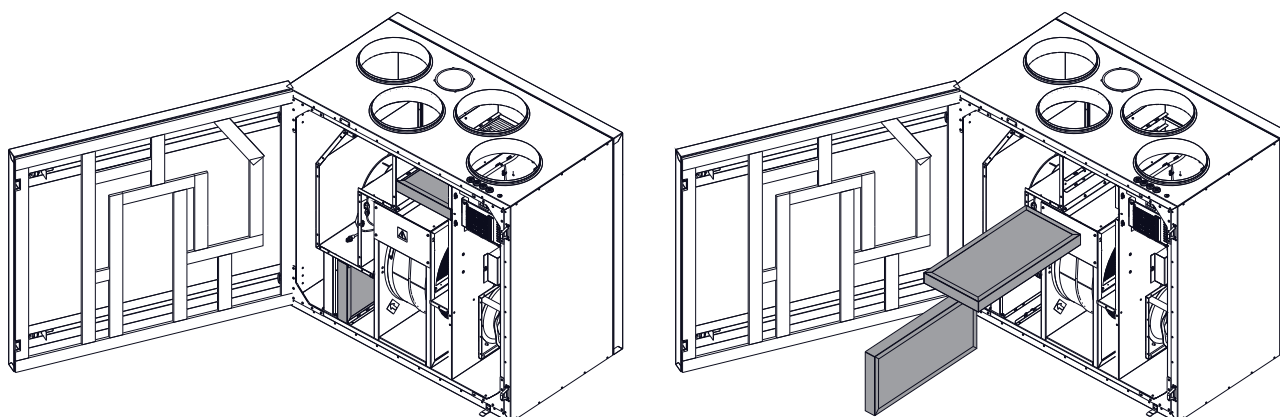C6M_GUIDE2-19-04
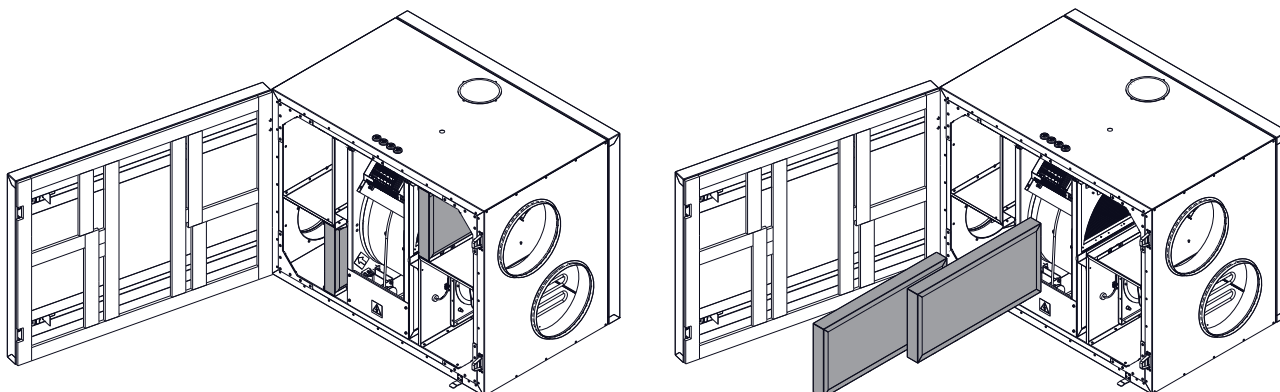
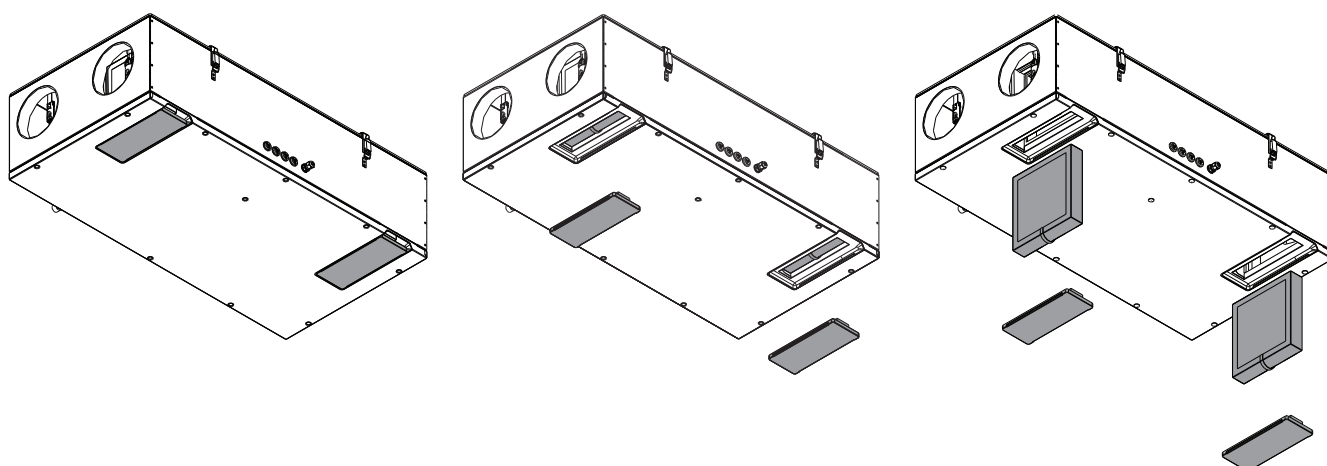**Domekt R 500 H - R 700 H**

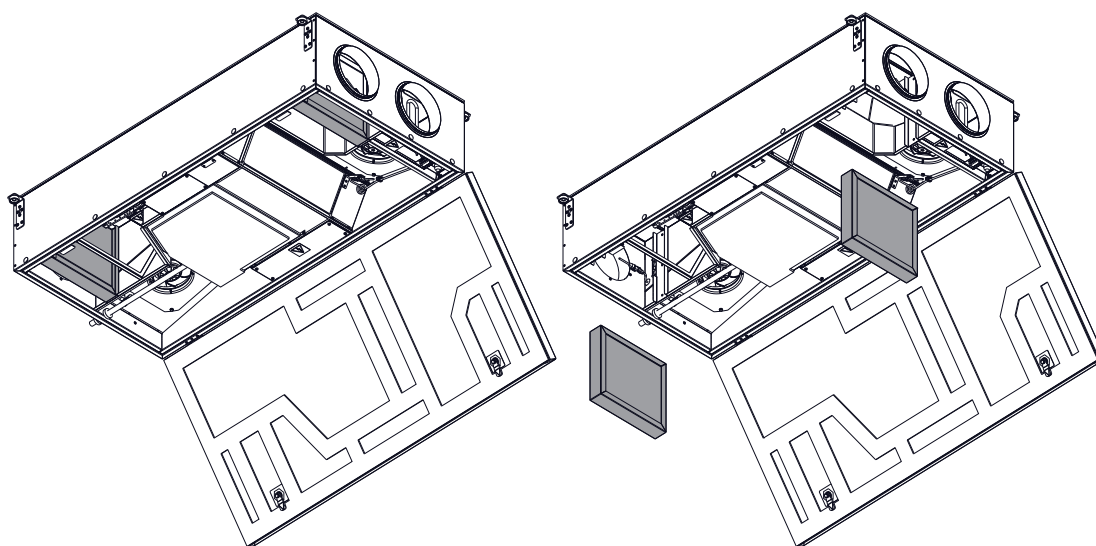**Domekt R 600 H**
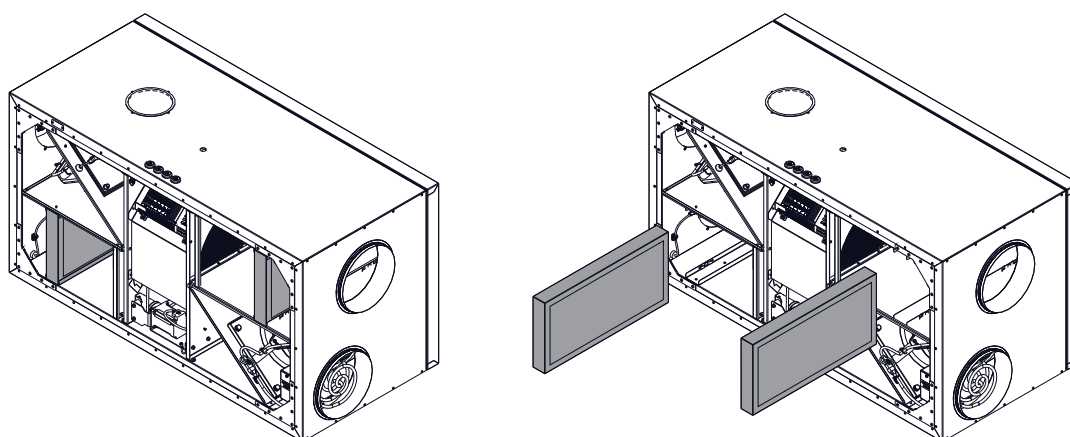
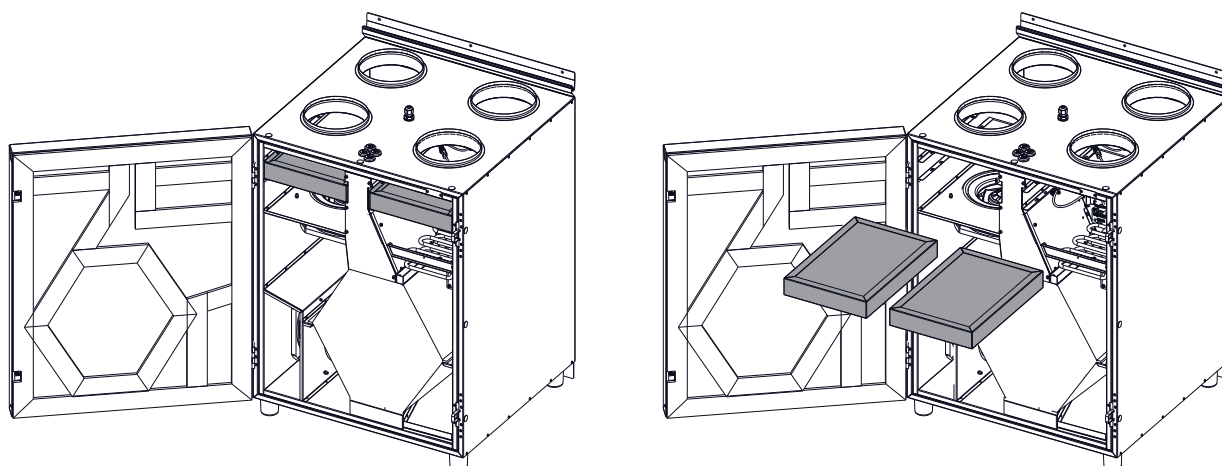**Domekt R 500 V - R 700 V**

Domekt R 700 F
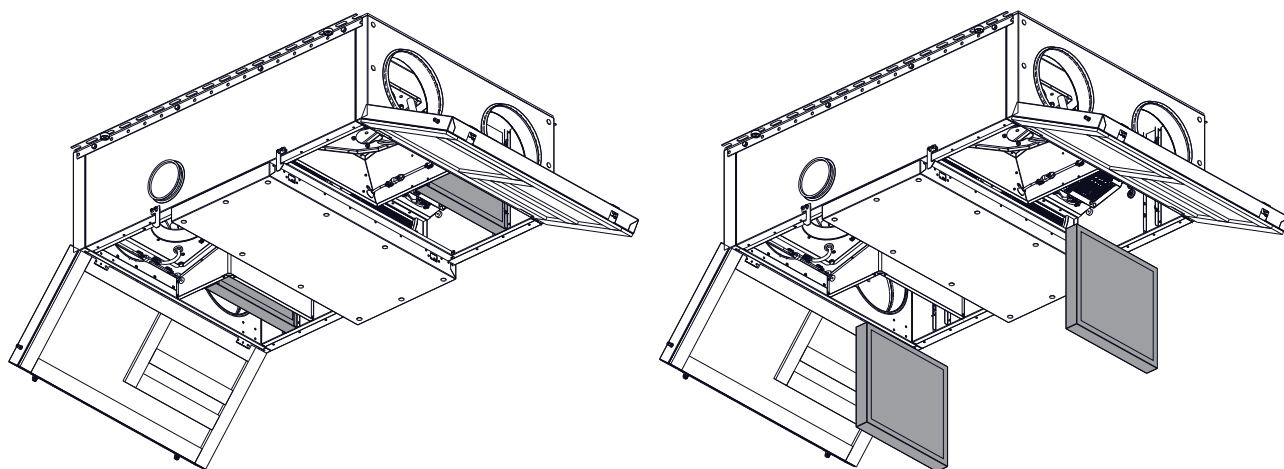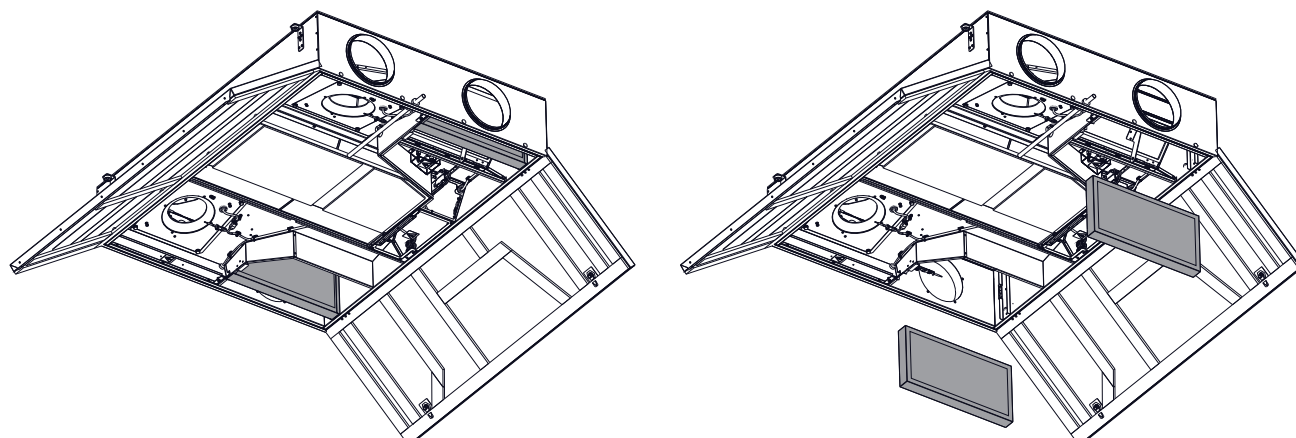

Domekt CF 150 F

Domekt CF 200 V - CF 300 V
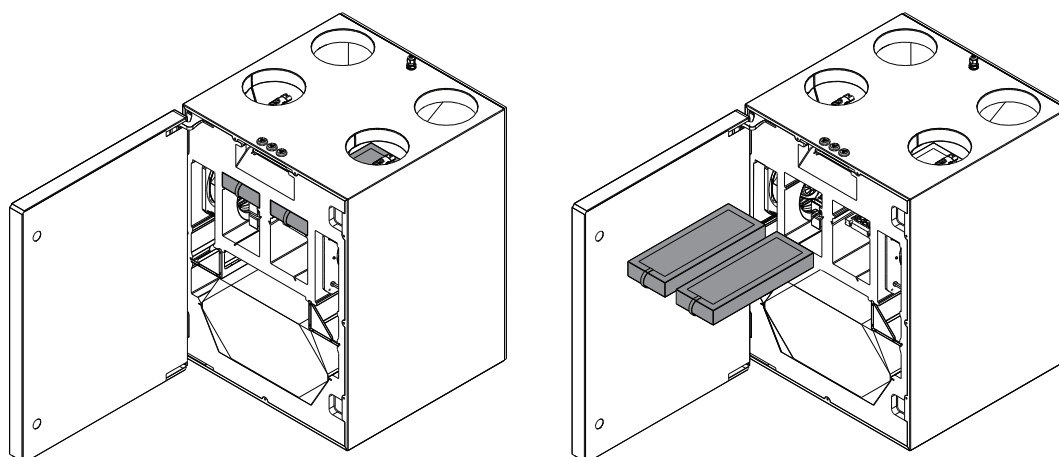
Domekt CF 250 F

Domekt CF 400 V

Domekt CF 500 F

Domekt CF 700 V
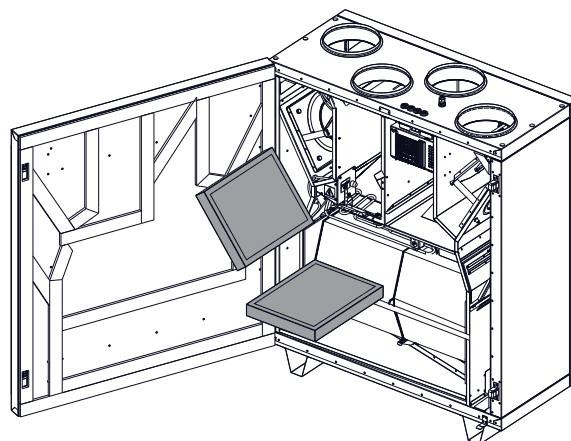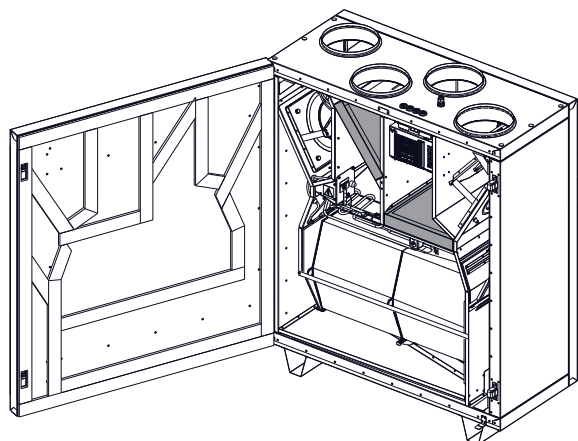
Domekt CF 700 H
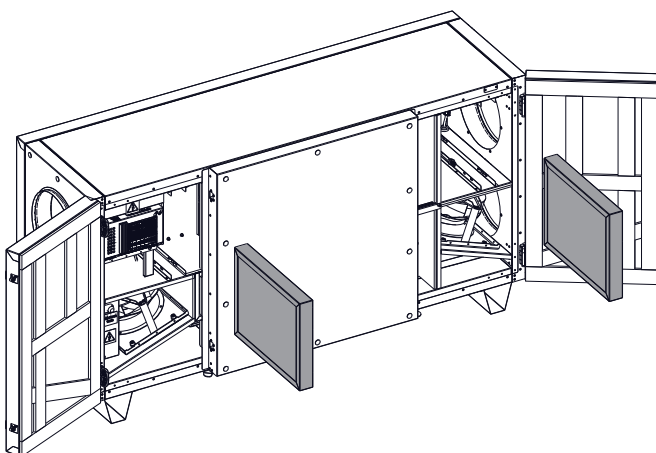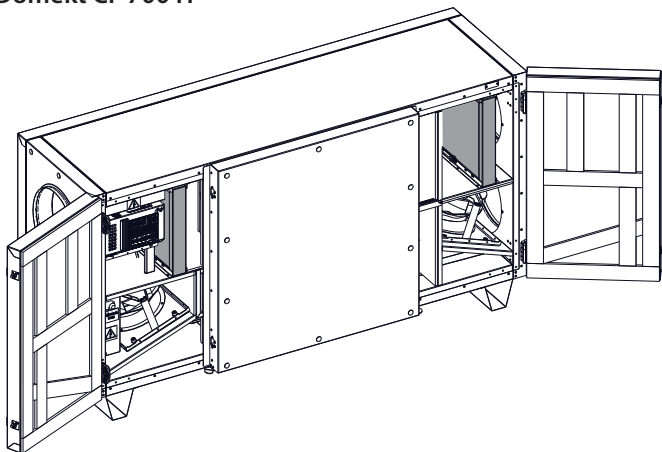
Domekt CF 700 F
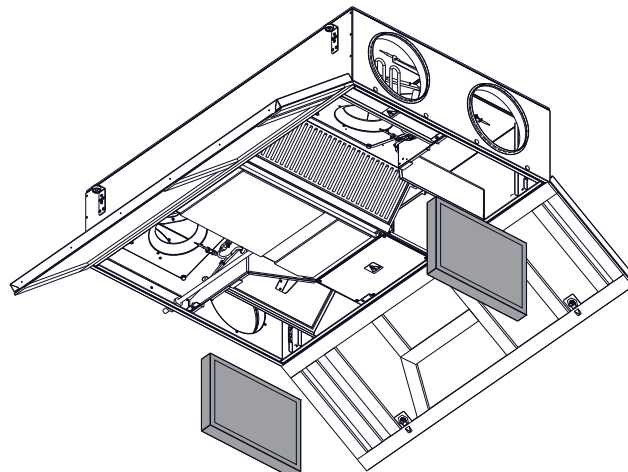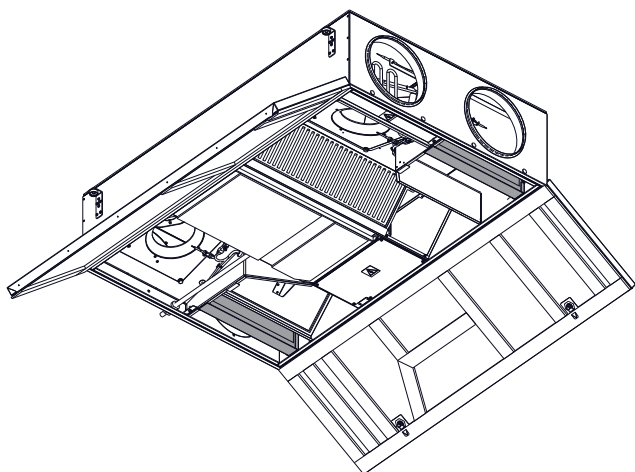
5.2. Device maintenance journal

The following table is for recording performed maintenance and repair works. The log is mandatory if the air handling unit is covered by the extended manufacturer's warranty.

Date	Performed procedures/notes	Procedures performed by: Name, last name, signature

LITHUANIA

UAB KOMFOVENT

**TECHNINĖS PRIEŽIŪROS SKYRIUS /
SERVICE AND SUPPORT**
Phone: +370 5 200 8000
Mobile: +370 652 03 180
Email: service@komfovent.com
www.komfovent.com

RUSSIA

ООО «АМАЛВА-ОКА»
Ул. Выборгская д. 16, стр. 1,
2 этаж, 206 офис, Москва, Россия
Тел./факс +7 495 640 6065
info.msk@komfovent.com
www.komfovent.ru

ООО «АМАЛВА-ОКА»
Ряжское шоссе, 20 литера Е, пом Н6
390017 г. Рязань, Россия
Тел.: +7 4912 950575, +7 4912 950672,
+7 4912 950648
info.oka@komfovent.com
www.komfovent.ru

BELARUS

ИООО «Комфовент»
ул. Уручская 21 – 423,
220125 г. Минск, Беларусь
Тел. +375 17 266 5297, 266 6327
info.by@komfovent.com
www.komfovent.by

SWEDEN

Komfovent AB
Ögärdesvägen 12B
433 30 Partille, Sverige
Tel. +46 31 487 752
info_se@komfovent.com
www.komfovent.se

PARTNERS

AT	J. PICHLER Gesellschaft m. b. H.	www.pichlerluft.at
BE	Ventilair group	www.ventilairgroup.com
	ACB Airconditioning	www.acbairco.be
CZ	REKUVENT s.r.o.	www.rekuvent.cz
CH	WESCO AG	www.wesco.ch
	SUDCLIMATAIR SA	www.sudclimatair.ch
	CLIMAIR GmbH	www.climair.ch
DK	Øland A/S	www.oeland.dk
EE	BVT Partners	www.bvtpartners.ee
FR	AERIA	www.aeria-france.fr
GB	ELTA FANS	www.eltafans.com
HR	Microclima	www.microclima.hr
HU	AIRVENT Légtechnikai Zrt.	www.airvent.hu
	Gevent Magyarország Kft.	www.gevent.hu
	Merkapt	www.merkapt.hu
IR	Fantech Ventilation Ltd	www.fantech.ie
IS	Blikk & Tækniþjónustan ehf	www.bogt.is
	Hitataekni ehf	www.hitataekni.is
IT	Icaria srl	www.icariavmc.it
NL	Ventilair group	www.ventilairgroup.com
	DECIPOL-Vortvent	www.vortvent.nl
NO	Ventistål AS	www.ventistal.no
	Thermo Control AS	www.thermocontrol.no
PL	Ventia Sp. z o.o.	www.ventia.pl
SE	Nordisk Ventilator AB	www.nordiskventilator.se
SI	Agregat d.o.o	www.agregat.si
SK	TZB produkt, s.r.o.	www.tzbprodukt.sk

FINLAND

Komfovent Oy
Muuntotie 1 C1
FI-01 510 Vantaa, Finland
Tel. +358 0 408 263 500
info_fi@komfovent.com
www.komfovent.com

GERMANY

Komfovent GmbH
Konrad-Zuse-Str. 2a,
42551 Velbert, Deutschland
Tel. +49 0 2051 6051180
info@komfovent.de
www.komfovent.de

LATVIA

SIA Komfovent
Bukaišu iela 1,
LV-1004 Riga, Latvia
Tel. +371 67 20 1572
info@komfovent.lv
www.komfovent.lv

komfovent®