komfovent

DOMEKT CF 250 F
C6 AUTOMATION

INSTALLATION AND USER MANUAL

en

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CONTENT

INSTALLATION MANUAL

1. INTRODUCTION 5
1.1. Safety requirements 5
1.2. Design of the units 5
1.3. Unit components 6
2. UNIT TRANSPORTATION AND STORAGE 7
3. MECHANICAL INSTALLATION 8
3.1. Installation site requirements 8
3.1.1. Maintenance area 8
3.1.2. Hanging of the unit 8
3.1.3. Humidity in the installation room 9
3.2. Unit dimensions 9
3.4. Duct system installation 10
3.5. Connection of external heating/cooling units 11
3.4.1. Thermostat function 11
3.5. Connection of condensate drain 12
4. ELECTRICAL INSTALLATION 12
4.1. Electrical input requirements 12
4.2. Connecting electrical components 13
4.3. Control panel installation 15
4.4. Connecting the unit to an internal computer network or the Internet 17
5. STARTING AND CHECKING THE UNIT 18
5.1. Control panel C6.1 19
5.2. Control panel C6.2 20
5.3. Start-up of the unit using a computer 20
5.4. Quick check 22

USER MANUAL

6. INTRODUCTION 23
7. AIR HANDLING UNIT FUNCTIONS 23
7.1. Air flow control 23
7.2. Temperature control 24
7.2.1. Thermostat function 24
7.3. Standard operating modes 24
7.4. Special operating modes 24
7.5. ECO mode 25
7.6. AUTO mode 25
7.6.1. Weekly operation schedule 25
7.6.2. Air quality control function 25
7.7. Protective functions 26
8. CONTROL AND SETTINGS 27
8.1. Control panel C6.1 28
8.1.1. Parameter overview 29
8.1.2. Turning on 29
8.1.3. Turning off 30

8.1.4. Thermostat function window 30
8.1.5. Mode change 30
8.1.6. Airflow and temperature settings 32
8.1.7. Air quality control mode activation and settings 32
8.1.8. ECO mode activation and settings 33
8.1.9. Creating a weekly operation schedule 33
8.1.10. Main settings 34
8.1.11. Advanced settings 36
8.1.12. Alarms 40
8.1.13. About device 41
8.2. Control panel C6.2 42
8.2.1. Turning on/off and changing operation modes 42
8.2.2. Messages 42
8.2.3. Control panel sounds 42
8.2.4. Keypad lock 42
8.3. Control via smartphone 43
8.3.1. Connecting to the unit using the "Komfovent Control" app 43
8.3.2. Main functions of the "Komfovent Control" app 45
8.4. Internet control 46
8.5. Control via a computer without an internet connection 48
8.5.1. Turning on/off and changing operation modes 49
8.5.2. Parameter overview 49
8.5.3. Airflow and temperature settings 50
8.5.4. ECO and AUTO mode settings 50
8.5.5. Ventilation by a weekly schedule 51
8.5.6. Creating a weekly schedule 51
8.5.7. Alarms 52
8.5.8. Settings 52
9. TROUBLESHOOTING 55
9.1. Table of messages 55
9.2. Table of light indicators of the C6.2 control panel 57
9.3. Remote control 58
10. PERIODICAL MAINTENANCE 59
10.1. Filter inspection and replacement 60
10.2. Unit maintenance log 61
APENDIX NO.1. KOMFOVENT CONTROL TERMS OF USE AND PRIVACY NOTICE 62
APENDIX NO.2. WARRANTY INFORMATION 65
APENDIX NO.3. WHERE TO FIND SERIAL NUMBER? 67

INSTALLATION MANUAL

1. INTRODUCTION

This manual is intended for qualified technicians installing the DOMEKT air handling unit. Qualified professionals are persons with sufficient professional experience and knowledge of ventilation systems, their installation, knowledge of electrical safety requirements and ability to work without risk to themselves or others.

1.1. Safety requirements

To avoid misunderstandings, read this manual carefully before installing the unit.

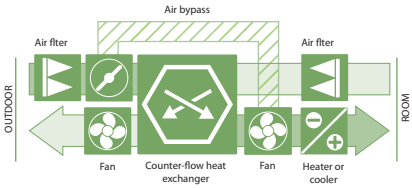
Air handling unit may only be installed by a qualified technician in accordance with the instructions given in this manual and in accordance with applicable legal and safety requirements. The air handling unit is an electrical-mechanical device that contains electrical and moving parts, therefore, ignoring the instructions in the manual not only shall invalidate the manufacturer's warranty but can also cause direct damage to property or human health.

- **When performing any kind of work, make sure the unit is unplugged from electrical supply.**
- **Use caution when working near heaters inside or outside the unit, as their surfaces may be hot.**
- **Do not connect the unit to the power supply network before all the external assemblies are fully installed.**
- **Do not connect the unit to the electrical supply, if there is visible damage that occurred during transport.**
- **Do not leave objects or tools inside the unit.**
- **It is forbidden to operate the unit in the premises where there is a risk of release of explosive substances.**
- **Use appropriate personal protective equipment (gloves, goggles) when installing or repairing the unit.**

This sign means that the product may not be disposed of together with your household waste as defined in Directive (2002/96/EC) and national legislation on the management of WEEE. This product must be disposed of at an appropriate collection point or recycling facility for waste electrical and electronic equipment (WEEE). Improper handling of this type of waste due to hazardous substances inside electrical and electronic equipment can endanger the environment and human health. By helping to ensure proper disposal of this product, you will also contribute to the efficient use of natural resources. For more information on how to dispose of such waste for further recycling, contact your city authorities, waste management organisations, approved WEEE systems or your household waste management bodies representatives.

1.2. Design of the units

Domekt CF is an air handling unit with a counter-flow recuperator (heat exchanger). Lamellas of the heat exchange come in contact with different air flows. Exchange of heat or cold takes place between extracted indoor and fresh outdoor air. If no recuperation is required, the air bypass damper is opened and the heat exchanger is closed. This way the outdoor air passes around the recuperator and enters the premises directly.



If the capacity of the heat exchanger is not sufficient to reach the temperature set by the user, heaters or coolers may additionally be switched on[1]. Heat exchanger and heater (or cooler) are designed to compensate for heating/cooling losses during the ventilation of the premises, thus AHU is not recommended to be used as main heating/cooling source of the building. AHU may not reach the supply temperature setpoint if the actual room temperature differs a lot from the desired value, since in that case heat exchanger capacity will be low.

[1] Depends on the unit components.

Each unit may be left or right inspection side[1]. The inspection side indicates which side of the unit contains the air supply duct to the premises.

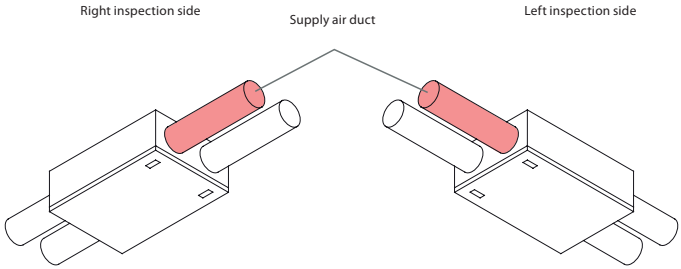
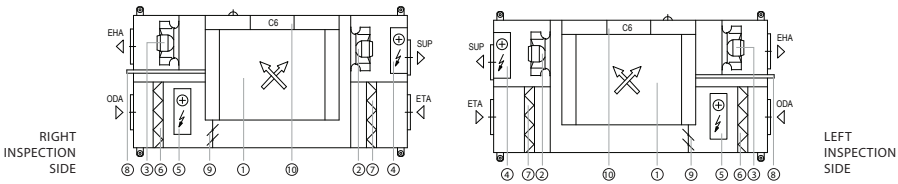


Fig. 1. Classification of units by inspection side

1.3. Unit components

Domekt CF 250 F



ODA – outdoor air

SUP – supply air

ETA – extract air

EHA – exhaust air

1 – counter-flow heat exchanger

2 – supply air fan

3 – extract air fan

4 – electric heater

5 – electric pre-heater

6 – outdoor air filter

7 – extract air filter

8 – condensate drainage

9 – air bypass damper

10 – C6 controller main board

[1] Depends on your order. The exact duct location is shown in the following paragraphs: «Components», «Unit dimensions».

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2. UNIT TRANSPORTATION AND STORAGE

Equipment must be transported and stored in the original packaging. During transportation, equipment must be properly secured and further protected against possible mechanical damage, rain or snow.

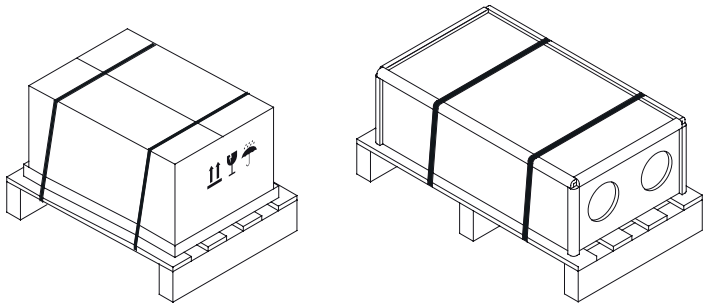


Fig. 2. Examples of equipment packaging

Forklift truck or crane can be used for loading or unloading. For the crane operation, special lashes or ropes must be used to securing them in the designated areas. Ensure that lifting lashes or ropes do not crush or otherwise damage the housing of the unit. We recommend using special belt supports. When lifting and transporting the equipment with a forklift, the forks must be long enough to prevent the unit from being overturned or mechanically damaging its bottom side. Air handling units are heavy, therefore, be careful during lifting, moving or transportation. Use personal protective equipment. Even small units should be transported on a forklift, a trolley or carried by multiple persons.

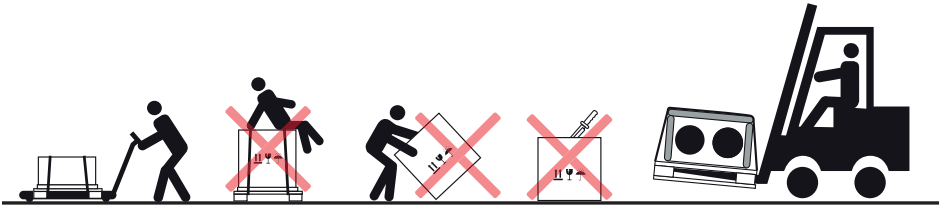


Fig. 3. Examples of transportation by crane, forklift and trolley

After delivery of the air handling unit, carefully inspect its packaging for damage. If mechanical or other damage is visible (e.g., wet cardboard packaging), notify the carrier immediately. If the damage is significant, do not accept the unit. Inform the selling company or the representative of UAB KOMFOVENT within three business days about any damage detected during delivery.[1]

Units should be stored in a clean, dry room at a temperature of 0-40 °C. When selecting a storage location, make sure the unit is not accidentally damaged, that other heavy objects are not loaded on top and dust or moisture does not get inside the unit.

Before installation AHU must be stored in clean and dry premises in their original packaging. If the unit is installed but not yet in use, all connection openings must be tightly closed and the unit must be additionally protected against environmental influences (dust, rain, cold, etc.).

[1] UAB KOMFOVENT is not responsible for losses caused by the carrier during transportation and unloading.

3. MECHANICAL INSTALLATION

3.1. Installation site requirements

DOMEKT units are designed for installation in household or technical rooms with an air temperature of 0 °C to +40 °C, relative humidity from 20% to 80% (non-condensing). We recommend not to rest the unit against the wall to prevent noise or vibration and accumulation of moisture or mould on the wall due to condensation.

- **It is forbidden to install DOMEKT air handling units outdoors. They are also not designed for ventilation or dehumidification of humid premises (swimming pools, baths, car washes, etc.).**
- **The temperature of the air extracted from the premises must not exceed 40 °C to avoid overheating of the unit components or false internal fire alarm signals.**
- **Make sure that children will not reach and will not play with air handling unit without adult supervision.**

3.1.1. Maintenance area

When selecting the installation or mounting location of the unit, provide unrestricted and safe access to the equipment for its repair or preventive maintenance. Minimum service area A defines an area, which must be free of any stand-alone or immovable devices, equipment, partitions, structures or furniture. This area is sufficient for performing service and filter replacement works. For repair and replacement of components, access area equal or greater than zone B shall be ensured.

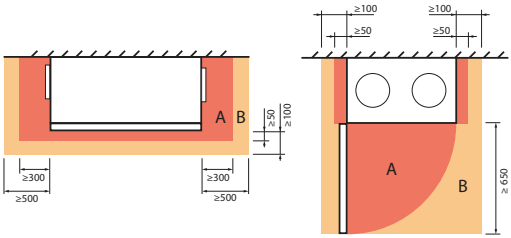


Fig. 4. Minimum space for maintenance

It is very important to plan an appropriate suspension location for ceiling-mounted flat units. Do not install device above stairs or in areas with exceptional ceiling heights, where special equipment would be required to access the unit. In case of the units mounted above the suspended ceiling: service access (if any) for the unit mounted above the suspended ceilings cannot be smaller than the dimensions of the unit or the ceiling must be installed to allow easy dismantling without damaging the structure.

When selecting the suspension location of the unit, keep in mind that preventive maintenance is carried out at least twice a year, and sometimes more often, therefore the user or maintenance personnel must be able to access the unit safely and as easily as possible.

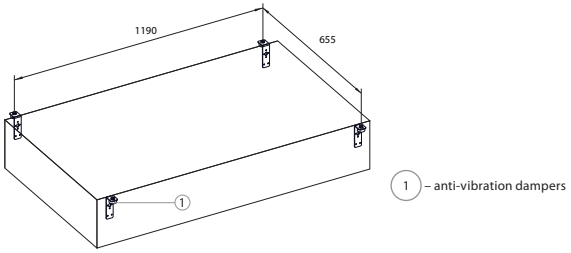
3.1.2. Hanging of the unit

The flat unit is mounted to the ceiling, slabs, or other horizontal structures with the doors facing downwards (see Fig. 4). For this purpose, special brackets with integrated anti-vibration dampers are provided in its structure. The brackets are fixed to the load-bearing structure or slab using threaded rods or anchor bolts.

- **It is forbidden to drill or screw into the casing of the unit, in places not provided for purpose, as there is a danger of damaging cables or tubes inside the housing.**
- **The Domekt CF 250F flat unit must be installed with a 15 mm slope towards the drainage side to ensure that the formed condensate can drain more easily from the unit.**
- **Open the unit doors carefully and do not let them swing freely on the hinges. Also be cautious, as the unit filters may fall out when the doors are opened.**

When installing the unit, it is important to ensure that its vibrations are not transmitted to the building structures, as this may cause additional noise audible in living spaces. Anti-vibration dampers are already integrated into the mounting brackets for ceiling-mounted units.

Domekt CF 250 F



3.1.3. Humidity in the installation room

If the unit is installed in a room with high humidity, condensation may occur on the walls of the unit in cold weather conditions. Newly built flats or homes have high probability of condensation, especially in the first year, until the construction or finishing materials haven't dried up completely. When installing the unit in the rooms with a high probability of condensation, it is necessary to ensure that the condensate does not damage the building structures or furniture.

To reduce condensation on the outside of the AHU, the following is recommended:

- Ensure proper ventilation of the room where the AHU is installed.
- Maintain a lower relative humidity in the room where the AHU is installed.
- Install a pre-heater to increase the air temperature of the outdoor air entering the unit.
- If the air is drier outside, you can increase the ventilation intensity and the temperature settings so that the rooms are dried faster.

In some spots of the casing (near hinges, locks or duct connections) some condensate may appear even with lower humidity in the installation room, however it is irrelevant for AHU operation.

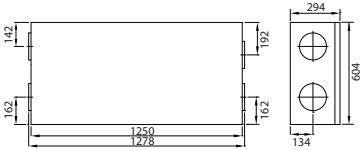
If the unit is shut down in cold outside temperatures, due to free air circulation, condensate can form inside of the unit, therefore, it is important to install air closing dampers (motorized are recommended) to close the air intake and exhaust openings when the unit is OFF. This will prevent cold air from the outside and warm air from the premises to enter the unit.

We recommend that you always keep the unit turned on and use it at minimum of 20% intensity even if no ventilation is required. This will ensure good indoor climate conditions and reduce condensation inside the unit, which might damage electronic components.

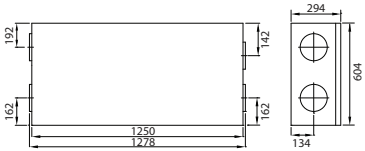
3.2. Unit dimensions

Domekt CF 250 F

Right inspection side



Left inspection side

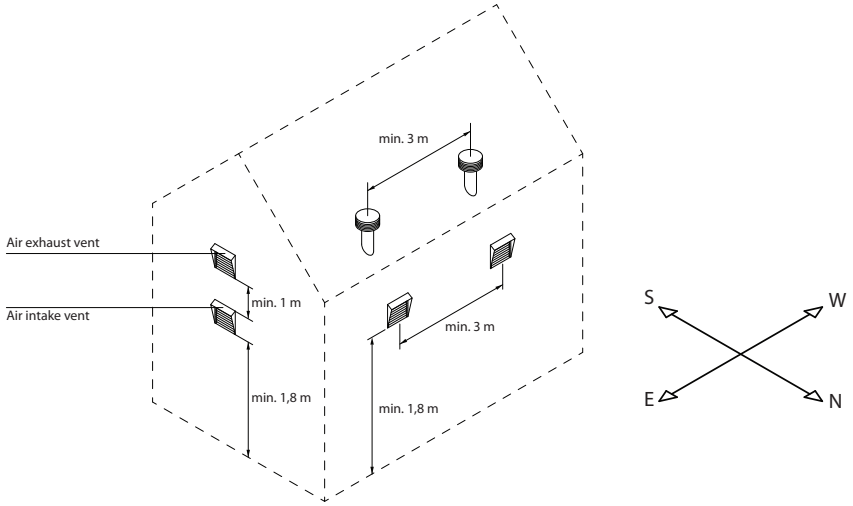


3.4. Duct system installation

The air in and out of the unit flows through the duct system. The duct system should be designed and selected to have low airflow rates and low pressure differentials, ensuring more accurate airflow rates, lower energy consumption, lower noise levels and longer life of the unit.

Outdoor vents must be installed as far apart as possible on different sides of the building to prevent the exhaust air from returning to the air intakes. Try to install the air intake vents where the outdoor air is the cleanest: do not direct them towards the street, car park or outdoor fireplace. We also recommend installing the air intake vent on the north or east side of the building, where the heat of the sun in summer will not have a significant effect on the supply air temperature.

It is highly recommended to install unit connecting ducts of supply inlet and exhaust outlet with a minimum slope on the outside of the premise, to avoid water flowing into the unit in case of rain or snow.



It is recommended to insulate the ducts in unheated rooms (attic, basement) to avoid heat loss. It is also recommended to insulate the supply air ducts if the unit is used for room cooling.

The air ducts are fitted to the unit with self-tapping screws. Different air flow duct positions are marked on the sticker located on the AHU:

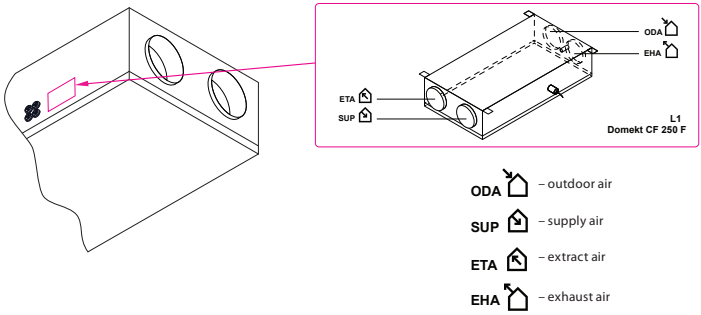


Fig. 5. Air duct marking

Diameter of the ducts used:

Unit	Duct diameter, mm			
	ODA	SUP	ETA	EHA
Domekt CF 250 F	160	160	160	160

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- **Ducts connecting the unit to the exterior of the building must be insulated (insulation thickness 50–100 mm) to prevent condensation on cold surfaces.**
- **Air intake and exhaust ducts must be fitted with air closing dampers (mechanical spring-loaded or electric with actuators) to protect the unit from exposure to climatic conditions when the unit is switched off.**
- **In order to minimise AHU noise transferring through the ducts into ventilated areas, sound attenuators must be connected to the unit.**
- **Duct system elements must have separate brackets and to be mounted in a way that their weight is not shifted to the unit casing.**

3.5. Connection of external heating/cooling units[1]

Additionally, you can connect the following to DOMEKT air handling units:

- Water heater.
- Water cooler.
- Direct expansion (DX) cooler/heater.

These accessories are installed in the air supply duct in the premises. All assemblies in the heating or cooling systems must be connected by a qualified specialist.

When connecting the heater/cooler pipes, they must be supported by a box spanner – otherwise they will be damaged. If water is used in the heater, for frost protection water temperature sensor (B5), must be installed. It is screwed into the special hole on the return water pipe. The sensor must be thermally insulated so that the room temperature does not distort water temperature measurements.

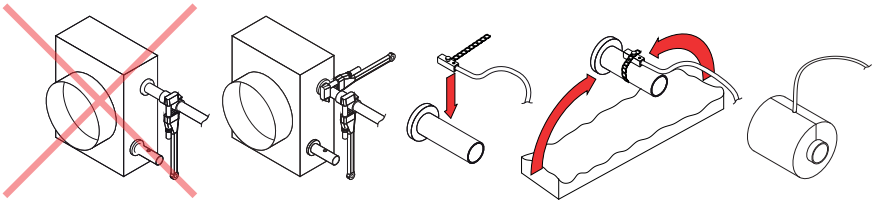

Fig. 6. Connecting the water heater/cooler hoses and installing the water temperature sensor

When operating the unit with negative outdoor temperature, a water-glycol mixture must be used as heat medium in a water heater or cooler or it is necessary to ensure a return water temperature of at least 25 °C.

Pipework package[2] must include circulation pump, which circulates heating/cooling medium through the coil (smaller circuit) and 3-way mixing valve with modulated actuator. In cases if 2-way valve is used, additionally it must be installed non-return valves to ensure continuous circulation around smaller circuit. PPU must be installed as close to the water coil as possible.

Heat exchanger coil of DX coolers/heaters are factory-filled with nitrogen gas. Before connecting heat exchanger coil to the refrigerant system, the nitrogen gas is discharged through a valve which is then cut off and coil connections are soldered to the pipeline.

3.4.1. Thermostat function[3]

C6.1 control panel can also be used as a room thermostat to turn on/off external heating or cooling devices (e.g., heating boiler, heat pump or air conditioner) according to the temperature of the room where the control panel is installed. Based on the control panel settings, the digital output is activated according to the room temperature (terminals No. 16-19, see “Connection of Electrical Components”). If two control panels are used, you can select different digital outputs on each of the control panels. This will allow activating different heating / cooling devices depending on which control panel temperature does not meet the desired temperature. Thermostat function can also be active when the device is stopped.

Read more about the function and settings in the User Manual.

[1] Ordered separately.
[2] It is recommended to use PPU made by Komfovent.
[3] C6 controller software version must be C6_1_5_36_54 or later, and for control panel – C6_1_slim_1_1_4_37 or later.

3.5. Connection of condensate drain

In the Domekt CF unit with a counterflow plate heat exchanger, condensate forms due to temperature differences between the outdoor air intake and the extracted indoor air. Therefore, this type of unit is equipped with a condensate collection tray and drainage pipes. Since negative air pressure is present inside the ventilation unit, the water cannot drain from the condensate tray by itself, so it is necessary to connect a siphon of appropriate height or a siphon with a non-return valve to the drainage pipe.

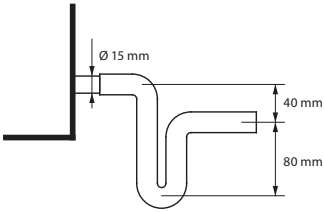

Fig. 7a. Installation of a siphon

The drainage pipeline must be mounted with a slope, without any constrictions or loops, which might prevent water from draining easily. If the drainage pipeline passes through the outdoors or unheated premises, it must be adequately insulated or equipped with a drainage heating cable to prevent water freezing in winter. Any drainage system cannot be directly connected to the wastewater system in order to prevent the transmission of odours and bacteria into the supply air. Condensate from the drain of the air handling unit must be collected in a separate container or into the sewage grate without direct contact: do not connect drain directly to sewer pipe and do not immerse it into water. The condensate collection point should be easy to clean and disinfect.

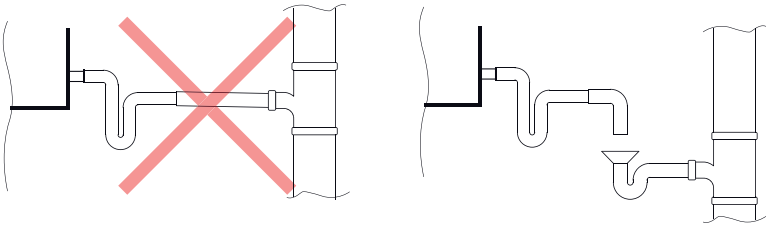

Fig. 7b. Condensate drain connection to sewer system

4. ELECTRICAL INSTALLATION

Electrical work may only be carried out by a qualified electrician in accordance with the instructions given in this manual and in accordance with applicable legal requirements and safety requirements. Before performing electrical component installation:

- **Make sure the unit is unplugged from the mains.**
- **If the unit has been standing in an unheated room for a long time, make sure there is no condensation inside it and check that the connectors and electronic parts of the connectors are not damaged by moisture.**
- **Check the insulation of the power cable or other cables for damage.**
- **Locate the electrical diagram of the unit according to the specific unit type.**

4.1. Electrical input requirements

- **The power supply rating for the unit is 230 V AC, 50 Hz.**
- **Connect the unit only to suitable power socket with appropriate earthing and meeting the electrical safety requirements.**
- **It is recommended to connect AHU to the mains via 16 A automatic circuit breaker with 30 mA current leakage protection (type B or B+).**
- **It is recommended that the control cables be placed at least 20 cm from the power cables, to reduce the possibility of electrical interference.**
- **All external electrical elements must be connected strictly according to the electrical diagram of the unit.**
- **Do not disconnect the connectors by pulling them on wires or cables.**

4.2. Connecting electrical components

All internal and external unit elements are connected to the main controller board.

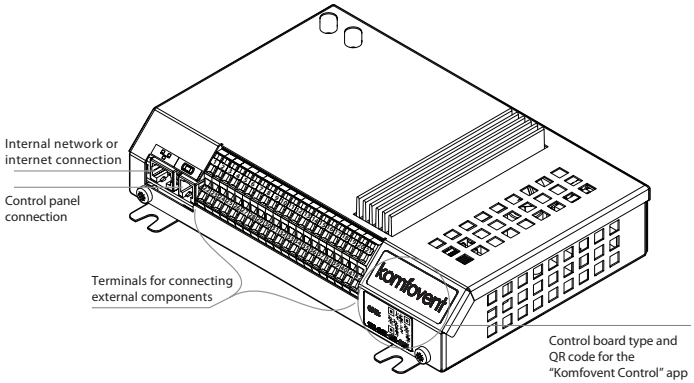

Fig. 8. C6 controller main board

The controller board on the unit may be concealed under the protective cover that must be removed for access to the controller terminals. For the location of the automation box and the controller board, see section 1.3. The terminals of the external elements of the controller board are numbered and are used only to connect optional components and may remain empty if no additional features are required.

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	Heating	Cooling	Alarm	Water pump Max. load 100W	
A	B	0..10V	GND	+24V	0..10V	GND	+24V	0..10V	GND	+24V	NTC 10k		NTC 10k		C	NO	NO	NO	~230V	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	C	0..10V	GND	+24V	0..10V	GND	+24V	0..10V	GND	+24V	0..10V	GND	+24V	∿	~230V	N
Override	Kitchen hood	Fireplace	Fire alarm	Common	Common	Supply air VAV sensor			Exhaust air VAV sensor			Air quality or humidity sensor 1			Air quality or humidity sensor 2			Air damper actuator Max. load 15W		
INPUTS						B6			B7			B8			B9			FG1		

Fig. 9. Terminals for connecting external elements of C6 board

- **The terminal numbering shown here only applies for C6 controller board. Before connecting the external elements, check the board type on the sticker in the front of the controller (see Fig. 8).**
- **The total power of external elements using 24 V voltage may not exceed 30 W.**
- **All cables from external components must be routed through the rubber grommets. To seal the cable correctly, do not make an "X" cut or too large hole in the grommet.**
- **Condensate inside of the unit may flow over surface of the cable in to the terminals of main board and cause damage to the electronics. To avoid that, please leave the cables of external components a bit longer and make a small loop inside of the unit.**

- **RS485 (1-2)** – here it can be connected:
  - Control panel (see. Fig. 12)
  - Data cable for a building management system, working via Modbus RTU protocol.
- **TG1 (3-5)** – power and control signal for the mixing valve actuator of the external heat exchanger for mixing. Depending on the "External coil" type selected in the settings (see "Domekt User Guide"), the valve actuator will be controlled by a heating or cooling signal.
- **DX (6-7)** – control signal for external direct expansion (DX) cooler/heater.
- **AUX (8-11)** – can be used for connection of additional elements that require a 24 V power supply and when there are no dedicated terminals (for example, to connect a second control panel). 0...10 V signal is used to control an external heater installed in the duct upstream the unit when "External coil" is selected in the "Frost protection" settings (see "Domekt User Guide") and electrical pre-heater installed in the unit is not used.
- **B1 (12–13)** – a duct temperature sensor must be connected here. If additional duct-mounted heating/cooling devices are used, the supply air duct temperature sensor must be installed downstream of all heating/cooling devices at a distance of no less than two duct diameters from the nearest heat exchanger.

Supply air temperature sensor B1

Fig. 10a

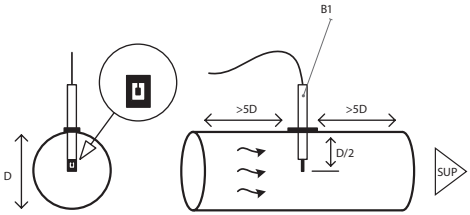

Fig. 10b

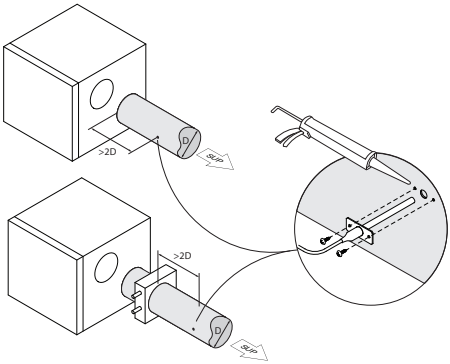

Fig. 10c. Installation of a supply air temperature sensor

- **B5 (14–15)** – for duct mounted water heater, a return water temperature sensor must be installed to protect against freezing (see section 3.4).

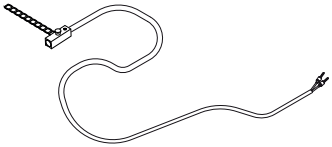

Fig. 11. Water temperature sensor

- **Outputs (16-19)** – the terminals are used when external heating/cooling units require an additional closed/open contact (i.e. to start the DX unit). The corresponding contacts are closed depending on whether the air handling unit heats or cools. The alarm signal contact is closed if the air handling unit has critical messages and its operation is stopped.
  If the thermostat function is used, you can connect external devices (e.g., heating boiler or heat pump) to these terminals, which will turn on/off when the control panel temperature does not meet the desired temperature. In the function settings on the control panel (see "User manual"), you can select which terminal will be used to switch on the external device. You can also select the signal type: normally open (NO) or normally closed (NC) contact. Based on these settings, terminals 16 + 17, 16 + 18 or 16 + 19 will be activated as soon as the thermostat is activated.

In case of an external DX unit, only ALARM output terminals (16 + 19) can be used for the thermostat function.

- **S1 (20-21)** – a water circulation pump used in conjunction with external water coils and is activated when required for heating/cooling.
- **Inputs (22–27)** – to switch the "Kitchen", "Fireplace", and "Priority" ventilation modes (see the "Domekt user manual"), the corresponding terminals must be connected together with the common terminal 26 or 27 (the ventilation modes will remain active as long as the terminals are connected). These modes can be activated by connecting a switch, motion sensor, or kitchen hood with normally open (NO) contacts to the terminals. Each function can have a separate switch.
  Fire alarm requires a normally closed contact (NC), therefore, a jumper is connected between terminals 26 and 25, instead of which, building fire system can be connected. When the contact is disconnected, the unit is stopped and a fire alarm message is displayed.
- **B6/B7 (28-33)** – if VAV airflow control method is used (see "Domekt User Guide"), it requires the installation and connection of optional pressure sensors in the ducts. Follow the manufacturer's instructions when installing VAV pressure sensors. Also, these terminals are used for DCV airflow control when a separate 0...10 V signal can be used to adjust the ventilation intensity (see "Domekt User Guide").
- **B8/B9 (34-39)** – for connection of air quality or humidity sensors for "Air quality" function. When the sensors are connected, its type and connection point must be specified in the settings (see "Domekt User Guide").
- **FG1 (40-42)** – terminals used to connect air damper actuators. 230 V power supply actuators with or without a spring return can be connected to them.

4.3. Control panel installation

The control panel must be installed in a room with:

- ambient temperature – 0...40 °C;
- relative humidity 20% to 80%;
- protection against accidental water droplets.

The control panel can be mounted on a concealed mounting box or directly on the wall – the screws are supplied with the panel. You can also use the magnets on the back to attach the panel to metal surfaces (i.e. on the door of the unit). If possible, mount the control panel in a place with good circulation of the ventilated air. Do not install the control panel inside of cabinets, behind doors, in a corner of a room and avoid direct sunshine. This is very important when room temperature maintenance is used or in CF type AHU's, which uses temperature and humidity sensors inside of the control panel for operation.

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

The control panel is supplied with a cable. If this cable is too short, you can replace it with a 4×0.22 mm cable, no longer than 150 m.

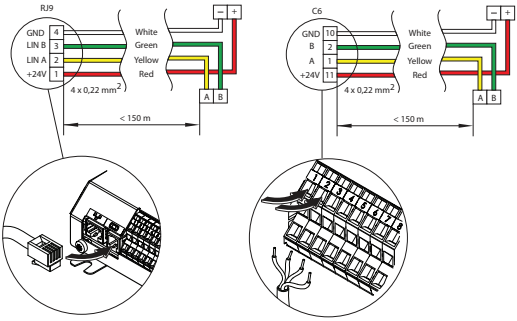

Fig. 12. Control panel cable wiring diagram

It is advisable to run the control panel cable in such a way that it does not go near the power supply wires or high voltage electrical equipment (electrical inlet cabinets, electric water heating boiler, air conditioning unit, etc.). The cable can be passed through the holes in the back or bottom of the control panel (follow the installation instructions supplied with the control panel). The wire to C6 controller board is connected to a dedicated slot (RJ45 connector; see Fig. 8) or to the terminals for external connections.

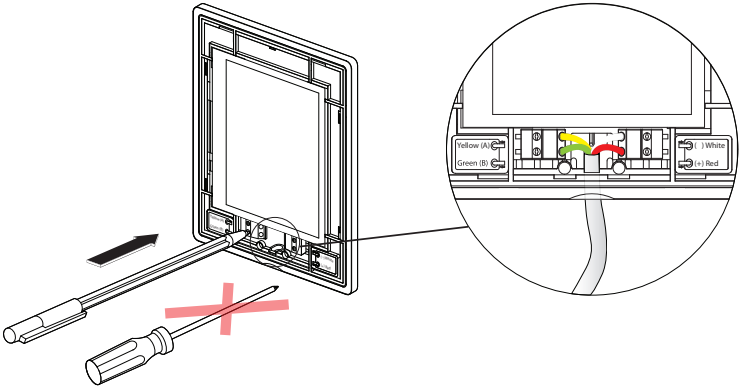

Fig. 13. Cable connection to the control panel

- **Do not use sharp tools (e.g. screwdriver) to press on the control panel's contacts. Pencil or ballpoint pen is best for this.**
- **Do not use any ferrules (or lugs) on the wires to be connected to the control panel, as they may prevent the cable from connecting properly or may damage the panel's connectors.**
- **To the controller main board connect only the completely assembled control panel with back and front covers installed. If installing covers when the control panel is powered up you may damage the internal electronic components.**

4.4. Connecting the unit to an internal computer network or the Internet

The unit can be controlled not only by the control panel, but also by computer or smart phone. In such cases, the air handling unit must be connected to an local computer network or to the Internet. The unit is controlled by a computer using a web browser, or a smartphone with a Komfovent Control app. The air handling unit is connected to the computer network with a CAT5 type cable (RJ45 connector; see Fig. 8). The total cable length between the unit and the network router must not exceed 100 m.

By default, the IP address of the air handling unit is 192.168.0.60, but it can be changed (if necessary) according to the local network parameters. The IP address can be found and changed on the control panel[1].

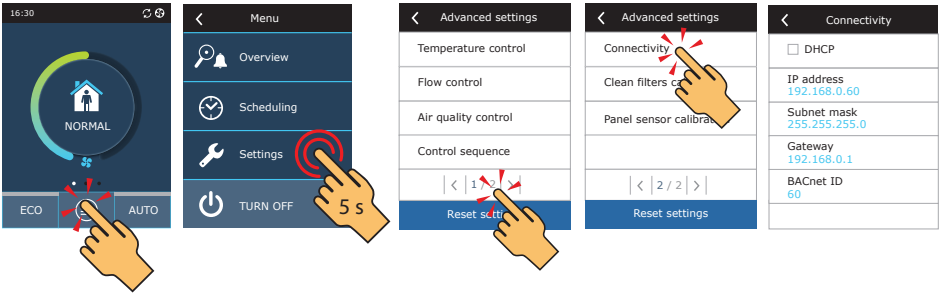

Fig. 14. View and change the IP address of the AHU on the control panel

An air handling unit connected to a network router can be controlled by a computer via a wireless connection (Wi-Fi) on the internal network. After connecting the unit to the network router, activate the DHCP setting on the panel (see Fig. 14). This will automatically assign the unit a free IP address on the local network (do not use this setting if you connect the computer directly to the unit).

When connecting the computer directly to the unit, in the network settings of the computer, it is needed to manually assign an IP address the last number of which would be different from the unit's IP address (for example, if the unit's IP address is 192.168.0.60, assign the address 192.168.0.70 to the computer). Also enter the subnet mask: 255.255.0.0.

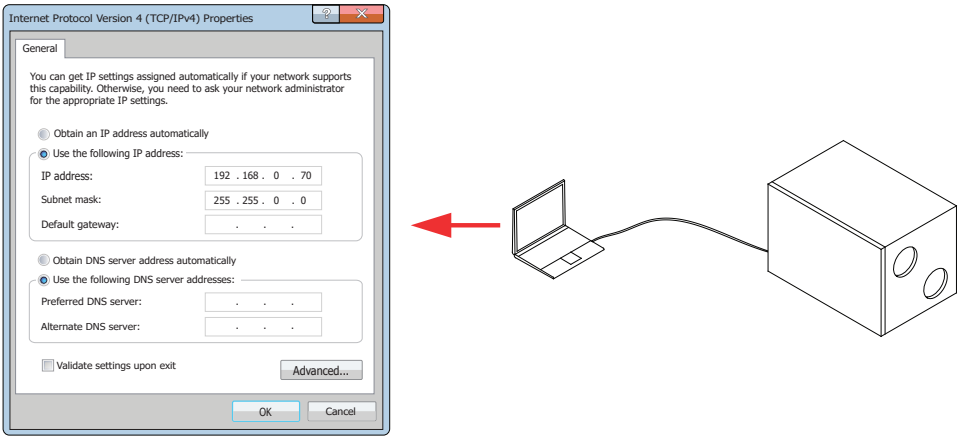

Fig. 15. Computer network settings for direct connection to the unit

[1] Only on the C6.1 panel (see Fig. 17).

To control the unit over the Internet, it must be connected to a network router with Internet access. Subsequent settings vary depending on whether the unit is controlled by a computer or a smartphone.

- The easiest way to manage your unit over the internet is to use a smartphone with the Komfovent Control app. Launch the app on your phone (the phone must have Internet access). When you connect for the first time, the app will ask you to scan the QR code at the front of the controller board (see Fig. 8). When you scan the code, the app will automatically establish the connection to the unit (for more information on the Komfovent Control app, see "Domekt User Guide").
- To control the unit via the Internet using a computer, log in to your *control.komfovent.com* account in a web browser.

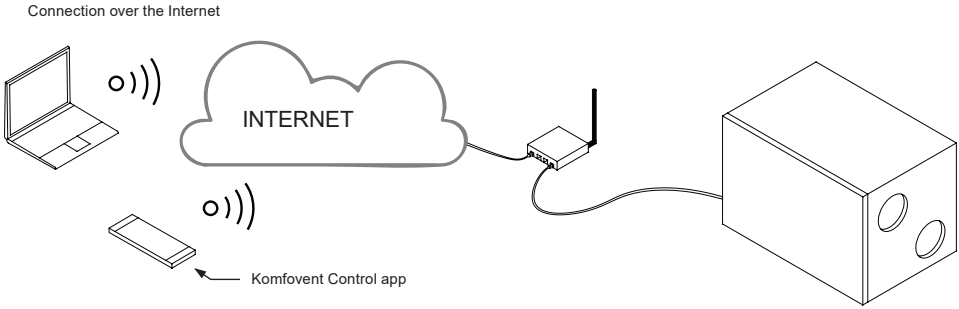

Fig. 16. Examples of unit connection to a local network or the Internet

5. STARTING AND CHECKING THE UNIT

Check for any foreign objects, garbage, or tools inside the unit before turning it on. Check that air filters are installed, or that condensate drainage is connected (if required), and fill the siphon with water. Inspect the duct system for unnecessary obstructions such as fully closed diffusers, regulation dampers, check that outdoor air grills are not blocked.

The operation, maintenance or repair of the air handling unit is prohibited for people (including children) with mental, physical or sensory disabilities, as well as for persons without sufficient experience and knowledge, unless supervised and instructed by the person responsible for their safety in accordance with these instructions.

- **The air handling unit can only be started when it is fully installed, with ducts and external electrical elements connected. Do not start the unit without duct system, as this may distort the measurement of the airflow required for stable fan control.**
- **Do not use the unit with a temporary electrical power supply as unstable power can damage the electronic components.**

The air handling unit can be equipped with one of two control panels[1]:

- C6.1 control panel with touch screen and colour display. Many functions and settings of the AHU can be reviewed and adjusted on the panel.
- C6.2 control panel with touch buttons that can only switch between basic ventilation modes and settings.

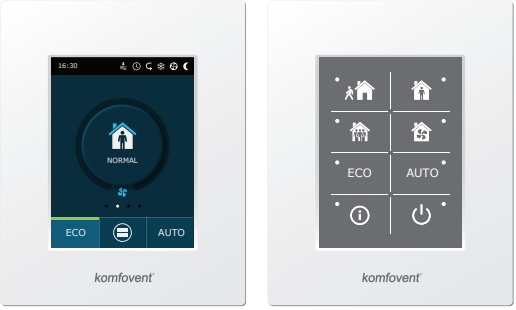

Fig. 17. Control panels C6.1 and C6.2

[1] Depends on your order.

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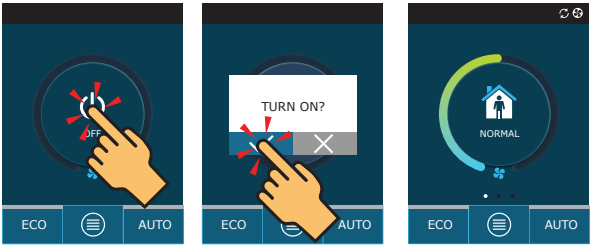
By default, the following standard ventilation modes are preprogrammed in the unit:

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

5.1. Control panel C6.1

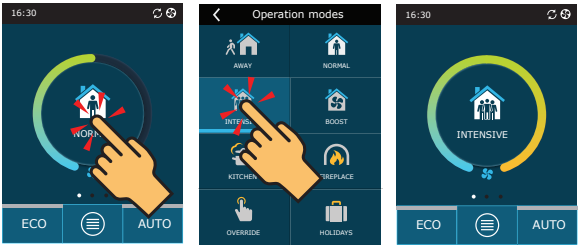
If the unit is connected to the mains, you will see a home screen or a screen saver on the control panel. Touching screen saver on the panel display will return it to the home screen.

To turn on the air handling unit:

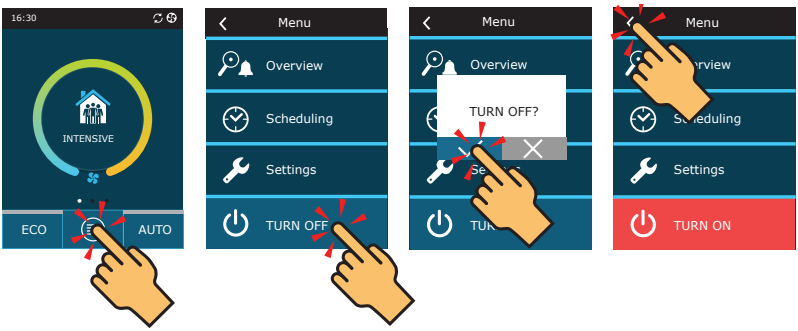


During the first minute after start-up, the automation of the unit will evaluate the unit settings, check the automation components and open the air dampers (if the duct system is equipped with air dampers with actuators). Afterwards a signal to the fans will be given and the unit will start operating in the last used ventilation mode.

To change the ventilation mode:



To turn off the air handling unit and return to the home screen:



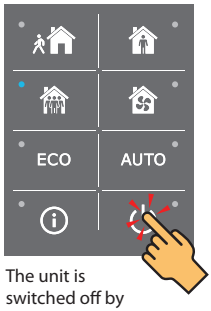
5.2. Control panel C6.2

If the unit is connected to the mains and is currently stopped, a red indicator next to the power button will light up.

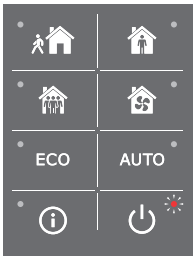
To turn ON/OFF the AHU or select the operating mode:

Press the desired operating mode button.

The blue indicator light will be on next to the active mode.



The unit is switched off by pressing the On/Off button.

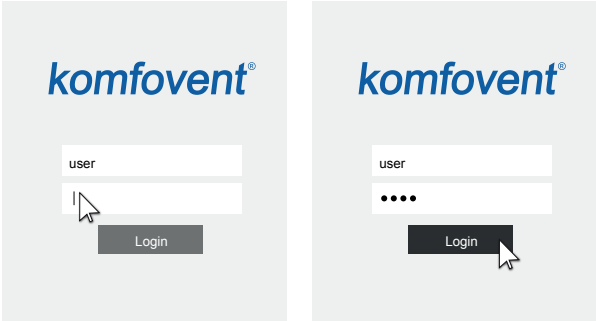


When the unit stops, the red indicator light will be lit next to the On/Off button.

5.3. Start-up of the unit using a computer

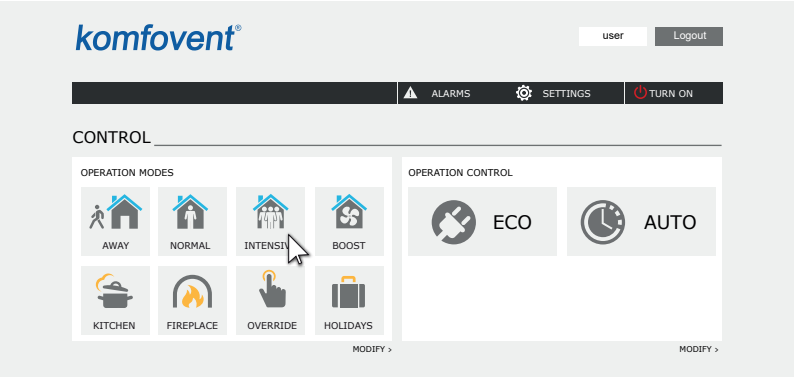
If the unit was ordered without a control panel, it can be started by using a computer. The unit is controlled by a computer using a web browser. Connect the computer directly to the air handling unit or to the computer network to which the air handling unit is connected as described in section 4.4. Disable the use of all proxy servers that may block the connection to your unit in Internet browser settings. Enter the IP address of the unit in your web browser:

Log in to the C6 controller user interface: enter the user name ***user***, password ***user***[1] and press the "Login" button.

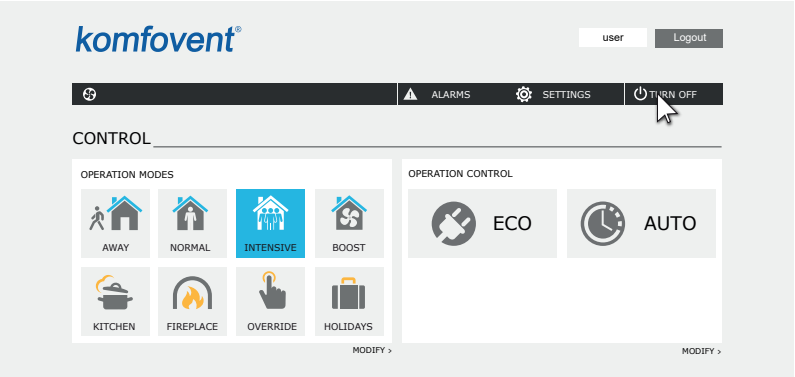


[1] Should you forget a changed password, it can be reset to the initial "user". To do this, you must restore the factory settings for the air handling unit using control panel.

To start the unit, press the required ventilation mode button:



You can stop the unit by pressing the "OFF" button:



5.4. Quick check

When you start your unit for the first time, check whether:

Task	Yes	No	Notes
The control panel operates responds to touches, and there are no error messages			
The air dampers opens fully			
There are no extraneous sounds and vibrations			
Changing the ventilation modes changes the fan speed			
The unit is airtight without gaps or air leakage			
Heating/cooling devices operates correctly			
External devices connected operates correctly			
The condensate easily flows from the unit and the drainage piping is watertight			
Other notes:			

Unit installed by	
Company	
Phone	
Date	
Signature	

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USER MANUAL

6. 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]

The operation, maintenance or repair of the air handling unit is prohibited for people (including children) with mental, physical or sensory disabilities, as well as for persons without sufficient experience and knowledge, unless supervised and instructed by the person responsible for their safety in accordance with these instructions.

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.

Make sure that children will not reach and will not play with air handling unit without adult supervision.

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.

7. 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.

7.1. 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".

[1] Depends on the equipment supplied.

7.2. 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 control panel. 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".

To display supply temperature in the control panel, it is needed to install temperature sensor in the supply air duct (see "Domekt installation manual").

7.2.1. Thermostat function[1]

C6.1 control panel can also be used as a room thermostat to turn on/off external heating or cooling devices according to the temperature of the room where the control panel is installed. For example, a heating boiler or heat pump connected to the AHU controller (see "Installation Manual") will be switched on as soon as the temperature of the control panel installed in the room drops below the set value. Thus, you will not need to install a separate thermostat that activates these devices in the room. Thermostat function can also be active when the device is stopped.

When two control panels are used for one AHU, both of them can operate as a separate thermostat to switch on/off different devices. For this purpose, you will have to specify which controller terminals are activated by each of the control panels.

For information on how to activate "Thermostat function" and settings thereof, see chapter "Control and Settings".

7.3. 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").

7.4. 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").

[1] C6 controller software version must be C6_1_5_36_54 or later, and for control panel – C6_1_slim_1_1_4_37 or later.

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7.5. 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").

The following options are available in the "Heat recovery control" setting:
Auto – the heat exchanger operates normaly
Maximum – the heat exchanger will be activated as soon as it is possible to return heat or cold from the premises, regardless of the desired temperature. The constant heat recovery will not work in case when free cooling/heating mode is in operation.
Non stop – the heat exchanger will be active all the time, regardless of any temperature conditions. This type of management is recommended when an enthalpy (rotary or counter-flow) heat exchanger is used and priority is given to maintaining air humidity rather than temperature (e.g. in summer to prevent humid air from entering the premises).

7.6. 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.

7.6.1. 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").
Operation according to the weekly schedule is not available if the air quality function is activated (see below).

7.6.2. 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 DCV 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:
  CO_2 – 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.

7.7. Protective functions

The air handling unit is equipped with several protective functions that affect the operation of the unit. The operator is not allowed to change these settings values. These functions protect the unit and its components against damage as well as provide protection for the building and people when the ventilation system is exposed to dangerous circumstances.

External fire alarm function stops the air handling unit as soon as a signal from the building's fire alarm system or smoke detectors is received. This immediately stops ventilation and fresh air from entering fire zones to prevent fire from spreading. Fire alarm message is displayed on a control panel or other device used for controlling the air handling unit. In case of false fire alarm, for example, due to fire protection system inspections, the air handling unit will need to be restarted after turning off the signal and clearing the fire alarm message. If such tests are run periodically, authorized service person may program the air handling unit to start in the previous mode after turning off the fire alarm.

Connection of the building's fire protection system signal is described in the "Installation Manual".

Internal fire alarm function stops the air handling unit when air temperature increase is detected inside the unit. This can happen, for example, when hot smoke enters the duct system from fire zones both inside and outside the building. This function prevents smoke from spreading inside the premises and warns about a potential fire hazard if the building's fire protection system has not yet responded. If the air handling unit is intended for operation in high temperature premises (for example, in drying chambers, bakeries, etc.), this function may be disabled. This can be done by authorized service person.

Electric heater overheat protection consists of several different control algorithms. Integrated thermostat disconnect electric heater's power supply if its temperature reaches a critical limit (e.g., in case of heater's control electronics failure). Depending on the unit model, the electric heater may contain one of the following thermostats is installed:

- Automatic thermostat 70°C which prevents heating tubes from overheating when the heater is running at high power and low airflow speed. Protection is restored as soon as the heater cools down and thermostat temperature drops. Heater operation is restored automatically.
- Manual reset thermostat 100°C. This thermostat, in case of overheating, completely disconnects the heater's power supply to protect control electronics and adjacent plastic components. Protection may be reset by pressing the RESET button inside the unit (see Chapter "Troubleshooting").

Eliminate the cause of overheating before restoring the manual reset thermostat of 100°C.

Also, the operation of integrated electric heaters and their possible failures are monitored by measuring the actual electric current and the air temperature before and after the heater.

Fan cooling of heating/cooling devices. If the air handling unit is stopped while electric heater or direct evaporation (DX) unit is still running, fan cooling is initiated. Fans run at fixed speed until heater tubes cool down or DX unit's refrigerant pressures stabilize. Blowing time depends on the accumulated heat/cold and ventilation intensity and can take up to 15 minutes.

Water heater frost protection function measures water temperature returning from the heater coil. At low outdoor temperatures, when there's a risk of water freezing, a 3-way water mixing valve is opened and hot water pump is started to prevent temperature of water inside the heater from dropping. If temperature of water returning from the heater coil still falls below the critical limit, the unit is stopped and outdoor air dampers are closed to prevent cold air from entering the unit.

When operating air handling unit in the temperatures lower than 0 °C, it is necessary to use water-glycol mixture as a heat carrier or to maintain a return water temperature of at least 25 °C.

Counterflow heat exchanger frost protection

The heat transfer and condensation occurring in the counterflow heat exchangers creates a possibility for it to freeze at low air temperatures. The air handling units have several measures to reduce the risk of freezing. On such units, when the outside temperature drops to -4°C, preheater (integrated or external) can be activated. Capacity of the preheaters is regulated based on the outdoor air temperature, airflow and the amount of moisture in the extracted air. If the indoor humidity is very low, it is likely that there will be no danger of the heat exchanger freezing even at very low temperatures outside.

To ensure proper operation of the pre-heater, a control panel or a separate humidity sensor must be installed in the ventilated premises (see "Installation Manual").

If you don't want to use the preheater for some reason, the anti-icing protection can be turned off. In this case, the air handling unit will be stopped when the outside air temperature is lower than -4 °C, thus protecting the heat exchanger from damage.

If, at very low outside air temperatures, the power of the preheater is not sufficient, both fans will be slowed down gradually, to protect the heat exchanger from freezing.

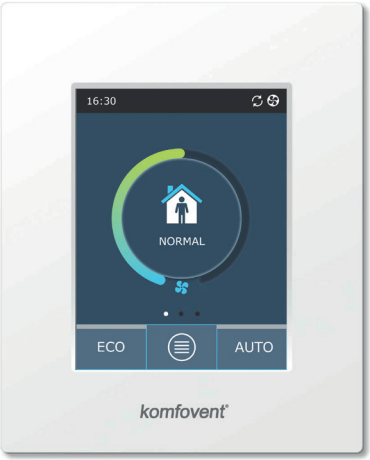
How to enable/disable the function or change its settings, read the "Advanced settings" clause.

8. CONTROL AND SETTINGS

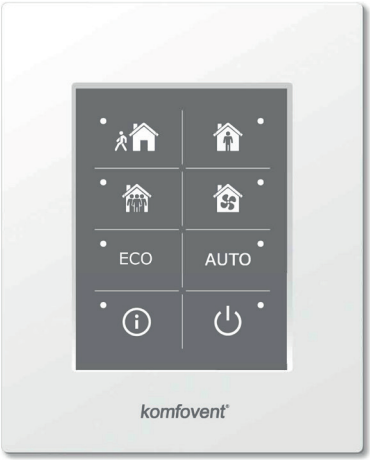
Ventilation unit may be conveniently controlled via the following ways:

- Control panel
- Mobile app
- Web browser

Air handling unit (based on its equipment) may have one of the following control panels:



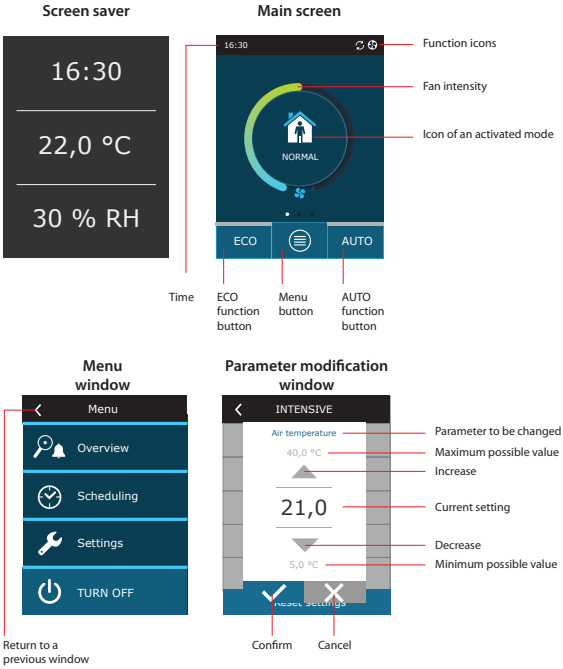
C6.1



C6.2

8.1. 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.



Displayed symbols on the panel

	Fan operation
	Energy recovery operation
	Air heater operation
	Air cooler operation
	There is a heating demand, but it is being blocked by the ECO mode
	There is a cooling demand, but it is being blocked by the ECO modes
	Air flow reduction
	ECO mode on. Free cooling operation.

	ECO mode on. Free heating operation.
	Alarm signal (see the troubleshooting section)
	Supply air
	Exhaust air
	Outside air temperature
	Air filters
	Instant heat recovery of the air handling unit
	Instant power consumption of the air handling unit

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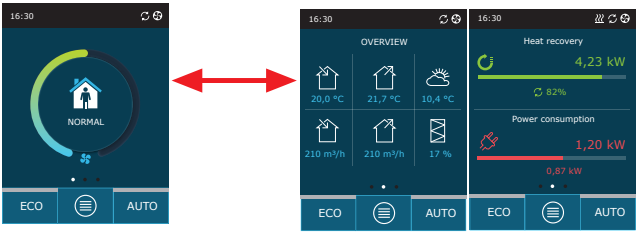
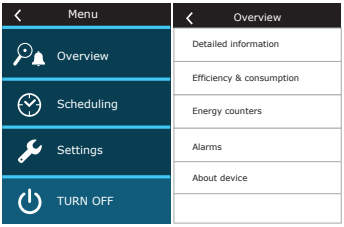
8.1.1. Parameter overview

Swipe the main window to the side to see various parameters: air flow, temperatures, filter contamination, energy recovery and power consumption.

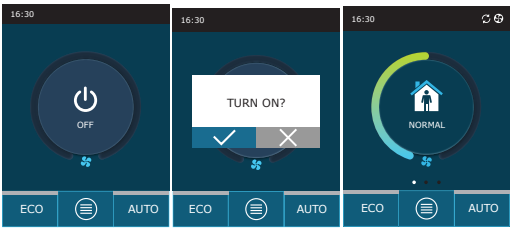


See menu section "Overview" for more parameters.



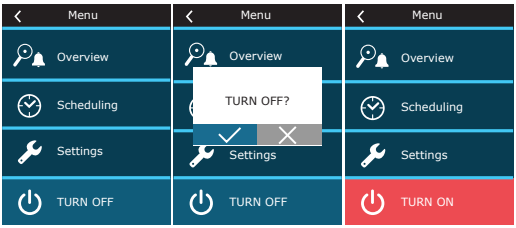
8.1.2. Turning on

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.



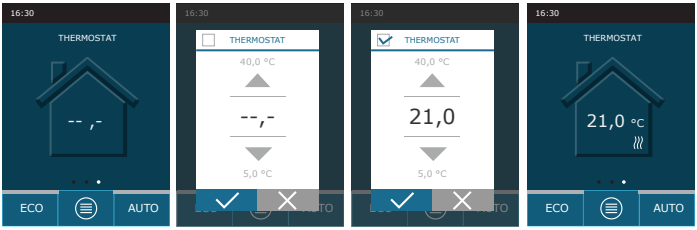
8.1.3. Turning off

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.



8.1.4. Thermostat function window[1]

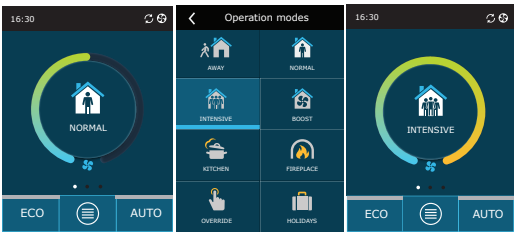
Perform the following steps to use a control panel as a thermostat (to switch on/off external devices according to the control panel temperature):
1. Swipe the main window to the side one time (if ventilation is stopped) or three times (if AHU is working).
2. Press on the house icon in the centre of the window.
3. Put a check mark at the top of the displayed message.
4. Select a desired room temperature and confirm.
5. If the actual control panel temperature is lower than the set value, the control of the external device will be activated and a function operation icon will be displayed in the function window (3 waves).



Thermostat function can also be active when the device is stopped.

8.1.5. 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.



[1] This window is displayed only with "Thermostat function" active (see "Advanced settings").

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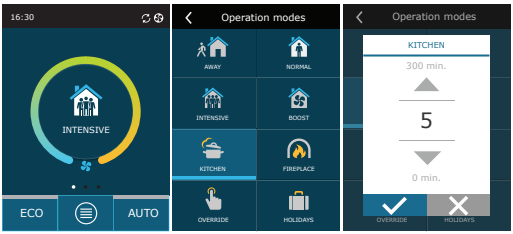
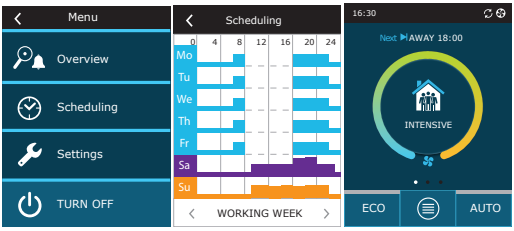
To turn on a **special ventilation mode**:
1. Press an icon indicating the current operation mode in the middle of the home screen.
2. Select and press a desired special operation mode.
3. Use the arrows to select desired operation duration and press to confirm.
4. Press the return icon at the top of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



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.

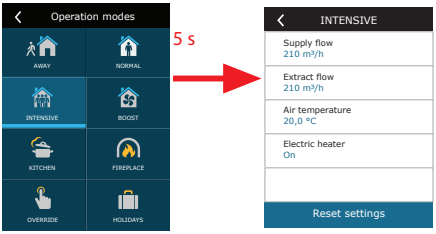


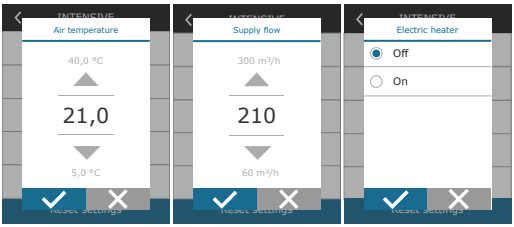
[1] Ventilation by a weekly schedule is not possible when air quality control function is activated.

8.1.6. Airflow 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.

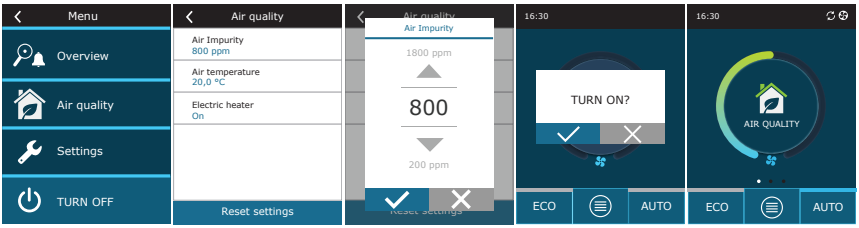




8.1.7. Air quality control mode activation and settings

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.



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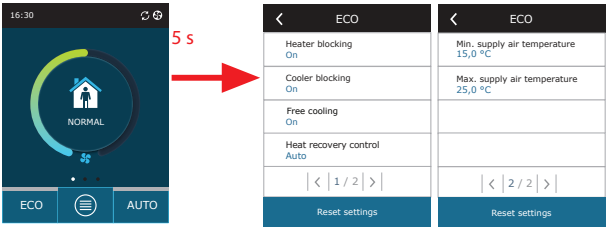
8.1.8. ECO mode activation and settings

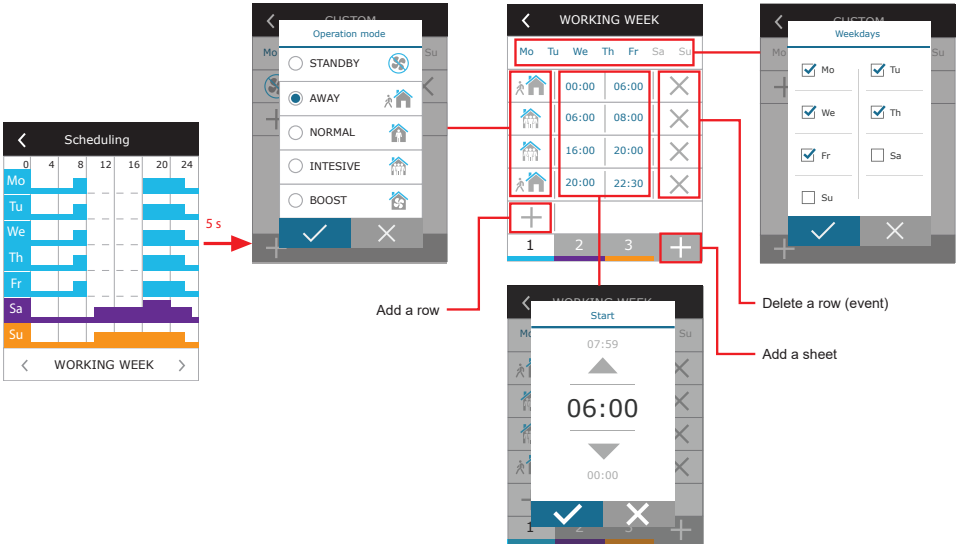
ECO mode may be activated in any ventilation mode by pressing ECO button at the bottom of the home screen. For more information about the ECO mode see chapter "Air Quality Control Functions".



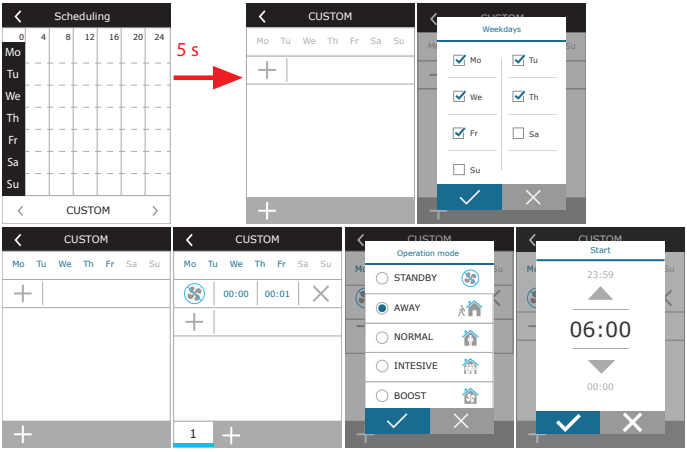
To change the ECO mode settings:
1. Press ECO button and hold it for 5 seconds.
2. Press a parameter you want to change.
3. Select a desired option or set a desired value using arrows.
4. Confirm your selection.
5. Press a return icon at the top of the window to return to the home screen.

8.1.9. 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).

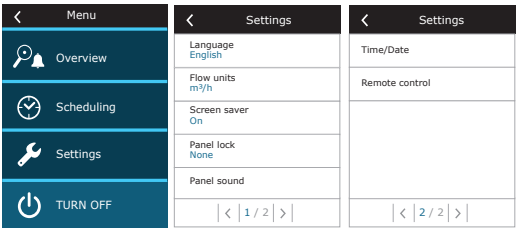


To create a weekly operation schedule:
1. Select a weekly schedule “My week” as shown in Chapter “Mode Change”.
2. Press the centre of the schedule window and hold for 5 seconds.
3. Press the weekday row to select which days of the week this schedule sheet is valid for.
4. Press + symbol and add a new row.
5. Press the ventilation mode icon on the left to select a desired ventilation mode. There is no need to include a STANDBY 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).



8.1.10. Main settings

In the menu point SETTINGS you can modify the main user interface settings:



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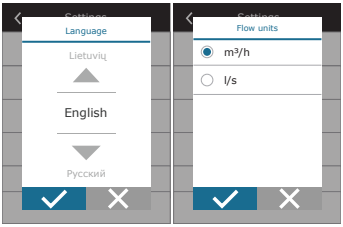
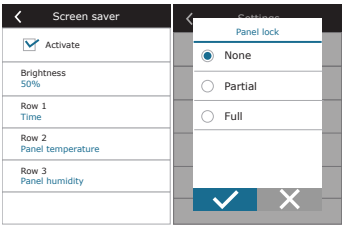
Language – set a desired control panel language using arrows.
Flow measurement units – select units for air flow measurement.

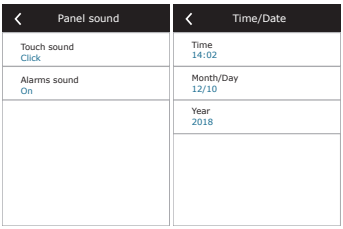


Screen saver – turn the screen saver on/off. Screen saver activates when a control panel is not used for longer than 1 min. You may select brightness of a screen saver, as well as settings and the order in which they are displayed. If a screen saver is deactivated, the control panel display turns off if not used for longer than 1 min. Tap a screen to wake-up.

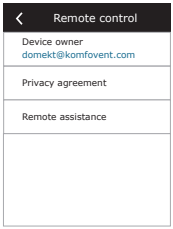
Panel lock – partial or full panel lock is available. Partial lock allows turning on/off an air handling unit and selecting desired ventilation mode but does not allow any ventilation settings to be changed. Full panel lock prevents the user from using the control panel. To unlock the panel, you have 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.



Remote control – settings for remote access to the air-handling unit.



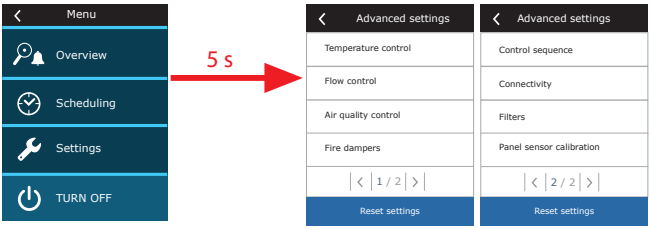
- **Device owner.** If the unit has been added to an account by an unknown person (e.g. an installer or a previous occupant of the same dwelling with a ventilation unit), their account can be removed from the unit by pressing the "Remove" button.

If you do not accept or decline the privacy policy, you cannot control the device with your smartphone or receive remote assistance from an authorized service representative.

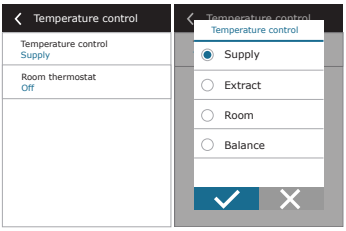
- **Privacy agreement** – after pressing the button, you will see a QR code, that can be scanned with a smartphone. After reading the privacy policy it can be accepted or declined.
- **Remote assistance** – by activating this feature, you can provide remote access to maintenance personnel or service representatives, e.g. in case of unit breakdown. Read more about this option in the "Troubleshooting" section.

8.1.11. Advanced settings

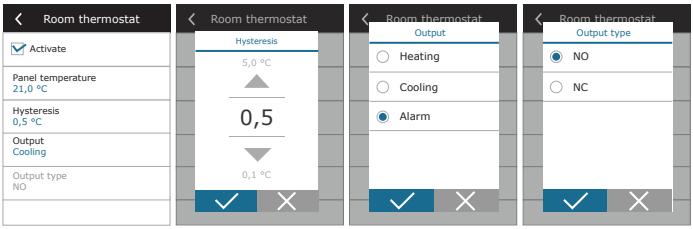
To access the advanced settings, press and hold the SETTINGS button for 5 seconds.



Temperature control – select a method for temperature control (see Chapter 7.2).



Room thermostat – here you can set parameters for proper operation of the thermostat function (see "Thermostat function"). You can set a desired control panel temperature, which will be reached by activating an external unit. You also can select hysteresis (temperature difference that activates the function). For example, if you set the desired control panel temperature to 23 °C and the hysteresis to 1 °C, the external unit will turn on when the room temperature drops to ≤ 22 °C and turn of when it rises to ≥ 24 °C. In the output field select which terminals of the C6M controller board will be used to turn on/off the external device (see "installation Manual") and select the output type: NO – normally open contact, NC – normally closed contact.



Settings in the output window refer to the terminal names of the controller, not the operation conditions of the thermostat function.

After activating the function in this menu, a new window THERMOSTAT will appear in the main window (see "Thermostat function window").

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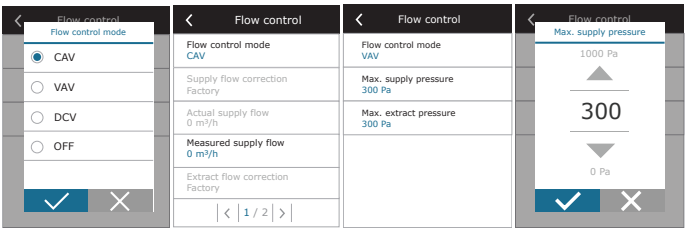
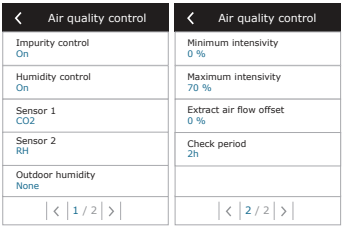
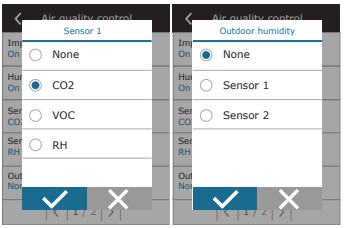
Flow control – select a method for air flow control (see Chapter 7.1). Selected CAV or DCV air flow control allows additional corrections of supply and extract air measurements, when the measured air volume does not match the actual one. This may also be due to design features of the duct system, for 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).



Air quality control – here you can activate and set-up air quality control which will be used in AUTO mode (see Chapter 7.6.2).

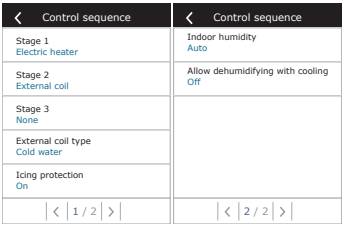


- **Impurity control** – turning on/off an impurity control function. At least one CO2 or VOC sensor must be connected to the controller board to activate this function (see Chapter 7.6.2.). If ventilation by a weekly schedule is required, this function must be turned off.
- **Humidity control** – turning 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 7.6.2.).
- **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".

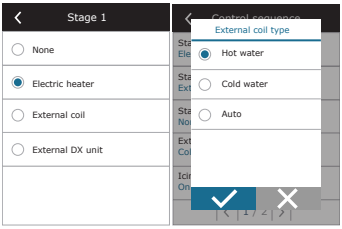


- **Minimum intensity** – select ventilation intensity at which the unit will operate when air quality (impurity or humidity) is good. If 0% is selected, the unit will stop when air impurity level is low.
- **Maximum intensity** – select ventilation intensity limit, under which the unit will operate when air quality (impurity or humidity) exceeds a defined value.
- **Extract air flow offset** – If you want the supply and extract air flow disbalance during air quality function operation, enter the percentage by which the extract air fan speed should differ in proportion to the supply air.
- **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.



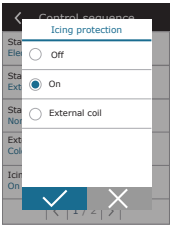
Numbers indicate the order of activation. All units have an integrated electrical heater, therefore it is factory-assigned as Stage 1. You can also assign an "external coil" (duct-mounted water heater/cooler) or an "external DX unit" (direct evaporation heat exchanger) as a stage. If an external coil 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".



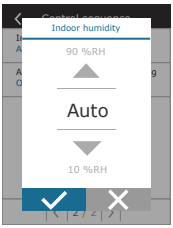
If you turn off an electric heater and do not activate a duct-mounted heater, the desired air temperature may not be reached when the outside air is cold.

You will not be able to select an external DX unit if the thermostat function is used and heating or cooling terminals are selected in the output settings thereof. If you want to use a DX unit, select ALARM terminals for the thermostat output (see "Thermostat function").

- **Icing 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").

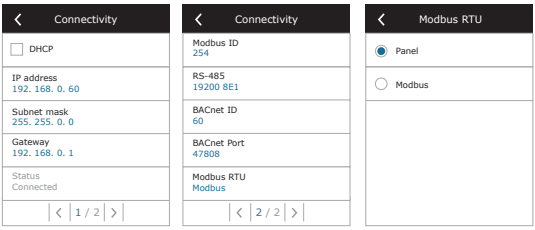


- **Indoor humidity** – this setting is required to determine freezing conditions.
  Possible settings:
  Auto – indoor humidity is set automatically using an integrated in the control panel humidity sensor and/or external humidity sensors connected to B8 and B9 terminals of the controller (see "Installation 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.

- **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 7.6.2).
  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).

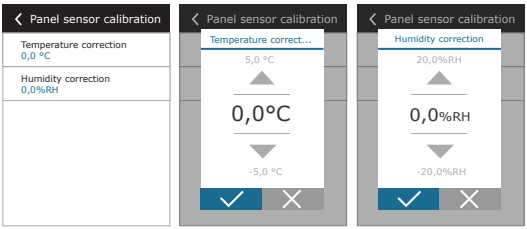


„Status" line shows connection between AHU and internet:

- **Disconnected** – AHU is not connected to LAN or internet network.
- **No internet access** – AHU is connected to LAN network and communicates with router, but internet is not accessible.
- **Connected** – AHU has internet access.

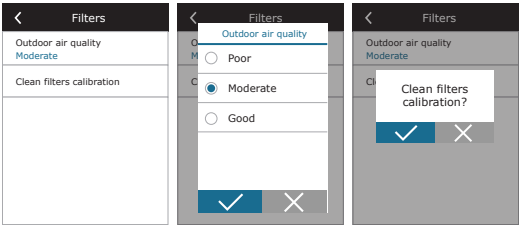
In the „Modbus RTU" line, it can be selected what device is connected to the terminals 1-2 of the C6 main board (See Domekt installation manual). A control panel of the unit or a building management system can be connected here. If mentioned terminals on the board are not used, do not change this setting and leave it as "Panel".

Panel sensor calibration – If the temperature and/or relative humidity measured by internal control panel sensors do not match the parameters measured by other devices, the accuracy of the sensors can be adjusted in this menu. The measured temperature may be adjusted within ± 5 ° C and the humidity within ± 20% range.

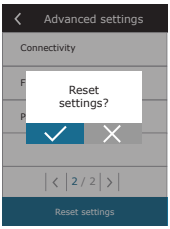


Filters. Here you can set outdoor air quality parameters or perform new filter calibration:

- **Outdoor air quality.** The time it takes for air filters to get dirty depends a lot on the environment in which the building is located. If the ambient air is very polluted, the filters will get dirty much faster and will need to be replaced more often. If the air quality of the environment is good, the filters will last longer. Since the air handling unit does not measure outdoor air quality, it can be specified in this menu, thus filter contamination messages will be more accurate.
- **Clean filters calibration.** After replacement, you must reset a filter timer by clicking this button.

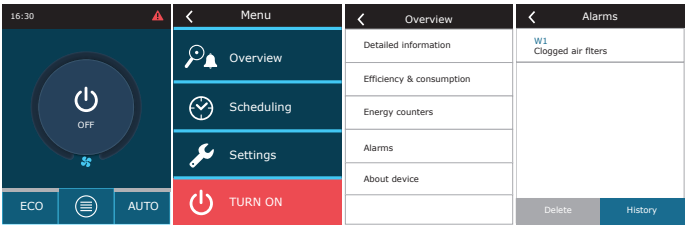


Reset settings – allows restoring factory settings.



8.1.12. 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”.

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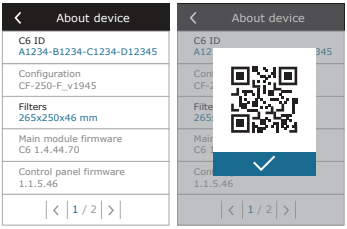
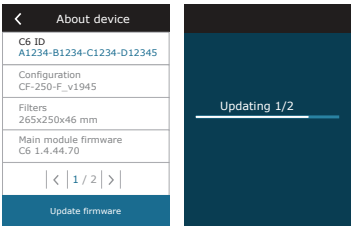
8.1.13. About device

In the „Overview“ screen, menu „About device“ displays information about AHU type, firmware versions and serial number. By pressing C6 ID line, QR code will be generated, that can be used when connecting via Komfovent Control mobile app.



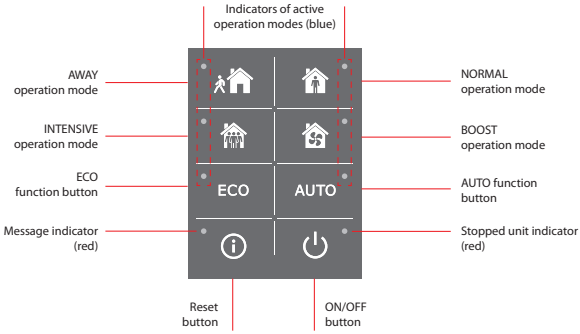
Update firmware. This button will only be visible when the ventilation unit is connected to the Internet and there is a newer firmware version than the one already stored in the controller. By pressing the button, the newer firmware will be automatically downloaded and installed into the ventilation unit. You will see the progress of the program update on the control panel screen.



- **Stop the air handling unit before starting the firmware update.**
- **If the Internet connection is lost during the firmware update, the update will be stopped and will restart automatically when the connection is restored.**
- **Make sure that the power supply will not be interrupted during the update, otherwise, the update will fail and the controller’s main board may be damaged.**

8.2. 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 7.3) 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.



8.2.1. 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.

8.2.2. 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.

8.2.3. Control panel sounds

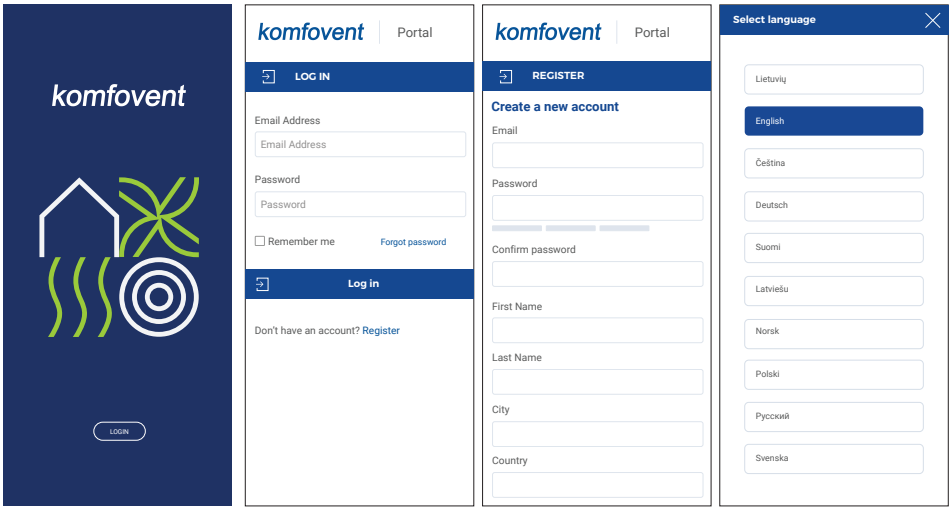
When a message appears, the control panel notifies the user with a beep. You may temporarily disable an audible alarm by pressing the reset button or deleting a fault message.
To disable audible alarms perform the following:
1. Press the ON/OFF button and hold for 5 seconds until you hear a beep and 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.

8.2.4. 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.

8.3. Control via smartphone

To control the unit via a smartphone, the "Komfovent Control" app is required. Before using the app, you will need to create an account and sign in. This can be done by visiting the *control.komfovent.com* website or directly within the app.



You will choose the app language when launching it for the first time. If needed, it can later be changed in the app settings.

Different languages can be used in the app and on the control panel.

8.3.1. Connecting to the unit using the "Komfovent Control" app

After connecting the unit to a network router with internet access, wait until the unit controller adapts to the local network. If you are using a control panel, you can check the connection status of the unit in the "Connectivity" window (see section "8.1.11 Advanced settings") and view the assigned IP address:

If you do not have a control panel, after connecting the internet cable simply wait 3–5 minutes for the unit to synchronise with the network router.

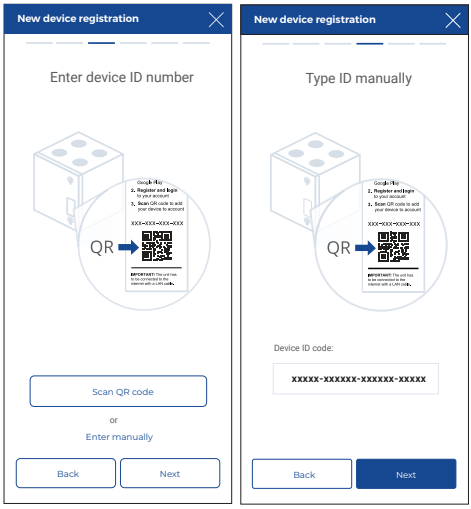
The "Komfovent Control" app may not function if the network router and/or firewall settings do not support the UDP data protocol.

On your smartphone (the phone must have internet access), open the “Komfovent Control” app. If you are the owner of the ventilation unit, the built-in wizard in the app will help you add your first unit.

To add a unit, you will need to scan a QR code, which can be found:

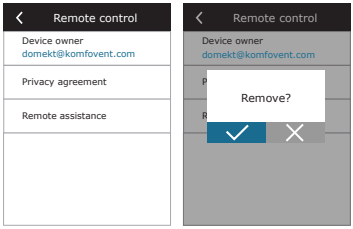
- on the unit door;
- on the main control board (see the “Installation manual”);
- on the control panel (see section “8.1.13 About the unit”).

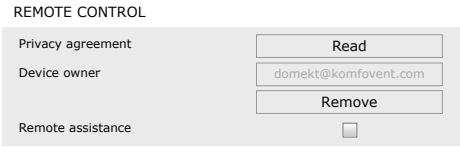
If, for any reason, the QR code cannot be scanned, the unit ID (indicated next to the QR code) can also be entered manually.



Only one owner of the same unit can be registered in the “Komfovent Control” app. If the unit has already been assigned to another “Komfovent” account, you will not be able to control it unless the owner shares its control from their account. If you want to connect to a ventilation unit whose control has been shared with you by the owner, simply skip the wizard.

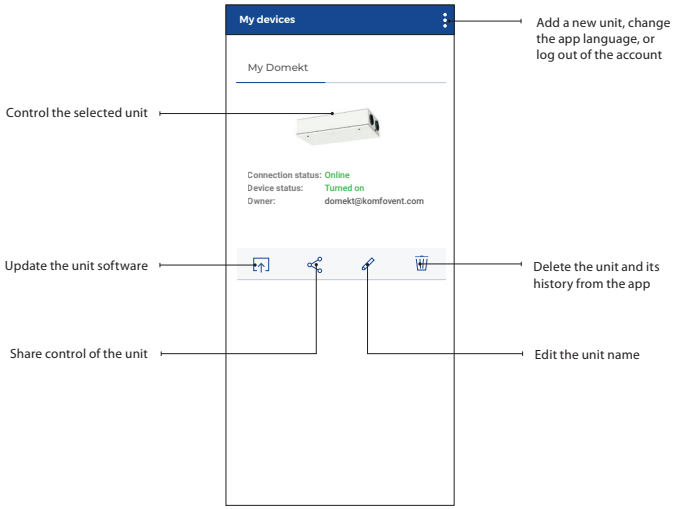
If the unit has been added to an account by an unknown person (e.g. an installer or a previous occupant of the same dwelling with a ventilation unit), their account can be removed from the unit via the control panel (see section “8.1.10 Basic settings”) or within the local network by connecting directly to the unit through a web browser (see section “8.4.8 Settings”).



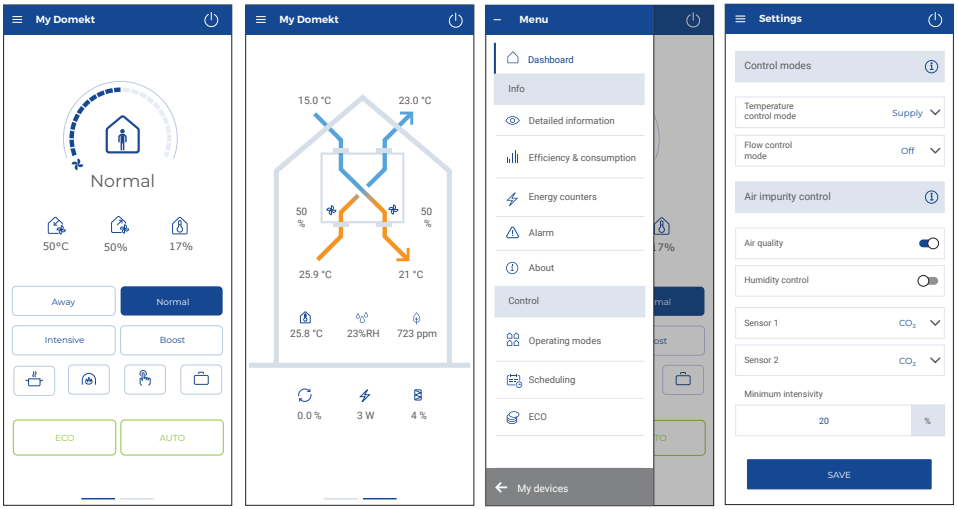


8.3.2. Main functions of the "Komfovent Control" app

After launching the app, you will first see the list of units assigned to you. Here you can add more units, change the app language, delete a unit, or rename it. To access the unit control interface, tap its image in the list.



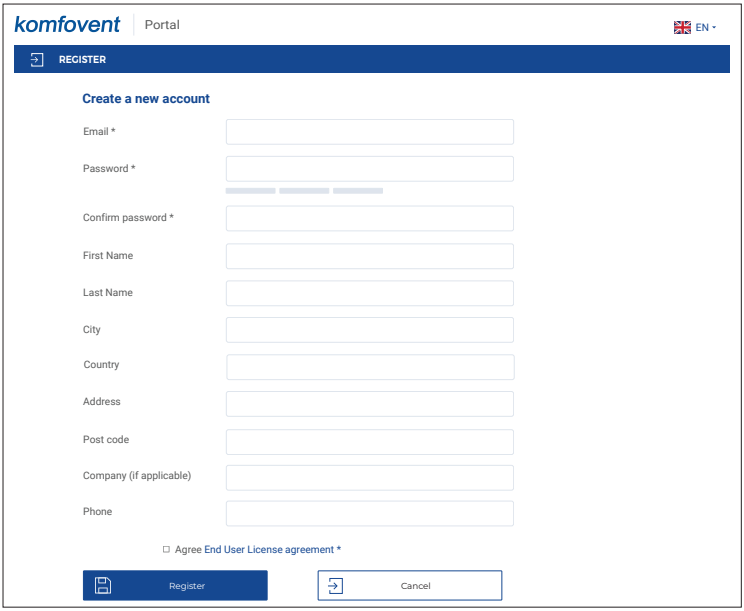
The app on a smartphone provides the user with the same unit control capabilities as when controlling it via a control panel or computer. Although the interface windows differ, the control modes, additional functions, and settings remain the same.



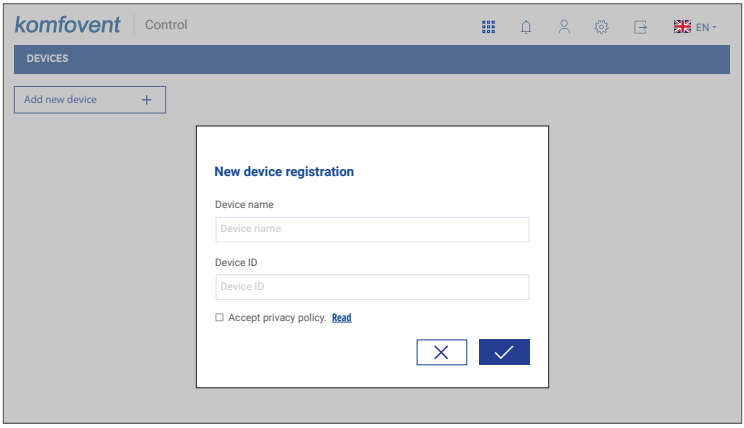
8.4. Internet control

The unit can be controlled via the Internet using a computer on the website control.komfovent.com or a smartphone with the "Komfovent Control" app. Before controlling the unit, you will need to create an account and register. This can be done by visiting the control.komfovent.com website or directly in the mobile application (see "Control via smartphone").

Register on the *control.komfovent.com* website by entering your account details:



If you have added your ventilation unit in the "Komfovent Control" mobile app or if the unit owner has shared control with you, you will see a list of units here. To add your first or an additional unit, click the "Add new unit" button and fill in the required details.



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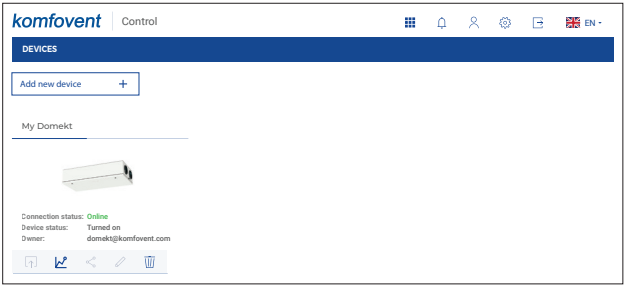
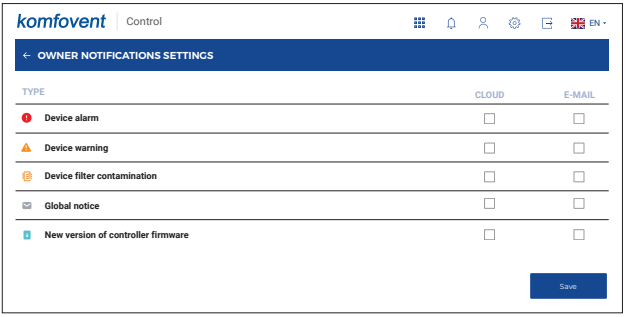
The unit ID can be found:

- next to the QR code on the unit door;
- on the main control board (see “Installation manual”);
- on the control panel (see section “8.1.13. About the unit”).

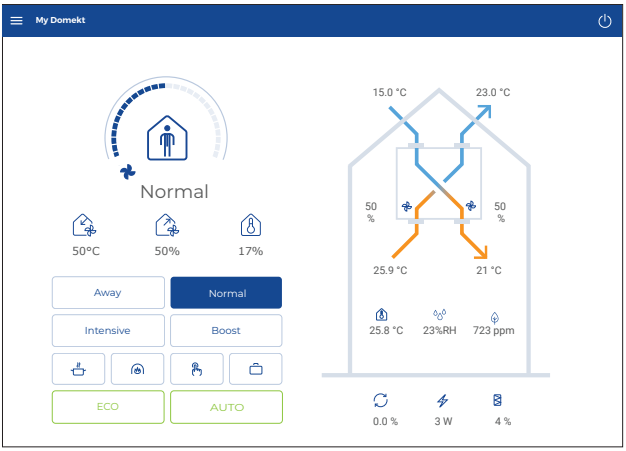
You will see all units you have added and those shared with you in the list. To control a unit, simply click on the image of the specific unit.



By clicking the settings button and selecting the “Owner notification settings” option, you can choose which unit notifications to display in the “Control” environment and which to receive by email.



The unit control environment is almost identical to the “Komfovent Control” app and provides the user with the same capabilities as controlling the unit via a control panel or smartphone.

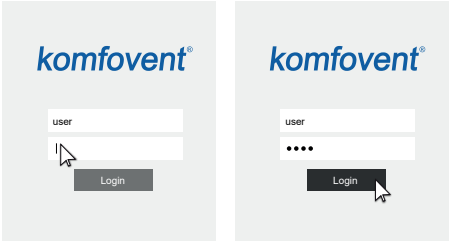


8.5. Control via a computer without an internet connection

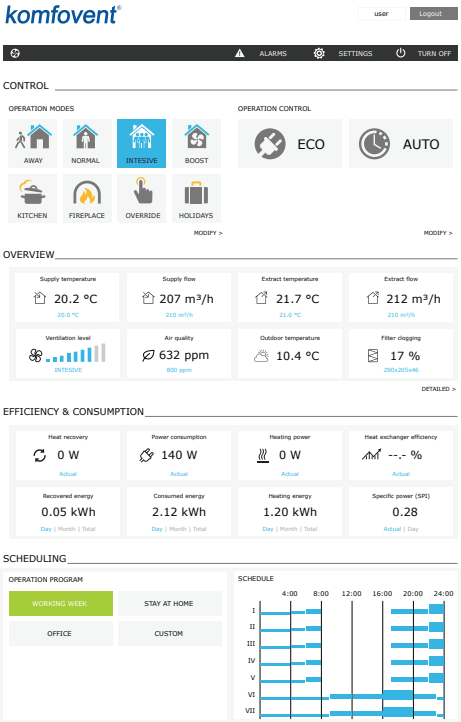
The device can also be controlled from a computer within a local network (without internet) or by connecting to it directly. For information on connecting the unit to an internal network or directly to a computer, see the "Installation Manual".

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] 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 using control panel.

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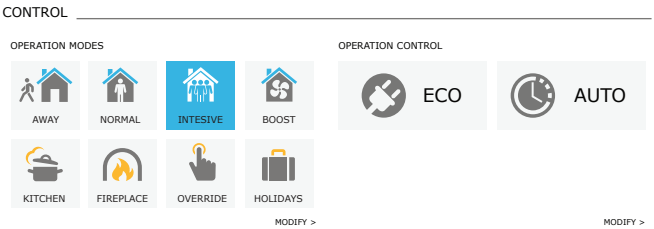
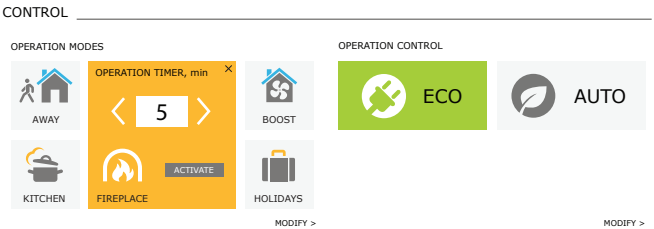
8.5.1. Turning on/off and changing operation modes

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:

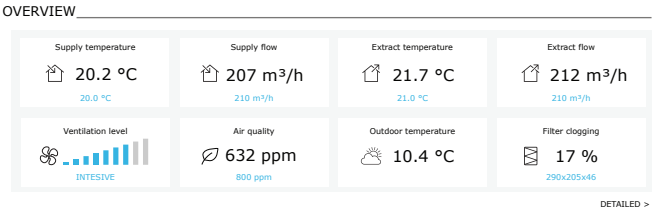


If you select a special operation mode, you will need to select the duration of operation. ECO and AUTO modes are activated by pressing buttons on the right side of the window. Button of a selected mode will change its colour:

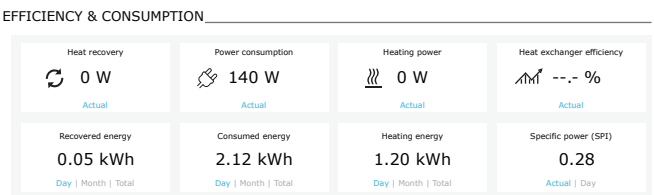


8.5.2. Parameter overview

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

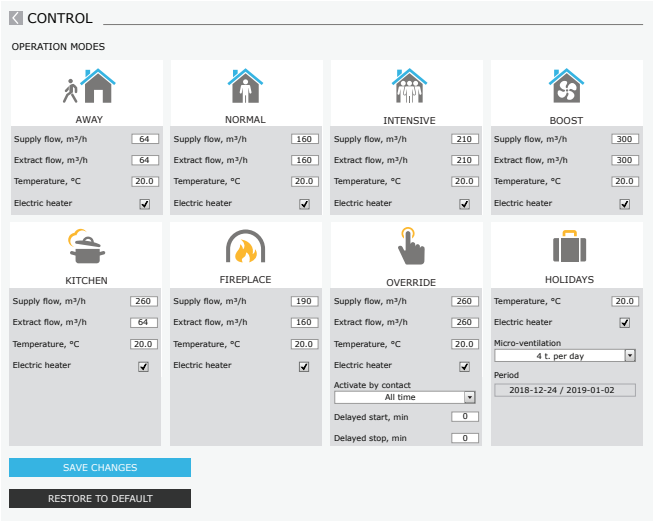


Section EFFICIENCY & CONSUMPTION displays measured and calculated power, power consumption and efficiency parameters. Daily, monthly, or total energy recovery and consumption is displayed by pressing buttons under a desired parameter.



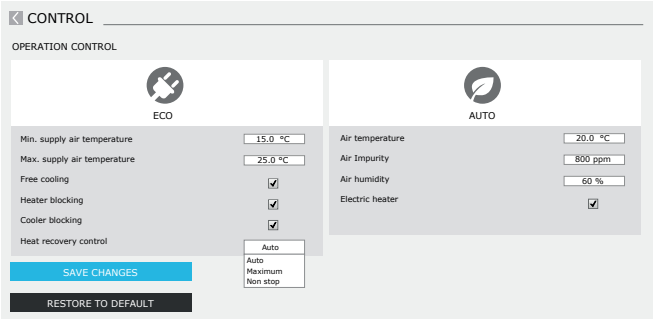
8.5.3. Airflow and temperature settings

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.



8.5.4. 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 7.5 and 7.6. 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.



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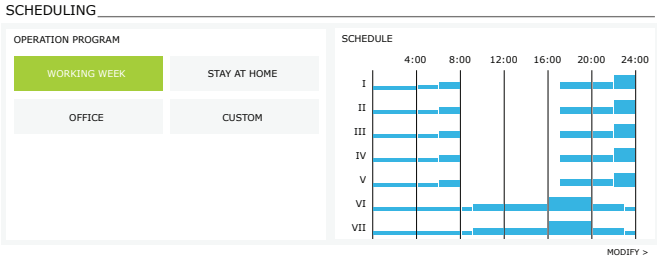
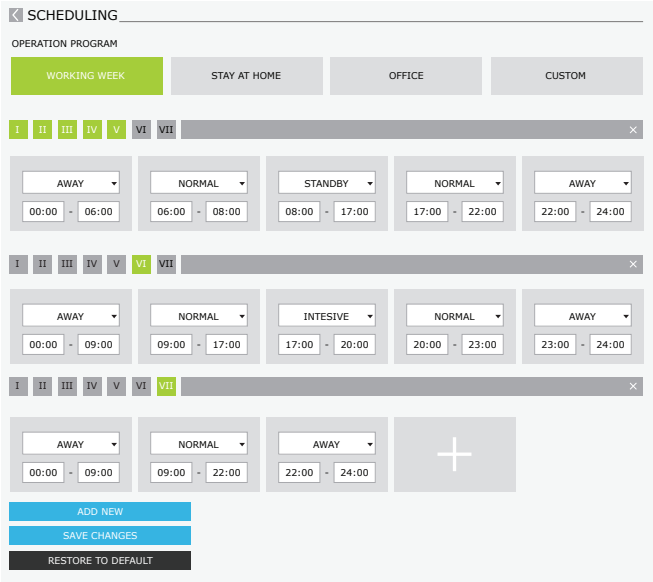
8.5.5. Ventilation by a weekly schedule

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.



8.5.6. Creating a weekly schedule

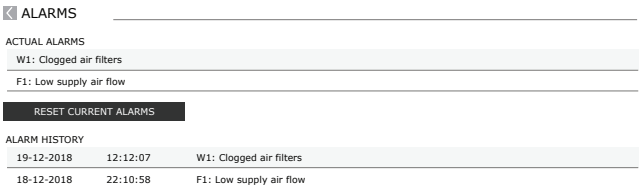
You can modify a weekly schedule or create your own schedule by pressing the button "Modify" in the main window next to the section "Scheduling". In the window that opens, you can choose from pre-programmed weekly programs or may as well create a new one. You may program 4 different days in each operation 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.



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

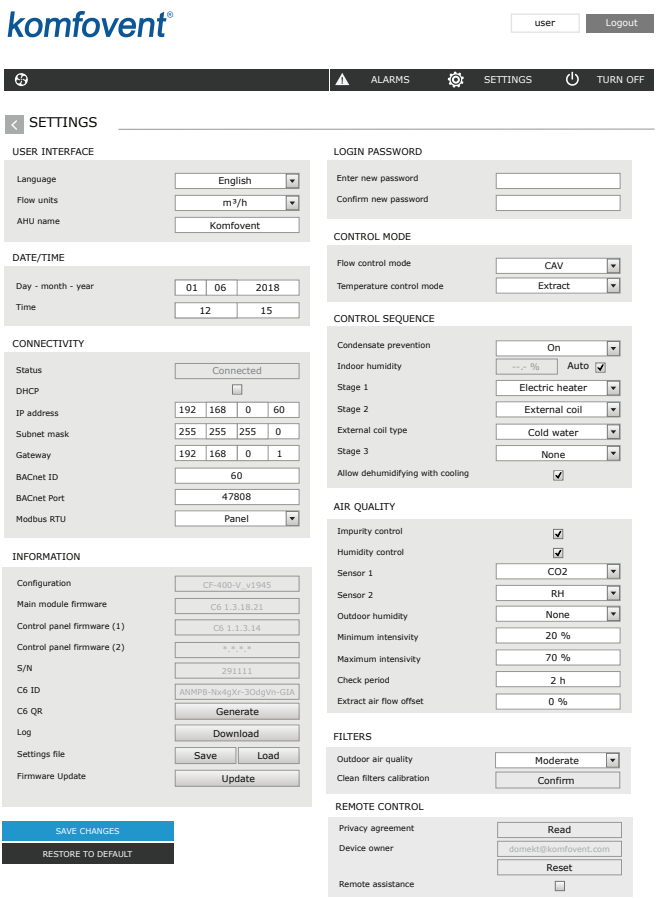
8.5.7. Alarms

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.



8.5.8. 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.



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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** – m^3/h or l/s. These units will be applied while operating in CAV or DCV flow control modes (see Chapter 7.1). 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.

"Status" line shows connection between AHU and internet:

- **Disconnected** – AHU is not connected to LAN or internet network.
- **No internet access** – AHU is connected to LAN network and communicates with router, but internet is not accessible.
- **Connected** – AHU has internet access.

In the „Modbus RTU" line, it can be selected what device is connected to the terminals 1-2 of the C6 main board (See Domekt installation manual). Additional control panel for AHU, building BMS system or external fire damper controller can be used. If mentioned terminals on the board are not used, do not change this setting and leave it as "Panel".

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

- By pressing "Generate" button, QR code will be generated, that can be used when connecting via Komfovent Control mobile app.
- 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.
- **Update firmware.** This button will only be visible when the ventilation unit is connected to the Internet and there is a newer firmware version than the one already stored in the controller. By pressing the button, the newer firmware will be automatically downloaded and installed into the ventilation unit. You will see the progress of the program update on the control panel screen. If newer version is not available, button will show "Up to date" text instead.

- **Stop the air handling unit before starting the firmware update.**
- **If the Internet connection is lost during the firmware update, the update will be stopped and will restart automatically when the connection is restored.**
- **Make sure that the power supply will not be interrupted during the update, otherwise, the update will fail and the controller's main board may be damaged.**

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 7.1 and 7.2).

- **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 7.2).

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

- **Icing protection** has the following settings:
  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 required to determine freezing conditions. 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.

- **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 7.6.2).

AIR QUALITY – here you can activate and set-up air quality control which will be used in AUTO mode (see Chapter 7.6.2):

- **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 7.6.2). 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 7.6.2).
- **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%.
- **Extract air flow offset** – If you want the supply and extract air flow disbalance during air quality function operation, enter the percentage by which the extract air fan speed should differ in proportion to the supply air.

FILTERS. Here you can set outdoor air quality parameters or perform new filter calibration:

- **Outdoor air quality.** The time it takes for air filters to get dirty depends a lot on the environment in which the building is located. If the ambient air is very polluted, the filters will get dirty much faster and will need to be replaced more often. If the air quality of the environment is good, the filters will last longer. Since the air handling unit does not measure outdoor air quality, it can be specified in this menu, thus filter contamination messages will be more accurate.
- **Clean filters calibration** – after replacement, you must reset a filter timer by clicking this button.

FILTERS

Outdoor air quality	Moderate
Clean filters calibration	Confirm

REMOTE CONTROL – settings for remote access to the air-handling unit

REMOTE CONTROL

Privacy agreement	Read
Device owner	domekt@komfovent.com
	Remove
Remote assistance	☐

- **Privacy agreement** – after pressing the button, you will see a QR code, that can be scanned with a smartphone. After reading the privacy policy it can be accepted or declined.

If you do not accept or decline the privacy policy, you cannot control the device with your smartphone or receive remote assistance from an authorized service representative.

- **Device owner.** If the unit has been added to an account by an unknown person (e.g. an installer or a previous occupant of the same dwelling with a ventilation unit), their account can be removed from the unit by pressing the "Remove" button.
- **Remote assistance** – by activating this feature, you can provide remote access to maintenance personnel or service representatives, e.g. in case of unit breakdown. Read more about this option in the "Troubleshooting" section.

9. 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 9.1).
- 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.**

9.1. 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 7.1), 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 7.1), 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	Air bypass damper of the counter-flow heat exchanger malfunctioning (only for DOMEKT CF units).	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.
F38–39	Air flow sensor failure	Disconnected or faulty air flow sensor(s)	It is necessary to check the sensor connections or to change the sensor.
F40	Communication error	1. Wrong settings 2. Not connected or broken external fire damper controller.	1. If fire damper system controller is not used with AHU, disable it in the Settings->Connectivity->Modbus RTU 2. Contact person responsible for fire damper system maintenance or authorized service.
F42-F45	Fire damper failure	Incorrect operation of one or more fire damper actuators	Contact person responsible for fire damper system maintenance or authorized service.
F46-F50	External fire alarm	External fire alarm received from fire damper controller.	Fire alarm can be generated from building fire system, from smoke detectors, thermostats of the damper actuator or etc.
F51-F52	Electric heater overheat	1. Integrated heaters malfunctioning. 2. Faulty air temperature sensor.	Contact authorised service.
F53 - F55	Supply fan drive failure	Supply air fan not working.	Contact authorised service.
F56	Communication error	There is no connection with the supply air fan.	1a. Check the fan connection. 1b. Contact authorised service.
F57 - F58	Fan pressure sensor failure	The supply air fan is malfunctioning.	Contact authorised service.
F59 - F61	Exhaust fan drive failure	Extract air fan not working.	Contact authorised service.
F62	Communication error	There is no connection with the extract air fan.	1a. Check the fan connection. 1b. Contact authorised service.
F63 - F64	Fan pressure sensor failure	The extract air fan is malfunctioning.	Contact authorised service.
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.

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Code	Message	Possible cause	User's actions
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. Supply air volume significantly exceeds the extract air volume. 2. 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.
W7	Temperature sensor failure	Extract air temperature sensor (SHI) not connected or defective.	Contact authorised service.

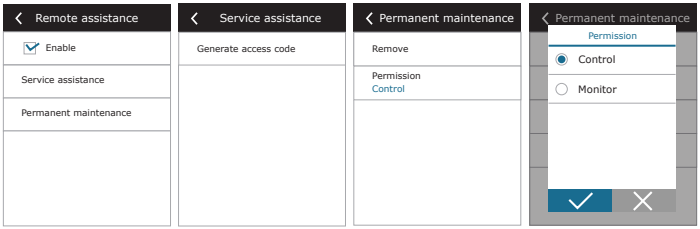
9.2. Table of light indicators of the C6.2 control panel

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 8.2. Different blinking and colour indicates different messages.

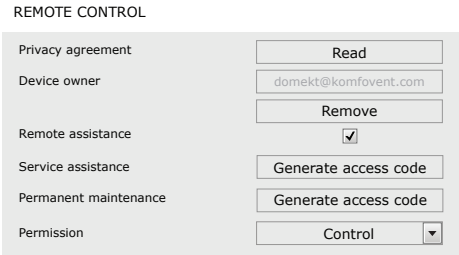
Indication	Operation	Possible cause	User's actions
Indicator near ON/OFF button lights up in red.	Device not working	Device stopped.	Press ON/OFF button to turn on/off the device.
Blue indicator near one of ventilation mode buttons is blinking	Device not working	The unit will soon start in a ventilation 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 9.1.
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 9.1.
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 8.2.4). 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.

9.3. Remote control

If the ventilation unit is connected to the Internet, remote access to it can be provided to service representatives or a maintenance company if necessary. In the "Settings" menu, in the "Remote control" window, you will find the "Remote assistance" function.



As well, settings of the "Remote assistance" function can be found in the web interface if computer is connected directly to the air handling unit.



Remote access can be granted temporarily, for example only during the repair of the device or for permanent monitoring to the maintenance personnel.

Before activating the "Remote Assistance" function, contact the company maintaining the device or an authorized service representative. You will need to provide them with a generated access code, which will be used for the connection.

UAB KOMFOVENT we reserve the right to make changes without prior notice

10. 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.

The operation, maintenance or repair of the air handling unit is prohibited for people (including children) with mental, physical or sensory disabilities, as well as for persons without sufficient experience and knowledge, unless supervised and instructed by the person responsible for their safety in accordance with these instructions.

- **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 doors on some unit models do not have hinges, so do not let the door out of your hands after unlocking it, as it may fall and cause injury.**

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 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 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.

10.1. 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 8. 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.

When placing the filter in the ventilation unit, take into account the direction of the air flow, otherwise the filter will not work effectively. The direction of air flow is indicated by the arrow on the sticker on the filter frame.

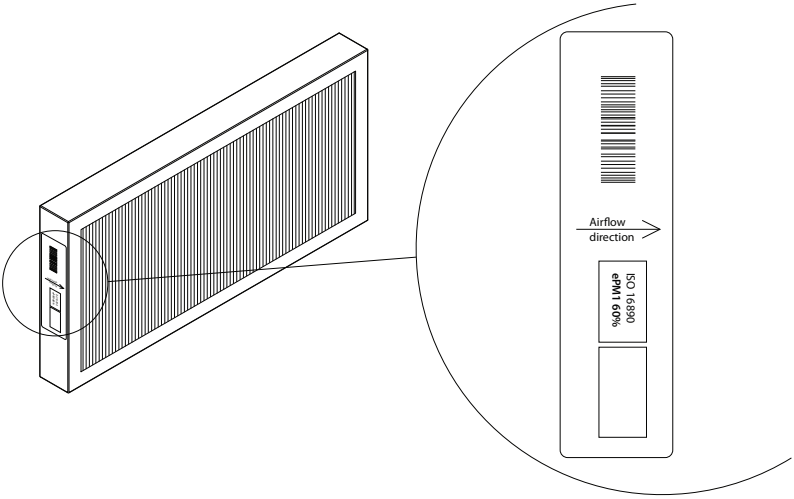


Fig. 18. A filter sticker indicating the direction of air flow

In a ventilation unit, air always moves towards the center of the unit, so place the filters so that their arrow points towards the heat exchanger.

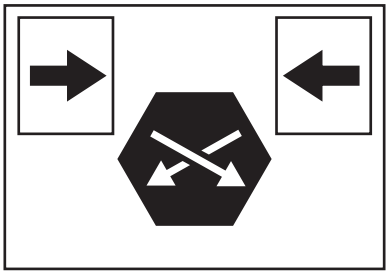
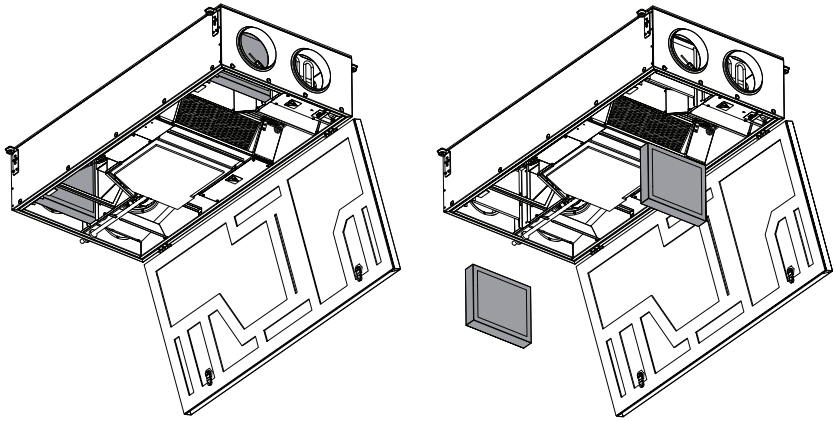


Fig. 19. Example of filter direction in the unit

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 CF 250 F



10.2. Unit maintenance log

This table records the repair or periodic maintenance work carried out on the unit. The log must be completed if the ventilation unit is covered by an extended manufacturer's warranty.

Date	Work performed / notes	Work carried out by (name, surname, signature)

APENDIX NO.1

KOMFOVENT CONTROL TERMS OF USE AND PRIVACY NOTICE

1. Introduction

These Terms of Use ("the Terms") govern the use of the KOMFOVENT CONTROL mobile application, operated by KOMFOVENT, UAB ("KOMFOVENT"), and the use of other related services. KOMFOVENT CONTROL is a mobile application designed to CONTROLly monitor and control a KOMFOVENT air handling unit connected to the Internet. These Terms also contain information about personal data processed for the above-mentioned purposes.

You must confirm that you have read the Terms of Use to use the KOMFOVENT CONTROL application. Please read all the Terms carefully and start using the KOMFOVENT CONTROL application only if the terms are clear and acceptable. KOMFOVENT reserves the right, at its sole discretion, to change these Terms of Use. If you continue to use KOMFOVENT CONTROL after we post changes to the Terms of Use, you are signifying your acceptance of the new terms.

2. Functionality

KOMFOVENT CONTROL allows monitoring and controlling your KOMFOVENT air handling unit remotely. As a user, you can see existing errors or warning messages, select and adjust the AHU settings and main parameters that provide information about the operation of the unit and facilitates its control.

The user can turn the device on/off, change modes and settings (airflow, temperatures, etc., depending on the device configuration), set a weekly schedule or air quality control function. User can monitor: sensor readings (temperature, humidity, etc., depending on installed sensors), flow/fan intensity information, heat exchanger operation and efficiency, filter contamination, power consumption, messages, message history, etc. KOMFOVENT may also perform software updates remotely (regarding bug fixes, compatibility of the application/controllers/server, support of new functions, etc.).

Detailed information on the KOMFOVENT CONTROL functions and operation can be found in the DOMEKT User Manual available at www.komfovent.com.

In case of any discrepancies between the product information provided in the Terms of Use and the User Manual, the information specified in the User Manual shall prevail.

3. Your Responsibility

Device ID number (ID) and a password identify you as a user in the KOMFOVENT CONTROL application. We strongly recommend that you make use of a unique and strong password that is reasonably hard to guess or find out (for example, do not use your name, birth date, car make or the same password used in other accounts) and do not disclose it to others. If you suspect someone is using your password, change it immediately.

The use of the KOMFOVENT CONTROL application is free except for any possible data usage fees that may be set by your Internet service provider.

4. Rights

Copyrights, other rights and contents of KOMFOVENT CONTROL are owned by KOMFOVENT and protected by law.

Commercial use of these rights without a prior written consent of KOMFOVENT is prohibited. This also applies to copying, transferring and sale of information, images, graphics, program codes and technical solutions. Bypassing security measures or system is prohibited.

Unauthorized use or distribution of the KOMFOVENT CONTROL application may violate copyrights, trademark and/or other laws and may be subject to civil and criminal liability.

5. Privacy Notice

5.1. Installation

In order to install the KOMFOVENT CONTROL application, you must agree with the Terms of Use and connect your controller to the Internet. Once the controller is connected to the Internet, the following data is periodically sent to the KOMFOVENT server:

- Product/controller ID number (ID).
- Software versions.
- Device configuration name.
- Product serial number.
- IP address and port number of the controller.
- Date of the first attempted login.

The processing of this data is necessary for the operation of the KOMFOVENT CONTROL app and provision of remote control services. If you use the KOMFOVENT CONTROL application, the legal basis for the processing of such data is the execution of the agreement on the use of the KOMFOVENT CONTROL mobile application.

The above-mentioned data is periodically sent to the KOMFOVENT server even if you do not start using your KOMFOVENT CONTROL application or decide to stop using KOMFOVENT CONTROL after connecting your device to the Internet. In this case, the legal basis for the processing of such data is your consent expressed by connecting your controller to the Internet. To stop sending the above-mentioned data, disconnect your controller from the Internet.

5.2. Login

To start controlling and monitoring your device via the KOMFOVENT CONTROL application, simply enter your device ID/scan the QR code and enter your password in the application. The controller and mobile phone must have access to the Internet.

5.3. Data Categories and Objectives

The following is an overview of data and personal information processed by KOMFOVENT:

Account credentials:
- User password.

Information about the product and its use:
- Date of the controller's first attempt to connect to the server.
- Product/controller ID number (ID).
- Product serial number.
- Software versions.
- Device configuration name.
- Data and parameters for control and operation of the product/device:
  - Operation modes and settings: flow, temperature, humidity and air quality settings, disabling or enabling of individual units.
  - Values for different types of device sensors, for example, temperature sensors, humidity sensors, etc.
  - Calibration values, operation limits.
  - Informative parameters: fan control levels, efficiency, energy consumption meters, notifications.
  - Parameters affecting device performance.
  - Weekly schedule times, programs, modes.
  - Settings of time, measurement units.

KOMFOVENT processes personal data for the following purposes:
- To provide a remote control feature to the user;
- To provide remote assistance;
- To analyse product operation;
- To improve the product and the KOMFOVENT CONTROL operation;
- To handle complaints and warranty requests.

The legal basis for the processing of such data is the execution of the agreement on the use of the KOMFOVENT CONTROL mobile application.

5.4. Storage and Deletion

Data specified in point 5.1 Installation is periodically sent to the KOMFOVENT server. The server does not connect to the controller and does not store any more data until the KOMFOVENT CONTROL application is downloaded and the Terms of Use are accepted. Once the Terms of Use are accepted, the server starts periodically collecting the data specified in point 5.3 Data Categories and Objectives.

Device data history is stored for 1 month.

After that, the data is safely and carefully deleted unless it is anonymized or there are other reasons and legal basis for extended storage.

5.5. Transfer of Personal Data

Personal data processed by KOMFOVENT shall not be transferred to third parties for management purposes. Personal data may only be transferred to data processors providing installation, maintenance and other services to KOMFOVENT. These companies process data on our behalf and under signed data processor contracts.

Your data will not be transferred to others unless you have given your consent or KOMFOVENT has a legal obligation to transfer such data or the transferred data is anonymized.

5.6. Additional Information

You have the right to access your personal data, to have it corrected or deleted, to restrict the processing and portability of your data, to refuse the processing of your personal data and the right to complain to the State Data Protection Inspectorate. Requests for enforcement of your rights shall be sent to the specified e-mail address or to the KOMFOVENT, UAB office address.

6. Notification and Termination

You may stop using the KOMFOVENT CONTROL app and/or stop periodical collection of your device information specified in point 5.3 Data Categories and Objectives at any time. This can be done in the KOMFOVENT CONTROL application by refusing to accept the Privacy Policy. By refusing to accept the Privacy Policy, you lose access to the KOMFOVENT CONTROL application and your device data is deleted from the KOMFOVENT server unless it is anonymized or there are other reasons and legal basis for extended storage.

If you transfer ownership of the product, you shall inform the new owner of the Terms of Use of KOMFOVENT CONTROL.

KOMFOVENT may terminate your access to the KOMFOVENT CONTROL application by notifying you 90 days in advance about the termination of the KOMFOVENT CONTROL services or planned major changes to the program. KOMFOVENT may also terminate or limit your access to the KOMFOVENT CONTROL if you violate these Terms of Use.

7. Disclaimer

Internet access is required for the proper functioning and failure-free operation of the KOMFOVENT CONTROL application according to these Terms and Product User Guide. In rare cases, KOMFOVENT CONTROL or a part thereof may be unavailable due to, for example, program updates, Internet network problems or other malfunctions.

KOMFOVENT will make every effort to ensure that the KOMFOVENT CONTROL app is free from viruses and other threats, but cannot guarantee this. You shall be held responsible for using and maintaining antivirus software and other security features on your phone and for backing up your data.

If you receive an error message or notice the error yourself, please report it to KOMFOVENT. KOMFOVENT shall not be held liable for any direct or indirect loss incurred by you or others if the KOMFOVENT CONTROL app cannot continue to operate as expected.

8. Contact information and other

The remote service provider and data controller is KOMFOVENT, UAB, company code 124130658, registered address Lentvario g. 146, 25132 Vilnius,

e-mail: info@komfovent.com.

For more information about KOMFOVENT products and services visit www.komfovent.com.

APENDIX NO.2

WARRANTY INFORMATION

Dear Customer,

KOMFOVENT thanks you for your choice. We are pleased that you have chosen us and will strive to ensure you are satisfied with your purchased product. To avoid misunderstandings, we kindly ask you to read the installation and operating instructions of the product carefully.

KOMFOVENT hereby confirms the obligations set by applicable consumer rights protection laws to fulfil consumer claims in case of detected product defects.

In case of any problems, we recommend immediately contacting the company that installed your ventilation unit, the company providing technical maintenance, or the nearest KOMFOVENT distributor branch. Please always note the device serial number. The device's serial number can be found on a sticker attached to the outside of the unit or on a plate mounted on the unit frame. Your claim will be registered and, if repair of the device is required, a representative will agree with you on a convenient arrival time. All repairs covered by the warranty will be carried out free of charge – with no charges for spare parts or labour.

Only an authorized representative can decide whether defective parts should be repaired or replaced with new ones. Replaced or repaired parts remain covered by the overall unit warranty. If repairs are performed after the end of the device's warranty period, the replaced or repaired parts are covered by a 6-month warranty.

The warranty covers all defects in the device arising from manufacturing or assembly faults. When operating the device under the conditions listed below, this warranty is valid from the product purchase date. If the purchase date is unknown, the warranty is calculated from the manufacturing date.

NORMAL OPERATING CONDITIONS

1. The devices must be protected from direct water ingress (rain or snow) and the effects of chemicals or be of special configuration intended for outdoor and/or aggressive environments.

2. The ambient temperature must be from -30 °C to +40 °C (if the unit wall thickness is at least 45 mm) or from 0 °C to +30 °C (if the unit wall thickness is at least 20 mm); exhaust air temperature – from +10 °C to +40 °C; relative air humidity – from 20% to 80%, non-condensing. The ratio of temperature and humidity must not exceed condensation conditions, i.e., condensation must not form on the inner or outer walls of the unit.

3. When starting equipment in new buildings or renovated premises during the autumn-winter season, the exhaust air humidity often exceeds normal operating conditions, and due to dust from construction materials, air filters may become clogged immediately after startup. It is recommended to dry and ventilate the premises before starting the ventilation equipment.

4. The ventilation unit must be periodically inspected (recommended interval – every 4 months): filters and heat exchangers checked for contamination, moving parts and belts checked. Air filters must be replaced at least once per year (recommended twice per year – before and after the heating season).

5. In the case of an extended warranty, periodic inspection of the unit must be performed at least twice a year throughout the entire warranty period, and the results must be recorded. Periodic inspections may only be performed by qualified specialists or a KOMFOVENT representative.

6. It is advisable not to switch off the ventilation unit; when ventilation is not required, reduce the intensity to the minimum.

7. System balancing must be performed before operating the ventilation unit.

KOMFOVENT representative reserves the right to refuse free warranty maintenance services if the following conditions are not met.

WARRANTY CONDITIONS

1. The warranty does not apply in the following cases:
   1.1. If the product usage or operating conditions, as specified in the installation and operating instructions, are violated;
   1.2. If the storage conditions of the unit are violated;
   1.3. If there are signs indicating attempts of unqualified repair;
   1.4. If the unit's construction has been altered;
   1.5. If the unit is used for purposes other than its direct intended use;
   1.6. If the device serial number on the attached plate or sticker has been changed, removed, or is impossible to identify;
   1.7. If the unit is installed not according to the manufacturer's installation instructions, has no space left for maintenance, or is installed in a location difficult to access;
   1.8. For noise, vibration, or colour changes arising from normal wear of the unit or its components.

2. The warranty does not apply to device malfunctions that occur due to:
   2.1. Damage to the unit caused by improper transportation or installation errors;
   2.2. Mechanical damage;
   2.3. Damage caused by foreign objects, materials, liquids, or condensation entering the device, except when this occurs due to a design flaw;
   2.4. Damage resulting from natural disasters, fire, domestic factors, accidental external effects (voltage fluctuations in the electrical network, lightning, etc.), or accidents.

3. Warranty service is not provided in cases where it is necessary to replace operating parts (filters, fuses).

4. Preparatory work required to access the unit and perform quality repairs, such as removal of furniture, walls, partitions, ceilings, ducts, plumbing, equipment from other manufacturers, or other obstructing items, is not considered warranty service. KOMFOVENT representatives have the right to refuse to perform such work.

5. The warranty does not cover additional fluids used in ventilation systems, such as heat exchanger filling fluids, in the event of leakage.

6. The warranty does not cover additional losses attributable to device failure, such as inconvenience, transportation expenses, phone calls and accommodation, personal or business losses, loss of salary or income.

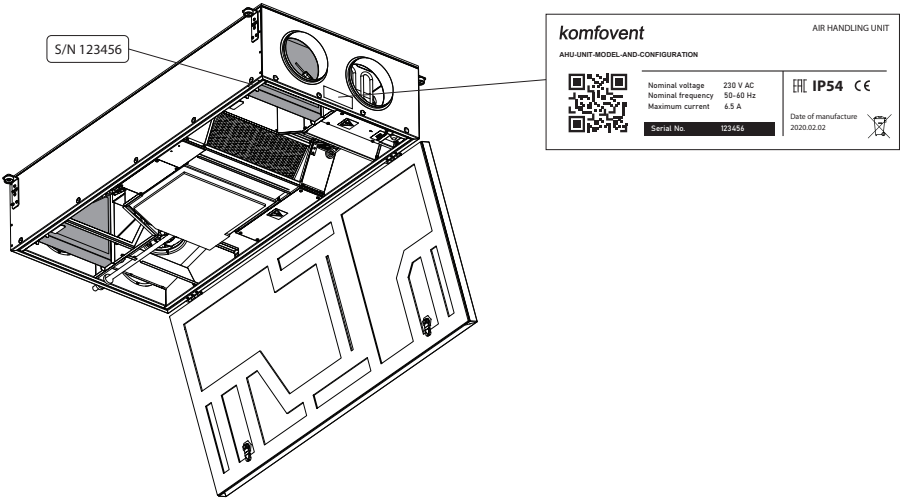
7. KOMFOVENT is not responsible for direct or indirect damage caused by KOMFOVENT products to people, pets, or property if the cause of such damage is failure to comply with the unit's usage and installation rules and conditions, intentional or negligent actions of users or third parties.

Since great attention is paid to product quality, we welcome your feedback, comments, or suggestions regarding the technical and operational properties of the equipment.

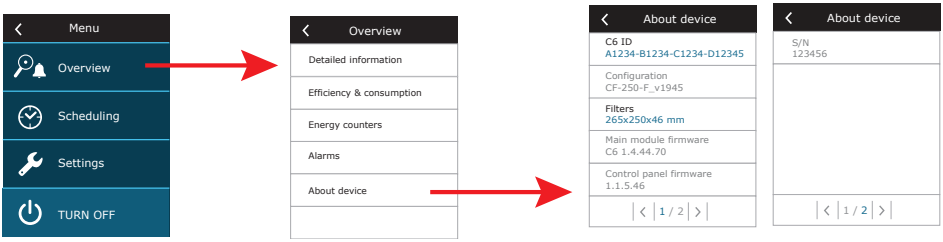
APENDIX NO.3

WHERE TO FIND SERIAL NUMBER?

1. On the unit casing



2. In the control panel



SERVICE AND SUPPORT

LITHUANIA
UAB KOMFOVENT
Phone: +370 5 200 8000
service@komfovent.com
www.komfovent.com

FINLAND
Komfovent Oy
Muuntotie 1 C1
FI-01 510 Vantaa, Finland
Phone: +358 20 730 6190
toimisto@komfovent.com
www.komfovent.com

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

LATVIA
SIA Komfovent
Bukaišu iela 1, LV-1004 Riga, Latvia
Phone: +371 24 66 4433
info.lv@komfovent.com
www.komfovent.com

SWEDEN
Komfovent AB
Ögärdesvägen 12A
433 30 Partille, Sverige
Phone: +46 31 487 752
info_se@komfovent.com
www.komfovent.se

UNITED KINGDOM
Komfovent Ltd
Unit C1 The Waterfront
Newburn Riverside, Newcastle upon Tyne NE15 8NZ, UK
Phone: 0191 429 4503
info_uk@komfovent.com
www.komfovent.com

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	ATIB	www.atib.fr
HR	Microclima	www.microclima.hr
HU	AIRVENT Légtechnikai Zrt.	www.airvent.hu
	Gevent Magyarország Kft.	www.gevent.hu
	Merkapt	www.merkapt.hu
IE	Lindab	www.lindab.ie
IR	Fantech Ventilation Ltd	www.fantech.ie
IS	Blikk & Tækniþjónustan ehf	www.bogt.is
	Hitataekni ehf	www.hitataekni.is
IT	ICARIA	www.icaria.srl
NL	Vent-Axia B.V	www.vent-axia.nl
	DECIPOL-Vortvent	www.vortvent.nl
	ForClima BV	www.forclima.nl
NO	Ventilution AS	www.ventilution.no
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