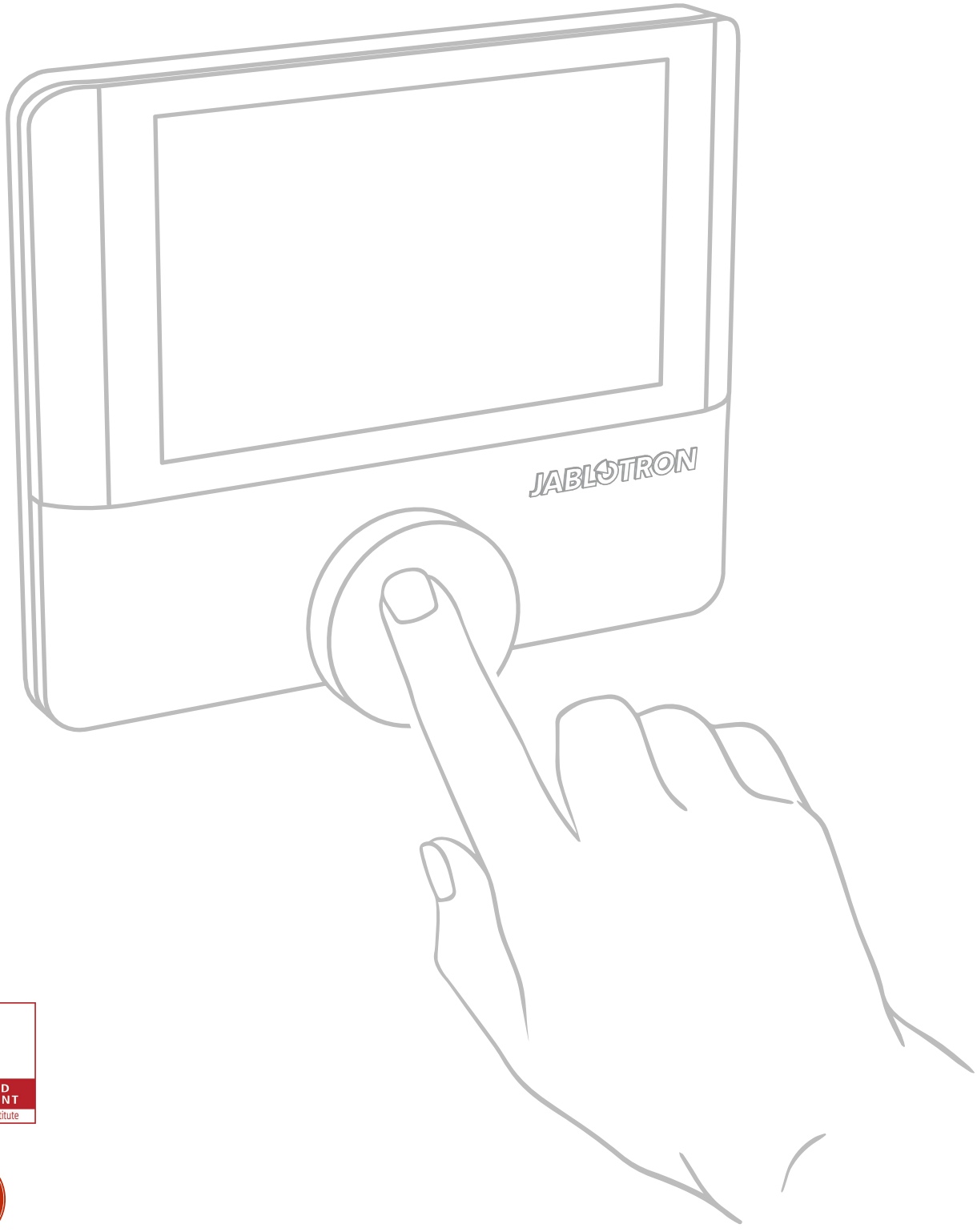
Ventilation unit
with heat and moisture recovery

FUTURA

User manual



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1. Introduction

Subject of this installation manual is **Futura - ventilation unit with heat and moisture recovery**, which is designed for controlled ventilation and treatment of the indoor environment of residential premises. The heat recovery unit ensures recovery of heat and moisture, filters supplied air and helps maintain optimum air humidity. In summer, it provides additional cooling in the night mode thanks to an integrated automatic bypass.

Before you put the heat recovery system in operation, read this User Manual carefully. It will provide you with information about operational principles of heat recovery unit, its structural design, modes, functions, operation and maintenance.

Pay attention to all specifications and instructions included in this manual and follow them accordingly. This is the only way of ensuring proper and safe operation of the heat recovery system.

This device complies with the Commission Regulation (EU) No 1253/2014 with regard to ecodesign requirements for ventilation units and Commission Delegated Regulation (EU) No 1254/2014 with regard to energy labelling of residential ventilation units.

ANY CHANGES RESULTING FROM TECHNICAL DEVELOPMENT ARE RESERVED. WE RESERVE THE RIGHT TO CHANGE THE CONTENTS OF THE MANUAL ANY TIME WITHOUT PRIOR NOTICE.

1.1. Symbols used

Please, pay increased attention to the used symbols and in the interest of your safety and proper operation of the heat recovery unit follow the instructions that accompany every symbol.

Symbol	Description
	**IMPORTANT WARNING**
	**CAUTION! IMMINENT DANGER!** (risk of injury of the user or the service staff; risk of ventilation unit damage or disruption of its proper function and operation)
	**CAUTION! ELECTRIC EQUIPMENT!**
	**DANGER! CAUTION! RISK OF HAND INJURY!**

2. Identification and application

The Futura heat recovery unit represents HVAC device with heat recovery and an active control of moisture recovery. It has been designed for comfortable and energy-efficient controlled ventilation of family houses. The heat recovery unit provides controlled ventilation of residential premises with required ventilation volume of 100 – 350 m^3 (3530 - 12360 ft^3), at the outdoor air temperature range from -19 °C to +45 °C (-2 °F to 113 °F). The unit can be used at the maximum relative indoor humidity level of 60 % at the temperature of 22 °C (72 °F).

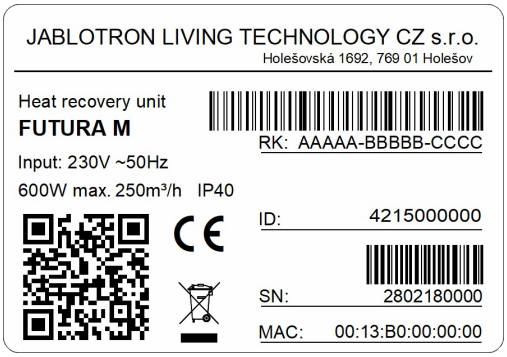

Figure 1 – Identification label

3. Safety instructions

Always follow the safety instructions that are included in this User Manual. Failure to observe them may result in personal injury or damage of the heat recovery unit.

- The unit has been designed and manufactured to provide controlled ventilation in residential buildings and premises.
- The unit may only be used for purposes for which it has been designed and manufactured and for which it has adequate technical capabilities – in line with the conditions defined by the manufacturer. Its design, construction and technical condition complies with safety regulations.
- The heat recovery unit must be installed in compliance with general and local safety regulations.
- The heat recovery unit may only be installed, connected, commissioned and maintained by an authorized service technician with respective professional qualifications. A service technician is a person with adequate qualifications, experience and knowledge of respective regulations, standards as well as possible risks and dangers.
- The unit may only be independently operated by physically and mentally apt persons that have thoroughly read and understood the User Manual. The User Manual must be stored in an accessible place.
- Do not change or modify the heat recovery unit in any way!
- Follow the time intervals for regular filter replacement.
- Do not repair the heat recovery unit! If you find a defect or damage contact a service technician immediately.
- We do not recommend leaving the heat recovery system off for prolonged periods, not even in the of absence of persons. Always let the system run at the lowest ventilation level or in the Automatic Mode.
- The unit can not be used while there is still unfinished construction work in the building. The unit must be installed and commissioned in a finished and clean building.
- The heat recovery unit is designed for joint operation with a fireplace only when the fireplace is suitable for passive buildings, has a sealed fireplace insert and its own air supply.
- Joint operation with a fireplace is possible only if relevant safety and fire regulations are followed. Such operation requires setting and using the Overpressure function (see Heat recovery unit functions).

The system must not be operated together with an open fireplace or with any fireplace without its own air supply!

The unit must be off and disconnected from electrical mains during any maintenance including filter replacement!

Do do not reach into the filter space with your hand when replacing filters! Avoid risk of hand injury!

4. Heat recovery operation principle

The heat recovery system ensures continuous replacement of used air with fresh, clean air. Heat recovery takes place in the exchanger, where the supplied air receives part of heat and humidity from extracted air (mainly from kitchen, bathroom etc.). Therefore fresh air which continuously flows into the interior (living room, children's rooms, guest bedroom, office etc.) is thermally optimized. The fresh air is also filtered before it is supplied. To prevent dust buildup on fan blades the extracted air is filtered as well. The two air streams are separated so that fresh and used air do not mix.

An automatic bypass enabling after-cooling during summer months (in the night mode) is integrated in the heat recovery unit. As heat recovery is not desirable during summer the bypass channel directs extracted air outside of the exchanger and thus prevents cooler night air from being heated up by the warm extracted air.

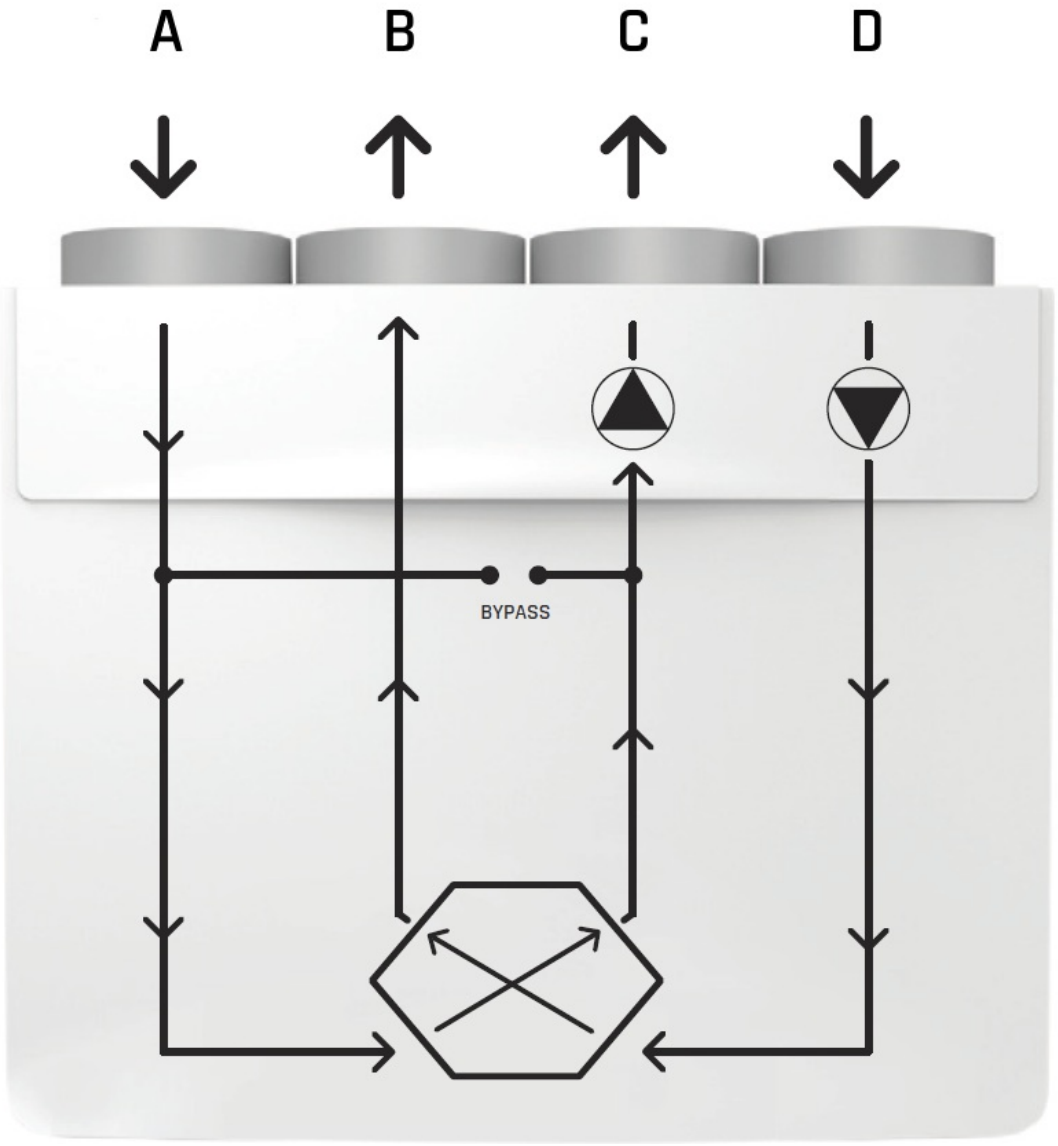

Figure 2 – Heat recovery principle

5. Structural parts of the heat recovery unit

The heat recovery unit consists of the following structural parts:

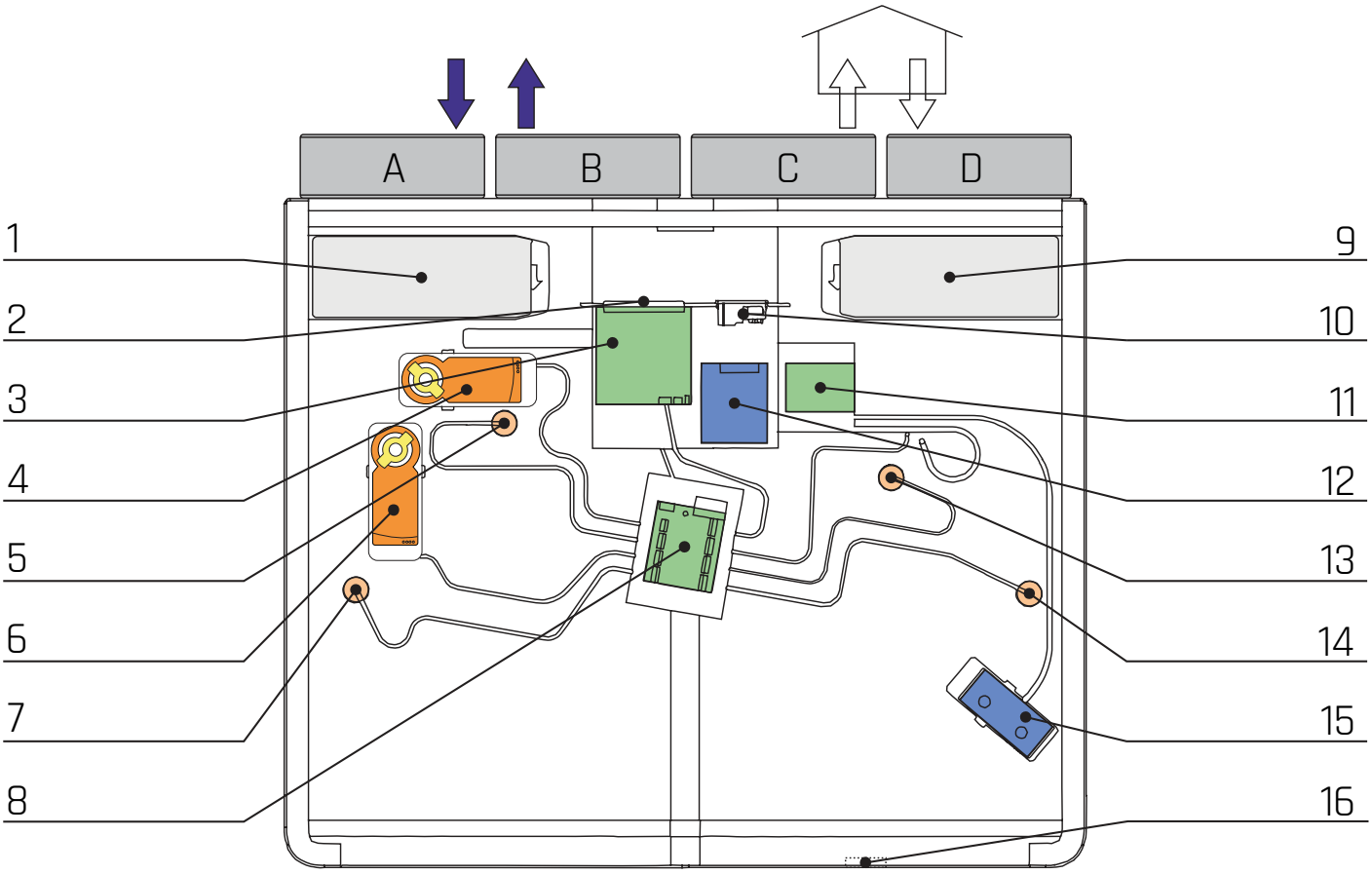

Figure 3 – Unit structure

A - Outdoor air

B - Waste air

C - Supplied air

D - Indoor air

Description:

1 - Outdoor air filter
2 - Terminal
3 - Main board
4 - Bypass servo
5 - T & RH waste air sensor
6 - Circulation servo
7 - T & RH outdoor air sensor
8 - IO board
9 - Extracted air filter
10 - Mains supply and fuse
11 - Power board
12 - Power supply
13 - T & RH supply air sensor
14 - T & RH extract air sensor
15 - Comfortable post-heating
16 - Condensate drain

5.1. Unit body

Outer jacket of the heat recovery unit is made of durable plastic. The internal structure is made of monolithic polypropylene, which serves as heat and noise insulation without thermal bridges. The orifices of the heat recovery unit (⌀ 150 mm) for air supply and exhaust are situated in its top part.

5.2. LED indicator

LED indicator is located on the front cover of the unit. It provides a visual indication of unit's current status. During normal operation green light pulses in regular intervals. A change in the LED color indicates an error notification, need to replace filters or Bluetooth activation. All color indications are described in the following table.

Color RGB LED	Description
green	Constant power, Automatic mode, Stand-by
Yellow	Replace filters! Filters are clogged!
Red	Error! Fault!
Blue	Active Bluetooth

Please pay attention to the changes in LED indicator.

5.3. Filters and filter replacement

The heat recovery unit contains F7 filters at the air supply as well as exhaust. The need to replace the filters is indicated automatically. Recommended frequency of their replacement depends on the air quality in the environment where the unit is used (1× approx. 2 – 6 months). Basic filtration can be supplemented with an optional carbon filter, which is inserted directly into the unit under the supplied air filter.

Users are alerted to the need to replace filters by:

- a change of the color of LED indicator on the front side of the unit (see the preceding table),
- a notification in MyJABLOTRON mobile application,
- a notification **"Filter"** and a warning symbol on the control panel

Do not reach into the filter space with your hands when replacing filters! Avoid the risk of hand injury!

Never use your heat recovery unit without filters! The unit must be off during maintenance and filter replacement!

When replacing filters proceed as follows:

- use On/Off button the switch the heat recovery unit off,
- remove cover from filter drawer and pull filters out of the drawer,
- insert a new filter into the drawer and place the cover back in its place, make sure to insert filters correctly, observing the arrows indicating air flow direction!
- switch the heat recovery unit on using the On/Off button
- press filter initialization button on the control board (see fig. 4 – Filter initialization) or start filter replacement in MyJABLOTRON application.

New filters must be inserted in both filter drawers and filter covers must be placed back before initialization process! Do not use any other filters than those supplied by the manufacturer and do not add any extra prefilters!

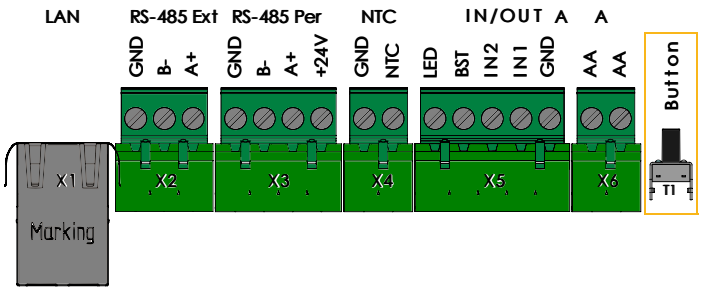

Figure 4 - Filter initialization - short press

After new filter initialization the unit will return to its previous setting.

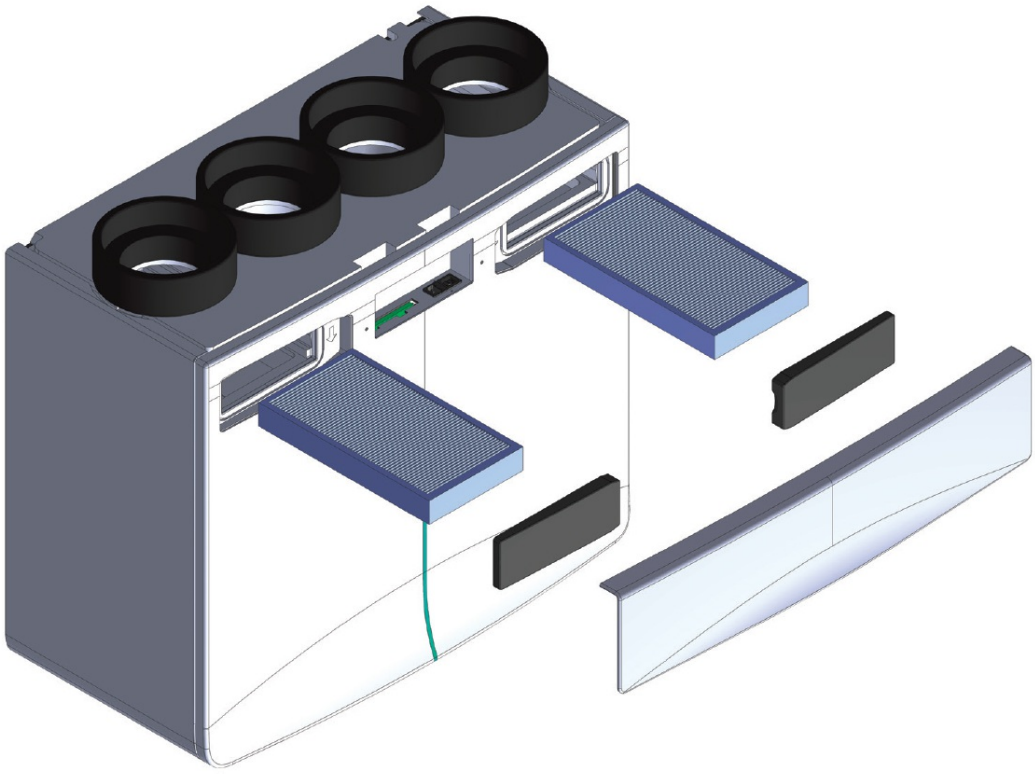

Figure 5 – Filter change

Clogged filters that are not replaced regularly may cause greater pressure loss, poor airflow and accumulation of dust on fan blades which hinders their functionality. Clogged filters also increase power consumption and output of fan motors. This results in excessive wear, systemic imbalance and improper operation of heat recovery system in general. In an extreme case this may lead to irreversible damage and impaired functionality of comfortable ventilation.

Replace filters on regular basis!

5.4. Enthalpy exchanger

Futura heat recovery unit is equipped with an enthalpy counter-current exchanger. Apart from transferring heat from exhausted air it is also capable of transferring humidity, thus optimizing indoor environment humidity levels.

5.5. Fans

Futura heat recovery unit contains two efficient fans with an integrated electronic unit and the function of maintaining a constant

air flow.

5.6. Summer bypass

Summer bypass is a supplementary bypass channel that directs supplied air around the exchanger during cooler summer nights. This prevents warm exhausted air from transferring its heat to cooler outdoor air and heating it up. Bypass works in an automatic mode and its use is based on the temperature setpoint. Bypass is not used at an outdoor temperature lower than +8 °C, during active Drying, Circulation or Stand-by. Automatic bypass function can be enabled or disabled in a mobile application.

5.7. Optional accessories

The heat recovery system can be supplemented with following optional accessories - CO_2 sensors (up to 8 pieces), Alfa control panels (up to 8 pieces), VAC material and distribution elements.

6. Unit operation modes

6.1. Stand-by

When the heat recovery unit is in Stand-by mode, the air exchange is not active. Information from all the connected sensors is available, being continuously evaluated. Thanks to connection to Jablotron Cloud, the heat recovery unit can be activated and its settings can be changed any time. The unit in Stand-by mode responds to Boost function.

6.2. Constant power

Constant power mode lets user adjust level of fan speed (levels 1 – 5). Depending on the temperature and humidity setpoint, the system controls the bypass flap and connected peripherals. It controls turning of the heat exchanger flaps and drying flap based on the current temperature and humidity.

6.3. Auto mode

Default mode of the heat recovery unit. This mode uses information from the connected CO_2 sensors and controls fan speed based on updated values. The ventilation output is adapted to the requirements for quality of the indoor environment. The unit remains in this mode until it is switched to the Time Schedule mode. The sensors control the operation of the heat recovery unit automatically; fan speed is adjusted according to data from sensors. There can be up to 8 CO_2 sensors connected to the unit and the HVAC technician can set which ones will be used to control the fan speed.

6.4. Time schedule

A mode in which user schedules switching between Automatic Mode, Stand-by Mode or a preset fan speed within a range of five levels: 1 (minimum) – 5 (maximum). Time schedule can be activated or deactivated. If Time schedule is activated while one of the functions is running, the function is immediately deactivated and the unit starts to run according to the Time schedule mode. However, Time schedule mode cannot be activated while the Vacation function is on.

7. Unit functions

7.1. Boost (forced ventilation)

A top speed (5) function used if a fast, forced ventilation of the indoor premises is required. The unit is temporarily switched to the maximum level, the fans working at the top speed. This function is available in any mode. It can be activated from the mobile application (for any time interval), from the wall-mounted control panel (for a preset interval) or with a Boost switch connected to the unit (for two preset intervals, one for short press and one for a 3 second long press). Boost switches are typically installed in rooms where forced ventilation is needed, such as bathroom, toilet or kitchen. The time interval for Boost switch (for both short and long press) can be adjusted, but only by the HVAC technician. If Boost is active, the time remaining until the expiration of this function is displayed next to the respective symbol. After expiration of the given time, the unit returns to the previous mode.

7.2. Summer bypass

Summer bypass consists of a supplementary bypass channel that directs the supplied air around the exchanger, namely during

cooler summer nights. This prevents the warm exhausted air from transferring the unwanted heat to the colder air from the outside and heating it up

7.3. Night mode

A reduced power function used at night. The unit is switched to the minimum level (1), the fans working at the lowest power setting. After expiration of the given time, the unit will return to the previous mode.

7.4. Vacation

A reduced power function used in periods of absence of the users on the premises. The unit is switched to the minimum level (1), the fans working at the lowest power setting.

7.5. Party

An increased power function used mainly when more people are present on the premises. The unit works at the 4th power setting. After expiration of the set time the unit will return to the previous mode.

7.6. Circulation

A function used if it is necessary to prevent flowing of outdoor air into the indoor space. The indoor air is circulated. Upon setting this function, the user sets the duration of this function.

7.7. Overpressure

A function designed for simultaneous use with a fireplace. The unit changes the ratio of the fan speeds for the aspirated and exhausted air. The fan exhausting air from the indoor space works at a lower speed than the fan that supplies air. This prevents combustion products and smoke from getting into the interior.

7.8. Anti-radon protection

A function for permanent radon protection of the premises. Similar to the Overpressure function, it changes the fan speeds for the fresh and exhausted air. The fan exhausting air from the indoor space works at a lower speed than the fan that supplies fresh air. This prevents radon from leaking indoors. This function can be actived only from the mobile application. The overpressure ratio is set by the HVAC technician and the function is permanent until its deactivation in the mobile application.

7.9. Heating

The heat recovery unit can heat the supplied fresh air by means of an internal heater. The heater output is controlled based on temperature of exhaust air. This feature can be turned on or off from a mobile application. The heat recovery unit is not intended as a primary source of heating!

7.10. Restart

The following user functions are reactivated after the restart of the unit or after a power outage:

- Ventilation
- Time schedule settings
- Vacation
- Anti-radon protection
- Fan speed for different levels (1-5)
- Overpressure settings
- Temperature setpoint
- Humidity setpoint
- Ventilation settings in Auto mode
- Boost duration
- IN1 and IN2 input settings
- Heating permission

- Cooling permission
- Automatic bypass permission

The following functions are deactivated after restart:

- Boost
- Circulation
- Overpressure
- Night mode
- Party
- Drying
- Filter check
- Shutdown
- Servicing mode
- Bluetooth permission

7.11. Winter operation

Winter operation is started automatically when the average temperature of exhausted air drops below -3 °C (27 °F). Winter operation prevents fans from stopping while the unit is in the Auto mode running according to data from the CO_2 sensors. During winter operation, the fans do not stop. Their speed decreases to Level 1 instead. When the unit is switched into the winter operation while the circulation mode is on, the circulation mode is deactivated.

7.12. Drying

The heat recovery unit is technically as well as structurally ready for operation at temperatures below the freezing point without the need of preheating down to -19 °C (-2 °F). When the outside temperatures remain below freezing point, the unit may occasionally switch into drying mode. This mode removes excess moisture from the unit. It is fully automatic, the unit activates drying mode as necessary according to operation logic evaluation. The time span between two drying cycles is not fixed.

- Drying lasts three hours.
- The flaps of the heat exchanger are further turned over in intervals determined by the dew point temperature.
- Heating (internal or CoolBreeze) is turned on the maximum.
- The bypass flap is shut and the circulation flap is open.
- The speed of both fans is set to 20%. Balancing of the pressure is not active, but the *Overpressure* mode and *Anti-radon Protection* mode stay on.
- *Too low Outdoor Temperature* and *Settings* symbols are displayed on the wall-mounted control panel.

Thanks to this function no other frost protection in the form of electric preheating is necessary. During this mode, the user comfort is not reduced; the air that is supplied to the indoor space is warmer than the air that is exhausted. If the Boost function is activated during drying, the forced exhaust time is limited to 2 minutes. The drying mode cannot be deactivated by the user and in case of a power outage, the drying mode is resumed after the unit is on.

7.12.1. Drying at extremely low outdoor temperature

A mode started automatically when the outdoor temperature drops and remains below -20 °C (-4 °F) for 16 minutes. This mode is deactivated when the temperature rises to -18 °C (0 °F). *Too low Outdoor Temperature* and *Warning* symbols are displayed on the wall-mounted control panel. After the drying is finished, the ventilation and filter check are blocked, Boost is limited to 2 minutes, the unit continues to run in the Circulation mode.

7.12.2. Drying during prolonged low outdoor temperature

Drying mode is activated when the temperature of exhausted air drops below -5 °C and does not rise above -1 °C during the following 72 hours. In case of a restart or a power outage the elapsed drying time is saved and when the unit is back on, the drying mode is resumed for the remaining period of time.

7.12.3. Drying after the fans have stopped

When the fans stop running for 35 seconds or longer, while the temperature of the exhausted air is below 0 °C, the drying is activated.

7.12.4. Icing protection

Icing protection is activated when the average temperature of the exhausted air is below -3 °C. Icing protection blocks Time schedule mode, Auto mode (in case the unit is controlled by CO_2 sensors) or analogue voltage input from stopping the fans. Instead of stopping, the fans continue to run at Level 1 speed. This action can be seen in the mobile application. Icing protection also blocks Circulation mode.

7.13. Functions, priorities and their response to simultaneous activation

When a certain function of the heat recovery unit has been activated, you can activate another function - that will either deactivate or interrupt the previous function, or the functions will run simultaneously. Each function and mode has a defined priority in relation to other functions. The functions and modes are prioritized in the following order:

- Emergency mode
- Boost
- Party
- Night mode
- Vacation
- Manual setting (level 1-5) or Time schedule mode
- Auto mode (CO_2 or analogue input)

Circulation, Overpressure and Anti-radon can run simultaneously with any of the above-mentioned modes/functions, but they cannot run simultaneously with each other. They are prioritized in the following order:

- Circulation
- Overpressure
- Anti-radon

The **Boost** function interrupts the **Circulation** function. The **Night mode** and **Party** functions will resume after expiration of the **Boost** function. If the **Boost** function is started and the **Vacation** function has also been selected (both symbols are lit), the **Vacation** function will resume once **Boost** function expires. **Boost** is available in any mode.

- Selecting the **Night Mode** deactivates **Boost** and **Party.**
- Selecting the **Vacation** function deactivates **Boost, Night Mode** and **Circulation.**
- Selecting the **Party** function deactivates **Boost, Night mode** and **Circulation.**
- **Party** function cannot be activated while the **Vacation** function is active.
- When the ventilation is controlled by **analogue input** with voltage of 1-10 V, it overrides the CO_2 controlled ventilation.
- Selecting the **Time schedule** deactivates all of the other running functions and the unit starts running according to the **Time schedule** settings. **Time schedule** is not available while the **Vacation** function is active.
- Pressing the **Boost** button repeatedly does not cancel, but prolongs the function.
- Selecting **Overpressure** while the **Boost** function is on does not cancel the **Boost** function. The fan speed ratio is adjusted according to the **Overpressure** ratio and the unit continues to run in **Boost.**
- Selecting the **Boost** while the **Overpressure** is active does not cancel **Overpressure**. The **Boost** is activated while the unit continues to operate at the **Overpressure** fan speed ratio.

Boost, Overpressure, Circulation have the option of setting a delayed start or stop.

8. Controlling the unit with Alfa control panel

Alfa control panel is a standard joint control panel for Jablotron Living Technology systems. Its operation starts on home screen.

8.1. Home screen

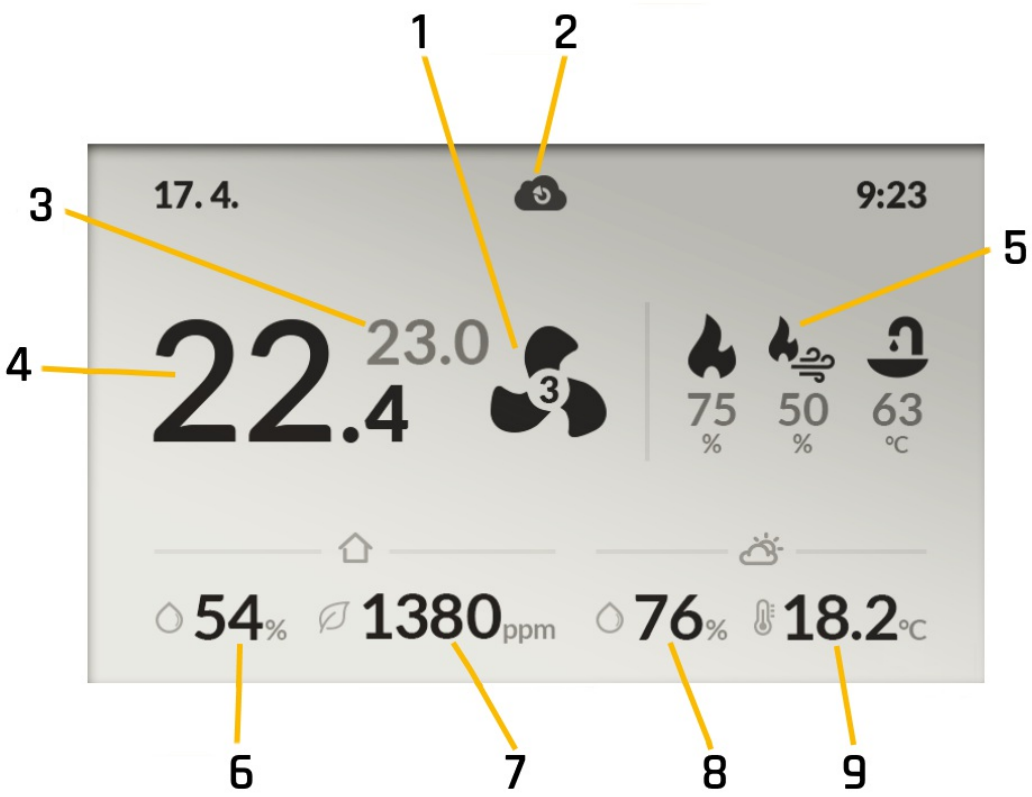

Figure 6 – Home screen icons

1 - Set ventilation level

2 - Connected to cloud

3 - Temperature setpoint

4 - Actual temperature

5 - CoolBreeze output

6 - Actual local humidity

7 - Actual local CO_2

8 - Outdoor humidity

9 - Outdoor temperature

Home screen quick access

User can set quick access for temperature setpoint or ventilation level. Turning the control dial provides a primary quick access and enables user to adjust the desired value (temperature or ventilation level, depending on the setting). The new value is saved automatically after three seconds of inactivity. In the Settings menu the user can set whether primary quick access will be assigned to temperature setpoint or ventilation level.

Secondary quick access (e.g. for ventilation level if the temperature is set as the primary quick access) is displayed by pressing and holding the dial. Subsequent turning of the control dial enables the user to adjust the given value (temperature or ventilation

level, depending on the setting). After three seconds of inactivity the value is saved and the secondary quick access indication disappears from home screen.

Displaying subsystem values

If a subsystem is available, its current value with respective unit is displayed below its icon. If the subsystem is not available, its icon is displayed in grey and – is displayed instead of the value. In case CoolBreeze is connected, the system displays icon of the current mode (cooling/heating - snowflake/flame and breeze icon). If CoolBreeze is not connected, the snowflake/flame icon is displayed in grey.

8.2. Quick access

Pressing the dial on the home screen displays menu with icons for individual subsystems, a "Home screen" icon and a "Settings" icon. In case a particular subsystem is not connected to the system, its icon is displayed in grey and the icon is skipped when the dial is turned.

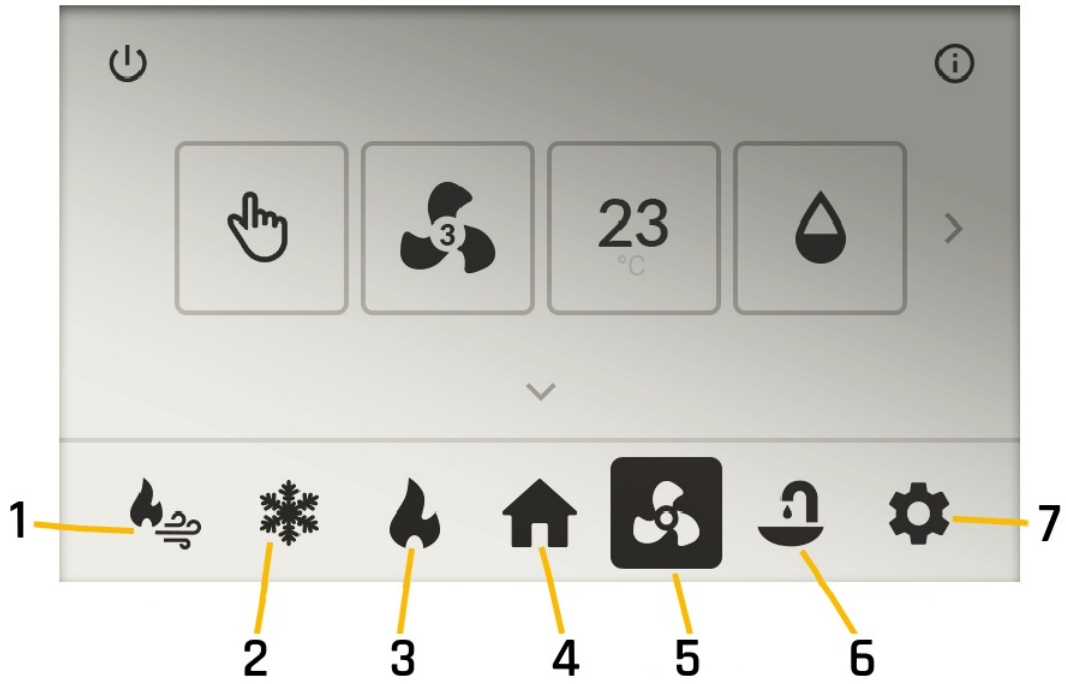

Figure 7 – Quick access tab icons - active ventilation

1 - CoolBreeze

2 - Cooling

3 - Heating

4 - Home screen

5 - Ventilation

6 - Hot water

7 - Settings

- Active icon is inverse - home screen is lit.
- Turning the dial scrolls through the menu items.
- Clicking on a highlighted item opens its respective screen.
- Clicking on the house icon hides the menu and displays the home screen.
- Menu timeout is five seconds - after five seconds of inactivity the display returns to home screen automatically. The timeout is reset when the dial is manipulated.
- Icons in the menu that are not active are displayed in grey and skipped when scrolling. Hot water, Cooling or Heating is only

displayed when the subsystem is connected.

Scrolling through items

Unless the subsystem is in the Stand-by state, “Operating Mode” is highlighted by default when entering the Quick Access screen. The currently highlighted item is indicated by a bold black frame. If the item's value can be changed, small arrows appear above and below the item. Turning the dial clockwise moves the highlight in the following order: "Ventilation level", "Temperature setpoint", "Humidity setpoint", "Next page", "Back", "Stand-by" and again "Operating mode". Turn the dial counter-clockwise to scroll through items in reverse order.

If the subsystem is in the Stand-by mode, the Stand-by button is highlighted by default when entering the Quick Access screen. The subsystem items are displayed in grey and show only the most recent status of the subsystem. Turning the dial scrolls through “Next Page” (or “Previous Page”), “Back” and “Stand-by” elements, subsystem items are skipped.

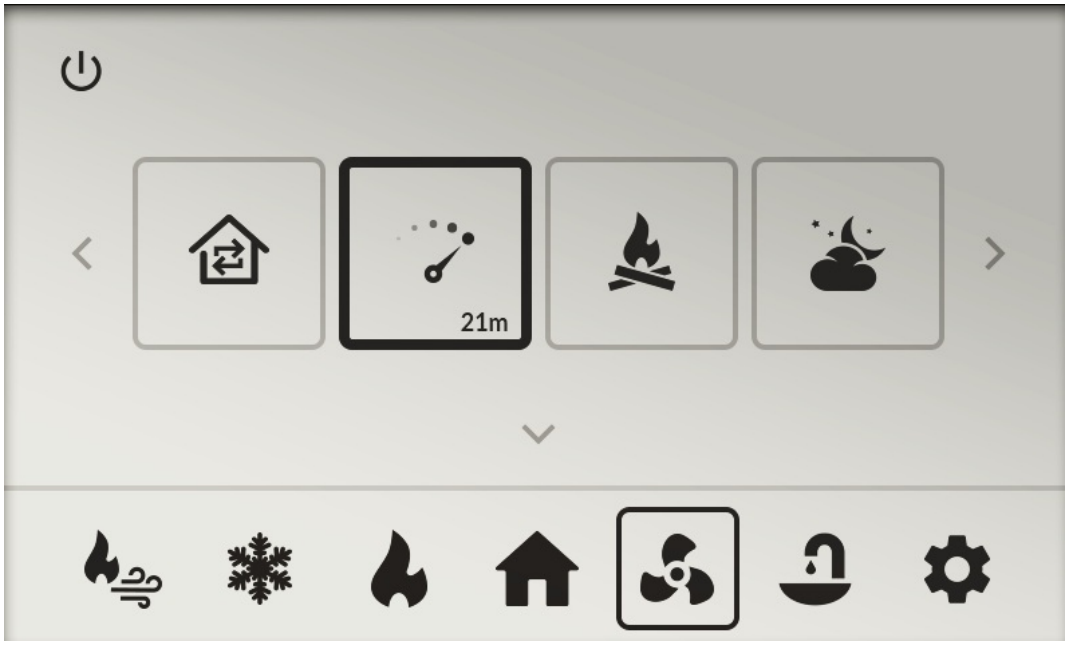

Figure 8 – Scrolling through items

How to select an item and adjust its value

If the currently highlighted item allows the value to be adjusted, small grey arrows appear above and below. Clicking on the item, its icon and the arrows blacken and the value can be changed. Turning the dial adjusts the value of the item within the defined step and range. Subsequent click confirms the new value. This action will highlight the menu item again and enable the user to scroll to other items. Pressing and holding the dial saves new settings. New settings are also saved automatically after ten seconds of inactivity and the quick access screen is displayed.

Figure 9 – Adjusting the value of selected item

8.3. Futura quick access screens

Futura has three basic quick access screens. Their description is stated below.

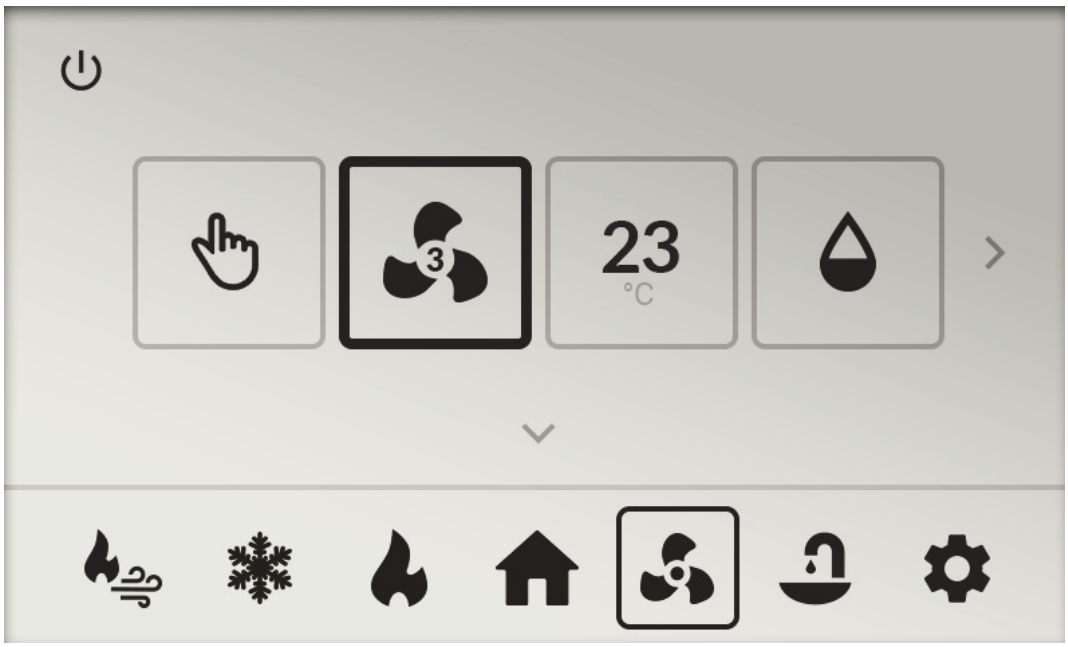

Figure 10 – First quick access screen

- **Operation mode** (adjustable item). Current ventilation mode. Icon shows current ventilation mode (Manual/Time Schedule).
- **Ventilation level** (adjustable item). Ventilation level. Icon shows current ventilation level.
- **Temperature setpoint** (adjustable item). Preferred temperature setpoint. Icon shows preferred temperature for bypass or heating.
- **Humidity setpoint** (adjustable item). Preferred relative humidity setpoint. Icon shows preferred humidity (each value has its individual icon).

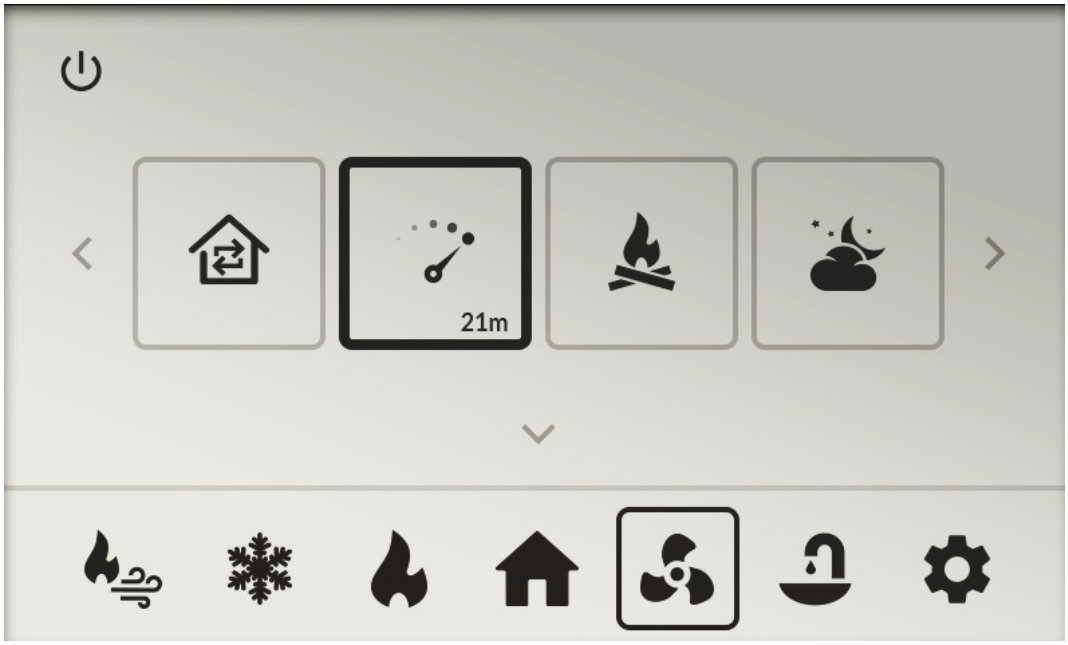

Figure 11 – Second quick access screen

- **Circulation.** Click to display the Time Setting Screen (Quick Access). The icon shows whether the Circulation function is active. If active, the Circulation icon is displayed along with remaining time (HH:MM). If the Circulation function is not active, only the circulation icon is displayed.
- **Boost.** Click to display the Time Setting Screen (Quick Access). The icon shows whether the Boost function is active. If active, the Boost icon is displayed along with remaining time (HH:MM). If the Boost function is not active, only the Boost icon is displayed.
- **Overpressure.** Click to display the Time Setting Screen (Quick Access). The icon shows whether the Overpressure function is active. If active, the Overpressure icon is displayed along with remaining time (HH:MM). If the Overpressure function is not active, only the Overpressure icon is displayed.
- **Night Mode.** Clicking this item displays the Time Setting screen (Night Mode page 1). After confirmation (Night Mode page 2) the mode is enabled. Clicking the cancel button disables the night mode. The icon shows whether Night mode is enabled, the item shows Night mode icon and the time from-to "HH:MM-HH:MM". If night mode is not enabled, only the Night mode icon is displayed.

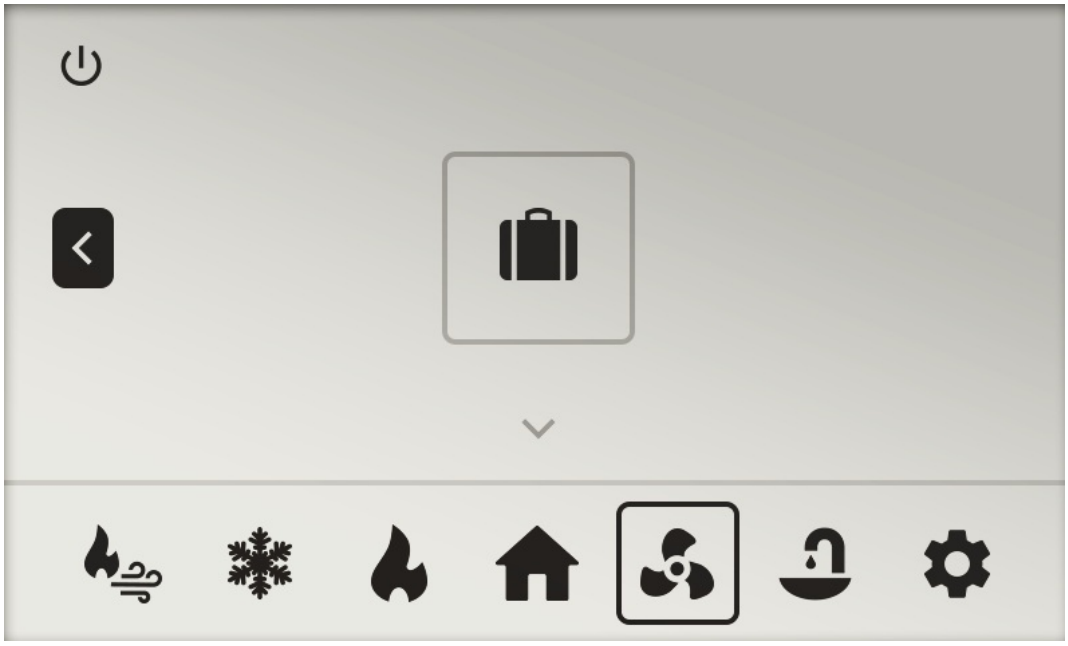

Figure 12 – Third quick access screen

- **Vacation.** Click this item to display the Time Setting Screen (Day/Hour). The icon shows whether Vacation mode is active, the item shows Vacation icon and the time to end (DDd HHh). If Vacation mode is not active, only Vacation icon is displayed.

The "Stand-by" and "Info" buttons are identical for all three screens. Clicking the "Stand-by" button turns the Stand-by mode on or off. Turning Stand-by mode on will disable quick access items.

The unit goes to Stand-by immediately upon clicking the dial - unlike adjustable items that are set by turning the dial.

8.4. CoolBreeze quick access screen

To quickly access CoolBreeze click on its icon. The icon in the menu bar will be highlighted and framed. The header and body of the screen turns into CoolBreeze quick access. The highlight moves to the first item on the left - "Operation Mode" or "Stand-by" when the unit is in the Stand-by mode.

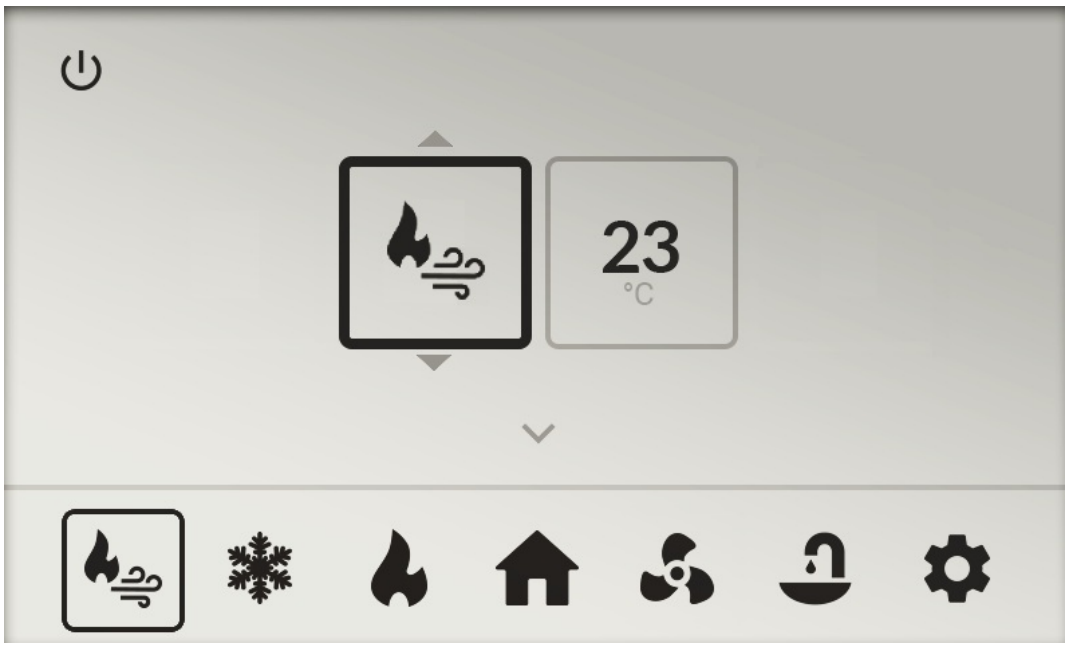

Figure 13 – CoolBreeze quick access screen

Scrolling through CoolBreeze menu

The logic of scrolling through CoolBreeze menu is the same as scrolling through the quick access of Futura. Turning the dial clockwise moves the highlight in the following order: "Set temperature", "Back", "Stand-by" and again "Operating mode". The "CoolBreeze power indication" item is skipped. Turning the dial counter-clockwise scrolls the highlight in the reverse order.

How to select an item and adjust its value

The logic of changing values in CoolBreeze quick access is the same as in the Futura quick access.

CoolBreeze menu description

- **„Stand-by" button.** The CoolBreeze goes to Stand-by mode immediately after clicking the dial - unlike adjustable items that are set by turning the dial. Stand-by button turns the Stand-by CoolBreeze mode on or off. Turning on the Stand-by mode disables the CoolBreeze quick access items. When the icon is black - CoolBreeze is in Stand-by mode; when the icon is light - CoolBreeze is running.
- **CoolBreeze Operating mode** (adjustable item). Setting the current CoolBreeze operating mode. The icon displays the current CoolBreeze operating mode. Cooling (flake and breeze symbol) - heating (flame and breeze symbol).
- **Temperature setpoint** (adjustable item). Preferred temperature setpoint - icon displays set preferred temperature.
- **„Back" button.** Clicking this item will move the highlight to the menu bar of the CoolBreeze subsystem.

8.5. Settings quick access screen

Quick access to the Settings menu is done by clicking the "Settings" icon. The icon in menu bar will then be highlighted. Screen header and body will transition to Settings quick access. Then the first item on the left will be highlighted - "Primary Quick Access".

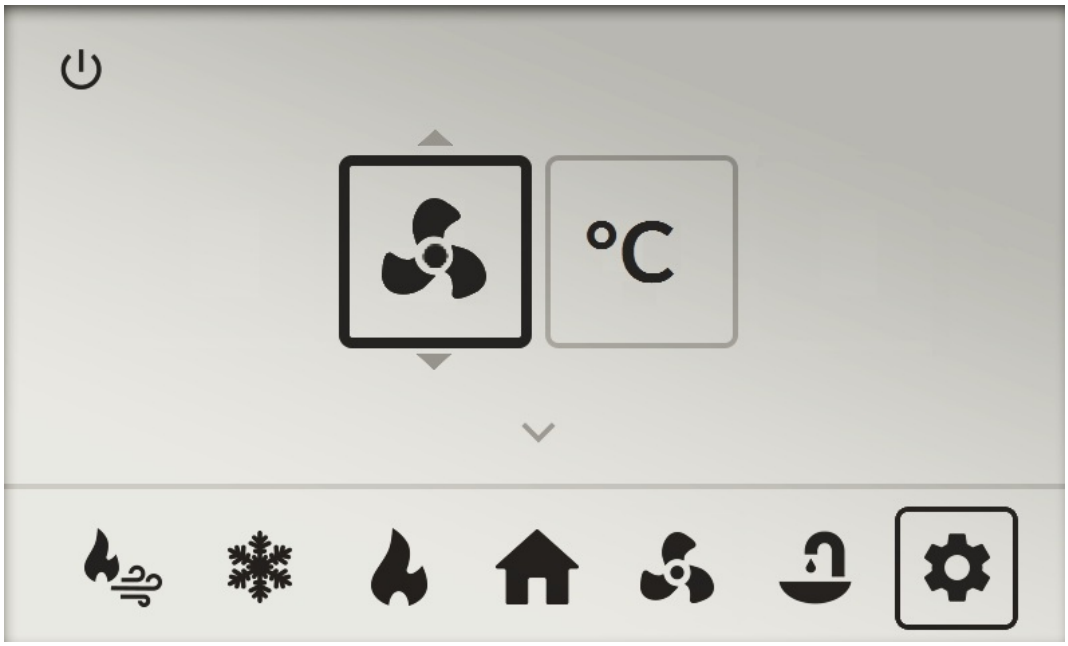

Figure 14 – Settings quick access screen

Scrolling through Settings items

The logic of scrolling through settings items is the same as for Futura quick access. Turning the dial clockwise moves the highlight in the following order: "Temperature unit °C/°F", "Back", and again "Primary Quick Access". Turn the dial counter-clockwise to scroll the items in the reverse order.

How to select an item and adjust its value

Changing value of a selected item in CoolBreeze menu is the same as in Futura.

Settings menu description

- **„Primary quick access"** (adjustable item). Allows the user to set the primary variable of the quick access. Icon displays current setting of the primary quick access variable (ventilation/temperature).
- **„Temperature unit °C/°F"** (adjustable item). Allows the user to set the preferred temperature unit (Celsius/Fahrenheit). Icon displays currently set unit.
- **„Back".** Clicking on this item will move the highlight to "Settings" menu bar.

8.6. Error notifications on home screen

If an error or warning arises in any of the subsystems, the home page header will dim and display an exclamation mark icon. In case of an error LED indicator turns red and flashes at maximum intensity; in case of warning LED flashes orange. If both an error and a warning have occurred, LED indicator flashes red.

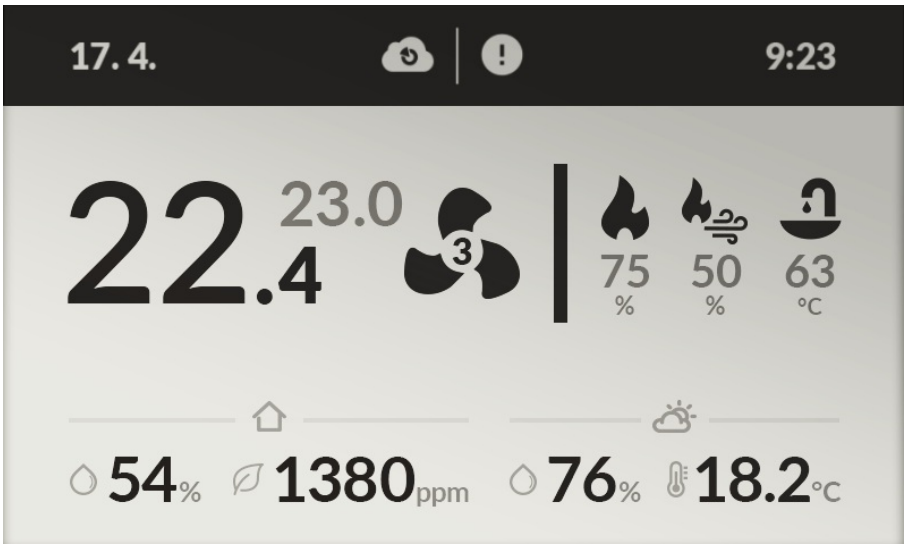

Figure 15 – Example of error notifications

If there is an error indication in home page header, clicking the dial will display the bottom bar menu and the "house" icon will be highlighted. The header and body of the screen will display a complete list of all errors and warnings.

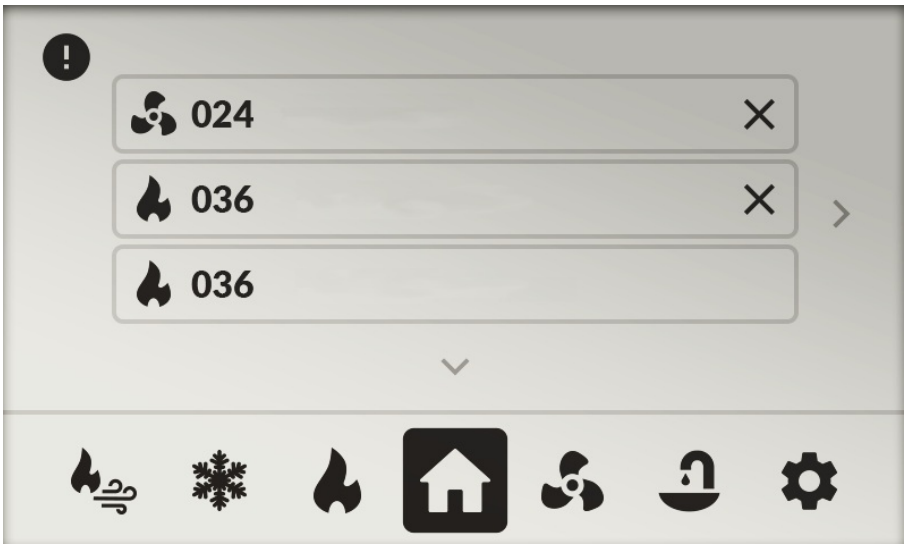

Figure 16 – Error listing screen

Screen with error listing displays a list of all current errors that have occurred in the system. Each error has its own code number. The errors are listed as follows: resettable errors come first, followed by other errors. If an error can be reset by the user, an "x" appears to the right of the error. Clicking the "x" will reset the error and the given entry then disappears from the list. If there are no more errors in the list, the home screen is displayed and the LED light turns off. If there are remaining errors in the list, the "Back" button is highlighted and the error list is updated.

Detailed information about error alerts can be found in the Installation Manual.

After commissioning contrast on Alfa control panel display may be lower. This is not a defect, contrast of the display should improve within an hour of operation.

9. CoolBreeze Functions

9.1. Cooling and heating with CoolBreeze

CoolBreeze starts cooling or heating when the following conditions are met:

- CoolBreeze is connected to RS-485 bus,
- no outdoor unit error or temperature and humidity sensor error at CoolBreeze input is detected,
- cooling or heating has been allowed on the wall-mounted control panel or in the mobile application,
- ventilation is running,
- current temperature is higher/lower than the preferred temperature setpoint.

9.2. Preferred and current temperature

Preferred temperature corresponds with temperature setpoint that has been set by the user either on the control panel or in MyJABLOTRON mobile application. Current temperature is calculated as an average of temperatures of all sensors (Alfa control panels and CO_2 sensors) except for the sensors that have been excluded from temperature control.

9.3. CoolBreeze power output

The power output is determined automatically according to the difference between preferred and current temperature. In case control panels are not available, the temperature of extracted air is used. In **Comfort** mode, power output is adjusted according to the difference between supplied and extracted air. If the temperature at Futura inlet or heat exchanger temperature exceeds allowed limit the power of CoolBreeze automatically decreases. If temperature of supplied air falls below minimum fresh air temperature, cooling output decreases. Actual power output of CoolBreeze can differ from the set output, as the outdoor unit may limit it based on heat exchanger temperature etc.

9.4. Fan speed during CoolBreeze cooling/heating

Nominal fan speed is maintained during both cooling and heating. Fan speed cannot be adjusted by the user, Time schedule or Auto mode. If ventilation is stopped during cooling or heating, the fans run at nominal power as long as a running compressor or defrost is indicated. The fan speed ratio (balancing) is calculated according to the fan speed settings for each ventilation level.

9.5. Bypass

Bypass cannot be opened while cooling or heating is running.

9.6. Outdoor unit defrosting

Outdoor unit starts defrosting automatically. CoolBreeze enters cooling mode during defrosting and removes indoor air heat. Futura temporarily turns on its internal heating to 100 % during defrosting to at least partially compensate for cooling of indoor air. Fan speed does not change.

9.7. Futura drying mode

If CoolBreeze is connected and there is no outdoor unit error or sensor error, CoolBreeze is used instead of internal heater. CoolBreeze performance is set to maximum.

10. Control of heat recovery unit

Control of the heat recovery system has been designed to provide user with easy use and clear information. The heat recovery unit can be controlled both locally and remotely.

10.1. Local control

- One Alfa wall-mounted control panel with integrated CO_2 sensor is included in standard supply; more wall-mounted control panels can be ordered extra (up to eight pieces total).
- Boost ventilation switch (not included in standard supply) and CO_2 sensors are available as additional accessories.

10.2. Remote control

The heat recovery unit can be remotely controlled using MyJABLOTRON mobile application for iOS and Android. It is a unique service that allows online access to the heat recovery unit with full control anytime anywhere via smartphone or tablet (remote monitoring, management of all functions and settings, error notifications and automatic filter change notifications).

10.3. Control using MyJABLOTRON mobile application

Control of Futura unit including CoolBreeze module via MyJABLOTRON mobile application.

10.3.1. Login and basic control

Sign in to MyJABLOTRON. After sign-in, you will see a list of all of your installed JABLOTRON devices. You can access device settings (Futura or CoolBreeze in this case) by tapping on its respective icon.

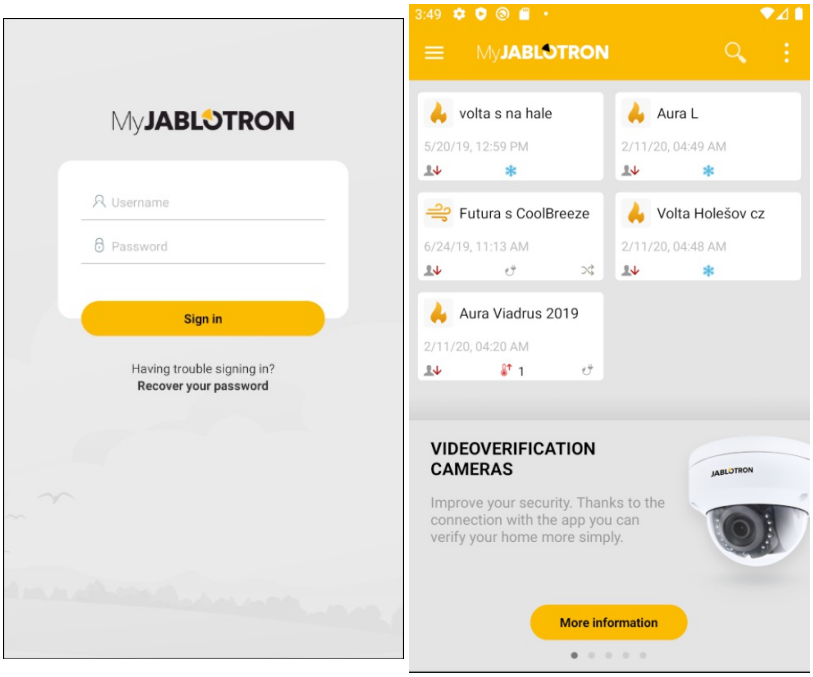

Figure 17 – Application sign-in, Figure 18 – Device selection

You are taken to main menu of the device. As a user, you can control fan speed, supply air temperature and air humidity.

At the same time, you can read current information regarding the unit (mode, status, fan speed), current temperature, humidity, CO_2 concentration and **Boost, Circulation and Overpressure** settings as described above (see chapter Functions of heat recovery unit).

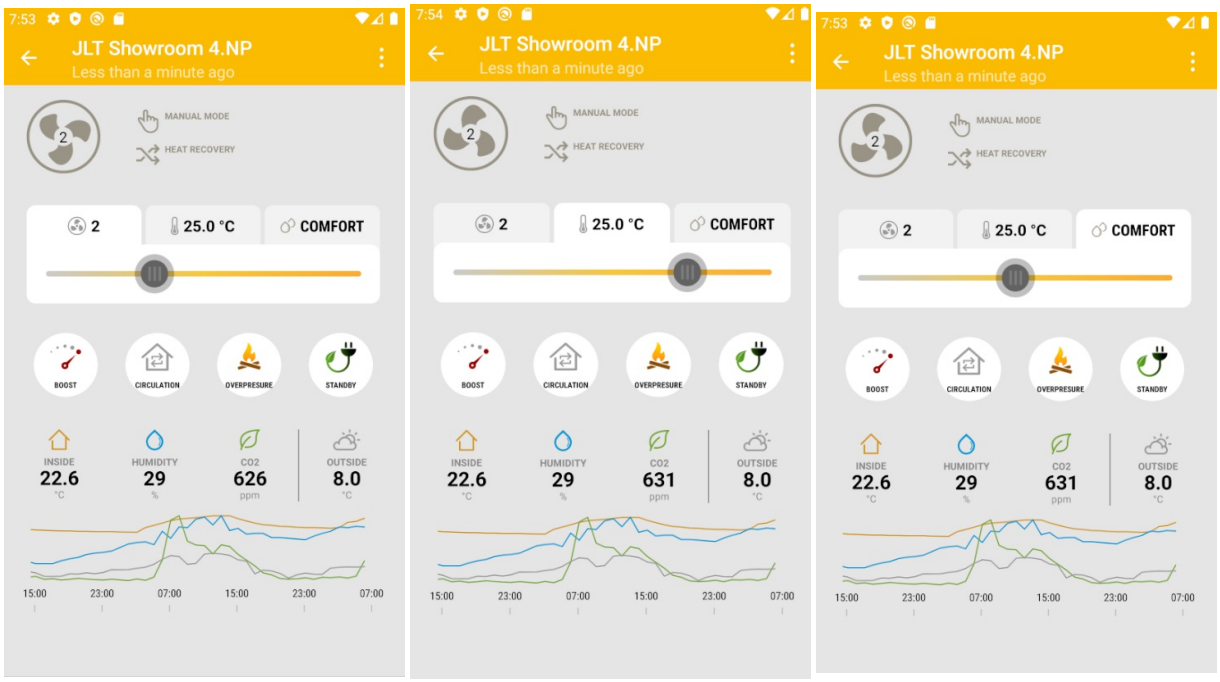

Figure 19 – Setting fan speed level, Figure 20 – Setting temperature, Figure 21 – Setting humidity

10.3.2. Information about the unit

- Tap on the bottom of the screen to see more information about your unit.
- The first screen shows the supply and exhaust air temperatures and humidity. The second screen shows firmware version, hardware revision and unit serial number, which will help you in communicating with our customer support in case of a fault.

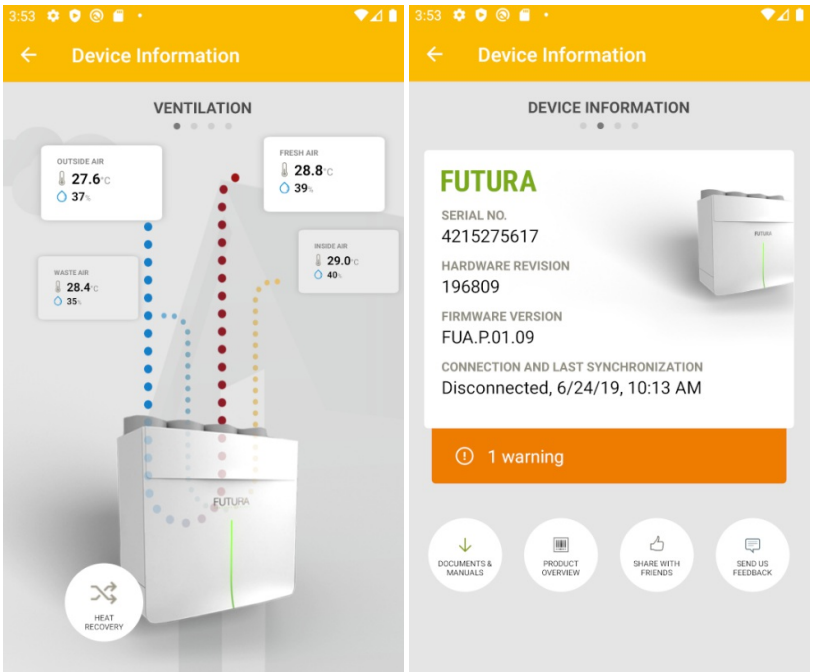

Figure 22 – Ventilation information, Figure 23 – Device information

- Third screen contains information about flow rates assigned to each ventilation level (this is set by HVAC technician during installation - the user cannot adjust this setting), current power consumption and status of unit actuators. The last screen contains your HVAC technician's and our customer support contact information.

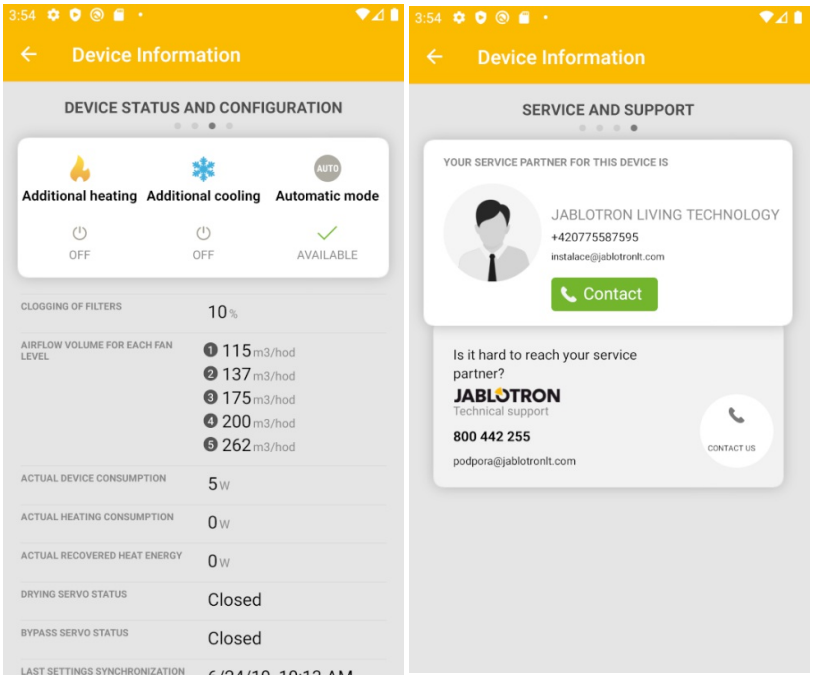

Figure 24 – Flow rates of different ventilation levels, consumption and actuator status, Figure 25 – Your service technician and customer support

10.3.3. Advanced settings

Tapping on the three dots in the upper right corner will take you to advanced settings, where you can turn on or off following modes: **Night Mode, Party and Vacation**

Section **TEMPERATURE CONTROL** allows you to turn on or off **Heating, Cooling and Auto bypass.** If the CoolBreeze module is not installed, the **Cooling** menu is inactive (displayed in grey font).

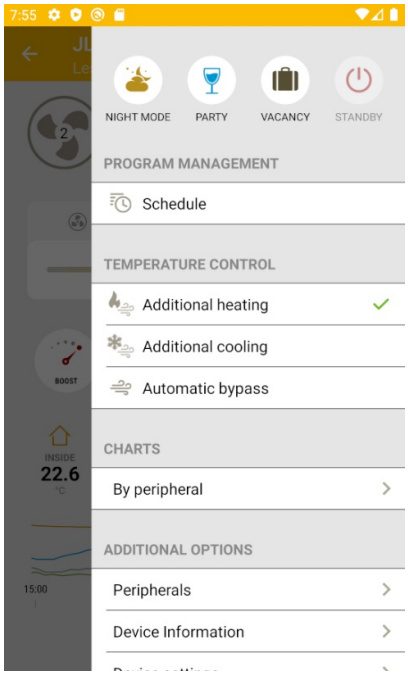

Figure 26 – Mode selection and further

In **GRAPHS** section, you can access graphic information about peripherals, such as CO_2 concentration from CO_2 sensor. Tap on the three dots in the upper right corner to access expanded selection menu for graphs from other sensors.

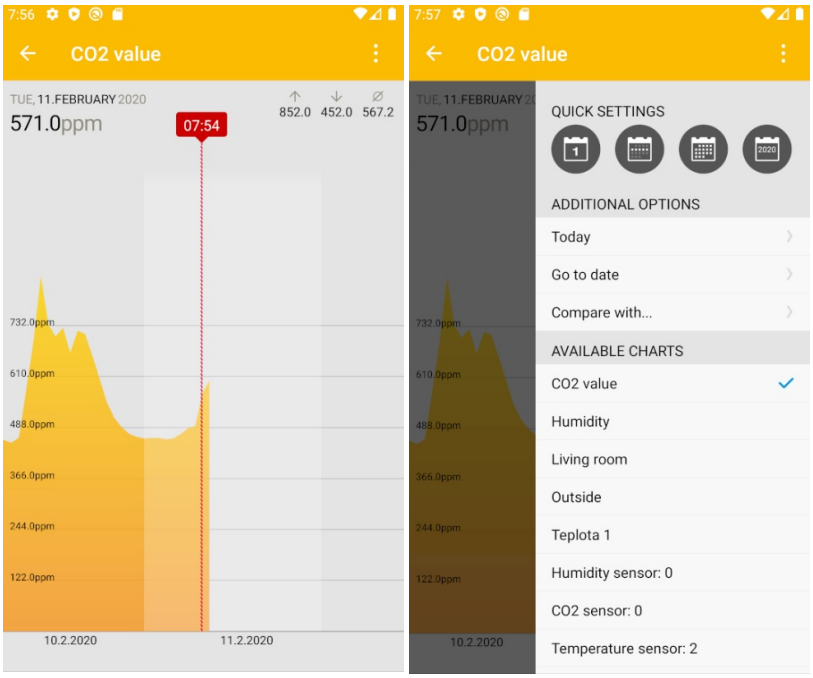

Figure 27 – CO_2 graph, Figure 28 – Available graphs

Last section **MORE OPTIONS** allows you to see individual peripheral sensors. Temperature sensor is pictured, swipe left to see humidity sensor and CO_2 sensor.

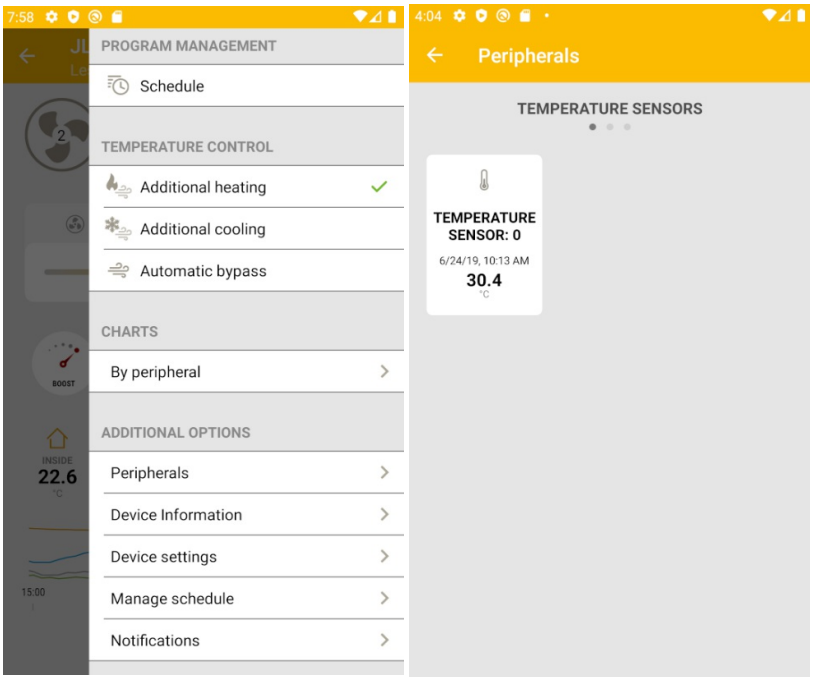

Figure 29 – More options, Figure 30 – Temperature sensor

Device Settings tab allows you to rename your unit, set up information sharing with your HVAC technician, turn **Radon protection** mode on or off, initiate filter change or reset the unit.

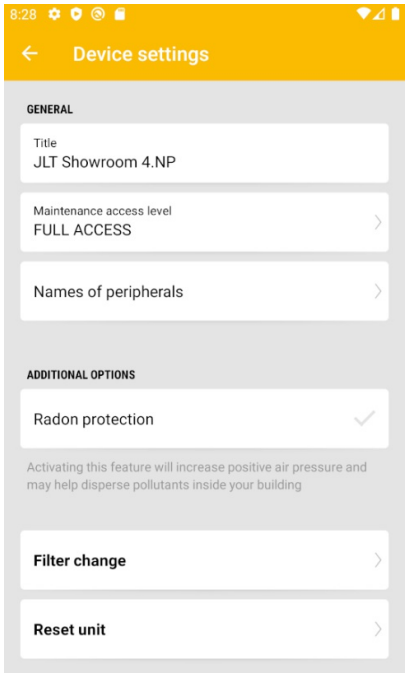

Figure 31 – Device settings

10.3.4. Setting the Time schedule mode

Tap on **Time Schedule settings** tab. Tap on the column below the day of the week that you would like to set Time Schedule for. An adjustable vertical bar representing ventilation time span appears. Drag the top/bottom of the bar to set start/end time. Tap on the bar again to select ventilation mode for given time span, as shown in figure 33. You can set more time spans and schedule remaining days of the week the same way. An incorrectly set time span can be deleted anytime. Tap on it, then drag and drop it to the trash bin (bottom right). To save the schedule, tap on the check mark in the top right corner.

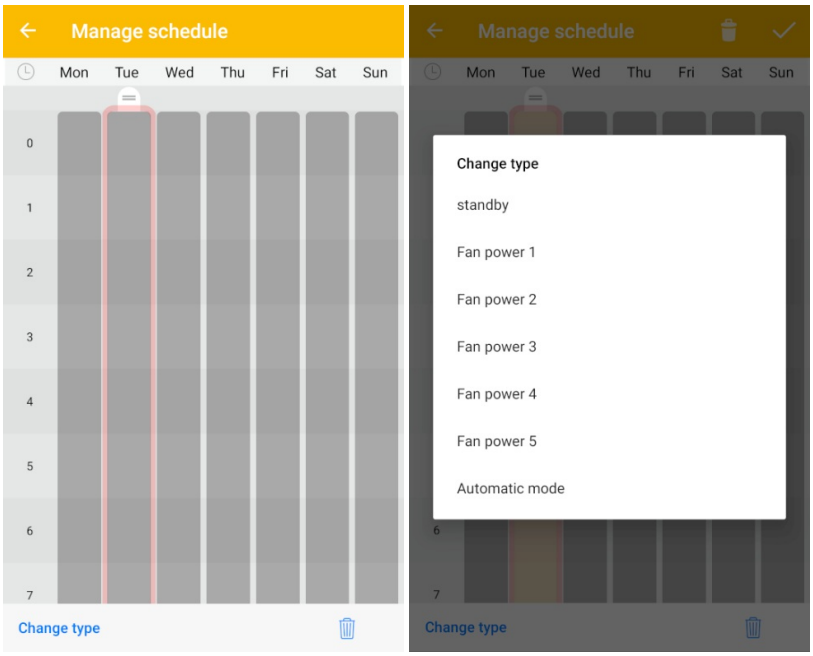

Figure 32 – Time schedule, Figure 33 – Select mode for time span

10.4. Sharing access to Futura

Sharing menu allows you to configure how you share access to Futura with other users along with different levels of their access rights.

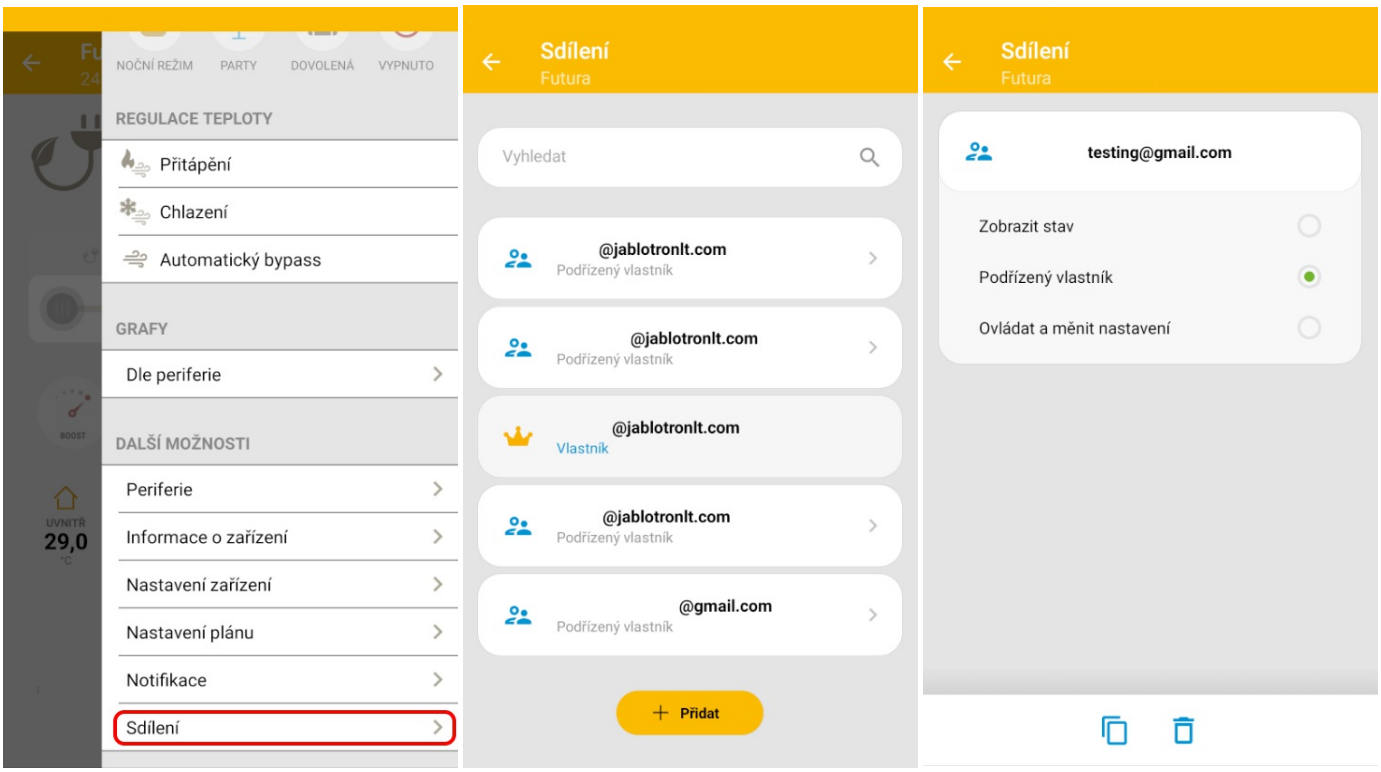

Figure 34 – Sharing tab, Figure 35 – List of users, Figure 36 – Access levels

There are four different levels of access rights that you can set for other users. They are listed below:

Owner

Owner is the user with superior rights. The device is registered with this user. Owner can control all settings of the unit, add other users and set a level of access for each of them.

Subordinated owner

Subordinated owner has the same rights regarding unit settings as Owner, but is not allowed to add new Subordinated owners. However, Subordinated owner can add new users with "Control and adjust settings" and "View status" access level.

Control and adjust settings User with this level of access can adjust only selected settings that a superior user grants an access to when adding them. User with "Control and adjust settings" access level is not allowed to add other users.

View status User with this level of access is allowed to view status of selected devices and their corresponding values. Visible devices are selected by the superior user when the user with "View status" access is added. User with "View status" access level is not allowed to add other users.

To add a new user click the "Add" button on the bottom of the screen. Then enter user's email address and select the level of access rights (see above). The level of access rights can be customized and you can select settings and functions that will be accessible to the new user.

11. Warranty

Futura heat recovery unit is covered by an extended warranty of 5 years. The warranty period begins once the unit is commissioned by a certified installation partner.

Acknowledgment of warranty claims is subject to compliance with all instructions given in the User Manual, which is part of the delivery. In particular, the following is required:

- Regular maintenance by an authorized service partner of JABLOTRON LIVING TECHNOLOGY CZ s.r.o. throughout the warranty period, in intervals specified by the manufacturer (at least once a year),
- Periodic replacement of filters (based on indication by Futura).

Warranty conditions

- The unit was supplied and commissioned by a certified installation partner of JABLOTRON LIVING TECHNOLOGY CZ s.r.o.
- The device is permanently connected to the Jablotron cloud services (taking into account intermittent network outages).
- The unit is checked at least once a year by an authorized service partner of JABLOTRON LIVING TECHNOLOGY CZ s.r.o.
- The unit is used in accordance with the manual and is not subject to unauthorized repairs.
- No modifications were made to the installation of the ventilation system which would go against installation recommendations of JABLOTRON LIVING TECHNOLOGY CZ s.r.o.
- Filters are replaced within 30 days of replacement indication. We recommend to enable notification of replacement need in MyJABLOTRON mobile application.

Warranty scope

JABLOTRON LIVING TECHNOLOGY CZ s.r.o. undertakes to repair the defective product free of charge during the extended warranty period, namely:

- 5 years from the date of commissioning by a certified installation partner.
- The warranty does not cover the costs of installation works related to the defective product (e.g. unmounting and mounting of the unit).
- In the event of a warranty claim, no repairs on the device may be performed without prior written consent of the manufacturer or supplier.

Warranty expires if:

- The warranty period has expired.
- The device has been subject to unauthorized changes or modifications.
- Parts not supplied by the manufacturer have been built into the unit.
- The device was used in an improper or incorrect way.
- The device has been damaged as a result of faulty connections, contamination in the system, natural disasters, or electrical grid failure.
- No filters were replaced upon reset indication.
- Filters were not replaced within 30 days of indication.

12. Disposal

12.1. Information for users regarding the disposal of electrical and electronic appliances (households)

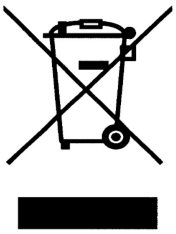

Figure 35 – Separate collection symbol

This symbol stated on the product or within the product documentation means that the item shall not be placed in the unsorted municipal waste. For proper disposal of the item, please return it to the designated collection points, where it will be accepted for free. By ensuring this product is disposed of correctly, you will help preserve valuable natural resources and prevent potential negative effects on the environment and human health. Contact your local authority or the nearest collection point for further details. Improper disposal of this type of waste may result in fines imposed in accordance with national regulations.

12.2. Information for users regarding the disposal of electrical and electronic appliances (corporate and business)

For proper disposal of electrical and electronic items, please request detailed information from your dealer or supplier.

12.3. Information regarding disposal of electrical and electronic items for users outside the European Union

The above symbol is only valid in the countries of the European Union. To ensure proper disposal of electrical and electronic items, request detailed information from your local authorities or equipment dealer.

Your installer/distributor:

JABLOTRON LIVING TECHNOLOGY CZ s.r.o.
Holešovská 1692, 769 01 Holešov, Czech Republic
Tel: +420 775 587 595 | E-mail: info@jablotronlt.com | Web: JABLOTRONLT.COM