INSTALLATION AND USER MANUAL

LCD TOUCH DISPLAY

V1_2017

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1 BASIC INFORMATION

- The enclosed installation and user manual contains all information for safe installation and use of the LCD touch display. **BEFORE USAGE, PLEASE READ THIS MANUAL CAREFULLY!**
- Store this manual in a safe and dry place; if possible somewhere near the LCD touch display. The manual must be kept in full legible condition during the lifespan of the display.
- The LCD touch display must be installed and connected according to this instruction manual. **IF YOUR ARE NOT ABSOLUTELY SURE, THAT THE DISPLAY IS CORRECTLY INSTALLED AND CONNECTED, DO NOT TURN THE DISPLAY ON!**
- The installer is obliged to explain to the end user how the LCD touch display is properly used in accordance with this manual.
- **THE MANUFACTURER SHALL NOT BE LIABLE FOR ANY DAMAGE OR IMPROPER OPERATION OF THE LCD TOUCH DISPLAY AS A RESULT OF IMPROPER INSTALLATION!**

2 IMPORTANT WARNINGS

WARNING!
The LCD touch display must not be used outside of the temperature range, stated in this manual, or in aggressive or explosive environments.

DANGER!
The LCD touch display must always be disconnected from the power supply prior to installation or maintenance.

WARNING!
Do not install or place any kind of heating elements near of the communication cable between the LCD touch display and the ventilation unit.

WARNING!
Do not use damaged equipment or cables for connecting the LCD touch display to the ventilation unit.

WARNING!
Please observe safety requirements for the electric equipment being used to install the LCD touch display.

WARNING!
Carefully unpack the LCD touch display from the packaging.

WARNING!
It is advisable, that you do not lengthen the communication cable between the LCD touch display and the ventilation unit by yourself and that you leave it to a professional. Avoid damaging the communication cable and do not bend it excessively.

WARNING!
The LCD touch display shall be used only for purposes, for which it was designed and intended.

WARNING!
Do not touch the LCD touch display with wet hands. Do not do maintenance work with wet hands.

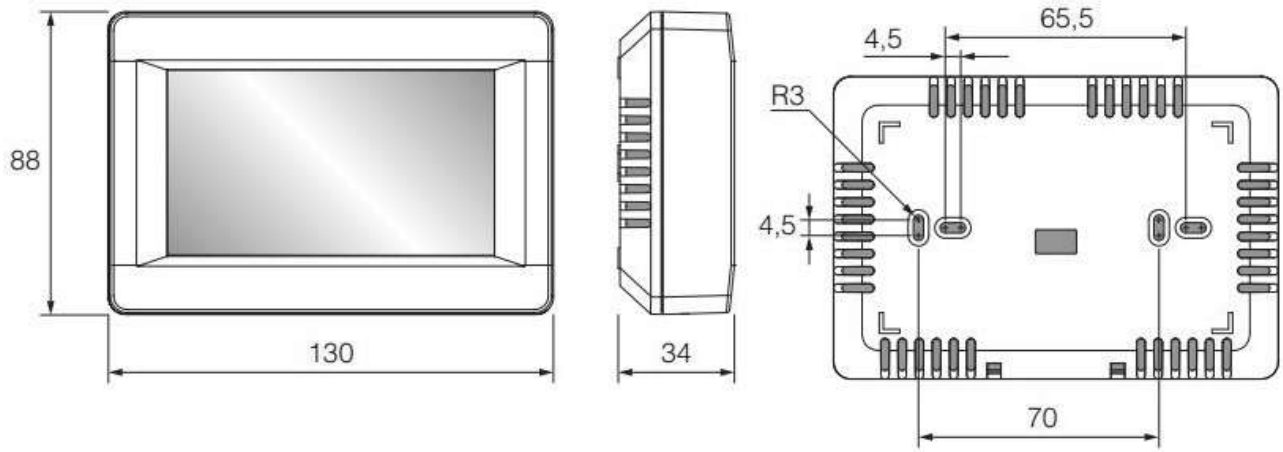
WARNING!
Avoid water access or spraying of water onto electrical parts of the LCD touch display.

WARNING!
Children shall not operate the LCD touch display.

WARNING!
In case of unusual sounds or smell form the LCD touch display, disconnect it from the power supply and contact the authorized service center.

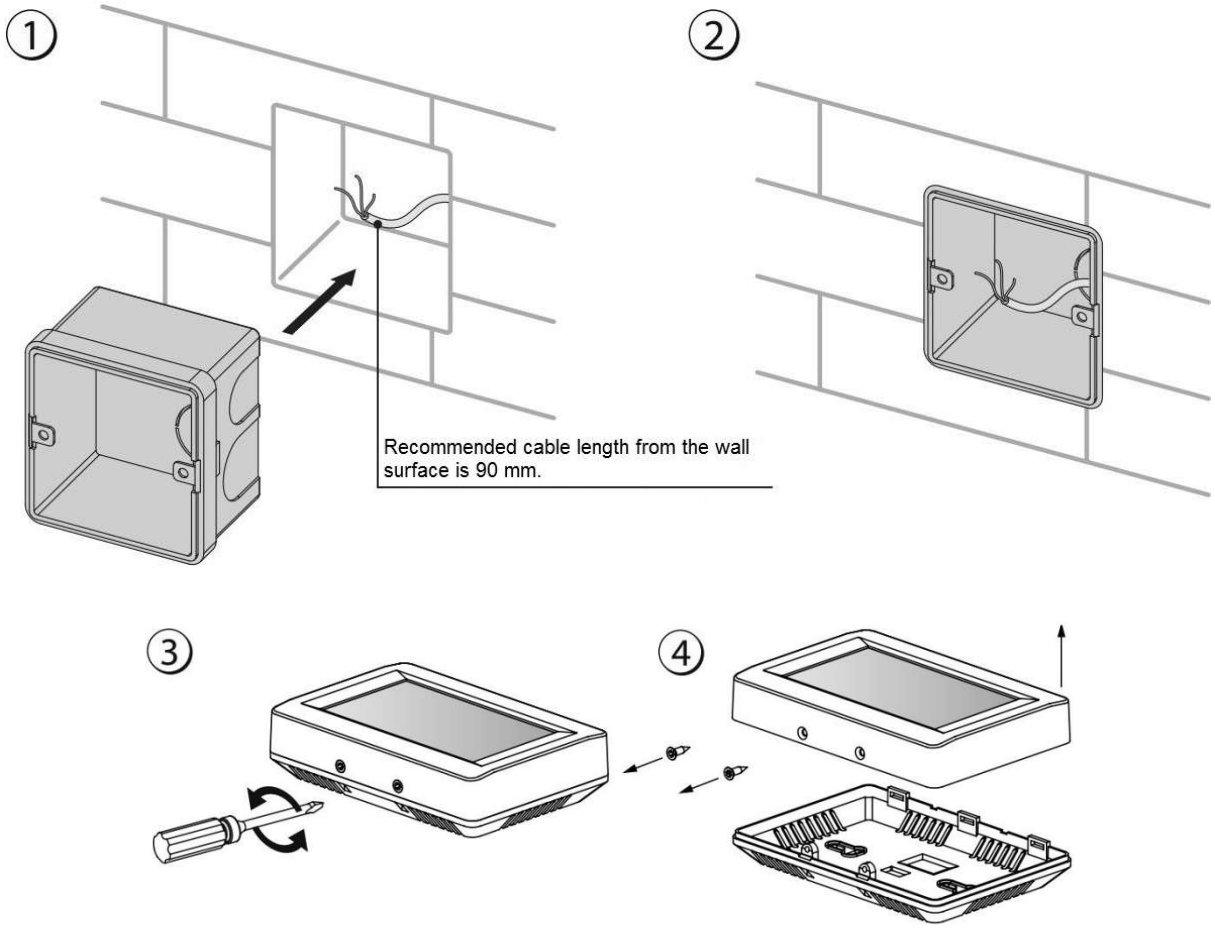
3 MAIN TECHNICAL INFORMATION

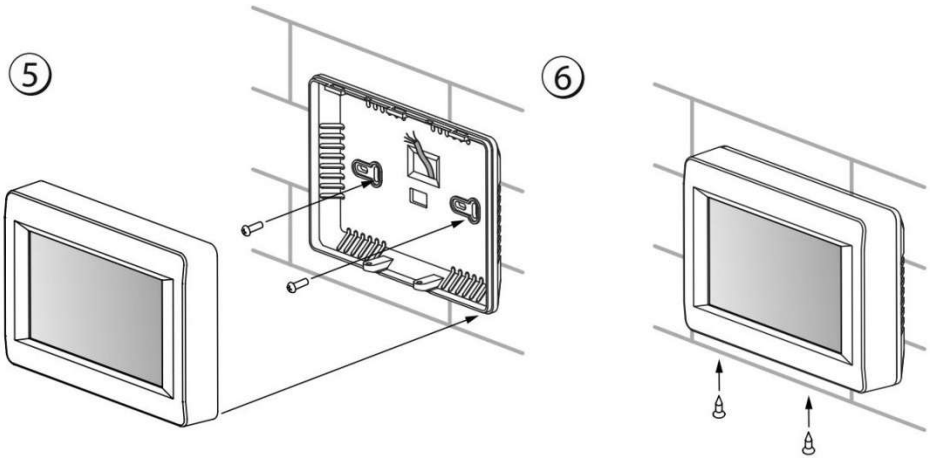
PARAMETER	VALUE
Ambient temperature [°C]	From +5 to +40
Relative humidity [%]	From 5 to 80 (no condensation)
Cable cross section [mm^2]	From 0,25 to 0,35
Dimensions (WxHxD) [mm]	130x86x30
Cable length [m]	Up to 50
Ingress protection rating	IP20



4 LCD TOUCH DISPLAY INSTALLATION

The air humidity sensor is located on the LCD touch display. The installation location of the display must be considered carefully, because the operation logic of the ventilation unit will be determined by air humidity of the air in the room, where the LCD touch display will be installed. Avoid installation in bathrooms and other rooms with moisture sources (kitchen, laundry rooms,…).

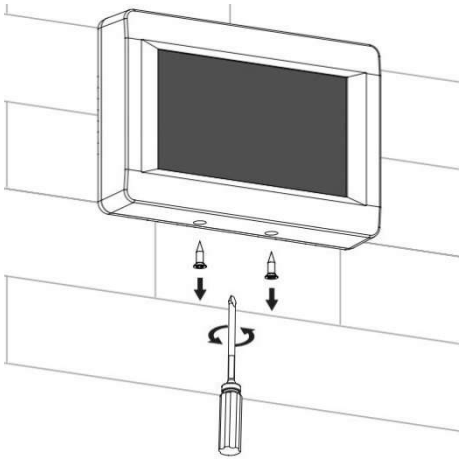




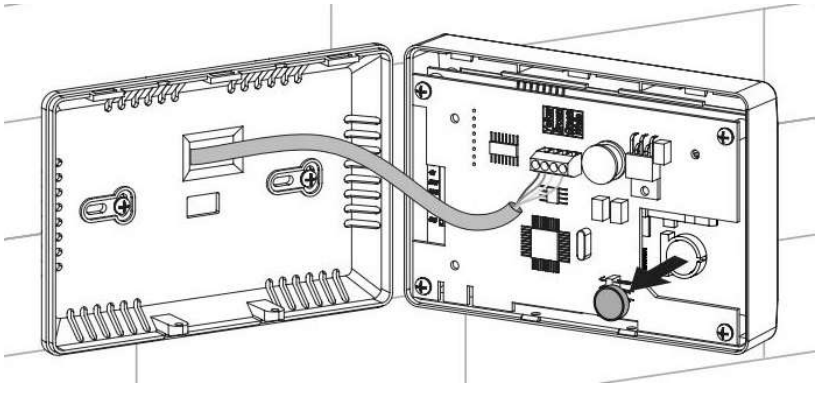
5 BATTERY REPLACEMENT

The battery keeps the internal clock running when the ventilation unit is disconnected from power supply. If the ventilation unit is disconnected from the power supply and the battery is low, the clock stops, time and date settings are reset. This leads to incorrect time and date settings when the ventilation unit is in operation and, to incorrect scheduled operation of the ventilation unit. In this case, the battery must be replaced. To replace the battery, please the follow the next steps:

1. Disconnect the ventilation unit from the power supply
2. Remove two screws on the bottom part of the LCD touch display casing.



3. Pull the front part of the casing aside to allow access to the inner circuit board. The battery must be replaced with a new one. The LCD touch display uses a **CR1220 lithium battery**. The location of the battery can be seen from the picture below.



4. Assemble the LCD touch display back in reverse order. **If the wires were unplugged from the terminal of the PCB during the battery change, re-connect them correctly. Failure to re-connect the wires correctly may result in ventilation unit malfunction.**
5. Connect the ventilation unit to the power supply, and set the current date and time on the LCD touch display.

6 CONNECTION CABLE

To connect the LCD touch display with the ventilation unit, standard electric cable can be used. Please make sure, that the connection cable meets the following requirements: corresponding cross-section and the amount of cores in the cable. The standard connection cable has 4 cores.

Do not lay the power supply cable for the ventilation unit neat of the connection cable to avoid disruption. The connection cable between the LCD display and ventilation unit must be of appropriate length: do not wind the excess length of the connection cable and rather remove the excess length. Otherwise the ventilation unit may malfunction.

RECOMMENDED CROSS-SECTION OF THE CONNECTION CABLE		
Cross-section	≥ 0,12 mm^2	≥ 0,25 mm^2
Cable length	Up to 15 m	Up to 50 m

The minimum recommended LCD touch display supply voltage is 11V.

7 OPERATION INSTRUCTIONS

7.1 Main Menu

In the upper part of the main menu, from left to right, current date, current air humidity and time are displayed. From the main menu, all functions and sub-menus can be accessed. Also a status icon for internet connection is displayed in the upper part of the main menu:

unit is connected to the internet

unit is not connected to the internet

Icon description:

- MENU: enables access to the user menu. For more information, please refer to »7.5 User menu«
- AUTO: activation/deactivation of the scheduled operation
- TEMPERATURE: icon displays the current temperature, measured by the ventilation unit. By pressing this icon you will enter into menu for temperature settings. For more information, please refer to »7.4 Temperature settings«
- ON/OFF: ventilation unit activation/deactivation
- TIMER: timer activation/deactivation
- AIR FLOW: icon displays current air flow setting. By pressing this icon you will enter into menu for air flow settings. For more information, please refer to »7.3 Air flow settings«

7.2 Ventilation unit activation and deactivation

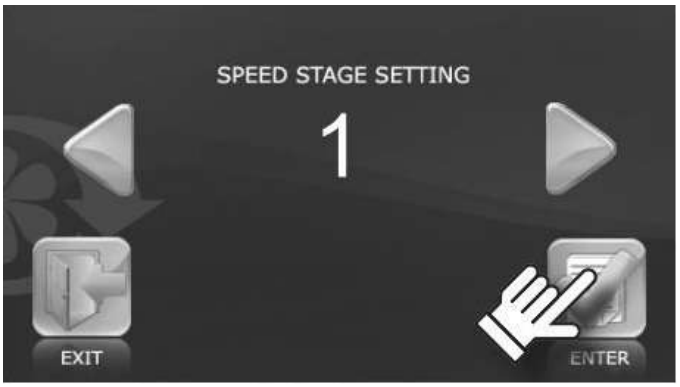
To activate or deactivate the ventilation unit, press the button ON to activate or OFF to deactivate the ventilation unit. When the ventilation unit is activated, the icon is highlighted in green, when the unit is deactivated the icon is highlighted in red. As long as the ventilation unit is deactivated, you will not be able to access menus and sub-menus or change any settings.

7.3 Air flow settings

To set the air flow, press the button AIR FLOW, as shown in the picture above. With pressing the AIR FLOW button, you will enter the sub-menu for air flow settings, which enables four different settings:

- : ventilation unit functions with first ventilator speed.
- : ventilation unit functions with second ventilator speed.
- : ventilation unit functions with third ventilator speed.
- AUTO: auto function enables the operation of the ventilation unit according to air humidity. After setting the AUTO function, the icon will change to , the ventilation unit will operate according to current air humidity of the air in the room, where the LCD touch display is installed. To set the level of humidity, please refer to »7.9.8 Humidity settings«

After pressing the AIR FLOW button, the sub-menu for the air flow settings is reached.



To select the desired ventilator speed, use or buttons, then press the ENTER button to save the settings.

To return to the main menu, press the EXIT button. If the settings were not saved with the ENTER button, after pressing the EXIT button, the settings will not be saved and you will return to the main menu.

7.4 Temperature settings

By pressing the TEMPERATURE button, you will enter the sub-menu for temperature settings.

After entering the temperature setting sub-menu, the temperature sensor can be chosen, according to which the ventilation unit will function.

DUCT: the ventilation unit will function according to the temperature sensor, which is located in the ventilation duct (in the ventilation unit).

ROOM: the ventilation unit will function according to temperature sensor, which is located on the LCD touch display.

To set the desired temperature, use or buttons, then press the ENTER button to save the settings. To return to the main menu, press the EXIT button. If the settings were not saved with the ENTER button, after pressing the EXIT button, the settings will not be saved and you will return to the main menu.

7.5 User menu

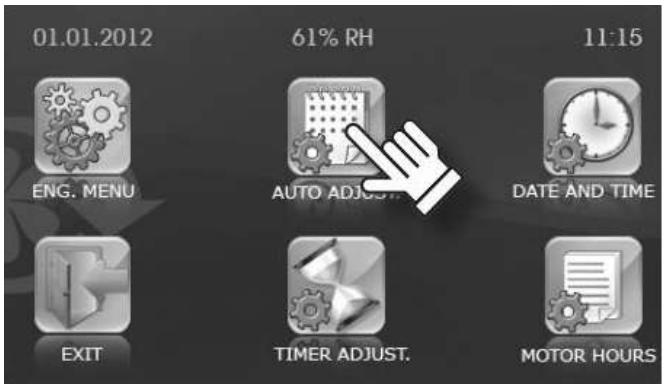
To enter into user menu, in the main menu, press the MENU button.

The user menu contains basic elements and functions for parameter settings.

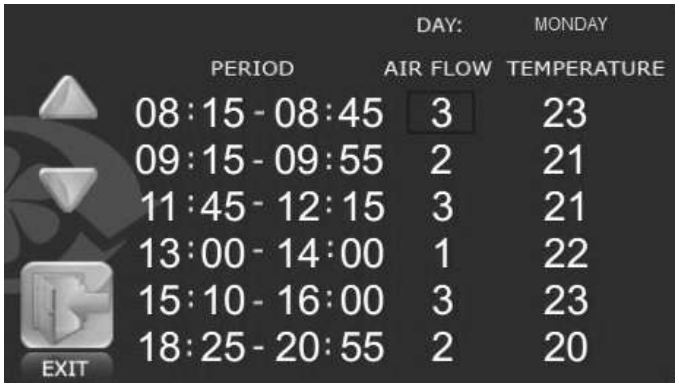
- ENG. MENU: enables access to the engineering menu. Access to this menu is protected with a password.
- AUTO ADJUST.: settings for scheduled operation
- DATE AND TIME: date and time settings
- TIMER ADJUST.: setting the time, temperature and ventilator speed for operation according to timer.
- MOTOR HOURS: setting the filter change period, motor hours reset after filter change and current operation time display.

7.6 Auto adjust.

AUTO ADJUST. enables scheduled operation of the ventilation unit. During this set time interval, the ventilation unit will operate according to settings made for the AUTO ADJUST. function (time, air flow and temperature). Between the set intervals, the unit will be in standby mode. To activate the AUTO ADJUST. function, in the main menu, press the AUTO button. Activation of this function is highlighted with a tic . The AUTO ADJUST. function has a lower priority then the TIMER function, so if the TIMER function is active, the AUTO ADJUST. function will not be active. To set the time intervals for the AUTO ADJUST. function, in the user menu, press the AUTO ADJUST. button.



After entering the sub-menu for time interval settings, first chose the day, for which you want the ventilation unit to operate according to this function. Press on the area of the LCD display, where the DAY is displayed (upper right part of the display).



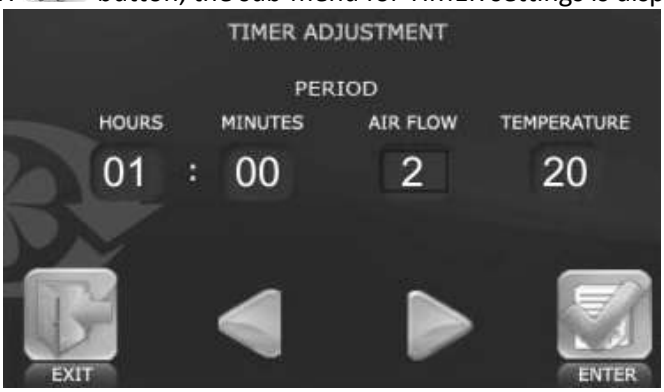
To set the desired time, air flow and temperature, press on the corresponding area of the LCD display (f.e. to set the temperature, press on the display area, where the temperature is displayed; the selected temperature will be highlighted with a square). Then with or button set the time, air flow and temperature.
Depending on the STANDBY MODE settings, the ventilation unit will either operate in STANDBY MODE or will be deactivated between the set time intervals

To save the settings and return to user menu, press the EXIT button.

7.7 Timer

To activate the TIMER, in the main menu, press the TIMER button. Activation of this function is highlighted with a tic . To set the TIMER, in the user menu, press the TIMER ADJUST. button.

After pressing the TIMER ADJUST. button, the sub-menu for TIMER settings is displayed.



To set the desired value, press on the corresponding area of the LCD display, and then with or button set the desired value. Then press the ENTER button to save the settings. To return to user menu, press the EXIT button. If the settings were not saved with the ENTER button, after pressing the EXIT button, the settings will not be saved and you will return to the user menu.
If TIMER and AUTO ADJUST. functions are both active, the ventilation unit will operate according to TIMER settings because the TIMER function has priority over AUTO ADJUST. function. When the AUTO air flow is set (7.3 Air flow settings), the TIMER is not active and cannot be activated

7.8 Motor hours

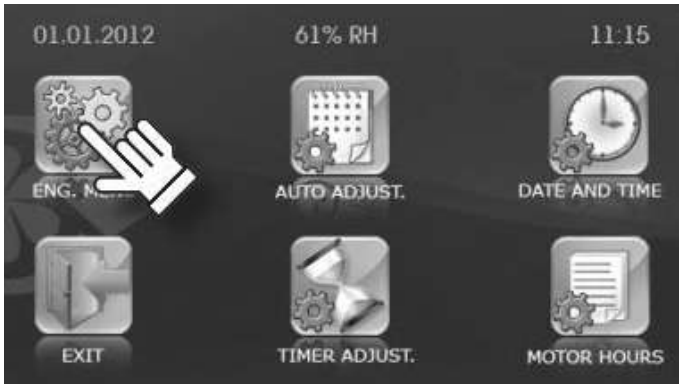
This function enables the user to set the time interval for filter maintenance. After the set time has expired, the LCD display will indicate every 24 hours that the filter maintenance is necessary.

To enter into this sub-menu, in the user menu press the MOTOR HOURS button.

Then with or buttons change the interval duration for filter maintenance. The window OPERATING HOURS displays the current operation time of the ventilation unit since the last filter maintenance. After the filter maintenance has been made, press the RESET button to reset the operation hours of the ventilation unit.
After the set maintenance interval has expired the ventilation unit will inform that filter maintenance in necessary.

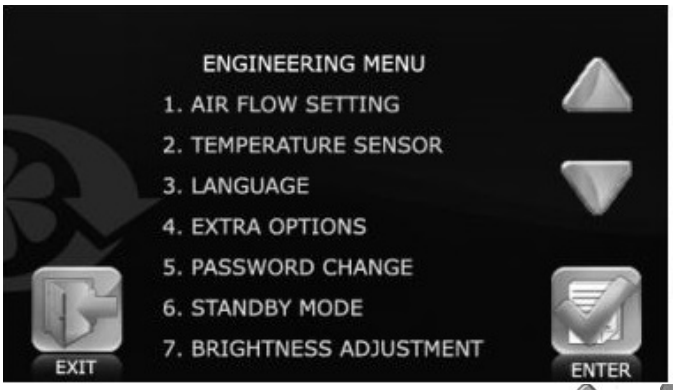
7.9 Engineering menu

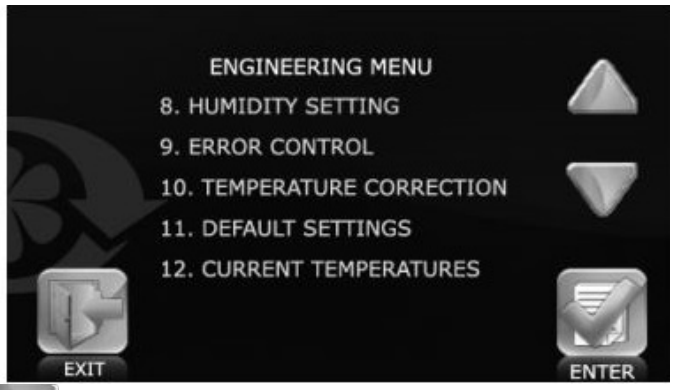
To enter into engineering menu, in the user menu press the ENG: MENU button.



Access to engineering menu is only possible with a password. The password is factory set to 1111.

After entering the password press the OK button. If you have entered the wrong password, press the RESET button to erase the entered password. To return to the user menu, press the EXIT button. If you have forgotten the password, press and hold the RESET button for 20 seconds, until you hear a long sound. The password will be reset to factory (1111).
After entering the password and confirming it with the OK button, access to sub-menus in the engineering menu is possible.





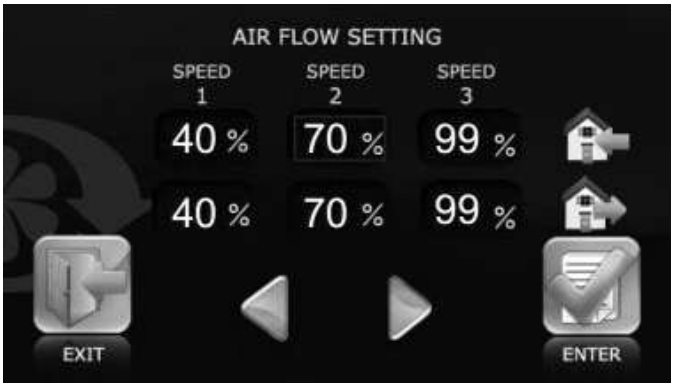
To move through the engineering menu press the or button.

To enter into the desired sub-menu, press the ENTER button.

To return to the user menu, press the EXIT button.

7.9.1 Air flow setting

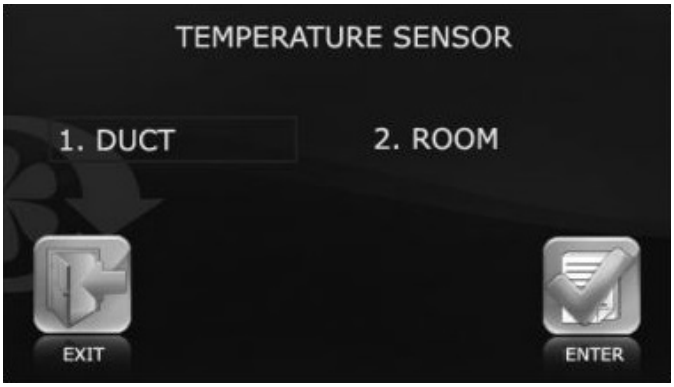
To adjust the air flow for each ventilator speed, move to the AIR FLOW SETTING menu and press the ENTER button.



Choose the ventilator speed, which you want to adjust; press on the corresponding LCD display area, the chosen ventilator speed will be highlighted with a square. With or buttons adjust the value for the ventilator speed, then press the ENTER button to save the settings. If you do not save the settings and you press the EXIT button, you will return to engineering menu and the settings will not be saved.
The air flow is set according to the percentage of each ventilator power output. For each ventilator, the value can be set separately, but this is not advisable. Always set the percentage for both ventilators to the same value (amount of air extracted from the building is the same as the amount of air supplied into the building).

7.9.2 Temperature sensor

To choose the temperature sensor for temperature control, in the engineering menu move to TEMPERATURE SENSOR and press the ENTER button.

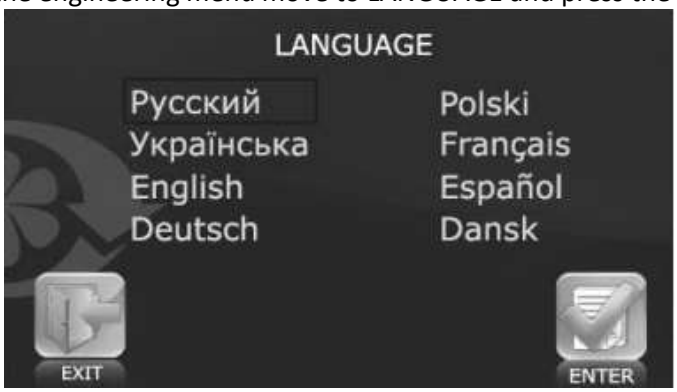


To change the temperature sensor, press the corresponding area on the LCD display and then press the ENTER button to save the setting. If you do not save the settings and you press the EXIT button, you will return to engineering menu and the settings will not be saved.

7.9.3 Language settings

The ventilation unit is pre-set with 8 languages. The ventilation unit is factory set to English language, but the language can be set differently depending on the user requirements.

To set the desired language, in the engineering menu move to LANGUAGE and press the ENTER button.



From the list of languages select the desired language and press the ENTER button to save the selection. If you do not save the selection and you press the EXIT button, you will return to engineering menu and the selection will not be saved.

7.9.4 Extra options

To enter into this sub-menu, in the engineering menu move to EXTRA OPTIONS and press the ENTER button. It is advisable, that you do not change these settings and leave this to the person making the first start of the ventilation unit.

- HEATING CONTROL: If the ventilation unit is equipped with an electric pre-heater, the parameter HEATING CONTROL must be set to ON. This enables the automatic operation of the electric pre-heater and freezing protection of the heat exchanger. In this case, the next parameter SUPPLY FAN OFF MODE must be set to OFF.
- SUPPLY FAN OFF MODE (deactivation of the supply air ventilator): When this function is activated, the supply air ventilator is shut off when the temperature before the inlet to the heat exchanger drops under a pre-set value. If the ventilation unit is not equipped with an electric pre-heater, the parameter SUPPLY FAN OFF MODE must be set to ON, and the HEATING CONTROL parameter to OFF, to enable heat exchanger freezing protection.
- HUMIDITY SENSOR SELECTION: Here the humidity sensor for humidity control can be selected. Two different settings can be made: 1 DUCT (installed in the air duct, after the heat exchanger) or 2 ROOM (on the LCD touch display).
- BYPASS OPERATION MODE: Activation of summer bypass mode. It is advisable, that this parameter is always set to 1 (ON) (otherwise differently if this setting is not available).

In case that the parameter SUPPLY FAN OFF MODE is set to ON, an additional sub-menu will open to set parameters for this function.

By pressing on the corresponding area on the LCD display, you can choose WORKING HOURS, DOWNTIME and SWITCH-OFF TEMPERATURE. Then with or button change the value and then press the ENTER button to save the settings. First two parameters define the delay and interval length, the third parameter defines the start temperature for this function. . If you do not save the settings and you press the EXIT button, you will return to extra options menu and the settings will not be saved.

We advise you, that you do not change these settings. Inappropriate settings may lead to freezing and damage to the heat exchanger.

7.9.5 Password change

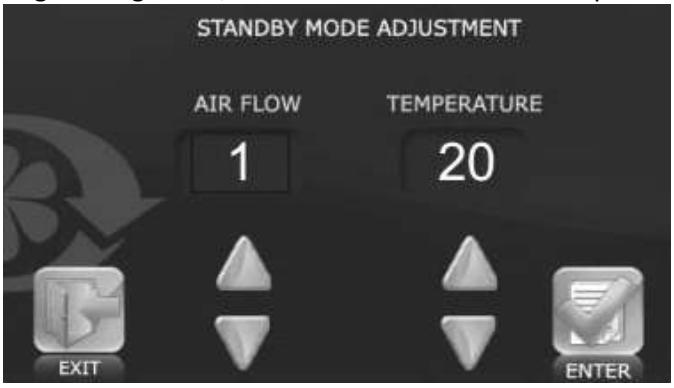
In this sub-menu you can change the factory or current password for the engineering menu access. In the engineering menu, move to PASSWORD CHANGE and press the ENTER button.

Then enter a new password for engineering menu access and press the OK button. With the RESET button you can erase the entered password if you do not like it or there was an error made. With the EXIT button you return to the engineering menu.

7.9.6 Standby mode

In standby mode the ventilation unit operates with the first ventilator speed according to the pre-set air temperature.

To set the standby mode, in the engineering menu, move to STANDBY MODE and press the ENTER button.



Then with or buttons select the value under AIR FLOW:

- 0: STANDBY MODE is deactivated
- 1: STANDBY MODE is activated

Then with or buttons set the desired temperature and press the ENTER button to save the settings. If you do not save the settings and you press the EXIT button, you will return to engineering menu and the settings will not be saved.

7.9.7 Display brightness adjustment

The brightness level for the LCD display can be set, for both operation and standby mode. The display goes into standby mode after 30s of non-activity. To adjust the brightness level, in the engineering menu, move to BRIGHTNESS ADJUSTMENT and press the ENTER button.

Then with or buttons set the desired brightness level and press ENTER to save the settings. If you do not save the settings and you press the EXIT button, you will return to engineering menu and the settings will not be saved.

7.9.8 Humidity setting

To set the desired humidity level, in the engineering menu, move to HUMIDITY SETTING and press ENTER .

By pressing the DUCT or ROOM button you can chose the humidity sensor. DUCT humidity sensor is optional and is not supplied in the standard ventilation unit kit. ROOM humidity sensor is located on the LCD touch display.

Then with or button set the desired humidity level and then press the ENTER button to save the settings. . If you do not save the settings and you press the EXIT button, you will return to engineering menu and the settings will not be saved.

To enable humidity function of the ventilation unit, the air flow must be set to AUTO (refer to 7.3 Air flow settings). The ventilation unit will operate in AUTO function as follows:

- When the air humidity is under the set value, the speed of the ventilators will be continuously reduced to first speed (this will not happen instantly, the speed of the ventilator will be slowly reduced).
- If the air humidity will increase over the set value, the ventilator speed will be continuously enlarged to the third ventilator speed.

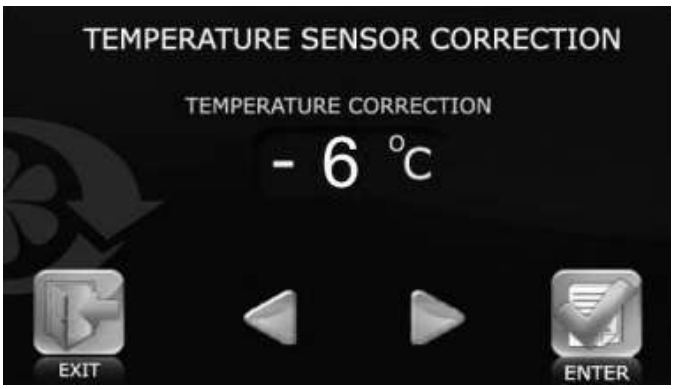
7.9.9 Error control

The ventilation unit enables the user to check for faults and errors. The date and error code is displayed. To check for faults, in the engineering menu, move to ERROR CONTROL and press the ENTER button.

By pressing the EXIT button you will return to the engineering menu. Error description can be found below, please refer to “8. ERROR DESCRIPTION”.

7.9.10 Temperature sensor correction

To correct the measurement of the temperature sensor, in the engineering menu, move to TEMPERATURE SENSOR CORRECTION and press the ENTER button.



Then with or button change the value for the temperature correction and then press the ENTER button to save the settings. If you do not save the settings and you press the EXIT button, you will return to engineering menu and the settings will not be saved.

It is advisable, that you do not change these settings, because this has a direct influence on the functionality of the ventilation unit in some modes of operation.

7.9.11 Default settings

In case, that some settings have been made and you want to restore the settings to default (or factory), in the engineering menu, move to DEFAULT SETTINGS and press the ENTER button.

By pressing the ENTER button, the settings will be restored to default. By pressing the EXIT button, you will return to the engineering menu.

By restoring the settings to default ones, all of the settings that have been made will be erased. So use this function only in last resort or write down the settings that you want to keep.

7.9.12 Current temperatures

The ventilation unit enables view of current temperatures, measured by the ventilation unit. To view the current temperatures, in the engineering menu, move to CURRENT TEMPERATURES and press the ENTER button.

Current temperatures will be displayed, which are measured on the ventilation unit:

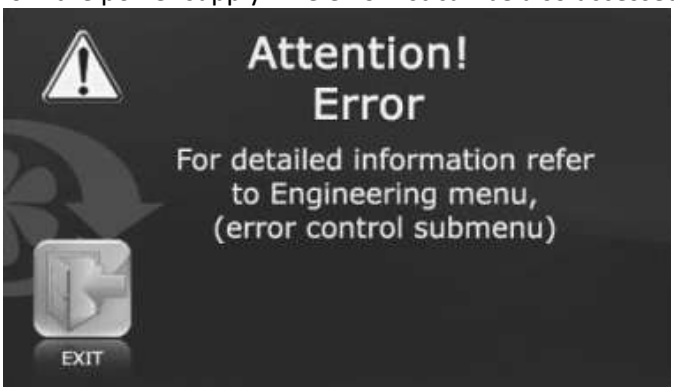
- OUTDOOR: air temperature before the inlet to the heat exchanger in the ventilation unit
- DUCT: temperature of the exhaust air from the rooms, measured in the ventilation unit before the inlet to the heat exchanger.
- AFTER THE HEAT EXCHANGER: temperature of the supply air to the rooms, measured in the ventilation unit after the outlet from the heat exchanger

Sensors, which are not connected, are in this sub-menu indicated with OFF.

- REVERSE FLUID: return water temperature from the post-heater module.
- AFTER THE AIR HEATER: air temperature on outlet from the post-heater module.

7.9.13 Errors

The LCD display will inform you in case of any kind of error or malfunction. The warning will be displayed every 30s, until the error or malfunction has been removed. To enter into the error list, press the EXIT button. To erase the error, disconnect the ventilation unit from the power supply. The error list can be also accessed from the engineering menu.



8 ERROR DESCRIPTION

Error code	Heater type	
	Electric	Water
TE1	Outdoor temperature sensor malfunction.	
TE2	Heat exchanger freezing protection temperature sensor malfunction.	
TE3		Return medium temperature sensor malfunction.
TE4		Water heater freeze protection sensor malfunction.
TE5	Duct temperature sensor malfunction.	
MIN	Supply fan malfunction.	
MEX	Extract fan malfunction.	
ERP	Communication error between the LCD display and the ventilation unit.	
DI1	TK 60 overheating sensor activation.	
DI2	Fire alarm sensor activation	
DI3	TK 90 overheating sensor activation.	
D15		Water pressure sensor malfunction.

9 DEFAULT (FACTORY) SETTINGS

PARAMETER		DEFAULT VALUE	UNIT
Air Flow		1	/
Temperature	Duct	25	°C
	Room	20	
Air Flow Setting	Air supply	Speed 1; 40, speed 2; 70, speed 3 ;99	%
	Air extract	Speed 1; 40, speed 2; 70, speed3 ;99	
Temperature sensor		Duct	/
language		English	/
Extra options	Heating control	OFF	ON/OFF
	Supply Fan Off mode	OFF	ON/OFF
	Humidity sensor selection	2	/
	Bypass operation mode	1	/
Supply Fan Off mode	Working hours	20	min
	Downtime	5	min
	Switch-off temperature	+3	°C
Standby mode setting	Air flow	1	/
	Temperature	20	°C
Display brightness setting	Operation	50	/
	Standby	1	/
Humidity setting	Duct	50	%
	Room	50	%
Temperature sensor correction		-6	°C
Timer settings	Hours	01	Hour
	Minutes	00	Minute
	Air flow	1	/
	Temperature	20	°C
Motor hours		3000	Hour