OXYGEN

Just like breathing

01/2024

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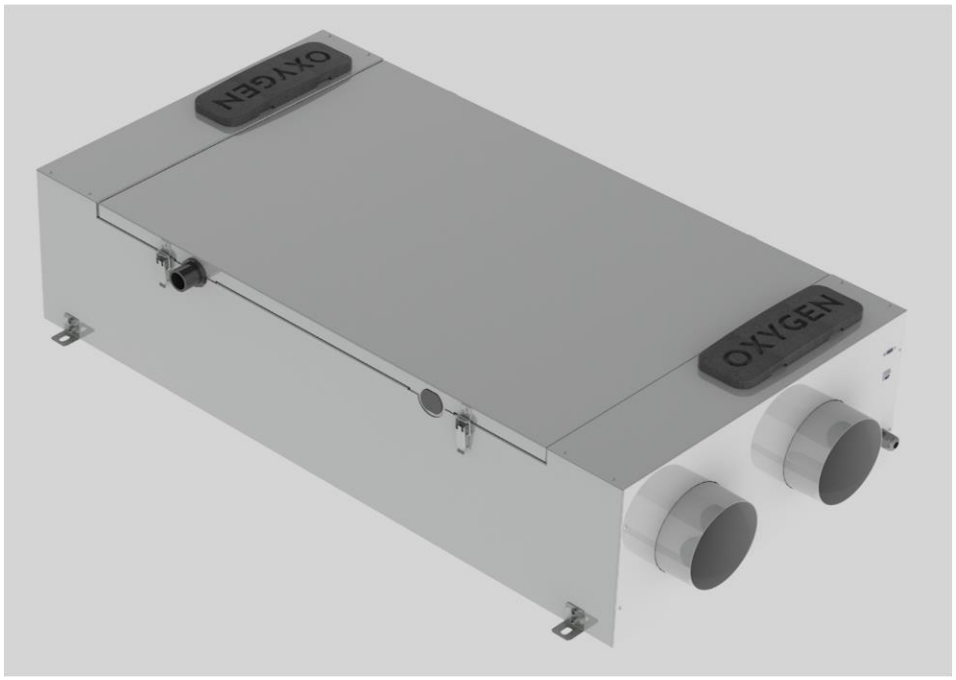


Installation, Operation, and Maintenance Manual

OXYGEN X-Air C-series ventilation units

Products with a Standard Heat Exchanger:
X-Air C180
X-Air C200
X-Air C250

Products with an Enthalpy Heat Exchanger:
X-Air C180E
X-Air C200E

INDEX

1. INTRODUCTION

Carefully read this manual to ensure safe installation and operation of the ventilation unit. Before using the product, perform all necessary installation and operation steps. To ensure safe operation, it is essential to follow the safety guidelines and instructions provided in this manual. Save this manual for future reference.

2. SAFETY SIGNS AND INFORMATIVE SYMBOLS

Danger!
Ignoring warnings marked with the danger sign may result in serious injury or even death

Caution!
Ignoring warnings marked with the caution sign increase the risk of damaging the device, nearby objects, and the environment.

Important information
Recommendations

Recycling symbol

2.1. General safety precautions

Using controllers or settings which are not described in this documentation, increase the risk of electric shock or other hazards caused by electrical voltage or current and (or) may damage other components of the device. **Life-threatening risk due to electric shock! To ensure your safety, it is necessary to follow all the instructions provided in this manual. Incorrect installation and (or) initialization process can cause serious injuries.**

2.2. General safety precautions for installation, maintenance, and cleaning

This product is manufactured in compliance with electrical equipment standards and regulations. Installers and maintenance technicians must have theoretical and practical training in the field of ventilation systems and should be able to work in accordance with workplace safety regulations and the construction norms and standards applicable in the country.

- Installation, maintenance, and cleaning tasks can only be performed by qualified specialists.
- Ensure that the device's power supply is disconnected before performing any installation, maintenance, service, or electrical work. Unplug the plug from the power outlet, or, if not possible, switch off the circuit breaker. Make sure that unauthorized persons do not switch on the device again.
- All electrical work must be performed by a qualified electrician, as there is a risk of life-threatening electric shock.
- Take measures to prevent unauthorized persons from entering the workspace, as accidentally dropped tools or components could injure them.
- The installer must select the fastening components (screws, plastic plugs, anchors, etc.) according to the building's construction material and load-bearing capacity. The installer is responsible for securely attaching the device to the building's structure.
- The power cord must be positioned in a way that prevents anyone from tripping over it and from pulling it out of the socket.
- Never use the device if the power cord is damaged. If such a fault is noticed, switch off the circuit breaker of the power supply to disconnect the electrical supply from the device, and urgently contact a qualified technician or the manufacturer's technical support center.
- The device can be used by children aged 8+ years, people with disabilities, and people who lack experience or knowledge if they are supervised or instructed how to use the device in a safe way and understand the hazards involved. Children must not play with the device. Children must not be allowed to perform cleaning or other work related to the maintenance of the device without supervision.

2.3. Inteded use

The device is designed and manufactured for ventilation in residential and office spaces, with certain limitations in industrial environments, where the ambient air temperature ranges from >0°C to +40°C, and the relative humidity ranges from 20% to 70% (non-condensing). The device is not intended for ventilation in swimming pools, saunas, greenhouses, summer houses, and other spaces with high humidity levels.

All C-series products are supplied with a built-in preheating element, which protects the counterflow heat exchanger from freezing. This ensures continuous operation at low outdoor temperatures.

3. TRANSPORT, STORAGE, AND UNPACKING

The device is packaged in a cardboard box ready for transport and storage. The packaging ensures protection against airborne dust. The device must be stored and transported in a way that protects it from physical damage.

Transport conditions: -20°C - +40°C
Long-term storage conditions: +5°C - +40°C, relative humidity <= 60% (non-condensing).

	Dispose of the packaging material in an environmentally friendly manner.

Checking the consignment

Carefully inspect the received consignment, and if you notice any damaged packaging or if the identification number of the delivered item does not match the one on the invoice, contact your supplier immediately.

Explanation of the identification label:

Example: **X-AIR C 200 E**

Label	Meaning
X-Air	Product name
C	Product type (ceiling-mounted)
180	Maximum air flow 143m^3/h
200	Maximum air flow 200m^3/h
250	Maximum air flow 243m^3/h
E	Enthalpy heat exchanger built into the unit

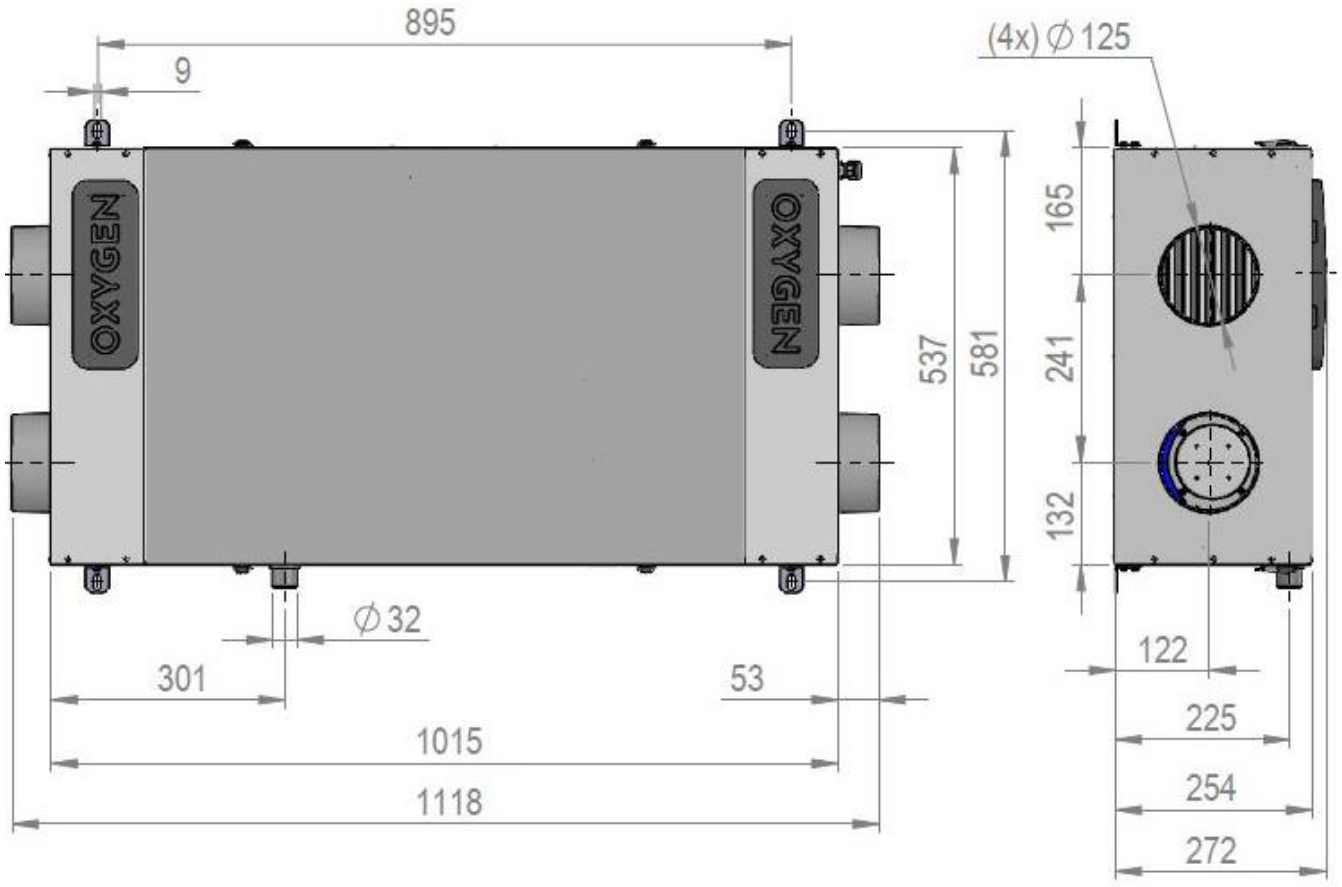
Package contents:

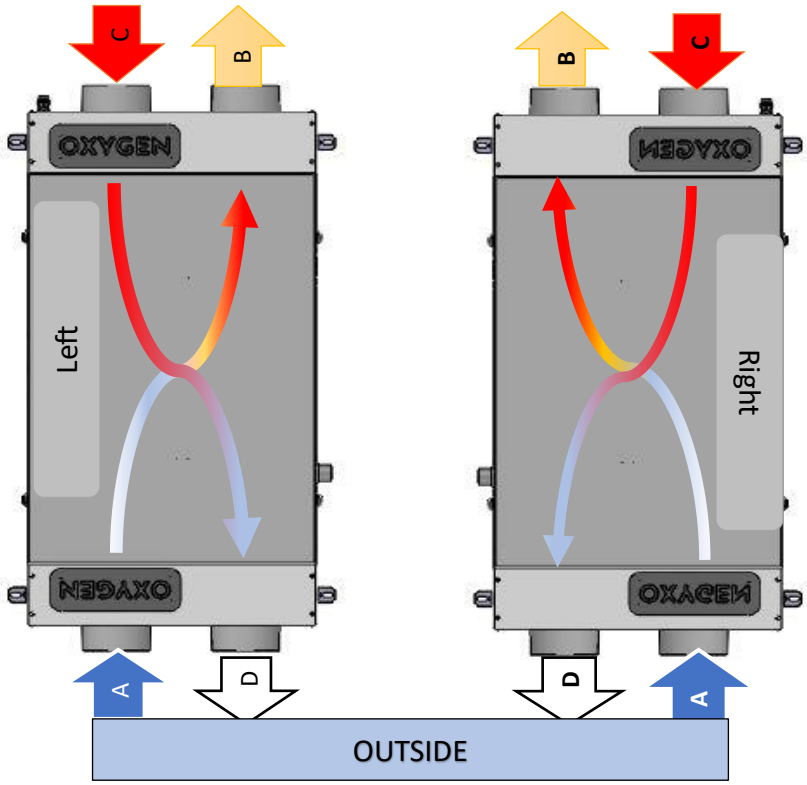
Table 1

	Ventilation unit. Check the identification label.	1 pc.
	Ceiling mount brackets	4 pcs.
	Screws M5x12 (DIN 7985) for fixing the brackets to the unit	8 pcs.
	Drain nozzle D32mm with O-Ring sealing gasket only for products with non-enthalpy heat exchangers)	1 pc.
	Instruction manual	1 pc.

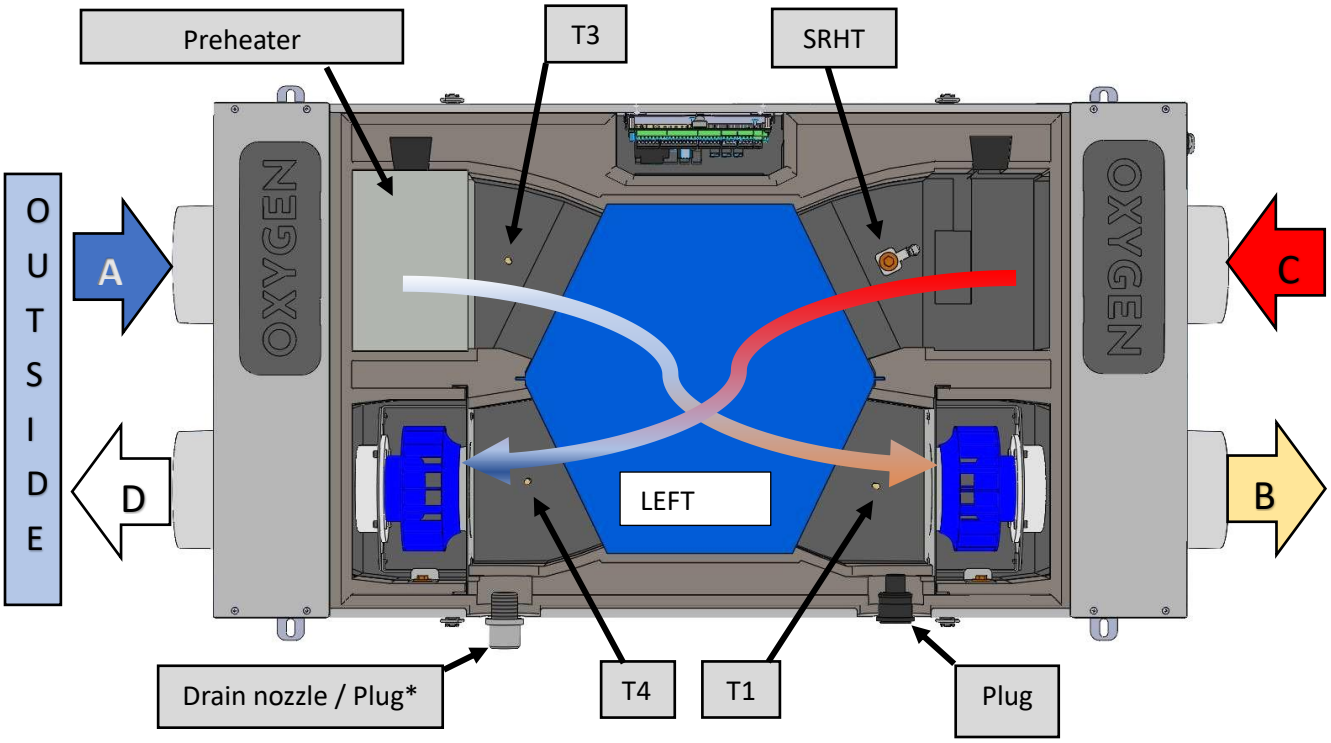
4. INSTALLATION

4.1. Dimensions and orientation



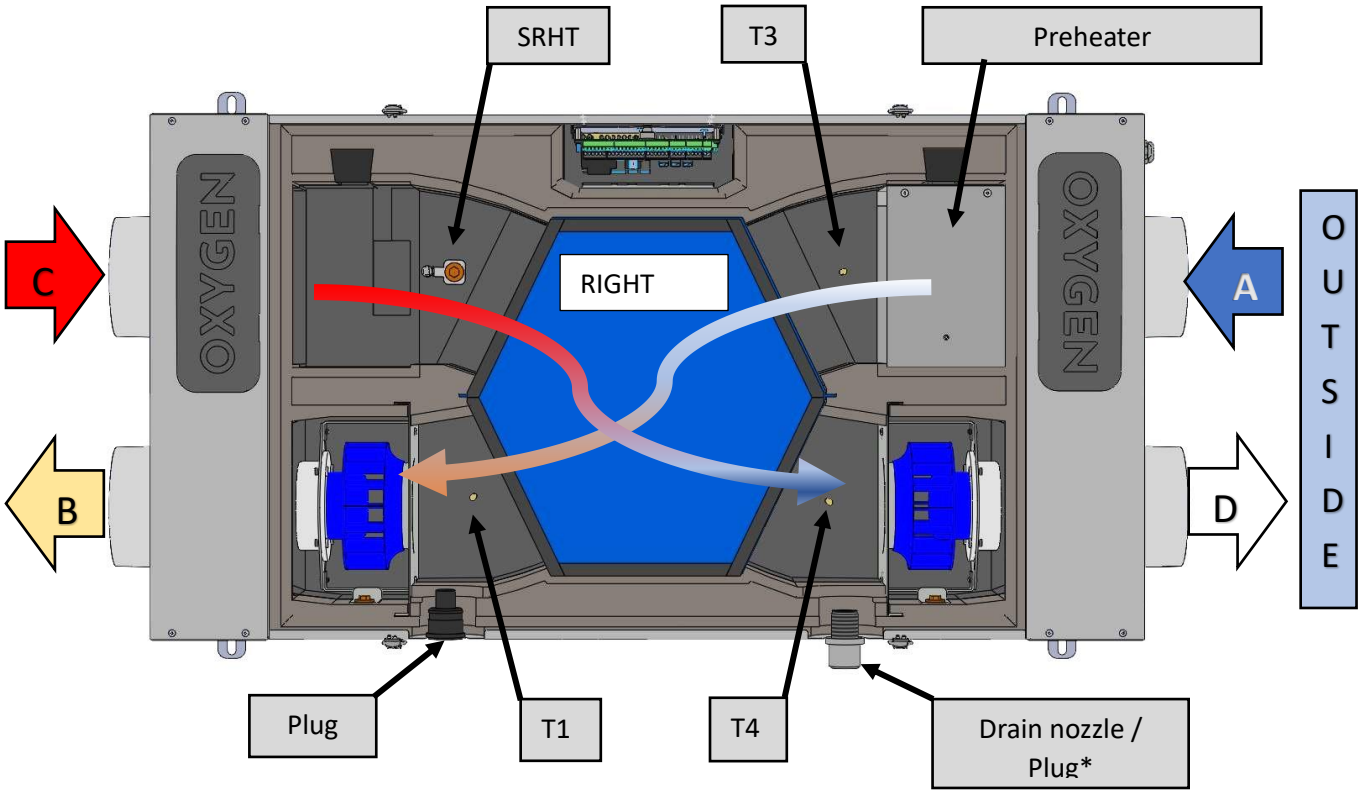


A – Air extracted from outside
B – Air supplied to inside
C – Extraction
D – Air exhausted to outside

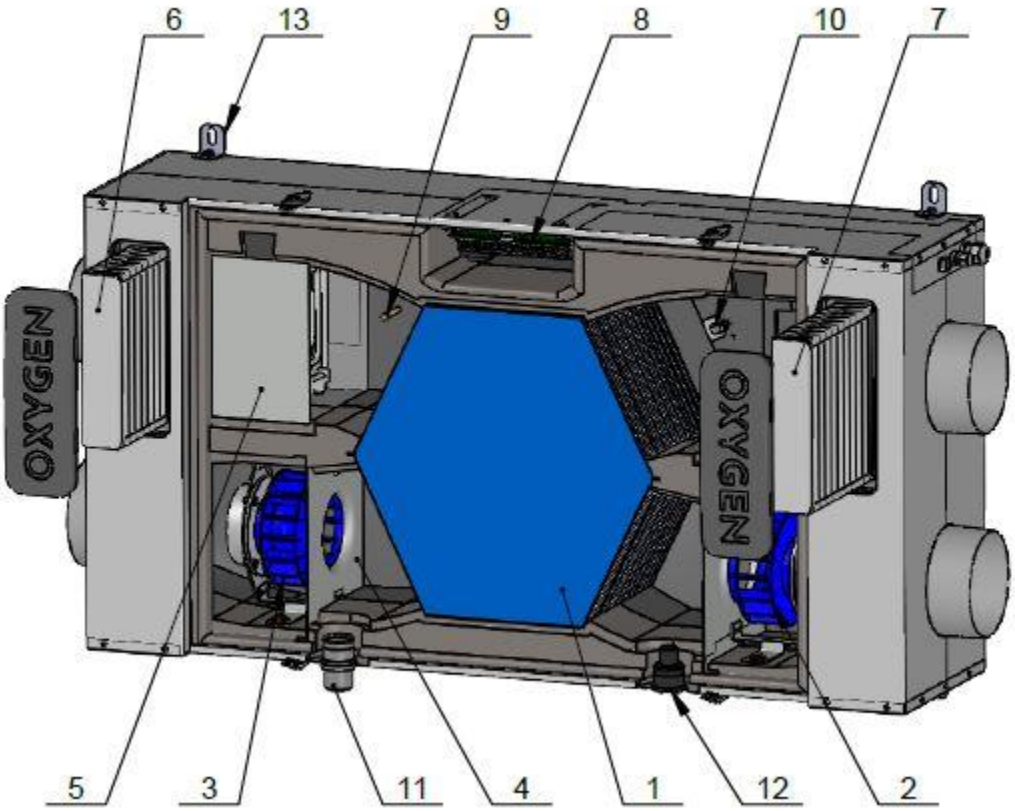


A – Air supplied from outside
B – Air supplied to inside
C – Extraction
D – Air exhausted to outside

T1	Indoor supply air temperature sensor
SRHT	Relative humidity and temperature sensor
T3	Outdoor air (after heater) temperature sensor
T4	Outdoor exhaust air temperature sensor



4.2. List of main service components



No.	Name of component	Qty.
1	Heat exchanger	1
2	Supply air fan	1
3	Exhaust air fan	1
4	Fan bracket	2
5	Heater	1
6	Supply air filter	1
7	Exhaust air filter	1
8	Controller	1
9	Air temperature sensor	3
10	Combined humidity and temperature sensor	1
11	Condensate drain nozzle*	1 (0)
12	Condensate drain plug**	1 (2)

- C180, C200, and C250 models include one condensate drain nozzle and one plug.
- C180E and C200E models include two plugs.

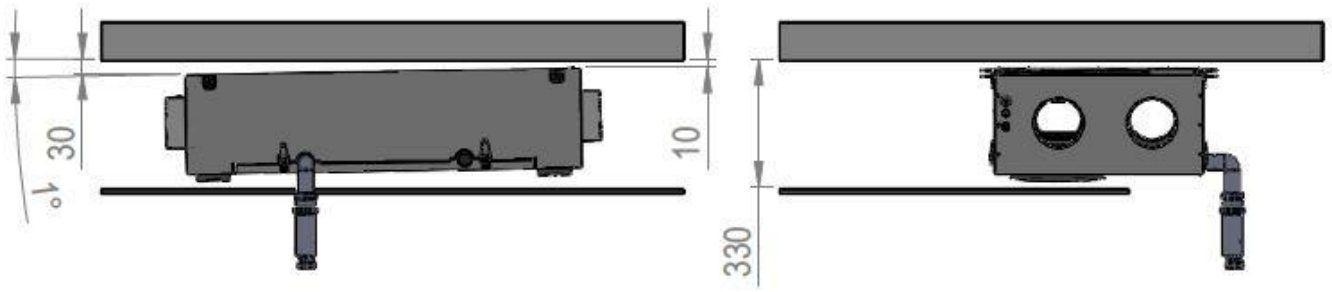
4.3. Installation

While ordering the ventilation unit, always specify the correct type (left or right side, see page 7). Changing the ventilation unit to another version in the future requires a lot of work. Ensure that there is enough space to install the unit itself but also auxiliary ventilation system components such as noise silencers or air distribution boxes.
The unit must be installed in a way that allows sufficient space for servicing and maintenance, such as filter replacement or access to the controller and heat exchanger.

Models C180, C200, and C250 can only be mounted on ceilings.
Models C180E and C200E can be mounted both on walls and on ceilings.

It is recommended to use rubber vibration isolation pads (not included) for all models to prevent sound from transmitting to the mounting surface.

* Make sure that in models C180, C200, and C250, there is the possibility to connect the condensate drain pipe of the unit to the building's sewage system and install a siphon.
* A minimum inclination of at least 1° must be ensured so that the condensate accumulating inside the device can flow out through the discharge outlet.
* The device must be mounted at a minimum distance of 3 mm (recommended 10 mm) from the mounting base, as shown in the image below. This reduces sound transmission to the structure.



The ventilation device must be mounted with at least a 1° slope so that the condensate reaches the recess in the form and drains through the condensate drainage pipe. A minimum space of 330 mm is required for mounting the device between the ceiling and the suspended ceiling.

- There should be at least 1,5 m distance between the outdoor supply air duct and the outdoor exhaust air duct.
- Both outdoor ducts should be insulated with a layer of thermal insulation of sufficient thickness to prevent condensation from forming on the outside of the ducts.
- We recommend installing sound attenuators both on the supply and on the exhaust air ducts.
- The condensate drainage nozzle should be screwed into the device with a maximum torque of 10 Nm.

For draining condensate into the sewer, use only a dry siphon. To prevent odors from entering the premises, as additional protection, we recommend using a “U” shaped siphon.

For draining condensate into the sewer, it is recommended to use dry-type siphons:

When the device is fitted with an **Enthalpy Exchanger** the humidity from the extracted air is partly transferred to the fresh supply air. In this case there is no condensate that must be drained from the unit Thus a dry siphon is not necessary with an enthalpy exchanger.

4.4. Ventilation duct installation

Correct duct connection is necessary to ensure reliable performance and aerodynamic characteristics of the installed ducts. The efficiency of the system depends mainly on the smoothness of the inner surface of the ducts, the diameter, the number of elbows and the length of the duct system.

To prevent condensation from forming on the outside ducts, it is necessary to insulate the ducts with an insulation material which is at least 50mm thick, with a thermal conductivity coefficient λD no smaller than 0,044 W/mK, at +10°C;

Another recommended option is to use ducts and fittings made of expanded polypropylene (EPP) or expanded polyethylene (EPE). Ducts and fittings made of this material are lightweight and do not require additional thermal insulation, as the material itself has these properties.

EPP technical characteristics:

- Thermal conductivity coefficient: 0,041 W/(m²K)
- Temperature range -40 °C to +60 °C
- Material density 50 kg/m³, antistatic
- Fire rating class B1
- Complies with DIN 1946-6

4.5. Access doors for maintenance of the heat recovery unit

Appropriate door dimensions	
Lenght (mm)	Width (mm)
1200	600
1200	650
1200	700
1200	800

4.6. Air balancing in ventilation systems

During the initial setup of the ventilation system, it is necessary to balance the supply and exhaust airflows of the ventilation unit. Only a properly balanced ventilation system will ensure flawless operation, optimum heat recovery and the lowest possible energy consumption during the cold season.

The system must be balanced according to the ventilation system installation project. Balancing depends on the type of control panel purchased.

Operating an unbalanced ventilation system during the cold season increases the risk of the heat exchanger freezing, potentially leading the unit to supply cold air indoors. This can permanently alter the heat exchanger's properties and damage the unit's internal integrity.

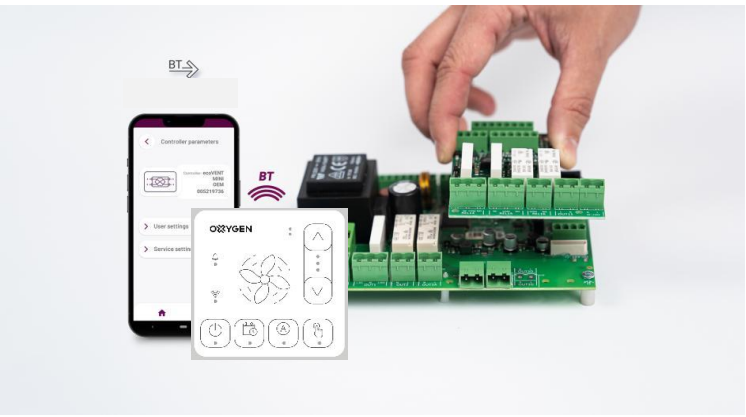
- Ensure that only qualified specialists, equipped with properly calibrated equipment, perform system balancing.
- Demand that the specialist who performed the system balancing prepare a ventilation system passport.

4.7. Electrical circuit connection

- Ensure that the device's power supply is disconnected before performing any installation, maintenance, service, or electrical work. Unplug the plug from the power outlet, or, if not possible, switch off the circuit breaker. Make sure that unauthorized persons do not switch on the device again.
- All electrical work must be performed by a qualified electrician.

The device is designed to be connected to a single-phase AC power supply of ~230 V/50 (60) Hz.
For connection, use only the power cable which is provided with the ventilation unit.
The electrical circuit must be equipped with a 16A circuit breaker to protect the circuit against overload or short circuit. The circuit breaker must also be freely accessible so that the unit can be quickly disconnected from the power supply if necessary.
When connecting the device to the electrical network, earthing should be installed in compliance with the applicable laws and standards of the Republic of Lithuania.

4.8. Controller



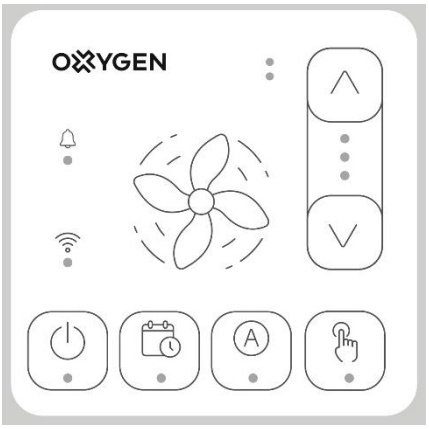
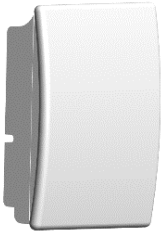


table 3

Controller			
Power supply	230 VAC, 50Hz		
Current consumption	0,04 A		
Max. rated current	OUT1	3(3) A	230V
	OUT2	3(3) A	
	OUT3A	3(3) A	
	OUT3B	3(3) A	
	OUT3C	3(3) A	
	OUT-230 V	6(6) A	
Ambient temperature	0…50°C		
Storage temperature	-25…+60°C		
Relative humidity	5…85% no vapor condensation		
Temperature measurement range / accuracy of CT10 (NTC 10K) sensors	-40…+60°C / ±2°C		
Cross-sectional area of connected cables, screw tightening force	0,5…2,5mm², 0,4Nm		
Dimensions of the main board	150 x 117 x 50mm		
Dimensions of the eV-Ex04 module	70 x 90 x 40mm		
Standards	EN 60730-2-9 EN 60730-1		
Software class	A, EN 60730-1		
Security class	Suitable for installing in Class 1 devices		
Overvoltage protection	2500V		
Protection class	IP 00		
Wired remote control SCP-V1			
Power supply	5…12 VDC		
Current consumption	0,24W (max. 1,7W)		
Data transmission	-RS485 (ModBus RTU protocol) with main controller -Wi-Fi B/G/N standard with ecoNET CLOUD -BT v4.2 with mobile app		
Operating conditions	0…40°C, 5…85% RH (non-condensing)		
Protection class	IP 20		
Storage temperature	0…65°C		

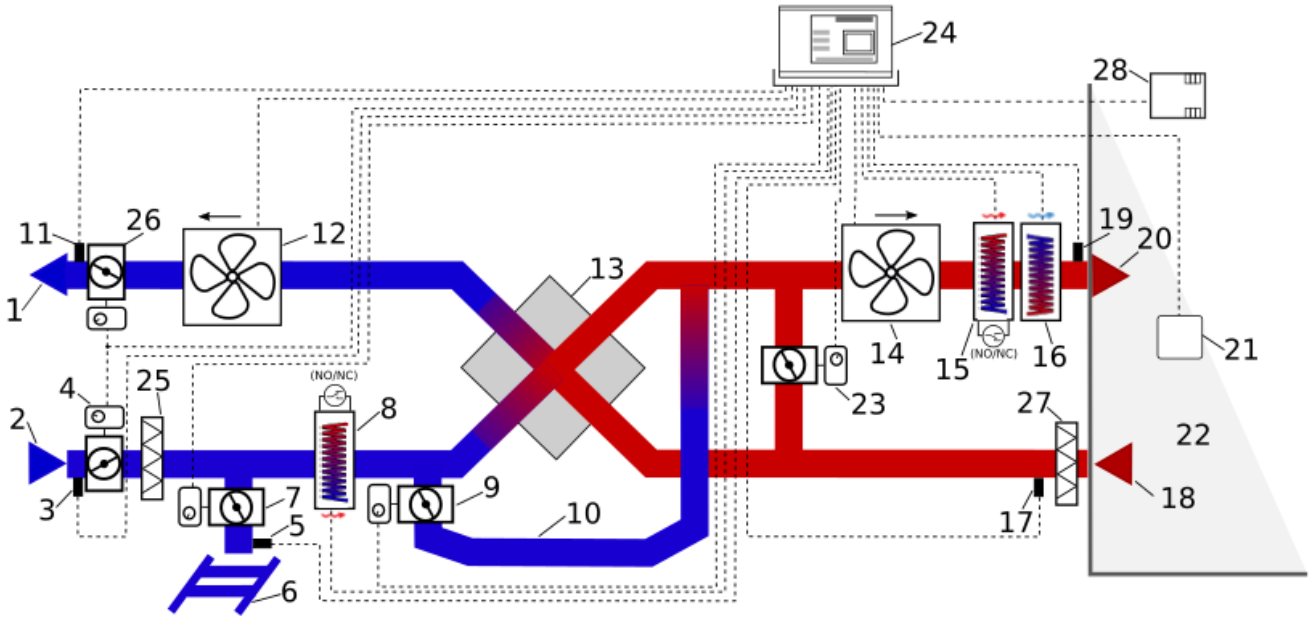


SCO2 EX1

SRHT IN1

SCO2 IN1

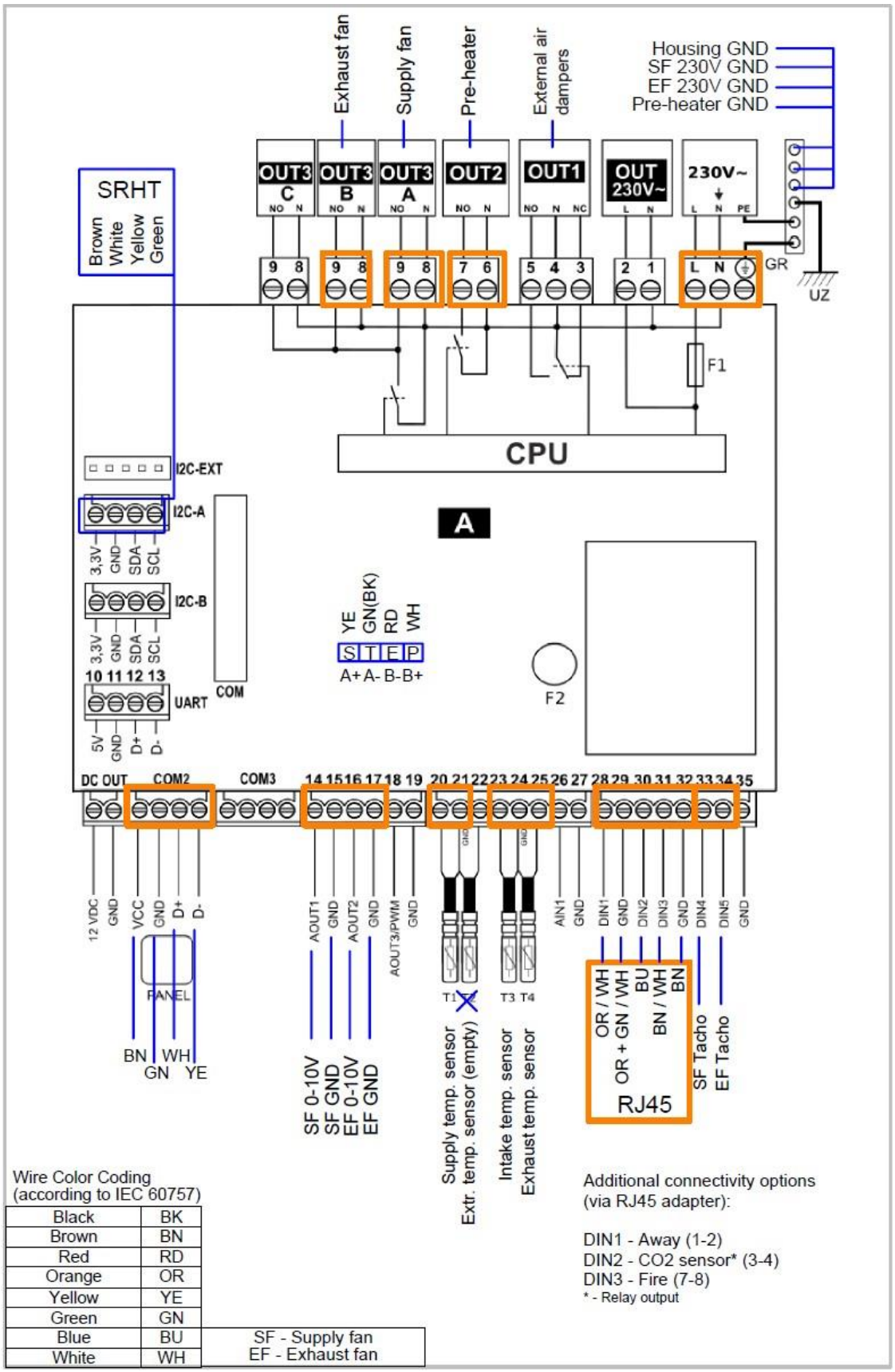
4.9. Automation diagram



Ventilation diagram with cross-flow heat exchanger:

1. Exhaust
2. Intake
3. Outdoor air temperature sensor **(T3)**
4. Outdoor air damper
5. Geothermal water temperature sensor
6. Geothermal system
7. Geothermal water damper
8. Outdoor air heater (preheater)
9. Bypass damper
10. Bypass
11. Outdoor exhaust air temperature sensor **(T4)**
12. Exhaust fan
13. Cross-flow heat exchanger
14. Air supply fan
15. Indoor supply air heater (secondary)
16. Freon water heater (secondary)
17. Extraction temp. sensor (from the room) **(T2)**
18. Extraction
19. Indoor supply air temperature sensor **(T1)**
20. Indoor supply air
21. Remote control panel
22. Ventilated space
23. Mixing chamber throttle actuator
24. Controller
25. Outdoor air supply filter
26. Exhaust throttle actuator
27. Extract air filter
28. Air quality or humidity sensor

4.10. Electrical wiring diagram



Wire Color Coding
(according to IEC 60757)

Black	BK	
Brown	BN	
Red	RD	
Orange	OR	
Yellow	YE	
Green	GN	
Blue	BU	SF - Supply fan
White	WH	EF - Exhaust fan

Additional connectivity options
(via RJ45 adapter):

DIN1 - Away (1-2)
DIN2 - CO2 sensor* (3-4)
DIN3 - Fire (7-8)
* - Relay output

Resistance input (NTC 10 K):

T1 – supply temperature sensor - before the secondary exchanger (required);
T2 – extraction temperature sensor (required) or air intake sensor on the building facade;
T3 – intake temperature sensor - at the filters (required);
T4 – exhaust temperature sensor (required);

Analog output (0-10 VDC):
AOUT1 – supply air fan;
AOUT2 – exhaust air fan;

Analog output (0-10 VDC or PWM):
AOUT3 / PWM – control of the primary heater via solid state relay (SSR);

Analog input (0 - 10 VDC):
AIN1 – analog humidity sensor;

Digital input (additional device connection):
DIN1 – "Away" function (NC contact);
DIN2 – for an external CO2 sensor (NC contact);
DIN3 – for fire alarm;

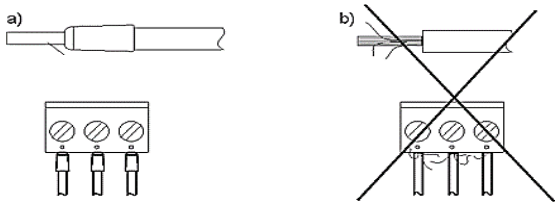
Voltage output:
OUT 230 V ~ - non-controllable mains voltage output to power the Ev-Ex04 module;
DC OUT - 24 VDC non-controlled voltage output;

Relay output (potential):
OUT1 – change of the direction of rotation of the exchanger actuator;
OUT2 – pre-heater;
OUT3A... OUT3C – supply and exhaust air fans and ionizer;

Data transmission bus:
RJ - ecoNET300 internet module;
COM - eV-Ex04 expansion module;
UART - RS232 transmission - empty;
COM2 – remote control panel (12 VDC supply voltage);
COM – socket for connecting expansion module B;
I2C-A – socket for differential pressure sensor SRHT IN1 or air quality sensor SCO2 IN1, or humidity sensor SRHT IN1;
I2C-B - socket for differential pressure sensor SRHT IN1 or air quality sensor SCO2 IN1, or humidity sensor SRHT IN1;
I2C-EXT – I2C transmission, in parallel with I2C-A and I2C-B;
CPU - controller;
L, N, PE - 230 V ~ controller power supply;
F1 – main line fuse T6.3 A / 250 VAC;
F2 - TR5 mains fuse, 630 mA / 250 VAC;
UZ – grounding;

Insulated lugs are necessary for multicore cables

Tightening torque – 1,2Nm

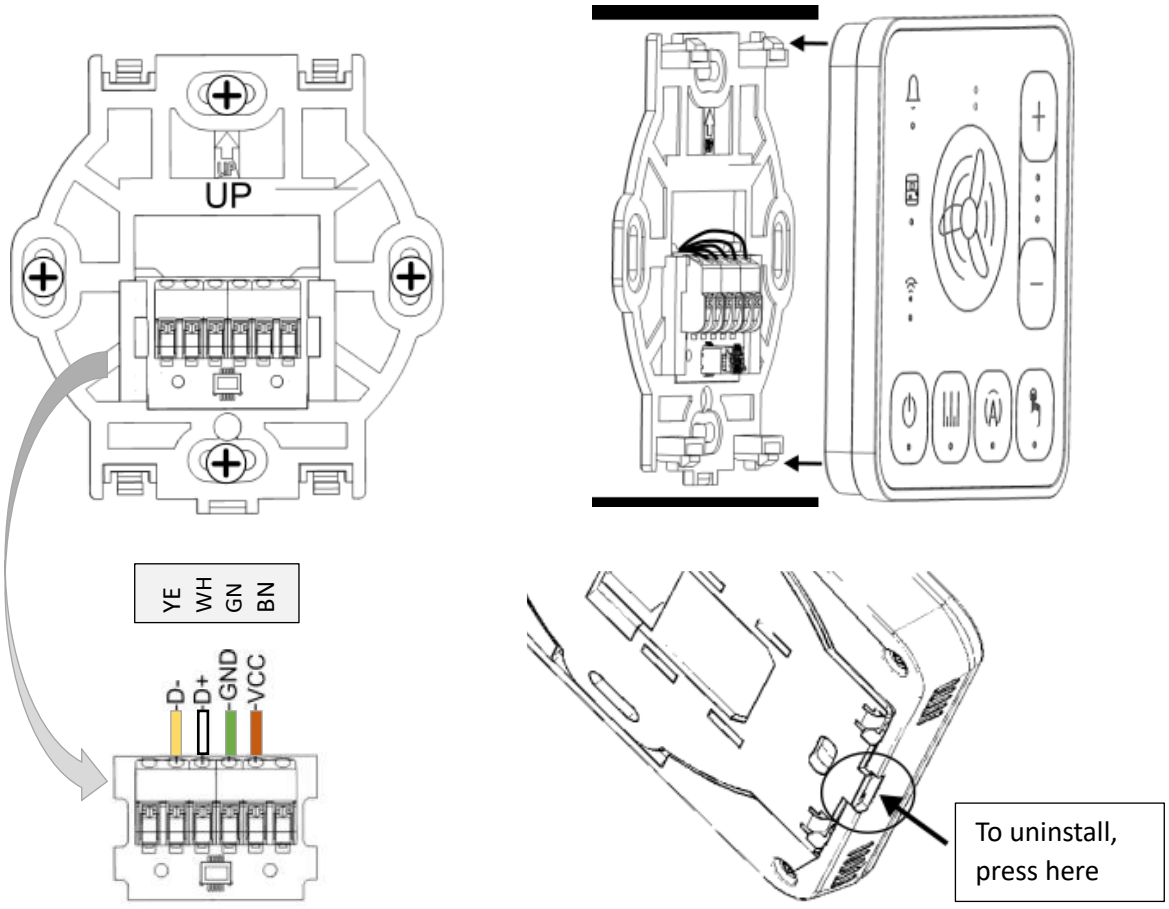


4.11. Remote control installation

The remote-control panel is designed to be mounted in a dry indoor area by fixing it to the wall. It cannot be used in areas where water vapor condensation is present.

The installation of the control panel must be carried out following the instructions provided below.

Remove the mounting frame from the back panel of the housing. To remove the frame, use a flat screwdriver. The cable connecting the panel to the controller must be routed into the wall. The cable cannot be laid together with the building's electrical network cables. The cable must not run alongside devices emitting strong electromagnetic fields.



After the unit is connected to the power supply, LED diodes will start blinking sequentially, indicating that the controller's software is being loaded. Loading takes about 10 seconds. If this time is much longer, check the correctness of the D + and D- wires of the transmission cable connecting the panel with the controller.

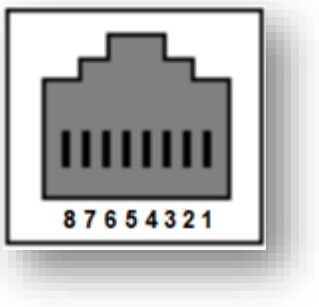
2.1. Additional device connection (comfort connector)

The installer can choose several auxiliary devices to expand the capabilities of the unit. By shorting the corresponding RJ45 connector contacts, the functions listen below can be activated.

Table 4

Contact No.	Activated function	Meaning
1 - 2	Away	Reducing ventilation power when leaving the house. Activation can be done with a key light switch or by activating a security alarm.
3 - 4	CO_2 sensor	Increase in ventilation capacity based on readings from connected additional CO2 or humidity sensors.
7 - 8	Fire alarm	Emergency shutdown of the unit in the event of a fire alarm.

An additional RJ45 adapter should be used for more convenient connection:



To activate the function, only a passive electrical switch or relay output should be used.

Devices for activating functions	
Keypad light activation switch for “Away” function 	Duct CO_2 sensor with relay output. Recommended model: DXC-G. 

3. DEVICE INITIALIZATION, INSPECTION, AND OPERATION

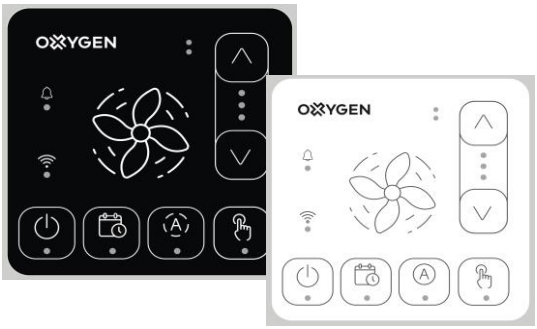
⚠	Before turning the device on, check the inside for any foreign objects, rubbish, or tools. Make sure that the unit has an air filter, the condensate drainage (if required) is connected, and the siphon is filled with water. Inspect the air duct system to ensure there are no obstructions, such as fully closed diffusers or control valves, and make sure the outdoor supply air grilles are not blocked.

The ventilation unit may come with one of two control panels:

1) Wired **SCP** (System Control Panel) control panel with touch-sensitive buttons that can be used only for basic ventilation modes and settings.
2) Wired **LCD ecoTouch** control panel with a touch-sensitive color display, where many of the unit's functions and settings can be viewed and changed.

The unit can be controlled in the following ways:

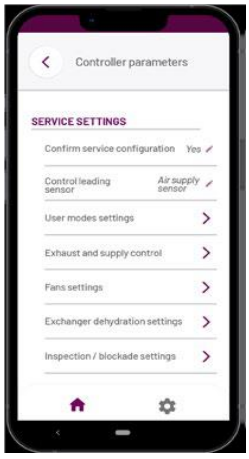
1) Wired remote control **SCP** or **LCD ecoTouch** control panel,
2) smartphone via **Oxygen Installer** app (Bluetooth) or the **OXYGEN Easy** app (Wi-Fi connection).
3) Computer via **easy.oxygenvent.com** website.



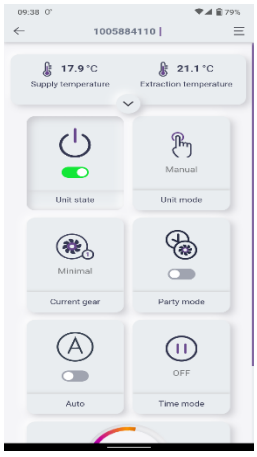
SCP control panel

LCD ecoTouch control panel

OXYGEN Easy app



Oxygen Installer app

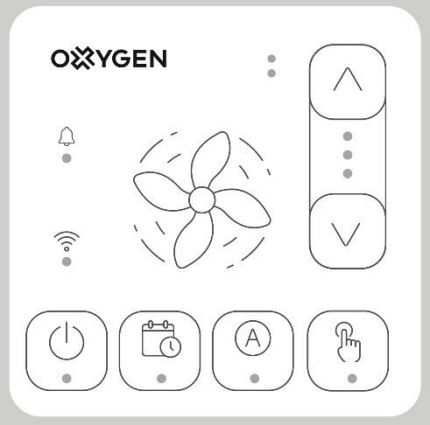


OXYGEN Easy app

5.1. Operating via the control panel

The SCP remote control can only control basic ventilation modes and settings.

The device is controlled by touching the selected function button on the SCP control panel. Button symbols and LED signal meanings:



- an LED that lights up means the device is switched on. Other LEDs, also indicate the status of the unit when it is switched on, e.g. fan speed selected, automatic control activated, scheduling, manual control.

- An LED illuminates to inform you when the unit is operating according to the timetable set by the weekly operating modes. If the time schedule is not set or not activated, the LED flashes. When the weekly operating mode is activated, the LED for the manual control switches off and vice versa.

- The speed of the recuperator fans will change automatically depending on the air quality information received from the CO2 sensor (if fitted).

- the recuperator operates in manual mode, which allows you to set the desired fan speed.

- increasing or decreasing the fan speed. This function only works when the manual control is activated.

- signaling of active events from the unit.

- A rapidly flashing symbol means that a Bluetooth signal is being emitted.
- A steady lit symbol means there is an active connection to the Wi-Fi network and the internet.
- A slow flashing symbol means there is a connection to a Wi-Fi network but no internet connection.

When the unit is plugged into the main power supply, for the first 40 seconds after switch-on, the unit automation will evaluate the factory settings, check the automation components, open the external air dampers (in case of a ductwork system with actuated dampers) and set the By-pass damper to its initial position. A low humming noise will be heard during the bypass damper setting. This is normal unit operation.

A rapidly flashing symbol means that a BT signal is being emitted.

When the By-pass damper stepper motor stops running, switch the unit on by pressing the button marked with the symbol . The LED on this button will briefly illuminate, followed by the manual mode LED .

When the button marked with + is touched, the first LED will light up, and after 20 seconds, the fans will start operating.

Later, after turning off the device from the power supply and turning it on again, the device will start operating in the last set ventilation mode.

5.2. Controlling the device via “Oxygen Installer” app (Bluetooth connection)

Oxygen Installer app is designed for device control and configuration via Bluetooth when there is no Wi-Fi connection. Note: effective Bluetooth (BT) range is about 10 meters, so if you are in a different room from the device, your smartphone may not detect the device.

To control the device via Bluetooth, you need to install the **Oxygen Installer** app on your smartphone or tablet. You can download it for free from Google Play (for Android devices from version 8 onwards) or the App Store, using the QR code or link provided on the manufacturer's website below.

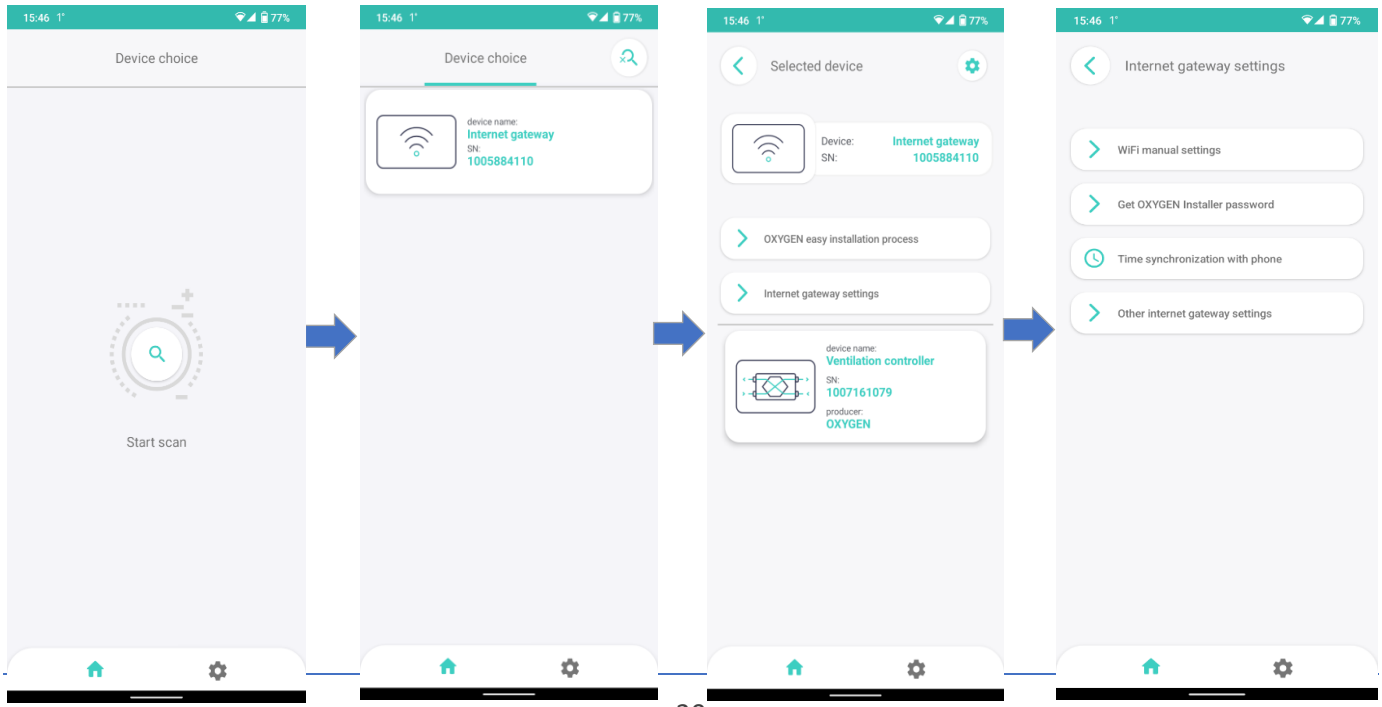
Google play

App Store

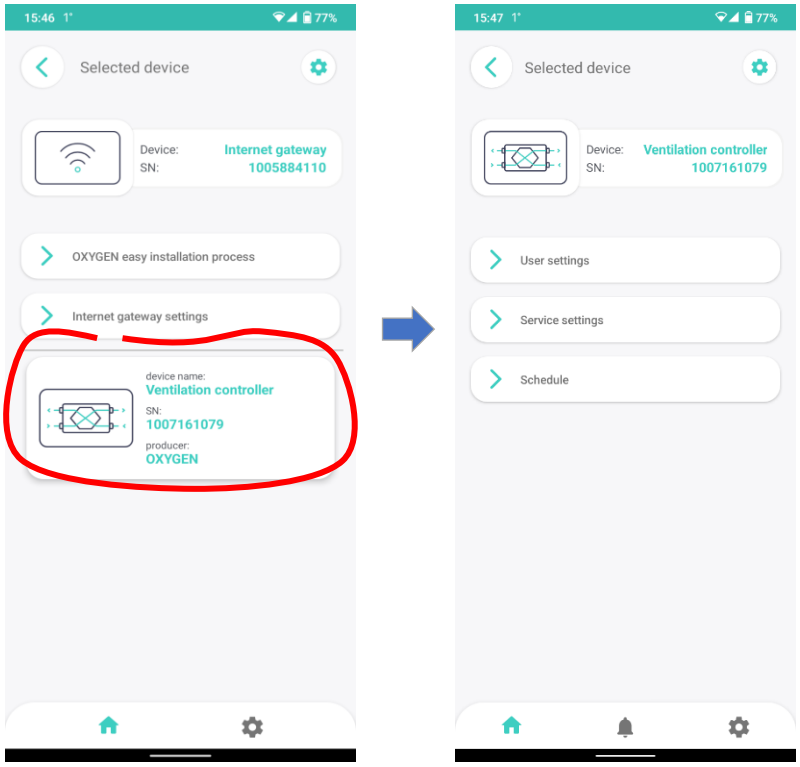
Android: https://play.google.com/store/apps/details?id=com.oxygen.lt.oxygeninstaller

iOS: https://apps.apple.com/be/developer/oxygen-group-uab/id1522780335

After installing the app, open it and initiate the search. The device must be connected to the network, and Bluetooth connection must be active (rapidly blinking BT symbol on the control panel). In the popup window **"Device choice"**, select **"Internet gateway"**, then proceed to **"Internet gateway settings"** > **"Time synchronization with phone"**. The controller will automatically synchronize the date and time with your phone's clock.



Then return to the "**Select device**" window and choose "**Ventilator controller**" (highlighted in red). In this window, you can access one of the three suggested menus: 1) User settings, 2) Service settings, and 3) Creating weekly schedules (Schedule).



5.2.1. User settings

The table below shows the values of the user settings. Once you have selected the desired value, you need to touch the "Accept" button for it to be executed.

Table 5

Work modes		
Unit state	**ON**	Turn on the device.
	OFF	Turn off the device.
Unit mode	**Manual**	The device will operate in manual mode.
	Schedule	The device will work according to the weekly schedule set by the device user.
Current gear	**Minimal**	The fans will run at the speeds set by the user of the unit. Factory settings are: minimal - 30%, normal - 50%, intensive - 75%.
	Normal	
	Intensive	
	Pause	Temporary suspension.
Auto	**On**	The device works on the basis of information from an external CO2 sensor.
	Off	
Time mode	**Out**	This function can be selected when you leave home. The device will be switched off for a set period of time.
	Party	Increases air circulation in rooms for a set period of time. Useful when more people are gathered indoors.
	Airing	When this function is activated, the air supply fan stops. The function can be adapted to quickly ventilate the room, e.g. burnt food in the kitchen.
	Off	Turn off activated “Time mode”.
Schedules	**Yes**	Switching the weekly timetable On/Off
	No	
Fireplace	**Yes**	The fireplace mode brings more fresh air into the room (causing overpressure) and thus improves smoke extraction through the chimney. Only switch on when the fireplace is in use. Factory setting - (-20%).
	No	
Fan speed difference – fireplace	**Yes**	Percentage difference between supply and extract air fan flows.
	No	
Temperature of comfort	**Comfort temperature of Gear 1**	The function only operates in the summer when the outdoor temperature is lower than the set threshold. The function is chosen to cool down the rooms with cooler outdoor air.
	Comfort temperature of Gear 2	
	Comfort temperature of Gear 3	
User modes		
Minimal	**Supply fan control**	The user can choose the airflow rate for each fan speed individually. We recommend that the supply and extract air fans run at the same speed, otherwise the system may be unbalanced. Recommended rates: 1st speed (minimum) 25 - 45% 2nd speed (normal) 45 - 70%
	Extraction fan control	
Normal	**Supply fan control**	
	Extraction fan control	
Intensive	**Supply fan control**	
	Extraction fan control	

		3rd speed (intensive) 70 - 100%
Time modes settings		
Airing	**Set fan control**	The function is designed to quickly ventilate rooms, for example when food is burnt, and unpleasant odors are spread throughout the room. When activated, this function stops the supply air fan, so that the window(s) must be opened to allow air to flow freely to prevent a vacuum from forming. The function is more suitable for the warmer seasons.
	Airing mode time duration	
Party	**Temperature of comfort**	The function is designed to speed up air circulation when large numbers of people gather indoors. The fans will run at 90% speed for a set period of time.
	Party mode duration	
Out	**Exit mode time duration**	A feature to turn off the device for a set period of time when you leave the house.

Information	
Current work status	
Current comfort temperature	Displays the comfort temperature set by the user.
Current lead temperature	
Control mode	**Heating**
Outdoor temperature	
Work mode	**Auto**
Current work mode	
Main work mode	**Minimal**
Temporary work mode	**OFF / ON**
Schedule	**Inactive / Active**
Temperatures	
Intake air temperature ***(1)***	°C
Exhaust air temperature	°C
Supply air temperature	°C
Extract air temperature	°C
Additional sensor temperature (if installed)	°C
Fans control	
Controle mode	**Standard**
Supply fan – work state	**ON / OFF**
Supply fan - control	%
Extraction fan – work state	**ON / OFF**
Extraction fan - control	%
Supply fan – revolutions per minute	RPM
Extraction fan – revolutions per minute	RPM
Filters	
Change - supply air filter	**No / Yes**
Change - extraction air filter	**No / Yes**
Filters - information	
Supply air filter – expire state	**15%** *(85% remain valid)*
Extract air filter – expire state	**15%** *(85% remain valid)*

Operation days - supply filter		Shows how many days the filter has been used
Operation days - extract filter		Shows how many days the filter has been used
Heat recovery		
Bypass control		***0%*** *- fully closed* ***100%*** *- fully open*
Preheater		
Preheater type		***Electric / 0 – 10VDC / PWM***
Preheater state		***ON / OFF***
Air quality switch		
Humidity level exceeded		***Yes / No***
Analog air quality sensor		
Current humidity		***%***
Humidity set point		***%***
Humidity hysteresis		***%***
Operation hours		
Days of device operation		
Days until review		
Filters		
Start filter change procedure	**No**	Before starting the filter change procedure, choose "Yes"
	Yes	
Alarm control panel		
Alarm control panel enable	**Yes**	The function is activated to enable the recuperator to respond to the activation of the alarm system.
	No	
Input logic state	**Normally close**	The selection should be made based on the scheme of the alarm control panel.
	Normally open	
Ventilation unit response	**Switching off the panel**	When the “Alarm control panel enable” function is activated and the alarm is triggered, the device will shut down.
	Change of speed	When the “Alarm control panel enable” function is activated and the alarm is triggered, the fan will operate at a selected speed.
Extraction fan control	25% - 100%	When the “Alarm control panel enable” function is activated, “Change of speed” is selected, and the alarm is triggered, the fans will operate at a selected speed.
Supply fan control	25% - 100%	
Airing	**Inactive** **Active**	When the “Alarm control panel enable” function is activated and the alarm is triggered, you can select the ventilation function.
Airing		
Supply fan control	25% - 100%	When the “Alarm control panel enable” function is enabled and the “Airing” function is activated, upon triggering the alarm, the device will ventilate the premises according to the set parameters.
Extraction fan control	25% - 100%	
Duration of airing	1min. – 100min.	
Airing time cycle	1h – 24h	

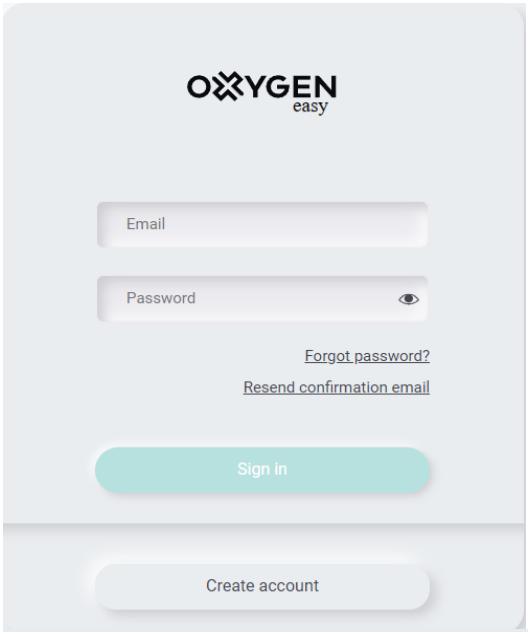
(1) – The temperature sensor is located behind the heating element, so during the cold season, when the heater is on, the displayed temperature will reflect the temperature of the air supplied to the heat exchanger.

5.1. Configuring your Wi-Fi connection

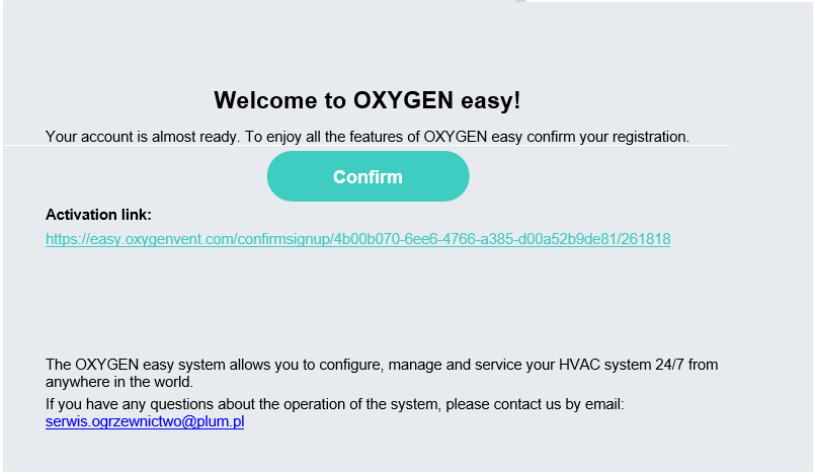
To control the device remotely via smartphone or through the **easy.oxygenvent.com** website, you will need to perform the steps listed below.

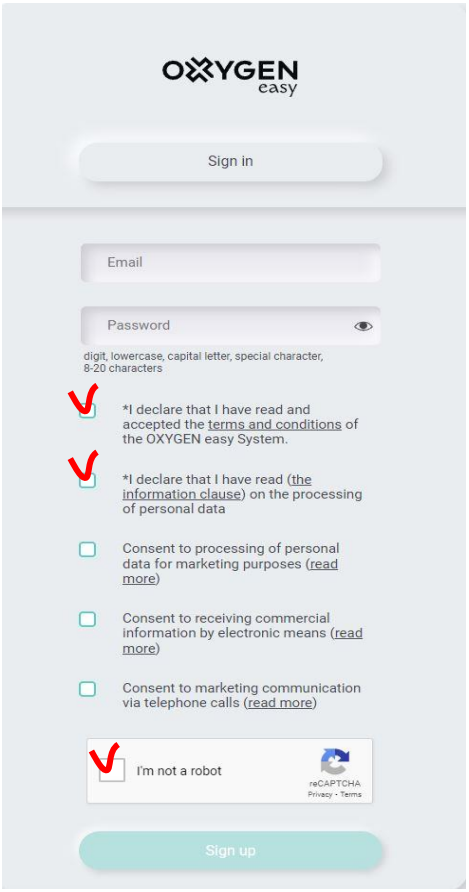
The device must be turned off, but Bluetooth connectivity must be active, i.e., the BT symbol blinking rapidly. The smartphone must have the **OXYGEN easy** app installed. It can be downloaded for free from Google Play or the App Store:
Android: https://play.google.com/store/apps/details?id=com.oxygenvent.easy
iOS: https://apps.apple.com/be/app/oxygen-easy/id6477522929

5.1.1. Create an account on the **easy.oxygenvent.com** website.
The password must consist of at least eight characters, including at least one number, one uppercase letter, one lowercase letter, and one special character.

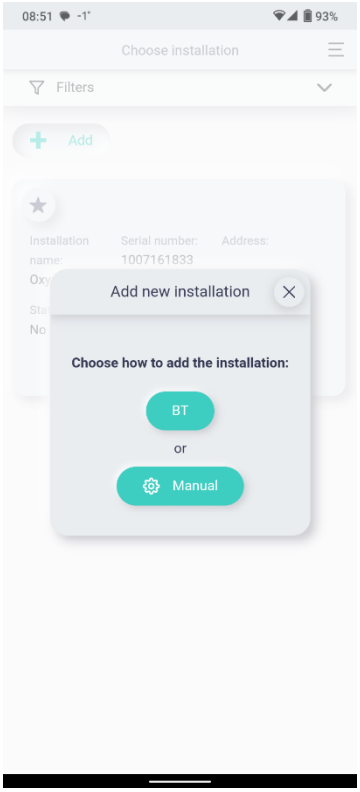


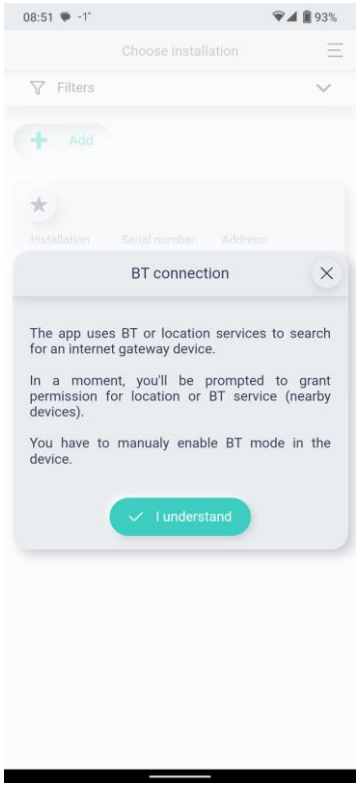
After entering the required information, click on "Sign up". You should receive an email requesting confirmation of registration in your email inbox. If you don't see the message in your Inbox folder, please check your Junk or Spam folder and make sure to move the email to the Inbox directory.

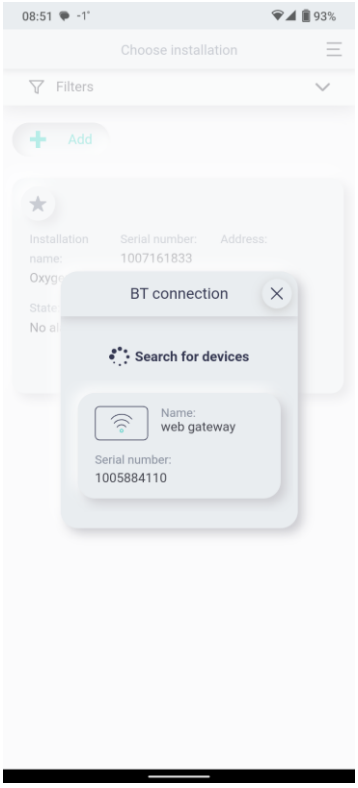


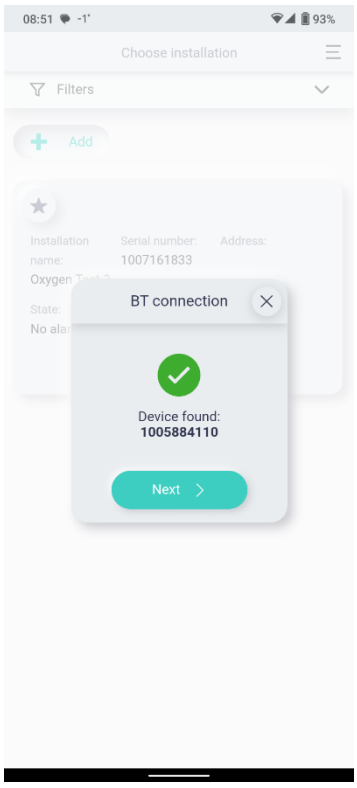


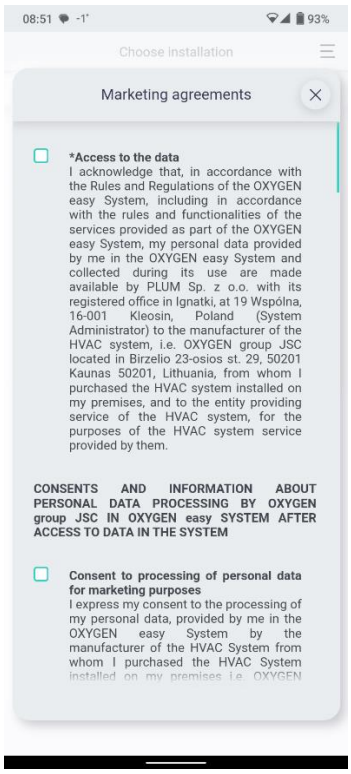
5.1.2. Open the installed app and select the "**ADD**" button. In the opened "Add new installation" window, select the **BT** button, and then follow the app's suggested prompts.









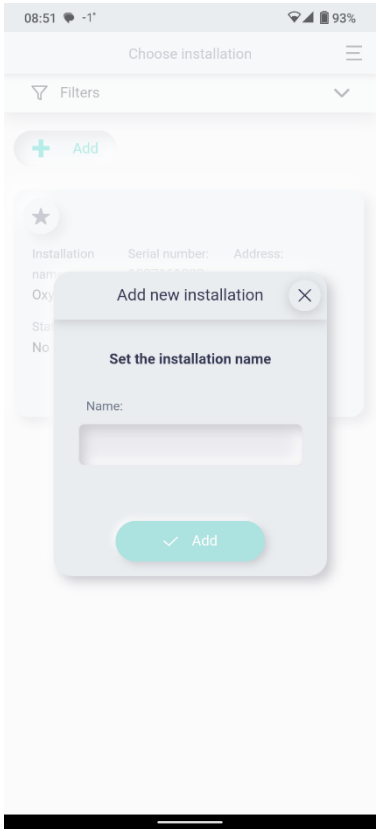


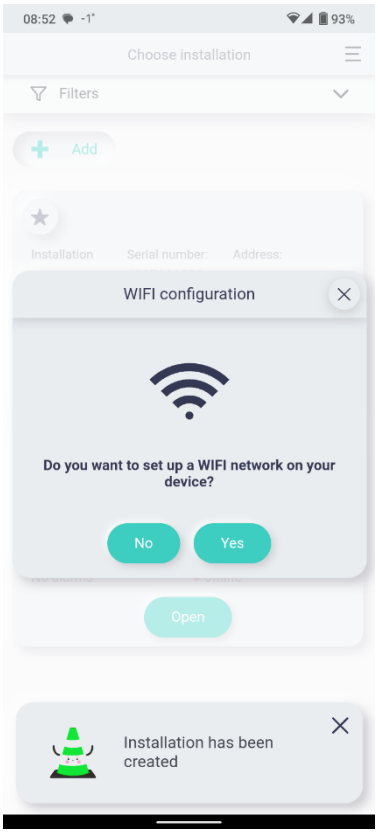
In the “Marketing agreements” section, you will need to accept all the terms marked with asterisks (*) by clicking on Accept.

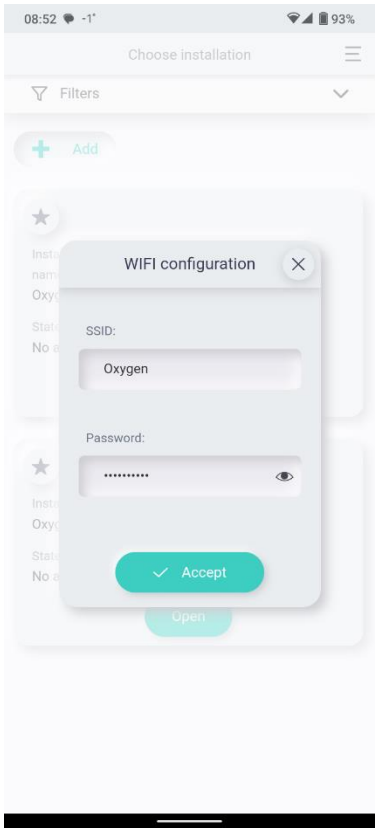
In the "Set installation name" field, enter your chosen device name, for example: "Oxygen recuperator".

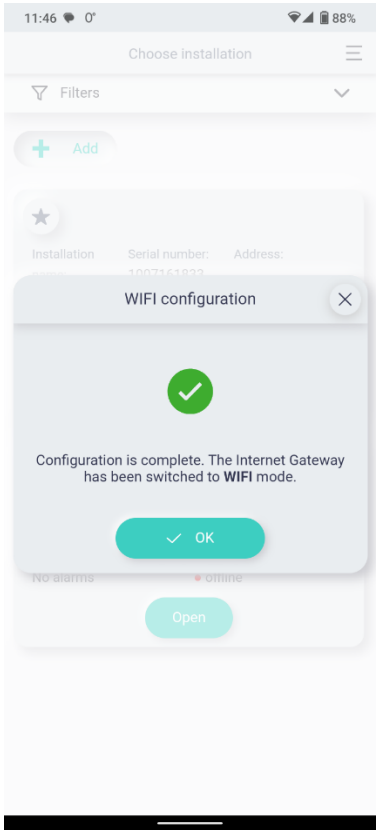
In the "Do you want to set up a Wi-Fi network on your device" field, press "**Yes**".

In the "SSID" field, enter the name of your router, for example, "Telia Greitas", and in the "Password" field, enter the router's password, then touch "Accept".



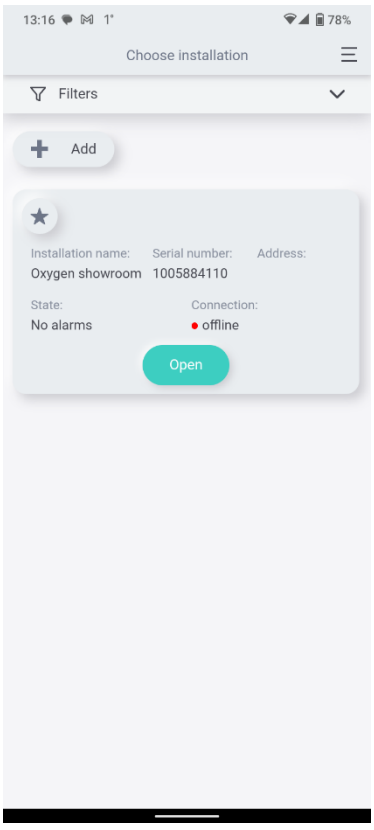


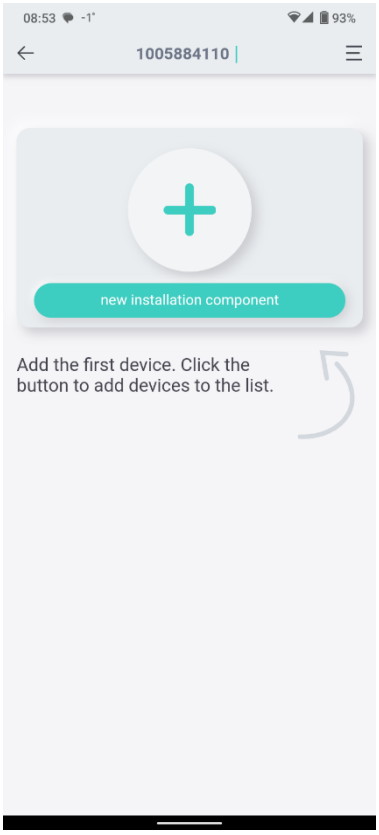


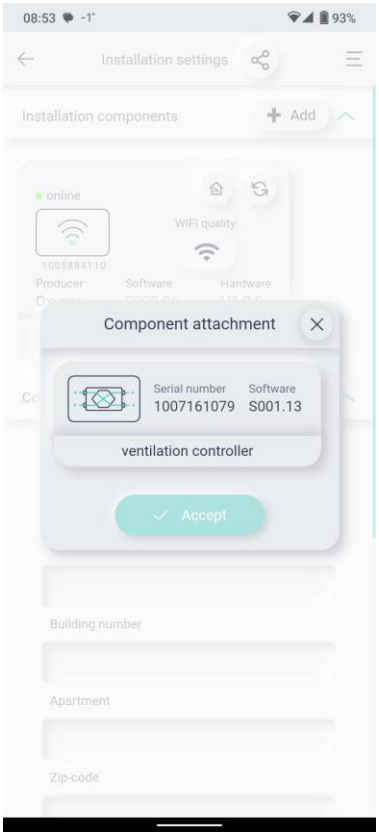


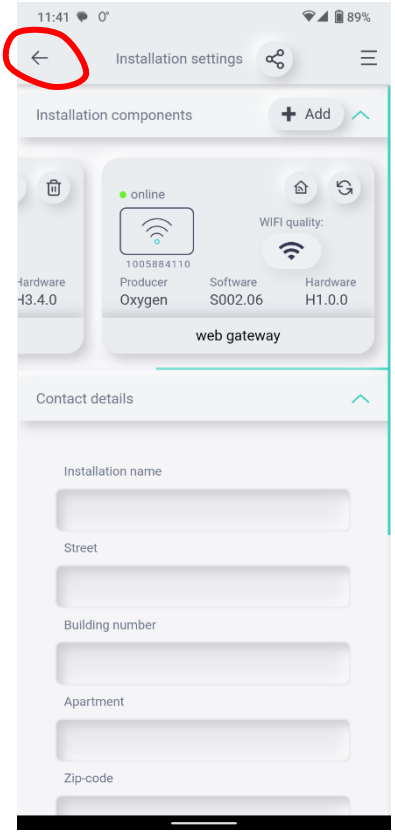
Upon opening the "WI-FI configuration" window, you should wait for the controller to reboot – on the SCP control panel, the LED blinking will stop, and the symbol will change from rapidly blinking to constantly lit. This indicates that the controller has switched from Bluetooth to Wi-Fi connection. Now, you can remotely control the device with your smartphone through the **OXYGEN easy** app or by accessing the **easy.oxygenvent.com** website from your computer.

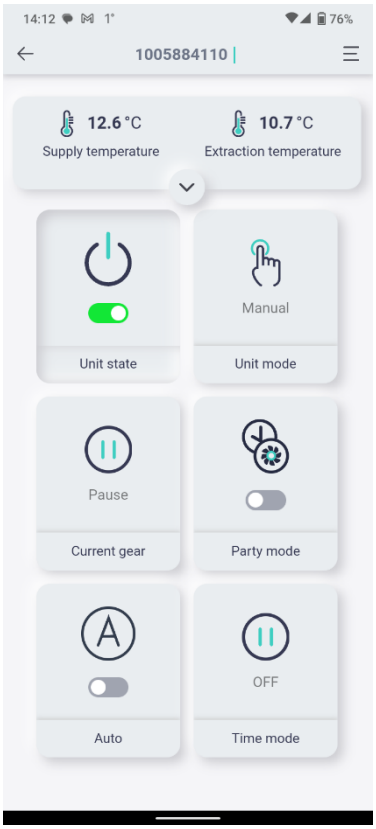
In the "Choose installation" window that opens, select "**Open**", and in the following window, select the "**+**" symbol.











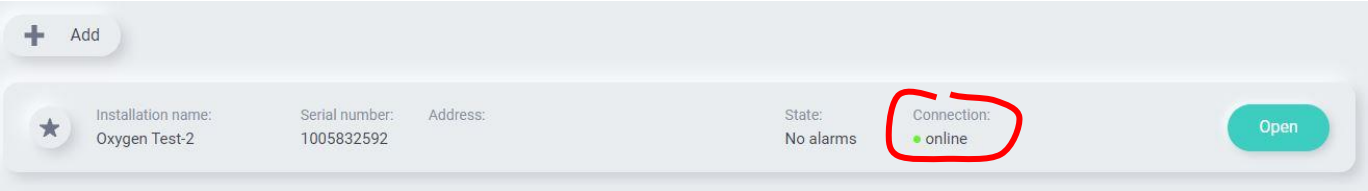
Oxygen Easy app window on your smartphone.

Here you will see the quick access buttons to control the device. Advanced management and information about the device can be accessed via the menu on the top right-hand side.

The values of the buttons are listed in Table 5.

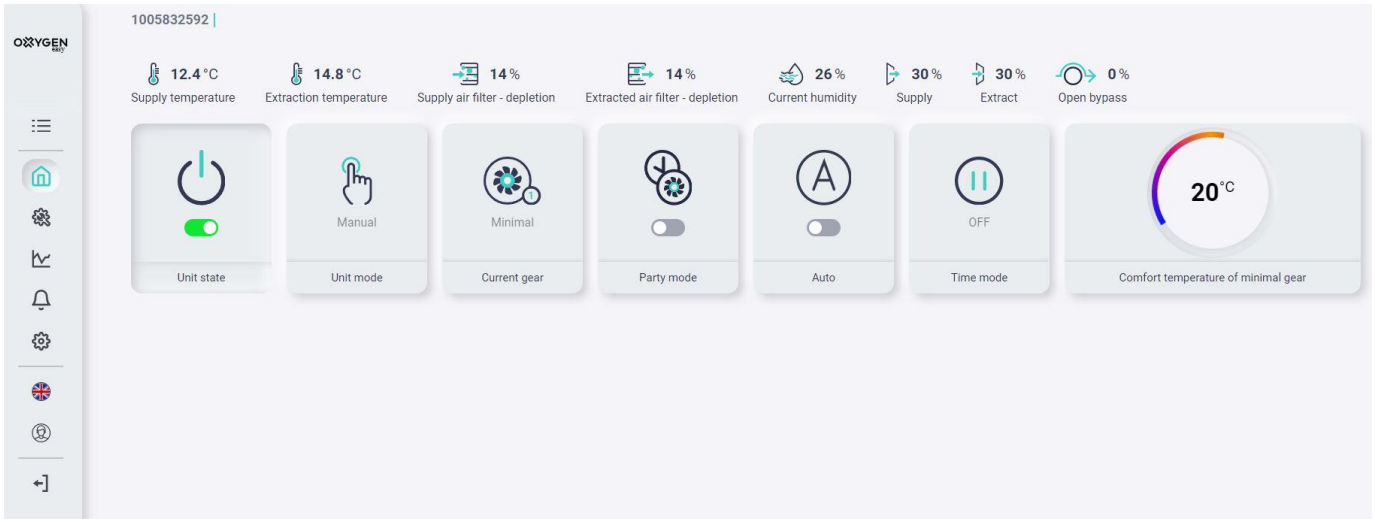
5.2. Controlling the device via **easy.oxygenvent.com** website

Open the **easy.oxygenvent.com** website window. If you have a WI-FI connection, the green online dot will light up.



5.2.1. “Home” window.

The top line displays only basic information, i.e. supply and extract air temperatures, filter contamination, relative humidity of the extract air, fan speed and the status of the By-pass damper (0% means closed).

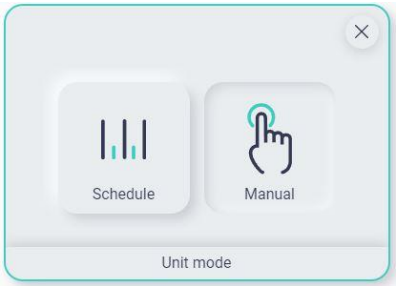


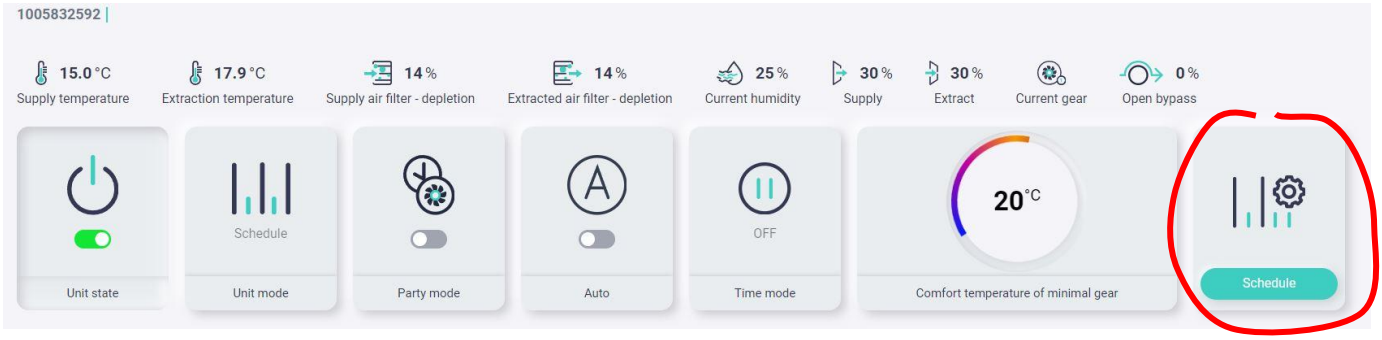
The buttons on the second row are used to control the device:

Unit state -Switching the device on/off

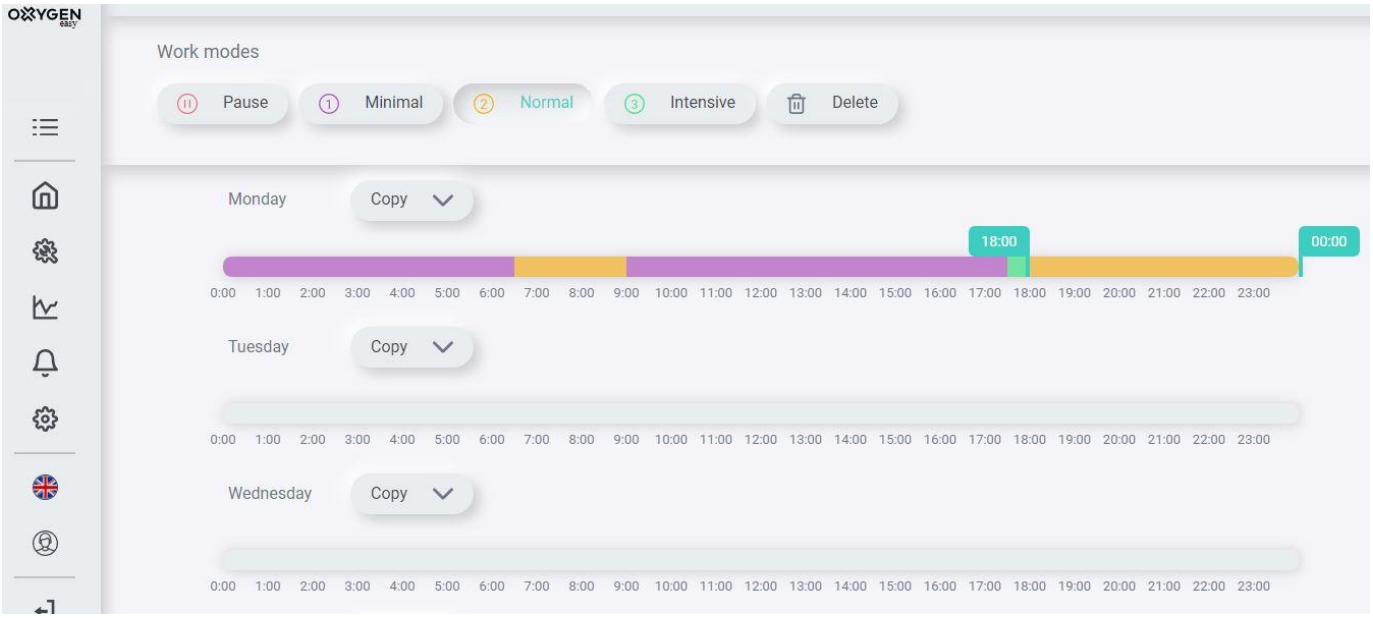
Unit mode - Manual – the device will operate in manual mode.

Unit mode - Schedule – The unit will work according to the weekly programme that is set up.
To schedule a weekly programme, press the Schedule button. In the window that opens, an additional box "Schedule" will appear on the right-hand side (photo below).



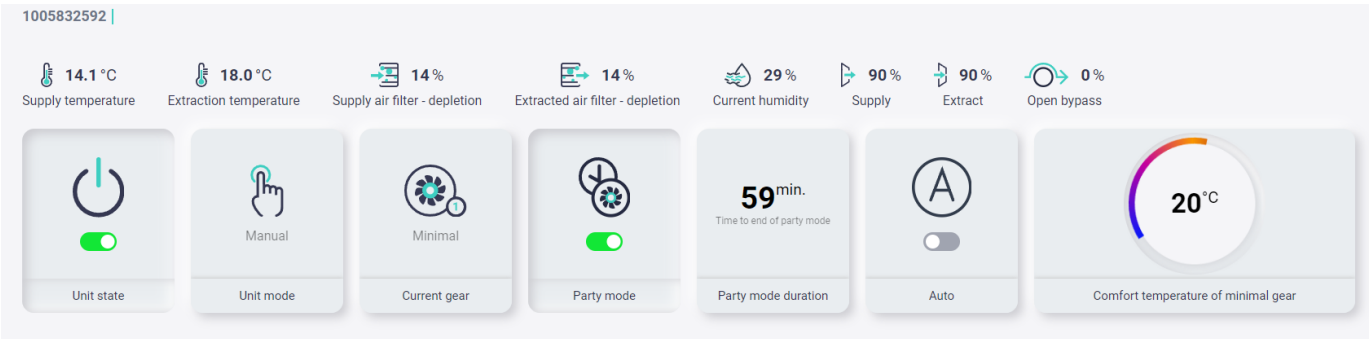


Pressing this button will bring up the weekly programme creation window. This allows to set up a weekly schedule for your device according to your needs. Once you have set up each day's schedule, click the "Accept" button at the bottom of the window".



Unit state – selection of fan speed.

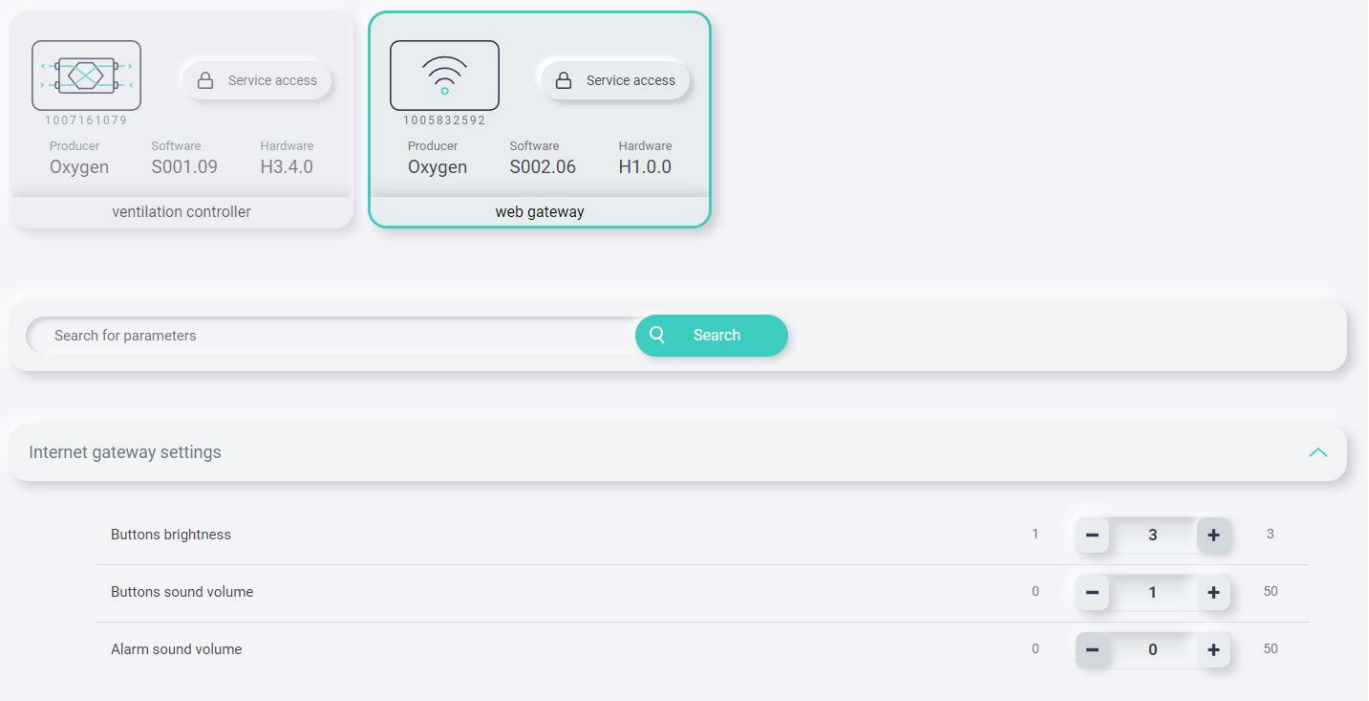
Party mode – the device will operate in boost mode for the selected period of time. The function is useful for large gatherings.



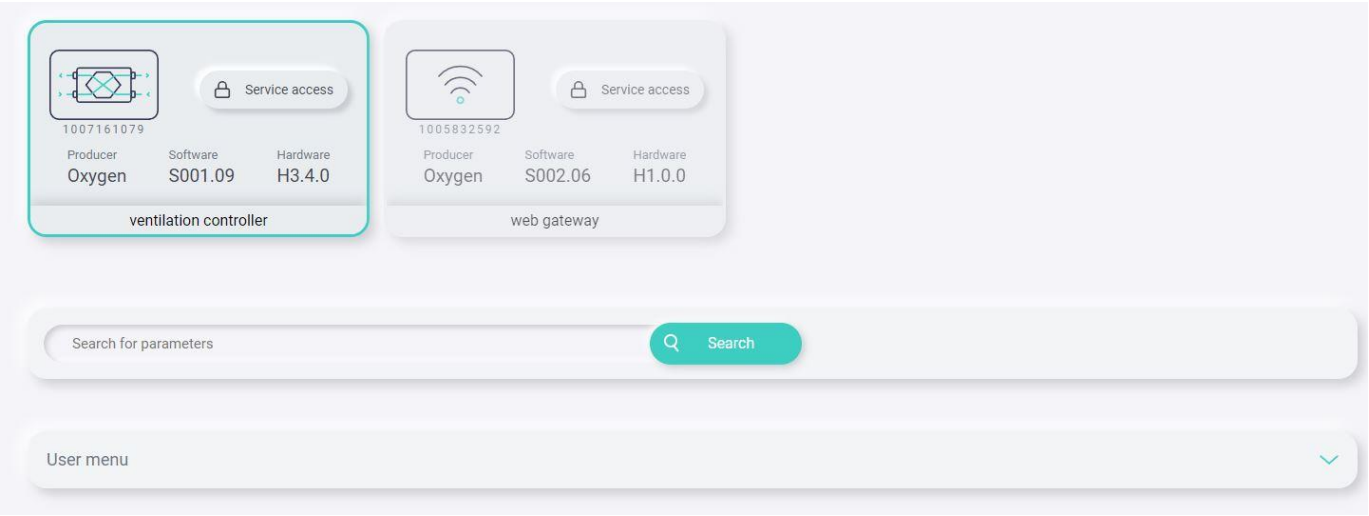
Auto – the unit will act on information from an external CO2 sensor (if fitted and activated).
Comfort temperature of current gear – This function only works in summer when the outside temperature is lower than the inside temperature, i.e. to cool the room.

5.2.2. "Devices parameters" window.

Web gateway the window allows you to set the brightness of the illumination of the buttons on the remote SCP, the sound of the buttons and the sound of the error indication.



Ventilation controller the user menu list that appears in the Controller window allows you to view detailed information about the device and to perform important configuration steps. A detailed description of the user menu



is given in table 5.

6. TECHNICAL MAINTENANCE PERFORMED BY THE USER

To keep the ventilation system working properly, it is important to regularly check and maintain all filters. If the filters become clogged, the unit will run louder as the fans have to compensate for the increased resistance. If the filters are clean, the unit will run quieter and consume less energy.

It is recommended to check the filters every 3-6 months. Please select the appropriate filter class for the season from the table below:

Season	Filter class according to EN 779:2012	Filter class according to ISO 16890	Recommended replacement frequency
All seasons	M5	ePM_{10} 50%	Every 6 months
Spring, summer	F7	ePM_1 70%	Every 4 months
Winter	Carbon G4	$ePM_{2.5}$ 60%	Every 6 months

Clean the duct grilles at least every six months.

7. TECHNICAL MAINTENANCE AND REPAIR PERFORMED BY A QUALIFIED SPECIALIST

Technical maintenance and repair should only be performed by qualified specialists. Maintenance and repair tasks include inspection and cleaning of the fan and heat exchanger. Cleaning the heat exchanger depends on the degree of soiling. The maintenance interval shall not exceed two years.

Heat exchanger cleaning procedure:

- Immerse the heat exchanger several times in warm water (max. 40 °C).
- Then rinse the heat exchanger thoroughly with warm tap water (max. 40°C).
- When drying the heat exchanger, position it in such a way that any remaining water can escape from the openings.
- Allow the heat exchanger to dry completely before reinstalling.

It is very important not to use any aggressive or strongly scented detergents!

Changing heat exchanger type:
The unit can be equipped and operated with two different types of heat exchangers:

- Standard counter-flow heat exchanger
- Entalphic counter-flow heat exchanger (membrane moisture heat exchanger)

8. VENTILATION UNIT INITIALIZATION DATA SHEET

Buyer details			
Name and surname:		Phone:	
Device installation address:		Email:	
Total area of ventilated space:			
Ventilation unit model:		**Identification No.:**	
Installer's details:			
Name and surname of engineer:			
Company:		Phone:	
Company address:		**Installation date:**	

Indoor supply air data			
Room	Project data (m^3/h)	Measured data (m^3/h)	
		Maximum flow	Minimal flow
Living room 1			
Living room 2			
Bedroom 1			
Bedroom 2			
Bedroom 3			
Bedroom 4			
Other...			
Other...			
Other...			

Outdoor exhaust air data			
Room	Project data (m^3/h)	Measured data (m^3/h)	
		Maximum flow	Minimal flow
Kitchen			
Bathroom 1			
Bathroom 2			
WC			
Closet			
Laundry room			
Other...			
Other...			
Other...			

9. TROUBLESHOOTING MANUAL

Problem	Possible cause	Solution
Ventilation unit is turned on, but the fans are not working.	No power supply.	Make sure that the power is supplied to the device controller, otherwise, troubleshoot the issue.
	The fan blade is stuck.	Turn off the device. Remove the cause
	The control panel displays the recorded fault.	Turn off the device and contact the seller.
The automatic circuit breaker trips after turning on the unit.	Short circuit or current leakage in an electrical circuit.	Turn off the device and contact the seller.
Low air flow.	Low fan speed.	Set higher speed.
	Clogged air filters.	Replace the filters with new ones.
	Clogged fan grilles, diffusers.	Clean the fan grilles and diffusers.
Excessive noise and vibration when the ventilation unit is running.	Dirty fan blade.	Clean the fan blades.
	The ventilation unit's mounting bolts are loose. No anti-vibration mounts.	Install anti-vibration mounts, check if the mounting bolts are not loosened.
Unreasonably high supply air temperature, excessively high electricity consumption.	Make sure that the heater is working properly. If the heather is continuously running, the thermistor may be damaged.	Turn off the device and contact the seller.
Water leakage (only for units with standard heat exchangers).	The condensate drainage system is contaminated, damaged, or incorrectly installed.	Clean the drainage line if necessary. Check the slope of the drainage line. Ensure that sewage pipes are protected from freezing.
Condensation on the unit casing and (or) on the ducts.	The unit is installed in a room with high humidity, such as a bathroom.	No action needed.

10. WARRANTY LIABILITY

10.1. Warranty Terms & Conditions

The device is covered by a 24-month manufacturer's warranty from the date of purchase. Warranty claims can only be made for material defects occurring within the warranty period. In the event of a warranty claim, the unit must not be dismantled without the manufacturer's written permission. Spare parts are only covered by the warranty if they have been supplied by the manufacturer and installed by an installer approved by the manufacturer.

The warranty expires when:

- The guarantee period has expired;
- The unit has been used without air purification filters;
- The unit is fitted with parts not supplied by the manufacturer (except filters);
- Changes or modifications not approved by the manufacturer have been made;
- The installation has not been installed in accordance with the applicable Building Regulations and the mandatory requirements specified in this manual;
- The defects are due to incorrect connection, misuse, or contamination of the system;

Normal wear and tear on the ventilation unit is excluded from the warranty. Ltd. Oxygen group reserves the right to change the design and/or configuration of its products at any time, without being obliged to change the units delivered previously.

10.2. Liability

The ventilation unit is designed and manufactured for ventilation of indoor spaces with balanced air flows. Any other use shall be considered as improper use and may cause damage to the unit or to the premises for which the manufacturer cannot be held responsible. The manufacturer shall not be liable for any damage caused by:

- Failure to comply with the safety, use and maintenance instructions in this document;
- Use of components not supplied or recommended by the manufacturer. The use of such components is the sole responsibility of the installer;
- Defects due to incorrect connection or improper use of the system;
- Normal wear and tear;

11. TECHNICAL SPECIFICATION ACCORDING TO "ECODESIGN" (ERP), NO. 1254/2014

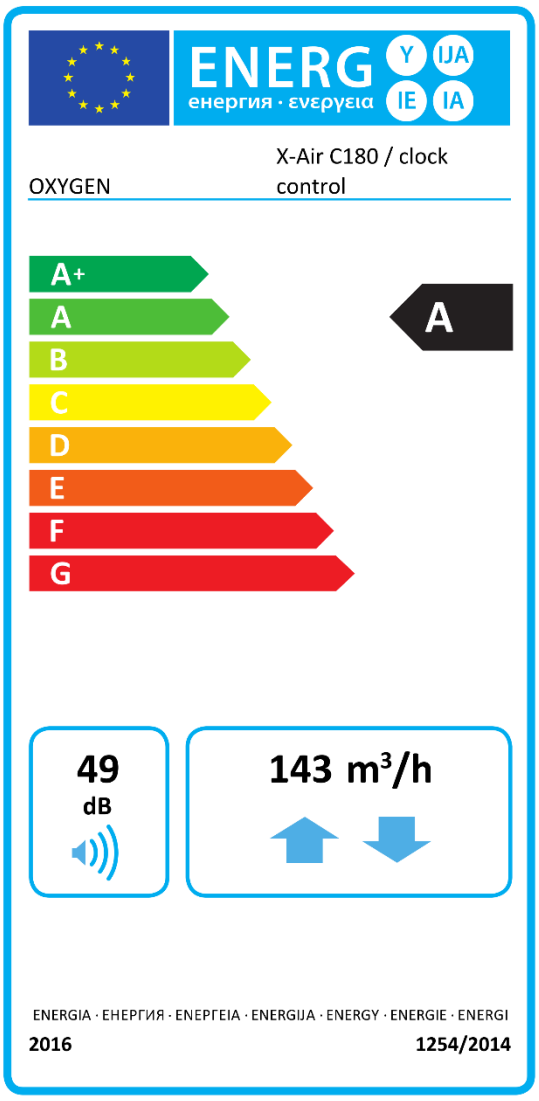
Product model	X-Air C180	X-Air C180E	X-Air C200v2	X-Air C200E	X-Air C250
Brand	Oxygen Group				
Specific Energy Consumption (SEC) class	A	A	A+	B	A
Specific Energy Consumption (SEC) value					
Cold climate (kWh/m^2/a)	-83.5	-81.9	-87.3	-73.8	-78.4
Temperate climate (kWh/m^2/a)	-38.7	-38.6	-42.4	-32.5	-35.9
Warm climate (kWh/m^2/a)	-13	-13.7	-16.7	-8.8	-11.6
Type of ventilation unit	Ventilation unit with heat recovery				
Fan	Variable speed EC fan				
Heat exchanger type	Counter-flow	Counter-flow, Enthalpy	Counter-flow	Counter-flow, Enthalpy	Counter-flow
Thermal efficiency	93%	87.9%	90%	80.8%	84.7%
Maximum air flow rate, (m^3/h)	143	143	200	200	230
Electrical power input of the fan at maximum flow rate (W)	76	76	110	110	110
Specific fan power (SFP), kW/(m3/s)	1,91	1,91	1,98	1,98	1,72
Sound power level (L_{WA})	49	49	49	49	49
Reference flow rate, (m^3/s)	0.028	0.028	0.039	0.039	0.045
Reference pressure difference, (Pa)	50	50	50	50	50
Specific power input (SPI), W/(m3/h)	0.29	0.24	0.34	0.38	0.3
Controller factor	0.95	0.95	0.65	0.95	0.95
Control type	Clock controller		Local demand sensor	Clock controller	
Leakage level*					
Internal	1.4%	1.4%	1.4%	1.4%	1.4%
External	2.5%	2.5%	2.5%	2.5%	2.5%
Dirty filter replacement alert	Options described in the user manual				
Internet address for disassembly instructions	www.oxygen.lt				
Annual electricity consumption (AEC) in the temperate climate zone, kWh/100m^2.a	373	316	226	473	382
Annual heating savings (AHS)					
Cold climate, kWh/100m^2.a	9172	8870	9182	8450	8681
Temperate climate, kWh/100m^2.a	4689	4534	4693	4319	4437
Warm climate, kWh/100m^2.a	2120	2050	2122	1953	2007
Bypass damper	Not included				

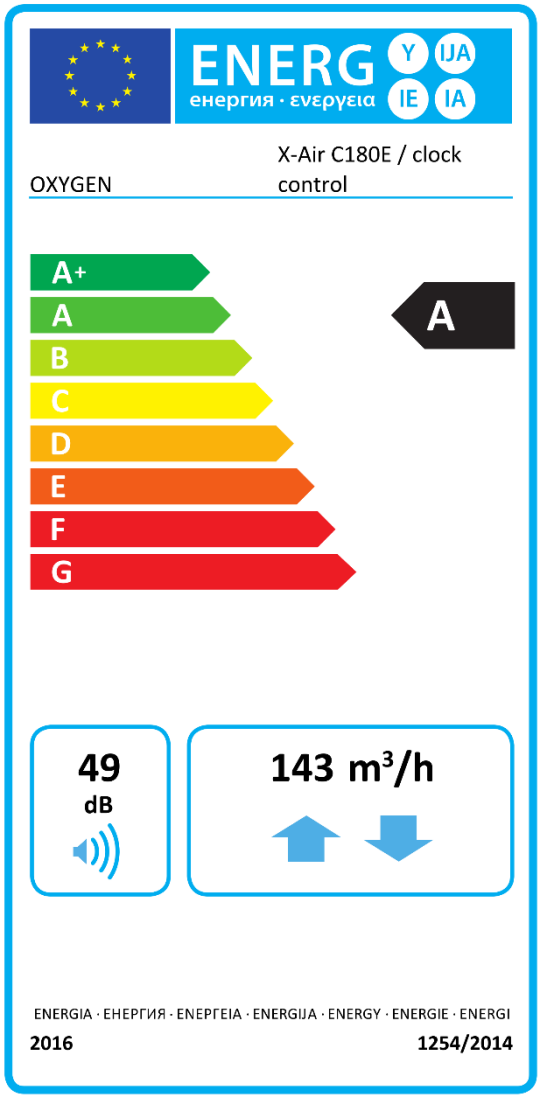
* - Measurements made according to EN 13141-7 standard (TNO-Report TNO 2014 R10659, April 2014)

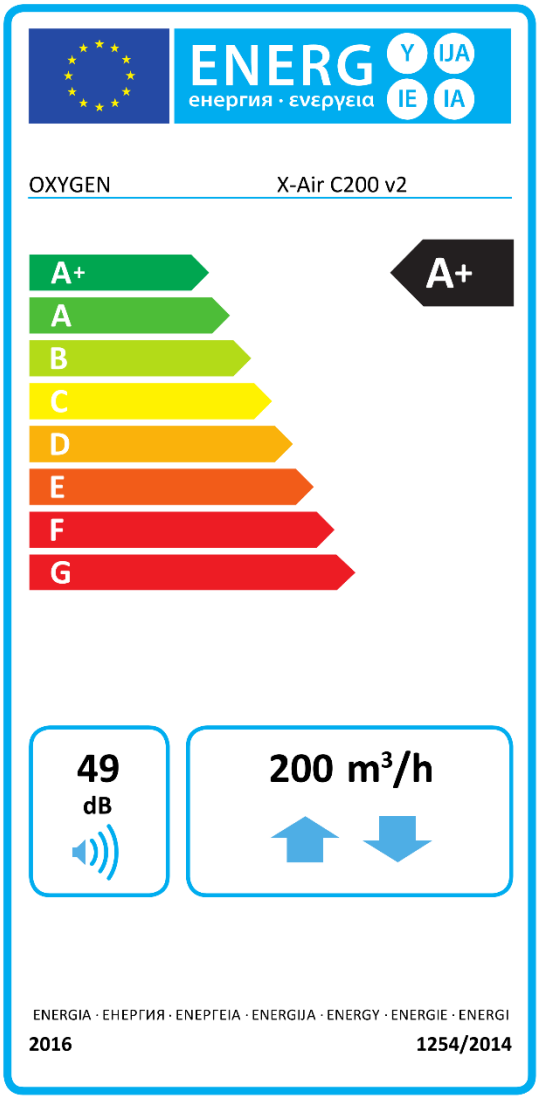
12. PRODUCT ENERGY EFFICIENCY LABELS

The energy efficiency label of the ventilation unit corresponds with the installation of the device and the model identifier of the product data sheet. The product label includes the following information:

- Energy efficiency class for the temperate climate;
- Indoor sound power level in dB (LWA);
- Maximum air flow rate;



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Y
IJA
IE
IA
OXYGEN
X-Air C200 v2
A+
A+
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B
C
D
E
F
G
49
dB
200 m³/h
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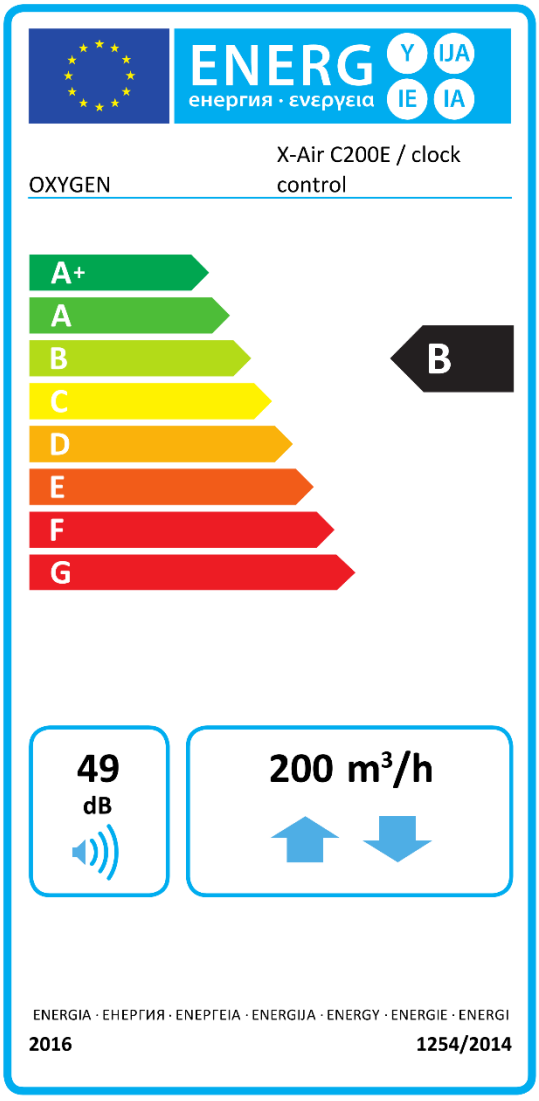
2016
1254/2014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IJA
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OXYGEN
X-Air C200E / clock control
A+
A
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B
49
dB
200 m³/h
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2016
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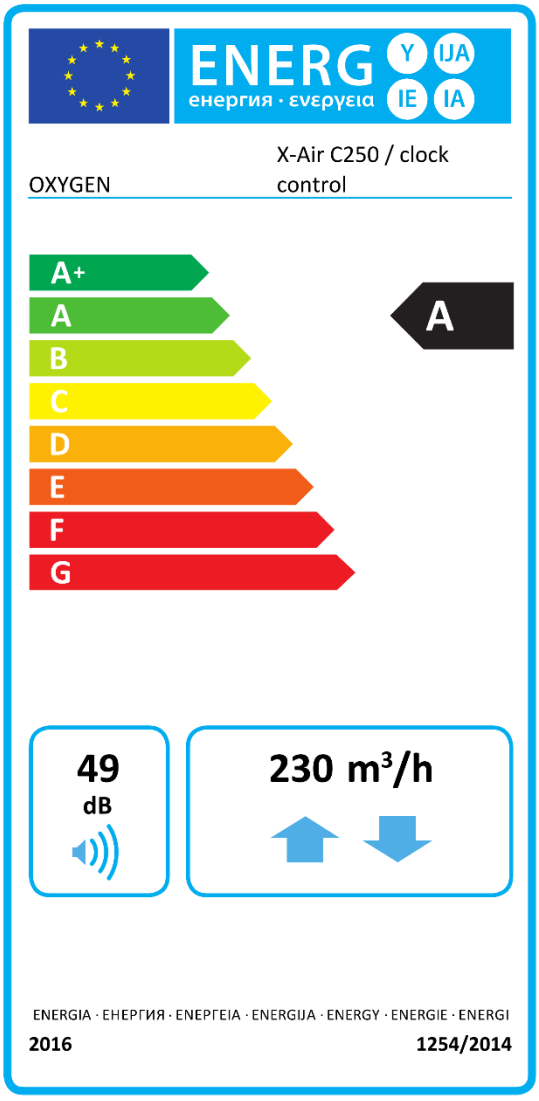
ENERG
енергия · ενεργεια
Y
IJA
IE
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OXYGEN
X-Air C250 / clock control
A+
A
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C
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A
49
dB
230 m³/h
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2016
1254/2014

13. DECLARATION OF CONFORMITY

Ltd. "OXYGEN group"
Birželio 23-osios g. 29
50201 Kaunas
LITHUANIA

Confirms that the following ventilation units with heat exchangers:

OXYGEN X-Air C180
OXYGEN X-Air C180E
OXYGEN X-Air C200v2
OXYGEN X-Air C200E
OXYGEN X-Air C250

Comply with the requirements of the following European Community Directives and Standards:

2009/125/EC – Ecodesign Directive
ES 1253/2014
ES 1254/2014
ES 2017/1369
EN 13141-7:2010

2010/30/ES – Energy Labeling Directive
ES 1254/2014
2011/65/ES – Restriction of Hazardous Substances (RoHS) Directive
EN 50581(2012)
2014/35/ES – Low Voltage Directive
EN 60335-1:2012
EN 60335-1:2012/A11:2014

Director
Aidas Šetikas
2024-02-01, Kaunas