



## ***INSTALLATION MANUAL***

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Heat Recovery Units	<b>OXYGEN X-Air C180</b>
	OXYGEN X-Air C180 <b>E</b>
	OXYGEN X-Air C <b>200</b>
	OXYGEN X-Air C200 <b>E</b>
	OXYGEN X-Air C2 <b>50</b>

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# 1. SAFETY REQUIREMENTS

Carefully read and follow safety requirements provided below before installing and while operating the Unit:

- Do not discard the Installation and operation manual, keep it for future reference.
- The Unit should be installed and operated in compliance with this Installation and operation manual, following the requirements of effective legislation and standards.
- When connecting the Unit to mains supply, grounding must be installed in compliance with requirements of effective legislation and standards.
- To prevent accidents and potential damage to the Unit it should be installed, connected, maintained and repaired only by qualified technician. Never attempt to do this by yourself!
- Turn off the Unit by using Control panel and wait for fans to stop completely before replacing air filters.
- Turn off the Unit by using Control panel, wait for fans to stop completely and disconnect the Unit from mains supply before performing any maintenance.
- Disconnect the Unit from mains supply before disconnecting or reconnecting the control panel.
- Before connecting the Unit make sure that no items will get sucked into the its air intake openings!
- The Unit is not intended to be used by persons (including children) with reduced physical, sensory or mental capabilities, unless they have been instructed to use the Unit and under constant supervision of person held responsible for their safety.
- Children may only use the Unit under adult supervision.
- Only original supplementary parts and consumables, certified by manufacturer should be used.
- The Unit package (cardboard, plastic, foam polystyrene) can pose hazard to children. Dispose or recycle the package elements!
- Disused Unit should be disposed in accordance with requirements of legislation on handling of waste electrical and electronic equipment.
- **IT IS PROHIBITED** to operate the Unit with damaged mains supply cable! Switch off the power circuit-breaker to disconnect mains supply and contact a qualified technician or manufacturer service centre immediately upon noticing such damage.
- **IT IS PROHIBITED** to attempt the repair of the damaged Unit or its part, to open its maintenance and service hatch! Contact a qualified technician or manufacturer service centre.
- **IT IS PROHIBITED** to operate the Unit while construction works are still in progress to remove dust or excess moisture. Fine dust of building materials, used in construction, can irreversibly change characteristics of the heat exchanger or cause damage to sensitive electronic components. Failure of the Unit caused by such operation will void the warranty.

## 2. DIMENSIONS AND WEIGHT

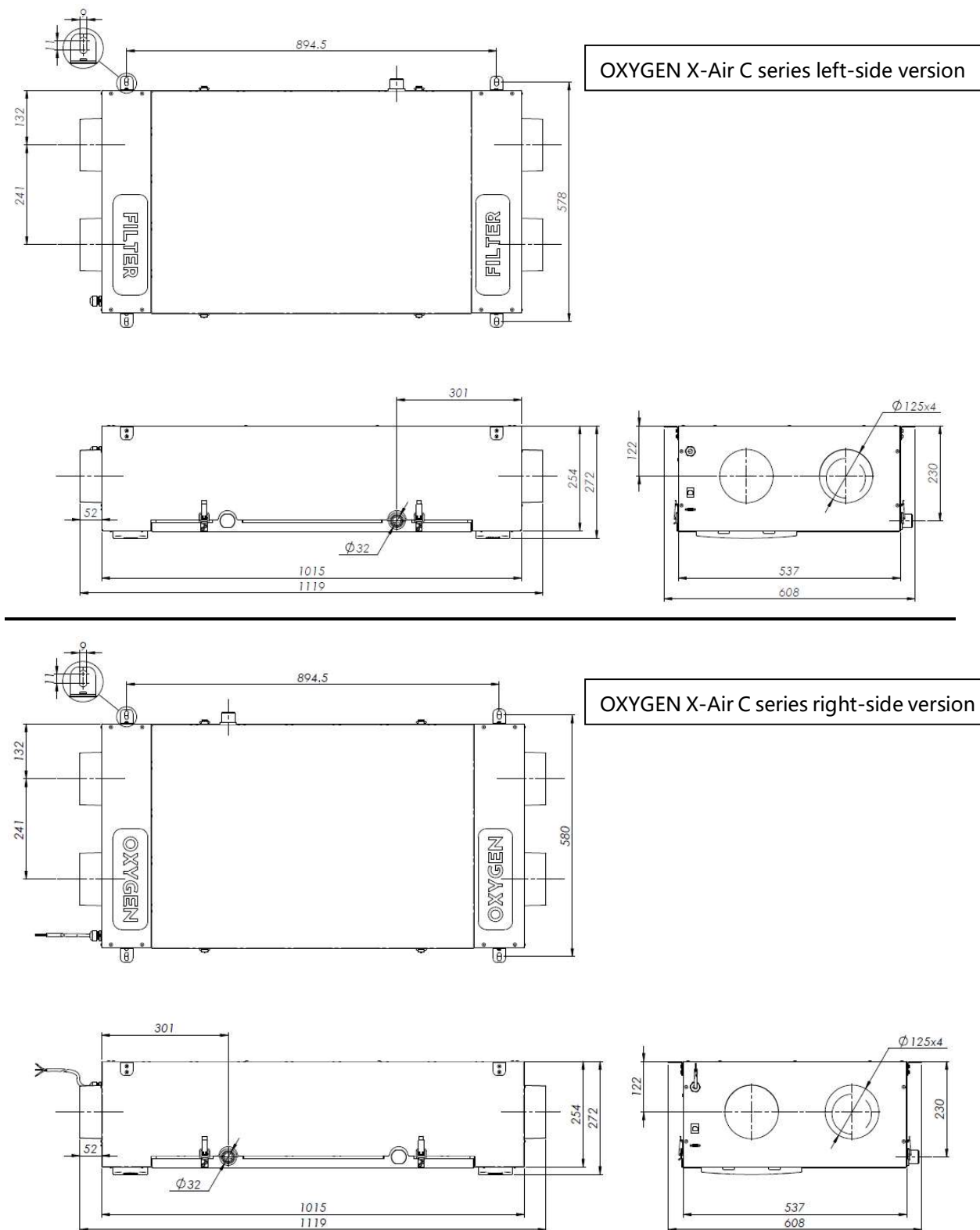


Figure 1. Unit dimensions

Body dimensions and weight	Length, mm	Width, mm	Height, mm	Weight, kg
OXYGEN X-Air C series	1015	537	272	25

### 3. INSTALLATION OF THE UNIT

#### 3.1. Mounting orientation

Choose the right mounting orientation of OXYGEN X-Air C series device before ordering. It will not be possible to change the mounting orientation later.

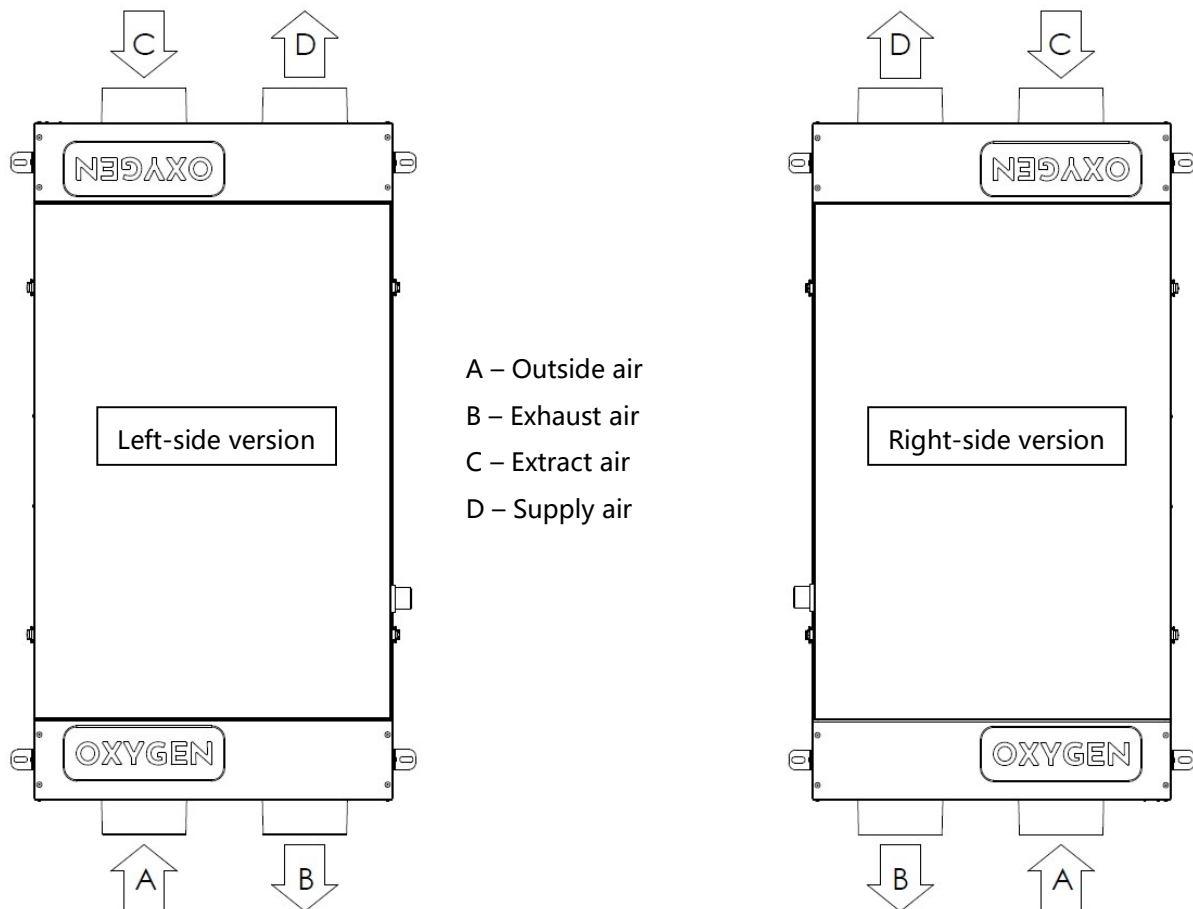


Figure 2. Mounting orientation

#### 3.2. Selecting the mounting location

The Unit should be installed in a heated room such as bath, storage room, boiler room or an attic. Make sure, that there is sufficient space to install not only the Unit itself, but also auxiliary ventilation system components – noise silencers or air distribution boxes. Make sure that there is a possibility to connect the condensate drain pipe of the Unit to the building's internal sewerage system.

**Operating conditions:** +15°C - +30°C, relative air humidity ≤ 60%.

The Unit should be installed horizontally with maintenance and service hatch looking downwards. L-shape fastening brackets (provided) should be used to fasten Unit to the ceiling. Use ceiling pins or locking sleeves (not included), depending on installation surface. It is recommended to use vibro-isolation gaskets (not included) to ensure that Unit vibration will not be transferred to the mounting surface.

### 3.3. Installation incline (only applicable for X-Air C200 and C250)

**IMPORTANT!** After Unit installation, make sure that the condensate drain corner is positioned lower than remaining Unit corners (refer to Figure 3. Horizontal installation diagram"). This will ensure smooth removal of accumulated condensate.

Corresponding distances must be maintained from ceiling plane, when installing the Unit:

No.	Distance from horizontal plane
1	20 mm
2	10 mm
3	0 mm
4	10 mm

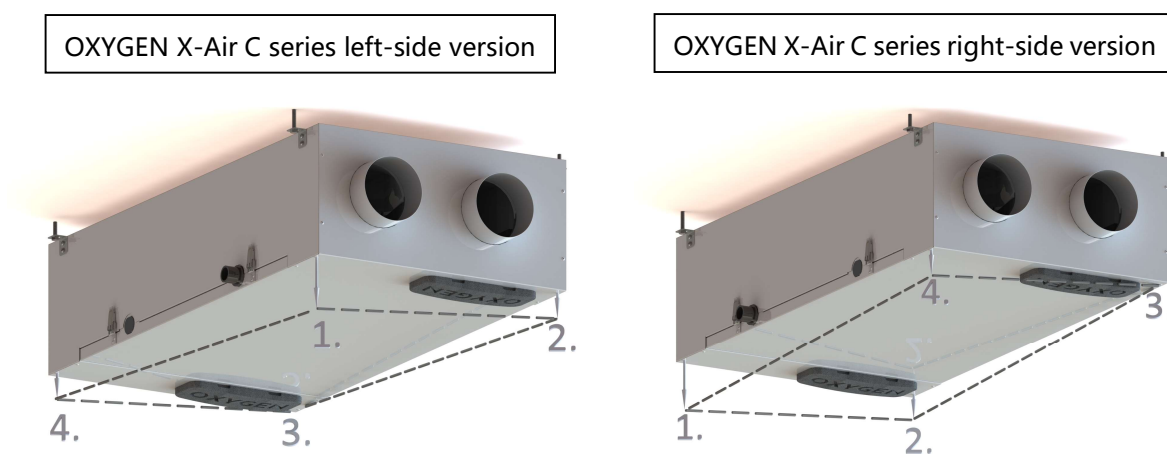
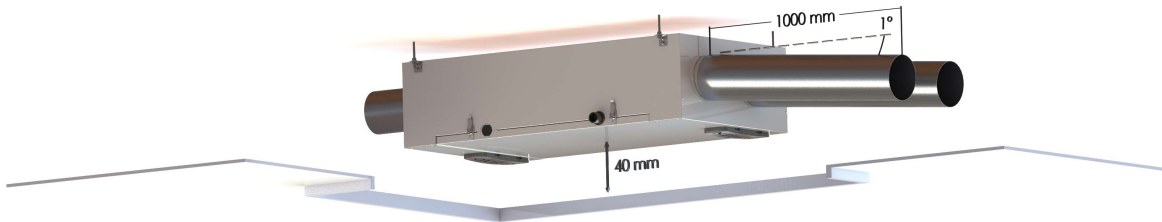


Figure 3. Horizontal installation diagram

### 3.4. Connecting ducts

It is recommended to install outside air supply and exhaust ducts as far as possible from each other to prevent the ingress of contaminated air back to premises. Please refer to local construction regulations.

Make sure that outdoor humidity or precipitation will not get into the Unit, when connecting outside air supply and exhaust ducts. Make sure that openings in the outside wall are installed lower than corresponding ducts of the Unit. The air intake opening in the outside wall should be protected against precipitation ingress to ventilation duct by grille or roof.



*Figure 4. Air intake duct connection diagram*

**IMPORTANT!** At least 1° ventilation duct incline (refer to Figure 4. Air intake duct connection diagram") should be ensured or other sufficient measures taken to prevent ingress of outdoor humidity or precipitation into the Unit.

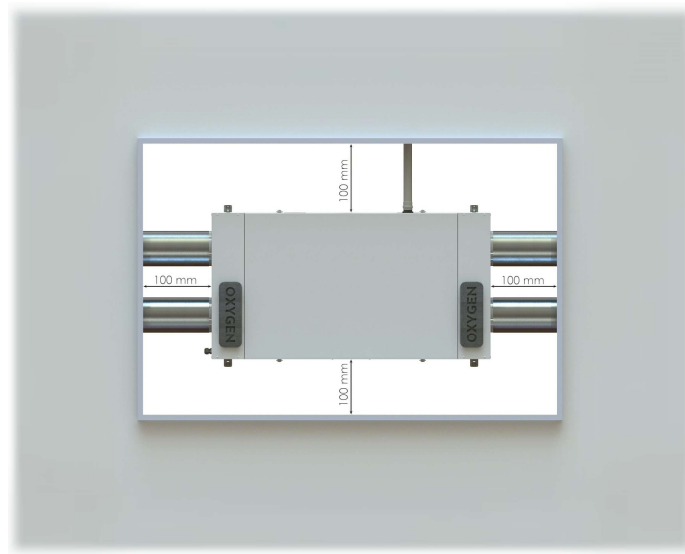
**IMPORTANT!** Both outside air intake and exhaust ducts should be covered with a layer of thermal insulation of sufficient thickness to prevent condensation of humidity on their walls due to difference between outdoor and indoor air temperatures.

**IMPORTANT!** Avoid using duct grille with dense mesh – it can quickly become clogged with dust and will prevent fresh air supply. The Unit is equipped with supply air filter to trap dust and insects.

### 3.5. Installing the maintenance and service hatch

When installing the Unit ensure enough space for its maintenance. Suspended ceiling in the room should be installed at least 30 mm from the lowest point of the Unit housing (refer to section 3.3 "Installation incline").

Maintenance and service hatch installed in the ceiling should be of suitable size to allow convenient access to all Unit components. At least 100 mm distance should be ensured from every edge of the Unit.



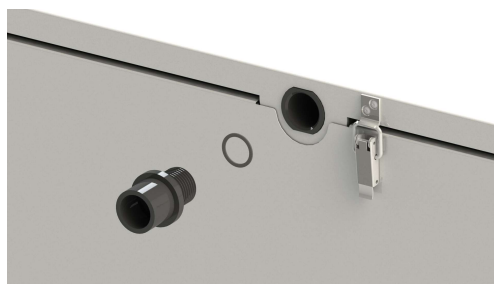
*Figure 5. Installation of maintenance and service hatch*

**IMPORTANT!** Owner of the Unit shall ensure the possibility to perform Unit maintenance. If there is not enough space for Unit maintenance, the manufacturer's representative is entitled to refuse to perform maintenance or repairs.

### 3.6. Connecting the condensate drain (only applicable for X-Air C200 and C250)

The Unit condensate drain should be connected to building's indoor sewerage system. If condensate drain is installed in non-heated premises or directed outdoors, it must be thermally insulated or equipped with electric heater.

Install a round rubber gasket into the condensate drain socket, then firmly screw the condensate drain nozzle in by hand.

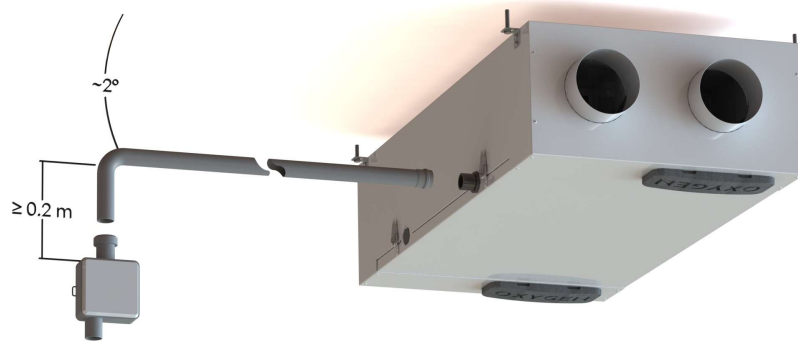


*Figure 6. Installing the condensate drain*

**IMPORTANT!** Do not use pliers or other similar tools, as excess power applied may damage the Unit. Mechanical damage will void the warranty.

The necessary incline of the condensate drain pipe should be ensured during the installation: at least 2° incline should be ensured in the horizontal part of the system, refer to Figure 7. Connecting the condensate drain".

Siphon with non-return valve is the obligatory part of the condensate drain system. It is recommended to use HL138, HepvO or similar type, internally or externally mounted siphon. Siphon should be installed according to Figure 7 diagram "Connecting the condensate drain", ensuring that the siphon manufacturer's instructions on incline, distances, necessary inspection hatch for the selected siphon model are observed.



*Figure 7. Connecting the condensate drain*

**IMPORTANT!** Ensure that condensate drain pipe can be easily disconnected from the drain nozzle if it is necessary to open the service maintenance and service hatch of the Unit, when fixing drain pipe in the wall or ceiling.

**IMPORTANT!** Condensate will start accumulating within the Unit when dew-point conditions occur if necessary incline of condensate drain pipe is not observed or siphon with non-return valve is not installed or not functional. Excessive level of accumulated water can leak out through unexpected parts of Unit's body and can cause rust formation or damage the ceiling. Operation of exhaust fan in conditions of excess moisture can cause its failure. Failure to properly install condensate drain will void the warranty.

### 3.7. Ventilation system balancing

It is necessary to balance the supply and exhaust air flows of the air handling unit during first launch of the ventilation system. Ventilation system will ensure proper heat recovery and the lowest possible electricity consumption during the cold season only if properly balanced.

System has to be balanced according to ventilation system installation project. Balance the supply and exhaust air flows by adjusting values for Fan1 and Fan2 in the operating parameters setting menu of control panel with touchscreen display (refer to section 1.5 of Operating parameters setting manual) or using P3 and P4 controls of control panel with the knob (refer to section 9.3.6 of Installation and operation manual "Additional system settings").

There is a risk of heat exchanger freezing when operating an unbalanced ventilation system during the cold season, as a result of which air handling unit may start supplying cold air to the premises. Unexpected indoor air moisture condensation can occur on the supply air ducts.

**IMPORTANT!** Balancing of the system can only be entrusted to qualified professional possessing all the necessary properly calibrated technical equipment.

**IMPORTANT!** Request a ventilation system passport to be prepared.

**IMPORTANT!** Freezing of heat exchanger which occurred during operation of an unbalanced ventilation system can irreversibly change the properties of the heat exchanger and damage the internal air tightness of the Unit. Failure of the Unit due to freezing while operating the unbalanced ventilation system will void the warranty!

## 4. CONNECTION OF THE UNIT

Mains supply, control panel cable and, if necessary, comfort function connector should be connected to the Unit, according to the following diagram:



- Control panel connector (USB)
- Comfort functions connector (RJ-45)
  
- Mains cable (230V, 3x1.5mm<sup>2</sup> L+N+PE)

*Figure 8. Connection of the Unit*

**IT IS PROHIBITED** to connect any cables or devices to the connectors of the control panel and comfort functions, despite similarity to any standard connectors. External similarity of connectors does not guarantee compatibility – connected devices may fail or damage the Unit. Failure of the Unit due to incompatible supplementary parts connection will void the warranty!

**IT IS PROHIBITED** to connect or disconnect control panel or WiFi controller without turning off the mains power first. The failure of the control panel or the Unit due to improper connection will void the warranty!

### 4.1. Connecting electric circuit

#### **WARNING!!!**

- To prevent accidents and potential damage to the Unit, it can only be connected by a qualified technician. Do not attempt to do that by yourself!
- Mains supply power rating shall comply with the rating indicated in the Unit manual.
- Mains supply should be disconnected when connecting the Unit.
- The Unit should be connected according to diagram provided in the User Manual.
- Only power cable provided with the Unit should be used to connect it to power source.
- Grounding should be installed in compliance with the requirements of effective legislation and standards when connecting the Unit to mains supply.
- Electric circuit must be equipped with suitable power circuit-breaker.

Power supply	230V, 50Hz, 5A
Maximum electric power consumption – fans	106W
Maximum electric power consumption – preheater	500W
IP protection class	20

## 4.2. Installation of the control panel

It is recommended to install control panel of the Unit in a living space (for example, in a corridor or hall) at 1.5 – 1.6 m height from the floor for convenient access. Lay the control panel connection cable supplied from the Unit location to the control panel location before finishing decoration works.

The maximum permissible installation distance of control panel from the Unit is 100 m. Use a flexible mounting cable 4x0.22mm<sup>2</sup> to connect the panel, the resistance of each conductor must not exceed 40Ω.

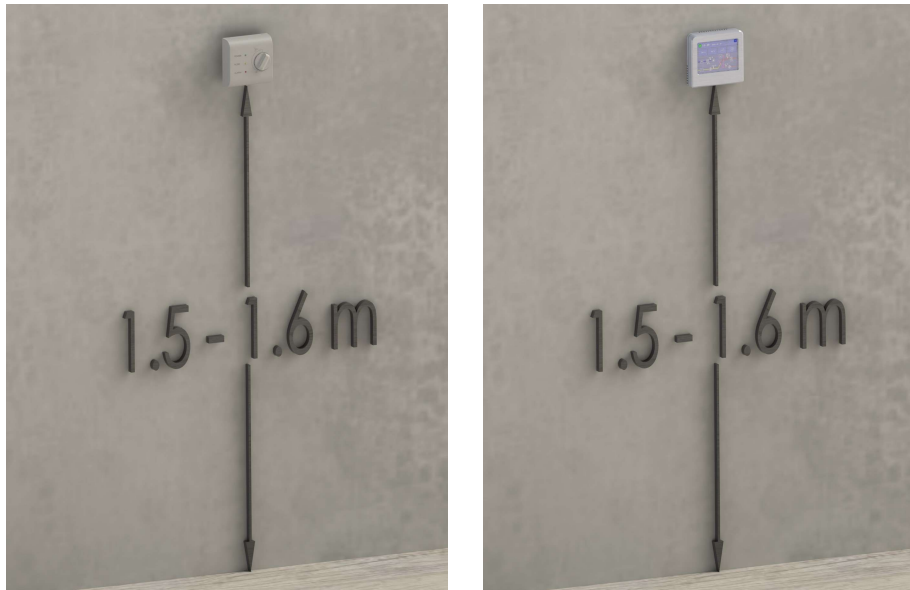


Figure 9. Installation of the control panel

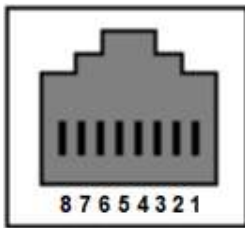
**IT IS PROHIBITED** to install control panel in premises, where relative air humidity exceeds 70%.

### 4.3. Connector of comfort functions

The Unit supports following external functionality:

- **Fire alarm** – emergency shutdown of the Unit upon activation of fire alarm;
- **Boost** – ventilation boost activation by external switch;
- **CO<sub>2</sub> sensor** – ventilation power increase based on readings of auxiliary CO<sub>2</sub> or humidity sensors connected;
- **Away** – reduction of ventilation power while away from home by security system or external switch.

Function can be activated by short circuiting the respective digital contacts of RJ45 function connector.



Conn. contact No.	Function of ventilation system
1-2	Away
3-4	CO <sub>2</sub> sensor
5-6	Boost
7-8	Fire alarm

Figure 10. Contacts of functions connector

**IMPORTANT!** Only passive jumpers or electric relays should be used to activate the function!

**IMPORTANT!** If the Unit is being controlled by control panel with a knob, please make sure that corresponding S2 switch does not block the usage of function (refer to section 9.3.6 of Installation and operation manual "Additional system settings").

**IT IS PROHIBITED** to connect the functions connector directly to electrical wiring network!

Optional RJ45 adapter can be used for more convenient connection:



Figure 11. Comfort functions RJ45 connector adapter

## 5. REPLACING AIR FILTERS

Heat Recovery Unit OXYGEN X-Air C series is equipped with supply and exhaust air filters.

- **Supply air filter** ensures supply air quality, protects against ingress of outdoor dust and insects (G4 Carbon, M5, F7 filtering classes);
- **Exhaust air filter** protects the device against ingress of indoor dust and insects (G4 filtration class).

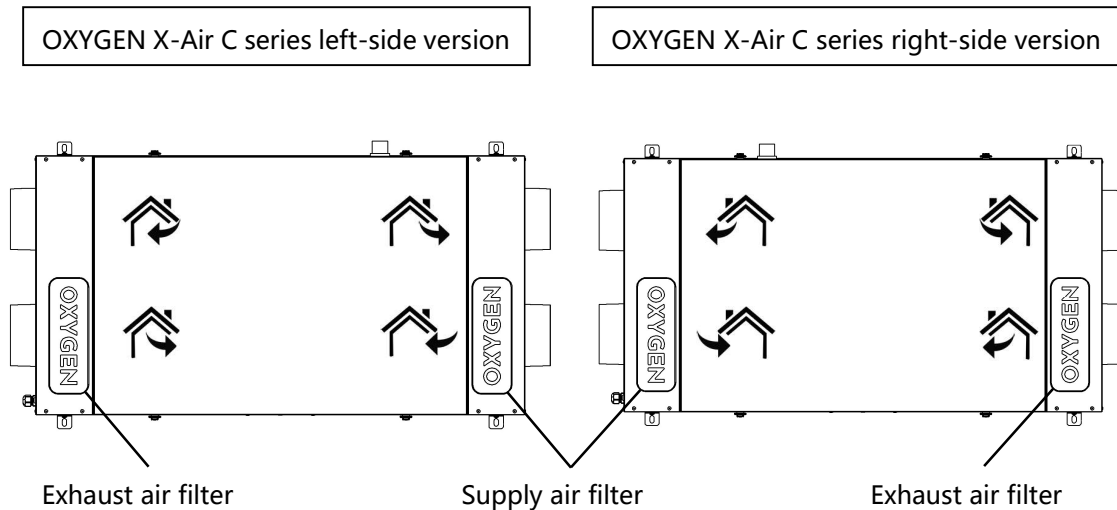


Figure 12. Locating air filters

Air filter replacing frequency depends on the selected filtering class and environment, where the Unit is being operated. Dusty operation environment will foul filters faster.

Replacing air filters:

- Shut down the Unit by control panel, make sure that fans have completely stopped
- Open the lid of the filter, that you intend to change, marked by "OXYGEN" by firmly gripping it and pulling out
- Use fabric handle to remove a filter
- Insert a new filter, following ventilation flow direction indicated on filter frame – it should point towards center of the Unit
- Firmly push the lid of the filter back to its place. Make sure it was tightly inserted into the Unit housing
- Turn on the Unit
- Reset filter lifetime meter, refer to sections 9.1.7 "Filter menu", 9.2.3 "Settings menu" or 9.3.5 "Resetting the filter lifetime meter" of Installation and operation manual, depending on type of controller being used.

It is recommended to replace air filters at least:

Filtering class, acc. EN 779:2012	Filtering class, acc. ISO 16890	Recommended replacing frequency
G4	Coarse 65%	every 6 months
G4 Carbon	ePM <sub>2.5</sub> 60%	every 4 months
M5	ePM <sub>10</sub> 55%	every 4 months
F7	ePM <sub>1</sub> 70%	every 2 months

**IMPORTANT!** The fouled air filters can result in ventilation power decrease and higher than usually power consumption.

**IMPORTANT!** Only original, manufacturer recommended filters should be used. The use of low quality third party filters can result in damage to sensitive device components due to excess dust or humidity. Metal filter frames can cause unrestorable damage to Units body. Failure of the Unit caused by the use of non-original components, will void the warranty.

Replacement filters can be ordered at: [www.oxygenvent.com](http://www.oxygenvent.com).

## 6. MAINTENANCE AND WARRANTY

Heat recovery Unit OXYGEN X-Air C series is granted 24 months warranty. Make sure to have the section below properly filled in to confirm the installation date. Have the proof of purchase handy before contacting service department.

Product	OXYGEN X-Air _____
Serial No.	_____
Installation date	_____
Contractor (company)	_____ _____ <small>(company name, technician, signature, stamp, contact details)</small>

**IMPORTANT!** Before contacting service department, make sure that the failure is persistent – check that:

- The Unit is connected to mains supply
- Power circuit-breaker is ON
- If RESET button is being displayed on touchscreen control panel (refer to section 9.2.5 of Installation and operation manual "Failure indication") or flashing red led of control panel with a knob indicates failure (refer to section 9.3.3 of Installation and operation manual "Failure indicator"), try rebooting the Unit first.

**IMPORTANT!** Flashing green and/or yellow leds of control panel with a knob do not indicate the failure! Refer to section 9.3.2 of Installation and operation manual "Air filter replacing / anti-frost protection indicator" for more information.

### Prepare to submit :

- Product model and serial number (locate it on the product label)
- Proof of purchase, including invoice or receipt
- Detailed description of failure, including photos or video recordings of the Unit, control panel and place of installation if necessary
- Your name, address, contact phone number, e-mail address

After gathering all the necessary information, contact the point of purchase.

## 7. INSTALLATION AND OPERATION MANUAL

Download comprehensive installation and operation manual for your device from [www.oxygenvent.com/downloads](http://www.oxygenvent.com/downloads).

## 8. CONTACTS

### OXYGEN

Company code:	304288834
VAT code:	LT100010366918
Bank account:	LT42 7044 0600 0810 3886
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AB "SEB" bank	
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