PICO 50
LOCAL VENTILATION WITH HEAT RECOVERY

Product Overview

www.orcaenergy.eu
Device for heat recovery PICO50, is suitable for both, renovated and newly constructed buildings. This simple and effective solution brings freshness into your home. Reduce the heating costs and say goodbye to mould.

**WHAT CAN EFFECTIVE, RELIABLE AND EFFICIENT VENTILATION DEVICES PROVIDE FOR YOU**

- Fresh air supply
- Discharging air from the room
- Cleaning dust and insects from the air
- Prevention of moisture and mould
- Protection against noise from the surrounding area
- Heat recovery and moisture regulation in the room
- Reducing the heating and air conditioning costs
- Low energy consumption

**COST-EFFECTIVE**
Ventilation systems of the individual rooms are ready-to-use ventilation devices, continuously supplying fresh air, cleaning the air, and at the same time removing the exhaustion air from your rooms.

**ENERGY EFFICIENT**
According to sustainable heat losses in every home, this technology for heat recovery is highly economical and modern.

**DIVERSE**
Ventilation devices are individual and useful in every phase of the projects, either when planning the ventilation equipment for new buildings, including post-fitting, as well as when renovating old buildings, or buildings, for which the central ventilation is economically inappropriate.

**HIGHLY EFFECTIVE**
Efficiency of heat recovery with ventilation devices is very high, up to 90%.

**EASY AND COMFORTABLE**
Ventilation systems have a compact size and do not require separate connecting elements or air lines. They are ready for immediate use.

### PICO 50

<table>
<thead>
<tr>
<th>Speed</th>
<th>1</th>
<th>2</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>Power supply (voltage/frequency)</td>
<td>230 V/50 Hz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consumption</td>
<td>3.8 W</td>
<td>3.96 W</td>
<td>5.61 W</td>
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<tr>
<td>Maximum current</td>
<td>0.024 A</td>
<td>0.026 A</td>
<td>0.039 A</td>
</tr>
<tr>
<td>Maximum air flow</td>
<td>14 m³/h</td>
<td>28 m³/h</td>
<td>54 m³/h</td>
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<tr>
<td>Fan speed</td>
<td>610 min⁻¹</td>
<td>880 min⁻¹</td>
<td>1450 min⁻¹</td>
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<tr>
<td>Noise level</td>
<td>19 dB(A)</td>
<td>22 dB(A)</td>
<td>29 dB(A)</td>
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<tr>
<td>Efficiency</td>
<td>≤50%</td>
<td></td>
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</tr>
<tr>
<td>Heat exchanger material</td>
<td>ceramic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipe diameter</td>
<td>150 mm</td>
<td></td>
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<tr>
<td>Protection class</td>
<td>IP 24</td>
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</tbody>
</table>
Example of the ventilation system
In reverse operation with heat and moisture recovery, the ventilation systems PICO change their operation, from air supply to the air exhaustion and vice versa, every 70 seconds. Therefore, during winter the heat collector receives heat and humidity, and during summer, it receives cold. The air flows between rooms through doorways and hallways, which creates a circulation of the air in the house. Thanks to the ventilation system with heat recovery based on the ventilation device PICO, the heating and air conditioning costs are significantly reduced.

**ECONOMICAL LOCAL ROOM VENTILATION**

**Structure**
The ventilation system consists of an adjustable telescopic pipe, fan unit and outer cover. Two filters and a ceramic heat collector are installed inside the telescopic pipe.

**Ventilation Grills**
Thanks to the modern design of the ventilation grills, they fit in well with every interior design. All ventilation systems are equipped with blade dampers. The PICO50 models are equipped with a decorative front panel, which is coated with an insulation layer for additional sound isolation from the inside.

**Ceramic Heat Collector**
The high-performance ceramic heat collector ensures the recovery of heat energy, from the outgoing air and heating the incoming air, with the efficient recovery of heat up to 90%. The unique regenerative heat energy collector possesses a cell structure with a larger surface and high efficiency. The heat collector is distinguished by its excellent transmission properties and good heat storage capacity.

**Round Air Pipe**
The round air pipes are made from PVC plastic. The telescopic length is adjustable according to the thickness of walls, which makes the installation fast and simple.

**Air Filter**
Incoming and outgoing air streams are cleaned with two installed air filters G3 classes. The filters clean the air of dust and vermin thus preventing contamination of the ventilation system.

The filters have an antibacterial coating. The filter can be cleaned with a vacuum cleaner or with water, during which the antibacterial coating does not get removed.

**Reversible EC Fan**
For air supply and discharge an axial flow fan is used with a reversible EC motor. Thanks to the EC technology, the fan is distinguished by its low energy consumption. Motor is powered with low voltage of 12V. The motor, with built-in overheating protection and ball bearings, is equipped for a long lasting operation.

**Mounting plate**
The PICO50 model contains a mounting plate, which facilitates the maintenance of fans, filters and heat collectors. The fan unit is installed onto the mounting plate with magnets and special adapters. The interior of the ventilation system is accessible by removing the fan unit without the need for any special tools.

**External cover**
Thanks to a special form of the external cover, the exhaust air and condensate, formed in the interior of the external cover, are discharged away from the wall of the building. The external cover also prevents the direct ingress of water and other particles from entering the ventilation system. The interior of the external cover is coated with an insulating layer for sound insulation and to prevent condensate formation.

**Power cable**
Ventilation systems are equipped with a power cable, so they are ready to use and do not require additional electrical connections. Simply plug in the cable into the socket and enjoy in fresh air. If it is necessary to install the cable under the rendering or connect more ventilation devices to a network, you can remove the cable with plug.

**Pre-installation kit and final installation kit for ventilation devices PICO**
During the first installation, the ventilation devices must be mounted in two steps. Therefore you need to use our kit for installation, the pre-installation kit and the final installation kit.

The first step takes place in the interior and the exterior of the wall and includes installation of electrical wiring, telescopic tube, the external cover, and setting of the mounting plate for the PICO model. The second step is performed before initializing the system and includes installation of the heat collector, filters, ventilation unit and connection of the control system.

**Pre-installation PICO package contains:**
- telescopic tube,
- external cover,
- foam material,
- mounting plate.

**PICO kit for final installation contains:**
- ceramic heat collector,
- ventilation unit,
- filter.

Example of the pre-installation kit.
Example of the final installation kit.
The ventilation systems provide a simple, effective and energy efficient ventilation of individual rooms in apartments, houses, public and commercial buildings.

The ventilation system may operate in reverse mode with energy recovery or only in ventilation mode without energy recovery.

**Cycle I.** The warm exhaust air is removed from the room through the ceramic heat collector. The exhaust air heats and moistens the ceramic heat collector and radiated up to 90% of the heat energy. After some time, the ceramic heat collector is warm enough and the ventilation system starts supplying the air.

**Cycle II.** Cold, fresh external air flows in through the ceramic heat collector, removing the stored heat and moisture until it reaches the room temperature. When the ceramic heat collector is cooled down, the ventilation system switches back to air exhaustion. Switching between the air supply and air exhaustion is repeated every 70 seconds.

Switches for basic operation of the model PICO 50, located on the device's housing, make the usage even more comfortable and convenient. To turn on the remote controlling of the ventilation system, set the switches on the ventilation unit to the centre.

**Controlling and operating modes**

Model PICO50 is supplied with a remote control, which enables easy and comfortable controlling of the device. When more ventilation devices are connected to the network, the signal from the remote control is only received by the first device. Other ventilation devices are then controlled through the first device.

**Main advantages**

- effective ventilation of individual rooms;
- high-tech ceramic heat collector with an effective recovery of the heat energy up to 90%.
- reverse fan with an EC motor and low energy consumption from 2.8 to 6.1W and low voltage of 12 V;
- an integrated control system;
- silent operation (13-33 dBa);
- easy installation and maintenance;
- class G3 filters provide the air cleaning;
- designed for continuous operation;
- without condensate formation.