Smart decentralized ventilation heat recovery system

ARS NORDIC SMART QR

USER MANUAL

DEVICE (ĮDEVICES)

TECHNICAL PASSPORT

Manufacturer : ARS NORDIC.LT

Description

The device is designed to ensure continuous air exchange in rooms. The device is designed and tested for Lithuanian climate conditions.!
The device is equipped with a ceramic air regenerator that absorbs and accumulates from the heat of the air leaving the room and heats the fresh air entering the room, thus ensuring minimal heat loss during the winter season. The electric heater, when the outdoor temperature is very low, heats the fresh air entering the room if necessary, to the required temperature, thus reducing energy consumption for heating cold outdoor air, prevents condensation and moisture accumulation in the room, and protects the room from mold and mildew formation.
The electric heater operates only in the mode where fresh air enters the room from outside and when the outdoor temperature is lower than specified in the HEATING mode.
If necessary and to save energy, the electric heater can be forcibly switched off, as it is described in the section
The device is equipped with a specially structured ceramic air regenerator that absorbs and stores from the room's outgoing air's cooled moisture and energy in such a way, cools the fresh air entering the room, thus ensuring minimal energy consumption during the hot summer season.
The device is designed for continuous operation, i.e.24 hours a day.
The maximum effect of the device will be achieved only by continuous operation and in optimal mode.

ARS NORDIC SMART QR:

1. Fan IN FAN –Indoor air supply fan with double decorative grilles – with a ten-degree smooth adjustment function, allowing air flow regulation from 15 m3/h in night, silent operating mode, up to 130 m3/h in day mode;
2. Air flow regulator 1 – allows optimizing air flow when it is extracted from the room;
3. Ceramic special composition regenerator – recuperator / heat exchanger / – helps significantly reduce temperature losses during ventilation of rooms;
4. Control module;
Thermal fuse – protects the device from overheating;
Thermostat – controls the heater and ensures that the air entering the room temperature does not exceed 24 °C;
Humidity sensor – ventilation is activated when there is a high level of humidity in the room; ventilation;
5. Electric heater 40 W – economical, operating in pulse mode with air inflow into the room, designed for additional heating of cold outdoor air. It maintains the temperature of the air entering the room so that it does not exceed 24 °C;
6. Air flow regulator 2 – allows optimizing the air flow entering the room;
7. Fan OUT FAN – extraction fan – with ten degrees of smooth adjustment allows air flow regulation from 15 m3/h in night, silent operating mode, up to 130 m3/h in day mode;
8.Filters – activated carbon filter and solid and coarse particle filter – helps ensure clean air flow in polluted urban and industrial areas. Helps purify air from odors, dust, bacteria, soot, car exhaust gases, etc..;
9.Telescopic air duct – allows adjusting the device length depending on the wall thickness;
10.External grille with insect screen – protects the device from moisture, even during heavy rain, and from insects entering the room;

Attention! Before using the device, carefully read the operating instructions!
Attention! When unpacking the device, make sure it is not visually damaged.
Attention! Keep the purchase receipt along with the stamped warranty card safe, if you need to make relevant claims. Failure to do so, the warranty will be considered invalid and will not apply.
Attention! Before installation, check that the voltage (V) and frequency (Hz) match the specified parameters.
Attention! When connecting the device, it is important to observe polarity (see section "Installation and Maintenance").
Attention! This device can be used by children aged 14 and over, as well as persons with physical and mental disabilities only if they have read and understood the operating instructions and safety rules for this device. Children are not allowed to play with this device. Children are not allowed to service or clean the device.
Attention! All electrical connection and installation work must be carried out according to applicable national and local laws and regulations.
Attention! All electrical connection and installation work must be performed by technically trained and qualified personnel.
Attention! Before installing or connecting this device, you must disconnect the main power supply.
Attention! This device is not intended for heating rooms and cannot replace room heating with heating appliances.
Attention! This device is not intended for cooling rooms and cannot replace an air conditioner.
The device may have a display and can be mounted on the wall, in the wall / concealed / suspended!
Attention!
All specified parameters are valid at a distance of three meters from the device, at 0 m above sea level, and at an air temperature from +25°C to -5°C. The device may have a display and can be mounted on the wall, in the wall / concealed / suspended!

Technical data
Minimum wall thickness – 28-33 cm.

Attention! Before installing and servicing the device, it is necessary to switch off the voltage in the electrical network.
Attention! At night, the deviceį we recommend turning on in silent mode. If the device somehow disturbs sleep at night, it is better to completely disconnect the device during the night.
Attention! The device may only be installed by a qualified electrician.
Device operating cycle:
Stage I:
In exhaust mode, contaminated warm air is removed from the room, saturated with carbon monoxide and carbon dioxide. As these substances pass through the ceramic regenerator, the air heats them. When heat accumulates in the regenerator, the OUT FAN fan, which extracts

air from the room, is turned off, and the IN FAN fan, which supplies air to the room, is turned on. The device switches to supply mode.

Stage II:

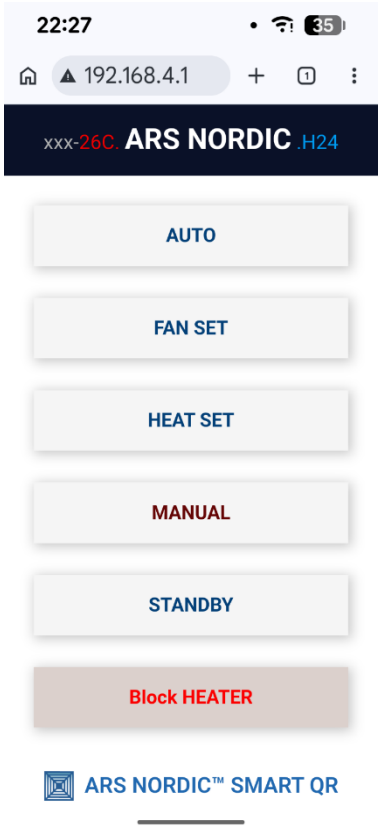
In supply mode, fresh cold air, passing through the filtration system, is cleaned of pollutants and dust, and then through the ceramic heat exchanger is heated to room temperature. When the ceramic regenerator transfers heat to the air entering the room, the exhaust mode is activated – the IN FAN fan, which supplies air to the room, is turned off, and the OUT FAN fan, which extracts air from the room, is turned on. The device switches to exhaust mode.

STANDBY (standby mode) – turns off fans, turns off heater, stops monitoring humidity level.
SLEEP (sleep mode) – reduces fan speed by one level with each press, until the desired speed and noise level are reached.
IN FAN SPEED (internal fan speed) – controls the fan speed at which
air is removed. There are 10 fan speeds to choose from – the first speed is 18 m3/h in silent mode, and the tenth speed is the maximum, i.e.. 150 m3/h.
IN FAN SPEED (external fan speed) – controls the fan speed for air flow. There are 10 fan speeds to choose from – the first speed is 18 m3/h in silent mode, and the tenth speed is the maximum, i.e.. 150 m3/h.
HEATER (heating unit) – regulates the set heating of the air entering the room temperature.
CUSTOM (custom mode) – regulates the set humidity in the room.

FEATURES

If the rotational speed of one fan is set to "0", then the fan with this indicator does not operate, while the second fan with a different indicator continues to operate and the system operates in either supply-only or exhaust-only mode. If the system operates only using air, the electric heater will be on all the time, which may increase energy consumption, unless the electric heater is turned off, as specified in the "Heater Off" (heater off) menu.
If both fans are not operating, the ceramic heater reaches the set temperature, the entire system turns off and ceases to function until the fan speed is changed and they are turned on via the menu.
If desired, you can additionally enable or disable the heating mode. This ensures heated airflow during the cold season and in conditions of high air humidity.
To select the desired combination of active and inactive functions, you can use the control panel yourself, on Android and iPhone devices.

Via WI-FI, you need to pair the device with a mobile phone. For this purpose, you need to scan the QR code that is affixed to the device's grille, and several more QR code stickers are provided. After scanning, you need to follow the mobile phone's connection instructions.



Optimal device operation.

Attention!
To prevent the device from freezing during the winter season when the temperature is very low, i.e.. below -10 °C, it is necessary that during the winter season the device operates continuously – 24 hours a day in the specified operating mode.
However, if you still have to switch off the device in winter, at very low temperatures, before starting the device, you must set OUT FAN period – 5-10 min., so that the device is heated by warm indoor air, and then switch the device to winter operating mode.
Before switching off the device during the cold winter period, it is necessary to switch the device to ventilation mode at maximum 10 OUT FAN and IN speed and set the heater temperature to 24 °C to remove condensate from the system, if any formed during device operation due to high humidity
in the room. In this mode, the device should be left to operate for at least 30-60 min.
Later, at low temperatures, you can switch off the device during the cold winter period.
This will protect the device from freezing and damage.
However, if you forget to do so, the device is well protected, its components are of very high quality, and the device itself is well designed, and this will protect it from damage.

Optimal device operating mode is achieved by setting the following parameters:

I. In winter, when the outdoor air temperature is lower: - 5°C (-5°C – 30°C)

1.Menu AIR FLOW (air flow)
- IN FAN fan operating period – 1 min.
- Indoor fan speed – 3-7
- Outdoor OUT FAN fan operating period – 5 min.
- Outdoor fan speed – 3-7

2.Heater menu
- Temperature: 22-34 °C
3.Menu CUSTOM (customized)
Humidity: Ideal humidity up to 60 % – with low humidity, the feeling of cold and coolness decreases
4.The electric heater is switched on via the control panel, Fig. 11 – HEATER ON/OFF or in the HEATER menu block – heater block 10,11,12 – Double-click on HEATER ON/OFF

II. In summer, when the outdoor air temperature is higher: + 30°C

1.Menu AIR FLOW (air flow)
- Indoor fan IN FAN operating period – 5 min.
- Indoor fan speed – 3-7
- Outdoor fan OUT FAN operating period – 1 min.
- Outdoor fan speed – 3-7
2.Heater menu
- Temperature: 18 °C
3.Menu CUSTOM (customized)
-Humidity: 60% – at low humidity, it becomes easier to raise the heat
4.Mmenu block HEATER –
heater block – double click on HEATER
OFF/ON

TECHNICAL MAINTENANCE

Attention!

Before performing technical maintenance on the device, you must switch off the power source. Make sure the device is completely disconnected from the electrical network. Work must be done carefully, trying not to break plastic parts, not to damage or disconnect wires and electronic components. It is best to entrust the work to specialists.!

The device must be regularly cleaned of dust and dirt.
To perform technical maintenance, you need to remove with a screwdriver the inner grille's decorative part. Then easily remove the air filter, rinse it of dust, and dry it. It is recommended to clean the device itself with a vacuum cleaner, and the fan blades with a damp cloth. Put it back and reassemble the decorative grilles.
Old dirty filters should be washed with warm soapy water and thoroughly dried so they can be used next time the device is cleaned.
The device should be cleaned once every three months, but no less than once every 6 months or at least 2-4 times a year. By cleaning the device more frequently, it will operate longer, and dust and dirt will not accumulate on the fans, which due to fan imbalance, can cause malfunction.
To ensure maximum heat exchange efficiency, it is necessary to regularly clean the device. The device can be cleaned with a vacuum cleaner. After cleaning the device, it must be wiped with a dry cloth.

WARRANTY AND SERVICE CONDITIONS

1. Warranty period
The manufacturer provides a 36 (thirty-six) month warranty from the date of purchase of the device.
The warranty is valid only upon presentation of:
• a valid purchase document (receipt or invoice), or
• a properly completed warranty card with the seller's signature and stamp.
The warranty applies only to manufacturing defects and structural failures of the device.

2. Warranty application limits
The warranty does not apply in the following cases:
• mechanical damage;
• improper installation;
• incorrect electrical connection;
• non-compliance with polarity;
• non-compliance with the operating instructions;
• unauthorized disassembly or modification of the device;
• use of the device for purposes other than its intended purpose;
• operation without filters or with clogged filters;
• failures caused by construction dust or environmental pollution;
• failures caused by unstable or improper electrical voltage.
Natural wear and contamination of filters are not considered a warranty case.

3. Remote control
Each remote control is factory-paired with a specific device and has a unique code.
A device does not work without an assigned remote control.
A remote control only works with the device assigned to it.
The warranty does not apply to:
• a lost remote control,
• a mechanically damaged remote control,
• damage due to incorrectly inserted batteries,
• remote control failures due to improper use.
Replacing or reprogramming the remote control, when it is not a factory defect, is a paid service.

4. Maintenance and user responsibility
The device must be regularly maintained.
The frequency of cleaning depends on:
• the purpose of the premises,
• environmental pollution,
• construction or repair work.
Filter cleaning or replacement can be performed by the user.
It is recommended that the internal cleaning of the device be performed by a qualified specialist.
If the device is not maintained or operated with clogged filters, the following may occur:
• the noise level may increase,
• the air flow may decrease,
• energy consumption may increase,
• mechanical failures may occur.
Failures caused by neglect are not covered by the warranty.

5. Service calls
If during a service visit it is determined that:
• the device is disconnected from the power supply;
• the remote control batteries are incorrectly inserted or discharged;
• the timer is set and the device is turned off;
• the filters are not cleaned or are heavily contaminated;
• the device is contaminated with construction dust;
• the failure occurred due to improper operation;
such a case is considered non-warranty.
In this case, the customer pays:
• arrival costs,
• diagnostic time,
• work performed.

6. Limitation of liability
The manufacturer and installer are not liable for:
• indirect or consequential losses;
• damage caused by improper operation;
• malfunctions of the device due to environmental conditions or instability of the power supply;
• noise or reduced performance due to uncleaned filters.
The manufacturer undertakes to eliminate only those defects that have arisen due to manufacturing or design flaws.

Specifications and accessories are subject to change without notice.

Disposal

Disposal information. This symbol means that this electrical and electronic equipment must not be disposed of as household waste, but must be taken to a collection point for the recycling of electrical and electronic equipment.