



MIK Mednarodno trgovsko in proizvodno podjetje, d. o. o. Celjska cesta 55,  
3212 Vojnik, Slovenia, EU



# MIKrovent

**GB** Instructions for use



MIKrovent® Office 60

MIKrovent® Professional 120



# English

Instructions for use

Version 2, 23. 10. 2018

## **LOCAL VENTILATION SYSTEM MIKROVENT® WITH HEAT EXCHANGER**

### **Read these instructions carefully**

Read these instructions carefully before using the ventilation device for the first time and save them for future reference. In them you will find many useful tips on the correct use and maintenance of the ventilation device. A little bit of preventative care from your side can bring you great savings in time and money throughout the entire lifespan.

## **Dear user!**

Thank you for purchasing the MIKrovent® ventilation system and congratulations on the excellent choice.

You have bought a quality product that will allow you controlled and high-quality ventilation of rooms with minimal heat losses. Fresh air is one of the key factors of healthy living. Your MIKrovent® will improve the living conditions and quality of living, and thus help you to improve your well-being.

We guarantee smooth operation, when considering the instructions for use. Instructions are attached, we ask you to read them before you start using them.

We wish you well-being with MIKrovent.

MIK, d. o. o.



## **WARNINGS**

**Do not use a damaged cable!**

**Do not twist the cable on sharp edges and do not break it!**

**The device should not come into contact with chemicals!**

**Do not place near the heat source!**

**Do not spill water!**

**Do not insert foreign objects into the device!**

**Do not use cable extensions to connect the device to the mains power supply!**

**Keep out of reach of children!**

**Do not repair the device yourself!**

# WARRANTY MIKrovent®

For smooth and proper operation of MIKrovent® local ventilation system, we recommend regular annual service inspections. In the event of a problem or failure of the device, we are available on the telephone number +386 3 425 50 50 or via the online form at [www.mik-ce.si](http://www.mik-ce.si).

MIKrovent® is an innovative local ventilation system that allows ventilation of the room by exchanging air through the heat exchanger. It is suitable for ventilating residential and commercial buildings.

**Before any work on the device, connection, start-up, use or maintenance, the person who will carry out the listed activities must read the corresponded instructions and recommendations for connection.**

Before installing the device, the protective film must be removed from the device.

MIKrovent contains two filters: the PM 2.5 filter (F7) prevents insects, dust and dirt from entering the room, while the filter marked with PM 10 (G4) serves to filter the indoor air. The internal filter can be washed and used repeatedly, whereas the outside air filter must be changed regularly, depending on the ambient air pollution, but at least once a year.



When asserting warranty service, the following conditions must be met:

- a regular annual service,
- and accompanied by the following documents:
- certificate of professional assembly of authorized repairer and
  - warranty or purchase order completed and validated.

CE



Quality is guaranteed with quality certificates, certificates of use safety, ecological certificates and technical and technological standards of the European Union, which show the safety of product use. All MIKrovent devices have a CE certificate.

MIKrovent 30 / 60 / 120

The seller reserves the right to errata and other errors, as well as changes in prices and technical data without prior notice.

# GENERAL SAFETY INSTRUCTIONS

Read these instructions for your safety before using your device. People who are not familiar with these instructions should not use the device. Keep the instructions for future reference.

The device is safe. Nevertheless, use it as carefully as other electrical devices.

**Attention!** Misuse of the device may result in serious injuries and / or even death.

Use only the required nominal voltage (Technical characteristics, page 8). Otherwise there is a risk of fire or damage to the device.

The device can only be connected and started by a qualified professional.

A professional must ensure that the contacts in the terminals do not come into contact with dirt, as there may be a short circuit and a fire. The connection must be carried out professionally, and the wires firmly inserted into the terminals, otherwise it may lead to poor contact and consequently to fire.

Do not remove the power cord during operation, as the spark may cause a fire.

Do not knot, compress or pull the electric flex from the device, as the cable can be damaged and cause a shock and/or fire.

If the power supply cable is damaged, it must be replaced by the manufacturer, its service technician or suitably trained person.

Do not include the device if you are using dangerous or allergenic substances nearby (e.g. insecticides or pesticides, ...). You can endanger the health of people who are allergic to certain chemical substances.

It is recommended to allow air circulation throughout the room with the appropriate setting of the blowing nozzles. Keep the air flow away from gas burners, etc.

**Do not repair the device yourself!** If it is repaired in an incorrect way, an electric shock may result, and consequently a malfunction of the device or devices / products in its surroundings.

Do not cover the suction grids and the blow nozzles.

If you do not use the appliance for a long time, disconnect it from the electrical installation for increased safety.

It is forbidden to use any fuse replacement (e.g. wire) as it might cause damage to the device or fire.

Turn off and unplug the appliance before cleaning the device. When the device is on and working, it must never be cleaned. Do not clean the appliance on the outside with water, you can only clean it with a slightly moist cloth.

If there are unusual occurrences such as the burning odour, turn off the appliance immediately and disconnect it from the electrical installation and consult a repairman. Failure to do so may result in damage to the device, electric shock or fire.

The ventilation device is not a toy. Make sure it is out of the reach of children.

Children over 8 years of age, people with reduced psycho-physical abilities, as well as persons with a lack of know-how and technical experience may use the device only if they are under the supervision of adults / responsible persons or are properly educated about the use of the device and understand the safety instructions.

**Power supply:** the device must be connected to a standard 230 V / 50 Hz grounded electrical socket. Installation must be done in accordance with the regulations of the country where the device will be in use.

Never connect the appliance to the mains with an electric extension cable. If no electrical socket is available nearby, a qualified electrician should install it.

# WARNINGS



A	Do not use a damaged cable!
B	Do not twist the cable on sharp edges and do not break it!
C	The device should not come into contact with chemicals!
D	Do not place near the heat source!
E	Do not spill wit the water!
F	Do not insert foreign objects into the device!
G	Do not use cable extensions to connect the device to the mains power supply!
H	Keep out of reach of children!
I	Do not repair the device yourself!

# IMPORTANT



The device is not meant for outdoor use.

**Power supply:** the device must be connected to a 230 V / 50 Hz grounded electrical socket. The installation must be done in accordance with the regulations of the country where the device will be used.

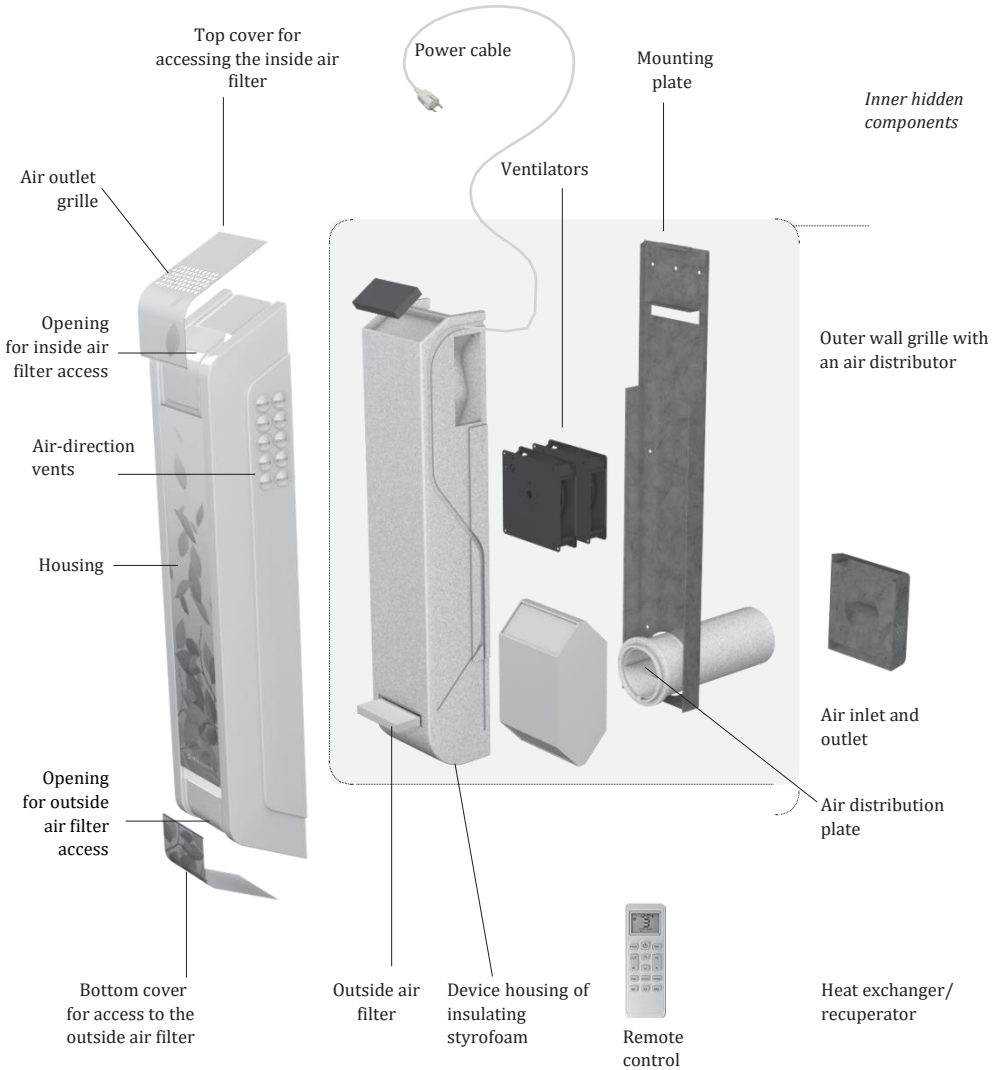
# Product information

MIKrovent® is a local ventilation device that allows ventilation of the room with minimal heat losses, due to efficient recovery (heat recovery). MIKrovent® consists of two fans, a heat exchanger (recuperator) and two filters. The first fan is intended for the supply of external air into the room, and the other for the exhaust of air from the room. The internal air and the external air flow circulate through the heat exchanger, where the internal air sends heat to the outside air on the way to the room without mixing. By doing this we ensure that the outside air preheats before entering the room, and the air filter ensures that there is no dust entry into the device and into the room.

# Package includes:

- 1x MIKrovent device with installation material,
- 1x remote control with 2x AAA batteries, and
- 1x user instructions.

# MIKrovent composition display





# Technical details

	<b>MIKrovent® Office<sup>60</sup></b>	<b>MIKrovent® Professional<sup>120</sup></b>
Air flow [m <sup>3</sup> /h]	20-60	60-120
Heat recuperation* [%]	up to 9	up to 87
Energy recuperator with enthalpy heat exchanger [%]	up to 70	
Supply voltage [V]	230 VAC 50 Hz	
Power required [W]	up to 50	up to 75
Noise level*** [dB]	up to 35	up to 40
Dimensions [mm]	1510 / 300 / 230	
Filters	outside air PM 2.5 (F7) inside air PM 10 (G4)	
Outdoor temperature operational range [°C]	from -25 to 50	
Control	Remote control / WiFi** / ModBus**	
Air pre-heating** [W]	600	1200
Sensors	Temperature / Humidity / CO <sub>2</sub> ** / VOC** / Radon**	

\* with maximum air flow with a PM 2.5 (F7) filter according to EN308

\*\* on demand

\*\*\* at 8 dB indoor sound dampening

## Connection to power

- Connect the device to a 230 VAC / 50 Hz power supply with a power cable and a standard plug in accordance with national installation regulations.
- The power cable has a minimum diameter of power supply wires (L, N and PE) 3 x 2.5 mm<sup>2</sup>:
  - black/brown power supply wire is connected to lead wire – L,
  - blue neutral wire is connected to – N, and
  - grounded wire is connected to grounding conductor PE.
- If you are replacing the power cable on the device, only the qualified person, electrician or service technician may connect the device.

The device does not have a direct switch on and off. In deactivated condition or Standby is a device under voltage, so any touch of internal components can be fatal.

# Usage of MIKrovent® Office<sup>60</sup> / Professional<sup>120</sup>

MIKrovent® Office<sup>60</sup> / Professional<sup>120</sup> is intended for use from -25° to 50°C outdoor temperature. If the outdoor temperature is around 5°C, MIKrovent will work with interruptions to prevent the condensation from freezing, resulting from its operation in the heat exchanger.

## OUTDOOR AIR INLET

MIKrovent® Office<sup>60</sup> / Professional<sup>120</sup> has special air nozzles on each side, allowing you to adjust the air flow direction. The air flow is routed by rotating the nozzle for 180°. The longest range - the breakthrough of fresh air into the room - is achieved if you turn the two nozzles to one another (as in the figure on the right).



## Modes of operation

The device has 4 modes of operation:

**MANUAL M** is a way to adjust the device to your own needs. The user himself adjusts the amount of air through the device between 20 and 60 m<sup>3</sup>/h for MIKrovent Office<sup>60</sup>, and between 60 to 120 m<sup>3</sup>/h for MIKrovent Professional<sup>120</sup>. The user can choose between 5 levels of operation, with 1 being the less, and 5 being the most intensive level of operation of the device.

**AUTO A** is a way to use MIKrovent when we want the device to operate automatically, or when we do not use ventilated place for a longer time. The device regulates the amount of incoming and outgoing air according to the relative humidity and temperature in the room (if the device has a built-in CO<sub>2</sub>, VOC or radon sensor, it is also regulated according to these sensors). By increasing the amount of moisture and CO<sub>2</sub> concentration, the operating power of the device increases. Thanks to its own electronics protocol, the device will automatically adjust its optimum performance according to the detected amount of temperature, humidity and CO<sub>2</sub>, and ppm particles.

**OUT** The device only pumps the air from the room. This method is used when we want to get rid of bad air in the room quickly. In this mode, 5 levels of device operation are available. This method is not recommended when using an open fire such as, for example, fireplace. Due to vacuum in the room, harmful gases (CO<sub>2</sub> etc...) can escape from the fireplace. When air is discharged, incomplete combustion and formation of carbon monoxide, which is fatal, may occur.

**IN** The device only supplies outside air to the room. Usually it is used for the natural cooling of the rooms in the summer time, because with this way at night we bring a lot of fresh and cold air. In the case when used in the room of a furnace or a fireplace, due to overpressure the combustion air intake increases and thus improves the combustion in these devices. In this mode, we have 5 levels of operation of the device, where the level 1 is also at least, and the 5th degree is the most intensive level of operation of the device.

# Instructions for using the remote control

## Functions



⏻	On / Off
PROG	Program settings
OK	Confirmation
OUT	Indoor air outlet
M	Manual operation mode
IN	Outdoor air inlet
A	Automatic operation mode
TIME	Setting time and day
MODE	On / Off program and determining the mode of operation
SPEED	Determining the speed of the program
⏪ ⏩	Selection of sections
^ v	Determining the level of operation
DEL	Delete section of programs

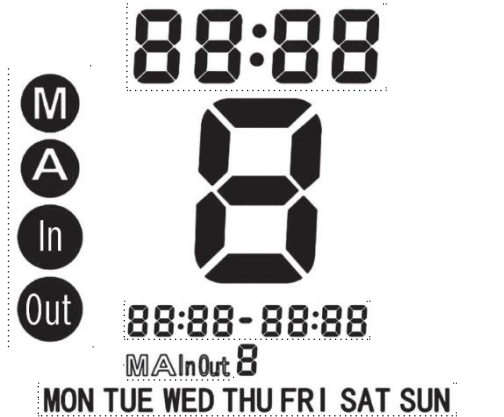
## Remote Control Screen

### OPERATION MODES

M - MANUAL  
A - AUTO  
In - AIR IN  
Out - AIR OUT

### OPERATION MODES OF WEEK PROGRAMMATOR

### DAYS OF WEEK PROGRAMMATOR



### TIME

### OPERATION LEVEL

from 1 to 5

### TIME SECTION OF PROGRAMMATOR

e.g.: 03:00 - 06:00

### OPERATION LEVEL OF WEEK PROGRAMMATOR

from 1 to 5

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### SIGNS FOR DAYS ON THE SCREEN

MON - Monday  
TUE - Tuesday  
WED Wednesday  
THU - Thursday  
FRI - Friday  
SAT - Saturday  
SUN - Sunday

## Setting the time and day

To set the clock and the day of the remote control, the following procedure must be performed:

1. Hold the TIME key until the clock starts blinking.
2. Use the (▲ ▼) buttons to set the desired time and confirm with OK.
3. Repeat the procedure to select the minutes and confirm with the OK button.
4. Use the (▲ ▼) buttons to select the day of the week and confirm with OK.

# SETTING A WEEK PROGRAMMER

## OPERATION MODES

- M - MANUAL
- A - AUTO
- In - AIR IN
- Out - AIR OUT



## Setting a weekly programmer

1. For proper operation of the device, the remote control must always be directed to the device - it must be in the field of view of the device.
2. When we want to use the weekly programmer, **we switch it on on by holding the MODE key for 3 seconds** and with the same in the same way we stop its operation.

With the programmer we have the possibility of setting 5 time sections for each day of the week. In each time section, MIKrovent can operate with a different mode of operation: with manual settings (MANUAL), automatic (AUTO), outside air inlet (In) and inside air outlet (Out).

The device automatically turns off automatically between time sections. To avoid this, it is necessary to create a minute break between the time sections, such as:

- Time section 1: between 22:00 and 22:50
  - Time section 2: between 22:51 and 23:59, and so on.
3. To adjust the sections, first press the PROG button for about three seconds until it starts blinking.
  4. Use the keys << >> to scroll through the days of the week. When we get to the right, we confirm this with the OK key.
  5. With the key << >> we can move between 5 time sections among which we can choose.
  6. To set the hours of the first day section, use the keys to select the desired hour and confirm with the OK button. Repeat this process for setting the time for turning the device on and off.
  7. To set the operating mode, press the MODE button and select the desired program with the keys ^ v.
  8. Press the SPEED key to set the operating strength and use the ^ v keys.
  9. To select time sections for a new day, we scroll back with the >> key until the week-sign starts flashing/blinking again. Press << key to move one step back, or >> one step further.
  10. When finished, press the OK button and hold it for 3 seconds so there are no more flashes on the screen.



### IMPORTANT

For the proper functioning of the programmer, the remote control must always be in the field of view of the device - directed to the device.

## 1. Cleaning

You can wipe the outside of the device with a damp, clean cloth. Do not use aggressive cleaners when cleaning, as they may damage the outer casing and decorative film on the ALU cover.

## 2. Changing air filters

To clean the air, MIKrovent® is equipped with high quality filters PM 2.5 (F7) and PM 10 (G4). The inside air filter is washable, and it is recommended to clean it every 3 months. The outside air filter PM 2.5 is not a washing filter and it is advisable to replace it once a year, depending on the contamination of the air (the more the air is polluted, the more often it needs to be replaced). Especially dirt in the air (such as tobacco smoke, animal hair, proximity to the construction site ...) can shorten the life of the filters. Before changing the filter, switch off the device using the remote control and disconnect it from the grid.

### INSIDE AIR FILTER:

1. Remove the top cover of MIKrovent.
2. Remove filter from device and switch it with new one or
3. If filter was washed, wait until it is dry and then put it back in the device.
4. Put top cover back on MIKrovent.

### OUTSIDE AIR FILTER:

1. Remove bottom cover of MIKrovent.
2. Grab filter with hand and pull it out.
3. Replace old filter with new and push it in the filter opening.
4. Put bottom cover back on MIKrovent.



# Sound warnings MIKrovent® Office 60/ Professional<sup>120</sup>

The device has built-in sound alerts in the form of beeps for mistakes on sensor, fan, shutter, and filter.

If the device detects an error on the built-in electrical components, it will start to warn you with a continuous beep. **In this case, turn off the device immediately, disconnect it from the electrical wrings and call the repairman.**

## Troubles

PROBLEM	POSSIBLE CAUSE	REMEDY
The device does not work and does not turn on.	Power cord is not plugged in.	Plug in the power cord to power grid.
	The device is damaged.	Contact service department.
	Electrical socket is damaged.	Try another electrical socket.
The device beeps continuously.	Defect on installed electrical equipment.	Contact the customer service / repairman.
The device is blowing air in room at a reduced speed.	System to dry the device has turned on.	Wait for the device to dry automatically.
	Device is set to a lower speed.	Increase the speed on the remote control.



# WARRANTY

- On behalf of MIK d.o.o. we guarantee that the product will work properly, considering the manufacturer's instructions and providing service for at least 6 years after the product is sold.
- The warranty period is 2 years.
- The MIK undertakes to eliminate all defects that would arise when used correctly during the warranty period at its own expense.
- If the appliance is not repaired during the warranty period within 45 days from the date of delivery of the appliance to the service unit, we will replace the appliance at your request with a new one.
- The warranty period is extended for the duration of the repair.
- MIK d.o.o. DOES NOT guarantee the warranty in the following cases:
  - If the buyer did not comply with the manufacturer's instructions.
  - For faults that are consequences due to outside causes such as mechanical damages caused by buyer or third-party person, interference inside the mechanical and electrical parts of devices, battery malfunctions, incorrectly plugged in device to power grid etc.
  - In case if treatment with device was not negligibly or not professional.
  - In a case of service part replacement with non-original parts.
- Warranty does not apply on parts that are subject to mechanical wear such as fans, filters, batteries ... etc.).
- Warranty claims are accepted only when the certified guarantee certificate and original invoice are presented at the same time.
- The warranty period begins on the date of sale of MIKrovent® to the final customer, as evidenced by the certified warranty card and the original receipt.

## WARRANTY PERIOD: 2 years

Product: MIKrovent® Type:	
Serial Nr.:	
Name and address of the sellers:	Company stamp:
Signature seller:	Date of sale:

Complaints and service:

MIK d.o.o. Celjska cesta 55, 3212 Vojnik, Slovenia, Tel.: +386 3 425 50 56

# TERMS AND CONDITIONS

These conditions apply if they are not replaced by the conditions of the maintenance contract.

## **Article 1 – Payments**

Payment is made at the location of the service after the bill has been submitted. If the buyer does not pay the invoice, the extended warranty expires, and the authorized service representative has the right to refuse maintenance services for the entire duration of the contract.

## **Article 2 – Changeability of Prices**

The price of the service is calculated based on materials and labor costs for 2018. In the event of a change, the price of the service may change, but in line with the increase in the cost of living and material prices.

## **Article 3 – Force Majeure**

The liability of an authorized repairman is expressly excluded from malfunction and damage caused by third parties or by users with misuse or unauthorized interference to the device, as well as the costs of water spill, fires, errors in the electrical installation and malfunctions due to force majeure or other causes, which the user can not influence, such as government measures, strikes, places, floods, etc. In any case, an authorized repairman is not responsible for these events.

## **Article 4 – Working Time**

All services under this contract shall be executed on working days and in the regular working hours of an authorized repairman, unless otherwise specified.

## **Article 5 – Preliminary Termination**

In the event of preliminary termination of the contract at the request of the buyer or due to his fault, the buyer is obliged to settle the obligations incurred by the authorized repairman.

## **Article 6 – Extraordinary Events**

Authorized service provider is committed to help at services that are not included in this contract such as electric power black out or in case of general malfunctions. The authorized service provider is entitled to payment for the services listed.

## **Article 7 – 3<sup>rd</sup> party service**

The authorized service provider reserves the right to leave the execution of services to third parties. Third parties are considered to be other authorized repairmen of MIK d.o.o. In such a case, the repairman undertakes to inform MIK d.o.o. and the buyer about the change.

## **Article 8 – Competent Court**

In the event of any dispute, the parties agree that the complaints are lodged with the court competent for the seat of the authorized service provider.

.....  
Date

.....  
Authorized service provider (stamp and signature)

.....  
Buyer

# Notes

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 We reserve the right to change information and products from this User Manual and content of this User Manual without further notice.

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