

MICRA 60



Micra 60 is the single room air handling unit with heat recovery for balanced energy saving single room ventilation of flats, cottages, social and commercial premises. No need to connect air ducts. The best solution for simple and efficient ventilation in refurbished premises.

FEATURES

- Efficient heat recovery ventilation for separate rooms (premises)
- Plate counter flow plastic heat exchanger with recuperating efficiency up to 79%
- EC fans with low energy demand and electrical safe voltage 12 V
- Integrated automatics with three operation modes
- Silent operation (22-29 dBA)
- Air cleaning with two G4 built-in filters
- Easy mounting
- Suitable for continuous operation
- Pulser power supply unit for wide range of power supply voltage 100-240 V and frequency 50-60 Hz.

CASING

Polymer coated metal casing decorated with mirror stainless steel. 15 mm penophole thermal and sound insulating layer. Modern unit design makes it match well with any interior. Removable front panel provides easy access for the unit servicing, i.e. for filter cleaning or replacement. Air is supplied to the room and exhausted outside through two Ø 125 mm air ducts.

AIR FILTRATION

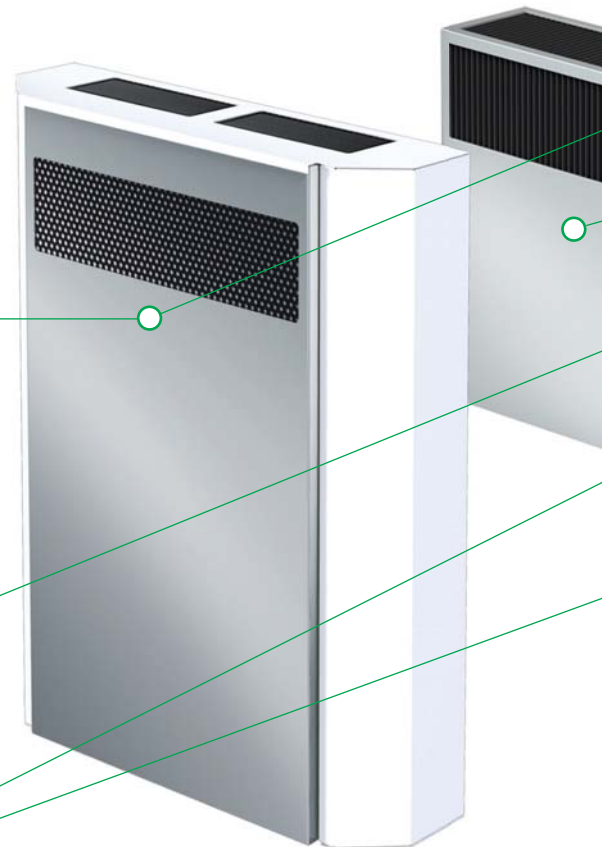
Two G4 built-in filters provide cleaning of supply and extract air. The filters serve to ensure supply of fresh air free of dust, pollen, insects and protect the unit from soiling.

AIR SUPPLY AND AIR EXTRACT

Axial EC fans provide air supply and air extract. Due to EC technologies the single room air handling unit with heat recovery is featured with low energy demand. The fans are powered by electric safe low voltage 12 V. The fan motors are equipped with built-in thermal overheating protection and ball bearings for longer service life.

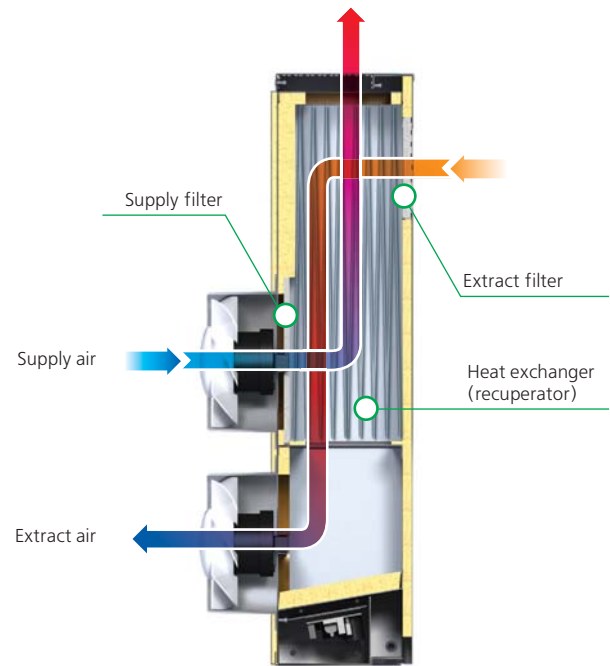
CONTROL UNIT

The unit is powered through an integrated pulser unit with a wide range of supply voltage from 100 V to 240 V and frequency from 50 to 60 Hz. The power unit has integrated protection circuit for various emergencies including short circuit, overload, voltage jumps, reverse polarity in output circuits. The versatile characteristics of the power unit enable the product use in various countries and ensure its stable operation in power grid with wide tolerances of electricity standard.



▶ OPERATING LOGIC

Fresh intake air from outside moves through the filter and the heat exchanger and is supplied to the premise with a supply exhaust fan. Warm stale air from the room moves through the filter and recuperator and then is exhausted outside with an exhaust axial fan. Heat energy of warm stale extract air is transferred to cold intake air flow from outside in the heat exchanger. Heat energy utilization results in reducing heat energy losses and operating costs for heating in cold season. The intake and extract air flows are fully separated and pollutants, odours and microbes contained in extract air are not transmitted to supply air.



▶ HEAT EXCHANGER (RECUPERATOR)

The unit is equipped with a high-tech plate counter-flow plastic heat exchanger. The heat exchanger utilizes heat energy of extract air flow to warm up cold air flow. Recuperating efficiency reaches 79%. Joint operation of the single room air handling unit with heat recovery **MICRA 60** with air conditioners is not only the most efficient way to arrange desirable indoor microclimate but considerable cost saving because the recuperator saves heat in winter and cool in summer.

▶ FREEZING PROTECTION

The single room air handling unit with heat recovery has integrated freeze protection system. In cold season the recuperator serves to transfer heat energy of warm extract air to cold intake air. During cooling of extract air some condensate can appear in the unit. It is drained outside through the exhaust air duct. If exhaust air temperature at outlet from the heat exchanger is below the set threshold value the condensate may freeze inside the recuperator. To prevent recuperator freezing the unit is equipped with electronic freezing thermostats that switch supply fan off in case of freezing danger. After that warm stale air warms the recuperator up to required temperature. When the freezing danger is off the supply fan is turned on and the unit reverts to previous operation mode.

▶ CONTROL AND OPERATION MODES

The unit is equipped with a sensor speed switch or a three-position speed switch. Automatic system enables three operation modes:

1. Supply and exhaust ventilation at minimum air capacity 30 m³/h and minimum noise level 22 dBA.
2. Supply and exhaust ventilation at medium air capacity 45 m³/h and minimum noise level 25 dBA.
3. Supply and exhaust ventilation at medium air capacity 60 m³/h and minimum noise level 29 dBA.



Three-position speed switch (Micra 60 A3)



Sensor speed switch (Micra 60 A4)

MICRA 60 VENTILATION SYSTEM ARRANGEMENT EXAMPLE

Install **MICRA 60** unit in any room where ventilation is required. One unit provides efficient ventilation for the area up to 24 m². Ventilation system based on the single room air handling unit with heat recovery **MICRA 60** is able to provide nonstop air exchange, save heat in winter and cool in summer.

To arrange the most energy efficient ventilation based on MICRA 60 units we recommend to install the intelligent VENTS iFan fans in the kitchen or in the bathroom that extract stale air on a signal from the activated motion or humidity sensor.



Mount the single room air handling unit with heat recovery **MICRA** on the front wall from inside. The minimum wall thickness is 100 mm.

First mark the through-the-wallholes on the wall for the air ducts with the paper master plate (included into standard delivery set or into MK1 and MK2 set (page 11). After drilling the holes fix the master plate to the wall with a mounting tape.

Insert the air ducts (included into MK1 and MK2 set (page 11) into the holes. The master plate is used to place the air ducts in a required position and to align the unit spigots with the air ducts.

Install the outer hood (included into the MK2 set or purchased separately outer box NB) on outer side of the wall to prevent ingress of water and foreign objects inside the unit.

Install the air ducts slightly sloped down to outside to ensure condensate drainage from the unit.

After the air ducts are fixed in required position between the outer box and the master plate, fill the gaps between the air ducts and the wall with a mounting foam through special slots in the master plate.

After the mounting foam hardens, remove the master plate and cut protruding parts of the air ducts to be flush with wall surface. Remove the decorative plate and the heat exchanger prior to fastening the unit casing.

While mounting the unit direct its spigots to the plastic air ducts and fix the unit to the wall with dowels and screws.

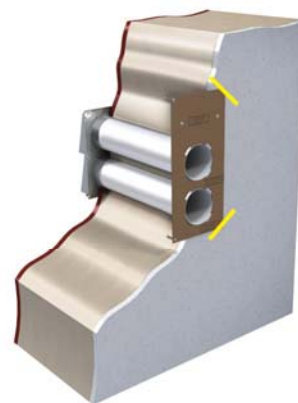
The unit is supplied with a pre-wired power cable and a plug. The unit may be connected to the fixed wiring system through the terminal leads. For doing that disconnect the power cable from the terminal box and connect the leaded outside power cables. After completing the casing mounting and electric connection re-install the heat exchanger and close the front panel.



1



2



3



4

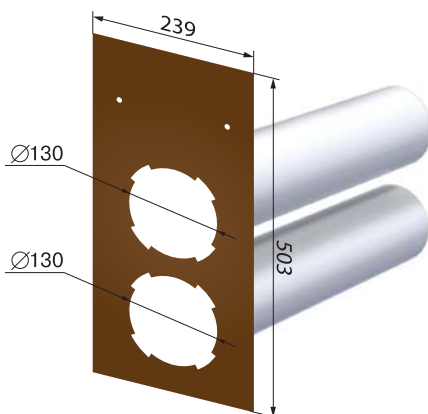
TECHNICAL DATA

Model	Speed	Voltage [V/ 50-60 Hz]	Power [W]	Current [A]	Air capacity [m ³ /h]	Heat recovery efficiency, %	Rotation per minute [min ⁻¹]	Sound pressure level at 3 m [dBA]	Ingress Protection
MICRA 60	1	100-240	4,2	0,02	30	79	1165	22	IP22
	2		9,6	0,04	45	74	1720	25	
	3		15,4	0,07	60	70	2685	29	

OVERALL DIMENSIONS [MM]



ACCESSORIES



MK1 Micra 60:

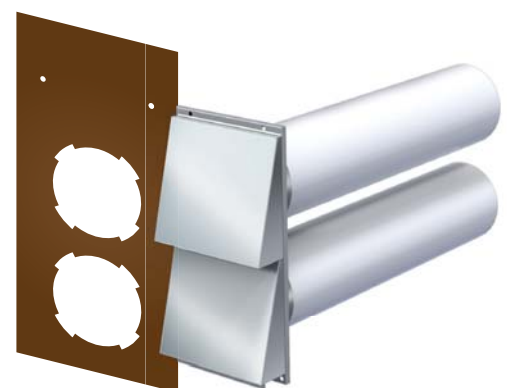
used to facilitate mounting and ensure correct alignment of the unit branch pipes with the air ducts:

- two plastic air duct 125 mm 500 mm long;
- two paper master plate.



NB Micra 60 outer ventilation kit:

- double outer metal hood.



MK2 Micra 60 mounting kit:

- two plastic air duct 125 mm 500 mm long;
- paper master plate, 1 pc;
- outer ventilation kit NB Micra 60.