

MICRA 60



MICRA 60 – is the single room air handling unit 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.

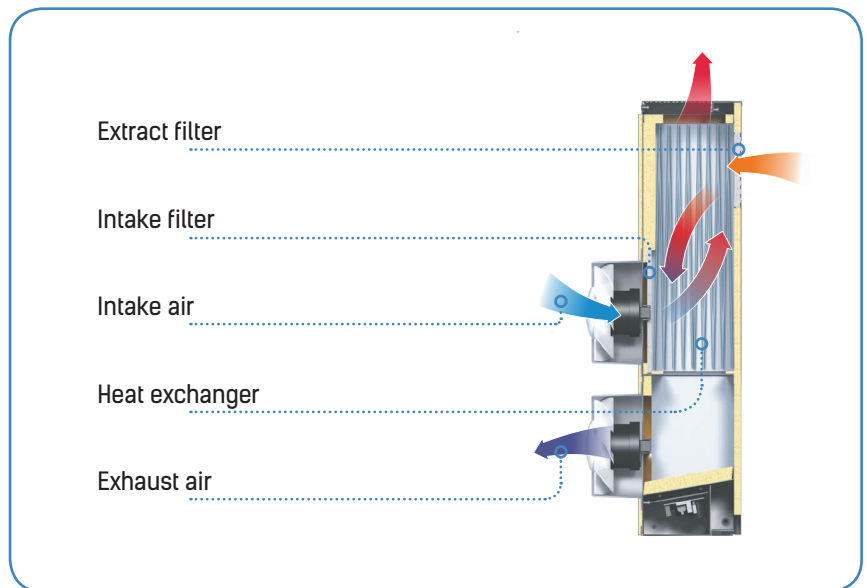
FEATURES

- Efficient supply and exhaust ventilation for separate premises (rooms).
- Plate counter-flow plastic heat exchanger with recovery efficiency up to 79 %.
- EC fans with low energy demand and safe voltage of 12 V.
- Integrated automation with three operation modes.
- Silent operation (22-29 dBA).
- Air purification by two integrated G4 filters.
- Easy installation.
- Suitable for continuous operation.
- Switched-mode power supply unit for wide range of power supply voltage of 100-240 V and frequency of 50-60 Hz.



OPERATING LOGIC

Fresh intake air from outside moves through the filter and the heat exchanger and is supplied to the premise with the supply axial fan. Warm stale air from the room moves through the filter and the heat exchanger and is exhausted outside with the exhaust axial fan. Heat energy of warm stale extract air is transferred to cold intake air in the heat exchanger. Heat recovery minimizes thermal energy losses and space heating expenses in cold seasons. The intake and extract air flows are fully separated and pollutants, odours and microbes contained in extract air are not transmitted to supply air.



CONTROL AND AUTOMATION

The unit is equipped with a sensor speed switch or a three-position speed switch.

Automation system enables three operation modes:

1. Supply and exhaust ventilation with minimum air flow rate of 30 m³/h and noise level of 22 dBA.
2. Supply and exhaust ventilation with medium air flow rate of 45 m³/h and noise level of 25 dBA.
3. Supply and exhaust ventilation with maximum air flow rate of 60 m³/h and noise level of 29 dBA.



A3: three-position speed switch (P3-1-300)



A4: sensor speed switch (SP3-1)

CASING

Polymer coated metal casing decorated with mirror stainless steel. 15 mm PE foam thermal and sound insulating layer. Due to modern design, the unit matches 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.

HEAT EXCHANGER

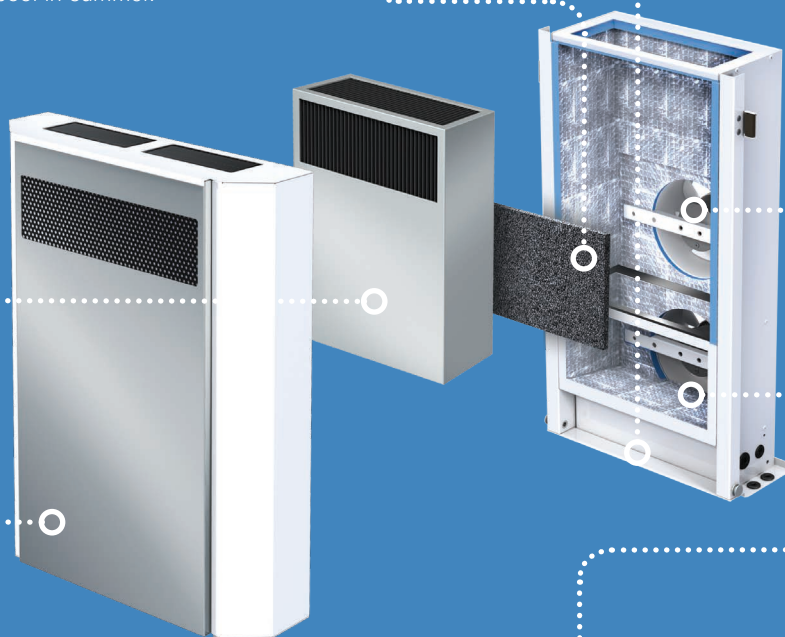
The unit is equipped with a high-tech plate counter-flow plastic heat exchanger. The heat exchanger recovers heat energy of extract air to warm up cold intake air. Heat recovery efficiency reaches 79 %. Combined application of MICRA single room air handling unit with air conditioners is not only the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

FILTER

Two integrated G4 filters provide intake and extract air filtration. The filters ensure filtration of intake air from dust and insects and prevent the ventilator parts from soiling.

POWER SUPPLY UNIT

The unit is powered through an integrated switched-mode power supply unit with a wide range of supply voltage from 100 to 240 V and frequency from 50 to 60 Hz. The power supply 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 supply unit enable the product use in various countries and ensure its stable operation in power grid with wide tolerances of electricity standard.



FREEZE PROTECTION

The single room air handling unit is equipped with an integrated freeze protection system. In cold season the heat exchanger serves to transfer heat energy of warm extract air to cold intake air. During cooling of extract air condensate can form 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 heat exchanger.

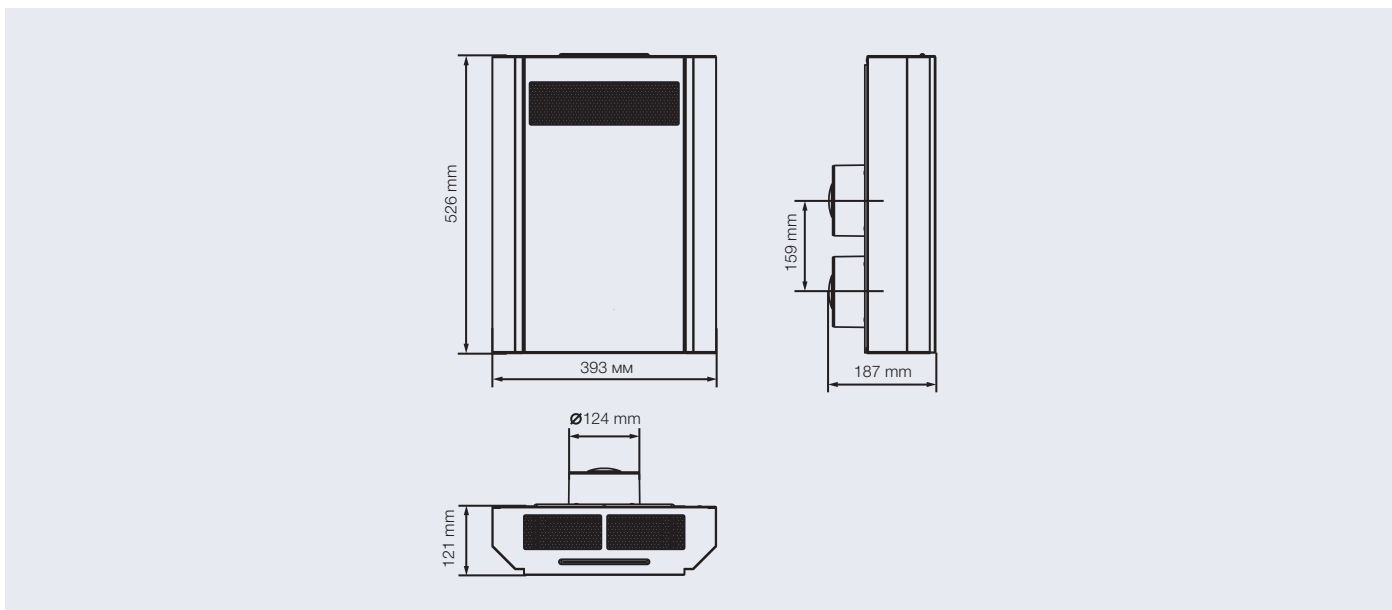
To prevent the heat exchanger freezing, electronic protection system is applied. It switches the supply fan off as the temperature sensor requires. Warm extract air defrosts the heat exchanger, then the supply fan switches on and the unit returns to normal operation.

FANS

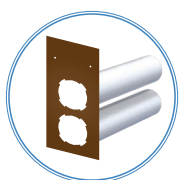
Axial EC fans provide air supply and air extraction. Due to EC technologies the single room air handling unit with heat recovery is featured with low energy demand. The fans are powered by electric safe low voltage of 12 V. The fan motors are equipped with integrated thermal overheating protection and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

TECHNICAL DATA

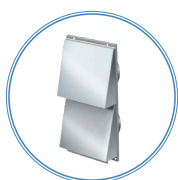
Model	Speed	Unit voltage [V/50 (60) Hz]	Power [W]	Current [A]	Air flow [m³/h]	Heat recovery efficiency [%]	RPM [min ⁻¹]	Sound pressure level at 3 m distance [dBA]	Ingress protection rating
MICRA 60	1	100-240	4.2	0.02	30	79	1165	22	IP22
	2		9.6	0.04	45	74	1720	25	
	3		15.4	0.07	60	70	2685	29	



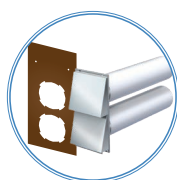
ACCESSORIES



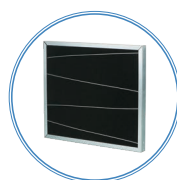
MK1 MICRA 60
mounting kit



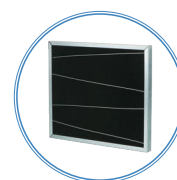
NB MICRA 60 outer
ventilation box



MK2 MICRA 60
mounting kit



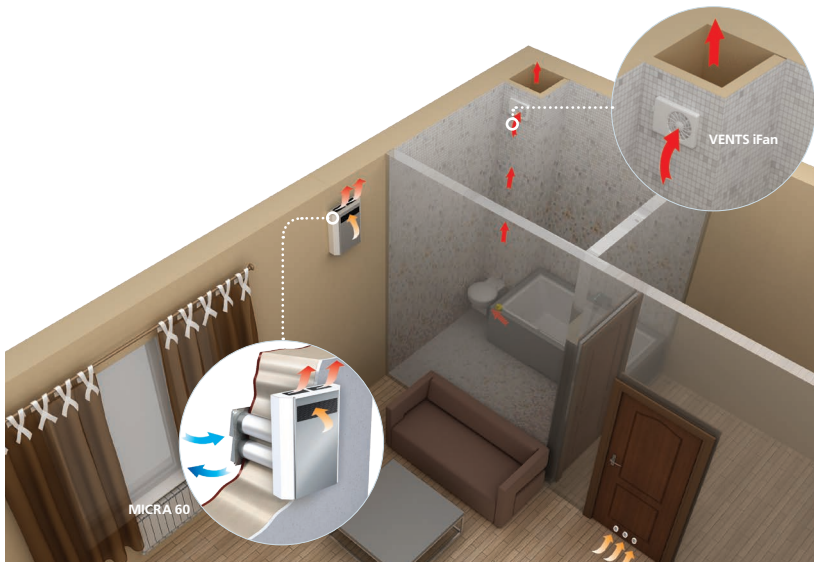
SF 216x147x10 G4
G4 filter



SF 279x88x10 G4
G4 filter

VENTILATION SYSTEM ARRANGEMENT

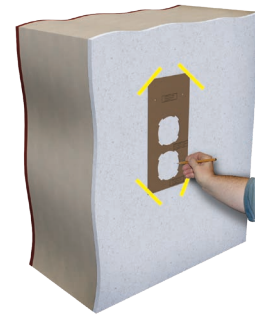
One MICRA 60 air handling unit should be installed in each space requiring ventilation. A single unit is capable of ensuring efficient ventilation in spaces with floor area up to 24 m². Ventilation system based on the MICRA 60 single room air handling unit is able to provide nonstop air exchange, save heat in winter and cool in summer. To arrange the most energy efficient ventilation based on MICRA 60 units, we recommend to install intelligent VENTS iFan fans that extract stale air on a signal from the activated motion or humidity sensor in the kitchen or in the bathroom.



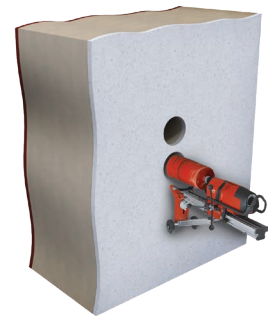
Mount the MICRA 60 single room air handling unit on the front wall from inside. The minimum wall thickness is 100 mm. First mark the holes on the wall for the air ducts with the paper master plate (included in the delivery set or in the MK1 and MK2 sets, page 8). After drilling the holes fix the master plate to the wall with a mounting tape. Insert the plastic air ducts (included in the MK1 and MK2 sets) 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 in the MK2 set or purchased separately (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.

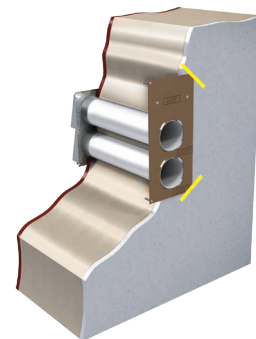
After the air ducts are fixed in required position between the outer box and the master plate, fill the gaps between the air ducts and the wall with a mounting foam through special slots in the master plate. After the mounting foam hardens, remove the master plate and cut protruding parts of the air ducts to be flush with wall surface. Open the decorative plate and remove 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. This requires disconnecting the power cable from the terminal box and connecting the power cables led outside. After completing the casing mounting and electric connection re-install the heat exchanger and the front panel.



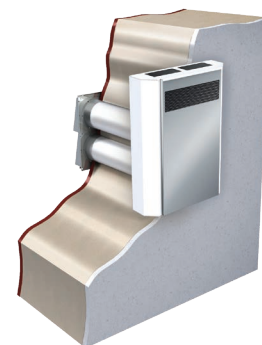
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