

MICRA 80 A3



MICRA 80 A3 is a single-room air handling unit for balanced energy saving ventilation of flats, cottages, social and commercial premises. No need to connect air ducts. This unit is ideally suited for creating simple yet highly efficient ventilation systems in newly erected and renovated spaces.

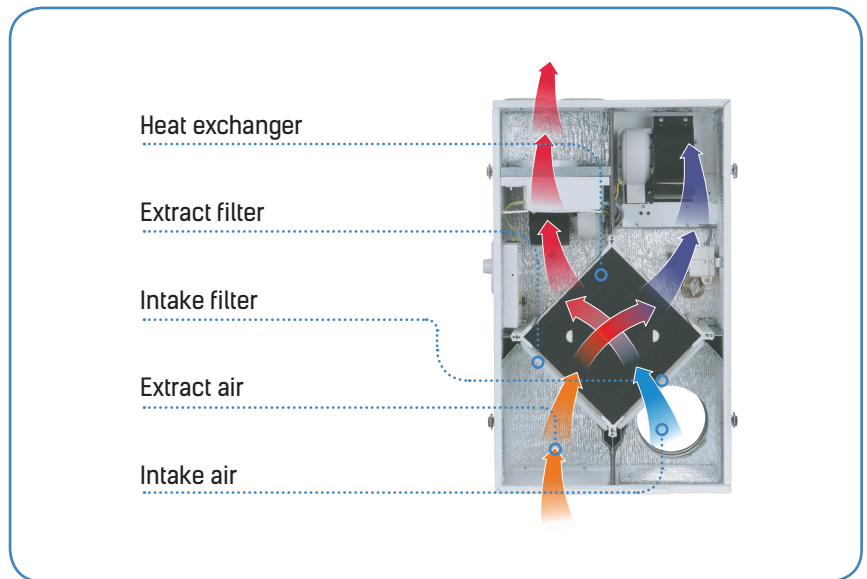
FEATURES

- Efficient supply and exhaust ventilation of separate premises (rooms).
- Enthalpy cross-flow heat exchanger with heat recovery efficiency from 68 % up to 77 %.
- Centrifugal fans with forward curved blades.
- Asynchronous motors with ball bearings. Integrated control system with three operation modes and air flow range from 40 up to 80 m³/h.
- Silent operation (24/32/41 dBA).
- Air filtration with two integrated G4 filters.
- Easy installation.
- Suitable for continuous operation.



OPERATING LOGIC

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



CONTROL AND AUTOMATION

The unit is operated with a three-position speed switch.

The control system enables three operation modes:

1. Supply and exhaust ventilation with minimum air flow rate of 40 m³/h and noise level of 24 dBA.
2. Supply and exhaust ventilation with medium air flow rate of 60 m³/h and noise level of 32 dBA.
3. Supply and exhaust ventilation with maximum air flow rate of 80 m³/h and noise level of 41 dBA.



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

CASING

The casing is made of polymer coated metal and is heat- and sound-insulated with 15 mm polyethylene foam layer. Removable front panel provides easy access for 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 enthalpy cross-flow heat exchanger. The heat exchanger recovers heat energy of extract air to warm up cold intake air. Heat recovery efficiency reaches 77 %. The applied heat exchanger enables not only heat but also humidity recovery. In warm seasons the heat exchanger operates to cool down and dehumidify the intake air. In cold seasons the heat exchanger operates to warm up intake air and to humidify it. Due to heat recovery process, the unit generates no condensate and requires no condensate drainage.

FANS

The centrifugal fans with forward curved blades provide air supply and extraction. The fan motors with ball bearings are rated for a long service life.

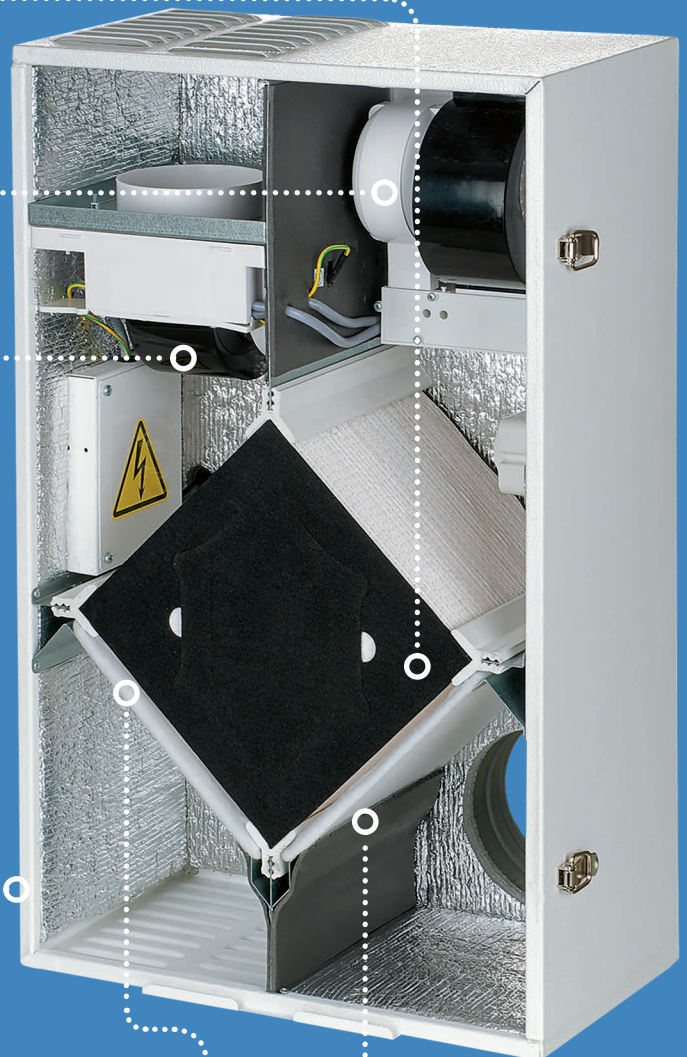


FREEZE PROTECTION

The unit is fitted with an integrated freeze protection system. The heat exchanger may be subjected to a freezing danger at low outside air temperatures. The exhaust air temperature falls down as ice accumulates in the heat exchanger. When exhaust air temperature falls down below a set point, the freeze protection thermostat is activated and shuts down the supply fan. The warm extract air flows through the heat exchanger until the extract air temperature rises above the set point. Then the supply fan turns on and the unit reverts to the standard operation mode.

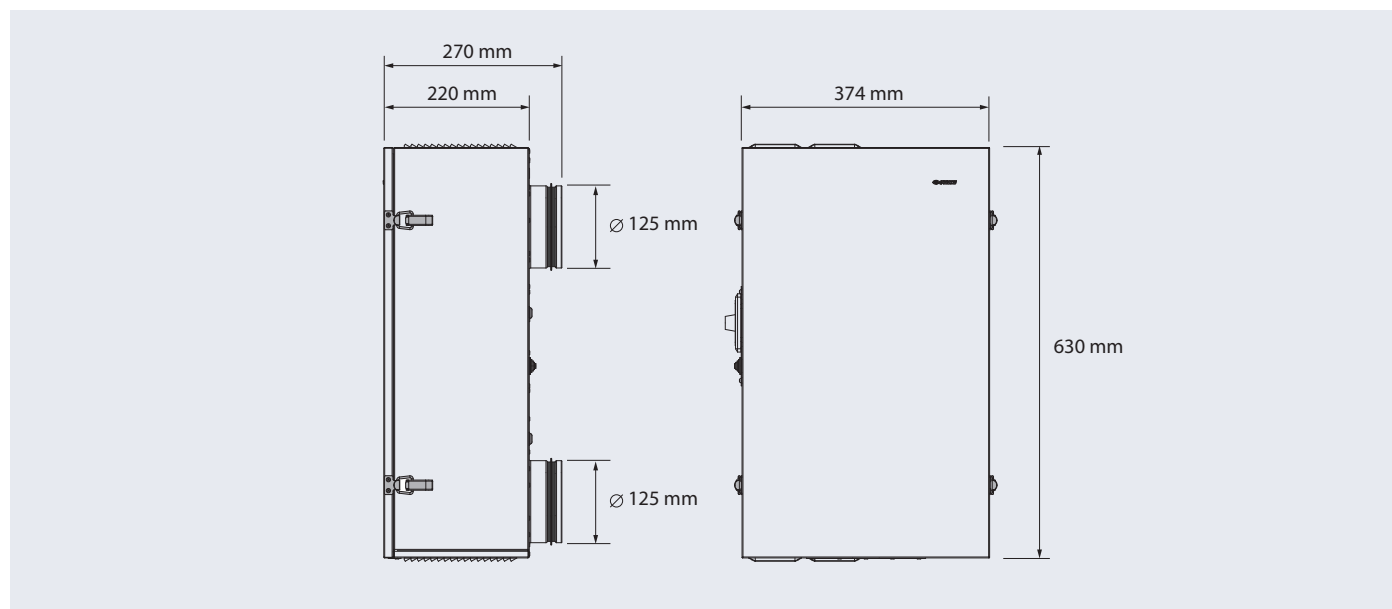
FILTER

Two integrated G4 filters are used to clean intake and extract air flows. The filters ensure delivery of fresh air free of dust and insects and protect the unit components from contamination.



TECHNICAL DATA

Model	MICRA 80 A3		
Speed	1	2	3
Voltage [V/50 Hz]	1~230		
Power [W]	25	35	57
Unit current [A]	0.15	0.20	0.34
Air flow [m³/h]	40	60	80
Noise level [dBA]	24	32	41
Maximum transported air temperature [°C]	-25...+40		
Casing material	Polymer-coated steel		
Insulation	15 mm, polyethylene foam		
Filter: extract/intake	G4		
Connected air duct diameter [mm]	125		
Weight [kg]	17		
Heat recovery efficiency [%]	68-77		
Heat exchanger type	Cross-flow		
Heat exchanger material	Enthalpy		



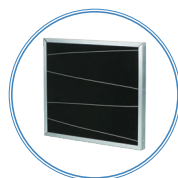
ACCESSORIES



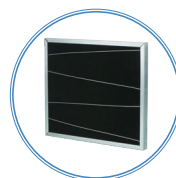
Round Ø 125 mm telescopic air duct, adjustable length from 500 up to 1000 mm



MVM 122 bVs N stainless steel outer hood



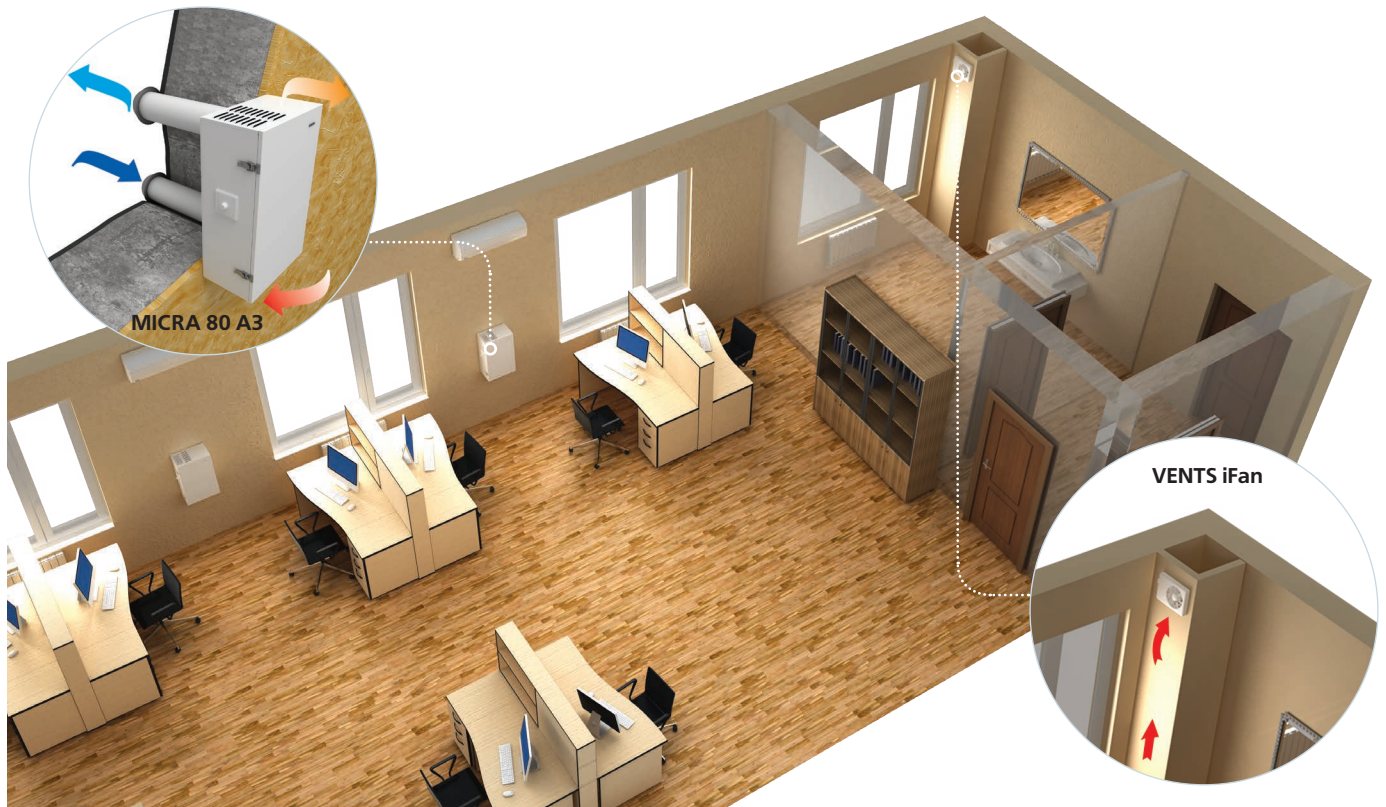
SF 195x195x6 G4 G4 filter



SF 195x195x6 G4 G4 filter

VENTILATION SYSTEM ARRANGEMENT

One MICRA 80 A3 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 32 m². A ventilation system based on MICRA 80 A3 is able to provide continuous air exchange and save heat in winter and cool in summer.



Mark the holes for the air ducts on the wall with the supplied cardboard master plate. After drilling the holes fix the master plate to the wall with a mounting tape. Insert the 125 mm plastic air ducts in the core 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 outdoor ventilation hoods from outside 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 using the outer ventilation hoods and the master plate fill the gaps between the air ducts and the wall with a mounting foam through the 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.

To mount the unit casing, open the service panel and take off the heat exchanger.

Connect the unit spigots to the plastic air ducts and fix the unit casing to the wall with screws and dowels.

After completion of the casing mounting and wiring operations re-install the heat exchanger and the front panel.

