



ECO-VENTILATION

Fresh air in your house!



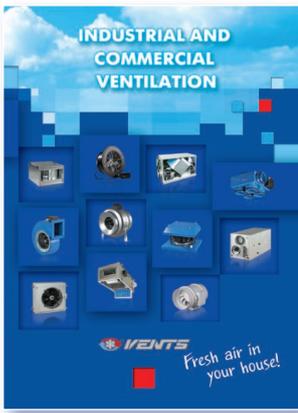
Single-room air handling units with heat recovery

Micra

Wi-Fi
Energy saving
Compact size

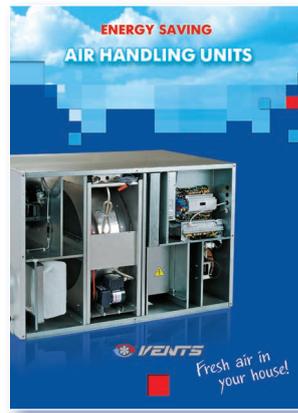
Versatile application
Easy mounting
Low noise





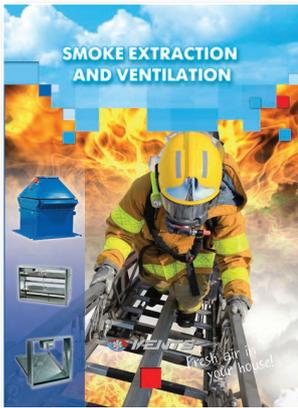
Industrial and commercial ventilation
(Catalogue no. 1)

Industrial and commercial ventilation components - fans for round and rectangular ducts, sound-insulated, axial and roof fans, air handling units with heat recovery, air heating units, accessories.



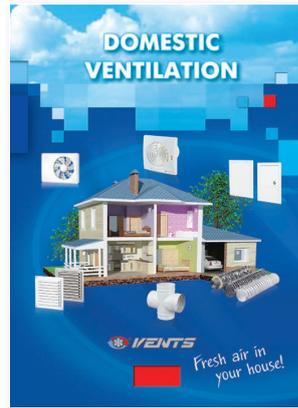
Energy saving ventilation
Air handling units
(Catalogue no. 2)

Energy saving supply and exhaust units and air handling units with heat recovery with air capacity up to 6500 m³/h.



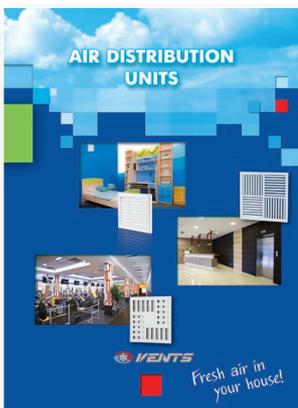
Smoke extraction and ventilation
(Catalogue no. 5)

Smoke protection systems of buildings and premises.



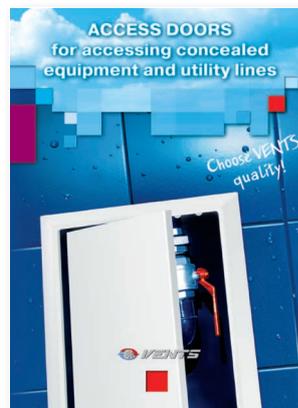
Domestic ventilation
(Catalogue no. 6)

Domestic ventilation: fans, mono-pipe exhaust kitchen and bathroom fans, air distribution units, air ducts and fittings, access doors, ventilation kits.



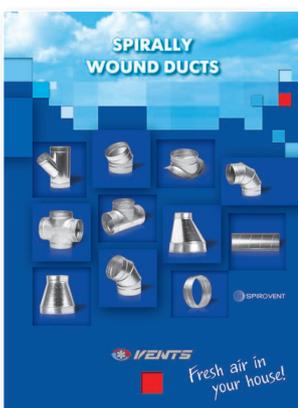
Air distribution units
(Catalogue no. 9)

Plastic and metal air distribution products (grilles, disk valves, diffusers, etc.) for ventilation, air conditioning and heating.



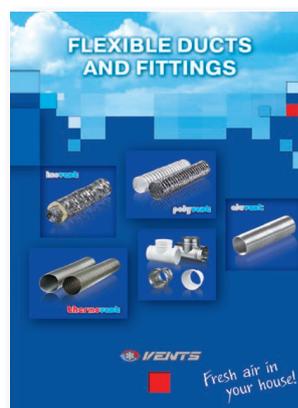
Access doors
(Catalogue no. 10)

Plastic and metal access doors for accessing concealed equipment and utility lines. Special offers for ceramic tiles.



Spirally wound ducts
(Catalogue no. 13)

SPIROVENT spiral seam vent ducts and fittings of 100 to 1600 mm diameter.



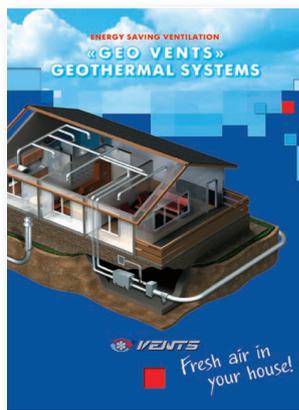
Flexible ducts and fittings for ventilation, air conditioning and heating
(Catalogue no. 14)

Flexible and semi-flexible air ducts made of polymeric materials, aluminium, galvanized or stainless steel, metal fittings for ventilation, air conditioning, heating, gas handling and abrasive particles aspiration.



Air handling units
AirVENTS
 (Catalogue no. 3)

Energy saving air handling units with air capacity up to 40 000 m³/h, for use in large residential, industrial and commercial objects.



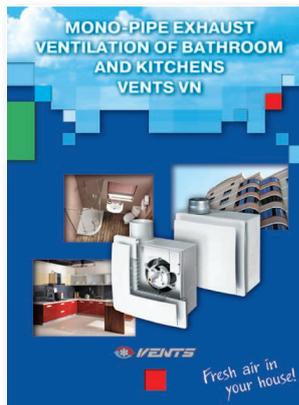
Energy saving ventilation
Geothermal systems
GEO VENTS
 (Catalogue no. 4)

Energy saving system GEO VENTS with use of the earth's surface layers heat. High ventilation system energy efficiency and low operating costs.



Domestic fans
 (Catalogue no. 7)

Domestic fans with air capacity up to 365 m³/h with extra functions: timer, humidity sensor, motion sensor, etc. Applied for premises up to 30 m².



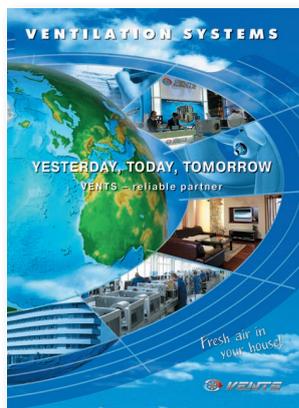
VENTS VN
Mono-pipe exhaust ventilation
 (Catalogue no. 8)

Exhaust ventilation in houses with mono-pipe ventilation system based on VENTS VN fans.



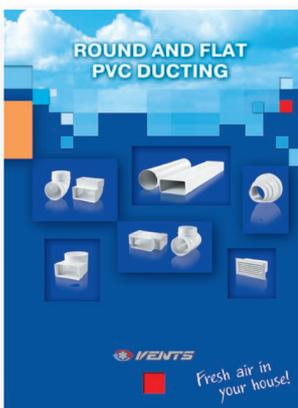
Energy saving ventilation.
Single-room energy recovery ventilators MICRA.
 (Catalogue no.11)

MICRA single-room ventilators with energy regeneration for efficient ventilation and lowest investments in ready-built and brand new premises.



VENTS presentation catalogue
 (Catalogue no.12)

VENTS mission is to bring fresh air to your house and surround you with the world of comfortable microclimate.



Round and flat PVC ducting
 (Catalogue no. 15)

Flat and round PVC ducts PLASTIVENT for ventilation of residential, office and commercial premises and connection of exhaust ventilation equipment (kitchen extractors, hoods, exhaust boxes, etc). Wide product range of fittings.



Energy saving ventilation.
Single-room energy recovery ventilators TwinFresh.
 (Catalogue no.16)

Single-room reverse ventilators with energy regeneration TwinFresh for efficient ventilation and lowest investments in ready-built and brand new premises.



MICRA 100 WiFi

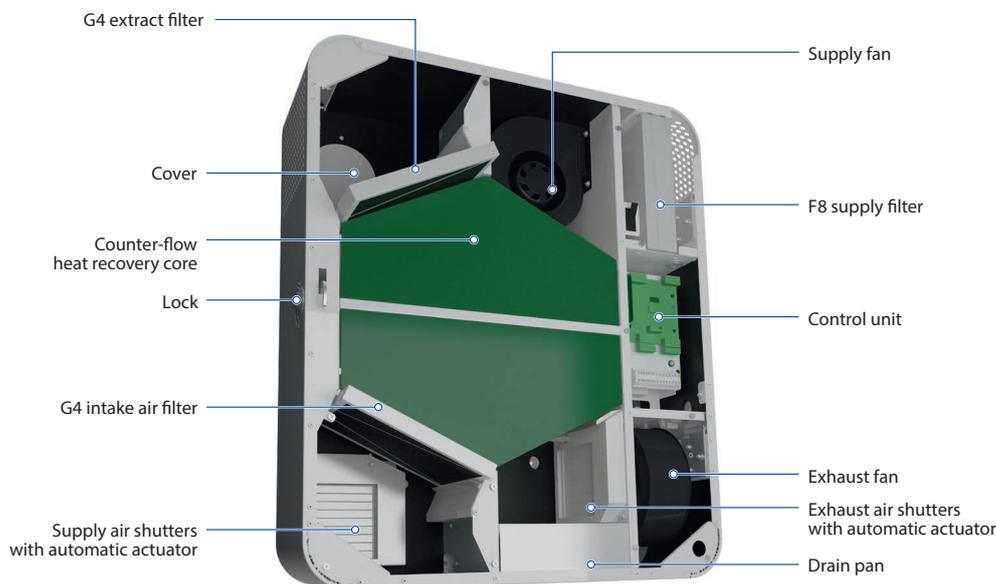


Micra 100 WiFi is an energy-efficient air handling unit for supply and exhaust ventilation intended for single-room ventilation of residential and commercial spaces as well as apartments and houses. This air handling unit is ideally suited for simple yet high-efficient ventilation in brand new and renovated spaces with no need of ductwork installation.

FEATURES

- Efficient solution for supply and exhaust ventilation of separate spaces
 - Electric pre-heater or re-heater modification available for cold climate conditions
 - Heat exchanger with an enthalpy membrane modification available for humid and hot climate conditions
 - Low-energy EC fans
 - Excellent noise control (25-38 dBA)
 - Supply air purification ensured with two built-in G4 and F8 filters (optional H13, F8 Carbon)
 - Upgradeable with an exhaust duct to provide air extraction from the bathroom
 - Easy installation
 - Compact size
 - Modern design
- Control with the mobile application Android / IOS

DESIGN



CASING

Polymer coated metal casing decorated with an acrylic front panel. Thanks to the modern design the unit can seamlessly blend with most interior design. Heat and sound insulation is provided with 10 mm cellular synthetic rubber layer. The front panel ensures convenient access for filter maintenance and has a lock for extra security. The unit has two \varnothing 100 mm inlet and outlet spigots for fresh air intake and stale air extraction outside. The third \varnothing 100 mm spigot (included) can be additionally fitted to the unit to connect an exhaust air duct from the bathroom.

AIR DAMPERS

The unit is equipped with supply and exhaust air dampers, which activate automatically to prevent drafts while the unit is off.

AIR FILTRATION

G4 and F8 panel filters provide supply air filtration. To meet more stringent air purity requirements a F8 filter can be replaced with an H13 or F8 Carbon (purchased separately).

G4 panel filter provides extract air filtration.

FANS

The units feature efficient electronically commutated (EC) motors with external rotor and impellers with forward curved blades. The state-of-the-art motor design offers the very best energy efficiency performance. EC motors are distinguished with high performance and totally controllable speed range. In addition to that the efficiency of electronically commutated motors reaches very impressive levels of up to 90 %.

NE MICRA 100 HEATER FOR CONDENSATE FREEZING PROTECTION (OPTIONAL)

Operation in a cold climate may result in condensate freezing in the exhaust air duct and the external hood. Therefore, it is recommended to install the NE Micra 100 heater (purchased separately) to prevent icing.

PRE-HEATING

Micra 100 E WiFi, Micra 100 E2 WiFi units are equipped with an electric pre-heater for freeze protection of the heat exchanger.

RE-HEATING

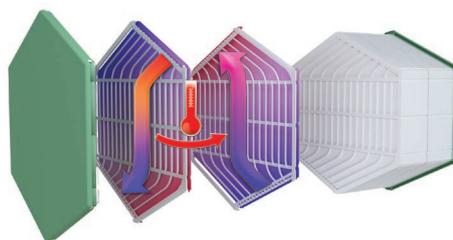
Micra 100 E1 WiFi, Micra 100 E2 WiFi units feature an electric re-heater to raise the supply air temperature as necessary.

HEAT EXCHANGER

Micra 100 WiFi units are equipped with a counter-flow heat exchanger with a polystyrene core.

In the cold season the extract air heat is captured and transferred to the supply air stream, which reduces the ventilation-generated heat losses. However, this process may be associated with condensation, which is collected in a special drain pan and evacuated outside via the exhaust air duct.

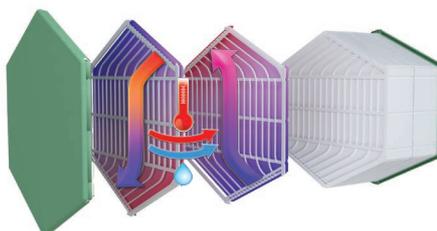
In the warm season the ambient air heat is transferred to the exhaust air stream. This allows for a considerable reduction of the supply air temperature, which reduces operation load for the air conditioners.



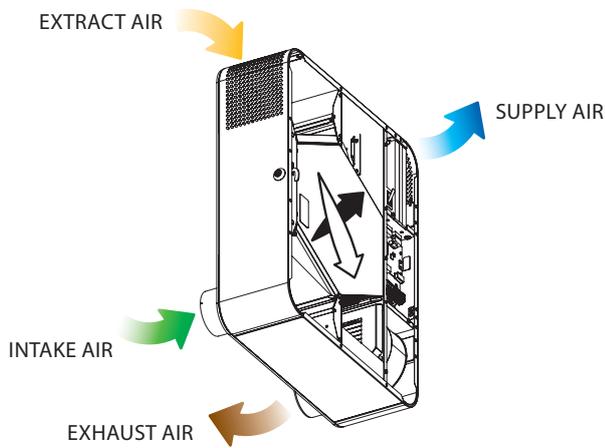
Micra 100 ERV WiFi units are equipped with a counter-flow heat exchanger with an enthalpy membrane.

In the cold season the extract air heat and moisture are transferred to the supply air stream through the enthalpy membrane reducing the heat losses from ventilation.

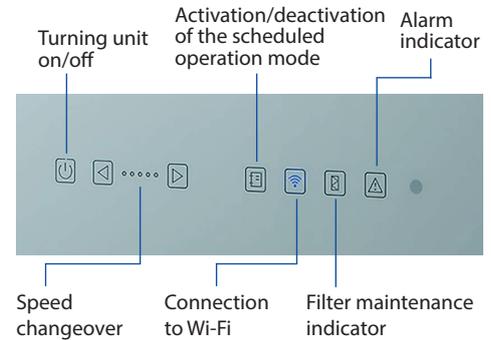
Consequently, the heat and moisture of the ambient air is transferred to the exhaust air stream through the enthalpy membrane in the warm season. This allows for a considerable reduction of the supply air temperature and humidity, which reduces operation load for the air conditioners.



FUNCTIONING

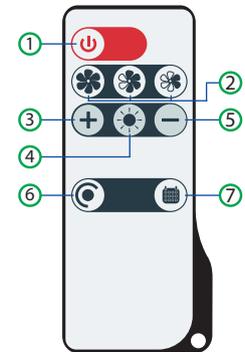


CONTROL PANEL



CONTROL

- The unit is equipped with a control panel
- The remote control is supplied as standard
- Wi-Fi communication
- Controlled by Android or iOS smartphone or tablet.



- ① Turning unit on/off
- ② Speed selection
- ③ Increasing temperature set point for the re-heater (available for the models with a re-heater)
- ④ Turning re-heater on/off (available for the models with a re-heater)
- ⑤ Decreasing temperature set point for the re-heater (available for the models with a re-heater)
- ⑥ Turning timer on/off
- ⑦ Activation/deactivation of the scheduled operation mode

FUNCTIONS

- Speed changeover
- Filter replacement indication
- Alarm indication
- Speed setting
- Timer
- Weekly schedule



VENTS MICRA app is available at Google Play market and App Store



FREEZE PROTECTION

Micra 100 WiFi features an exhaust air temperature sensor downstream of the heat exchanger, which disables the supply fan to let the warm extract air warm up the heat exchanger. After that the supply fan turns on and the unit reverts to the normal operation mode. Overheating protection for **Micra 100 E WiFi** and **Micra 100 E2 WiFi** is implemented with a pre-heater.

Following functions are available:

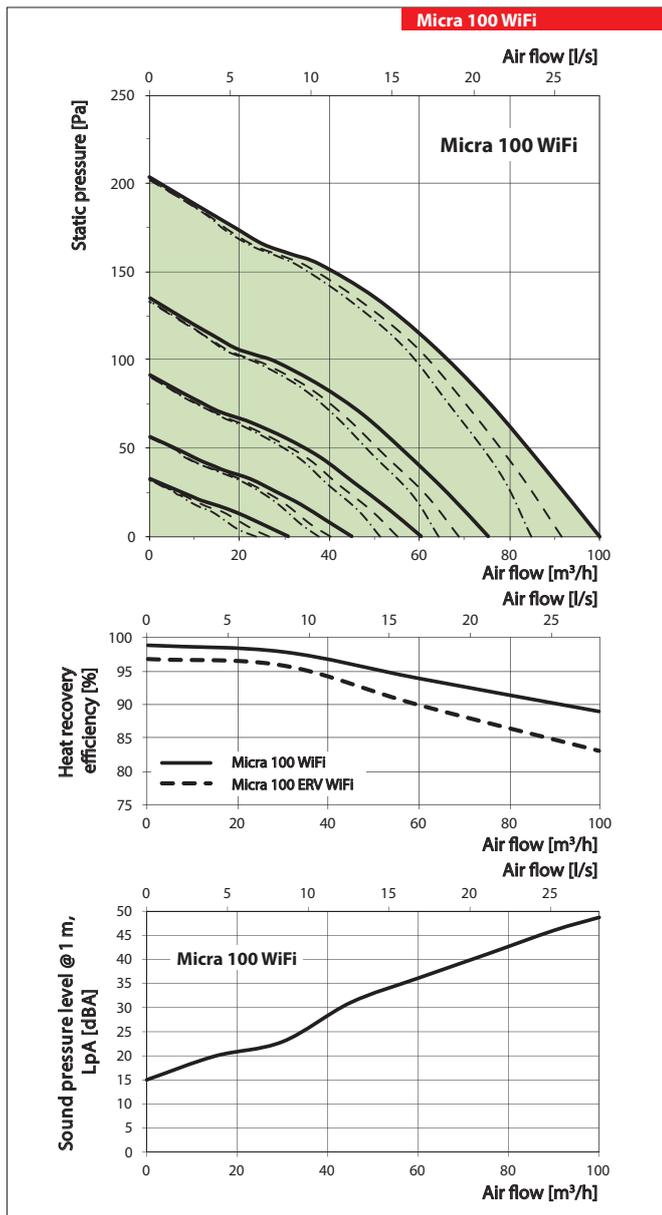
	Micra 100 WiFi Micra 100 E WiFi	Micra 100 E1 WiFi Micra 100 E2 WiFi
Speed selection	+	+
Filter replacement indication	+	+
Alarm indication	+	+
Speed setup	+	+
Timer	+	+
Week scheduler	+	+
Re-heater enabled/disabled	-	+
Supply air temperature setup	-	+
Control with the mobile application VENTS MICRA Android / IOS	+	+

TECHNICAL DATA

Technical data	Micra 100 WiFi					Micra 100 ERV WiFi					Micra 100 E WiFi					Micra 100 E ERV WiFi				
Speed	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Voltage [V/50 (60) Hz]	1~110-240					1~110-240					1~220-240					1~220-240				
Max. unit power without electric heater [W]	20	23	29	37	53	20	23	29	37	53	20	23	29	37	53	20	23	29	37	53
Integrated electric pre-heater power [W]	-					-					700					700				
Integrated electric re-heater power [W]	-					-					-					-				
Max. unit current without electric heater [A]	0.4					0.4					0.4					0.4				
Max. unit current with electric heater [A]	-					-					3.6					3.6				
Max air flow [m³/h]	30	44	60	75	100	30	44	60	75	100	30	44	60	75	100	30	44	60	75	100
RPM [min ⁻¹]	2200																			
Sound pressure level at 3 m distance [dBA]	13	20	27	33	39	13	20	27	33	39	13	20	27	33	39	13	20	27	33	39
Transported air temperature [°C]	-15...+40																			
Casing material	polymer coated steel																			
Insulation [mm]	10																			
Extract filter	G4																			
Supply filter	G4, F8. Optional: F8 C, H13																			
Connected air duct diameter [mm]	100					100					100					100				
Weight [kg]	31					31					31					31				
Heat recovery efficiency [%]*	98	95	92	90	89	96	94	89	85	83	98	95	92	90	89	96	94	89	85	83
Heat exchanger type	counter-flow																			
Heat exchanger material	polystyrene					enthalpy					polystyrene					enthalpy				
SEC class	A					A					A					A				

Technical data	Micra 100 E1 WiFi					Micra 100 E1 ERV WiFi					Micra 100 E2 WiFi					Micra 100 E2 ERV WiFi				
Speed	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Voltage [V/50 (60) Hz]	1~220-240					1~220-240					1~220-240					1~220-240				
Max. unit power without electric heater [W]	20	23	29	37	53	20	23	29	37	53	20	23	29	37	53	20	23	29	37	53
Integrated electric pre-heater power [W]	-					-					700					700				
Integrated electric re-heater power [W]	350					350					350					350				
Max. unit current without electric heater [A]	0.4					0.4					0.4					0.4				
Max. unit current with electric heater [A]	1.94					1.94					5.2					5.2				
Max air flow [m³/h]	30	44	60	75	100	30	44	60	75	100	30	44	60	75	100	30	44	60	75	100
RPM [min ⁻¹]	2200																			
Sound pressure level at 3 m distance [dBA]	13	20	27	33	39	13	20	27	33	39	13	20	27	33	39	13	20	27	33	39
Transported air temperature [°C]	-15...+40																			
Casing material	polymer coated steel																			
Insulation [mm]	10					10					10					10				
Extract filter	G4																			
Supply filter	G4																			
Connected air duct diameter [mm]	100					100					100					100				
Weight [kg]	31					31					31					31				
Heat recovery efficiency [%]*	98	95	92	90	89	96	94	89	85	83	98	95	92	90	89	96	94	89	85	83
Heat exchanger type	counter-flow																			
Heat exchanger material	polystyrene					enthalpy					polystyrene					enthalpy				
SEC class	A					A					A					A				

*Heat recovery efficiency is in compliance with EN 13141-8



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VENTS **Micra 100 WiFi**

A+

A

B

C

D

E

F

G

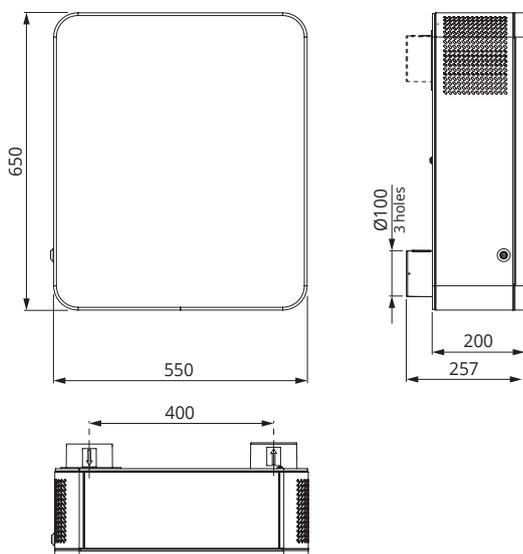
A

47 dBA

100 m³/h

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2018 **1254/2014**

OVERALL DIMENSIONS



	Micra 100 WiFi		
Specific energy consumption (SEC), kWh/(m ² .a)	Cold -79.4	Average -39.7	Warm -14.3
Type of ventilation unit	Bidirectional		
Type of drive installed	Variable speed		
Type of heat recovery system	Recuperative		
Thermal efficiency of heat recovery, %	92		
Maximum flow rate, m ³ /h	100		
Electric power input, W	53		
Sound power level, dBA	47		
Reference flow rate, m ³ /s	0.017		
Reference pressure difference, Pa	N/A		
Specific power input (SPI), W/(m ³ /h)	0.483		
Control typology	Local demand control		
Maximum internal leakage rates, %	0.1		
Maximum external leakage rates, %	0.9		
Mixing rate of bidirectional units, %	20		
Airflow sensitivity at +20 Pa and -20 Pa	0.93		
The indoor/outdoor air tightness, m ³ /h	7		
Internet address	http://www.ventilation-system.com		
The annual electricity consumption (AEC), kWh electricity/a	Cold 863	Average 326	Warm 281
The annual heating saved (AHS), kWh primary energy/a	Cold 9230	Average 4718	Warm 2133

MOUNTING EXAMPLE

Each space requiring ventilation is equipped with one or several Micra 100 WiFi units.

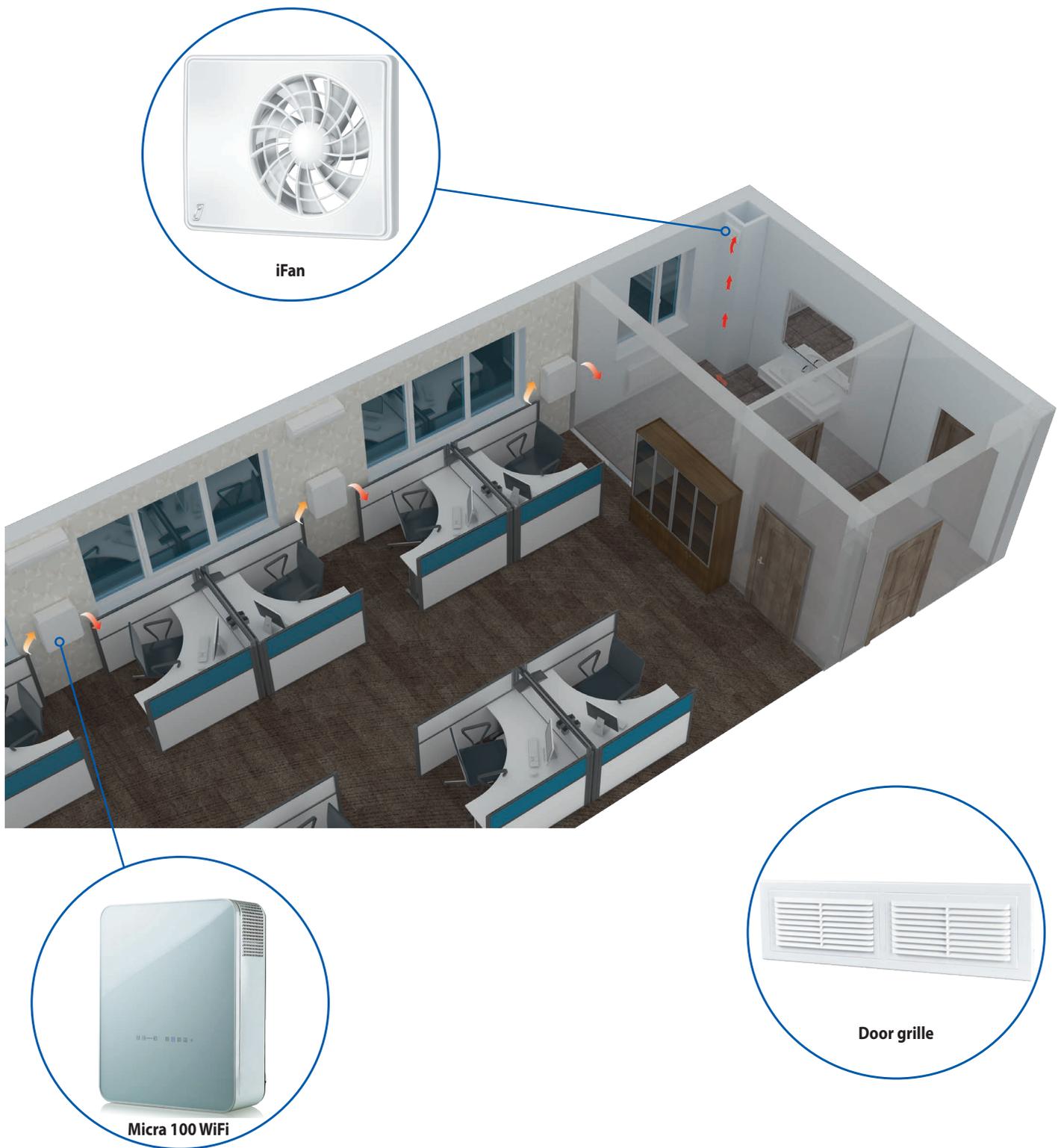
A single unit is capable to ensure efficient ventilation in spaces with floor area up to 100 m².

Micra 100 WiFi units can be upgraded with a bathroom exhaust air duct. To enable such a configuration the units can be additionally equipped with the optional \varnothing 100 mm spigot (supplied as standard).

Micra 100 WiFi deployment in a compact residential space



Micra 100 WiFi mounting example in the office



ACCESSORIES

Name	Picture	Description
MK Micra 100 white		Mounting kit: Two plastic Ø 100 mm air ducts 500 mm long Outdoor box (white) Cardboard template
MK Micra 100 chrome		Mounting kit: Two plastic Ø 100 mm air ducts 500 mm long Outdoor box made of hairline stainless steel Cardboard template
NB Micra 100 white		Outdoor box (white)
NB Micra 100 chrome		Hairline stainless steel outdoor box
NE Micra 100		Heater to prevent condensate freezing in the drain pipe and the outdoor box
SF 193x158x18 G4 PPI		G4 filter
SF 193x158x47 F8		F8 filter
SF 193x158x47 F8 C		F8 carbon filter
SF 193x158x47 H13		H13 HEPA filter
HR-S		HR-S humidity sensor
CO2-1		CO ₂ sensor with air quality indication
CO2-2		CO ₂ sensor

VENTILATION SYSTEMS
www.ventilation-system.com



**MICRA SINGLE ROOM AIR HANDLING UNITS
WITH HEAT RECOVERY**

VENTS reserves the rights to modify any of its products' features, designs, components and specifications at any time and without notice to maintain the development and quality of manufactured goods.

05-2020

