Air handling units

Company introduction

VentiAir

VENTIAIR – Air conditioning units from Czechia

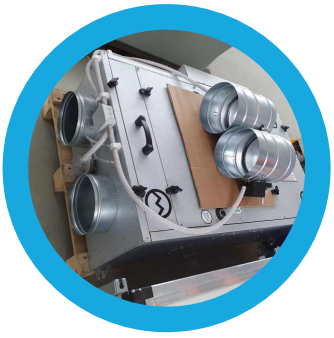
Our company is a leading Czech manufacturer of air conditioning units. One of the goals of our company is the complexity of delivery. That is why we have built a production company with a complete portfolio of units which, at the same time, remains flexible in solving individual customer requirements. Thanks to this, we manufacture and supply units to many, not only European, countries.

We place great emphasis on minimizing operating costs, and therefore we approach each order very carefully and always propose individual solutions tailored to the needs of the project. We supply ventilation units also including measurement and control systems. That is why we have managed to build a strong position on the European ventilation unit market.

Our facilities are installed in various projects such as office buildings, schools, hotels, hospitals, sports facilities, banks, production halls, shopping centres, private and public swimming pools.

We strive for the team of our company to be composed of professionals who are able to address the needs of our customers to their maximum satisfaction. We are aware of the importance of a quality relationship between the supplier, the installation company and the designer and so we approach the business.

VentiAir



Standards

CERTAINTY FOR YOU AND YOUR PARTNERS

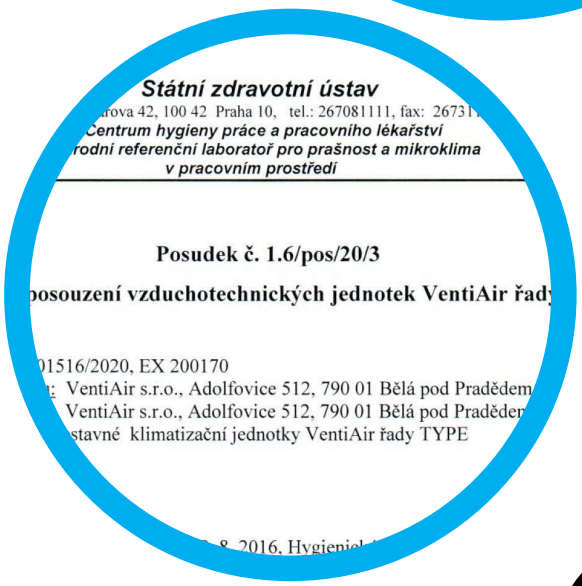
Our units go through a complex product certification process from several certification authorities. Among the main ones, we can name an authorized person 227 - RESEARCH INSTITUTE OF BUILDINGS - CERTIFICATION COMPANY and then laboratories of the internationally recognized TÜV standard.

Part of the certification is also the verification of the actual parameters of the products and comparison with the stated characteristics.

Certification includes:

- **Measurement of air performance of the device** and comparison of measured values with the parameters specified by the manufacturer
- Measurement and control of parameters according to **EN 1886 and EN 13053**
- **Measurement of noise characteristics** and comparison of measured values with parameters specified by the manufacturer according to EN 13053
- Comparison of technical data with valid legislation
- Regular **annual supervision in production, repeated measurements**


CERTIFICATE
No.: TM 61000464.001
Licence owner
VentiAir s.r.o.
Adolfovice 512
790 01 Bela Pod Pradedem
Czech Republic
Our reference number
SD/84943954
PN-EN 1886:2008


Státní zdravotní ústav
Centrum hygieny práce a pracovního lékařství
Posudek č. 1.6/pos/20/3
VentiAir s.r.o., Adolfovice 512, 790 01 Bělá pod Pradědem


CERTIFIKÁT VÝROBKU
č. 227/C5/2020/0128
Autorizovaná osoba 227
Vzduchotechnické jednotky VentiAir řady TYPE

* under the conditions specified in the operational and technical documentation

Brief characteristics of VentiAir air conditioning units

Construction

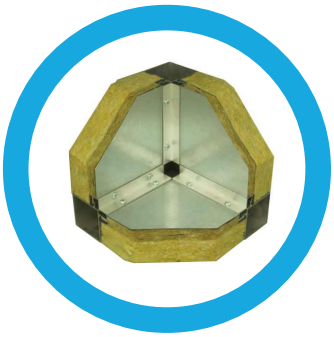
- Skeletal structure consisting of aluminium profiles, plastic corners and sandwich panels
- Panel filling - **polyurethane** (PUR) or **mineral wool**
- Panel cladding - galvanized or stainless steel, RAL according to customer requirements
- Service access – from side (as standard), from bottom (under-ceiling design), or according to requirements and options
- The exterior design is equipped with a full-area roof with overlaps, material **galvanized sheet metal**, dampers including actuators inside the chambers, intake and exhaust rain shutters on request.

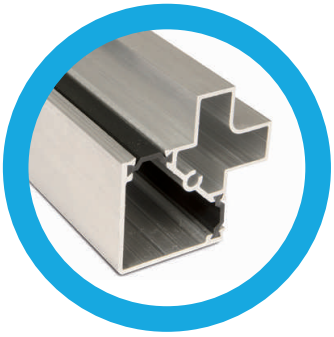
Advantages of the used construction

- Reduction of energy losses - minimization of thermal bridges
- Elimination of moisture condensation
- High rigidity and durability of the structure
- Elimination of moisture condensation
- Elimination of moisture absorption
- Insulating material with a very long degradation time
- Smooth inner sheathing surfaces - easy to maintain hygiene
- Lightweight inspection panels - simple operation
- High resistance to external atmospheric influences
- High resistance to mechanical damage

TÜVRheinland CERTIFIED
Regular Production Surveillance Safety
www.tuv.com
ID 0000073065

Data according to EN 1886 for PUR panel 45mm	Value
Working conditions	-40 to +90°C
Heat transfer coefficient for cladding K=0,67 W/m²K	T2
Coefficient of thermal bridges	TB2
Mechanical resistance of the casing	D1
Sheath tightness -400 Pa/+700 Pa	L1
Filter tightness	F9
Panel thickness - PUR	25, 45 mm
Panel thickness - mineral wool	50,60 mm
Sheet thickness - PUR panel	0,6 mm
Sheet thickness - mineral wool panel	0,8 mm
Thermal conductivity coefficient PPU	0,022 W/mK
Fire resistance of cladding	fire resistant material (NRO)
Moisture absorption	0,04%
PPU density	42kg/m³
Panel weight	10 kg/m²
Corrosion protection - weight of galvanic coating	275g/m²
Material / thickness of outer safety coating	polyester 25 µm





Characteristics of units

Components

- The individual components of the VentiAir series are supplied by reputable manufacturers
- Fans - Ziehl-Abegg, EBM (free impeller, speed control by frequency converter, EC)
- Heat exchangers - Klingenburg, Heatex, Hoval, Roen, Recutech, DBM
- Control system - EL-Piast, UCS, CAREL, Siemens, Domat
- Frequency converters – Danfoss

Delivery

On the frame - according to the customer's request, the whole unit on one frame. Availability depends on dimensions, unit weight and destination. The advantage is fast installation, minimization of time needed for installation on site.

In blocks (by chambers) - suitable for engine rooms inside buildings, ideal for larger and heavier pieces, individual blocks are connected by the assembly company according to the written instructions into a functional unit directly at the installation site.

In whole or in blocks for disassembly - advantageous for reconstruction of buildings. Complete chambers or equipment are delivered without glued joints (not sealed). It is thus possible to disassemble the components and transport the individual components (motors, fans, recuperation units, exchangers, panels) to the destination separately. Subsequently, the unit is folded back to its original state and sealed.

The price of delivery includes the delivery of both individual chambers which are connected to a functional unit on the construction site as well as accessories - sleeves, dampers, frequency converters.

Measurement and control - depending on the customer's requirements, VentiAir units can be equipped with integrated Plug & Play control - ideal for compact units that do not connect multiple chambers into a functional unit. In case of modular units, a completely fitted switchboard and other components are supplied separately for installation on site.

Hygienic design - VentiAir-TYPE units meet the requirements for air conditioning in all types of clean rooms, including healthcare, from a material, constructional and operational point of view.

Explosion-proof design zone II - the design of the units allows the installation of explosion-proof motors and fans.

Above-standard equipment of VentiAir air conditioning units - hinges with the possibility of turning left / right, sight glasses, epoxy coatings for swimming pool design, chemical operations, stainless steel design, surface treatment in RAL according to customer requirements, chamber lighting, etc.

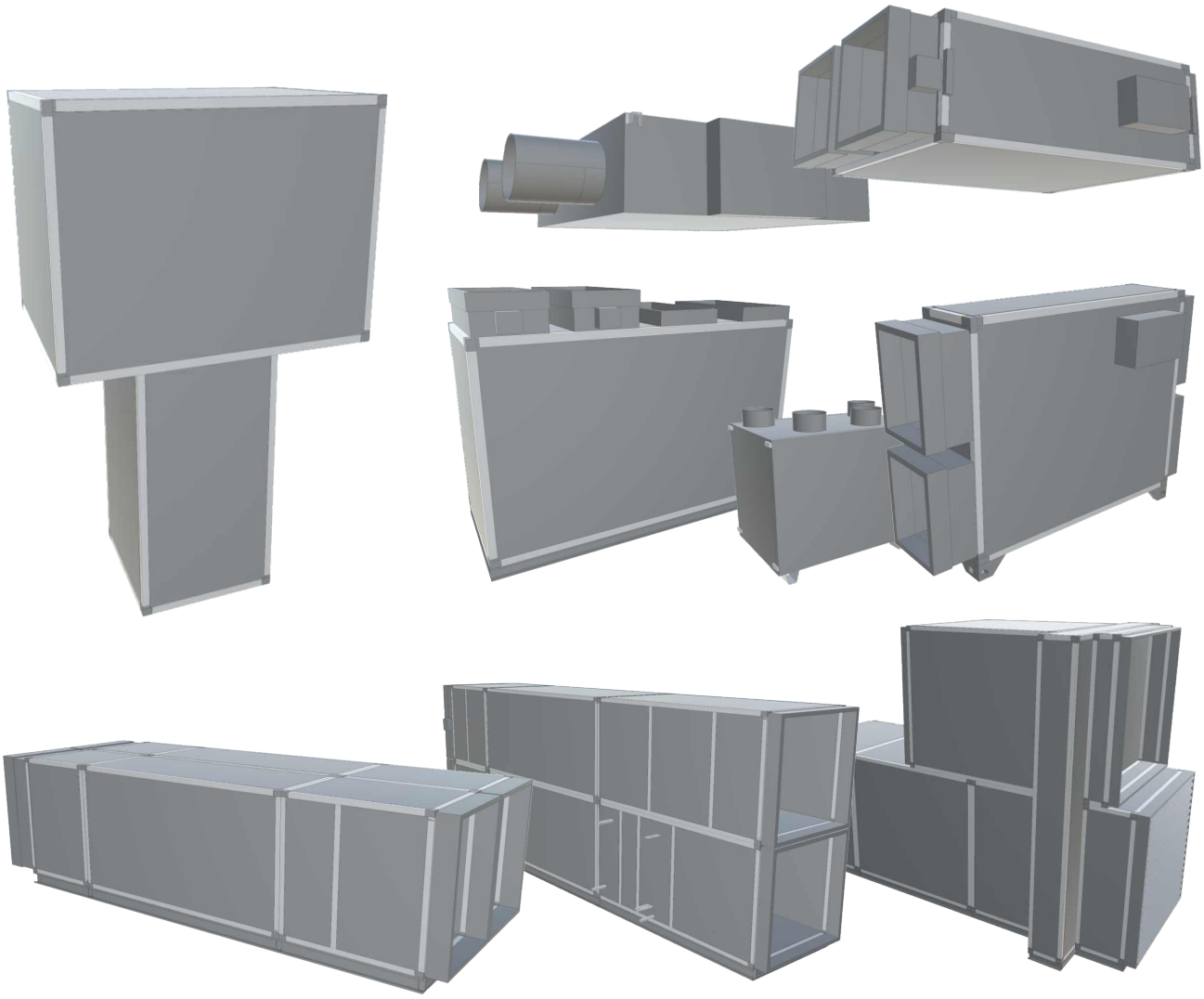
For the apartment or industry - VentiAir can do it all

Assembling and special units

- The basic production program is assembly units of frame construction.
- Thanks to the variability of the design and the huge range of possible performance of the device, we can manufacture the device according to any requirements.
- We also supply special units in swimming pool design, chemically resistant, with heat pumps or non-explosive design.
- Thanks to almost unlimited possibilities, it is possible to further expand the production line – i.e. equipment out of the range of standard sizes.

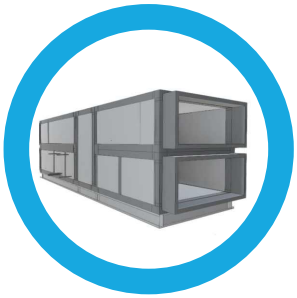
Compact units

- Units with minimal space requirements.
- With the possibility of already integrated advanced regulation with high connectivity and access via Internet
- Several different types of connections and locations of units
- Unit flow ranges from 200 m^3/h to 7 500 m^3/h

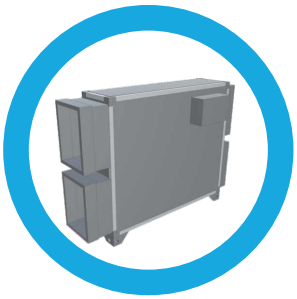


Product portfolio VentiAir

S-TYPE, W-TYPE - standard assembly units



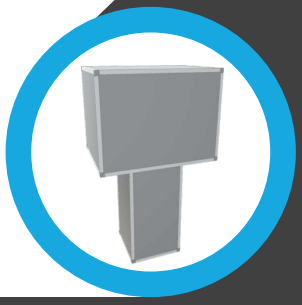
- S-TYPE – air conditioning assembly unit for rooms with a requirement for reduced construction height or installation on the roof
- preferred design in combination with rotary exchnager units - the exchanger does not deviate from the profile of the unit
- chamber cross-sectional ratio 1: 2 (HxW), the resulting cross-section of the bi-directional unit is a square
- in this type, two or three fans are preferably placed in parallel in one chamber
- W-TYPE - assembled air handling unit with a square cross-section of chambers, vertical or horizontal design
- 25 size ranges, any device configuration according to project requirements, air output of the unit from 1 000 m^3/h
- stable frame design, basic frame height 100mm — taller or adjustable legs on request
- plug-fan fans with frequency converters or energy-saving EC motors
- PUR panel or mineral wool —25mm, 45mm, 50mm, 60mm, profiles with elimination of thermal bridges



P-TYPE K, R - compact units

- compact air conditioning unit with heat recovery
- counter-flow high efficiency recovery exchanger or rotary heat exchanger
- minimal dimensions, **under-ceiling, floor and vertical design**
- **variant for outdoor operation**
- for ventilation of offices, shops, schools, restaurants, etc.
- integrated by-pass damper, mixing damper as option
- air flow rate range from 300 m^3/h to 5 500 m^3/h
- integrated control system - MODBUS RTU, Ethernet - control via Internet
- possibility of heating (internal) and cooling (external)

R-TYPE - compact roof units

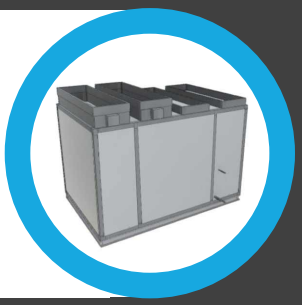


- compact air handling unit with heat recovery for installation directly into the roof
- economical EC motors
- recovery exchanger with high efficiency - plate and rotary
- for ventilation, especially of industrial, production and storage halls
- integrated control system - MODBUS RTU, Ethernet - control via Internet
- possibility of heating and cooling (water / electric / direct evaporation)
- choice from two unit sizes with nominal flow rates of 5 000 m^3/h and 8 000 m^3/h

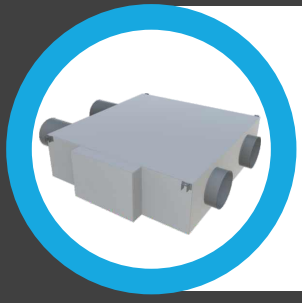
T-TYPE - compact school units

- compact air handling unit with heat recovery in three sizes
- meets the high requirements for low noise - only 35 dB
- floor and suspended versions
- easy to install to school classes
- **security against unauthorized entry into the unit and its control**
- possibility to connect to the superordinate system
- integrated by-pass damper
- integrated control system

K-TYPE K, R - compact units with chimney connection system



- compact air conditioning unit with heat recovery with connection on top
- economical EC motors
- counter-flow heat recovery exchanger with high efficiency or rotary exchanger with the possibility of moisture transfer
- for ventilation of offices, shops, restaurants, etc.
- integrated control system - MODBUS RTU, Ethernet - control via Internet
- filtration class standard F7 / M5 - other variants possible
- possibility of heating and cooling (water / electric / direct evaporation)
- 5 unit sizes for use in every project - for air flow rates from 500 m^3/h to 8 500 m^3/h



REKU-TYPE - small compact units

- small compact air conditioning unit with heat recovery for flow rates from 100 m^3/h to 1 000 m^3/h - 6 sizes
- economical EC motors
- counter-flow heat recovery exchanger with high efficiency
- **chimney, suspended and vertical design**
- designed for indoor use
- integrated control system - MODBUS RTU, Ethernet - control via Internet
- possibility of heating and cooling (water / electric / direct evaporation)

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