



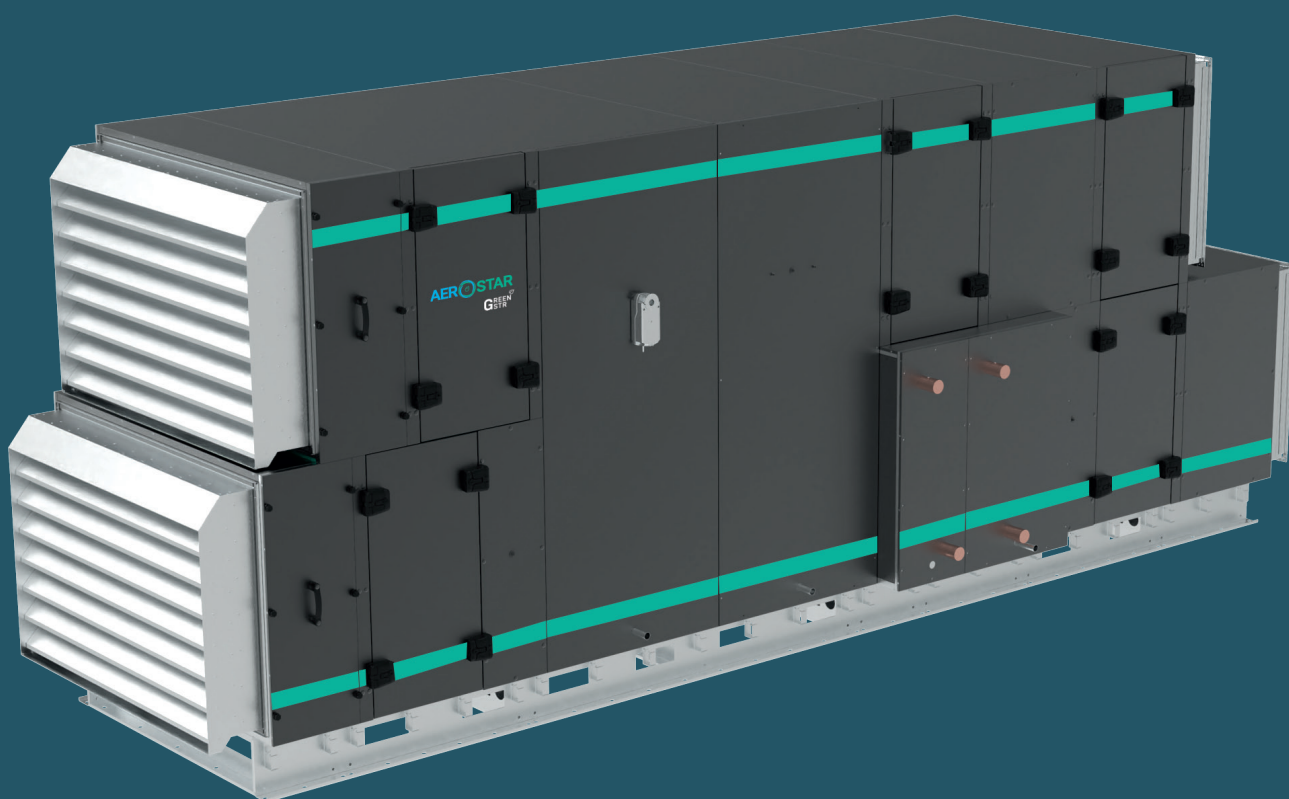
AEROSTAR

Participant: Vent-Service LTD.
Commercial range name: GreenStr.
Aeroselect selection software version 2.0.0.0 (27-09-2021)
Certificate number: 19.04.077
www.eurovent-certification.com

GreenSTR

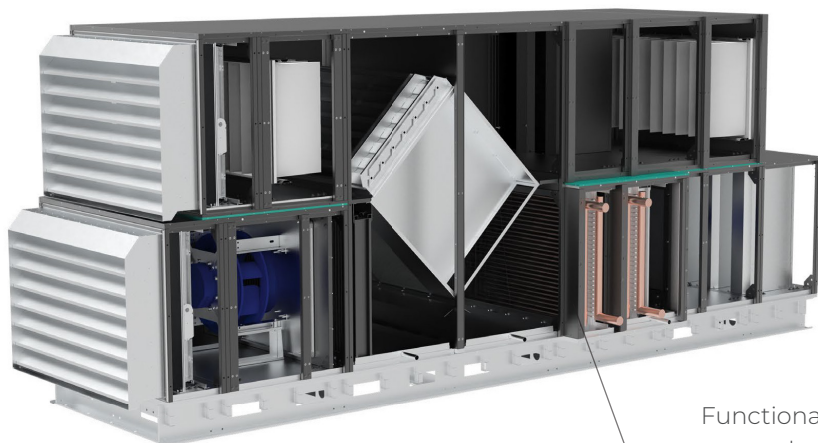
Multifunctional air handling unit

CAPACITY: from 1 500 m³/hour up to 25 000 m³/hour





Create ecoclimate



AREA OF USAGE:

for facilities of various assignments, including medical institutions and other premises with high requirements for cleanliness conditions.

Functional units are designed taking into account all the necessary parameters: the size of the mounting and construction slots that highly simplifies the process of assembling of ventilation units on the site.

ADVANTAGES

Resources savings 88%:



80% RECUPERATORS

Reduce of energy consumption up to 80% and ensure the protection of environment.



5% EC-MOTORS

Energy efficient EC-motors allow reducing of operating costs at least for 5%.



3% IMPELLERS

Improved backward-bladed fans:
- increase the efficiency;
- reduce the energy consumption by 3%;
- minimize the noise level.



Automation system is developed individually for each particular unit. Allows controlling the parameters of the equipment with maximum efficiency.



High-accuracy designing and exclusive selection program AeroSelect.



The units are equipped with a number of energy-saving technologies that allow users to gain the maximum efficiency at the minimum resource costs.



Minimum manufacturing time of equipment.



Medical modification of unit is possible.



Non-standard solutions for the premises of all types.

BASIC CONFIGURATION

ANTI-CORROSION COATING

Metal with high zinc content and extra-strong anti-corrosion coating allow installation of equipment inside and outside the buildings of all types.

- In case of outside installation the units are equipped with an air intake covers, protective deflectors and roof. In this case the air valves and automatic equipment are mounted inside.

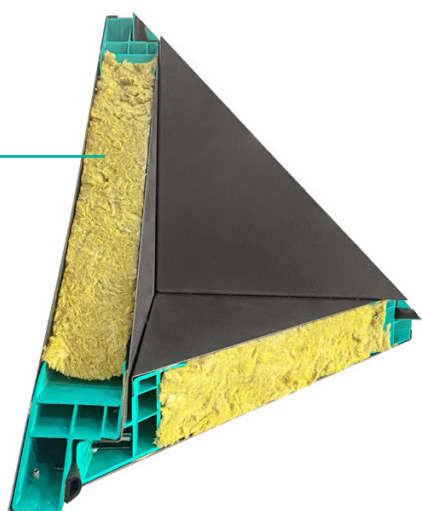


SANDWICH PANELS

provide increased structural strength, heat and sound insulation.

Thickness – 50 mm.

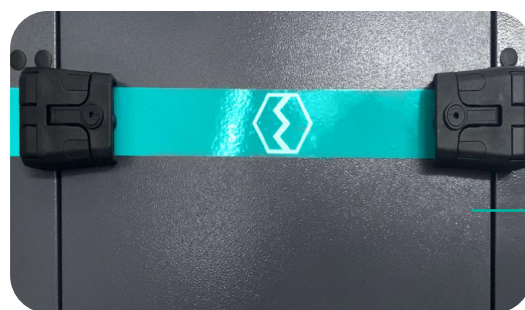
Filling compound – mineral wool with a density 50 kg/m³.



- ⊕ Minimization of heat losses.
- ⊕ Air valve of increased tightness (with a function of heating).
- ⊕ Minimal energy losses per square meter of surface.
- ⊕ PVC profiles are armed with a reinforced insert.
- ⊕ increased mechanical strength.

INNOVATIVE CASE MADE OF PVC-PROFILE

- ⊕ Powder epoxidized coating on the outside and inside surfaces of the case.
- ⊕ Simple and tight interconnection of the sections.
- ⊕ Reduced weight of the unit.
- ⊕ Reduced production time.
- ⊕ Sandwich panels with thickness 50 mm made of rock wool (from molten erupted rocks) with a density of 50 kg/m³



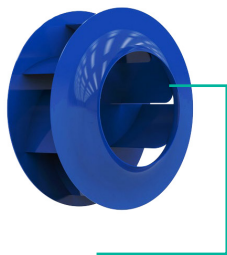
ITALIAN ACCESORIES

The unit is equipped with high-quality ergonomic Italian accessories: locks, handles, hinges.

The doors can be opened in either direction or can be removed.

FAN GROUP WITH DIRECT DRIVE

Impeller is mounted on the electric motor shaft that **highly increases efficiency of the fan.**



IMPELER

- ⊕ Welded steel construction;
- ⊕ 7 bent back blades;
- ⊕ Quality balancing G2.5

Static pressure up to 2500 Pa;
Static efficiency up to 73%;



IMPELLER FOR EC-MOTOR

- ⊕ ZAmid – high-quality composite material;
- ⊕ 3D blades in the form of water drops;
- ⊕ airfoil blade;
- ⊕ low noise level.

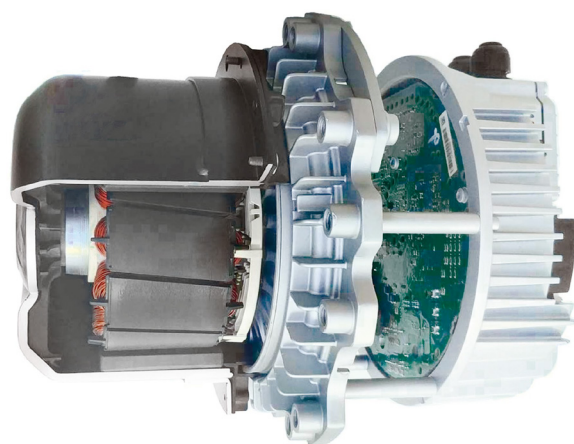
Static pressure up to 2500 Pa;
Static efficiency up to 75%;
Air consumption: up to 25 000 m³/hour.

AC-MOTOR

Is placed on a vibration-resistant frame separated from the body of the unit. Perfectly adjusted to the aerodynamics of the ventilation network, it is possible to adjust the parameters if necessary.

Energy efficiency classes: IE1, IE2, IE3.
Protection class: IP 55

Equipped with a frequency converter that enables quick reach of the set point.



EC-MOTOR

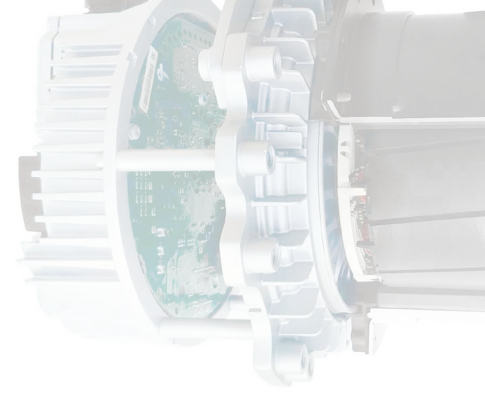
Brushless synchronous motor with electronic control highly reduces noise level.

High working pressure: up to 2500 Pa.
Wide range of nominal voltage: 200-277V and 380-480 V ±15%.
Long service life: more than 80000 of continuous work.

EC-ELECTRIC MOTOR WITH EFFICIENCY HIGHER 90%

- ⊕ Saves at least 30% more electricity than an AC motor. Complies with the ErP 2015 directive.
- ⊕ Built-in EMC filter protects against phase loss and low voltage in the network.
- ⊕ Protection against overheating of the motor and electronics, and protection against rotor lock.
- ⊕ No starting currents.





- ⊕ No service needed.
 - ⊕ The absence of the frequency converter saves installation space.
 - ⊕ Allows reduction of the fan capacity up to 10%.
 - ⊕ EC-motor optionally has MODBUS RTU protocol.
- | **Option.** Application of the **Flow Grid** technology: air flow rectifier.



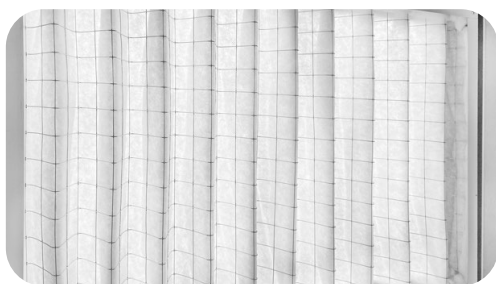
DUAL FAN

- ⊕ Dual fan system. This configuration **is 50% more reliable than a system with one powerful fan.**
- ⊕ Occupies less space.

MODULAR FILTERS

Filtration classes ISO 16890: Coarse ($0,3 \leq x \leq 10$), ePM10 ($0,3 \leq x \leq 10$), ePM2,5 ($0,3 \leq x \leq 2,5$), ePM1 ($0,3 \leq x \leq 1$).
Prevent the migration of dust particles through the filter material.

Filter groups	Particle size (micron)	Classification criteria
ISO Coarse	$0.3 \leq x \leq 10$	Average efficiency < 50%
ISO ePM10	$0.3 \leq x \leq 10$	Average efficiency $\geq 50\%$
ISO ePM2,5	$0.3 \leq x \leq 2,5$	Minimum efficiency $\geq 50\%$
ISO ePM1	$0.3 \leq x \leq 1$	Minimum efficiency $\geq 50\%$



CASSETTE FILTER

- ⊕ Durable galvanized metal frame.
- ⊕ The filter material is fixed on the mesh.
- ⊕ Made of polyester fibres.

Filtration class acc. to ISO 16890: Coarse.
Working environment temperature: up to 80°C.
Humidity of the working environment: $\leq 100\%$.



POCKET FILER

The pocket design **guarantees the increase of filtration area** and provides maximum efficiency. Made of a durable painted metal frame.

Filter material: polyester / micro-fibreglass.
Filtration class acc. to ISO 16890: Coarse, ePM10, ePM2.5, ePM1
Working environment temperature: up to 80°C.
Humidity of the working environment: $\leq 100\%$.

RECUPERATOR

The recuperation system allows reusing of the energy of the exhaust air from the room to heat up and cool down the air from the outside.

The usage of recuperator gives an opportunity **to reduce the total energy consumption by 80%**, which is especially important considering the rapid increases of energy prices.



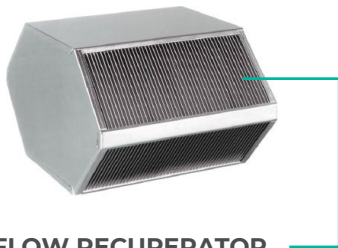
ROTOR RECUPERATOR

In rotary recuperators, heat transfer from the exhaust air to the supply air is carried out by means of a movable matrix with different types of coatings. The matrix of the rotary recuperator consists of two layers of aluminium foil, smooth and corrugated, alternately applied to each other. The recuperation efficiency will vary depending on the height of the corrugated tape, as well as the rotation speed of the wheel.

Reduction of heat exchange areas and speed of rotation in 10 rpm allows reducing energy consumption by 80%.

Foil thickness: from 1,4 to 1,8 mm.
Wave height of the foil: from 1,6 to 2,5 mm.

Efficiency: up to 88% depending on the type, size and operating parameters.



COUNTER-FLOW RECUPERATOR

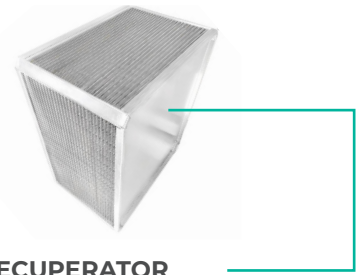
Counter-flow movement of an air stream provides high productivity at low expenses of pressure on all surface of air distribution.

Five different device sizes with air volume up to 1300 m³/h in one unit.

The use of aluminum resistant to sea water impact. Accurate factory production. Precise execution - perfectly smooth surfaces.

Provides tightness of air conditioning systems. The heat exchanger is made without usage of screws and rivets.

High strength. Frost resistance. Resistant to overheating. No possibility of leakage of hazardous fumes in case of fire.



CROSS-FLOW RECUPERATOR

Thanks to the plate heat exchangers, two air streams, a warm exhaust air stream and a cold supply air stream, pass next to each other through thin plates without any contact.

Energy exchange occurs on the surface of the heat exchanger plates. At the same time there is no mixing of two air streams.

Efficiency: up to 85%, depending on the type, size and operating parameters.

- ⊕ Corrosion-resistant aluminium foil coated with epoxide resin.
- ⊕ Strong connection of plates thanks to double folding, pressure stability thanks to five-fold thickness of material.

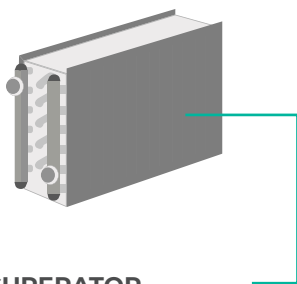
Plate structure: embossed plates, distance between plates from 3,8 to 11,5 mm.
Air productivity: up to 25 000 m³/h.

Epoxy coated device designed for use in indoor pools or in household outbuildings. The scope of supply includes the air valve of the bypass channel.

The plates form a sealed housing due to the diffusion of the adhesive sealant, so the device is characterized by:

- high tightness;
- hygienic use due to complete drainage of condensate.

Up to 90% efficiency is guaranteed by patented technology. Perfect geometrical arrangement of the plates connected by double-edge technology. Low pressure loss due to computer modeling. 100% of the products are checked for leak tightness. Eurovent, RLT and AHRI certification. Bypass installation is possible. COMBI solution. Epoxy version.



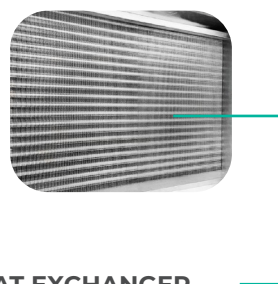
GLYCOL RECUPERATOR

Consists of two **heat exchangers**: one in the exhaust air flow, the other one in the supply air flow.

The main advantage of this recuperator is the possibility of its application in case of air streams are at a distance from each other.

Usage in systems where NON-mixing of air streams is of high priority.

The heat exchanger located in the stream of exhaust air takes away thermal energy and transfers it with the help of circulating thermal medium: a solution of water and glycol, of the heat exchanger mounted in a stream of supply air.



HEAT EXCHANGER

Suitable for thermal mediums of any types: freon, steam, water, glycol solution.

Basic configuration

Slat block:

- corrugated surface;
- internal notches, arranged in a chessboard order;
- number of tubes rows: 1-12;
- distance between the ribs: 1,6-5,0 mm;
- thickness of plates: 0,1-0,19 mm.

Maximum working pressure: 20 atm.

Copper pipes: diameter - 9,52 mm, wall thickness – 0,27 mm / 0,33 mm.

Collector made of copper or steel pipes.

Slats: Al OR Alepoxy

ADDITIONAL OPTIONS

⊕ NON-STANDARD DESIGNING

Allows adapting to any parameters and solve the problems of different levels of engineering complexity.

⊕ POSSIBILITY OF INSTALLATION OF THE HEAT PUMP of any complexity level:

- heating of supply air,
- cooling of supply air,
- heating / cooling of supply air by means of the energy-efficient heat pump working on ozone-safe freon R410a.

⊕ INSPECTION WINDOWS

Allow inspecting the unit without opening the door.

⊕ PAINTING IN ANY COLOUR OF THE RAL PALETTE

Different types of controllers are adapted to the solution of any problem and perform the control over:

- fan;
- Electric heater / water heater;
- Water cooler;
- compressor air and condensate unit;
- Humidifier;
- Air mixing chamber;
- Glycol or rotary recuperator.



REALISED PROJECTS



Cosmopolit Mall, Kyiv,
Vadyma Hetmana Str.



Epicenter (Logistic center),
Kalynivka village



ATB, Volodymyr-Volynskiy,
Kovelska Str.



Ice arena, Kramatorsk



Cottage community "Green
Hills" (sports complex),
Vita-Poshtova village



Real estate house,
Kharkiv, Pavlivska Str.



Novus, Kyiv, Bohatyrskaya Str.



Novus, Kyiv, Ivana Puliukha Str.



Novus, Kyiv, Bratislavskaya Str.



Novus, Chaiky village



Novus, Kyiv, Peremohy Ave.



Novus, Bucha,
Kyievo-Myrotska Str.

REALISED PROJECTS



Bandurskiy oil extraction factory LLC,
Bandurka village, Mykolaiv region



PrJSC Myronivska Poultry Farm,
Canteen, Stepani village,
Kaniv district, Cherkasy region



Office center, Kyiv,
Olenivska Str.



Unit City Campus B11, B14, B15,
Kyiv, Sim'i Khokhlovych Str.



Office premises, Kyiv,
M.Maksymovycha Str.



Lyceum "Design-education",
Boryspil



Toys factory "New Horizons",
Kyiv, Korabelna Str.



Procredit Bank, Residential
Complex San Francisco, Kyiv,
Premohy Ave.



Residential Complex
Respublika (school and
nursery school), Kyiv



Country residence,
Chubynske village, Kyiv region



Casino, Zhytomyr



Cinema "Krakiv", Kyiv,
Rusanivska Embankment

REALISED PROJECTS



Casino, Petropavlivska
Borshchahivka



Casino, Odesa



Casino, Chernivtsi



DR. BOGOMOLETS institute
of dermatology and cosmetology,
Kyiv, Tarasa Shevchenka blvd.



Casino, Khmelnytskyi



Casino in "Atmosfera"
shopping mall, Kyiv



"Nashe Nebo" shopping mall,
Kriukivshchyna village, Kyiv region



Ibis Hotel, Kyiv



Warehouse complex
of "BaDM" corporation,
Dnipro



Blockbuster Mall, Kyiv,
Stepana Bandery Ave.



Residential complex Smart
Plaza Obolon, Kyiv



Toys factory "New Horizons",
Kyiv, Korabelna Str.

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and from anywhere in the world:**

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- ⊕ manage the settings
- ⊕ receive notifications of emergencies
- ⊕ consult customer service of AEROSTAR



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reports

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