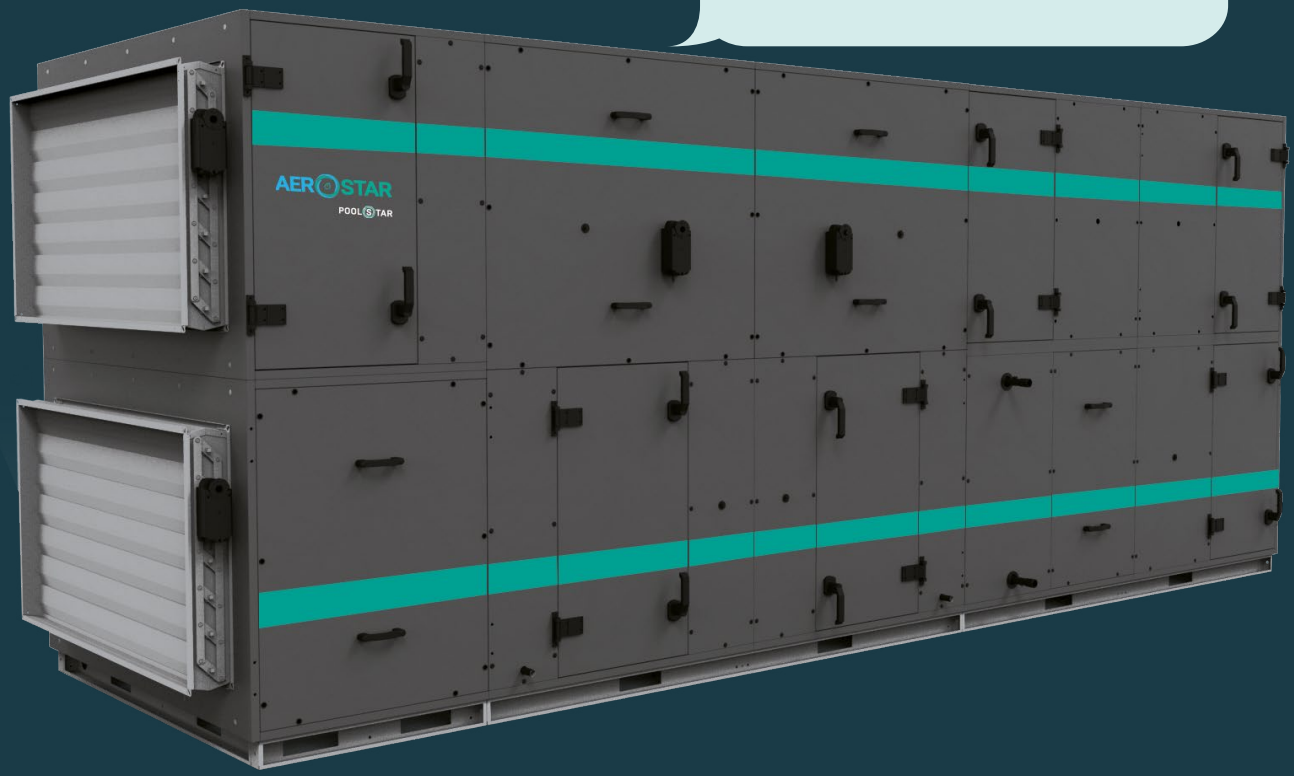
AEROSTAR

PoolStar

Equipment for dehumidification and ventilation of air in rooms with intensive moisture release

CAPACITY
3000 m³/h - 32000 m³/h



R410A

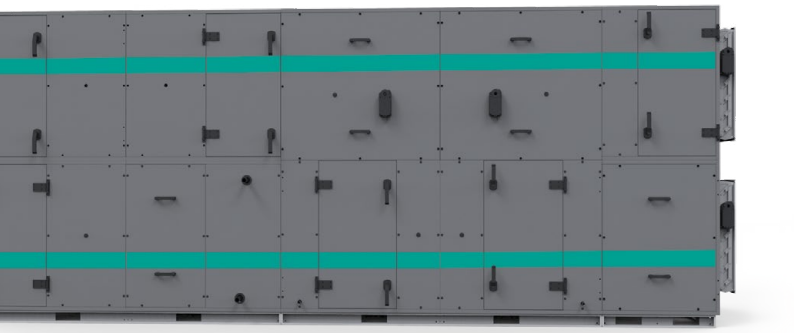
eco

Solutions that work

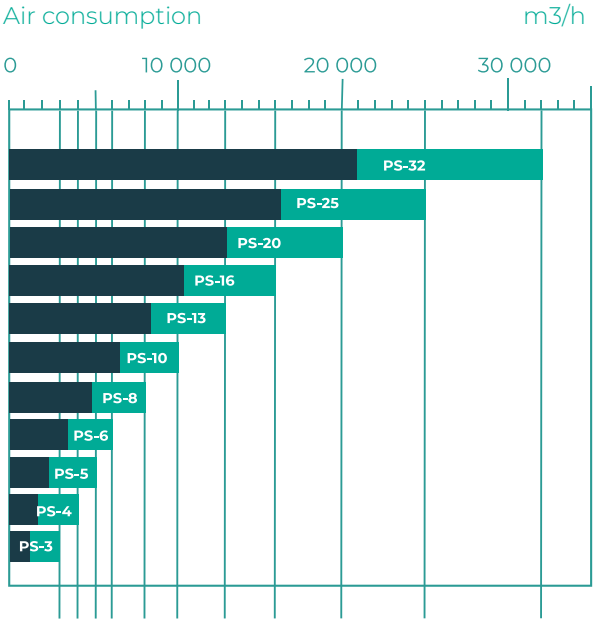


Area of usage:
Are made in various modifications therefore are perfectly suitable for application in pools of all types and aqua parks.

Unit PS-32 is made in frame case



Standard model range is presented with 11 standard sizes:



Minimum air consumption

Maximum air consumption

Advantages

Protection from corrosion, mould and fungus
Prevents formation of condensate, corrosion, mould and fungus, prevents the destruction of load-bearing structures.

Double energy efficiency
Is provided by joint work of the plate recuperator and the heat pump.

High-quality steel coated with anti-corrosion powder paint
The environment in which POOLSTAR operates is aggressive because chlorine is used in swimming pools. In addition, there is constant contact with humid air. For additional protection against corrosion, all interior panels are made of high-quality steel coated with anti-corrosion powder paint.

Energy Saving mode of operation
PoolStar units are equipped with a set of automation that can be easily integrated into a single management and scheduling system of the facility. Depending on the thermophysical characteristics of the room, automation system selects the optimal energy saving mode of equipment operation for proper ventilation and dehumidification.

Up-to-date parameters of equipment are available in the selection program AeroSelect. Don't forget to check them with your manager

BASIC CONFIGURATION

EPOXIDIZED WATER HEATER

During operation in winter the epoxy aluminium-copper water heat-exchanger is put into operation. In full recovery mode the fast heating of the pool room is provided after stand-by or night mode operation.

POCKET FILTER

The cleaner the air is, the higher the heat-exchange coefficient is and, as a consequence, the efficiency of the whole unit.
Purity class - ISO 16890: ePM10 60%, ePM2,5 75%, ePM1 80%
Operating medium temperature: up to 80°C.









HIGHLY EFFICIENT HEAT-EXCHANGER OF “FREON-WATER” TYPE

Is the optimal solution for the air heating and cooling systems. The heat-exchanger has two circuits: water from the pool circulates in one circuit, hot gas circulates through another circuit, and after gas condensation it transfers heat to a water stream.

- compact;
- minimum internal volumes;
- high working pressure;
- self-cleaning of working surfaces;
- has low resistance.

RECUPERATOR WITH EPOXY COATING

The recuperation system allows reusing of the energy of the exhaust air from the room to heat and cool the air from the outside. The use of recuperator gives an opportunity to reduce the total energy consumption by 60% that is especially important considering the rapid increases of the prices for the energy sources.

- Corrosion-resistant aluminium foil coated with epoxy resin for aggressive environments.
- Strong connection of plates due to double folding.
- Pressure stability due to five-fold thickness of the material.
- The distance between the plates of 6.5 mm increases the drying efficiency.
  This design avoids pressure losses without performance reduction.
- Efficiency: up to 85%, depending on the size and operating parameters.

HEAT PUMP

Allows using the electrical and thermal energy for drying and heating with top efficiency. The pump does not require a remote compressor-condenser unit, which reduces the cost of installation work. The heat pump section dries and maintains the air temperature in the specified range.

- ecological refrigerant R410A;
- high efficiency;
- individual automation.



Up-to-date parameters of equipment are available in the selection program AeroSelect. Don’t forget to check them with your manager

DOES NOT REQUIRE ADDITIONAL LABOR COSTS OF THE SERVICE PERSONNEL

Additional options

- For rooms with limited space, it is possible to perform an energy-efficient supply and exhaust system with a heat pump and without a plate recuperator, as well as a supply unit with a heat pump and a mixing chamber.
- Can be equipped with an electric heater
- Painting in any colour of the RAL palette.

AUTOMATIC MODE

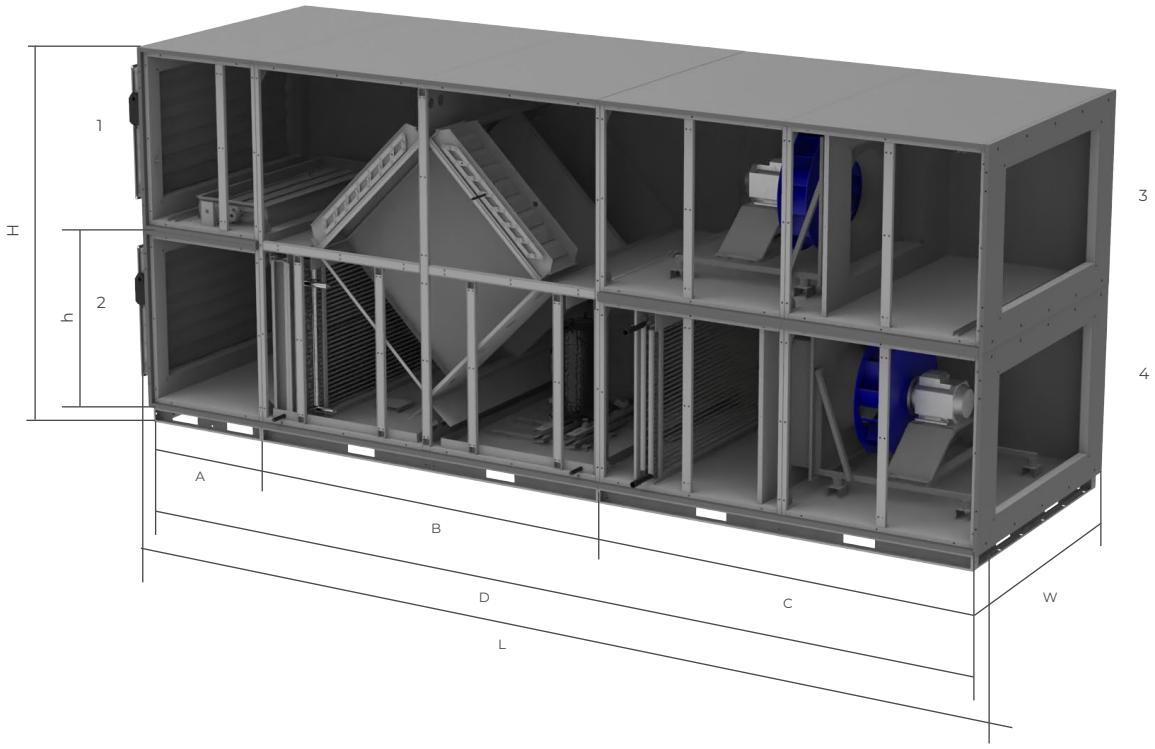
Provides an energy-efficient method of drying depending on the air humidity in the room and the climatic parameters of the outside air.

TECHNICAL FEATURES

TYPE	AIR CONSUMPTION, M3/H	MAXIMUM EXTERNAL STATIC PRESSURE, PA	AMOUNT OF MOISTURE REMOVED, KG/H (Air parameters: Outside: T=22°C, φ = 80%. Exhaust: T=30°C, φ = 60%)		ELECTRIC POWER CONSUMPTION, KW*
			MAIN MODE (WINTER, MIXING OF FRESH AIR)	ACTIVE DRYING	
PoolStar-3	3 000	800	28,6	6	6,5
PoolStar-4	4 000	800	39,6	10,1	9,9
PoolStar-5	5 000	800	65,2	12,4	11,5
PoolStar-6	6 000	600	88,4	17,2	13,3
PoolStar-8	8 000	650	131,4	22,9	18,1
PoolStar-10	10 000	400	171,5	25,3	18,9
PoolStar-13	13 000	650	230,7	36,6	30,2
PoolStar-16	16 000	550	181,9	50,5	35,7
PoolStar-20	20 000	500	221	55,7	43
PoolStar-25	25 000	500	282,1	75,6	53
PoolStar-32	32 000	450	449,9	78,7	66,3

*In main mode while using EC fans, not taking into account automation consumption.

Up-to-date parameters of equipment are available in the selection program AeroSelect. Don't forget to check them with your manager



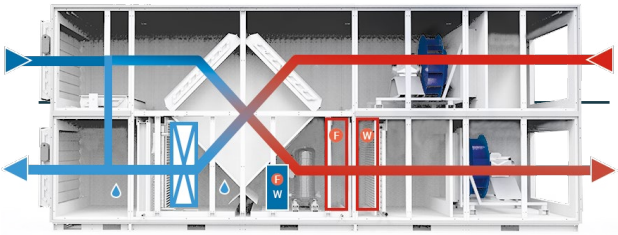
DIMENSIONS OF THE UNIT

TYPE	DIMENSIONS OF THE UNIT, MM								CONNECTION DIMENSIONS, MM			
	A	B	C	D	h	H	W	L	1	2	3	4
PS-3	700	1300	1429	3429	550	1185	900	3900	600/350			
PS-4	729	1458	1458	3645	600	1285	1000	4125	700/400			
PS-5	729	1589	1589	3907	700	1485	1100	4387	800/500			
PS-6	729	1700	1663	4092	700	1485	1200	4572	900/500			
PS-8	729	2000	1663	4392	800	1685	1300	4872	1000/500			
PS-10	729	2000	1663	4392	900	1885	1400	4872	1150/600			
PS-13	729	2300	2073	5102	1000	2085	1550	5582	1300/700			
PS-16	729	2905	2073	5707	1100	2285	1700	6187	1400/800			
PS-20	729	3069	2204	6002	1250	2585	1900	6482	1600/1000			
PS-25	729	3200	2523	6452	1400	2885	2050	6932	1750/1100			

Up-to-date parameters of equipment are available in the selection program AeroSelect. Don't forget to check them with your manager

OPERATION MODES OF THE UNIT

The built-in automation allows to adjust the unit to optimum operating modes: the main mode «winter», «winter min», «active drying», «fast heating», «summer», «summer +», «summer ++» (additional option), thanks to which it significantly saves the electric power.



Winter (main mode)

Main mode for winter time when there are people in the room.
Moisture is removed and fresh heated air is supplied to the pool.

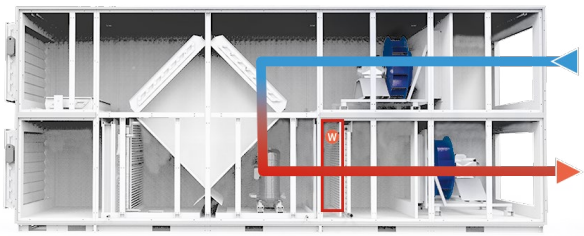
By default:
Fans work at 100%
Admixing of fresh air – 30%
Heat pump works



Winter min

Is applied when the pool is not used, water surface is covered or there is no water inside the pool.
Fresh air is supplied to the room for a minimum number of people (service personnel).

By default:
Fans work at 80%
Recirculation – 80%
Admixing of fresh air – 20%



Fast heating

Designed for conditions when there are no people in the pool premise and no moisture release, water surface is covered or there is no water inside the pool.

By default:
Water heater works in a stand-by mode.
Admixing of fresh air – 0%.



Active drying

Is used when there are no people in the pool, but there is an active release of moisture.
The unit operates in stand-by mode, maintaining certain humidity due to the operation of the heat pump.

By default:
Recirculation – 100%
Admixing of fresh air – 0%
Heat pump works.

Up-to-date parameters of equipment are available in the selection program AeroSelect. Don't forget to check them with your manager

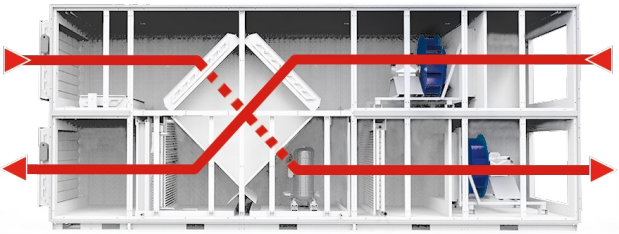


Summer

The mode in which ventilation of the pool premise is performed with the help of fresh warm air.
Maintains the set moisture level. This is achieved by removing moist air and supplying warm dry air.

By default:
Fans work at 100%.
Fresh air – 100%
Heat pump doesn't work.





Summer+

The mode is similar to the Summer mode, except that the supply air is not heated on the recuperator but goes through the bypass.

By default:
Fans work at 100%.
Fresh air – 100%

Summer ++ (extra option)

The unit works as a general forced ventilation system. The mode is relevant in the warm season with high humidity of outside air.
The supply air passes through the recuperator, while the heat pump is turned on the reverse mode, removing excess heat from the supply air.

By default:
Fans work at 100%.
Admixing of fresh air – 100%

REALISED PROJECTS



Cottage community "Green Hills",
Vita-Poshtova village



Sport Complex,
Zoloche village



Fitness centre "Vertical",
Odessa



WISH AQUA&SPA RESORT,
Vyshenky village



Sports and wellness centre,
Vyshenky village

Up-to-date parameters of equipment are available in the selection program AeroSelect. Don't forget to check them with your manager

AEROSTAR

PoolStar compact

Compact unit for dehumidification and ventilation of air in rooms with intensive moisture release.

CAPACITY
FROM 750 m³/h TO 3000 m³/h



Solutions that work



Parameters that determine comfort being in the pool:

- temperature,
- humidity,
- speed of movement,
- high-quality air composition.

For maintenance of comfortable conditions and an acceptable level of water evaporation, the humidity in the pool should be 50-60%.

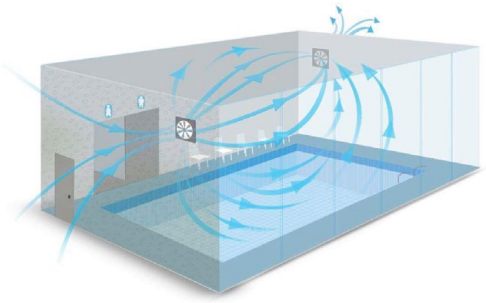
POOLSTAR COMPACT UNIT HELPS TO CREATE A HEALTHY MICROCLIMATE IN THE POOL

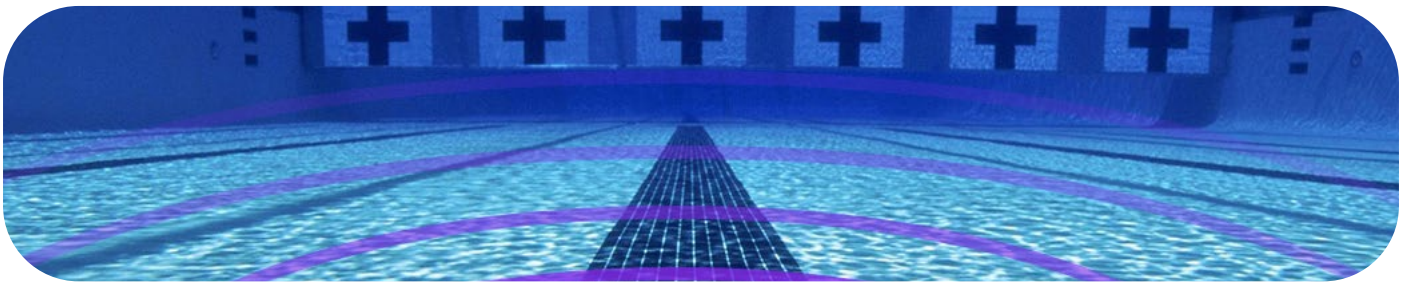
At very high relative humidity a feeling of suffocation occurs. High humidity reduces evaporation through the skin and limits regulatory capacities of the body to maintain body temperature at the constant level. Therefore, the humidity control in the pool at a large extent determines the feeling of comfort.



The composition of air – which is the ratio of oxygen and carbon dioxide, evaporation, odours, air mobility – is regulated by the ventilation system.

The designers of air distribution system should achieve the effective reduction in humidity and acceptable air quality in the pool.
Complaints about uncomfortable conditions in water are frequently caused by poor air distribution and by the fact that chloramines are not removed from the surface of the pool.





Up-to-date parameters of equipment are available in the selection program AeroSelect. Don't forget to check them with your manager

Area of usage:
Small pools in private houses.



Provides the most comfortable conditions while being in the pool.



Advantages

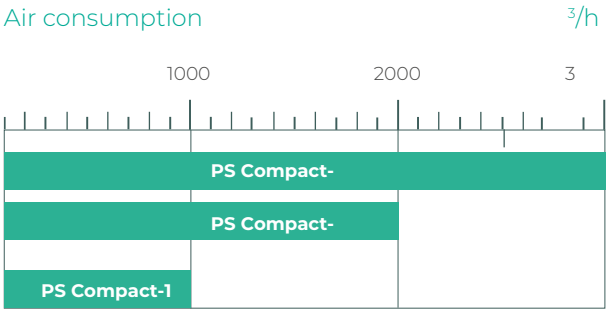
Protection from corrosion, mould and fungus
Prevents formation of condensate, corrosion, mould and fungus, prevents the destruction of load-bearing structures.

Double energy efficiency
Is provided by joint work of the plate recuperator and the heat pump.

High-quality steel coated with anti-corrosion powder paint
The environment of POOLSTAR operation is aggressive because of chlorine usage in swimming pools. In addition, there is constant contact with humid air. For additional protection against corrosion, all interior panels are made of high-quality steel coated with anti-corrosion powder paint.

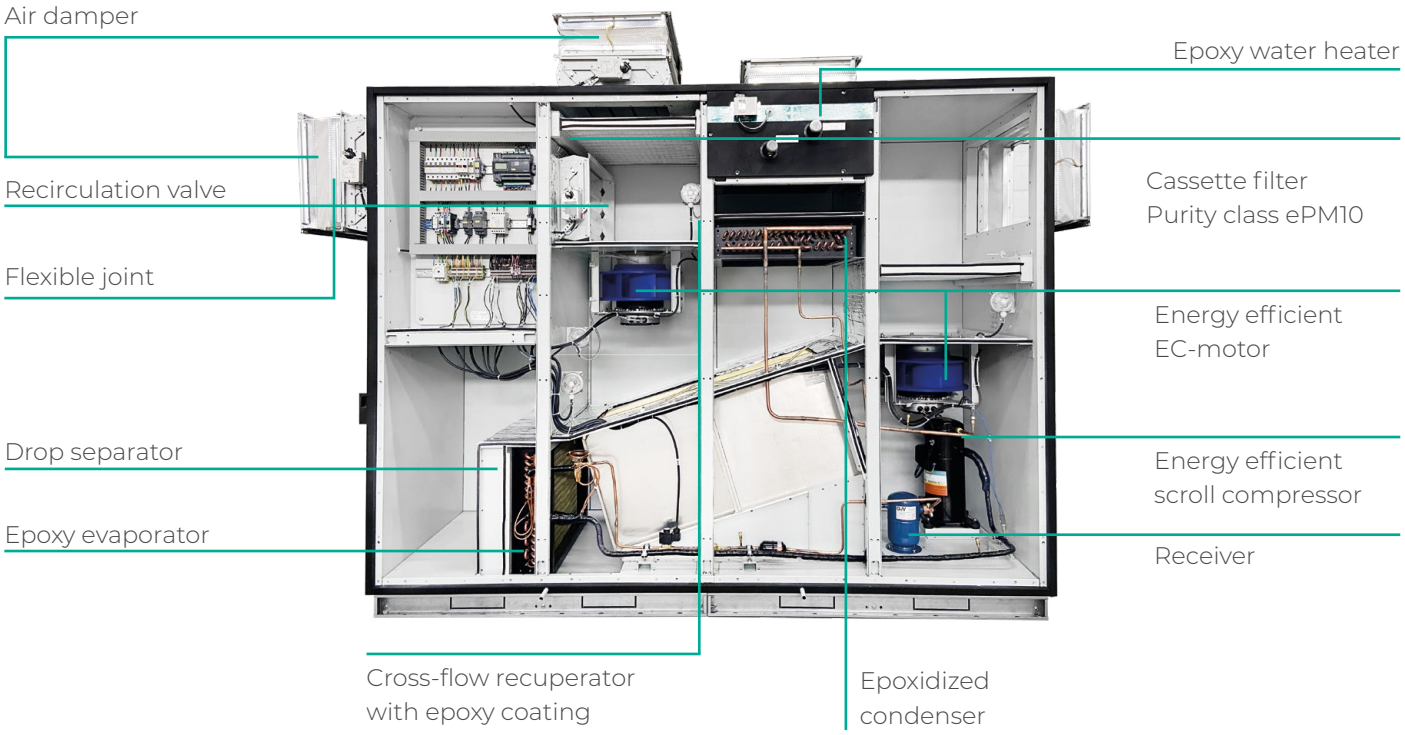
Energy saving mode of operation
PoolStar Compact units are equipped with a set of automation that can be easily integrated into a single management system “Smart Home”.

Standard model range is presented with 3 standard sizes:



Up-to-date parameters of equipment are available in the selection program AeroSelect. Don’t forget to check them with your manager

BASIC CONFIGURATION



ENERGY EFFICIENT EC-MOTOR

EC-electric motor with efficiency above 90%.
Saves at least 30% more electricity than AC motor.
Complies with the ErP 2015 directive

ENERGY EFFICIENT SCROLL COMPRESSOR

- innovative design of the built-in radial and axial coordination of scrolls.
- accurate calculation of load and sealing force optimizes operating sound pressure.
- built-in sound insulation.
- built-in protection against high pressure and overload.

CROSS-FLOW RECUPERATOR WITH EPOXY COATING

Allows reducing the total energy consumption by 60%

- Corrosion-resistant aluminium foil coated with epoxy resin for aggressive environments.
- Strong connection of plates due to double folding, pressure stability due to five-fold thickness of the material.

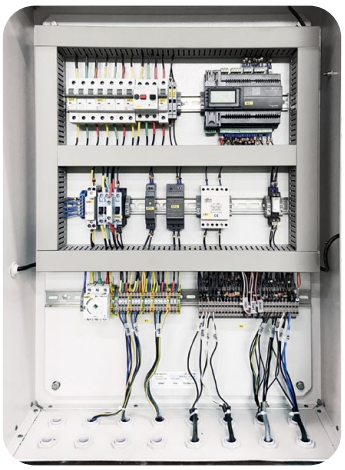
AIR DAMPER

Equipped with a turn-type drive and modulating control.

Interior panels are made of high-quality steel coated with anti-corrosion paint for aggressive environments.

Up-to-date parameters of equipment are available in the selection program AeroSelect. Don't forget to check them with your manager

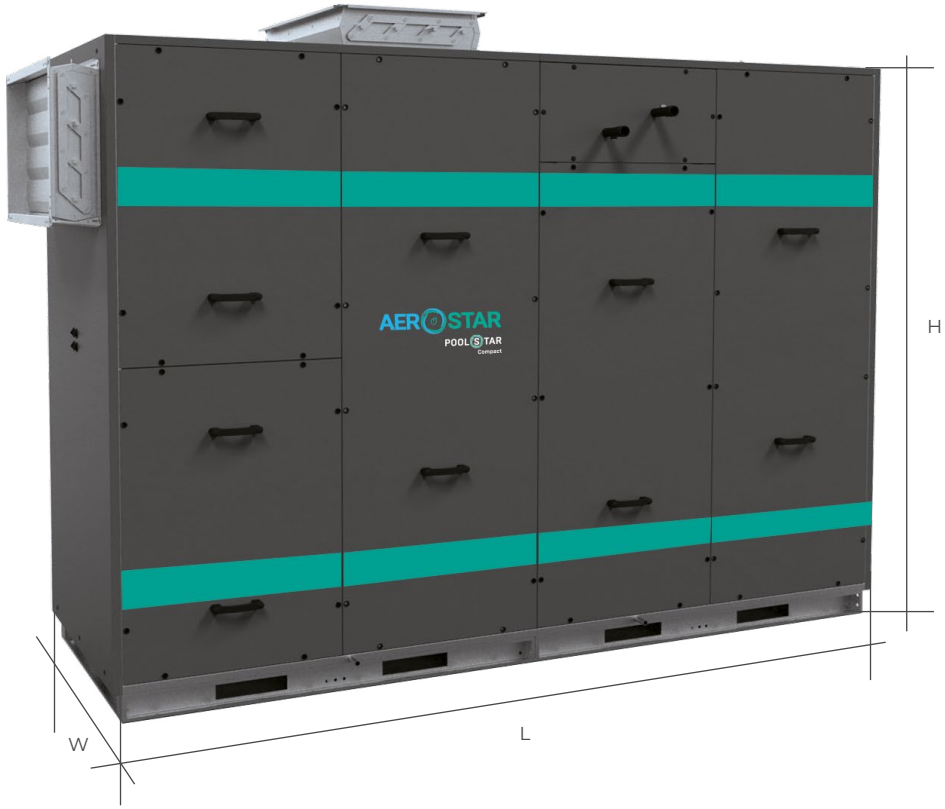
BASIC CONFIGURATION



BUILT-IN AUTOMATION

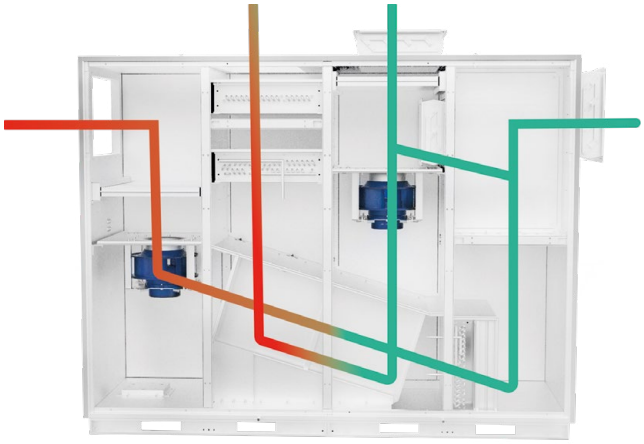
Depending on the thermophysical characteristics of the room, automation system selects the optimal operation saving mode of equipment for ventilation, dehumidification and maintenance of the set temperature in the room.

DIMENSIONS OF THE UNIT



TYPE	DIMENSIONS OF THE UNIT, mm			CONNECTION DIMENSIONS, mm			
	H	W	L	1	2	3	4
PS Compact-1	1500	600	2450	400/200			
PS Compact-2	1800	750	2450	600/350			
PS Compact-3	1800	900	2450	700/400			

Up-to-date parameters of equipment are available in the selection program AeroSelect. Don't forget to check them with your manager

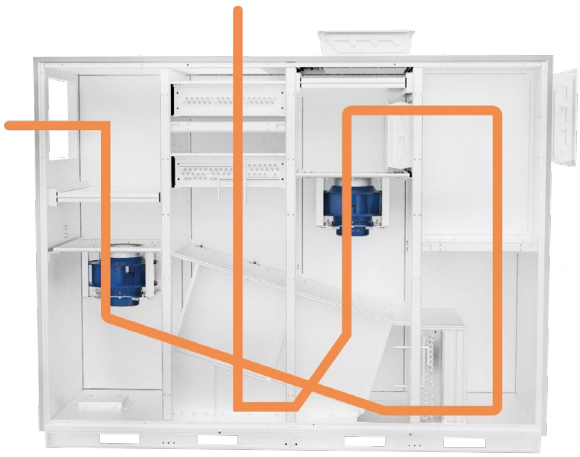


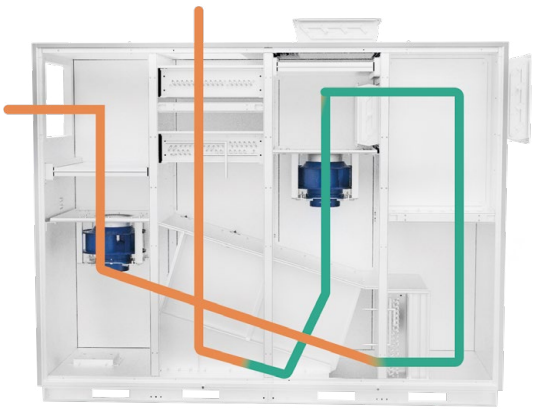
Winter (main mode)

Main mode for winter time when moisture is removed and fresh air is supplied to the pool.
The mode is activated when the actual humidity level exceeds the set humidity value on the controller.
Recommended parameters:
Admixing of fresh air – 30%

Fast heating

Designed for conditions when there are no people in the pool room and no moisture release, so that set humidity value is higher than the actual one, and actual temperature is lower than the set temperature.
Recommended parameters:
Recirculation – 100%





Active drying

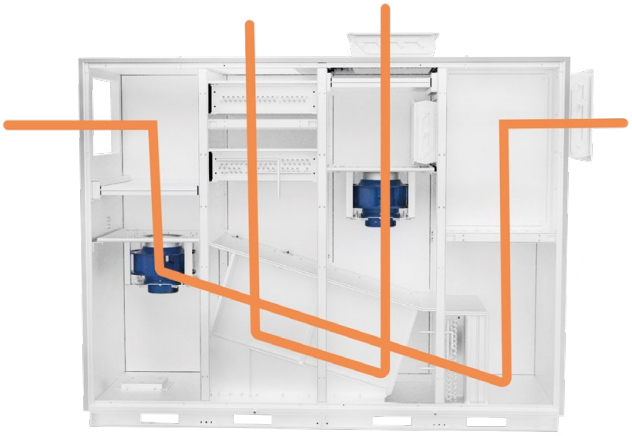
Is used when there are no people in the pool, but there is an active release of moisture. The unit operates in stand-by mode, maintaining certain humidity due to the operation of the heat pump.

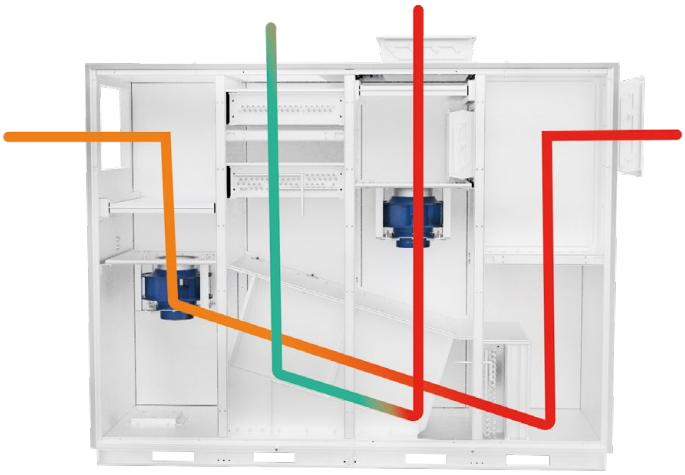
Recommended parameters:
Recirculation – 100%

РЕЖИМИ РОБОТИ

Summer

The mode in which ventilation of the pool premise is performed with the help of fresh warm air.
Maintenance of the set moisture level is achieved by removing moist air and supplying warm dry air.





Summer ++

The supply air passes through the recuperator, while the heat pump is turned on the reverse mode, removing excess heat from the supply air.

REALISED PROJECTS



Cottage community “Green Hills” (sport complex), Vita-Poshtova village.



Sport Life,
Lviv



Fitness centre “Vertical”,
Odessa



WISH AQUA&SPA RESORT,
Vyshenky village



Kupava,
Brovary



Sport Life, Retroville Mall
Kyiv

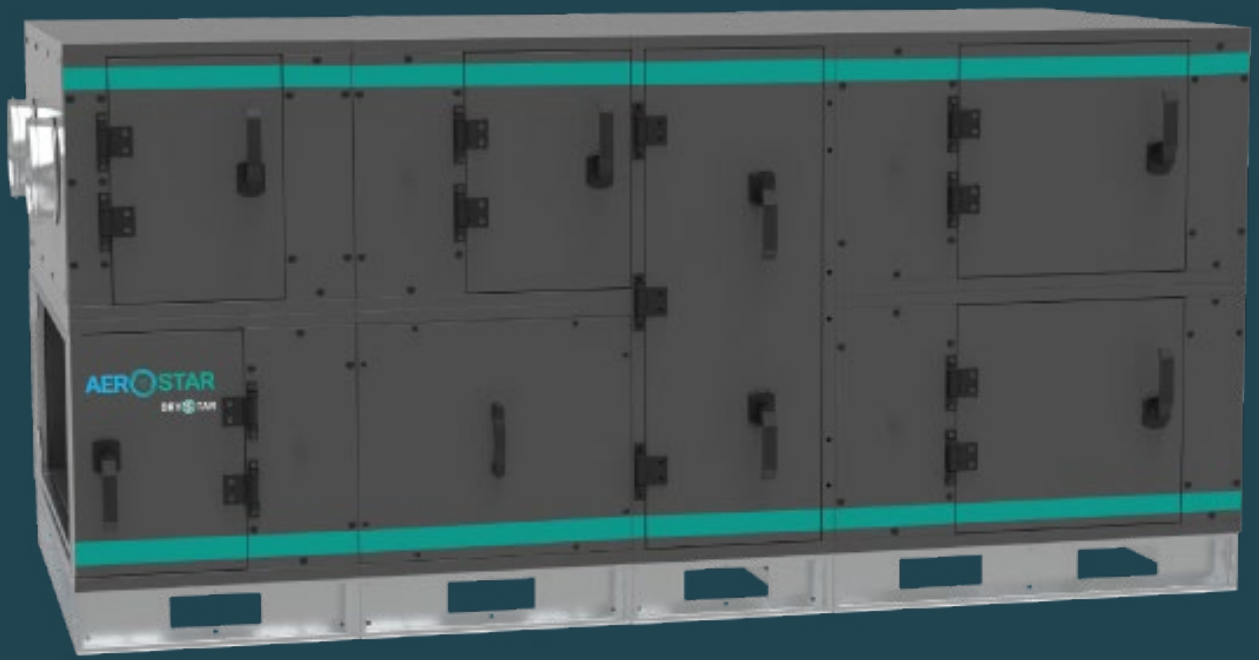
Up-to-date parameters of equipment are available in the selection program AeroSelect. Don’t forget to check them with your manager

AEROSTAR

DryStar

Adsorption rotary air dryer

CAPACITY: 1 000 – 8 000 m³/hour



eco

Increased moisture level causes the rapid growth of bacteria and mould. That is why moisture damages and destroys buildings, spoils different things, and is harmful for people's health.

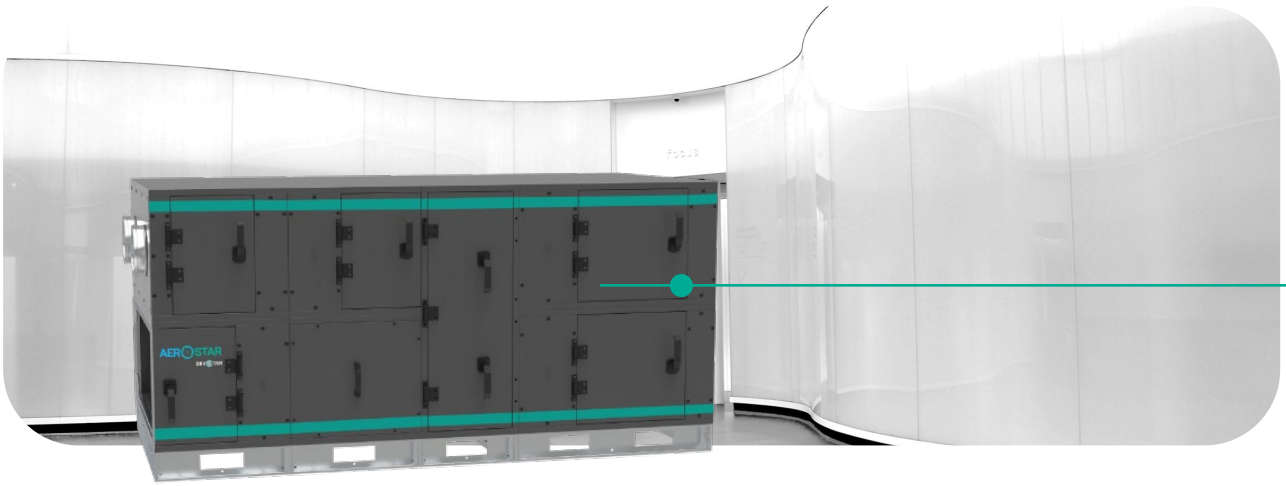
According to researches, a person feels best at a relative humidity in the range **from 40% to 60%**.

In such conditions, the body most effectively fights against airborne spread infections.

Excessive water vapour content negatively affects the operation of residential buildings, comfort and well-being of people living in them.

Increased humidity causes irreparable damage to production facilities, public buildings, retail spaces and warehouse terminals, cultural and entertainment facilities.





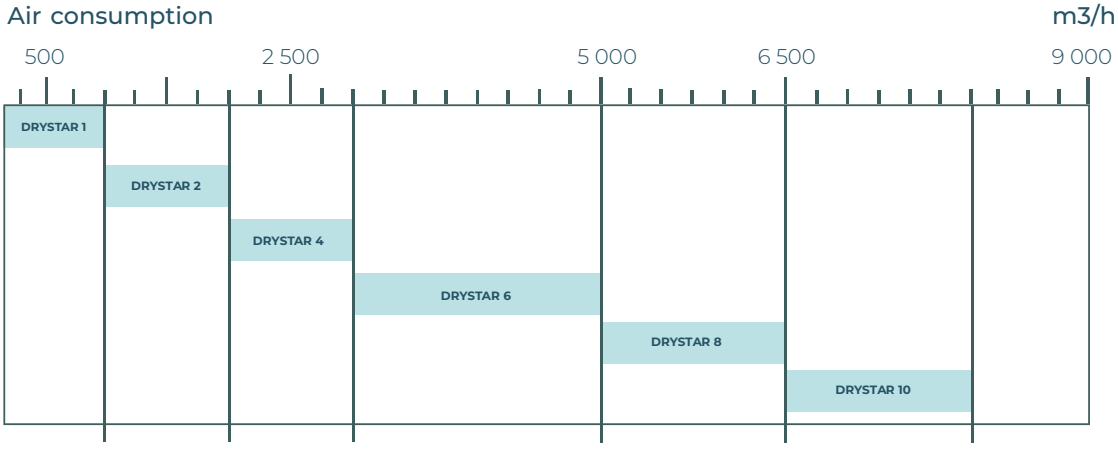
AREA OF USAGE

ice arenas, food industry, pharmacy, warehouses, museums, medicine.
Can be used both independently (indoors or outdoors), and in a complex with air-processing system.

- - Dehumidifiers reduce humidity without changing the temperature.
- - Support the creation of normatively necessary conditions for people who are indoors.
- - Control and maintain the required relative humidity for production technology in industrial buildings.
- - Protect from corrosion, provide electrical and environmental safety.
- - Reduce the humidity level to remove the load and increase the service life of refrigeration units.
- - The air is dried, preventing the formation of ice in refrigerators and freezers, transitional vestibules.
- - Intensively remove moisture after natural disasters, floods or waterfloods.
- - Dry the objects during building on the stages of finishing, concrete or repair works.
- - Remove the evaporations from the pool mirrors, preventing formation and dropout of condensate on equipment and surfaces.
- - Carry out dehumidification during complex air treatment.

Optionally: the unit can be equipped with sensors of air moisture.

Standard model range is presented with 6 standard sizes



Up-to-date parameters of equipment are available in the selection program AeroSelect. Don't forget to check them with your manager.

ADVANTAGES



Controls humidity level, prevents condensation and, as a result, prevents the formation of mould and bacteria growing, protects against corrosion;



Supports long-term storage of hygroscopic materials and bulk substances;



Unique sealed reinforced case ;



Equipped with a sorption rotor with ultra-high capacity to absorb the moisture;



Convenient maintenance of the unit due to the improved design;



Easily integrated into the scheduling system of the facility.

DIMENSIONS OF THE UNIT

Model	Rated consumption, m3/h	Static pressure	Rated consumption, m3/h	Static pressure	Reactivation air humidity	Power consumption
	Supply air		Reactivation air			
DryStar-1	1000	250	250	250	20°C/50%	11,8
DryStar-2	2000	250	500	250		14,2
DryStar-4	3000	250	750	250		27,3
DryStar-6	5000	250	1250	250		50,1
DryStar-8	6500	250	1625	250		69,9
DryStar-10	8000	250	2000	250		84,5

Model	Power supply	Filter type	Level of sound pressure (LW in the surrounding area)	Dehumidification, kg/h	Dimensions (W*H*L), mm	Weight, kg
DryStar-1	230/1/50	G4	38	6,3	11,8	603
DryStar-2	230/1/50	G4	39	13	14,2	603
DryStar-4	230/1/50	G4	39	19,8	27,3	701
DryStar-6	400/3/50	G4	55	33,4	50,1	1312
DryStar-8	400/3/50	G4	55	42,4	69,9	1312
DryStar-10	400/3/50	G4	48	50,8	84,5	1043

Up-to-date parameters of equipment are available in the selection program AeroSelect. Don't forget to check them with your manager.

BASIC CONFIGURATION



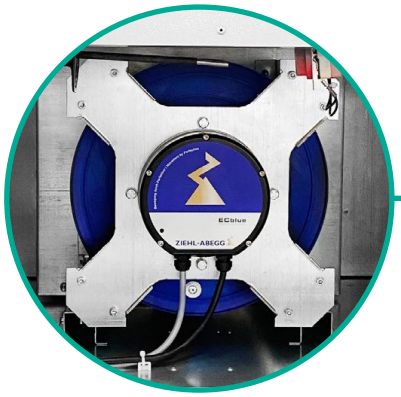
POCKET FILER

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: <100°C
Humidity of the working environment: ≤100%.





EC-MOTOR

Brushless synchronous motor with electronic control highly reduces noise level.

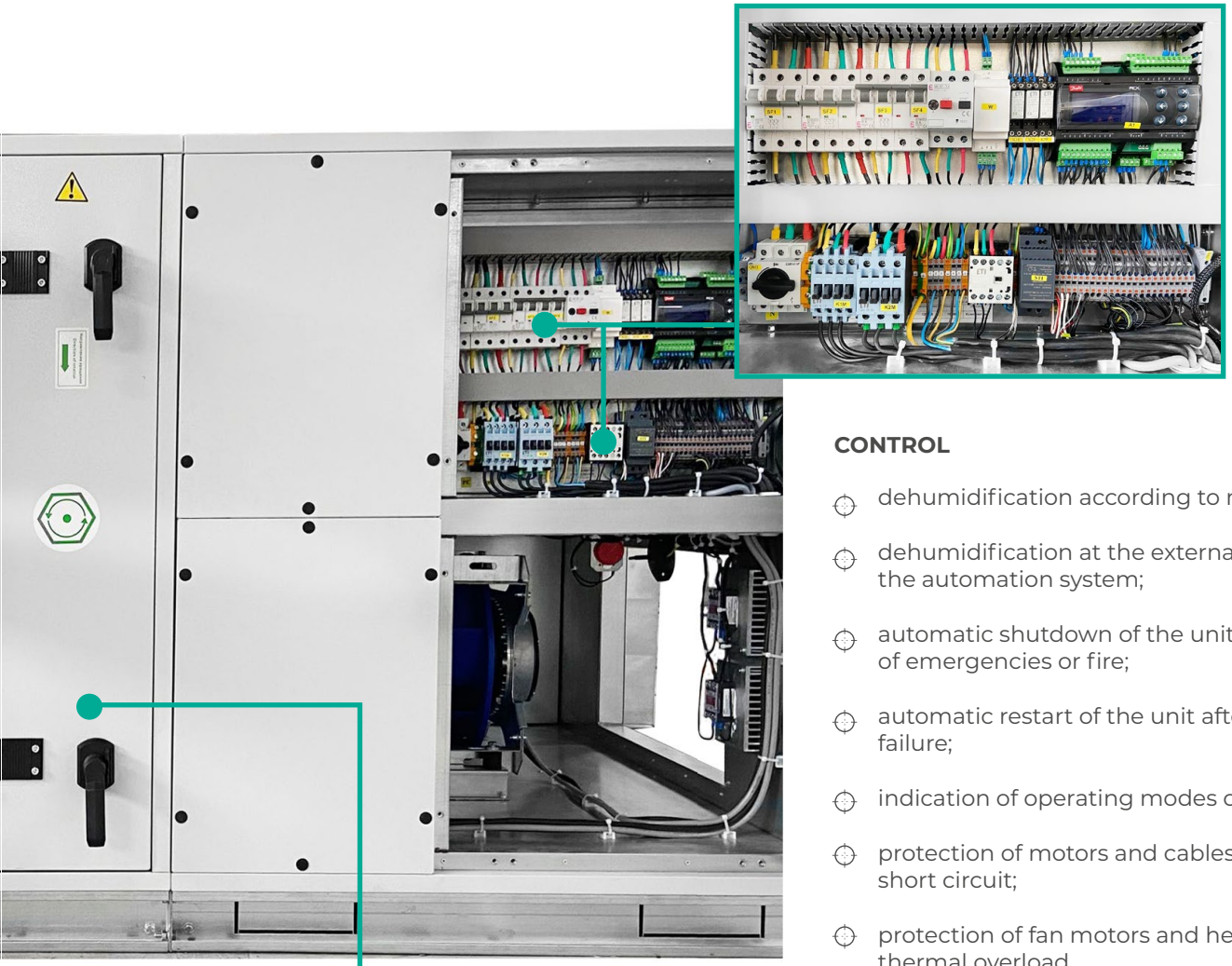
High working pressure: up to 2500 Pa.
Wide range of nominal voltage: 200-277V and 380-480 V ±15%.
Long service life: more than 80000 hours of continuous work.

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%.
- Optionally EC-motor is equipped with MODBUS RTU protocol.

Option. Application of the Flow Grid technology: air flow rectifier.

Up-to-date parameters of equipment are available in the selection program AeroSelect. Don't forget to check them with your manager.



CONTROL

- dehumidification according to moisture sensor;
- dehumidification at the external signal from the automation system;
- automatic shutdown of the unit in case of emergencies or fire;
- automatic restart of the unit after a power failure;
- indication of operating modes of the unit;
- protection of motors and cables against short circuit;
- protection of fan motors and heaters from thermal overload.



SORPTION ROTOR

Adsorption dehumidifiers work at any temperatures and air humidity levels.

The rotor is the main element of the dehumidifier. Two isolated from each other air streams are passed through the rotor at the same time.

The first stream is dehumidified air.
The second stream is reactivation air.

Water molecules are absorbed by a special absorbent composition (based on silica gel) while passing through a rotary recuperator.

Moisture removal is accompanied by the air temperature increase. While rotating recuperator enters the reactivation zone, where it is dried by a second stream of heated air. This way, its moisture-absorbing properties are restored.

Up-to-date parameters of equipment are available in the selection program AeroSelect. Don't forget to check them with your manager.