

Altera[®]

Product catalogue



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ATREA HISTORY

1973

• The first plastic heat recovery exchanger in the Czech Republic by Ing. Petr Morávek CSc.

1989

• The Velvet revolution

1990

• ATREA was established

1992

• The first export to Germany

1996

• First production premises reconstruction

2000

• ATREA is employing 100 people

2014

• Moving into new production facilities

2024

• ATREA's premises reached 20,000 m² and approximately 500 people

About company

ATREA s.r.o. was established in 1990 by Ing. Petr Morávek, CSc., and his son Daniel in the laundry room of their family home. Thanks to the technical erudition of our founder, the flexibility of a private family-owned company and an active business policy, ATREA has become one of the largest manufacturers of ventilation equipment in the European market with over thirty years of experience.

ATREA currently employs around **500 employees in thirteen countries**. The manufacturing premises of the company are situated in the Czech Republic – Jablonec nad Nisou, about 20 km from the border with Germany. **The area of the manufacturing plant is about 20,000 m²** with further planned expansion in the next few years. The manufacturing plant includes state-of-the-art robotic machinery and advanced automation 4.0., which results in the production of top products.

Production policy

ATREA is one of the **leading European producers of ventilation units with heat recovery**. The production programme of the company focuses mainly on ventilation units, but they

also produce innovative and exceptional products for ventilation of industrial kitchens and the company is further active in passive houses and energy-saving solutions. Unlike most competing companies, an important part of the company's success is the **maximum control of strategic components of its own production programme**. The company thus develops and manufactures its own heat recovery exchangers, as well as its own top control system, which is directly tailored to ATREA ventilation units.

Technological innovation

The success of ATREA therefore lies mainly in the **constant technological innovation** and deep technical erudition of its founders and the entire development team. The development of strategic components and the pressure on constant innovation thus allow the maximum possible leadership over competition through **innovative and unique products of top quality** and penetration to the demanding Western markets where less-quality manufacturers are hard to enforce.



Certifications

We can prove our top-quality products by having the most demanding international certifications:

- Passive House / VDI 6022
- Eurovent / Ecodesign 2018
- Conformité Européenne



Rotary heat exchangers are a Eurovent certified product of the renowned company Kastt

Trade policy

ATREA is a multinational company building a holding of European subsidiaries. Since it is a family-owned company, its business policy is guided by an effort to achieve the most slender and effective structure.

This makes the company very active and flexible in its business strategies, which allows to reactreacting flexibly to local and international movements on the HVAC market compared to corporate structures.

This makes ATREA the leader in the Czech, Slovak and Romanian markets and one of the leading players in the market in Germany, where the company has built strong representation through a top partnership lasting more than 20 years.

Overall, ATREA is present in more than 23 foreign markets, including not only Germany but also the UK, Switzerland, Denmark and Australia, and is also building its own subsidiaries – currently associated subsidiaries in Slovakia, Hungary, Romania, Bulgaria, Poland, Croatia, Moldova, Denmark, Sweden, Norway and Austria.

Own accredited laboratory

ATREA also has its own testing laboratory **Air-Lab**, which is an **internationally recognised, certified and accredited laboratory** for measuring not only HVAC units with heat recovery. This allows the company to respond flexibly to its own development trends and cooperate with international players such as the PHI Institute or Eurovent.

EVIA

ATREA is also a member of the prominent Evia Group, which brings together the most important and largest European producers. The European Ventilation Industry Association (EVIA) was established in Brussels in July 2010. EVIA's mission is to represent the views and interests of the ventilation industry and serve as a platform between all the relevant European stakeholders involved in the ventilation sector, such as decision-makers at the EU level as well as our partners in EU member states.



ATREA Foundation

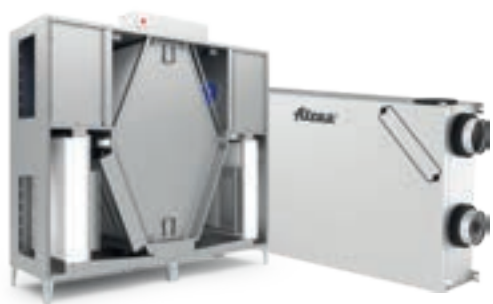
As a family owned company we believe that successful business should be socially responsible and care about its region. Thus ATREA foundation cares about social, educational and health projects. As a priority, we are ready to support our colleagues in difficult life situations.

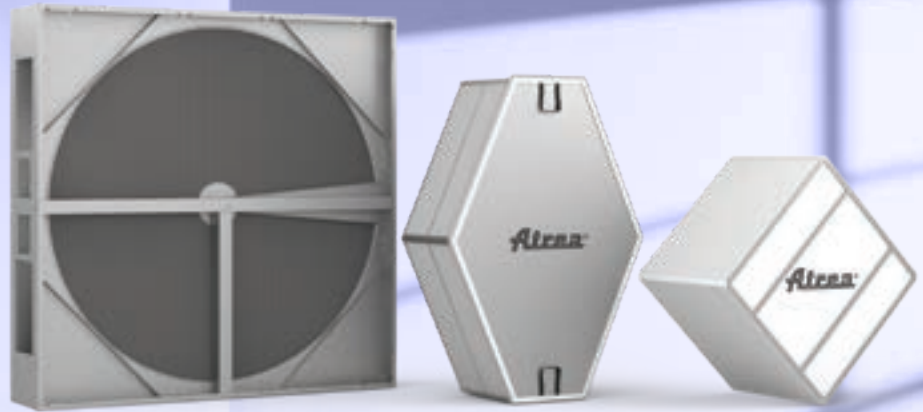
We try to be active mainly in our region and support various institutions like regional library, hospitals or different types of NGOs. We try to reflect the current needs so we also support invaded Ukraine. From longer-term projects, we are actively involved in supporting the fight against domestic violence.

We believe business should care about other people.

ATREA product range

- Commercial ventilation
– air-handling units from 500–15,100 m³/h
- Residential ventilation
– air-handling units from 170–560 m³/h
- Kitchen ventilation
– whole area ventilation ceilings and kitchen hoods
- SMART Box system
– complete solution of VAV boxes, control system and a central unit
- School ventilation





- 
Counter-flow – ATREA own production of plastic heat recovery cores, S7 type is the biggest diamond-shape heat-recovery exchanger on the market, efficiency up to 95 %, range up to 11,000 m³/h.
- 
Cross-flow – ATREA own production of plastic heat recovery cores, efficiency up to 65 %, range up to 15,100 m³/h.
- 
Rotary-wheel – efficiency up to 85 %, range from up to 15,000 m³/h, Eurovent certified (Rotary heat exchangers are a Eurovent certified product of the renowned company Kastt spol. s r.o.)

OWN HEAT RECOVERY CORE PRODUCTION

Certification



VDI 6022 ready



Eurovent
Rotary heat exchangers are a Eurovent certified product of the renowned company Kastt



Passive House



Ecodesign 2018

ATREA highlights

Own production of heat exchangers – We have our own know-how for the production of heat recovery cores. Our range consists of cross-flow and counter-flow types for both domestic and commercial range.

High quality products – We use the best components on the market, such as Belimo servos and ebm-papst and Ziehl-Abegg fans.

Control system – There are two types of control system in our portfolio, a high-demand version with integrated web server or a simpler and cheaper version.

Selection software – A great tool for designers, easy, intuitive, includes all the technical and marketing information.

Compact units – Our units are very small and flexible to fit the strictest project requirements.

Plug'n'play – ATREA units are compact with all wiring done in the production. Thus quick commissioning saves the time and labour costs.

Remotely controlled units – There is no need to travel long distances to fix our units. Errors can easily be fixed using the unit's web interface.

Certification – We can prove the high quality of our products with various major certificates throughout our portfolio.

Each heat-recovery exchanger leaving ATREA company is tested in the special testing chambre as a part of final quality check and labeled with the results.

ATREA's product range

150–550 m³/h DOMESTIC LINE

DUPLEX Pro / Pro-V
DUPLEX Easy2
DUPLEX R5
DUPLEX Slim

500–15,100 m³/h COMMERCIAL LINE

DUPLEX Multi
DUPLEX MultiEco
DUPLEX Flexi / -V
DUPLEX Roto
DUPLEX Basic
DUPLEX RS5
DUPLEX Silent

770–1,100 m³/h SCHOOL LINE

DUPLEX Inter
DUPLEX Inter-H

KITCHEN LINE

Ventilation ceilings
Kitchen hoods

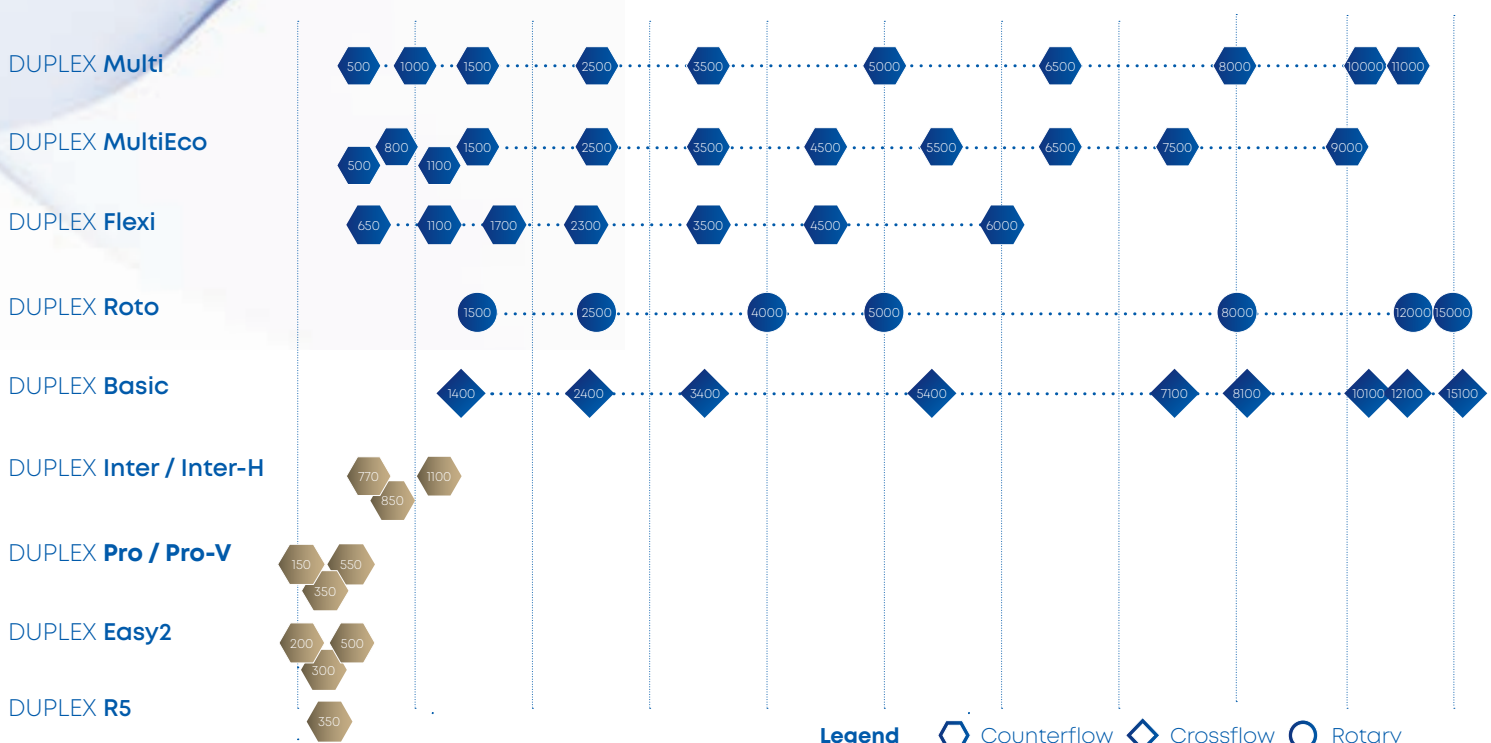
SMART Box central system

VAV boxes, central unit and control system guaranteed by one producer.




• Domestic range

• Commercial range





DUPLEX Multi

500–11,000 m³/h |  Counterflow

DUPLEX Multi units represent the best of what ATREA offers to ventilate mainly commercial buildings. The philosophy of these units is based on plenty of possibilities of configuration and absolute variability. The units are exclusively tailored according to the requests and needs of individual projects. Superior construction of the units is suitably completed with the latest control system with the Internet connection.



Certification



ADVANTAGES Multi

- Heat recovery efficiency up to 93 %
- Superior plastic counter-flow heat exchanger
- Very flat design, suitable even for ceiling-suspended mounting
- Ceiling-suspended version up to 8000 m³/h
- Highly variable
- Compact and semi-compact design
- Elegant look
- Integrated heating and cooling possibility
- Floor-standing, ceiling-suspended and floor-standing flat version
- The units meet requirement in accordance with Commission regulation (EU) No. 1253/2014 (Ecodesign)
- Remote control via Internet interface
- Major savings in servicing costs
- Touchscreen controller
- EC type fans – top German quality
- Smart phones application
- BMS, KNX, Bacnet compatibility
- Hygiene version according to VDI 6022
- 100% by-pass
- Air circulation mode
- Constant airflow and pressure control

Multi size range



500 m³/h

11,000 m³/h

DUPLEX Multi ways of application

ATREA base-frame

Unique solution for rooftop units – **no ducting needed!**



Standard solution

- HEAT loss
- MATERIAL expenses
- LABOUR expenses
- UNATTRACTIVE design

ATREA base-frame solution

- COST saving
- NO heat loss
- ELEGANT design

inside

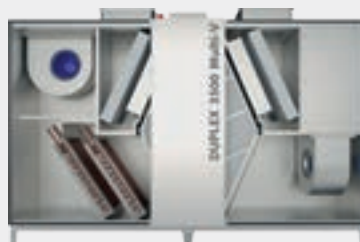


DUPLEX Multi

500–11,000 m³/h
(500, 1000, 1500, 2500, 3500, 5000, 6500, 8000, 10000, 11000)

A compact and 100% customizable unit for various **indoor** installation positions including **floor-standing and underceiling** to meet all the requirements of all projects.

vertical



DUPLEX Multi-V

1,500–8,000 m³/h
(1500, 2500, 3500, 5000, 6500, 8000)

Air-handling unit with heat recovery efficiency of up to 93% with the same philosophy of total customization, but with special design of **all spigots upwards**.

rooftop



DUPLEX Multi-N

1,500–11,000 m³/h
(1500, 2500, 3500, 5000, 6500, 8000, 10000, 11000)

Excellent customized **rooftop** compact HVAC units. These units can be 100% project tailored and have our professional S7 heat exchanger with heat recovery efficiency up to 93%.



DUPLEX MultiEco

500–9,000 m³/h |  Counterflow

This unit line follows up to a very successful line DUPLEX Multi and it offers a wide range of versatile ventilation units with air performance from 500 to 9,000 m³/h. The philosophy of these units is based on several possibilities of configuration and absolute variability of these units. To keep up with the latest trends, we have created a whole new generation of compact commercial ventilation units that comply with EU Directive 1253/2014 and simply put, this is a solution that will take your breath away.



Certification



ADVANTAGES MultiEco

- Heat recovery efficiency up to 93 %
- Superior plastic counter-flow heat exchanger
- Very flat design, suitable even for ceiling-suspended mounting
- Highly variable
- Compact and semi-compact design
- Elegant look
- Integrated heating and cooling possibility
- Floor-standing, ceiling-suspended and floor-standing flat version
- The units meet requirement in accordance with Commission regulation (EU) No. 1253/2014 (Ecodesign)
- Internet interface as standard (aMotion)
- Major savings in servicing costs
- Touchscreen controller
- EC type fans – top German quality
- Smart phones application
- BMS, KNX, Bacnet compatibility
- Hygiene version according to VDI 6022
- 100% by-pass
- Air circulation mode
- Constant airflow and pressure control

MultiEco size range



500 m³/h

9,000 m³/h

Valuation ECODESIGN 2018



Ecodesign is a new Commission regulation (EU) No. 1253/2014 that must be followed by all EU markets. This applies to ventilation units with heat recovery; manufacturers and distributors.

There are also few minimum requirements, such as:

- The minimum thermal efficiency of all heat recovery systems except run-around heat recovery systems in bidirectional ventilation units shall be 73 %
- The maximum internal specific fan power of ventilation components in W/(m³/s) for a bidirectional ventilation unit with other heat recovery system must fulfill a certain limit.
- Recommended class of filtration is F7 / M5 (supply / exhaust)
- The heat recovery system shall have a thermal by-pass
- All units shall be equipped with a multi-speed drive or variable speed drive

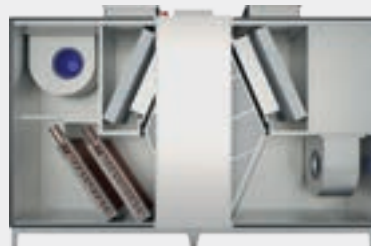
 **inside**



DUPLEX MultiEco
500–9,000 m³/h
(500, 800, 1100, 1500, 2500, 3500,
4500, 5500, 6500, 7500, 9000)

DUPLEX MultiEco units for **indoor** use. The whole range can optionally be equipped with built-in or external accessories – water or electric heating, water-based or direct cooling, shut-off dampers, by-passes and recirculation etc.

 **vertical**



DUPLEX MultiEco-V
1,500–6,500 m³/h
(1500, 2500, 3500, 4500, 5500, 6500)

An excellent, brand new generation of our customized compact HVAC units with all outlets **directed upwards**. These units can be 100% project tailored and have our professional S7 heat exchanger with heat recovery efficiency up to 93 %.

 **rooftop**



DUPLEX MultiEco-N
1,500–9,000 m³/h
(1500, 2500, 3500, 4500, 5500, 6500,
7500, 9000)

Ventilation unit with heat recovery targeted for the **rooftop** installations. A special feature of this new generation is their superb compactness with maximum focus on minimum height and ATREA innovative solution for heat loss elimination.



DUPLEX RS5

1,500/700–5,500/2,000 m³/h |  Counterlow

Ventilation units DUPLEX RS5 with unique air circulation and cooling solution via central air ducting, allowing full-fledged ventilation and internal air circulation at the same time. Units are produced in several sizes from 1,500 / 700 to 5,500 / 2,000 m³/h of circulation / ventilation volume and are intended for ventilation of every type of civil and residential buildings, as well as from commercial and industrial buildings, where the emphasis is not only for ventilation, but also for heating and cooling.



Certification

ADVANTAGES RS5

- Heat recovery efficiency up to 93 %
- Superior plastic counter-flow heat exchanger
- Ceiling-suspended mounting
- An integrated recirculation damper with independent recirculation air supply
- Elegant look
- Built-in heaters and coolers
- The units meet requirement in accordance with Commission regulation (EU) No. 1253/2014 (Ecodesign)
- Internet interface as standard (aMotion)
- Major savings in servicing costs
- Touchscreen controller
- EC type fans – top German quality
- Smart phones application
- BMS, KNX, Bacnet compatibility
- Hygiene version according to VDI 6022
- 100% by-pass
- Air circulation mode
- Constant airflow and pressure control

RS5 size range



1,500 m³/h 5,500 m³/h

- The units are designed for areas where **hot air heating** is required. For example, where it is not possible to use conventional heating systems either **due to interior design** (spaces where **radiators cannot be used**) and the impossibility of covering all heat losses (floor heating systems that have limited output).
- The units are advantageous for **buildings with low energy performance**, where it is necessary to **quickly balance the temperature**, eg due to a sudden external heat gain from sunlight, which conventional heating systems don't solve fast enough (especially floor heating systems). Air systems **respond more quickly** to the demands of **increasing and decreasing heat output**.
- Thanks to **ventilation at the required performance**, ie no over-ventilation or low-ventilation, **an optimal climate is guaranteed even in terms of relative humidity**.
- The circulation air from the unit can **transmit a high heating or cooling capacity**, of course corresponding to the air volume from the unit.
- The **minimalist dimensions of the units place small demands on the utility room space**. The units are always delivered in an **under-ceiling design**, thanks to which they **allow the use of the given space**, for example for storage.

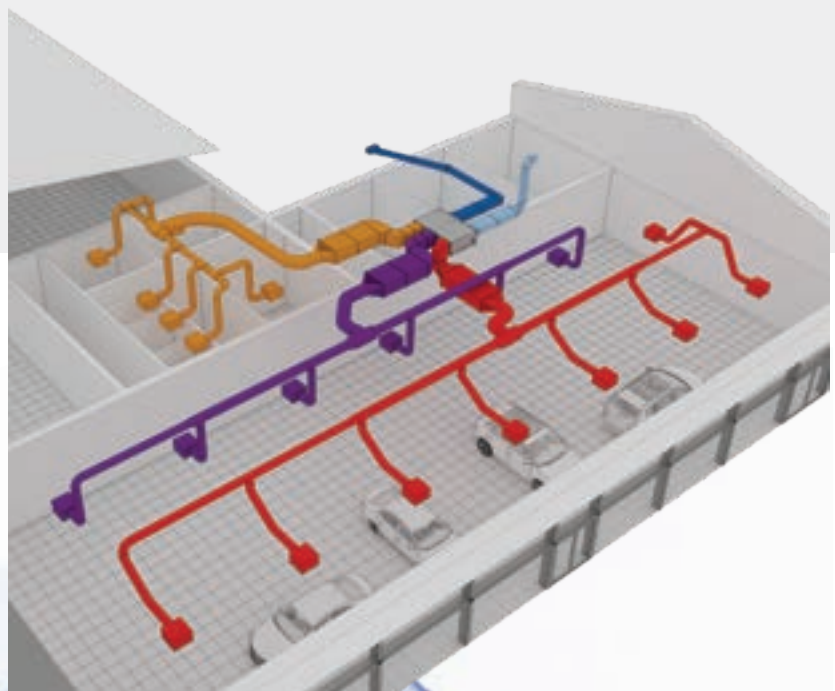
 underceiling



DUPLEX RS5

1,500–5,500 m³/h (1500/700, 1500/1000, 2500/700, 2500/1000, 3500/1200, 3500/2000, 5500/1200, 5500/2000)

New DUPLEX RS5 series indoor units with a unique re-circulation design solution to allow full-scale ventilation with simultaneous interior air recirculation. The units are manufactured in several capacity versions.



COMMERCIAL LINE



DUPLEX Flexi 3

650–6,000 m³/h |  Counterlow

The philosophy of these extraordinary and high-efficient unit is serial production, with subsequent availability in stock – that means delivery possibility within 24 hrs. Our customers can therefore immediately react to their clients' needs and optimize transport cost. The units are universal and can be modified on the side. 6 configurations in 1 unit!

Certification



ADVANTAGES Flexi

- Floor-standing, under-ceiling and rooftop in one
- Off-the-shelf delivery
- Efficiency of up to 93 %
- Great compactness
- On-site variability
- Versatile positioning
- Heating and cooling
- Left or right configuration in one unit
- Major savings in servicing costs as a result of the built-in web server
- 100% by-pass
- Constant flow and constant pressure
- Hygiene version according to VDI 6022
- Wide range of additional accessories
- PHI certification of the whole Flexi range

Flexi size range



650 m³/h

6,000 m³/h

DUPLEX Flexi 3 ways of application

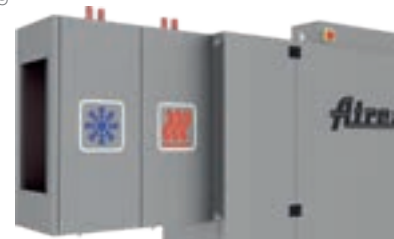
Cooling

The units can just as easily be provided with our water cooling coil with a special surface with aluminium fins to better spread water droplets to prevent them from entering the HVAC duct. As standard, either water-based or direct coolers are supplied, they can also be operated in reverse mode to act as a heat pump.

Heating

The Flexi series units can easily be fitted with on-site heating accessories. An electrical EPO-V heater is available for use either as an electric re-heater or pre-heater. Another option is using a hot-water air heater.

6in1 Three installation positions with two side orientations



 floorstanding



 underceiling



 rooftop



DUPLEX Flexi 3

650–6,000 m³/h

(650, 1100, 1700, 2300, 3500, 4500, 6000)

Versatile compact HVAC units designed for **indoor and outdoor** installation, with a counterflow heat recovery exchanger with efficiency up to 93 % and highly efficient EC fans.



left



right

- Ultraslim height of underceiling installation
- Highly variable and easily adjustable on site

- Immediately available to customers
- Six configurations in one unit!

COMMERCIAL LINE



DUPLEX Flexi-V

500–3,500 m³/h |  Counterlow

The philosophy of these extraordinary and high-efficient unit is serial production, with subsequent availability in stock – that means delivery possibility within 24 hrs as well as thoughtful and imaginative unit design offers a wide range of on-site modifications and the possibility to meet conditions of various projects.



Certification



ADVANTAGES Flexi-V

- Installer-friendly construction
- Off-the-shelf delivery
- Efficiency of up to 93 %
- Great compactness
- On-site variability
- Heating and cooling
- Left or right configuration in one unit
- Major savings in servicing costs as a result of the built-in web server
- 100% by-pass
- Constant flow and constant pressure
- Hygiene version according to VDI 6022
- Wide range of additional accessories

Flexi-V size range



500 m³/h 3,500 m³/h

Performance sizes DUPLEX Flexi-V

Cooling

The units can be additionally fit with our water cooling coil with a special surface with aluminium fins to better spread water droplets to prevent them from entering the HVAC duct. As standard, either water-based or direct coolers are supplied, they can also be operated in reverse mode to act as a heat pump.

Heating

The Flexi-V series units can easily be fitted with on-site heating accessories. An electrical EPO-V heater is available for use either as an electric re-heater or pre-heater. Another option is using a hot-water air heater.

 vertical



left



right

DUPLEX Flexi-V

500–3,500 m³/h

(500, 900, 1800, 2800, 3500)

Units are supplied with all spigots facing upwards. It elegantly solves the sometimes problematic connection of air ducts and brings up new possibilities for installing the units in normally unusable spaces.



Two stage air filtration

Units can be optionally fitted with two-stage air filtration on supply and exhaust branch.



DUPLEX Roto

1,500–15,000 m³/h |  Rotary

All-purpose units DUPLEX Roto with rotary heat recovery core are used for comfort ventilation, as well as hot air heating and cooling offices, shops, retail, school buildings, restaurants, etc. The units are versatile because of the compact size, high heat recovery efficiency, low power consumption and minimal noise. DUPLEX Roto completes the series of DUPLEX Multi and DUPLEX Basic units and expands ATREA with seven additional sizes of ventilation units with air capacities from 1,500 to 15,000 m³/h (nominal outputs with external pressure min. 200 Pa). Roto units follow the philosophy of multiple variability. Designers can easily modify spigot connections, filters, heating, cooling or the position of the units themselves. Superior construction of units is suitably supplemented with the latest high-tech regulation, which includes web-server and communication via the Internet.



Certification

Rotary heat exchangers are a Eurovent certified product of the renowned company Kastt spol. s r.o.

ADVANTAGES Roto

- Heat recovery efficiency up to 85 %
- Rotary heat exchanger certified by Eurovent
- Highly variable
- Compact or assembly design – simplifies transport and installation
- Elegant look
- Integrated heating, preheating and cooling
- Floor-standing – indoor or rooftop installation
- Great thermal insulation of the casing
- Internet interface as standard (aMotion)
- Major savings in servicing costs
- EC fans – top German quality
- BMS, KNX, Bacnet compatibility
- Hygiene version according to VDI 6022
- Combined mode with air circulation
- Constant airflow and pressure control

Roto size range



Performance sizes DUPLEX Roto



DUPLEX 8000–15000 Roto units are assembled from 3 sections to simplify their transportation and installation. Parts can be delivered optionally and the unit can be fitted in highly inaccessible areas.

LABYRINTH SEALING

DUPLEX Roto 8000–15000 rotary heat exchanger might be equipped with special labyrinth sealing. This patented solution improves the already excellent tightness against short circuit on the unique values of up to 1.5 %.



inside



DUPLEX Roto

1,500–15,000 m³/h

(1500, 2500, 4000, 5000, 8000, 12000, 15000)

All-purpose units DUPLEX Roto with rotary wheel heat recovery exchangers can be provided in both versions **inside and outside** and follow the philosophy of multiple variability of other ATREA sister lines.

rooftop



DUPLEX Roto-N

1,500–15,000 m³/h

(1500, 2500, 4000, 5000, 8000, 12000, 15000)

Thanks to their construction design, DUPLEX Roto-N are fully adapted for rooftop installation. Rooftop units are equipped with special hoods and roofs that protect the unit against bad weather conditions.



DUPLEX Silent-N

1,400–2,400 m³/h |  Counterflow

The philosophy of the brand new units DUPLEX Silent-N, as the name suggests, is based on noise attenuation immediately inside the ventilation unit. The design of the units with integrated noise silencers allows installation directly above the installation shafts of apartment buildings. This eliminates long ducts on roofs, reduces heat loss and significantly reduces maintenance costs. They are mainly used in central ventilation systems of apartment and industrial buildings, where the connection to the first apartment or office is usually 2 meters behind the unit.



Certification



ADVANTAGES Silent-N

- Heat recovery efficiency up to 93 %
- Superior plastic counter-flow heat exchanger
- Compact size with built-in noise silencers
- Wide variability
- Comfortable cooling mode at night in apartment buildings
- Eliminates major problems of central rooftop units (long ducting along the roofs of multi-storey apartment buildings)
- The units meet requirement in accordance with Commission regulation (EU) No. 1253/2014 (Ecodesign)
- Ideal location of the units directly above the installation shafts
- Internet interface as standard (aMotion)
- EC type fans – top German quality
- Smart phones application
- BMS, KNX, Bacnet compatibility
- 100% by-pass
- Constant airflow and pressure control

Silent-N size range



DUPLEX Silent-N ways of application

Construction of units

DUPLEX Silent-N units differs from other series in the placing of spigots for duct connection. Silencers are then placed inside the unit. This is an original solution, which guarantees noise attenuation and does not require ducting on the roof of the building.

The unit can be divided into a fan section (fans for supply and exhaust placed side by side), heat recovery section and ducting connection section. Thus, the mounting of the supply fan itself significantly contributes to the reduction of the noise. On site, the unit is assembled into a common base frame and looks as a single set.

rooftop



DUPLEX Silent-N

1,400–2,400 m³/h
(1400, 2400)

The compact ventilation units with heat recovery DUPLEX 1400–2400 Silent-N are, thanks to their top properties, predestined for the widest range of use in all types of buildings.

These units are characterized by a very steep characteristic and very low power consumption – thanks to a top EC fans.





DUPLEX Basic

1,400–15,100 m³/h |  Crossflow

The DUPLEX Basic units are compact ventilation units with crossflow heat recovery core. Unlike DUPLEX Multi, these units have simpler a cheaper control system and also a different heat recovery core. Their performance range is between 1,400–15,100 m³/h. They are intended solely for applications that do not come under the field of activity of the committee's regulation (EU) No. 1253/2014. Ventilation units DUPLEX Basic are equipped with time-proven types of crossflow plastic heat recovery cores, which reach up to 75 % of heat efficiency with low pressure loss of air. Other important parts are the new EC fans of the highest quality – the products of the internationally recognized manufacturers ebm-papst and Ziehl-Abegg.



Certification

ADVANTAGES Basic

- Heat recovery efficiency up to 75 %
- Superior cross-flow heat exchanger
- Very flat design, suitable even for ceiling-suspended installation
- Highly variable
- Compact and semi-compact design
- Elegant look
- Integrated heating and cooling possibility
- Floor-standing, ceiling-suspended and floor-standing flat version
- Great thermal insulation of the casing
- Internet interface as standard (aMotion)
- Cheaper and simpler CP control system
- A major decrease in servicing costs
- Touchscreen controller
- EC type fans – top German quality
- BMS, KNX, Bacnet compatibility
- Hygiene version according to VDI 6022
- 100 % by-pass
- Air circulation mode
- Constant airflow and pressure control

Basic size range



1,400 m³/h

15,100 m³/h

Performance sizes DUPLEX Basic



Heat recovery units with crossflow heat exchanger are especially suitable for the ventilation of commercial kitchens because of the bigger space between the lamellas. Such cross-flow core kitchen ventilation is also in accordance with ErP 2018.

 inside

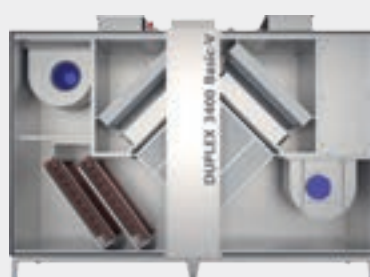


DUPLEX Basic

1,400–15,100 m³/h (1400, 2400, 3400, 5400, 7100, 8100, 10100, 12100, 15100)

Customized HVAC units with cross-flow heat recovery exchangers. This line is a cheaper version of the highest quality sister line DUPLEX Multi. Suitable for the indoor usage.

 vertical



DUPLEX Basic-V

1,400–10,100 m³/h (1400, 2400, 3400, 5400, 7100, 8100, 10100)

DUPLEX Basic line has cross-flow exchanger up to 75 % of heat recovery efficiency and could be delivered also with all spigots up.

 rooftop



DUPLEX Basic-N

1,400–15,100 m³/h (1400, 2400, 3400, 5400, 7100, 8100, 10100, 12100, 15100)

These units can be 100 % project tailored and customized for the rooftop installations.



DUPLEX Inter



850 m³/h |  Counterflow

Indoor decentralized ventilation units DUPLEX 850 are designed for balanced ventilation in school classrooms, open-plan offices, facilities, restaurants, shops and everywhere else where they are required to be built directly in residential areas requiring as low noise levels as possible. The units are characteristic with their high heat recovery efficiency, very low noise levels and low power input.



Certification

32 dB (A)!

A new generation of school ventilation

ADVANTAGES for designers

- Low noise to allow installation directly in occupancy areas of buildings with the most stringent acoustic requirements
- Completely autonomous based solely on CO₂ concentration
- A ductless system without any ductwork in the building
- Demanding condensate drainage eliminated
- Digital control system aMotion supplied as a standard feature, allowing remote administration through the Internet
- Very efficient ventilation thanks to air stream reaching up to 10 metres
- Very easy installation without the need for trade-specific design or specialist HVAC and power installation
- High heat recovery efficiency of up to 93 %
- The bypass closes the heat recovery exchanger inlet to allow the free-cooling
- Automatic frost protection
- Optional air supply reheating
- When the unit is set back from external walls with windows, duct sound attenuators may be installed to reduce noise transmission through the external wall
- Ecodesign 2018 compliant

The most important **ADVANTAGES:**

- ✓ NO need for condensation drain
- ✓ NO ducts needed!
- ✓ Extremely quiet **32 dB (A)!**

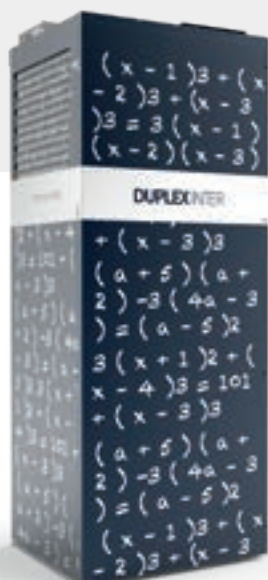


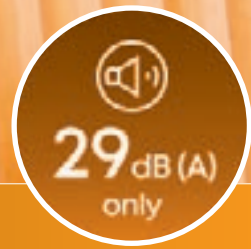
natural wood casing

UNIQUE lacquered design

DUPLEX Inter

Optional choice, which unifies the look of the classroom together with the DUPLEX Inter and does not optically enlarge the unit.





DUPLEX Inter-H

770–1,100 m³/h |  Counterflow

Brand new underceiling ventilation units DUPLEX Inter-H are designed for balanced ventilation in school classrooms, open-plan offices, facilities, restaurants, shops and everywhere else where they are required to be built directly in residential areas requiring as low noise levels as possible. The units are characteristic with their high heat recovery efficiency, very low noise levels and low power input.



Certification

A new generation of school ventilation units

ADVANTAGES for designers

- The most silent school unit on the market – sound pressure 29 dBA at a flow rate of 650 m³/h
- Air flow up to 1100 m³/h
- High efficiency of heat recovery up to 93 %
- Height only 550 mm
- Demanding condensate drainage eliminated (!)
- Integrated preheater as standard included in the unit price
- Integrated infrared CO₂ sensor included in the unit price
- 4 options of the connection port position (to be decided at the installation)
- An option for unit to be partly installed in the suspended ceiling (to be decided at the installation)
- Quick and easy installation – original installation kit
- Unit to be split into 2 parts for easier handling and manipulation (through the door)
- Interior design – additional cladding option installation after the unit has been commissioned after the very final phase of the construction works
- Optional reheater – easily to be fitted additionally

The most important **ADVANTAGES:**

- ☑ NO need for condensation drain
- ☑ NO ducts needed!
- ☑ The most quiet unit on the market! **29 dB(A)!**

Cassette ceiling installation

The unit is fully ready to be partially installed in the ceiling, just rotate the front panel with supply diffusers, to minimize even more the interference with the room clearance. In addition, the unit's surface cladding covers the unit's suspension. As a result, the unit has a very clean look.



Draughtles air distribution

Innovative supply diffusers use the Coanda effect to distribute the supply air evenly without draughts throughout the ventilated room.





SMART BOX SYSTEM

25–2,600 m³/h

SMART box system by ATREA is the only complete solution on the market, linking together a central heat recovery air-handling unit, up to 63 individually controllable decentralized DCV/VAV boxes and a cutting-edge control system including sophisticated controllers and a service interface for each flat or office.



One supplier provides warranty on everything

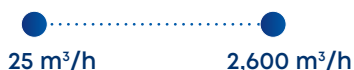
ATREA can also provide a simpler, cheaper solution – EASY box. This solution contains just the ventilation unit with heat recovery, VAV box and simpler control system.

ADVANTAGES SMART box

- Complete ventilation system
- Guarantee from one supplier
- Lower maintenance costs (no filter replacements, etc.)
- Quiet operation due to the unit's rooftop location



SMART box size range



Smart solution for apartment houses Complete ventilation system



**DUPLEX
unit**



**SMART
boxes**



**Control
system**



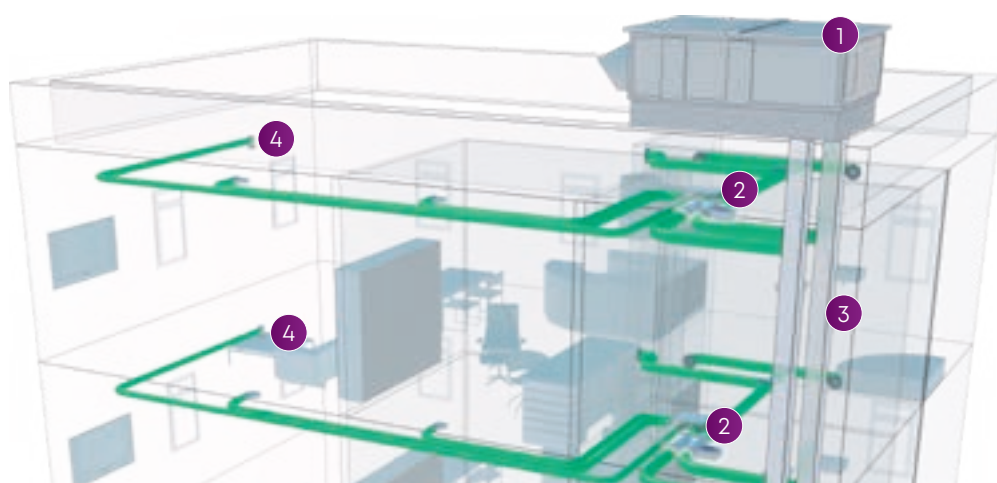
**Internet
connection**

The basis of the SMART box system is a compact heat recovery air-handling unit, located anywhere inside or outside the building as chosen by the designer.

The heart of the SMART box system is a DCV/VAV controller. Compared with conventional devices, it has a wider range of settings and control options and above all minimizes energy demands.

The roof and heart of the whole system is the cutting-edge aMotion control system, offering full control of each box through a web interface or using a touch-screen controller.

This oversees the entire system for its administrator, at the same time allowing the users to control it using computers and smart phones.



- 1 Central unit (rooftop; with counter-flow heat exchanger)
- 2 SMART box ensuring individual ventilation of each apartment
- 3 Central, rising air distribution - connects the central unit with the individual apartments
- 4 Distribution in apartment space - fresh supply air and exhaust air

DOMESTIC LINE

DUPLEX Pro

150–560 m³/h |  Counterlow

New and already sixth generation of compact ventilation units with heat recovery DUPLEX Pro / Pro-V is, just like its predecessors, meant for comfort ventilation of houses and flats. Its parameters make it particularly suitable for low-energy passive houses. It is also very suitable for the use in flats with decentralized ventilation systems or for centralized systems. The units come in two basic models – Pro to be mounted under the ceiling and Pro-V to be mounted on walls. The Pro and Pro-V units meet all criteria on appliance in the highest energy class A+.

Certification



A+



Smartphone app



two types of control panels

ADVANTAGES Pro / Pro-V

- Very low ambient noise
- The highest energy class A+
- Mounting on walls and under ceilings
- Three performance variants to choose from
- Counterflow heat recovery exchangers
- Heat recovery efficiency up to 93 %
- Closable automatic bypass
- The most energy-saving EC fans
- Under-ceiling variants with very low building height
- Connection ports without thermal bridges
- Simple filter replacement without opening the door
- Two types of controls for different price ranges
- Integrable electric pre-heater/reheater
- Easily connectible control system
- Constant air flow function
- Warm-water heating
- INTEGRATED WEB SERVER

Pro / Pro-V size range



● ●
150 m³/h 550 m³/h



● ●
150 m³/h 560 m³/h

Performance sizes DUPLEX Pro / Pro-V

The units are because of its sandwich construction extremely silent in their operation.

Air pre-heaters and reheaters – For absolute comfort in ventilated areas, the units can be equipped with an integrated electric pre-heater and reheater, which are made using PTC cells. This greatly simplifies the installation and saves space. Electric pre-heater serves as protection against the recovery exchanger freezing up.

External heaters and pre-heaters – It is also possible to choose from electric or hot-water reheaters in pipes as optional components.

 underceiling



DUPLEX Pro
150–550 m³/h (150, 350, 550)

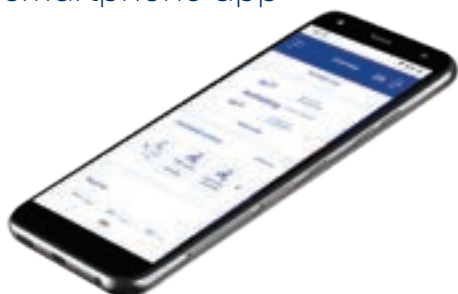
 vertical



DUPLEX Pro-V
150–550 m³/h (160, 360, 560)

ADVANTAGES for end-users

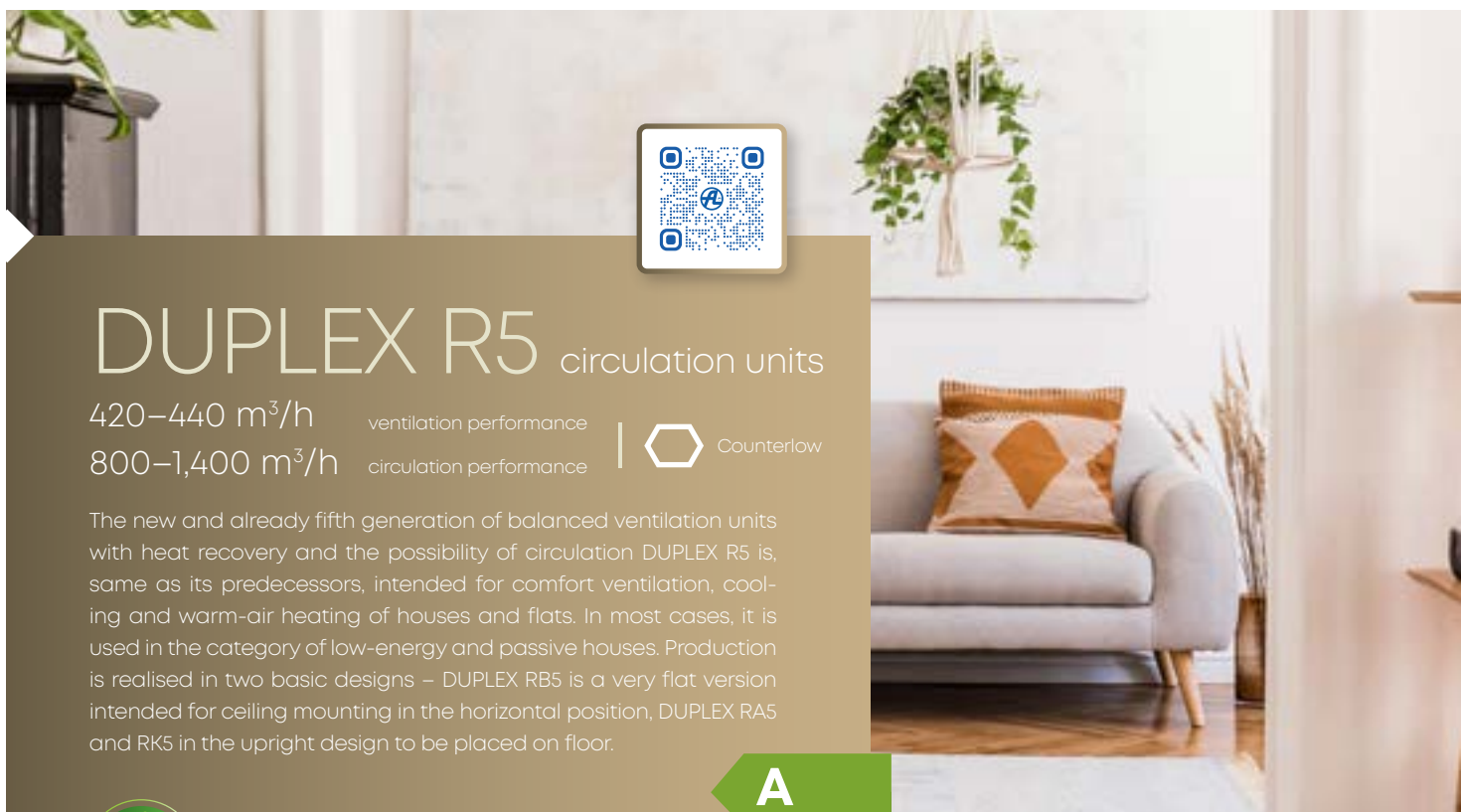
aMotion
Smartphone app



Simple filter replacement

Filters are important for a healthy indoor climate without pollutants from an outside environment. Customers can choose a filter class to meet their needs. These filters are also very easy to replace.





DUPLEX R5 circulation units

420–440 m³/h

ventilation performance

800–1,400 m³/h

circulation performance



Counterflow

The new and already fifth generation of balanced ventilation units with heat recovery and the possibility of circulation DUPLEX R5 is, same as its predecessors, intended for comfort ventilation, cooling and warm-air heating of houses and flats. In most cases, it is used in the category of low-energy and passive houses. Production is realised in two basic designs – DUPLEX RB5 is a very flat version intended for ceiling mounting in the horizontal position, DUPLEX RA5 and RK5 in the upright design to be placed on floor.

A



Certification

ADVANTAGES R5

- High energy class A
- Floor-standing and ceiling suspended design
- Counterflow heat recovery exchangers
- Heat recovery efficiency up to 93 %
- Fully closable automatic bypass
- The most energy-saving EC fans
- Heating and cooling is independent on ventilation
- Cooling and heating with water coil / DX coil
- Separated circulation circuit up to 1200 m³/h
- Low noise emissions
- Integrated electric reheater
- Easily connectible control system
- Constant air flow function
- Warm-water heating
- INTEGRATED WEB SERVER

R5 size range



420 m³/h/440 m³/h

Performance sizes DUPLEX R5

Units can be equipped with registers for heating and/or cooling precisely according to a concrete need. The electric heaters (E) or water heaters (T) can be selected. These heaters provide comfort air afterheating after recuperation or heating of the object.

The water heater can also be used for water cooling. As standard, it is possible to additionally install the second water cooler or the direct evaporator of the heat pump to provide cooling but also afterheating and heating.

underceiling



DUPLEX RB5 420 m³/h / 850 m³/h

DUPLEX RB5 for under-ceiling mounting position, heat recovery core efficiency up to 93 % and ebm-papst fans.

vertical



DUPLEX RA5 / RK5 420–440 m³/h / 800–1,400 m³/h

Small and compact air handling units for ventilation, cooling and warm-air heating of residential apartments and houses with all spigots up.



DUPLEX RDH5-L

600 m³/h ventilation performance | Counterflow
1,300 m³/h circulation performance

Fifth generation of horizontal ventilation units with special surface coating with possibility of air circulation for ventilation reducing humidity and warm air heating of swimming pools, suitable even for salt-water pools.



Certification

ADVANTAGES RDH5-L

- High energy class A
- Counterflow heat recovery exchangers
- Heat recovery efficiency up to 93 %
- Fully closable automatic bypass
- The most energy-saving EC fans
- Suitable even for salt-water swimming pools!
- Simple controls
- Low noise emissions
- Easily connectible control system
- Constant air flow function
- INTEGRATED WEB SERVER

RDH5-L size range



●
600 m³/h

Special surface coating FOR SALT-WATER POOLS!

Units can be equipped with registers for hot-water heating precisely according to a concrete need. These heaters provide comfort air afterheating after recuperation or heating of the object.

 vertical

DUPLEX RDH5-L 600 m³/h / 1,300 m³/h

Horizontal air handling unit with **special surface coating** with air circulation ventilation reducing humidity and warm air heating of swimming pools.





DUPLEX Easy2

200–500 m³/h |  Counterflow

DUPLEX Easy2 is a top quality product that meets the most modern requirements. It can be mounted on the wall or under the ceiling. The unit is designed for comfort ventilation in all types of residential and civil buildings, and is particularly suitable for low-energy and passive houses and flats in residential buildings with decentralized ventilation systems.

Certification



A+



Smartphone app



Two types of control panels

ADVANTAGES Easy2

- 93 % counterflow heat recovery exchanger
- Top quality EC fans – German quality
- Underceiling or wall mounted position
- 100 % by-pass damper
- Excellent dimensions
- Easy filter replacement
- Possible of constant pressure in the supply
- Very low noise level to surroundings
- Compliant with energy class **A+/A**
- Very low height
- Connection ports without thermal bridges

Easy2 size range





In comparison to many competitive air-handling units made from EPP or EPS, the solid casing construction of DUPLEX Easy2 units provides excellent noise attenuation for comfort silent in your house or apartment.

Underceiling



Wall mounted



ADVANTAGES for investors and designers

Excellent dimensions (220 mm)

The DUPLEX Easy2 was developed with a constant emphasis on the market's requirements for the size of the units. **The DUPLEX Easy2 units' design has been modified to achieve the height of the ceiling-suspended position of 220 mm!** This factor greatly facilitates installation and saves space.

Filters

Filters are important for a healthy indoor climate without pollutants from an outside environment. Customers can choose a filter class to meet their needs. These filters are also very easy to replace.



DUPLEX Slim

150 m³/h



The units are characterized by a very flat construction and their dimensions make them suitable for installation above overhead flushing systems for toilets. The heart of the unit is a heat recovery heat exchanger whose main advantage is its high energy efficiency. Airflow is provided by high efficiency radial fans from leading manufacturer ebm-papst. The unit includes retractable filters for filtration of incoming and outgoing air.

Certification



A



Smartphone app



Two types of control panels

ADVANTAGES Slim

- Very low construction height
- Dimensions tailored for installation above toilet flushing systems
- Very low radiated noise to the surroundings
- Compliant with energy **class A**
- Connection ports without thermal bridges
- Filter exchange without opening the door

Slim configuration



conf. 10

conf. 11

150 m³/h



DUPLEX Slim are compact ventilation units with heat recovery, the design of which is intended for installation above concealed flush systems for wall hung toilets.

Simple filter replacement

Filters are important for a healthy indoor climate without pollutants from an outside environment. Customers can choose a filter class to meet their needs. These filters are also very easy to replace.



CONTROL SYSTEM

There are two types of control system available for our customers:

aMotion Control system

A convenient system with integrated support for online monitoring and control via the Internet. Also with the option of connecting to the higher-ranking systems of centralized building management. A wide range of sensors (temperature, humidity, air quality, etc.) can be included in the system to enable automatic control for economical operation. The aMotion system is suitable for standard and complex applications (such as the ventilation of restaurants and offices).



Smartphone app



aTouch controller

aDot controller

Various functions of the aMotion control system:

- Constant flow – An option to fit sensors for constant flow control.
- Constant pressure – An optional accessory for constant pressure control.
- CO₂ sensors, relative humidity sensors and air quality sensors – An option to set the intensity of ventilation automatically based on those parameters.
- **Modbus TCP** – Communication with a superior system for BMS.
- User preferences – including setting weekly programmes for ventilation, heating and cooling modes.
- Immediate manual override settings for more convenience to the user as well as weekly programme control.
- External inputs function – ventilation switches as required.
- Combined heating and preheating (electrical or water based)
- Zoning – the ability to split the building into zones and define their operation.
- **BACnet / KNX** – optional converter enables connection to the superior system via BACnet or KNX protocol.

aTouch controller

- Touchscreen and fully colourful controller
- On the wall design
- Similar design with ATREA web interface
- Built-in temperature sensor for free – ambient temperature control
- Password protected service access for enhanced safety
- 50 m distance reach
- Automatic screensaver
- Up to 4 controllers per one unit

aDot controller

- Optional version
- Simple and cheaper controller for the ATREA aMotion control system
- Intuitive power and temperature setting
- Both controllers with one unit possible
- Simple On / Off button
- Suitable for easy controlling in houses, restaurants, shops etc.
- Additional full remote setting control possibility

CP Control system

A basic digital control system. A wide range of sensors (temperature, humidity, air quality, etc.) can be included in the system to enable automatic control for economical operation. The CPM system is suitable for standard applications (such as the ventilation of restaurants and offices).



CPA controller

CPB controller

CPA controller

- Graphic touchscreen controller
- Weekly program
- "Party" mode – when a higher ventilation performance is requested
- "Vacation" mode – automatic activation and deactivation according to a set date
- Warns when the filters need to be changed
- Automatic operation on a constant output signal – e.g. constant pressure control

aMotion which meets all requirements for the most advanced system.

CP which is a cheaper and simple control system for controlling the basic functions of the unit.

CPB controller

- Manual or automatic mode
- Continuous fan control
- Automatic by-pass damper control
- Anti-freeze heat recovery exchanger protection
- Switching between external electric or built-in water heater
- Switching for selected performance according to an external signal
- Automatic operation according to sensors (CO₂, rH) with 0–10 V output
- Control of the intake and outlet lock dampers
- Settings for minimum and maximum allowed revs
- Optional connection of CO₂ or rH sensor – max. 2 sensors with a switch or 0–10 V output
- Outputs for electric preheater and heater control (pulse 10 V) or hot-water control (0–10 V)



Ventilation ceilings

ATREA is able to supply a complete solution for kitchen ventilation – from the ventilation ceiling to the air-handling unit with heat recovery. Having the whole service in one package gives us a huge competitive advantage, because it is both convenient and comfortable for the customer. ATREA ventilation system is designed according to both EN16282 and VDI 2052. The construction of our ventilation system meets the most stringent criteria in terms of health requirements as well as design. The well-lit space of the entire kitchen, the draft-free supply of fresh air and perfect extraction, all that with the additional benefit of a modern control system, create a pleasant and clean environment for kitchen staff.



Certification

BUSINESS advantages

• **Attractive design**

Polycarbonate fillings together with stainless steel elements create a very elegant kitchen design.

• **Easy maintenance**

It is extremely easy to clean the ceiling. A wet dishrag will do the job.

• **Light weight**

There are no special weight demands to install ATREA ventilation ceilings.

• **Pleasant environment for cooks**

People need to work in a healthy and light environment, which is not a problem when having ATREA TPV ceiling in the kitchen.

• **Brightens up the space**

Thanks to the polycarbonate light covers, the light spreads all over the place.

• **Air-tight (closed extraction system)**

This system ensures that no polluted

air can come into contact with the building construction and thus no mold can form. This is extremely important, because we maintain a very high level of hygiene in all of our ventilation systems.

• **ATREA provides turn-key solution!**

From the initial consultation via calculations and designing of the complete system to production and installation of kitchen ceiling, control system and the heat-recovery unit providing sufficient airflow. All in one package!

TECHNICAL advantages

- Complete ventilation system from one producer
- Automatic control system
- Ventilates the entire area of the kitchen
- Hygienic air exchange
- High filtration efficiency
- Europe-wide TÜV certification
- Integrated supply of fresh air
- Integrated light for the whole area
- Perfect protection for the building construction
- Air-tight system perfectly protecting the building construction





Wall-to-wall ventilation and extraction ceilings are the flagship of ATREA's range. The fundamental difference from our competitors is the design of the polycarbonate false ceiling and the shape of the extraction duct. Completely airtight solution designed, produced and tailored to each individual project.



TPV

TPV-N



CHARACTERISTICS

- TPV – A standard polycarbonate version of a fully illuminated ventilation ceiling.
- TPV-N – Ventilation ceiling made of stainless steel.
- TPV-K – Stainless steel design of the TPV ventilation ceiling with painted white aluminium fillings between the air ducts.





KITCHEN HOODS

A comprehensive range of extractor hoods, from the basic KUBUS type to an intelligent extractor hood with heat recovery, reheating and an integrated OPTIMA connection. They can be used for all sizes and types of kitchens. They are renowned for their high-quality workmanship and long service life.



MODIS 2

MODIS 2 is part of ATREA's product line – assembled kitchen hoods with a unique construction solution based on a modular system. This line offers an option to choose how the product will be delivered.

- 5 year warranty
- Attractive design
- Integrated light

There are three choices to be made:

- Delivery of a disassembled hood without the spigot
- Delivery of a disassembled hood with the spigots ready to be assembled on-site
- Delivery of an assembled hood



KUBUS

A simple hood suitable for appliances such as dishwashers and convection ovens for kitchens of all types and sizes. The operation of such appliances does not result in the particles of fat being contained in exhaust air so it is not necessary to install grease filters.

- Fully welded construction
- Durable AISI 304 stainless steel

OPTIMA

A compact kitchen hood OPTIMA with heat recovery, filtration, supply air, a heater and LED lights. Suitable for new or renovated buildings. No extra room for airhandling systems is needed. All functions are integrated inside the unit, with only the fans installed in the supply and exhaust ducts to meet requirements.



VARIANT

Kitchen hoods VARIANT ensure efficient extraction with exhaust air filtration and simultaneously the supply of fresh air for kitchens of all sizes. They are custom made and include an automatic operation control system.

- Integrated supply of fresh air
- Integrated fluorescent light with IP65
- Low weight
- Elegant design
- Optional directing of fresh air supply
- Compact size



GRANDE

The welded stainless steel kitchen hood GRANDE was developed to meet the most stringent technical parameters according to the EN16282 and also the customer's design demands. Thanks to these parameters it can be used for ventilating cooking tops working under enormous strain and also acts as a design element.

- Stainless steel design
- Cost-saving light
- Wireless control of the light
- Minimum of mounting joints (a "fully welded" look)
- Huge accumulation space
- High efficiency of separators



SELECTION SOFTWARE

- ATREA offers its proprietary design software that is a highly useful and practical tool to select DUPLEX series units and provide great marketing support!
- Very detailed calculations on all specifications are standard.
- The software checks whether all components were selected and whether the selected system is working. This way you can avoid any possible mistakes.
- Compatibility with BIM – supports export of the selected equipment in RFA and IFC formats



ATREA selection software is frequently updated and available to download for FREE.

IT INCLUDES

- Selecting a unit and its accessories
- Showing parameters of the selected appliance
- An option to adjust the various parameters, designs or mounting positions of the units
- Selecting the control system with accessories in a functional set
- Electrical wiring diagrams
- Displaying and printing the components installed, an h-x diagram and HVAC diagrams
- Price specifications of individual components
- Print output to a printer or PDF
- Exporting drawings and diagrams to DXF in 2D or 3D
- Sending the design and export by e-mail
- Additionally, the design software includes a full catalogue of ATREA's products in PDF format.

ATREA CERTIFICATES

We, as ATREA, can prove our quality by **having premium European certificates** and complying with highest European standards. Thus, we give the base to our customers to win even the most difficult projects.



EU directive No. 1253/2014, which applies to ventilation units with heat recovery; manufacturers and distributors. According to this directive, the airhandling unit must meet the following minimum requirements:

1) residential ventilation units max flow rate **does not** exceed 250 m³/h or is between 250–1.000 m³/h and the manufacturer declares its use only for residential ventilation application (within ATREA product range DUPLEX Easy 2, Pro).

2) non-residential ventilation units max flow rate exceeds 250 m³/h and is between 250–1.000 m³/h and the manufacturer **does not** declare its use for residential ventilation application (within ATREA product range DUPLEX Flexi, Roto, Multi, MultiEco)

All ventilation units, except dual use units, shall be equipped with a multi-speed drive or a variable speed drive All bidirectional ventilation units shall have a heat recovery system. The heat recovery system shall have a thermal by-pass facility.



Passive House certificate; our units are certified based on **few minimal requirements** that need to be fulfilled in order to obtain this certificate.

These are:

- **Recovery efficiency**
75 % SFP – 0.45 W/m³/h
- **The tightness of the casing**
and between sections in the unit – max. 3 % of the nominal flow
- **Noise**
- **Power energy consumption**
during active frost protection of the heat exchanger

German norm with very strict requirements. It guarantees that **health-conscious materials** have been used, together with smooth surfaces that **do not support the growth or spread of micro-organisms**. This is declared by the special ISO EN846 test. It also defines minimal requirements for the unit's construction, so all the parts of the unit are **easily accessible and safe** to reach. Moreover, it takes in account the indoor air quality by determining the proper filtration class.

This independent certificate organ ensures customers, **that declared parameters** by producer **are true**. Eurovent can certify both – an air-handling unit or a heat exchanger.

REFERENCES



SKODA Auto
Mlada Boleslav
Czech Republic

TPV Ventilation ceiling
with 1000 m² area



Battersea Power
Station London
Great Britain

10 pcs of DUPLEX Flexi units

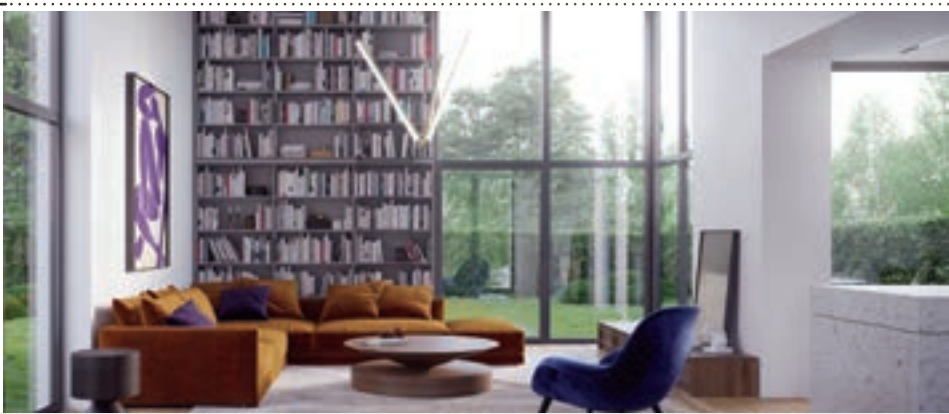


REFERENCES



Amber Forest
Romania

250 pcs of DUPLEX Easy units

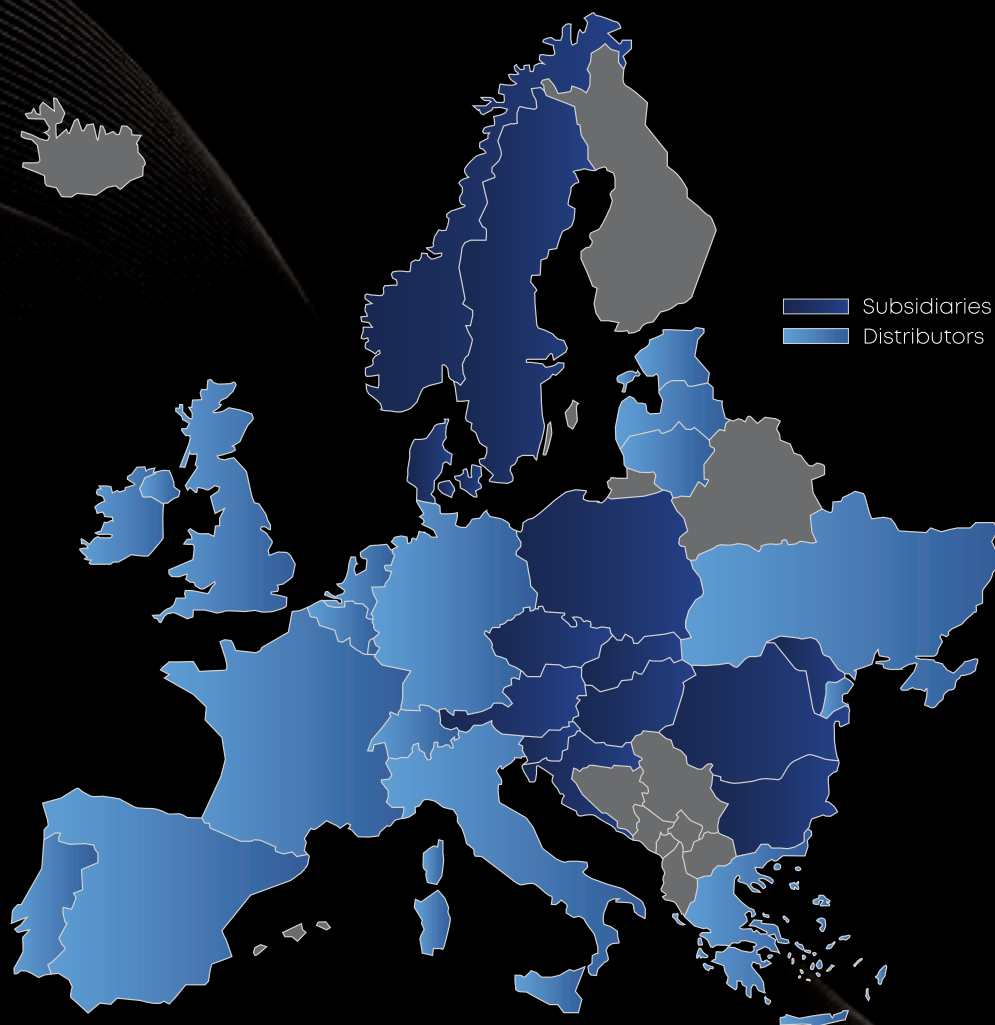


University
of Tasmania

10 pcs of DUPLEX Multi units



Atrea®



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