

» AIR TREATMENT

AIR HANDLING UNITS

# AIR HANDLING UNITS *by* FLÄKTGROUP

» A COMPLETE RANGE OF ENERGY EFFICIENT AND FLEXIBLE AIR HANDLING UNITS



eCO PREMIUM™



eCO TOP® / eQ TOP™



eCO SIDE/eQ PRIME®



eQ MASTER®



eQL®



# WE BRING **BETTER AIR** TO LIFE

We eat about 1 kg of food, we drink approximately 2 liters of water but **we inhale 20 000 litres of air every day.** With up to 90% of our time spent indoors, the air we breathe makes a huge difference for our health, comfort and productivity. Also, typically 85% of the Life Cycle Cost of a ventilation system is generated by the energy cost which puts focus on smart and energy efficient solutions.

**This is where FläktGroup comes into the picture.**





## ENERGY EFFICIENCY – THE ESSENCE OF OUR SOLUTIONS

All our research, development and testing activities are singularly focused to provide our customers with the best and most efficient solutions possible to their ventilation and indoor climate challenges.

From new and innovative concepts, smart material choices and manufacturing processes to advanced controls, minimised running cost and easy maintenance, FläktGroup always strive to deliver the best for your long-term economy and our environment.



## *WE MAKE BUILDINGS MORE EFFICIENT AND COMFORTABLE – NOW AND IN THE FUTURE*

As the world tries to combat global warming, the focus on energy consumption and its "carbon footprint" increases. If we can use less, that footprint will be smaller. With ever stricter legislation and property owners increasingly demanding higher energy efficiency for their buildings, delivering solutions to meet these demands can seem daunting.

FläktGroup can help you achieve these targets. With our strong heritage, vast product range, global coverage and skilled people, we are in a unique position to deliver energy efficient products and solutions to all applications and industries.

Our solution is a broad approach that leaves no stone unturned to achieve optimum results. It is a chain that starts with high-performing components utilising the latest technologies, continues with carefully designed products that focus on energy efficiency and finishes with complete solutions that use smart controls to manage every single part of the system to optimise the energy savings.

All this is achieved whilst maintaining high levels of indoor comfort that we need and expect within a modern building design – and that you can rely on FläktGroup to deliver.

# We always have the right air handling solutions **for all types of environments**

## OFFICES

We provide high indoor air quality to ensure the wellbeing and productivity of the occupants, to ensure no sick leave due to draught or bad indoor climate. Making the office environment attractive will also allow for higher rental income for property owners.



## HOTELS & RESTAURANTS

FläktGroup has a proven history of providing high comfort solutions for hotel rooms with low noise levels and comfortable airflows. For restaurants there is a wide range of products to ventilate dining areas and kitchens and to ensure that energy can be recovered without any risk of odours.



## HYGIENE

For hygienic applications such as hospitals and pharmaceutical facilities we offer solutions suited for perfect cleanliness, advanced energy recovery with zero contamination and adhering to legislative demands for patient security.



## RESIDENTIAL

For residential and multi-dwell buildings FläktGroup has a wide range of products for ventilation, easy to clean valves and energy recovery with focus on high quality and robustness.

## INDUSTRIAL APPLICATIONS

Industrial buildings with large volume spaces and a lot of machinery can present unique challenges when it comes to managing ventilation. FläktGroup has efficient solutions that optimise climate and productivity for both people and business critical equipment.



## SHOPPING CENTRES

Shopping should be a pleasant and safe experience for the visitors as well as the possibility for the property owner to generate higher incomes. With our air treatment and fire safety solutions we ensure matching these requirements today and tomorrow.



## EDUCATION

We provide children and students the best possible climate for learning but still allowing for great flexibility as layout demands or occupancy will change over time, always adapting to the needs of the people occupying the spaces.



## PUBLIC BUILDINGS

In tunnels and metros it is crucial that people are safe in case of accidents and that bad air is ventilated out from the confined spaces. The FläktGroup fan range is developed to meet the needs in these complex installations.



## MARINE

Marine environments such as naval ships and oil rigs demand high quality solutions due to the harsh, corrosive and possibly explosive conditions. FläktGroup has a long history of successfully delivering solutions meeting the strict demands for these applications.

# 8 product families **that cover** **your project's every need**

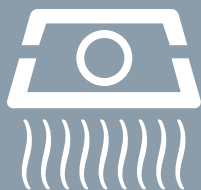
## AIR TREATMENT



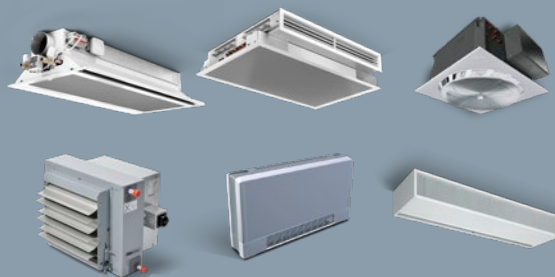
- Modular Air Handling Units
- Compact Air Handling Units
- Low Airflow Compact Units
- Top Connected Air Handling Units
- Residential Air Handling Units
- Energy Recovery Solutions
- Integrated Heating & Cooling
- Swimming Pool Dehumidification



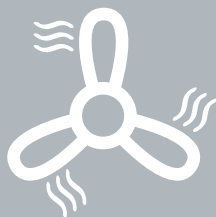
## AIR DIFFUSION



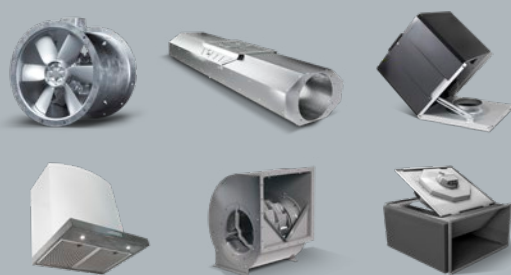
- Chilled Beams
- Fan Coils
- Air Curtains
- Air Heaters



## AIR MOVEMENT



- Ventilation Fans
- Car park fans
- Fire Safety Fans
- Cooker Hoods



## AIR MANAGEMENT & ATD's

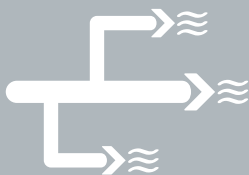


- Air Valves
- Diffusers
- Grilles
- External Louvres & Cowls
- Air Distribution Systems
- Dampers
- Air Volume Dampers
- Fire Dampers
- Smoke Dampers & Ducts

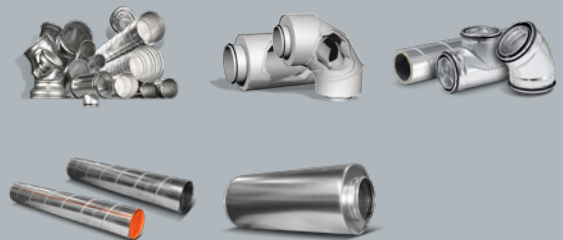


**We have more than 3000 products to ensure that there is always a perfect fit in our customer's projects.** Having the largest product range in the market, our offering covers five critical air functions of the HVAC system for providing the best Indoor Air Comfort & Critical Air solutions.

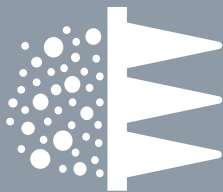
#### AIR DISTRIBUTION



- Fittings
- Ducts
- Silencers



#### AIR FILTRATION



- Clean Room Filtration Units
- Clean Room Building Elements



#### AIR CONDITIONING & HEATING



- Chillers and Heat Pumps
- Data Centre & IT Cooling
- Air Conditioning



#### CONTROLS



- ISYteq Controls for AHU and FCU
- ISYteq FICO Fire Safety Control System
- Ipsum Optimisation System



# The *advanced* eQ family by FläktGroup

Always feature-packed, flexible and ready to deliver to the highest standards



## Highly flexible

The eQ range gives you tremendous possibilities to tailor the configuration of your AHU to your specific demands. The complete range of energy-efficient components, accessories and configuration possibilities on offer ensures that there is always an optimal solution for you.

## Energy efficient

All FläktGroup air handling units are designed with energy efficiency in focus and are filled with the most energy efficient components. This ensures AHUs with low SFPv and high energy recovery rate.

## Certified performance

eQ air handling units are certified according to Eurovent. The energy and casing performance is tested regularly and certified. All FläktGroup AHU's can be designed to fulfil the EU Ecodesign directive.

## Focus on low LCC

eQ AHU's are great performers when it comes to energy efficiency, giving you the benefit of low annual energy consumption and low total energy cost. To optimise your investment, FläktGroup provides an advanced tool to calculate the Life Cycle Cost.



### Integrated controls

Factory-fitted controls to your unique configuration make sure that functionality and energy efficiency reach or surpass set targets. With easy to use interface and compatibility with BMS systems, commissioning is quick and simple.

### Robust casing

The unique eQ casing forms a strong, air tight and stable, box-section framework. The casing is Eurovent certified with excellent thermal and sound insulation as well as air tightness properties.

### Hygienic design

eQ casing is designed with hygiene in mind. Easy cleanability and no risk of trapped water are basic characteristics. Econet run around coil recovery system completely eliminates the risks of bacteria and odour transfer from exhaust to supply air.

### Easy installation

Thanks to the considered design, installation and commissioning times are kept to a minimum. As far as possible the units are delivered pre-assembled and pre-configured with a minimum of wiring and component assembly needed on site.

# COMPACT AND STANDARDISED OR ULTIMATE FLEXIBILITY? **WITH eQ THE CHOICE IS YOURS**



## eQ TOP™

eQ Top is a top-connected AHU with a small footprint. All connections are circular for easy connection to a spiro duct system. eQ Top is supplied with fans, filters and rotary heat exchanger. There is a wide range of duct mounted components, including dampers, coils, silencers etc. eQ Top can be equipped with an integrated control system with control and alarm functions as well as the possibility to communicate with BMS systems.

### QUICK FACTS

- Available in **2 sizes**
- Energy efficient rotary heat exchanger
- Plug & Play installation
- Circular connection on the top
- Integrated controls

### AIR FLOW

720 – 5.040 m<sup>3</sup>/h (0,2 – 1,4 m<sup>3</sup>/s)



## eQ PRIME®

eQ Prime is a standardised range of air handling units in compact casing that includes the most energy efficient components such as 270 Premium rotor, ReCooler HP, Recuterm counterflow and IE5 EC-motors. The basic block of fans, filters, and heat recovery can be complemented with heater, cooler and silencers inside the casing or mounted in the duct. Integrated controls system is optional.

### QUICK FACTS

- Compact design available in **8 sizes**
- Sizes 032–050 are supplied with twin fans (032 can optionally be delivered with a single fan)
- Plug & Play installation
- Regoterm/RegAsorp energy recovery rotors
- Recuterm counterflow plate heat exchanger
- Integrated controls
- Also available with T2/TB2



### AIR FLOW

1.440 – 23.400 m<sup>3</sup>/h (04 – 6,5 m<sup>3</sup>/s)

**Modern buildings need to be ventilated in a modern and efficient way to achieve good indoor climate.** This also needs to be combined with reduced energy consumption and environmental impact. FläktGroup is a global leader in energy efficient ventilation solutions, and we are proud to offer an unrivalled range of air handling units that can cover virtually any application and requirement. From small compact units to completely tailored modular units for very large airflows, we can match or exceed your needs.



## eQ MASTER®

The eQ Master is a range of flexible modular air handling units. eQ Master offers wide flexibility in components, configuration and material selection to meet the needs of most building requests. eQ Master offers a comprehensive range of components, heat recovery systems, filters and fans etc. packed in a hygienic and rigid casing.

### QUICK FACTS

- Modular unit available in **21 sizes**
- High degree of flexibility in functionality and configuration
- Flexible and highly efficient energy recovery systems
- Good hygiene characteristics
- Integrated controls

### AIR FLOW

**360 – 43.200 m³/h** (0,1 – 12 m³/s)



## eQL®

eQL is FläktGroup's range of air handling units for large airflow rates. The modular design means that it is possible to tailor the configuration of components, material selection and placement to meet the demands of most building types. The range includes energy recovery systems, rotor or Econet run around coil, filters, fans, humidifiers, etc. eQL can be delivered in the form of an outdoor plant with service corridor.

### QUICK FACTS

- Modular unit available in **8 sizes**
- High degree of flexibility in functionality and configuration
- Flexible and highly efficient energy recovery systems
- Large airflows in one unit
- Outdoor installation with service corridor

### AIR FLOW

**28.800 – 108.000 m³/h** (8 – 30 m³/s)



FLEXIBILITY & EFFICIENCY

# The *modular eQ family* by **FläktGroup**

A flexible set of components for optimum energy efficiency

**Regoterm  
270 Premium** rotary  
heat exchanger

**Econet** intelligent  
run around coil  
recovery system

**FläktGroup's eQ range is designed from the outset as a modular unit, to give you maximum flexibility.**

We offer a complete range of functional modules to tailor the air handling unit to the demands of your specific project. Thanks to our history of innovations, continuous development work, world-class testing and lab facilities, we will always offer components that are class-leading in terms of energy savings. Due to the fact that FläktGroup is also a specialist in complete ventilation solutions, we always use our know-how to select specific components that are well-balanced when combined. Together they provide optimum performance and energy efficiency, combined with a low life cycle cost.



**Recuterm** Crossflow and Counterflow plate heat exchangers

**Energy efficient fans**  
Floor or wall mounted IE5  
Ziehl-Abegg Bluefin fans

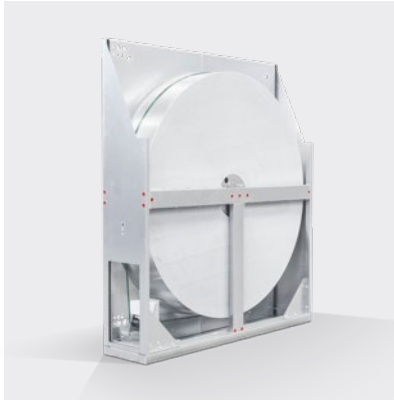
**ReCooler HP** Integrated heating and cooling recovery with exceptional energy recovery



To help you with the selection process we have developed ACON – an easy-to-use and powerful product selection tool for air handling units. It offers rapid product selection to specific project requirements and provides you with all the necessary technical information.

» [www.flaktgroup.com](http://www.flaktgroup.com)

## Energy recovery options

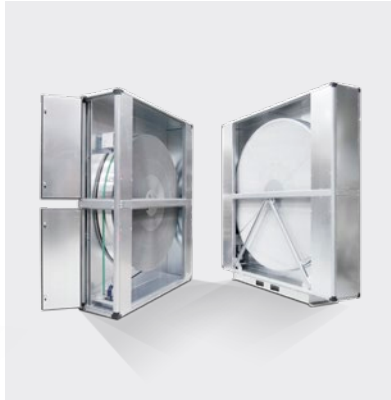


### REGOTERM® /REGASORP



Rotary heat exchangers from FläktGroup offer high levels of heating and cooling recovery at low pressure drops. Regoterm comes with different efficiency variants allowing true optimisation according to climate zone and supply air temperature needs

- Up to 90% temperature efficiency
- Regoterm 270 Premium for optimised ratio between heat recovery and pressure drop
- RegAsorp sorption rotor for up to 90% humidity transfer and efficient cooling recovery



### TWIN WHEEL®



Twin Wheel is a system with a RegAsorp sorption rotor, a cooling coil and a sensible rotor. This system significantly cuts down on cooling energy compared to traditional systems. The system is suitable in warm humid climate zones when there is a need for cooling and humidity control, especially in facilities with chilled beams.

- System for energy efficient dehumidification
- RegAsorp sorption rotor plus sensible rotor
- Stand-alone section with dedicated controller
- The need for a heating coil is dramatically reduced



### ECONET®



Econet is FläktGroup reliable and well proven intelligent run around coil recovery system with up to 80% heat recovery efficiency. It is a very safe system with no risk for transfer of bacteria or odour from exhaust to supply air.

- No risk for cross contamination – increased safety as supply and extract air does not mix
- Heating and cooling added to heat recovery coils – simplified configuration and short AHU
- Econet advanced frost protection for reliable operation and optimised heat recovery
- Factory built pump unit with control system

## Energy recovery options



### RECUTERM® counterflow



Recuterm counterflow is the plate heat exchanger range for high temperature efficiency ~85%. Recuterm counterflow is ideal for central AHUs in residential buildings where there is a need to consider risk of odour transfer. Recuterm AFP, advanced frost protection, demand based frost protection offers reliable operation and the highest total energy efficiency in cold climates.

- Heat transfer efficiency up to 85%
- Recuterm advanced frost protection
- Splittable for entry into narrow building openings

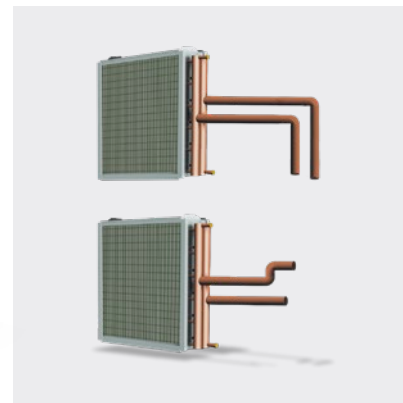


### RECUTERM® crossflow



Recuterm crossflow is the plate heat exchanger range for medium temperature efficiency ~73%. It is available for eQ Master upto size 072. It is ideal for all buildings where there is a risk of odour transfer from the extract air to the supply air. Typical applications are kitchen extracts, and residential buildings.

- Heat transfer efficiency up to 73%
- Airflow rates upto 25.000m³/h (7 m³/s)
- Recuterm advanced frost protection



### ECOFLOW



Ecoflow run around coil recovery system for eQ can be configured for above 68% heat recovery efficiency, which is the ErP request from 2018. The design for high heat recovery efficiency includes two coils in series.

- Run around coil recovery system for eQ Master
- Delivery includes coils in each air stream
- Ecoflow gives the benefit of no cross contamination between airflows

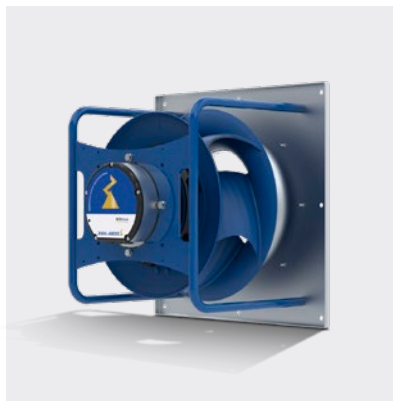


## ZIEHL-ABEGG BLUEFIN



Ziehl-Abegg floor mounted fans are available with either metal or composite impellers and IE3 AC motors or IE4 Permanent Magnet motors. All are available with VSD and are available with units featuring integrated controls.

- Market leading manufacturer
- Superb total fan efficiency
- Low noise and vibration



## EC MOTORS



The air handling unit can be supplied with fans equipped with IE5 EC-motors. EC motors are used in all Prime to achieve a short footprint for the unit and also maximum system efficiency.

- EC Blue motor technology for maximum system efficiency
- Excellent sound performance - low noise level

## Dampers



## DAMPERS



Damper constructed from galvanized sheet steel or stainless sheet steel. Dampers are factory mounted as standard, with actuator connected to controller on AHUs with integrated controls. Dampers are available for closing or mixing

- Counter-rotating stable damper blades in double-plate construction with EPDM rubber seals
- Mounted externally or protected inside casing
- Insulated damper blades as option
- According to tightness class CEN3 or CEN4
- Damper actuators as option

## Integrated cooling & heating



## ReCOOLER® HP



ReCooler HP is the combination of a reversible heat-pump unit and an energy recovery wheel in one unit – bringing true benefits from design to operations. eQ with ReCooler HP is a complete plug & play air handling unit for ventilation, heating and cooling, where everything is included and factory tested.

- High performance and comfort with low running costs
- Heat pump mode – no need for additional heating
- Quick and simple installation

This product contains fluorinated greenhouse gas, R410A, with a GWP-factor of 2088.  
Refrigerant quantity: 3.6-11.8 kg, corresponding to 7.9-24.6 tonnes of CO<sub>2</sub> equivalent.

## Heaters & coolers



### HEATERS & COOLERS



eQ includes a wide offering of heaters and coolers. For heating we offer water coils or electrical heaters and for cooling, water or DX coils. The coils are made with copper tubes and aluminium fins, but for special demands, such as marine and off-shore use, different materials are available. We can deliver versions that are embedded in the AHU or duct mounted. For hygiene critical applications we offer a special model equipped with a withdrawable drain tray to facilitate cleaning, which satisfies hygiene requirements.

## Filters



### FILTERS



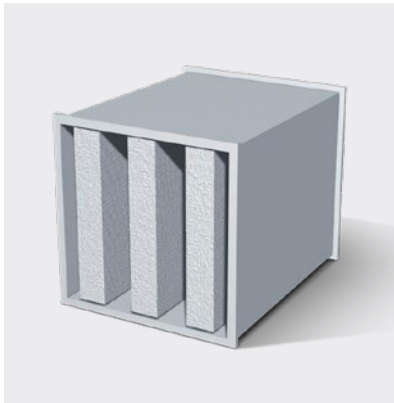
**Panel filter** – Filter cassettes in different filter classes. ISO coarse  $\geq 30\%$  (G2) filters are cleanable in aluminum and ISO coarse  $\geq 60\%$  (G4) filters are of synthetic material.

**Bag filter** – Filter cassettes, coarse filter: ISO coarse  $\geq 60\%$  (G4), fine filter: from  $ePM_{10} \geq 50\%$  (M5) to  $ePM_{1} \geq 80\%$  (F9). Manufactured from synthetic or glass fibre. Can also be provided with a coarse pre-filter. Fine filters are also available as compact filters for increased filter area. All bag filters are classified according to filter standard EN ISO 16890

**HEPA filter** for air handling units with high demands on hygiene. EQPF has a patented filter frame to eliminate the risk of leakage.

**Carbon filter** – Filter for adsorption/removal of gas pollutants and odours. The filter consists of cartridges filled with active carbon. Bayonet fitting makes installation and changes quick and easy.

## Silencers



### SILENCERS



All eQ units can be equipped with silencers mounted inside casing or as a duct-mounted version. When configured inside the AHU the sound performance is certified according to Eurovent. The baffles inside the silencers is made of non-combustible mineral wool with internal protective fabric which prevents fibres from the wool being carried along the air flow.

- 4 variants for different silencing effect and lengths
- Optional withdrawable baffles for manual cleaning

## Humidifiers



### HUMIDIFIER



Evaporative humidifier section is selectable for eQ Master and eQL. The humidifier material is made of a special impregnated glass fibre material that allows for superb moisture absorptive capability. The inorganic compound makes it hygienic, fire resistant and incombustible.

- Evaporative humidifier
- Circulating water or once-through



## CASING

The eQ unit casing consists of closed box-section frame members made of 1.5 mm aluzinc plated sheet steel (corrosion protection class C4) or stainless steel, and bolted together at the corners using steel brackets. The arrangement forms a strong, air tight and stable, box-section framework.

The double-skin design of the casing gives the unit very smooth inside and outside surfaces, which facilitates cleaning and reduces the risk of accumulations of dirt. The casing fulfils high hygiene requirements, and eQ is certified according to German VDI 6022 hygiene standard. The casing is also available with T2/TB2.

Casing panels and inspection doors are of double-skin design with 50 mm thick insulation. Side panels can be removed from the outside of the unit. The doors are hung on adjustable hinges and are equipped with mechanically secured sealing strips. The doors are fitted with door handles with lockable latches. The latch is concealed within the door panel.

### OUTDOOR VERSION

The eQ units are also available in outdoor versions. The design is mostly identical to that of the indoor version and both have the same technical data. However, the outside of the casing is sealed with permanent elastic sealing compound and a factory fitted roof.

## ACCESSORIES

For the eQ series, a wide range of functional and practical accessories are available, allowing you to fully tailor the unit to your demands in every detail. Below are some examples of the available accessories:

- Lamp
- Inspection window
- Lifting devices
- Adjustable feet
- Connection pieces and flexible connections
- Differential manometers for filter pressure drop, of different types incl. Dwyer Magnehelic
- Safety accessories including screens for fans and door stops
- Drains
- Water traps
- Spare filters
- Flanges for coils
- Empty sections with drain pans
- ....and many more



# Quick selection

## eQ PRIME and eQ TOP



### eQ Prime with rotary heat exchanger

| Size | Nominal airflow<br>m³/h m³/s |     | Fan size | Length<br>(mm)* | Width x height<br>(mm) | Longest block<br>(mm) | Duct connection<br>(mm) | Approx weight<br>(kg) | Fuse        |             |
|------|------------------------------|-----|----------|-----------------|------------------------|-----------------------|-------------------------|-----------------------|-------------|-------------|
|      |                              |     |          |                 |                        |                       |                         |                       | Small motor | Large motor |
| 005  | 1.440                        | 0,4 | Standard | 1.450           | 1.050 x 1.102          | 550                   | 500 x 300               | 310                   | 10A         | 10A         |
| 008  | 2.880                        | 0,8 | Small    | 1.450           | 1.350 x 1.302          | 550                   | 800 x 400               | 420                   | 10A         | 10A         |
|      | 3.660                        | 1,0 | Large    | 1.550           |                        |                       |                         |                       |             |             |
| 011  | 4.320                        | 1,2 | Small    | 1.550           | 1.450 x 1.502          | 700                   | 800 x 400               | 530                   | 10A         | 16A         |
|      | 5.040                        | 1,4 | Large    | 1.650           |                        |                       |                         |                       |             |             |
| 018  | 6.840                        | 1,9 | Small    | 1.750           | 1.650 x 1.702          | 700                   | 1.100 x 500             | 660                   | 16A         | 16A         |
|      | 7.920                        | 2,2 | Large    | 1.850           |                        |                       |                         |                       |             |             |
| 023  | 10.440                       | 2,9 | Small    | 2.250           | 1.700 x 2.002          | 950                   | 1.400 x 600             | 1.350                 | 16A         | 16A         |
|      | 11.880                       | 3,3 | Large    | 2.350           |                        |                       |                         |                       |             |             |
| 032  | 13.320                       | 3,7 | Small    | 2.450           | 1.800 x 2.202          | 1.050                 | 1.400 x 800             | 1.350                 | 16A         | 20A         |
|      | 15.120                       | 4,2 | Large    | 2.250           |                        |                       |                         |                       |             |             |
| 041  | 16.920                       | 4,7 | Small    | 2.300           | 2.000 x 2.302          | 1.100                 | 1.700 x 800             | 1.500                 | 20A         | 25A         |
|      | 19.080                       | 5,3 | Large    | 2.400           |                        |                       |                         |                       |             |             |
| 050  | 21.240                       | 5,9 | Small    | 2.400           | 2.300 x 2.602          | 1.100                 | 2.000 x 800             | 1.850                 | 25A         | 30A         |
|      | 23.400                       | 6,5 | Large    | 2.500           |                        |                       |                         |                       |             |             |

\*T2/TB2 Increases length, see Acon for details



### eQ Prime with plate heat exchanger

| Size | Nominal airflow<br>m³/h m³/s |     | Fan size | Length<br>(mm)* | Width x height<br>(mm) | Longest block<br>(mm)** | Duct connection<br>(mm) | Approx weight<br>(kg) | Fuse        |             |
|------|------------------------------|-----|----------|-----------------|------------------------|-------------------------|-------------------------|-----------------------|-------------|-------------|
|      |                              |     |          |                 |                        |                         |                         |                       | Small motor | Large motor |
| 005  | 1.440                        | 0,4 | Standard | 2.150           | 800 x 1.102            | 1.250                   | 500 x 300               | 477                   | 10A         | –           |
| 008  | 2.880                        | 0,8 | Small    | 2.250           | 1.100 x 1.302          | 1.350                   | 800 x 400               | 701                   | 10A         | 10A         |
|      | 3.660                        | 1,0 | Large    | 2.350           |                        |                         |                         |                       |             |             |
| 011  | 4.320                        | 1,2 | Small    | 2.600           | 1.200 x 1.502          | 1.600                   | 800 x 400               | 925                   | 10A         | 16A         |
|      | 5.040                        | 1,4 | Large    | 2.700           |                        |                         |                         |                       |             |             |
| 018  | 6.840                        | 1,9 | Small    | 2.900           | 1.400 x 1.702          | 1.800                   | 1.100 x 500             | 1.186                 | 16A         | 16A         |
|      | 7.920                        | 2,2 | Large    | 3.000           |                        |                         |                         |                       |             |             |
| 023  | 10.440                       | 2,9 | Small    | 3.450           | 1.700 x 2.002          | 2.150                   | 1.400 x 600             | 1.780                 | 16A         | 16A         |
|      | 11.880                       | 3,3 | Large    | 3.550           |                        |                         |                         |                       |             |             |
| 032  | 13.320                       | 3,7 | Small    | 3.850           | 1.800 x 2.202          | 2.450                   | 1.400 x 800             | 2.125                 | 16A         | 20A         |
|      | 15.120                       | 4,2 | Large    | 3.650           |                        |                         |                         |                       |             |             |

\*T2/TB2 Increases length, see Acon for details \*\*Splittable

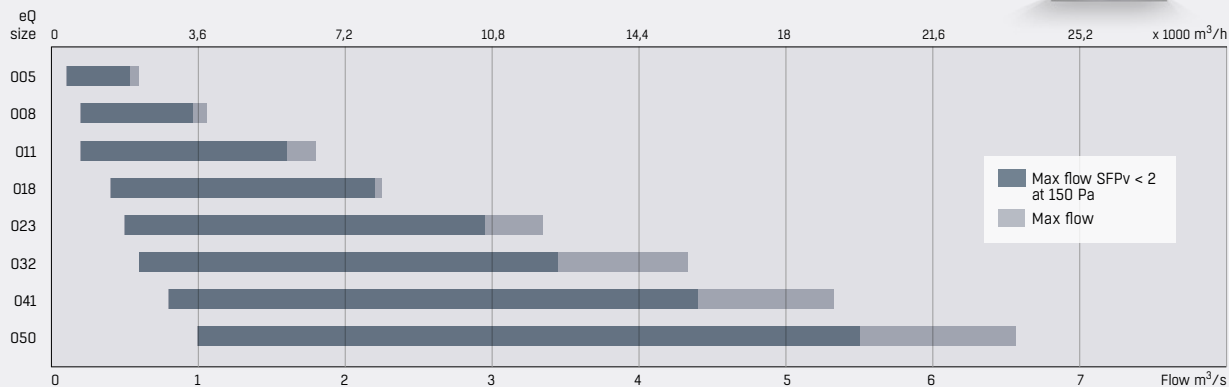


### eQ Top

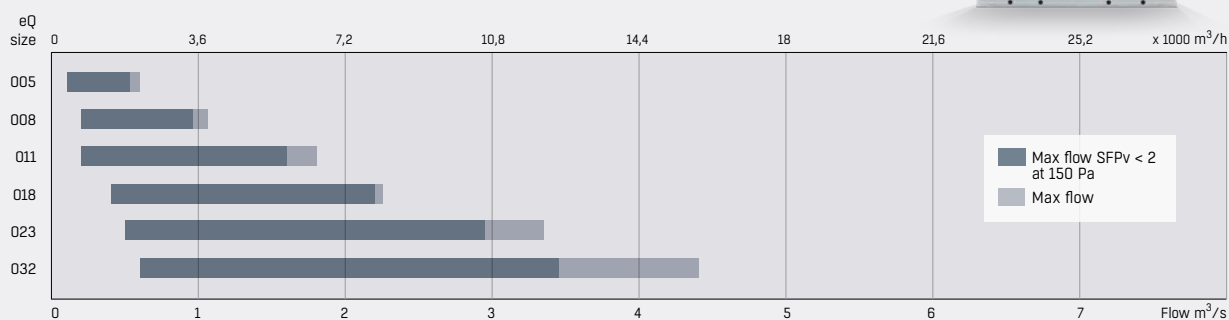
| Size | Nominal airflow<br>m³/h m³/s |     | Fan size | Length<br>mm | Width<br>mm | Height<br>mm | Longest block<br>length mm | Duct connection<br>mm | Approx.<br>weight kg |
|------|------------------------------|-----|----------|--------------|-------------|--------------|----------------------------|-----------------------|----------------------|
| 008  | 2.880                        | 0,8 | Small    | 1750         | 1100        | 1302         | 600                        | ø400                  | 533                  |
|      | 3.600                        | 1,0 | Large    |              |             |              |                            |                       |                      |
| 011  | 4.320                        | 1,2 | Small    | 1950         | 1200        | 1502         | 700                        | ø500                  | 662                  |
|      | 5.040                        | 1,4 | Large    |              |             |              |                            |                       |                      |

# Flowcharts

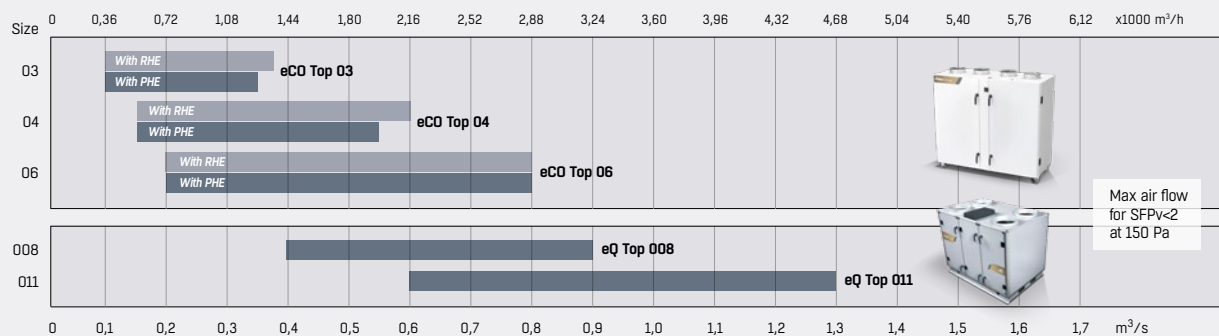
## eQ Prime with rotary heat exchanger



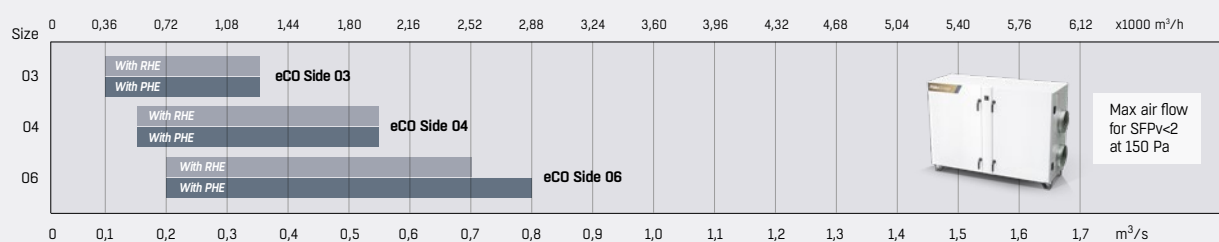
## eQ Prime with plate heat exchanger



## eCO Top and eQ Top



## eCO Side



# Quick selection

## eQ MASTER and eQL



### eQ Master

| Size | Airflow at internal velocity<br>m³/h    m³/s |               | Unit width<br>(mm) | Unit height<br>single deck<br>(mm) | Unit height<br>double deck<br>(mm) |  |
|------|----------------------------------------------|---------------|--------------------|------------------------------------|------------------------------------|--|
|      | 1,0 m/s                                      | 2,5 m/s       |                    |                                    |                                    |  |
| 005  | 720    0,2                                   | 1.800    0,5  | 800                | 476                                | 952                                |  |
| 008  | 1.080    0,3                                 | 3.240    0,9  | 1.100              | 576                                | 1.152                              |  |
| 009  | 1.440    0,4                                 | 2.880    0,8  | 800                | 776                                | 1.552                              |  |
| 011  | 1.800    0,5                                 | 4.680    1,3  | 1.200              | 676                                | 1.352                              |  |
| 014  | 2.160    0,6                                 | 4.680    1,3  | 1.100              | 776                                | 1.552                              |  |
| 018  | 2.520    0,7                                 | 6.480    1,8  | 1.400              | 776                                | 1.552                              |  |
| 020  | 2.880    0,8                                 | 6.840    1,9  | 1.100              | 1.076                              | 2.152                              |  |
| 023  | 3.240    0,9                                 | 9.720    2,7  | 1.700              | 926                                | 1.852                              |  |
| 027  | 3.960    1,1                                 | 9.360    2,6  | 1.400              | 1.076                              | 2.152                              |  |
| 032  | 4.680    1,3                                 | 11.880    3,3 | 1.800              | 1.026                              | 2.052                              |  |
| 036  | 5.040    1,4                                 | 11.880    3,3 | 1.400              | 1.376                              | -                                  |  |
| 041  | 5.760    1,6                                 | 14.400    4,0 | 2.000              | 1.076                              | 2.152                              |  |
| 045  | 6.480    1,8                                 | 15.120    4,2 | 1.700              | 1.376                              | -                                  |  |
| 050  | 6.840    1,9                                 | 19.080    5,3 | 2.300              | 1.226                              | 2.452                              |  |
| 054  | 7.560    2,1                                 | 18.360    5,1 | 2.000              | 1.376                              | -                                  |  |
| 056  | 7.920    2,2                                 | 19.340    5,4 | 1.700              | 1.676                              | -                                  |  |
| 063  | 8.640    2,4                                 | 21.600    6,0 | 2.300              | 1.376                              | -                                  |  |
| 068  | 10.080    2,8                                | 23.490    6,5 | 2.000              | 1.676                              | -                                  |  |
| 072  | 10.080    2,8                                | 24.840    6,9 | 2.600              | 1.376                              | -                                  |  |
| 079  | 11.160    3,1                                | 27.630    7,7 | 2.300              | 1.676                              | -                                  |  |
| 090  | 12.600    3,5                                | 31.770    8,8 | 2.600              | 1.676                              | -                                  |  |



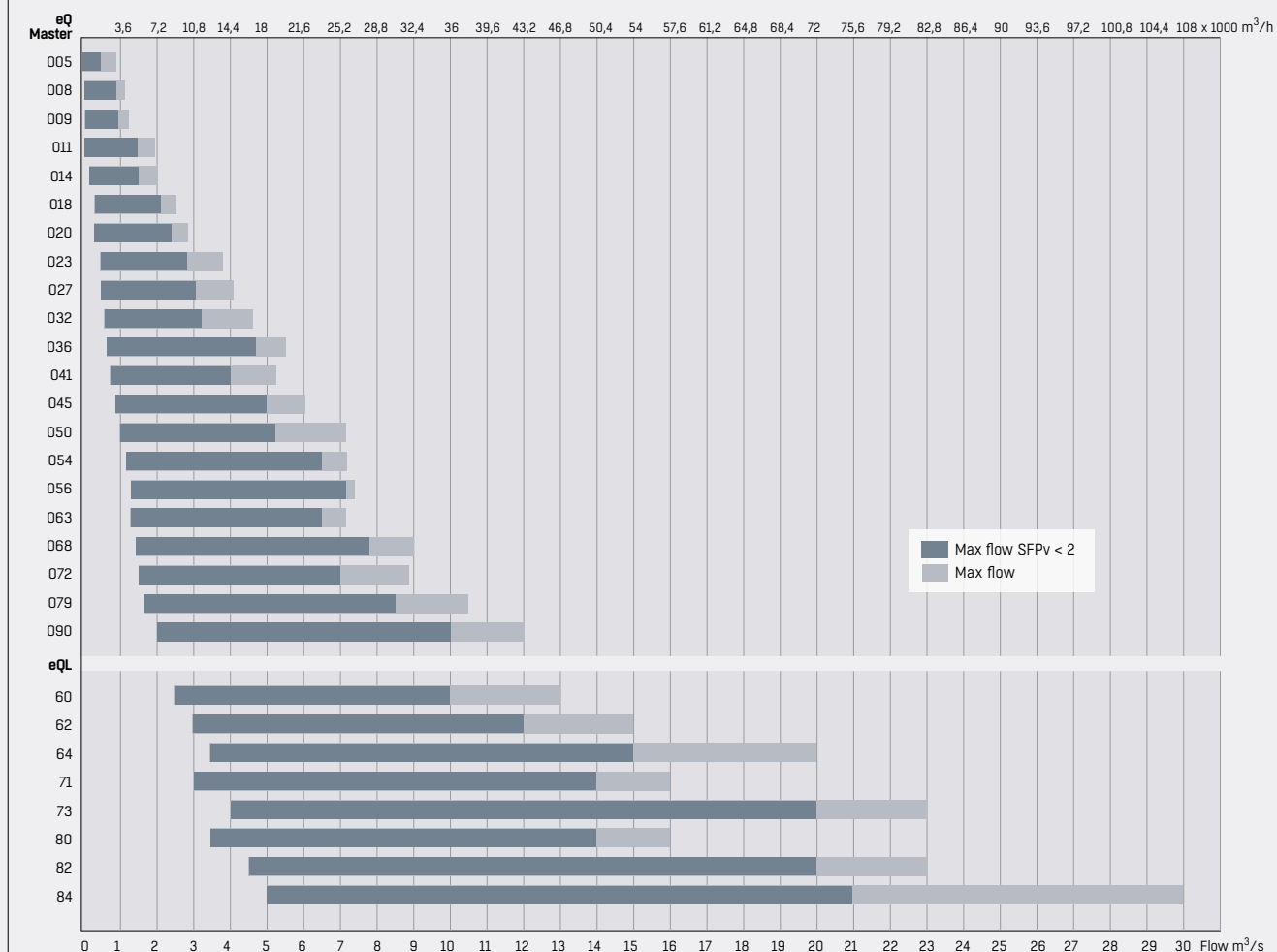
### eQL

| Size | Airflow at internal velocity<br>m³/h    m³/s |                | Unit width<br>rotor<br>(mm) | Unit height<br>single deck<br>(mm) | Unit height<br>double deck<br>(mm) |  |
|------|----------------------------------------------|----------------|-----------------------------|------------------------------------|------------------------------------|--|
|      | 1,0 m/s                                      | 2,5 m/s        |                             |                                    |                                    |  |
| 60   | 11.990    3,3                                | 29.970    8,3  | 3.400                       | 2.050                              | 4.250                              |  |
| 62   | 15.880    4,4                                | 39.690    11,0 | 3.660                       | 2.050                              | 4.250                              |  |
| 64   | 19.760    5,5                                | 49.410    13,7 | 4.000                       | 2.050                              | 4.250                              |  |
| 71   | 18.260    5,0                                | 45.640    12,7 | 4.000                       | 2.350                              | 4.850                              |  |
| 73   | 22.730    6,3                                | 56.820    15,8 | 4.500                       | 2.350                              | 4.850                              |  |
| 80   | 21.170    5,9                                | 52.920    14,7 | 4.500                       | 2.650                              | 5.450                              |  |
| 82   | 26.350    7,3                                | 65.880    18,3 | 4.500                       | 2.650                              | 5.450                              |  |
| 84   | 32.830    9,1                                | 82.080    22,8 | 4.900                       | 2.650                              | 5.450                              |  |

# Flowchart and unit configuration



*eQ Master and eQL with rotary heat exchanger*



*eQ unit configuration*

| Feature type        | Detail                            | eQ Top | eQ Prime | eQ Master | eQL |
|---------------------|-----------------------------------|--------|----------|-----------|-----|
| Configuration       | Supply or exhaust air only        |        |          | •         | •   |
| Filter              | Fine filters                      | •      | •        | •         | •   |
|                     | Carbon filter                     |        |          | •         | •   |
|                     | HEPA filter                       |        |          | •         | •   |
| Fans                | Wall mounted fan                  | •      | •        | •         |     |
|                     | Floor mounted fan                 |        |          | •         | •   |
| Heat recovery       | Regoterm/RegAsorp (thermal wheel) | •      | •        | •         | •   |
|                     | Twin Wheel                        |        |          | •         |     |
|                     | Recuterm Crossflow PHE            |        |          | •         |     |
|                     | Recuterm Counterflow PHE          |        | •        | •         |     |
|                     | Econet (run around coils)         |        |          | •         | •   |
|                     | Ecoflow (run around coils)        |        |          | •         | •   |
| Integrated cooling  | ReCooler HP                       |        | •        | •         |     |
| Heaters and coolers |                                   | •      | •        | •         | •   |
| Silencers           |                                   | •      | •        | •         | •   |
| Humidifiers         |                                   |        |          | •         | •   |
| Integrated controls |                                   | •      | •        | •         |     |

# COMPACT UNITS FOR SPACE CONSTRAINED INSTALLATIONS



## eCO TOP & eCO SIDE

eCO Top and eCO Side feature compact dimensions, low sound levels and an attractive white-painted exterior finish to provide great flexibility in the location of the unit. They were developed with light commercial buildings, such as offices, schools and restaurants in mind. The top or side connections and ISYteq Touch 7.1, with commissioning wizard, make the installation quick and simple. Carefully chosen components ensures low running and life cycle costs.

### AIR FLOW

360 – 2.880 m<sup>3</sup>/h (0,1 – 0,8 m<sup>3</sup>/s)

## QUICK FACTS

- Available in **3 sizes**
- Easy to transport and install
- Rotary heat exchanger with up to 85% energy recovery
- Plate heat exchanger with up to 83% energy recovery
- Energy efficient plenum fans with EC-motors
- White-painted exterior finish, suited for installation in public areas with optional top/bottom cover plates (eCO Top)
- ISYteq Touch 7.1 with commissioning wizard
- Low noise
- VDI 6022 hygiene standard
- T2/TB2

VDI  
6022

T2/TB2

**eCO Top, eCO Side and eCO Premium – Air Handling Units that are compact in dimensions but fully featured and packed with all our know-how.** These units are perfectly suited for installation in areas that have space limitations, narrow fan rooms or in ceiling voids. Typical examples are public buildings such as child care centres, schools, offices, shops etc. where the small footprint, perfect comfort and low noise levels are especially appreciated. They also come with integrated controls that are programmed, configured and tested to ensure that installation and commissioning is quick and simple – and that the units' energy efficiency is maximised straight out of the box.



## eCO PREMIUM™

A compact high performing AHU with energy recovery, ideal for ceiling void installations. The unit is packed with features for clean, fresh air, high efficiency and low noise. Elaborate electronic control system, minimised maintenance and most importantly high energy performance. In the new eCO PREMIUM, all of these features are fitted in a compact casing that fit even the smallest spaces.

### AIR FLOW



**720 – 3.240 m³/h** (0,2 – 0,9 m³/s)

### QUICK FACTS

- Available in **6 sizes**
- Very low noise level (BSRIA tested)
- Integrated controls with ISYteq Touch 3.5
- Plug fans with EC-motors
- Counter flow plate heat exchanger ~85% efficiency
- Market leading energy efficiency - low SFPv
- Heaters inside the unit
- Wide scope of duct mounted components
- Outdoor version as option

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# INTEGRATED CONTROLS

MAXIMISE THE POTENTIAL OF YOUR AHU  
WITH QUICK AND EASY SELECTION, DELIVERY,  
INSTALLATION AND COMMISSIONING

---



## EASY TO SELECT

With our ACON online selection tool, you can easily select and configure the integrated controls for your FläktGroup Air Handling Unit. Based on your selection of AHU and controls, a full documentation including consultant specification and wiring diagram is immediately available.

When your unit is produced, it will be configured and tested before delivery, according to your ACON configuration. Selecting a complex modular unit is now as easy as a compact!

## FUNCTIONS FOR BEST BALANCE BETWEEN COMFORT AND SUSTAINABILITY

A large palette of functions from the basic but important, to more advanced such as Active Mixing, Pressure Balancing, Density Compensation and AFP (Patented Advanced Frost protection) are available. The AFP controls and minimises the need for defrosting and saves money.

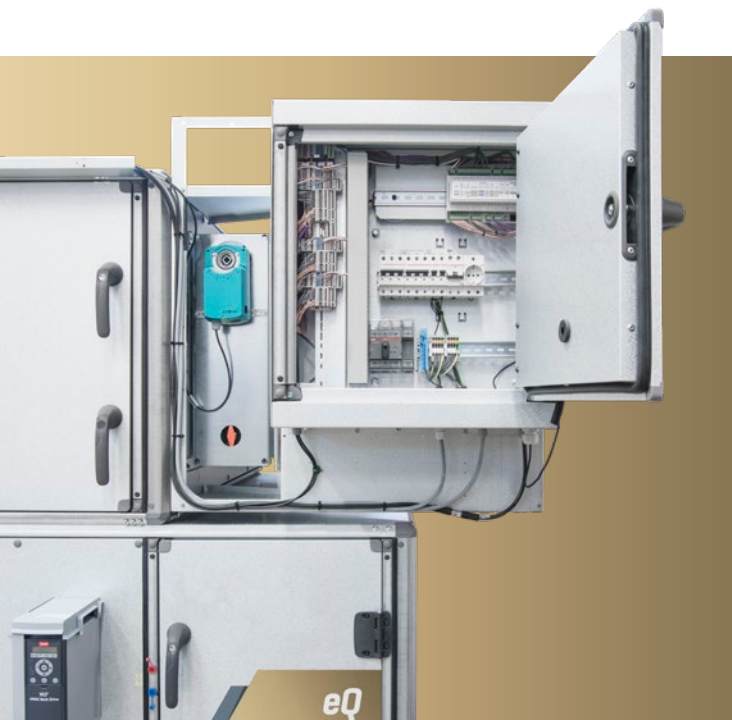
You can have every function for your comfort and combine them with our multiple choice of energy recovery systems for example ReCooler HP, ECONET, Twin Wheel – all controlled by our controllers.

The perfect balance between comfort and sustainability is available at your fingertips.



**You will always benefit from our Integrated controls.** We are experts in AHUs and how to optimise the control for your choice of balance between Comfort and Energy consumption. Any advanced Air Handling Unit needs to meet high demands and deliver both healthy and comfortable indoor climate, while at the same time giving you the best economy through the lowest possible energy consumption.

We have made it easy for you to choose the functions and configuration through our selection tool ACON as well as supplying complete documentation at the stage of selection and full information of the delivery of your system – ready to be installed and started. Easy to plan for your project - all inclusive.



## EASY CONNECTIVITY

With integrated control you can fully control the AHU from a distance and in the case of a breakdown of the BMS system, the AHU runs locally – not affecting the comfort or health of persons in the building. There are many possibilities for connecting accessories, or connection to the internet and connection to BMS:

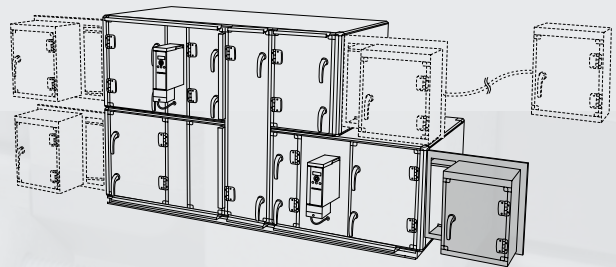
- Modbus TCP
- BACnet
- LonWorks
- Modbus RTU

Your eQ can also be configured with our intelligent web-based eQ Smartweb. The system constantly monitors the health, readiness and performance of your AHU, giving full control at all time, and minimising emergency site visits.

## EASY INSTALLATION AND COMMISSIONING

An AHU from FläktGroup is easy to install and commission with specific features depending on the needs.

- Quick installation and commissioning supported by easy to understand documentation.
- In some models, free positioning on the control cabinet for our modular units is possible
- Internal quick connectors between the blocks
- All units are configured and tested accordingly, when delivered from factory as selected in ACON
- Loose supplied accessories are shipped together with the unit.



# ALWAYS THE RIGHT PRODUCT CHOICE WITH A COMPLETE RANGE OF ADVANCED SELECTION TOOLS

To help you always select the correct product for your project, FläktGroup has developed a complete range of selection tools. The programs are freely available on our website and are continuously updated to always include the latest products and knowledge from our research centres and lab testing. Many of the tools are considered to be among the very best of their kind in the world, they offer advanced life cycle cost calculations and all the efficiency and performance data you need. The goal is to make it easy to specify the most energy efficient and functional product for your project, regardless of application area. Therefore we also focus on making our selection tools as user-friendly as possible.

On the support centre section of [www.flaktgroup.com](http://www.flaktgroup.com) we have gathered links and information on all of our selection tools.



## LCC CALCULATIONS

To make an informed choice when making your investment in an air handling unit, the overall life cycle cost calculation is an important metric to consider.

FläktGroup has developed a sophisticated calculation tool that provides you with the yearly energy cost and life cycle cost. A large number of data sources are taken into account, including detailed climate information, heating and cooling recovery equipment and all relevant energy consumption points etc.

The LCC calculation tool is integrated in ACON for maximum ease of use.





## ACON® SELECTION TOOL

Easy-to-use and powerful selection. ACON® is a powerful and easy product selection tool for air handling units. It is the best and most advanced of its kind on the web. It offers rapid product selection to specific project requirements and provides you with all the technical information.

- Product dimensions
- Noise data
- Performance data
- Efficiency data
- Life cycle cost
- Product documentation
- Export of Dxf and Dwg files
- Certificates

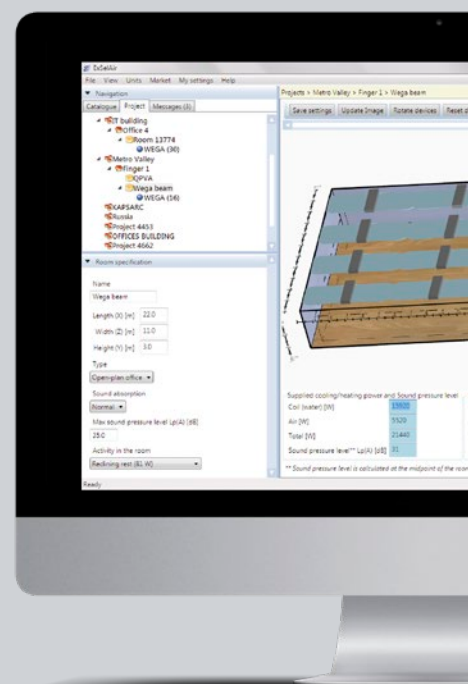
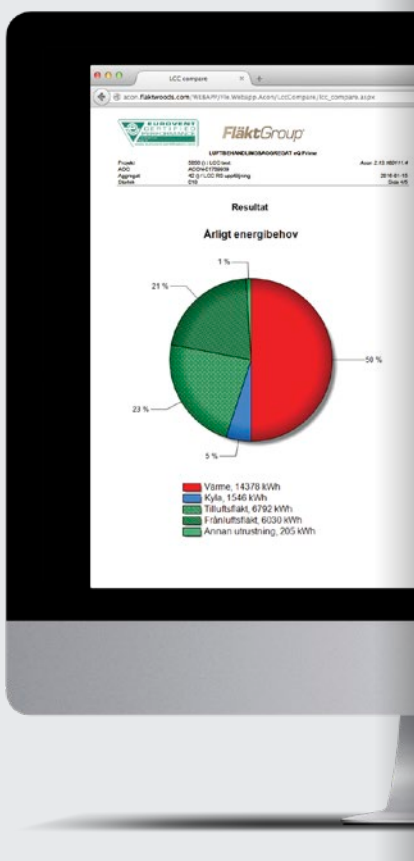


## MAGICAD PLUG-INS

MagiCAD offers possibilities to have plugins to enable a user to connect and import product selections and calculations and thereby selections become faster, easier and more accurate.

The plugin enables the users to find air terminal devices, chilled beams and air handling units. The plugins are available for AutoCad and Revit.

Via MagiCAD, plugins offer FläktGroup an opportunity to make it easier and more productive for designers to choose between our products. The Plugin is available for free for all MagiCAD users worldwide.



## EXCELLENCE IN SOLUTIONS

WWW.FLAKTGROUP.COM

AHU RANGE 9908GB

FläktGroup is the European market leader for smart and energy efficient Indoor Air and Critical Air solutions to support every application area. We offer our customers innovative technologies, high quality and outstanding performance supported by more than a century of accumulated industry experience. The widest product range in the market, and strong market presence in 65 countries worldwide, guarantee that we are always by your side, ready to deliver Excellence in Solutions.

### PRODUCT FUNCTIONS BY FLÄKTGROUP

Air Treatment | Air Movement | Air Diffusion  
Air Distribution | Air Filtration | Air Management & ATD's  
Air Conditioning & Heating | Controls | Service



» Learn more on [www.flaktgroup.com](http://www.flaktgroup.com)  
or contact one of our offices