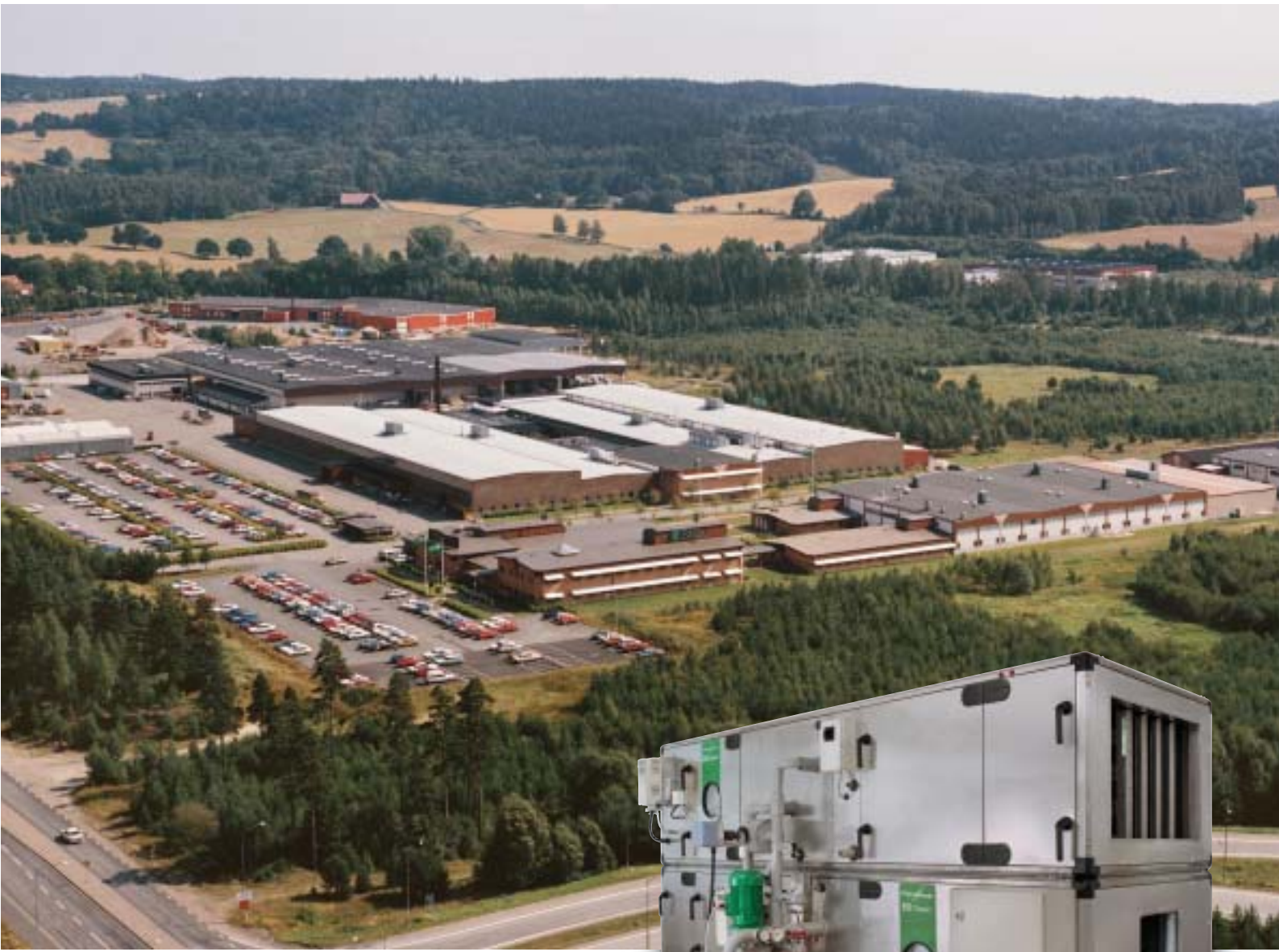


EU and EC air handling units
Good indoor comfort anywhere in the world



Fläkt

FläktWoods



Fläkt Woods has extensive knowledge and vast experience. We have produced air handling units since 1937.

Unlike most of its competitors, Fläkt Woods is more than merely an assembler of air handling units. The main components are designed and manufactured by us specifically for our air handling units. We control the quality and the performance. We ensure that the quality and performance are optimized to give the best possible performance over the lifetime of the unit.

The units and all components are designed, tested and produced by Fläkt Woods to applicable standards including ISO 9001 (quality assurance), ISO 14001 and EMAS (environmental management).

Technical performance is generally in accordance with CEN standards and the EU and EC air handling units are certified by EUROVENT.



Air handling with technology in the centre

» An advanced product selection program makes dimensioning and specifying easier than ever before.

The associated product selection program is an integrated part of the EU and EC air handling units. It quickly and easily selects the right unit size and type to meet the preferred specifications.

The program gives a complete technical specification with detailed dimensional sketches. Pressure drop, power consumption, efficiency, sound data, SFP-figure and LCC - cost calculations are calculated automatically and are presented on screen as well as on a printout. Even a 3D unit drawing can be transferred to AutoCAD.

Laboratory tested components

The Fläkt Woods laboratory is equipped to test the performance of fans, filters, heat recovery units and other components according to applicable standards.

EU and EC air handling units are certified according to the test and classification standard EUROVENT/CECOMAF 6/C/005/-1997 and have certificate number 99.03.008.

Certification comprises the testing of a standard unit in an independent laboratory chosen by EUROVENT. Measured data must correspond with catalogue data as well as data presented by the product selection program to obtain certification. The following data is checked:

- Flow, pressure, power consumption
- Sound power to ducts per octave band
- Sound to the surroundings per octave band
- Heating and cooling capacity
- Efficiency of the heat recovery unit
- Pressure drop on the water side

The following is included and tested as a supplement: mechanical strength, heat transfer, filter leakage and sound levels (according to the standard prEN 1886).



The Fläkt Woods laboratory is equipped to test everything from fans and filters to heat recovery units and complete systems.



A robust casing platform

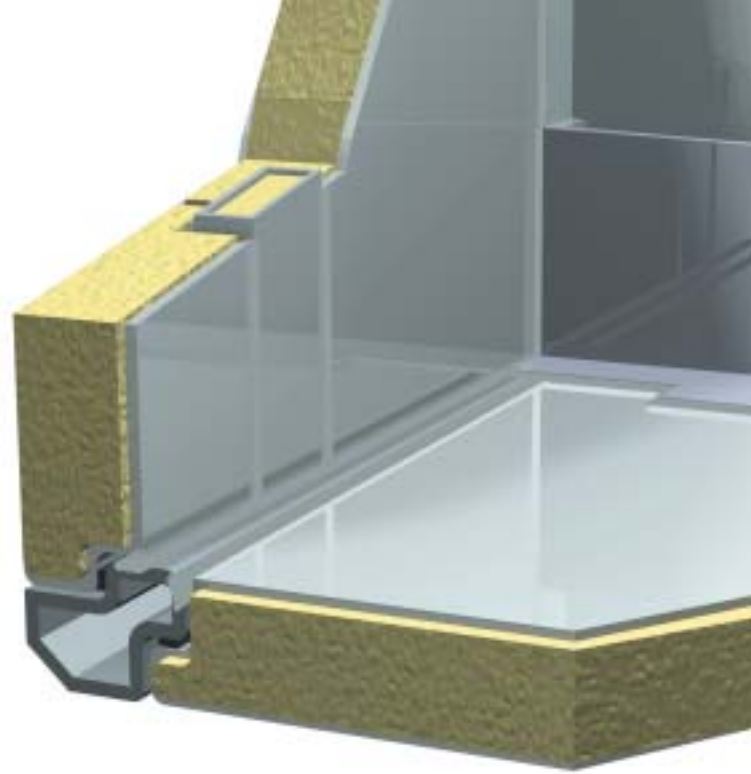
» The EU and EC-units are built on a common design platform, which means that you can choose between module or compact and get the same good casing specifications.

Same robust design

The casing is built on a framework of hollow section steel profiles bolted to sturdy corner pieces of aluminium or composite material. Double skinned panels form the cladding. The casing meets the performance requirements of the CEN standards. Apart from the normal galvanized finish, stainless steel or pre-coated steel are available options on the modular unit.

For outdoor units or units selected for CEN B leakage the joints between panel and frame are sealed.

A stable frame design of enclosed steel sections and corners made up of a composite material.



Security on every door

Each door is equipped with a lockable handle as standard. The handle is designed to avoid thermal bridges and leakage.

Environmentally safe insulation

The EU and EC air handling units both use mineral wool as the casing insulation. Mineral wool, which is non-combustible, gives both high-quality acoustic insulation and excellent thermal insulation. The framework is also available with insulation.



Each door is equipped as standard with a lockable handle.



The frame section for the small units up to EU size 53 and all EC units.



Larger units are built on more robust frame sections for strength and stability.



Dampers and filters

» The filters play a very important role in the ventilation system. They both protect the system and make sure that the indoor environment satisfies the stipulated demands. Minimal leakage and service friendliness are two important features for the filter section.

Most EU and EC-units feature our new filter frame, which is designed to promote service friendliness and prevent leakage. The filter frames are withdrawable, which makes them easy to access for inspection and cleaning.

The filter section can be fitted with a drainage tray with a screen as an extra option. Of course there is a wide range of filter classes and materials available.

Carbon filter

In some applications it may be appropriate with an active carbon filter to reduce high odour concentrations. An active carbon filter absorbs gases and odours in the outdoor or exhaust air to protect and improve the indoor climate or to protect the environment.

Absolute filter

Absolute filters (HEPA) with extremely high separation capacity are installed in clean rooms, operating theatres and other hygienic ventilation applications. The mounting of the filter is extremely important, if the system is to conform to the stringent demands.

The EU unit series offers a reliable absolute filter section with a filter wall, which has a better leakage class than the actual filter.



The features filter frame makes it easier to access the filter for service and inspection.

Damper

A damper is used in the air handling units for shutoff and adjustment of the air flow. Our newly improved damper is designed for the Scandinavian climate, which demands reliable dampers with low leakage rates.

The damper is used to adjust, shutoff and mix air flows.



Heat exchanger for heating and cooling

» Our unit contains a Fläkt Woods heat exchanger to ensure good performance and quality.

Quality in production, and a very accurate and fully developed product selection program, means that you can trust the performance and reliability.

The coils are usually manufactured of copper pipe with aluminium fins, but fins are also available in copper or epoxy coated aluminium for applications where there is a greater risk of corrosion.

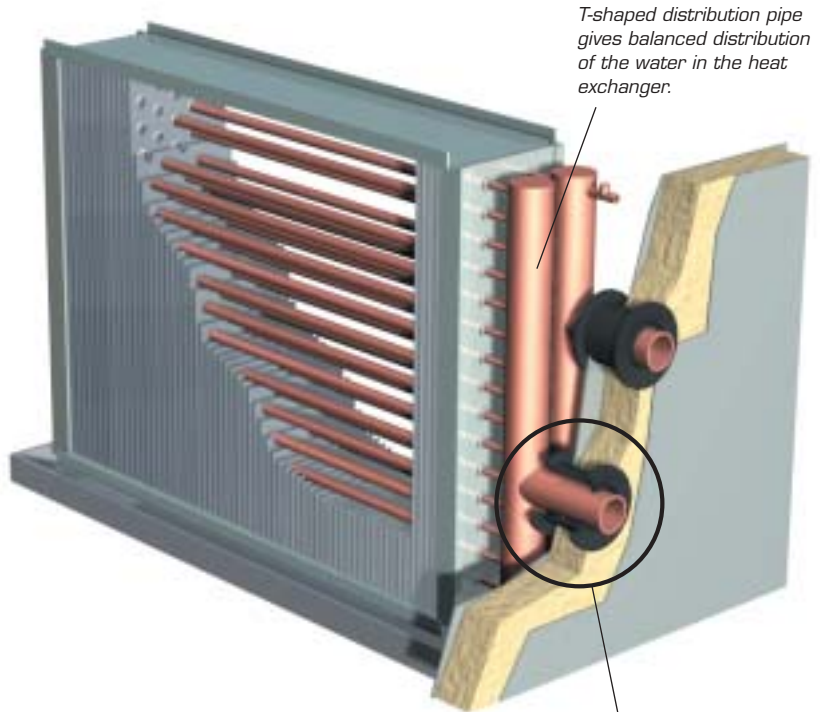
Inclined drainage tray

The heat exchanger for cooling is equipped with a stainless steel drainage tray that is angled towards the inspection side and a pipe extending out through the casing.

In addition, the larger sizes are equipped with an intermediate tray that is angled and connected to the floor tray via a hose approved for the food industry.

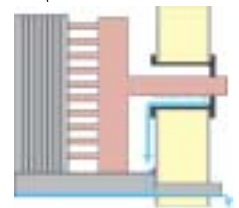
Sealed lead-throughs

All heat exchangers are equipped with nipples for venting and drainage and all connections enter the casing via a sleeve that both seals



T-shaped distribution pipe gives balanced distribution of the water in the heat exchanger.

the lead-through against air leakage as well as counteracts water penetrating the insulation.



The Fläkt Woods-developed pipe sleeve seals the lead-through against air leakage as well as water penetrating the insulation.



High quality heat exchanger.



Effective and hygienic water seal.

Fans at the heart of the system

» The fan is the heart of the air handling system. As experts in fan design we know how to install fans in air handling units.

The EU and EC units are equipped with fans manufactured by Fläkt Woods. We offer a wide range of fan models and accessories allowing you to choose the optimal solution for your specific installation.

The fans are tested and measured in our pressure chamber to the standard DIN 24166. They are driven by high quality and top performance motors, for example, motors from ABB.

Centrifugal fans

The most popular fans are belt driven centrifugal fans with backward curved blades. These fans offer high efficiency and flexible operation. The belt drive means the motor can run synchronously and we can then choose a motor close to the optimal power output.

Centrifugal fans with forward curved blades are the best alternative for small flows as these require very little space.

The belt drive consists of a standard V-belt with appropriate pulleys. Spare parts are readily available and adjustment is easy.



Flat belt drive for good economy and operating safety.

All bearings are designed for an estimated average life of 22 years at maximum speed and significantly greater at lower speeds.

An alternative is a flat belt drive which gives higher efficiency and a smaller service requirement. The larger bearings give a longer operating life than equivalent V-belt drives. Another advantage of the flat belt drive is that it does not give off any dust.

Plug fans

The plug fan has recently become popular. As it is direct driven it requires a minimum of service. It is easy to clean and has a low vibration level.

Many accessories to choose from Irrespective of which fan you choose a number of accessories can be chosen for safety and convenience. A frequency inverter ready connected and installed at the factory is just one example. Flow meter with instrumentation is another good example.



Low sound level. Fans and units are measured using a sound-level meter in our laboratory.





Econet® – a new way of thinking

» Econet® is a packaged liquid coupled heat recovery system with a unique control system offering highly efficient use of energy, linked with space flexibility.

Econet® is a fully packaged liquid coupled heat recovery system

A highly developed software application allows you to optimize the selection and offers thermal simulations and circuit diagrams.

Econet® is supplied complete with all necessary components starting with the optimized heat exchangers with condensate drain pans on both supply and exhaust to allow both heating and cooling in each coil. The system is complete with pump, frequency inverter, controls and all necessary valves and sensors. No need for you to select and

order the separate components, we have already done it for you!

The only job you have to do is assemble the prefabricated parts on site and supply any water/water heat exchangers to supplement the heat output.

Econet® offers higher efficiency – for more of the time

Normal liquid coupled heat recovery systems are selected for specific airflow rates.

The efficiency of the system is then a function of the airflow rate and is often optimized for the maximum design flow. In reality, ventilation

ControlMaster® control when demands are high

ControlMaster® is a complete integrated control system for Fläkt Woods units. The equipment is supplied installed for complete as well as block divided air handling units.



ControlMaster® is the perfect solution for small systems with basic control equipment as well as for large systems with demands on data communications and an integrated control system.

ControlMaster® conforms to EU directives (MD, EMC and LVD) and is CE marked.

Easy selection

ControlMaster® is easy to select using the product selection program. The program automatically selects the control equipment for the unit you have chosen. Shunts are selected for the air heaters or air coolers chosen. Frequency inverters are selected together with the motors, drive systems and

fans to give the lowest SFP_v-figure. A simple yet effective solution that saves time.

Fast track installation

Not only do you save time during the project design stage but also during installation.

ControlMaster® is complete and requires no major on site electrical installation.

The control equipment is ready for commissioning as soon as the unit is installed.

A packaged solution

In our workshop great importance is given to test running and the inspection of each control system before delivery, to assure the highest quality.

ControlMaster® is a complete package:

- Air handling unit
- Purpose designed control equipment
- Commissioning of the unit by qualified personnel





Units for hygienic applications

» Even in its standard design the EU air handling unit satisfies the requirements for a hygienic unit.

Large inspection doors, withdrawable components and smooth internal surfaces provide excellent prerequisites for straightforward cleaning and maintenance.

For future standards

For applications demanding higher levels of hygiene we can offer EU 2000 in a version suitable for wet cleaning. The joints between panels and frame are sealed with a permanently elastic, non-toxic sealant that contains no silicon. The sealant is resistant to disinfectants and offers no sustenance to bacteria. Where necessary, a stainless steel casing can be chosen.

Often it is the area around the filter frame that needs most attention when cleaning and our filter frame is fully withdrawable to make this easier.

Simple service

In the smaller units many of the components are withdrawable as standard or as an option.

We recommend the plug fan for hygiene applications since it is easy to clean and has no belt drive.

Where centrifugal fans must be used we recommend the use of flat belts since they provide very long service with little or no shedding of dust.



Withdrawable components make cleaning easier.

Knowledge and experience

Fläkt Woods possesses vast knowledge+ experience in hospital and pharmaceutical applications and understand the demanding requirements.