

Cooler and ReCooler



FläktWoods

Everybody wants cooling



The right temperature for optimum performance

These days we take cooling for granted. We want a comfortable environment to work, travel and play in. It is now difficult to find a new car without air conditioning! Cooling in a car improves safety by keeping your concentration sharp and the same goes for the office. With the right temperature people just perform better.



Saving Energy, Economy and Environment with Fläkt Woods

Energy optimization is an important aspect of ventilation, where Fläkt Woods have acclaimed expertise. We use e³ to highlight products and solutions that are particularly effective. They serve a dual purpose of saving both your long-term economy and our environment.

www.flaktwoods.com/energy

Fläkt Woods Cooler – the simple solution

Air handling units with integrated cooling

It may seem obvious that cooling should be part of the ventilation. Yet it is not uncommon for cooling to be installed as a separate system.

There are advantages to integrating cooling in the ventilation unit. Installation and maintenance becomes easier, in addition the ventilation system is the best way to effectively spread the cold air throughout the premises.

Yet this is only one of the advantages. The real advantages lie in the possibility of savings and recovery. With integrated cooling both temperature and air quality are optimised. This gives a perfectly balanced indoor climate at the lowest possible cost.

Fläkt Woods Cooler is a factory-made cooling unit that is supplied complete with control equipment and is available for the Fläkt Woods air handling unit – eQ.



Unit solution with Cooler and ReCooler

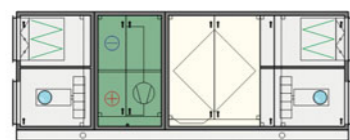
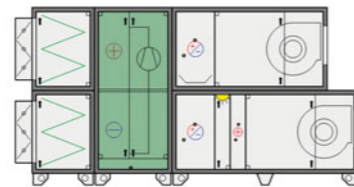
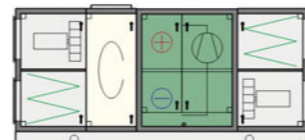


Plate heat exchanger



Liquid-coupled heat exchanger



Rotary heat exchanger

The Cooler and ReCooler can be used for eQ with different solutions for heat recovery. Available in the following sizes for eQ: 008, 011, 018, 023, 032, 041, 050 and 072. You can dimension your selection in the Acon product selection tool.

Function and economy

Each Cooler is function and performance tested in test rigs prior to delivery. The range consists of several versions for varying cooling requirements. Standardised units give assured function at a competitive price. Not to mention the time saved during design and installation.

Fast installation

The Cooler is supplied complete with automation and control equipment. All that needs to be done on site is to connect the mains supply, connect the temperature control signal and fit the drainage pipe.

Reliable operation

The key to reliability is the construction of the cooling system, which is adapted to the air handling unit. In addition, this is combined with tested and documented technical design. The different output variants have

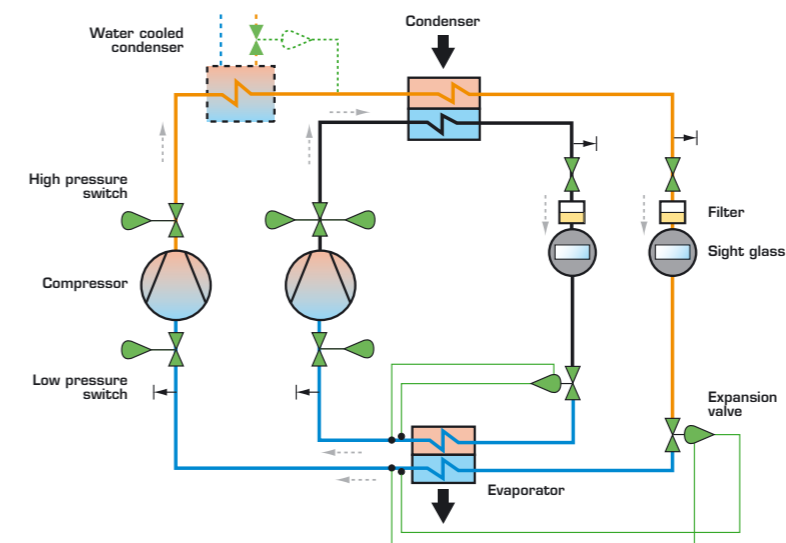
broad cooling output ranges. This guarantees optimised cooling capacity.

Easy selection

No in-depth refrigeration competence is necessary to carry out the project design work. Selection is made quickly and simply in the product selection tool Acon, which has built-in safeguards to ensure a 'safe' selection. The product selection is verified by a comprehensive printout with full performance details.

Green technology

A cornerstone of the Fläkt Woods design and development policy is to create products with a minimum of environmental impact. The Cooler was developed with a focus on energy and the environment. Therefore, materials and design have been optimised for the lowest possible energy consumption, minimal environmental impact and energy efficient operation.



Refrigerant circuit

The Fläkt Woods Cooler has two or more complete refrigerant circuits with scroll compressors controlled by a 0–10V input signal and protected by high and low pressure switches, one of which has automatic reset with time delay to ensure operation at high outdoor temperature. As an accessory, the Cooler can be fitted with an additional water-cooled condenser.

Technical details

- Charged with refrigerant and factory tested.
- Complete with controls.
- 0–10V control signal with three capacity steps.
- Refrigerant R407c
- Easy to select using our product selection tool ACON.
- When combined with Control Master control equipment, a complete factory connected and tested air handling unit is created.



ReCooler with cooling recovery

This new system consists of a Cooler combined with a hygroscopic rotor. The ReCooler's condenser and subcooling coil is located in the extract air after the rotor. The separate subcooler allows the use of a special type of condenser which is very efficient at partial loads.

The EQKB ReCooler is always supplied as a complete, factory tested unit, ready for connection to other functional components. The refrigerant is R407C and the unit is intended for a horizontal air flow direction.

When cooling is required and the outdoor air is warmer than the extract air, the supply air is cooled and dehumidified in the rotor. Then the supply air is re-cooled to the desired temperature in the cooling unit's evaporator. When heating is required, the hygroscopic rotor provides high heat and moisture recovery.

The ReCooler is controlled by an external 0–10 V signal. The ReCooler contains 2 compressors. These can be switched in three power stages.

To ensure the satisfactory cooling of the condenser project design assumes that the extract airflow is greater than or equal to the supply air flow.

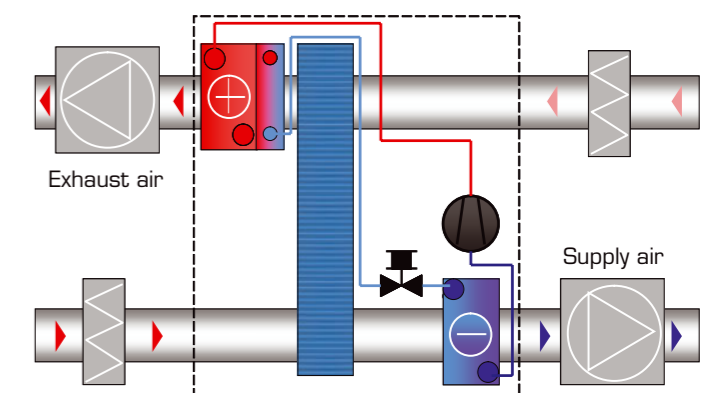
The rotor is operated for cooling recovery when the outdoor air is hotter than the extract air; and for heat recovery when there is a demand for heat.

The ReCooler is intended for outdoor air temperatures between +20 °C– 35 °C and a minimum supply air temperature +12 °C.

The ReCooler is not suitable for supply air temperature control, unless an optional hot gas bypass is fitted.

The cooling unit is best controlled by the setpoint of the extract air or room air temperature, as supply air temperature control may give rise to stability problems.

In the event of condensation and air speeds above 3 m/s, the evaporator must be equipped with a drip separator.



We Bring Air to Life

Fläkt Woods is a global leader in air management. We specialise in the design and manufacture of a wide range of air climate and air movement solutions. And our collective experience is unrivalled.

Our constant aim is to provide systems that precisely deliver required function and performance, as well as maximise energy efficiency.

Solutions for all your air climate and air movement needs

Fläkt Woods is providing solutions for ventilation and air climate for buildings as well as fan solutions for Industry and Infrastructure.

Air Handling Units (AHUs)

Modular, compact and small AHU units. Designed to ensure optimisation of indoor air quality, operational performance and service life.

Air Terminal Devices and Ducts

Supply and exhaust diffusers and valves for installation on walls, ceiling or floor are all included in our large range and fit all types of applications.

Chilled Beams

Active induction beams for ventilation, cooling and heating, and passive convection beams for cooling. For suspended or flush-mounted ceiling installation – and multi-service configuration. With unique Comfort Control and Flow Pattern Control features.

Residential ventilation

A complete range of products for residential ventilation. Consists of ventilation units, exhaust air fans and cooker hoods designed to optimise indoor comfort and save energy.

Energy recovery

Dessicant-based product and systems that recover energy, increase ventilation and control humidity.

Fans

Advanced axial, centrifugal and boxed fans for general and specialist applications. Comprehensive range including high temperature and ATEX compliant options. Engineered for energy efficiency and minimised life cycle cost.

Chillers

Air-cooled and water-cooled chillers with cooling capacity up to 1800kW. Designed to minimise annual energy consumption in all types of buildings.

Controls and drives

Variable speed drives and control systems, all tested to ensure total compatibility with our products. Specialist team can advise on energy saving and overall system integration.

Acoustical Products

A complete line of sound attenuating products, including rectangular and round silencers, Media Free silencers, custom silencers and acoustic enclosure panels.

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See global website for international sales offices www.flaktwoods.com

The logo for Fläkt Woods, featuring the company name in a bold, green, sans-serif font. A stylized green swoosh underline is positioned beneath the 't' in 'Woods'.