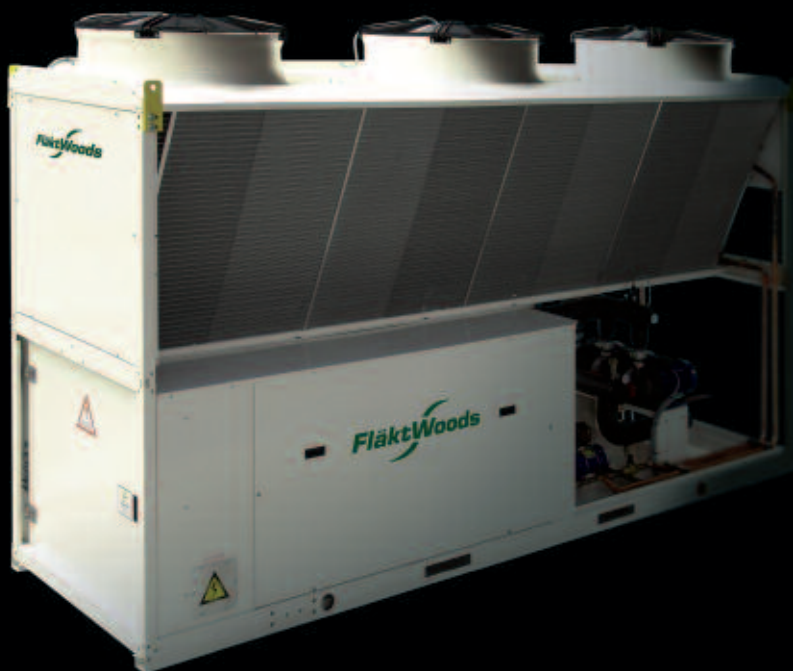


Precise Air Management
Product Range > Chillers



Fläkt Woods experience – at your service

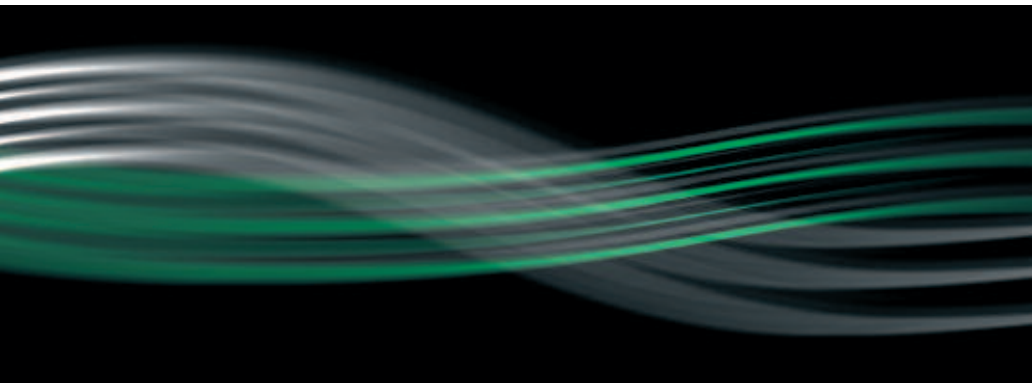
Fläkt Woods is a global leader in air management. We specialise in the design and manufacture of precision technology to deliver complete, integrated solutions. In everything we do, energy efficiency and environmental responsibility are always our major priorities. And our collective experience is unrivalled.



Our knowledge and reputation has been built up through a century of engineering innovation and development. This reflects an impressive track record that equips all our customers with a special confidence. An assurance that, whatever the need or application, Fläkt Woods can deliver the product, the performance and the service that is required. Precisely.

Our expertise is not confined to original manufacture and supply. It is available to you from the selection process onwards, and continues well beyond installation, throughout each system's operating life.

When you first select and install one or more of our systems, our partnership with you is only just beginning. Because you'll always be able to call on Fläkt Woods experience. We're at your service.



Fläkt Woods systems summary

The comprehensive Fläkt Woods range serves a very wide spectrum of applications: across Commercial, Industrial, Public and Residential sectors.

Systems to create integrated air quality solutions include

- Chillers
- Air Handling Units
- Chilled Beams
- Axial and Centrifugal Fans
- Other Air Terminal Devices and Ducts
- Integrated controls

Chillers

The ClimaFläkt® range: a complete selection of chillers, heat pumps and condensers for HVAC applications. Options include both air-cooled and water-cooled technology, with scroll or screw compressors, for indoor and outdoor installations and cooling capacities up to 1800kW.

Total air quality solutions – precisely

Indoor air quality has never been more important. It's the object of increasingly stringent regulation and subject to today's sharper focus on energy efficiency. But getting it exactly right can also bring you valuable long-term benefits.

For example, it raises productivity levels in enclosed workplaces, improves comfort levels in hotels – and sustains optimum conditions for patients and staff in healthcare environments.

Find the right system to achieve these advantages – and you can also expect reductions in both energy consumption and operating costs. Fläkt Woods has it all.

The perfect combination

The ideal indoor climate is dependent on the correct combination of several factors.

- **Ventilation**
The supply of fresh air – without uncomfortable draughts
- **Temperature**
Via cooling, or heating, to the optimum levels
- **Humidity**
A proper balance for personal comfort and health
- **Air purity**
The dilution of CO₂ and filtration of harmful or irritating particulates
- **Noise**
No distractions from functioning systems

At Fläkt Woods, we have the systems and expertise to give you that combination.

From one expert source

Fläkt Woods is unique. We are the ONLY systems company capable of providing the entire indoor climate solution for each individual project.

That means we can deliver all the air management functions, capacity and performance that a building requires – both within specific areas and for the entire structure.

Within each designed installation, all Fläkt Woods system elements are fully compatible with each other for maximum integrated operational efficiency.

In short, our expertise has precisely the answer you need.

Contents

Air-Cooled Chillers

Technology to maximise efficiency 4

Climafläkt® air-cooled range (examples) 5

Intelligent Controls 6

Water-Cooled Chillers

Summary 6

Further information/guidance

Unrivalled R&D facilities 7



Air Cooled Chillers

Technology to maximise efficiency

Chillers are at the heart of every integrated air climate system. Helping deliver the right temperature for the indoor environment – while reducing total energy consumption.

We understand the priorities in designing the ideal HVAC system installation: a combination of performance precision with controllability and optimum energy efficiency.

The Fläkt Woods chillers range has the technology to help satisfy every one of these goals. The list on the opposite page is just a selection of the very wide choice we can offer.

Unit size, cooling capacity, preferred refrigerant, functions and operational options: with us, there's no doubt you can exactly match the required performance specification for each installation.

Range features – for fully-integrated operation and reliability

Fläkt Woods latest ClimaFläkt range of chillers are designed for high efficiency and lasting service reliability as a fully-integrated unit:

- Robust all-weather resistant construction for outdoor installation
- Integral design for variable (part) load operation
- Full pre-delivery testing and inspection: enabling fast installation and immediate operation
- Easy maintenance
- Fully-certified equipment: Eurovent and CE

Options available with:

- Microprocessor control
- Electronic expansion valves
- Low noise versions

Optional features

Exact performance specifications can include special features to help satisfy particular operational needs. These include:

- Heat pump
- Free cooling circuit
- High efficiency fans for variable speed electronic control

Efficiency even at part load

No chiller is required to run constantly at peak load year-round. Typically, it will spend up to 90% of time at less than 60% of its designed capacity. This is where high efficiency is so important – and where the biggest savings can be made.

And that's what Fläkt Woods gives you. Our chillers can help reduce your overall annual energy consumption by up to 35%.

Fläkt Woods option: harnessing free cooling potential

For many applications, cooling water is still required in buildings even when the external temperature is low.

In such cases, by installing a chiller with an integral dry free cooling circuit, water can be chilled without running the compressors. So the cold outside air becomes a source of free cooling.

Very substantial savings in consumption and cost of energy are achievable – as well as reduced wear and tear for the compressors. That's why, typically, there is very fast payback of the additional investment.





Air Cooled Chillers

ClimaFläkt® air-cooled range

These are just a selection of our ClimaFläkt air-cooled chillers that offer a very wide choice of size, specification, capacity, and performance:

Scroll Compressor Units

with ozone-friendly **R-410A** refrigerant

Including:

KCAA

- 14 sizes: rotary or single scroll
- Cooling capacity: **4.32 to 37.2kW**
EER at 100%: 2.27 to 2.91
- Compact size: ideal for residential applications
Variable speed fan and water pump
- Silent operation

KCAG

- 8 sizes: twin scroll
- Cooling capacity: **24.3 to 72.2kW**
- ESEER: 4.06 to 4.48
- High efficiency: uses 2 compressors with different capacity
Self-adapting to integrated system: reduced installation costs
- Quick installation with standard hydronic pack

KCCC

- 31 sizes: multi-scroll
- Cooling capacity: **86 to 965kW**
- ESEER: 4.05 to 4.67
- Self-adapting to integrated system: reduced installation costs
- Very high efficiency: enables substantial energy savings
- Incorporating HYDROPack device: simplifies water connections, and automatically protects unit/maintains operation in event of pump failure

Twin-Screw Compressor Units

with **R-134a** refrigerant

Including:

KCCE/F

- 14 sizes
- Cooling capacity: **364 to 1525kW**
- ESEER: 4.01 to 4.31
- High capacity screw compressors: up to 1100kW capacity with just two twin-screws; and up to 1525kW with three
- Fitted with an economiser circuit for extra operating efficiency
- Electronic control and expansion valves

Air Cooled Chillers

Intelligent controls

Units that think for themselves – and act accordingly – are now the latest contribution to sustained round-the-clock operational efficiency.

Both for individual chiller units, or in integrated cooperation with other Fläkt Woods air management components, this is what control sophistication can deliver.

Self-adaptive electronic operation

Our systems incorporate control functions that are sensitive to variations in chiller load requirements and operating parameters.

The stopping and starting of compressors is made more accurate and efficient, and less wearing. So service life is prolonged and operating costs are automatically reduced. This is achieved via predictive programmes that monitor temperature, pressures and time.

Switching off and on is more precise – and the load demand is matched more precisely.

Reduced noise

Automatic fan speed controls can react to changes in thermal load. This means noise is reduced when units are operating on part capacity – which, for many applications, can be a particular benefit during the night.



Taking advantage of free cooling power

With a free cooling circuit integrated into the chiller design, the ambient outdoor temperature is constantly monitored. When this falls below the required chilled water temperature, the intelligent controls activate the free resource.

Compressors are only gradually re-introduced when temperatures rise so that maximum benefit of free cooling availability is obtained.



Water Cooled Chillers

Options for higher outputs

Fläkt Woods also offers water-cooled chillers. These include split type options, with remote dry coolers and condenser, for larger installations with heavy demand.

The KCGE and KCHG models incorporate twin-screw semi-hermetic compressors and R134a refrigerant. These units have outputs ranging from 500 to 1500kW.

Further information and guidance

Whatever the size of your planned air management systems installation, you can be sure that, at Fläkt Woods, we're always ready to help.

To supply expert advice, information and guidance.

And to ensure selection and specification of an integrated system that exactly matches the detailed needs of each building.

We're also equipped to provide the best possible support throughout the operational service life of each installed system.

About other Fläkt Woods systems

Chillers are just one part of our comprehensive solutions for your air management needs.

To get the bigger picture, you can request introductory literature for our other air management systems:

- Air Handling Units
- Chilled Beams
- Fans

Selection and specification advice

If you'd welcome expert assistance with design, selection and system specification, the Fläkt Woods Systems Sales Team can be contacted on:

01206 222549 or

email info.uk@flaktwoods.com

Upgrades and system monitoring

If you're looking to upgrade or refurbish an existing installation, Fläkt Woods Technical Site Services Team are the experts. They can also help extend operational service life, ensure legal compliance, and monitor and maintain efficient operation of your installed systems. Our brochure can tell you more.

Call 01206 222547 or

email service.uk@flaktwoods.com

Unrivalled R&D facilities

As leading pioneers in our specialist fields, Fläkt Woods has one of the world's largest networks of facilities for testing entire air climate solutions.

Our dedicated laboratory in Colchester, unique in the UK, is equipped to demonstrate and prove product performance and control strategies. We have further R&D facilities in Sweden, Finland, France and the USA.

Specific dynamic testing capabilities include measurement and study of:

- Comfort levels
- Cooling and heating outputs
- Velocity profiles
- Noise criteria

We also use advanced software tools for theoretical design, covering:

- Computational fluid dynamics [CFD]
- Product/component design
- System selection

In all, across Europe, there are 6 Fläkt Woods Technical Centres. More than 270 skilled personnel are constantly focused on maintaining technological progress, system performance and product quality.

Selection and specification advice

01206 222549

Upgrades and system monitoring

01206 222547

Precise Air Management

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 the only company in the UK capable of providing total system solutions from the following portfolio:

● 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.

● Air Handling Units (AHUs)

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

● Chillers

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

● 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.

● Smoke control and car park ventilation systems

Unique approach to car park ventilation, aided and optimised by Computational Fluid Dynamics (CFD) software. Complete turnkey solutions for designing, installing and commissioning mechanical and natural smoke ventilation.

● 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.

● Technical Site Services

Our dedicated team providing comprehensive post-installation services. Including condition-based contract monitoring, preventative and routine maintenance, refurbishment and system upgrades.

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Fläkt Woods operates a policy of continuous improvement and reserves the right to supply products that may differ from those illustrated and described in this publication. Certified dimensions will be supplied on request on receipt of order.

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'.