

Precise Air Management *Product Range > Fans*



ClimateConsult experience – at your service



ClimateConsult systems summary

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

Systems to create integrated air quality solutions include

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

Fans

The widest selection for all sizes and types of application. These range from large supply and extraction fans for service in industry or infrastructure, through to compact and small units for domestic ventilation – or as components for air management equipment. We also have specialist options and ranges to help deliver fire safety and extra energy efficiency.

Total air movement solutions – precisely

Air movement in occupied buildings has many roles to play. Not just to bring the ventilation and comfort that are vital to human existence. It also has the potential to protect.

In an ideal world, this would all be achievable via natural, non-mechanical processes. But reality is different. In most cases, and to varying extents, powered air movement is essential.

From functional operational routines, to one-off emergency situations, fans have a front-line role to play in many built environments. And, whatever each precise need, ClimateConsult certainly has the right solution.

The perfect solution

The ideal air movement equipment will satisfy the correct combination of several factors, insofar as each applies to a specific project:

- **Function**
Including air supply or extraction; heat transfer and recovery; drying; blowing; particle transportation and filtering; and, in the event of fire, emergency management of smoke and toxic fumes
- **Flow**
Required air volume capacity and speed
- **Energy efficiency**
Less energy consumed to achieve the desired result
- **Controllability**
Allowing performance to match demand – no more, no less
- **Sound**
Quiet operation to avoid noise distraction
- **Space availability**
Fitting the space or location available

At Fläkt Woods, we have the technology and experience to give you that combination.

From one expert source

ClimateConsult offer the widest range of fans available in today's market: from the largest infrastructure fan; through to compact, lightweight models designed for small premises or domestic situations.

That means we can deliver all the air movement functions, capacity and performance that a building or structure requires – whatever its size and purpose.

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

Contents

Range overview

Fans summary 4-5

General ventilation

The perfect fit – reliability in action 6

Hazardous areas

ATEX-compliant range 7

Fire safety

Fans for Life Safety systems 8

When the heat is on 9

Complete smoke extraction systems 10

Protective ventilation for car parks 11

Energy efficiency

More function – less consumption 12-13

Intelligent control – matching need 14-15

Range key details

JM Axial fans 16-17

Box fans/Mini AHUs 18-19

Centrifugal fans 19

Plate fans/Tube fans 20

Roof units/Residential 21

Standards & approvals

Compliance and certification 22

Further information/guidance

Unrivalled R&D facilities 23



Range overview

Fans summary – introducing the right choice

	Box Fans								Plate Fan
	MiniBox	SingleBox	TwinBox	PowerBox	Axcent 3	MPS	Copford	Mini AHU	JMP
Applications									
Fire safety & life systems									
Catering	●	●	●	●	●	●	●		●
Education: schools/universities	●	●	●	●	●	●	●	●	●
Healthcare	●	●	●	●	●	●	●	●	●
Industrial									●
Leisure: venues/stadiums	●	●	●	●	●	●	●	●	●
Offices	●	●	●	●	●	●	●	●	●
Retail: malls/supermarkets	●	●	●	●	●	●	●	●	●
Residential: hotels/apartments	●	●	●	●	●	●	●	●	●
Placement									
Internal mounting	●	●	●	●	●	●	●	●	●
External mounting		○	○	○	○	○	●	○	●
Low profile (ceiling void)	●	●	●					●	
Functions									
Stairwell pressurisation									
Smoke extract (inc. loading bays)									
General extract	●	●	●	●	●	●	●	●	●
Toilet extract			●				●		
Kitchen hood extract				●	●	●			●
Demand control ventilation (fan controls)	●	●	●	●	●		●		
Required Features									
Compact design	●	●	●					●	●
Energy efficient	●	●	●	●	●	●	●	●	●
Speed controllable	●	●	●	●	●	●	●	●	●
For use with <i>iFan</i> controls	●	●	●	●	●		●		
Low noise	●	●	●	●	●	●	●	●	
ATEX/hazard zone compliant									○
Key Specifications									
Sizes (mm dia.)	100-315	125-500	125-400	400-560	200-760	250-400	Rectangular spigot DD: 1.88 BD: 8.65	Rectangular spigot	315-630
Max air flow (m³/s)	0.4	1.66	0.74	2.9	8.4	2	DD: 1.88 BD: 8.65	1.09	4.08
Max static pressure (Pa)	725	510	370	800	900	1100	DD: 590 BD: 780	800	175
Max operating temperature	Up to 60°C	Up to 60°C	Up to 70°C	Up to 55°C	Up to 50°C	Up to 80°C	Up to 40°C	Up to 40°C	Up to 50°C

○ Product available but variant only.

DD = Direct drive BD = Belt drive

Note: This table is **not** comprehensive: it is provided only as a selected introduction to the comprehensive Fläkt Woods range of Fans and their applications. For additional options, visit www.clco.dk. Larger sizes are available, please enquire for further details.

General ventilation

The perfect fit – reliability in action

Whatever its function, it must do it well. That is the constant theme of all ClimateConsult product designs, and is reflected in each product's performance across our entire system portfolio. Our fans are widely recognised as today's premier range, and trusted to go on doing the job – day in, day out.



For introductory key details of ClimateConsult fan ranges, including standard features and options, see pages 16-21.

For assistance with identifying precisely the right fan solution for your specific projects, please call ClimateConsult A/S

The application context may vary, but the fundamental requirements are the same: supply and extraction. System requirements will be dictated by building size and function, and by numerous other operational parameters, which the installed ventilation must satisfy.

With ClimateConsult, you have a genuinely comprehensive choice. We can be relied on to have exactly the fan type, model, performance, and capacity each situation needs. You can also completely depend on the quality and reliability of its engineering.

Fan options for general ventilation

Units and ranges designed to provide routine ventilation and general air movement functions for a variety of applications and environments include:

- Axial Fans
- Bifurcated Fans
- Box Fans
- Plate Fans
- Tube Fans
- Roof Units
- Centrifugal Fans

ClimateConsult also offers a comprehensive choice of units for whole house/domestic ventilation, as well as mini air handling units for small commercial and industrial premises.

Hazardous areas

ATEX-compliant range



Mechanical ventilation and extraction can be required in environments which have potentially explosive atmospheres – whether from chemical vapours, volatile gases or hazardous dust. For these situations, we have the widest range of fans that comply fully with the ATEX 100a Directive.

ATEX

Compliance became a legal requirement in 2003. The Directive applies to a wide variety of equipment intended for use in hazardous areas, such as petro-chemical plants, pharmaceutical and chemical manufacturing, battery rooms, flourmills and grain silos.

The manufacturer Fläkt Woods has invested heavily in fan engineering design modifications to achieve and satisfy the necessary high specifications.

For fans, these safety modifications include:

- Features to avoid or minimise sparks
- Changes to the motors and material thickness
- Impeller locking systems
- Adjustments to impeller tip clearances

We also have systems in place to ensure continuous ATEX compliance during our normal production.

Fan options for ATEX environments

ClimateConsult offers fully ATEX-compliant CE-marked fans in the following ranges:

- JM Aerofoil
Axial fans range
- Centripal EU
Centrifugal fans range



Fire safety

Fans for Life Safety systems

Within any building's total functionality, one element is paramount: its ability to ensure a safe environment in the event of emergency conditions. If and when such a situation occurs, Life Safety for the occupants and for emergency services, and damage limitation for the building fabric, immediately becomes the priority for the ventilation system.

Fan options for Life Safety systems

ClimateConsult units designed for emergency ventilation and smoke extraction at high temperatures include:

- JM Aerofoil
- JM High Temperature Aerofoil
- JM Bifurcated Aerofoil
- JM Multi-stage Aerofoil
- Centrifugal Single Inlet
- UDA & DVA High Temperature Roof Units

All these fan types are suitable for both normal and emergency smoke ventilation conditions, and can be inverter speed-controlled.

In normal mode, they have lower Specific Fan Power (SFP) values and optimised running costs, because the inverter controls average power consumption and extract rate.

Specific control functions

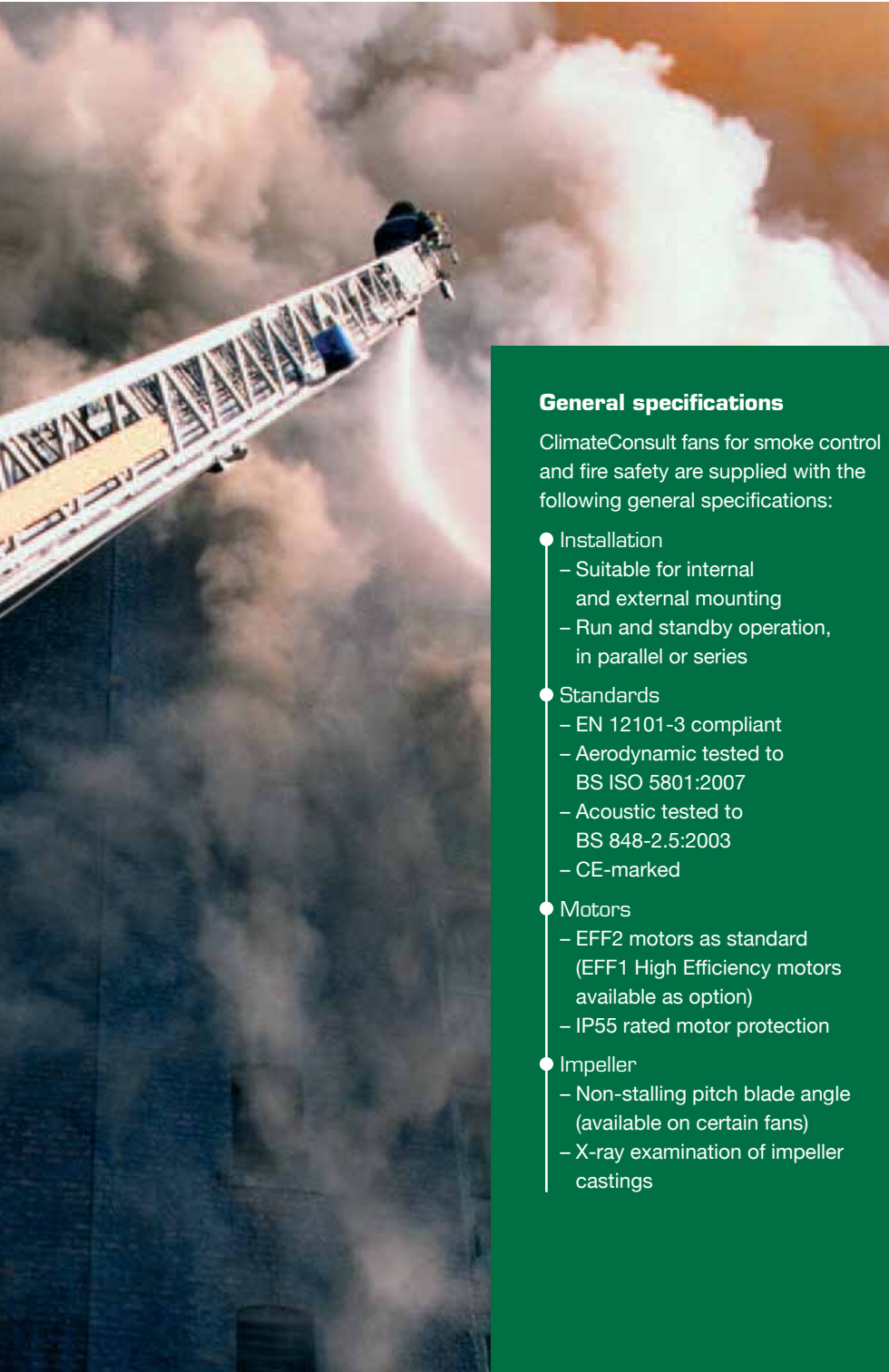
Our fan technology plays several important roles in the event of an emergency condition. Each could be an important defence against life-threatening fumes and hot smoke:

- Control and removal of hot smoke/gases to give time for occupants to escape – even if the fan itself is subject to high temperatures
- Extraction of 'cool' smoke while it remains unstable in the early stages of a fire
- Pressurisation: supply of clean air into escape routes to hold back smoke
- Clearance: removal of residual smoke after fire is contained and suppressed

Natural ventilation may be inadequate for these needs, particularly where 'cool' smoke may be involved, and could be compromised by prevailing winds.



When the heat is on



General specifications

ClimateConsult fans for smoke control and fire safety are supplied with the following general specifications:

- Installation
 - Suitable for internal and external mounting
 - Run and standby operation, in parallel or series
- Standards
 - EN 12101-3 compliant
 - Aerodynamic tested to BS ISO 5801:2007
 - Acoustic tested to BS 848-2.5:2003
 - CE-marked
- Motors
 - EFF2 motors as standard (EFF1 High Efficiency motors available as option)
 - IP55 rated motor protection
- Impeller
 - Non-stalling pitch blade angle (available on certain fans)
 - X-ray examination of impeller castings

That's when you need total reliability, without compromise. The capacity to function even in extreme, emergency circumstances. Efficiently controlling and extracting smoke, fumes and hot air – on demand.

ClimateConsult' axial and centrifugal ranges are designed to give you precisely that assurance. They offer high temperature performance that is ready to respond if the situation arises, and safe operation that deserves the confidence of designers, installers and users.

Emergency temperature capabilities

While our units for emergency situations are suitable for normal ventilation operation, they are specifically designed for one-off operation at the following temperatures:

- 250°C for 2 hours
- 300°C for 1 hour
- 300°C for 2 hours
- 400°C for 2 hours
- 600°C for 2 hours

100% X-rayed impeller components

By the nature of the process, die casting of metals can conceal hidden porosity. This can structurally reduce core strength, and increase the possibility of fatigue or failure, especially at elevated emergency temperatures.

However, with ClimateConsult' axial fans, you have the assurance that all cast impellers have been subjected to X-ray inspection to ensure test compliance and product integrity.

Fire safety

Complete smoke extraction systems



In a fire emergency, smoke is a potential killer unless it is quickly controlled. It can also hamper the work of emergency services. Whatever the type and function of a building, diligent planning for the fast, effective removal of smoke is an essential provision to ensure personnel safety.

ClimateConsult has the experience to provide complete and precisely tailored solutions for almost any industrial, commercial or residential applications including:

- Warehousing
- Multi-storey shopping malls
- Offices
- Multi-occupancy housing/ apartment blocks

and special-need environments such as:

- Enclosed or underground car parks

In addition to powered extract fans, we offer a comprehensive range of ventilation components to cover both daily requirements and emergency situations.

These products are tested to BS EN 12101 specification standards for smoke and heat control systems.

Products for smoke extraction systems

ClimateConsult can design and supply systems for smoke extraction to suit the specific needs each individual building. Each system may comprise the appropriate combination of:

- Design
- Mechanical or natural ventilation products
- Control systems
- Sensors
- Electrical wiring
- Commissioning

Protective ventilation for car parks



Fan options for car park ventilation

ClimateConsult fan technologies designed for use as part of these more complete, cost-effective and tailored ventilation solutions for car parks include:

- **Jet Thrust**
In-line axial fans that are reversible, truly symmetrical impellers to provide efficient flow in both directions.
- **Induction Thrust**
Shallow-profile centrifugal fans, ideal for car parks with significant height restrictions, especially those requiring a unidirectional system for clearance of air pollution and smoke.

In enclosed or underground car parks, a fire emergency requires fast, intelligent action to contain and control the problem. ClimateConsult technology, application knowledge, expertise and state of the art software combine to provide a unique approach, with tailored solutions.

Traditional car park ventilation techniques are based on air change rates and duct runs with vertical droppers and high/low level grilles. This ducting typically uses up valuable headroom and parking space, and such systems are costly to install and operate. ClimateConsult can provide a modern alternative solution providing benefit to client and user alike, whilst complying fully with the latest technical requirements and European standards.

Operating on demand

Unlike these old-style systems, with ClimateConsult solutions there is no requirement for the ventilation system to run continuously. Our systems operate only when required, using a series of strategically placed, independently controlled fans.

Under normal operational conditions, sensors detect pollution such as carbon monoxide (CO), Liquefied Petroleum Gas (LPG) and Nitrogen Oxides (NOx). Selected fans automatically induce the contaminated air and direct it to the main extract point for discharge.

In the event of a fire emergency, ClimateConsult systems control the direction of smoke travel. Smoke sensors trigger fans to run up to full design speed to direct the smoke, via other fans as necessary, to the nearest extract point. Smoke, heat and toxic fumes are removed swiftly and safely from a fire by the shortest route.

Tailored solutions using CFD

Our car park solutions are individually modelled to suit each building's layout. Computational Fluid Dynamics (CFD) software, combined with Fläkt Woods in-house expertise and own fully-researched input data, is used to plot the ideal number, type and location of fans required for each application.

A computerised 3D model evaluates airflow with only the main extract system in use. This identifies main airflow routes and highlights any stagnant or recirculatory areas. Our fans are then superimposed upon this model and placed in optimum positions to achieve both normal extract and emergency fire/smoke extract.

Main extract fans in these installations can be smaller because there is less ductwork resistance. Installation costs are lower and, because the system operates only when required, running costs are also minimised.

Energy efficiency

More function – less consumption

As the world tries to combat and halt global warming, the focus on energy consumption and its 'carbon footprint' increases. If we can use less, that footprint will be smaller. At ClimateConsult, we are constantly applying our technological skills and experience to the continuing drive for greater efficiency and reduced energy waste in order to minimise the environmental impact.



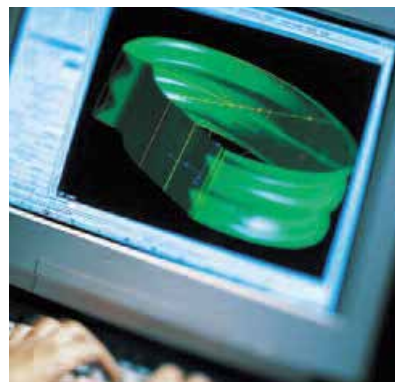
Energy efficiency is a core principle of our fan design. Environmental concerns are not the only factor. The problem of escalating energy costs is a significant additional incentive.

So our development focus is always firmly on two principal goals:

- Delivering the same (or better) functions, while reducing the amount of power a fan needs
- Enabling it to operate only when needed

Within our total range, we can now offer motor efficiencies up to 97% and motor power factors of 0.9 and above.

These are all reasons why you can rely on ClimateConsult to help you comply with new or updated legislation, or solve a specific building requirement. With our Life Cycle Costing assessments, we can ensure that both energy consumption and running costs are reduced to a minimum.



Fan options for extra efficiency

Units designed to run at maximum efficiency, or avoid wasted energy by reacting automatically to changes in demand, include:

- *iFan* Mini Box Fan
- *iFan* Single Box Fan
- *iFan* Twin Box Fan
- *iFan* Power Box Fan
- *iFan* Axcent 3 Fan
- *iFan* Copford Box Fan
- Inverters (E.C.A. approved products)
- *iFan* JM Aerofoil
- JM Aerofoil (with EFF1 motors)
- JM High Temperature Aerofoil (with EFF1 motors)



Achieving lowest SFPs (watts/litre/second)

No fan can run at 100% total efficiency: some power is needed to deliver its function. However, the primary objective is to minimise the ratio of power to volume flow rate – using less power to deliver more volume flow rate.

Recent Building Regulation updates now include SFP values, and apply to both new and existing buildings.

For new buildings, these regulations now specify that SFP values should not exceed 2.5 for central systems incorporating energy recovery, and no more than 1.8 for those without energy recovery heating or cooling.

Principles of extra operational efficiency

More efficient solutions can also be achieved by recognising – and avoiding – factors that contribute to higher motor power requirements.

For example, run and standby applications in series are more power-hungry than fans placed in parallel. That's because, with parallel placement, damper loss is less than idling fan loss, making it the preferred installation to reduce system resistance.

We do recognise that parallel positioning may not always be possible, and that systems need to be tailored to fit the requirements of each installation.

Nevertheless, by drawing on Climate-Consult' extensive experience, fan selections can be optimised for any situation – typically with smaller motors, lower noise levels, reduced SFPs and less power consumed.

General specifications

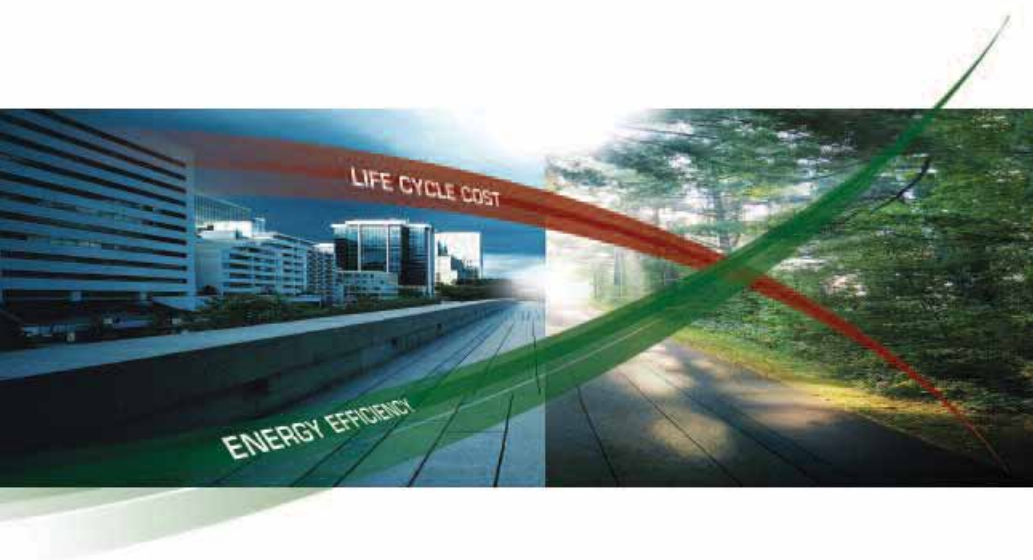
Fläkt Woods fans to achieve maximum energy efficiency are supplied with the following general specifications:

JM Aerofoil Product range

- Installation
 - Suitable for internal and external mounting
 - Run and standby operation, in parallel or series
- Standards
 - Aerodynamic tested to BS ISO 5801:2007
 - Acoustic tested to BS 848-2.5:2003
 - CE-marked
- Motors
 - EFF2 motors as standard (EFF1 High Efficiency motors available as option)
 - IP55 rated motor protection

iFan Box Products

- Installation
 - Suitable for internal mounting
 - Larger Copford units also suitable for external mounting
 - Options: single fan, and run and standby fan
- Standards
 - Aerodynamic tested to DIN24163 or DS848 Part 1
 - Acoustic tested to DIN45635 or DS848 Part 2
 - CE-marked
- Motors
 - EFF2 motors as standard (EFF1 High Efficiency motors available as option for Copford units)



Energy efficiency

Intelligent control – matching need

Mechanical ventilation should only be provided when it is actually required – delivered when demanded. Otherwise, by definition, the system operation is a waste of energy and resource.

That's why, at ClimateConsult, we've developed increasingly intelligent technology. Systems that can take responsibility for recognising when the need is there – or when system requirements change – and react accordingly to maintain peak operating conditions.

The goal of this advanced technology is simply stated: optimum performance with minimum running costs while providing full functionality.

Delivering demand-controlled ventilation

Our *iFan* intelligent fan systems always deliver performance tailored to the needs of the moment within the building space concerned – whether public, commercial or residential.

This advanced ventilation can therefore help maintain a better, more comfortable indoor environment while reducing energy usage and running costs to the minimum necessary.

It does so using sophisticated controls that are constantly monitoring and reacting to changes in its operational environment.





***iFan* integral control specifications**

The intelligent controls that are integral to *iFan* operation include:

- **Function**
 - Auto changeover facility (Run & Standby mode)
 - Duty sharing (Run & Standby mode)
 - Run-on timer
 - Speed controller
- **Performance**
 - Improved SFP values in normal ventilation mode
 - Fan operation varies in response to input signals: from maximum to trickle or stop
- **Set-Up**
 - Integration with Building Management System (BMS) if required
 - Remote monitoring availability
 - Low voltage sensors/switches

While each *iFan* is effectively a stand-alone system, it can operate as part of the building control system when linked into the BMS. The Intelligent Control Unit (ICU) is at its heart, and this can be programmed for various environmental conditions – either via automatic or manual (user) control.

As well as receiving and acting on sensor inputs, the ICU incorporates an LED display for set-up, operation and maintenance. This enables easy monitoring of running times, fan speeds and other operational data. It can also indicate faults or service intervals.



Commissioning *iFan* units

Commissioning is fast and simple. Each system features plug and play low voltage sensor and switch connectors, and a plug and socket connector between the ICU and *iFan*.

The ICU is then programmed with the maximum demand and operational conditions that are to be monitored. This control strategy is determined by the requirements of the installation design for the building environment.

Inverter drives: qualifying for tax breaks

Selecting systems and equipment designed to reduce energy consumption can save money in other ways.

Installation of approved inverters can mean Enhanced Capital Allowance (ECA) tax breaks are available.

These offset your investment against taxable profits, and thereby help reduce payback timescale for the plant.



Range key details

JM Axial fans

For general air movement and special applications.

Including options for:

- Emergency high temperature smoke extraction (*see page 8*)
- ATEX environments
- Pressurisation

Standard features

- All fans are certified to ISO 5801
- CE marking
- X-ray inspection of all cast impeller parts
- EFF2 motor as standard
- High energy efficiency: reduced SFP
- Motor protection IP55
- Non-overloading
- Adjustable pitch impeller for exact performance required
- Low installed noise levels
- High temperature capability: up to 200°C for 2 hours for three-phase fans only

Range options

- Long and short casings
- Multiple blade configurations
- Inverter: speed controllable
- Explosion proof/ATEX compliant versions
- Higher temperature operation capability: tested to BS EN 12101-3
- EFF1 motors for extra efficiency



JM Aerofoil

- Sizes: 315mm to 1600mm Ø
- Volume flow: up to 65m³/s
- Static pressure: up to 1900 Pa
- Operating temperature range: -20°C to +50°C
- Role: General ventilation and/or extraction



JM High Temperature Aerofoil

- Sizes: 315mm to 2500mm Ø
- Volume flow: up to 150m³/s
- Static pressure: up to 1900 Pa
- High temperature capability: up to 400°C for 2 hours
- Role: Emergency ventilation/hot fire smoke extraction



Large JM Aerofoil

- Sizes: up to 4000mm Ø
- Volume flow: up to 425m³/s
- Static pressure: up to 3400 Pa
- High temperature capability:
 - up to 250°C for 2 hours
 - options up to 400°C for 2 hours
- Role: Heavy duty industrial and infrastructure applications – higher pressure/volume
- Option: Fully-reversible flow



JM MaXfan and MaXfan Plus Aerofoil

- Sizes: 400mm to 630mm Ø
- Volume flow: up to 7.2m³/s
- Static pressure: up to 1100 Pa
- Operating temperature range: -20°C to +50°C
- Role: High pressure kitchen extract
- Options: Single-phase or three-phase



JM Bifurcated Aerofoil

- Sizes: 400mm to 1000mm Ø
- Volume flow: up to 20m³/s
- Static pressure: up to 1000 Pa
- Operating temperature: up to 200°C
- Motor separated from air stream
- Role: Exhaust/recirculation of fumes/gases/hot air



Bifurcated Series 33

- Sizes: 152mm to 305mm Ø
- Volume flow: up to 0.89m³/s
- Static pressure: up to 380 Pa
- Operating temperature: up to 200°C

iFan JM Aerofoil

- Axial fans incorporating an integral intelligent control unit (ICU), plus sensors and/or switches
- Delivering demand control ventilation – from maximum to trickle (20%) or stop
- Reduces ventilation energy consumption and running costs



JM Multi-stage Aerofoil

- Sizes: 315mm to 1000mm Ø as standard. Larger sizes are available on request
- Volume flow: up to 31.6m³/s
- Static pressure: up to 2000 Pa
- Operating temperature: up to 200°C
- Role: Higher pressure development
- Option: Further multi-stage fans available for higher pressures



Range key details

Box fans

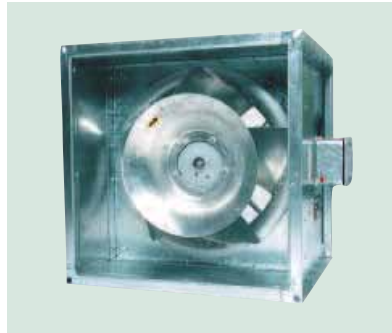
Compact boxed units for air supply and extract where space is restricted.

Standard features

- Easy to install
- Quiet operation
- Energy efficient: on demand ventilation

iFan box range

- Box fans incorporating an integral intelligent control unit (ICU), plus sensors and/or switches
- Delivering demand control ventilation – from maximum to trickle (20%) or stop
- Reduces ventilation energy consumption and running costs



Axcent 3

- Sizes: 200mm to 760mm Ø impellers
- Volume flow: up to 8.4m³/s
- Static pressure: up to 900 Pa
- Operating temperature: up to 50°C
- High volume flow and pressure development
- Low running costs
- Impeller: mixed flow



PowerBox

- Sizes: 400mm to 560mm Ø
- Volume flow: up to 2.9m³/s
- Static pressure: up to 800 Pa
- Max operating temperature: 40°C
- High volume flow and pressure development
- Thermal and acoustic insulation
- Impeller: backward curved centrifugal



MiniBox

- Sizes: 100mm to 315mm Ø
- Volume flow: up to 0.4m³/s
- Static pressure: up to 725 Pa
- Operating temperature: up to 60°C
- Low profile unit
- Easy to clean/maintain – removable fan
- Wall or ceiling mounting: integral fixing brackets
- Impeller: forward curved (sizes 150mm and below); backward curved (sizes 200mm and above)



SingleBox

- Sizes: 125mm to 500mm Ø
- Volume flow: up to 1.66m³/s
- Static pressure: up to 510 Pa
- Operating temperature: up to 60°C
- Horizontal or vertical mounting
- Acoustically lined box
- Easy maintenance
- Neoprene seals on inlet/outlet spigots
- Low noise at higher pressures
- Impeller: forward curved



TwinBox

- Sizes: 125mm to 400mm Ø
- Volume flow: up to 0.74m³/s
- Static pressure: up to 370 Pa
- Operating temperature: up to 70°C
- As SingleBox but offering a for duty/standby or duty/share function for toilet extract
- Auto-changeover facility in event of fan failure
- Impeller: forward curved



MPS Kitchen Extract Units

- Sizes: 250mm, 315mm, 355mm and 400mm Ø connection spigots
- Volume flow: up to 2m³/s
- Static pressure: up to 1100 Pa
- Max operating temperature through fan: 80°C
- Max operating ambient temperature: 60°C
- Horizontal or vertical mounting
- Thermal and acoustic insulation
- Impeller: backward curved centrifugal



Copford – Larger Boxed Fan Product

- Volume flow: up to 8.65m³/s
- Static pressure: up to 780 Pa
- Max operating temperature: 40°C
- Direct or belt-driven options
- Internal duct or external roof options
- Single or twin fan (duty/standby) options
- Auto-changeover facility in event of fan failure (Twin Fan units)
- Impeller: forward curved centrifugal

Mini Air Handling Units



Compact units for small commercial or industrial premises.

Mini AHU

- Sizes: 1, 2 or 3
- Volume flow: up to 1.09m³/s
- Static pressure: up to 800 Pa
- Temperature capability: up to 40°C
- Acoustically lined
- Roles: Ventilation or extraction with filter, heater or cooling variants
- Options:
Supply or extract versions – or models for both supply and extract plus heat recovery (plate heat exchanger integral controls available)

Centrifugal fans

For general air movement and special applications.

Including options for:

- Emergency high temperature smoke extraction (see pages 8-9)
- ATEX environments

Centrimaster GT

- High temperature (smoke extraction) capability: 400°C for 2 hours
- Low noise
- Sizes: 200mm to 1400mm Ø
- Volume flow: up to 50m³/s
- Static pressure: up to 3300 Pa
- Options:
Direct or belt drive (single inlet version).
Double inlet version belt drive only)

Centripal EU

- Operating temperature up to 350°C in continuous use
- High energy efficiency – over 80%
- Sizes: 355mm to 1400mm Ø
- Volume flow: up to 40m³/s
- Static pressure: up to 20000 Pa
- Options:
– Impellers choice: 11 widths and 6 fixed geometry types
– Drive choice: direct or belt drive (as standard); coupling drive (option)
– Safety switch to ISO 12499

Europal

- Operating temperature up to 350°C in continuous use
- High energy efficiency – over 85%
- High aerodynamic range
- Sizes: up to 2500mm Ø
- Volume flow: up to 100m³/s
- Static pressure: up to 26000 Pa
- Options:
– Impellers choice: 10 widths and 4 fixed geometry types
– Impellers reinforced for particulate handling
– Drive choice: belt or coupling drive

Standard features

- Fully assembled
- Motor protection IP55

Range options

- Drive options
- Impeller choice

Range key details

Plate fans

For simple air movement applications.

Standard features

- Fully assembled
- Motor protection IP55
- Adjustable pitch impeller for exact performance required
- Overheat protection

Range options

- Adjustable or fixed pitch
- Inverter: speed controllable



JM Aerofoil Plate Axial

- Sizes: 315mm to 630mm Ø
- Volume flow: up to 4.08m³/s
- Static pressure: up to 175 Pa
- Operating temperature range: -40°C up to +70°C
- Speed controllable
- Motor protection IP55
- Overheat protection fitted as standard on single phase motors



Compac Climafan

- Sizes: 315mm to 500mm Ø
- Volume flow: up to 2.8m³/s
- Static pressure: up to 200 Pa
- Operating temperature range: -40°C up to +54°C
- Low noise
- Additional option: EC motor and matched speed controller



Tube fans



Multi-functional lightweight fans for local or zoned general air movement applications.

ILCP and ILCM

- Sizes: 100mm to 315mm Ø
- Volume flow: up to 0.46m³/s
- Static pressure: up to 700 Pa
- Speed control as standard
- Low noise
- Compac design
- Low SFP values

Roof units

For general and emergency ventilation via roof mounted self-contained units.

DSP, DSC and DSM Roof Extract Units

- Sizes: 200mm to 760mm Ø
- Volume flow: up to 9.2m³/s
- Static pressure: up to 1000 Pa
- Temperature capability: up to 50°C
- Robust, fibreglass casings
- Mounting angle up to 30°
- Role: General ventilation and/or extraction
- Options:
 - Four fan types, three impeller designs
 - Choice of motors and mountings
 - Speed controller types: Electronic, Transformer or Inverter

Roofmaster

- Volume flow: up to 5m³/s
- Static pressure: up to 650 Pa
- High temperature capability: up to 400°C for 2 hours (smoke extraction model)
- Low noise
- Role: General ventilation and/or emergency smoke extraction
- Options:
 - STEF: sound attenuated – with standard, smoke extraction and spark-proof versions

Also: For emergency smoke extract applications at high temperature (as well as standard temperature operation): UDA and DVA Roof Extract Units

Standard features

- Fully assembled
- Motor protection IP55
- Overheat protection

Range options

- Sound attenuated versions
- Emergency smoke extraction
- Vertical and horizontal discharge



Residential/ domestic fans

Comprehensive housing range designed for ventilation of homes.

MEV range

- Role: ventilation extract
- Volume flow: up to 100 l/s
- Service capacity: areas up to 170m²

MVHR range

- Incorporating high efficiency plate or rotary heat exchangers
- Volume flow: up to 140 l/s
- Service capacity: areas up to 380m²

Minimaster system

- Kitchen mounted with cooker hood or in line with cabinets
- Service capacity: living space up to 155m²
- Options:
 - JBDD: exhaust only – up to 100 l/s at 160 Pa
 - RDKG: supply and exhaust with plate heat exchanger – 20-80 l/s (or RDKR with rotary heat exchanger)

Rexovent system

- Role: housing ventilation
- Placed in loft or utility room
- Service capacity: living space up to 400m²
- Options:
 - RDAB: with plate heat exchanger – up to 150 l/s (or RDAR with rotary heat exchanger)



Standards & approvals

Compliance and certification

As standards become more challenging, and regulations get tighter, you can rely on ClimateConsult to help you ensure compliance.

Standards

Including:

General

- **BS 848: Part 2:1985**
Fans for general purposes. Methods of noise testing
- **DIN 45635-38/56:1986**
Method of noise testing
- **ISO 5801: Part 1:2007**
Industrial fans. Performance testing using standardized airway
- **DIN 24163:1985**
Method of air performance testing
- **ISO 12499:1999**
Industrial fans — Mechanical safety of fans — Guarding

Fire safety

- **BS EN ISO 12101: Part 3:2002**
Smoke and heat control systems. Specification for powered smoke and heat exhaust ventilators (Replacing BS 7346: Part 2)
- **ISO 21927: Part 3:2006**
Smoke and heat control systems. Specification for powered smoke and heat exhaust ventilators
- **BS 7346: Part 7:2006**
Components for smoke and heat control systems. Code of practice on functional recommendations and calculation methods for smoke and heat control systems for covered car parks

Fan types	Standards compliance							
	ISO 5801	DIN 24163	BS 848-2	DIN 45635	ISO 21927-3	EN 12101-3	AMCA	Parts F&L*
JM Aerofoil	●		●				●	●
JM High Temp	●		●		●	●	●	●
JM Bifurcated	●		●				●	
JM Multi-stage	●		●				●	●
Large JM	●							●
MaXfan	●		●					●
Box fans		●		●				
Centrifugal fans	●			●				
Plate fans		●		●				
Tube fans		●		●				
Roof units	●							●
ATEX fans	●		●				●	
Intelligent fans	●	●	●	●			●	●

*Building regulations

Fan types	Features				
	ATEX Options	X-rayed Moving Parts	IP55	Low Noise	Standby Option
JM Aerofoil	●	●	●	●	●
JM High Temp		●	●	●	●
JM Bifurcated		●	●	●	●
JM Multi-stage	●	●	●	●	
Large JM		●	●		
MaXfan		●	●	●	
Box fans				●	●
Centrifugal fans	●		●	●	●
Plate fans			●	●	
Tube fans				●	
Roof units			●	●	
JM ATEX fans	●	●	●	●	

Regulations

Including:

- **Building Regulations: Part F**
Ventilation
- **Building Regulations: Part L**
Conservation of fuel and power

Certifications

Including:

- **EU ATEX Directive:**
Certificate No. ST M07 TEC 2885 covering ATEX-compliant options
- **BSRIA-tested**
JM High Temperature Fans
- **Air Movement and Control Association (AMCA) certified**
JM ranges

Further information and guidance

Whatever the size of your planned air management systems installation, you can be sure that, at ClimateConsult, 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.

Unrivalled R&D facilities

Our supplier 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.

