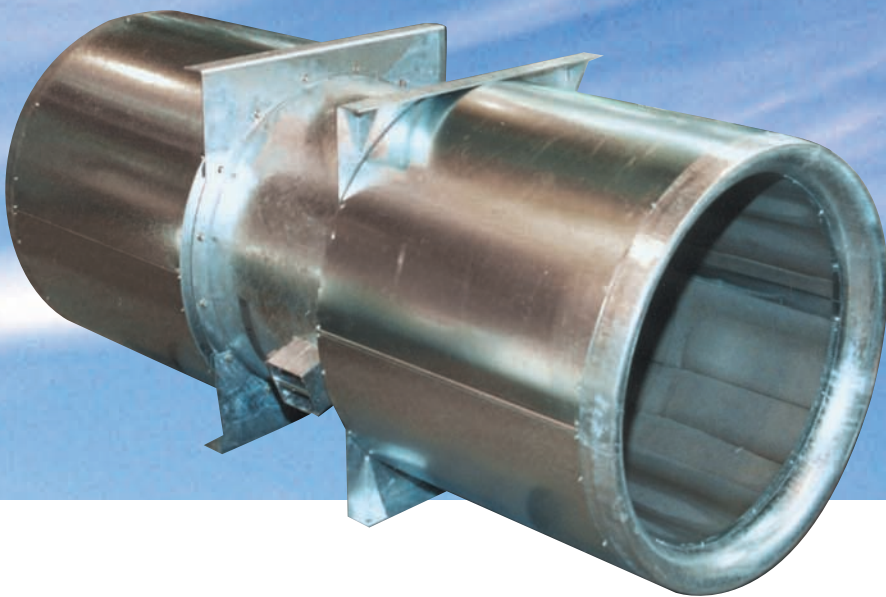


Precise Air Management
Jetfoil - Tunnel Fans



FläktWoods

Jet Fans and Accessoires

Fläkt Woods is the industry leader in air movement technology, providing innovative solutions worldwide. Our extensive knowledge of design and applications is based on over 100 years of experience in tunnels, buildings, industry and original equipment manufacturers. Fläkt Woods' global coverage reaches over 100 countries and is supported by an extensive distribution network.

Our expertise in tunnel ventilation applications covers road & rail tunnels, metros, tunnel construction and wind tunnels. Fläkt Woods' products have been successfully used in underground projects throughout the world and our Jet Fan product range is unrivalled in its technology, innovation and efficiency.



Ventilation

Ventilation is required for safety and to maintain acceptable temperatures and comfort. Pollution emitted by trains and road vehicles must be removed to provide an acceptable and safe environment. The heat from a train may need to be removed by forced ventilation to ensure that the temperature is acceptable to both people and equipment. In the case of a fire, smoke must be removed to enable safe escape and to assist access to fight the fire. The normal ventilation principles are to dilute pollution and to remove the smoke. The smoke may be removed by creating a reservoir from which it is extracted. Alternatively sufficient velocity is created to drive the smoke to one side.



The Jetfoil Fan Range

General Information

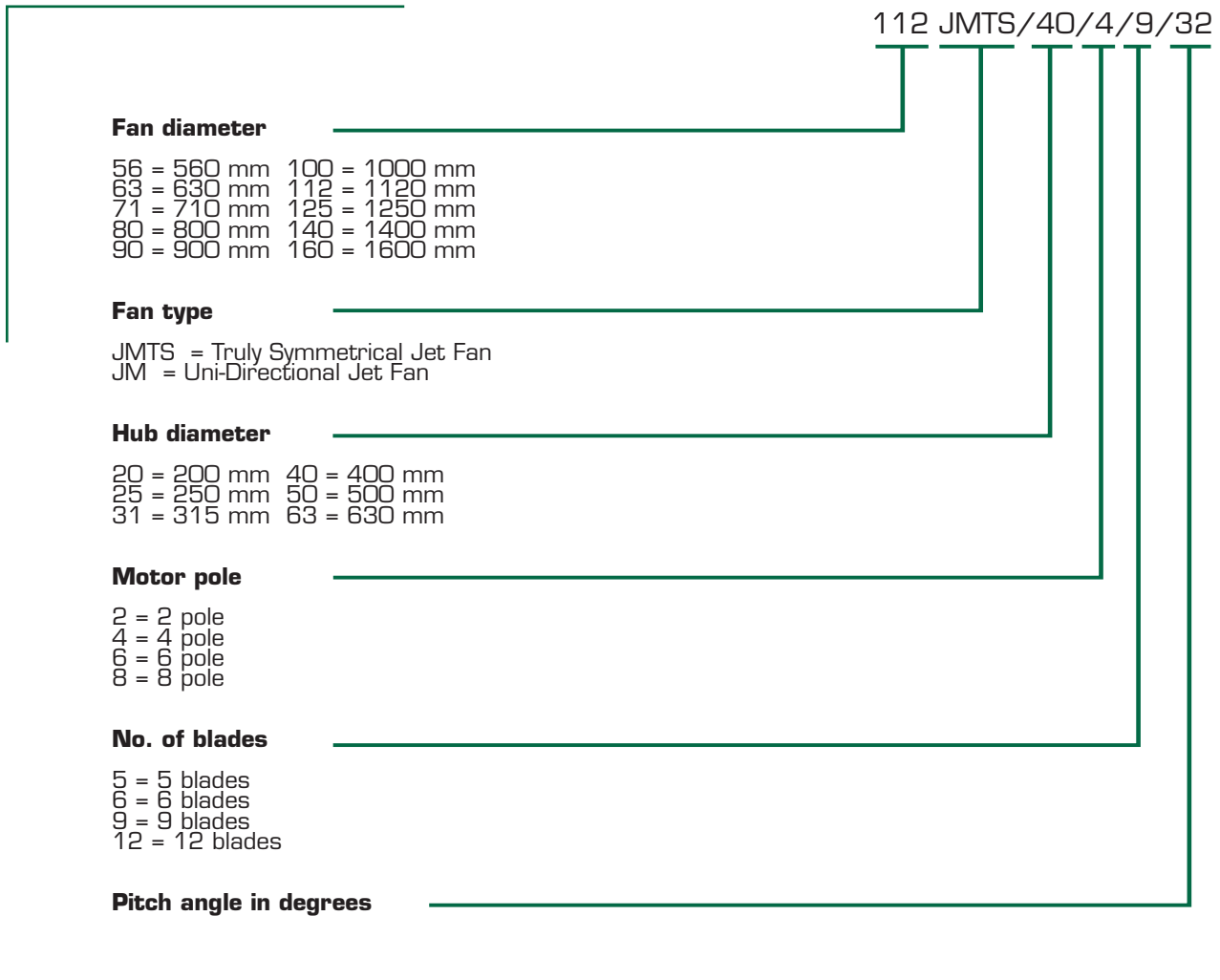
- Ø560 - Ø1600mm
- Thrust up to 5000N
- Ø710mm up to 3000 rpm, Ø1250mm up to 1800 rpm and Ø1600mm up to 1200 rpm
- Fully adjustable die cast aluminium impellers in uni-directional and truly reversible configurations; X-ray inspection
- Mild steel casing - hot dipped galvanised after manufacture, painted or all stainless steel construction
- Silencers fitted where required
- Motor protection IP55
- High thrust performance
- Emergency ventilation options up to 400°C/2 hours
- Truly reversible fans provide 100% thrust reversibility. Uni-directional fans give approx. 40% thrust for emergency use only, in the reverse mode with increased noise level.

Applications

- Longitudinal ventilation of road tunnels
- Emergency ventilation - smoke control
- Mine ventilation
- Hangar/large area ventilation



Fan Codes



Fan Selector

Fan Selector is the selection software for all the Fläkt Woods Fan Group products: Axial Flow Fans (among which Jet Fans for Tunnels), Centrifugal fans, Boxed Fans, Roof Extract units, Plate mounted fans.

The Fan Selector allows you to choose fans which fit your required application.

How to Register, easy as 1, 2, 3!

All you need to do to register your details on-line is to follow the simple instructions shown below.

- 1) Click on the site link to start the process: <http://fanselector.flaktwoods.com/signup/>
- 2) All you need to do is to fill in the fields that have red text labels, but if you wish to complete more of the form, this would be helpful.
- 3) Once you have entered your details, just click the "Register" button at the bottom of the registration page to submit your request.

Fan Selector

User Account Set-up

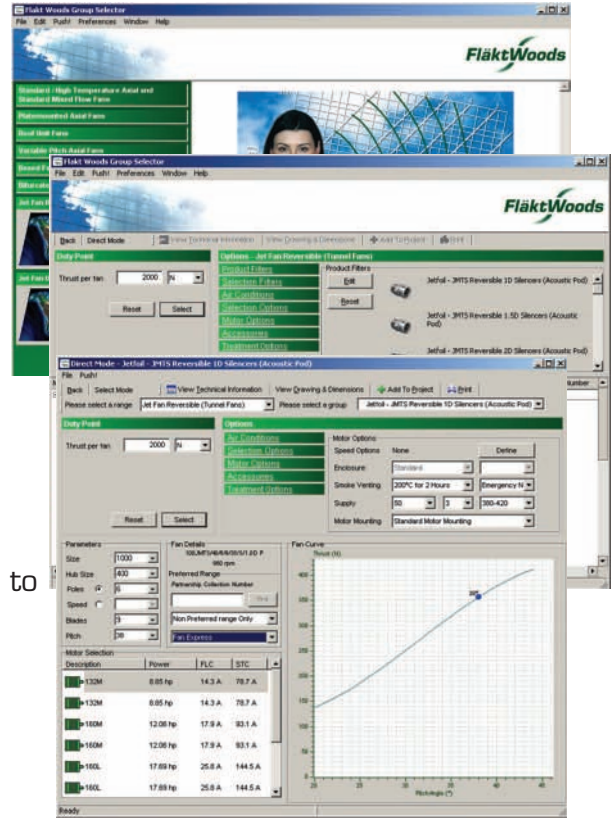
Once a user account has been created, our automatic registration system will send you an e-mail confirming your user name and password. Note: your username will be your e-mail address, so if you have a personal address this would be better than a general one (as this will allow you to personalise our software). The account set-up process normally completed between 24-48 hours after your initial password confirmation.

Desktop CD

Should you prefer to use the Desktop version of the software (which is locally installed onto your computer's hard drive), then this is available on request. All you need to do is to advise your full postal address and we would be happy to mail a CD to you.

Link to the On-Line Fan Selector:
<http://fanselector.flaktwoods.com>

1. After logging in, the first screen displayed allows the selection of axial fans, identify and click 'select' to continue.
2. The next screen displays the various types of axial fans, therefore it is necessary to filter the selection by clicking 'product filter' and 'edit'.
3. The desired flow and pressure can be input to identify suitable fans. Other filters can be adjusted so the desired fan is identified.
4. Each fan can be highlighted and technical information made available

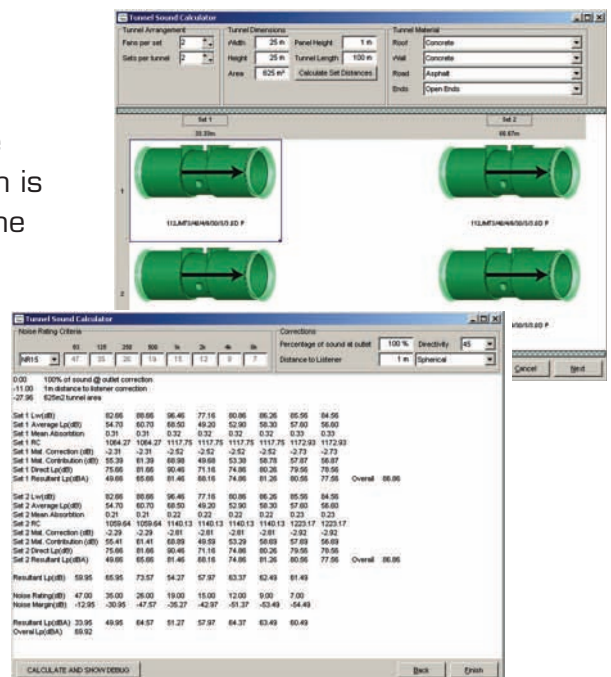


Sound Level Calculation

The Fan Selector also has the capability of calculating the installed noise levels of the jet fans. When the desired fan is selected and added to a project it is possible to access the tunnel design feature.

By inputting the tunnel arrangement, dimensions, materials and air direction and selecting the noise rating criteria on the next screen, a list of the sound levels is displayed.

Please note; this function is for guidance only and does not give any commitment on the exact acoustic parameters



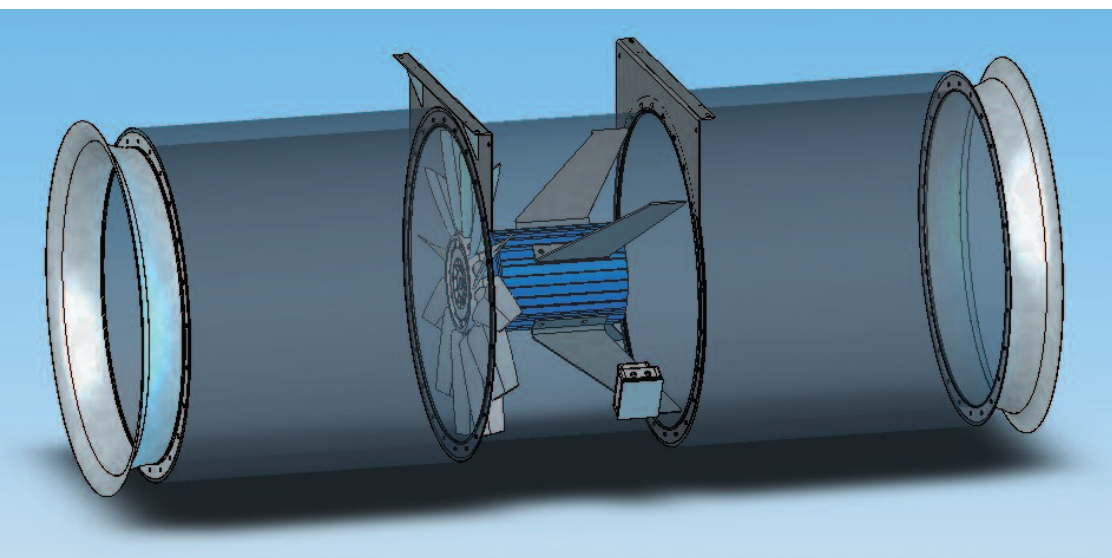
Jetfoil Standard Range

Range includes:

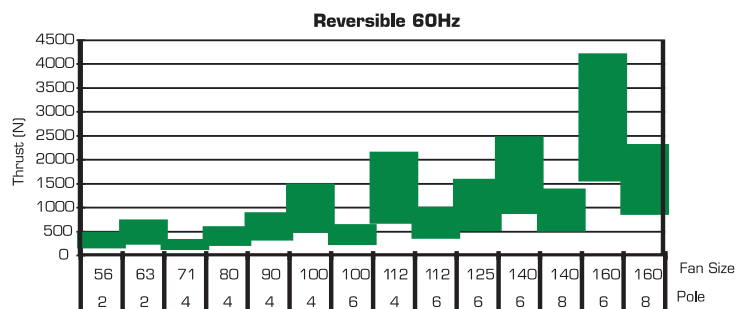
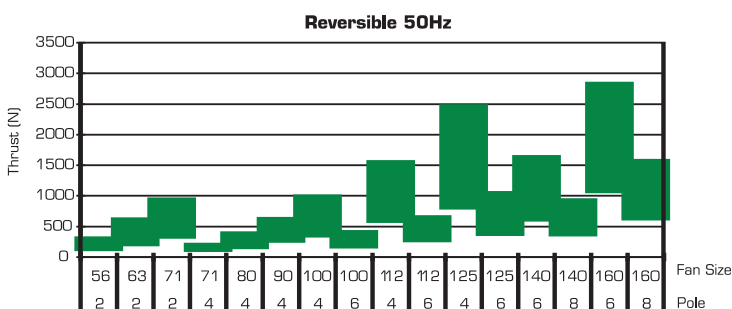
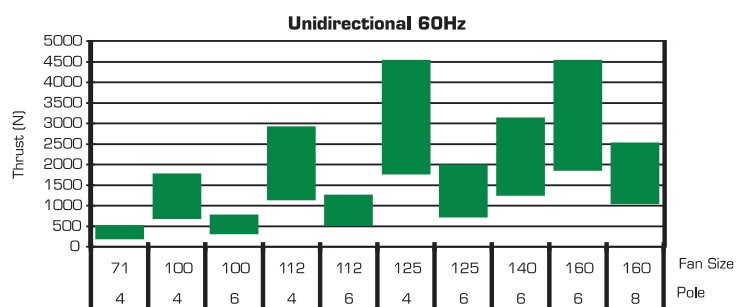
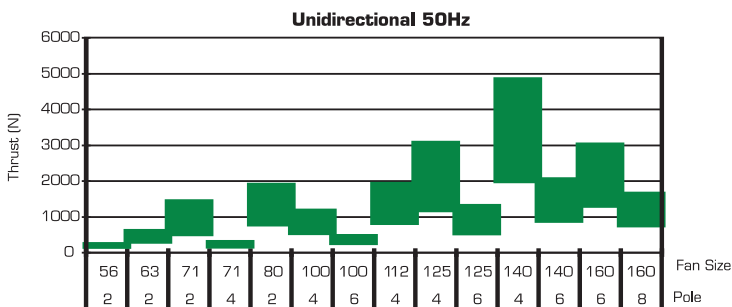
- 10 diameters - 560 mm to 1600 mm
- Swept back arm design for improved performance and noise reduction
- Zinc galvanised or stainless steel casing
- IP55 Motor Protection
- Low installed noise levels
- High Energy Efficiency

Options:

- Option of a silencer with or without acoustic pod
- Mounting frame to ensure secure installation
- Epoxy paint



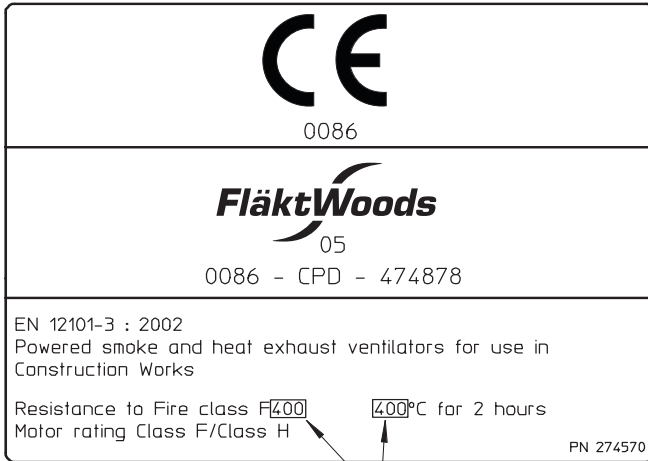
Performance Range – 300/2 with 1D Silencers



High Temperature Fans

High temperature fans are required as a safety measure. If a fire occurs it verifies that the fan will operate for a certain period of time in order to clear the smoked area. The fans are certified by BSRIA in conjunction with the latest European recognised standard EN12101-3. There are two levels of certification, 300°C and 400°C for two hours operation, and the fans will continue to operate for this period of time at the given temperature.

For more information visit www.flaktwoods.com



Fan label in accordance with CE marking directive EN12101-3

200 for 200°C for 2 hours
 300 for 300°C for 1 hour
 400 for 400°C for 2 hours

High Temperature Range

Range includes:

- 10 diameters - 560 to 1600 mm
- 300/2 or 400/2 operation
- 50 Hz or 60 Hz supply
- HT Approved and certified motors
- Additional impeller locking feature

Options:

- Epoxy paint on top of galvanised finish
- Bolt-on Silencers
- Accessories

HT Certification

Emergency, High Temperature, Smoke Extract Fans fall within the scope of the EU Construction Products Directive.

The implementation of the Construction Products Directive and the publication of the product specific standard, EN 12101-3 have made it a mandatory requirement for smoke control fans sold into the European Union to carry a CE Mark from April 1st, 2005. The CE mark may only be affixed after successful completion of testing, auditing of factory production control and the issue of a certificate by accredited independent authorities.

This procedure is intended to prevent fan failures during an emergency smoke situation, where a fan failure can ultimately lead to the loss of life. Fläkt Woods fully endorse the concept that, in such a safety critical application, only fully verified and certified products should be specified. This made the decision to test and certify this core product range all the more easier.

The decision was made to embark on a major testing programme in conjunction with BSRIA, a leading authority in building research. Using the expertise of Fläkt Woods and BSRIA's new state of the art High Temperature test rig, the Jet Fan range was successfully tested in compliance with this demanding new legislation with minimum complications.

This investment resulted in Fläkt Woods being able to offer a BSI Certified, CE marked Jet Fan product for use at 400°C / 2 hours from 560mm to 1250mm, together with a comprehensive range of approved accessories.

Fläkt Woods have enhanced their position as the foremost provider of specialist products for emergency high temperature smoke control by becoming the first fan manufacturer in the world to be able to apply CE marking to these safety critical products.



CE marking was then obtained from BSI for the JM HT fan range for additional 200°C and 300°C temperature categories, ensuring that Fläkt Woods has one of the most comprehensive range of products available in the Single European Market.

Other Accessories

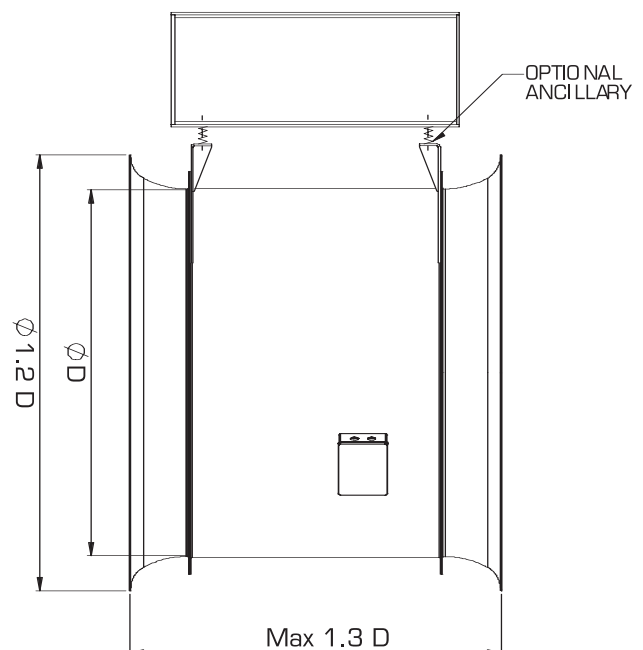
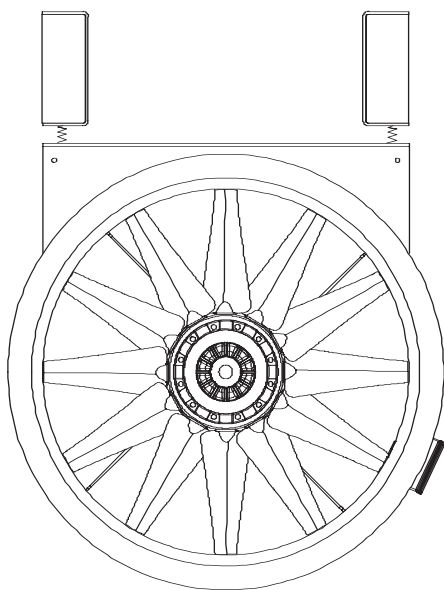
Jet Fan Silencer		Acoustic pod	
Mounting feet		Guards	
Bellmouth Inlet		Spring Vibration Isolators	

Outline Drawings

It is recommended that a Fläkt Woods frame accompany the jet fan to ensure a secure installation. Anti-vibration mounts are available for soft mounting installations.

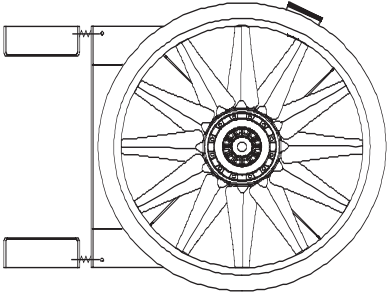
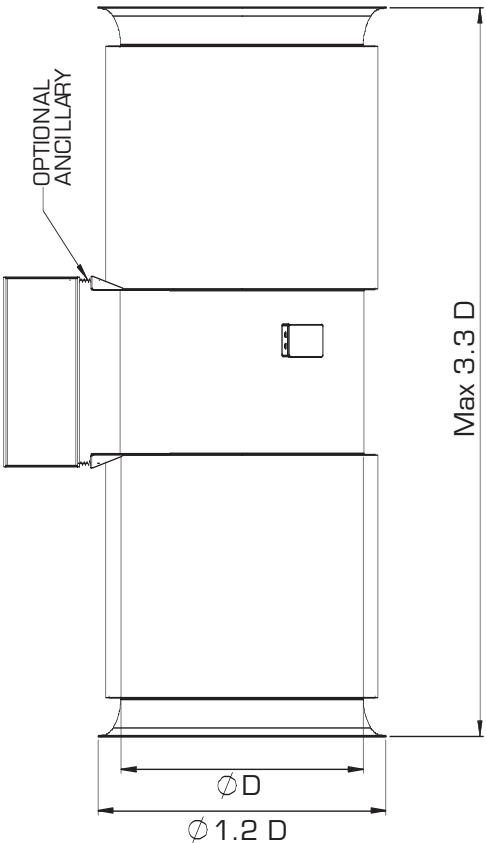
Dimensions denoted with ** to be advised by Fläkt Woods.

Base Fan - No Silencers

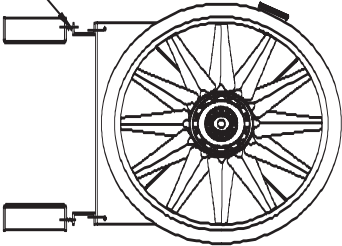
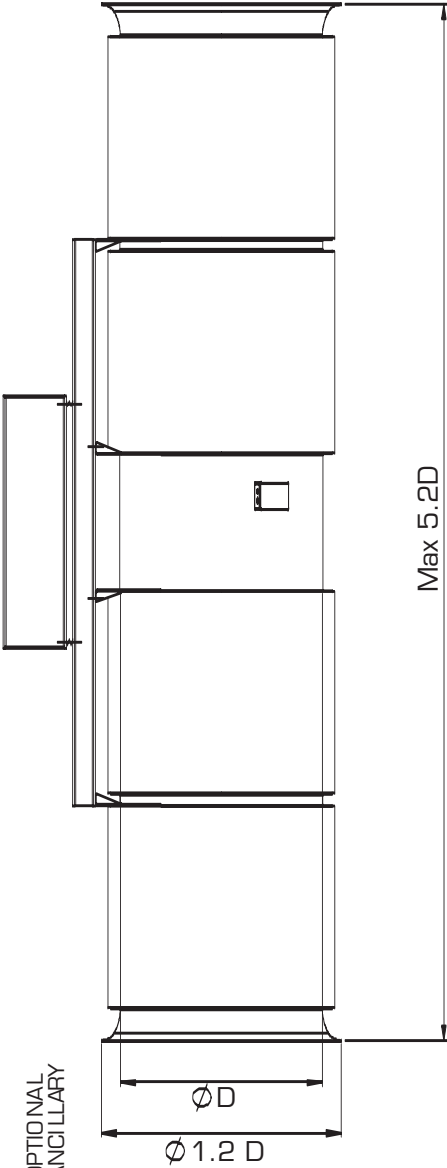


Outline Drawings

Jet Fan with 1D Silencers

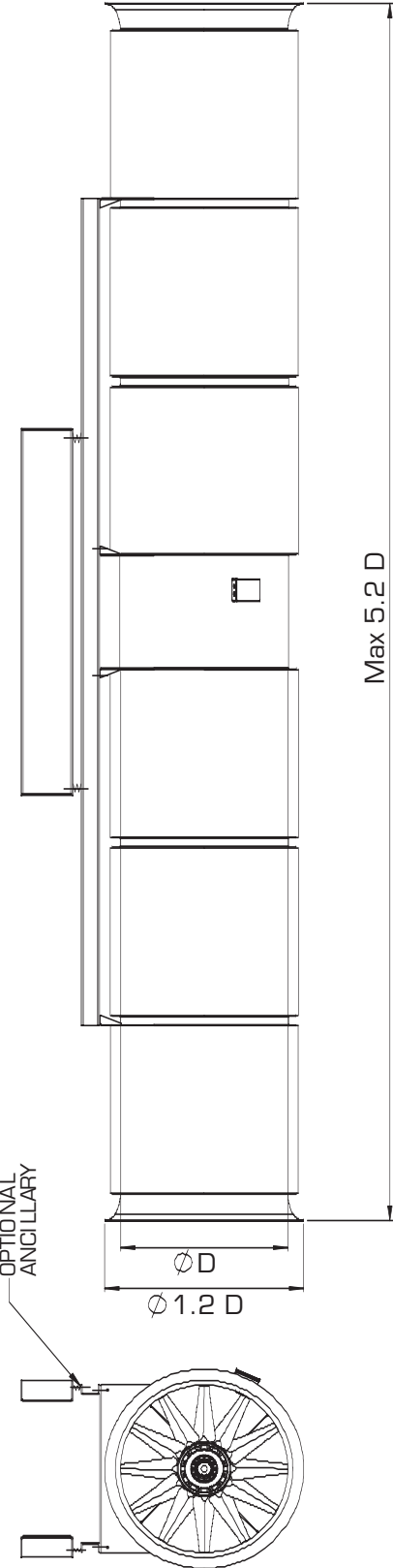


Jet Fan with 2D Silencers



Outline Drawings

Jet Fan with 3D Silencers



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.

Fläkt Woods operates a policy of continuous development and improvement. Accordingly, the Company 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.

FWG-JRG/JFB-01/0908

Fläkt Woods Limited

Axial Way, Colchester, Essex CO4 5ZD

Tel 01206 222 555 Fax 01206 222 777

email info.uk@flaktwoods.com www.flaktwoods.co.uk

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'.