

AIRTREND Limited
Predstavništvo u Beogradu
Kumanovska 14
11000 Beograd, Srbija
Tel: 011 3836886, 3085740
Faks: 011 3444113
e-mail: gobrid@eunet.rs
web: www.airtrend.rs



FIRE SAFETY SOLUTIONS

Indoor management solutions
for fire safety and smoke extract





Woods Air Movement is a global leader in air comfort and fire safety. We specialise in the design and manufacture of precision technology to deliver complete, integrated fire safety solutions.

In everything we do, safeguarding the well being of buildings, occupants and owners is always our major priority.

Our collective experience is unrivalled to ensure that we provide you with the perfect solution!

Within any building's total functionality, one element is paramount: its ability to ensure a safe environment in the event of emergency conditions.

If such a situation occurs, Life Safety for the occupants, for the emergency services and for the building fabric immediately becomes the priority for the ventilation system.

110 years of air movement knowledge, combined with our in-house expertise and contributions to the development of industry standards, mean we are well placed to respond to new challenges and regulation changes.

Through continuous Research, Development and Innovation we have consistently advanced fan technology to deal with emergency fire conditions.

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.

In addition to powered extract fans, we offer a comprehensive range of ventilation components to cover both daily requirements and emergency situations. Our products have been rigorously tested, so fully comply with BS EN 12101-3:2015, which is a key standard, related to components of smoke and heat control systems.

Woods Air Movement can design, supply and install complete systems for smoke extraction to suit the specific needs of each individual building.

Each system typically includes a combination of the following elements:

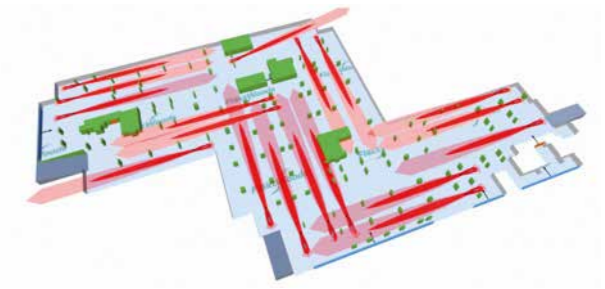
- Design
- Mechanical ventilation products
- Control systems
- Sensors
- CFD Analysis
- Commissioning
- Maintenance



We always have the right solutions for your fire safety requirements

SYSTEM DESIGNS

We offer the greatest value to our clients when we are involved at the design stage. Our in house team of designers and CFD experts are able to optimise the system to ensure the best design based on your specifications using our market leading products.



COMMISSIONING & MAINTENANCE

We have in-house teams and local partners across the world who will ensure that your system is commissioned and maintained successfully and operates as designed in line with local applicable codes and standards.



SMOKE TESTS

We are able to run hot smoke tests if required which demonstrate the effectiveness of our system designs and products. As one of the pioneers of the jet fans, we have designed and delivered 100's of operational car parks across the world.



CONTROLS & SENSORS

Localised control solutions are available that your system meets regional and local standards.

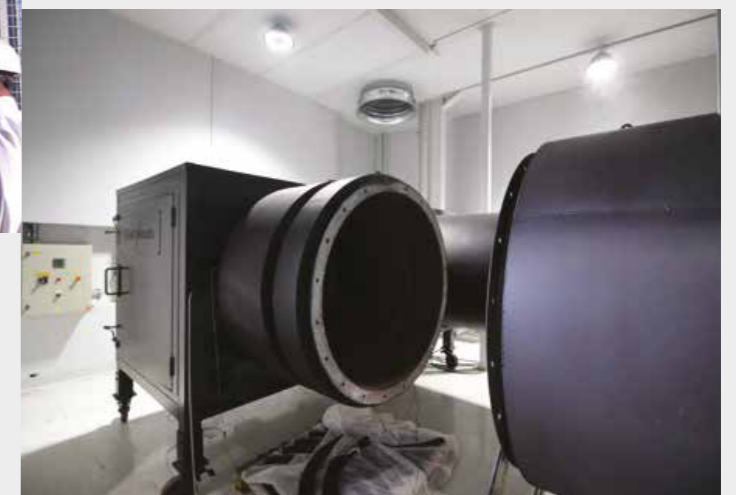
SYSTEMS

We don't just design and manufacture fans. We can provide the complete system and give you a turnkey solution from design to commissioning.



IN-HOUSE TEST LABORATORY

Our in-house test facilities are some of the most advanced in the world, which have the ability to test in accordance with a wide range of standards to validate Aerodynamic, Acoustic and High Temperatures performance of our fans..



AXIAL FANS

Woods Air Movement has one of the largest certified ranges of high temperature axial fans in the world. From 315mm to more than 3 metres in diameter and up to F400.

JET THRUST AND INDUCTION FANS

A wide range of impulse & induction thrust fans are available, including the class leading JTV with ultra high thrust and efficiencies within a limited unit depth.

INSTALLATION

We can work with your preferred partners to provide a smooth installation or manage the whole process through our own in-house teams and partners.

AVAILABLE SOLUTIONS FOR WHEN THE HEAT IS ON



We provide a wide range of high temperature fans that are fully certified to EN12101-3:2015 meeting the highest standards.

Woods Air Movement fan types can be suitable for both normal and emergency ventilation conditions



JMv AEROFOIL: Energy Efficient Ventilation

QUICK FACTS

- Up to 84.8% efficiency, FMEG Grade 76
- Operating costs reduced by up to 44.5%
- HT EN12101-3:2015 Certified
- 2, 4, 6 and 8 pole speed options available

TECHNICAL FACTS

Casing:	Long
Sizes:	315mm to 1400mm #2
Temperature:	-40°C to 50°C F200, F300 & F400 (emergency operation)
Volume:	Up to 63.1 m ³ /s #1
Pressure:	Up to 1650Pa #1
Electrical Supply:	3ph / 50Hz / 60Hz



JM AEROFOIL: Versatile Ventilation Solutions

QUICK FACTS

- Bolt on guide vanes deliver higher pressures
- ATEX and Marine variants available
- HT EN12101-3:2015 Certified
- 2, 4, 6 and 8 pole speed options available

TECHNICAL FACTS

Casing:	Long & Short
Sizes*:	315mm to 1600mm
Temperature:	-40°C to 50°C F200, F300 & F400 (emergency operation)
Volume:	Up to 51.8m ³ /s #1
Pressure:	Up to 2400Pa #1
Electrical Supply:	3ph / 50Hz / 60Hz

* Larger sizes available on request



HIGH PRESSURE JM2 AEROFOIL: Versatile Ventilation Solutions

QUICK FACTS

- Multi-Stage design delivers high pressures
- ATEX and Marine variants available
- HT EN12101-3:2015 Certified
- 2 and 4 pole speed options available

TECHNICAL FACTS

Casing:	Long/Long
Sizes*:	315mm to 1000mm
Temperature:	-40°C to 50°C F200, F300 & F400 (emergency operation)
Volume:	Up to 31m ³ /s #1
Pressure:	Up to 2500Pa #1
Electrical Supply:	3ph / 50Hz / 60Hz

* Larger sizes available on request



600°C BIFURCATED AXIAL: Dedicated Smoke Extract

QUICK FACTS

- Durable steel single piece welded impeller
- Designed for extremely high temperatures
- HT EN12101-3:2015 Certified
- 2, 4 and 6 pole speed options available

TECHNICAL FACTS

Casing:	Long, Bifurcated
Sizes:	400mm to 1250mm
Temperature:	F400, F600 & 600°C/2hrs
Volume:	Up to 33m ³ /s
Pressure:	Up to 1000Pa
Electrical Supply:	3ph / 50Hz

NOTES: #1 Maximum air flow volume and pressure shown relates to 50Hz range.
#2 Maximum fan diameter within our 60Hz range is currently 1000mm.

NOTES: #1 Maximum air flow volume and pressure shown relates to 50Hz range.

JMvG RANGE

Our JMv High Efficiency fan range extension provides enhanced performance

We designed and launched a revolutionary high efficiency Axial fan range, the "JMv". Our fan design took aerodynamic efficiency beyond the next level, which didn't just meet the Fan Energy related Product Regulation (EU ErP 327/2011) targets, it significantly exceeded them. We can confirm that our original core JMv range has been extended and enhanced by the addition of the 1000mm, 1120mm, 1250mm and 1400mm sizes, which, as they feature new Guide vane technology, are known as "JMvG" fans, but as they share a common heritage, they are still part of the JMv family.

Our 1400mm JMvG single stage fan develops 30% more airflow than an equivalent JM and 23% more pressure but uses 13% less power. Maximum airflow is 56 m³/s, while its maximum pressure development capability is 1500 Pa, so this solution can often replace a two-stage fan. Key benefits of the range include:

- Our JMv (G) range is now available in a diameter range from 315 mm to 1400 mm
- JMv (G) fans deliver Fan and Motor Efficiency Grades (FMEG) up to N77, which far exceeds the current target (N58) and future tier 3 ErP Regulation target (N64)
- JMv (G) Axial fans are suitable for dual mode operation, both normal ventilation and fire mode, when they are design extract hot smoke
- Fans are fully certified in accordance with EN12101-3:2015 for F200, F300 and F400 temperature categories.



PRODUCT DETAILS

The JMvG High Efficiency Axial fan range can deliver air flow rates up to 63.1 m³/s and static pressure up to 1650 Pa. Our JMv(G) fans can be mounted into ductwork horizontally or vertically depending on the system configuration and we offer a wide range of accessories, such as mounting feet, anti-vibration mounts, matching flanges and flexible connectors. Fan casings are manufactured from galvanised steel, so have a high level of corrosion resistance, but we can also offer alternative finishes to deliver C3 corrosion resistance. Fan impellers are manufactured from Aluminum, or for specialist applications, from high grade carbon steel.

JMv (G) Axial flow fans are fully certified in accordance with EN12101-3:2015, which allows them to be driven by Frequency Converter (VSD) during a fire event, which provides fire system designers with a greater degree of functional performance.

FAST FACTS

- Volume flow rate up to 63.1 m³/s
- Static pressure up to 1650 Pa
- 1 and 3 phase options available (HT fans only available in 3 phase)
- Suitable for both 50Hz and 60Hz electrical supplies
- Fire rated for 200°C, 300°C and 400°C for a duration of 2 hours
- Continuous operating temperatures up to +50°C as standard (+80°C on request)
- Energy efficient, offers running cost reductions of up to 50%
- Low sound levels
- Speed controllable during a Fire Event via our fully compliant HT fan and VSD solution

HT ROOF FANS



The HTC high temperature roof fans for smoke extraction from buildings, industries and professional kitchen hoods are the best product which are energy efficient, has low sound levels and speed controllable to meet the desired ventilation needs. The roof fans are ErP compliant.

Critically and most importantly, the system operates automatically via smoke detection and includes pressure sensing equipment which modulates fan speed and pressure profiles ensuring forces on the lobby doors do not exceed acceptable levels.

HIGHTEMPERATURE (HT) ROOF FANS

- 1 and 3 phase option available
- Available in wide size range from 225 mm to 1000 mm
- Maximum fire rated at 400°C for 2 hours

FAST FACTS

- Volume flow rate up to 11 m³/s
- Static pressure up to 850 Pa
- 1 and 3 phase options available
- 50Hz version (60Hz only on request)
- Maximum fire rated temperature up to 400°C for 2 hours
- Continuous operating temperatures up to 110°C
- Energy efficient
- Low sound levels

PRODUCT DETAILS

The HTC roof fans can handle volume flow rates up to 11 m³/s and static pressure up to 850 Pa. These fans can discharge horizontally but using an accessory can convert it into vertical discharge.

The fan cowl is made of seawater resistant aluminum and the backward curved centrifugal impeller is made of steel with self-cleaning system.

The roof fans can be fitted with a range of accessories like manual and gravity shutters, swing-out frames, vertical discharge sockets, etc.

The HTC high temperature roof fans should be used with a speed controller to meet the demand ventilation needs.

The fans are equipped with standard asynchronous motors of Class F insulation with IP55 protection.



AVAILABLE SOLUTIONS OVERVIEW FOR PARKING PARKS



Woods fan types can be suitable for both normal and emergency ventilation conditions



JTv - SLIMLINE

QUICK FACTS

- High performance cylindrical silencer
- Compact length
- High efficiency
- Maximum thrust

TECHNICAL FACTS

Casing:	Cylindrical
Sizes:	315mm to 400mm
Temperature:	F200, F300 & F400
Thrust:	91N (50Hz) & 88N (60Hz)
Electrical Supply:	3ph / 50Hz / 60Hz
Versions:	Uni-directional & Reversible



JTv - LOW PROFILE

QUICK FACTS

- Low height for confined spaces
- Low noise levels for a more discreet installation
- Maximum efficiency

TECHNICAL FACTS

Casing:	Octagonal
Sizes:	315mm to 400mm
Temperature:	F200, F300 & F400
Thrust:	89N (50Hz) & 85N (60Hz)
Electrical Supply:	3ph / 50Hz / 60Hz
Versions:	Uni-directional & Reversible



JT - STANDARD PROFILE

QUICK FACTS

- High efficiency with low running costs

TECHNICAL FACTS

Casing:	2 piece silencer
Sizes:	315mm to 400mm
Temperature:	F200, F300 & F400
Thrust:	54N (50Hz) & 63N (60Hz)
Electrical Supply:	3ph / 50Hz / 60Hz
Versions:	Uni-directional & Reversible



ITF - SMOKE EXTRACT

QUICK FACTS

- Ultra Low Profile for confined spaces
- High Thrust

TECHNICAL FACTS

Casing:	Induction
Temperature*:	F300 & F400
Thrust:	50N, 75N & 100N
Electrical Supply:	3ph / 50Hz / 60Hz
Versions:	Uni-directional

* Please speak to our sales team to find out which configurations are fully certified.

HT FAN AND VSD PACKAGED SOLUTION APPLICATIONS

- Allows a Dual mode Axial fan to be speed controlled during normal ventilation mode and Emergency HT mode
- Fan and VSD combination tested and certified by BSRIA and BSI: FULLY complies with EN12101-3:2015 (F300 & F400)
- Packaged solution uses tried and tested design principles
- Advance VSD design allows multiple duty set points to be defined
- BMS compatibility adds additional control flexibility and high levels of design strategy confidence
- VSD "Fire Mode" ensures that the fan and VSD package performs a smoke extract function for a minimum of 2 hours
- Woods / Danfoss package is UNIQUE

ONE OF THE FIRST FULLY EN12101-3:2015 CERTIFIED Fire Mode Packaged Solutions in the Market

EN12101-3: 2015 – STANDARD EVOLUTION

8th April 2017: Smoke and Heat control systems standard changed to include the option to use Frequency Converters during a fire event. This revision, we believe, is a real game changer, as it offers designers more solution possibilities and will contribute significantly to improving building occupant safety

2015 version of this certification standard states 3 basic approaches for using Variable Speed Drives (VSDs) with dual mode High Temperature smoke extraction / Normal Ventilation Axial fans. These are:

- Third Party tested and Certified Fan/VSD range: Only 5% motor de-rate and no need to fit Voltage Waveform filters
- By-pass the VSD during a fire event
- De-rate drive motors by 20% and fit Voltage Waveform filters between VSD and Fan Motor



THIRD PARTY TESTED AND CERTIFIED FAN AND VSD RANGE

Having successfully completed third-party testing of our core fan range, we are proud to confirm that Woods, together with Danfoss Drives, are the first to announce a fully certified EN12101-3: 2015 packaged HT fan and VSD solution in the UK and Europe.

Our VSD HT fan control solution is the most practical, flexible and cost-effective solution as it removes the need for over-sizing fan drive motors and having to fit a Voltage waveform filter tested a few times a year.

Reliability of a dual mode fan and matched VSD package is also higher, as fire mode fans are effectively "run tested" every day. Dedicated fire mode fans are typically only tested a few times per year.

To ensure delivery of the best possible customer solution, Woods teamed up with leading VSD manufacturer, Danfoss Drives. Both companies, who together have amassed a total of 150 years' experience within the HVAC industry, are passionate about Quality, Excellence and Fire Safety.

VARIABLE SPEED DRIVE APPLICATIONS

- Stairwell Pressurisation (Multi-Storey buildings) – Multi-Zone Controls
- Lift Shaft Pressurisation (Multi-Storey buildings) – Multi-Zone Controls
- Smoke Extract Fans (Buildings) – Multi-Zone Controls
- Smoke Extract & Pollution Control Fans (Car Parks) – Multi-Zone Controls
- Tunnel Ventilation, Pollution Control and Smoke control / Extraction



CERTIFIED RANGE SCOPE – TOP LEVEL ATTRIBUTES

- Any HT Axial flow fan with JM, JMv, JM2, JM2S, JM2SP, JT and JTv impeller variants
- Woods Air Movement approved motor frame size range: 80 to 280 inclusive (Foot/Pad/Flange)
- Maximum motor and VSD rating is 90kW. Larger motors are not currently certified.
- Approved multi-voltage motor electrical supply: 380-420v 50Hz or 440-480v 60Hz (3 phase)
- Maximum Fan speed must be equal to, or less than the impeller maximum speed
- HT Categories: 300°C/1 hour, 300°C/2 hours & 400°C/2 hours
- If HT 200°C/2 hours specification is required, offer 300°C/2 hour specification
- Approved VSD: Danfoss VLT HVAC FC101 (or FC102) range

ADVANTAGES OF USING VSD CONTROL WITH AXIAL FANS

- Precise speed control allows actual design duty to be accurately achieved
- Adaptive speed control (via NOx / CO sensors) delivers optimum pollution control
- Flexibility to adapt fan performance based on evolving system needs
- Energy saving opportunities based on using "on demand" control logic

CERTIFICATE UPDATE

Our new and updated EN12101-3:2015 High Temperature fan certification was issued by BSI on the 9th January 2019

Full Compliance is confirmed by the existence of an associated Technical Annex file: "Fans Driven by PWM frequency converter at ambient and at high temperature A.1.n".

This defines precise attributes of the tested and approved VSD range

To confirm full EN12101-3:2015 compliance, HT Fan manufacturers must be able to provide a copy of their Technical Annex file, which supports their test certificate

CONTACT US FOR THE AVAILABLE CPD



PROTECTIVE VENTILATION Car Parks

Traditional car park ventilation system designs are based on duct runs with high and low level extract. This design approach typically uses up valuable space and such systems are often costly to install and then operate. Woods 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 traditional system design approaches, with the Woods solutions, single or multiple points of extract are placed strategically, with fitted mounted Jet Fans that may operate independently or in groups.

During day-to-day operation, the level of Carbon Monoxide is constantly measured by gas monitoring sensors throughout the car park level.

Upon detection of increased levels of contaminants, selected Jet Fans are activated to dilute the contaminated air and guide it towards the point of extract.

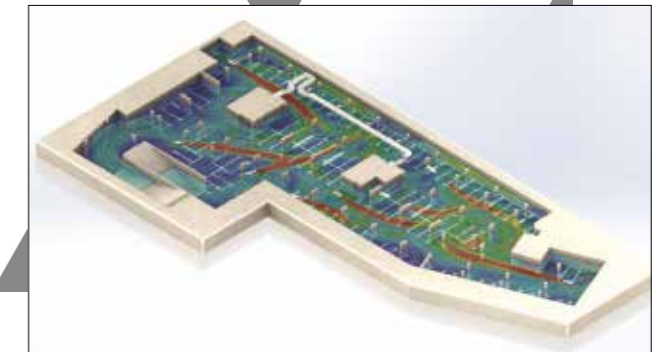
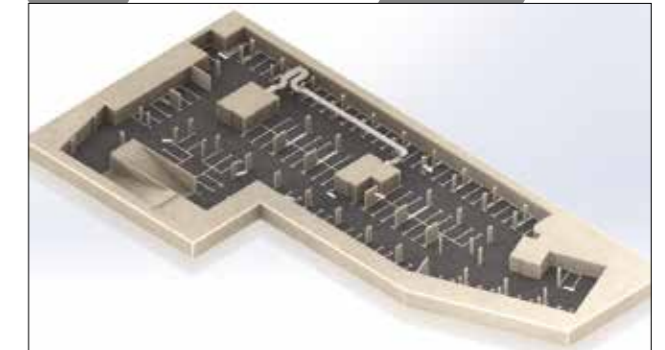
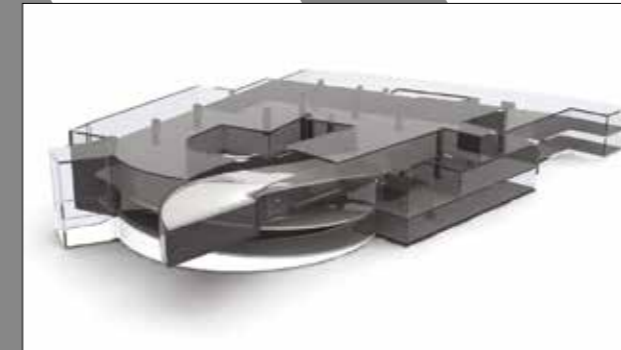
In the event of a fire, a smoke detection system will cease the day-to-day operation of the car park ventilation system. Depending on the chosen system design approach, the system will be reactive to either clear the smoke or to provide increased visibility to allow improved conditions which leads to more efficient firefighting deployment.

TAILORED SOLUTIONS USING CFD

Our car park ventilation solutions are designed for the specific structure. Computational Fluid Dynamics (CFD) software, combined with Woods in-house expertise and own fully-researched input data is used to validate the overall performance of the system both in day-to-day and emergency smoke extract mode.

CFD Analysis allows Woods engineers to assess the car park operation with respect to its acceptance criteria; this could be from minimum airflow speed to maximum allowed smoke spread depending on the project need. The engineer can then optimise the position and operation of the system to best suit the criteria. This is supported pre-CFD by detailed calculations to demonstrate system compliance and ensure that the system can achieve the required criteria.

One of the major benefits of the Jet Fan approach is that, by eliminating the extract duct work, the system resistance is substantially reduced allowing smaller motors on the main extract fan units.



CFD DESIGN (Computational Fluid Dynamics)

Airflow behaviour is difficult and complicated to predict. Accurate calculation is paramount in order to create an effective car park ventilation system. Woods modelling is backed up with both lab and field tests.

HOW IT WORKS

Manual calculation methods are limited in their ability to predict proper system performance. This is why Woods offers the possibility to undertake full CFD analysis to customers on their projects.

The CFD software comprises of a solver, which integrates the relevant differential conservation equations (Mass, Linear Momentum Energy and Concentration). The software program solves these algebraic equations for a finite number of iterations until an acceptable level of accuracy has been obtained, allowing accurate car park design.

Woods CFD Engineers are highly trained and experienced, using their knowledge and expertise to design the system to meet the applicable performance requirements.

Design is verified by using industry recognised, highly accurate, CFD modelling software. The system is then adjusted and recalculated if required.

PROCESS STAGES

1. Client layout drawings and sections are converted into a 3D domain model which is sent to the client for approval.
2. Upon approval the domain model is frozen and detailed calculations commence.
3. The model is initially run with only the main fans operating. This identifies the main bulk airflow paths from the supply to the extract points and any areas of re-circulation within the car park.
4. Thrust Fans are added to the model and positioned to distribute the airflow to all of the areas of the car park, ensuring removal of any stagnant areas of air.
5. A detailed report of the results is produced for each project with appropriate air speed plots, velocity profiles and particle animations.



Stairwell Fire & Smoke Safety

As the built environment continues to require ever taller buildings, so does the need for more robust and intelligent fire protection systems capable of ensuring the safe evacuation of these elevated structures. Woods Air Movement is actively involved in supporting this development with our range of fully EN 12101-3:2015 certified Smoke Extract Axial fan range, which are used either within our own roof, wall or duct mounted smoke extract or pressurisation solutions or those offered by our local partners, who also often offer turnkey solutions, from design to installation.

The most popular design concept is to exhaust smoke from stairwell lobbies within a building, via appropriately sized fire rated extract shafts. This solution uses two high temperature Axial flow fans, which our installers or local partners mount in series to provide a duty and standby function which offers a higher degree of protection. This assembly is positioned at the top of the extract shaft at roof level.

Importantly and necessary for correct operation of the system, replacement fresh air enters the building via a ventilator installed at the top of the stairwell. Pressure sensors monitor the input air to ensure that the forces on lobby doors do not exceed the prescribed limit of 100N. This enables the system to maintain a negative pressure in relation to the stairwell, ensuring that escape routes are kept free from smoke, which minimises the potential for smoke inhalation by escaping occupants.

Critically and most importantly, the system operates automatically via smoke detection and includes pressure sensing equipment which modulates the fresh air input fan speed, ensuring that the forces on lobby doors do not exceed acceptable levels.

Where the pressurisation solution requires to be duct mounted, our SMPA product provides this installation option.

In addition to the above, fire safety solutions also include our Hatch (SMHA and SMWH) roof and wall mounted smoke extract units and feature a powered hatch that automatically opens during a fire event. Our roof mounted SMIA "Hatch" product not only provides a Smoke Extract function but can be reversed to provide a fresh air input mode as well. Our speed controllable HTC Smoke Extract units are also designed for roof installation.

SYSTEM DESIGN CONCEPT SUMMARY

- The system provides a dedicated mechanical extraction point on each floor.
- In the event of a fire, where the system is activated on any one floor; an evacuating occupant will exit from the office to the lobby and then into the stairwell.
- The lobby must remain at a negative pressure in relation to the stairwell and adjacent office spaces, ensuring the stairwell is kept smoke free during a fire evacuation.

NB: The lobby is sacrificial, as maintaining the stairwell free from smoke is the primary concern.

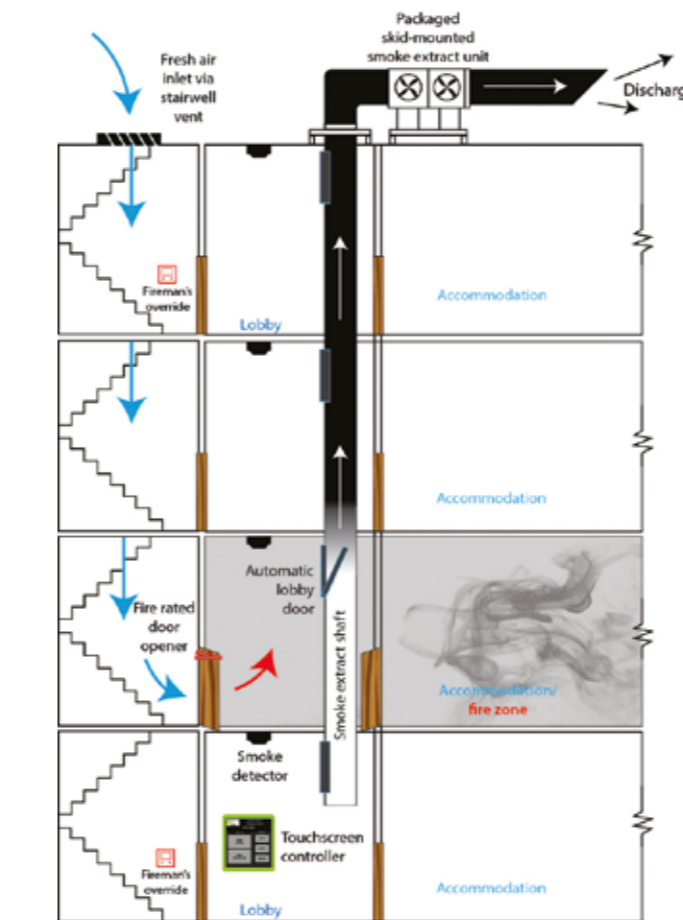
There are two operating modes for the system:

DOOR CLOSED MODE:

- The system operates to maintain a negative pressure in the lobby space relative to the buildings stair cores and accommodation spaces.
- Critically, the accommodation doors must not be pulled open due to this negative pressure, as this would breach the fire compartmentation of the lobby.

DOOR OPEN MODE:

- When either the accommodation or stairwell door opens, the fan speed (and delivered duty) increases to maintain the negative pressure within the lobby ensuring that the stairwell remains free from smoke, with the relevant door(s) open.



EN 12101-3 AND ISO 21927-3 HT CERTIFICATION

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

The implementation of the Construction Products Regulation and the publication of the product specific standard, EN 12101-3 have made it a mandatory requirement for smoke control fans sold in 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 issue of a certificate by accredited independent authorities.

The procedure is intended to prevent fans failures during an emergency smoke situation, where a fan failure can ultimately lead to loss of life.

Woods fully endorse the concept that, in such a safety critical application, only fully verified and certified products should be specified. As such all JM fans are tested and certified.

The Woods JM range was successfully tested and are certified to EN 12101-3 and ISO 21927-3 by a third party; however, because of ISO 21927-3 applies globally, it provides specifications against which powered smoke and heat exhaust ventilators can be evaluated and certified outside EU member states.



Woods worked with the certifying authorities to build and certify a high temperature facility capable of testing fans up to 3.5 metres diameter at up to 400°C.

This investment resulted in Woods being able to offer a British Standards Institution Certified, CE marked JM HT product including 300°C/2 hours 400°C/2 hours ranges, in diameter starting at 1400mm up to a maximum of 2800mm at relevant time/temperature categories.

This investment also resulted in Woods being able to offer a British Standards Institution Certified, CE marked Jet Fan product for use at 400°C/2 hours from 560mm to 1600mm, together with a comprehensive range of approved accessories.

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, ensuring that Woods has one of the most comprehensive range of products available in the World.

It is also believed that Woods is now the only manufacturer to have successfully tested a 2.24 metre diameter fan, running at 1500 rpm with a 1MW motor.

 2797
 ** 2797 - CPR - 474778
EN 12101-3: 2015 Powered smoke and heat exhaust ventilators for use in Construction Works Resistance to Fire Class F400 400°C for 2 hours Motor rating Class F/Class H



bsi. British Standards Institution

Certificate of Constancy of Performance

This is to certify that:

Flakt Woods Limited
 Airedale Way
 Colchester
 CO4 5ZD
 United Kingdom

Multi Certificate Number: 2797 CPR 474778

In respect of:

EN 12101-3:2015 - Smoke and heat control systems. Specification for powered smoke and heat exhaust ventilators.

In compliance with Regulation (EU) 2015/1032 of the European Parliament and of the Council of 9 March 2015 (the Construction Products Regulation or CPR), this certificate applies to the above construction product. This certificate attests that all the provisions concerning the assessment and verification of constancy of performance described in Annex A1 of the above regulation, under system 1 for the performance set out in this certificate are applied and that the factory production control (FPC) established by the manufacturer is assessed to ensure the consistency of performance of the construction product. This certificate was first issued on the date below and will remain valid as long as neither the harmonised standard, the AUCP (method), nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified product certification body.

For and on behalf of BSI, a notified body for the above regulation:
 Notified Body Number: 2797
 Personnel Notified Body: 822 2006
 First Issued: 2004-09-07

Dr. Steve Hagerlins, Managing Director
 Validated Date: 2020-02-04

Page: 1 of 20

...making excellence a habit[®]

WE HAVE THE LARGEST CERTIFIED HIGH TEMPERATURE RANGE IN THE WORLD!



Our wide range of fans can be installed in various applications.





Woods Air Movement delivers smart and energy efficient Air Movement and Fire Safety solutions to support every application area. We offer our customers innovative technologies, high quality and outstanding performance supported by more than 100 years of accumulated industry application experience. The widest range of Air Movement and Ventilation products in the market, and strong market presence with over 100 years of experience and manufacturing of products, guarantees that we are always by your side, ready to deliver Excellence in Solutions.

AIRTREND Ltd. - KOVENT D.O.O.
Kumanovska 14
11000 Beograd
Tel. 011 383 68 86, 308 57 40
Faks 011 344 41 13
E-mail: gobrid@eunet.rs, office@kovent.rs
www.airtrend.rs, www.kovent.rs

