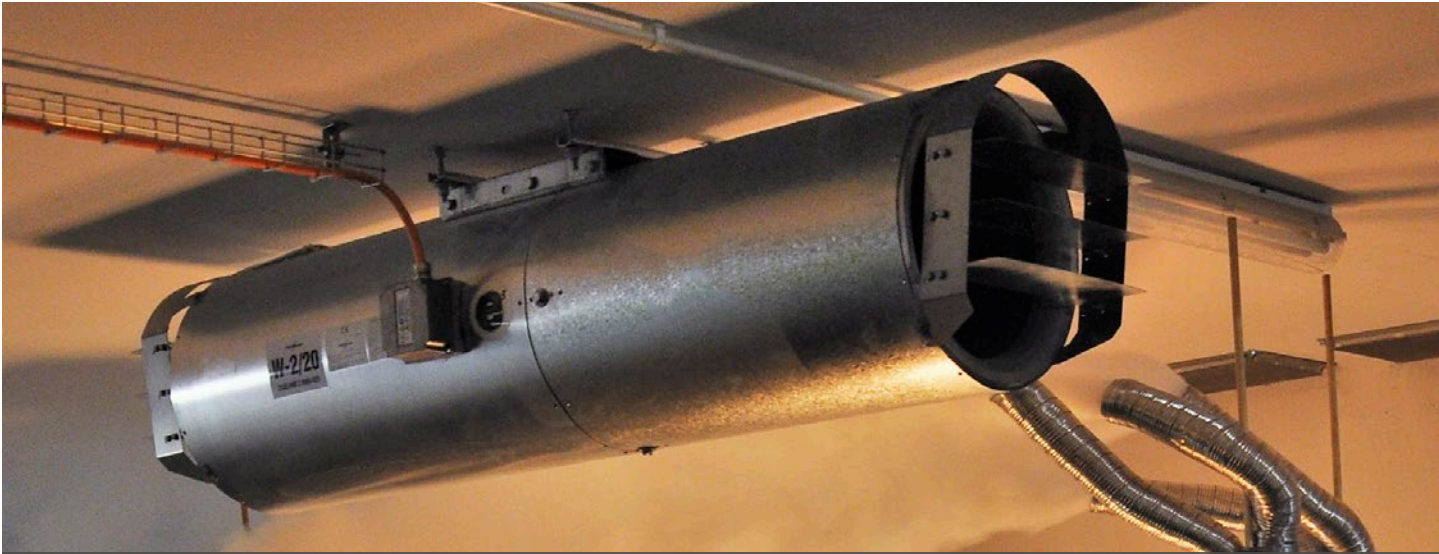


EN12101 - 3:2015

Full Compliance Delivers Safer Buildings



FULLY CERTIFIED HIGH TEMPERATURE
FAN & FREQUENCY INVERTER
PACKAGED SOLUTION



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 Air Movement 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.



ADVANTAGES OF USING VSD CONTROL WITH AXIAL FANS

- Precise speed control allows actual design duty to be accurately achieved
- Adaptive speed control (via NO_x / 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



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

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 Air Movement / Danfoss package is UNIQUE FIRST FULLY EN12101-3:2015 CERTIFIED Fire Mode Packaged Solution in the UK & Europe**



CERTIFIED RANGE SCOPE – TOP LEVEL ATTRIBUTES

- Any HT Axial flow fan with JM, JMv, JM2, JM2S, JM2SP, JT and JTv impeller variants
- Woods 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



Danfoss

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 Air Movement, 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.

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.

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



Woods Air Movement Ltd. 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 fifty 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.

**Contact our friendly sales team today
for more information**

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