

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

FläktGroup

EN12101 - 3:2015

FULL COMPLIANCE DELIVERS SAFER BUILDINGS

Fully Certified High Temperature Fan & Frequency
Inverter Packaged Solution

HT Fan + VSD
-fully certified to-
EN12101-3:2015



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
- Fläkt Woods / Danfoss package is UNIQUE

FIRST FULLY EN12101-3:2015 CERTIFIED Fire Mode Packaged Solution in the UK & Europe

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 Fläkt 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, Fläkt 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

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

CERTIFIED RANGE SCOPE – TOP LEVEL ATTRIBUTES

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

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



FläktWoods
Danfoss



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

FläktGroup®

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

**EXCELLENCE
IN SOLUTIONS**

FläktWoods *Danfoss*

THE ONLY FULLY COMPLIANT EN12101-3: 2015
FAN AND SOLUTION IN THE UK AND EUROPE



WORKING TOGETHER...
TO DELIVER ENHANCED
FIRE SAFETY WITHIN BUILDINGS

