

Smoke extract fans

**Completely under control – certified safety**

F400 smoke extract fan with frequency converter



# Success! – Testing a smoke extract fan with frequency converter

For many years, EN 12101-3:2015 (Smoke and heat control systems – Part 3: Specification for powered smoke and heat exhaust ventilators) was a guarantee for the safety of smoke extraction applications. The standard was revised in 2015, clarifying the definition of controllability for powered smoke extraction systems. Previously, if daily ventilation could be controlled via a frequency converter, in the case of a fire the frequency converter had to be circumvented with a bypass switch. Now a smoke extraction fan can be tested in combination with a frequency converter, rendering a bypass switch unnecessary.

# Advantages for customers:

- No need for tricky and expensive installation of a bypass switch
  - Energy-saving operation via frequency converter possible at all times
  - Safety systems within the smoke extraction system can be coordinated with each other
  - Parameterisation of the frequency converter for up to 32 fixed speeds
  - In case of fire the speed can be regulated via a 4-20 mA signal (e.g. differential pressure control)
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## Have you ever tried?

Most manufacturers switch off the fan shortly after reaching the minimum time for a classification. But what happens if the fire scenarios demand an adapted application of smoke extraction? To find out, Systemair – successfully – performed an extended stress test at the internationally recognised testing institute, the BSRIA in Bracknell, UK.



## We did it!

After reaching the classification time, the fan was subsequently operated between partial and full load. By using specified suppliers and frequency converters with a "fire mode" (safety-related emergency operation function), it was possible to repeatedly simulate control in the case of a fire. The system was switched off after a total loading period of almost 200 minutes. After this period, the mechanical and electrical fan components showed no signs of fatigue.



## Use it!

Systemair has the right smoke extraction fan for every application with certified combined safety. This means our energy-saving fans can be used for every ventilation task.



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Systemair now has F400 smoke extract fans ready for you, with frequency converter and highly-efficient IE3 motor. These fans are not just suitable for significantly more efficient requirements, but can also be used for dual-purpose operation (providing extremely efficient everyday ventilation as well as smoke extraction in case of fire). In the case of a fire, the fan can be controlled without a bypass by using the frequency converter. F400 smoke extract fans are available in the sizes 315 to 1600.

## Find the right ventilation product quickly!

Use our **selection programme** to choose perfectly-fitting fans, compact air handling units and air diffusers – quickly and with a precise operating point.

You can find an overview of all our products with the necessary technical data in our **online catalogue**. Round off your ventilation package with our comprehensive range of accessories.

Find out more right now at [www.systemair.de](http://www.systemair.de)

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