

▶ X-FANS ▶▶



# The perfect team

BVAXO 9/27 • DAX • FU • VD

## ► Systematic smoke extract ►►

### Perfect teamwork

In the event of a fire, every second counts. All safety-related components and systems, such as duct smoke detectors, fire and smoke control dampers, purging systems and fans, have to function reliably and without any delay. This is only possible with an overall control system. The combination of smoke exhaust fan (BV DAX), fan diagnosis system (VD) and frequency inverter (FU) is part of an overall system solution for safe and reliable fire protection and smoke extract.

### Economical

BV DAX is a TROX TLT axial fan in a weather-resistant casing; any TROX TLT axial fan can be used. This is an economical solution and above that easy to install as it is largely pre-assembled.



### Innovative

The fan diagnosis system allows for maintenance based on the actual condition of fans. This means that a fan may have to be replaced later than the standard maintenance intervals would suggest. The diagnosis system also ensures functional reliability.

### Safe

The certified frequency inverter unit ensures safe and precise speed adjustment of smoke exhaust fans. It comes with dedicated firmware for smoke extract applications and is available for temperature categories F300 to F600.



## ► Saving energy and costs ►►

### The complete solution

BV AX, type DAX, is an axial fire gas roof fan and has a fully thermally insulated and weather-resistant casing. With its double-skin aluminium casing (corrosion protection class C5) and the two thermally insulated, fixed exhaust dampers it can be tightly sealed to the building structure, thereby complying with the German Energy Saving Ordinance (EnEV).

The CE-certified BVAXO 9/27 F400 smoke exhaust fan is a convincing product due to its particularly good price-performance ratio and high efficiency at low and medium pressures.

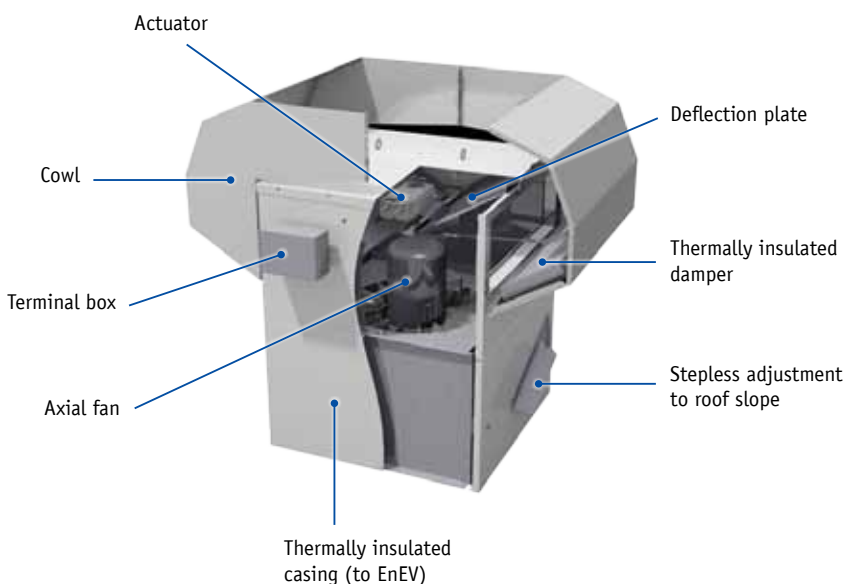
### Easy installation

BV AX may be a sophisticated system yet it is easy to install because the casing, dampers, fan and base are factory mounted and form a unit. The base is adjustable to fit on roofs with up to a 25° slope.

The electric actuator for the exhaust dampers and the fan itself are factory wired, and the terminal box and the local isolator are easily accessible from the outside.

### BVAXO 9/20 F400 with DAX casing

- Approved for smoke extract in combination with a frequency inverter to EN 12101-3
- CE-certified for temperature class F400
- Meets all legal requirements (smoke extract, German Energy Saving Ordinance EnEV)
- Weather-resistant thermal insulation T4/TB4 to EN 1866



- Volume flow rates of up to 100,000 m<sup>3</sup>/h
- Weather-resistant casing complies with German Energy Saving Ordinance
- Good price-performance ratio
- Easy installation





## ► Fan diagnosis system VD ►►►

### Condition-based fan maintenance

Smoke exhaust fans are safety-related components and must therefore comply with building regulations. Maintenance of a fire protection system is the sole responsibility and duty of the building or system owner.

In Germany, for example, it is regulated in law that anyone who neglects maintenance not only faces fines or their business being shut down by the authorities, they also have to deal with the loss of warranty claims. If a mechanical smoke extract system fails in the event of a fire, there is even the threat of further civil or criminal proceedings.

Maintenance procedures such as changing the lubricant or replacing bearings, as well as regular test runs, can be expensive with regard to the assembly work and material involved.

The TROX TLT fan diagnosis system VD allows for maintenance based on the actual condition of bearings. In other words: A bearing needs to be replaced only when the diagnosis system detects that the actual condition warrants replacement. Although this does not relieve the system owner of the obligation to carry out legally required tests, it does lead to considerable cost savings compared to maintenance based on standard intervals or visual inspection only.

### The TROX TLT fan diagnosis system

- Cuts the risk of an unscheduled stoppage
- Helps prove the functional reliability of the system
- Covers all parameters of the system (vibration, temperature, volume flow rate)
- Extends the replacement intervals for motors and components
- Reduces the costs for functional test runs and inspections
- Automatically performs functional test runs
- Evaluates data and creates data logs automatically
- Indicates the fan status using a 'traffic light' system
- Is quick and straightforward to handle



- Proof of functional reliability
- Reduces maintenance costs
- Extends part replacement intervals
- Fan status indicated with 'traffic light' system



## ► Frequency inverter unit FU ►►

### Speed adjustment for smoke exhaust fans

In the event of a fire, smoke extract systems keep the areas affected by the fire as well as escape and rescue routes free from smoke and prevent the spread of fire gases. The frequency inverter unit (FU) from TROX TLT is now available for multi-zone systems, where volume flow rates have to be adjusted based on where a fire has been detected.

This allows for the safe, precise and easy speed adjustment of fans in one-zone and multi-zone systems. Almost needless to mention that the frequency inverter unit has been certified to EN 12101-3.

The frequency inverter units come with dedicated firmware for smoke extract applications and are available for temperature categories F300 to F600.

They can be combined with axial and centrifugal smoke exhaust fans for indoor or outdoor installation, including installation on roofs.

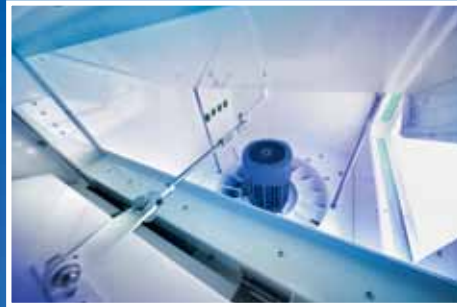
### Advantages

- Safe function since the system is tested and certified according to EN 12101-3:2015
- Easy commissioning and operation due to factory configured applications
- Correct sizing, including aerodynamic values
- Use of smallest possible fan for each application
- Efficient electrical installation and power supply
- Just one smoke exhaust fan for several smoke compartments as operating points can be adjusted using speed control
- Easy adjustment when optional certified volume flow rate measuring unit is used
- Small space requirement
- Low investment in equipment



- Tested and certified
- Easy to adjust
- Factory configured
- Allows for smallest possible fan sizes





**TROX<sup>®</sup> TECHNIK**   
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