Fire Safety

Smoke Extract Fans

Keep Your Cool: Smoke Extraction with Systemair

systemair

Smoke extract fans for every requirement

Smoke extraction of buildings requires precise planning and customised concepts.

Systemair's comprehensive range of products offers suitable solutions for every requirement: centrifugal fans and axial fans for roof, duct or wall mounting. Performance range from 500 up to 220.000 m³/h. Systemair smoke extract fans are approved for smoke extraction in case of fire as well as for daily ventilation. Comprehensive accessories complete the range.
Systemair smoke extract fans include the following temperature classes:

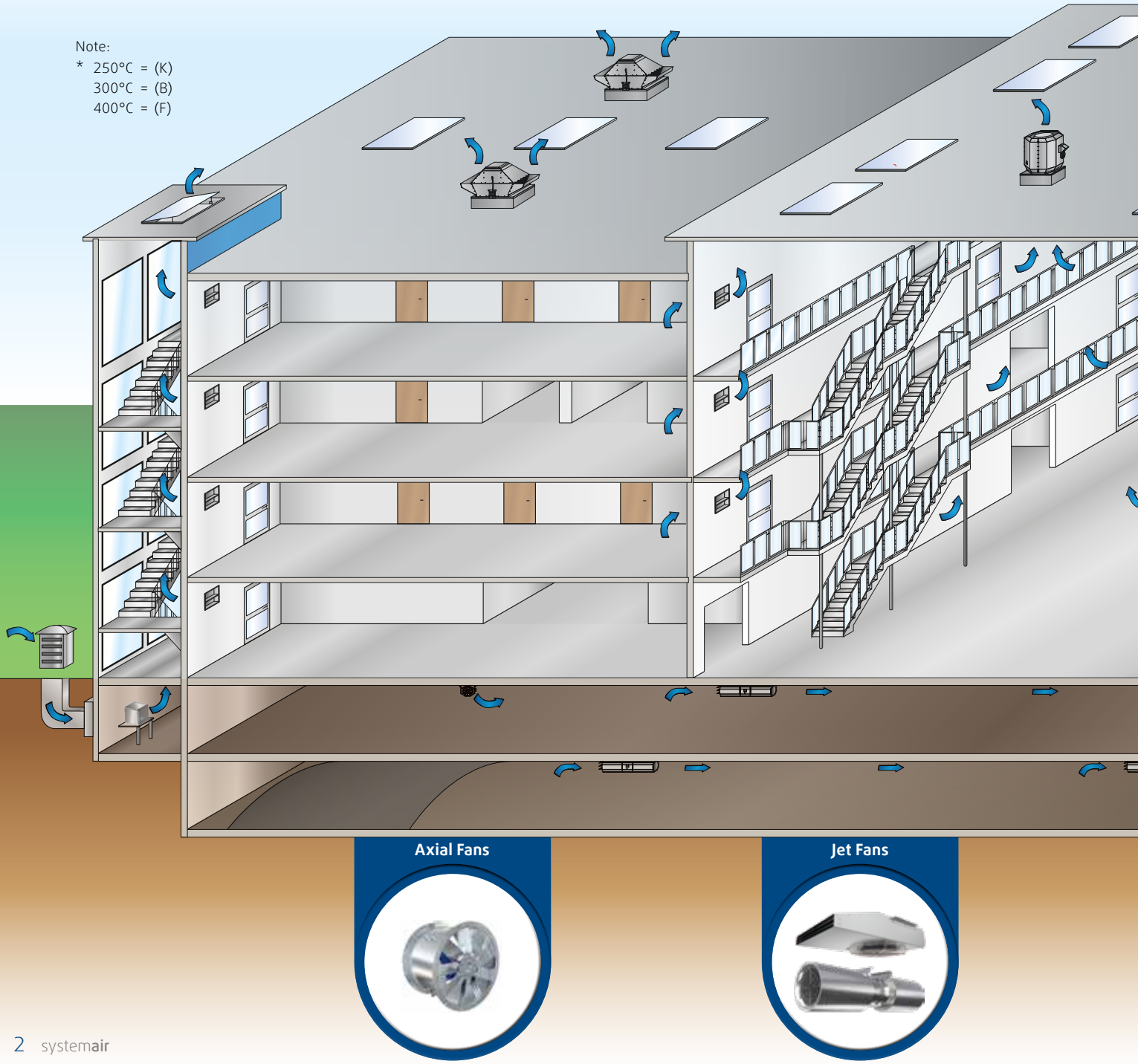
F600 – 600 °C/120 min.
F400 – 400 °C/120 min. *
F300 – 300 °C/120 min. *
F250 – 250 °C/120 min. *

Typical areas of application include shopping centres, airports, industrial buildings, cinemas, theatres or similar buildings. Systemair smoke extract fans are also used during process exhaust air with high temperatures, for parking garages and tunnel ventilation.

Tested to EN 12101-3

Systemair smoke extract fans have been tested by Technical University of Munich, LGAI Barcelona or BSRIA Brachnell to ensure that it complies with the European product and testing standard EN 12101-3. The

Note:
* 250°C = (K)
300°C = (B)
400°C = (F)



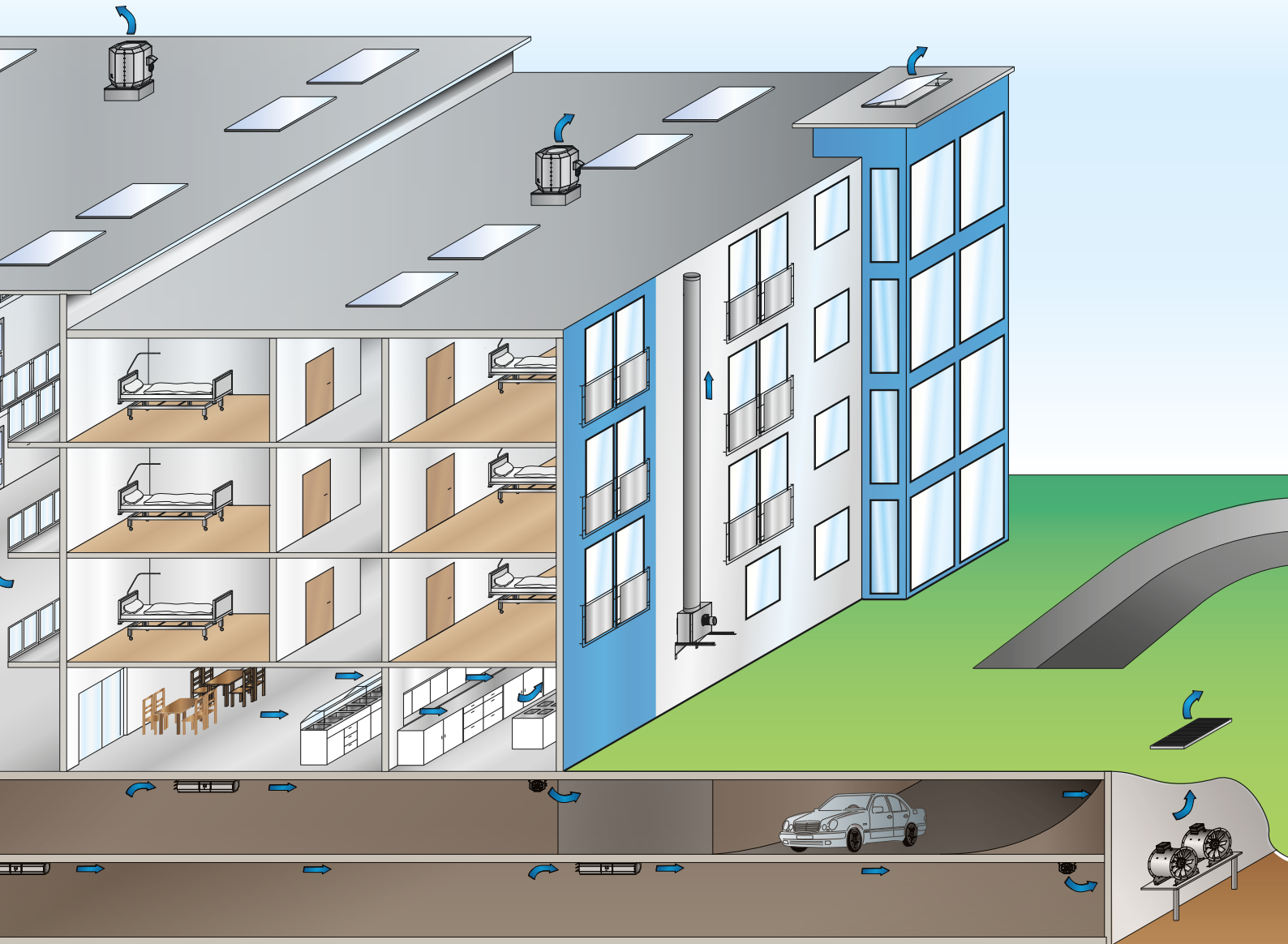
complete range carries the CE marking in accordance with EN 12101-3:2002-06; continued compliance is monitored by TÜV Süd.
The EU Declaration of Conformity is available 'for you to download at www.systemair.de

Mechanical smoke extraction

During a fire, smoke and fire gases spread through the entire building. It is therefore essential that buildings are constructed to prevent the expansion of smoke and fire in case of fire. Evacuation routes as well as firefighting routes for the fire-services have to be kept clear of smoke. Mechanical exhaust systems reduce the risk factors in case of fire. They extract the smoke and heat from the building. In comparison with natural smoke extraction units, they work independently of external conditions and assure the full performance immediately. Mechanical smoke extraction units are especially indispensable to the following application areas:

- High ceiling rooms without windows
- Subterranean rooms and passages
- Buildings which are constantly exposed to wind
- Huge rooms with high fire load
- Rooms with sprinkler systems

Today, mechanical smoke and heat extraction systems are essential for fire prevention measures.



Wall and Duct Fans

Roof Fans

Smoke Extract Centrifugal Fans

Duct Fan MUB/F

F400 - 400 °C/120 min.

- Versatile installation and assembly variants
  - » Installation either inside or outside the fire zone without additional insulation
  - » Can be installed vertical or horizontal
  - » Suitable for indoor or outdoor installation
- Choice of exhaust direction, it can be modified on site
- Backward curved impellers, manufactured from galvanized steel
- The casing consists of a frame, manufactured from profiled steel, 4 double skin panels from galvanized steel and 20 mm mineral wool insulation inside
- There is a choice of single-speed or two-speed motors
- A circular connection spigot is pre-installed as standard
- Wide range of accessories
- Air volume up to 13.770 m^3/h

Wall Fan KBR/F

F400 - 400 °C/120 min.

- Temperature of transported air up to 200 °C in continuous operation
- An inspection door facilitates maintenance and cleaning work
- Electronically controllable
- Backward curved impellers; made of galvanized steel sheet (except 355DZ and DV – steel blades, RAL 9005 coated)
- Galvanised sheet steel housing, with 50 mm stone woll, sound-proofed and heat-insulated
- IEC standard motor, ISO classF, one- or two-stage
- For installation outside the fire zones
- Wide range of accessories
- Air volume up to 7.100 m^3/h

Roof Fan DVG-V/DVG-H/DVG EC

F400 - 400 °C/120 min.

DVG-V

DVG-H

- Temperature of transported air up to 120 °C in continuous operation
- Backward curved impellers; made of galvanized steel sheet
- Seawater resistant aluminium casing, base plate and inlet nozzle from galvanized steel sheet
- Encapsulated, insulated motor, placed outside air flow, ISO class F, enclosure class IP54
- Wide range of accessories
- Air volume up to 17.700 m^3/h
- DVG EC with high efficient speed controllable motor

Smoke Extract Centrifugal Fans

Roof Fan DVV

F400 - 400 °C/120 min.
F600 - 600 °C/120 min.

- Temperature of transported air up to 120 °C in continuous operation
- Backward curved impellers, F400 made of galvanized steel sheet, F600 made of stainless steel
- Seawater resistant aluminium casing, base plate and inlet nozzle from galvanized steel sheet
- Encapsulated, insulated motor, placed outside the air flow, ISO class F, enclosure class IP54
- Motor cooling via fresh air duct
- Installation above heated rooms, also applicable above unheated rooms with the use of FSL flaps (accessories)
- Wide range of accessories
- Air volume up to 54.800 m^3/h

Smoke Extract Axial Fans

Roof Fan DVAX

F400 - 400 °C/120 Min.

DVAX-BPF

DVAX-BPN

- DVAX-BPF – version with integrated base plate and fl ange connection
- DVAX-BPN – version with integrated base plate and nozzle on the intake side
- Casing made of hot-dip galvanized steel
- FU-controllable, IE2 single speed high efficiency motor inside, ISO class H, enclosure class IP55
- Aerodynamically shaped blades made of highly resistant cast aluminium alloy for optimal efficiency.
- PTC thermal protection serial built-in motor
- Service switch included as standard
- Vertical exhaust
- Connection according to Eurovent
- Wide range of accessories
- Air volume up to 73.900 m^3/h

Smoke Extract Axial Fans

AXC...(B)

F250 - 250 °C/120 min.
F300 - 300 °C/120 min.

- Fan size from 315 to 1.600 mm
- Casing made of hot-dip galvanized steel
- Aerofoil impeller with adjustable pitch angle for maximum efficiency
- Terminal box in IP65 mounted at the outside of the casing for easy wiring
- Motors IP54, insulation class H, in accordance with EN 60034-5/IEC 85
- Wide range of accessories
- Air volume up to 212.000 m^3/h

AXC...(B)-G

F300 - 300 °C/120 Min.

- Fan size from 315 to 1.600 mm
- Casing made of hot-dip galvanized steel
- Aerofoil impeller with adjustable pitch angle for maximum efficiency
- Terminal box in IP65 mounted at the outside of the casing for easy wiring
- Motors IP54, insulation class H, in accordance with EN 60034-5/IEC 85
- Two fans in series for higher pressure
- Wide range of accessories
- Air volume up to 212.000 m^3/h

Smoke Extract Axial Fans

AXC...(F)

F400 - 400 °C/120 Min.

- Fan size from 315 to 1.600 mm
- Casing made of hot-dip galvanized steel
- Aerofoil impeller with adjustable pitch angle for maximum efficiency
- Terminal box in IP65 mounted at the outside of the casing for easy wiring
- Motors IP54, insulation class H, in accordance with EN 60034-5/IEC 85
- Wide range of accessories
- Air volume up to 212.000 m^3/h

AXC...(F)-G

F400 - 400 °C/120 Min.

- Fan size from 315 to 1.600 mm
- Casing made of hot-dip galvanized steel
- Aerofoil impeller with adjustable pitch angle for maximum efficiency
- Terminal box in IP65 mounted at the outside of the casing for easy wiring
- Motors IP54, insulation class H, in accordance with EN 60034-5/IEC 85
- Two fans in series for higher pressure
- Wide range of accessories
- Air volume up to 212.000 m^3/h

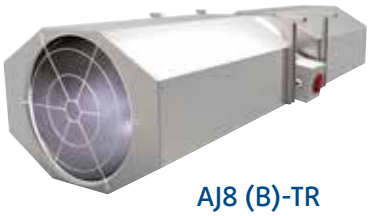
Smoke Extract Jet Fans

Jet Fans AJR(B)-TR / AJ8(B)-TR

F300 - 300 °C/120 min.

- Fan size from 315 to 400 mm
- Aerofoil impeller with adjustable pitch angle for maximum efficiency
- Casing manufactured from galvanized sheet steel, completely sound insulated
- Motors IP54, insulation class H (smoke extract), Motors IP55, insulation class F (CO-exhaust), according to EN 60045-5/IEC 85
- Terminal box for easy access at the outer fan casing, min. IP66
- Fully reversible blade settings available on request
- Removable fan module also after installation for easy maintenance
- Two design versions: circular AJR-TR and octagonal AJ8
- Air volume up to 9.440 m^3/h

AJR(B)-TR



AJ8 (B)-TR

Tunnel Jet Fans AJ...(K) / AJ...(B) / AJ...(F)

AJ...(K) = F250 - 250 °C/120 min.
AJ...(B) = F300 - 300 °C/120 min.
AJ...(F) = F400 - 400 °C/120 min.

- Fan size from 500 to 1.600 mm
- Casing manufactured from galvanized or hot dip galvanized steel sheet
- Aerofoil impeller with adjustable pitch angle for maximum efficiency
- Impeller for one rotation direction or truly reversible
- Terminal box mounted at the outside of the casing, minimum IP65
- Standard IEC motors according to IEC 34, smoke extract motors with different temperature classes for smoke displacement
- Motors with frequency 50 Hz and 60 Hz available
- Permanently lubricated ball bearings, optional relubrication device

AJ

Induction Fan IV...(B) / IV...(F)

IV...(B) = F300 - 300 °C/120 min.
IV...(F) = F400 - 400 °C/120 min.

- Compact casing, ideal for rooms with low ceilings
- Appealing design
- Thrust performance 50 N and 85 N
- Casing manufactured from galvanized steel sheet
- IEC standard motors according to IEC 34, smoke extraction motors of various temperature classes for smoke displacement possible
- Exhaust direction can be variably modified
- Approved inspection switch optional
- Air volume up to 9.950 m^3/h

Special Applications

Axial fan in sound insulated housing

AXC-Box

- Medium-pressure axial fan with aluminum impeller
- To be used one or two-speed IEC standard motors of protection IP 55, insulation class F, conforming to EN 60034-5/IEC 85
- High temperature motor, protection class IP54/55, insulation class H, for 250° -, 300° - or 400 °C/120 min., on request
- Fan unit with vibration-dampers, casing with removable double-layered panels from galvanized sheet steel, insulated with a 20 mm thick acoustic and thermal insulation made of combustible mineral wool
- Casing frame including corners consisting of aluminium, access to the fan through service door possible (operating side can be selected)
- Standard version for horizontal installation, design for vertical installation on request
- Weather protection roof available for outdoor installation

Damping values

Insertion loss DIN EN 1886	HZ	125	250	500	1000	2000	4000	8000
Systemair Box 20 mm	dB	12	14	18	27	22	25	33
Systemair Box 50 mm on request								

MRH roof hatch for smoke and heat extraction

MRH

- Vertical exhaust
- Snow load SL 1000 (EN 12101-3), wind suction load WL 1500 (EN 12101-2)
- Fan size from 710 to 1.120 mm
- The casing is made as a double metal layer with mineral wool insulation. The hatch casing is made of pre-galvanised steel while the hatch cover of AlMg3
- Insulation thickness: walls 120 mm (k =0,29 W/m2K), cover 150 mm
- Certified as accessory of smoke and heat extract axial fans
- 24VDC electrically operated spindle actuator for cover opening
- Indication for opened/closed cover position (floating limit switches)
- Installation on flat or inclined roof - adjustable side bars to roof pitch (possibility to adjust depends on the height position of side bar - instructions)
- Installation on flat surface (e.g. concrete) or through the roof
- Robust structure
- Sucking side connection acc. Eurovent 1/2
- Exhaust protective grid is included

Systemair around the globe

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Distribution Centers

50

Countries with Sales Subsidiaries

Always close to you!

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