MRA-W

Mechanical Smoke and Heat Exhaust Ventilation Systems

Wall

Mechanical smoke and heat extraction systems with wall-mounted fans (MRA-W) provide targeted removal of smoke and heat through the building's façade. They offer a compact and powerful solution, especially for buildings with limited roof space or specific structural requirements. Thanks to their space-saving wall installation, MRA-W systems enable efficient smoke extraction and make a significant contribution to the safety of people and property.

Typical Applications

MRA-W systems are used in industrial and commercial buildings, underground car parks, logistics centers, and public facilities such as shopping malls, high-rise buildings, or event venues. They are particularly suitable for buildings where roof installation is not possible or not desired. Wall integration allows for targeted smoke extraction while also enabling the systems to contribute to daily ventilation.

Standards-compliant systems:
Developed in accordance with EN 12101-3 and classified as a smoke dilution system in line with ÖNORM H6029.

CE CERTIFIED
EN 12101-3

Compact and powerful wall-mounted fans:
Ensure efficient smoke extraction even in buildings with low ceiling heights or limited roof space.

High temperature resistance:
Reliable operation in temperature classes ranging from 200°C to 600°C.

Flexible control options:
Can be combined with air supply systems, fire and smoke curtains for optimized airflow management.

Energy-efficient dual use:
In addition to smoke extraction, MRA-W systems can also be used for daily ventilation.

Regulatory-compliant planning:
Project planning is carried out in coordination with the relevant authorities to ensure legal compliance.

Easy integration:
Wall-mounted installation allows for flexible placement without major structural modifications.

Cost-efficient complete solution:
Includes planning, implementation, and installation – with ventilation ducts and electrical systems as part of a full-service package.

Perfect complement:
Can be combined with roof-mounted systems and smoke curtains for a comprehensive smoke extraction concept.Entrauchungskonzept.

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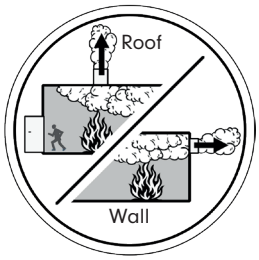
Custom Design:
Mechanical smoke extraction systems are available in a wide range of configurations and cover a broad spectrum of applications.
Each system is individually designed and tailored to the specific area of use, regulatory requirements, structural conditions, and performance specifications.

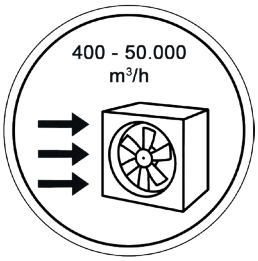


Temperature Classes:

Available for operating temperatures ranging from 200 °C to 600 °C. Smoke extraction systems must maintain full functionality at a defined temperature for a specified duration. This is classified according to temperature classes defined in EN 12101-3, specific to each device. For example:
- F300 / 120 = Max. 300°C for at least 120 minutes
- F400 / 120 = Max. 400°C for at least 120 minutes
- F600 / 120 = Max. 600°C for at least 120 minutes

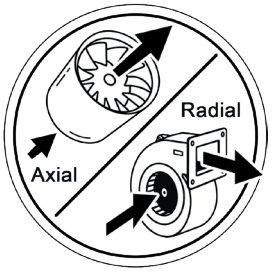
Air Volume:

Available for air volumes ranging from 400 to 50,000 m³/h.
The performance of a smoke extraction system is defined by its air handling capacity. Key factors determining the required air volume include:
- Type of building (e.g., industrial, office, underground garage)
- Room volume
- Required smoke extraction rate
- Temperature class (e.g., F400)



Installation Location:

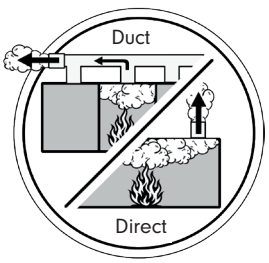
Roof or wall.
The installation location of mechanical smoke extractors is generally determined by the building's structural conditions and its surroundings.
Additional key factors include noise emissions, exposure to weather conditions, and the required performance level of the system.



Fan Design:

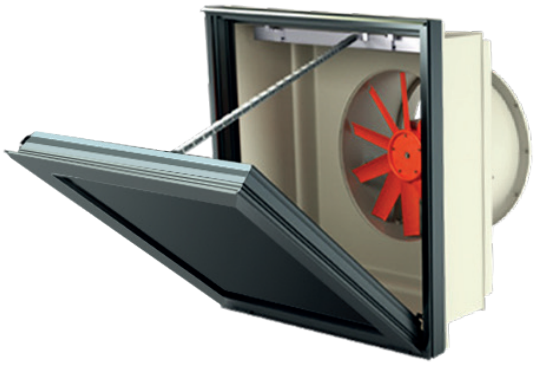
Axial Fans: Air intake and discharge are aligned in the same direction. These fans are available in high-performance versions but allow only a straight airflow without additional ducting.

Centrifugal (Radial) Fans: Air intake and discharge are offset by 90°. They allow redirection of the airflow without additional components but are limited in their maximum performance.



Air Ducting Configuration:
When direct exhaust is not feasible due to structural constraints or cost considerations, smoke can be extracted via ductwork.
Examples include:
- Centralized extraction from multiple rooms or floors
- A centralized system can be more cost-effective
- Regulations specifying the exhaust outlet location
- Structural limitations that prevent a heavy extraction unit

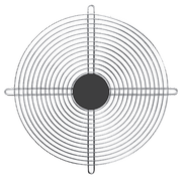
Accessories:
The core component of any mechanical smoke extraction system is the fan, whose design determines the overall performance of the system.



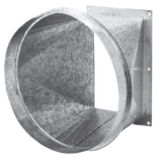
With the appropriate accessories, the system can be adapted to the specific requirements of each project.

These accessories include:

Protective grilles

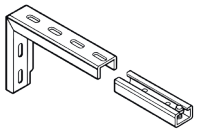



Nozzles / Flanges

Bases / Filters / Ducts


Electrical components / Mounting materials



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