

A photograph of a movie theater interior. The seating consists of red, upholstered theater chairs arranged in rows, facing a dark stage area. Stage lights are visible, creating bright rays of light against the dark walls.

# HVAC solutions for leisure, entertainment & sport buildings

Maximum indoor air quality – Tailored ventilation systems

# Your strong partner for fresh air and peak performance

In sports and event halls, indoor air quality is more than a technical necessity – it is a key factor for comfort, health, and safety. It affects the well-being of visitors and performers and is an integral part of the overall safety and comfort concept. The challenges for ventilation technology are diverse.

Sports and event halls feature vast floor areas and very high ceilings. These structural conditions make it difficult to distribute fresh air evenly and require powerful systems capable of efficiently moving large volumes of air. At the same time, especially in existing buildings, finding a suitable installation location can be a challenge.

During sports events, concerts, or trade fairs, large numbers of people spend extended periods of time in the halls. The result: rapid accumulation of CO<sub>2</sub> and humidity, which impairs air quality and increases the risk of infections. Therefore, reducing aerosols and complying with hygiene concepts are now indispensable components of

safety strategies – and must be firmly integrated into planning.

Large crowds generate heat, which must be dissipated as energy-efficiently as possible. At the same time, temperature and humidity must be kept within a comfort range – or at levels that protect the building structure from condensation-related damage.

Standards such as ÖNORM B 2608:2014 and DIN EN 16789 define clear requirements for air exchange, temperature, and humidity. WOLF ventilation units reliably meet these standards – and are suitable for both new construction and the renovation or retrofitting of existing systems.



# Efficient and flexibly adaptable systems for a healthy indoor climate

A healthy indoor climate requires a holistic, project-specific approach that ensures both comfort and protection for visitors and performers, while flexibly adapting to usage and occupancy. This includes draft-free air distribution and a pleasant temperature level. Intelligent controls enable demand-driven climate management, optimally regulating temperature and humidity. Depending on the event, room volume, number of people, duration of stay, and air transfer from adjacent rooms can be adjusted.

High-quality air filtration systems with long service lives ensure hygienically fresh air. Based on continuously recorded CO<sub>2</sub> concentrations in real time, WOLF ventilation units adjust the air exchange rate to current needs – naturally without any audible noise. Thanks to seamless integration into building management systems, ventilation technology

can be centrally monitored and controlled. In terms of dimensions, geometry, performance, and equipment, WOLF offers not only standard models but also custom-designed solutions – for indoor or outdoor installation, optionally in any desired RAL color. WOLF ventilation units are ideally suited for new buildings, renovations, or retrofits.





## Ice sports hall

In an ice sports hall, two climate zones meet: the target air temperature above the ice is 8 °C, while a comfortable 22 °C is desired in the spectator areas. Climate control in ice stadiums is particularly demanding, as it also affects ice quality. Effective dehumidification of the air above the ice surface prevents fog formation in the hall and frost buildup on the ice.

WOLF ventilation systems keep cold air in the lower part of the hall and direct warm air along the ceiling. This prevents condensation from forming on the inner roof surface – effectively eliminating the cause of mold and structural damage.



## Event and exhibition Hall

When it comes to climate control in event and exhibition halls, high capacity and flexible, demand-driven regulation are key. These large halls are used for rock concerts, sporting events, seated assemblies or trade fairs – each with widely varying visitor numbers, activity levels and durations of stay.

A distinction is generally made between basic ventilation and operation based on different hall occupancy scenarios. In all cases, large volumes of air must be moved flexibly and as needed, and precisely controlled via sensors (e.g. CO<sub>2</sub>, VOCs, temperature). Heating and cooling coils or heat pump technology enable comfortable temperature control. This ensures a pleasant indoor climate while maintaining energy efficiency.

Central ventilation units offer advantages over decentralised solutions by providing excellent and hygienic air quality along with high heat recovery. State-of-the-art fan technology further contributes to low operating costs.



## Sports hall

WOLF ventilation units ensure fresh air and consistent comfort in sports halls all year round, as fresh air can be heated or cooled as needed. A sports hall is either supplied by a central ventilation unit or by several units placed at strategically important locations. The goal is always to ensure homogeneous air distribution to avoid drafts and temperature stratification. Presence detectors, CO<sub>2</sub> and/or VOC sensors provide the data basis for intelligent, demand-driven control of the ventilation units. Equipped with counter-flow heat exchangers, they can recover up to 90 percent of the heat from the exhaust air and, in combination with highly efficient fan technology, significantly reduce energy costs.



## Theatre, opera house and cinema auditorium

Ventilation technology in cultural venues such as theatres, opera houses and cinemas serves multiple purposes simultaneously. It ensures comfort and hygiene in both the audience area and on stage, while also meeting fire protection requirements.

High-performance filters (class ePM1 75% or F9), UVC radiation or ionisation clean the supply air before it enters the rooms. This improves air quality hygienically and minimises the risk of infection. In addition, the ventilation units adjust the air volume flow via sensors to match the occupancy level (night operation, rehearsals or performances). Thanks to efficient fan technology and heat recovery, WOLF ventilation systems guarantee responsible and sustainable energy use, resulting in low operating costs.

# Health, comfort and futureproofing

Ventilation in sports and event halls is a complex interplay of technology, safety and comfort. Those who invest early in modern and adaptive ventilation units from WOLF – while integrating monitoring and infection protection – not only create a healthy indoor climate but also lay the foundation for economical and safe operation of sports and event venues, both now and in the future.

/J1

## Health and safety

Reduction of infection risks, mould formation and pollutant exposure.

/J2

## Energy efficiency

Modern systems with heat recovery, state-of-the-art fans and demand-driven control reduce operating costs even at high performance levels – and lower the carbon footprint.

/J3

## Comfort and performance

Pleasant temperatures and humidity levels promote well-being and productivity.

/J4

## Regulatory compliance

Meeting legal requirements and hygiene standards ensures event approval.

/J5

## Flexibility and future proofing

WOLF ventilation units quickly adapt to different usage scenarios and safety requirements and can be individually planned in terms of geometry and performance.



**WOLF is one of the leading international suppliers of innovative solutions for indoor climate control. Here's what matters most to our customers:**



#### **German know-how**

We develop our products at our headquarters in Mainburg, Bavaria. We manufacture them with the highest precision and vertical integration. WOLF Campus training programme offers you in-depth expert knowledge on professional installation, maintenance, etc. with seminars and in-house training courses.



#### **Partnership at eye level**

A nationwide and international network of personal contacts at our locations ensures fast and uncomplicated support. The WOLF Service Team provides you with expert advice and support during commissioning and maintenance.

A network of wholesale partners facilitates the procurement of spare parts.



#### **Simply powerful solutions**

WOLF ventilation systems combine efficiency, durability and ease of operation.

The wide-ranging air handling product portfolio is complemented by digital services that save time, money and CO<sub>2</sub>.



#### **For an intact environment and diversity**

We consciously prioritise durability and sustainability in our design and choice of materials. At WOLF, different generations and nations work hand in hand and benefit from each other.

