

# Company Profile 4.0



*air technology*

## air technology. Know-how for tomorrow.



**Helios is a forward-looking family business and is one of Europe's leading fan manufacturers.**

The modern factory has a floor area exceeding 100 000 m<sup>2</sup> of which 50 000 m<sup>2</sup> is production area. The plant is equipped with the latest production machinery resulting in high quality products. Helios has over 6 decades of designing and manufacturing fans and components for the ventilation industry.

In addition to about 25 sales offices in Germany, Helios operates with agencies and subsidiaries in more than 20 countries in Europe and worldwide.

The philosophy is the same everywhere: Competent consultation, training and problem solution for the customer, support when planning, a reliable safe delivery of continuous high quality products manufactured in Villingen-Schwenningen.

**The efficient logistics centre organises the order processing of Helios customers and keeping a working amount of products to be able to efficiently supply 98 % of orders from stock.**

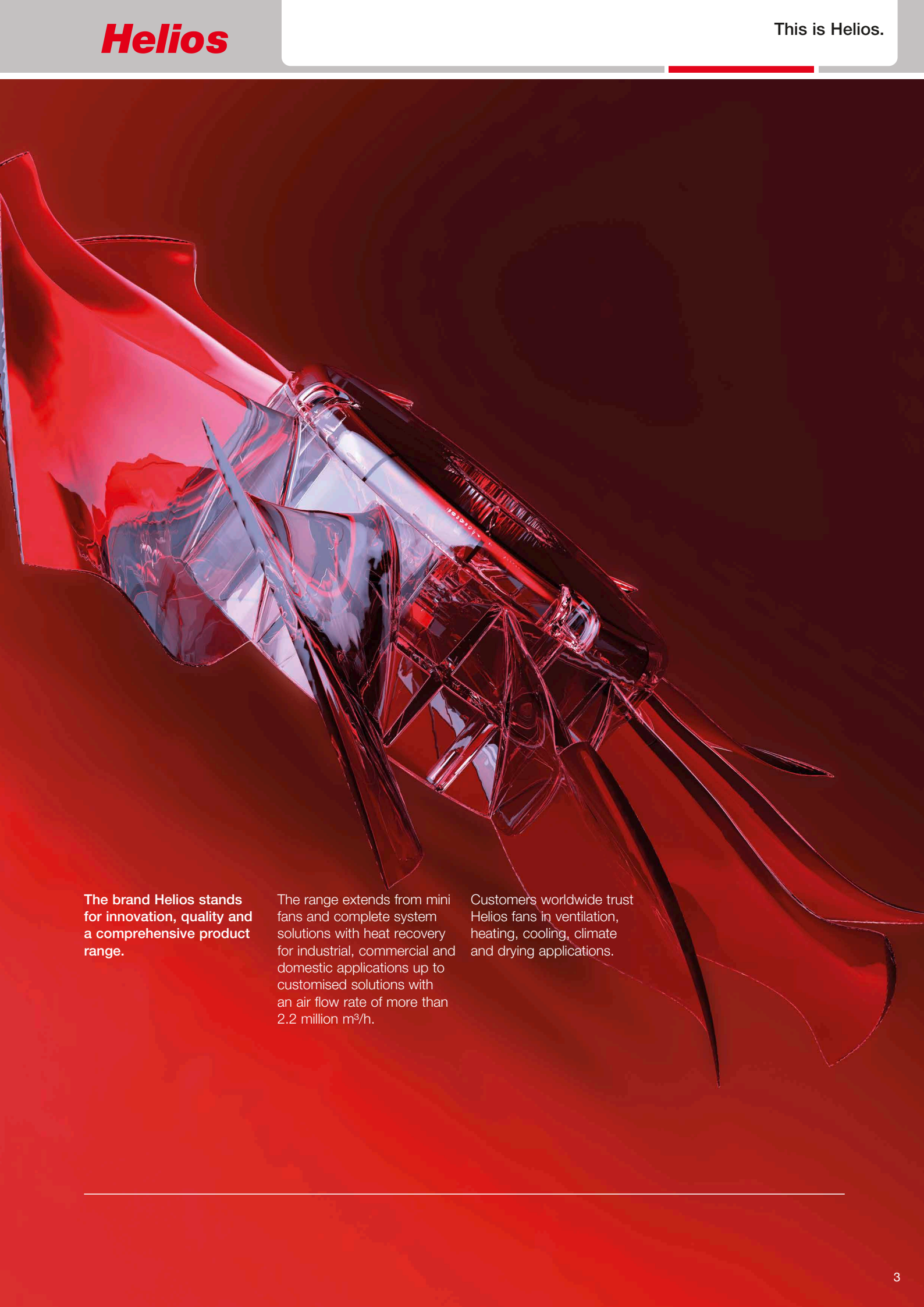
36 000 bulk containers, 12 000 euro-pallets with over 10 000 final products and 25 000 components are permanently available in stock. The automated capacity permits the consignment sale of approximately 15 000 orders per month in a one-shift operation. Additionally, 20 regional warehouses guarantee a unique delivery service within Germany.



**In the ventilation training centre "LCC" you learn all about "ventilation engineering".**

No matter whether you would like to know more about trend-setting solutions or be trained to special topics such as ventilation with heat recovery, you can find solutions with Helios.

Benefit from ventilation training in theory and practice. A pleasant ambience, modern media technology and a well equipped show-room awaits you.



The brand Helios stands for innovation, quality and a comprehensive product range.

The range extends from mini fans and complete system solutions with heat recovery for industrial, commercial and domestic applications up to customised solutions with an air flow rate of more than 2.2 million m<sup>3</sup>/h.

Customers worldwide trust Helios fans in ventilation, heating, cooling, climate and drying applications.

## Comfortable climate Helios.

Ventilation and air drive every facet of our passion. Passion that has moved us, spurred us on and fascinated us for decades. Visions that once inspired us have since been established optimally as market-leading products.

### AIR. OUR PASSION.



**Ventilation and moving air in all its aspects is our passion.**

**This passion has affected and fascinated us at Helios for over 6 decades.**

**The visions which inspired us once are now well established as market leading products.**

### PURE.



As one of the leading manufacturers of fans and ventilation systems, Helios sets pioneering landmarks over and over again. The comprehensive product range offers individual and specific solutions for each technical ventilation application.

The brand name Helios stands for integrated over-all solutions in almost all ventilation ranges. The unique extensive standard program

### TAILORED.



offers a wide, range for a variety of applications with different power characteristics. Additionally, a range of accessories precisely matched to applications are available for every fan.

This guarantees a cost effective system from a single supplier. The low-cost solution works, saves time and trouble and is available in all dimensions and capacities.





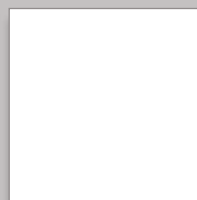
The origin of the company Helios Ventilatoren goes back to the foundation of Fernwellen Apparatebau AG in Schwenningen a.N. in 1923. The company manufactured headphones and loudspeakers with horns, as well as detector elements and had 30 employees within a short space of time.

In the early 1930s, production started on bicycle lights (dynamos, headlamps and rear lights), which were successfully marketed under the brand name "Helios" – taking its roots from the god of the sun from Greek mythology.

In 1951 the company started production of fans. In the beginning, table, ceiling and standing fans are manufactured. As early as the early 1960s, the Helios range includes axial fans in three model ranges with an impeller with a diameter of 200 to 950 mm. The following decades are shaped by successful and continuous additions to the core areas.

Small fans  
 Ø 100 – 150 mm  
 Flush mounted wall fan Ø 200, 250 mm  
 Centrifugal fan Ø 100 mm  
 Axial in-duct fans

EcogreenVent®

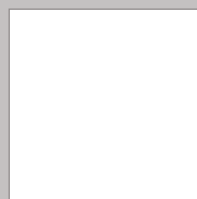


External wall fans  
 Small window fans  
 Ceiling sweep fans  
 Electric fan heaters



Controlled room ventilation systems  
 – ultraSilence® ELS with single units  
 – Central Ventilation System ZLS  
 – Central ventilation box ZEB

EcogreenVent®





KWL® ventilation systems  
 with heat recovery  
 – Wall installed unit up to 60 m³/h  
 – Compact units up to 500 m³/h  
 – Units for vertical and horizontal  
 installation up to 2600 m³/h

EcogreenVent®




KWL® Periphery  
 – Ground-to-brine/-air heat exchanger  
 – Flexible ducting system  
 – Insulated ducting system  
 – Accessories for KWL® units



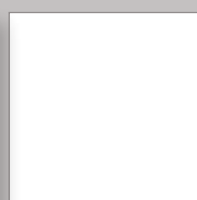
Axial high-performance fans  
 Ø 200 to 1000 mm   
 Medium-pressure axial fans AMD  
 and AMW  
 High pressure in-line mixed-flow fans  
 RADAX® VAR, Ø 225 to 630 mm 

EcogreenVent®



Centrifugal fans e.g. for commercial  
 kitchen applications for air flow  
 temperatures up to max. 120 °C  
 – GigaBox  
 – MegaBox   
 – Fresh air boxes with integrated  
 heater

EcogreenVent®

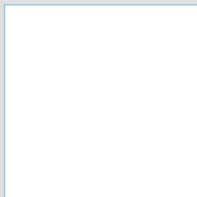






ECgreenVent®

- InlineVent® circular fans
- Mixed flow fan, Ø 100 to 315 mm
  - Explosion proof fans
  - RR, RRR and SlimVent® Ø 80 to 315 mm
  - Acoustic Line SilentBox® and SVS Ø 125 to 400 mm



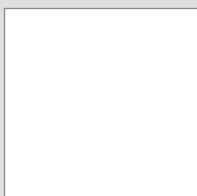
ECgreenVent®

- InlineVent® rectangular fans
- KV..., forward curved impeller
  - KR..., backward curved impeller
  - SKR..., sound insulated



Accessories for circular and rectangular fans

- Air filters
- Electric heater batteries
- Warm water heater batteries
- Attenuators



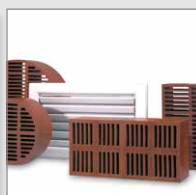
ECgreenVent®

- Roof fans in AC, EC and T120
- Centrifugal, vertical discharge
  - Centrifugal, vertical + horizontal



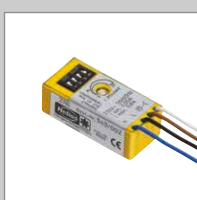
Accessories

- Shutters, grilles, duct components, wall and roof terminations
- Sound insulation element
- Air flow volume stabiliser
- Extract, supply air elements and poppet valves



Fire protection systems and shutter elements

- Fire block element, shutter
- Fire protection valves
- Fire protection damper
- Cold smoke damper
- Fire protection ventilation stone



ECgreenVent®

- Measure - Control - Monitor.
- Overrun timer, reversing switches
  - Pole and reversing switches
  - Motor full protection units
  - Electronic speed controller
  - Frequency inverters
  - Electronic control systems, temp. and humidity controller

**The Helios Standard Range Catalogue contains the standard program in all pressure- and performance ranges which is extremely large and finely graduated.**

More than 3000 types make it easy to find the right solution also for unusual requests and complex operating conditions. All relevant information – technical data, drawing, characteristic, accessories – in a compact format.

**The new heat recovery unit generation of Helios KWL®**

Since 2014 in a new look and enlarged performance range. With even better efficiencies, modular unit configuration and the revolutionary control concept Helios easyControls. With flow rates from 45 to 2600 m³/h Helios KWL® units are suitable as centralized or decentralized solutions in multi-storey buildings, for single-family- and passive houses or commercial use.

**ECgreenVent – The energy-saving ventilation for the future**



The complete EC fan range of Helios includes over 100 models in 14 series with duties from 360 up to 19630 m³/h. Equipped with energy-saving EC-drive technology the EC-box-, circular- and rectangular duct-, roof- and axial fans with speed control achieve energy savings of 40% to 70% compared to conventional AC fans.

**TGA Catalogue**

As a system provider in areas of technical building services (TGA) Helios features a complete car park ventilation program with flow rates up to 149 140 m³/h. The solutions are suitable for use at normal temperature, as well as for the smoke extraction according to the classifications F300, F400 and F600. The entire range is displayed in the TGA Catalogue.



Standard Range Catalogue – the standard program.



KWL® ventilation systems with heat recovery incl. periphery.



The energy-saving ventilation for the future – ECgreenVent.



Fans for the technical building services (TGA) and smoke extraction.



**Helios jet fans for car park ventilation.**

Helios fans come in axial and centrifugal design. The compact and lightweight aluminium construction and low noise levels combined with maximum thrusts of 6 to 75 N make them market leading jet fans.

**Jet fans IVA in axial design:**

Silent and universal in application – setting the standard in thrust and weight. Ø 315 to 400 mm, for ventilation and in temperature class F300, F400.

**Jet fan IVR in centrifugal design:**

Slimline, compact, lightweight and powerful. Perfect, even in limited space. Ø 500 and 560 mm, for ventilation and in temperature class F300.



On our homepage [www.heliosventilatoren.de](http://www.heliosventilatoren.de) you can find all required information for the design process – also available as download.

In addition, more useful software tools for the design of large axial fans, the pressure drop calculation and for the design of the mono tube ventilation system ultraSilence® ELS are available as a download. You have specification texts, wiring diagrams, assembly instructions, flyers etc. in direct access at any time.

Whether you want to select the ideal ventilation solution for your object, quickly calculate pressure drops, or a KWL® layout including ventilation concept and bill of material carried out fast and safely. With the wide range of software applications, Helios offers powerful tools to assist you during the design process.

## KWL® layout, bill of material and ventilation concept.

For a safe and simple planning of complete KWL® systems with Helios system components including bill of material. The proof of a ventilation concept in just a few steps. KWLeasyPlan can be operated as an online application directly in the browser without installation. Their project results can be stored and are ready to be printed.

## The easy way to each product ID. Even when on the move.

Whether directly via the QR-code from the device packaging on your Smartphone, or using the search entry in the online-application in your Web browser. HeliosSelect quickly leads to the desired product and provides all data of an article from the drawing, through the performance curve, technical specifications and the wiring diagram to the installation instruction at a glance.









Plan your heat recovery system

Assemble required material

Seminars and workshops

Consumer information

[www.KWLeasyPlan.de](http://www.KWLeasyPlan.de)





Product: HRFW EC 400 A

Descriptio Tech.Intl Accessor Characteris Wiring diag Dimensional Download

Download

PDF Data sheet

PDF Operation and installation manual

PDF Wiring diagram

PDF Dimensional drawing

CAD drawing



[www.HeliosSelect.de](http://www.HeliosSelect.de)



## Axial fans from Helios.

Axial fans from Helios are used worldwide for ventilation, heating, cooling and drying applications as well as in cooling towers and condensers. The core competencies of the fan manufacturer include the design and production of special solutions that are developed out of the standard product range reflecting the specific requirements of the customer.

The picture shows a mobile, hydraulically adjustable fan unit with a capacity of up to 150 000 m³/h. A downstream guide vane provides a linear flow pattern and allows the realistic simulation of different flow situations.

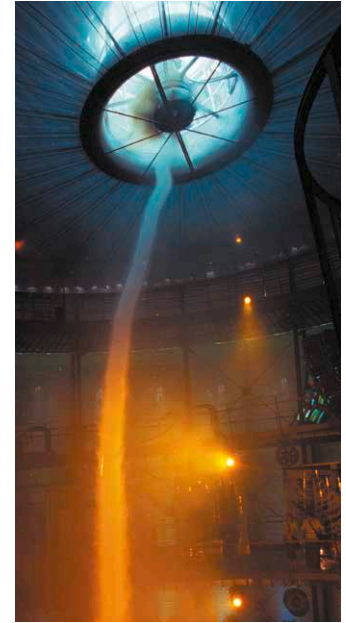




## Helios rules the air stream technology even in unusual applications.

World's largest, artificial tornado with 22 m height, was staged every hour during the EXPO 2000 in the pavilion of the dual system.

That effect has been created from one main fan with an impeller diameter of 2800 mm (secured in the rope roof construction) and 40 further axial fans, arranged in a spiral shape.



## With Helios indoor wind surfing is a real pleasure.

27 large axial fans guarantee wind speeds of approximately 7 Beaufort. Having impeller diameters of 2 m and motor powers of 45 kW each they provide an air flow volume in excess of 6 million m<sup>3</sup>/h.

The successful competition is now possible in various places throughout Europe. The fans are "mobile" and are transported in containers to the different meetings without dismantling.



## Axima, the European leader in building, engineering, process and refrigeration technologies have counted on Helios know-how for many years.

They did so for their latest project. Helios delivered 9 AVD DL 3150/6 axial fans, made from galvanised steel to ensure the operation of Axima cooling towers in two paper mills. The purpose of these fans is to cool water which is absolutely indispensable for the manufacturing of paper. An impeller diameter of 3150 mm and a motor power of 37 kW results in an air flow of 324 000 m<sup>3</sup>/h for each fan.



Because of the responsibility for the environment, it became very important to offer high technology, ecologically friendly products, that result in highly efficient and cost effective solution. Axima designed the cooling tower where the fan is positioned at the bottom of the tower, allowing easy access for cleaning and maintenance. The result is savings in time and money.

The fans in the cooling towers are designed to supply air instead of extracting. Therefore the fan is protected from the high humidity and often corrosive air associated with extraction, resulting in extended periods before cleaning and maintenance is required. Axima choose the Helios product range because of its quality, reliability and know-how at a competitive price.







ARail railway station, Frankfurt a.M.

## A futuristic welcome to Frankfurt.

With the ARail station, the Deutsche Bahn AG and the Frankfurt Main Airport AG have created the optimum connection between rail and air traffic. One of Europe's most attractive centers of transport service has been created, that is covered by a 145 m long and up to 14 m high

glass dome. To make the stay as pleasant as possible for travellers in the railway station of superlatives (690 m long, up to 65 m wide), Helios developed an air curtain in cooperation with the Institute for Industriaerodynamic at the Aachen college.

With 96 axial fans of 1000 mm and 16 of 1250 mm impeller-Ø, a total air flow volume of more than 3.5 million m<sup>3</sup>/h with an air speed of approximately 7 m/s is achieved. This air curtain prevents unpleasant "through draught" in travelling through this railway station of superlatives.



Helios fans for ARail railway station.



Mehr! Musical Theatre, Hamburg

## Smoke exhaust fans secure safety in musical and theatre location.

With the newly built Mehr! Theatre musical and event location the planning office draw a bow between outstanding architecture and the latest event technology. On 4000 m<sup>2</sup>, a musical and theatre location is integrated into the historical Hamburg Großmarkthalle – a traditional wholesale market hall. To secure the safety of audience and actors a fire protection concept was installed that includes the characteristic building features e.g. the interior height of close to 20 meters.

Twelve smoke exhaust fans are taking care that in case of emergency people inside the building can use the escape routes to get outside.

With different level of audience seating, it is important that the smoke exhaust fans guarantee smoke free layers at the ground floor as well as at the gallery on the first floor. In case of fire, six fans remove up to 390 000 m<sup>3</sup> smoke from the theatre while six axial fans positioned next to the stage provide outside air. To sustain higher temperature during fire, the smoke exhaust system is designed to last up to 300 °C for 2 hours.



Roof-mounted smoke exhaust fans.





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