

# Solutions for **Industrial Applications**

Your trusted partner in creating the ideal climate for industrial environments.

systemair



We Create Better Air.
**Every Day. Worldwide.**

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# Nothing stops us. Anywhere.

Where others struggle, our solutions keep performing. From extreme conditions to unpredictable challenges, they deliver reliable operation without compromise — because we have yet to find what can stop them.

### Designed to meet industrial demands

— Built to perform, long lasting materials
— Health & safety certified
— Minimal footprint when needed
— Scalable configurations
— Energy-efficient performance
— High system compatibility, seamless integration

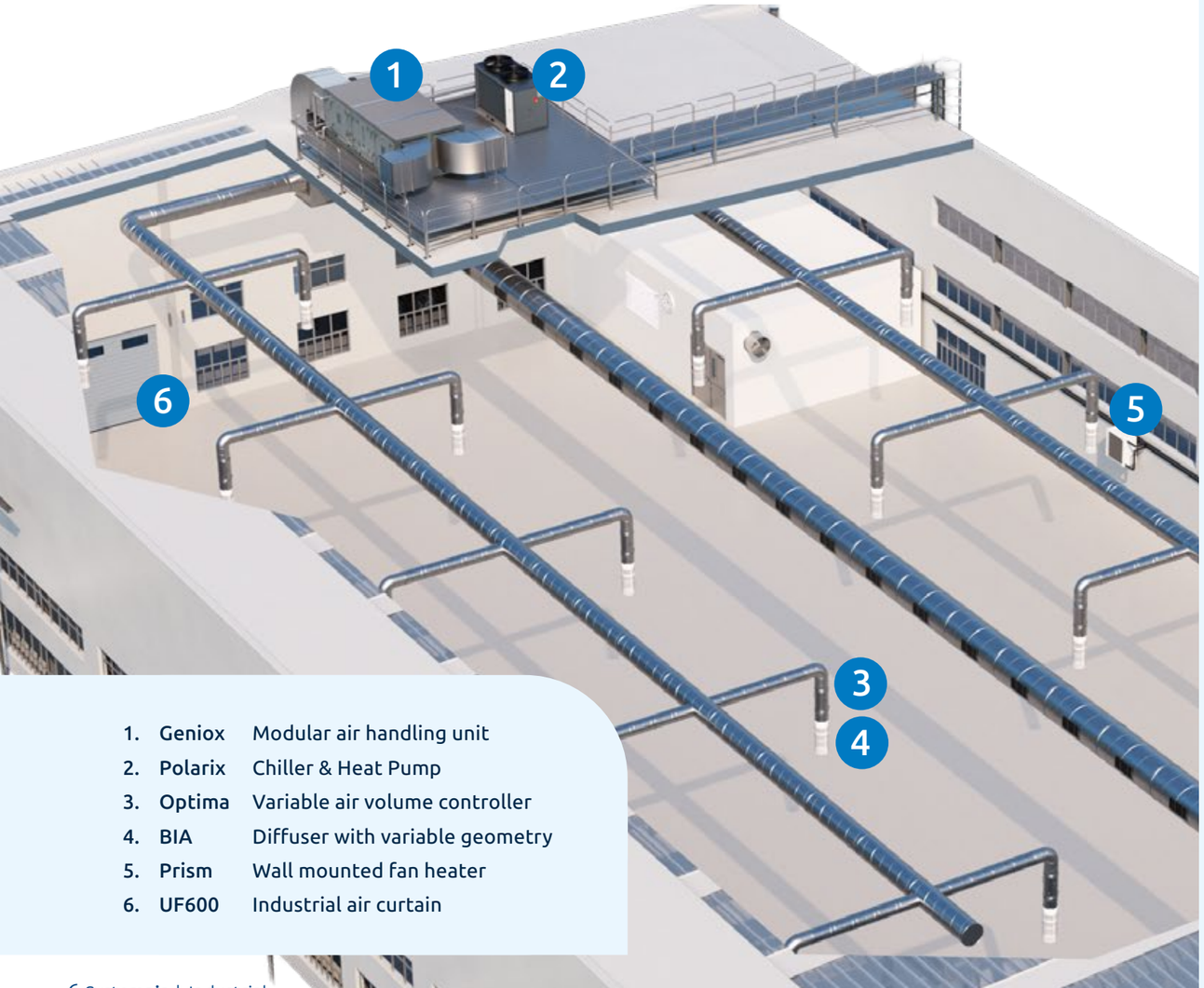
Our team of experts understands the specific requirements of large-scale heavy industry projects. They provide the consulting and technical support needed to help ensure your project is planned, implemented and operated successfully.




Backed by decades of industrial expertise, our systems help ensure higher uptime, safer working environments and lower life-cycle costs. The result is stable processes, secure operations and energy-efficient performance — exactly what demanding industrial applications require to run continuously and reliably.

# Essential solutions for every industry — from one trusted supplier

In industrial environments, climate demands do not compromise. What do all industries have in common? The need for a fully integrated HVAC ecosystem. Systemair delivers exactly that: a complete, end-to-end solution designed to ensure comfort, energy efficiency and operational continuity across demanding industrial applications.




| | | |
|---|---|---|
| 1. | **Geniox** | Modular air handling unit |
| 2. | **Polarix** | Chiller & Heat Pump |
| 3. | **Optima** | Variable air volume controller |
| 4. | **BIA** | Diffuser with variable geometry |
| 5. | **Prism** | Wall mounted fan heater |
| 6. | **UF600** | Industrial air curtain |



## 1. Air handling units + 2. Chillers & Heat pumps

The heart of every ventilation system is the air handling unit, ensuring a continuous supply of fresh air with precisely controlled parameters.

Systemair's portfolio also includes solutions specifically designed for industrial environments, featuring modular units that adapt seamlessly to the available space, whether installed indoors or outdoors. Their flexible, tailor-made design ensures reliable performance even in the most demanding conditions.

While the air handling unit ensures efficient filtration and maximum heat recovery, the integrated heat pump – available in multiple configurations and with low GWP refrigerant options – provides heating and cooling with optimised energy efficiency and reduced operating costs.

## 3+4. Air distribution products

Systemair offers a wide range of diffusers and grilles designed to meet the specific requirements of industrial applications.

In many projects, floor space is limited, requiring air distribution to operate above the occupied zone. This is where advanced diffuser design plays a key role – delivering adaptable airflow patterns that automatically adjust depending on heating or cooling mode, ensuring optimal air distribution and comfort.

Demand-controlled ventilation can be achieved through Variable Air Volume (VAV) controllers. When areas are unoccupied, the system intelligently redirects airflow to zones where it is needed most. This results in a significant reduction in energy consumption, while maintaining a high level of indoor climate quality.

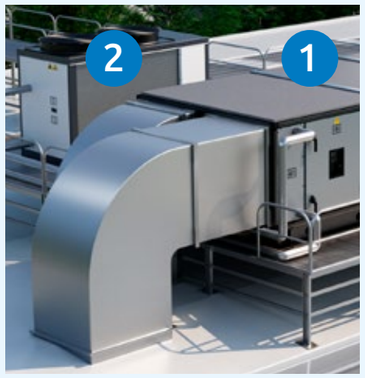
## 5. Fan heaters

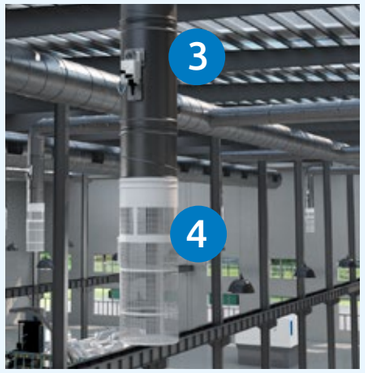
To ensure stable thermal comfort for workers and protect sensitive equipment in cold climate environments, radiant and fan heaters can be installed directly at the point of use.

Fan heaters with tailor-made designs are ideal for challenging conditions, including combustible, dusty or damp environments. Engineered for reliability and safety, they provide efficient and targeted heating exactly where it is needed most.

## 6. Air curtains

Maintaining stable indoor conditions in industrial buildings is challenging, especially when large doors are constantly opening for vehicles and personnel. This is where industrial air curtains deliver significant value. Installed at floor level or above the doorway, the units create an invisible barrier that separates indoor and outdoor environments, reducing energy losses even when doors remain open.







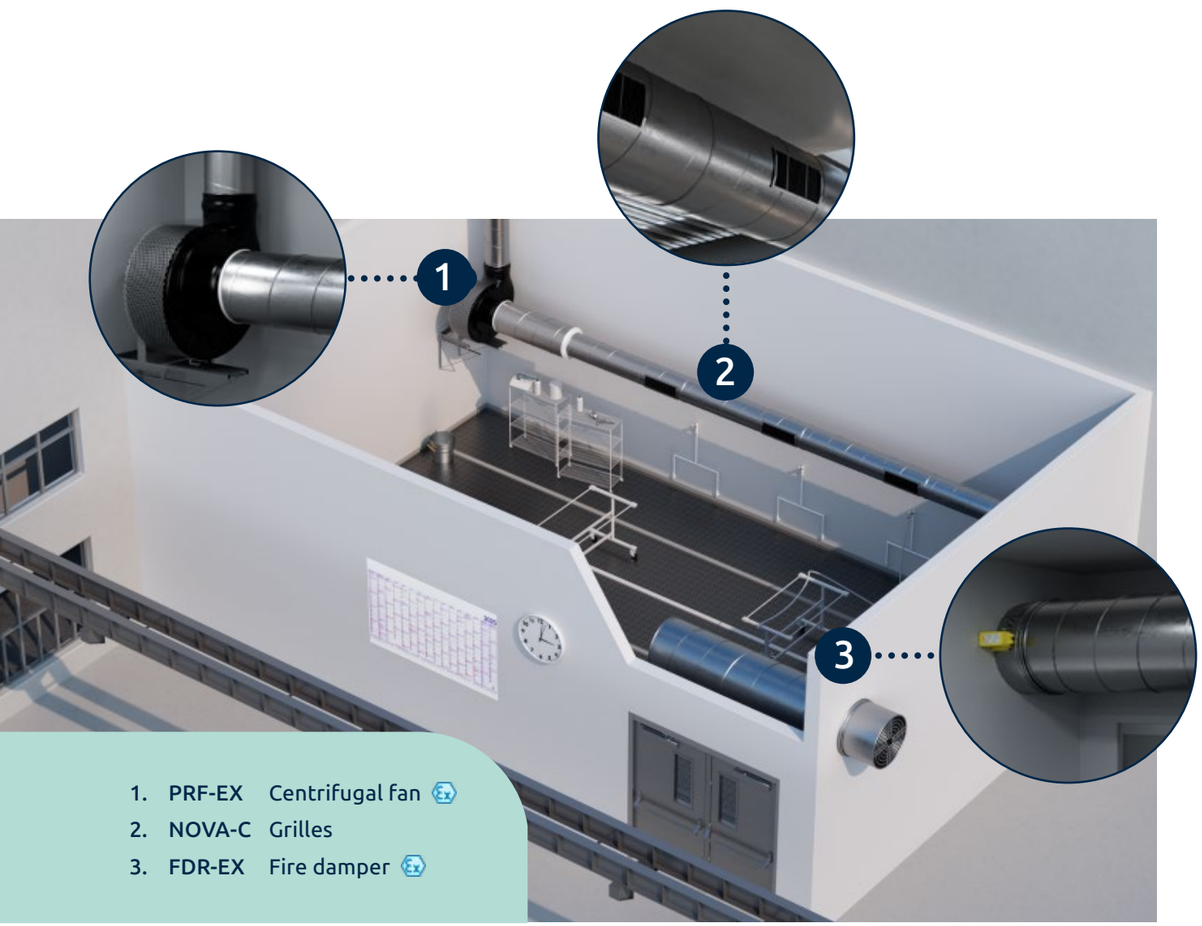


# Production facilities
## — and a wide range of options

Effective ventilation is essential across all industries, yet every application presents its own unique challenges. Production facilities may require the control of chemical emissions, high temperatures, dust, or potentially explosive atmospheres to ensure safe, reliable and energy-efficient operation.

### Agressive media

Some production facilities operate in highly corrosive and explosive environments as part of their daily activities, for example due to the presence of chemical vapours, particularly in industrial paint shops. Such demanding conditions require robust and reliable ventilation solutions. An effective extraction system is therefore essential, incorporating fans, air distribution products and fire dampers designed to withstand corrosive atmospheres and certified for use in explosive environments.




1. **PRF-EX** Centrifugal fan
2. **NOVA-C** Grilles
3. **FDR-EX** Fire damper






1. **DVV/F** Smoke and heat extract roof fans
2. **RoofLine** Air handling unit with variable geometry diffuser
3. **Pamir** Air curtain

# Warehouses
## — thinking smart

Warehouse facilities present unique challenges, from limited installation space and rapid construction schedules to fire safety requirements and frequent door openings. Systemair delivers smart solutions that ensure efficient ventilation, smoke control and a stable indoor climate all year round.

### Limited space, fire protection and high door traffic

When installation space is limited, traditional ductwork is not always the best option. Systemair solution with RoofLine air handling unit with variable geometry diffuser offer a practical and efficient alternative.

Dual-purpose fire fans combine daily ventilation with reliable smoke and heat extraction in the event of fire, enhancing building safety.

Frequent door traffic can also affect indoor climate conditions, especially in warehouse areas. Air curtains help reduce energy losses and maintain thermal comfort through invisible air barrier and intelligent, low-maintenance control.



## Large spaces

In some industrial applications, the size of the facility and variations in outdoor temperatures can present significant challenges for production processes. This was the case at the LEGO factory in Monterrey, Mexico. Covering 100,000 m², the facility requires strict control of humidity and temperature to ensure consistent manufacturing quality.

Systemair developed a ventilation solution based on high volumes of fresh air to reliably manage Monterrey's wide temperature variations, ranging from 0°C to 42°C. The project included 27 Geniox air handling units, with airflows ranging from 1,400 to 40,000 m³/h, as well as 1,000 fire dampers.










## Cleanrooms

Cleanrooms in laboratories must meet the highest hygiene standards to ensure the reliability and integrity of sensitive testing processes. Selecting the right equipment is therefore essential, particularly hygienic air handling units that guarantee indoor air quality free from viruses, bacteria and mould.

However, hygiene does not depend only on the air handling unit. Air distribution components play an equally critical role in maintaining controlled and sterile environments

For the KRKA laboratory in Slovenia, Systemair supplied CFC-A Clean Filtering Cassettes equipped with H14 HEPA filters for both supply and extract air in laboratory areas, including cleanrooms.

The cassettes were selected for their high-efficiency filtration perfor-mance, ensuring optimal air purity and compliance with stringent hygiene standards. They meet VDI 6022 requirements, achieve air-tightness class L1 in accordance with EN 1886:2007, and are suitable for cleanroom applications as defined by ISO 14644-1.

The result is a reliable solution that guarantees clean, controlled and sterile air – essential for critical laboratory environments.

# Food processing plants
## — protecting food quality

Each application presents unique challenges, and the food industry is no exception. Reliable ventilation systems are essential to maintain the highest levels of safety and hygiene, protecting products, processes and consumers alike.



### Hygienic indoor air quality

Air handling units play a critical role in the food industry, where strict control of air quality is essential to ensure product safety and compliance with hygiene standards. We provide solutions tailored to hygienic requirements to help maintain food quality, as demonstrated at the Mars Petcare facility in Valladolid, Spain. For this project, a Geniox air handling unit with an airflow of 57,000 m³/h was supplied. Geniox is hygienic by design, meaning it is built with corrosion-resistant materials that help prevent the spread of viruses, bacteria and mould, ensuring the highest standards of food safety.







### Cold storage

Many cold storage facilities in the food industry face humidity-related challenges when preserving perishable goods. Excess moisture can lead to high defrosting costs, product losses due to deterioration, and increased energy consumption caused by frequent door openings.

In such conditions, air curtains provide an effective solution by maintaining stable cold room temperatures and minimising moisture infiltration.

This approach was implemented at H.C. Andersen Bagergaarden A/S in Denmark, where several PAECS air curtains were installed. An analysis of one unit showed annual energy savings of approximately 30 MWh. In addition to lowering energy consumption, resolving humidity issues also helped significantly reduce product waste.

# Ships and offshore
## — reliability and durability everywhere

Ships and offshore platforms require highly reliable ventilation systems, where high temperatures robust solutions. Even when it comes to heating, toughness is sometimes needed.





Among other products, we also offer heaters built for harsh and challenging environments.

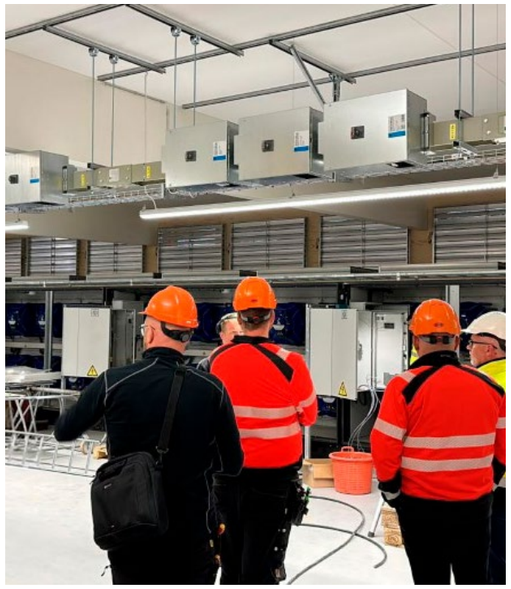
Vibration on board ships and offshore platforms often cause devices and equipment to malfunction, which requires robust products designed to withstand this. This can be solved with enhanced or flexible mounting. The choice of material is often important as well as requiring a higher protection class.

1. **Elektra-V** Electrical fan heaters

# Data centers
## — protecting product quality

The data centre industry is experiencing rapid growth, driven by increasing demand for cloud services, artificial intelligence and high-performance computing, making future-proof system design essential as rack power densities continue to rise, while efficient air cooling and ventilation play a key role in maintaining optimal operating conditions, improving energy efficiency and ensuring long-term reliability.





### Cooling solutions

Systemair's cooling solutions are designed for the evolving demands of modern data centres, delivering flexible, high-performance systems that adapt to high-density applications, space constraints and challenging climates. The result is reliable, energy-efficient and scalable cooling, supporting continuous operation and future growth.

Fire safety is a critical priority in enclosed data centre environments. Systemair delivers advanced smoke extraction solutions that effectively control and contain smoke and fire, protecting valuable infrastructure and ensuring full compliance with the latest safety standards – providing confidence and operational security.

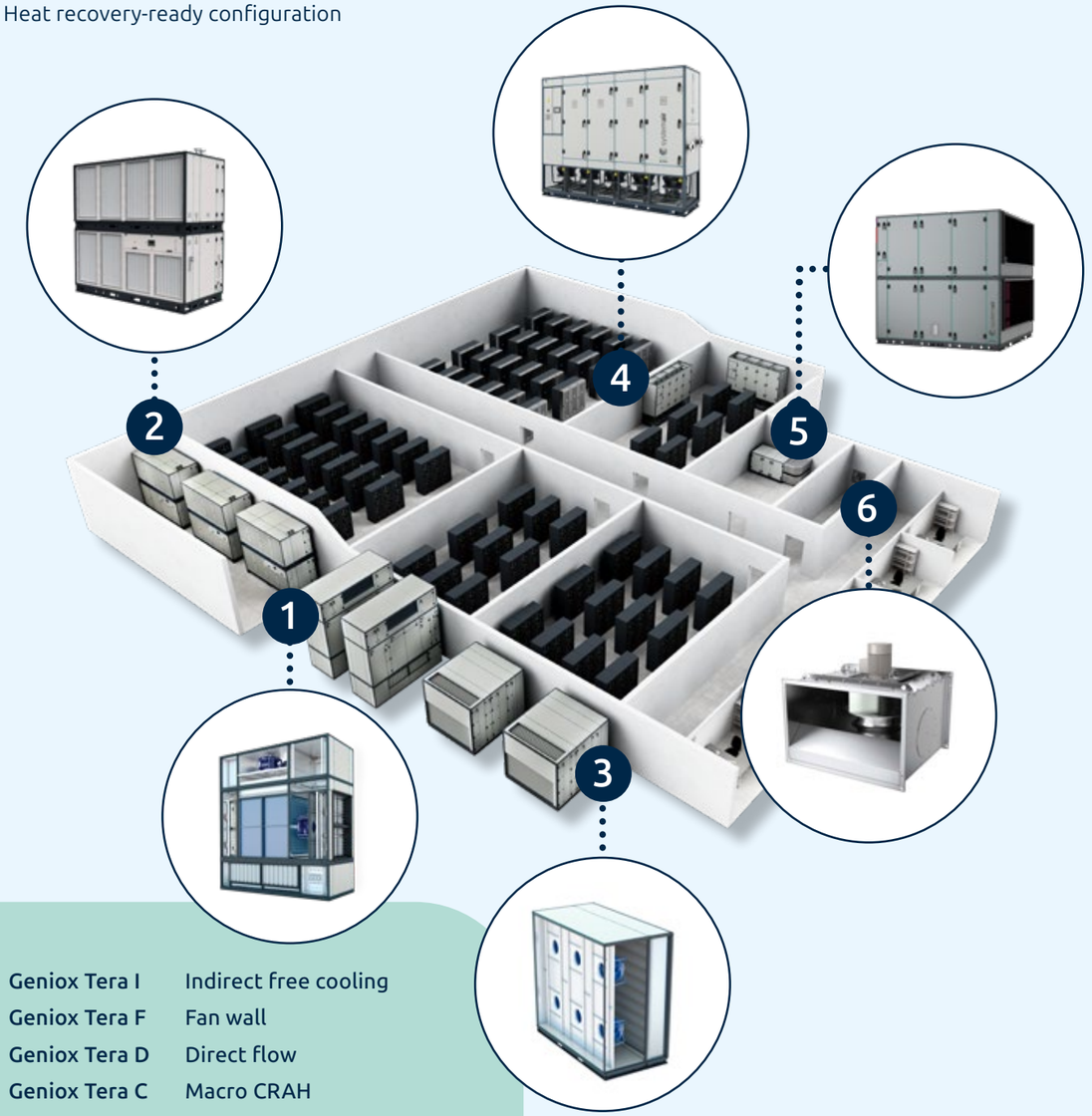


### Cooling whats it's important to you!

atNorth is one of the leading colocation data centre operators in the Nordics, recognised for its expertise in high-density computing and strong commitment to sustainability.

For its Iceland facilities, atNorth required a fully free-cooling solution with no reliance on mechanical cooling, targeting an exceptional maximum pPUE of 1.05. Systemair delivered more than 60 Geniox Tera D units, engineered to meet these demanding requirements:

— Arctic execution with 4-stage intake damper configuration
— Easy service access to maximise uptime
— Modular design for fast and efficient installation
— Heat recovery-ready configuration




| | | |
|---|---|---|
| 1. | **Geniox Tera I** | Indirect free cooling |
| 2. | **Geniox Tera F** | Fan wall |
| 3. | **Geniox Tera D** | Direct flow |
| 4. | **Geniox Tera C** | Macro CRAH |
| 5. | **Geniox** | Make-up air handling unit |
| 6. | **BKF** | Fire fan |

# Tailormade solutions
## — a real life example

Complex industrial projects demand more than standard products. They require engineering expertise, flexibility and the ability to turn specific challenges into reliable solutions. For the West Link railway project in Gothenburg, Sweden, Systemair delivered a tailored tunnel ventilation solution designed to meet demanding airflow requirements while maintaining strict noise control in a busy urban environment.

The tunneling points are surrounded by residential buildings and public facilities. Therefore, the noise level needed to be controlled, with limits for both day- and nighttime hours. The ventilation system had to be designed to accomodate the diesel emissions from the machinery and transport vehicles, as well as the fresh air requirements of the number of people working in the tunnel.

By combining deep application knowledge, high-performance fan technology and close collaboration throughout the project, Systemair demonstrated its ability to go beyond supplying products — delivering the right solution for the application, from design and calculations to installation and commissioning.



**High-performance ventilation**

Two 250 kW axial fans deliver airflow rates of up to 60 m³/s, providing the capacity required for demanding tunnel construction conditions.



**Engineered from start to finish**

From airflow calculations and fan design to installation and commissioning, Systemair delivered a solution tailored to the project's specific requirements.

**Ventilation tailored to the application**

Variable-speed control adjusts airflow to changing ventilation requirements as tunnel construction progresses.

# The perfect match

Products specifically for industrial applications
— customise your specific project

- Explosion proof
- Designed for dusty environments
- Hygienic certifications
- Heat and smoke extraction
- For continuous high-temperature operation
- Resistant to aggressive media



# Fans

## Roof fans



DVV



DVG

Our smoke and heat exhaust roof fans, including the DVV and DVG models, are engineered for reliable, high-performance operation in demanding industrial environments.

In the event of a fire, they ensure maximum safety with certified performance at temperatures up to 400°C/120 min or 600°C/120 min, depending on the model. This guarantees efficient smoke extraction when it matters most – protecting both people and property.

## Axial fans



AXCBF

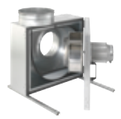
Our AXCBF axial fans are engineered to deliver reliable, high-performance operation in demanding industrial environments where high temperatures are a critical factor.

Designed for durability and continuous operation, they can withstand temperatures of up to 200°C, ensuring consistent performance even under the most challenging conditions.

## Centrifugal fans



BKF



KBR/F



AxZent

The portfolio of centrifugal fans is designed for demanding industrial environments. Depending on the model, the fans are engineered for high-temperature operation or smoke extraction applications up to 400°C for 120 minutes in fire conditions.

## Tailor made fans



AXC



AXC-H



AXC-EX

We provide tailored ventilation solutions for demanding applications. Our AXC axial fans can be customised for specific air volume, pressure, temperature, material, and coating requirements. The AXC(B) and AXC(F) ranges are certified for daily ventilation and smoke extraction, while AXC-EX fans are designed for explosive atmospheres.

## High temperatures fans



DVN



KBR



MUB/T

Systemair offers high-temperature fans engineered for reliable, continuous operation in demanding environments where elevated temperatures are a critical factor.

Depending on the model, they are designed to withstand continuous temperatures between 100°C and 120°C, ensuring stable performance, long service life and dependable operation under challenging conditions.

## Agressive media fans



DVP



PRF

Industrial environments where processes generate aggressive atmospheres require fans with enhanced robustness and durability. Continuous exposure to corrosive particles and contaminants can accelerate material degradation, making it essential to use equipment specifically engineered to withstand harsh operating conditions over the long term.

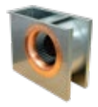
## Explosion-proof fans for agressive media



AXCBF-EX



AW-EX



DKEX

In certain industries, flammable materials require enhanced safety measures. Our explosion-proof fans are ATEX certified, ensuring safe and reliable operation in potentially explosive atmospheres.

## Agressive + Explosion-proof fans



PRF-EX

Systemair also delivers ventilation solutions for highly complex industrial environments where aggressive atmospheres and explosive substances are present.

In these demanding conditions, our systems are engineered to ensure long-term durability, reliable operation and maximum safety – providing dependable performance even in the most critical applications.



# Air handling units

## Modular air handling units



Geniox



KA

In addition to its standard commercial portfolio, Systemair offers air handling units specifically engineered for industrial applications.

Our solutions are designed to meet a wide range of project requirements – from corrosion-resistant materials and strict hygiene standards to explosion-resistant designs, advanced control functions, and the handling of high air volumes and pressures. The result is a flexible, high-performance solution tailored to even the most demanding environments.

## Roof heat recovery units with adaptable airflow distribution



Roofline

Certain industrial applications are subject to strict space constraints and require fast, straightforward installation, while still ensuring optimal air distribution in both heating and cooling modes.

To meet these demands, Systemair has developed air handling units that operate without the need for duct systems. Combining a compact footprint with high efficiency and robust construction, these solutions ensure reliable performance even in the most space-constrained environments.

## DCC air handling units



Geniox Tera F



Geniox Tera I



Geniox Tera D

Systemair's Geniox Tera units are engineered to deliver scalable, high-efficiency cooling for large data centres. Optimised for maximum space utilisation, they ensure reliable and consistent performance while reducing power consumption by up to 40% compared to conventional cooling solutions.

# Fire safety products

## Fire and smoke dampers



FDR



FDR-EX



FDR-KS

Systemair offers fire and smoke control dampers engineered for reliable performance in fire conditions.

They can operate as standalone units or as part of advanced multizone systems, with optional control modules enabling seamless integration and monitoring. Selected solutions are also suitable for use in explosive environments, ensuring safe and dependable operation in even the most demanding applications.

# Air distribution products

## Diffusers




BIA




BURE




AJD

Industrial applications often combine limited installation space with the need for high air volumes and efficient air distribution. Systemair's air distribution portfolio includes both standard and specialised diffusers for high ceilings and long throw applications, ensuring reliable performance in heating and cooling modes.

## Air volume control



OPTIMA-S-FCS



OPTIMA-R-FC-EX



TUNE-S

Precise air volume control is essential in industrial ventilation systems, ensuring accurate pressure balancing and efficient demand-controlled ventilation. Our VAV controllers are designed for a wide range of applications, including dust-laden, explosive, and hygienic environments in accordance with VDI 6022.



# Air curtains and heating

## Air curtains



Pamir



Tatra



PAECS



UF600

At external entrances and cold storage doorways, significant energy losses can occur in industrial environments. Frico's high-performance air curtains create a stable and comfortable indoor climate while effectively reducing unwanted air infiltration. They represent a smart and cost-efficient investment – particularly for large openings where energy losses can be substantial and operational efficiency is critical.

## Infra heaters



Elztrip



IRCFC



Aquaztrip

Radiant panel heaters are widely used in industrial buildings with high ceilings, where conventional heating systems can lead to significant heat stratification. Because radiant heat warms surfaces directly rather than the surrounding air, energy losses between the heater and floor level are minimised.

## Fan heaters



Elektra



Panther T



swx

In addition to standard electric and water fan heaters, Systemair offers specialised solutions for demanding environments. The SWX range of water heaters is designed for corrosive environments up to class C5-M, featuring stainless steel or epoxy-coated coils and an IP65 protection rating. Electrical heaters from the ELECTRA range are engineered for challenging applications, including areas with high humidity, flammable atmospheres, extreme temperatures or offshore conditions, ensuring reliable and safe operation.

# Air conditioning

## Chillers and heat pumps

R290 R32



Polarix NEO



Polarix EVO



Polarix GEN

Polarix heat pumps deliver flexible and energy-efficient solutions designed to meet the performance and sustainability demands of industrial applications.

Polarix NEO uses the natural refrigerant R290, offering optimised performance with reduced environmental impact. Polarix EVO delivers high efficiency within the R32 portfolio, while Polarix Gen is built on the same robust platform as EVO, providing reliable performance for standard efficie

# Market relevance
## — Europe’s leading supplier of ventilation products

Systemair is Europe’s leading supplier of ventilation products, thanks to its extensive product range and strong local and regional presence, which enables us to offer better availability and higher delivery reliability. Our products and solutions are marketed under a number of brands, of which the main ones are Systemair and Frico related to industrial applications.

systemair

The Systemair brand spans a wide range of high-quality ventilation products, including fans, air distribution products, air conditioning products and air handling units for both comfort and safety ventilation. Systemair holds a strong position as leading maker of energy-efficient ventilation products.

FRICO

Under the Frico brand, Systemair offers turnkey solutions based on products for airborne heating and we are market-leading in air curtains and airborne heating in Europe. Frico is represented in 70 countries via subsidiaries or distributors. The brand represents an accumulation of 80 years of experience in developing products that deliver a pleasant indoor climate to customers.



# For your peace of mind
## — with every project

From verified performance data to hygiene and explosion protection, Systemair offers products and solutions backed by recognised third-party certifications and specialist solutions to support your application requirements.

amca INTERNATIONAL MEMBER

### Proven, reliable performance

Selected Systemair products carry AMCA Certified Ratings, providing reliable performance representations for the characteristics covered by their certification. Periodic check testing helps ensure that manufacturers continue to report credible, comparable performance information.

Ex ATEX

### Safety for demanding environments

For potentially explosive atmospheres, Systemair offers selected ATEX-certified products. You can choose solutions according to the hazardous area classification, substances present and specified operating conditions. Certifications apply to specified products and con-figurations. Speak to our team about energy-efficient product selection, hygiene requirements, ATEX-certified options and environmental documentation.

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

### Certified confidence for specifiers

When selecting products, the Eurovent Certified Performance mark provides peace of mind from end-users to consultants.. Rigorous, frequent third-party laboratory tests, along with factory and selection software audits, ensure products perform as claimed in catalogues and datasheets.

EUROVENT CERTIFIED PERFORMANCE AIR HANDLING UNITS www.eurovent-certification.com HYGIENIC

Eurovent HAHU brings recognised hygiene requirements, including those from VDI 6022-1, DIN 1946-4 and HTM 03-01, together in a single certification programme with an easy-to-understand three-star rating system.

VDI 6022

VDI 6022-certified Systemair products are designed to meet the highest hygiene standards, helping ensure clean, healthy indoor air, minimizing contamination risks, and supporting safe, reliable HVAC operation throughout the building lifecycle.

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