

-fabricAir

# AIR DISPERSION IN SPORTS FACILITIES

— How to create the ideal HVAC solution for athletes, spectators and facility managers

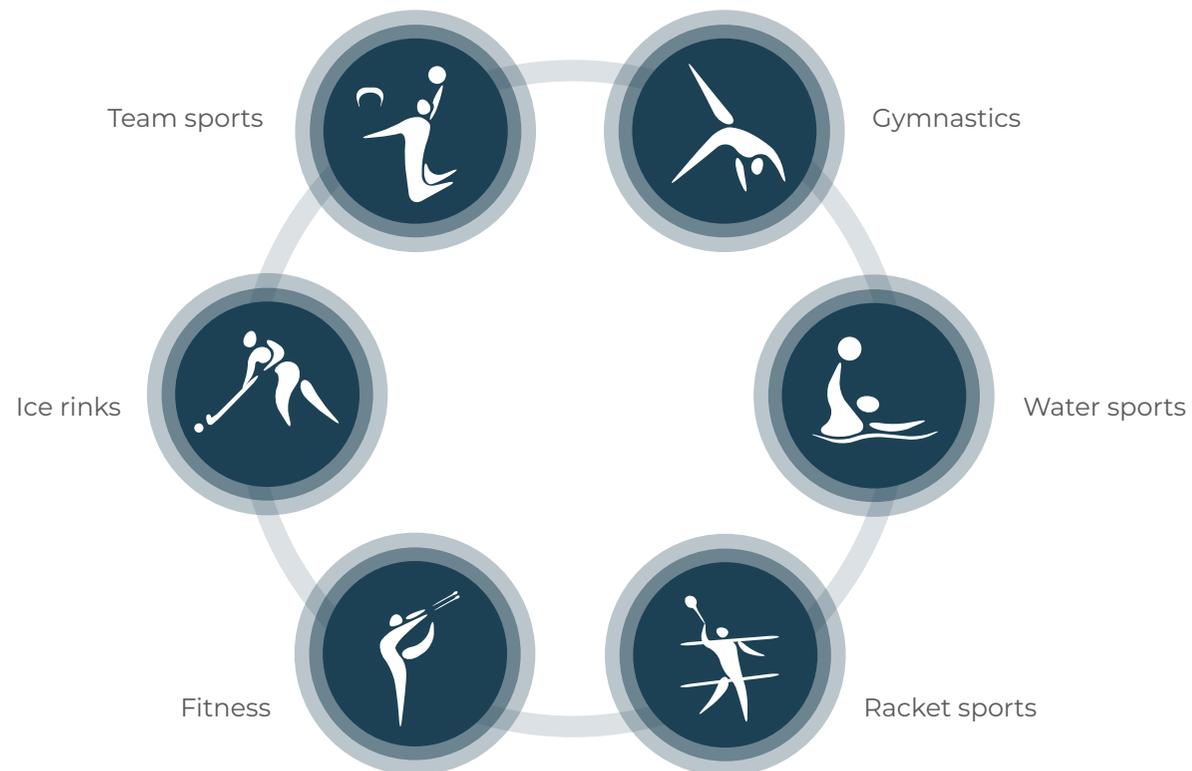
smart air  
solutions.



# An Unrivalled HVAC Solution

A FabricAir dispersion system is tailored to the specific venue and the unique specifications of its varying sub-zones. It is the most flexible HVAC technology on the market; thus, ideal regardless of the type of sport and number of users.

FabricAir dispersion technology is used for air distribution and air dispersion in virtually all sports applications to optimize conditions for athletes and spectators. It prevents condensation while creating a comfortable environment, and it ensures optimal performance regardless of seasonal variations.



# Why Fabric Ducting is Ideal in Sports Facilities

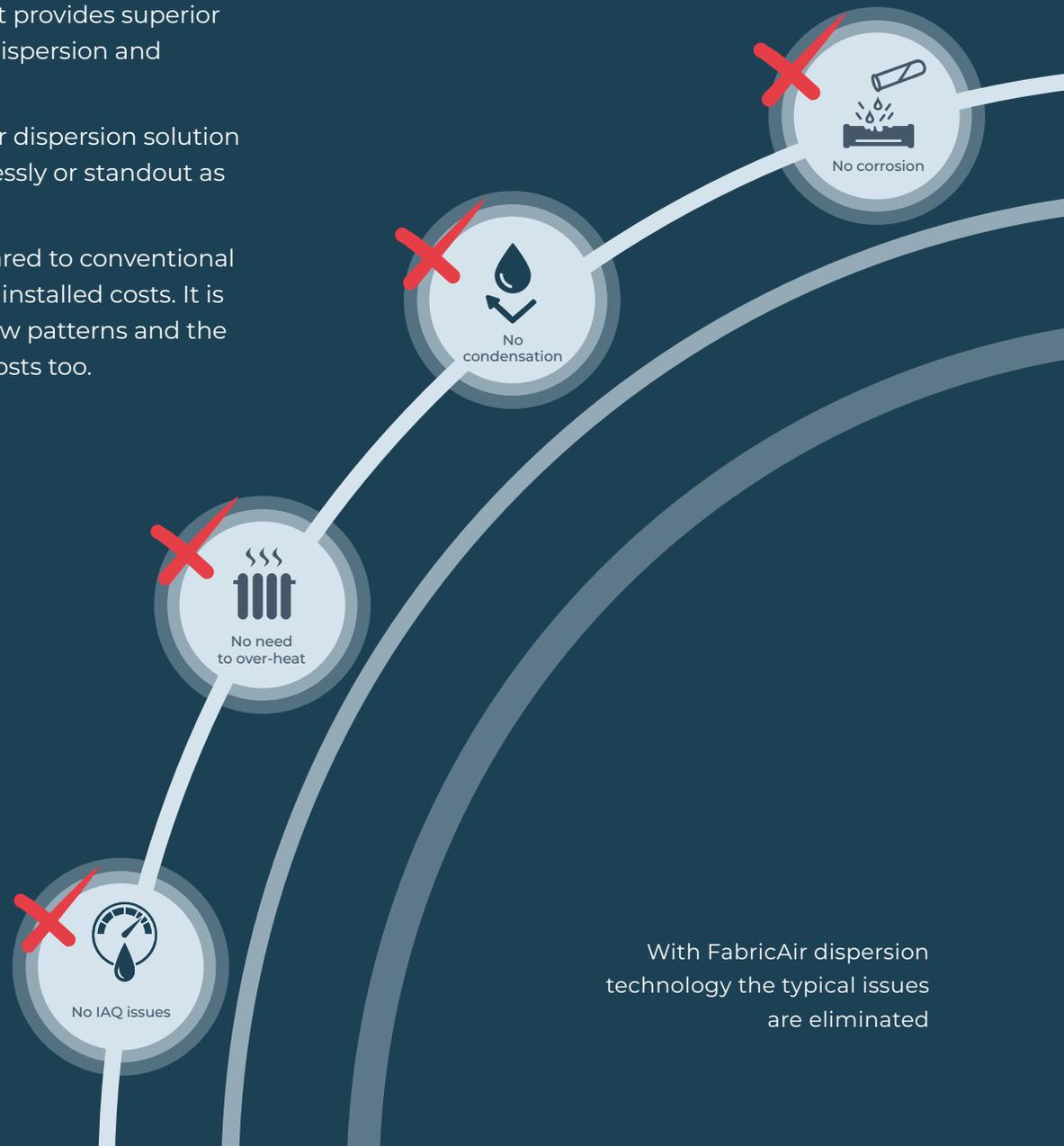
Fabric is the most suitable material for air dispersion in sports facilities. It doesn't corrode, it isn't damaged by impact from e.g. rogue balls, and it provides superior comfort to the users of the facility through even draft-free air dispersion and custom flow patterns.

The flexibility of fabric ducting makes it easy to integrate the air dispersion solution into the overall design scheme; either letting it blend in seamlessly or stand out as a design element with colors, logos and / or graphics.

It is also the most cost-efficient solution on the market. Compared to conventional solutions, such as metal ducts, you can save up to 70% on total installed costs. It is easy to install and maintain, and due to the efficiency of the flow patterns and the lower pressure drop you can save up to 40% on your running costs too.

## UNRIVALLED TECHNICAL PROPERTIES

- Prevents condensation and corrosion
- Improves IAQ and occupant comfort
- Enables a high air change at low velocity
- Tailored from fireproof corrosion-free materials
- Hygienic and easy to maintain
- Will not dent or disfigure if struck with balls, etc.
- Excellent opportunity for branding with custom colors and logos



With FabricAir dispersion technology the typical issues are eliminated



Customized to each zone



Spas



Aqua parks





## Water Sports

The most common challenges facing HVAC engineers when designing solutions for water sport facilities is the risk of corrosion and a need to ensure a constant airflow across the water, without generating too high evaporation.

The harsh environment puts a toll on conventional metal solutions, leading to stress corrosion cracking. Created from polyester fibers, a FabricAir dispersion system is not degraded by the harsh environment, and condensation does not form on the ductwork. The airflow can even be used to sweep condensation from other surfaces, such as windowpanes.

The systems are designed for a minimum, but constant and even airflow across the water surface.

Our suspension systems are all made in anti-corrosion optimized materials, suitable the humid environment.

- No condensation
- No corrosion
- Precisely controlled airflows
- High air change at low velocity
- Improved IAQ and occupant safety
- Minimal vaporization of pool water
- Customized to each individual zone and its unique requirements

Community pools



Competition pools





Curling



Figure Skating



## Ice Rinks

Ice rinks typically represent two separate zones with each their unique requirements: the skater zone and the spectator zone. These are separated through a type of air curtain created using the directionality of the airflows to prevent mixing.

To prevent fog and evaporation from the ice, a low velocity, low temperature airflow is directed toward the skater zone. The spectator zone typically requires a warmer temperature and a high air change without drafts to create the most comfort.

Additional airflows can be designed to sweep surfaces from harmful condensation. This prevents corrosion and mold and ensures that no condensed water drips onto ice and audience.

- Separate skater and spectator zones
- Optimal conditions on and above the ice
- Low velocity across the ice to prevent evaporation
- Uniform indoor air environment
- High user comfort
- Condensation and corrosion free

Community Ice Rinks

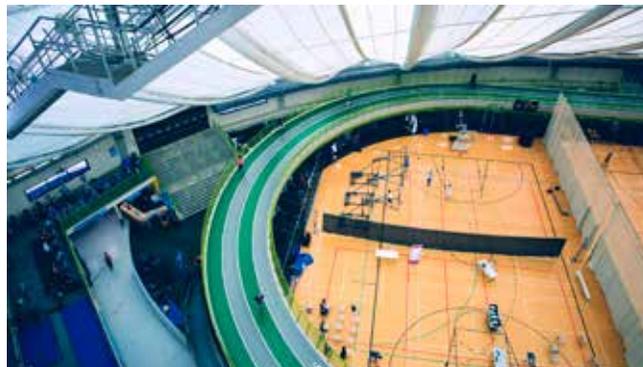




Basketball Courts



Multi-Arenas



Spectator Sports





## Sports Centers & Multi Arenas

In sports centers and multi-purpose arenas there are huge differences between daily practice and spectator events. Typically, multi-purpose venues have longer operating hours and host a larger array of events. This demands more flexibility from the HVAC solution, as it must perform optimally regardless of the number of users on any given day.

A FabricAir dispersion system is customized to the given space and its sub-sections. Draft-free, virtually silent comfort in the spectator zone and feathering down odors and humidity from athletes in the players zone ensure ideal conditions for all users.

These facilities often have high ceilings. The precision throws from our directional flow models ensures that the air is delivered as needed in each zone, without drafts, and with an even dispersion to create a uniform environment.

- Comfort without drafts
- Air curtains to separate zones
- Minimize odors and humidity
- Fabric ducts are not damaged by e.g. rouge balls
- Low maintenance
- LowNoise™ for virtually silent solutions

Volleyball Courts



Indoor Soccer & Football



Community Gyms





Fitness Studios



Weight Lifting



Dance Studios





## Fitness & Dance Studios

Due to the athletes' metabolic heat gains, efficient ventilation is crucial to counter odors and humidity in fitness studios, weight training facilities, spinning rooms, dance studios, etc.

The even and draft-free air dispersion solutions from FabricAir are ideal, even in facilities with restricted ceiling heights. A high air change at low velocity ensures user comfort and a healthy indoor air quality.

The airflow can be designed to also sweep surfaces from condensation to prevent mold and bacteria growth caused by a humid environment. The ductwork is easy to clean and maintain, and it is not damaged if struck by people or equipment.

- Counter odors and sweat from athletes
- No drafts and a high air change create excellent IAQ
- Easy to clean and maintain
- Adaptable duct profiles for low ceilings
- No condensation on the duct surface
- Sweeping (fixtures and structural elements) from condensation
- Not damaged by e.g. rouge balls

Spinning Facilities





Offices



Changing Rooms



Cafeterias





## Ancillary Facilities

The versatility of a FabricAir dispersion system makes it ideal in sports applications, and the advantages are equally applicable in ancillary facilities, such as changing rooms, reception areas, offices, cafeterias and so forth.

Ensuring a comfortable indoor environment in the entire facility increases to the overall user satisfaction and enhances the user experience.

We are air engineering experts and we deliver solutions for all types of rooms in need of air conditioning.

- Assembly areas
- Kiosk, Cafeteria & kitchen
- Changing rooms
- Offices & Meeting rooms
- Saunas & Solariums
- Reception areas
- Maintenance facilities
- ... and much, much more

Kitchens



## Advantages of FabricAir Dispersion Technology



### **QUICK & EASY INSTALLATION**

Due to the lightweight nature of fabric ducting and versatile suspension solutions, a FabricAir dispersion system is easy to install and adapt to various needs. Conventional metal systems take 4 to 5 times longer to install and are less flexible in connection with changing requirements.



### **COST-EFFICIENT WITH LOWER ENERGY CONSUMPTION**

Using FabricAir dispersion technology enables savings of up to 70% on total installed costs and 40% on the running costs.



### **GREATER COMFORT AND SAFETY**

FabricAir dispersion solutions are draft-free and virtually silent to ensure a high level of comfort. Our solutions comply with local fire regulations and building codes, are corrosion-free and are available with anti-microbial and anti-static options. Our suspension solutions can be either aluminum, galvanized or stainless steel.



### **INFINITE DESIGN POSSIBILITIES**

The design flexibility of FabricAir dispersion solutions allows architects and interior designers full freedom to match the aesthetics of the venue. Choose custom fabric colors and add team logos or lettering.

## An Energy-Efficient Solution

Energy usage from HVAC represents about 25% of a sports facility's running costs. Hence, it is crucial to design the HVAC solution properly to keep energy consumption down.

Using FabricAir dispersion systems ensures energy savings of up to 40% compared to conventional technologies. This is the result of the even air distribution and high precision air dispersion. The outcome is a more efficient mixing, thus reaching the desired room temperature quicker. Moreover, FabricAir dispersion systems typically operate with a lower pressure drop than conventional metal systems.



## Air dispersion & air distribution Solutions



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Innovating the HVAC industry since 1973

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