

VENTILATION, HEATING AND COOLING

# Textile Ducting & Air Distribution

Breathe in fresh air and refresh your mind.





## There's a Smarter Way to Distribute Air Than With Steel Ducts

Ventilation is essential for a healthy and comfortable indoor environment – whether it's an office, school, production hall or sports centre. But traditional sheet metal ducting comes with limitations. It's heavy, requires complex installation, and often struggles with condensation or noise. Maintenance is complicated and costly, which means it often gets neglected in practice.

Over time, this leads to poorer air quality, higher operating costs, and a shorter system lifespan.

Textile ducting has already become the preferred solution in many countries worldwide, where it is used in a large share of projects thanks to its lightweight design, quick installation, and ability to deliver even, draft-free airflow











Air distribution no longer has to be heavy, noisy, or difficult to maintain. Across Europe, a modern alternative is gaining ground – textile ducting. It stands out with its surprising functionality and performance:



#### **Even Air Distribution**

Air flows through the textile surface along the entire length, ensuring a uniform supply without drafts or dead zones.



#### Lightweight Design

The textile material weighs only 260–330 g/m², r oughly 20 times less than conventional sheet metal ducts.



#### No Condensation

The permeable fabric balances the temperature inside and outside the duct, preventing unwanted condensation on the surface.



#### Stylish Design

Textile ducts can be customized in shape, color, and pattern (including logo printing) to perfectly match the interior of any project.



#### Hygienic Solution

The textile surface helps filter the supplied air, while maintenance is quick and simple – unlike the complicated cleaning of metal



#### Fast Installation

Thanks to the lightweight and flexible design, installation is up to 70% faster compared to metal ducts..



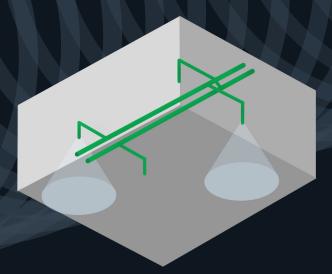
#### **Easy Transport**

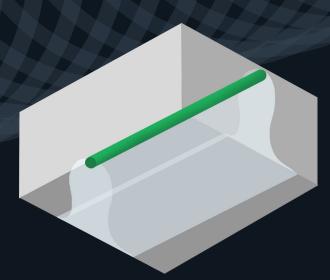
Textile ducts are packed in boxes of up to 25 kg, making them easy to store and even ship by courier service.



#### Sustainability

With Cradle to Cradle certification, the system contributes valuable points toward sustainable building standards such as LEED or BREEAM.





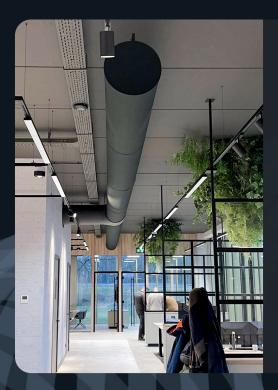
**Sheet Metal Ducts** 

Permeable Textile Ducts



## How Does Textile Duct Work?

From full-surface diffusion to precisely directed supply – always tailored to the needs of your space. There is no single way to ensure proper air distribution. Every building requires a different approach, which is why we offer several system types: from uniform airflow through the entire textile surface to targeted air supply for demanding applications. Simply share your room layout with us, and we will take care of the ideal solution, including calculations and airflow visualization.



#### Permeable System

Air is distributed evenly across the entire textile surface at low velocity, creating a quiet and draft-free environment. The passive movement, driven by temperature differences, naturally blends with the room air without turbulence or directional flow.

Ideal for cooling and fresh air supply in comfort spaces such as offices, schools, or conference rooms. Not suitable for warm air, which would rise to the ceiling and remain unused.







#### Non-permeable System

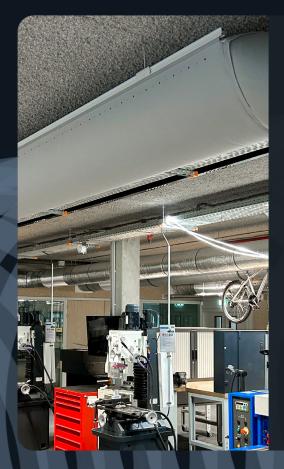
Ducts made of DFC-0 material supply air exclusively through perforations or nozzles. This allows precise airflow direction, higher outlet velocities, and targeted ventilation, cooling, or heating – especially in spaces with high ceilings

Since the fabric does not allow moisture transfer, temperature differences may cause condensation on the surface. That is why operating conditions and temperature gradients must be carefully considered already in the design phase to avoid unwanted effects.









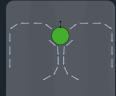
#### Hybrid System

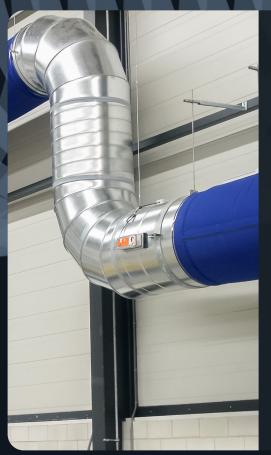
This solution combines even air supply through the permeable fabric with targeted airflow from perforations or nozzles. Low velocities provide comfort where needed, while higher energy delivers air further into the space. The distribution elements help overcome longer distances or height differences without compromising comfort, while the passive surface supply maintains a balanced indoor climate.

Thanks to this combination, the hybrid system is suitable for ventilation, cooling, and heating, especially in spaces with variable conditions or multiple functions – from classrooms and offices to kitchens, and sports halls.









#### Special Solution: Membranes

When a single diffuser needs to handle both cooling and heating, conventional systems hit physical limits. Cold air sinks, warm air rises.

Membrane technology solves this challenge by dividing the duct into two separate halves, separated by an airtight layer. Each section is designed for a different mode and switches according to current needs, ensuring optimal airflow at all times.

The result is a stable indoor climate, high comfort, and reliable performance even under the most demanding conditions – from sports arenas to industrial facilities.









## Manufacturing Technology

Our solutions are based on a carefully developed system that combines the right choice of material, smart construction, and flexible installation options. Every detail matters – from the type of fabric to the perforation method and the suspension within the ceiling structure..

#### **MATERIALS**

We work exclusively with fabrics designed specifically for air distribution systems. All materials are certified, safe for human health, and tailored to the specific requirements of each space.

#### Own Weaving Mill in Denmark

The TCS and DFC-HT fabrics used in our textile ducts come from our own weaving mill, KE Fibertec Væveri, located in Vejen, Denmark. This facility is dedicated exclusively to producing textiles for air distribution – from yarn selection to final finishing.

Every step in material production affects performance. For example, uniform air permeability across the entire duct surface is achieved through controlled yarn tension during winding and precise weft density during weaving. Dimensional stability is further ensured by thermal fixation at 160–190 °C, which minimizes shrinkage. These processes guarantee consistently high-quality parameters with shrinkage just to 0.5%.









At the head of our weaving mill stands Mr. Frank Hansen, representing the third generation of a family continuing a long textile tradition. Under his leadership, KE Fibertec Væveri has become a symbol of craftsmanship, modern technology, and environmental responsibility.

Frank Hansen combines proven manufacturing methods with nature-friendly innovations. Today, the weaving mill runs entirely on renewable energy, carefully recycles waste, and continuously implements new sustainable technologies.





#### What Materials Do We Use for Tailoring Ducts?

The TCS and DFC-HT fabrics come from our own weaving mill in Vejen, Denmark. The DFC-0 material, with its special non-permeable property, is sourced from a trusted supplier in Italy.

#### **TCS**

This polyester fabric, made from TREVIRA CS fibers, is woven in a twill structure with the highest dust-holding capacity, ensuring the longest maintenance intervals. TCS is available in 6 permeability levels and 7 standard colors, with custom colors also available on request.

#### Material characteristics:

- Filtration class M6 according to EN779:2012
- Dust-holding capacity 25 g/m² acc. to EN779:2012
- Fire classification D-S1-d0 according to EN13501
- 100% recyclable
- Cradle to Cradle certification available



#### **DFC-HT**

This polyester fabric, made from high-tenacity fibers and woven in a plain structure, offers excellent durability and versatile use, including applications in cleanrooms. It is available in 4 permeability levels and in both standard and custom colors.

#### Material characteristics:

- Filtration class G2 according to EN779:2012
- Certified for cleanrooms, class 4 acc. to ISO 14644-1
- Fire classification D-S1-d0 according to EN13501
- Tear resistance 110–210 N according to ISO 13937-2
- Cradle to Cradle certification available



#### DFC-0

An airtight fabric with minimal maintenance requirements, which always needs to be combined with distribution elements. It is ideal for applications where large volumes of air must be delivered over long distances. Standard colors are available in three options.

#### Material characteristics:

- Non-permeable fabric with zero filtration capacity
- No condensation when used in environments with RH below 90%
- Free from PVC, halogens, or hazardous substances.
- Fire classification D-S1-d0 according to EN13501 without the need for additional treatment.







#### **High-Impulse Elements**

Air can be supplied in three ways: exclusively through functional elements (non-permeable system), directly through the fabric surface (permeable system), or by combining both (hybrid system). For functional elements, we offer three types: EA perforation, nozzles, and DFC perforation.

#### **EA Perforation**

Designed for projects with a strong focus on cost efficiency. While perforation is not the most effective form of air distribution, it still delivers sufficient results and is a suitable choice for highly economical solutions.



#### **Nozzles**

Nozzles are ideal when large volumes of air need to be delivered over long distances, as they increase the outlet velocity of the duct. With nozzles, it is possible to heat effectively even when the system is installed at great heights.

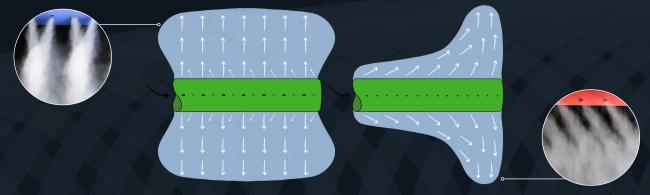




#### **DFC Perforation**

With standard perforation, air does not exit perpendicular to the duct but at an angle, causing unwanted flow along the sleeve. At the beginning of the system, air tends to stagnate, while at the end noticeable drafts occur. Comfort and performance are lost, and balancing turns into a constant compromise.

DFC perforation eliminates this problem. A combination of laser-cut openings and integrated directional flaps ensures that air always flows perpendicular into the room, regardless of pressure. The result is uniform, stable, and predictable distribution along the entire length of the duct



DFC perforation of the ducts

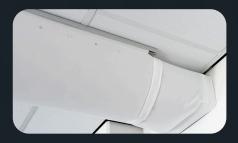
Standard perforation of the duct

Laser-cut openings combined with directional baffles guide the airflow strictly perpendicular into the room. Thanks to laser precision, every opening has identical properties, ensuring uniform distribution along the entire length of the duct. The flaps are integrated directly into the fabric, resistant to wear, and remain reliable even after many years of operation.

#### Perforation Variants to Meet the Requirements of any Project:

#### **DFC Comfort**

- Low airflow / gentle distribution / maximum comfort
- Air volume:  $7-20 \text{ m}^3/\text{h/m}$  (at 60 Pa)
- Ideal for: offices, schools, canteens, lecture halls, cinemas
- Suitable for: ventilation, cooling, and heating over shorter distances



#### **DFC Induction**

- Medium airflow / higher dynamics / medium comfort
- Air volume: 30-90 m³/h/m (at 120 Pa)
- Ideal for: showrooms, exhibitions, museums, fitness centers, light industry
- Suitable for: ventilation, cooling, and heating



#### **DFC Long Throw**

- High airflow / long reach / no comfort requirements
- Air volume:  $65-370 \text{ m}^3/\text{h/m}$  (at 120 Pa)
- Ideal for: warehouses, logistics centers, sports halls, production facilities
- Suitable for: ventilation, cooling, and heating





#### INSTALLATION OF THE DUCT

We offer three installation options, making it easy to choose the most suitable solution for each project and installation site. In addition, we provide initial connections as well as premium options with internal reinforcements.



#### Suspended Aluminum Profiles: Flexrail

Suspension using aluminum profiles fixed to the ceiling with threaded rods or wire hangers. Suitable mainly for circular ducts, but also applicable for semicircular ducts.

#### Flexrail benefits:

- Aesthetic and highly durable suspension of the system
- Suitable even for spaces with limited ground access the duct is installed by simply sliding it into place



#### Aluminum Profiles Directly to Ceiling: Wingrail

Aluminum profiles mounted directly to the ceiling or wall. This makes them the most suitable solution for semicircular or quarter-circle ducts, but they can also be used for circular ducts installed directly on the ceiling.

#### Wingrail benefits:

- Aesthetic and highly durable suspension of the system
- Ideal for spaces with low ceilings or limited room under the duct.



#### Wire Suspension

Wire is one of the most commonly used suspension methods. It is the lightest possible way to install the system and therefore places the least load on building ceilings. This suspension requires horizontal fixation.

#### Wire benefits:

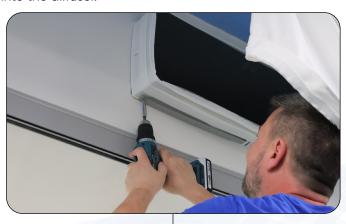
- Extremely lightweight with minimal stress on the ceiling.
- Simplest installation method.



#### Intial Connection of the System

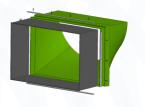
You don't need to worry about connections either, we provide solutions that ensure smooth integration into any system. For circular ducts clamps or textile straps are used, which easily attach to the cord sewn into the diffuser.

For rectangular ductwork, we supply special mounting frames in 3 variants – Hidden Frame, Textu Frame, and Metu Frame Alutex. These can be quickly assembled from the supplied profiles, whether the duct has a flange or not.



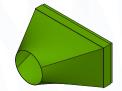
#### Hidden Frame

The most aesthetic solution for connecting to rectangular ductk, covered with a textile strip.



#### Textu Frame

Connection to rectangular ductwork where all mounting components remain hidden.



#### Metu Frame AluTex

Connection to rectangular ductwork with visible mounting components.



#### Internal Reinforcements

A premium solution that preserves the aesthetic appearance of textile ducts even when the system is not in operation. They prevent unsightly sagging and maintain the perfect shape of the duct under all conditions, enhancing not only the visual impression but also the overall life. Stainless steel inner rings (3–4 mm) absorb pressure shocks during start-up, protect the fabric, and extend system durability.

They also keep the duct in shape when the fan is off, ideally when suspended in aluminum profiles. Designed for diameters of 200–1270 mm, reinforcements up to 500 mm are installed directly during production, while larger systems are supplied for on-site installation. Spacings of 500 or 1000 mm and Velcro fastening ensure easy handling and maintenance.







#### **PRODUCT PORTFOLIO**

## **Textile Based Ventilation**

Textile ducts are the core of our portfolio. We design and manufacture them to ensure uniform air distribution, easy installation, and long service life. Each shape and suspension method has its own advantages, allowing us to tailor the solution precisely to your project.

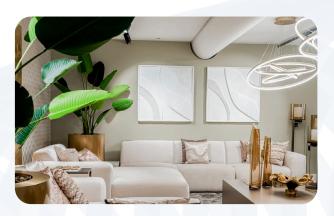
#### Colors & Custom Designs

Our textile systems don't have to be just a technical solution – they can also become part of the interior design. We offer a standard color range as well as any RAL shade, with options for custom patterns or logo printing. This allows us to deliver ducts that fit seamlessly into any environment, from offices to sports halls.



#### **Ducting for Every Premises**

Every project requires a different approach, which is why we offer a wide range of shapes and suspension options. Our ducts are manufactured in round, half-round, or quarter-round designs, making it possible to adapt the system to the space so it is always efficient, aesthetic, and easy to maintain.



#### Easy Transportation & Installation

Textile ducts are very lightweight, and their packaging is designed accordingly. They are packed in cardboard boxes weighing no more than 25 kg, which makes transport, storage, and on-site handling much easier. Thanks to their low weight, the system puts no strain on the ceiling structure, and installation is fast and straightforward.

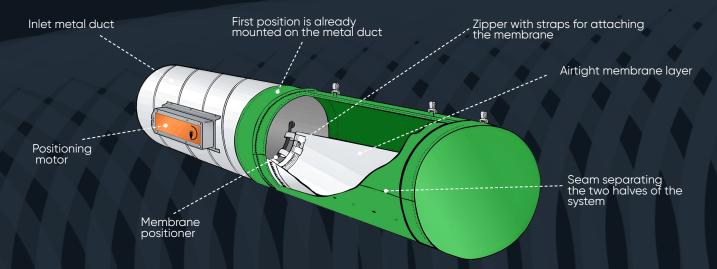




#### PRODUCT PORTFOLIO

## Membranes

Textile ducting is the ideal solution for most applications where the goal is comfortable and even air distribution. But sometimes, project constraints call for a single duct to provide both cooling and heating in a highly demanding environment. A standard system would struggle to maintain the required comfort, which is why a special membrane technology comes into play. This technology divides the duct into two sections, and with the help of a motor, you can switch the airtight layer between cooling and heating mode. Airflow is always optimized according to the physical properties of air, ensuring the indoor environment remains stable and comfortable.

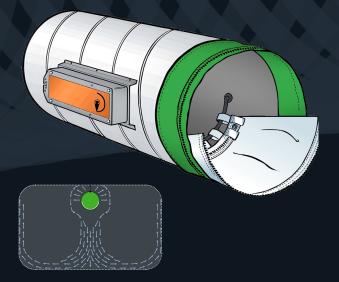


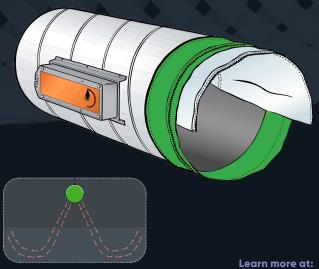
#### **Cooling Mode**

Cold air is distributed only through the upper half of the duct. The lower perforated section remains sealed by the membrane. The airflow takes advantage of the natural downward movement of denser cold air. As a result, the cold air gradually spreads throughout the space, naturally displacing warmer air from the lower zone of the room.

#### **Heating Mode**

Warm air is supplied only through the lower perforated surface of the duct, while the upper section is sealed by the membrane to prevent upward leakage. Thanks to the perforation, the warm air exits the duct at higher velocity, allowing it to penetrate the occupied zone without rising immediately.





www.euroair.eu/en/membranes

#### **PRODUCT PORTFOLIO**



## **FBS Panels**

FBS panels are flat textile ducting units designed for installation in standard cassette ceilings. The entire visible surface of the panel is used for even air distribution without drafts, ensuring maximum indoor comfort. They are an ideal choice for offices, schools, or conference rooms, where the combination of comfort, quiet operation, and efficiency is essential.



#### Fresh Air Supply

Provides ventilation without causing unpleasant drafts.



#### Hassle-free Installation

Montáž probíhá bez nutnosti žádných nástrojů, zvládnete to tak sami a během chvilky.



#### Significant Energy Savings

Operates at low pressure loss, consuming less energy and reducing operating costs.



#### Standardized Solution

Panels are designed to fit standard cassette ceiling dimensions.



#### Quiet for Maximum Focus

With low noise levels (<20 dB(A)), they ensure quiet environment, ideal for offices or schools.



#### Easy and Quick Maintenance

Maintenance is done by removing the bottom section – fast and simple









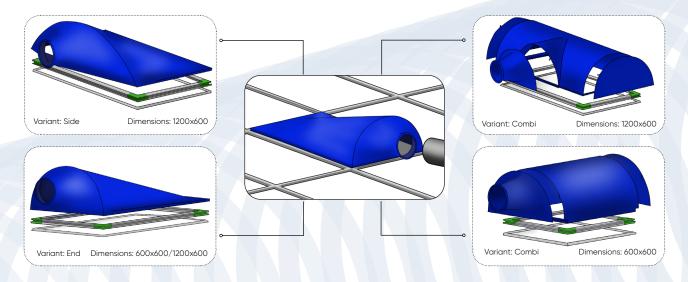


#### Modular Solution from 3 parts

We manufacture FBS panels in two standard sizes: 600×600 mm and 1200×600 mm. The smaller version always has a connection at the end (End), while the larger panel can have a connection at both the end (End) and the side (Side).

We also offer a Combi version, where up to four panels can be connected together using zippers.

We assemble the panel frames directly at our premises by connecting two profiles using recycled plastic corners. This allows us to deliver custom sizes quickly, while maintaining fast delivery times. Each panel can be manufactured as a fully breathable solution (550, 775, or 1240 m3/m2/h) or with DFC baffles for directional air distribution.



#### Materials & Colors

The bottom part, which distributes air into the space, is manufactured from TCS material, available in 7 color variants. The top part, which serves to supply air, is usually made from impermeable DFC-0 material in dark blue.

#### Sustainable Solution

FBS panels are part of the CradleSox® product range. In order to meet certification requirements, the upper part of the panel is made of DFC-HT material with a permeability of 20 m³/m²/h in black or dark blue, in one or two layers.





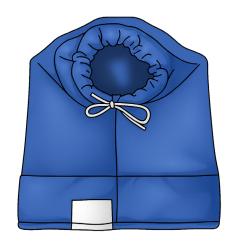


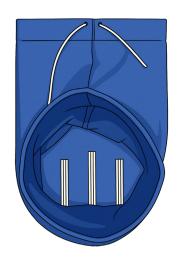


## **Defrost Sock**

Defrosting is an essential part of refrigeration equipment operation. If frost on the evaporator is not removed in time, it blocks air flow, increases energy consumption, and shortens the service life of the entire unit.

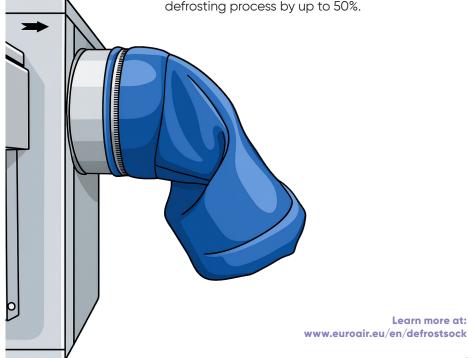
In operations where continuous cooling is necessary (e.g., in cold storage rooms, catering facilities, slaughterhouses, or fruit and vegetable storage), long defrosting times can cause complications and financial losses.



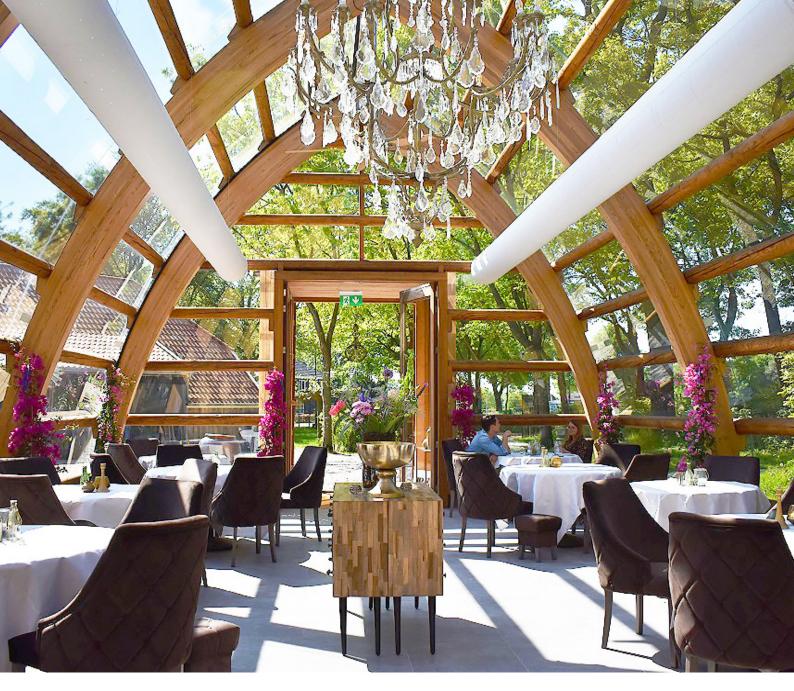


Defrost Sock is a special fabric DUCTthat is placed directly on the evaporator. We manufacture it from highly durable fabric with a 10-year warranty, resistant to repeated cooling and defrosting cycles. The design is simple but well thought out, with three Velcro straps for immediate closure and a cord for regulating air flow.

When the unit switches to defrost mode, the evaporator begins to release heat. Without the vent, this air would dissipate into the room and the process would take much longer. Defrost Sock captures the heat and keeps it right next to the evaporator, so the frost disappears faster and more efficiently. When the evaporator is turned off, the vent closes immediately, preventing unnecessary heat loss and speeding up the entire defrosting process by up to 50%.



Learn more at:





**APPLICATIONS** 

## Your space, Our solution

Nowadays, fabric ducts are no longer just for the food industry.

Thanks to their flexibility and even air distribution, they are proving their strength in offices, schools, sports halls, and laboratories—anywhere where a pleasant and healthy indoor environment needs to be ensured. From ventilation and cooling to heating.





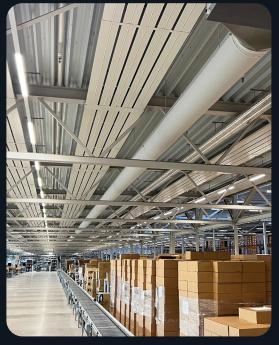
#### **Industrial halls**

Textile vents can provide effective ventilation even in large production areas. Thanks to lower pressure loss, they reduce energy consumption and help keep operating costs low..



#### **Food Industry**

In environments with high hygiene requirements, the antibacterial treatment of textile ducts helps minimize the risk of contamination. This makes them the ideal choice for humid and cold operations.



#### Logistics centers

Textile vents help maintain a stable temperature throughout the space. Thanks to the even distribution of air, they protect stored goods from fluctuations that could affect their quality.



#### Clean rooms & Laboratories

DFC-HT material meets the strict requirements of ISO Class 4. It enables reliable ventilation even in environments where cleanliness and precision are top priorities.





#### Offices

Even air distribution creates a pleasant and healthy environment for all employees in offices.



#### Stores & Showrooms

A pleasant temperature in the space promotes customer satisfaction and encourages them to stay longer. Textile outlets ensure effective heating in winter and cooling in summer.



#### Children's corners & Nurseries

For the youngest children, the quality of the indoor environment is especially important. Textile vents help maintain a stable and healthy climate that promotes children's well-being and immunity.



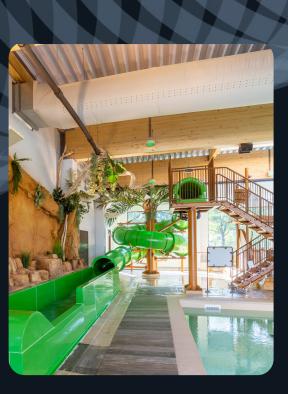
#### Schools & Universities

Air quality has a direct impact on students' concentration. Textile ducting ensure even air exchange and help reduce  $CO_2$  concentrations in classrooms and auditoriums.



#### Restaurants

A pleasant atmosphere is just as important as good food. Fabric vents help keep the air in the room fresh and clean without disrupting the atmosphere at the table.



#### Aquacenters

A humid environment requires a solution that can withstand it. Fabric ducts are corrosion-resistant, and helping to keep operations running without downtime.



#### Kitchens

Well-ventilated kitchens are essential for smooth operation. Textile ducts ensure a constant supply of fresh air and contribute to a pleasant working environment.



#### **Gyms & Fitness Centers**

Exercise is all about air. Textile diffusers ensure effective airflow even in high-traffic areas, helping to maintain a healthy environment for sports.





#### **TEXTILE DUCTING**

## Service & Maintenance

One of the reasons why fabric ducting is becoming an increasingly popular is that it is much easier to maintain. While cleaning metal ducting can be complicated, costly, and often neglected in practice, fabric ducting can be washed or cleaned with commonly available products without dismantling. This not only reduces operating costs, but also contributes significantly to the quality of the indoor environment – especially in areas with air recirculation, where dust is effectively captured

For example, our ducts from TCS material can retain up to 92% of dust particles (according to EN779:2012). In practice, this means that the fabric acts as a natural filter – but that is precisely why it is important to maintain it regularly.

Each material has its own specific characteristics: permeable materials can be washed in an industrial washing machine, while the impermeable DFC-0 material only requires maintenance by wiping with a wet wipe. Detailed maintenance instructions can be found in the maintenance instructions.

See washing instructions at: www.euroair.eu/en/other-documents

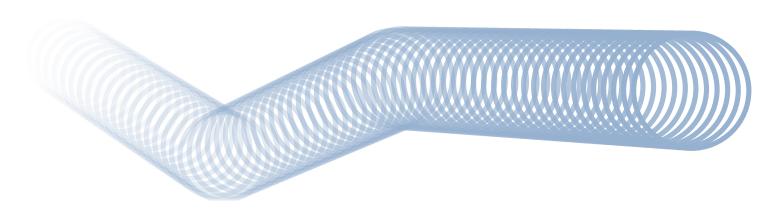
#### **TEXTILE DUCTING**

## Warranty

Our textile outlets are manufactured in accordance with ISO 9001:2015, and each piece undergoes careful final inspection. This allows us to stand behind what we deliver and offer an above-standard warranty that is among the longest in the industry. Whether it's textile systems made from our materials or FBS panels that complement them, we provide a warranty of up to 10 years. All details can be found in the warranty certificate.

We guarantee the long service life of our systems precisely because we control the entire manufacturing process. Everything is manufactured exclusively in Europe – in the Czech Republic and Denmark – which gives us confidence in every detail. We use our own materials developed for air distribution, and every product is inspected in accordance with our high quality standards.

See warranty certificate at: www.euroair.eu/en/other-documents





### 2025

The largest investment within the entire KE Fibertec Group – we have started the reconstruction of the premises in Varnsdorf worth almost 8 million EUR.

#### 2019

With increasing production, we also reached a significant milestone in the number of production employees in 2019.

### 2015

We introduced CradleSox® – ducts certified according to the Cradle to Cradle sustainability standard.

#### 2011

Increasing demand has led us to move to larger production facilities so that we can better meet the needs of our customers. However, production remains in Varnsdorf, Czech Republic.

#### 2007

We have become part of the KE Fibertec Group, one of the global leaders in the field of textile ventilation technology.

#### 2003

 Johnny Kusk Møller and Torben Rohde expanded operations by establishing a production in Varnsdorf, northern Bohemia.

#### 1991

 Niels Erik Thomson founded the company in Denmark with a clear vision: to improve quality of life through more efficient air distribution.

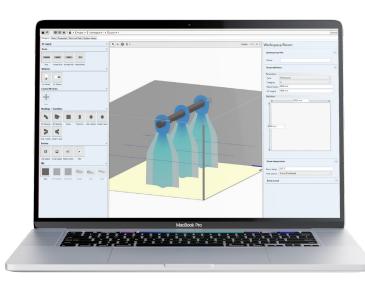
#### **EURO AIR**

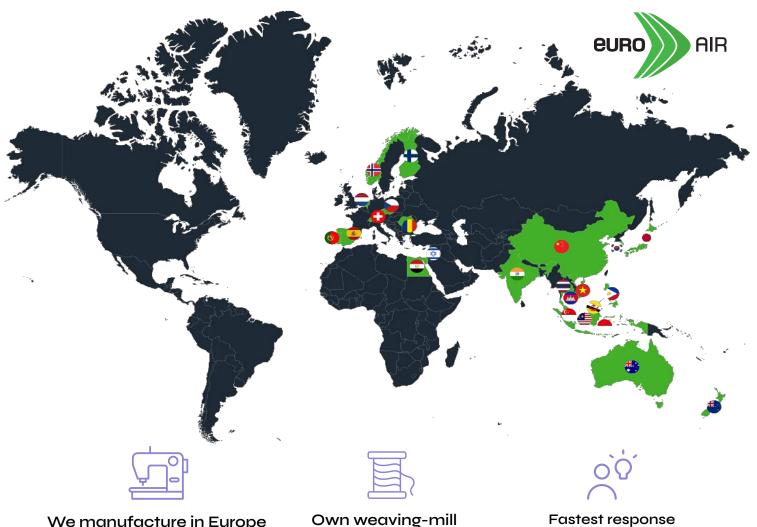
## We know, what your interior need

For more than 30 years, we have been designing and manufacturing textile ducts that bring fresh air where it is needed. Effectively, aesthetically, and with long-term operation in mind.

Our production takes place exclusively in the Czech Republic and Denmark, and we control the entire process – from the selection of yarn to the installation of the finished solution. Thanks to this, you can rely on the results of our work.

Today, we are part of the KE Fibertec Group, the world leader in fabric ventilation. What does that mean for you? You get proven materials, our own weaving mill, and research facilities that let us deliver a system that meets your exact requirements.





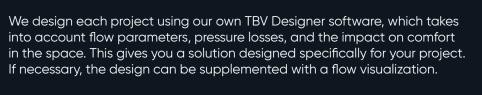
#### We manufacture in Europe

Our production facilities are located in the Czech and Denmark. We sew from materials from our own weaving mill in Denmark.

#### Fastest response

We know how valuable your time is. We respond within 24 hours.

In order to offer you a reliable solution that will work long-term and without compromise, we test every project at the design stage. Our specialists use our own laboratory facilities, where smoke flow tests and detailed performance measurements are carried out. Thanks to these simulations, we can verify in advance how the system will behave in real operation.



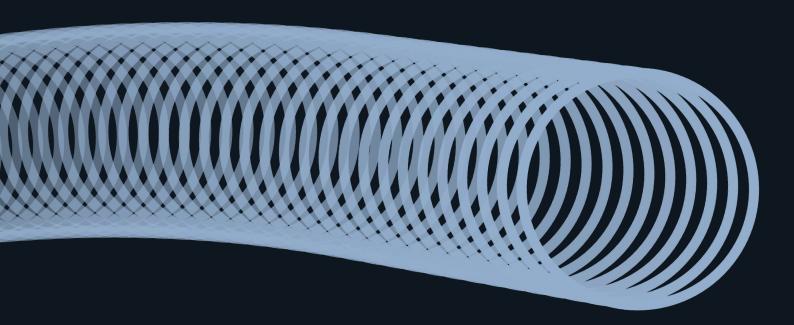
Our sales representatives will be happy to help you design a solution, answer technical questions, and discuss the details of your project with you.

#### Miroslav Mejsnar

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