
EURO AIR
VENTILATION & COOLING
FBS Panels
Flat ceiling diffusers easily integrated into suspended ceilings.
WWW. EUROAIR.EU

EURO AIR

We have been here for you since 1991

For more than 30 years, our skilled seamstresses have been sewing tailor-made textile ducts for air distribution in Varnsdorf, North Bohemia, and Vejen, Denmark.

We bring solutions that combine functionality, quality and aesthetics. And all this with the highest level of expertise. Thanks to us, you can breathe fresh air in every interior.

Euro Air's textile air distribution systems are the result of a combination of sophisticated design, maximum efficiency and a commitment to sustainability. With a system from Euro Air, you not only get a product that matches your exact specifications, but also the assurance that you are investing in technology that is safe, reliable and designed with the future in mind.

When you cooperate with us, you get a partner who understands the uniqueness of each interior and its individual needs. We design all solutions to provide maximum functionality and comfort for the end user.

Learn more about Euro Air at:
www.euroair.eu/en/about-us

Manufactured in Europe
Our facilities are located in Czech and Denmark.

Self-produced materials
We use materials from our own weaving mill in Vejen, Denmark.

The quickest reactions
We know how valuable your time is. That's why we respond within 24 hours.

MATERIALS

Fabrics made with a family heritage

The materials TCS and DFC-HT, which we use to tailor the air ducts for you, come from our own weaving mill in Vejen, Denmark. The KE Fibertec Væveri weaving mill focuses its entire production on air distribution textiles.

We use non-flammable polyester yarn for production, which is sourced from the same granulate for both. The different properties of the materials are then due to the different processing of the yarn.

The fabrics from our weaving mill have a unique feature on the market, uniform air permeability over their entire surface. This is ensured by a special warp preparation process, in which constant yarn tension is maintained during winding onto the spool. During the weaving process, we modify the weft density to achieve the desired permeability.

Learn more about weaving mill at:
www.euroair.eu/en/weaving-mill

AIR DISTRIBUTION

FBS Panels

FBS panels are a flat textile ducts designed for easy installation in suspended ceilings. The entire visible surface of the panel in the room acts as an active surface for ventilation and is made of permeable material. This ensures that no draft or dead zones occur. Especially in areas with high indoor climate requirements such as offices, classrooms or meeting rooms, is this essential.

FBS panels operate at very low pressure drops, which means energy savings and long-term efficiency. All this to ensure that you will not only have a functional solution, but also a positive feeling that you have made the right decision for your project.

Delivery of the fresh air
BS Panels provide ventilation without causing unpleasant drafts.

Significant Energy Savings
Low pressure loss results in reduced energy consumption and operating costs.

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

Easy and Quick Maintenance
Maintenance is simple, just remove the bottom part. Fast, easy, and trouble-free.

Seamless Installation
The installation is done without any tools - you can do it yourself in a moment.

Stylish Design
Available in 7 colour options that easily match any interior.

10-year Warranty
We guarantee warranty on the material and functionality of all system omponents.

Standardized solution
The panels are designed in standard dimensions of suspended ceilings.

Efficient Air Distribution

FBS panels are made of flame retardant fabrics and meet high demands for safety and functionality. The upper part of the panel is made of light or zero permeability fabric, which prevents air from escaping into the space above the ceiling. This ensures that the entire visible surface in the room is effectively used for air distribution.

As a result, the air is evenly supplied at low flow velocities, without draughts and with high operational efficiency. FBS panels are a reliable solution for cooling or isothermal air supply where comfort and energy efficiency are a priority.

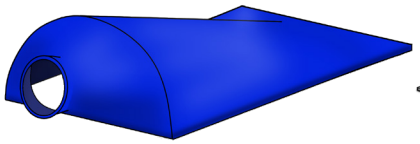
Solution for Low-Ceilings Spaces

Thanks to the flexible fabric top, FBS panels are the ideal choice for rooms with limited height above the ceiling. The low weight and design adapted to standard cassette ceilings allow for easy installation without the need for additional hanging or anchoring.

The panels fully integrate into the ceiling grid and provide a highly functional air distribution solution. This makes them particularly suitable for schools, offices and other areas with high demands on indoor comfort.

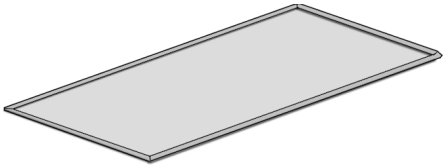
Modular Design with Only 3 Parts

The FBS panels are composed of three parts that can be assembled or disassembled easily without tools. This makes it easy to move them, adapt them to a different location or replace just a specific part without having to change the whole panel.



Top Part

Variants: Side / End / Combi



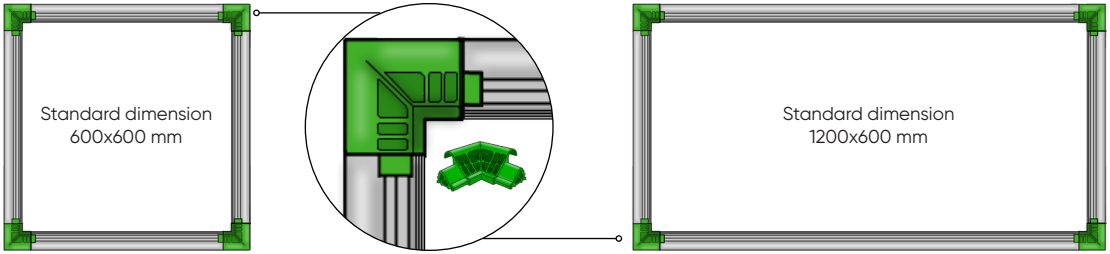
Bottom part

Type: 1 / 2

Frame with recycled plastic corners

Panel Size = Frame

We supply FBS panels in two standard sizes of ceiling grids: 600×600 mm and 1200×600 mm. The frame of the panel is assembled from profiles using recycled plastic connectors directly in our facility in Varnsdorf (Czech). This makes it easy to produce even non-standard dimensions to suit the specific needs of the project very quickly.



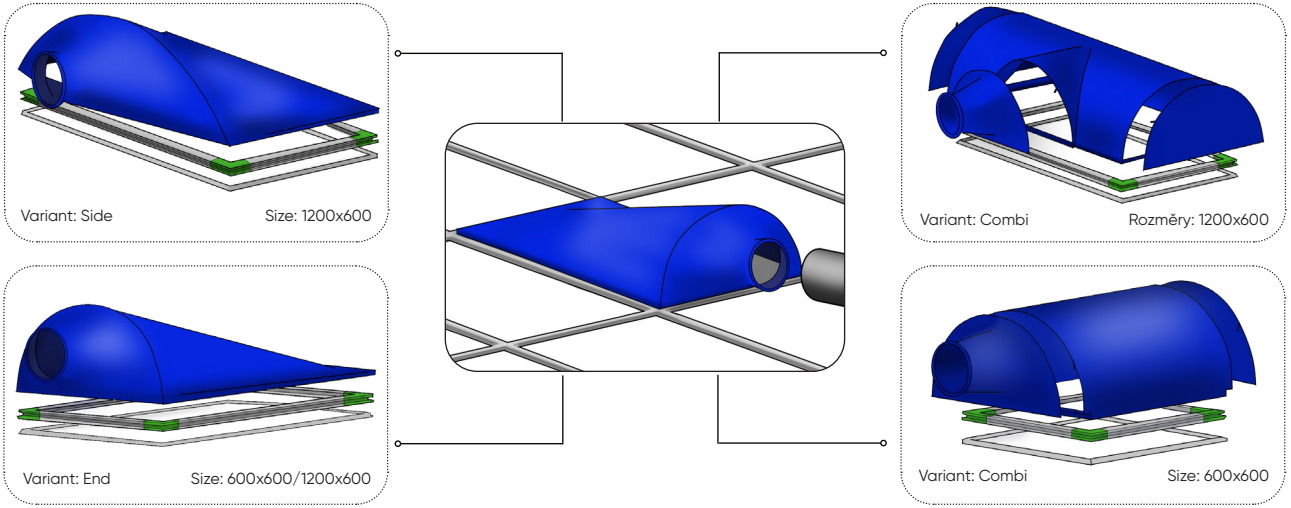
Air Supply = Top part

Each FBS panel is equipped with a flexible connection Ø160-250 mm.

As standard, the top piece is made of impermeable material DFC-0 (dark blue), which prevents any air from escaping above the ceiling. For projects with a requirement for Cradle to Cradle certification, we offer a variant in DFC-HT material with a permeability of 20 $m^3/m^2/h$, in single or double layer version, in dark blue or black.

For the bigger 1200×600 mm size, the inlet can be placed either on the longer side (Side variant) or on the shorter side (End variant). The smaller 600×600 mm panels always have the inlet on the shorter side, but can be simply rotated to suit the project.

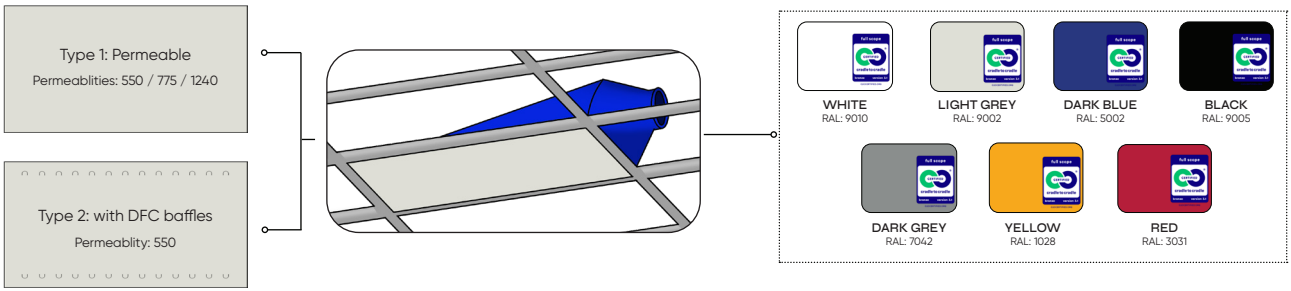
Both sizes are also available in a Combi variant for combining up to 4 panels into one unit. The panels can also be used as a 100% diffusion element. In this mode, air flows directly into the entire space above the ceiling and then through the bottom permeable part into the space.



Air Distribution = Bottom Part

Thanks to the permeability of TCS material, we can produce a panel that distributes air evenly over the entire surface, without perforations, nozzles or other elements. Air flows exclusively through the fabric, ensuring quiet operation and a perfect ceiling appearance. There are 3 levels of air permeability to choose from, depending on the air volume.

Alternatively, we offer a version with DFC baffles that allows directional air distribution with a single air permeability option. In both cases, the lower fabric part is easily removable, simplifying cleaning and extending the life of the system. TCS material is available in 7 standard colours.



Recycled Frame Corners

Since 2025, we have been producing corner connections for FBS panels from our own recycled granulate, which is produced by shredding plastic yarn spools in our weaving mill in Denmark.

These spools previously ended up with external partners for further processing. Today, we recycle them and use the resulting material to make the corner fasteners for the panels.

The result is a solution that brings many benefits:

- **Express production of any dimensions**
  The entire frame is assembled in our mounting department in Varnsdorf, Czech Republic. We do not rely on external suppliers
- **Stronger and more durable construction**
  The connections are made of 100% recycled PPC (polypropylene C), which is characterised by its high mechanical strength. This makes the connection stable and reliable.
- **Material with proven origin**
  The recyclate comes exclusively from plastic spools that are produced as a by-product of the yarn winding process in the weaving mill.
- **A step in line with our sustainability strategy**
  This approach is part of a wider commitment to minimise waste and maximise the use of raw materials throughout the production chain.

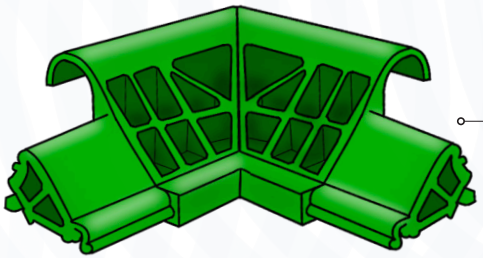
The use of our own recycled components does not affect system reliability in any way. FBS panels continue to be supplied with a standard 10 year warranty on all components and functionality.

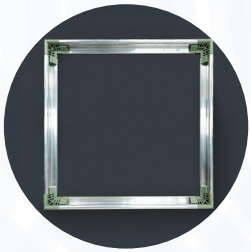
We shred sools into granulate on special machine.

Granulate is used for futher production.

We use it for producing corners for FBS panels.

Empty plastic yarn spools.





The frames are manually assembled in our mounting department.

FBS PANELS

Certified for Sustainable Projects

We can offer FBS panels in a Cradle to Cradle® certified version, which is part of our sustainable product line CradleSox®. This version is designed for projects focused on environmental responsibility and provides you an advantage in obtaining points in LEED, DGNB or BREEAM.

What is different in the certified version?

The panel construction stays the same. The difference is in the top (hidden) part. The certified panel uses the DFC-HT material with a permeability of 20 m3/m2/h in black or dark blue - in options of single or double layers of fabric. We manufacture this material in our own weaving mill in Denmark, which allows us to guarantee the entire production process.

The standard panel is made with a part made of DFC-0 non-permeable material, which meets the high technical requirements but is not part of our certified portfolio as it is not a material of our own production.

What will you gain with the certified option?

- The same simple installation, good appearance and speed of delivery as with the standard version
- Documented added value for projects seeking DGNB, BREEAM or LEED points.
- Full material transparency and documentation for certification.
- Buy-back bonus of up to 10% of the original price when the end-of-life panel is returned to Euro Air for recycling.
- A 10 year warranty on all components and functionality of FBS panels also applies to this certified option.

Certified FBS panels deliver a functional solution with proven benefits for long-term sustainable construction.

Photos: BLT Luchttechniek

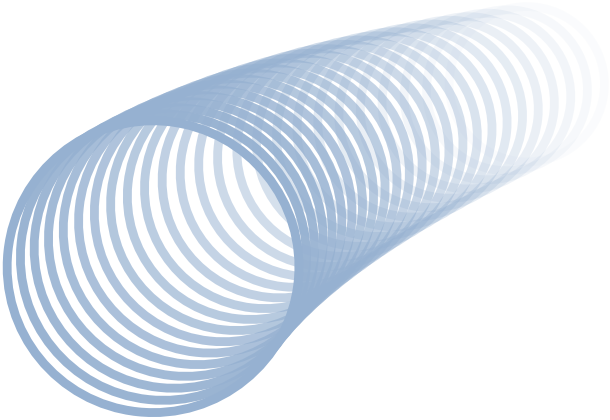
FBS PANELS

Easy and Quick Installation

The installation of an HVAC system for lowered ceilings is simple and you can do it in few minutes. Just follow 4 simple steps:

1. Remove the ceiling cassette that will be replaced and the neighbouring cassette in the direction of the connection.
2. I nto the free area, place the diffuser, which is designed to fit perfectly into the grid.
3. Connect the air inlet and make sure the diffuser is seated properly
4. At the end, put back the neighbouring ceiling cassette that was removed to access the mounting.

The whole process is very easy and does not require any special tools.



FBS PANELS

Your Premises, Our Solution

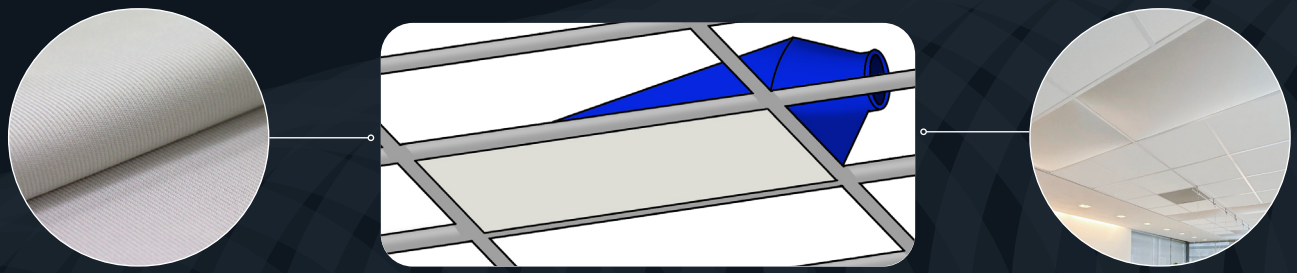
Thanks to the use of permeable materials, fresh air is delivered evenly, without draughts, which is crucial for environments such as schools and offices. Simply everywhere where comfort is a top priority.

Specification of the Airflow

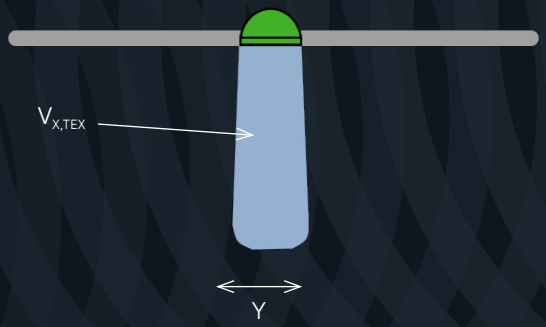
We offer 2 types of FBS panels (permeable solution and solution with DFC baffles) to perfectly cover different types of applications. Type 2, equipped with DFC baffles, allows directional air distribution not only directly under the panel but also to the sides and is therefore ideal where a wider area needs to be covered

Type 1: Permeable Solution

Air distribution through the bottom of the panel, which is made of permeable material with permeabilities of 550, 775 or 1240 $m^3/m^2/h$.



In this air distribution solution, no directional elements affect the flow. The movement of air is determined solely by the laws of thermodynamics.
The cold air naturally diffuses downwards and slowly drops into the space directly below the panel.
This method of distribution is ideal for cooling or isothermal ventilation in spaces where there is no need to cover a larger area outside the axis of the diffuser.



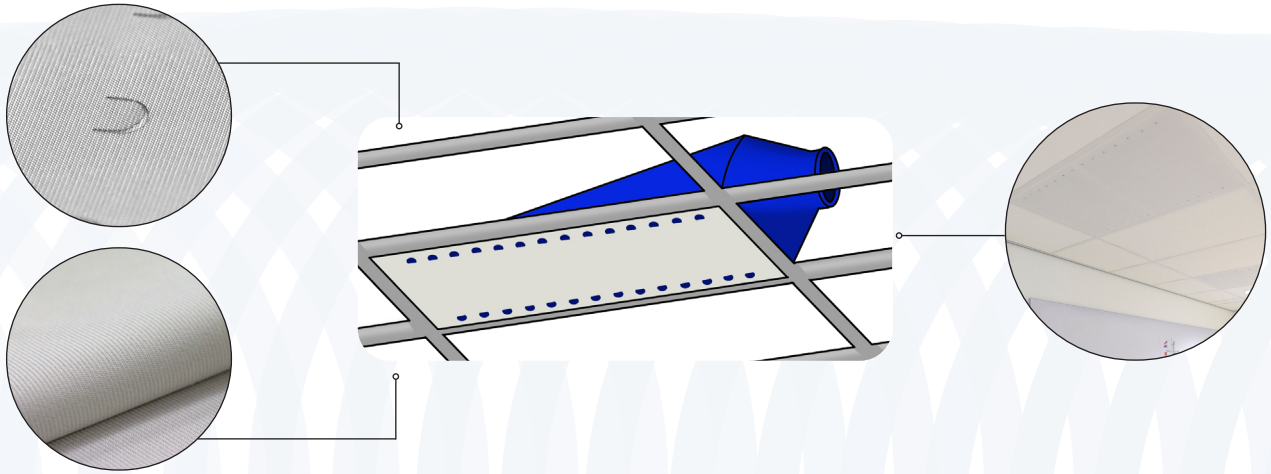
Dimensions: 600 x 600 mm		
Pressure (Pa)	Permeability (550)	Permeability (775)
30	45 m^3/h	83 m^3/h
40	65 m^3/h	109 m^3/h
50	80 m^3/h	134 m^3/h
60	95 m^3/h	158 m^3/h
70	110 m^3/h	182 m^3/h

Dimensions: 1200 x 600 mm		
Pressure (Pa)	Permeability (550)	Permeability (775)
30	95 m^3/h	166 m^3/h
40	130 m^3/h	218 m^3/h
50	160 m^3/h	268 m^3/h
60	190 m^3/h	316 m^3/h
70	220 m^3/h	363 m^3/h

Sound Power Level[dB(A)] Size 1200x600 Permeability 550, 775	
dP [Pa]	LwA
30	< 20
40	< 20
50	< 20
60	22
70	25

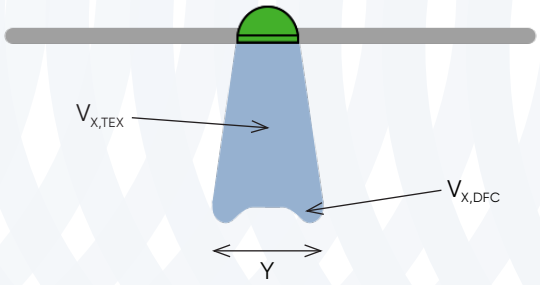
Typ 2: DFC baffles and permeablity of 550 m³/m²/h

Air distribution through the lower part of the panel, which is made of permeable material with a permeability of 550 $m^3/m^2/h$ and equipped with laser-cut baffles for air directing.



By combining the permeable material TCS 550 and the DFC directional baffles, the air distribution area can be significantly extended. The air is directed not only perpendicularly downwards, but also sideways - the result is a wider coverage of the space, which is shown as "Y" in the scheme.

The velocity of the air exiting through the DFC baffles ($v_{X,DFC}$) is slightly higher than for the fully permeable section ($v_{X,TEX}$), but still remains within the recommended range for comfort zones.



Dimensions: 600 x 600 mm	
Pressure (Pa)	Permeability (550)
30	50 m³/h
40	70 m³/h
50	85 m³/h
60	100 m³/h
70	115 m³/h

Dimensions: 1200 x 600 mm	
Pressure (Pa)	Permeability (550)
30	105 m³/h
40	140 m³/h
50	170 m³/h
60	200 m³/h
70	230 m³/h

Sound Power Level [dB(A)]					
	dP [Pa]	LwA		dP [Pa]	LwA
Size 600x600	30	< 20	Size 1200x600	30	< 20
	40	< 20		40	23
Permeability 550	50	< 20	Permeablity 550	50	26
	60	22		60	29
	70	26		70	32

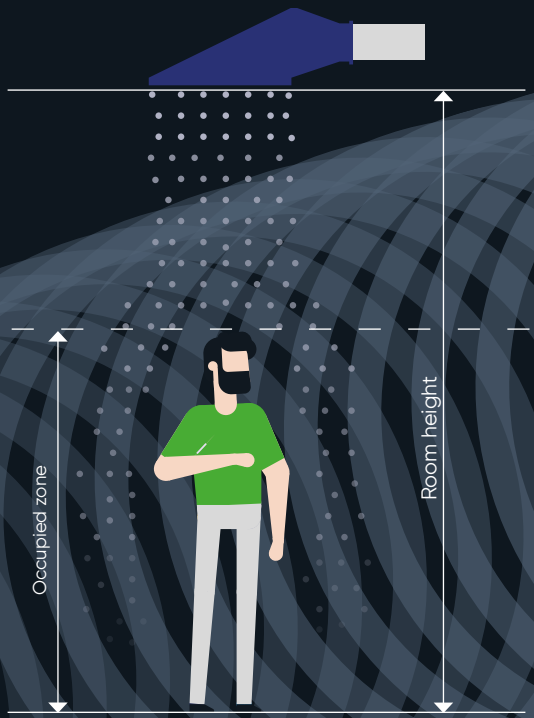
FBS PANELS

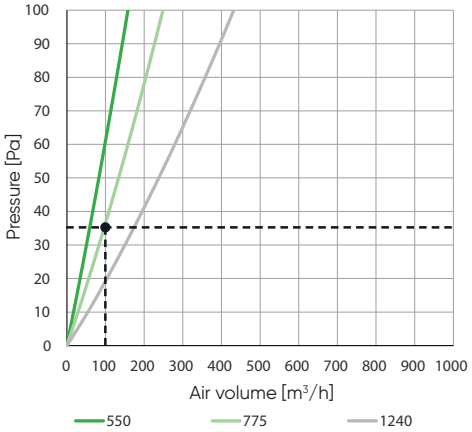
Technická studie

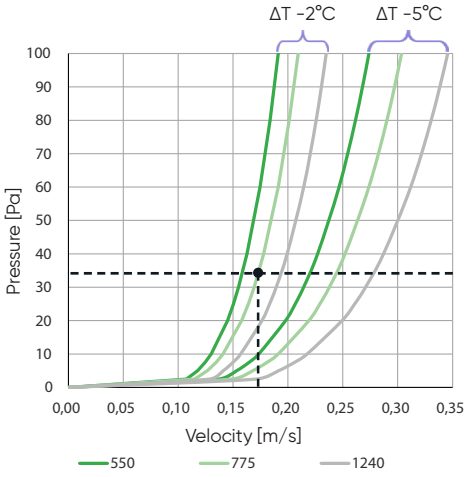
Example: Type 1 (775) - 600x600

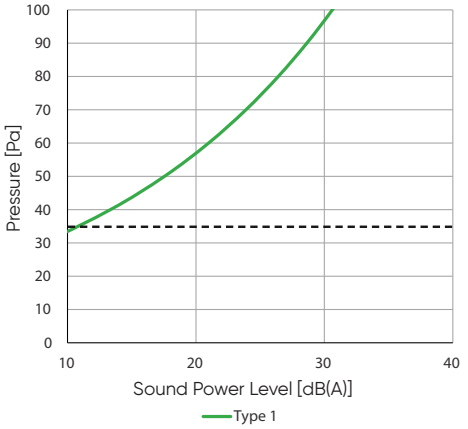
At a pressure of 35 Pa and ΔT -2 °C the air volume is 100 m³/h, the air velocity in the occupied zone is 0.17 m/s and the sound level is <10 dB(A).

The situation therefore meets the criteria for the room category A according to EN 1752. The FBS panels type 2 with DFC baffles will generate a sound power level of 14 dB(A).





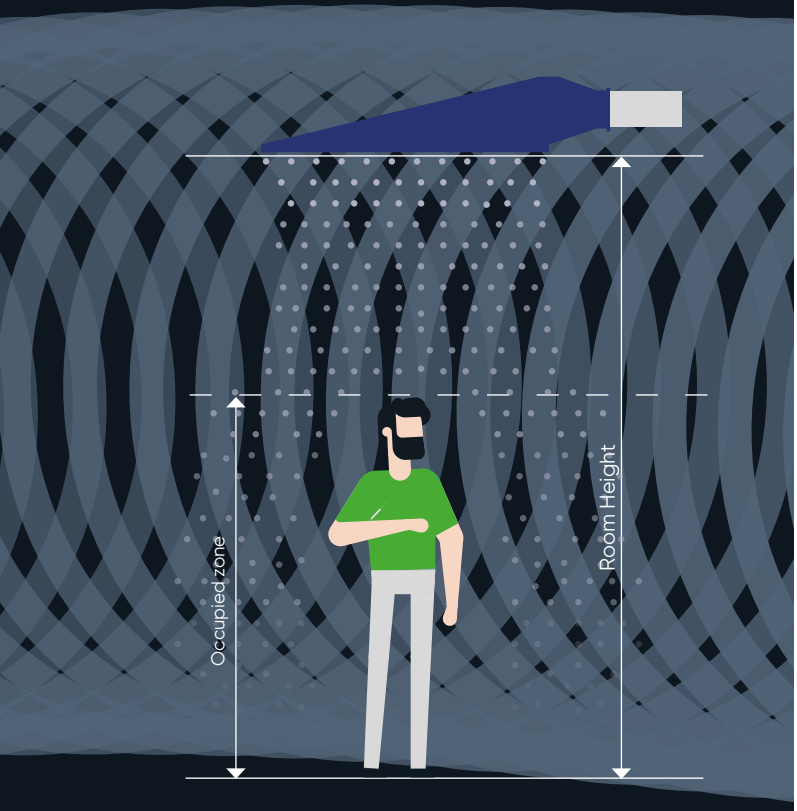


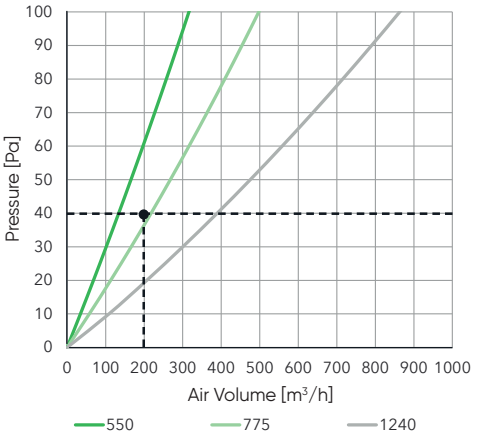


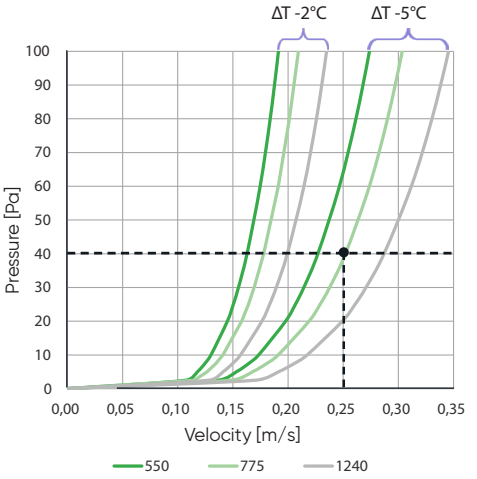
Example: Type 2 (775) - 1200x600

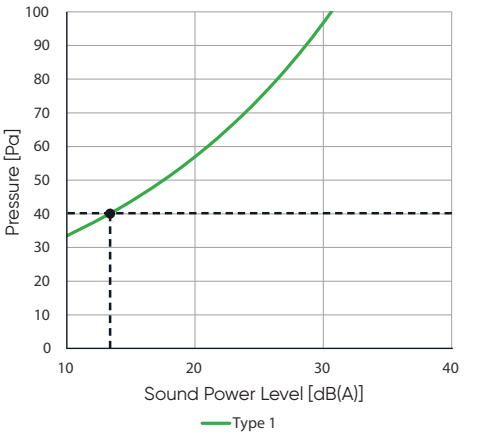
At a pressure of 40 Pa and ΔT -5 °C, the air volume is 200 m³/h, the velocity in the occupied zone is 0.25 m/s and the sound power level is 13 dB(A). This situation meets the criteria for room category B according to EN 1752.

These 2 cases both assume a room height of 2,5 m and an occupied zone of 1,8 m, which is approximately the height of a person standing upright.









FBS PANELS

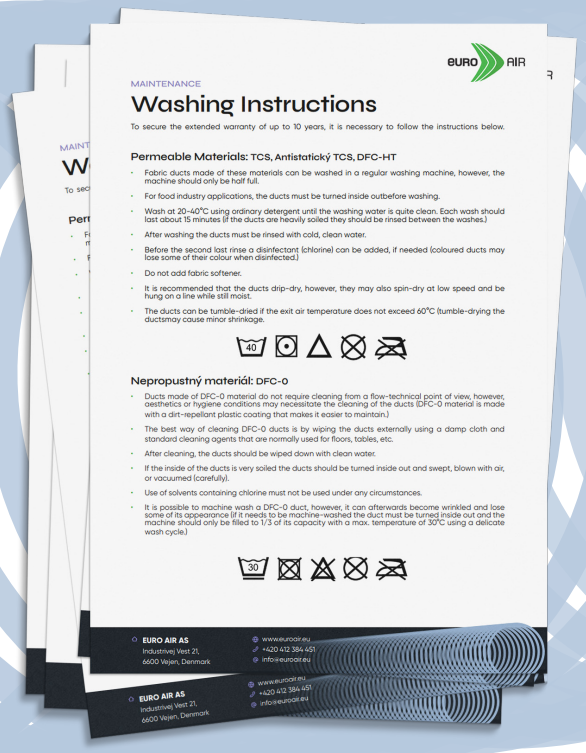
Maintenance

For washing, only the visible (bottom) part is always removed, which does not require any tools. The fabric should be washed at a temperature of up to 40 °C, according to the washing instructions for the material.

FBS PANELS

Warranty

We are absolutely sure about the quality of our products and that is why we offer a 10-year warranty. This covers all system components and their functionality, which ensures you longterm reliability



FBS PANELS

BIM Objects

We also provide panels in standard sizes 600x600 and 600x1200 as BIM components for Revit. This makes it easy to integrate the components into your design, both with and without perforations. They also include technical calculations, so you will have an instant insight into the effectiveness of the designed solution.

If you are interested in BIM components, please do not hesitate to contact us.

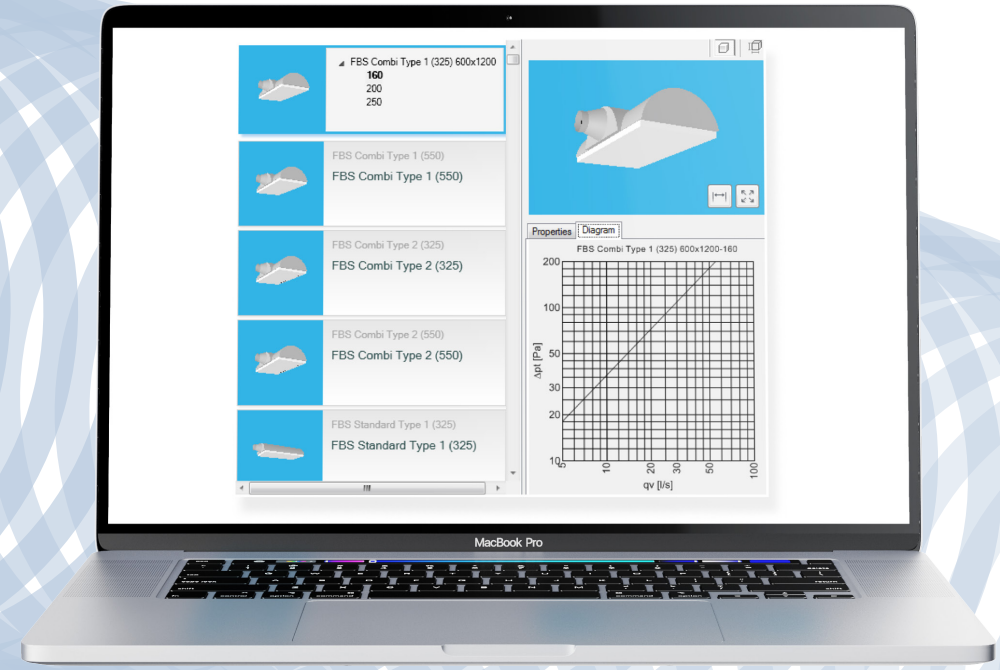
FBS PANELS

Express Dispatch

For the most popular variants of FBS panels, we offer the possibility of dispatch within 48 hours after order confirmation (in working days). This service applies to:

- 1200×600, variant Side, Type 1 (perm. 775 $m^3/m^2/h$)
- 600×600, variant End, Type 1 (perm. 775 $m^3/m^2/h$)
- colors: white (RAL 9010) or light grey (RAL 9002)

Maximum quantity for express dispatch is 10 pieces per order. For other types, colours or larger numbers of panels, standard delivery times apply.



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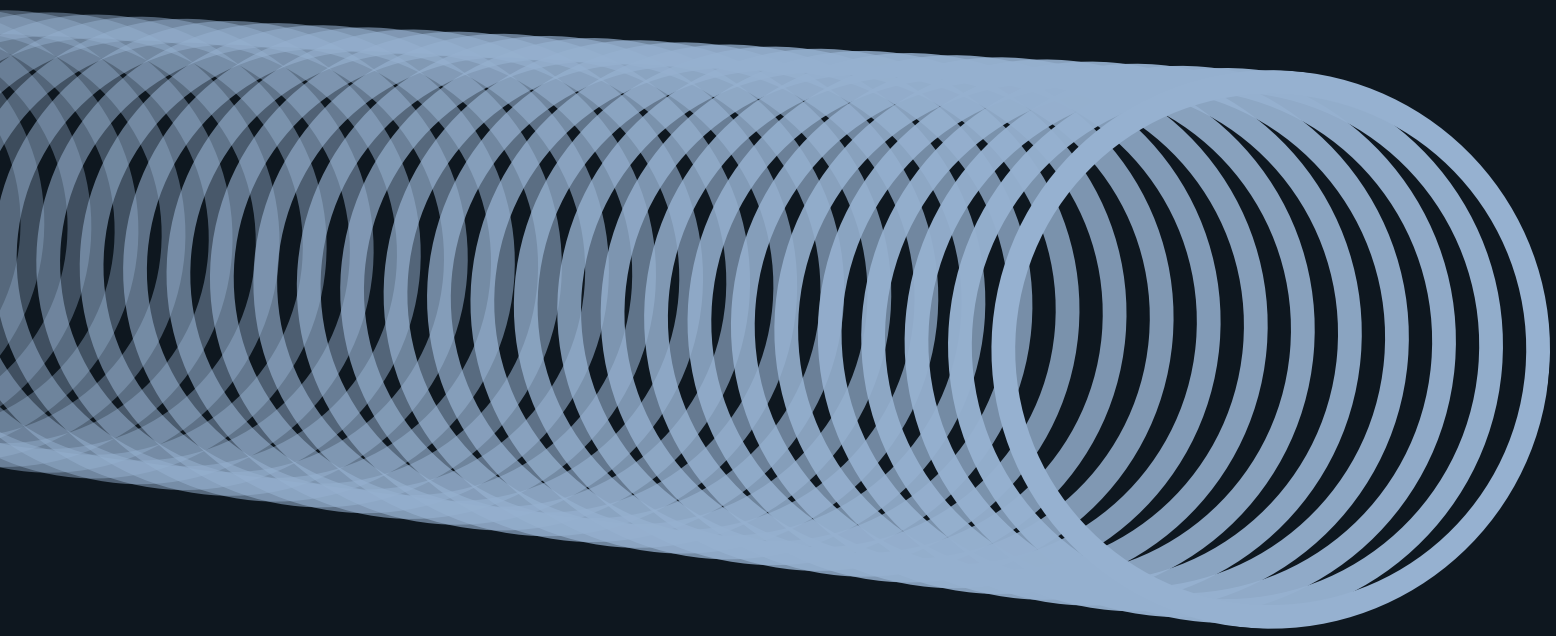

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