

FabricAir® Dispersion Systems

- **LIGHTWEIGHT**
- **NO CONDENSATION**
- **ATTRACTIVE PRICE**
- **NOISELESS VENTILATION**
- **FAST AND EASY INSTALLATION**
- **DRAFT-FREE AIR DISTRIBUTION**
- **WASHABLE AND HYGIENIC**
- **WIDE COLOR SELECTION**
- **LONG SERVICE LIFE**
- **CUSTOM-MADE**

Certificate of
Registration
Filenumber:

10008624
QM08



ISO9001:2008

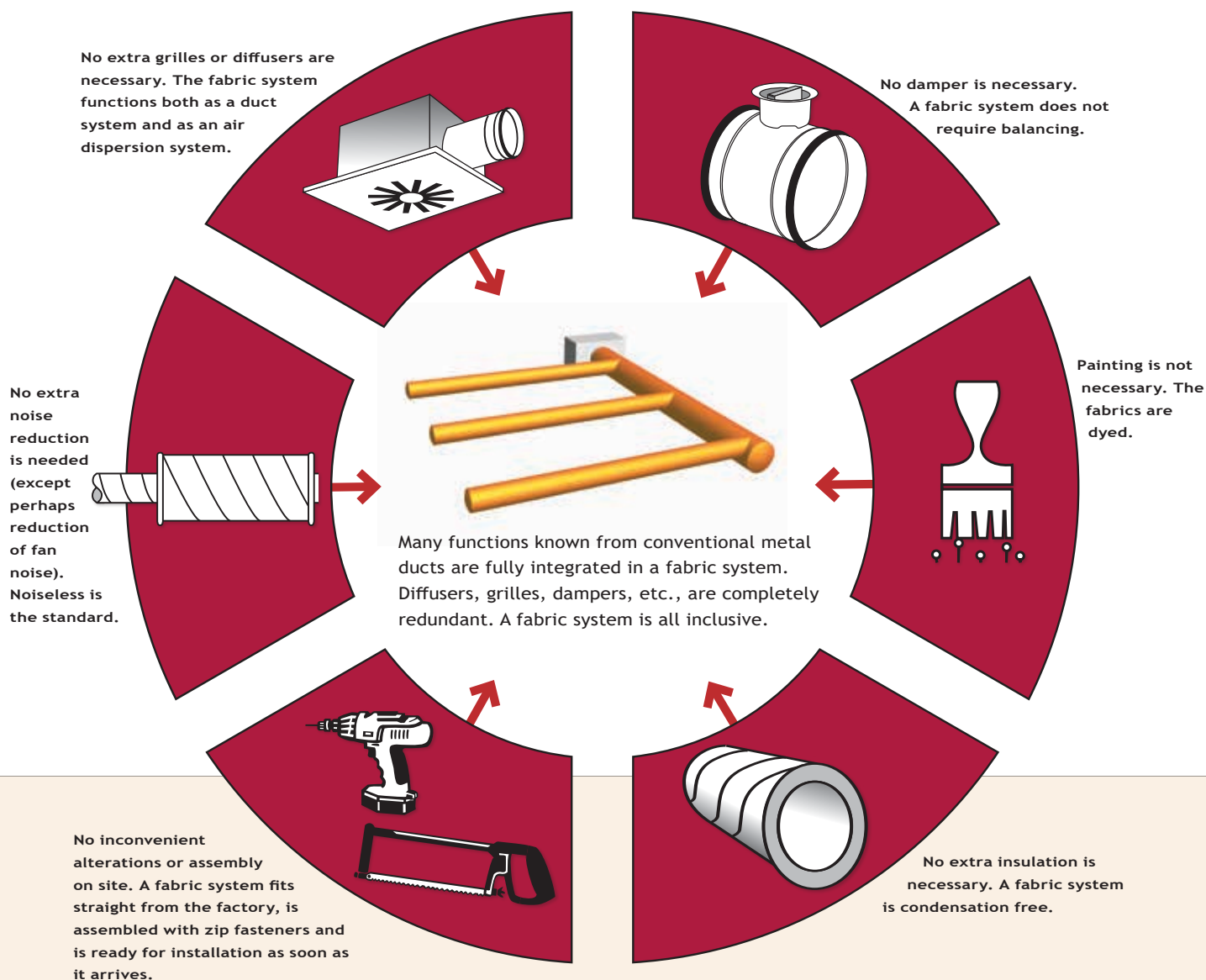
FabricAir

Fabric Systems – Air Dispersion – All Inclusive

A fabric system has great advantages compared with conventional metal ducts. The main advantages are:

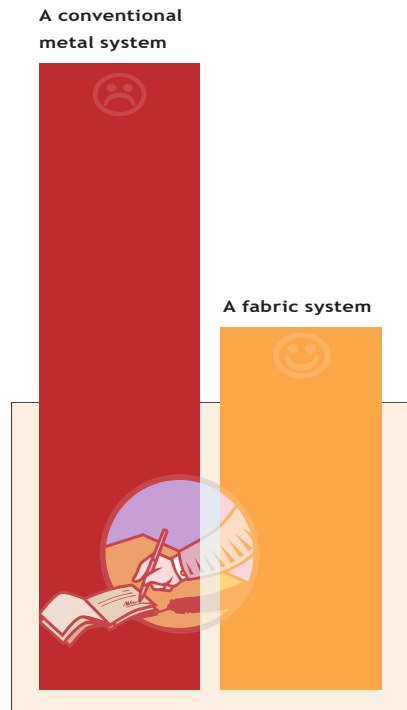
- More cost-effective
- Better comfort
- Better hygiene
- Lighter weight
- More environmentally friendly

We call it “air dispersion - all inclusive”.



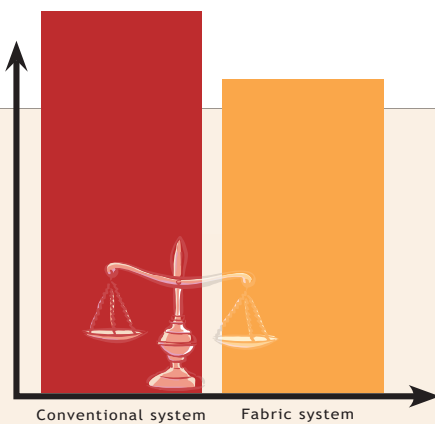
DIFFERENCE IN COSTS

Fabric solutions are 30% to 70% less expensive than metal - especially due to the reduced costs of installation and transportation.



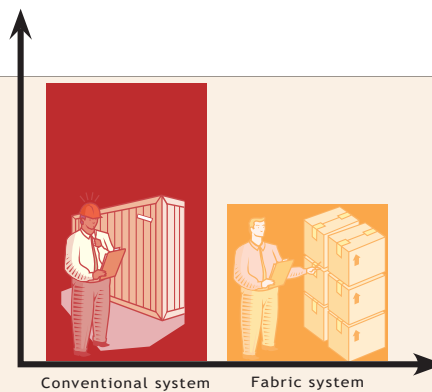
MATERIALS

The price of metal is unstable and has become very high over the years. The price of fabric is stable and has not changed substantially over the years. Savings are 10% to 40%.



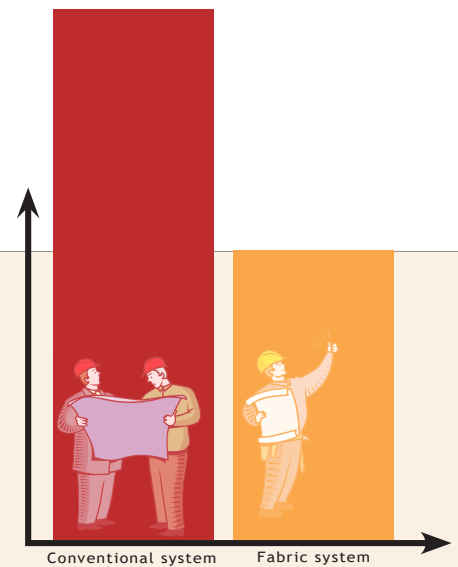
TRANSPORTATION

Metal ducts take up a lot of space. This is reflected in the cost of transportation. Fabric systems are rolled up and transported by courier or a freight company. Savings are 20% to 70%.



INSTALLATION

Assembling metal ducts is time-consuming. Working with fabric systems is easy and simple. Savings are 20% to 90%.

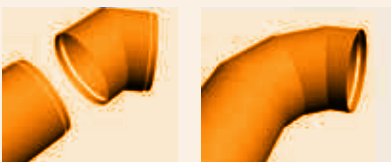
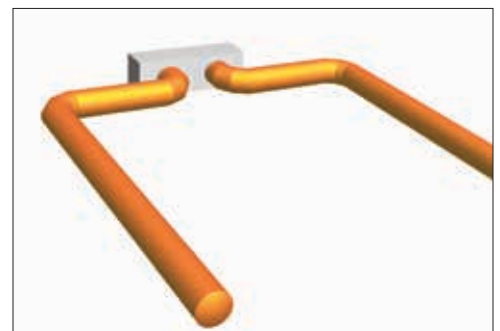
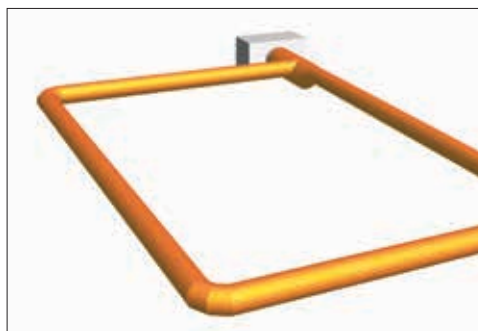
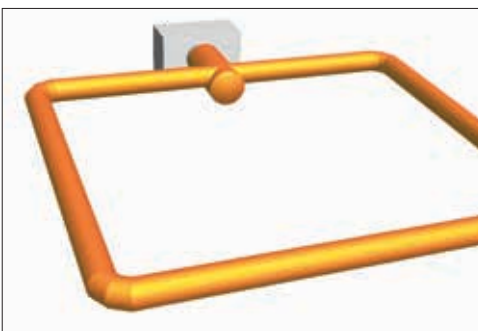
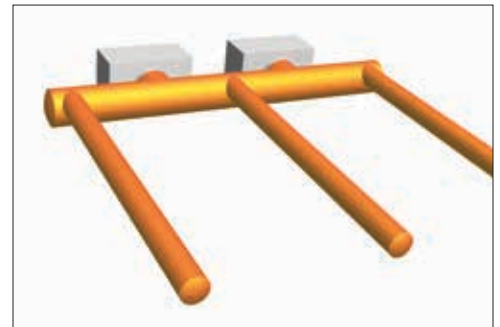
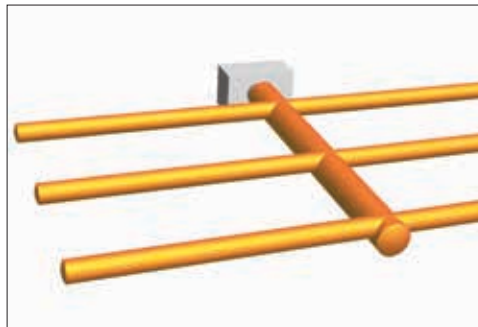
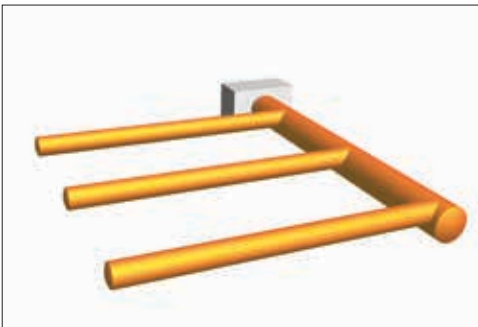


A Versatile System Design

The design of fabric systems varies from job to job - the possibilities are endless. It is easy to create fabric systems fitting the layout of the building perfectly. Naturally, the systems are supplied with both elbows, main and side ducts, reductions etc. Since

a fabric system does not require balancing, the need for dampers is minimized and the design work is simplified - while the indoor climate is optimized.

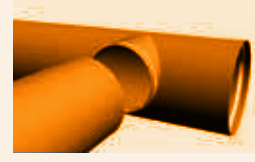
The possibilities for creating a versatile system design are at the very least the same as conventional ducts. In most cases the versatility is greater.



Elbows - made with the exact angle desired. There are no restrictions as to direction or dimensions.



Reductions and transitions - All transitions and reductions are made in fabric. Based on the suspension system chosen, the optimum transitions and reductions are selected.

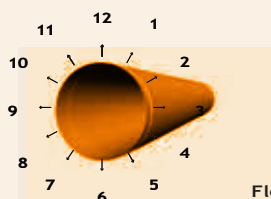
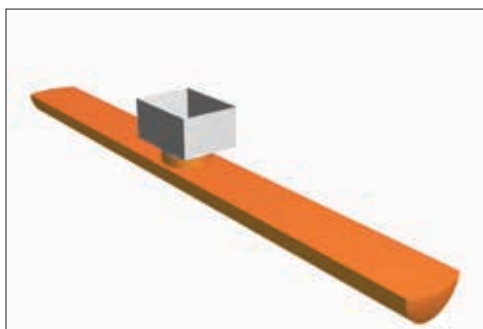


Outlet branch - transition from a main duct to a side duct through an outlet branch.

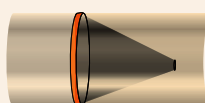
Download complete component drawings at www.fabricair.com

- dwf (AutoCad 3D)
- dwg (AutoCad 2D)
- pdf (Acrobat 3D)
- pdf (Acrobat 2D)

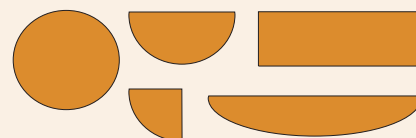
The fabric ducts are adapted to each individual job and are infinitely variable.



Flow models - The air is distributed through flow models placed at the desired position. The position is given by using a dial.



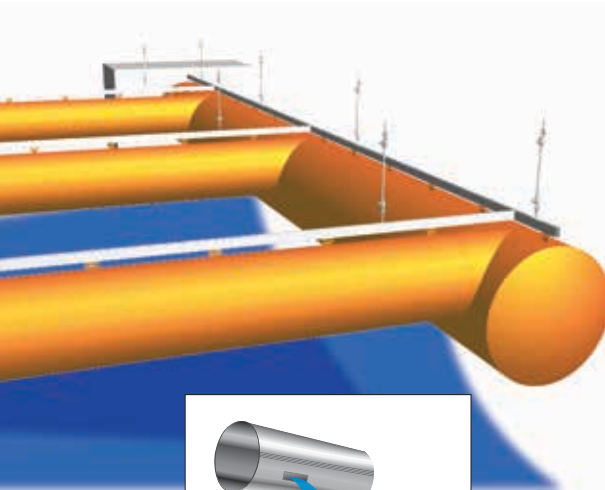
Flowstraightener (FLS) is used to rectify or regulate the air in a duct. A FabricAir® system is usually designed in a way that makes cones unnecessary.



Duct profiles - the most common profiles are round and half round ducts, which are supplied as standard solutions. Other solutions require custom design at FabricAir®.

Increased Comfort for the Occupants

The air is evenly distributed throughout the length of the fabric system. The distribution of air can be controlled with great precision and can be easily optimized.



A conventional duct with grills or diffusers distributes the air at certain points, resulting in uneven air distribution.

An employee will experience a pleasant indoor climate when the air is distributed with no draft or noise. A fabric system is easy to optimize for a perfect indoor climate.

The fabric systems are much less noisy than metal ducts. Basically, they are noise-free.

The fabric systems distribute air throughout the length of the duct and not just from grills or diffusers as is the case with metal ducts.

NO NOISE

The noise from the fabric system is very limited. It is possible to achieve low levels of noise with conventional metal ducts but they usually require special noise reduction. In the fabric system the only thing needed is the correct choice of flow model.

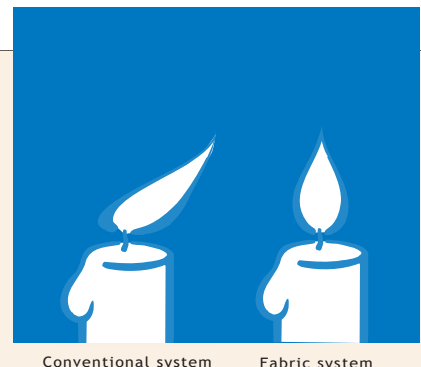
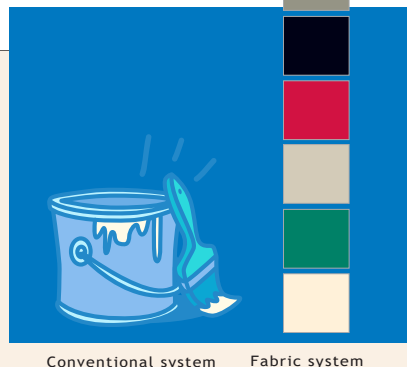
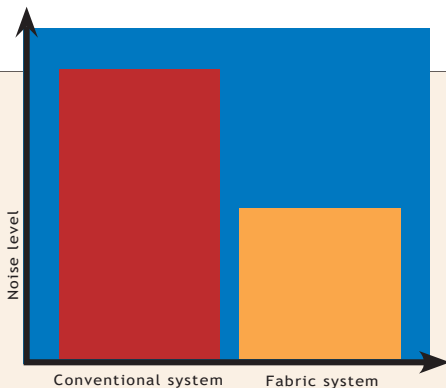
BROAD RANGE OF COLORS

The fabric systems are supplied in a broad range of standard colors - at no added cost. Several fabrics can also be supplied in special colors.



NO DRAFTS

All of the fabric systems from FabricAir® are dimensioned to make it as comfortable as possible for the individual employee. As a consequence, it is only natural that the fabric systems do not cause discomfort due to drafts.



Efficient Distribution of Air

The fabric systems from FabricAir® are efficient for most jobs in ventilation, heating and refrigeration.

The many different flow models make it easy to find an optimal solution with a specific throw.

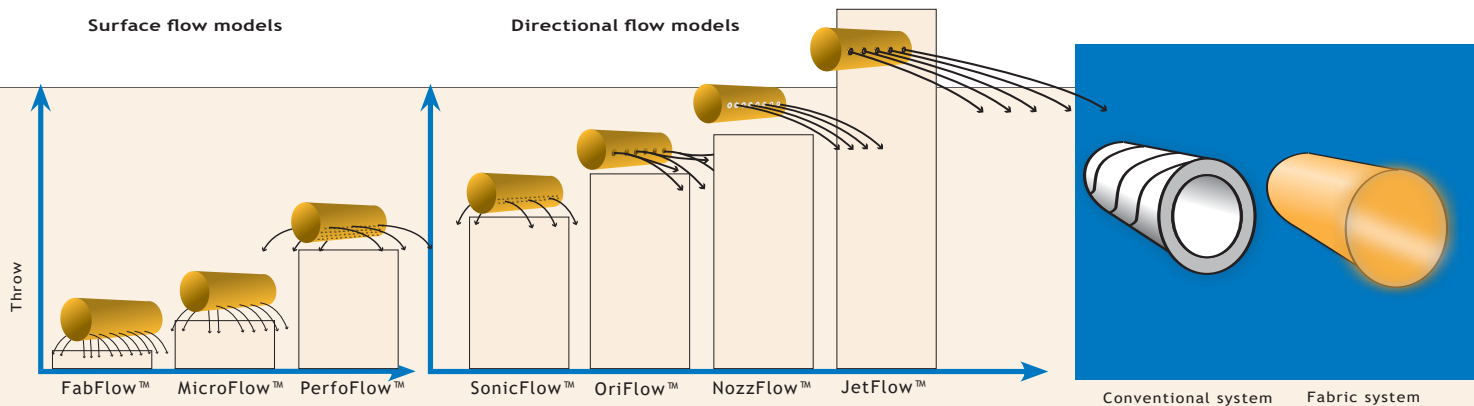
In addition to the possibilities of adjusting the air flow pattern, the FabricAir® system also performs well in cooling jobs. The permeable surface efficiently prevents condensation and bacteria growth on the duct.

ADJUSTED THROW

When a fabric system is dimensioned, the air throw is very flexible. The array of products ranges from low impulse solutions to solutions with a long throw.

NO CONDENSATION

Metal ducts need insulation to avoid condensation problems. This is not the case with fabric ducts. The air permeable material prevents condensation.

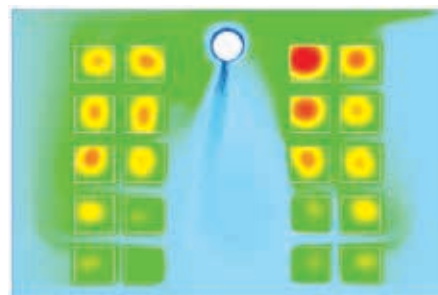




FabricAir® Customer Service

Our sales companies all have a competent customer service function, which is ready at the phones to answer questions, prepare quotes and handle orders.

Partnering with FabricAir®



FabricAir® as Partner

FabricAir® has made fabric systems since 1973. Today (2013), the company has about 125 employees in the main office in Denmark and the subsidiary companies in Lithuania, the UK, the US, Germany, Turkey and Norway.

Consultancy and Documentation

FabricAir® has a staff of highly educated engineers who help our clients all over the world. Having supplied more than 1.000.000 meters (3,000,000 feet) of ducts in 2013, this staff of employees handles consultancy, dimensioning, drawings, CFD simulations, testing, and documentation for fabric-based ventilation systems on a daily basis.

The entire FabricAir® group has an ISO 9001 quality certification by UL (UL Registered Firm) and is also certified by DNV.





FabricAir® Installation Service

In addition to the consultancy documentation work mentioned earlier, FabricAir® also works as a subcontractor, mounting the fabric systems in several markets. In this way any uncertainty as to the cost of the project is removed - our prices are always fixed and free of any unpleasant surprises.



FabricAir® Supervisor Service

If you do not want FabricAir® to handle the installation but you are still uncertain as to how to handle the installation of a fabric system FabricAir® can offer a unique supervisory solution in which we send out an experienced supervisor, who offers advice during the actual installation. This service naturally also comes at a fixed price, and as an additional service the supervisor draws up an estimate for the total time necessary for the actual installation.

FabricAir® Service Concept

In several countries, FabricAir® offers actual service contracts for our products. The most comprehensive contract includes total service, including the on-site dismantling of the system, complete service of the ducts, documentation, storage of spare ducts and mounting the serviced ducts. However, it is possible to buy ad hoc servicing - please inquire with your local FabricAir® representative about our offers in your area.

The fabric systems are dimensioned and constructed based on online 3D drawing and configuration tools.



All fabrics used in our production undergo a strict quality and environmental control. Most of our fabrics comply with the Oeko-Tex 100 standard.



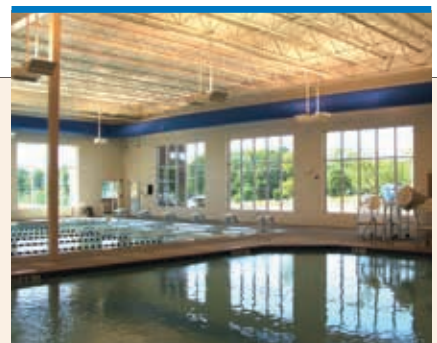
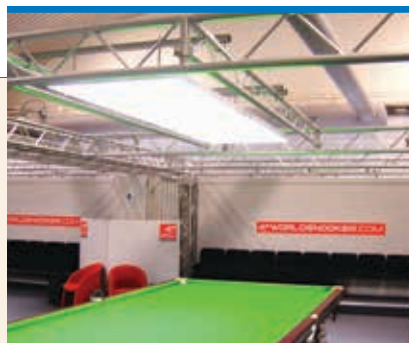
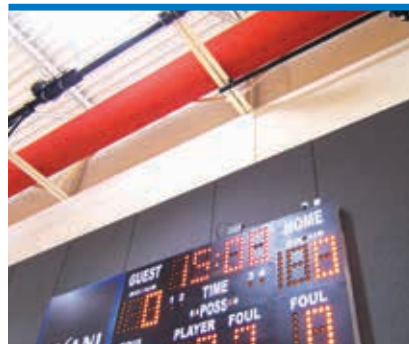
For more than 10 years FabricAir® has been able to offer the servicing of the fabric systems at our own laundry facility.



Gallery

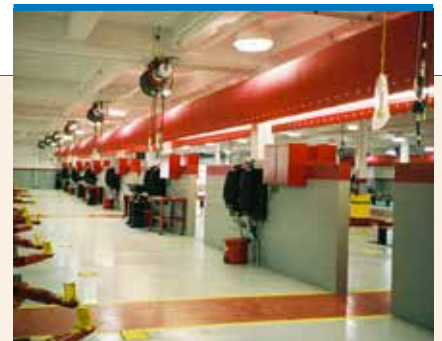
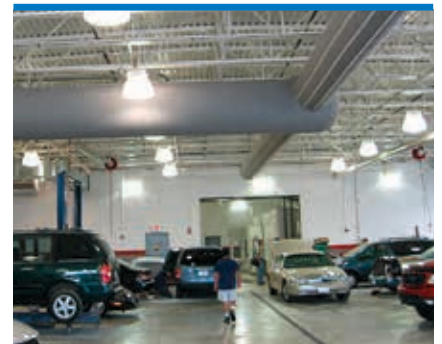
Sports and Leisure

Swimming pools, sports arenas,
fitness studios



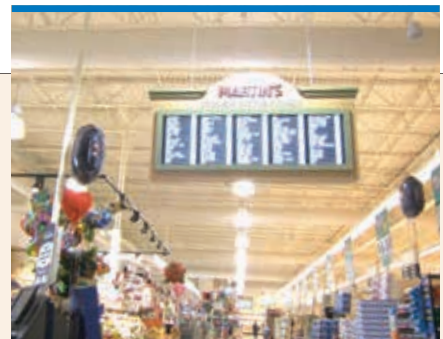
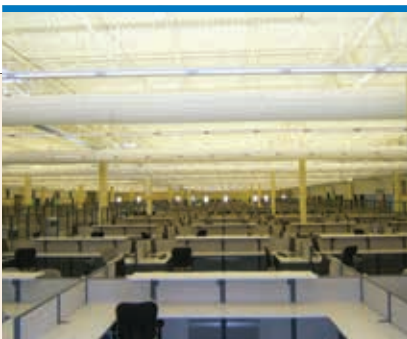
Industrial Ventilation

Production facilities, storage rooms,
printing works, body shops



Retail and Public Areas

Supermarkets, malls, stores, showrooms, restaurants, atriums, convention centers



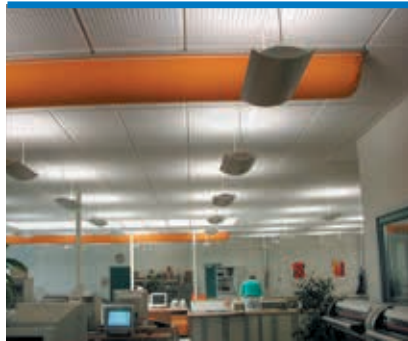
Medical Industry

Production, clean room laboratories



Educational, offices and comfort in general

Offices, diners, schools, child care facilities, lecture halls



Hygienic Advantages through Washing and Bacteria Control

Equalizing rooms, slicing rooms, warehouses, food terminals, cold working areas

No Condensation

When trying to avoid bacteria in the production process, it is important to avoid condensation on the surface of the ventilation ducts, creating a risk of bacteria growth. If air permeable fabrics are used, a fabric system will always be free of condensation. When working with cooling in the food industry, this is a major advantage.

Anti-microbial Properties

Generally, bacteria are unable to grow in a clean FabricAir® fabric. However, it has to be pointed out that bacteria will always

be able to grow in dirty ducts. If there are specific requirements for the hygiene in rooms with the fabric system, FabricAir® recommends the use of our special fabrics with additional anti-microbial properties.

Cleaning

Usually a ventilation duct is not easy to clean or to make bacteria-resistant. Fabric ducts solve this issue. Zippers make the system easy to dismantle and wash in a commercial washing machine.

The cleaning options and the anti-microbial properties are some of the primary reasons that fabric systems have become the preferred ventilation system in the food industry in many countries.

Service

(not available in all countries)
FabricAir® continues the co-operation with the client after the installation. We offer an individual maintenance agreement on washing and maintenance - including dismantling and fitting. Contact FabricAir® for an offer for service for your system.



EASY CLEANING

Machine washable - the most efficient form of bacteria control.

If a production must run round the clock while the ducts are washed a spare set of ducts is a good solution to avoid unnecessary shutdowns.



Installation

Practical Advantages Make the Installation Fast

A fabric system is quickly installed. You can do it from a ladder or lift. The fabric systems are custom-made and fit the suspension system. Shortening, welding etc. is unnecessary so no extra equipment is required to cut or adjust the systems.

Each duct section is zipped together with the next section to form complete

ducts. They are pulled in place on the suspension system. After this is done, the air system can be turned on.

How about the balancing of the system, which is necessary with conventional systems? Not necessary. A fabric system is ready immediately and does not require balancing. Hang up the ducts and turn on the system - then the installation is complete.

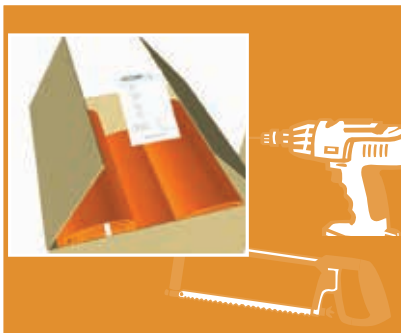
The duct sections are zipped together. The zipper is hidden behind a sewn fabric flap.

The info label found on each duct section shows where the section must be placed in the duct system.



FEW TOOLS

Detailed instructions for installing the systems are given in the instructions manual supplied. Only a few tools are needed.



FAST INSTALLATION

The suspension system is installed from a ladder or lift. No matter if a rail or cable solution is chosen, the installation is quick and simple.



LOW WEIGHT

A FabricAir® fabric system does not put a strain on ceilings or roof constructions because we always use low-weight fabrics. In spite of the weight, the fabrics are very strong and durable.

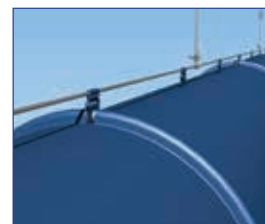




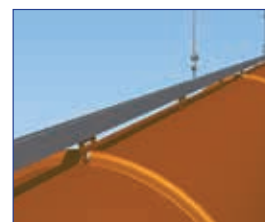
All-in-One for Better Looking Ducts

When using the All-in-One solution on a FabricAir® system, the ducts are kept open and stretched out even when the air is turned off. Furthermore, this solution ensures that starting up the system causes a minimum of strain, which is not always the case with a duct that is hanging deflated. A flat duct (classic) is closed, meaning that the air has to push itself through the duct at start-up. This often results in the very straining popping effect.

All-in-One is supplied in the most cost-effective version installed on cables, as seen in the illustration.

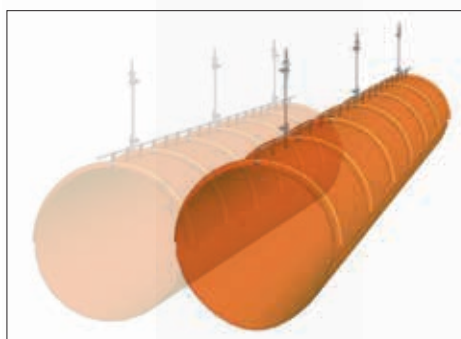


All-in-One on an H-rail. Ducts on H-rails are quickly installed or taken down for washing.



All-in-One

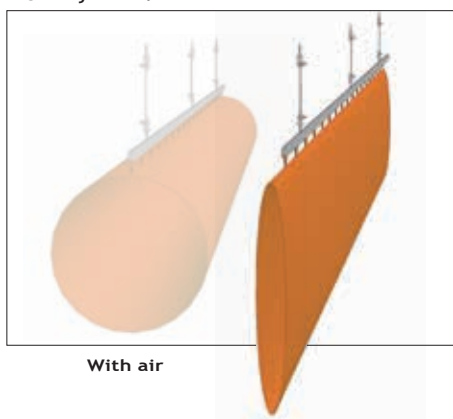
Only a slight change of the circular shape occurs with All-in-One when the air is turned off.



With air Without air

Classic

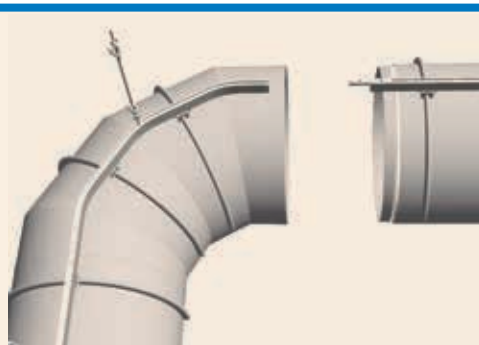
Regular systems with single suspension are not round but become flat when the air is turned off. This is not the case with All-in-One systems.



With air
Without air

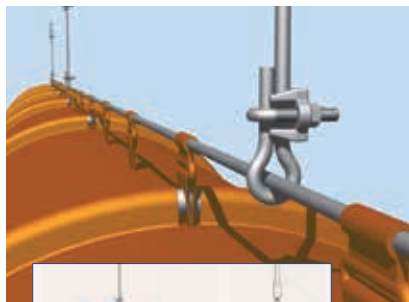
With All-in-One, support hoops are mounted at fixed intervals. The hoops are removable and are removed prior to washing.

All-in-One ensures that the ducts are always stretched out, even when there is no air in the system. Suspension type 8, All-in-One, is shown here.

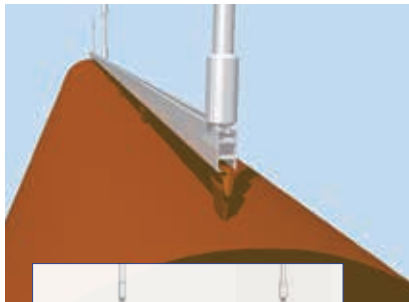


Suspension Types

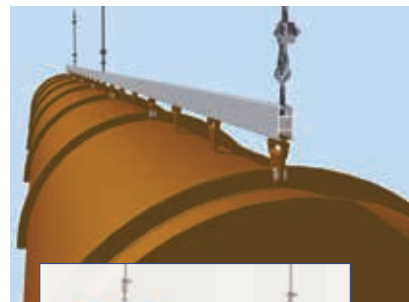
TYPE 1, SINGLE CABLE



TYPE 5, SINGLE H-RAIL



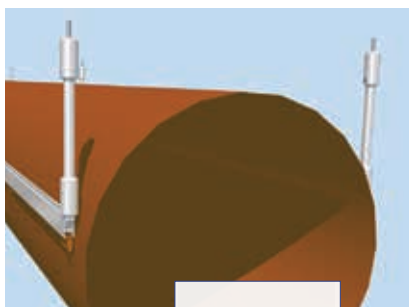
TYPE 8, SINGLE H-RAIL



TYPE 2, DOUBLE CABLE



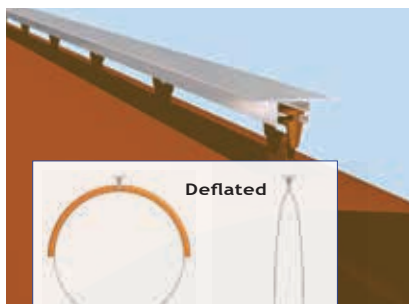
TYPE 6, DOUBLE H-RAIL



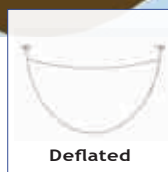
TYPE 13, DOUBLE H-RAIL



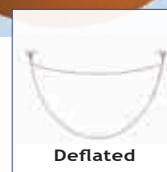
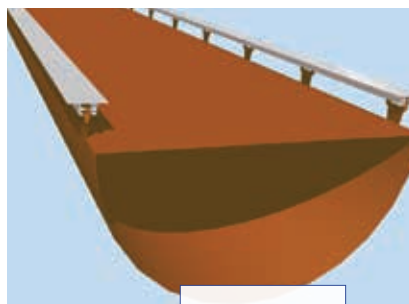
TYPE 3, SINGLE T-RAIL



TYPE 11, D-SHAPED T-RAIL



TYPE 12, D-SHAPED T-RAIL



Fabrics



Permeable Fabric

The permeable fabrics allow some of the air to pass through the surface of the fabric. This is an efficient way of preventing condensation. Permeable fabrics can be used for more or less all types of projects - but must always be used in the food industry or other industries in which condensation and hygiene are parameters.



Non-permeable Fabric

In non-permeable (airtight) fabrics, the air is distributed solely through the flowmodel, which the duct is equipped with. These ducts are typically made out of coated materials.



FabricAir® produced more than 1,000,000 meter (3,000,000 ft) of fabric-based ducts in 2013.

SYMBOLS USED FOR FABRIC PROPERTIES



Warranty. A high-quality product with a 10 year warranty. Some fabrics have 10, 5, 3 or 1 year warranty programs. The warranty does not change during this period.



Washable. The fabric can be washed in a washing machine, thereby maintaining a good and high level of hygiene.



Low permeability tolerance. Low tolerance ensures the technical performance.



Dimensionally stable. Shrinkage less than 0.5%, ensuring that the fabric keeps its shape when washing and that the ducts fit the suspension system.



All-in-One. Optimal type of mounting, which keeps the duct round - even without air. The solution furthermore reduces unwanted wear during system start-up.



Antistatic. The material does not conduct static electricity.



Oeko-Tex certified. The certification approves the fabric according to the Oeko-Tex 100 standard as being free of substances, which are harmful for people and the environment.



Permeable fabric



Non-permeable fabric



Antimicrobial treatment. Repels and kills bacteria and effectively prevents microorganisms from growing.



Fire retardant. Approved according to several fire standards - see data at each fabric.



UL classified product according to the UL 723 standard and UL 2518.













ULC classified product.



FabFlow MicroFlow PerfoFlow SonicFlow OriFlow NozzFlow JetFlow

FabricAir® Trevira



			
Certificates	Trevira Basic	Trevira CS 100	Trevira CS 150
EN 13501-1		B-s1,d0	B-s1,d0
UL723			
ULC S102.2			
Performance Certificates			
UL 2518			

About FabricAir® Trevira

FabricAir® Trevira is a permeable fabric. It is suitable in places where there is a risk of bacteria growth or condensation, such as the food industry or indoor pools.

FabricAir® Trevira is supplied with a 5 or 10 year warranty and all variants are Oeko-Tex certified. All suspension types are available, including All-in-One, which always keeps the duct stretched out even when the air is removed from the system.

FabricAir® Trevira is machine washable and retains its dimensions after washing (max. 0.5% shrinkage). The permeability is uniform (max. 5% variation). The fabric is supplied in six standard colors and can be dyed with custom colors.

FabricAir® Trevira CS 150 is supplied with a specially developed antimicrobial treatment, which is especially suitable for areas with strict requirements for hygiene.

FABRICAIR® TREVIRA BASIC



FABRICAIR® TREVIRA CS 100



FABRICAIR® TREVIRA CS 150



Standard Colors for the Fabric

The colors shown are intended as a guide only. A sample of the exact color may be obtained at FabricAir®. Custom color is also available.

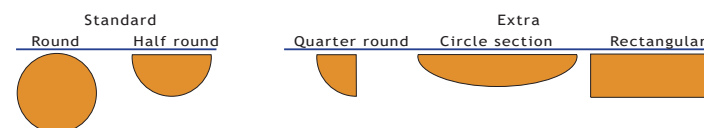


White	Blue	Orange	Gray	Black	Red	FabricAir® NO.
1000	1001	1002	1003	1004	1005	
-	18-4148	15-1058	17-0000	19-4007	18-1763	Pantone TP*

Standard Colors for Accessories

The colors of the accessories are matched with the fabric colors as shown. Alternative requests must be stated separately.

Nozzles	Sliders	Hooks

**Duct Profile**

* Note: The Pantone TP code roughly corresponding to FabricAir®'s colors is indicated here. Differences in colors must be expected and FabricAir® cannot be held responsible for such differences.

**ALL-IN-ONE**

Optionally, FabricAir® Trevira can be supplied with All-in-One support hoops which keep the duct open permanently.

ZIP FASTENER

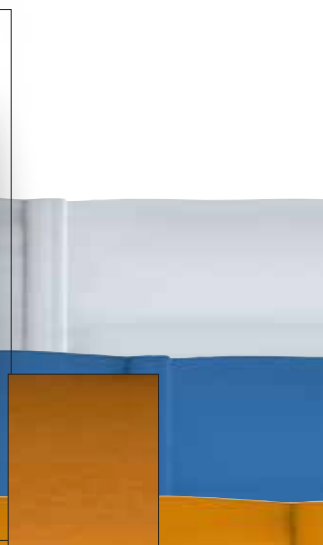
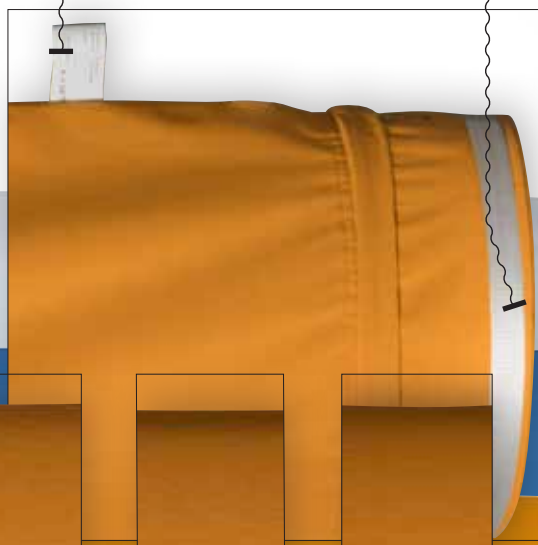
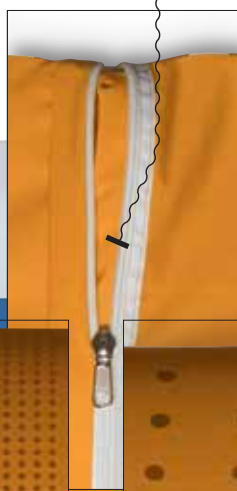
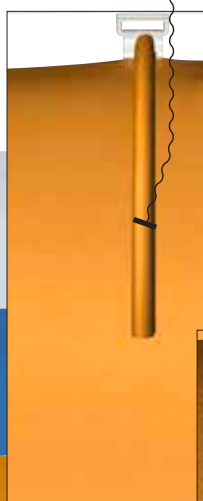
The sections are assembled with heavy-duty industrial zip fasteners, discreetly hidden under an extra seam.

TAG NUMBER

Each duct section is labelled with a tag number, which indicates the order of assembly. Furthermore, it contains an ID number, which makes the tracking easier.

SAFE MOUNTING

Fabric ducts connected to sheet metal systems are secured using a pinch-down duct belt.



FabFlow™
The air is distributed through the entire surface of the fabric.

MicroFlow™
The air is distributed through micro-perforations.

PerfoFlow™
The air is distributed through small orifices.

SonicFlow™
The air is distributed through lengthwise rows of small orifices.

OriFlow™
The air is distributed through large orifices.

NozzFlow™
The air is distributed through venturi shaped plastic nozzles with excellent discharge coefficients.

JetFlow™
FabricAir®'s JetFlow™ with built-in Jets provide exceptionally long throws for large areas.

FabricAir® Combi



Certificates	Combi 20	Combi 30	Combi 60	Combi 65	Combi 70	Combi 80	Combi 85	Combi 90
EN 13501-1	B-s1,d0	B-s1,d0			B-s1,d0	B-s1,d0	B-s1,d0	B-s1,d0
UL723								
ULC S102.2								
GOST	✓				✓	✓	✓	✓
Performance Certificates								
UL 2518								

About FabricAir® Combi

FabricAir® Combi is available with both permeable and non-permeable fabric. The fabric is strong and durable - it comes with a 10 year warranty (FabricAir® Combi 20 and Combi 30 is 5 year). FabricAir® Combi is Oeko-Tex certified. All suspension types can be used, including All-in-One, which always keeps the duct stretched out even when the air is removed from the system.

FabricAir® Combi is machine washable and retains its dimensions after washing (max. 0.5% shrinkage). The permeability is uniform (max. 5% variation). The fabric is supplied in nine standard colors. FabricAir® Combi 80 and Combi 90 are supplied with a specially developed antimicrobial treatment, which is especially suited for areas with strict hygiene requirements.

FABRICAIR® COMBI 20



FABRICAIR® COMBI 30



FABRICAIR® COMBI 60



FABRICAIR® COMBI 65



FABRICAIR® COMBI 70



FABRICAIR® COMBI 80



FABRICAIR® COMBI 85



FABRICAIR® COMBI 90



Standard Fabric Colors

The colors shown are intended as a guide only. A sample of the exact color may be obtained at FabricAir®.



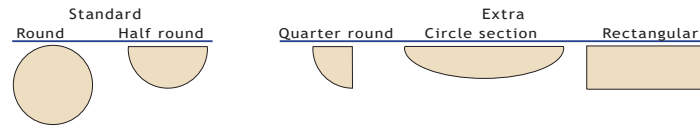
Standard Colors for Accessories

The colors of the accessories are matched with the fabric colors as shown. Alternative requests must be stated separately.

White	Blue	Orange	Dark Gray	Black	Red	Light Gray	Green	Tan	FabricAir® NO.
3000	3001	3002	3003	3004	3005	3006	3007	3008	Pantone TP*
None	19-4056	14-0955	18-4105	19-4205	18-1764	14-0105	17-5633	12-0710	
									Nozzles
									Sliders
									Hooks



Duct Profile



* Note: The Pantone TP code roughly corresponding to FabricAir®'s colors is indicated here. Differences in colors must be expected and FabricAir® cannot be held responsible for such differences.



ALL-IN-ONE

Optionally, FabricAir® Combi can be supplied with All-in-One support hoops which keep the duct open permanently.

ZIP FASTENER

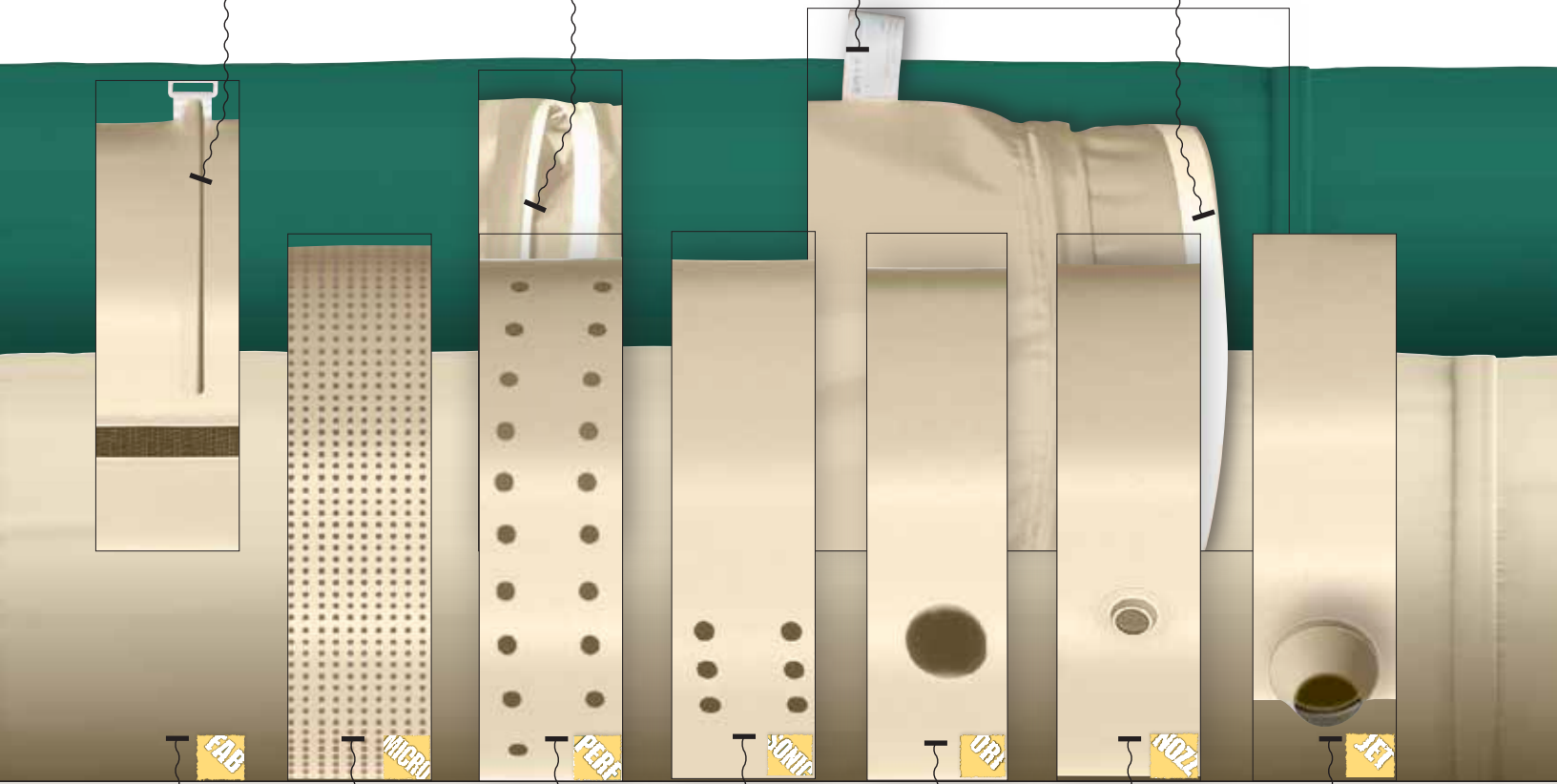
The sections are assembled with heavy-duty industrial zip fasteners, discreetly hidden under an extra seam.

TAG NUMBER

Each duct section is labelled with a tag number, which indicates the order of assembly. Furthermore, it contains an ID number, which makes the tracking easier.

SAFE MOUNTING

Fabric ducts connected to sheet metal systems are secured using a pinch-down duct belt.



FabFlow™
The air is distributed through the entire surface of the fabric.

MicroFlow™
The air is distributed through micro-perforations.

PerfoFlow™
The air is distributed through small orifices.

SonicFlow™
The air is distributed through lengthwise rows of small orifices.

OriFlow™
The air is distributed through large orifices.

NozzFlow™
The air is distributed through venturi shaped plastic nozzles with excellent discharge coefficients.

JetFlow™
FabricAir®'s JetFlow™ with built-in Jets provide exceptionally long throws for large areas.

FabricAir® Lite



Certificates
EN 13501-1

FabricAir® Lite 5	FabricAir® Lite 10	FabricAir® Lite 15	FabricAir® Lite 20
	B-s1,d0	B-s1,d0	B-s1,d0

About FabricAir® Lite
FabricAir® Lite is a non-permeable, strong and durable fabric which comes with a three-year warranty.

FabricAir® Lite is machine washable and retains its dimensions after washing (max. 0.5% shrinkage). The fabric is available in several standard colors.

FABRICAIR® LITE 5



FABRICAIR® LITE 10



FABRICAIR® LITE 15



FABRICAIR® LITE 20



Standard Fabric Colors

The colors shown are intended as a guide only. A sample of the exact color may be obtained from FabricAir®.

White	Blue	Grey	Black	FabricAir® NO.
7500	7501	7503	7504	
11-0601	19-4050	18-4105	19-4205	Pantone TP*

Sliders

Hooks

Standard Colors for Accessories

The colors of the accessories are matched with the fabric colors as shown. Alternative requests must be stated separately.

Duct Profile

Standard

Round

Half round

Extra

Quarter round

Circle section

Rectangular

* Note: The Pantone TP code roughly corresponding to FabricAir®'s colors is indicated here. Differences in colors must be expected and FabricAir® cannot be held responsible for such differences.

ZIP FASTENER

The sections are assembled using heavy-duty industrial zips discreetly hidden under an extra seam.

TAG NUMBER

Each duct section is labelled with a tag number which indicates the order of assembly. It also contains an ID number, which makes the tracking easier.

SAFE MOUNTING

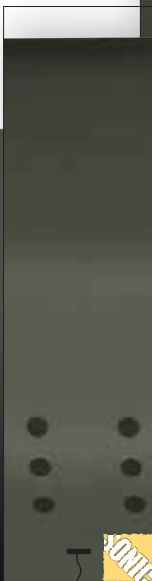
Fabric ducts connected to sheet metal systems are secured using a pinch-down duct belt.



MicroFlow™
The air is distributed through micro-perforations.



PerfoFlow™
The air is distributed through small orifices.



SonicFlow™
The air is distributed through lengthwise rows of small orifices.



OriFlow™
The air is distributed through large orifices.



Certificates

ULC S102.2

Poly



FabricAir® Poly

FabricAir® Poly is a cost-effective, advantageous alternative. It is a non-permeable fabric, mainly used in heavy industrial installations for distributing isothermal or heated air.



Certificates

EN 13501-1

ULC S102.2

NFP 92-507:2004

GOST

Glass 220

A2-s1, d0































MO



FabricAir® Glass 220

FabricAir® Glass 220 is used in areas with strict requirements for fire rating. FabricAir® Glass 220 is woven with glass fibers, which are noncombustible. The material cannot be machine washed and consequently cannot be used if this is a requirement.



Standard Fabric Colors The colors shown are intended as a guide only. A sample of the exact color may be obtained at FabricAir®.	FabricAir® Poly		FabricAir® Glass 220			FabricAir® NO. Pantone TP* Nozzles (NozzFlow™) Sliders Hooks
						
	White	White	Blue	Gray	Black	
	5200	4000	4001	4002	4004	
	11-0602	11-0601	19-3832	14-4203	19-4006	
Standard Colors for Accessories The colors of the accessories are matched with the fabric colors as shown. Alternative requests must be stated separately.						  
						
						
						

*Note: The Pantone TP code roughly corresponding to FabricAir®'s colors is indicated here. Differences in colors must be expected and FabricAir® cannot be held responsible for such differences.

OriFlow™
 The air is distributed through large orifices.

ZIP FASTENER

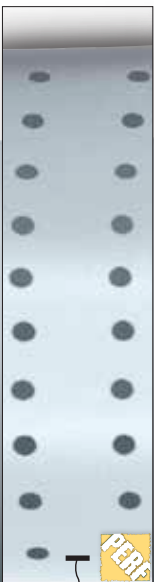
The sections are assembled using heavy-duty industrial zips discreetly hidden under an extra seam.

TAG NUMBER

Each duct section is labelled with a tag number which indicates the order of assembly. It also contains an ID number, which makes the tracking easier.



MicroFlow™
 The air is distributed through micro-perforations.



PerfoFlow™
 The air is distributed through small orifices.



SonicFlow™
 The air is distributed through lengthwise rows of small orifices.



OriFlow™
 The air is distributed through large orifices.



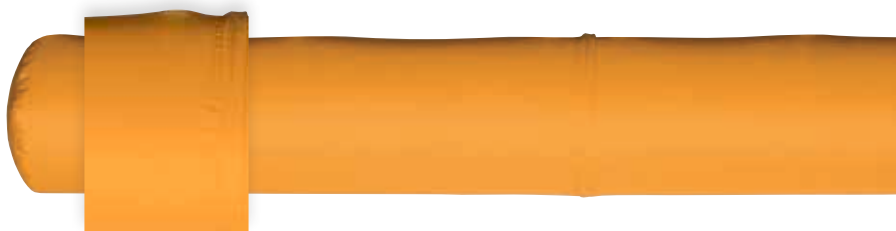
NozzFlow™
 The air is distributed through venturi shaped plastic nozzles with excellent discharge coefficients.

Flow Models



FabFlow™

In FabFlow™, the air exits the duct through the permeable fabric surface. The air is driven by thermodynamic forces preventing drafts in the occupied zone, resulting in a high level of comfort.



Characteristics

Characteristics of this flow model are:

Surface:
Permeable

Near-zone:
0 (surface velocity below 0,5 m/s or [98 fpm])

Fabrics suitability

The flow model is suitable for these fabrics:

NC level

Design pressure:

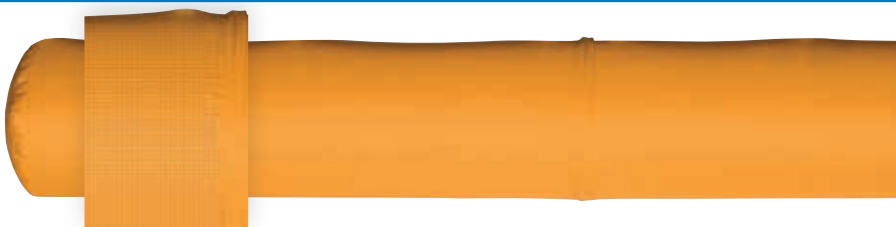
		ΔP [INWG]							
		0.24	0.32	0.40	0.48	0.56	0.64	0.72	0.80
		ΔP [PA]							
Fabric:		60	80	100	120	140	160	180	200
FabricAir® Trevira Basic	●	15	15	15	20	20	25	25	25
FabricAir® Trevira CS 100	●	15	15	15	20	20	25	25	25
FabricAir® Trevira CS 150	●	15	15	15	20	20	25	25	25
FabricAir® Combi 20	●	15	15	15	20	20	25	25	25
FabricAir® Combi 30*	-	-	-	-	-	-	-	-	-
FabricAir® Combi 60	●	15	15	15	20	20	25	25	25
FabricAir® Combi 65*	-	-	-	-	-	-	-	-	-
FabricAir® Combi 70	●	15	15	15	20	20	25	25	25
FabricAir® Combi 80	●	15	15	15	20	20	25	25	25
FabricAir® Combi 85*	-	-	-	-	-	-	-	-	-
FabricAir® Combi 90*	-	-	-	-	-	-	-	-	-
FabricAir® Lite 5*	-	-	-	-	-	-	-	-	-
FabricAir® Lite 10*	-	-	-	-	-	-	-	-	-
FabricAir® Lite 15*	-	-	-	-	-	-	-	-	-
FabricAir® Lite 20*	-	-	-	-	-	-	-	-	-
FabricAir® Glass 220*	-	-	-	-	-	-	-	-	-
FabricAir® Poly*	-	-	-	-	-	-	-	-	-

* = Non permeable



MicroFlow™

With MicroFlow™, the air exits the duct via laser cut micro-perforations, along the circumference of the duct. The micro-perforations can cover between 90° and 360° of the duct's circumference. MicroFlow™ has the smallest near-zone of all of the perforated fabrics available. In most cases the near-zone will not extend beyond 300 mm [11.81"].



Characteristics

Characteristics of this flow model are:

Surface:
Micro-perforations 0,2-0,6 mm [0.008"-0.024"] diameter

Near-zone:
Maximum 300 mm [11.81"]

Fabrics suitability

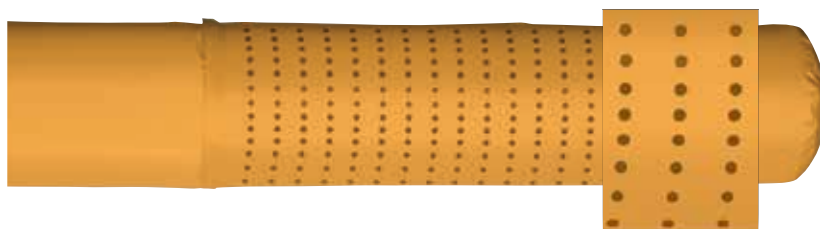
The flow model is suitable for these fabrics:

NC level

Design pressure:

		ΔP [INWG]							
		0.24	0.32	0.40	0.48	0.56	0.64	0.72	0.80
		ΔP [PA]							
Fabric:		60	80	100	120	140	160	180	200
FabricAir® Trevira Basic	●	20	25	25	30	30	35	35	40
FabricAir® Trevira CS 100	●	20	25	25	30	30	35	35	40
FabricAir® Trevira CS 150	●	20	25	25	30	30	35	35	40
FabricAir® Combi 20	●	20	25	25	30	30	35	35	40
FabricAir® Combi 30*	●	20	25	25	30	30	35	35	40
FabricAir® Combi 60	●	20	25	25	30	30	35	35	40
FabricAir® Combi 65*	●	20	25	25	30	30	35	35	40
FabricAir® Combi 70	●	20	25	25	30	30	35	35	40
FabricAir® Combi 80	●	20	25	25	30	30	35	35	40
FabricAir® Combi 85*	●	20	25	25	30	30	35	35	40
FabricAir® Combi 90*	●	20	25	25	30	30	35	35	40
FabricAir® Lite 5*	●	20	25	25	30	30	35	35	40
FabricAir® Lite 10*	●	20	25	25	30	30	35	35	40
FabricAir® Lite 15*	●	20	25	25	30	30	35	35	40
FabricAir® Lite 20*	●	20	25	25	30	30	35	35	40
FabricAir® Glass 220*	●	20	25	25	30	30	35	35	40
FabricAir® Poly*	-	-	-	-	-	-	-	-	-

* = Non permeable



PerfoFlow™

With PerfoFlow™ the air exits the duct via laser cut perforations, along the circumference of the duct. The perforations can cover between 90° and 360° of the duct's circumference. The size of the near zone depends on the static pressure inside the duct, the percent of the circumference that is perforated, the size and spacing of the perforations.

Fabrics suitability

The flow model is suitable for these fabrics:

NC level

Design pressure:

		ΔP [INWG]	0.24	0.32	0.40	0.48	0.56	0.64	0.72	0.80
		ΔP [PA]	60	80	100	120	140	160	180	200
Fabric:										
FabricAir® Trevira Basic	●		25	30	30	30	35	35	40	40
FabricAir® Trevira CS 100	●		25	30	30	30	35	35	40	40
FabricAir® Trevira CS 150	●		25	30	30	30	35	35	40	40
FabricAir® Combi 20	●		25	30	30	30	35	35	40	40
FabricAir® Combi 30*	●		25	30	30	30	35	35	40	40
FabricAir® Combi 60	●		25	30	30	30	35	35	40	40
FabricAir® Combi 65*	●		25	30	30	30	35	35	40	40
FabricAir® Combi 70	●		25	30	30	30	35	35	40	40
FabricAir® Combi 80	●		25	30	30	30	35	35	40	40
FabricAir® Combi 85*	●		25	30	30	30	35	35	40	40
FabricAir® Combi 90*	●		25	30	30	30	35	35	40	40
FabricAir® Lite 5*	●		25	30	30	30	35	35	40	40
FabricAir® Lite 10*	●		25	30	30	30	35	35	40	40
FabricAir® Lite 15*	●		25	30	30	30	35	35	40	40
FabricAir® Lite 20*	●		25	30	30	30	35	35	40	40
FabricAir® Glass 220*	●		25	30	30	30	35	35	40	40
FabricAir® Poly*	-		-	-	-	-	-	-	-	-

* = Non permeable

Characteristics

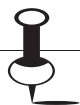
Characteristics of this flow model are:

Surface:

Perforations 3,0-14,0 mm
[0.12"-0.55"] diameter

Near-zone:

up to 6.400 mm [21']



Elements affecting air flow

The air flow in a room is affected by many factors. Occasionally these factors can cause unexpected flow patterns.

In this context, it is important to consider:

- the geometry of the room
- the placement of duct accessories: orifices and nozzles.
- exhaust placement
- heat-source placement
- temperature difference, ΔT
- permeability of the fabric
- design pressure, ΔP

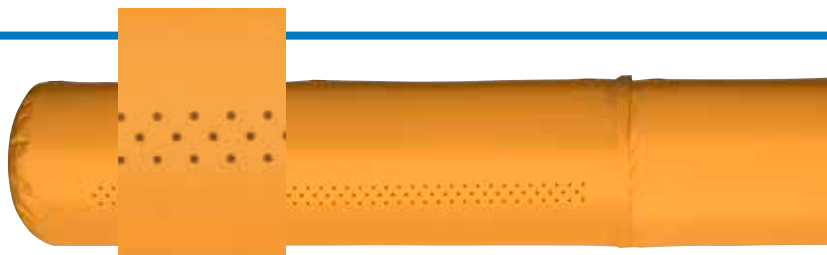
Flow Model Principles

We offer flow models based on different principles. When combined with our fabric options, these

thermodynamic and ventilation properties provide a wide product range that is adaptable to almost every situation.

SonicFlow™

SonicFlow™ is a directional flow model where the air exits the duct via rows of laser cut perforations. Multiple rows of SonicFlow™ can be specified for a duct, with each row covering a maximum of 30° of the circumference. The throw depends on the static pressure inside the duct, the size, and spacing of the perforations.



Characteristics

Characteristics of this flow model are:

Surface:
Perforations 3,0-14,0 mm
[0.12"-0.55"] diameter

Exit velocity:
7,0 to 13,0 m/s [1,378 to 2,559 fpm]

Throw:
Medium-directional

Fabrics suitability

The flow model is suitable for these fabrics:

NC level

Design pressure:

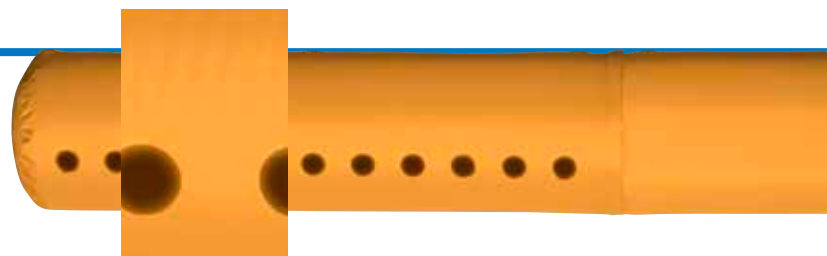
		ΔP [INWG]							
		0.24	0.32	0.40	0.48	0.56	0.64	0.72	0.80
		ΔP [PA]							
Fabric:		60	80	100	120	140	160	180	200
FabricAir® Trevira Basic	●	25	30	30	30	35	35	40	40
FabricAir® Trevira CS 100	●	25	30	30	30	35	35	40	40
FabricAir® Trevira CS 150	●	25	30	30	30	35	35	40	40
FabricAir® Combi 20	●	25	30	30	30	35	35	40	40
FabricAir® Combi 30*	●	25	30	30	30	35	35	40	40
FabricAir® Combi 60	●	25	30	30	30	35	35	40	40
FabricAir® Combi 65*	●	25	30	30	30	35	35	40	40
FabricAir® Combi 70	●	25	30	30	30	35	35	40	40
FabricAir® Combi 80	●	25	30	30	30	35	35	40	40
FabricAir® Combi 85*	●	25	30	30	30	35	35	40	40
FabricAir® Combi 90*	●	25	30	30	30	35	35	40	40
FabricAir® Lite 5*	●	25	30	30	30	35	35	40	40
FabricAir® Lite 10*	●	25	30	30	30	35	35	40	40
FabricAir® Lite 15*	●	25	30	30	30	35	35	40	40
FabricAir® Lite 20*	●	25	30	30	30	35	35	40	40
FabricAir® Glass 220*	●	25	30	30	30	35	35	40	40
FabricAir® Poly*	●	-	-	-	-	-	-	-	-

* = Non permeable



OriFlow™

OriFlow™ is a directional flow model where the air exits the duct via rows of laser cut orifices. Multiple rows of OriFlow™ can be specified for a duct. The throw depends on the static pressure inside the duct, the size, and spacing of the orifices.



Characteristics

Characteristics of this flow model are:

Surface:
Orifices 14,1-125,0 mm
[0.56"-4.92"] diameter

Exit velocity:
7,0 to 18,0 m/s [1,378 to 3,543 fpm]

Throw:
High-directional

Fabrics suitability

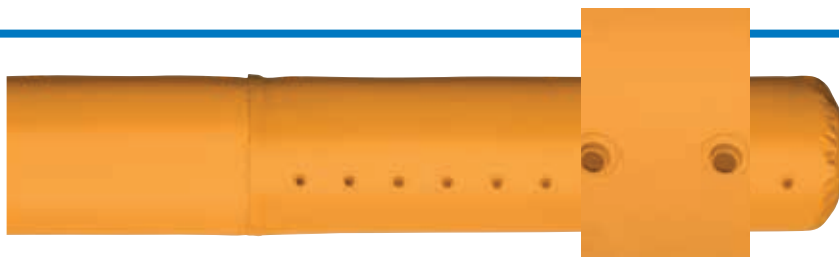
The flow model is suitable for these fabrics:

NC level

Design pressure:

		ΔP [INWG]							
		0.24	0.32	0.40	0.48	0.56	0.64	0.72	0.80
		ΔP [PA]							
Fabric:		60	80	100	120	140	160	180	200
FabricAir® Trevira Basic	●	20	25	25	25	30	30	35	35
FabricAir® Trevira CS 100	●	20	25	25	25	30	30	35	35
FabricAir® Trevira CS 150	●	20	25	25	25	30	30	35	35
FabricAir® Combi 20	●	20	25	25	25	30	30	35	35
FabricAir® Combi 30*	●	20	25	25	25	30	30	35	35
FabricAir® Combi 60	●	20	25	25	25	30	30	35	35
FabricAir® Combi 65*	●	20	25	25	25	30	30	35	35
FabricAir® Combi 70	●	20	25	25	25	30	30	35	35
FabricAir® Combi 80	●	20	25	25	25	30	30	35	35
FabricAir® Combi 85*	●	20	25	25	25	30	30	35	35
FabricAir® Combi 90*	●	20	25	25	25	30	30	35	35
FabricAir® Lite 5*	●	20	25	25	25	30	30	35	35
FabricAir® Lite 10*	●	20	25	25	25	30	30	35	35
FabricAir® Lite 15*	●	20	25	25	25	30	30	35	35
FabricAir® Lite 20*	●	20	25	25	25	30	30	35	35
FabricAir® Glass 220*	●	20	25	25	25	30	30	35	35
FabricAir® Poly*	●	20	25	25	25	30	30	35	35

* = Non permeable

**Fabrics suitability**

The flow model is suitable for these fabrics:

		NC level								
		Design pressure:								
		ΔP [INWG]	0.24	0.32	0.40	0.48	0.56	0.64	0.72	0.80
Fabric:	ΔP [PA]	60	80	100	120	140	160	180	200	
FabricAir® Trevira Basic	●	20	20	25	25	30	30	35	35	
FabricAir® Trevira CS 100	●	20	20	25	25	30	30	35	35	
FabricAir® Trevira CS 150	●	20	20	25	25	30	30	35	35	
FabricAir® Combi 20	●	20	20	25	25	30	30	35	35	
FabricAir® Combi 30*	●	20	25	25	30	30	30	35	35	
FabricAir® Combi 60	●	20	20	25	25	30	30	35	35	
FabricAir® Combi 65*	●	20	25	25	30	30	30	35	35	
FabricAir® Combi 70	●	20	20	25	25	30	30	35	35	
FabricAir® Combi 80	●	20	20	25	25	30	30	35	35	
FabricAir® Combi 85*	●	20	25	25	30	30	30	35	35	
FabricAir® Combi 90*	●	20	25	25	30	30	30	35	35	
FabricAir® Lite 5*	-	-	-	-	-	-	-	-	-	
FabricAir® Lite 10*	-	-	-	-	-	-	-	-	-	
FabricAir® Lite 15*	-	-	-	-	-	-	-	-	-	
FabricAir® Lite 20*	-	-	-	-	-	-	-	-	-	
FabricAir® Glass 220*	●	20	20	25	25	30	30	35	35	
FabricAir® Poly*	-	-	-	-	-	-	-	-	-	

* = Non permeable

NozzFlow™

NozzFlow™ is used in applications where very precise directional airflow is needed. The discharge coefficient is almost at unity, due to the shape of the nozzle. This results in higher discharge velocities, than an equivalently sized orifice, and longer more directional throws.

Characteristics

Characteristics of this flow model are:

Surface:

Nozzles 18,0 mm [0.70"] diameter

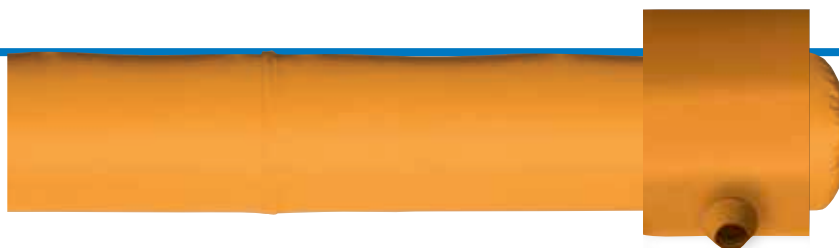
Exit velocity:

7,0 to 20,0 m/s [1,378 to 3,937 fpm]

Throw:

High-directional

The nozzles can be placed anywhere needed on the duct surface so that conditioned air easily can be directed to where it is needed.

**Fabrics suitability**

The flow model is suitable for these fabrics:

		ΔP [INWG]	0.24	0.32	0.40	0.48	0.56	0.64	0.72	0.80
Fabric:	ΔP [PA]	60	80	100	120	140	160	180	200	
FabricAir® Trevira Basic	●	20	20	25	25	30	30	35	35	
FabricAir® Trevira CS 100	●	20	20	25	25	30	30	35	35	
FabricAir® Trevira CS 150	●	20	20	25	25	30	30	35	35	
FabricAir® Combi 20	●	20	20	25	25	30	30	35	35	
FabricAir® Combi 30*	●	20	25	25	30	30	30	35	35	
FabricAir® Combi 60	●	20	20	25	25	30	30	35	35	
FabricAir® Combi 65*	●	20	25	25	30	30	30	35	35	
FabricAir® Combi 70	●	20	20	25	25	30	30	35	35	
FabricAir® Combi 80	●	20	20	25	25	30	30	35	35	
FabricAir® Combi 85*	●	20	25	25	30	30	30	35	35	
FabricAir® Combi 90*	●	20	25	25	30	30	30	35	35	
FabricAir® Lite 5*	-	-	-	-	-	-	-	-	-	
FabricAir® Lite 10*	-	-	-	-	-	-	-	-	-	
FabricAir® Lite 15*	-	-	-	-	-	-	-	-	-	
FabricAir® Lite 20*	-	-	-	-	-	-	-	-	-	
FabricAir® Glass 220*	-	-	-	-	-	-	-	-	-	
FabricAir® Poly*	-	-	-	-	-	-	-	-	-	

* = Non permeable

JetFlow™

JetFlow™ is capable of generating exceptionally long throws through the use of conical jets, in varying diameters. The jets have a very high discharge coefficient, due to the conical shape of the jet. This results in higher discharge velocities, than an equivalently sized orifice.

Characteristics

Characteristics of this flow model are:

Surface:

Jets 50 to 250 mm [1.97" to 9.84"] diameter

Exit velocity:

10,0 to 20,0 m/s [1,969 to 3,937 fpm]

Throw:

High-directional

The jets can be placed anywhere needed on the duct surface so that conditioned air easily can be directed to where it is needed.

FabricAir® Dispersion Systems

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Cover photo: 10.000 meter (30,000 feet) of FabricAir® Dispersion System installed in Europe's largest pork facility, Danish Crown, Horsens, Denmark.
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