



FABRIC DUCTING & DIFFUSERS

Technical data

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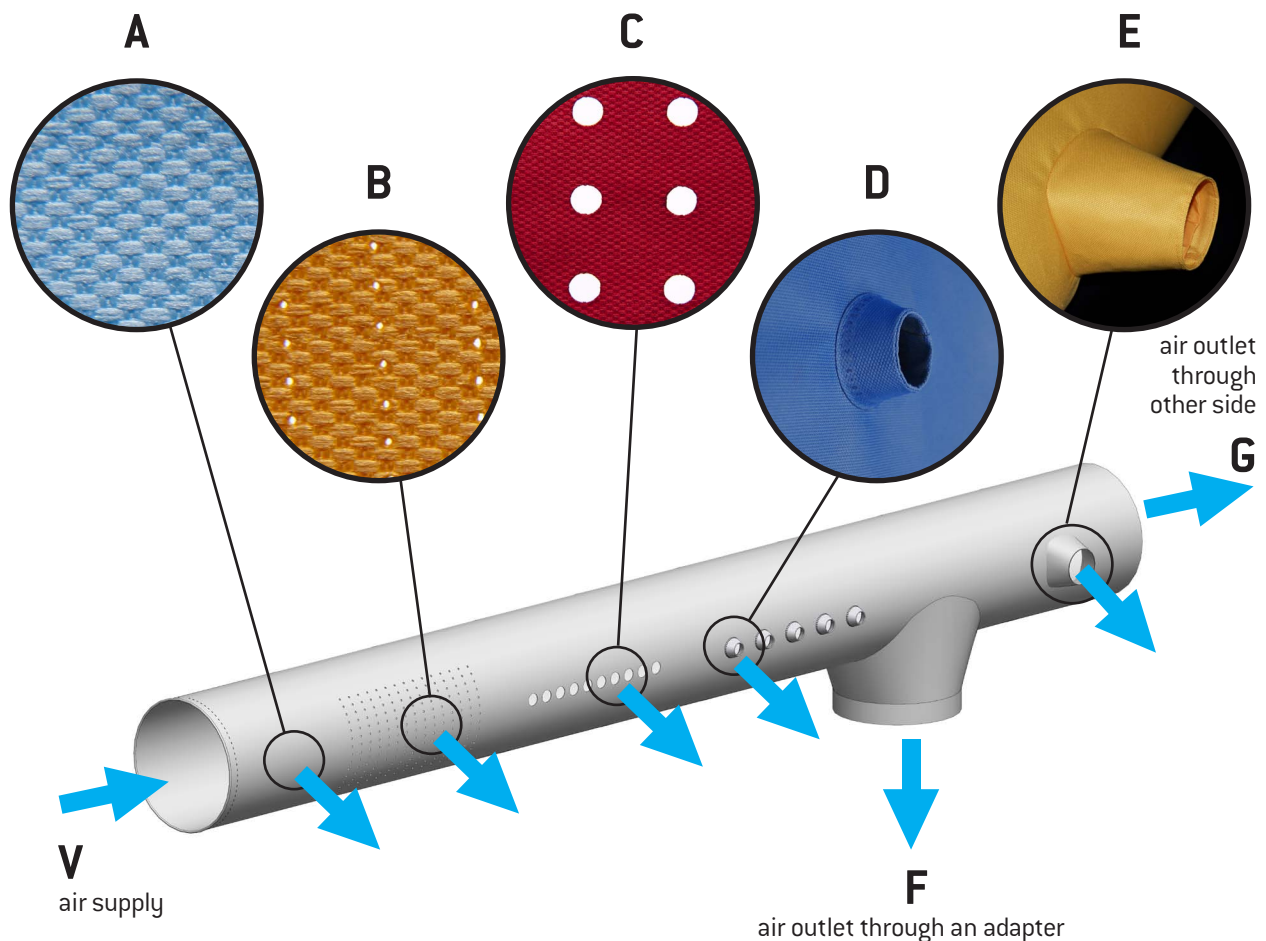
1. Fabric Ducting & Diffusers: Methods of distributing and returning air

Prihoda products are generally ducting as well as air distribution devices (or return devices) all at the same time. We offer positive pressure air dispersion systems (fabric ducting & diffusers) as well as negative pressure ducting for exhaust or returning air to the unit from the space served.

1.1. Air dispersion / distribution options for fabric diffusers

Flow V brought into the diffuser through any of the ends or through the entry adapter may exit in the following manners:

- A - through a permeable fabric
- B - through microperforation – 0.2 – 0.4 mm holes in the fabric
- C - through perforation – holes with a diameter greater than 5/32" (4mm)
- D - through a small nozzle
- E - through a large nozzle
- F - through an adapter – air is guided off into another ducting branch (Fabric or metal)
- G - through the second end – air leads to another diffuser or ducting (such as back to metal duct, etc.)



It always holds true that: $V = A + B + C + D + E + F + G$

[certain values of A, B, C, D, E, F, G may be zero]

Airflow Models for Prihoda Fabric Ducting & Diffusers

Air is distributed from fabric diffusers through various sizes, patterns, and types of openings. The combination of size, spacing, and grouping of holes together with various outlet flow models provide an infinite number of combinations and solutions for air distribution requirements for today's project challenges.

Microperforation - Tiny laser cut holes with a diameter of 0.2 – 0.4 mm, intended for low velocity / laminar air dispersion (Very low throw, not recommended for heating unless directional microperforation is used).

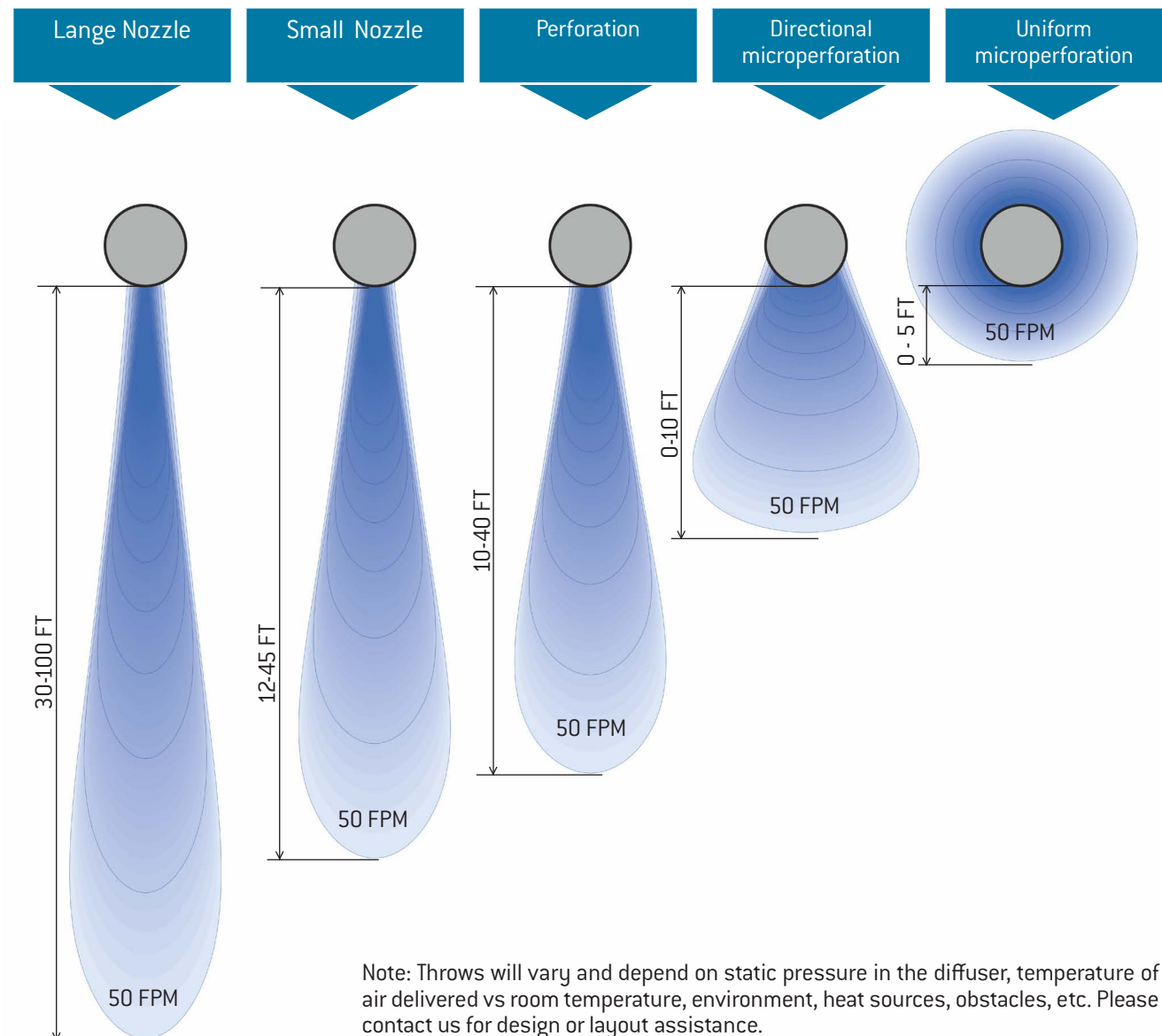
Perforations - A series of 5/32 inch (4mm) or larger holes, provide directed air supply (low to medium throw for heating, cooling, and ventilating).

Nozzles - 3/4" diameter and up, very long throws or when a high velocity or spot cooling/heating is required.

* When calculating the throw/velocity at different distances from the duct, the temperature difference between the delivered air and the room (Delta T) must be considered along with the air speed from the outlets.

Fabric diffusers are an extremely versatile air distribution device which cover the entire spectrum of applied flow models used today. We achieve the desired throw by selecting the correct air diffuser outlet method, or quite often, a combination of methods.

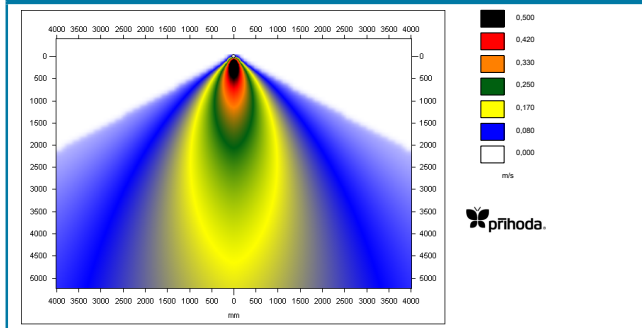
Airflow Models



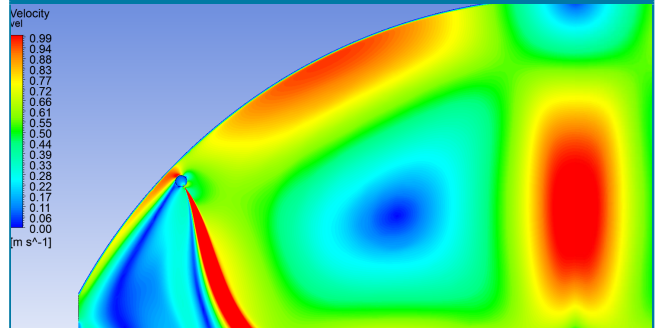
We tailor make all of our products to meet the needs of each individual project. Due to every project's specific needs and the numerous combinations of flow models we decided years ago to develop design software to better assist our customers and to insure a proper solution is achieved on every order we deliver.

Our software provides throw velocities at various distances from the diffuser (isothermal or corrected for heating / cooling), pressure loss calculations, and sound generated. Generally the design parameters are static pressure available to the diffuser, volume of air, flow model, fabric type, installation height, throw needed (space dimensions), temperature difference, sound sensitive or not, and mounting method.

Airflow patterns created by PRIHODA design software

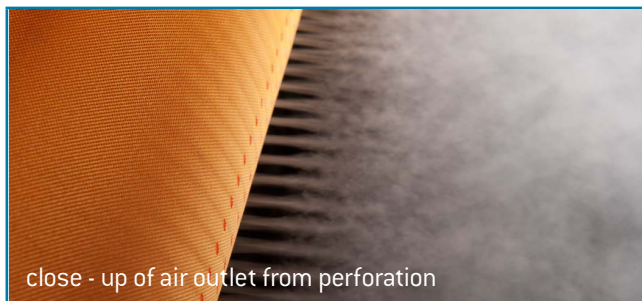
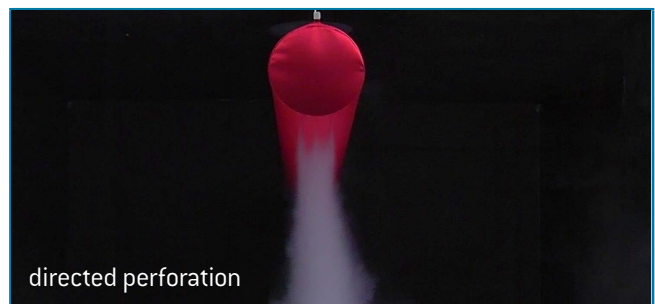


Airflow patterns created by Ansys Fluent CFD software



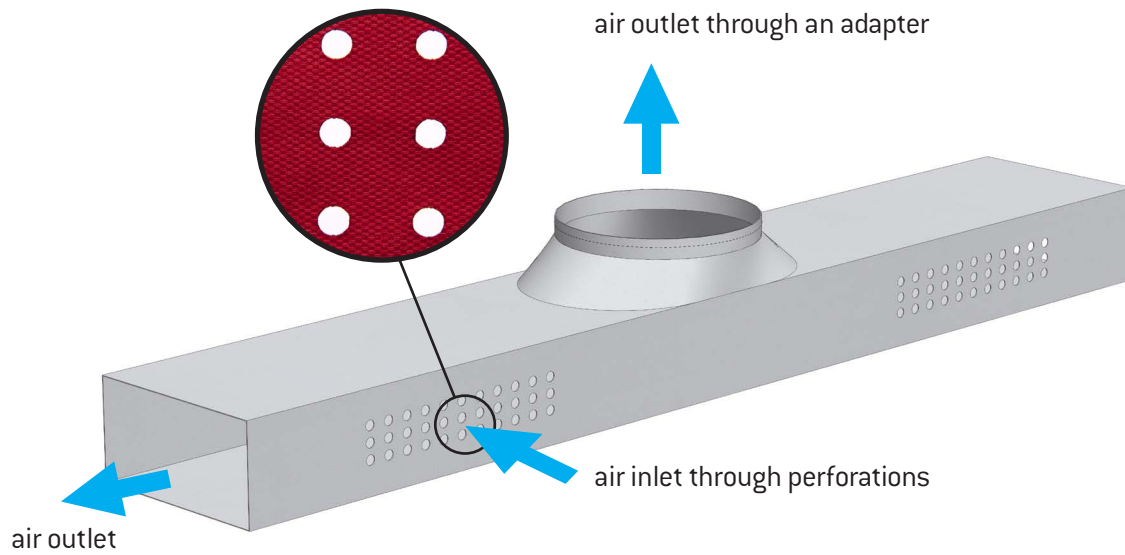
Many years of continuous software updates, lab/field testing, and thousands of installations world wide gives us complete confidence that our products will accomplish the solution your project requires. On very large or critical airflow applications we also offer the use of Computational Fluid Dynamics software from one of the leading CFD software companies, Ansys Fluent (formerly Fluent Airpak).

Examples of airflow patterns created through a smoke test in the PRIHODA testing center



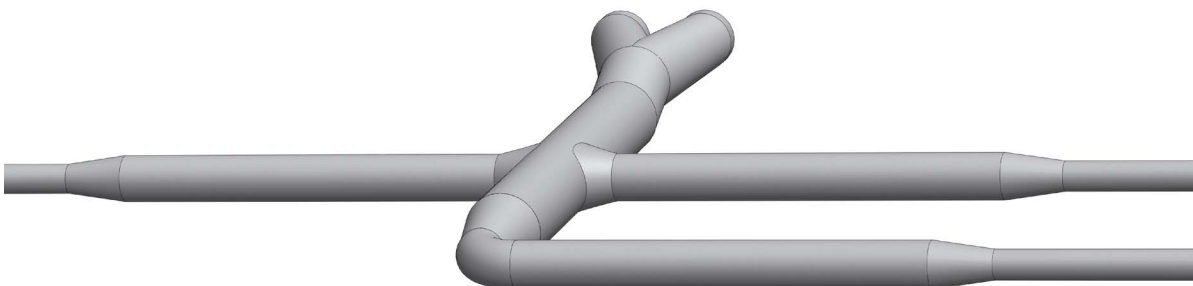
1.2. Air inlets for negative pressure ducting

Perforations are currently the only air inlet option used for negative pressure ducting.



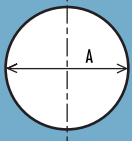
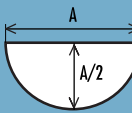
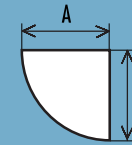
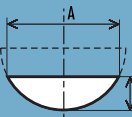
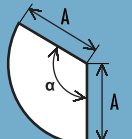
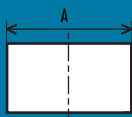
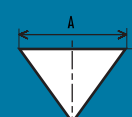
1.3. Transporting air with fabric ducting

Ducting made from impermeable fabric or insulated ducting feeds air to the point where it needs to be distributed. We can manufacture nearly any fitting required such as a "T", reducer, radius elbow and many other custom fittings.



2. Basic properties of Prihoda Fabric Ducts

2.1. Cross Section

POSITIVE PRESSURE ONLY	C	CIRCULAR		The basic and most simple version, which is the easiest to install and maintain. Recommended unless your project requires otherwise.
	H	HALF-ROUND		Use where there is not enough space for a circular diffuser.
	Q	QUARTER-ROUND		Use where there is not enough space for a circular diffuser, or if the diffuser is to be installed in a corner of a room or space.
	SG	SEGMENT		Use where there is not enough space even for a half-round diffuser or if a low profile look is desired.
	SC	SECTOR		Use where quarter-round shape cannot be used because of an unusually shaped ceiling construction.
POSITIVE AND NEGATIVE PRESSURE	S	SQUARE		The shape is kept by means of a special structure holding all the corners of the diffuser and holding all four sides of fabric in tension.
	T	TRIANGULAR		The diffuser cross section is maintained by stretching with a weighted rod placed into the cross section bottom corner.

Note: We also make transitions to take the duct from one of the shapes above to a different shape. Some shapes deform slightly despite being properly tensioned, this is due to positive or negative pressure and the material flexibility (applies to cross sections S and T).

2.2. Dimension

We manufacture fabric ducting and diffusers ranging from 4" to 80" diameters (custom diameters upon request), depending on the project requirements. The inlet adapter dimensions are always approximately 1/2" larger than the metal connection for ease of installation.

In general, fabric diffusers are designed for similar flow speeds as traditional ducting and the volume of air determines the inlet size. Maximum velocities range from 1400-1800fpm for round ducts and 700-1400fpm for half round ducts (the higher the inlet velocity, the more static pressure required). Factors to consider are potential flow turbulence from fittings, available pressure, and sound generated by fast moving air. Specific conditions of flow, static pressure and weight of the fabric used must be taken into account to avoid vibrations/duct movement. Do not hesitate to contact us for design advice, we would be glad to help.

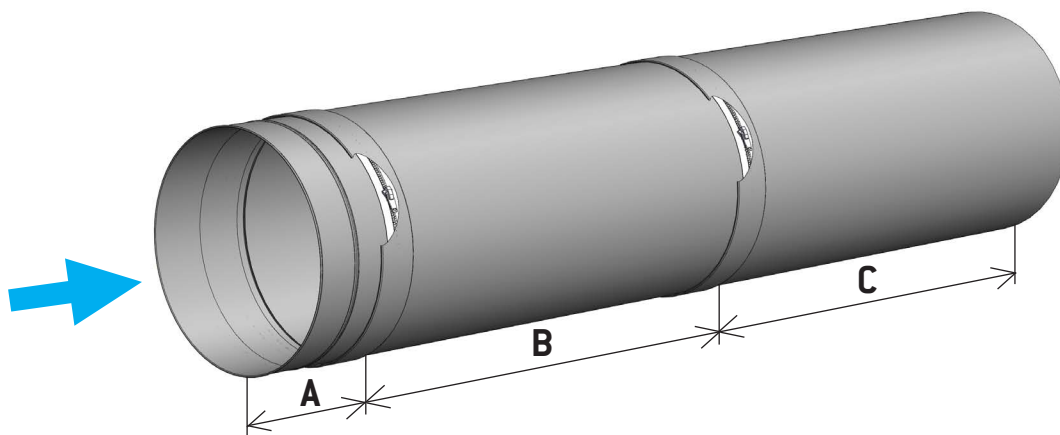
Dimension in individual shapes is understood to mean:

Cross section	Dimension (values A,B)
Circular	diameter (A)
half-round	diameter (A)
quarter-round	radius (A)
segment	chord, height (A,B)
sector	radius (A)
square	length of edges (A,B)
triangular	base, height (A,B)

2.3. Length

Determining the length of fabric ducting and diffusers typically depends on the space. Generally the same air flow may be supplied into an area using a 10' - 650' long diffuser depending on the material used, its modification, and the supply fan's delivery pressure. The length of diffuser will usually correspond with the space dimensions depending on throw, velocity and installation height. We can help to determine the length and flow model to specify for the most economical and effective solution.

MOST FREQUENT CASE



A - beginning (Inlet/Collar) – length 4"-8"

B - continuous part (Straight section) – length 16.4'-33', may be repeated several times in sequence

C - end part – length from 3' to 36' (6" Zippered end caps also available upon request, otherwise the endcap is sewn directly to the last section.)

- Individual parts are connected with zippers; the number of zippers may be modified per customer request.
- Only the overall length in feet (thus A + B + C) is provided in the material list; ducting and diffusers are separated into segments during production.

2.4. Pressure

Fabric ducting is typically designed with the static regain method. Pressure losses of fabric diffusers & ducting are very similar to those of traditional metal ducting, but also slightly different. The biggest difference is that for most fabric duct applications the air is continuously distributed along the entire length so the velocity of the air continuously decreases. This equates to a lower velocity or friction pressure loss per running foot for fabric ducting than traditional metal ducting. For very long duct runs, typically over 100', we will also reduce the duct diameter similar to metal ducting to ensure even air delivery from inlet to the endcap.

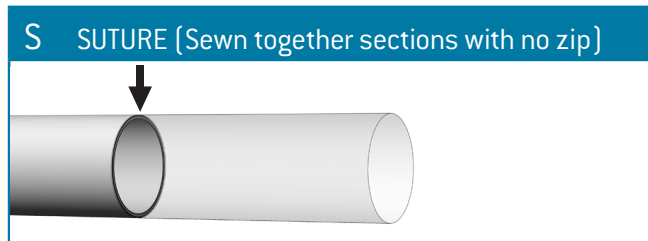
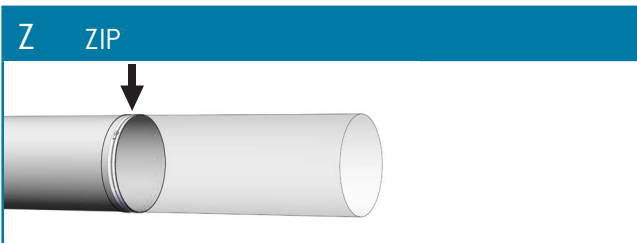
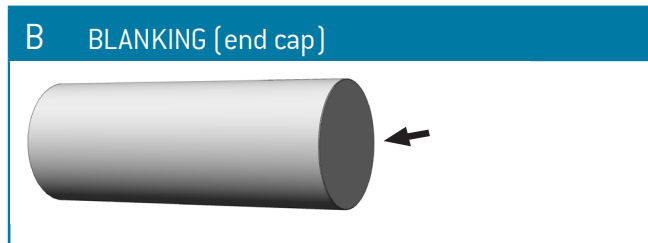
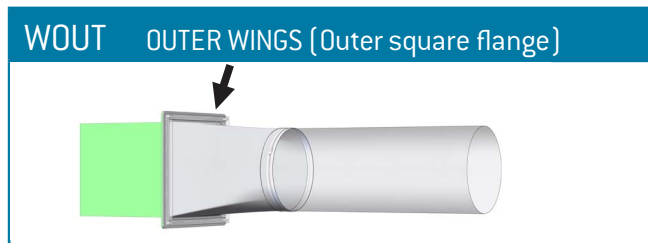
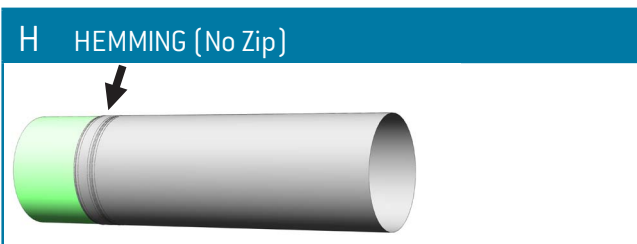
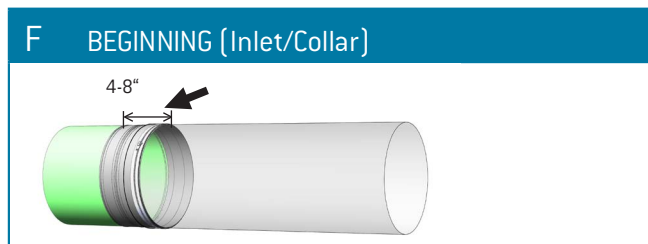
Minimum static pressure necessary to keep a fabric diffuser or duct fully inflated depends on the weight of the fabric used and if reinforcement options are used. Sufficient pressure for light weight materials is .10 INWG and 0.20 INWG for medium and heavy weight fabrics (if no reinforcement options used).

Generally Fabric ducts are designed on average for .50" wg inlet external static pressure loss. Do not hesitate to contact us for design assistance of the distribution system or ducting, as our software can easily provide accurate pressure loss calculations.

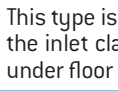


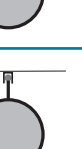

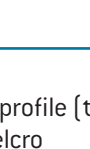
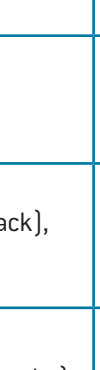


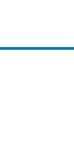
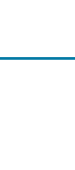

Graph of pressure distribution in a fabric diffuser



2.5. Types of Ending



3. Installation

Installation no.	Cross section view	Type of suspension	Additional accessories	
0		This type is without mounting material, hooks or enlarged cord. For vertical installations secured and hung by the inlet clamp, horizontal installations only suspended by tensioner ring in endcap (see chapter 5.7), or for under floor ducting which require no suspension.		
1		1 wire	D, F, K, M	
2		1 wire	D, F, K, M	
3		1 profile (track), velcro	A, B, C, G, J, L, H	
4		2 profiles (tracks)	B, C, G	
5		1 suspended profile (track)	A, B, C, G, I, D, E, F, K, L, M	
6		2 suspended profiles (tracks)	A, B, C, G, I, D, E, F, K, L, M	N
7		tensioner	D, F, H can be added to any other installation	
8		profiles (tracks), velcro	A (can be added to any other installation), B, C, G, L, H, J	
9		profiles (tracks)	A, D, E, F, K, L, M	
10		profiles (tracks)	A, L	
11		profiles (tracks)	A, E, K, L, M	

Hook for wire & Glider for profile [track]



Aluminium profile [track]



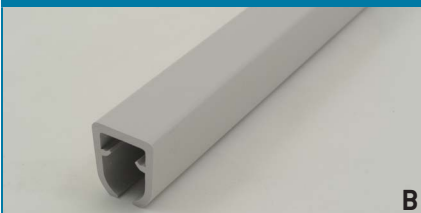
Plastic coated wire [galv.] and galvanized mounting material



Enlarged strip [A]



Plastic Profile [track] [B]



Aluminium profile with hangers [C]



Plastic coated wire [galv., stain.] and stainless mount. m. [D, F]



Threaded rod [E]



Profile/track Connectors



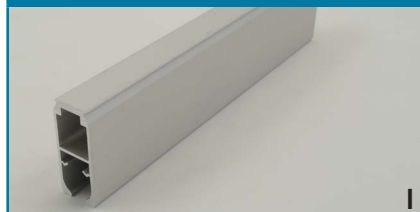
Stainless Profile [track] [G]



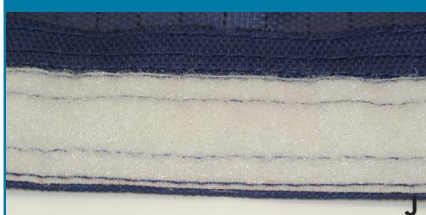
Tensioner in Endcap [H]



Reinforced Aluminum profile [track] [I]



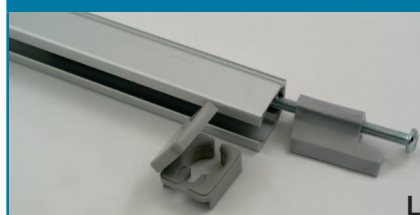
Velcro [J]



Galvanized chain [K]



Screw Tensioner in the profile [track] [L]



Gripple hangers - upper parts [M]



Gripple hangers - lower part [M]



External Arch profile [track] hanger [N]



4. Design Features

We offer a solution for nearly any application. Everything is tested by our Research and Development Engineers in our state-of-the-art testing laboratory and followed up with real world field tests to confirm our data. All products are custom-made and we are ready to meet your specific requirements for custom equipment or designs which are not published in our catalog or website. Feel free to contact us with your unique application and put us to the test!

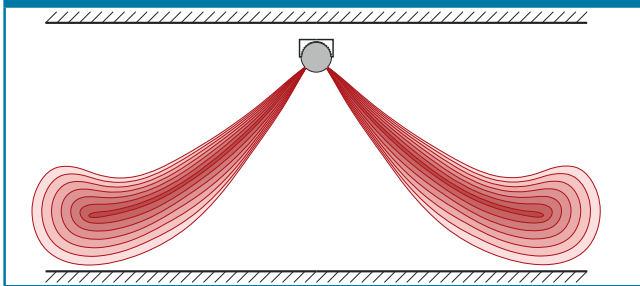
4.1. Products for special use

Membrane Diffuser

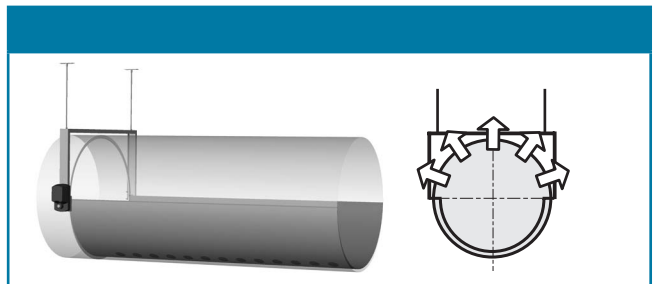
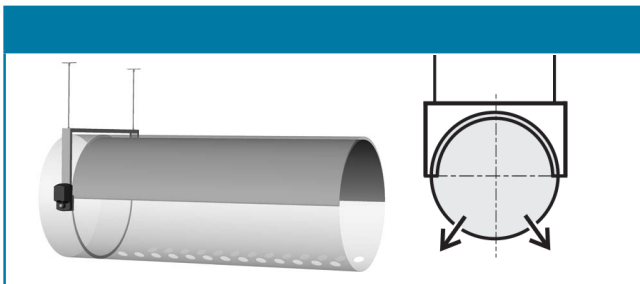
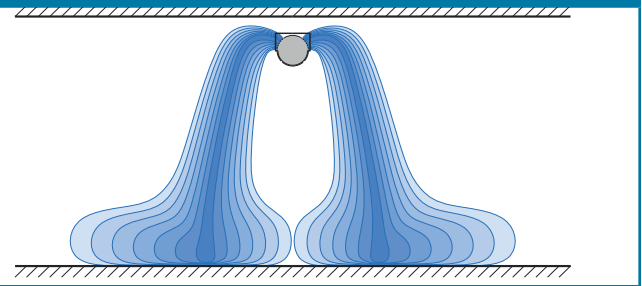
Diffuser for two different supply air modes

This option combines two types of diffusers into one. The membrane, produced from a light non permeable fabric, is sewn horizontally into the center of the diffuser. It covers either the top or bottom of the inside of the duct in an alternating fashion. The front end of the membrane is fastened to a flap controlled by a servo motor (or manual chain-and-gear) which makes it possible to select between two positions, usually cooling or heating. In heating mode the membrane seals the top half of the diffuser and the air exits through a series of perforations downwards. In cooling mode the membrane seals the bottom half and the air exits only out of the top of the fabric or microperforation for a laminar flow / displacement cooling effect.

Heating (flap seals top)



Cooling (flap seals bottom)



FLAP

Used for switching between the two modes. It is made from PMS/NMS or PMI/NMI material (according to fire resistance needed); the internal design and external frame are made from galvanized steel. The length is always 16". The flap includes a 220 V or 24 V servo motor, or could be supplied with chain and gear for manual operation.

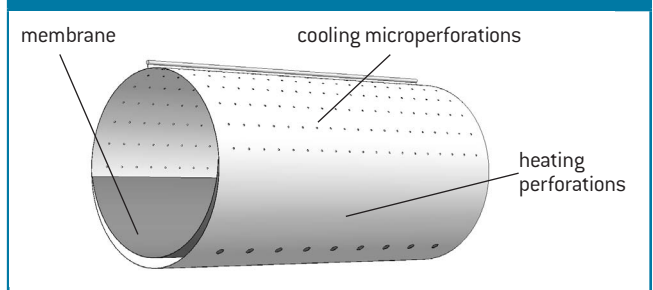
DIFFUSER

The membrane always covers one half of the diffuser and leaves the other open to supply air.

Detail of flap with servomotor



Detail of Membrane diffuser



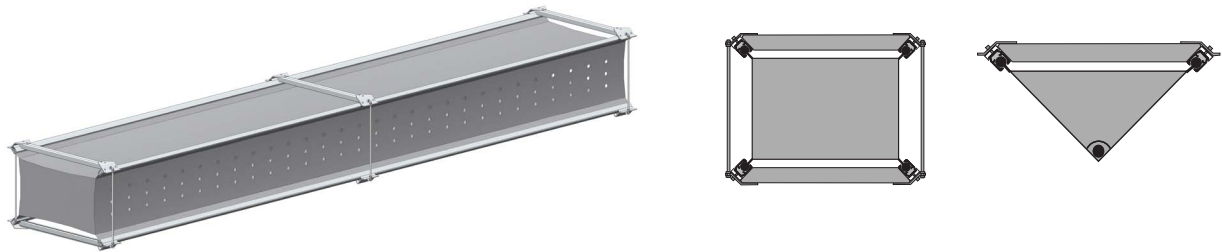
Negative Pressure Ducting

Fabric Ducting for removing air

Negative pressure ducting is only supplied in square or triangular cross-sections. To prevent the duct from collapsing due to negative pressure and flexible fabric the duct walls must be stretched and held in tension in the lengthwise and crosswise directions. Tensioning is done with track profiles, threaded rods and weighted rods for the triangular cross sections. Air is drawn into the duct through perforations that can be positioned on any side and anywhere along the length of the duct. To ensure equal extract/exhaust rates we can adjust the perforation diameters or span between the perforations progressively along the duct. Designed for use where regular / complete cleaning of ducting is required (such as food industry), negative pressure fabric ducting may be easily pulled out from the suspension structure, the parts are separated using zippers, and everything can be washed. Also can be a good option for corrosive environments such as pools and natatorium return ducts. If the Nano Silver treated NMI material is used, the ducting will have antimicrobial properties as well.

IMPORTANT NOTE: For use with the following non-porous fabrics only: NMS, NMI, NMR.

Square negative pressure fabric ducting with external stretching structure and a detail of available cross sections

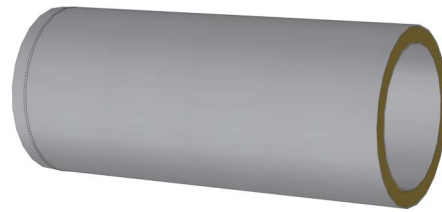


Insulated Ducting

Used for decreasing heat losses/gains when transporting air through unconditioned spaces from the air handler to the area intended to be conditioned. An unwoven 2" polyester layer is used as insulation and is sewn in between the inner wall (light weight material) and the external wall of the duct which is usually a medium weight material; however all of our materials are suitable for use as the external layer. The process of sewing some what decreases the thickness of the insulation by about 0.8"-1.2". The maximum achieved heat coefficient is 1.8 W/ m2K. We typically provide 7' sections with diameters starting at 10". Each 7' section has at least one reinforcement ring. This insulated hose also has excellent sound attenuation properties as an added benefit.

Thermal insulation and noise dampener

Insulated Ducting

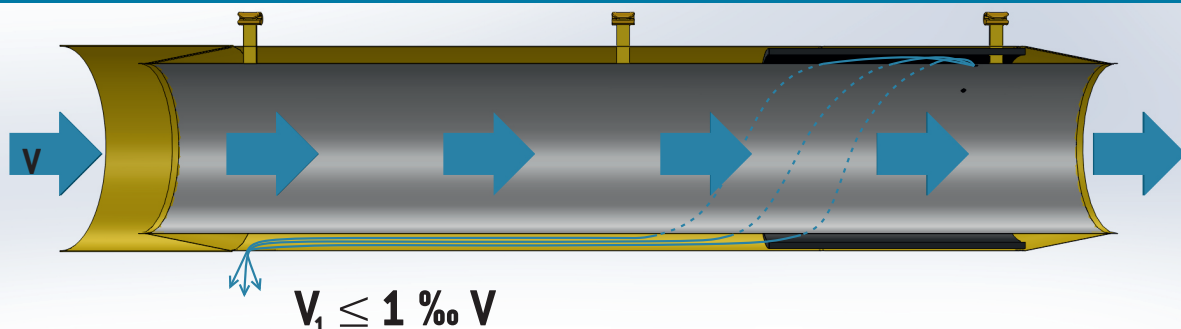


Double Wall Fabric Ducting

Condensation Prevention

Condensation is avoided by the use of double wall fabric ducting. The inner layer is maintained in the correct position by a negligible flow of air (about 1% of the ducting flow). The heat transfer coefficient reaches up to 3.5 W/m2/K.

Principle of Double Wall Fabric Ducting



Defrost Damper for Walk-In Coolers/ Freezers

Faster and more efficient cooler defrosting

The purpose of the Defrost Damper (DeDa) is to simply close off the fan & coils of a walk-in cooler/freezer to speed up the process of defrosting. Made of NLW fabric, which ensures proper coverage of the cooler and has a hydrophobic treatment to reduce frost buildup.

Defrost Damper on a cooler in operation (1)



Defrost Damper on a cooler out of operation (2)

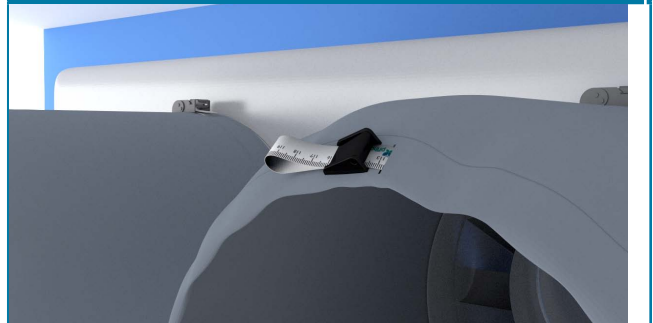


1. We utilize a special fabric for defrost dampers, designed to provide good coverage of the fan outlet and resistance to ice build up (hydrophobic treatment).

2. The Defrost Damper is connected to the cooler by a textile clamp or metal strip. The defrost damper may require a transition or adapter to fit to the cooler fan, these are not included as standard but can be supplied upon request.

3. There is an adjustable strip with a plastic clamp on the outlet of the damper, which allows for adjustment of the outlet diameter. During commissioning it is important to adjust the strip to balance the damper so that there is no vibration or movement, while trying to minimize pressure drop.

Detail of adjustable cord on the outlet (3)



Anti-static Design

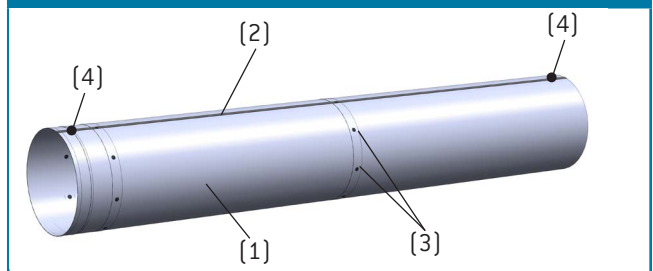
Anti-static design is intended for rooms where there can be no risk of electrostatic discharge from the diffuser (sensitive electronic equipment, battery manufacturing, server rooms, data storage, etc.)

It consists of 4 components and must be asked for in the design and quote process:

1. A conductive fabric (PMI and NMI have conductive carbon fibers woven into the material).
2. A highly conductive strip sewn in along the length of the diffuser.
3. All zippers are equipped with metal joints.
4. Grounding points at the ends of the diffuser.

Eliminating Electrostatic Discharge (ESD)

Anti-static duct design features

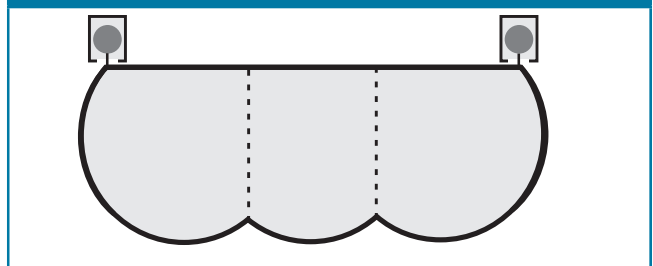


Combined half-round section (Oval)

High volume, low profile diffuser

This is a combination of several half-round diffusers sewn together side by side. It allows for higher volumes of air for applications with limited overhead space preventing a full round diffuser from being used.

Example of Combined half-round section



4.2. Solutions for Medium to High Throw Applications

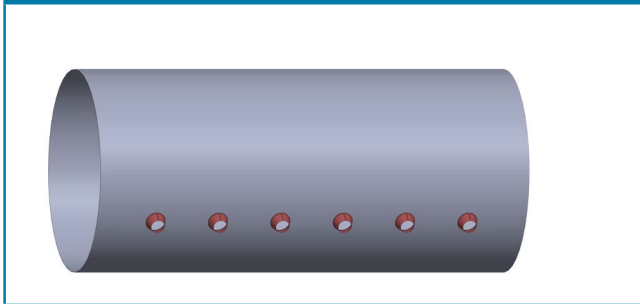
Small Nozzles

Perpendicular discharge and 25% increased throw

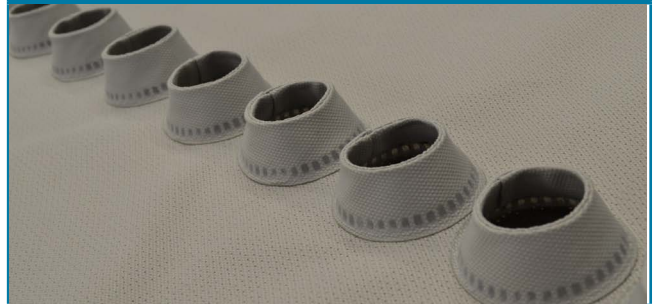
As perforations increase in size the air discharge angle or “deflection” angle toward the end cap increases unless there is sufficient pressure behind the orifice to correct the deflection. This angled discharge can cause more tempered air to be delivered at the far end of space (near the end cap) causing undesired temperature differences and uneven distribution in the space. Small nozzles offered by Prihoda are made from the same material as the duct and ultrasonically welded to the duct to correct this discharge angle. A CFD analysis also shows a 25% increase in throw when comparing the performance of nozzles and perforations of the the same size, airflow and pressure. Small nozzles are available in 3/4” (20mm), 1” (30mm), and 1.5” (40mm) which can be provided in two variants: industrial, for when it just needs to function at the lowest cost, and premium when it needs to function while having a better finished appearance (less prone to wrinkle).

IMPORTANT NOTE: for fabric PMS, NMS, PMI, PMIre, NMI, NMR only

Small nozzles on the diffuser



Row of small nozzles



Small nozzle - industrial



Small nozzle - premium

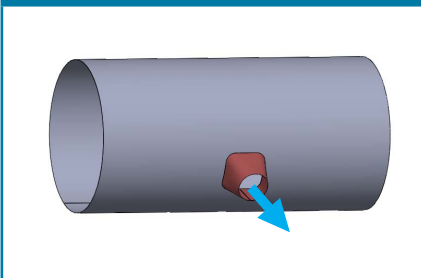


Large Nozzles

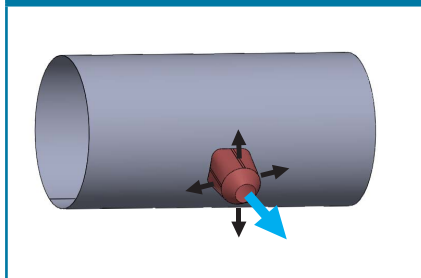
For longest throw

Large nozzles can accomplish the longest throw distance from fabric diffusers. Depending on the volume of air, static pressure and temperature difference throws of more than 70ft can be achieved. Large Nozzles can be fixed position (centered), directed in a certain angle from the factory or adjustable onsite, but the appearance of each type of nozzle is about the same. The adjustable nozzle may be directed as desired up to $\pm 45^\circ$ using 4 belts. The folds and belts are covered in fabric so they are concealed along with a damper that is sewn internally in the nozzle to adjust the flow of air if needed. Please feel free to contact us with the requirements and details of your long throw/high velocity nozzle design.

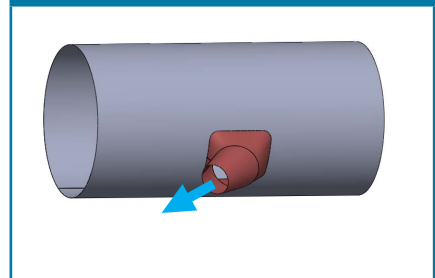
Fixed nozzle



Adjustable nozzle



Directed nozzle



4.3. Products with adjustable parameters

Adjustable Length Fabric Duct

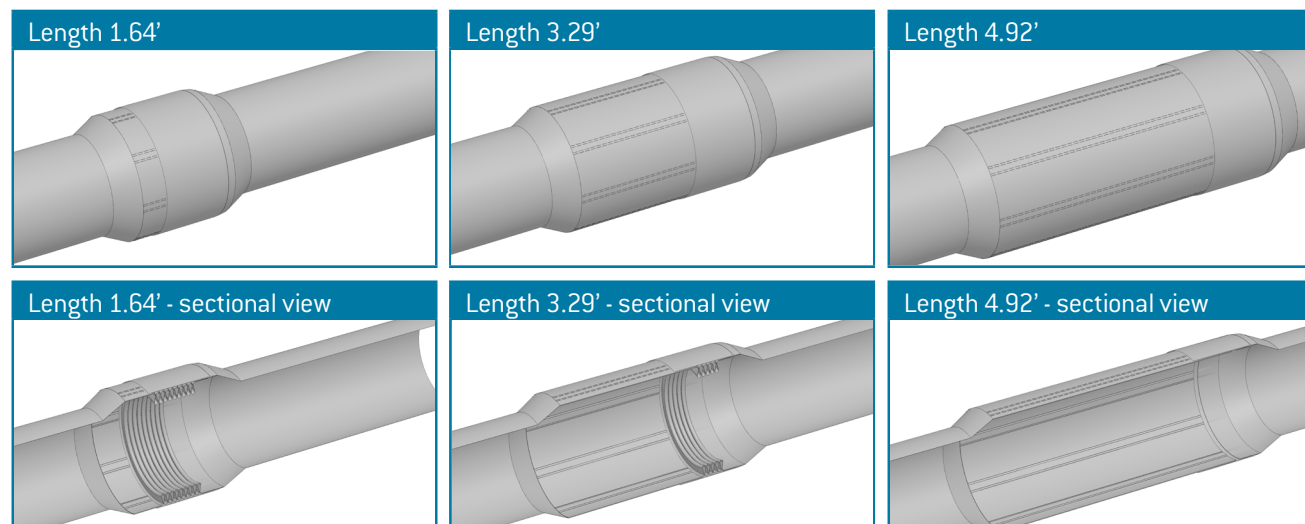
Option of changing length during assembly/install

8 lengthwise adjustable tie belts are equally sewn around the circumference of the circular ducting for an adjustable length section. If all are adjusted to the same length, the section's length is decreased. The ducting is thus able to quickly adapt to the situation required on site.

CONDITIONS OF USE:

- Adjustable section has a max length of 4.92' and may be reduced to 1.64'.
- The diameter must be increased by approx. 25% to accommodate for local pressure losses.
- Only for circular sections > 10" dia
- Only for PMI, PMS, NMI, NMS, PLI, PLS, NLI, NLS materials.
- Adjustable parts may not contain enlarged strip for support

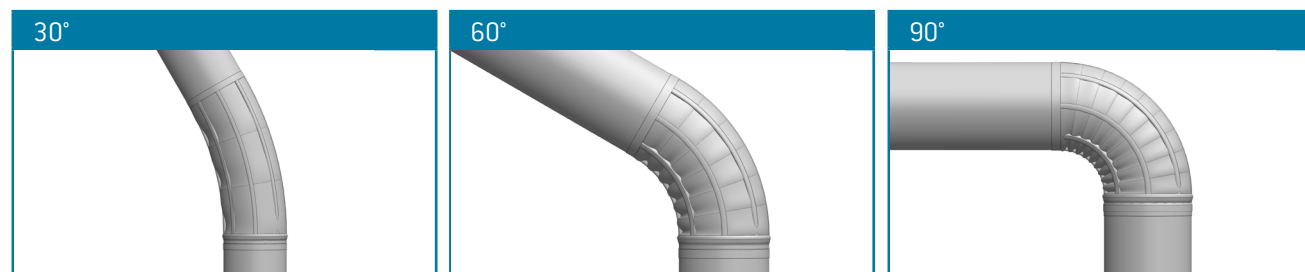
Close-up view of tie belt



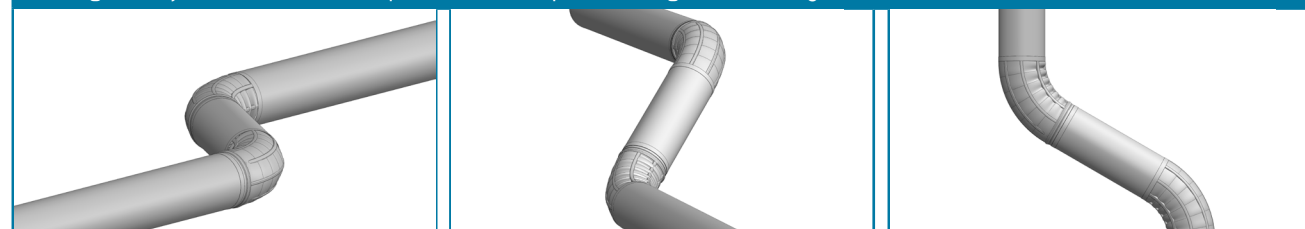
Adjustable Arch/Elbow

Angle may be adjusted during assembly

8 lengthwise adjustable tie belts (same as adjustable length) are equally sewn around the circumference of the circular ducting. Shortening a particular belt turns the ducting in a certain direction. The bend/angle is changed by adjusting the belt:



Placing two adjustable elbows in sequence makes it possible to get around any obstacle on site.

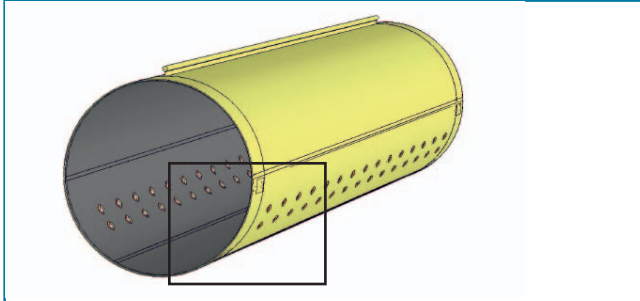


Adjustable Perforation

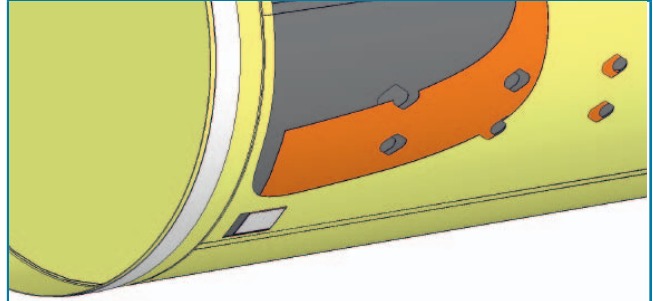
Setting airflow

Pushing the innovative envelope yet again, Prihoda engineers have designed a unique solution which allows manual adjustment of the free area of perforations and subsequently the airflow and throw from the diffuser openings. If placed on both sides of the duct it allows an installer or end user to fine tune the percentage of air coming from either side of the duct or completely shut one side, while opening the other side 100%. The size, number, and placement of the openings selected by the factory will be project dependant and based on available pressure and airflow requirements.

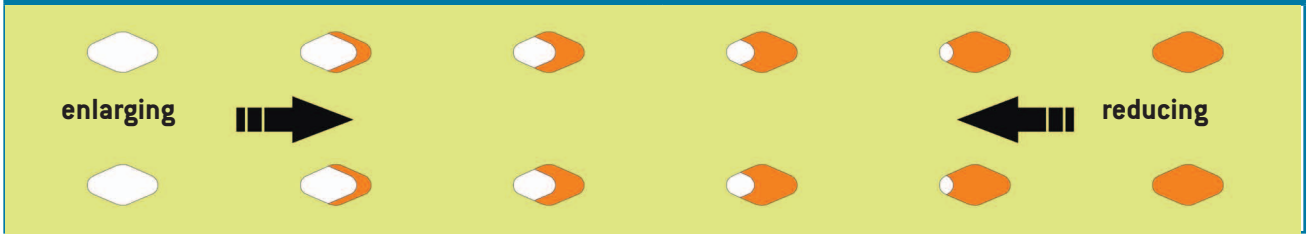
Diffuser with adjustable perforation



The perforation section is made up of three layers of fabric



The middle layer of fabric can be shifted lengthwise and the required position is set with velcro tabs

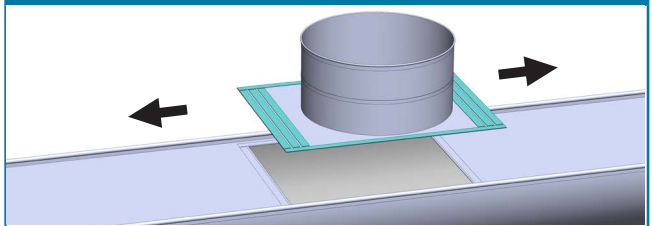


Moveable Inlet Adapter

Inlet adapters in the roof of a half-round or quarter-round diffuser can be designed in a way so they are laterally movable by up to 3 inches. A moveable inlet adapter can be helpful when onsite conditions differ slightly from the design drawings. "INM" symbolizes the moveable inlet adapter in a specification (short for Inlet-Movable).

Positioning the inlet adapter

The adjustable inlet is secured with several strips of Velcro

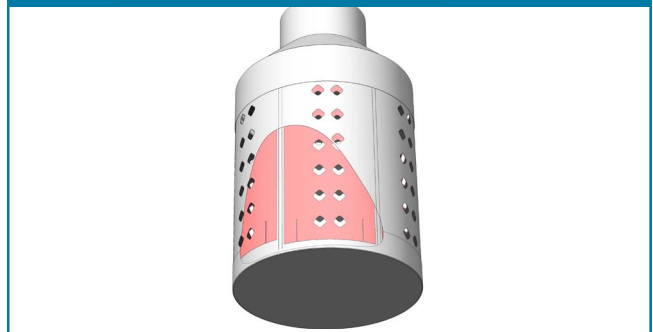


Lantern Air Diffuser

Our Lantern diffuser is designed to distribute air at high level, most often from units installed on the roof. It may only be installed in a vertical position. The air is blown horizontally in one to six directions. Vertical sliding strips are used to regulate the flow rate.

Simple configuration and direction of the air flow

The lantern consists of 3 layers

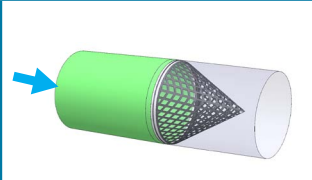
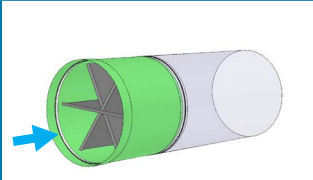
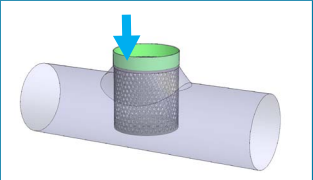
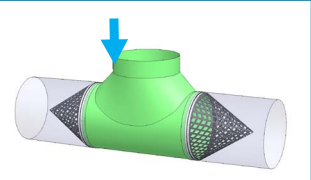

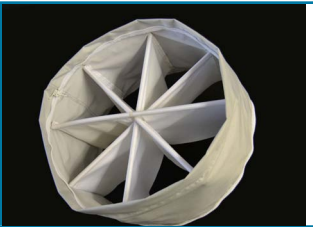
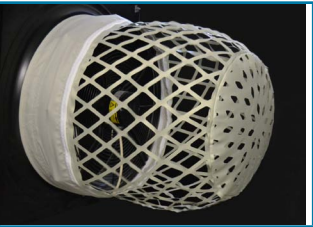



4.4. Solutions for problematic air flow

Equalizers

Airflow equalizing/Flow correction

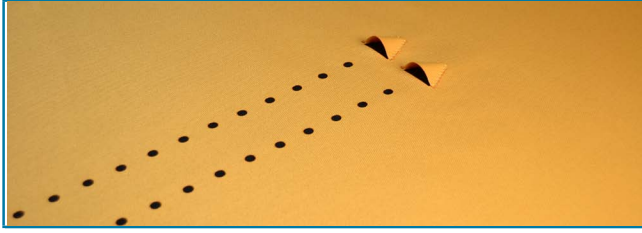
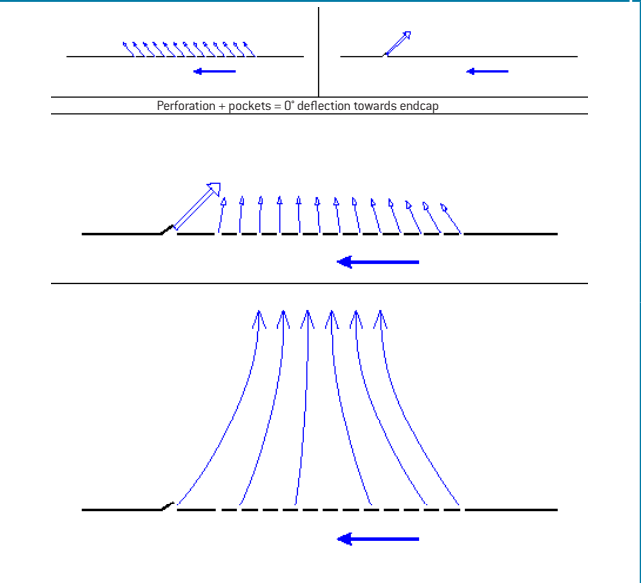
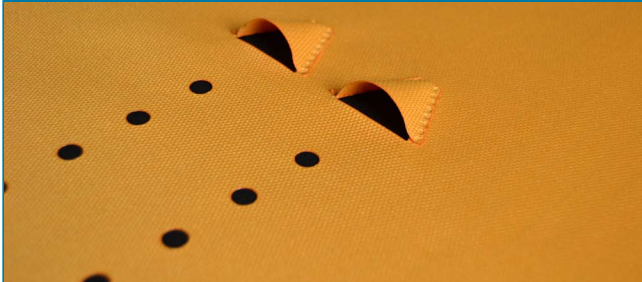
Equalizers are internal devices used for equalizing flows and reducing turbulence downstream of the fan or a fitting. Their use can reduce vibrations and movement in the fabric caused by irregular flow, however they add a pressure loss which should be considered in the design process. Many of our competitors use similar devices made of a fine mesh material which can act like a filter and clog with dust and debris over time. Prihoda's unique design is clog resistant.

EQ	EQS (star)	EQP (pot)	EQT (T-shape)
perforated fabric cone	star-shaped fabric sewn into the diffuser	cylinder sewn from a perforated fabric with bottom	equalizer copies inside form of diffuser
			
			

Pocket Deflectors

Solution for deflection of flow from perforations

In certain situations air can exit from perforations (holes) at a very pronounced angle towards the endcap, a condition we refer to as deflection. Fabric Pocket Deflectors are designed to prevent deflection using the interaction of two air flows of similar momentum. Air discharged from the last outlet in a row of holes is directed at a certain angle using a fabric pocket to balance the air deflection angle from the preceding series of perforations. The result from this effect is perpendicular throw without the use of a nozzle for every air outlet. Our software monitors the deflection angle towards the endcap out of perforations in real-time during the design to alert the designer when pockets are applicable.

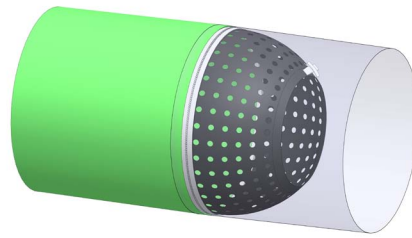
<p>Fabric Pocket deflectors on the diffuser</p> 	<p>Detail of Fabric Pocket deflectors</p>  <p>Perforation + pockets = 0° deflection towards endcap</p>
<p>Fabric Pocket deflector principle</p> 	

Damper

Similar to an equalizer only it has an adjustable outlet where the diameter may be adjusted using a sewn in belt with stopping clamp. Maximum opening to the diffuser diameter means zero pressure loss, and in contrast, fully closing the outlet side provides the highest local loss. The setting may be adjusted at any time by opening the zipper where the damper is located. It serves to equalize the static pressure along the diffuser, thereby equalizing the dispersion. It can also be used for flow regulation into the diffuser or to help balance a complex system. Most fabric duct systems do not require balancing if designed properly, but dampers do add increased adjustability of the system and are included in all of the large nozzles as a standard.

Airflow equalizing/Flow correction

Damper

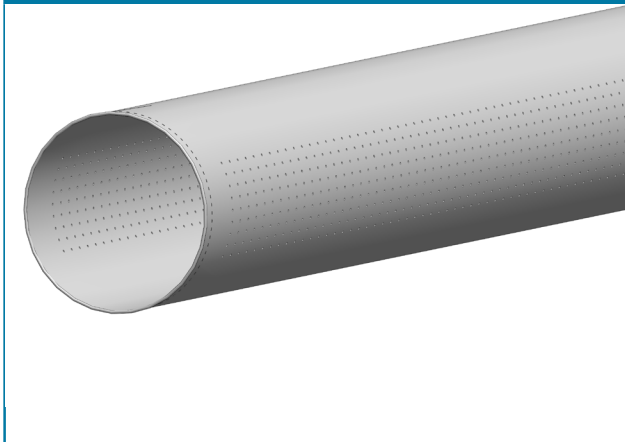


Diffuser for High Load cooling

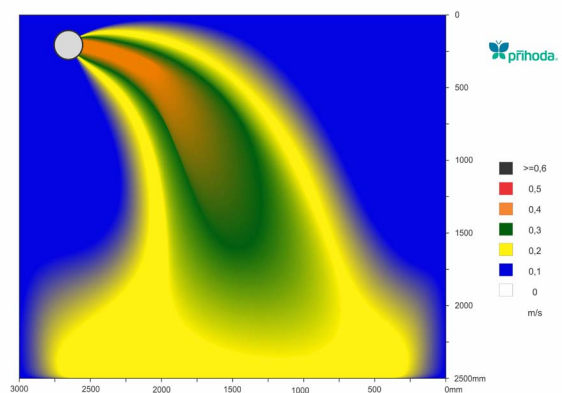
When cooling with a high delta T cold air can fall rapidly below even a uniform microperforated diffuser due the density of very cold air compared to room temperature air. To prevent occupant discomfort and drafts over sensitive equipment we recommend horizontal air discharge from directed microperforations rather than uniform microperforations. By placing the microperforations in a row on either side of the duct and ensuring the horizontal airflow pattern achieves a certain speed we can prevent premature downward deflection of the airflow. With sufficient outlet speed (determined by static pressure) it is possible to introduce 400W (1364 btus/hr) of cooling capacity per meter of duct (3.3ft), while maintaining a velocity below 50fpm in the occupied zone. Airflow patterns are illustrated below, please contact us for the specific calculations on your project.

Cooling with high temperature difference (>6K)

Microperforation 90°, 270°



Airflow patterns, Microperforation 90° & .66in wg



Anti-deflector

The Anti-deflector prevents deflection of airflow from fabrics microperforated by holes larger than the thickness of the fabric. It is made of a fine mesh and covers the diffuser from the inside. Proper filtration must be used to prevent additional maintenance. Our calculation software recommends its use when the deflection is noticeable from microperforations.

Prevents the deflection of airflow from microperforation

Detail of diffuser with anti-deflector



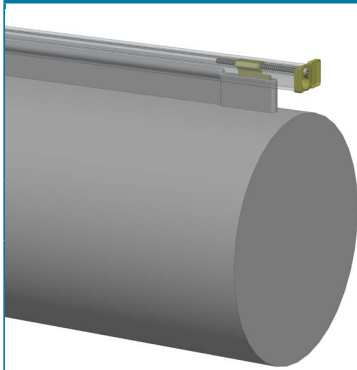
4.5. Premium & Aesthetic options

Screw tensioner in the track profile

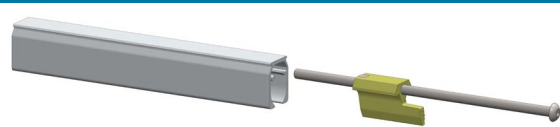
Wrinkle reduction

Screw tensioners in the track profile are used to improve the duct appearance by removing creases and wrinkles in the fabric that may have been created when the ducts were packed and shipped from the factory. The pliability of the fabric allows stretching by up to 0.5% of the length. Non-stretched diffusers are thus 0.5% shorter than specified in drawings and the proper length is achieved by using tensioners. The installation procedure is specified in the assembly instructions included with all deliveries.

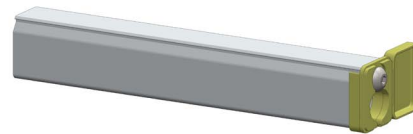
Principle of tensioner in the profile



Screw with slider



Plug



CONDITIONS OF USE: We recommend using whenever possible, i.e. in all aluminium profile (track) installations.

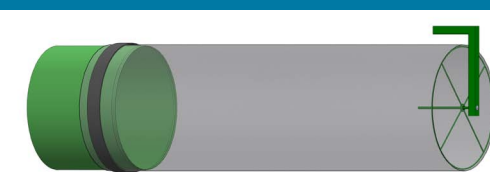
Endcap Tensioning

Stretches the entire length of the diffuser

Anchored into the wall in the axis of the diffuser



Anchored into the profile (track) on the ceiling (wall)

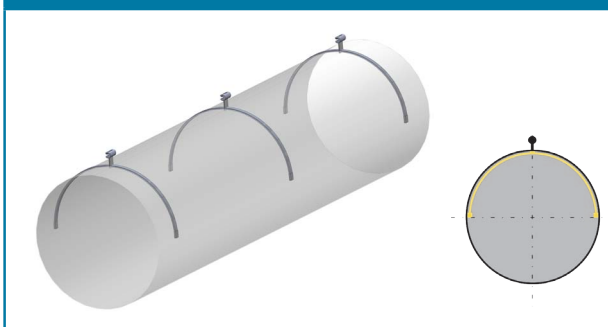


Internal Arcs

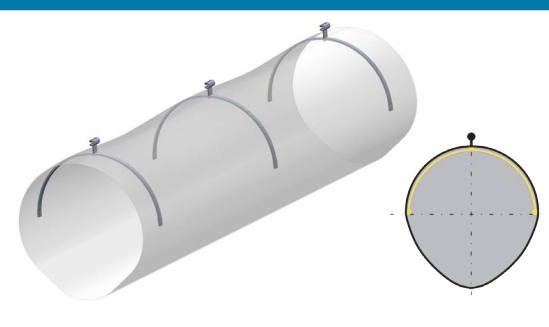
Prevents sagging of the diffuser with no air supply

Used for improving ducting/diffuser shape when the unit is off and reducing rapid inflation pop/snap if no soft starter device or VFD on fan. Aluminum Arcs are inserted into pockets sewn in the top of the internal ducting wall/roof and fastened in the middle by a Velcro attachment. They are installed from the factory and provide a cheaper alternative to full circumference rings. See chapter 9, FAQ 1 to see the cross section views of the hold open options with no air in the diffuser.

Inflated diffuser with arcs



Diffuser with arcs without air supply



Rings/Hoops

Shape retention with no air supply

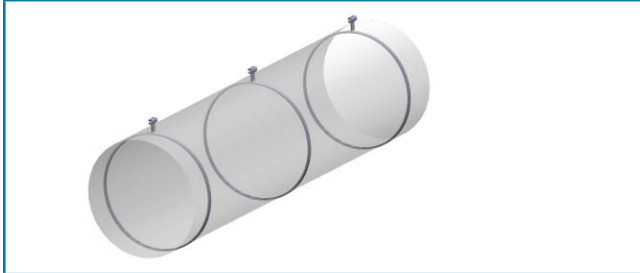
Can be manufactured from:

1. Flat aluminum profiles – remains rigid for all diameters
2. Heat resistant plastic:
 - Shape can deform or oval by 20% with no air
 - With fabrics PMI, NMI, PMS, NMS, PLI, NLI, PLS, NLS, NLF, NMF, NMR, NLW - diameters 16" – 48"
 - With fabrics NHE and insulated ducting - diameters 16" – 28"
3. Stainless steel - remains rigid for all diameters

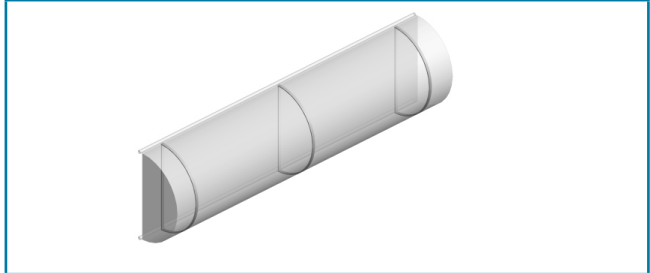
*All shapes other than round must be made from aluminum

They are installed internally or externally with a standard spacing of 3.3' fastened with Velcro and can be disassembled for maintenance. Shorter and longer intervals can be supplied upon request.

Circular diffuser with tyres



Half-round diffuser with tyres

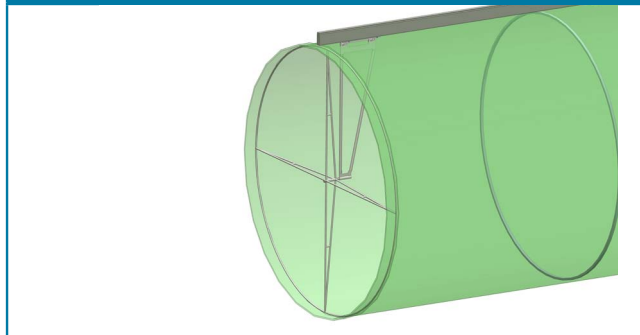


Internal tensioning system

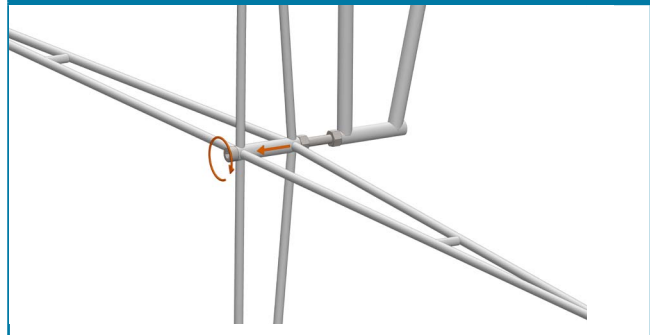
Perfectly straightens the shape

The internal tensioning system retains the shape of round ducting with or without air supply. It consists of an aluminum track, reinforcing rings every 3.3 ft (1M), and internal tensioning ring and bracket every 30 ft (10M) and at the endcap. Proper tensioning is achieved by adjusting the threaded axial connection of the tensioning ring to the bracket every 30 ft.

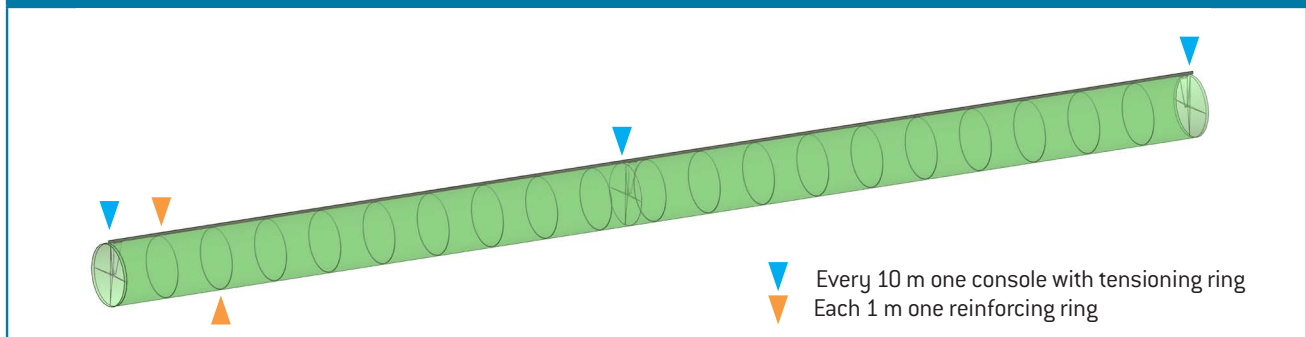
Internal tensioning console with tensioning ring



Detail of tensioning rings



Internal tensioning system



Custom Printing (Logos & Text)

Using the diffuser surface for advertising

Company slogans, logos, school names or mascots can be printed on the diffuser as an option (Vector file required). ID names or numbers on diffuser sections in large plants can ease maintenance and installation.



Office design/Premium finish

Details for improved appearance

Previously reserved for half round diffusers in offices for optimum aesthetics it is now an option for any shape. The premium finished look is done by reinforcing the endcap so it doesn't balloon out, manufacturing with the fewest seams possible and comes with a hidden clamp on the inlet.

4.6. Mounting simplification

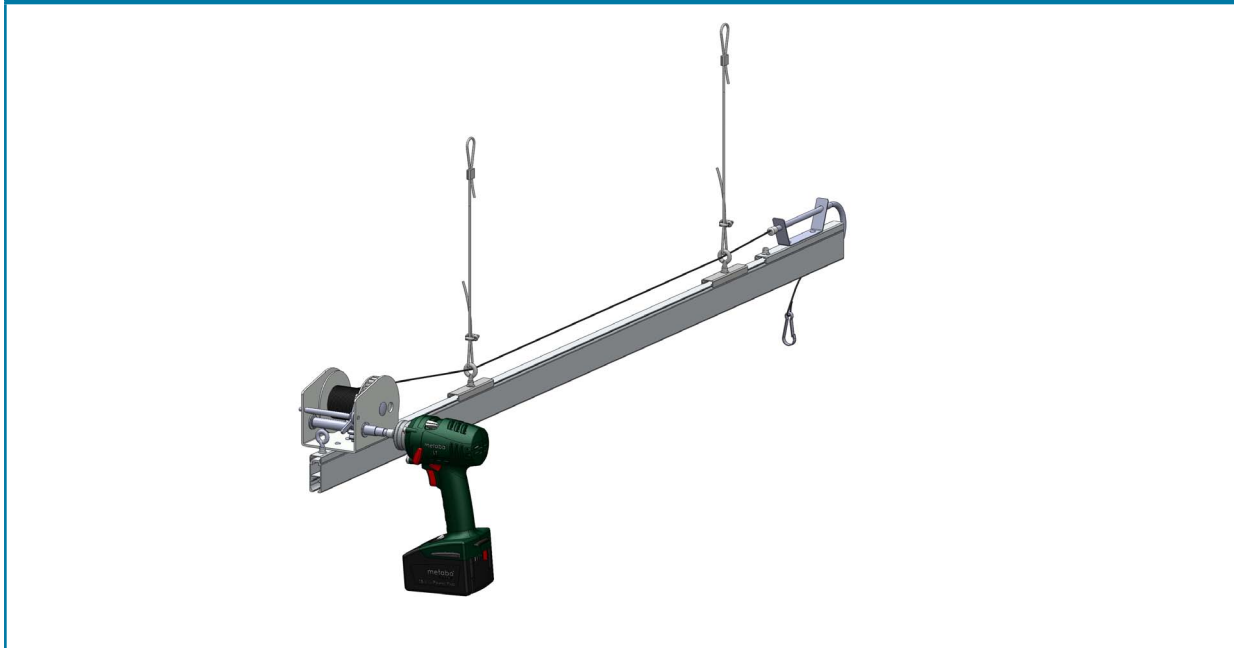
Winch system

Install & remove the diffusers from one end

The entire diffuser can be pulled into the aluminum profile track from one end using a simple winch. This significantly simplifies installing and un-installing the diffuser especially if installed over permanent equipment or pools where the ducts are not easily accessible.

CONDITIONS OF USE: It is only suitable for installation 5, 5D, 5F, 5I, 5DI, 5FI, let us know in the design or quote phase if your project may require this option and we can advise the type of installation method needed

Winch winding using approved site tools



5. Material

5.1. List of most important benefits of our fabrics

Fabric is the central component of our product, so Prihoda places great emphasis on ensuring that only the highest quality materials are used. Every material we offer has been through a long development process in order to achieve the highest value for our customers as possible. The PMI/NMI fabrics provide all of the built in benefits listed below at no additional cost.

High tear strength	Our basic PMS/NMS/PMI/NMI fabrics offer optimum strength and durability. In the texture it is 1800 N/10mm, and 1000 N/10mm in the weave. Because of these parameters, it is nearly impossible that the material will come apart or fray under normal operating conditions.
High fire resistance	The PMI/NMI/PMS/NMS fabrics are certified according to EN 13501-1 with an excellent result. They achieve B-s1,d0 classification meaning they meet a specified flame spread / smoke development index, and do not produce burning droplets. NHE fabrics in fact meet class A requirements. PMI/NMI/PLI/NLI/PMS fabrics meet UL723/NFPA 90A 25/50 index (UL file number R125183).
Very low fiber shedding	Due to the use of endless fibres, ALL of our fabrics can be used in cleanrooms up to ISO Class 4. Independent laboratory tests demonstrate that there is practically no particle shedding from our material during operation.
Antistatic effect	Woven carbon fiber in PMI/NMI materials eliminate electrostatic discharge from the diffuser. (Note: Grounding accessories must be used to fully dissipate electrostatic discharge).
Antimicrobial effect	We utilize a special treatment which kills various types of bacteria and fungi that come in contact with our fabric. Independent testing has proven even after TEN washes there was no reduction in the efficacy of the treatment. This essentially means a permanent effect due to the low maintenance requirements (see the following point).
Easy to maintain	Our fabrics made of endless fibers are not prone to clogging from impurities in the airflow. This air is distributed through the holes, and the textile diffusers remain nearly clean inside (in a normal environment with EU3/G3/MERV 5 filtration) so the diffusers do not require maintenance other than outer dusting. Washing is usually only needed due to sanitary or aesthetic reasons.
Durable Appearance	Thanks to our endless fiber technology, the appearance of the fabric does not change over time, or with multiple washing cycles, unlike materials made of staple fibres. Our PMI/NMI/PMS/NMS materials retain their aesthetics after many maintenance cycles.

Designation	Permeability	Weight	Material	Specification								
PMS/NMS	yes/no	medium	100% polyester	●	B	●	●	●	●	9	●	●
PMI/NMI	yes/no	medium	100% polyester	●	B	●	●	●	●	9	●	●
PMIre	yes	medium	100% recycled polyester	●	B	●	●	●	●	4	●	●
PLS/NLS	yes/no	light	100% polyester	●	E	●	●	●	●	9	●	●
PLI/NLI	yes/no	light	100% polyester	●	B	●	●	●	●	9	●	●
NLF	no	light	100% polyethylene	●	●	●	●	●	●	1	●	●
NMF	no	medium	100% polyester +2x PVC	●	B	●	●	●	●	4	●	●
NHE	no	heavy	100% fibre glass+ 2x polyurethane	●	A	●	●	●	●	7	●	●
NMR	no	medium	100% polyester	●	B	●	●	●	●	1	●	●
NLW (only for DeDa)	no	light	85% polyester, 15% nylon	●	E	●	●	●	●	1	●	●
NMT	no	medium	90% PVC + 10% polyester	●	C	●	●	●	●	1	●	●
				antimicrobial	fire resistant (class)	antistatic	high strength	machine washable	suitable for clean rooms	number of standard colors	special colors	water repellent

- standard
- upon request
- not applicable

5.2. How to Choose a Suitable Fabric

1/ What level of fire resistance do you need?

Our fabrics have 3 levels of fire resistance.

Peak fire resistance	Increased fire resistance	Low fire resistance
Specified using the letter “E”, as in “Excellent” means an entirely non combustible material. Within this class, we only use fabrics constructed from fibreglass with a polyurethane coating. These are however non permeable and more fragile than polyester fabrics of medium weight. This fabric (NHE) is in class A2-s1,d0 as per EN 13501-1.	Specified using the letter “I”, as in “Increased” means practically non combustible and very low smoke production. These materials (PMI, PMLre, NMI, NMR, PMS, NMS, NLI, PLI) meet the requirements for use in the majority of spaces & building codes (UL 723, NFPA 90a, UL2518, ULC) and are by far our most popular fabrics.	Specified using the letter “S”, as “standard” or “F”, as in “foil” or T as translucent are less fire resistant. They can be used in rooms where an increased fire resistance is not required. These fabrics (NLW, NMT, NLS, PLS) are in classes C,D,E as per EN 13501-1. The foil (NMF, polyethylene plastic) has no fire resistance.

2/ What are your demands for rigidity and cleaning ability?

Fabrics are divided in 3 categories by weight.

Light (L)	Medium (M)	Heavy (H)
Diffusers made from these materials only require .10 in wg of static pressure to achieve proper inflation. However, they are light weight, have lower durability and increased risk of tearing if used improperly. All our light weight materials can be machine washed with the exception of NLF.	These fabrics have a mass between 5 and 10 oz/yd ² . They have the highest rigidity and anti-tear resistance. The minimum static pressure required for inflation is .20 in wg. Our medium weight materials are our most popular sellers as they are commercial grade and can be machine washed.	Our heavy fabric (NHE) has a polyurethane coating which makes it non permeable. It must be washed or sprayed/hosed down by hand and requires a minimum .25 in wg for inflation. It is a good option for industrial, dirty applications.

3/ Do you need a permeable fabric?

Permeable material prevents condensation occurring on the duct when cooling below dew point.

4/ Do you want totally a sustainable product? We can offer Prihoda recycled.

Our standard Prihoda Fabric ducts and diffusers offer many environmentally friendly & IAQ benefits, however we now offer a 100% recycled material (PMSre). Working with a global textile manufacturer, Unifi, we use Repreve recycled fibers from recycled post-consumer plastic bottles in this product. Prihoda Recycled looks, feels and functions no different than our non recycled UL fabrics, but it leaves a smaller footprint. This product can contribute to LEED v4 Materials & Resources due to its post consumer origin, 3rd party Environmental Product Declaration, and LCA.

5/ What color do you want?

Most of our materials are available in our 9 stock colors detailed below (shades may vary). Custom / special colors are available at an additional cost and longer delivery time.

RAL 9016	PANTONE 135 (RAL 1017)	PANTONE 420 (RAL 7035)	PANTONE 424 (RAL 7037)	PANTONE 341 (RAL 6024)	PANTONE 187 (RAL 3001)	PANTONE 2915 (RAL 5012)	PANTONE 7462 (RAL 5005)	PANTONE 419 (RAL 9017)
								
WH	YE	LG	DG	GR	RE	LB	BL	BC

Please ask for a sample book if you wish to see or match a precise color or shade.

6. Maintenance and Warranty

All of our ducting & diffusers are made from high quality and highly resistant materials without natural fiber additives. The material used is specified within the technical description of your order. Diffusers/ducting made of fabrics PMS, PMI, PLS, PLI, NMS, NMI, NLI, NLS, NMR, NLW can be washed normally in a common/industrial washing machine. Diffusers/ducting made of NMF, NHE, and NLF materials must be washed by hand. If the diffuser/ducting is equipped with rings, arcs or tensioning systems, these fixed components need to be taken out before washing.

Washing Procedure:

- Very dusty diffusers should be vacuumed prior to washing (pressurized air, soft brush).
- Wash in washing machine with industrial washing detergent (follow directions for amount recommended by detergent manufacturer) at 40°C (104°F). We recommend a spin cycle of 400 rpm and several rinses. As the majority of the dirt and debris is accumulated on the inside of the diffuser it is usually best to turn them inside out. If badly soiled repeat washing or use a slightly stronger detergent. For hand washed materials use an adequate detergent, however, most hand washed materials can be cleaned with a vacuum, sponge or a steam cleaner.
- A disinfectant can be used for added safety (medical or food service applications) but is not generally needed due to the antimicrobial agent already in the material (PMI/NMI). Do not use harsh chemicals which can harm the material or whiteners/bleaches which can discolor the diffuser. Use as directed by manufacturer.
- Spin-dry the diffusers gently and either drip dry on a line or re-install them and finish drying with airflow from the ventilator. Never store wet diffusers.

Legend for symbols

	Machine wash at max. temperature of 40°C (104°F), normal mechanical action, normal rinse, normal spin cycle.
	Gentle/delicate machine wash only, rinse at falling temperature, light spin, max. temperature 40°C (104°F).
	Hand wash only, do not machine wash, max. temperature 40°C (104°F), handle gently.
	Do not bleach product.
	Product may be dried in rotary drum dryer at reduced drying temperature.
	Do not dry the product in a rotary drum dryer.
	Iron at a max. temperature of 110°C (230°F), use caution when steam ironing.
	Do not iron product; steaming and steam processing is prohibited.
	Do not dry clean product, do not remove spots using organic solvents.
	The product is safe to dry clean using perchlorethylene and all solvents specified under the symbol F.

Any maintenance must strictly follow the washing label symbols sewn into every section.

pos01-part01-of02	<input type="checkbox"/> Number of the position, part
OP 142250	<input type="checkbox"/> Order number at PRIHODA
High Tech-CM.1351	<input type="checkbox"/> Identification by customer
NMI 100% polyester	<input type="checkbox"/> Material
	<input type="checkbox"/> Treatment symbols
PŘÍHODA s.r.o.	<input type="checkbox"/> Manufacturer
Tailor-made Air Ducting&Diffuser	
Za Radnicí 476 CZ 539 01 Hlinsko tel.: +420 469 311 856 fax: +420 469 311 856 info@prihoda.com www.prihoda.com	
Made in EU - Czechia in September 2014	<input type="checkbox"/> Where and when it has been made

Warranty Period

10 year	fabrics PMS/NMS/PMI/PMSre/NMI/NMR
2 year	membrane diffuser, servomotors, fabrics NMF/NLF/NHE/NMT
2 year(max. 50 washing cycles)	fabrics PLS/NLS/PLI/NLI/NLW
12 months	All other items not mentioned above, unwoven accessories (zips, hooks, etc), printing, assembly and accessories

The warranty period is deemed to start on the day of sale. For warranty to be valid all installation and maintenance instructions must be followed, in addition to regular maintenance of the supply air units. Additionally, supply air must be filtered to at least EU3 (MERV5) & maintain design pressure/flow stated in the submittal/order confirmation. Any deviation to the original design which has adverse effect on the material or accessories may void the warranty such as liquids/chemicals dripping on the fabric etc.

Special conditions for printed diffusers.

- Ambient Temperature within the range +10°C to +40°C.
- Do not iron.

8. Applications / Project References

Food processing industry

The first fabric diffusers were used in the food industry. Sanitary regulations require that all food processing devices should be easily sanitized and cleaned. Out of all the air distribution system options, this condition is only met by Fabric Ducting. Fabric Ducts are perfectly clean after washing and a disinfecting agent can also destroy any pathogens that may resist the antibacterial treatment. Fabrics made of continuous fibres, developed especially for Parihoda's textile diffusers, are very smooth and do not allow the build up of impurities. This unique and special feature distinguishes them from diffusers made of standard fibres that continuously trap dust and can represent a sanitary risk.



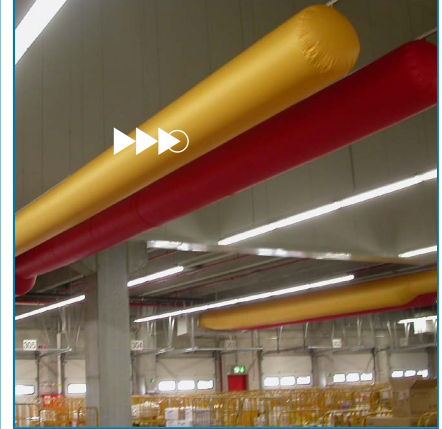
Supermarkets, exhibition and large retail areas



For large retail areas we can provide supply air through laser cut perforations or nozzles, whichever suit the application best. Experience over many years shows that Fabric ducting & diffusers offers a substantially better, more uniform air pattern than can be achieved with traditional systems, while also offering substantial cost savings. The wide range of 9 stock colors allows for many different aesthetic designs while the Fire Resistance of our fabrics meet all world wide standards. (UL2518, UL723, ULC S102.2, NFPA90a 25/50)

Food Storage, Low Temperature Production Areas

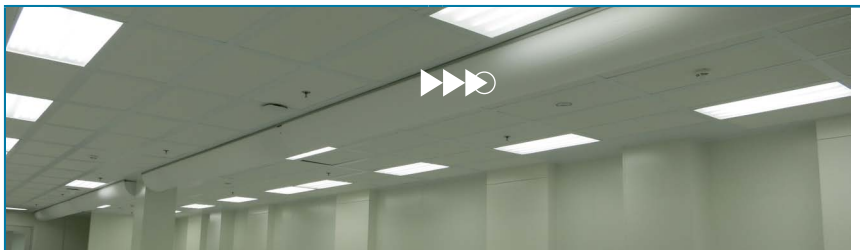
In large cold storage rooms Prihoda Fabric Ducting distribution systems provide uniform air distribution, ensuring maintenance of stable product temperatures and temperature zones. In production zones with large amounts of people working in low temperatures, high air velocity will be a major cause of discomfort and may cause a higher sickness or absence rate. Fabric ducts and diffusers disperse cold air without causing drafts, and create comfortable, low velocity environments for workers.



Chemical, textile and and electronic industry

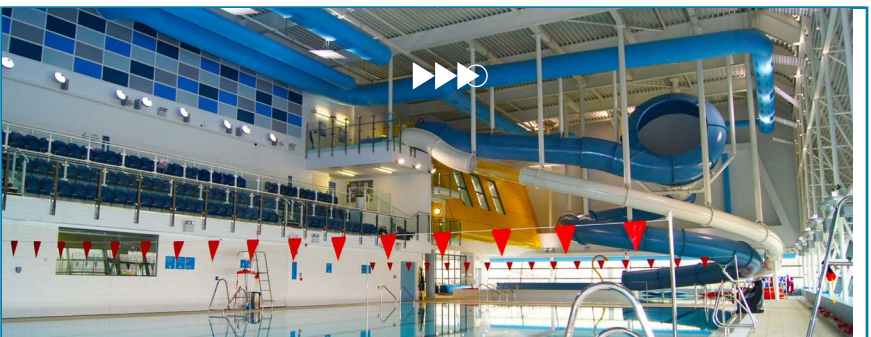
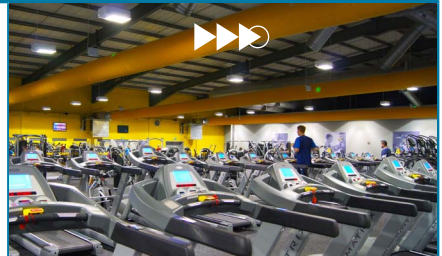


Prihoda Fabric Ducting air distribution is a perfect solution for any industrial operation. Prihoda Fabric Ducts provide uniform low velocity air distribution or targeted air patterns, at unbeatably low costs. Over 100 suspension solutions make it possible to choose a convenient installation style for any application, easily accommodating most suspended and formed ceiling types. Contaminated production environments may require the use of fabrics with larger laser cut perforations.



Pools, Sports Halls and Fitness Centers

Large sports facilities are a typical application for Prihoda Fabric Ducting & Diffusers, we are able to create a large range of diffusion air patterns to suit any project. Our many installations at sports and fitness centers provide comfortable cooling & air movement for customers “working out”. In these applications low ceiling heights are often encountered, where half round fabric ducts make an aesthetic and functional low cost solution. Swimming Pools are a perfect application for Fabric Ducts, as the fabric material will not rust, corrode or sweat and is a fraction of the cost of double wall treated/SS/ALU metal systems. The bright colors available also revive and enhance many swimming pool interiors.



Kitchens

Space in kitchens is usually limited, and their extreme load with heat and vapors requires intense ventilation. Pihoda Fabric Ducts disperse high volumes of air uniformly into this environment without creating drafts. The fabric material used is resistant to steam and vapors and maintenance is quick and easy. Compared to a traditional stainless steel installation Fabric Ducting is a much lower purchase, installation and maintenance cost and easily achieves sanitary demands due to the fact the ducts are washable.



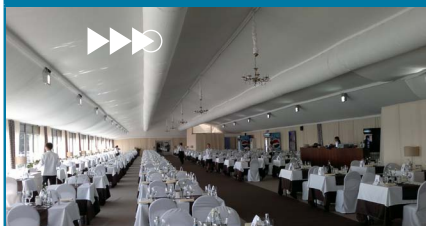
Offices, restaurants, cinemas etc.



Higher aesthetic demands can be satisfied by the multiple colors and shapes available with Pihoda Fabric Ducting air distribution systems. When designed properly and correctly installed fabric diffusers become an elegant part of an interior. Air diffusion through Fabric Ducting provides similar comfort results to chilled beams or perforated ceilings, however at a much lower capital cost. Unlike the traditional diffusers, embedded in soffits, our even and continuous diffused solutions do not cause any local discomfort such as drafts or dead zones. Studies have demonstrated that employees in such evenly distributed and cooled offices are significantly more comfortable, and sick leave can be reduced.



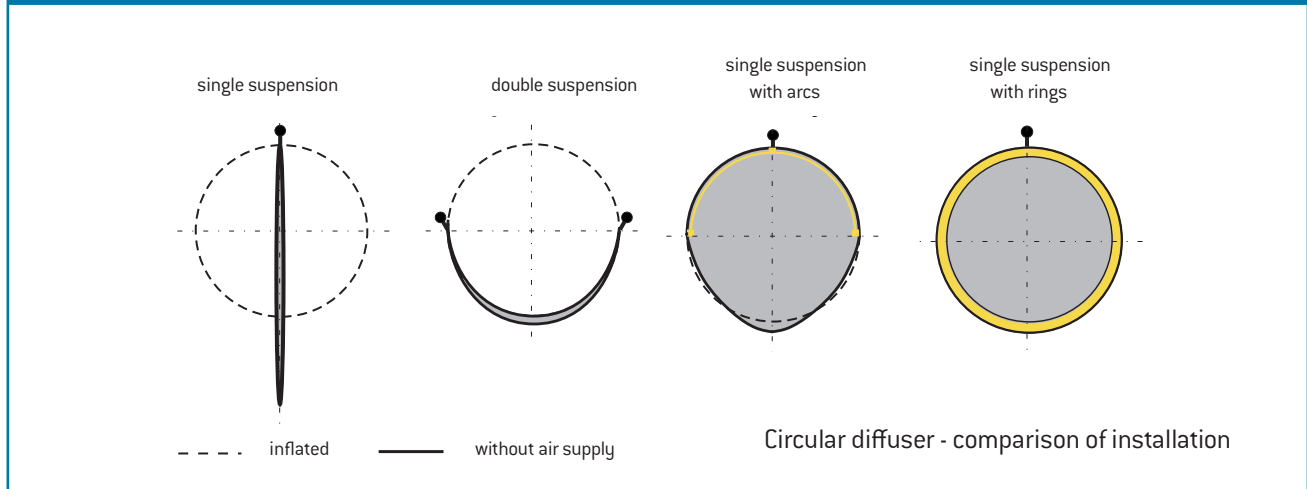
Temporary installations



The benefits of using Pihoda Fabric Ducting and distribution systems for cooling or heating of large scale tents or other temporary structures are quite obvious. Light weight roof structures can easily support fabric ducting and diffusers because they weigh less than a pound per linear foot. Installation is very quick, using the supporting wires and hooks provided as part of the system. Top quality materials allow multiple repeated use so the ducting system can be taken down and reused with the tent. Cooling or heating using a large AHU and Fabric Ducting diffusing all along the structure, is much more economical and comfortable than simply blowing the air into a space. Specifically with heating the warm air rises quickly creating stratified hot air near the ceiling, and thus an enormous heat loss. In cooling, with air diffused through Fabric Ducting intense airflow causes local air currents and drafts; while elsewhere dead zones with insufficient cooling develop. Both cases are successfully resolved by a properly designed Fabric Ducting air distribution system.

9. Frequently Asked Questions

1/ What does a textile diffuser look like when the fan is switched off?



2/ Is it possible to use Fabric Ducting for exhaust or return air?

PŘÍHODA was the first fabric duct manufacturer worldwide to introduce negative pressure ducting into the market. It is made with a square or triangular shape. The principal is based on sufficient stretching of all ducting walls by means of a tensioning system. The construction enables simple disassembly and re-installation. Laser cut perforations are used to draw the air into the duct.

3/ What is the service-life duration of fabric diffusers?

Prihoda fabric ducts are not a temporary or short term solution. Diffusers made from good quality fabrics will last for 15 years or longer. In fact, some of our first installations from the early 90's are still in use with the original ducts in place, which is a testament to the longevity of our products. The lighter fabrics (PLI/NLI) or polyethylene ducts have limited durability and are used for short term installations when cost has the highest priority.

4/ What is the pressure loss of a fabric diffuser?

The external static pressure required at the inlet of our round duct systems range from .20inwg - 1inwg, with the average being about .50in wg ESP. Smaller air handlers may have less static pressure available or some projects may require much higher throws or smaller duct diameters (higher inlet velocities) which increases the static pressure needed. Complex systems with elbows, T's and equalizers present certain pressure losses which needs to be taken into consideration and is easily calculated in our software. Friction loss for fabric ducts is usually lower than traditional metal systems (designed with equal friction) due to the decreasing air speed inside our diffusers (static regain design). Lighter materials or half round ducts require as little as .10 in wg.

5/ What to do with diffusers when they get clogged by contamination?

Diffusers with micro-perforation or larger laser cut holes rarely, if ever, get completely clogged by contamination (if used with minimum pre-filtration EU3/MERV5). Diffusers with laser cut perforations and microperforations are superior to ducts with mesh slots and materials woven to a specific permeability as our diffusers do not act like giant filters. The maintenance (typically washing in a washing machine) is really only necessary for hygienic and aesthetic reasons. Each individual zipped section contains a washing label which provides all washing information. Our experience has proven that our fabrics made of continuous fibers remain practically clean on the inside after many years of operation with proper filtration.

6/ Can fabric diffusers get moldy?

Generally the answer is no for all of our products when installed and air is running through them. Antimicrobial treatments in our PMI/NMI offer added protection from many forms of bacteria, molds, mildew and fungi however, mold can form on any kind of untreated surface if left moist and unventilated and there is an organic food source such as dirt or cardboard. Therefore, never store moist diffusers and do not keep them out of operation for long periods of time. Mold is extremely difficult and often impossible to remove once established. It is usually best to replace the diffusers if they have gotten wet while stored or have been exposed to mold growth.

7/ Is it possible to use rectangular diffusers?

Prihoda has developed a special construction which enables use of a rectangular cross-section. The principal is based on stretching the fabric in transverse and longitudinal direction by means of a tensioning system. The construction enables simple disassembly and re-installation. Fabric ducting with rectangular cross-section can be assembled directly on the ceiling or suspended from the structure above.

8/ Does the textile diffuser function as a filter at the same time?

If materials woven to a specific permeability are used, the fabric functions as a filter for the part of the transferred air that goes through the fabric. As the fabric contamination gradually increases, the pressure loss grows and the air flow decreases (or energy costs increase). Therefore, it is necessary to frequently wash those types of fabrics. This is why Prihoda utilizes microperforated or laser cut perforated fabric as a better solution because they do not function as filters thus significantly reducing maintenance. Furthermore it is much easier to change a filter before the duct system rather than washing the entire duct system...we are a manufacturer of air distribution ducts and diffusers, we are not in the business of filtering air.

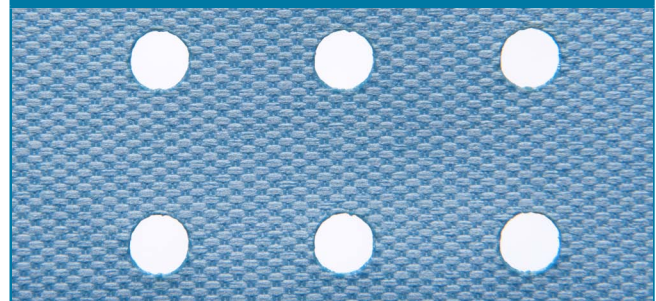
9/ Why doesn't PRIHODA use plastic nozzles or mesh slots?

Mesh slots were first used as a method to reduce washing maintenance for fabric ducts with no openings that only distributed air through materials woven to a certain permeability. By placing mesh slots in the duct with horizontal discharge maintenance requirements were reduced as the mesh did not clog as quickly as the material. Mesh slots were never intended to solely distribute the air from the ducts and are an outdated flow model which clogs with dirt, creates higher noise, and does not control the air as well as perforations or nozzles do. We offer textile nozzles instead of plastic nozzles because our textile nozzles have the exact same color, texture, flame spread / smoke development as the material itself, will not adversely increase the weight of the duct, and will not crack or degrade which is not the case for plastic nozzles.

Microperforation



Perforation



10/ Why doesn't PRIHODA use more permeable fabrics?

We use permeable materials to avoid condensation where supply air temperature is below dew point. However, we only have material of a single permeability value. It is very low and serves just to prevent condensation. Distribution of air is done exclusively using holes (perforation or microperforation or a combination of both) and adjusted holes (nozzles, pockets). Our product portfolio also includes non permeable materials, which are often useful in other situations.

5+5+5

5 for fabric ducting & diffusers

1/ Economy & Speed

The cost savings when using Prihoda Fabric Duct instead of traditional metal can be as much as 70% especially when you consider the cost of conventional diffusers, cost of shipping, much longer installation times, painting, sealing & balancing. Installation and/ or removal of fabric ducts take only a fraction of the time needed for metal systems.

2/ Hygiene

Cleaning is simple, the ducts are easy to remove and cleaned in conventional washing machines. Once cleaned and disinfected Fabric Ducts are 100% hygienic, much more than can be guaranteed with traditional rigid systems.

3/ Sustainability

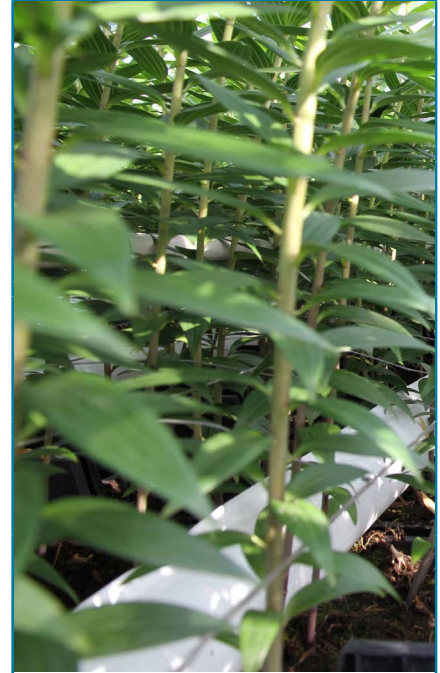
Our fabric ducts are made in accordance with an Environmental Management System (ISO14001), require less energy to manufacture, transport, & install than traditional metal systems and are offered with 100% post consumer recycled content material.

4/ Designs that meet any requirement

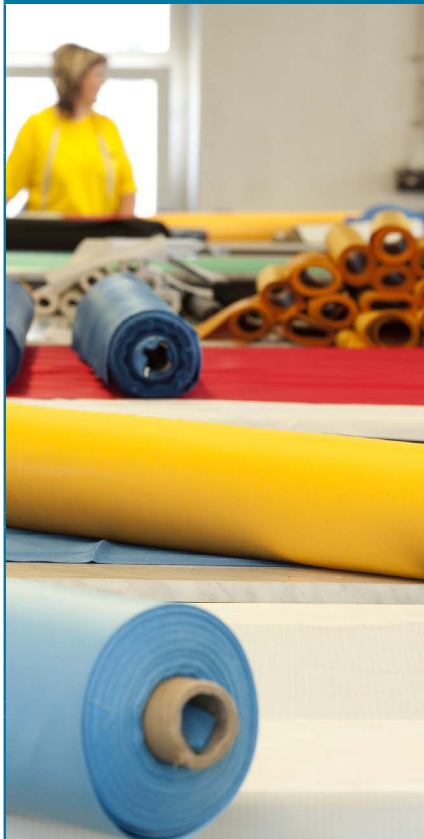
A myriad of air flow models can be achieved from laminar flow, low velocity air distribution for critical environments to high velocity, high throw targeted air patterns.

5/ Aesthetics

Various color and shape combinations exist to satisfy most aesthetic demands. Allowing the product to blend into its environment, or become a tasteful enhancement of the buildings interior.



5 for PRIHODA`s fabrics



1/ Optimum Strength

Through a long development process, we have optimized the weight of our PMI textiles to about 6.5oz/yd². The textile strength moderately exceeds the strength of the ducts seams, which is ideal. Greater strength or heavier materials do not in any way benefit customers as the strength a fabric duct is limited by the strength of the seams.

2/ Very low particle shedding

Because we use continuous fibers, all of our fabrics can be used in Clean Rooms up to ISO Class 4. Independent laboratory tests have demonstrated almost zero particle emissions from Prihoda materials in operation. Thanks to continuous fibers, the appearance of the fabric will not change even after multiple washing cycles, unlike materials made from staple fibers.

3/ Antimicrobial Effect

Our special antimicrobial treatment kills various microbes that come in direct contact with the material. Even after ten washing cycles the Prihoda antimicrobial material still conforms to the requirements of the relevant international standard, which means realistically a lifetime guarantee considering the low frequency of washing required with our fabrics. This applies to PMI/NMI/NMR fabrics.

4/ High Fire Resistance

Our Prihoda PMI/NMI/PMS/NMS/NMR fabrics are certified in accordance with EN 13501-1 with excellent results. Prihoda material achieve classification B-s1,d0. [excellent fire resisting performance B, low smoke emissions S1, zero molten, flaming drips d0]. In addition PMI/PLI/NLI are UL classified to UL723 (meeting NFPA90A), UL2518 (AC167), and ULC listed with flame spread smoke development under 25/50.

5/ Antistatic Design

Our material includes interwoven carbon fibers which make our Prihoda PMI, NMI and NMR textiles more electrically conductive. This allows us to easily prepare the ducts to prevent electrostatic discharge when required.

5 for PRIHODA

1/ Best Price/Quality Ratio

We offer the best ratio between price and quality, however our very reasonable prices do not mean any compromise on quality. Having an ISO 9001 quality management system in place minimizes manufacturing defects and ensures the proper operation and durability of our products, which is our highest priority.

2/ Experience, Knowledge & Technical Support

Fabric Ducting is the only product we manufacture and we focus constantly on its improvement. Our engineers carefully verify every technical detail in our specialized R&D test lab. Furthermore, technical engineers review every order to approve the parameters prior to manufacture and delivery.

3/ Innovative

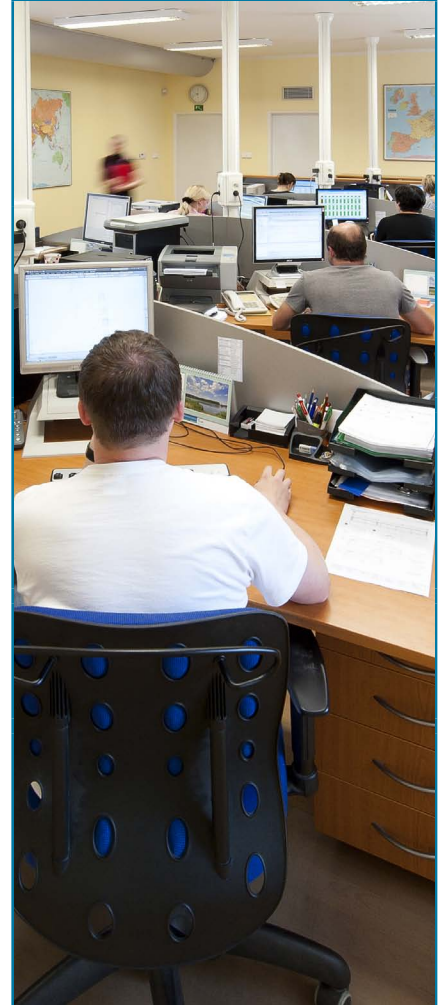
Every year we launch several new ideas on to the market as a natural consequence of the enthusiasm and creativity of our teams. We do not consider anything finished, everything can be improved upon. For example microperforation of fabrics is our unique technology.

4/ 10 Year Warranty

Because of the highest quality materials and manufacturing techniques, we are able to provide a ten year warranty.

5/ Speed

Despite manufacturing mostly bespoke items, we are still able to meet very demanding delivery timescales, thanks to our excellent work organization. For instance, in 2014 we delivered more than 5000 orders to over 60 Countries all over the world. More than 99% of these deliveries were dispatched within our confirmed delivery timescales. The delivery time in order-based production did not exceed 3 weeks throughout the year; a range of orders was produced within an express delivery time of 1 week.



PRIHODA holds certificates for:

- quality management system ISO 9001
- environmental management system ISO 14001



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