Discover the Advantages of DuctSox Air Dispersion

innovate

differentiate

DUCTSOX®
Fabric Air Dispersion Products

DuctSox® Fabric Duct Ventilation

On the Cover

DuctSox Systems discharge air through a combination of porous fabrics, engineered orifices, and linear vents. Smoke testing reveals uniform air flow patterns in all of our DuctSox products, including the traditional DuctSox System (pictured middle), LabSox™ (pictured left), and UFSox™ (pictured right). DuctSox are available in both porous and non-porous fabrics. The traditional DuctSox System shown on the cover is a non-porous fabric. The photo below is a DuctSox in a porous fabric. Smoke testing shows air passing through the fabric mixes with the air dispersion jet.

DuctSox Systems

DuctSox are an attractive and cost effective alternative for exposed metal HVAC ductwork and diffusers. Constructed of fabric, our systems are available in round or surface mount shapes for horizontal or vertical orientations. We also have a large variety of fabric types, ranging from our recycled content Coronado™ and Sedona-Xm™ fabrics to our economy grade EkoTex™.

Different than conventional metal, fabric products are engineered and manufactured for each project. DuctSox designs can be simple, straight systems or very intricate layouts which incorporate fittings such as radius elbows, Ts, and transitions. Sections are zippered together to form extended lengths with diameters from 6 to 80 inches.

Whether industrial, retail, education, commercial, government, warehousing, laboratory, food processing, temporary or permanent, if it's an open ceiling or finished, DuctSox offers a proven choice.

DuctSox Corporation

DuctSox products have been accepted within key industry organizations such as ASHRAE, Underwriter's Laboratories (U.S. & Canada), International Code Council, and many local building authorities throughout the world.

To maintain market leadership, DuctSox tries to offer the best products, designs, and sales support in our industry. More than evolving our standard products, DuctSox strives to be the leader in the industry through our commitment to quality, service, and innovation. This commitment has allowed us to expand our product offerings, including LabSox and UFSox.

DuctSox's corporate goals include developing and maintaining a global distribution and manufacturing strategy, as well as developing innovative products while providing customer solutions.

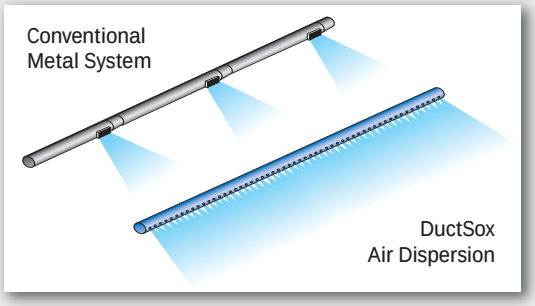
If you'd like to learn more about our DuctSox products or view photos of installations throughout the world, visit www.ductsox.com.

Fabric Advantages & Benefits

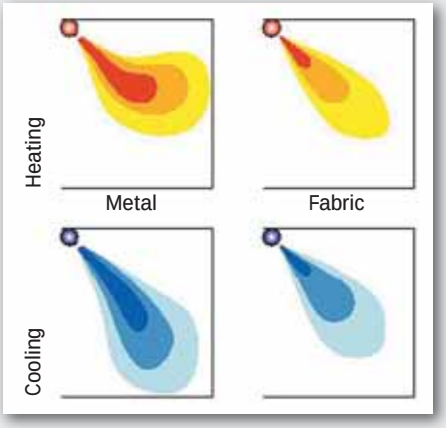
Superior Air Dispersion

In open ceiling architecture, traditional metal duct systems discharge air through side-mounted metal diffusers usually spaced 10 to 15 feet apart. The air is directed to specific zones resulting in less efficient mixing of air in the occupied space and often causing drafting and hot or cold spots.

With a DuctSox System, the air is discharged more uniformly along the entire length of the DuctSox System providing consistent and uniform air dispersion in the occupied space.

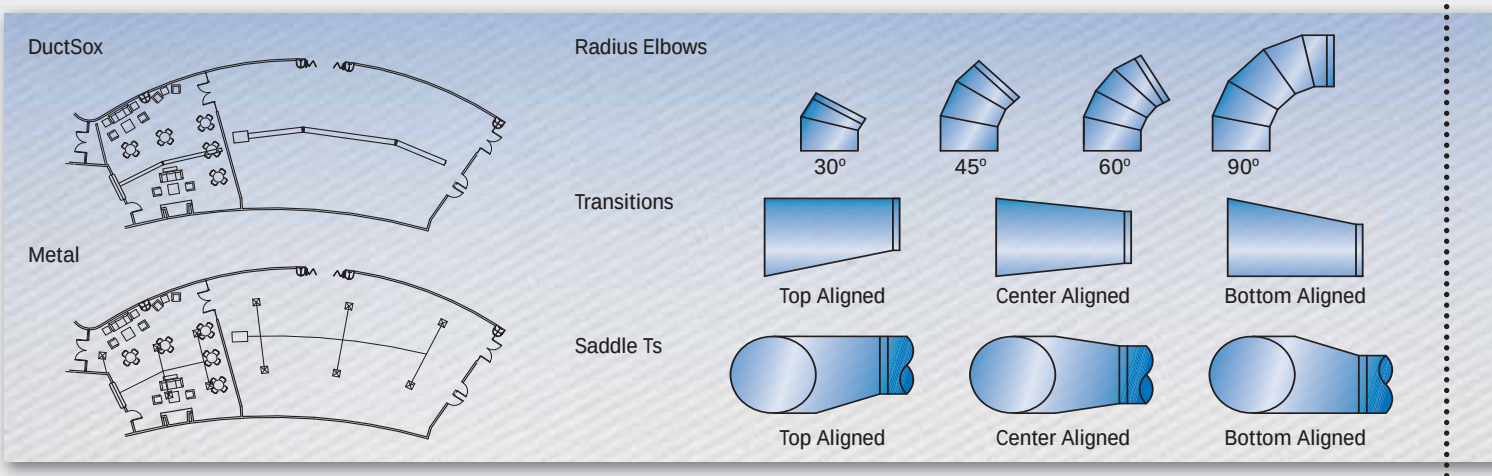


Better air dispersion means better air mixing. Extremely high entrainment ratios result in consistent throw performance for orifices or linear vents. Conventional systems with high volume diffusers result in significant differences from heating to cooling due to the weight, buoyancy, and volume of air being dispersed.



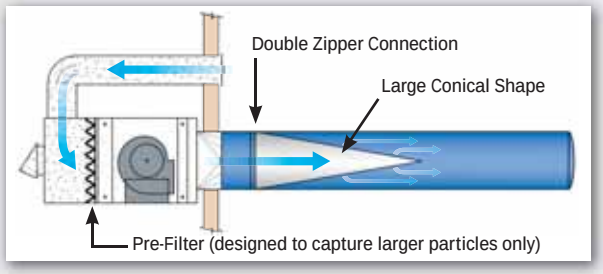
Simplified Design

This means less ductwork! Because the entire DuctSox System is a diffuser, air can be discharged over the occupied space in a more efficient pattern, as seen in this comparison layout. DuctSox Systems may be designed with fittings similar to metal ductwork, including many standard zippered fittings and unlimited customization to match any application requirements.



Flow Control AFD™

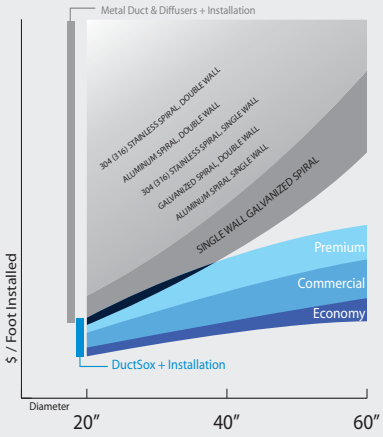
Airflow control is critical in HVAC air dispersion. The zip-in Adjustable Flow Device (AFD) offers variable resistance to balance static regain, balance airflow to branches, reduce turbulence, and reduce abrupt start ups. The AFD comes standard for all Coronado, Sedona-Xm, and TufTex systems.



DuctSox Final Filter™

A DuctSox Final Filter is available for your DuctSox System. The Final Filter filters the air before it is distributed throughout your fabric air dispersion system. The Final Filter reduces dirt build-up in your DuctSox System. Other advantages include: no additional filter bay is required in the DuctSox, conical shape provides large loading area/extended life, and simple zip-in construction means easy replacement.

Fabric Features, Advantages, & Benefits



Cost Savings

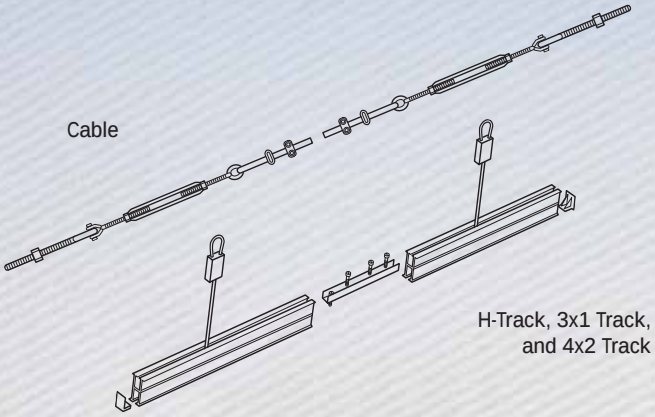
The cost of DuctSox is 20 to 80% less than metal.

- There is considerable savings in the labor time required to install DuctSox versus a comparable metal system. It may require 10 times more labor (man hours) to install metal.
- Savings increase with diameter. Unlike metal, the labor time required to install a 60” diameter DuctSox is nearly the same as a 20” diameter.
- The cost savings of air porous DuctSox are even more dramatic when compared to insulated/double wall spiral metal duct, or premium materials, including aluminum, stainless, or PVC coated.
- The cost of metal has proven to be unstable in today’s economy.

Simple and Easy Installation

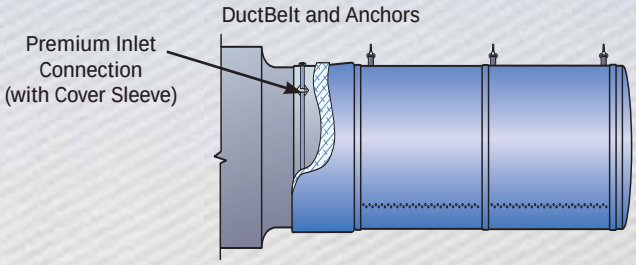
Three simple steps to install a DuctSox System can save up to 90% labor time compared to metal.

1 First, the suspension system is installed using either a simple wire cable or aluminum track system.



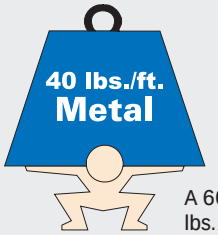
2 Second, connect zippered DuctSox to the suspension system with one of these five attachment options.

3 Third, connect and fasten the DuctSox inlet to the starting collar using a DuctBelt and Anchors.



Lighter Weight

The weight of a DuctSox System can be significantly less than a comparable metal system. Designing with DuctSox Systems means lighter roof loads, ease of handling, and reduced need for power lifting equipment.



A 60” spiral metal duct weighs 40 lbs./ft. (18 gauge, uninsulated)

A 60” DuctSox weighs under 2 lbs./ft.

Properly Balanced

DuctSox Systems are custom designed and require little, if any, balancing.

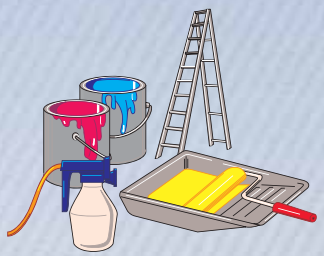
Easy Shipping

DuctSox can be packaged and shipped to your location from any of our manufacturing facilities. Smaller and lighter packages reduce transportation costs and damage. Available air freight delivery eases installation schedules and international shipments.

A Lifetime of Carefree Ownership

Lifetime Maintenance

Whether your air delivery system is fabric or metal, it will require cleaning sometime over its useful life. Because a DuctSox System can be cleaned inexpensively, it allows the owner to clean a DuctSox more frequently than a metal system. Cleaning metal ductwork can be expensive—those costs are often overlooked. And, you should consider that a metal duct system needs to be cleaned inside and out!



A dirty duct (interior) can be a leading contributor to sick building syndrome and human health problems. To maintain Indoor Air Quality (IAQ), the inside surfaces of metal duct require cleaning by a qualified duct cleaning service which can be very expensive, and cleaning the outside surfaces of metal ductwork can be even more expensive. In public spaces, it is not unusual that metal duct requires external surface work to maintain aesthetics and cleanliness. The costs of labor, materials, scaffolding, and possible business interruption often exceed the initial investment cost of the ductwork. Not to mention, metal is sensitive to moisture from condensation, humidity and leaky roofs, high saline air content, chlorine, and other hostile gases and chemicals that cause corrosion and premature deterioration to metal and finished surfaces.

Easy to Clean

When it comes time to clean your DuctSox System, it can be easily removed and laundered. The cleaning process can involve either vacuum cleaning and/or hand or machine washing depending on the fabric. DuctSox Systems are designed with zippered sections for ease of handling and are sized to fit into industrial washing machines.

Hygienic

DuctSox woven fabrics do not absorb moisture, which can be a source for development of bacteria and mold. In addition, some of our fabrics feature an active antimicrobial agent that inhibits bacteria growth. DuctSox's hygienic nature provides resistance to fabric deterioration and breakdown extending life and minimizing maintenance.

Silk Screening

Utilize your DuctSox System to advertise your company or school logos, mascots, inspirational sayings, sponsors, or suppliers.

Portable

Lightweight, flexible, simple, and easy installation/removal enables DuctSox Systems to be relocated between multiple sites. They are ideal for temporary use facilities such as large banquet tents, tunneling projects, or almost any application where part time air ventilation is required.

Flexible

DuctSox fabrics will not dent or scratch like metal ductwork. Damage from moving objects, such as volleyballs and basketballs is eliminated.

Air Porous

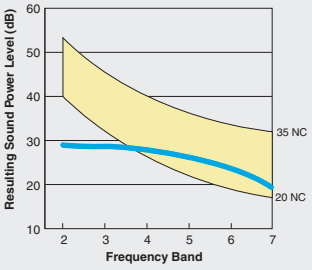
Air passing through the fabric may eliminate the risk of condensation and deflect airborne dust from accumulating on DuctSox surfaces.

Colorful

DuctSox Systems can be aesthetically pleasing. Our fabrics are available in a variety of standard colors, including custom colors to match any interior decor. High performance dyes inhibit damage from ultraviolet light and chlorination found in swimming pool environments.

Quiet Air Delivery

With a properly designed DuctSox System, air is delivered quietly and without the resonating properties found in metal. Additionally, DuctSox fabrics provide noise absorption benefits in the occupied space.

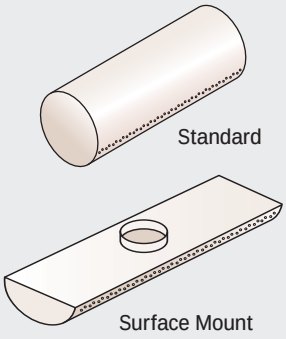


Selecting a System

Four Part DuctSox System

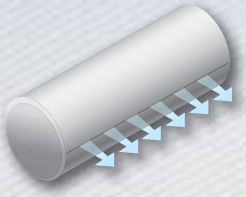
Series: Defines the cross sectional shape.
Fabric: Defines the material and construction.
Model: Describes how the air is dispersed.
Suspension: Includes support and attachment components.

1. Select the Series of DuctSox: Our standard DuctSox are cylindrically shaped and are intended to be suspended and exposed in open ceiling architecture. It is the Series of choice when there is sufficient ceiling height and clearance from obstructions. The Surface Mount Series can be either half-round (D-Shape) or quarter-round shaped and are intended to be flush mounted to finished wall and ceiling applications, most common where ceiling height is less than 14 feet.

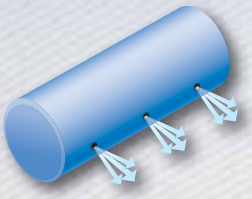


2. Select the Proper Model: There are three standard models of DuctSox that define how the air is delivered.

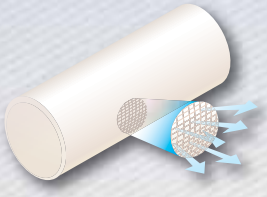
Comfort-Flow: Air is delivered through linear vents providing a gentle linear air flow. Typical applications are high occupancy spaces where emphasis is on optimum air diffusion and mixing, creating comfortable and pleasing environments.



High-Throw: Air is delivered through orifices providing extended distance and jet-type air flow. Typical environments are low-occupancy spaces, but can include high-occupancy environments, if careful consideration is given to factors that affect comfort.



Low-Throw: Air is delivered through porous fabric resulting in reduced air velocities of less than 30 FPM at the DuctSox surface. Low-Throw is ideal for food processing environments where elimination of drafts, uniform air distribution, and secondary air filtration is required.



3. Select the Proper Fabric: Choose from nine fabrics, including Coronado, Sedona-Xm, TufTex, Verona, DuraTex, Microbe-X, Stat-X, Rx, and EkoTex. DuctSox fabrics were developed to satisfy application requirements in the industrial, retail, and commercial markets, including telecommunications and food processing. Each fabric is inherently different in terms of aesthetics, color options, weight, porosity, strength, durability, and launderability. And, some fabrics may possess special features such as antimicrobial or antistatic properties. It is important to match the fabric features with the application requirements. For example, if condensation is an issue, an air porous fabric should be selected. Likewise, it is a good idea to match industrial fabrics with industrial applications and aesthetically appealing fabrics to retail and commercial applications.

4. Select the Proper Suspension System: The last step is to select the suspension system. Suspension options range from simple Tension Cable (galvanized or stainless steel) and three track configurations, including two anodized aluminum options (Suspended H-Track and Flush Mount) and one stainless steel system (V-Track). The attachment options are either Snap Clips, 3x1 Hangers, 4x2 Hangers, Snap Tabs, or Cord-In. Selecting the right suspension is based on architectural appeal, economy, and the availability of suspension options with the selected fabric.

DuctSox Design Note: See the DuctSox Design Manual to determine air flow design incorporating vent and orifice sizing, fabric porosity selection, DuctSox lengths and diameters, air flow orientation and throw, etc. For a copy of the Design Manual, visit our website at www.ductsox.com or contact DuctSox at (866)-DUCTSOX (382-8769).

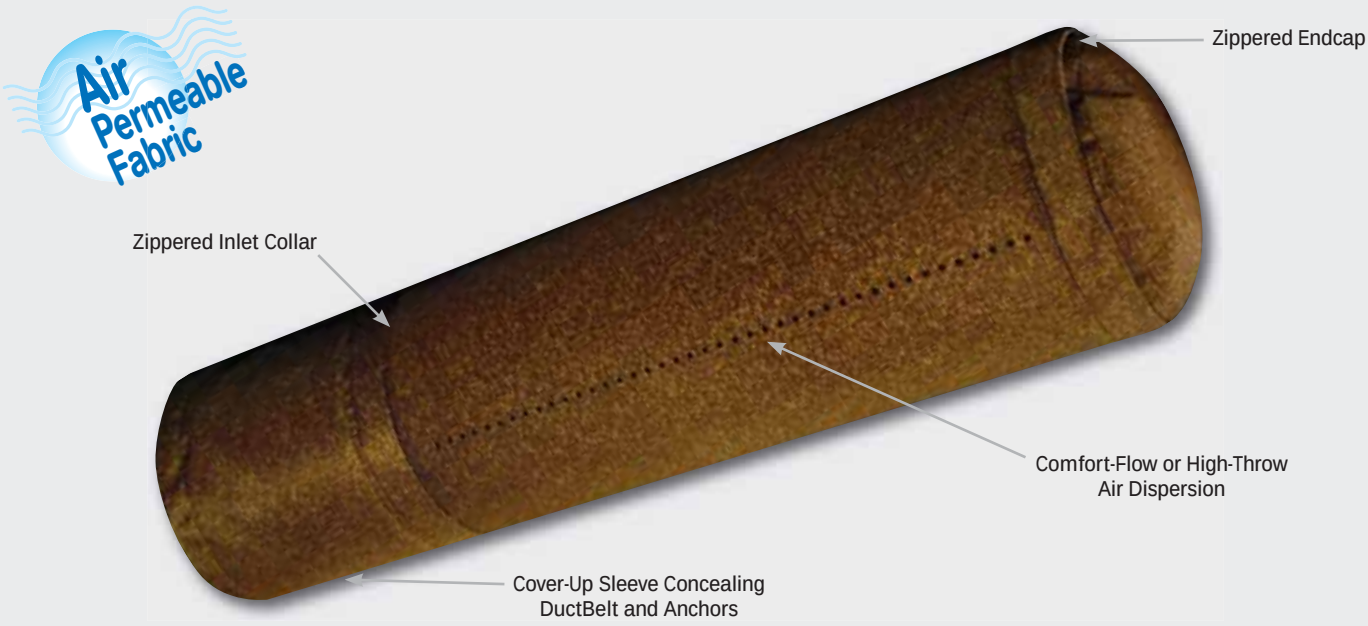
Recommendations

Application	Model Options*	Fabric Options	Suspension & Attachment Options
Food Processing	LT, CF	Microbe-X, Verona	Stainless Steel Cable and Snap Clips
Industrial, Manufacturing, Warehousing, Distribution	HT, CF	Sedona-Xm, TufTex, Verona, DuraTex, EkoTex up to 30” diameter	Tension Cable: Snap Clips Aluminum Track with Snap Tabs 3x1 and 4x2 Hanging System
Pools	CF	Coronado, Sedona-Xm, Verona, TufTex, DuraTex	Tension Cable: Snap Clips Aluminum Track: Snap Tabs or Cord-In 3x1 and 4x2 Hanging System
Gymnasium	HT, CF	Verona, DuraTex	Tension Cable: Snap Clips Aluminum Track with Snap Tabs 3x1 and 4x2 Hanging System
Office Space, Telemarketing	CF, HT	Coronado, Sedona-Xm, Verona, TufTex, DuraTex	Tension Cable: Snap Clips Aluminum Track: Snap Tabs or Cord-In 3x1 and 4x2 Hanging System
Retail, Grocery Store	CF, HT	Coronado, Sedona-Xm, Verona, TufTex, DuraTex	Tension Cable: Snap Clips Aluminum Track: Snap Tabs or Cord-In 3x1 and 4x2 Hanging System
Restaurant, Bar, Cafeteria	CF, HT	Coronado, Sedona-Xm, TufTex	Tension Cable: Snap Clips Aluminum Track: Snap Tabs or Cord-In 3x1 and 4x2 Hanging System
Library, School, Classroom	CF, HT	Verona, DuraTex	Tension Cable: Snap Clips Aluminum Track: Snap Tabs or Cord-In 3x1 and 4x2 Hanging System
Telecommunications, Electronic Hub	CF	Stat-X	Tension Cable: Snap Clips 3x1 and 4x2 Hanging System
Auditorium, Sports, Arena, Convention Center, Church	HT, CF	Coronado, Sedona-Xm, Verona, TufTex	Tension Cable: Snap Clips Aluminum Track: Snap Tabs or Cord-In 3x1 and 4x2 Hanging System
Tent, Temporary Structure, Animal Housing	HT	DuraTex, EkoTex up to 30” diameter	Tension Cable: Snap Clips
Clean Room, Laboratory, Kitchen	LT, CF SF1, SF2	Microbe-X, Stat-X, Rx	Galvanized Cable and Snap Clips D-Fuser MetalPan, All-Fabric, and Traditional 3x1 and 4x2 Hanging System

Model, fabric, and suspension recommendations are based on DuctSox experience.

*** CF** = Comfort Flow, **LT** = Low Throw, **HT** = High Throw
SF1 = Surround Flow, **SF2** = Select Flow

Coronado™



Fabric

Coronado features our designer patterns while offering an active antimicrobial agent, a matte fabric finish, and it's GREEN with 55% recycled content. This fabric is available in four standard patterns and custom patterns. Construction features finished seams, positive inlet anchoring system with cover-up sleeve, zippered endcaps, and a zippered inlet collar for a DuctSox Final Filter or Adjustable Flow Device. Coronado Fabric is air permeable, machine washable, and available with all suspension systems.

Application

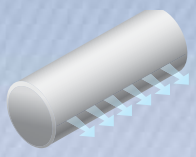
Coronado is a colorful designer fabric that is ideal for any aesthetically-attractive environment. Common uses include retail, commercial, high-end residential, and community applications.

Specifications

Weave: Fire Retardant Polyester Filament/Filament Twill 55% Recycled Content
Weight: 6.8 oz/yd^2
Porosity: 2 CFM/ft^2 @ 0.5" w.g.
Codes: Classified by Underwriter's Laboratories in accordance with the requirements of:
- NFPA 90A
- ICC/AC167; *"Acceptance Criteria of Fabric Air Dispersion Products"*
- UL 2518

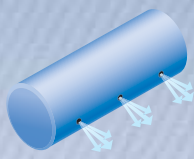
MODEL

Comfort-Flow



L-Vent (Standard)

High-Throw



SG Diffuser

PATTERN OPTIONS

Galvanized

Harvest

Cork

Camo

* Custom colors and patterns available. May require a premium charge and additional lead time.

Note: Colors may vary. No two dye lots are the exact same color.

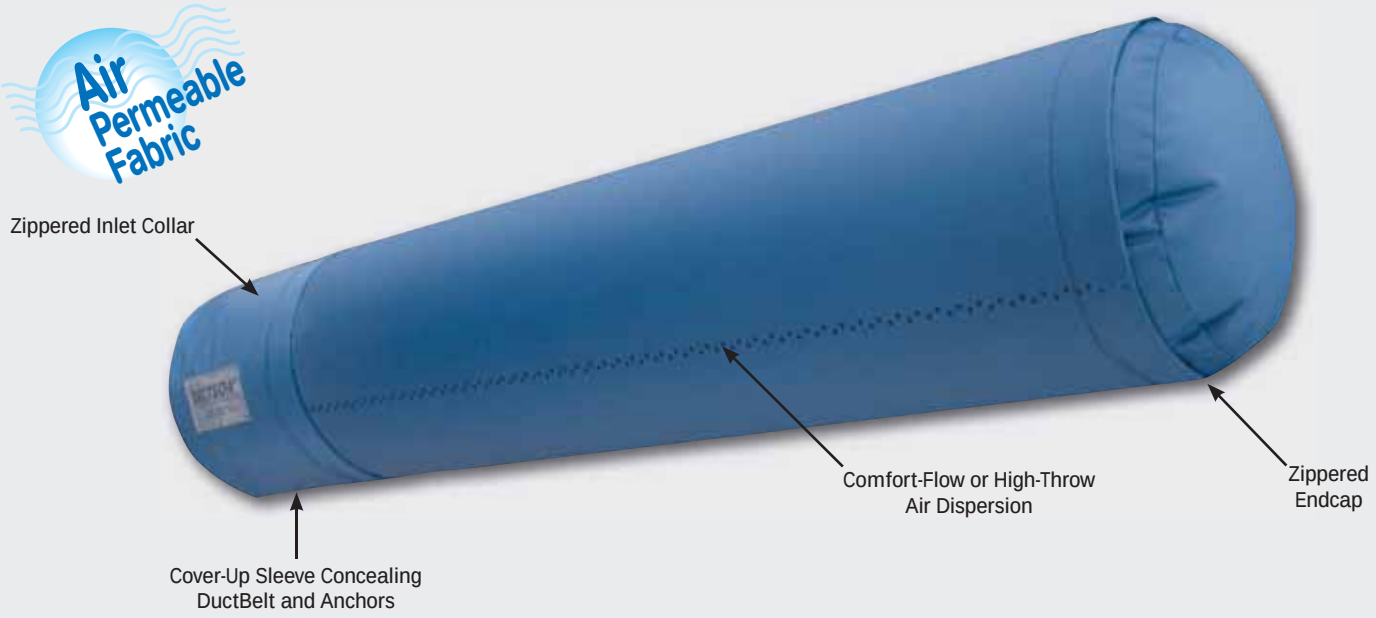
Coronado features an active antimicrobial agent which is incorporated into the fabric during the fabric manufacturing process. Independent antimicrobial testing reveals a distinct zone of inhibition around the fabric swatch. Even after being laundered (10x), tested fabric samples continue to yield clear antimicrobial effectiveness.

DUCTSOX 10 YEAR WARRANTY

CLASSIFIED UL®
File R18856

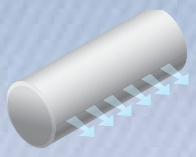
Coronado is made with 55% recycled content (80% post industrial and 20% post consumer).

Sedona-Xm™



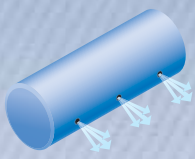
MODEL

Comfort-Flow



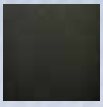
L-Vent (Standard)

High-Throw



SG Diffuser

COLOR OPTIONS


Black


Gray


Natural White


Tan


Green


Blue


Red


Custom Colors*

* Custom colors available. May require a premium charge and additional lead time.

Note: Colors may vary. No two dye lots are the exact same color.

Sedona-Xm features an active antimicrobial agent which is incorporated into the fabric during the fabric manufacturing process. Independent antimicrobial testing reveals a distinct zone of inhibition around the fabric swatch. Even after being laundered (10x), tested fabric samples continue to yield clear antimicrobial effectiveness.

DUCTSOX 10 YEAR WARRANTY

CLASSIFIED UL®

File R18856

Sedona-Xm is made with 55% recycled content (80% post industrial and 20% post consumer).

Fabric

Sedona-Xm premium grade fabric features an active antimicrobial agent, a matte fabric finish, and it's GREEN with 55% recycled content. This fabric is available in seven standard colors plus custom color matching. Construction features finished seams, positive inlet anchoring system with cover-up sleeve, zippered endcaps, and a zippered inlet collar for a DuctSox Final Filter or Adjustable Flow Device. Sedona-Xm fabric is air permeable, machine washable, and available with all suspension systems.

Application

Sedona-Xm is a colorful premium fabric that is ideal for any aesthetically attractive environment. Common uses include retail, commercial, education, and community applications. Ideal if condensation is a concern.

Specifications

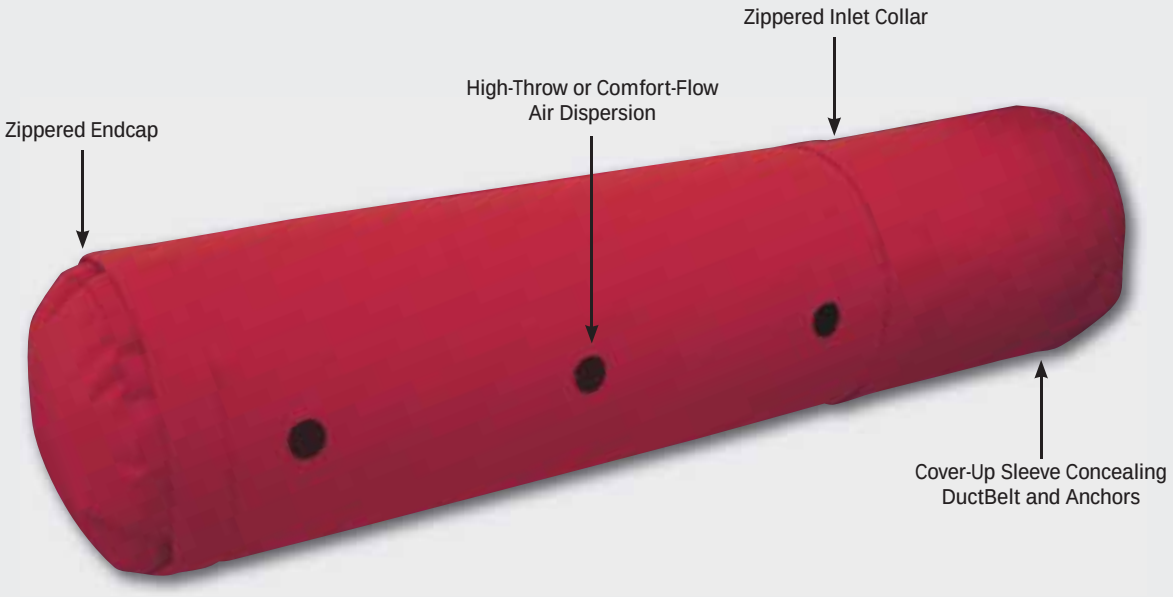
Weave: Fire Retardant Polyester Filament/Filament Twill
55% Recycled Content

Weight: 6.8 oz/yd^2

Porosity: 2 CFM/ft^2 at 0.5" w.g.

Codes: Classified by Underwriter's Laboratories in accordance with the requirements of:
- NFPA 90A-2002
- ICC/AC167;
"Acceptance Criteria of Fabric Air Dispersion Products"
- UL 2518

TufTex™



Fabric

TufTex is a heavyweight, premium grade non-permeable polyester fabric. This heavy-duty fabric has a textured, aesthetically-attractive finish. Construction features finished seams, a positive inlet anchoring system with cover-up sleeve, zippered endcaps, and a zippered inlet collar for a DuctSox Final Filter or Adjustable Flow Device. TufTex is machine washable.

Application

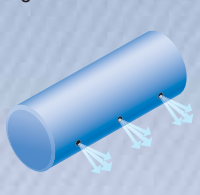
TufTex is ideal for heavy-duty industrial applications, yet aesthetically attractive for commercial and retail environments. Airflow options include standard High-Throw (orifices only) and all Comfort-Flow options. Use where condensation is not an issue.

Specifications

Weave: Fire Retardant Polyester
Plain Weave, Coated
Weight: 8.2 oz/yd^2
Porosity: None
Codes: Classified by Underwriter's Laboratories in accordance with the requirements of:
- NFPA 90A
- ICC/AC167;
"Acceptance Criteria of Fabric Air Dispersion Products"
- UL 2518

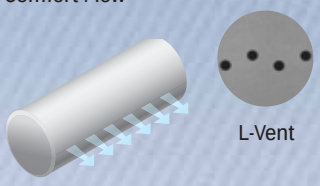
MODEL

High-Throw



Orifice
(Standard)

Comfort-Flow



L-Vent

COLOR OPTIONS

Black | Silver | White | Taupe

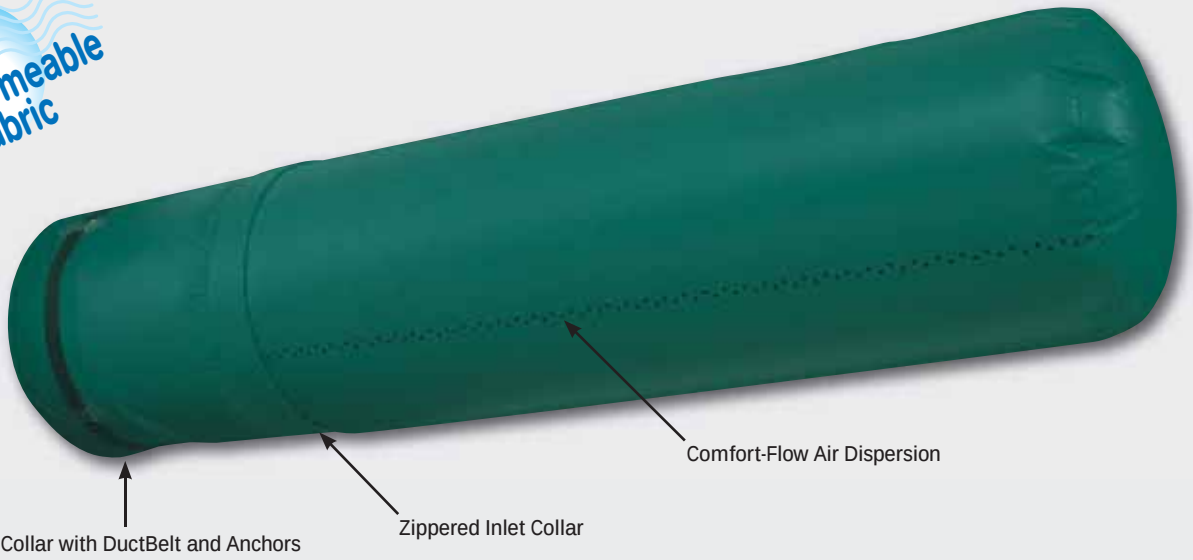
Green | Blue | Red

Note: Colors may vary. No two dye lots are the exact same color.

DUCTSOX 10 YEAR WARRANTY

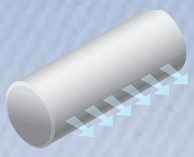
CLASSIFIED UL®
File R18856

Verona™



MODEL

Comfort-Flow



L-Vent
(Standard)

COLOR OPTIONS

Black

Gray

White

Tan

Green

Blue

Red

Custom Colors*

* Custom colors available. May require a premium charge and additional lead time.

Note: Colors may vary. No two dye lots are the exact same color.

DUCTSOX 5 YEAR WARRANTY

CLASSIFIED UL®

File R18856

Fabric

The all purpose Verona is a woven, air permeable commercial grade fabric that offers best-in-class performance and features. Features include finished seam construction, positive inlet anchoring system, and a zippered inlet collar for the addition of a DuctSox Final Filter or Adjustable Flow Device. Verona comes in seven popular colors, including black, gray, white, tan, green, blue, and red. It is also available in custom colors. Verona is machine washable and available with all DuctSox suspension systems.

Application

Ideal for any aesthetically-attractive environment. Common uses include retail, commercial, education, and community applications. Ideal if condensation is a concern.

Specifications

Weave: Fire Retardant Polyester Filament/Filament Twill

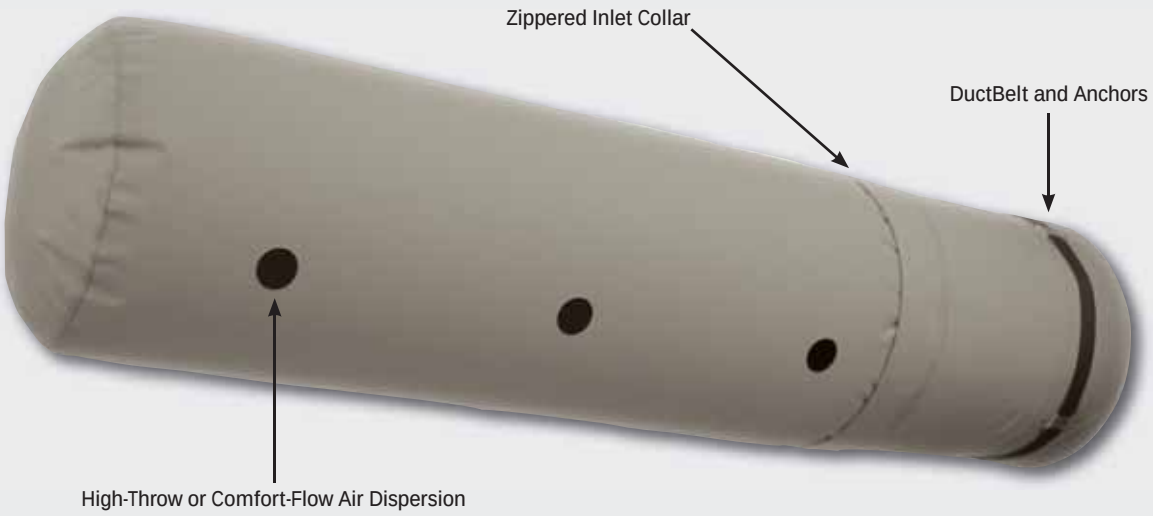
Weight: 6.2 oz/yd^2

Porosity: 2 CFM/ft^2 at 0.5" w.g.

Codes:

- Classified by Underwriter's Laboratories in accordance with the requirements of:
  - NFPA 90A
  - ICC/AC167; *"Acceptance Criteria of Fabric Air Dispersion Products"*
  - UL 2518
- UL-C (Canada)
- BS 5867 Part 2, 1980
- GB8624-2006

DuraTex™



Fabric

DuraTex is a medium weight, commercial grade non-permeable fabric. Developed as our mid-grade polyester-based fabric, DuraTex features include finished seams, an inlet collar with positive inlet anchoring system, and a zippered inlet collar for the addition of a DuctSox Final Filter or Adjustable Flow Device. DuraTex is machine washable and is available with all DuctSox suspension systems. It is also available in five standard colors.

Application

DuraTex is ideal for light retail and industrial applications such as manufacturing, warehousing, and distribution.

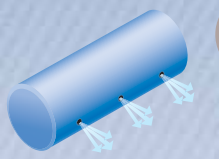
Specifications

Weave: Fire Retardant Polyester Plain Weave, Coated
Weight: 5.5 oz/yd^2
Porosity: None
Codes:
- Classified by Underwriter's Laboratories in accordance with the requirements of:
  - NFPA 90A
  - ICC/AC167; *"Acceptance Criteria of Fabric Air Dispersion Products"*
  - UL 2518

Also available (by request only) to meet:
- BS 5867 Part 2, 1980

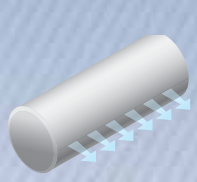
MODEL

High-Throw



Orifice (Standard)

Comfort-Flow



L-Vent

COLOR OPTIONS

Black

Silver

White

Taupe

Blue

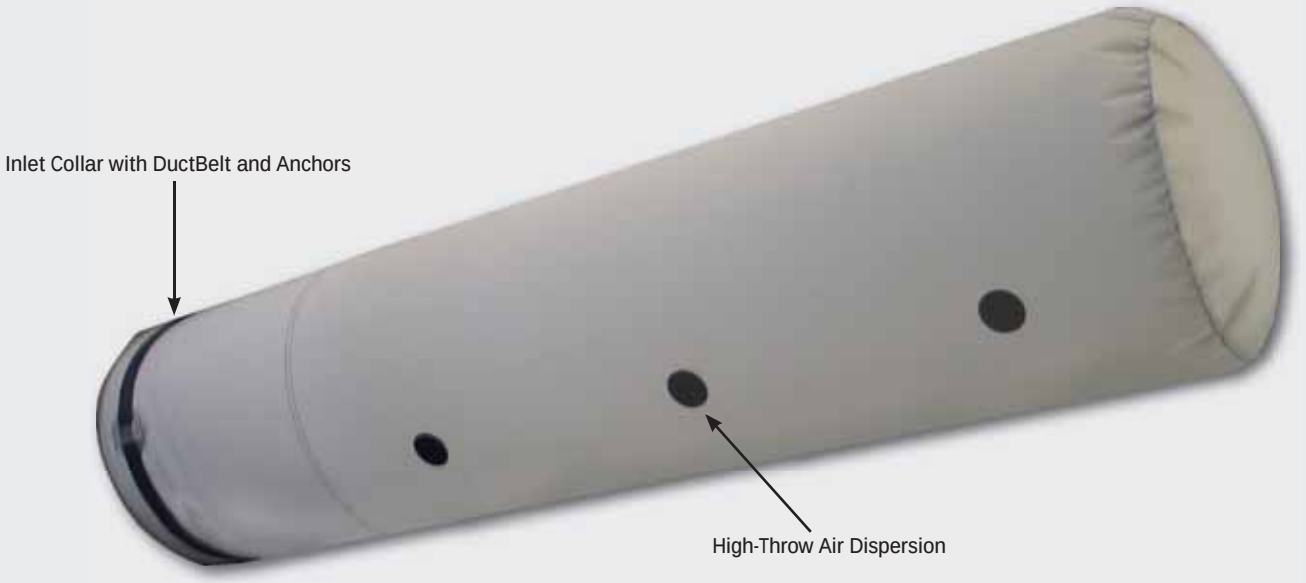
Note: Colors may vary. No two dye lots are the exact same color.

DUCTSOX 5 YEAR WARRANTY

CLASSIFIED UL®

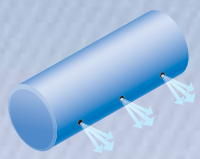
File R18856

EkoTex™



MODEL

High-Throw



Orifice

COLOR OPTIONS

Silver

Note: Colors may vary. No two dye lots are the exact same color.

DUCTSOX 1 YEAR WARRANTY

CLASSIFIED UL®

File R18856

Fabric

EkoTex is a lightweight, non-porous woven and coated polyester material. It is the most economical DuctSox fabric and features simple construction including finished seams and an inlet collar with DuctBelt and Buckle. EkoTex is machine washable and is only available in round shape with Tension Cable or Suspended H-Track Suspension.

EkoTex products are available in limited diameters, suspension configurations, and air dispersion.

Application

Ideal for lightweight duty and simple designs, including industrial applications such as manufacturing, warehousing, and distribution. Other uses include greenhouses and temporary structures.

Specifications

Weave: Fire Retardant Polyester Plain Weave, Coated

Weight: 3.1 oz/yd^2

Porosity: None

Codes:

- Classified by Underwriter's Laboratories in accordance with the requirements of:
  - NFPA 90A
  - ICC/AC167; *"Acceptance Criteria of Fabric Air Dispersion Products"*
  - UL 2518
- BS 5867 Part 2, 1980
- GB8624-2006

Microbe-X™

Fabric

Developed for food processing, Microbe-X fabric offers a lightweight and highly launderable filament fiber construction. The polyester yarns are also treated with a non-leaching antimicrobial which controls the growth and transmission of harmful bacteria, fungi, and molds that can be found in food processing environments. Microbe-X is proven to be effective after 100 wash cycles. Construction features finished seams and a heavyweight inlet collar with an integral DuctBelt and attachment loops. Microbe-X is machine washable and available with all DuctSox suspension systems.

Application

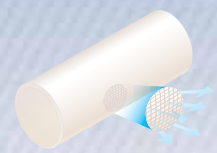
Ideal for refrigerated/food processing environments and other applications requiring low velocity air delivery.

Specifications

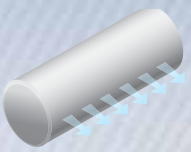
Weave: Filament Polyester
Weight: 3.2 oz/yd^2
Porosity: 6, 13, 20, 29 CFM/ft^2 @ 0.5" w.g.
Treatment: Non-leaching, Permanent Antimicrobial
Codes: Microbe-X has been evaluated and approved by USDA for use in food processing facilities.

MODEL

Low-Throw



Comfort-Flow



L-Vent

COLOR OPTIONS

White

DUCTSOX 1 YEAR WARRANTY

FOOD PROCESSING IN COLOR!

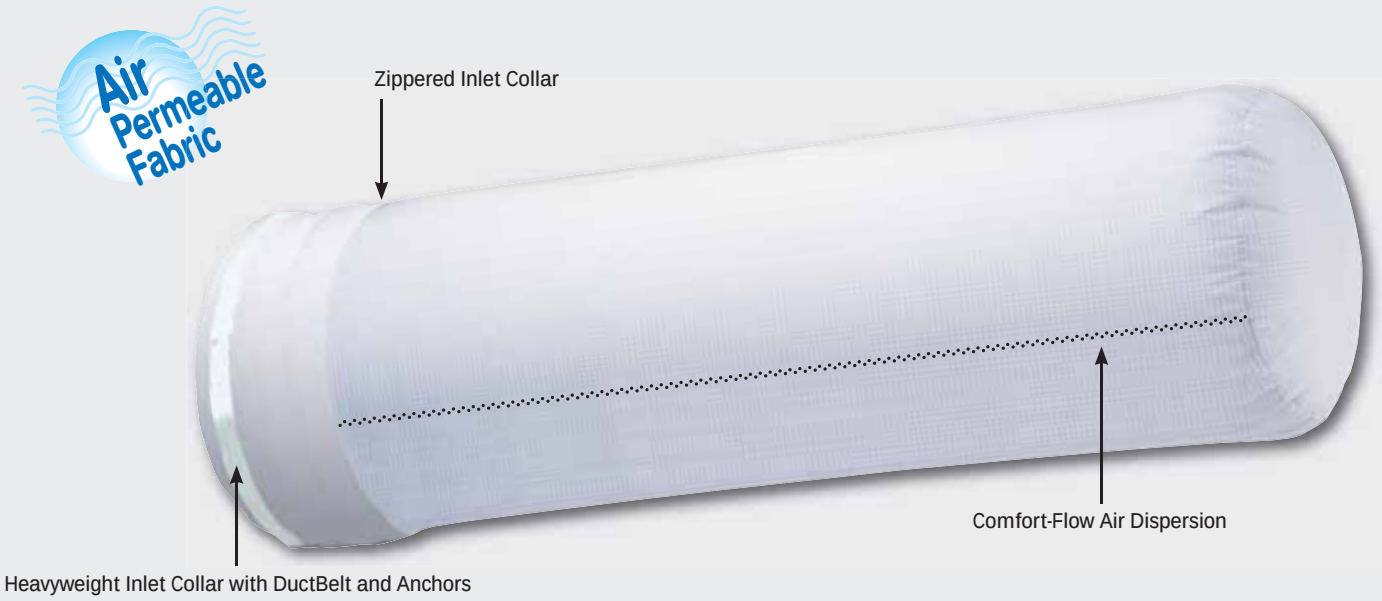
We are now offering our Verona fabric for food processing applications where extensive laundering is required. It will be available in multiple permeabilities, will meet the same FR requirements as Verona, and will be available in both white and custom colors.

DUCTSOX 1 YEAR WARRANTY

CLASSIFIED UL®
File R18856

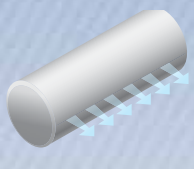
- UL-C (Canada)
- BS 5867 Part 2, 1980
- GB8624-2006

Stat-X™



MODEL

Comfort-Flow



L-Vent
(Standard)

COLOR OPTIONS

White

Light Blue

Note: Colors may vary. No two dye lots are the exact same color.

DUCTSOX 5 YEAR WARRANTY

CLASSIFIED UL®

File R18856

Fabric

Stat-X is an engineered polyester based fabric designed for electrically-sensitive environments. It includes ESD (Electro Static Dissipative) yarns woven in a grid pattern approximately 1/4" x 1/4" to dissipate static buildup. Stat-X is a lightweight, air permeable fabric. Construction features finished seams and heavy-duty inlet collar with positive inlet anchoring system and a zipper inlet collar for the addition of DuctSox Final Filter or an Adjustable Flow Device. Stat-X is machine washable and available with all DuctSox Suspension Systems.

Application

Stat-X is ideal for static sensitive environments in the telecommunication and electronic industries.

Specifications

Weave: Filament Polyester with Interwoven ESD Yarns

Weight: 2.9 oz/yd^2

Porosity: 2.5 CFM/ft^2 @ 0.5" w.g.

Codes:
- Classified by Underwriter's Laboratories in accordance with the requirements of:
  - NFPA 90A
  - ICC/AC167; *"Acceptance Criteria of Fabric Air Dispersion Products"*
  - UL 2518
- UL-C (Canada)

Adjustable Flow Device (AFD™)

Airflow Control

Designed for new systems, as well as retrofits, our patented AFD controls airflow. It is easily installed or replaced in minutes by zipping or unzipping its collar between duct lengths. It is available in 6 inch to 80 inch diameters. Besides benefits of airflow control, the AFD also serves as a flow straightener. The AFD will be preset from the factory to the recommended setting per location and should not require any field balancing unless otherwise specified.

Standard Design / Location:

Inlet

- Each inlet when multiple inlets are connected to a common AHU / fan
- Any system that has an apparent turbulent inlet configuration

Middle

- All systems with an intermediate zipper over 40 ft and inlet velocity over 1,400 CFM

No Pop

- All systems over 100 ft and over 5,000 CFM placed within last 30% of run

Plenum

- After outlet (or outlets within 10 ft) when plenum velocity is over 1,200 FPM

Exceptions

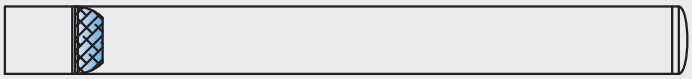
- Typically, systems should not include more than two AFDs in sequence to an endcap

Coronado, Sedona-Xm, and TufTex

- AFD devices come standard with each system constructed of our Coronado, Sedona-Xm, and TufTex premium fabrics (the AFD is an optional feature with all of our other fabrics)

Inlet

- Balance multiple runs
- Reduce / eliminate airflow turbulence



Middle

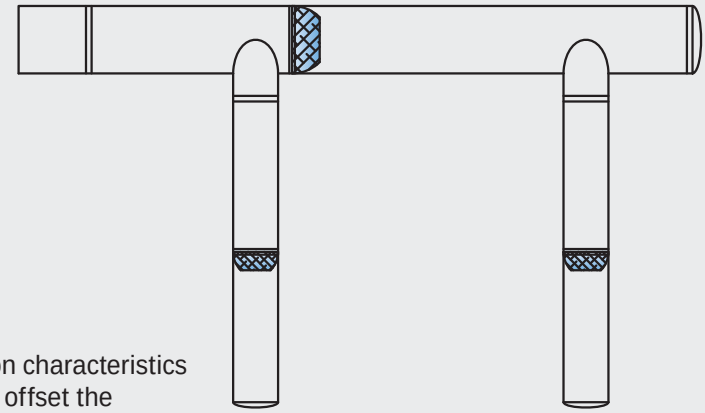
- Balance static regain

No Pop

- Reduce inflation “pop”

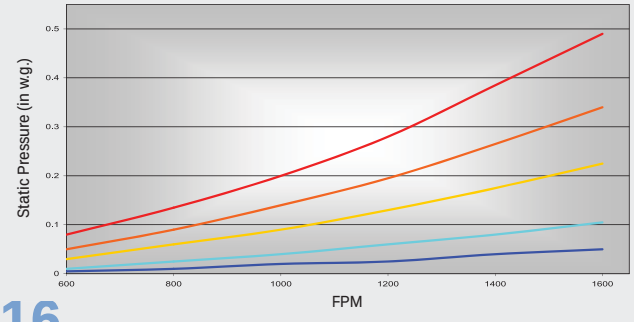
Plenum and Branches

- Direct airflow into branches and balance static regain

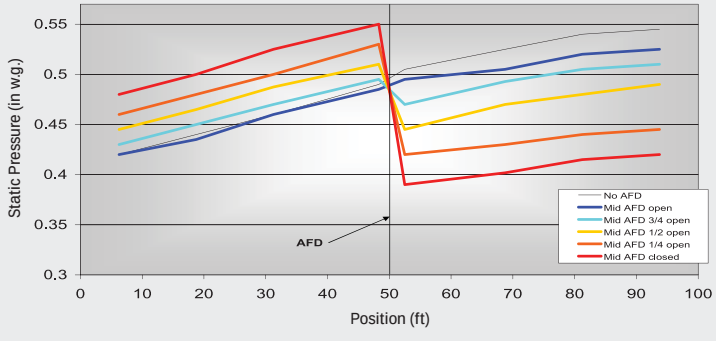


Simple adjustments to the opening size varies flow restriction characteristics of the AFD. Relative to inlet velocity, this restriction can help offset the effects of static regain to properly balance airflow through vents.

Pressure Drop vs. Inlet Velocity



Static Regain

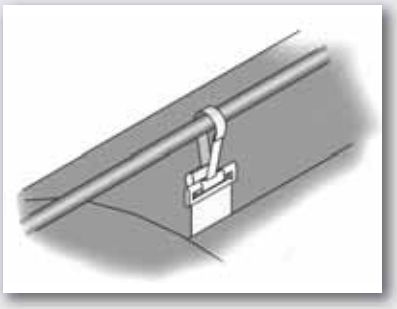


Suspension Options

DuctSox Fabric Ventilation Systems are easily suspended, with an array of convenient installation options that enable simple and flexible integration into a wide range of architectural situations.

Tension Cable

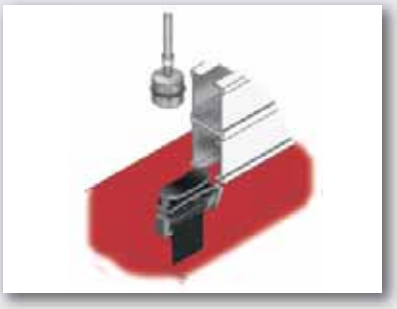
Simple Tension Cable is available with all fabrics and is the most economical option. For use with all sizes, Cable suspension is available for one, two, and three row suspension options (two row required for systems 32” to 72” in diameter, three row required for diameters larger than 72”). Snap Clips are spaced every 24 inches along the length to ensure proper support. The system consists of a cable, turnbuckle(s), and securing hardware for a simple installation. Cable components are available in galvanized, 316 Stainless Steel, and plastic coated S/S cable.



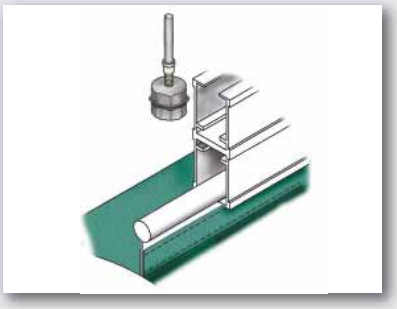
Cable with Nylon Snap Clip

Suspended H-Track

Anodized aluminum track includes an open top and bottom to allow easy location of vertical supports and clear connection to the DuctSox below. H-Track is available for most fabric options. For use with all sizes, H-Track suspension is available for one and two row suspension options (two row required at 32” diameter and larger) and may include radius sections for elbows. Snap Tabs are spaced every 24 inches along the length to ensure proper support. The Cord-In attachment option allows for continuous support for smaller diameter sections. The system consists of 10 foot sections of H-Track, couplers, end caps, locking cable drop supports, and Gripple quick connect devices for easy installation. Supporting hardware components are available in galvanized or 316 Stainless Steel.



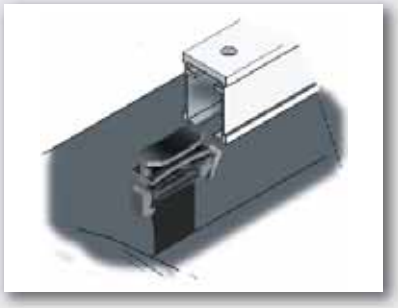
Aluminum H-Track with Snap Clip



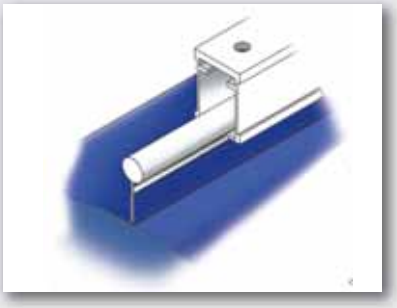
Aluminum H-Track with Cord-In

Flush Mount Track

Anodized aluminum track is available for select fabric options and is designed to be affixed to a flat surface using anchors or T-Bar snap clips. Flush Mount Track is available for one row suspension options and all Surface Mount Models. Snap Tabs are spaced every 24 inches along the attachment to ensure proper support. Cord-In attachment options allow for continuous support for smaller diameter sections. The system consists of 12 foot sections of Flush Mount Track, couplers, end caps, and, if required, T-Bar connection clips for installation to a common T-Bar ceiling.



Aluminum Flush Mount with Snap Tab



Aluminum Flush Mount with Cord-In

Suspension Options

3x1 Suspension

The 3x1 Suspension System offers a whole new dynamic in the appearance and functionality of fabric duct suspension. The 3x1 System gives your open ceiling the sophistication you've been looking for with style, color, and a simpler suspension system, making transitions smoother and less complicated. (10" to 48" diameter)

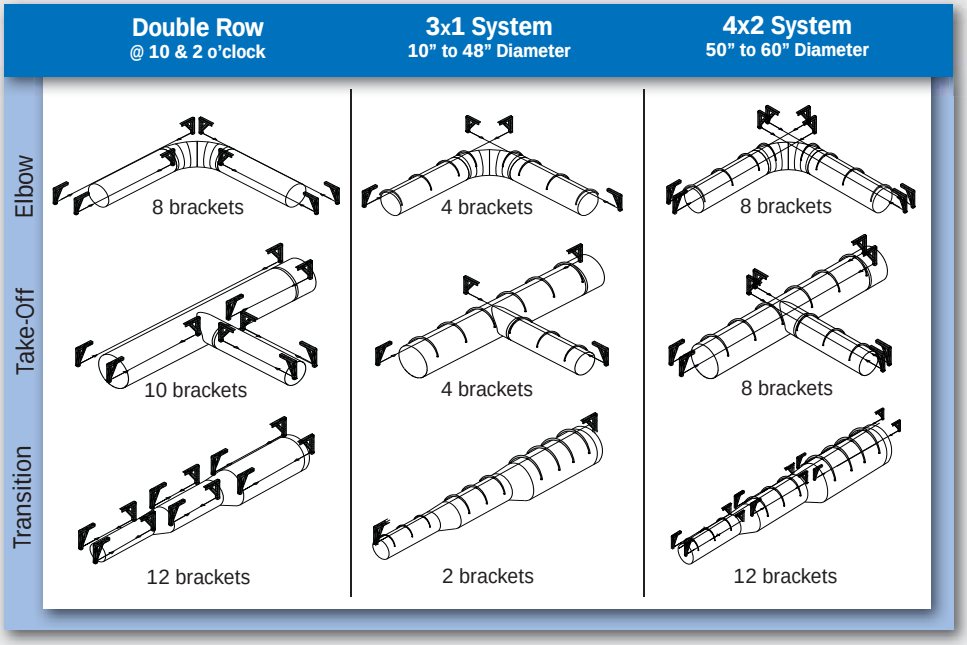
By requiring only a single cable, the 3x1 System reduces the number of knee brackets with elbows, Ts, or transitions, reducing material and labor costs.

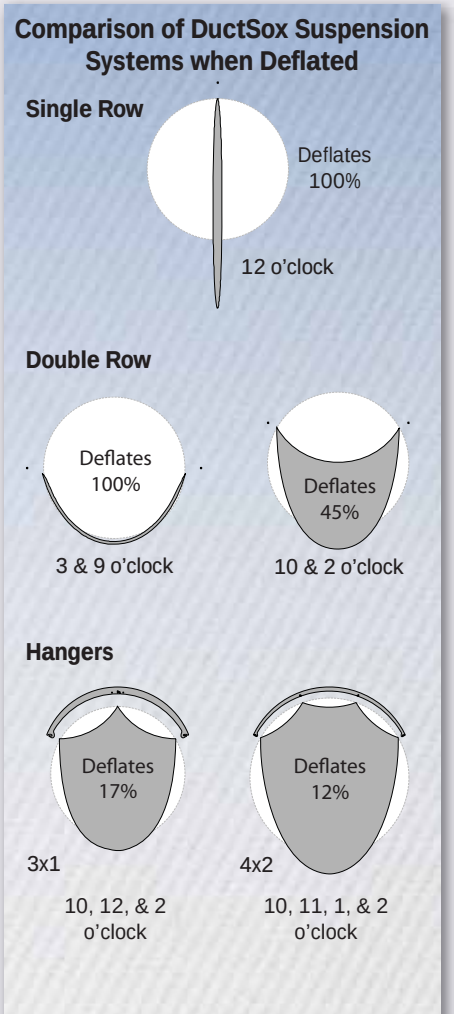
- 3x1 hangers attach to tension cable at 12 o'clock
- D-Clasps connect duct at 10 & 2 to each hanger end
- Snap clips connect to cable between hangers

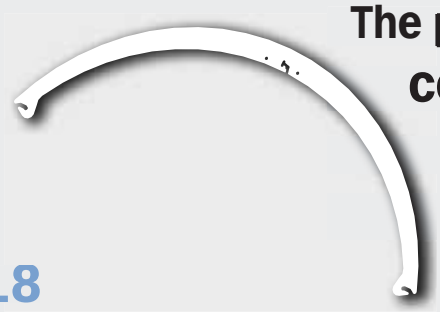
The 3x1 Suspension System can also be used with our Suspended H-Track connecting the hanger to the track with a J-hook.

4x2 Suspension

The 4x2 Suspension System is similar to the 3x1 Suspension System, however, made for larger diameters. The 4x2 hangers attach to tension cable at 11 & 1 o'clock. The 4x2 Suspension System can also be used with our Suspended H-Track connecting the hanger to the track with a J-hook. (50" to 60" diameter)







The perfect complement to your open ceiling structure

LabSox™

LabSox are fabric air dispersion devices designed for laboratory environments (vivariums, pharmaceutical, research education, etc.) in critical applications commonly associated with a fume hood or other airflow sensitive equipment (scales, laser, microscope, etc.).

Airflow in laboratories is a critical design factor as turbulent air can negatively effect research or even cause hood failure resulting in a compliancy issue. The LabSox advantage is clear as air passes through specialized fabric panels resulting in uniform, low velocity, radially diverging air patterns with little, if any, turbulence.

LabSox products are not only ideal for labs of the future, but can be easily retrofitted to resolve air flow issues in existing facilities.

Better Air Dispersion

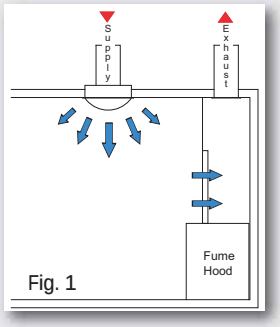


Fig. 1

Fabric provides uniform, low velocity airflow patterns (Fig. 1) that have little or no turbulence. In many critical environments, this may enhance hood performance.

Metal diffusers use turbulent airflow (Fig. 2) to create radial airflow patterns that may reduce hood capture rates and possibly increase hood failure.

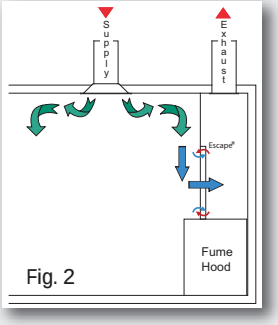
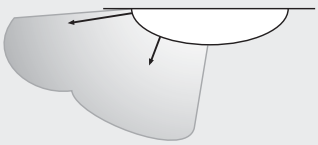


Fig. 2

There are two airflow options to choose from for your LabSox.

Surround Flow™

Surround Flow is the standard air flow model for all D-Fuser models. The radial shape of the fabric face produces a uniform and radially diverging air pattern. Even with high volumes, D-Fusers deliver less turbulence and lower noise than conventional metal D-Fusers.

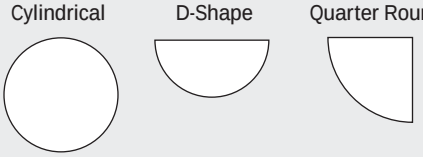


Select Flow™

Select Flow combines customized vent patterns to include directional airflow control. Airflow can be directed several different ways, e.g. airflow can be directed out of two sides only. Depending on your needs, there are many different combinations available.

Product Configurations

Our LabSox products can be configured as our Traditional product grouping, the D-Fuser MetalPan, or the D-Fuser All-Fabric. The Traditional product grouping includes our Cylindrical, D-Shape, and Quarter Round shapes with all suspension options, including tension cable, suspended track, and surface mount track.



LabSox Benefits

- **Reduced Noise**
  Fabric faced products offer noise levels at least 10 NC quieter than metal
- **Unique Rx LabSox Fabrics**
  Fabrics are engineered and designed for critical environments, high permeable fabrics woven with filament thread, 50% post-industrial recycled content, antimicrobial treated, launderable
- **Better performance at lower cost**
  20-50% less than metal, simple and easy to install, low weight/reduced freight costs, flexible fabric/less susceptible to damage, less jobsite storage
- **Versatile Product Offering**
  Traditional product configurations plus two innovative D-Fusers: All-Fabric and MetalPan
- **Low Discharge Velocity**
  By passing air through permeable fabric

D-Fuser™ All-Fabric™

The All-Fabric LabSox features an innovative aluminum extrusion which secures the fabric backpanel and face. This modular assembly allows the face panel to be removed for maintenance. The unique fabric backpanel eases installation as the only ceiling penetration required is for the inlet connection. The slightly larger and deeper 9-inch face profile of the All-Fabric model increases internal mixing volume and decreases average discharge velocity.

24" x 48" All-Fabric D-Fuser

24" x 96" All-Fabric D-Fuser

Features:

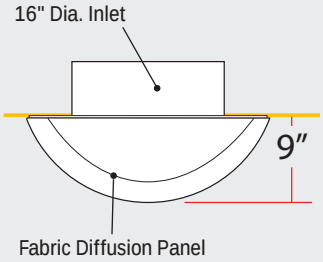
- Lower discharge velocity
- Universal installation configurations (T-bar or finished ceiling)
- Lightweight shipping
- Increased airflow volume per unit
- Easy maintenance
- Quiet

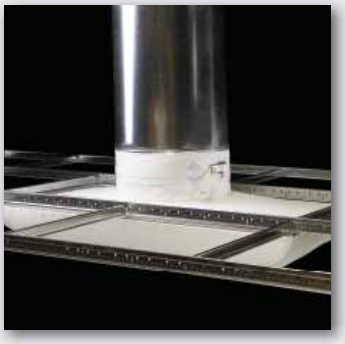
Options:

- Standard 24” x 48”, 24” x 96” (custom sizes available)
- Surround Flow (std.) or Select Flow
- Custom inlet size and position

All-Fabric D-Fuser

35% more surface area yields lower average discharge velocities





Fabric Inlet Connection

D-Fuser™ MetalPan™

The MetalPan LabSox combines the traditional metal backpan with the unique advantages of a fabric face for improved airflow performance using an industry standard installation method. The construction features a metal backpan, face frame, and fabric face. The shallow six-inch depth of the face provides a low profile dispersion panel, yet delivers excellent performance.

24" x 48" MetalPan D-Fuser

Face Removed,
Reveals Rigid Diffusion Panel

Features:

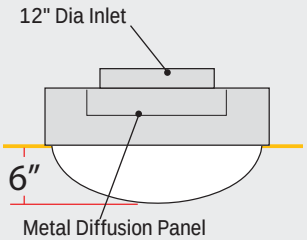
- Industry std. configuration
- Interchangeable fabric face
- Lightweight (10 lbs. lighter than metal for 24” x 48”)
- Shallow 6” face depth and tapered ends
- Capable of airflow volumes up to 1,000 CFM (24” x 48”)

Options:

- Size 24” x 24”, 24” x 48”
- Optional Select Flow
- Inlet diameter
- Filtration
- Insulated backpan
- Backpan construction (steel, aluminum, or stainless steel)

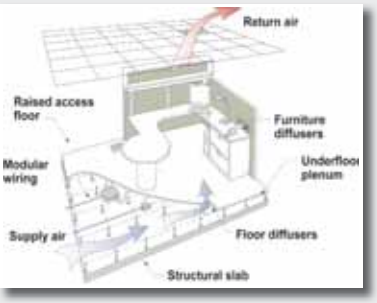
MetalPan D-Fuser

Metal backpan offers short 6” face depth and easy installation



24" x 24" MetalPan D-Fuser

underfloorSOX™



UFAD system. *Picture provided by Center for the Built Environment*

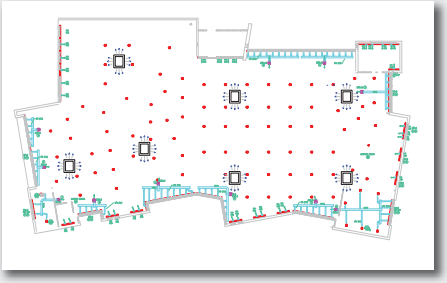
UnderFloorSox (UFSox) are DuctSox Fabric Air Dispersion Systems designed to distribute and disperse air to perimeter and high-heat load locations in Under Floor Air Distribution (UFAD) Systems. UFAD is a relatively new and unique method for delivering conditioned air in offices and other commercial buildings. Unlike conventional overhead air-mixing systems, UFAD Systems use the space beneath the raised access floor as a plenum to introduce air into the occupied space, usually through special floor-mounted diffusers. Typical applications that employ UFAD design are in high-tech office and business spaces utilizing cable for voice, power, and data transmission.

UFAD Systems are becoming increasingly accepted in commercial building space as the benefits, which are well documented by ASHRAE, can include:

- Improved employee comfort
- Reduced energy costs
- Improved Indoor Air Quality
- Improved productivity and health
- Reduced floor to floor heights
- Reduced life cycle building costs

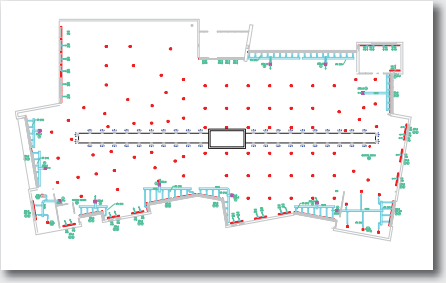
UFAD Models are based on displacement ventilation principles, requiring that the air stratifies from the floor to the ceiling, where it is either exhausted or recycled back into the space. New construction projects using UFAD Technology frequently qualify for LEED® credits for increased ventilation "effectiveness."

One of the issues and challenges of UFAD Systems is thermal decay of the supply air to perimeter or special high-heat load zones. Air conveyance to zones that are greater than 50' from the supply chase can be subject to thermal decay as heat is transferred to the air from the floor panels and/or from the concrete floor slab. When this occurs, occupants in the warmer zones will generally increase the amount of air supply by adjusting their floor mounted diffusers. This can often lead to overmixing the air in the space causing destratification and possibly losing the benefits of UFAD technology. To offset the loss in temperature of supply side air over extended distances, designers have included the use of either air highways, ductwork, or more supply chases to convey conditioned air to those zones. While all three have benefits, they do have drawbacks to consider.



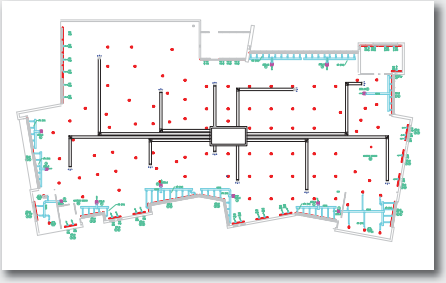
More Supply Chases

Adding supply chases for an open floor plan, especially in large projects, can be very expensive and may be difficult to coordinate due to building design and floor layout limitations.



Air Highways

Partitioning the structure and floor tile as duct, air highways can experience significant thermal decay. Additionally, the obstruction can create challenges for routing cable and reconfiguring office space.

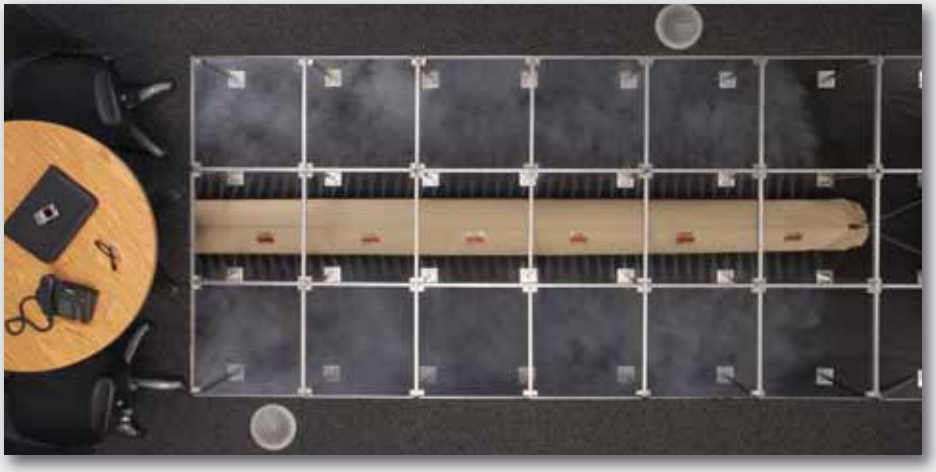


Metal Ductwork

More comparable of spot cooling, ductwork routes and disperses airflow creating uneven pressure and temperature distribution. Systems are not flexible and can create challenges for routing cable and reconfiguring office space.

UFSox

under floor SOX™



UFSox are the best solution for UFAD Systems to supply air to perimeter and special high heat load zones. The key advantages of UFSox are:

Even Air Dispersion

This continues to be a significant feature and advantage of fabric air dispersion systems versus metal. Engineered vents and/or orifices and variable end caps are designed to meet your application needs providing high entrainment ratios and uniform air dispersion patterns (low velocity). These advantages maintain temperature control both under and above the raised access floor, especially in extended distance locations.

Air Porous Fabrics

UFSox reduces heat loss (temperature gain) or thermal decay over extended distances and to perimeter zones. Additionally, porous fabrics eliminate the risk of condensation to the ductwork. Tests done at the Bio-Environmental and Structural Systems (BESS) Laboratory at the University of Illinois quantifies the temperature gradient or thermal barrier around the circumference of the ductwork.

Simple Assembly & Installation

- Lightweight, easy to handle and install
- Modular and zippered straight sections and fittings to meet the standard access floor height cavities from 12” to 18”
- UFSox lay on the floor and are positively located using tension cables at ends of straight runs and elbows
- Reconfigurable: modular zippered sections allow for future re-design

Lower Total Cost

UFSox Systems can be evaluated from both the initial investment and the lifetime ownership cost. Initial cost advantages of UFSox include the cost of materials and installation related considerations (shipping, storage, handling, and installation labor). Lifetime ownership benefits are realized through efficiency of operation of the UFAD system. UFSox systems improve temperature consistency through floor devices and can reduce incidents of costly destratification. Consistent temperature within the UFAD plenum improves pressurization (balanced distribution), efficiency, and employee comfort.

Inlet Connection
Zippered inlet collar secures to metal using DuctBelt and Anchor

Radius Elbow
Unique elbow support and structure ensure alignment in standard floor grid

Operable End Cap
Allows adjustment to release airflow as needed

Active Section
Custom per application, airflow dispersed through one or both sides for optimum performance

Airflow Tag
Application/ product identification label

Warranty & Code Compliance

Design & Performance Warranty

For the first year of operation, each DuctSox system designed and operating within the published guidelines is covered by a design and performance warranty. To assist through the design process, we freely offer our published design manual on our website or provide design assistance through our inside sales and engineering group.

DuctSox Product Warranty

The DuctSox Warranty is for replacement or repair credit based on the amount of the warranty period remaining. The warranty is not available in the form of a cash payment, only as credit towards repair or replacement. The DuctSox Warranty covers materials, fabrication and performance of the fabric portion of the DuctSox System only. Warranty coverage begins at time of shipment.

Material / Product	Warranty Period	Application Requirements
Coronado, Sedona-Xm, TufTex	10 year, prorated years 6–10	Airflow and static pressure per original DuctSox design in accordance with published requirements
Verona, DuraTex, Stat-X, UFSox	5 year, prorated years 2.5–5	Same as above
EkoTex, Rx, Microbe-X, LabSox	1 year	Same as above

Warranty excludes damage to fabric from improper installation, poor maintenance, abuse, abrasion, caustic chemicals, exposure to high temperature (over 180 degrees Fahrenheit), fabric discoloration and shrinkage, or any unauthorized modifications to the DuctSox System. Warranty does not cover labor, equipment rental, or freight charges incurred as a result of executing the warranty.

NOTE: A warranty is only as good as the company that stands behind it!

Code Compliance

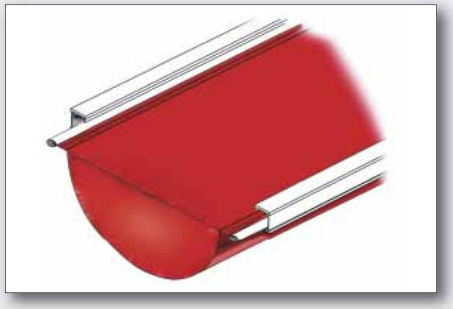
As drafted by the International Code Council (ICC), Acceptance Criteria for Fabric Air Dispersion Systems (AC-167) is the most comprehensive compliance requirement assembled for the fabric duct industry. AC-167 ensures that our products meet a level of safety, quality, and performance. Along with that, many of our products are classified by Underwriter's Laboratories (UL) which ensures continued compliance for our UL labeled products. Additional information is available at www.ductsox.com.

Educational

Air quality is an important part of an effective learning environment. This is why many of our education clients choose DuctSox because of its superior air dispersion capabilities.

Suspension Options for Low Ceilings

The Surface Mount DuctSox is an option for low profile applications where flush mounting to the ceiling and/or wall is required. Applications can vary from environments such as classrooms and laboratories to office settings where low ceiling heights are common. Anodized aluminum flush mounted tracks are easily anchored to fixed ceiling surfaces or installed to a T-Bar grid system using standard mounting clips provided by DuctSox. The cord-in feature helps maintain an inflated and pleasing appearance even when deflated. Standard diameters are 14", 18", 22", 26", 30", and 34". The air inlet to a Surface Mount DuctSox can be either top-down through the ceiling or from the side through the wall.



Gyms / Fitness

Exercise and air quality go hand in hand. Using DuctSox in gymnasium/fitness applications creates the proper amount of continuous air dispersion to ensure a comfortable atmosphere for all members.

Retail / Commercial

"Not having to use paint, adhesives, sealants, and other processes associated with metal duct that introduce pollutants to your air distribution system will always be a green factor."

Stephen Wagner
Mechanical Engineering & Construction Inc.
Baltimore, MD

Pools / Waterparks

"We're really pleased how it performs and looks, especially the custom earth-tone color that coordinates with the rest of the space. It's designed to resist corrosion, so it's really a good choice for this type of space."

Raymond E. Bolton, AIA, Principal
Architectural Design Consultants, Inc.
Lake Delton, WI

Manufacturing / Warehousing

"Once other engineers realize fabric duct's value in a project such as this, I think you'll be seeing a lot of other industrial plants adding these types of cooling and IAQ benefits for employees."

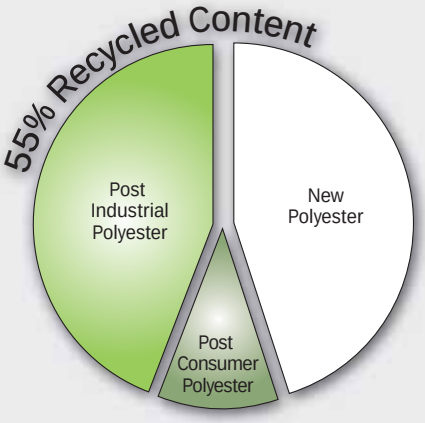
Phil Fina
Quad Graphics
Saratoga Springs, NY

DuctSox are GREEN!

Sedona-Xm™ & Coronado™: Now with 55% Recycled Content!

DuctSox now has fabrics with recycled content! Both our Sedona-Xm and Coronado fabrics are made with 55% recycled content (80% post industrial and 20% post consumer). We are the first fabric duct manufacturer offering recycled fabric options. Our new and improved Sedona-Xm and Coronado are great options to have in today's environmentally-conscious society, and one that should be specified on your next GREEN project!

LEED® Credits	
Materials and Resources	MR Credit 4, Recycled Content (post-consumer + 1/2 pre-consumer)



Other GREEN Benefits of Fabric Duct

The concept of using fabric ductwork instead of metal ductwork for air dispersion offers many sustainable benefits besides cost. DuctSox are 100% custom made to fit your project, meaning no excess fabric and minimal waste. This may help with Materials and Resources Credit 2, Construction Waste Management.

Go to www.ductsox.com and click on our "Technical Center" for the proper specifications. Be sure to download Sedona-Xm and Coronado!

Environmental Benefits	
Improved Air Quality	Better air dispersion which results in more effective air distribution
Reduced Solid Waste	Less packaging, minimum jobsite waste
Conserved Resources	Reduced material use, less energy to ship, less labor and resources required to install
Economic Benefits	
Lower Construction Costs	Lower equipment costs, reduced installation costs, structural (lightweight)
Lower Operating Costs	Increased efficiency of air delivery, reduced maintenance costs, no painting
Improved Productivity	Better airflow increases comfort, more aesthetically pleasing
Health and Community Benefits	
Comfortable Environment	Quiet air delivery and even air dispersion, better ventilation effectiveness
Healthy Environment	Cleaner distribution systems, launderable, no mold, no condensation

Rx Fabrics and Recycled Content

Rx fabrics are an engineered polyester-based fabric designed for air dispersion in critical environments. They contain up to 50% post-industrial recycled content. Rx fabrics are utilized in our LabSox products.

Required Maintenance for DuctSox Products

There are three different areas to consider for maintaining your DuctSox Products.

1. Performance:

DuctSox products have been refined to reduce or eliminate required maintenance. Over years of use, extensive dirt build up will have little, if any, effect on the air dispersion performance of our Premium (Sedona-Xm and TufTex), Commercial (Verona or DuraTex), or Economy (EkoTex) products.

2. Aesthetic:

Keeping the exterior of your DuctSox looking clean may be very important to you. If this is the case, your maintenance schedule should be no different than with metal duct. Although, keeping your DuctSox looking clean can be much easier and less expensive than keeping your metal duct clean. There are a few things that may help reduce the exterior dusting of a DuctSox, including selecting a porous fabric or cycling the system once daily. The most common options for cleaning your DuctSox include vacuuming and/or using compressed air, or it can be easily removed and laundered.

3. Hygienic:

Over its lifetime, the interior of a duct system will collect dust and/or other micro-organisms that have been known to contribute to sick building syndrome. DuctSox has a distinct advantage over metal—you can completely launder your fabric duct system. This allows you to clean both the inside and outside of your HVAC system helping to eliminate the contributors of sick building syndrome.

Overall, the laundry requirements for each space varies based on the quality of the filters in the air handling unit, the amount of dirt entrainment entering the space (on people's shoes and/or clothing), and other location related issues (e.g. near farmland). Based on our experience, average commercial spaces with relatively high traffic and 50% efficient filters may choose to launder their DuctSox after five to seven years. If your fabric is white, a more frequent schedule may be necessary.

Laundry Instructions

All Fabrics

- Remove system and break down into sections
- Turn soiled side out, soak in cold water for 30 minutes
- Any commercial washer with mild detergent should be suitable for laundering your DuctSox
- Wash cold on a gentle cycle
- Rinse thoroughly (repeat cycle if DuctSox is still soiled)
- Line dry or no-heat tumble dry

If the system becomes dirty/soiled during installation, please coordinate a proper cleaning prior to completion.

Exterior surface dirt can, most frequently, be blown off using a combination of a brush and compressed air.

Dubuque, Iowa

DuctSox products have been accepted within key industry organizations such as ASHRAE, Underwriter's Laboratories (US & Canada), International Code Council, and by many building code authorities throughout the world.

More than evolving our standard products, DuctSox strives to be the leader in the industry through our commitment to quality, service, and innovation.

To better support our Global Distribution Network, we have expanded our production capabilities to Kunshan, China.

Kunshan, China

Our commitment to INNOVATION provides unique products for many environments.

DUCTSOX® Fabric Air Dispersion Products — Custom engineered air dispersion systems for open and finished ceiling applications.

LabSOX™ Air Dispersion For Critical Environments — Unique air dispersion systems offer reduced discharge velocities for critical environments.

underfloorSOX™ Plenum Air Dispersion Systems — Engineered distribution and dispersion systems provide uniform temperature and pressure for raised access floors.

For more information on our DuctSox, LabSox, or UFSox products, check us out at www.ductsox.com, or contact us at 866-382-8769!

innovate

differentiate

Products may be covered by one or more of the following patents: 6565430, 6558250, 5769708, 6425417, 6626754, 6280320, 5961044, 5655963, 6960130, 6958011, 6953396, 6899615

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