FabricAir

# CEILING DIFFUSERS

smart air **solutions.**

Simplicity • Performance • Aesthetics

**EN** IMPERIAL VERSION

FabricAir® Ceiling Diffusers offer easy installation, reliable performance, a choice of aesthetic finishes and energy-friendly technology

# Aesthetics, simplicity and performance

## Smart Air solutions

Indoor air quality in the modern workplace is important for both comfort and health. FabricAir® Ceiling Diffusers were developed to provide buildings with a draft-free indoor climate. They offer easy installation, flexible design and eco-friendly technology.

FabricAir® Ceiling Diffusers are made from two standard fabric components – a plenum box and a flow panel.

Air is delivered through a flat flow panel, allowing the diffuser to match suspended ceiling tiles. Diffusers can be designed as needed – to supply and extract air. The plenum is fully insulated to prevent energy loss while providing quiet and draft-free operation. The diffusers are suitable for isothermal and cooling conditions.

## Flexible design

Ceiling diffusers are available in a choice of fabric colors and prints to match your design aesthetics. A low plenum box (12 in) ensures each diffuser easily fits into your suspended ceiling.

## Simple installation

Installation can be completed in minutes. A simple tightening strap is all that is required to secure the ceiling diffuser to metal or flexible ducts.

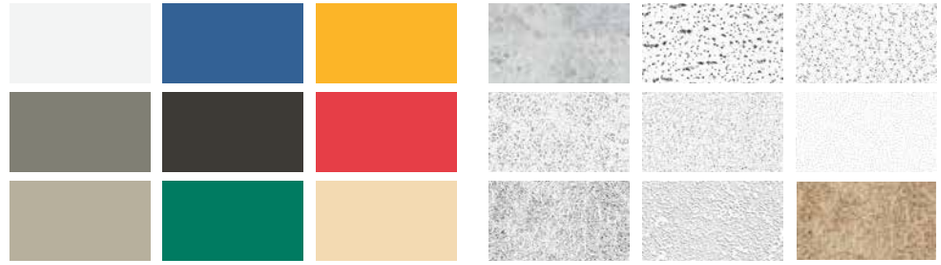
## Reliable performance

Because the ceiling diffusers are fully insulated, they prevent energy loss, eliminate any risk of condensation, are suitable for isothermal or cooling conditions, and can be deployed to supply and extract air. The diffusers are compliant with fire regulations, and each unit offers quiet, draft-free operation and well balanced air distribution. Every FabricAir® Ceiling Diffuser is protected by a full manufacturer's warranty.

Pattern matched to complement surrounding tiles

Contrasting panels make a statement

Some of many color and printed texture options available for FabricAir diffusers



# Design flexibility and aesthetics

Make a bold statement with bright colors or choose a discreet design to match the surrounding ceiling tiles. FabricAir® Ceiling Diffusers are available in a range of standard colors or custom prints according to your specification.

The ceiling diffuser doesn't require regular maintenance and can be adapted to certain needs quickly. If you are in a mood to change the appearance of your office, simply remove the existing flow panel and change with a new one!

White fabric for any setting

Peel off the flow panel

Fit the other flow panel on a plenum box

# Simple installation

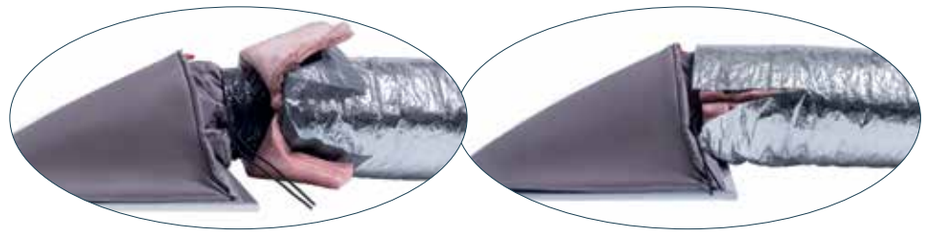
FabricAir® Ceiling Diffusers can be installed in a matter of minutes.
To install:

1. Drop in the diffuser.
2. Slide the diffuser's connection sleeve over the duct.
3. Tighten the supplied strap.

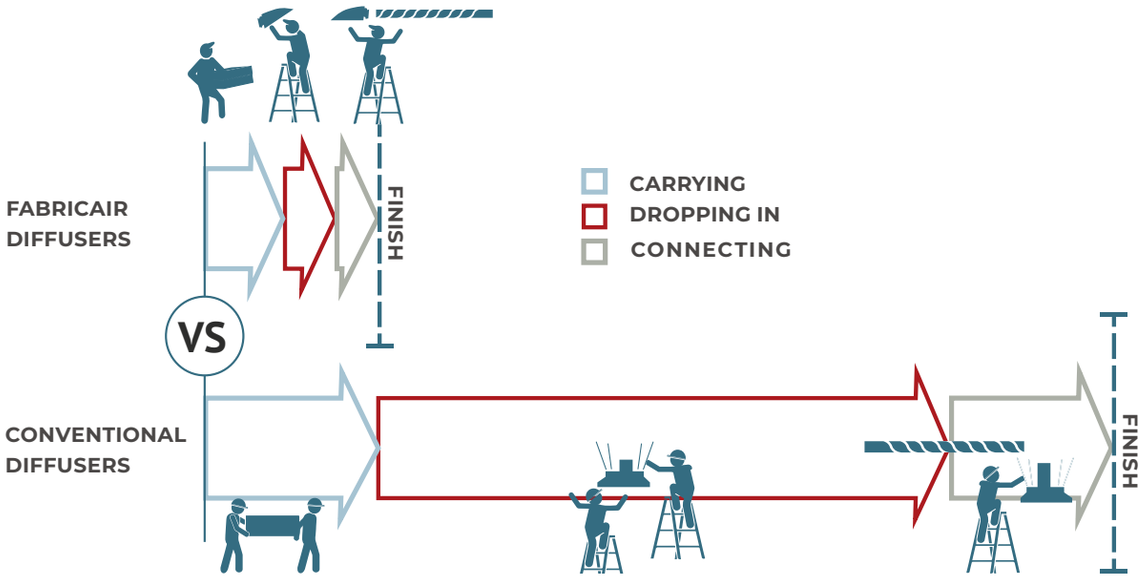
That's it.




If using flexible ducts, cut open and peel back the outer layer of insulation. Insert the inner part of the flexible duct and tighten the strap.



Replace the outer layer of insulation.




Installation is many times faster, compared to conventional diffusers

## Carrying

FabricAir® Ceiling Diffusers, depending on the size, weigh from 4.0 to 6.4 lb. Lightweight product design allows one person to carry up to four units at a time. In comparison to the conventional diffusers, fabric ones are up to three times lighter, which shortens the carrying process by 50%.

## Dropping in

The dropping in process of FabricAir® Ceiling Diffusers is extremely fast. Because of the light weight, there is no need for additional ceiling anchors, seismic bracing, support cables, rods extra tools or materials, installation is seven times faster than traditional diffusers.

## Connecting

Connection of a FabricAir® Ceiling Diffuser is the simplest process possible. The installer only needs to slide the diffuser's opening over the duct and tighten the strap making the connecting process four times faster than the traditional approach.

# Significant time savings

FabricAir® Ceiling Diffusers installation consists of three stages: carrying, dropping in and connecting making installation up to five times faster.

Lightweight design allows several units to be carried at once

# Reliable performance

FabricAir® Ceiling Diffusers offer well-balanced air distribution without causing drafts in occupied zones. They create reliable, healthy indoor air quality even in rooms with low ceilings.

The shape, form and insulation of the FabricAir plenum box minimizes noise and energy loss as well as eliminates condensation risk.

Although developed for typical office environments, FabricAir diffusers are also suitable for schools, shops and other comfort ventilation applications with suspended ceilings.

# Product features

## Flexible deployment options

Suitable to supply and extract air, FabricAir diffusers are available in several sizes and connection positions for deployment in most settings. Quiet operation makes FabricAir diffusers ideal for use in offices, libraries, classrooms and more.

## Energy-friendly technology

FabricAir® Ceiling Diffusers are designed to reduce the carbon footprint of your projects. Their lightweight fabric construction generates less $CO_2$ during production and transport than conventional diffusers.

FabricAir® Ceiling Diffusers also place less load stress on your construction, saving up to 25 pounds per unit.

Each diffuser is fully insulated to prevent energy loss and eliminate any risk of condensation

## Lifespan and warranty

Every unit is supplied with a full 10 year manufacturer's warranty, protecting you against manufacturing defects and other potential issues.

## Hygienic operation

The operation of FabricAir® Ceiling Diffusers is extremely simple. The product does not require regular maintenance but can be washed and disinfected as desired.

## Integrated architectural design

A range of custom print options allows FabricAir® Ceiling Diffusers to match the surrounding tiles, keeping ceiling design consistent and integral with overall space design.

- Suitable for isothermal or cooling conditions
- Available for both supply and extraction of air
- Draft-free air distribution
- Satisfies fire regulations
- Eliminates any risk of condensation
- Doesn't require regular maintenance
- Antimicrobial fabric
- Quiet operation
- Suitable for T-profile based suspended ceiling types
- Available in standard and custom colors as well as custom prints and patterns
- Low product height (12 in)
- Insulated plenum box to prevent energy loss
- A tightening strap connects the diffuser to metal or flexible ducts
- 10-year warranty

## Vital statistics

Office area: 10225 ft²
Ceiling height: 8 ft
Air volume: 4885 cfm
FabricAir diffuser sizes: 24"x48", 48"x24" and 24"x24"
Maximum pressure loss: 0.092 in.w.g.
67 diffusers in total (32 supply diffusers and 35 extract)
Sound power level, max: 21 dB(A)

"Subtle but effective, the FabricAir diffusers perfectly match the aesthetics of our new office. More importantly, they ensure good air circulation so that we are able to work in comfort, whatever the weather outside."

Morten Bergsten, CEO,
Bergsten Timber, Denmark

# Looks good, feels good

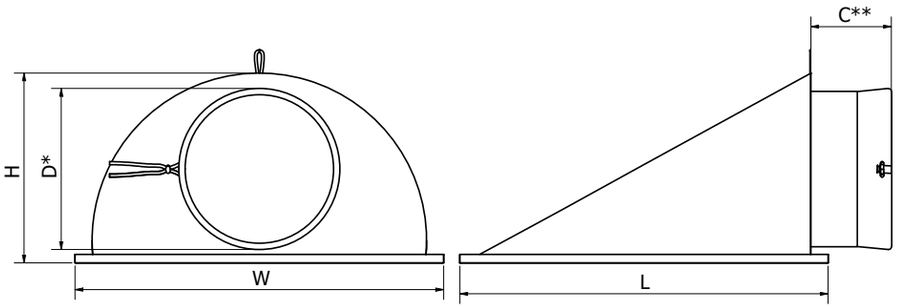
When Bergsten Timber opened a brand-new office building, they chose FabricAir to supply the ceiling diffuser units. The air handling units are located in the basement transporting the air through a ventilation system across three floors. Then the air is distributed in the rooms at isothermal or cooling conditions (depending on the demand) through strategically placed FabricAir® Ceiling Diffusers, with additional VAV dampers to help regulate the air volume in each room.

# Technical data

## Supply unit, SMI

The FabricAir SMI ceiling diffusers are drop-in diffusers, suitable for T-profile-based suspended ceiling installations and are used for both cooling and isothermal air supply. They are quick to install and require no tools. The diffusers can be connected to both solid and flexible ducts. The plenum box – the upper and hidden part of the diffuser – is insulated. The connection sleeve is centered on the end or side of the plenum box and it fits duct sizes from 5 in to 10 in by adjusting the strap lock. The flow panel – the lower and visual part – is a fabric with a MicroFlow™ flow model and is available in alternative colors or printed patterns. FabricAir® Ceiling Diffusers are made from FabricAir Combi 80 and Combi 90 fabrics, and they come with a 10-year warranty.

### Dimensions




### Performance data

| SMI | W (in) | L (in) | H (in) | D* (in) | C** (in) | | m (lbs) |
|---|---|---|---|---|---|---|---|
| | | | | | solid duct | flexible duct | |
| 24'' x 24'' | 23¾ | 23¾ | 12 | 10¼ | 8 | 4¼ | 4.0 |
| 24'' x 48'' | 23¾ | 47¾ | 12 | 10¼ | 8 | 4¼ | 6.4 |
| 48'' x 24'' | 47¾ | 23¾ | 12 | 10¼ | 8 | 4¼ | 6.4 |

**Notes:**

* Fits duct sizes Ø5''-10'' by adjusting the strap lock.

** Length of the connection sleeve when fully extended. Length decreases with the size of the duct when connected. Smaller duct diameter results in a shorter length of the connection sleeve.

**Disclaimer:** Diffuser flow panels may experience a small amount of sagging during operation or at rest after extended use.

### Performance data

Tested in general accordance to ANSI/ASHRAE Standard 70-2006. Tests performed with straight metal duct connection. Actual performance may vary in the field depending on upstream duct layout and when flexible duct is used.

NC values based on octave band 2 to 7 sound power levels minus a room absorption of 10 dB, re 10-12 Watts. Dash (-) in space denotes an NC value of less than 15. Throw values given are the vertical distance from the diffuser to the jet average terminal velocities of 150, 100 and 50 fpm in isothermal conditions. Where throw is left blank means the terminal velocity is not achieved or is less than 1.0 ft. Recommended airflow range up to 175 cfm for 24"x24" unit and up to 350 cfm for 24"x48" and 48"x24" unit for optimum performance and appearance. Grey zone indicates the range where airflow exceeds the recommended values.

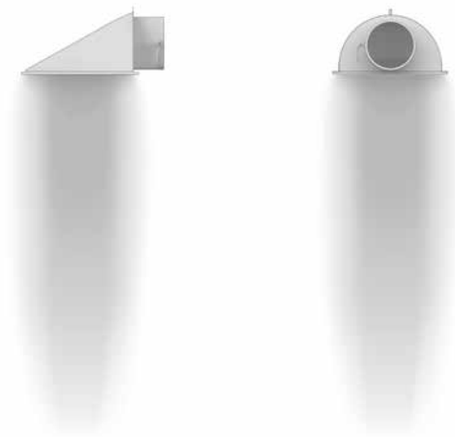
### Code compliance

| | | | | | | | Feature |
|---|---|---|---|---|---|---|---|
| EN 13501-1 | UL 723 | ULC s102.2 | GOST 30244 | NFP 92:507 | DS 428 | GB 8624 | Anti-microbial |
| B-s1, d0 | ✓ | ✓ | ✓ | M1 | ✓ | B-s1, d0, t1 | ✓ |

# SMI 24" x 24"

## Air distribution pattern

The air at isothermal or cooling conditions is distributed below the diffuser creating a low velocity air dispersion beneath it.



## Sound attenuation

Sound attenuation of the diffuser ΔL from duct to room in dB.
Dash (-) denotes attenuation was not determined.

| Diffuser | Connecting duct diameter (in) | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|---|---|---|---|---|---|---|---|---|---|
| 24" x 24'' | 5 | - | - | - | - | 3.2 | 0.8 | 2.6 | 4.3 |
| | 6 | - | - | - | - | 5.2 | - | 0.4 | 3.0 |
| | 8 | - | 0.6 | - | - | 6.5 | 1.5 | 1.6 | 4.1 |
| | 10 | - | 0.2 | - | 0.1 | 5.8 | 2.5 | 3.7 | 3.8 |

## Sizing tables

| Connecting duct diameter (in) | Neck velocity (fpm) | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Velocity pressure (in.w.g.) | 0.002 | 0.006 | 0.010 | 0.016 | 0.022 | 0.031 | 0.040 | 0.051 | 0.062 | 0.076 |
| 5 | Airflow (cfm) | 27 | 41 | 55 | 68 | 82 | 95 | 109 | 123 | 136 | 150 |
| | Total pressure loss (in.w.g.) | 0.010 | 0.023 | 0.040 | 0.063 | 0.090 | 0.123 | 0.161 | 0.203 | 0.251 | 0.304 |
| | NC | - | - | - | - | - | - | - | - | 16 | 18 |
| | $Throw_{50}$ (ft) | | | | | | | | | | 1.1 |
| | $Throw_{100}$ (ft) | | | | | | | | | | |
| | $Throw_{150}$ (ft) | | | | | | | | | | |
| 6 | Airflow (cfm) | 39 | 59 | 79 | 98 | 118 | 137 | 157 | 177 | 196 | 216 |
| | Total pressure loss (in.w.g.) | 0.022 | 0.049 | 0.086 | 0.135 | 0.194 | 0.264 | 0.345 | 0.437 | 0.539 | 0.653 |
| | NC | - | - | - | - | - | - | 16 | 19 | 21 | 23 |
| | $Throw_{50}$ (ft) | | | | | | | 1.2 | 1.6 | 2.0 | 2.4 |
| | $Throw_{100}$ (ft) | | | | | | | | | | |
| | $Throw_{150}$ (ft) | | | | | | | | | | |
| 8 | Airflow (cfm) | 70 | 105 | 140 | 175 | 209 | 244 | 279 | 314 | 349 | 384 |
| | Total pressure loss (in.w.g.) | 0.050 | 0.114 | 0.202 | 0.315 | 0.454 | 0.618 | 0.807 | 1.022 | 1.261 | 1.526 |
| | NC | - | - | - | 16 | 19 | 22 | 25 | 27 | 28 | 30 |
| | $Throw_{50}$ (ft) | | | | 1.6 | 2.3 | 3.0 | 3.7 | 4.4 | 5.2 | 5.9 |
| | $Throw_{100}$ (ft) | | | | | | | | 1.2 | 1.6 | 2.0 |
| | $Throw_{150}$ (ft) | | | | | | | | | | |
| 10 | Airflow (cfm) | 109 | 164 | 218 | 273 | 327 | 382 | 436 | 491 | 545 | 600 |
| | Total pressure loss (in.w.g.) | 0.120 | 0.271 | 0.481 | 0.752 | 1.083 | 1.474 | 1.925 | 2.437 | 3.008 | 3.640 |
| | NC | - | - | 19 | 24 | 27 | 29 | 32 | 34 | 36 | 38 |
| | $Throw_{50}$ (ft) | | 1.4 | 2.5 | 3.6 | 4.7 | 5.8 | 6.9 | 8.0 | 9.2 | 10.3 |
| | $Throw_{100}$ (ft) | | | | | 1.4 | 1.9 | 2.5 | 3.0 | 3.6 | 4.2 |
| | $Throw_{150}$ (ft) | | | | | | | 1.0 | 1.4 | 1.8 | 2.1 |

# SMI 24" x 48"

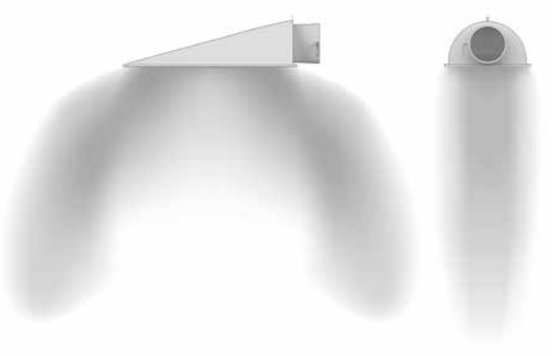
## Sound attenuation

Sound attenuation of the diffuser ΔL from duct to room in dB.
Dash (-) denotes attenuation was not determined.

| Diffuser | Connecting duct diameter (in) | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|---|---|---|---|---|---|---|---|---|---|
| 24" x 48" | 5 | 0.1 | 0.1 | - | - | 5.6 | 1.0 | 2.0 | 6.6 |
| | 6 | 0.6 | 0.2 | - | - | 5.5 | 1.4 | 0.5 | 3.3 |
| | 8 | 0.8 | 0.5 | - | - | 4.7 | 3.6 | - | 4.3 |
| | 10 | 1.6 | 1.0 | - | 1.0 | 6.4 | 5.9 | 3.1 | 7.1 |

## Air distribution pattern

The air at isothermal or cooling conditions spreads wider beneath the diffuser. The effect becomes stronger as the air volume increases, allowing to cover a larger area of the room with the fresh air while preventing draft.



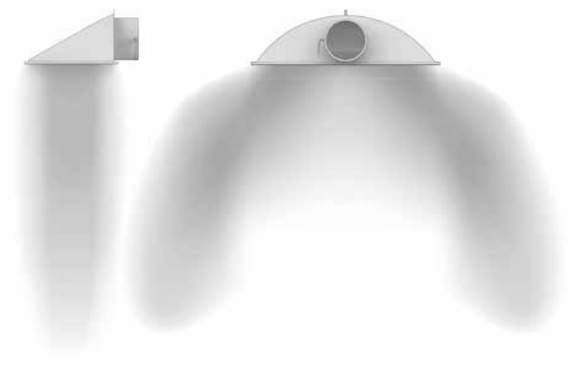
## Sizing tables

| Connecting duct diameter (in) | Neck velocity (fpm) | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Velocity pressure (in.w.g.) | 0.002 | 0.006 | 0.010 | 0.016 | 0.022 | 0.031 | 0.040 | 0.051 | 0.062 | 0.076 |
| 5 | Airflow (cfm) | 27 | 41 | 55 | 68 | 82 | 95 | 109 | 123 | 136 | 150 |
| | Total pressure loss (in.w.g.) | 0.004 | 0.009 | 0.017 | 0.026 | 0.038 | 0.051 | 0.067 | 0.085 | 0.105 | 0.127 |
| | NC | - | - | - | - | - | - | - | - | - | 16 |
| | $Throw_{50}$ (ft) | | | | | | | | | | |
| | $Throw_{100}$ (ft) | | | | | | | | | | |
| | $Throw_{150}$ (ft) | | | | | | | | | | |
| 6 | Airflow (cfm) | 39 | 59 | 79 | 98 | 118 | 137 | 157 | 177 | 196 | 216 |
| | Total pressure loss (in.w.g.) | 0.007 | 0.017 | 0.030 | 0.047 | 0.067 | 0.092 | 0.120 | 0.152 | 0.187 | 0.227 |
| | NC | - | - | - | - | - | - | - | - | - | - |
| | $Throw_{50}$ (ft) | | | | | | | | | | |
| | $Throw_{100}$ (ft) | | | | | | | | | | |
| | $Throw_{150}$ (ft) | | | | | | | | | | |
| 8 | Airflow (cfm) | 70 | 105 | 140 | 175 | 209 | 244 | 279 | 314 | 349 | 384 |
| | Total pressure loss (in.w.g.) | 0.015 | 0.033 | 0.060 | 0.093 | 0.134 | 0.182 | 0.238 | 0.301 | 0.372 | 0.450 |
| | NC | - | - | - | - | - | - | - | - | 15 | 17 |
| | $Throw_{50}$ (ft) | | | | | | | 1.2 | 1.6 | 1.9 | 2.3 |
| | $Throw_{100}$ (ft) | | | | | | | | | | |
| | $Throw_{150}$ (ft) | | | | | | | | | | |
| 10 | Airflow (cfm) | 109 | 164 | 218 | 273 | 327 | 382 | 436 | 491 | 545 | 600 |
| | Total pressure loss (in.w.g.) | 0.034 | 0.077 | 0.136 | 0.213 | 0.306 | 0.417 | 0.545 | 0.689 | 0.851 | 1.030 |
| | NC | - | - | - | - | 15 | 18 | 20 | 22 | 24 | 26 |
| | $Throw_{50}$ (ft) | | | | 1.2 | 1.7 | 2.3 | 2.8 | 3.4 | 3.9 | 4.5 |
| | $Throw_{100}$ (ft) | | | | | | | | | 1.2 | 1.4 |
| | $Throw_{150}$ (ft) | | | | | | | | | | |

# SMI 48" x 24"

## Air distribution pattern

The air at isothermal or cooling conditions spreads wider beneath the diffuser. The effect becomes stronger as the air volume increases, allowing to cover a larger area of the room with the fresh air while preventing draft.



## Sound attenuation

Sound attenuation of the diffuser ΔL from duct to room in dB.
Dash (-) denotes attenuation was not determined.

| Diffuser | Connecting duct diameter (in) | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|---|---|---|---|---|---|---|---|---|---|
| 48" x 24" | 5 | - | 0.3 | - | - | 6.7 | 3.1 | 3.8 | 1.1 |
| | 6 | - | 0.1 | - | - | 6.9 | 3.0 | 2.9 | 1.8 |
| | 8 | - | 0.7 | 0.1 | - | 9.4 | 5.3 | 5.3 | 3.4 |
| | 10 | - | 1.0 | 1.7 | 1.1 | 10.0 | 4.0 | 4.5 | 6.2 |

## Sizing tables

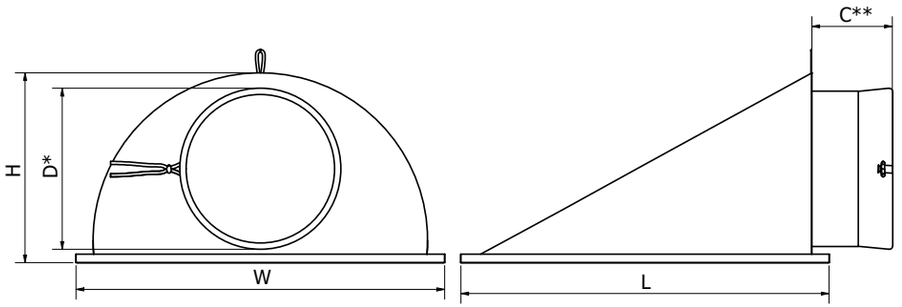
| Connecting duct diameter (in) | Neck velocity (fpm) | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Velocity pressure (in.w.g.) | 0.002 | 0.006 | 0.010 | 0.016 | 0.022 | 0.031 | 0.040 | 0.051 | 0.062 | 0.076 |
| 5 | Airflow (cfm) | 27 | 41 | 55 | 68 | 82 | 95 | 109 | 123 | 136 | 150 |
| | Total pressure loss (in.w.g.) | 0.004 | 0.010 | 0.018 | 0.028 | 0.040 | 0.055 | 0.072 | 0.091 | 0.112 | 0.135 |
| | NC | - | - | - | - | - | - | - | - | 15 | 17 |
| | $Throw_{50}$ (ft) | | | | | | | | | | |
| | $Throw_{100}$ (ft) | | | | | | | | | | |
| | $Throw_{150}$ (ft) | | | | | | | | | | |
| 6 | Airflow (cfm) | 39 | 59 | 79 | 98 | 118 | 137 | 157 | 177 | 196 | 216 |
| | Total pressure loss (in.w.g.) | 0.008 | 0.017 | 0.031 | 0.048 | 0.069 | 0.094 | 0.123 | 0.156 | 0.192 | 0.233 |
| | NC | - | - | - | - | - | - | - | - | - | 15 |
| | $Throw_{50}$ (ft) | | | | | | | | | | |
| | $Throw_{100}$ (ft) | | | | | | | | | | |
| | $Throw_{150}$ (ft) | | | | | | | | | | |
| 8 | Airflow (cfm) | 70 | 105 | 140 | 175 | 209 | 244 | 279 | 314 | 349 | 384 |
| | Total pressure loss (in.w.g.) | 0.015 | 0.035 | 0.061 | 0.096 | 0.138 | 0.188 | 0.245 | 0.311 | 0.383 | 0.464 |
| | NC | - | - | - | - | - | - | 16 | 18 | 20 | 22 |
| | $Throw_{50}$ (ft) | | | | | | | 1.2 | 1.6 | 1.9 | 2.3 |
| | $Throw_{100}$ (ft) | | | | | | | | | | |
| | $Throw_{150}$ (ft) | | | | | | | | | | |
| 10 | Airflow (cfm) | 109 | 164 | 218 | 273 | 327 | 382 | 436 | 491 | 545 | 600 |
| | Total pressure loss (in.w.g.) | 0.038 | 0.085 | 0.152 | 0.237 | 0.342 | 0.465 | 0.607 | 0.769 | 0.949 | 1.148 |
| | NC | - | - | - | 18 | 21 | 24 | 26 | 28 | 29 | 31 |
| | $Throw_{50}$ (ft) | | | | 1.2 | 1.7 | 2.3 | 2.8 | 3.4 | 3.9 | 4.5 |
| | $Throw_{100}$ (ft) | | | | | | | | | 1.2 | 1.4 |
| | $Throw_{150}$ (ft) | | | | | | | | | | |

# Technical data

## Extract unit, EPI

The FabricAir EPI is a drop-in unit, suitable for T-profile-based suspended ceiling installations and is used for air extraction. They are quick to install and require no tools. The units can be connected to both solid and flexible ducts. The plenum box – the upper and hidden part of the unit – is insulated. The connection sleeve is centered on the end or side of the plenum box and it fits duct sizes from 5 in to 10 in by adjusting the strap lock. The flow panel – the lower and visual part – is a fabric with a PerfoFlow™ flow model and is available in alternative colors or printed patterns. This unit is made from FabricAir Combi 80 and Combi 90 fabrics, and it comes with a 10-year warranty.

### Dimensions




### Performance data

| SMI | W (in) | L (in) | H (in) | D* (in) | C** (in) | | m (lbs) |
|---|---|---|---|---|---|---|---|
| | | | | | solid duct | flexible duct | |
| 24'' x 24'' | 23¾ | 23¾ | 12 | 10¼ | 8 | 4¼ | 4.0 |
| 24'' x 48'' | 23¾ | 47¾ | 12 | 10¼ | 8 | 4¼ | 6.4 |
| 48'' x 24'' | 47¾ | 23¾ | 12 | 10¼ | 8 | 4¼ | 6.4 |

**Notes:**

* Fits for duct sizes Ø5''-10'' by adjusting the strap lock.

** Length of the connection sleeve when fully extended. Length decreases with the size of the duct when connected. Smaller duct diameter results in a shorter length of the connection sleeve.

**Disclaimer:** Unit flow panels may experience a small amount of curve inwards during operation or sagging at rest after extended use.

### Performance data

Tested in general accordance to ANSI/ASHRAE Standard 70-2006. Tests performed with straight metal duct connection. Actual performance may vary in the field depending on upstream duct layout and when flexible duct is used. To obtain total pressure, add the velocity pressure to the static pressure.

NC values based on octave band 2 to 7 sound power levels minus a room absorption of 10 dB, re $10^{-12}$ Watts. Dash (-) in space denotes an NC value of less than 15. Grey zone indicates airflow which exceeds the working range. Exceeding recommended airflow rates may cause vibrations and performance disturbances.

### Code compliance

| | | | | | | | Feature |
|---|---|---|---|---|---|---|---|
| EN 13501-1 | UL 723 | ULC s102.2 | GOST 30244 | NFP 92:507 | DS 428 | GB 8624 | Anti-microbial |
| B-s1, d0 | | | ✓ | M1 | ✓ | B-s1, d0, t1 | ✓ |

# EPI 24" x 24"

## Sound attenuation

Sound attenuation of the diffuser ΔL from duct to room in dB.
Dash (-) denotes attenuation was not determined.

| Diffuser | Connecting duct diameter (in) | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|---|---|---|---|---|---|---|---|---|---|
| 24" x 24" | 5 | - | 0.1 | - | - | 1.4 | 0.4 | 2.5 | 3.5 |
| | 6 | - | - | - | - | 3.3 | - | - | 3.6 |
| | 8 | - | 0.5 | - | - | 5.2 | 1.7 | 3.3 | 3.6 |
| | 10 | - | - | - | - | 3.6 | 3.1 | 3.6 | 3.7 |

## Sizing tables

| Connecting duct diameter (in) | Neck velocity (fpm) | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Velocity pressure (in.w.g.) | 0.002 | 0.006 | 0.010 | 0.016 | 0.022 | 0.031 | 0.040 | 0.051 | 0.062 | 0.076 |
| 5 | Airflow (cfm) | 27 | 41 | 55 | 68 | 82 | 95 | 109 | 123 | 136 | 150 |
| | Neg. static pressure (in.w.g.) | 0.010 | 0.023 | 0.040 | 0.063 | 0.091 | 0.123 | 0.161 | 0.204 | 0.252 | 0.304 |
| | NC | - | - | - | - | - | - | - | - | - | 15 |
| 6 | Airflow (cfm) | 39 | 59 | 79 | 98 | 118 | 137 | 157 | 177 | 196 | 216 |
| | Neg. static pressure (in.w.g.) | 0.011 | 0.024 | 0.042 | 0.066 | 0.095 | 0.129 | 0.169 | 0.213 | 0.263 | 0.319 |
| | NC | - | - | - | - | - | - | - | - | - | - |
| 8 | Airflow (cfm) | 70 | 105 | 140 | 175 | 209 | 244 | 279 | 314 | 349 | 384 |
| | Neg. static pressure (in.w.g.) | 0.015 | 0.033 | 0.059 | 0.092 | 0.133 | 0.181 | 0.236 | 0.298 | 0.368 | 0.446 |
| | NC | - | - | - | - | - | - | 17 | 20 | 22 | 25 |
| 10 | Airflow (cfm) | 109 | 164 | 218 | 273 | 327 | 382 | 436 | 491 | | |
| | Neg. static pressure (in.w.g.) | 0.023 | 0.051 | 0.091 | 0.143 | 0.205 | 0.279 | 0.365 | 0.462 | | |
| | NC | - | - | 16 | 21 | 26 | 28 | 31 | 34 | | |

# EPI 24" x 48"

## Sound attenuation

Sound attenuation of the diffuser ΔL from duct to room in dB.
Dash (-) denotes attenuation was not determined.

| Diffuser | Connecting duct diameter (in) | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|---|---|---|---|---|---|---|---|---|---|
| 24" x 48'' | 5 | 0.2 | - | - | - | 5.0 | - | 0.3 | 5.0 |
| | 6 | 0.5 | 0.2 | - | - | 4.4 | 0.1 | 0.3 | 2.0 |
| | 8 | 0.6 | 0.5 | - | - | 5.5 | 3.1 | 2.0 | 4.0 |
| | 10 | 1.4 | 1.1 | - | - | 5.6 | 5.3 | 3.9 | 7.3 |

## Sizing tables

| Connecting duct diameter (in) | Neck velocity (fpm) | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Velocity pressure (in.w.g.) | 0.002 | 0.006 | 0.010 | 0.016 | 0.022 | 0.031 | 0.040 | 0.051 | 0.062 | 0.076 |
| 5 | Airflow (cfm) | 27 | 41 | 55 | 68 | 82 | 95 | 109 | 123 | 136 | 150 |
| | Neg. static pressure (in.w.g.) | 0.009 | 0.021 | 0.037 | 0.059 | 0.084 | 0.115 | 0.150 | 0.190 | 0.234 | 0.283 |
| | NC | - | - | - | - | - | - | - | - | - | 16 |
| 6 | Airflow (cfm) | 39 | 59 | 79 | 98 | 118 | 137 | 157 | 177 | 196 | 216 |
| | Neg. static pressure (in.w.g.) | 0.010 | 0.023 | 0.040 | 0.063 | 0.091 | 0.124 | 0.162 | 0.205 | 0.253 | 0.306 |
| | NC | - | - | - | - | - | - | - | - | - | - |
| 8 | Airflow (cfm) | 70 | 105 | 140 | 175 | 209 | 244 | 279 | 314 | 349 | 384 |
| | Neg. static pressure (in.w.g.) | 0.010 | 0.023 | 0.041 | 0.064 | 0.092 | 0.125 | 0.164 | 0.207 | 0.256 | 0.310 |
| | NC | - | - | - | - | - | - | - | - | - | 16 |
| 10 | Airflow (cfm) | 109 | 164 | 218 | 273 | 327 | 382 | 436 | 491 | 545 | 600 |
| | Neg. static pressure (in.w.g.) | 0.013 | 0.029 | 0.051 | 0.080 | 0.115 | 0.156 | 0.204 | 0.258 | 0.319 | 0.386 |
| | NC | - | - | - | - | - | 16 | 19 | 21 | 22 | 24 |

# EPI 48" x 24"

## Sound attenuation

Sound attenuation of the diffuser ΔL from duct to room in dB.
Dash (-) denotes attenuation was not determined.

| Diffuser | Connecting duct diameter (in) | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|---|---|---|---|---|---|---|---|---|---|
| 48" x 24'' | 5 | - | - | - | - | 8.4 | 3.7 | 4.6 | 0.5 |
| | 6 | - | - | - | - | 5.6 | 4.0 | 3.5 | 1.1 |
| | 8 | - | 0.6 | - | - | 8.7 | 5.8 | 6.5 | 3.2 |
| | 10 | - | 1.0 | 1.5 | 1.6 | 8.8 | 3.6 | 4.7 | 4.6 |

## Sizing tables

| Connecting duct diameter (in) | Neck velocity (fpm) | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Velocity pressure (in.w.g.) | 0.002 | 0.006 | 0.010 | 0.016 | 0.022 | 0.031 | 0.040 | 0.051 | 0.062 | 0.076 |
| 5 | Airflow (cfm) | 27 | 41 | 55 | 68 | 82 | 95 | 109 | 123 | 136 | 150 |
| | Neg. static pressure (in.w.g.) | 0.010 | 0.021 | 0.038 | 0.059 | 0.086 | 0.117 | 0.152 | 0.193 | 0.238 | 0.288 |
| | NC | - | - | - | - | - | - | - | - | 15 | 16 |
| 6 | Airflow (cfm) | 39 | 59 | 79 | 98 | 118 | 137 | 157 | 177 | 196 | 216 |
| | Neg. static pressure (in.w.g.) | 0.010 | 0.022 | 0.039 | 0.062 | 0.089 | 0.121 | 0.158 | 0.200 | 0.247 | 0.298 |
| | NC | - | - | - | - | - | - | - | - | - | - |
| 8 | Airflow (cfm) | 70 | 105 | 140 | 175 | 209 | 244 | 279 | 314 | 349 | 384 |
| | Neg. static pressure (in.w.g.) | 0.011 | 0.025 | 0.045 | 0.070 | 0.101 | 0.138 | 0.180 | 0.228 | 0.281 | 0.340 |
| | NC | - | - | - | - | - | - | - | 16 | 19 | 21 |
| 10 | Airflow (cfm) | 109 | 164 | 218 | 273 | 327 | 382 | 436 | 491 | 545 | 600 |
| | Neg. static pressure (in.w.g.) | 0.015 | 0.033 | 0.059 | 0.093 | 0.134 | 0.182 | 0.237 | 0.300 | 0.371 | 0.449 |
| | NC | - | - | - | - | - | - | 16 | 18 | 20 | 21 |

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