



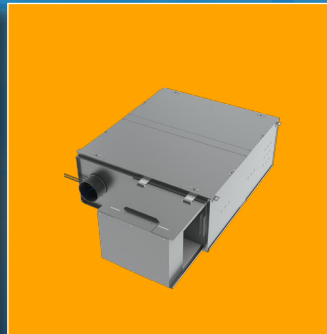
# Titus Quick Reference Guide

ADVANCING THE SCIENCE OF AIR DISTRIBUTION

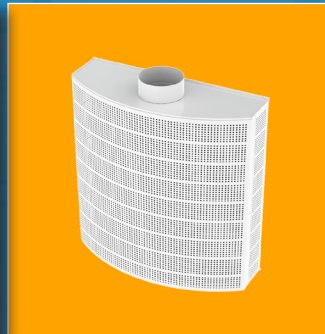
Grilles & Diffusers



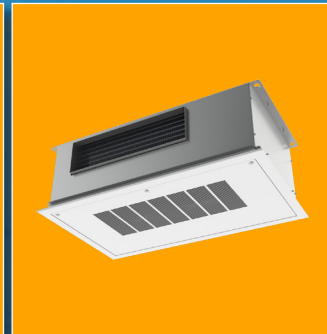
Terminal Units /  
Underfloor Products



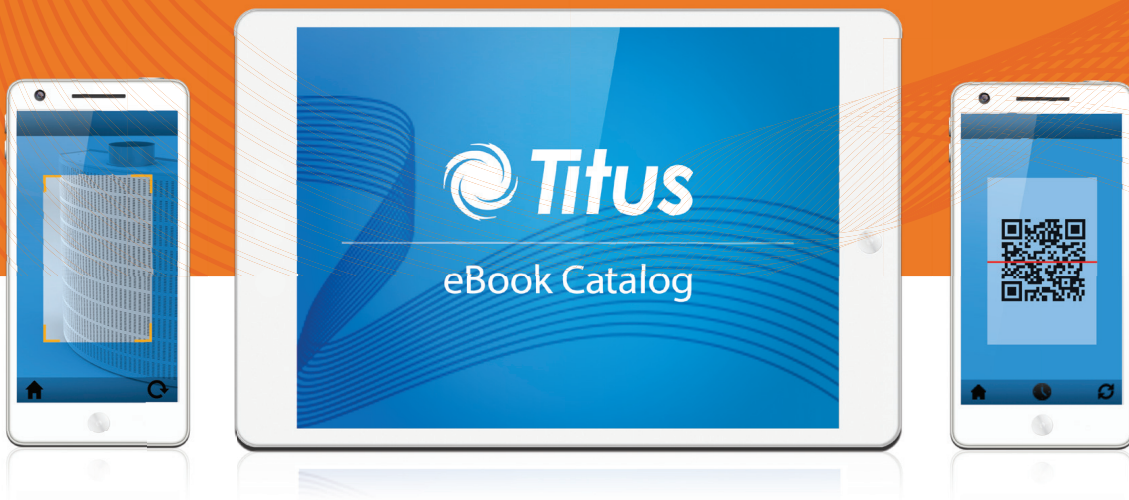
Chilled Beams /  
Displacement Ventilation



Fan Coils / Air Handlers



# Click. Touch. Scan. Know.



Titus air management products come with a complete suite of digital support tools: QR codes, our proprietary AR app, and eBook Catalog. So you're just a click, touch, or scan away from videos, installation instructions, and full technical details about Titus products. It's just another way we're redefining how you work with air management products.



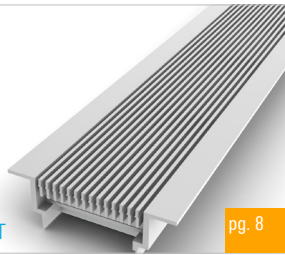
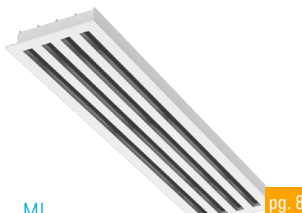


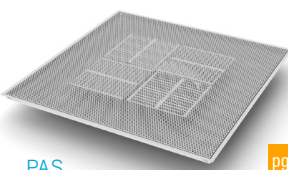
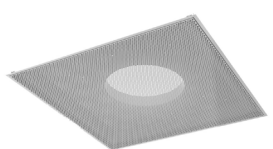
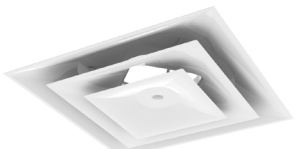







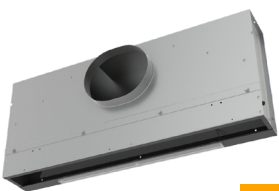

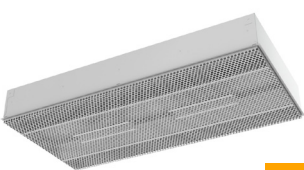



More Information  
on Titus E-Tools

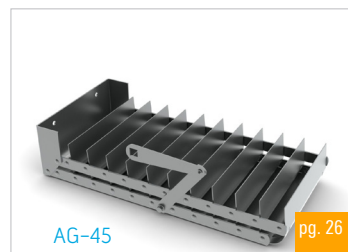
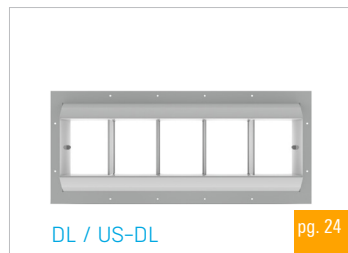
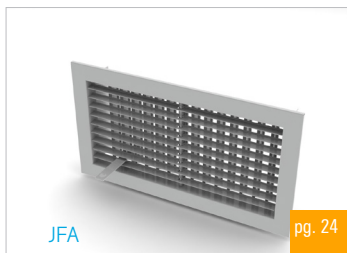
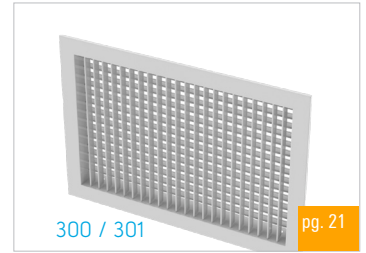
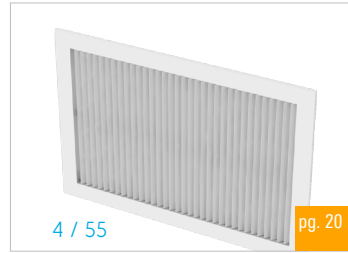
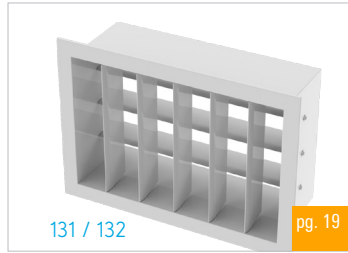
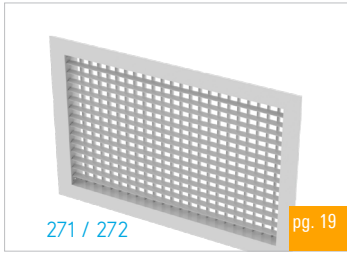




Diffusers

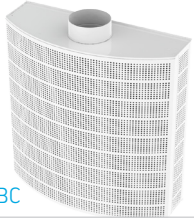
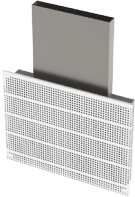
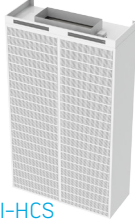



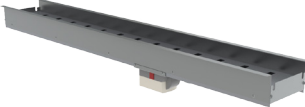
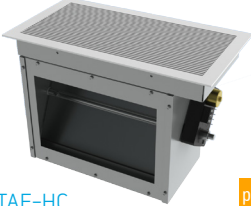
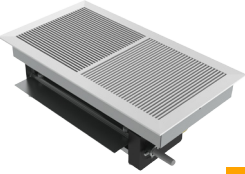
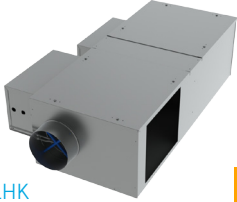
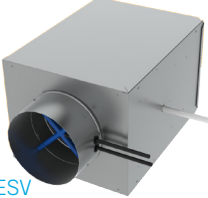
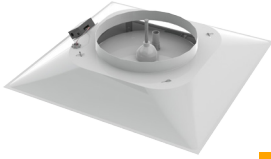
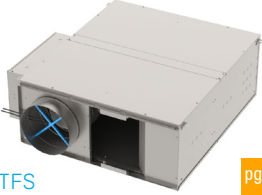

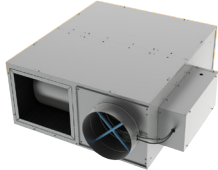



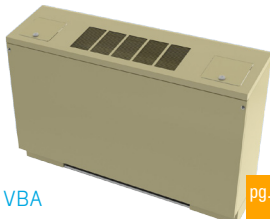

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 <p>TMR / TMRA pg. 9</p>	 <p>FLOWBAR pg. 10</p>	 <p>PAS pg. 11</p>	 <p>PAR pg. 11</p>
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 <p>TDV pg. 13</p>	 <p>TBF-AA pg. 14</p>	 <p>N-1 pg. 15</p>	 <p>TBD SERIES pg. 15</p>
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Grilles & Accessories





Displacement & Chilled Beams / Underfloor / Terminal Units / Fan Coils & Air Handlers

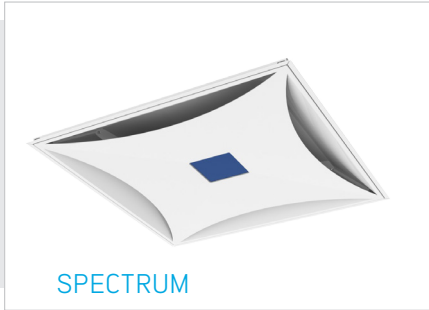
 <p>DVBC</p> <p>pg. 30</p>	 <p>DVIR</p> <p>pg. 30</p>	 <p>DVRI-HCS</p> <p>pg. 32</p>	 <p>CBAL (-12, -24)</p> <p>pg. 33</p>
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## Architectural Ceiling

SUPPLY DIFFUSERS



- » Strong, clean, unobtrusive lines harmonize with the ceiling system, without sacrificing performance
- » Delivers a uniform 360° horizontal air pattern, without excessive noise or pressure drop
- » Excellent choice for variable air volume systems
- » MRI compatible (OMNI-AA / OMNI-AA-NT)
- » **Standard sizes:** 6", 8", 10", 12" / **Module sizes:** 12" x 12", 20" x 20", 24" x 24"



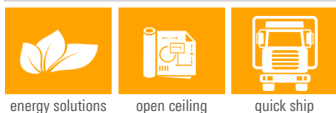
- » Excellent choice for VAV systems
- » Delivers a tight 4-way horizontal air discharge pattern
- » Unique architectural face design with center appliqué (nine standard colors or custom colors and logos)
- » **Standard sizes:** 6", 8", 10", 12" / **Module size:** 24" x 24"

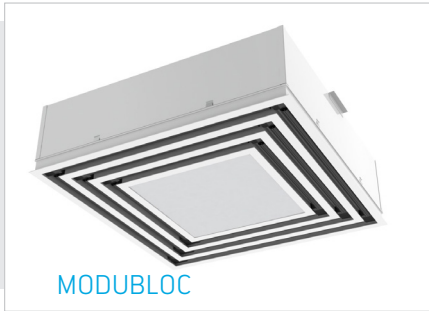


- » Satisfies architectural as well as engineering criteria
- » Plaque face allows the diffuser to harmonize with ceiling systems without sacrificing performance
- » Deep backpan designed to ensure optimum performance without excessive noise or pressure drop
- » **Standard sizes:** 6", 8", 10", 12" / **Module size:** 24" x 24"



- » Designed for architectural ceilings and facilities with exposed ductwork
- » Can be used effectively in heating or cooling applications
- » Uniform 360° discharge pattern
- » **Standard sizes:** 6", 8", 10", 12"





- » Designed to be visually pleasing while providing superior performance
- » Designed so that a ceiling tile (by others) can be field cut and inserted into the face of the diffuser
- » Excellent choice for VAV systems
- » **Standard sizes:** 8", 10", 12", 14"



- » Designed for an architectural look and engineered performance
- » Clean, unobtrusive lines harmonize with ceiling systems without sacrificing performance
- » Delivers a 360° tight horizontal air pattern without excessive noise or pressure drop
- » **Standard sizes:** 6", 8", 10", 12" / **Module size:** 24" x 24"



- » Designed to provide a tight 360° circular pattern
- » Provides excellent performance in variable air volume systems
- » Inlet collar is 1 7/8" deep to allow for easy duct connection
- » **Standard sizes:** 6", 8", 10", 12" / **Module size:** 24" x 24"

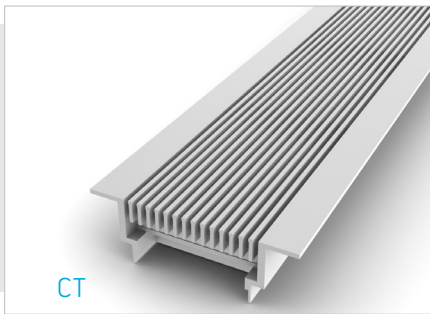




Linear



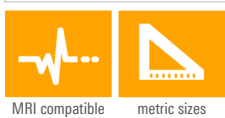
- » Designed for variable air volume systems
- » Available with one to eight slots
- » Ideal for continuous length applications



- » Designed for both heating and cooling applications, supply as well as return
- » Available in eight different core styles plus a wide selection of frames and borders
- » Can be selected for ceiling, side wall, or sill installations



- » Designed for both heating and cooling applications, supply as well as return
- » Combines crisply sculptured styling, careful workmanship, and effective air distribution
- » Excellent performance in variable air volume systems



- » Designed specifically for field attachment of ML or MLR Modulinear diffusers
- » End caps can be turned up to allow installing the MP on continuous runs of ML diffuser
- » Can be used as supply or return



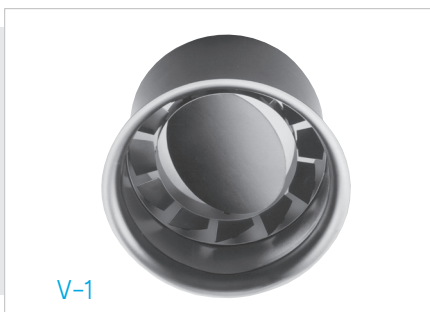
## Round Ceiling



- » Designed for cooling applications
- » Uniform 360° discharge pattern
- » The two horizontal discharge settings allow the diffuser to be adjusted for two different flow rate conditions
- » **Standard sizes:** 6", 8", 10", 12"



- » Designed for both heating and cooling applications
- » Uniform 360° discharge pattern
- » Suitable for factories, warehouses, convention halls, coliseums, shopping malls, and other applications where ceilings are high and conditions are variable
- » **Standard sizes:** 10", 12", 14", 16"



- » Designed for both heating and cooling applications
- » Uniform 360° discharge pattern
- » Suitable for foyers, waiting rooms and other areas with recessed lighting fixtures
- » **Standard sizes:** 6", 8", 10", 12"



SUPPLY DIFFUSERS

## Architectural Linear



FLOWBAR

- » Fully integrating and complementing the ceiling system and other ceiling components
- » All FlowBar linear systems are available curved
- » Allows supply, return and exhaust air all from one diffuser, reducing ceiling clutter
- » Slot widths: 1", 1½", 2", 2½"

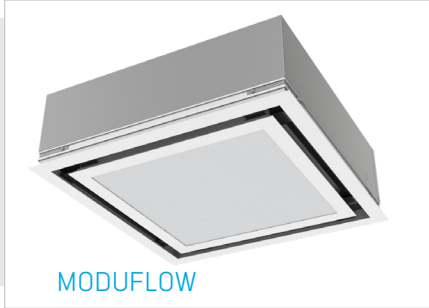


metric sizes

woodgrains

open ceiling

quick ship



MODUFLOW

- » Designed so the ceiling tile material can be field cut and inserted into the face of the diffuser
- » Field adjustable for 1-, 2-, 3-, or 4-way directional air patterns
- » Engineered to handle large capacities of air using a single slot
- » Slot width: 1" / Plenum inlet: 6", 8", 10", 12"



quick ship



FLOWTEE

- » Utilizes the HighThrow and/or JetThrow pattern controllers
- » Excellent selection for variable air volume system applications
- » Allows designer to maintain linear appearance with a lay-in diffuser
- » Slot width: 1" / Plenum inlet: 6", 8", 10", 12" / Lengths: 2', 4'

SUPPLY DIFFUSERS



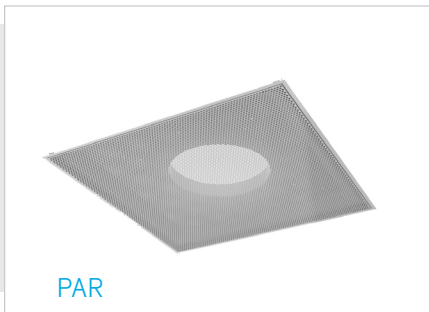
## Perforated Ceiling



- » Designed for both heating and cooling applications
- » A tight, uniform, horizontal blanket of air protects the ceiling against smudging
- » Discharge pattern can be adjusted to vertical as well as to one-, two-, three- or four-way horizontal
- » Fire rated option not available on quick ship
- » **Standard sizes:** 6", 8", 10", 12" / **Module size:** 12" x 12", 16" x 16", 20" x 20", 24" x 12"



SUPPLY DIFFUSER



- » Designed for both return or exhaust applications
- » Provides matching return for all of Titus' perforated diffusers
- » Several border styles to choose from
- » Fire rated option not available on quick ship
- » **Standard sizes:** 6", 8", 10", 12" / **Module size:** 12" x 12", 16" x 16", 20" x 20", 24" x 12"



RETURN DIFFUSER



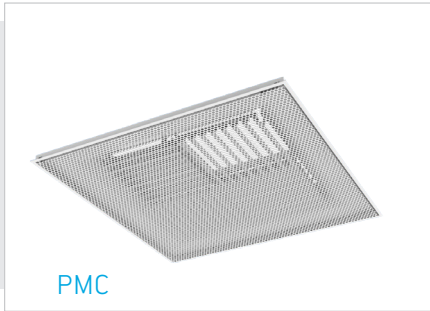
- » Designed for longer throws
- » Good performance in variable air volume systems
- » Discharge pattern can be adjusted from horizontal to vertical
- » **Standard sizes:** 6", 8", 10", 12" / **Module Sizes:** 12" x 12" and 24" x 24"

SUPPLY DIFFUSERS

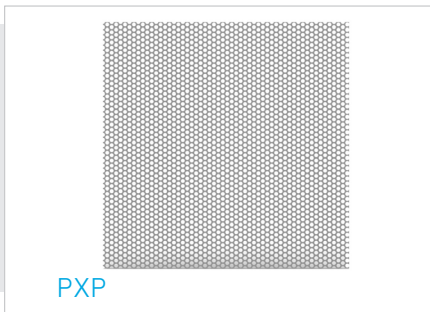


- » Generates a high induction air pattern that maximizes throw
- » Delivers a horizontal blanket of air that adheres to the ceiling even at varying volumes
- » Pressure drop and noise levels are lower than typical curved blade perforated diffusers
- » **Standard sizes:** 6", 8", 10", 12"





- » Can be adjusted for a one-, two-, three- or four-way discharge pattern after it has been installed
- » Perforated face provides the architectural advantage of blending the diffuser into the ceiling system
- » Offers the performance of the modular core diffuser for variable air volume applications
- » **Standard sizes:** 6" x 6", 8" x 8", 10" x 10", 12" x 12"



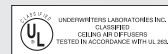
- » Designed for return or exhaust applications
- » Panels match models PAS supply diffusers in appearance after installation
- » Installed by laying between T-bars
- » MRI compatible (PXP-AA)
- » **Module sizes:** 12" x 12", 16" x 16", 20" x 20", 24" x 12"



## Square Ceiling



- » Delivers supply air in a true 360° pattern without streaking and smudging the ceiling
- » Excellent performance in variable air volume systems
- » All sizes have three cones, giving a uniform appearance where different neck sizes are used in the same areas
- » Fire rated option not available on quick ship
- » **Standard sizes:** 4", 5", 6", 7" / **Module sizes:** 12" x 12", 20" x 20", 24" x 24"



- » Can be adjusted for a one-, two-, three-, or four-way pattern after it has been installed
- » Maintains a horizontal flow pattern from maximum to minimum cfm
- » Excellent choice for variable air volume systems
- » **Standard sizes:** 6" x 6", 8" x 8", 10" x 10", 12" x 12"



## Square & Rectangular Ceiling



- » Handles an unusually large amount of air for a given pressure drop and noise level
- » Pleasing appearance harmonizes with various architectural details especially modular ceiling systems
- » Maintains an unbroken horizontal flow from maximum cfm down to minimum
- » Fire rated option not available on quick ship
- » Inlet sizes (Rnd. Neck): 6", 8", 10", 12" / Module sizes (Rnd. Neck): 12" x 12", 24" x 24"



SUPPLY DIFFUSERS



- » High capacity ceiling diffuser
- » Louvered face with integrated induction vanes for exceptional air mixing
- » Extremely flexible, with cores available for one-, two-, three- or four-way horizontal flow
- » Inlet sizes (Rnd. Neck): 6", 8", 10", 12" / Module sizes (Rnd. Neck): 12" x 12", 24" x 24"



- » Louvered face with integrated induction nozzles for exceptional air mixing
- » A high capacity ceiling diffuser that maintains a continuous horizontal flow from maximum cfm down to minimum cfm
- » Extremely flexible with cores available for one-, two-, three- or four-way horizontal flow
- » Inlet sizes (Rnd. Neck): 6", 8", 10", 12" / Module size: 24" x 24"



- » Presents a clean, functional, strong appearance, along with high performance
- » Designed for ceiling, high side wall and low side wall installations
- » Louvers are individually adjustable from the face of the diffuser
- » Duct sizes: 1-way, 6" x 4" through 36" x 36" / 2-, 3-, 4-way, 6" x 6" through 36" x 36"



## Nozzle



TBF-AA

- » Provides precise control of high-capacity jets
- » For demanding spot cooling and heating HVAC applications, such as industrial or large open areas
- » Deep deflection rings in each nozzle are designed to maintain directional control at high velocities up to 30 degrees in any direction
- » **Nozzle sizes:** 6", 8", 10", 12" (up to 4 nozzles)

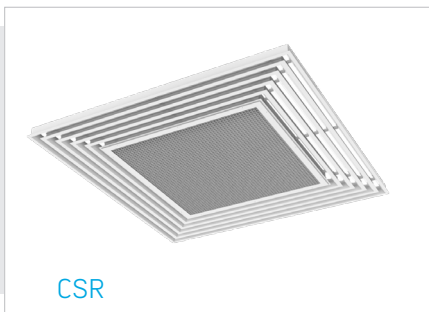


open areas

duct mounted

open ceiling

## Concentric



CSR

- » Designed to maximize the performance of a combined supply/return diffuser
- » Supply and return air are handled through one air device
- » Ideal for applications requiring a system that provides equal distribution on all four sides while maintaining low noise levels
- » **Module sizes:** 48" x 24", 48" x 36", 48" x 48", 60" x 60"

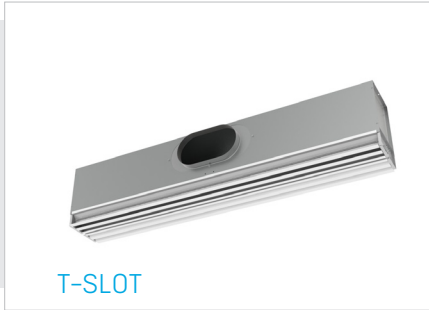
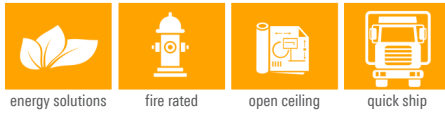


quick ship

## Plenum Slot



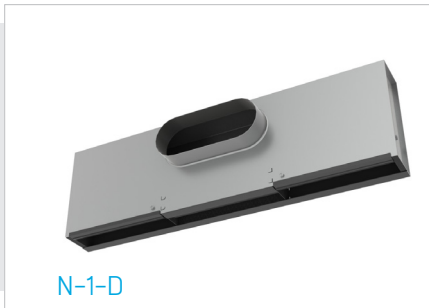
- » Ideal for the restricted ceiling spaces in many modern buildings
- » Excellent choice for variable air volume operation and has the extra advantage of minimizing smudges on the ceiling
- » Handles a large volume of air at low pressure drop and noise level
- » Fire rated option not available on quick ship
- » Slot width: 1", 1½" / Plenum inlet: 6", 8", 10", 12" / Lengths: 24", 36", 48", 60"



- » Designed to blend with the symmetry of typical ceiling grid systems
- » Handles large volumes of air at low pressure drop and noise level
- » Excellent choice for variable air volume operation
- » Plenum inlet: 6", 8", 10" / Lengths: 24", 36", 48", 60"



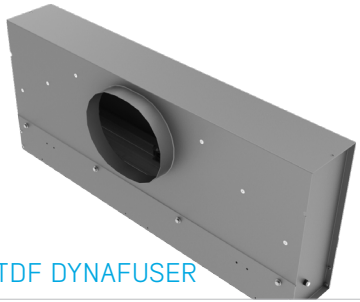
- » High induction, single-slot diffuser that incorporates a fixed discharge slot design
- » For use in standard lay-in ceilings
- » Excellent for variable air volume systems
- » Plenum inlet: 6", 8", 10" / Lengths: 24", 36", 48", 60"



- » Down blow delivers air in two separate discharge patterns
- » For use in standard lay-in ceilings
- » Excellent for variable air volume systems
- » Plenum inlet: 6", 8", 10" / Down blow lengths: 8", 12", 15", 18" /
- » Lengths: 24", 36", 48", 60"

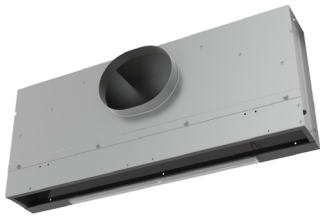


SUPPLY DIFFUSERS



TDF DYNAFUSER

- » For cooling and heating applications
- » Utilizes SMA technology
- » Operates on a narrow temperature band (62° F to 82° F)
- » **Plenum inlet:** 6", 8", 10", 12" / **Lengths:** 24", 48"



EOS

- » Utilizes energy harvesting technology from solar and ambient room light to power an internal actuator
- » Operates on a narrow temperature band (71° F to 78° F)
- » Smart logic programming on internal P.C. board checks supply air temperature in 10 minute intervals
- » **Plenum inlet:** 6", 8", 10", 12" / **Lengths:** 24", 48"



AUTO-CHANGEOVER DIFFUSERS

## Critical Environment

RADIAL PATTERN



RADIATEC

- » Designed to meet the challenge of diluting airborne contaminants by supplying high-volume, low-velocity airflow to displace impurities
- » Applications include labs with exhaust fans, pharmaceutical manufacturing, and biotechnology
- » Airflow pattern is designed to produce a uniform pattern to prevent dead spots where contaminants can linger
- » Inlet sizes: 8", 10", 12" / Module sizes: 24" x 24", 48" x 24"



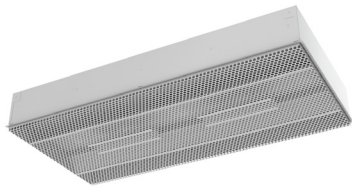
cleanrooms



research labs



quick ship



TRITEC

- » Designed to allow large volumes of air to be brought into the environment with very short throws
- » Applications include labs with exhaust hoods, pharmaceutical manufacturing, telephone switching rooms, and biotechnology research
- » Its unique design allows it to create a full pattern in the middle of the diffuser as well as on the ends
- » Inlet sizes: 8", 10", 12" / Module sizes: 24" x 48", 24" x 24"



cleanrooms



research labs



quick ship



VERSATEC

- » Features adjustable pattern control technology for delivering high volumes of low velocity air in a radial pattern
- » Choose between VersaTec with an optional adjustable blade face or VersaTec with a perforated center section
- » Applications include labs with exhaust fans, pharmaceutical manufacturing, and biotechnology research
- » Inlet sizes: 10", 12" / Module sizes: 24" x 24", 48" x 24"



cleanrooms



research labs



quick ship



TLF

- » Laminar flow diffuser
- » Ideal for installation in hospital operating rooms
- » Generates a low velocity, evenly distributed, downward moving "piston" of conditioned air
- » Use with a linear air curtain
- » Inlet sizes: 6", 7", 8", 9" / Module sizes: 24" x 12", 24" x 24", 36" x 12", 36" x 24"

LAMINAR PATTERN



hospitals



surgical



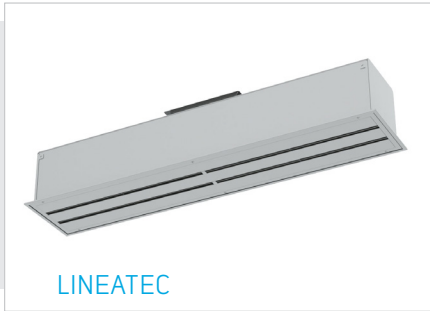
cleanrooms



research labs



quick ship



LINEATEC

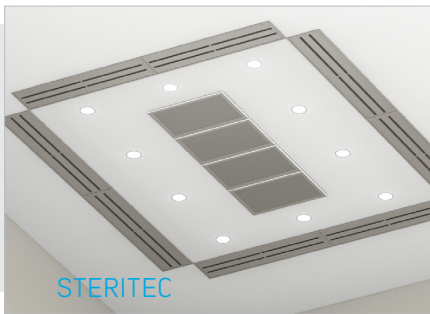
- » Excellent for use as a perimeter air curtain in clean air environments such as operating rooms
- » Provides a curtain of supply air
- » Typically used to surround TLF diffusers in operating rooms to reduce internal contaminants
- » Specify the length, the number of inlets, and the inlet width

LINEAR AIR CURTAIN



hospitals

surgical



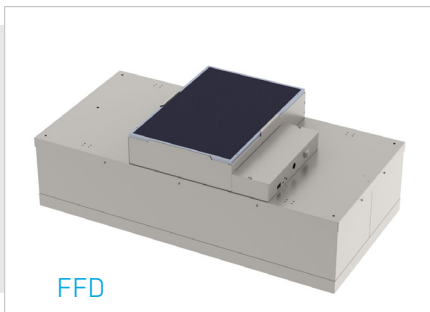
STERITEC

- » Combines the features of the TLF and the LineaTec to form a clean zone within a cleanroom
- » Perforated pressure induction plate facilitates balancing
- » Non-contaminate airflow protects the patient, the equipment, and the personnel
- » Specify the length, the number of inlets, and the inlet width



hospitals

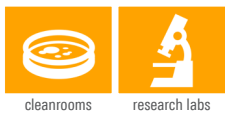
surgical



FFD

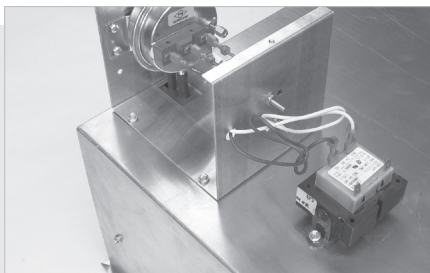
- » Fan filter unit for cleanroom environments
- » Low profile design
- » PSC or ECM motor
- » **Module sizes:** 24" x 24", 48" x 24"

FAN FILTER DIFFUSERS



cleanrooms

research labs



HEPALERT / HEPA FILTER

- » Designed for Titus TLF and RadiaTec diffusers with HEPA filters
- » LED lights illuminate from green to red when the pressure set point for filter replacement has been reached
- » HEPA<sub>LE</sub>RT switch activates LED when filter free area becomes fifty percent restricted
- » **Nominal filter sizes:** 24" x 12", 36" x 12", 48" x 12", 60" x 12"

ACCESSORIES



hospitals

surgical

cleanrooms

research labs



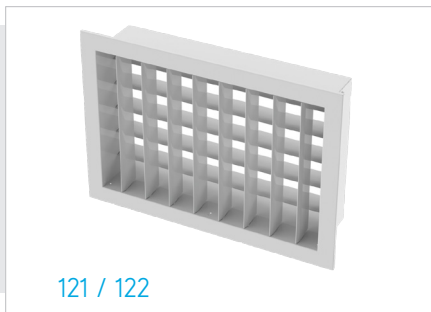
## AeroBlade



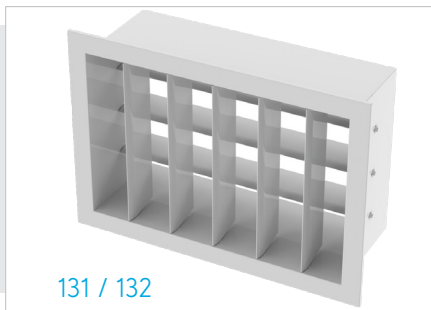
- » Blades: 3/4" spacing, individually adjustable, parallel to the long or short dimension
- » 271 - Single Deflection / 272 - Double Deflection
- » Available in steel, aluminum
- » **Sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"



- » Blades: 1/4" spacing, individually adjustable, parallel to the long or short dimension
- » 111 - Single Deflection / 112 - Double Deflection
- » Available in steel
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"



- » Blades: 2" spacing, individually adjustable, parallel to the long or short dimension
- » 121 - Single Deflection / 122 - Double Deflection
- » Available in steel
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"



- » Blades: 3" spacing, individually adjustable, parallel to the long or short dimension
- » 131 - Single Deflection / 132 - Double Deflection
- » Available in steel
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"





23

- » Blades: 3/4" spacing, parallel to the long or short dimension
- » 45° fixed deflection
- » Available in steel
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"



quick ship

metric sizes



3 / 56

- » Blades: 3/4" spacing, parallel to the long or short dimension
- » 45° fixed deflection
- » Available in aluminum
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"



MRI compatible

quick ship

metric sizes



25

- » Blades: 1/2" spacing, parallel to the long or short dimension
- » 30° fixed deflection
- » Available in steel
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"



quick ship

metric sizes



4 / 55

- » Blades: 1/2" spacing, parallel to the long or short dimension
- » 45° fixed deflection
- » Available in aluminum
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"



MRI compatible

quick ship

metric sizes

300 / 350



- » Blades: 3/4" spacing, individually adjustable, parallel to the long or short dimension
- » 301 - Single Deflection / 300 - Double Deflection
- » Available in steel, aluminum, and stainless steel
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"

SUPPLY GRILLES



- » Blades: 3/4" spacing, parallel to the long or short dimension
- » 350 - 35° fixed deflection / 350ZRL - 0° fixed deflection
- » Available in steel, aluminum, and stainless steel
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"

RETURN GRILLES

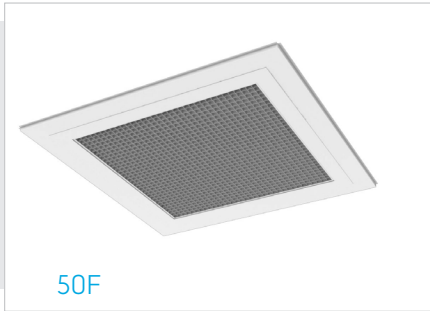


- » Blades: 1/2" spacing, parallel to the long or short dimension
- » 355 - 35° fixed deflection / 355ZRL - 0° fixed deflection
- » Available in steel and aluminum
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"

FILTER RETURN GRILLES



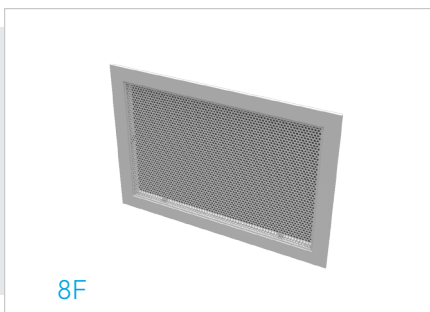
Specialized



- » High free area core, minimized pressure drop
- » Matches general appearance of parabolic lighting fixtures
- » Core sizes: 1/2" x 1/2" x 1/2", 1/2" x 1/2" x 1", 1" x 1" x 1" aluminum
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"



- » Sight proof design
- » 45° fixed deflection
- » Core sizes: 1/2" x 1/2" x 1/2"
- » Available in aluminum or stainless steel
- » **Nominal duct sizes:** 10" x 10", 22" x 10", 22" x 22", 46" x 22"



- » 51% free area perforated face
- » Matches general appearance of industry standard perforated diffusers
- » Available in steel, aluminum and stainless steel
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"



- » Blades: 33 - 1/2" spacing 30 - 3/8", blades parallel to the long or short dimension
- » 33 - 38° fixed deflection / 30 - 0° fixed deflection
- » Available in steel
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"



EGGCRATE GRILLES

PERFORATED GRILLES

HEAVY DUTY GRILLES



60 / 63

- » Great for areas with high humidity
- » Heavy duty design stands up to abuse
- » Blades: 1/2" spacing, blades parallel to the long or short dimension
- » 63 - 30° fixed deflection / 60 - 0° fixed deflection
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"

HEAVY DUTY GRILLES



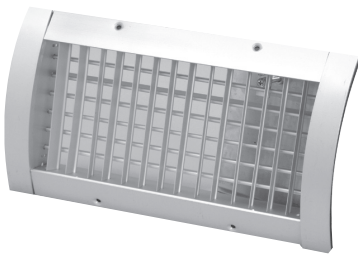
MRI compatible

humid areas

rugged areas

quick ship

metric sizes



S300 / S301

- » Blades: 3/4" spacing, individually adjustable, blades parallel to the long or short dimension
- » S301 - Single deflection / S300 - Double deflection
- » Radius endcaps match duct to avoid installation cost of duct taps
- » **Nominal duct sizes:** 10" x 3", 12" x 3", 10" x 4", 12" x 4" / **Heights:** 3", 4", 6", 8"

SPIRAL GRILLES



quick ship

duct mounted



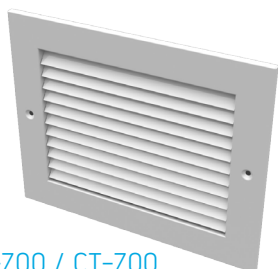
S8F

- » Has 3/16" perforated holes on 1/4" staggered centers
- » Radius endcaps match duct to avoid installation cost of duct taps
- » Available with universal endcaps
- » **Heights:** 3", 4", 6", 8"



quick ship

duct mounted



T-700 / CT-700

- » Sight proof
- » Used in doors and partitions
- » V-blades block vision and provide extra strength
- » T-700: Steel / CT-700: Aluminum
- » **Nominal duct sizes:** 6" x 6", 8" x 6", 10" x 6", 8" x 8"

DOOR RETURN GRILLES



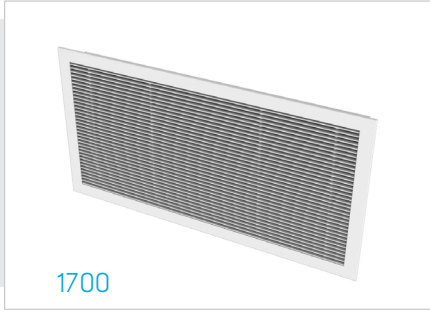
doors / partitions

sight proof design

quick ship

metric sizes





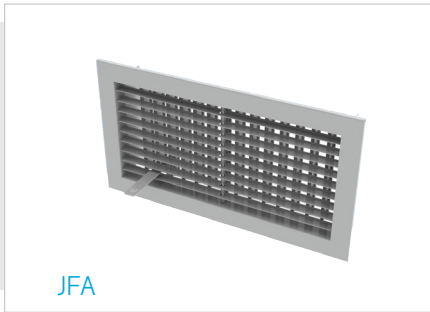
1700

- » Remove, invert, or reverse the core for four different vertical deflections
- » Offers a look of refinement backed with strength, versatility and superb performance
- » Core is easily removed with one pull on the detachable operating lever
- » **Nominal duct sizes:** 8" x 4", 7" x 5", 6" x 6", 12" x 4"

REVERSIBLE CORE GRILLES



metric sizes



JFA

- » Individually adjustable extruded aluminum front blades, 3/4" centers, parallel to the long or short dimension
- » Steel rear blades gang operated
- » Pole operator handle for adjusting rear blades
- » **Nominal duct sizes:** 7" x 4", 6" x 5", 8" x 4", 7" x 5"

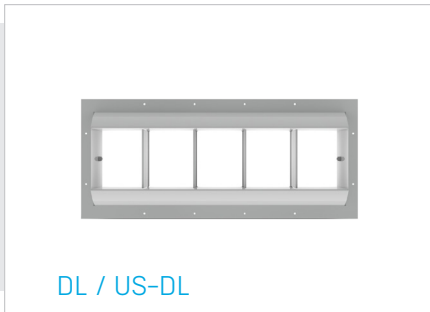
POLE OPERATED SUPPLY GRILLES



factories

quick ship

metric sizes



DL / US-DL

- » Designed to handle large air capacity requirement and long throws
- » Felt seal between the drum and border to stop leakage and hold the drum securely in the position selected
- » Can be operated at high discharge velocities
- » Available with / without split vanes
- » **Sizes:** 9" x 6", 12" x 6", 18" x 6, 24" x 6"

DRUM LOUVERS



airport terminals

factories

open areas

gymnasiums

quick ship

duct mounted



S-DL

- » Designed to handle large air capacity requirement and long throws
- » Felt seal between the drum and border to stop leakage and hold the drum securely in the position selected
- » Can be operated at high discharge velocities
- » Available with / without split vanes
- » **Sizes:** 9" x 6", 12" x 6", 18" x 6, 24" x 6"



airport terminals

factories

open areas

gymnasiums

duct mounted

GRD Accessories

DAMPERS



- » Duct mounted sliding blade damper used in round duct applications
- » Gang operated radial blades
- » Blades slide at right angles to the duct, allowing the damper to work effectively in flexible duct applications
- » Sizes: 6", 8", 10", 12"



- » Neck mounted opposed blade damper for use on Titus 300/350 grilles and registers
- » Gang opposed blades meter air volume with minimum disturbance
- » Mounts using spring steel S-clips
- » Sizes: Up to 24" x 18"



- » Can be specified for either factory or field installation on grille
- » Gang opposed blades meter air volume with minimum disturbance
- » Slot-Face Operator (Type 1) is for supply grilles and Lever Operator (Type 8) is for return grilles
- » Sizes: 6" x 3" to 48" x 48"



- » Duct mounted damper with grid used in round duct applications
- » Performs as a turning vane, damper and equalizing grid
- » Field installs at the transition between the primary rectangular duct and the round duct take off
- » Sizes: 4", 5", 6", 7"





- » Duct mounted equalizing grid used in round duct applications
- » Vanes give maximum control of airflow with minimum noise and turbulence
- » Individually adjustable vanes with friction pivots to hold the desired settings and provide rattle free performance
- » **Sizes:** 4", 5", 6", 7"



- » Duct mounted volume extractors with 1" blade spacings
- » Can adjust both air volume and flow in duct systems around problem areas such as elbows, tees and take offs
- » Can adjust the contour of airflow to fill the duct, thus reducing noise and pressure drop
- » **Duct Sizes:** 6" x 4" to 36" x 12"



- » Duct mounted turning vanes used in square and rectangular duct applications
- » Deflects air in a curved path with minimum pressure drop
- » Can be adjusted to provide uniform air distribution in take off duct
- » **Sizes:** 6" x 4" to 36" x 36"



- » For special applications, where it is necessary to baffle one or more quadrants of the diffuser inlet to achieve a desired air pattern
- » Used to block a 90° section within a round neck
- » Baffles help prevent maximum airflow in the direction where it is installed
- » **Inlet sizes:** 6", 8", 10", 12"





- » Rapid mount frame allows quick installation of lay-in type diffusers in hard ceilings
- » Installed in opening and secured in place using security clips
- » Rapid mount frame can be mounted in plaster or sheet rock ceiling
- » **Ceiling module:** 12" x 12", 16" x 16", 20" x 20", 24" x 12"



- » Manufactured of roll-formed material
- » Can be installed on the surface of the wall or embedded in the plaster
- » Manufactured for use with 300/350, 50F, 50R, 8R and 8F series of grilles and registers
- » **Sizes:** 6" x 6" to 48" x 48"



- » An acoustical return sound boot
- » Designed for ceiling plenum return air applications
- » Eliminates sound transfer in open plenum ceiling
- » **Sizes:** 10" diameter and 16" diameter

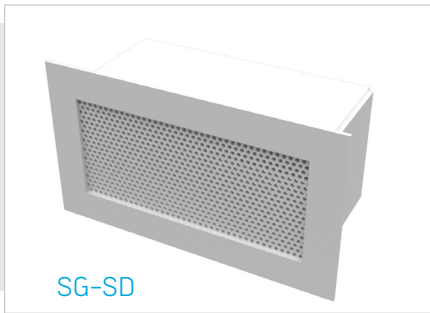


- » Designed to form flexible duct into highly efficient 90° elbows
- » Improves airflow and saves energy by eliminating kinks and restrictions
- » Great for retrofit applications or new building construction
- » Universal design fits flexible sizes: 4" - 16"



## Security Products

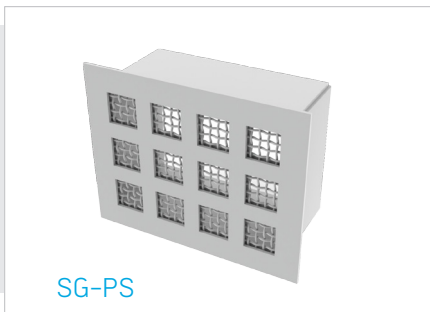
MAXIMUM SECURITY



- » Designed to deter suicide attempts
- » The design of the grille minimizes the hole openings in the face of the grille while still providing airflow and without compromising security and safety
- » Complies with NIC Guidelines for Suicide Prevention and California Title 24
- » **Dimensions:** Widths 6" to 30", heights 4" to 30" / **Sleeve lengths:** 6", 8", 10", 12"



- » The design of the grille allows a greater effective free area and airflow without compromising security and safety
- » Face plate is  $\frac{3}{16}$ " steel with  $\frac{5}{16}$ " diameter holes on  $\frac{7}{16}$ " staggered centers and 1" border
- » SG-PR is used in areas where moisture may cause a problem with standard steel grilles
- » **Dimensions:** Widths 6" to 30", heights 4" to 30" / **Sleeve lengths:** 6" to 18" in 1" increments



- » SG-PS is the industry standard used in areas of maximum security and/or minimum supervision where absolute grille integrity must be maintained
- » Effectively prevents the concealment of dangerous or potentially lethal objects or any other contraband of concern to authorities
- » Steel, square perforated
- » **Dimensions:** Widths 6" to 30", heights 4" to 30" / **Sleeve lengths:** 6", 8", 10", 12", or 18"



- » A medium security grille for sidewall applications
- » Effectively prevents the concealment of dangerous or potentially lethal objects or other contraband
- » Heavy gauge steel louvers welded to a steel sleeve that extends through the wall makes this an exceptionally strong bar type grille
- » **Dimensions:** Widths 6" to 30", heights 4" to 30" / **Sleeve lengths:** 6", 8", 10", 12", or 18"



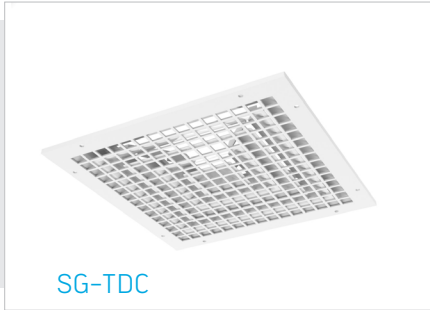
MEDIUM SECURITY



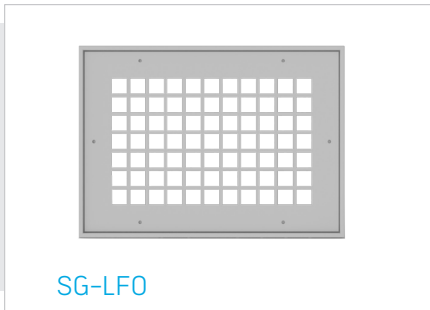


- » A minimum security grille ideal for shower areas
- » The rust proof construction makes the SG-1500 an excellent choice for exposure to constant humidity or frequent hosing down
- » All aluminum security grille
- » **Dimensions:** Widths 6" to 30", heights 4" to 30" / **Sleeve lengths:** 6", 8", 10", 12"

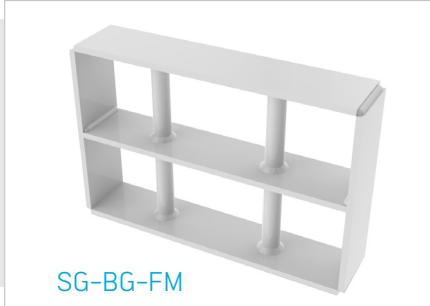
MINIMUM SECURITY



- » Used in areas of constant supervision or lobbies or entryways
- » Contains Titus model TDC border 1 (surface mount) with 1, 2, 3, or 4 way blow pattern
- » Designed where minimum security is still necessary and maximum performance is required
- » **Standard sizes:** 6" to 24" (3" increments)



- » Can be used in any area where additional security is required
- » Lattice face with plaster frame available
- » Available in stainless steel for corrosive environments
- » **Dimensions:** Widths 6" to 30", heights 4" to 30" (2" increments)

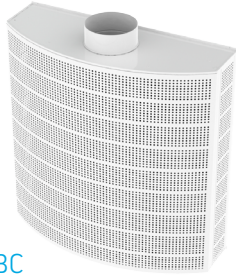


- » A framed barrier grille typically provided in wall openings between secure and nonsecure areas
- » Available with sleeve
- » All junction points welded
- » **Dimensions:** Widths 6" to 30", heights 4" to 30" (2" increments)

BARRIER

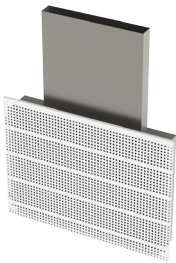


## Displacement Ventilation



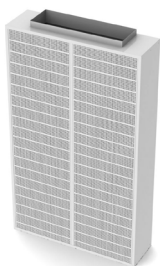
DVBC

- » Curved face for wall mount applications
- » Designed to supply a large volume of air at low velocity to the occupied zone
- » Includes integral variable air pattern controllers for easy adjustment of the airflow spread pattern
- » **Inlet Sizes:** 8", 10", 12", 16" / **Unit Sizes:** 36" x 37", 36" x 60", 36" x 79"



DVIR

- » 1-way discharge designed for flush mount applications
- » Designed to supply small to medium volumes of air at low velocity to the occupied zone
- » Includes integral variable air pattern controllers for easy adjustment of the airflow spread pattern
- » **Inlet Sizes:** 8", 12", 14", 16" / **Unit Sizes:** 12" x 10", 12" x 12", 16" x 10", 16" x 12"



DVRI

- » Can be positioned against the wall in a flush or surface mount orientation
- » Designed to supply a large volume of air at low velocity to the occupied zone
- » Includes integral variable air pattern controllers for easy adjustment of the airflow spread pattern
- » **Inlet Sizes:** 8", 10", 12", 16" / **Unit Sizes:** 24" x 24", 24" x 47", 24" x 48", 24" x 79"

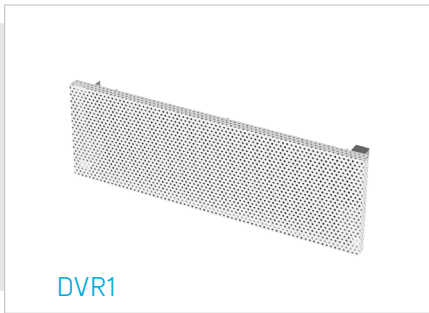


DVR3

- » 3-way air discharge pattern for wall or surface mount applications
- » Designed to supply a large volume of air at low velocity to the occupied zone
- » Includes integral variable air pattern controllers for easy adjustment of the airflow spread pattern
- » **Inlet Sizes:** 8", 10", 12", 22" / **Unit Sizes:** 24" x 24", 24" x 48", 24" x 60", 36" x 48"

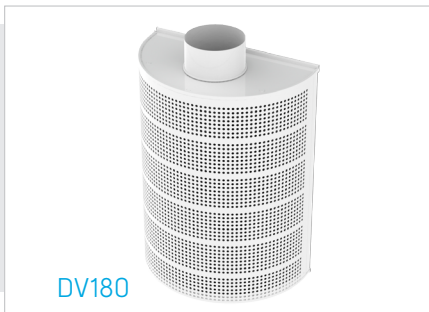


RECTANGULAR



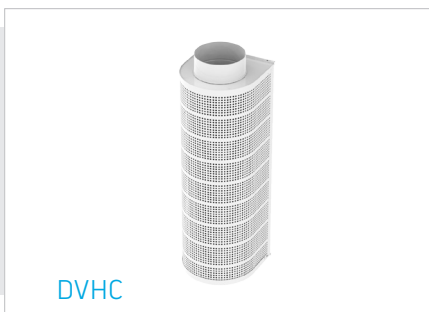
- » 1-way discharge designed for flush mount applications in the risers of steps or stairs
- » Designed to supply a large volume of air at low velocity to the occupied zone
- » Includes integral variable air pattern controllers for easy adjustment of the airflow spread pattern
- » **Unit Sizes:** 6" x 18", 12" x 12", 18" x 6", 18" x 8"

RECTANGULAR



- » 180° air discharge pattern for wall or surface mount applications
- » Designed to supply a large volume of air at low velocity to the occupied zone
- » Includes integral variable air pattern controllers for easy adjustment of the airflow spread pattern
- » **Inlet Sizes:** 6", 8", 10", 12" / **Unit Sizes:** 18" x 24", 24" x 24", 24" x 36", 24" x 48"

SEMI-CIRCULAR



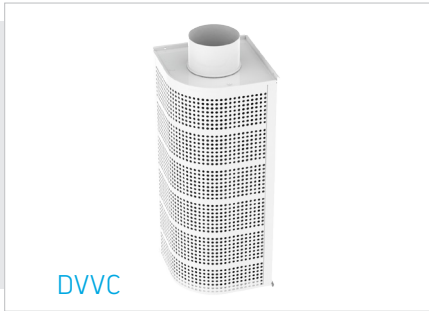
- » 180° air discharge pattern for wall or surface mount applications
- » Designed to supply a large volume of air at low velocity to the occupied zone
- » Includes integral variable air pattern controllers for easy adjustment of the airflow spread pattern
- » **Inlet Sizes:** 5", 6", 8", 10" / **Unit sizes:** 10" x 25", 11" x 25", 13" x 37", 15" x 37"



- » Flat face displacement diffuser with 90° air discharge pattern for corner mount applications
- » Designed to supply a large volume of air at low velocity to the occupied zone
- » Includes integral variable air pattern controllers for easy adjustment of the airflow spread pattern
- » **Inlet Sizes:** 8", 10", 12" / **Unit Sizes:** 24" x 24", 24" x 36", 24" x 48", 24" x 60"

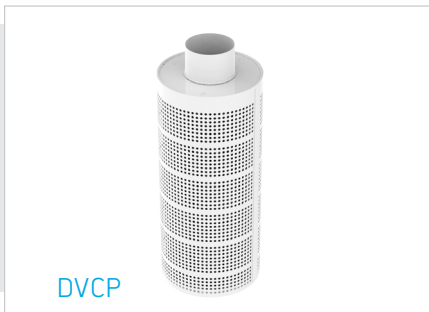
CORNER MOUNT





- » Curved face displacement diffuser with 90° air discharge pattern for corner mount applications
- » Designed to supply a large volume of air at low velocity to the occupied zone
- » Includes integral variable air pattern controllers for easy adjustment of the airflow spread pattern
- » **Inlet Sizes:** 5", 6", 8", 10" / **Unit Sizes:** 10" x 25", 11" x 25", 13" x 37", 15" x 37"

CORNER MOUNT



- » 360° air discharge pattern for floor installations
- » Designed to supply a large volume of air at low velocity to the occupied zone
- » Includes integral variable air pattern controllers for easy adjustment of the airflow spread pattern
- » **Inlet Sizes:** 5", 6", 8", 10" / **Unit Sizes:** 11" x 24", 12" x 24", 14" x 36", 16" x 36"

CIRCULAR



- » Can be positioned against a wall in flush or surface mount applications
- » Combines displacement principles and mixed airflow principles in a single device for optimum comfort
- » Heating / cooling unit that provides heating for displacement ventilation applications
- » **Inlet Sizes:** 14", 32" / **Unit Sizes:** 36" x 79", 47" x 79"

HEATING / COOLING



- » Can be positioned against a wall in flush or surface mount applications
- » Features energy harvesting technology from solar and ambient room light to power actuators
- » Combines displacement principles and mixed airflow principles in a single device for optimum comfort
- » Heating / cooling unit that provides heating for displacement ventilation applications
- » **Inlet Sizes:** 14" round, 24" x 8" rectangular
- » **Unit Sizes:** 36" x 79" round, 47" x 79" rectangular



## Chilled Beams



- » 1-way and 2-way air patterns
- » Multiple nozzles providing low sound levels
- » 2-pipe or 4-pipe for heating and cooling
- » **Beam widths:** 12" / **Nominal lengths:** 2 to 10 ft. with 1 ft. increments

LINEAR ACTIVE



- » 1-way and 2-way air patterns
- » Multiple nozzles providing low sound levels
- » 2-pipe or 4-pipe for heating and cooling
- » **Beam widths:** 24" / **Nominal lengths:** 2 to 10 ft. with 1 ft. increments



- » Linear sidewall active chilled beam diffuser with horizontal air distribution
- » Multiple nozzles providing low sound levels
- » Designed to be recessed into a sidewall, soffit, or bulkhead
- » **Nominal lengths:** 3 to 10 ft. with 1 ft. increments



- » Design accommodates both recessed and exposed mounting
- » Used for cooling only
- » Available as diffuser shell (no coil/piping)
- » **Beam widths:** 12", 17" / **Nominal lengths:** 4 to 14 ft.

LINEAR PASSIVE







CBAF (TAO)

- » Simultaneous heating and cooling
- » Low noise levels, conforms to ANSI Standard S12.60
- » Designed to fit below windowsills
- » Multiple 5 or 6 ft. units can be connected in series

FLOOR MOUNTED



woodgrains

energy solutions

dual-function

k-12 education



ALPETY (FKL / HKL)

- » Single circuit for each sail as ordered; hard copper connection between individual blades
- » 15mm diameter pipe connections
- » Available with hinged mounting equipment allowing sails to swing down to 45°
- » **Nominal lengths:** 2', 4', 6', 8' / **Blade widths:** 5¼", 7"

RADIANT CEILING



energy solutions



ALPETY SKS

- » Operational perforated face pattern includes acoustical fleece to enhance room sound absorption
- » Single water circuit per panel
- » 15mm diameter pipe connections
- » **Nominal lengths:** 2', 4', 6', 8'



energy solutions

## UnderFloor Air Distribution (UFAD)



TAF-R / TAF-R-FR

- » For applications in pressurized underfloor air distribution systems
- » Constructed of a high impact polymeric material designed to resist damage from traffic
- » Relocation to another zone is simply done through relocating the floor panel
- » The trim ring's extra wide flange is designed to prevent carpet from pulling away from the diffuser
- » Fire rated option not available on quick ship
- » **Dimensions:** 8"



energy solutions

fire rated

quick ship

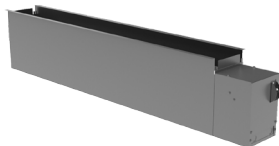


TAF-G

- » It allows "through-the-floor" power/data/phone cable access
- » Constructed of a high impact polymeric material designed to resist damage from traffic
- » With the grommet installed in the floor panel, relocation to another zone is simply done through relocating the floor panel
- » The trim ring's extra wide flange is designed to prevent carpet from pulling away from the diffuser
- » **Dimensions:** 8"



quick ship

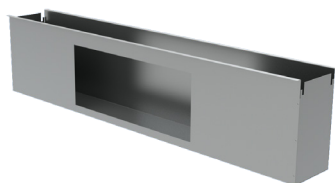


TAF-L-E

- » Designed to be integrated with the CT-TAF-L linear bar grille
- » Drops into perimeter slot and sits on top of the raised floor tile (by others) and a perimeter angle
- » Has an SCR electric heat fin tube assembly in the plenum
- » ETL listed at 120V, 208V, 240V, 277V at 1.1 kw maximum output
- » **Unit Size:** 48" length



energy solutions



TAF-L-R

- » A fixed linear bar diffuser plenum for underfloor perimeter return applications
- » Designed to be integrated with the CT-TAF-L linear bar grille
- » Drops into perimeter slot and sits on top of the raised floor tile (by others) and a perimeter angle
- » 20" x 8" inlet can be used for ducted or non-ducted applications
- » **Unit Size:** 48" length



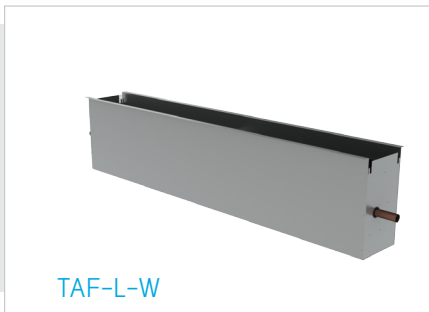
energy solutions

ROUND PRODUCTS

TAF-L PERIMETER SYSTEM



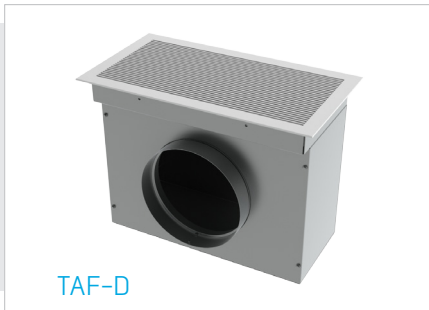
- » A variable linear bar diffuser plenum for underfloor perimeter supply applications
- » Designed to be integrated with the CT-TAF-L linear bar grille
- » Designed to provide a uniform throw pattern throughout its operating range
- » 24 volt electric damper actuator is supplied with the assembly
- » **Unit Size:** 48" length



- » A fixed linear bar diffuser plenum for underfloor perimeter heating applications
- » Designed to be integrated with the CT-TAF-L linear bar grille
- » Drops into perimeter slot and sits on top of the raised floor tile (by others) and a perimeter angle
- » Has a fin tube assembly in the plenum
- » **Unit Size:** 48" length

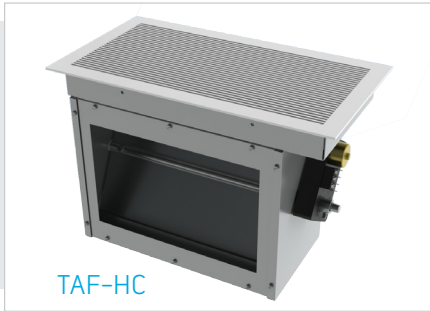


- » Designed to be integrated with the TAF-L-V, TAF-L-E, TAF-L-R, and TAF-L-W plenums
- » CT-TAF-L core drops into frame which drops into perimeter slot and sits on top of carpeting
- » Installs into the TAF-L plenums from the top surface, removal of the flooring is not required
- » Sections can be joined end-to-end for continuous appearance using alignment clips
- » **Dimensions:** Order continuous length; 6" width

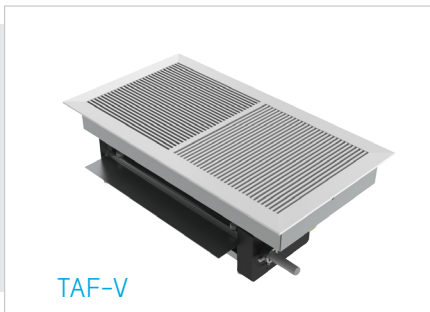


- » Designed for floor applications and utilized for ducted applications
- » Heavy gauge steel plenum
- » Installs into access flooring from top surface
- » CT-TAF diffuser and TAF-D are sold as separate units
- » **Inlet Size:** 8" / **Unit Size:** 8" x 16"

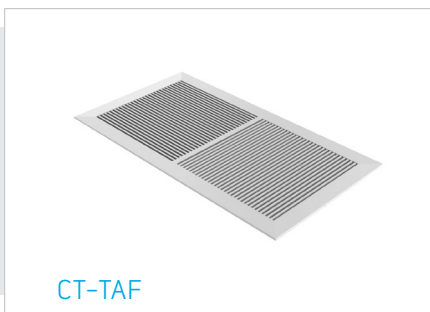




- » Delivers constant volume heating & VAV cooling within the same unit
- » Can be ducted for heating & provides variable air volume cooling control
- » Diffuser core available in single or multi-piece configuration
- » Installs into access flooring from top surface, removal of flooring is not required
- » Inlet Sizes: 8" / Unit Sizes: 8" x 16"



- » Designed for areas with frequent changes in heating loads
- » Provides variable air volume cooling only control for non-ducted applications
- » Tight close-off damper with optional 24 VAC electric actuator
- » Available with single or multiple diffuser cores
- » Inlet Sizes: 8" / Unit Sizes: 8" x 16"

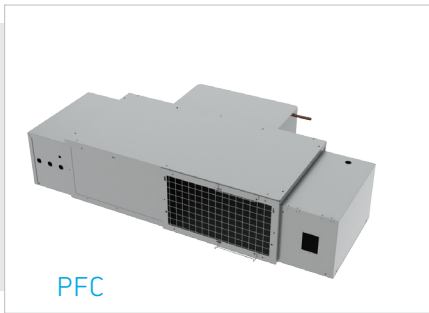


- » Fixed linear bar diffuser for underfloor applications
- » Designed to be integrated with the TAF-HC, TAF-V, and TAF-D plenums
- » Drops into plenum opening and sits on top of carpeting
- » Diffuser cores are available in single, dual, & quad core configurations



- » Dual density insulation, coated to prevent erosion meets requirements of NFPA 90A and UL 181
- » Energy efficient fan motor, permanent split capacitor type, mounted in variation isolators
- » Pressure independent primary airflow control
- » Adjustable SCR fan speed control, with minimum voltage stop
- » Inlet Sizes: 9", 10" / Unit Sizes: 3, 4





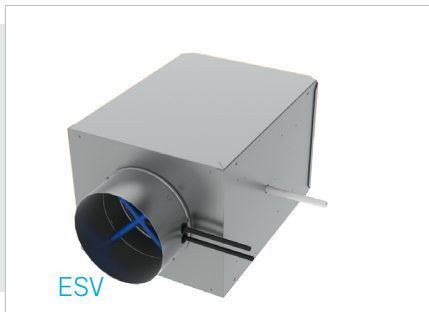
PFC

- » Energy efficient fan motor, permanent split capacitor type, mounted in variation isolators
- » Adjustable SCR fan speed control, with minimum voltage stop
- » Single point electrical connections
- » Ultra-high efficiency ECM motor available
- » **Unit Sizes:** 10, 14, 16

FAN BOOSTER



## Terminal Units

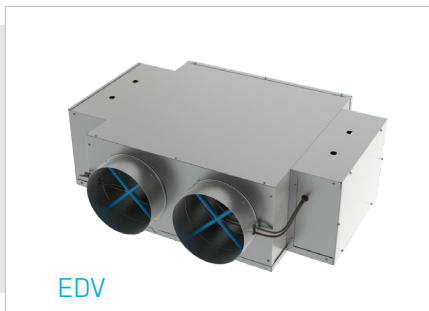


ESV

- » Assured of accurate, AHRI Certified Performance ratings
- » Compact size and easy access for service saves time and expense in installation
- » Rectangular discharge opening is designed for slip and drive cleat duct connection
- » **Inlet sizes:** 4", 5", 6", 7"



SINGLE DUCT / DUAL DUCT



EDV

- » Used when hot and cold supply air is needed for accurate temperature control with minimum flow requirements
- » Ideal vehicle for alternative ventilation strategies and humidity control
- » Total filtration of all air delivered to the zone is possible
- » **Inlet sizes:** 4", 5", 6", 7"

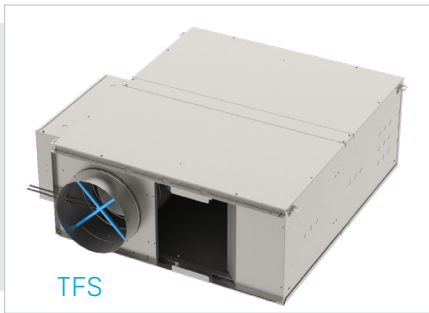


T3SQ-2

- » Brings both accuracy and flexibility to the variable air volume market
- » Combines the functions of a VAV terminal and a high performance diffuser in one
- » Modulates the air volume delivered to a zone to accurately control cooling and heating conditions
- » **Neck sizes:** 6", 8", 10", 12"

VAV DIFFUSERS

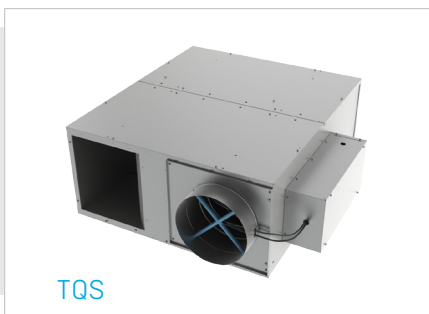




- » Two casings for easy design layout, flip for right or left hand mount
- » Energy-efficient fan motor, permanent split capacitor type, mounted with vibration isolators
- » Adjustable fan speed control
- » Available with standard PSC or high efficiency ECM motor
- » Inlet sizes: 6", 8", 10", 12"



- » FAST™ attenuator system that greatly reduces radiated sound power levels
- » Integral external & internal sound attenuator for ultra low sound
- » Adjustable fan speed control
- » Available with standard PSC or high efficiency ECM motor
- » Inlet sizes: 6", 8", 10", 12"



- » Built-in sound baffle for low sound levels, both radiated and discharge
- » Adjustable fan speed control
- » Available with standard PSC or high efficiency ECM motor
- » Inlet sizes: 6", 8", 10", 12" / Unit sizes: 2, 3, 4, 5



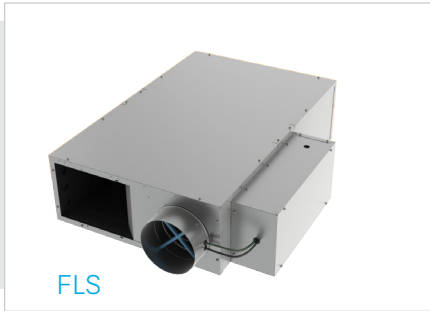
- » Fan powered induction unit with sensible cooling coil & drain pan
- » Used with DOAS applications
- » Designed for low profile applications
- » Built-in sound baffle for low sound levels, both radiated and discharge
- » Adjustable fan speed control
- » Available with standard PSC or high efficiency ECM motor
- » Inlet sizes: 6", 8", 10", 12" / Unit sizes: 2, 3, 4, 5



SERIES FAN POWERED

LOW PROFILE SERIES

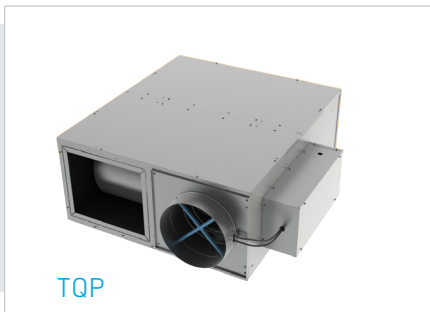




- » Useful where building height limits dictate shallow ceiling plenums
- » Energy efficient fan motor, permanent split capacitor type, mounted in vibration isolators
- » Adjustable fan speed control
- » **Inlet sizes:** 8" dia., and 16" x 8" / **Unit sizes:** 2, 3, 4



LOW PROFILE SERIES



- » Two casing sizes ease in design layout
- » Energy efficient fan motor, permanent split capacitor type, mounted in vibration isolators
- » Adjustable fan speed control
- » **Inlet sizes:** 6", 8", 10", 12" / **Unit sizes:** 2, 3, 4, 5



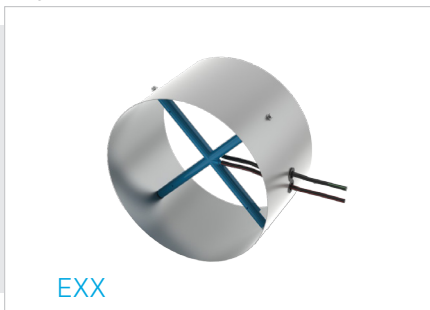
PARALLEL FAN POWERED



- » Useful where building height limits dictate shallow ceiling plenums
- » Energy efficient fan motor, permanent split capacitor type, mounted in vibration isolators
- » Adjustable fan speed control
- » **Inlet sizes:** 6", 8" dia., and 14" x 8" / **Unit sizes:** 2, 4



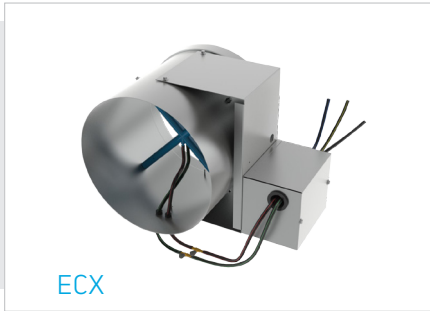
LOW PROFILE PARALLEL



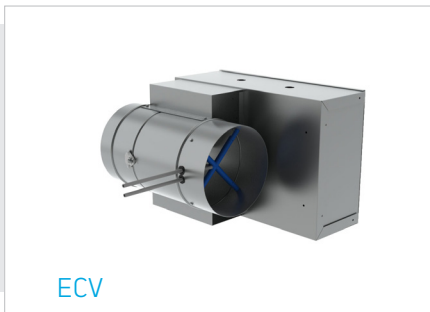
- » An air measuring station designed for use in round ducts
- » Converts older constant volume systems into modern energy efficient variable air volume systems
- » Flow measurement taps included for easy balancing connections
- » **Inlet sizes:** 4", 5", 6", 7"



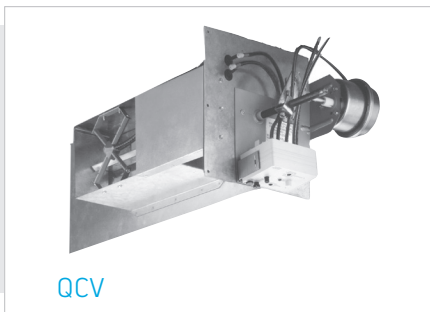
RETROFIT



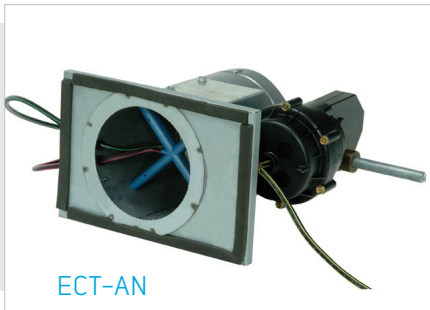
- » Terminal unit retrofit applications
- » Converts older constant volume systems into modern energy efficient variable air volume systems
- » Flow measurement taps included for easy balancing connections
- » Simple and easy installation
- » Inlet sizes: 4", 5", 6", 7"



- » Terminal unit retrofit applications
- » Converts older constant volume systems into modern energy efficient variable air volume systems
- » Flow measurement taps included for easy balancing connections
- » Variety of control options available
- » Inlet sizes: 4", 5", 6", 7"



- » Terminal unit retrofit applications
- » Converts older constant volume systems into modern energy efficient variable air volume systems
- » The casing can be configured to mount on either the right or left side of the existing duct
- » Variety of velocity control options available

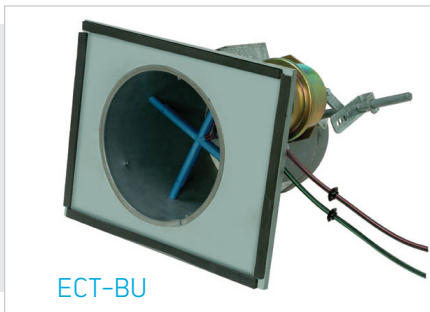


- » Terminal unit retrofit applications
- » Designed to retrofit Anemostat Terminals
- » Can be adjusted for a minimum cfm setting of zero (full shutoff)
- » Available with electric actuators for use with electronic or DDC retrofit controls
- » Inlet size: specify W x H

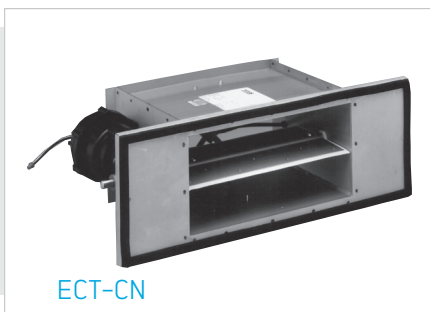




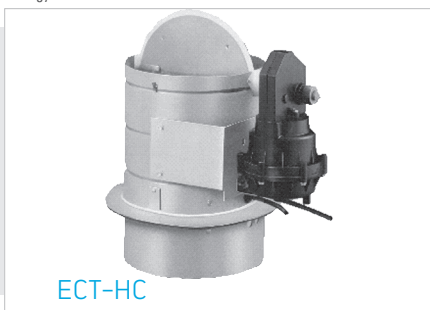
- » Terminal unit retrofit applications
- » Designed to retrofit Barber-Coleman Terminals
- » Performance after is similar to Titus ESV for single duct operation & Titus EDV for dual duct operation
- » Minimum airflow can be adjusted for full shutoff
- » **Inlet size:** specify W x H



- » Terminal unit retrofit applications
- » Designed to retrofit Buensod Terminals
- » Can be adjusted for a minimum cfm setting of zero (full shutoff)
- » Available with electric actuators for use with electronic or DDC retrofit controls
- » **Inlet size:** specify W x H



- » Terminal unit retrofit applications
- » Designed to retrofit Connor Terminals
- » Can be adjusted for a minimum cfm setting of zero (full shutoff)
- » Available with electric actuators for use with electronic or DDC retrofit controls
- » **Inlet size:** specify W x H

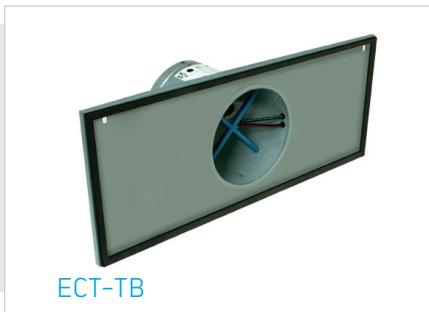


- » Terminal unit retrofit applications
- » Designed to retrofit Titus Terminals
- » High capacity valve can control up to 800 cfm
- » Available with electric actuators for use with electronic or DDC retrofit controls
- » **Inlet size:** specify W x H





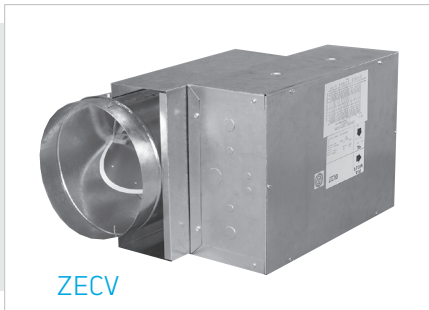
- » Terminal unit retrofit applications
- » Designed to retrofit Krueger Terminals
- » Can be adjusted for a minimum cfm setting of zero (full shutoff)
- » Available with electric actuators for use with electronic or DDC retrofit controls
- » **Inlet size:** specify W x H



- » Terminal unit retrofit applications
- » Designed to retrofit Tuttle & Bailey Terminals
- » Minimum airflow can be adjusted for full shutoff
- » Available with electric actuators for use with electronic or DDC retrofit controls
- » **Inlet size:** specify W x H



- » Terminal unit retrofit applications
- » Pneumatic control kit
- » Pressure independent operation
- » Controller can be set to operate with either a direct acting or a reverse acting thermostat
- » **Inlet size:** specify W x H



- » Terminal unit retrofit applications
- » Limits static pressure in duct systems feeding VAV devices
- » Bypass or discharge pressure control
- » Flow ranges to 4,000 cfm
- » **Inlet sizes:** 8", 10", 12", 14"





ZQCV

- » Terminal unit retrofit applications
- » Limits static pressure in duct systems feeding VAV devices
- » Bypass or discharge pressure control
- » Flow ranges to 15,000 cfm
- » **Unit sizes:** Ranges from 5" x 5" to 52" x 26"

RETROFIT



energy solutions



retrofit



PESM

- » Terminal unit retrofit applications
- » An accurate and convenient means of measuring airflow, as well as balancing the system
- » Can be fitted with water reheat coils
- » The measuring device provides accurate readings at extremely low pressure drops
- » **Inlet size:** 4", 5", 6", 7"



quick ship



retrofit



ALPHA CONTROLLER PACKAGE

- » Alpha controller is flexible & can be used in both standalone and network applications
- » Easier to commission through a thermostat and does not require software at the jobsite
- » Integrates universally with all BACnet manufactures' protocols
- » Extremely reliable one-piece design enjoys the advantage of an integrated controller, sensor, actuator, & communication

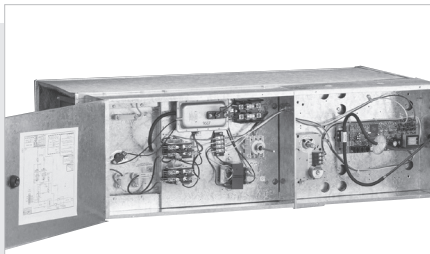


Thermostat

CONTROLS



quick ship



FMA

- » Allows the mounting of digital controls on Titus terminals with the assurance of a quality finished product built in a controlled environment
- » Guarantees professional, quality installation of digital control products
- » Wiring diagrams and installation methods have been reviewed and approved by control manufacturers for hundreds of standard applications
- » Multiple knockouts in sizes from 7/16" to 1 1/8" to accommodate almost any field connection requirement



T3SQ THERMOSTAT

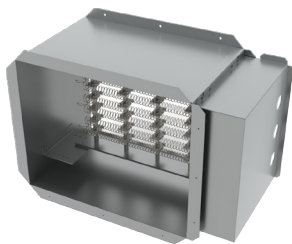
- » Brings both accuracy and flexibility to the variable air volume market
- » Combines the functions of a VAV terminal and a high performance diffuser in one
- » Modulates the air volume delivered to a zone to accurately control cooling and heating conditions

CONTROLS



TITUS II

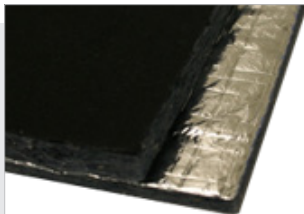
- » Pneumatic terminal unit controller
- » The ideal choice for new construction, retrofit applications, or replacement
- » Accurate control over a duct velocity range of 0 to 3000 fpm
- » Operates at low system pressures
- » Thermostat switch changes the action from direct acting to reverse acting without additional calibration



ELECTRIC COILS

- » Available on Titus single duct and fan powered terminals
- » Design minimizes stratification and hot spots that can cause nuisance tripping of the thermal cutouts
- » Dust tight construction
- » Each complete terminal with electrical coil installed, is ETL listed and has been tested in accordance with UL standards

ELECTRIC COILS



ECOSHIELD

**INSULATION CHARACTERISTICS**

- » **Material:** Natural Fiber Duct Liner
- » **Thickness:** ½", 1"
- » **R-Value:** Differentiate based off of type of material and thickness
- » **Density:** 3.0 lbs/ft<sup>3</sup>
- » **Flame Spread:** less than 25
- » **Smoke Density:** less than 50
- » **Mold Growth:** None

LINERS





FIBERGLASS

INSULATION CHARACTERISTICS

- » **Material:** Dual Density Fiberglass
- » **Thickness:** ½", 1"
- » **R-Value:** Differentiate based off of type of material and thickness
- » **Density:** 1.5 lbs/ft<sup>3</sup> with 4.0 lbs/ft<sup>3</sup> face
- » **Flame Spread:** less than 25
- » **Smoke Density:** less than 50
- » **Mold Growth:** None



FIBRE FREE

INSULATION CHARACTERISTICS

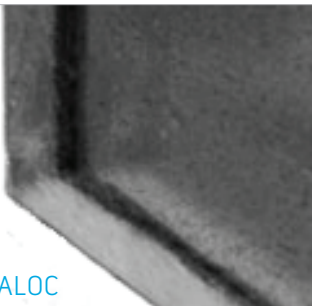
- » **Material:** EPFI (Engineered Polymer Foam Insulation)
- » **Thickness:** ½", 1"
- » **R-Value:** Differentiate based off of type of material and thickness
- » **Density:** 1.5 lbs/ft<sup>3</sup>
- » **Flame Spread:** less than 25
- » **Smoke Density:** less than 50
- » **Mold Growth:** None



STERILOC

INSULATION CHARACTERISTICS

- » **Material:** Foil Faced Duct Board Insulation
- » **Thickness:** 1<sup>3</sup>/<sub>16</sub>"
- » **R-Value:** 3.5 ft<sup>2</sup> °F h/Btu @ 75° F
- » **Density:** 4.0 lbs/ft<sup>3</sup>



ULTRALOC

INSULATION CHARACTERISTICS

- » **Material:** Solid Metal Liner over Fiberglass
- » **Thickness:** 1" Fiberglass in ¾" Deep Metal Pan
- » **R-Value:** Fiberglass - 3.9 ft<sup>2</sup> °F h/Btu @75° F
- » **Density:** Fiberglass - 1.5 lbs/ft<sup>3</sup>
- » **Flame Spread:** 25
- » **Smoke Density:** 50
- » **Mold Growth:** None

Fan Coils

VERTICAL STACK



- » Designed for free-blow or ducted, concealed installations, suitable for hotel, motel and apartment building applications
- » Automatic 2-pipe changeover switch for heating and cooling applications
- » 300 - 1200 cfm nominal airflows
- » 0 - 0.3" external static pressure; 0 - 0.5" high static option



- » Designed for free-blow or ducted, concealed installations, suitable for hotel, motel and apartment building applications
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- » 300 - 1200 cfm nominal airflows
- » 0 - 0.3" external static pressure; 0 - 0.5" high static option

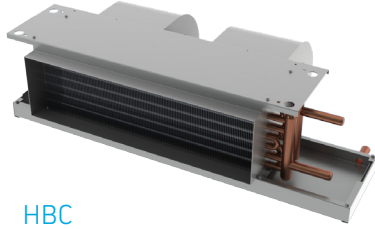


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- » 300 - 1200 cfm nominal airflows
- » 0 - 0.3" external static pressure; 0 - 0.5" high static option





HBC

- » Designed for concealed installations above ceilings with ducted air discharge and suitable for projects such as hotels, motels, condominiums and general commercial application
- » High-efficiency 2-row coil suitable for a 2-pipe system
- » 200 - 1200 cfm nominal airflows
- » 0 - 0.3" external static pressure



condos

quick ship

hotels / motels



HBE

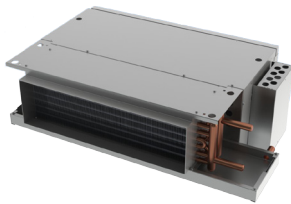
- » Designed for exposed ceiling installations free blowing into the space suitable and for projects such as hotels, motels, condominiums and general commercial application
- » High-efficiency 2-row coil suitable for a 2-pipe system
- » 200 - 1200 cfm nominal airflows
- » 0 - 0.3" external static pressure



hotels / motels

quick ship

condos



HBP

- » Designed for concealed installations above ceilings with ducted return and discharge air and are suitable for projects such as hotels, motels, condominiums and general commercial application
- » High-efficiency 2-row coil suitable for a 2-pipe system
- » 200 - 1200 cfm nominal airflows
- » 0 - 0.3" external static pressure



condos

hotels / motels

quick ship



HBR

- » Designed for over ceilings installations with ducted discharge air and suitable for projects such as hotels, motels, condominiums and general commercial application
- » High-efficiency 2-row coil suitable for a 2-pipe system
- » 200 - 1200 cfm nominal airflows
- » 0 - 0.3" external static pressure



hotels / motels

quick ship

condos



VBA

- » Designed for exposed floor standing applications such as public buildings, hotels, schools, hospitals, and general commercial applications.
- » High efficiency 2-row coil suitable for a 2-pipe system
- » 200 - 1200 cfm nominal airflows
- » 0 - 0.3" external static pressure



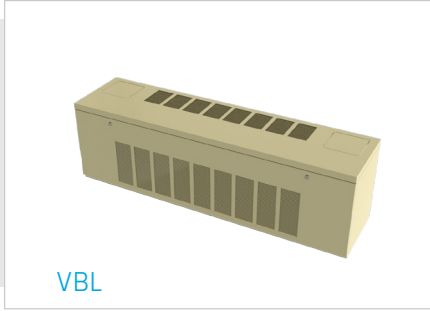
VBC

- » Designed for concealed installations inside a closet or furred-in under a window and ducted, for projects such as public buildings, hotels, schools, hospitals, and general commercial applications
- » High efficiency 2-row coil suitable for a 2-pipe system
- » 200 - 1200 cfm nominal airflows
- » 0 - 0.3" external static pressure



VBF

- » Designed for exposed floor standing applications such as public buildings, hotels, schools, hospitals, and general commercial applications
- » High efficiency 2-row coil suitable for a 2-pipe system
- » 200 - 1200 cfm nominal airflows
- » 0 - 0.3" external static pressure



VBL

- » Ideal for exposed applications in public buildings, hotels, schools, hospitals, and general commercial applications where the unit height is restricted
- » High efficiency 2-row coil suitable for a 2-pipe system
- » 200 - 600 cfm nominal airflows
- » 0 - 0.3" external static pressure





VBLC

- » Designed for concealed installations inside a closet or furred-in under a window installations for applications in public buildings, hotels, schools, hospitals, and general commercial applications where the unit height is restricted.
- » High efficiency 2-row coil suitable for a 2-pipe system
- » 200 - 600 cfm nominal airflows
- » 0 - 0.3" external static pressure



VERTICAL BASIC



k-12 education



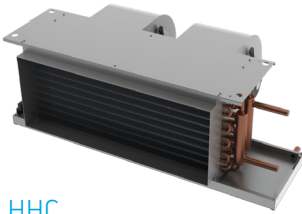
hospitals



hotels / motels



quick ship



HHC

- » Designed for concealed installations above ceilings with ducted air discharge and suitable for projects such as hotels, motels, condominiums and general commercial applications
- » High efficiency 3-row coil suitable for a 2-pipe system
- » 600 - 2000 cfm nominal airflows
- » 0 - 0.5" external static pressure



HORIZONTAL HIGH OUTPUT



apartments



quick ship



hotels / motels

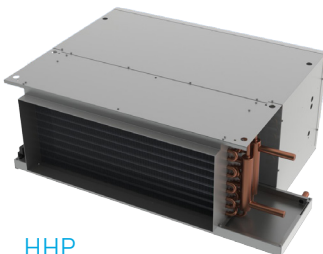


HHE

- » Designed for exposed ceiling installations free blowing into the space and suitable for industrial and commercial applications
- » High efficiency 3-row coil suitable for a 2-pipe system
- » 600 - 2000 cfm nominal airflows
- » 0 - 0.5" external static pressure



quick ship



HHP

- » Designed for concealed installations above ceilings with ducted return and discharge air and suitable for projects such as hotels, motels, condominiums and general commercial applications
- » High efficiency 3-row coil suitable for a 2-pipe system
- » 600 - 2000 cfm nominal airflows
- » 0 - 0.5" external static pressure



apartments



quick ship



hotels / motels



- » Designed for ducted closet installations and suitable for industrial and commercial applications
- » High efficiency 3-row coil suitable for a 2-pipe system
- » 600 - 2000 cfm nominal airflows
- » 0 - 0.5" external static pressure



VERTICAL HIGH OUTPUT



- » Replacement ECMs for all Titus terminal units
- » Has the ability to modulate the airflow to meet partial load requirements
- » Reduces the energy requirements of a building
- » Low operating temperature
- » Requires very little energy to offset the heat gain from the motor to the cooled airstream

ACCESSORIES



- » Modulated valve actuator control device
- » Increases chiller and boiler efficiency by 15-20% with substantial energy savings by meeting exact conditioned space load requirements
- » Increases occupant comfort in the conditioned space
- » Reduces system energy costs



- » Programmable thermostat
- » Allows the fan coil unit to be programmed to run only at specific times of the day at specific temperatures
- » Programming for shutdown during unoccupied time reduces energy cost
- » Occupant can temporarily override the program





## Air Handlers



HAB

- » Designed for the common areas and large meeting rooms in hotels, motels, apartment complexes, condominiums, schools, universities, hospitals, and nursing homes
- » Belt driven fans, multi-row capability, and available factory options
- » 600 - 9000 cfm nominal airflows
- » 0 - 1.5" external static pressure

HORIZONTAL BELT DRIVE



apartments k-12 education hospitals hotels / motels quick ship



MAB

- » Designed for the common areas and large meeting rooms in hotels, motels, apartment complexes, condominiums, schools, universities, hospitals, and nursing homes
- » Belt driven fans, multi-row capability, and available factory options
- » 600 - 8000 cfm nominal airflows
- » 0 - 1.5" external static pressure

MODULAR BELT DRIVE



k-12 education hospitals hotels / motels universities quick ship



RAB

- » Designed for the common areas and large meeting rooms in hotels, motels, apartment complexes, condominiums, schools, universities, hospitals, and nursing homes
- » Belt driven fans, multi-row capability, and available factory options
- » 600 - 8000 cfm nominal airflows
- » 0 - 1.5" external static pressure

ROOFTOP BELT DRIVE



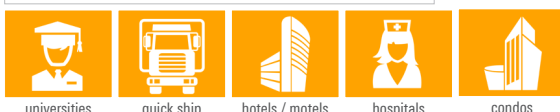
universities k-12 education hospitals hotels / motels quick ship



VAB

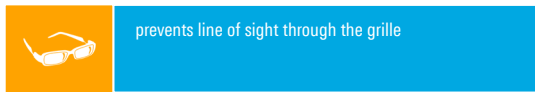
- » Designed for the common areas and large meeting rooms in hotels, motels, apartment complexes, condominiums, schools, universities, hospitals, and nursing homes
- » Belt driven fans, multi-row capability, and available factory options
- » 600 - 5000 cfm nominal airflows
- » 0 - 1.5" external static pressure

VERTICAL BELT DRIVE

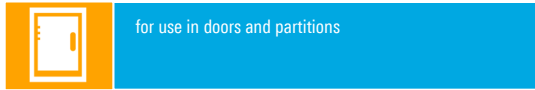


universities quick ship hotels / motels hospitals condos

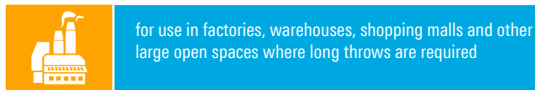
## Application Icons Key



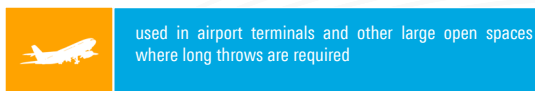
sight proof design



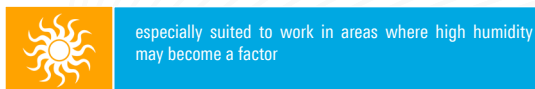
doors / partitions



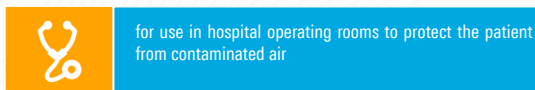
factories



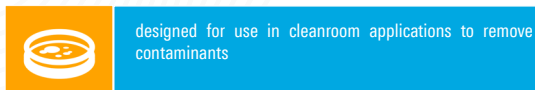
airport terminals



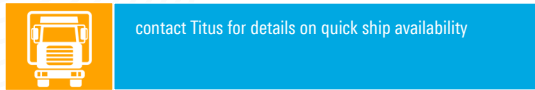
humid areas



surgical



cleanrooms



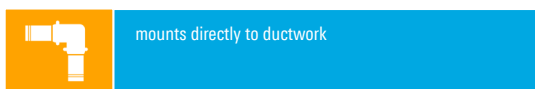
quick ship



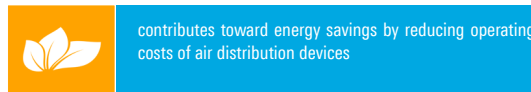
mounting frames



baffle



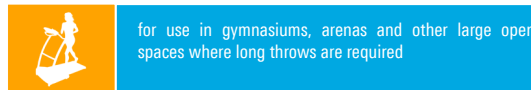
duct mounted



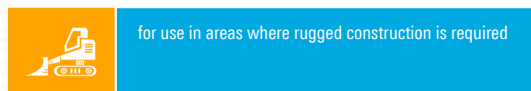
energy solutions



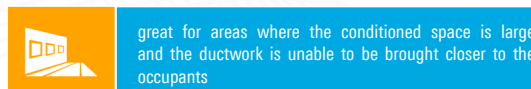
MRI compatible



gymnasiums



rugged areas



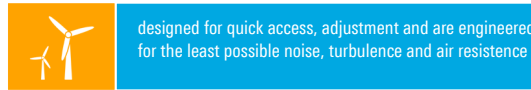
open areas



research labs



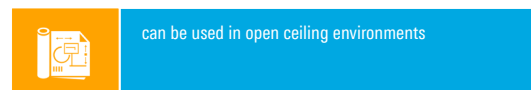
hospitals



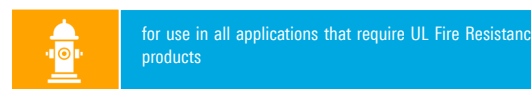
air balancing



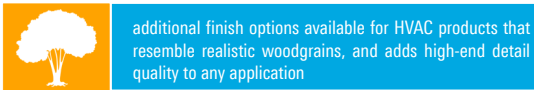
duct accessories



open ceiling



fire rated



additional finish options available for HVAC products that resemble realistic woodgrains, and adds high-end detail quality to any application

woodgrains



energy-harvesting & savings feature of an HVAC device powered by ambient light

light powered



supplies both heating & cooling from one HVAC device

dual-function



unit contains smart logic mechanism enabling it to adjust the temperature band between heating & cooling

smart logic



long periods without supervision & several opportunities to come into direct contact with the security product

maximum security



intermittent periods without direct supervision & many opportunities to come into direct contact with the security product

medium security



mostly supervised & few opportunities to come into direct contact with the security product

minimum security



maintains security in wall openings between secure and non-secure areas

secure



for use in areas where supervision is required

monitoring areas



for use in corrosive environment applications

prevents corrosion



designed to prevent the occurrence of suicide attempts

suicide deterrent



for use in areas to prevent the concealment of harmful or dangerous objects, contraband and any other inappropriate devices from authorities

lethal objects



excellent air distribution device for schools and other educational facilities

k-12 education



for use in colleges & university buildings

universities



for usage in condos and other industrial or commercial building applications

condos



great for apartments or other similar applications

apartments



excellent air distribution device for hotels, motels or any similar commercial building application

hotels / motels



suitable for foyers, waiting rooms and other areas with recessed lighting fixtures

recessed lighting



for use in retrofitting older products into modern designs & systems

retrofit



Diffuser module sizes are hard metric & inlets are soft. Metric linear and grille products are converted to the nearest 1/4" for ordering. Contact us for more information.

metric sizes

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Google Plus - <https://plus.google.com/+titushvac/posts#+titushvac/posts>

YouTube - <http://www.youtube.com/user/TitusHVAC/feed>

# Woodgrain Finish Options

## The Elegance of Wood Meets the Durability of Aluminum

As LEED and GREEN continue to permeate the commercial building industry, building owners, architects and engineers are looking for new and environmentally responsible solutions for everyday building needs without sacrificing performance or aesthetics. Titus' woodgrain finishes offer an appealing substitute for wood and natural stone without harming the environment. Woodgrain finishes allow for conservation of our natural resources while also offering a durable cosmetic alternative to conventional finishes with low-to-no VOCs.

Unlike natural wood, Titus' woodgrain finishes are easy to clean and do not require the constant upkeep as wood products. They are available in either a smooth gloss or textured finish and will not deteriorate due to moisture, temperature extremes or corrosion. And of course you will never have to worry about termites. They will give you the look of high end wood grains, marbles, and granites with the durability of powder coating.

Additionally, woodgrain finishes offer high resistance toward all atmospheric agents and are resistant to heat, acids, humidity, salt, detergents and UV. All of the powders used are made in a TGIC free super durable formulation and meet the performance requirements listed in AAMA 2603 and AAMA 2604-2.

As the architectural industry searches for alternative materials to meet the growing demand for LEED and GREEN builds, Titus is proud to say that we are the first commercial HVAC company to bring this cutting edge technology to the U.S. market.

Redefine your HVAC aesthetics with high-performance metal products that look like wood and stone. There is really no limit to what you can create when you redefine your comfort zone.







*At Titus our goal is very clear: to help the people who depend upon us by continuing to innovate and advance the science of air distribution. We are guided in this work by our commitment to building on opportunities that significantly improve the health, efficiency, comfort and aesthetics of the environments in which our products are used.*

*Contact us for your next air distribution solution!*



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 **Titus**  
Redefine your comfort zone.™