



AIR DISTRIBUTION
PRODUCTS

INDUSTRY SOLUTIONS

01



ADVANCING THE SCIENCE OF AIR DISTRIBUTION

CRITICAL ENVIRONMENTS

Rethink what air management systems can be.
Revise your notion of functionality.
Redefine your comfort zone.™

An abstract graphic consisting of numerous thin, overlapping, wavy lines that create a sense of motion and depth. The lines are light gray and originate from the bottom right corner, extending towards the center of the page.

Comfort, Redefined.

Since 1946, Titus has focused on technologically advanced products that create the highest degree of comfort.

We've consistently led the industry by breaking the barriers of expectation and convention when it comes to technology. We've redefined how technology drives, influences and supports air management. And by being first to market with the most innovative approaches to air distribution, we're proud to say that the marketplace has taken notice, and is counting on us to lead the way into the next decade. A challenge we're more than happy to accommodate.

Titus has raised the bar on design, proving that functional can also be beautiful. And we've redefined what it means to be energy efficient, with a collection of smart technology products that optimize the use of natural resources.

Titus has also redefined what it means to work with an air management products partner. We pride ourselves on listening and responding so that we can not only meet expectations, but also exceed them. Service has been, and will always be, our main focus at Titus. And, it's why so many of our customers keep coming back.

Welcome to your new comfort zone. It starts here.

Overview

APPLICATIONS

Titus representatives have installed diffusers in cleanrooms and in clean areas throughout the entire country for over 25 years. Many operating rooms and research laboratories as well as numerous other facilities have Titus environmental diffusers.

Cleanrooms include hospital operating rooms, electronics manufacturing, pharmaceutical and biotechnology manufacturing, research facilities, automotive painting and many other applications.

GENERAL CLEANROOM INFORMATION

Design criteria for cleanrooms include cleanliness classification desired, air volume requirements, air motion, proper filtration and removal of contaminants, properly designed equipment and personnel training. Titus products are designed to help the engineer with the proper air distribution requirements and air motion.

Contamination comes from two sources: external and internal. External sources include incoming air, wall penetrations for pipes, ducts and other HVAC equipment.

Internal sources include personnel, process equipment, manufacturing processes and material ingress.

No matter what source has contributed to the unwanted particle count, the design of the cleanroom or clean area facilitates the control of incoming particles and eliminates particles within the environmental envelope.

AIR MOTION

Motion is critical to control concentrations of particles in the entire cleanroom or in a particular area of the room. Air motion is either unidirectional, also called laminar, or multi-directional. The following figure shows typical cleanroom airflow patterns. Unidirectional air motion is used to push unwanted particles out of the controlled space. Multi-directional air motion can be used to remove unwanted particles by dilution.



VersaTec

Radial Diffuser, High Volume, Low Velocity, Aluminum Blades with Steel Backpan for Critical Environment Applications

FEATURES AND BENEFITS:

- Uses specially formed adjustable blades for maximum free area and directional throw
- High airflow capacity (200 to 800 cfm)
- Individual adjustable louvers
- Available in 24 x 24 and 48 x 24 module sizes
- Internal air baffling to equalize airflow across the face of the diffuser
- Optional perforated or louvered center section



MODEL:

VersaTec / Steel Backpan with Aluminum Blades
VersaTec-AL / Aluminum Backpan with Aluminum Blades



cleanrooms



research labs

FINISHES:

Standard Finish - #26 White
Optional Finish - #04 Mill

OVERVIEW

Hemispherical Air Diffusion Using Adjustable Blades

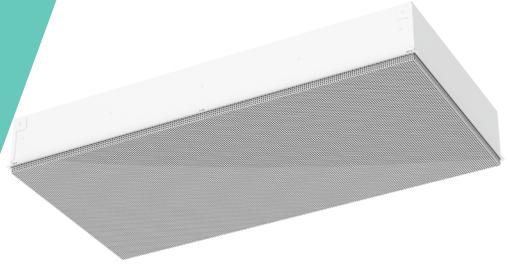
VersaTec models feature adjustable pattern control technology for delivering high volumes of low velocity air in a radial pattern. Each model is constructed using adjustable blades which allow adjustment of the discharge air pattern. Two versions of this model are available; VersaTec with an optional adjustable blade face and VersaTec with a perforated center section. VersaTec diffuser blades drop less than 1-inch below the ceiling.

TriTec

Radial Air Pattern, Steel Perforated Face and Steel Backpan for Critical Environment Applications

FEATURES AND BENEFITS:

- Face drops no more than 5/8-inch below the ceiling
- Removable face for sanitizing, (no special tool required to remove the face)
- Available in 24 x 24 and 48 x 24 module sizes
- Low velocity hemispherical (2-way) pattern or one-way pattern available
- Great for use in fume hood areas
- Standard earthquake tabs



MODELS:

TriTec / Steel Face and Backpan
TriTec-AL / 304 Stainless Steel Face with Aluminum Backpan
TriTec-AL / 304 Stainless Steel Face and Backpan



cleanrooms



research labs

FINISHES:

Standard Finish - #26 White
Optional Finish - #04 Mill

OVERVIEW

High Volume, Low Velocity, Radial Air Diffusion Technology

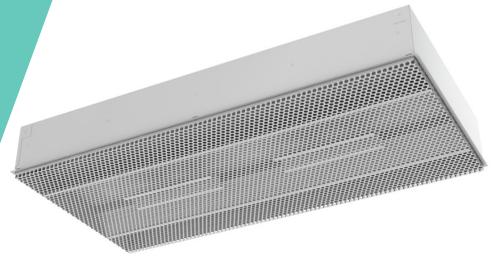
Titus TriTec diffusers are designed to meet the challenge of diluting airborne contaminants by supplying high-volume, low-velocity airflow to displace these impurities. The airflow pattern is designed to produce a uniform pattern to prevent dead spots where contaminants can linger. It is an excellent choice for ISO Class 6 to 8 spaces.

TriTecR

Perforated Face with Aluminum Backpan for Critical Environment Applications

FEATURES AND BENEFITS:

- Ideal for installation in laboratory and isolation rooms
- Snap-in, tool-less HEPA filter installation and removal
- Factory pressure tested
- Fully welded construction option
- Roomside accessible PAO challenge port option
- Perforated face quickly removes by loosening quarter-turn fasteners



MODELS:

TriTecR-AL / 304 Stainless Steel Face with Aluminum Backpan
TriTecR-AL / 304 Stainless Steel Face and Backpan



cleanrooms



research labs

FINISHES:

Standard Finish - #26 White
Optional Finish - #04 Mill

OVERVIEW

Ultra Clean, High Volume, Low Velocity, Radial Air Diffusion Technology

TriTecR models are designed to allow large volumes of HEPA filtered air to be brought into the environment with very short throws. Including snap-in, auto-centering filter retainers, the TriTecR reduces the amount of time and effort during installation and removal of filters.

RadiaTec

Aluminum Dome Face Radial Diffuser for Critical Environment Applications

FEATURES AND BENEFITS:

- Removable face for sanitizing, (no special tool required)
- 2-way or 1-way diffusion pattern
- Available in 24 x 24 and 48 x 24 module sizes
- Great for use in fume hood areas
- Optional HEPA filter rack available
- Unique baffling inside diffuser assures even air distribution across entire face



MODELS:

RadiaTec-AL / Aluminum Face and Backpan
RadiaTec-SS / 304 Stainless Steel Face and Backpan



cleanrooms



research labs

FINISHES:

Standard Finish - #26 White
Optional Finish - #04 Mill

OVERVIEW

High Volume, Low Velocity, Radial Air Diffusion Technology

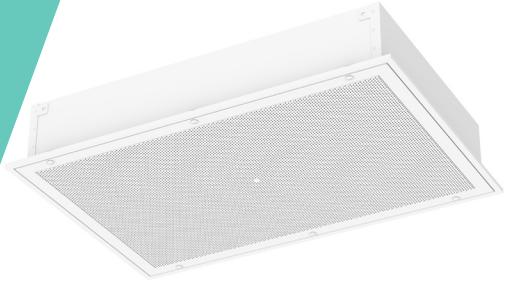
The RadiaTec diffuser is designed to meet the challenge of diluting airborne contaminants by supplying high-volume, low-velocity airflow to displace these impurities. The airflow pattern is designed to produce a uniform pattern to prevent dead spots where contaminants can linger. In addition, the air pattern is tighter to the ceiling than competitive models to limit the air pattern penetration into the occupied zone.

TLF

Laminar Flow Diffuser

FEATURES AND BENEFITS:

- Removable face for sanitizing, (no special tool required)
- 2-way or 1-way diffusion pattern
- Available in 24 x 24 and 48 x 24 module sizes
- Great for use in fume hood areas
- Optional HEPA filter rack available
- Unique baffling inside diffuser assures even air distribution across entire face



MODELS:

TLF / Steel

TLF-AA / Aluminum

TLF-SS / 304 Stainless Steel



cleanrooms



research labs



hospitals



surgical

FINISHES:

Standard Finish - #26 White

Optional Finish - #04 Mill

OVERVIEW

Vertical Laminar Flow Technology

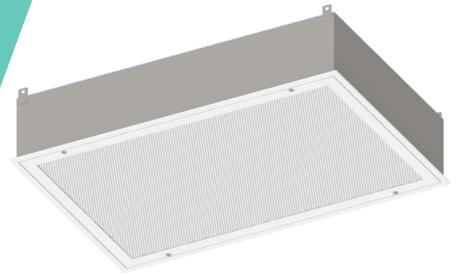
Titus laminar flow diffusers, model TLF, are the industry standard for unidirectional flow. TLF diffusers can be used to create clean zones by positioning the diffuser directly over the area to be washed with clean air. They are also used in most operating rooms as the center diffuser. The vertical piston of air created by the TLF is used to discharge clean air over the patient during surgery or surgical procedures.

TLFR

Laminar Flow Diffuser, Stainless Steel or Aluminum

FEATURES AND BENEFITS:

- Ideal for installation in laboratory and isolation rooms
- Snap-in, tool-less HEPA filter installation and removal
- Factory pressure tested
- Fully welded construction option
- Roomside accessible PAO challenge port option
- Perforated face quickly removes by loosening quarter-turn fasteners



MODELS:

TLFR-AA / Aluminum
TLFR-SS / 304 Stainless Steel

FINISHES:

Standard Finish - #26 White
Optional Finish - #04 Mill

OVERVIEW

Vertical Laminar Flow Technology

Used in operating rooms as the primary diffusers, the vertical piston of air created by the TLFR is used to discharge clean air over the patient during operations. Including snap-in, autocentering filter retainers, the new TLFR reduces the amount of time and effort during installation and removal of filters.



cleanrooms



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hospitals



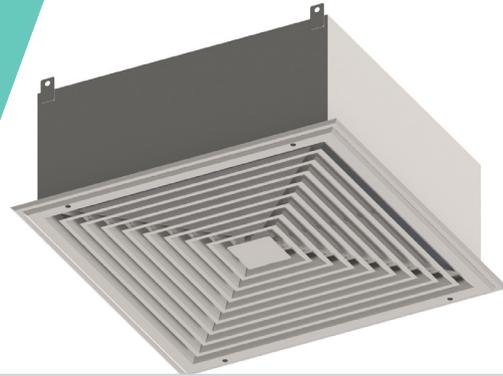
surgical

TDCR

Ultra Clean, High Volume, Louvered Face, Cross Flow Air Diffusion Technology

FEATURES AND BENEFITS:

- Ideal for installation in laboratory spaces and anterooms
- Snap-in, tool-less filter installation and removal
- Factory pressure tested
- Fully welded construction option
- Roomside accessible PAO challenge port option
- Louvered face quickly removes by loosening quarter-turn fasteners
- Retainer cables prevent the perforated face from falling after removal



MODELS:

TDCR-AA / Aluminum Face with Aluminum Backpan
TDCR-SS / 304 Stainless Steel Face and Backpan

FINISHES:

Standard Finish - #26 White
Optional Finish - #04 Mill

OVERVIEW

Ultra Clean, High Volume, Louvered Face, Cross Flow Air Diffusion Technology

TDCR models are designed to allow large volumes of filtered air to be supplied to the space in a 4-way cross-flow air pattern. Titus Series TDCR diffusers handle an unusually large amount of filtered air for a given pressure drop and noise level. Including snap-in, auto-centering filter retainers, the TDCR reduces the amount of time and effort during installation and removal of filters. This decreases the time a laboratory or anteroom is out of commission, allowing facilities to maximize profitability and patient care.



cleanrooms



research labs



hospitals



healthcare

LineaTec

Laminar Air Curtain Diffuser, Stainless Steel or Aluminum

FEATURES AND BENEFITS:

- Provides a curtain of supply air
- Blades have minimum adjustability to allow precise control of the air curtain angle
- Optional round cornered plenums include 3/4" radius with a continuous weld, ground smooth
- Excellent diffuser for use as a Perimeter Air Curtain in Clean Air Environments such as operating rooms



MODELS:

LineaTec-AL / Aluminum

LineaTec-SS / 304 Stainless Steel

FINISHES:

Standard Finish - #26 White

Optional Finish - #04 Mill



hospitals



surgical

OVERVIEW

Linear Air Curtain Technology, Vertical Air Curtain Diffuser for Perimeter Control of Pollutants

LineaTec is a linear air curtain diffuser used to create an air curtain barrier between a clean zone and the balance of the room. The air curtain typically discharges 25 to 50 cfm per linear foot of slot. Flow rates of up to 100 cfm per linear foot of diffuser can be obtained with a two-slot LineaTec. LineaTec diffusers surround TLF diffusers in operating rooms to reduce internal contaminants in the operating theatre.

SteriTec

Aluminum Surgical Suite System

FEATURES AND BENEFITS:

- Perforated pressure induction plate facilitates balancing
- Blades have minimum adjustability to allow precise control of the air curtain angle
- Two-slot perimeter air curtain for creating an air wall between clean zones and adjacent area
- Inlets available in 5", 6", or 8" heights
- For surface mounted or lay-in T-Bar system
- Square cornered plenums have tightly fitted end caps spot-welded in place



MODELS:

SteriTec-AL / Aluminum

SteriTec-SS / 304 Stainless Steel

FINISHES:

Standard Finish - #26 White

Optional Finish - #04 Mill



hospitals



surgical

OVERVIEW

Sterile Environment System Technology

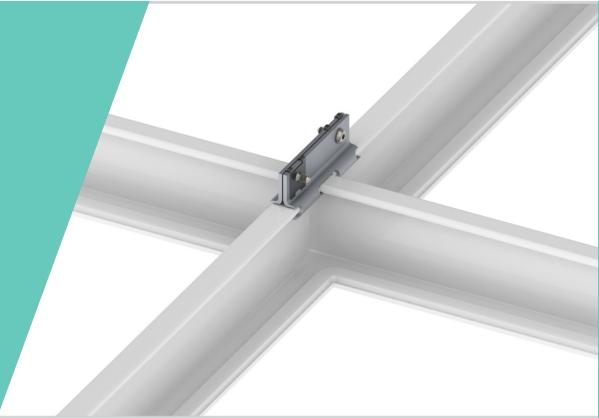
The SteriTec air curtain provides an invisible barrier or wall to reduce room air from being mixed with the pure filtered clean laminar flow from the TLF diffusers. Contaminated air outside the air curtain is prevented from entraining or being mixed with the clean zone created and inside the LineaTec diffusers zone. In most applications the LineaTec diffusers of the SteriTec system are selected for a terminal velocity of 50 fpm about 2 Feet above the floor. This allows the flow to travel down to and along the floor to the external low sidewall exhaust return grilles.

AORCS

The Atlas Ceiling Grid System is a Field Assembled, Gasketed, Heavy Duty Ceiling Grid for Use in Operating Rooms, Laboratories, and Cleanroom Applications

FEATURES AND BENEFITS:

- Heavy duty extruded aluminum construction
- All systems are custom engineered for each installation & application
- Closed-cell polyethylene gasket with pressure sensitive adhesive
- Pre-cut at factory for rapid assembly in the field with “quick snap” connectors
- “Quick snap” connectors allow for reconfiguration in the field
- Factory supplied blank-off panels to match air distribution equipment



MODEL:

AORCS / Aluminum 1½” Adjustable Grid System

FINISHES:

Standard Finish - #26 White / Antimicrobial PowderCoat

Optional Finish - #01 Mill

Optional Finish - #21 Enviro-Thane to match / Antimicrobial PowderCoat

Optional Finish - #84 Black / Antimicrobial PowderCoat



cleanrooms



research labs



hospitals



surgical

OVERVIEW

Gasketed Heavy Duty Ceiling Grid System

Used to support diffusers, blank-off panels, and light fixtures, the Atlas ceiling system also creates an air tight barrier between the space and ceiling plenum to prevent transmission of contaminants into or out of the occupied space. All systems are custom engineered for each unique application.

Fan Filters

A Unique Solution for Cleanroom Applications

FEATURES AND BENEFITS:

- Fan Filter Diffuser with blower / motor combo that provides constant laminar airflow to the occupied space
- High performance, low energy consumption and low noise levels
- Low profile design is perfect for applications with limited ceiling plenum space
- Walkable plenum (excluding pre-filter)
- Meets IEST recommended practices



MODELS:

FFD / PSC motor / HEPA Filter

FFDE / ECM motor / HEPA Filter

FFDR / PSC motor / Room side replaceable HEPA Filter

FFDER / ECM motor / Room side replaceable HEPA Filter

FFDRA / Room side replaceable PSC motor and HEPA Filter

FFDERA / Room side replaceable ECM motor and HEPA Filter



cleanrooms



research labs

FINISHES:

Standard Finish - #26 White

Optional Finish - #04 Mill

OVERVIEW

Low Energy, Low Sound and Low Profile

Titus offers a complete line of fan filter diffusers that can be used for new design or retrofitting cleanroom environments. Each Titus FFD (fan filter diffuser) is a self-contained fan filter module that includes HEPA filter, pre-filter, fan speed control and low profile design. Air circulation is maintained by using a lightweight, forward curved fan powered by a 120V or 277V, 60Hz motor.

Notes

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605 Shiloh Rd.
Plano, Texas 75074
(ofc): 972.212.4800
(fax): 972.212.4884
(web): www.titus-hvac.com