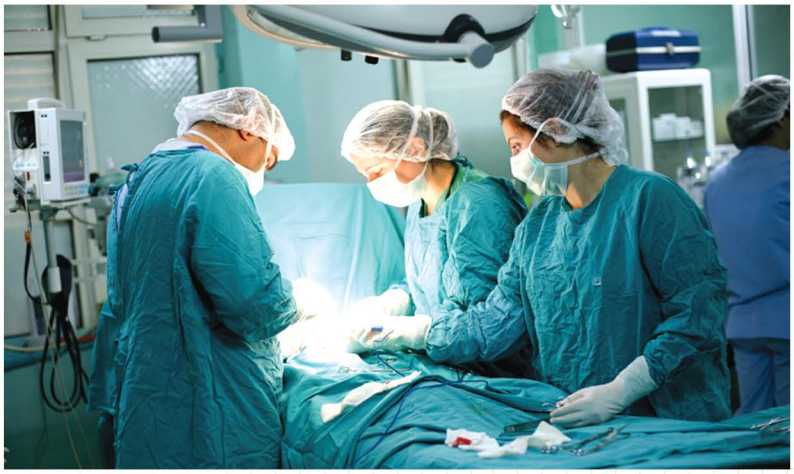
AIR GUIDE

ROOM LEVEL AIR DECONTAMINATOR • REGISTERS • DIFFUSERS

Quality • On Time • On Budget

CRITICAL ENVIRONMENT

Infection Control with Clinical Cost Advantages



BROCHURE

2012

- Effectively and affordably mitigate Hospital Acquired Infections (HAI)
- Kill or remove pathogens at the source with modular solutions

AIRGUIDE

LIFETIME AIR DISTRIBUTION ADVANTAGE

50 Years

AirGuide Manufacturing has built 50 years of trust. Starting as the top pick for construction and retrofit projects in coastal states throughout the U.S., AirGuide manufactures the most reliable all aluminum, stainless and stamped steel grilles, registers, and diffusers serving the worldwide market across multiple industries. Specifically, AirGuide offers a line of Infection Control and Controlled Air products for the healthcare industry.

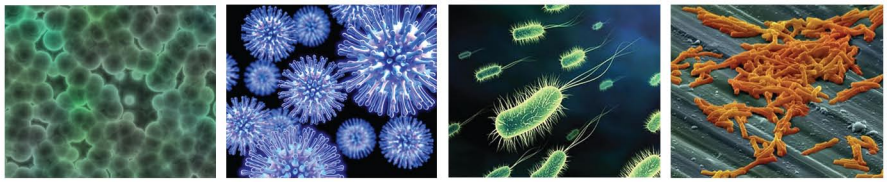
We help professionals, facility owners and managers combat daily airborne infection control and particulate contamination in critical environment applications. We meet the changing and unique demands of healthcare settings to increase patient outcomes while reducing administrative and clinical costs. We help you stay on time and on budget in your construction and innovation needs for your healthcare facility. Rely on AirGuide's commitment and business practices to help you gain greater speed, ease and competitiveness.

Infection Control
How Hospital Acquired Infections Affects You

The Centers for Disease Control and Prevention (CDC) estimates that $45 billion is added to the annual healthcare costs to treat Hospital Acquired Infections (HAI).

The Leapfrog Group, an advocacy group representing large employers, reports that an infection can add $42,000 to a patient's bill in the intensive care unit.

Starting in 2012 - Medicare mandates hospitals to report HAI or pay a penalty. Medicare will reduce payments to hospitals with poor ICU infection rates.



In the U.S., more people die from Hospital Acquired Infections (HAI) than from AIDS, breast cancer, and auto accidents combined. HAI are the 4th major cause of death in the United States with 99,000 annual deaths, following cancer deaths (565,000), tobacco deaths (440,000), and obesity deaths (400,000).

HAI are prominent in hospital admissions. An estimated 1.7 million patients contract an HAI every year. HAI represent 4.5 infections out of every 100 hospital admissions. The average length of stay for infected patients increased from 9 to 25 days.

AirGuide Manufacturing Helps You Reduce HAI Risks Using Four Methods

Filtration
Filter is deployed to eliminate hazardous agents at the source of exposure.

Purification
Ultraviolet germicidal irradiation (UVGI) is deployed to expose pathogens to radiation for removal and destruction.

Pressure
Using differential pressure, directional airflow is created to isolate contaminants in the area.

Dilution
Adequate air changes per hour via ventilation, deploying room-level purification to reduce HAI risks.

AirGuide Manufacturing Critical Environment Infection Control and Controlled Air Systems

Infection Control

Room Level Air Decontaminator

Fan Filter Air Diffuser

Controlled Air

Laminar Flow System

Radial Pattern Diffusers

CEIC-RLAD

Specification Summary:

- MERV 8 Pre-Filter
- HEPA V-Bank Filtration 99.97% @ 0.3 microns
- 2 UVC Bulbs 4,400 microwatts/cm2 irradiation in sealed chamber
- Hi-efficiency brushless DC motor
- Thermal overload protection
- Variable air volume control /850 CFM capacity

Room Level Air Decontaminator, an Air Scrubber

Our Room Level Air Decontaminator "RLAD" **is a portable air cleansing device that removes and kills airborne pathogens at room level.** This air scrubber helps infection control professionals in health care facilities remedy problem areas or convert zones quickly, economically and effectively while complying with standards and guidelines as set forth by CDC, AIA, and HRSA. Utilizing state-of-the-art **filtration and UV Germicidal Irradiation technologies** and superior designs, AirGuide's RLAD provides unparalleled air-scrubbing performance. This room level air decontaminator is configured for recirculation of room air, or can be fitted with an optional, easily installed exhaust collar assembly. By ducting the collar and discharging the air into an adjacent space, the negative room pressure can be increased.

Easily moved to any space, RLAD plugs into any standard 110 vac wall outlet to immediately start scrubbing the air, creating impromptu isolation environment to meet terrorism threats and potential biological, chemical, or nuclear contamination of patients or to keep contaminants down during facility construction.

Application:

- Isolation rooms
- Pre and Post Preparation of Operating Rooms
- Emergency Rooms (ER)
- Triage
- Intensive Care Units (ICU)
- Waiting Rooms
- Treatment Rooms

Replacement Parts and Accessories:

AMPF Anti-Microbial Pre-Filter
UVCB UVC Germicidal Irradiation Bulb
HEPA Filter (99.97% @ 0.3 micron)
ULPA Filter (99.999% @ 0.12 micron)

CEIC- FFAD

Specification Summary:

- 304 Stainless Steel with all welded plenum
- Available in 48"x24" and 24"x24"
- #4 satin polished finish
- Constant air volume of 250-700 CFM
- HEPA (99.97% @ 0.3 micron) or ULPA (99.999% @ 0.12 micron) filters, separatorless 2" (51mm) deep media, integral test port, anodized aluminum gel seal frame.
- Perforated face with 3/32" diameter holes on 60° 1/4" staggered centers

Fan Filter Diffuser Series

Our Fan Filter Air Diffuser "FFAD" Series **provides its own constant airflow independent of existing HVAC systems, yielding unequalled flexibility for the design and construction in all clean room environments.** A fan-powered HEPA OR ULPA filtered diffuser, FFAD combines proven vertical air mass technology with the latest ECM fan motor capabilities to produce a non-aspirating, low velocity, uniformly distributed downward moving piston of filtered air. The FFAD can be incorporated into a laminar flow system.

Automatically compensating for changes in filter load and static pressure and more, our all-welded stainless steel plenum is built to meet the latest pressure testing standards. **Available in HEPA and ULPA filters, FFAD is computer-controlled with variable-speed ECM motor and higher CFM output.**

Designed for both lay-in t-bar ceiling systems and surface mount applications FFAD can also be incorporated into an existing HVAC system with a round duct inlet for simple duct connection (rectangular and oval duct connection upgrades available). Clear anodized extruded aluminum filter frame with test port to measure filter pressure drop leakage (scan) tests. Removable faceplate for ease of cleaning with cleanable, expanded aluminum prefilter Computer-controlled, variable speed ECM motor with internal microcomputer that provides low energy consumption, high performance and long motor life.

Application:

- Operating Room
- Used for clean room applications such as research, animal or pharmaceutical labs, as well as food processing plants, microchip plants, and other protective environment rooms.

How to Order:

CEIC-FFAD – Critical Environment Infection Control – Fan Filter Air Diffuser

Replacement Parts and Accessories:

HEPA Filter (99.97% @ 0.3 micron)
ULPA Filter (99.999% @ 0.12 micron)

Options:

☐LED Indicator light alerts user to change filter Baked Epoxy-Polyester Hybrid Powder Coat
☐Clear ☐Gray Beige ☐Silver ☐Dark Bronze
☐Black – Matte ☐Black – Texture

CEIC - FFAD 48 X 24 - HEPA - #3 - 316 - R

- 48 x 24 - 48L 24W
- 24 x 24 - 24L 24W
- HEPA– HEPA Filter
- ULPA – ULPA Filter
- R - Rectangular Duct Connect
- O - Oval Duct Connect
- **OPTIONS**
  - None (default) —
  - 316 Stainless Steel 316
- **FINISH**
  - #3 Satin Polished (default) #3
  - White WH
  - Special SP

Critical Environment Controlled Air Laminar Flow System

One of the major sources of microbiological particles in the operating room is from the surgical staff and is proportional to the number of people moving about in the room. The goal of any system is to isolate the patient from the microbiological particles produced by the surgical team and the support staff in the operating room. AirGuide offers a modular Laminar Flow system designed to create a clean zone to suit almost any application.

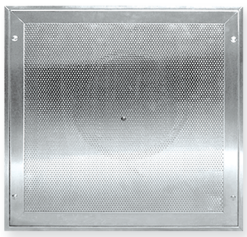
AirGuide's Critical Environment Controlled Air Laminar Flow System consists of our **Laminar Flow Perimeter Slot Diffusers (CECA-LFPSD)** and the **Laminar Flow Diffusers (CECA-LFD)**. Specially designed to **create a clean zone around the patient** in the operating room with an air curtain around the patient and the surgical staff, this system establishes an invisible barrier to airborne microorganisms. It protects and isolates the clean zone from contaminated room air and personnel that are outside the curtain.

The AirGuide Laminar Flow system with HEPA Filter Diffuser uses the proven concept of vertical air mass technology which produces a nonaspirating, low velocity, uniformly distributed downward moving piston of conditioned air. These high quality filters **may be used individually, or as in the case of hospital operating rooms, several units may be linked together to sufficiently cover the area and produce one large combined laminar mass**. Installed in an operating room above the operating table, the clean conditioned air flows over and blankets the operating table effectively isolating the patient from contaminated air.

Our Laminar Flow System:

- Adheres to public safety requirements
- Minimizes the number of airborne contaminants at the surgical site
- Uses only the minimum amount of air imposed by the standards
- Is cost effective, easy to install and clean
- Meet recommended sound levels
- Is flexible enough to accommodate a wide variety of room layouts and equipment.

CECA-LFD



Specification Summary:

- Solid Type 304 Stainless Construction
- Perforated face has 3/32" (2.4) Diameter Holes on 60º 1/4" (6) Staggered Centers
- Integral damper with screwdriver slot for easy access and integral pressure plate ensuring true laminar airflow
- Designed for Lay-In T-Bar Ceiling Systems & Surface Mount Applications
- Integral Earthquake Tabs
- Round Duct Inlets for Simple Duct Connection
- #4 Satin Polished Finish

Laminar Flow Diffuser Series

The **Laminar Flow Diffuser "LFD" Series** utilizes the well-proven and time-tested concept of vertical air mass 'laminar flow' technology. Our LFD **produces a non-aspirating, low velocity, uniformly distributed downward moving 'piston' of conditioned air.** In addition, the LFD is designed to accommodate a Gel Seal HEPA or ULPA filter, which can be easily removed and replaced from the face of the unit. These high quality filters incorporate a separatorless 2" deep media, integral test port and an anodized aluminum gel seal frame.

They may be used individually, or as in the case of hospital operating rooms, several units may be linked together to produce one large combined laminar mass. The only significant amount of room air infiltration occurs at the outer boundary of the laminar flow mass, outside the confines of the operating table. The patient is therefore bathed in 'clean air' and effectively isolated from secondary room air and any airborne contaminants.

The ability of the CECA-LFD to maintain a sterile environment directly below is enhanced by the use of low level exhaust grilles located around the room periphery which remove the contaminated air before it can react with the boundary layer of the laminar flow mass.

Applications:

- Installed in operating room above operating table.
- Used for clean room applications such as research, animal or pharmaceutical labs, as well as food processing plants, microchip plants, and other protective environment rooms.

How to Order:

 # CECA-LFD – Critical Environment Controlled Air – Laminar Flow Diffuser

Replacement Parts and Accessories:

HEPA Filter (99.97% @ 0.3 micron)
ULPA Filter (99.999% @ 0.12 micron)

Options:

☐LED Indicator light alerts user to change filter
Baked Epoxy-Polyester Hybrid Powder Coat
☐Clear ☐Gray Beige ☐Silver ☐Dark Bronze
☐Black - Matte ☐Black - Texture

CECA-LFD - 08 - 48 x 24 - L - #3 - 316 - HEPA - MC - SC

MODEL
- 304 Stainless Steel

INLET SIZE
6, 7,8,10, 12, (152, 176, 203, 254, 305)

CEILING MODULE SIZE

Imperial Modules (inches) (mm)
- 48 x 12 (1219 x 305)
- 60 x 12 (1524 x 305)
- 72 x 12 (1829 x 305)
- 24 x 24 (610 x 610)
- 48 x 24 (1219 x 610)
- 60 x 24 (1524 x 610)
- 72 x 24 (1829 x 610)

Metric Modules (mm)
- 1200 x 300
- 1500 x 300
- 1800 x 300
- 600 x 600
- 900 x 600
- 1200 x 600
- 1500 x 600
- 1800 x 600

SC – Single Chamber (default)
DC – Dual Chamber

MC – Medium Capacity
HC – High Capacity

HEPA – HEPA filter (default)
ULPA – ULPA filter

OPTIONS
- None (default) —
- 316 Stainless Steel 316

FINISH
- #3 Satin Polished (default) #3
- White WH
- Special SP

FRAME TYPE
- Lay-in T-Bar L
- Surface Mount S

CECA-LFPSD

Specification Summary:

- Solid Type 304 Stainless Construction
- Perforated Pressure Plate has 3/32" (2.4) Diameter Holes on 60º 1/4" (6) Staggered Centers
- Designed for Lay-In T-Bar Ceiling Systems & Surface Mount Applications
- Integral Earthquake Tabs
- Flanged Inlets for Simple Duct Connection
- Plenums have Rounded Corners for Easier Cleaning
- #4 Satin Polished Finish

Perimeter Slot Diffuser Series

The Laminar Flow Perimeter Slot Diffuser "LFPSD" Series is specially designed to provide an air curtain for operating rooms. The unique slot design of the LFPSD **creates a continuous curtain of air, angled outwards 5º - 15º, that encloses the operating area and minimizes the possibility of contaminated air entering the surgical area.** The double slot design creates a uniform velocity curtain that minimizes infiltration of contaminated air into the curtain air stream. It also creates a wider velocity profile with less turbulence and hence less induction over similar two slot designs. The face design also incorporates longitudinal deflectors that horizontally deflect a small amount of air lengthwise thereby joining sections and corners with a truly continuous curtain, resulting in enhanced isolation of the surgical area.

Application:

- Linked together in many hospital operating rooms to produce one large combined laminar mass
- Used for clean room applications such as research, animal or pharmaceutical labs, as well as food processing plants, microchip plants, and other protective environment rooms

How to Order:

CECA-LFPSD – Critical Environment Controlled Air – Laminar Flow Perimeter Slot Diffuser

CECA-LPDSD - 12 x 5 - 10 - S - #3 - 316

MODEL
- 304 Stainless Steel
- 304 Stainless Steel w/O.B.D

INLET(S) SIZE (inches) (mm)

- 10 x 5	(254 x 127)	- 1 inlet	4ft. (1219) Module
- 16 x 5	(406 x 127)	- 1 inlet	6ft. (1829) Module
- 10 x 5	(254 x 127)	- 2 inlets	8ft. (2438) Module
- 12 x 5	(305 x 127)	- 2 inlets	10ft. (3048) Module
- 16 x 5	(406 x 127)	- 2 inlets	12ft. (3658) Module
- 16 x 5	(457 x 127)	- 2 inlets	14ft. (4267) Module
- 14 x 5	(356 x 127)	- 3 inlets	16ft. (4677) Module

CEILING MODULE LENGHT (ft.) (mm)

- 4 ft.	(1219)
- 6 ft.	(1829)
- 8 ft.	(2436)
- 10 ft.	(3048)
- 12 ft.	(3658)
- 14 ft.	(4267)
- 16 ft.	(4677)

OPTIONS

- None (default)	
- 316 Stainless Steel	316

FINISH

- #3 Satin Polished (default)	#3
- White	WH
- Special	SP

FRAME TYPE

- Lay-in T-Bar	L
- Surface Mount	S

Options:
Baked Epoxy-Polyester Hybrid Powder Coat
☐Clear ☐Gray Beige ☐Silver
☐Dark Bronze ☐Black - Matte ☐Black - Texture

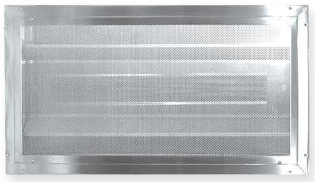
Accesories

Filters: Currently available as options in our stainless steel laminar flow and radial flow diffusers, or any combination grille, plaster frame, and plenum models in hinged or non-hinged models. Typical applications include hospitals, semiconductor manufacturing, disk drive and compact disk manufacturing, food processing, pharmaceutical production and aerospace manufacturing. **Our standard filters incorporate an anodized aluminum Gel Seal frame that mates with a specially constructed frame on our diffusers to provide a leak-tight connection.** The filters also utilize a separatorless 2" deep media pack as standard and we provide a test port integral with every filter.

The test port is used to measure filter pressure drop, perform leakage (scan) tests or to adjust balancing dampers in the diffuser neck. All filters are UL 900 Class I Listed and Factory Mutual Approved, individually scan tested per Section 6.2 of IEST-RP-CC034.1, packaged independently from the diffuser for final installation of the filter in the field (by others). ULPA filters are assembled and tested in a clean room environment prior to sealing in a polybag.

☐ HEPA Filter: 99.97% at 0.3 µm
☐ ULPA Filter: 99.999% at 0.12 µm

CECA-FRD



Flat Radial Diffuser Series

The **Flat Radial Diffuser "FRD" Series** comes with or without a HEPA Filter. Designed to **provide low aspiration at high ventilation rates with internal baffles and a pressure plate for an excellent radial air pattern**. Especially suited for clean room applications such as research laboratories, animal labs, food processing, hospital rooms and computer rooms, this diffuser allows large volumes of air to be supplied at low level velocities. The unobtrusive flat face design provides the smooth appearance required for architectural excellence.

The **FRD-2** model introduces air in a semi-cylindrical 180º radial flow pattern, flushing a room with large volumes of clean conditioned air and minimizing infiltration of contaminated air.

The **FRD-1** model introduces air in a 90º radial flow pattern for perimeter applications.

How to Order:

CECA-LFD – Critical Environment Controlled Air – Laminar Flow Diffuser

Replacement Parts and Accessories:
HEPA Filter (99.97% @ 0.3 micron)
Options:
☐LED Indicator light alerts user to change filter
Baked Epoxy–Polyester Hybrid Powder Coat
☐Clear ☐Gray Beige ☐Silver ☐Dark Bronze
☐Black – Matte ☐Black – Texture

CECA-FRD1 - 08 - 24 x 24 - L - #3 – 316 - HEPA

MODEL
- 180° Pattern FRD-2
- 90° Pattern FRD-1

ROUND INLET SIZE
- 06 (152)
- 07 (178)
- 08 (203)
- 10 (254)
- 12 (305)

CEILING MODULE SIZE

Imperial Modules (Inches) (mm)
- 24 x 24 (610 x 610)
- 36 x 24 (914 x 610)
- 48 x 24 (1219 x 610)
- 60 x 24 (1524 x 610)

Metric Modules (mm)
- 600 x 600
- 900 x 600
- 1200 x 600

HEPA - HEPA filter (default)

OPTIONS
- None (default) —
- 316 Stainless Steel 316

FINISH
- #3 Satin Polished (default) #3
- White WH
- Special SP

FRAME TYPE
- Lay-in T-Bar L
- Surface Mount S

CECA-HRDP

Hinged Radial Pattern Diffuser Series

The Hinged **Radial Pattern Diffuser "HRDP" Series** comes with or without a HEPA filter. Designed to **provide low aspiration and high ventilation rates** especially for clean room applications, the unique design of solid baffles in an intrusive perforated face can **handle large volumes of air with low initial face velocities**. The curved face design is pleasing to the eye, without unsightly sharp angles. Engineered design and performance are the result of extensive laboratory testing.

The face of the diffuser is attached to the plenum with two stainless steel hinges; the opposite side is secured with 1/4-turn fasteners. The diffuser face simply hinges down for easy access to the interior for cleaning and sanitation. The **HRDP-2** model introduces air in a semi-cylindrical 180º radial flow pattern, flushing a room with large volumes of clean conditioned air and minimizing infiltration of contaminated air. **The HRDP-1** model introduces air in a 90º radial flow pattern for perimeter applications.

HRDP with filter incorporates an extended plenum and a unique frame designed to accommodate a Gel Seal HEPA or ULPA filter. These high quality filters can be easily removed and replaced from the face of the unit. Also incorporated is a separatorless 2" deep media, integral test port and an anodized aluminum gel seal frame.

How to Order:

CECA-HRDP Critical Environment Controlled Air – Hinged Radial Pattern Diffuser

Replacement Parts and Accessories:
HEPA Filter (99.97% @ 0.3 micron)
Options:
☐LED Indicator light alerts user to change filter
Baked Epoxy - Polyester Hybrid Powder Coat
☐Clear ☐Gray Beige ☐Silver ☐Dark Bronze
☐Black - Matte ☐Black- Texture

CECA-HRDP - 2 - 08 - 24 x 24 - L - #3 - 316 - HEPA

MODEL
-180° Pattern
- 90° Pattern

ROUND INLET SIZE
- 08 (203)
- 12 (305)

CEILING MODULE SIZE

Imperial Modules (Inches) (mm)
- 48 x 12 (1219 x 305) (Model HRDP-1 only)
- 24 x 24 (610 x 610)
- 48 x 24 (1219 x 610)

Metric Modules (mm)
- 1200 x 300 (Model HRDP-1 only)
- 600 x 600
- 1200 x 600

HEPA - HEPA filter (default)
ULPA - ULPA filter

OPTIONS
- None (default) —
- 316 Stainless Steel 316

FINISH
- #3 Satin Polished (default) #3
- White WH
- Special SP

FRAME TYPE
- Lay-in T-Bar L
- Surface Mount S

For More Information

Product Catalog for Detailed Information

For detailed product information, including engineering, application and performance data, contact your local AirGuide Manufacturing representative or one of our Customer Service Specialists to request a copy of our latest Product Catalog.

www.airguidemfg.com for More Resources

The AirGuide website contains a wealth of information beyond this handbook or our Product Catalog, including new product releases, product and application videos, case studies, part number conversion, and what people say about us, all made available at your fingertips.

Guide your Project to be On Time, On Budget

For help in finding specification equivalent products for your project to gain greater speed, ease, affordability and competitiveness, please request our Part # Conversion Guide from our Product Specialists.

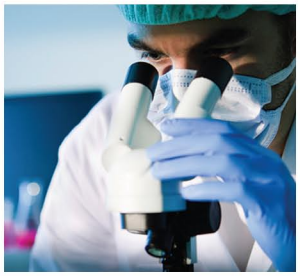
Lower Your Cost Per Order Entry

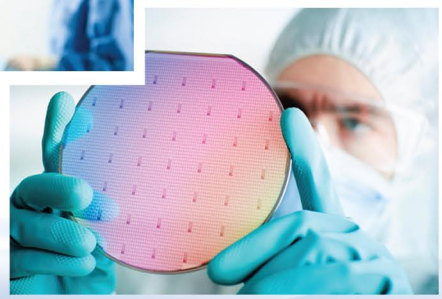
Use Our Instant Information Online Software

AirGuide is proud to offer our robust quotation software system with instant information for your order to aid you in your selection of our products, saving you significant time and costs.

Produced in USA, our products are offered in full and **fractional sizes** with standard and customcolors for all models that are **made-to-customer-orders** and produced efficiently with a lean manufacturing process from our 52,000 sq. ft. facility in Miami, Florida.

Engineers and architects can **tailor specifications** to customers' needs while distributors and their builder/contractor/installer customers are able to **go after custom jobs and individualized programs at affordable pricing**, removing the stigma that custom quality products must come with a high price tag.





AIRGUIDE

ROOM LEVEL AIR DECONTAMINATOR · REGISTERS · DIFFUSERS

Quality • On Time • On Budget

CRITICAL ENVIRONMENT

Infection Control with Clinical Cost Advantages

795 W 20th Street, Hialeah, FL 33010
Phone: 305-888-1631 | Fax: 305-888-1634
www.airguidemfg.com