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Critical Environments

price®

priceindustries.com

Price Critical Environments

Price's Critical Environment system solutions are designed to meet the highest and most current standards of performance, adaptability and energy efficiency.

Poor indoor air quality in a critical environment can compromise both the health of the people and the validity of the processes in that space. The choice of air distribution strategy throughout critical environments has a direct and significant impact on performance, energy usage and the ongoing maintenance of the facility and must be selected with these factors in mind. These environments are also subject to ongoing upgrades in standards, evolutions in technology, and changes to methodology, and as such must be flexible without compromising performance.

The Price Cleanroom

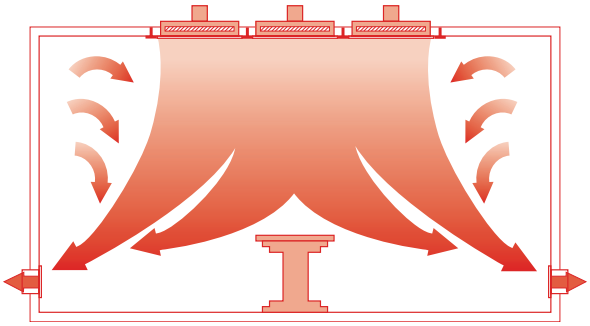
All Price products with high-efficiency filters are assembled and PAO tested inside the Price Cleanroom.

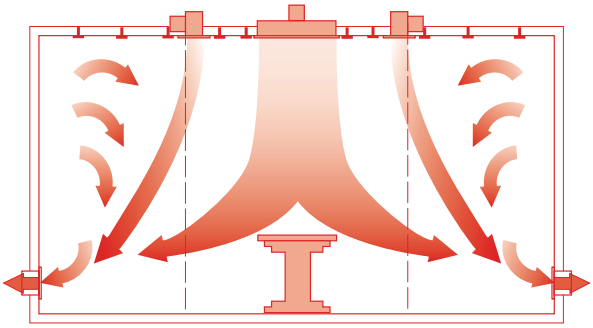
With room access restricted to only certified cleanroom technicians and nearly 20 air changes of HEPA filtered supply air delivered to the space every hour, Price has set a new standard in process control and product quality.

PAO testing is done for every filtered product to guarantee the integrity of the diffuser casing, with all test data logged for future reference. No product leaves the secure cleanroom until it has passed the PAO test and is ready for shipment.

Operating Rooms

Price O.R. systems offer an integrated approach to meet the specialized needs of the operating room, minimizing the risk of airborne infection and maximizing comfort.





Laminar Flow System

The Price Laminar O.R. System controls airborne contamination in the operating room by providing low-mixing, uniform vertical supply air from laminar flow diffusers. Price has the industry's largest selection of laminar flow diffusers, including units with integral high-efficiency filters for superior convenience and performance.

Air Curtain System

The Price Air Curtain O.R. System incorporates laminar flow diffusers over the surgical site and surrounded by Price Hospital Operating Room Diffusers (HORD) to provide a clean surgical zone enclosed in a perimeter air curtain. The air curtain maximizes flexibility by increasing ceiling space for mounting medical equipment, and providing additional cooling capacity to meet the heat loads of the modern O.R.

All Price O.R. Systems conform to ASHRAE Standard 170, 2008 requirements for operating room air distribution.

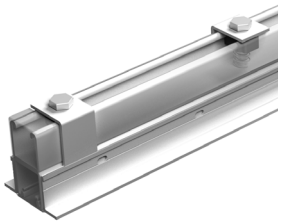
Price O.R. System Components

Hospital Operating Room Linear Slot Diffusers
(HORD series)
Linear slot diffusers with integral plenums surround the surgical area, creating a "barrier" of clean air between the room perimeter and the critical surgical space

Laminar Flow Diffusers
(LFD series)
Engineered to provide a uniform vertical projection of supply air at controlled low mixing and velocity above the patient and surgical team.

Hospital Grade Welded Ceiling System
(HGWC)
Heavy-duty extruded aluminum ceiling grids facilitate convenient access to the O.R. ceiling plenum without compromising the integrity of the room envelope.

Hospital Grade Laminar Flow Common Plenum System
(HGPL Series)
Multiple laminar flow diffusers integrated into a single pressurized heavy-duty plenum unit provide protective laminar flow with reduced duct connections and installation labor.



Hospital Grade Welded Ceiling System (HGWC) with Integrated Unistrut®
(HGWC Series)
Unistrut® integration facilitates the delivery of large volumes of laminar airflow through ceilings between structural equipment supports.

Patient Rooms

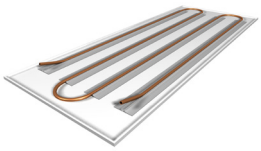
Price has a spectrum of options to satisfy the needs of modern patient rooms, from conventional air distribution strategies to industry leading solutions that maximize performance while minimizing energy consumption.

All Price Patient Room products conform to ASHRAE Standard 170, 2008 requirements.

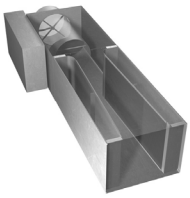
SPD-HI, High-Induction Square Plaque Diffuser

Louvered High-Induction Directional Diffusers
(SMX/AMX series)
Horizontal throw diffusers with special discharge vanes to produce shorter throws and rapid temperature mixing for maximum comfort in the patient room.

Linear Active Chilled Beams
(ACBL series)
Offer maximum comfort and significant potential for energy savings when applied as a recirculating room HVAC unit as described by ASHRAE.



Modular Radiant Panels
(RPM series)
Designed to provide radiant heating or cooling for perimeter zones or localized temperature control.



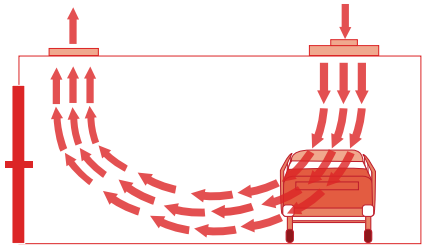
Quiet Single-Duct Terminal Units
(SDVQ series)
A fully tested and patented ultra quiet terminal unit with integrated silencer.

Isolation Rooms

Isolation room air patterns are paramount to the safety of patients and other hospital occupants.

The Price line of Critical Environment diffusers includes a number of high-capacity units capable of supplying large volumes of air with minimal levels of room air entrainment.

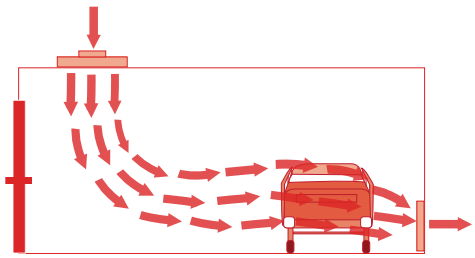
Protection for Patients



Protective Environment Isolation Rooms

Supply diffusers are positioned directly above the patient bed, ensuring clean supply air washes over the patient before conditioning the rest of the space and eventually exhausting at high level near the room entrance.

Protection for Staff & Visitors



Airborne Infectious Isolation Rooms

Supply diffusers near the room entrance and low-level exhaust near the patient bed support movement of air and airborne contaminants toward the patient and away from the corridor.

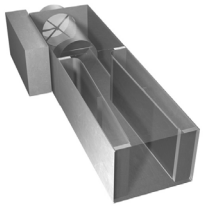
Price Isolation Room System Components

Radial Flow Diffusers
(RFD series)
Designed to supply large volumes of air in 180˚ or 90˚ radial patterns at low velocity, reducing the risk of draft and unwanted distribution of airborne contaminants.

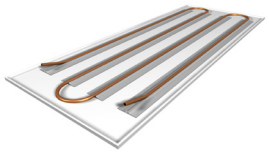
Flush Face Radial Flow Diffusers
(FRFD series)
Designed to produce a low-velocity, multi-directional air distribution pattern. The diffuser's flush face is architecturally appealing and removable from the room side via quarter-turn fasteners.

Laminar Flow Diffusers
(LFD series)
Engineered to provide a uniform vertical projection of supply air at controlled low mixing and velocity, providing predictable room airflow patterns.

Hospital Grade Louvered Bar Return Grilles
(700H series)
Stainless steel return grilles designed with quick-release fasteners for convenient removal and cleaning.



Quiet Single-Duct Terminal Units
(SDVQ series)
A fully tested and patented ultra quiet terminal unit with integrated silencer.



Modular Radiant Panels
(RPM series)
Designed to provide radiant heating or cooling for perimeter zones or localized temperature control.

Fan Filter Units
(FFU series)
Designed to provide unidirectional vertical flow of filtered air using a fan and motor assembly to provide a static pressure boost for areas being renovated or with pressure drop issues

Laboratories and Pharmacies

The Price line of Critical Environment products includes solutions designed to deliver large volumes of air to critical zones without causing discomfort to occupants, or interfering with the operation of fume hoods or similar equipment.

Price Laboratories and Pharmacies Components

Radial Flow Diffusers

(RFD series)

Designed to supply large volumes of low velocity air in 180˚ or 90˚ radial patterns, satisfying high cooling loads without disturbing critical processes.

Flush Face Radial Flow Diffusers

(FRFD series)

Designed to produce a low-velocity, multi-directional air distribution pattern. The diffuser's flush face is architecturally appealing and removable from the room side via quarter-turn fasteners.

Laminar Flow Diffusers

(LFD series)

Delivers uniform vertical supply air at low velocity, reducing the risk of draft and interference with fume hoods or laminar flow workbenches

Fan Filter Units

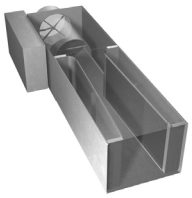
(FFU series)

Designed to provide unidirectional vertical flow of filtered air using a fan and motor assembly to provide a static pressure boost for areas being renovated or with pressure drop issues

Linear Active Chilled Beams

(ACBL series)

These diffusers allow ventilation and latent loads to be decoupled from sensible loads for significant savings potential in load-driven laboratories.



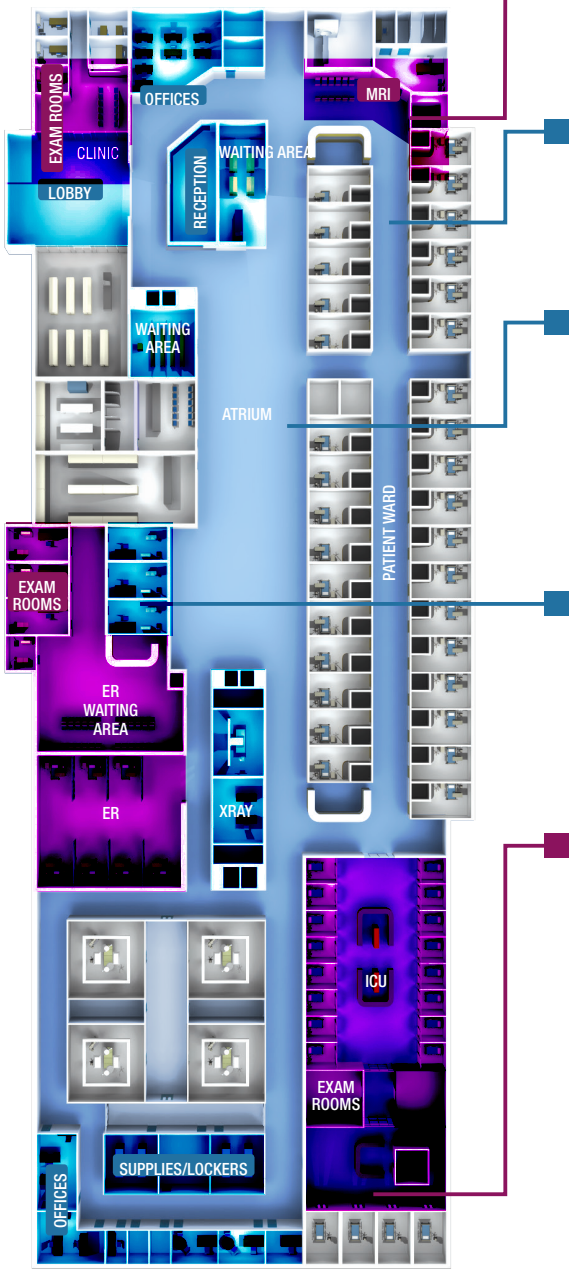
Quiet Single-Duct Terminal Units

(SDVQ series)

A fully tested and patented ultra quiet terminal unit with integrated silencer.

Support & Common Areas

Price is the only manufacturer of air distribution products for healthcare that specializes in solutions for the entire healthcare facility, helping to ensure high performance and improved indoor air quality throughout the building.



MRI

Price offers a full line of non ferrous products suitable for use in MRI rooms.

Hallways

High induction outlets such as the Price Square Plaque Diffuser (SPD) or directional louvered air outlets (SMD) maximize comfort while keeping sound levels low.

Waiting Areas, Lobbies & Atria

An alternative to traditional overhead systems, displacement systems have been known to reduce occupant exposure to airborne contaminants. The lighter than air contaminants are displaced upwards out of the occupied zone and exhausted from the room.

Offices

Conventional overhead supply systems are always a good choice for offices; however, Displacement Ventilation is another option that features high indoor air quality, high levels of comfort and low noise levels.

Examination Rooms

Price SCD Square Cone Diffusers are common in examination rooms and provide a comfortable, draft free, quiet environment. Displacement outlets are also viable, displacing heat and contaminants up and away from the doctors and patients to high level returns.

Price Hospital Grade Ceiling Systems

The Price Heavy-Duty Cleanroom Ceiling Systems are designed to provide convenient access to the ceiling space as well as support the installations of diffusers, infill panels, light fixtures and Unistrut. The continuous gasket prevents leakage between the ceiling plenum and occupied space while the sterile white powder coat finish is formulated to resist deterioration from hospital grade cleaners and disinfectants.

Hospital Grade Welded Ceiling System

HGWC Systems are supplied in large, factory welded modules and provide a strong ceiling support structure for easy field installation.

- High quality, heavy duty extruded aluminum T-bars
- Large factory welded modules for field assembly
- Closed-cell polyethylene gasket helps maintain the integrity of the room envelope
- Permitted for use in operating rooms by the 2010 FGI Guidelines for the Construction of Health Care Facilities

Hospital Grade Welded Ceiling System with Integrated Unistrut

The HGWC with Integrated Unistrut combines equipment, laminar flow diffusers (with or without HEPA filters) and heavy-duty framing for a sealed ceiling system.

- Custom-engineered system components including ceiling-level Unistrut® rails for mounting equipment
- Fill-in panels for access to ceiling plenum

Hospital Grade Laminar Flow Common Plenum System

The HGPL is an integrated plenum design incorporating multiple diffusers resulting in a system with significantly fewer duct connections.

High-Efficiency Filters

Products with High-Efficiency Filters

Designed for applications where upstream filtration is insufficient for room requirements, Price offers a full line of products with integral high-efficiency filters. Utilizing high-efficiency filters with gel-seal frames and diffusers with continuously welded knife-edges, supply air is unable to enter the critical room space without first passing through the filter.

Fan Filter Units

(FFU series)

Provides a unidirectional vertical flow of filtered air using a fan and motor assembly to provide a static pressure boost for areas being renovated or with pressure drop issues.

Laminar Flow Diffusers

(LFDC series)

Engineered to provide a uniform vertical projection of supply air at controlled low mixing and velocity.

Radial Flow Diffusers

(RFDC/FRFDC series)

Designed to supply large air volumes in 180˚ or 90˚ radial patterns at low velocity.

Louvered Directional Diffusers

(AMDC series)

Horizontal 4-way discharge with high flow rates and excellent mixing characteristics for maximum comfort.

Training & Education

Critical Environments Training Courses are held several times per year at Price.

Courses are available for consulting and design professionals. Topics covered include an overview of PRCN, the Price All-in-One selection software, standard and special / custom products and applications, and a review of current standards.

Lab tours and in-house training are available at Price Research and Training Facilities, featuring flow visualization capabilities for Operating Room Systems and other CE products.

Price Engineer's HVAC Handbook

The Most Comprehensive Guide to HVAC Fundamentals

The Price Engineer's HVAC Handbook is a compilation of the engineering knowledge related to the application of air distribution and Critical Environments products and approaches gained at Price over the past 60 years.

The Handbook contains chapters on Critical Environments and its applications including liberal use of examples and graphics to help illustrate and explain concepts and systems.

Chapter 20: Introduction to Health Care HVAC

Chapter 21: Applications of Health Care HVAC

Contact your local Price sales representative to reserve your copy.

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