

PURAFLO®

CLEANROOM TECHNOLOGIES FOR COMMERCIAL APPLICATIONS



price | **CRITICAL ENVIRONMENTS**

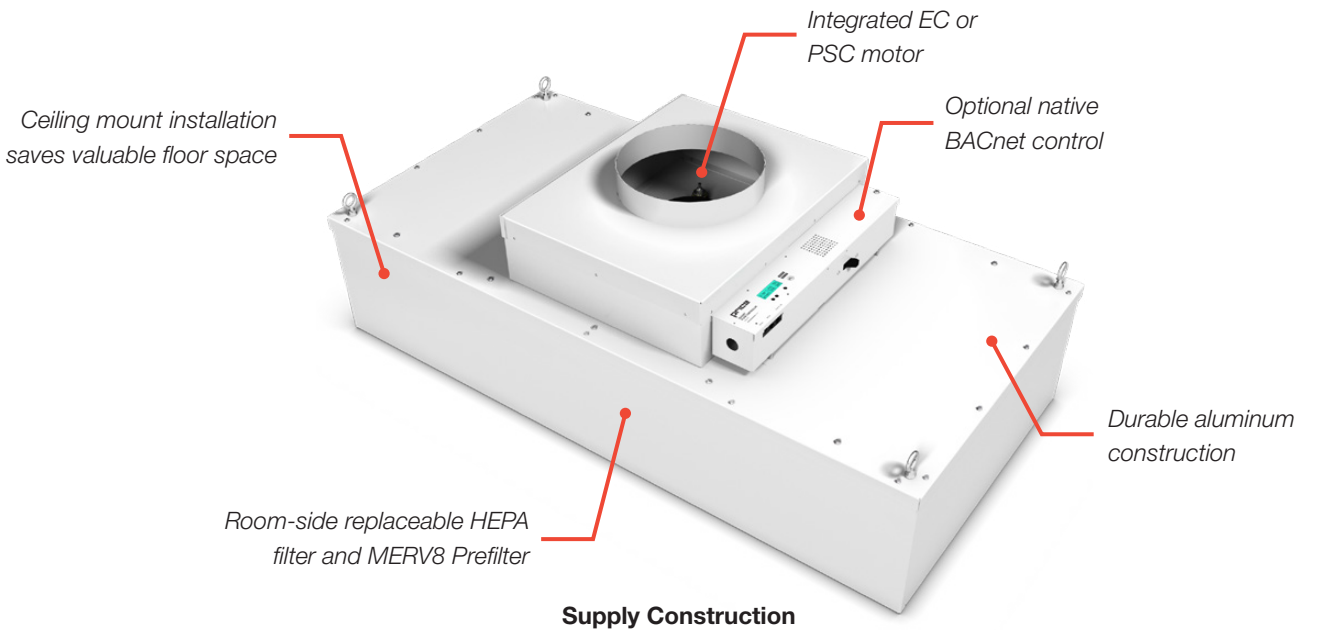
PURAFLO®

Cleanroom Technologies for Commercial Applications

The Puraflo provides HEPA filtration and increased room air changes, effectively reducing the concentration of airborne contaminants and therefore the probability of exposure to airborne germs, viruses, and bacteria. Ideal for use in a variety of commercial spaces including offices, classrooms and more; the Puraflo is quick and easy to install with no impact on the existing HVAC system. Derived from our industry leading line of Fan Filter Units (FFU) the Puraflo delivers cleanroom-grade HEPA filtration with high energy efficiency and low sound levels.



Ventilation and filtration provided by heating, ventilating, and air-conditioning (HVAC) systems can reduce the airborne concentration of SARS-CoV-2 (the virus that causes COVID-19) and thus the risk of transmission through the air.¹



**Exhaust Construction with
Optional Portable Cart**



**Dual-Outlet
Exhaust/Recirculating Construction**

ULTRA-CLEAN AIRFLOW

- + Remove 99.99% (0.3 µm particle size) of contaminants with HEPA filtration.
- + Increase the air change rate in any space to reduce the concentration of airborne contaminants.

APPLICATION FLEXIBILITY

- + Ideal for retrofit applications, Puraflo is simple to install and functions completely independently of the existing HVAC system, eliminating the need for costly infrastructure changes while providing ultra-clean recirculated airflow.
- + Ceiling-mount configurations free up valuable floor space, and allow the Puraflo to be located throughout the ceiling to optimize contaminant removal.
- + For location flexibility, and even faster installation portable floor-mount options are available.
- + **For clean air fast, temporarily use Puraflo in a floor mount configuration, and later have the same unit ceiling mounted for a permanent clean air solution.**

TYPICAL APPLICATIONS

The Puraflo is intended for a wide range of applications wherein HEPA filtration is desired or required to reduce airborne pathogens and improve occupant safety. A variety of construction options allow this versatile product to be configured for a multitude of retrofit applications including classrooms, offices, patient rooms, care homes, and more.

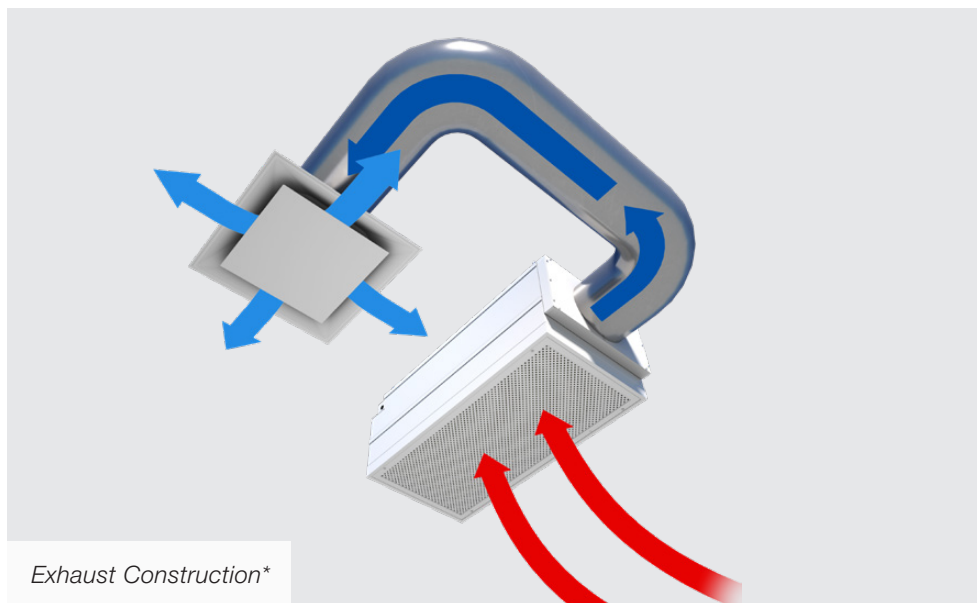
CONSTRUCTION

- + Application
 - Supply
 - Exhaust
 - Combination Exhaust/Recirculating
- + Mounting
 - Ceiling
 - Portable Cart
- + Size
 - 24 in. x 24 in.
 - 24 in. x 36 in.
 - 24 in. x 48 in.
- + Options
 - Face-mounted LED indicator



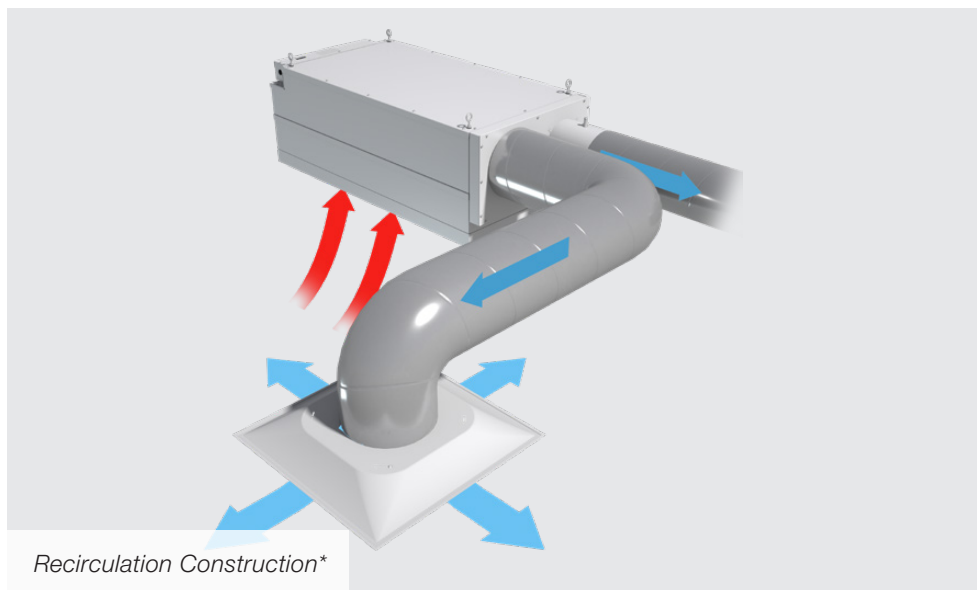
Exhaust Construction

- + Contaminated room air is drawn in through the face of the unit, passed through the HEPA filter, and recirculated to the space through a standard ceiling diffuser.
- + This configuration allows selection of the discharge diffuser to optimize thermal comfort and air distribution in the space.



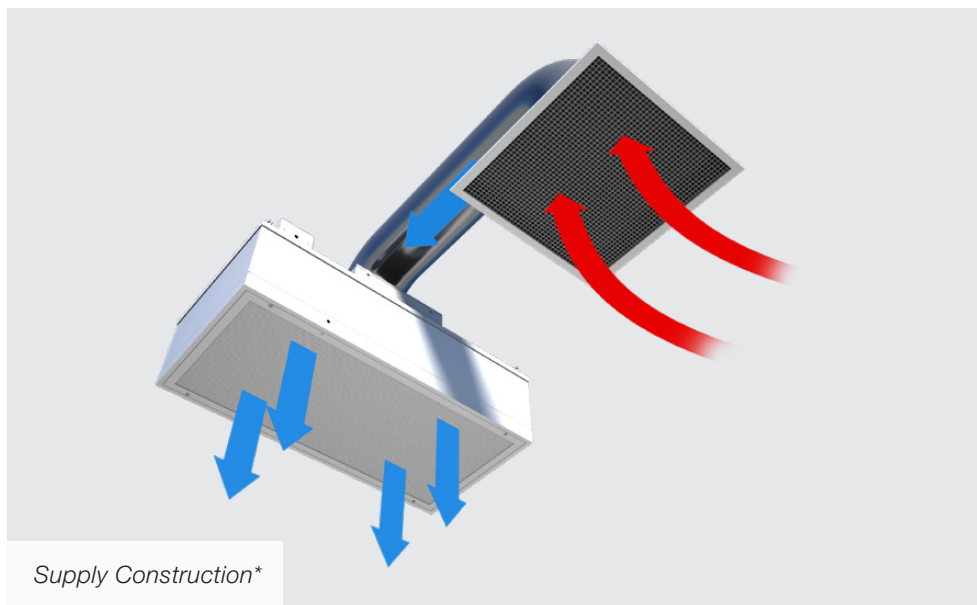
Recirculation Construction

- + Contaminated room air is drawn in through the face of the unit, passed through the HEPA filter, and discharged through two outlets - one ducted to the outdoors, and the other to a supply diffuser recirculating filtered air to the space.
- + This configuration is ideal for applications like dental offices and patient rooms where a negative room pressure as well as an increased air change rate is desired.



Supply Construction

- + Contaminated room air is drawn in through the inlet on the back of the unit or a standard return grille, passed through the HEPA filter, and redistributed to the space with a laminar airflow pattern.
- + This configuration is well suited to:
 - Small rooms or offices where additional mixing diffusers cannot be accommodated
 - Atriums with high ceilings, where a downward column of air is advantageous
 - Non-ducted applications like open ceilings or floor mount configurations



CLASSROOM

Room Specs

- + Room Size: 1000 sq.ft.
- + Ceiling Height: 9 ft.
- + Room Volume: 9000 ft³
- + Additional Air Changes: 2
- + Flow Rate: 300 cfm
- + Sound: <35 NC
- + Equipment:
 - 1x Puraflo Exhaust (24 in. x 48 in.)
 - 1x Supply Diffuser

Details

ASHRAE and the CDC recommend the use of in-room or pre-assembled HEPA filtration systems in schools to improve indoor air quality, through HEPA filtration and increased air changes (at least two additional ACH).

A typical classroom is approximately 1,000 sq.ft. with 9ft. ceilings. One exhaust flow Puraflo (24 in. x 48 in.) can supply the recommended two additional air changes to a classroom with a flow rate of 300cfm.

The Puraflo and the corresponding supply diffuser should be positioned for maximum contaminant removal in the space, and to avoid filtered air discharging directly into the Puraflo. Selection of the discharge diffuser should promote room air mixing and thermal comfort.





OPEN OFFICE

Room Specs

- + Room Size: 1200 sq. ft.
- + Ceiling Height: 10 ft.
- + Room Volume: 12,000 ft³
- + Additional Air Changes: 2
- + Flow Rate: 400 cfm
- + Sound: 35 NC
- + Equipment:
 - 1x PuraFlo Exhaust (24 in. x 48 in.)
 - 1x Supply Diffuser

Details

Open offices are densely populated areas with minimal fresh supply air, and lots of recycled air. To help mitigate airborne pathogen transmission in these spaces an additional two air changes per hour of HEPA filtered air is recommended.

The number of PuraFlo units required in an office is dependent on the number of air changes desired and the volume of the space. One exhaust flow PuraFlo unit operating at 400cfm supplies enough airflow for an additional 2ACH for every 1,200 sq.ft. of office space (with 10 ft. ceilings).

The PuraFlo and the corresponding supply diffuser should be positioned for maximum contaminant removal in the space, and to avoid filtered air discharging directly into the PuraFlo. Selection of the discharge diffuser should promote room air mixing and thermal comfort.

DENTAL OPERATORY

Room Specs

- + Room Size: 125 sq. ft.
- + Ceiling Height: 9 ft.
- + Room Volume: 1125 ft³
- + Additional Air Changes: 8
- + Flow Rate: 150 cfm
- + Sound: <35NC
- + Equipment:
 - 1x Puraflo Exhaust or Combination
(24 in. x 24 in.)
 - 1x Supply Diffuser

Details

Rotary tools used during dental procedures create aerosolized contaminants that can be detrimental to the health of dentists and hygienists. The amount of time required for removal of airborne contaminants from a space varies based on the air change rate. As an example, increasing from 4 ACH, typical in many dental operatories, to 12 ACH reduces the time to remove 99.9% of airborne contaminants from 104 minutes to 35 minutes, allowing dentists to safely see more patients each day.

In dental offices the exhaust flow Puraflo should be located near the patients feet so that contaminated air is drawn away



from the dental practitioner, and filtered air should be supplied from behind the patients head to wash the work space with clean air.

Optional use of a combination exhaust and recirculating flow Puraflo allows a portion of the airflow to be exhausted while the remainder is recirculated, simultaneously creating a negative pressure environment to contain airborne contaminants, and increases the air change rate to flush contaminants from the space.

For more information on dental applications, visit www.pricecriticalenvironments.com/products/dental-operatories.

PERSONAL CARE HOMES

Room Specs

- + Room Size: 200 sq. ft.
- + Ceiling Height: 9 ft.
- + Room Volume: 1,800 ft³
- + Additional Air Changes: 6
- + Flow Rate: 180 cfm
- + Sound: <35 NC
- + Equipment:
 - 1x Puraflo Exhaust (24 in. x 48 in.)
 - 1x Supply Diffuser

Details

Prevention of airborne pathogen transmission is of the utmost importance in personal care homes and other spaces with at-risk occupants. Increasing the air change rate in these spaces will help reduce the concentration of airborne contaminants and therefore the risk of exposure to airborne pathogens.

One puraflo unit processing 180 cfm will provide an additional 6 ACH in a 200 sq.ft. patient room (with 9 ft. ceilings).

In these applications the exhaust flow Puraflo unit should be located near the door, with the recirculation diffuser located over the patient bed. This configuration provides clean airflow to the patient and encourages the movement of less-clean air toward the exit.



PATIENT ISOLATION ROOMS

Room Specs

- + Room Size: 150 sq. ft.
- + Ceiling Height: 9 ft.
- + Room Volume: 1,350 ft³
- + Additional Air Changes: 8
- + Flow Rate: 180 cfm
- + Sound: <35 NC
- + Equipment:
 - 1x Puraflo Combination (24 in. x 48 in.)
 - 1x Supply Diffuser

Details

Airborne infectious isolation rooms (AIIR) are used for patients with easily communicable airborne disease. When there is a shortage of AIIR, existing hospital patient rooms can be converted to negative pressure isolation rooms by creating 0.1 in. w.g. negative pressure and by increasing from 4 to 12 ACH, in accordance with ASHRAE 170 code requirements.

The combination exhaust and recirculating flow Puraflo allows a portion of the airflow to be exhausted while the remainder is recirculated, simultaneously creating a negative pressure environment and increasing the



air change rate to meet ASHRAE 170 requirements for AIIR.

In these applications the Puraflo should be located directly over the patient's head so that contaminated air is drawn directly out of the room, and filtered air should be supplied toward the door so that airflow is encouraged to move from clean to less-clean areas of the room.

For more information on patient isolation rooms, and flexible “pandemic-ready” options that allow the user to easily change between normal operation of a patient room and isolation mode, visit www.pricecriticalenvironments.com/products/retrofit-isolation-room.



WAITING & RECEPTION AREAS

Room Specs

- + Room Size: 300 sq. ft.
- + Ceiling Height: 10 ft.
- + Room Volume: 3,000 ft³
- + Additional Air Changes: 4
- + Flow Rate: 200 cfm
- + Sound: <35 NC
- + Equipment:
 - 1x PuraFlo Exhaust (24 in. x 48 in.)
 - 1x Supply Diffuser

Details

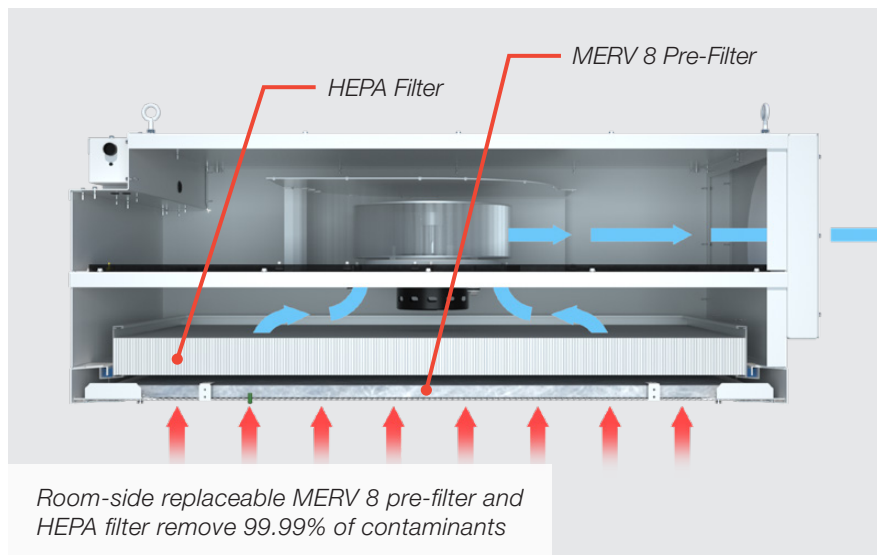
Waiting and reception areas are typically densely populated and can see a lot of foot-traffic from a many different people each and every day. Keeping these spaces clean can help prevent airborne pathogens from getting their foot in the door.

Waiting and reception areas vary in size based on the application, whether it be in a medical center, office building, or multi-family housing complex. As an example, a single exhaust flow PuraFlo unit operating at 200cfm can provide an additional 4 ACH for a 300 sq.ft. waiting area with 9 ft. ceilings.

The PuraFlo and the corresponding supply diffuser should be positioned for maximum contaminant removal in the space, and to avoid filtered air discharging directly into the PuraFlo. Selection of the discharge diffuser should promote room air mixing and thermal comfort.

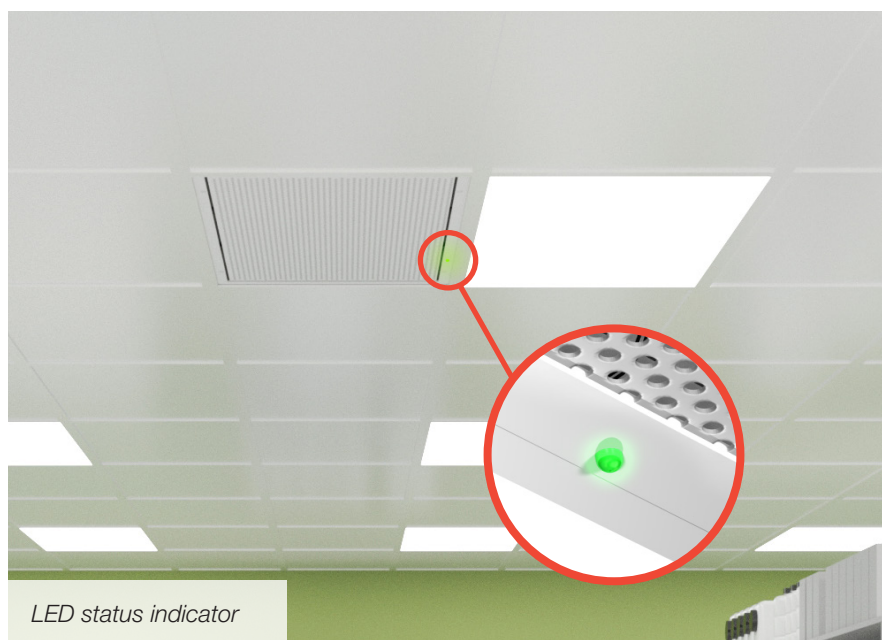
EASY MAINTENANCE

- + Quickly and easily replace both the MERV 8* and HEPA filter from the room-side.
- + Filter replacement schedule varies based on application, environmental conditions, and user preference. Generally:
 - MERV 8 pre-filters should be replaced every 6 months
 - HEPA filters should be replaced every 2 years
- + Integrated knife edge and HEPA filter gel track allow for tool-free installation and replacement.
- + MERV8 pre-filter captures large particulate, extending the life of the HEPA filter.
- + Optional face-mounted color LED alerts the user when the filter is loaded and due for replacement, or if the motor is not operating properly. A green LED indicates normal operation, a yellow LED indicates a loaded filter and a red LED indicates an issue with the motor.



ENERGY EFFICIENT

- + Puraflo provides increased air recirculation with lower energy consumption than a building-wide system.
- + Recirculation through individual Puraflo units allows for room-level control and energy expenditure, reducing overall energy consumption, and allowing for smaller building-wide systems



*MERV 8 pre-filter is not room-side replaceable on unit with supply construction.



BACNET FLOW CONTROLLER

Featuring tactile buttons and an LCD screen that displays important variables like CFM, the BACnet Flow Controller (BFC) is easy to setup and control locally or via BACnet.

CONSTANT AIRFLOW

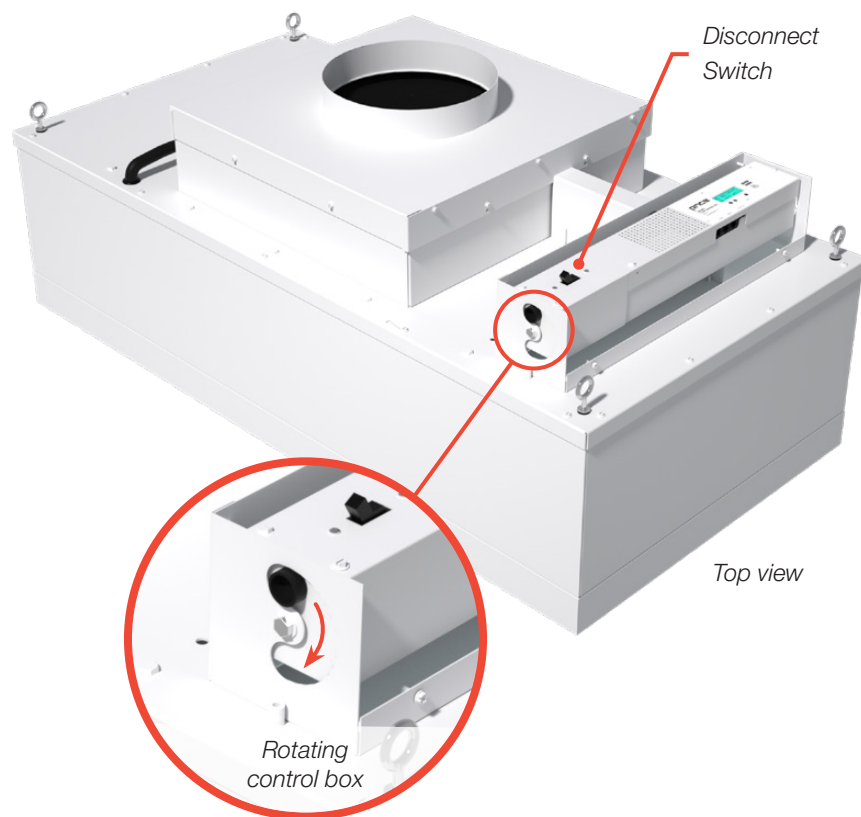
A constant flow motor program on the pre-programmed EC motor adjusts the motor to maintain the airflow rate as the filter loads over time - meaning the PuraFlo will continue to provide the intended airflow (cfm) throughout the life of the filter.

Key Features

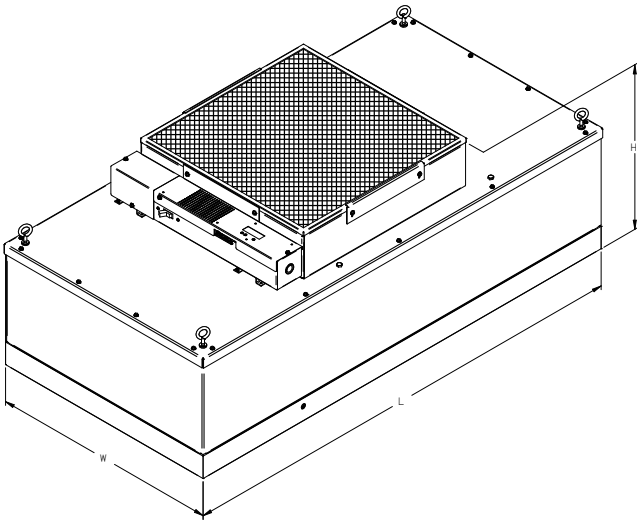
- + Native BACnet MS/TP
- + Backlit LCD display
- + Several network points for control, monitoring or trending:
 - CFM output
 - Motor RPM and status
 - Motor hours
 - Filter status and pressure drop
 - Filter hours

ROOM-SIDE ACCESSIBLE CONTROLS

- + The room-side accessible controls option features a rotating control box that allows access to the controls from both the top of the unit and from the room-side.
- + To access the control box from the room-side remove the diffuser face, HEPA filter, and gasketed controls cover located inside the plenum.
- + A disconnect switch is located on the face of the control box, and is easily accessible regardless of control box orientation.
- + Optional room-side accessible controls are available with all speed controllers.



DIMENSIONAL DATA



FFU with RSR Filter			
Unit Size	L (in.)	W (in.)	All Motors
			H (in.)
24 in. x 48 in.	47.625	23.625	18.125
24 in. x 36 in.	35.625	23.625	18.125
24 in. x 24 in.	23.625	23.625	18.125

PERFORMANCE DATA

Supply

Unit Size	Filter	Motor - Fan	Active Filter Area (sq. ft.)	Max cfm	Watts at Max cfm	cfm at 90 fpm	Watts at 90 fpm	Sound (dBA) at 90 fpm	Weight (lbs.)
24 in. x 48 in.	RSR	ECM - BC	5.3	750	130	480	55	51	76
		ECM - FC	5.3	750	220	480	80	50	74
		PSC - BC	5.3	750	210	480	150	49	76
		PSC - FC	5.3	750	350	480	235	49	74
24 in. x 36 in.	RSR	ECM - BC	3.8	540	120	345	55	49	64
		ECM - FC	3.8	540	190	345	70	50	62
		PSC - BC	3.8	540	210	345	145	48	64
		PSC - FC	3.8	540	300	345	180	50	62
24 in. x 24 in.	RSR	ECM - FC	2.3	330	140	210	60	46	53
		PSC - FC	2.3	330	200	210	120	46	53

Performance Notes:

- Units are tested in accordance with IEST RP-CC002.2, Recommended Practice for Unidirectional Flow Clean-Air Devices.
- Sound levels were measured with unit installed in a T-Bar ceiling, with gasket, in a standard room. Sound levels in dBA were measured at a distance of 30 inches from the filter face, with the unit set to produce 90 fpm average face velocity. (Note that data is for a clean filter only. If fan speed is increased to compensate for filter loading the noise level will increase.)
- For electrical circuit sizing, consult the "max amps" shown on the submittal for each product configuration and voltage.
- All data is based on a unit with a clean filter.
- 90 fpm values are based on active filter area.
- Heat Gain: BTUh = Watts x 3.413

Exhaust

Unit Size	Filter	Motor - Fan	Active Filter Area (sq. ft.)	Max cfm	Watts at Max cfm	cfm at 90 fpm	Watts at 90 fpm	Sound (dBA) at 90 fpm	Weight (lbs.)
24 in. x 24 in.	RSR	ECM - FC	2.3	330	140	210	60	52	58
		PSC - FC	2.3	330	210	210	120	50	58
24 in. x 48 in.		ECM - FC	5.3	750	225	480	85	53	74
		PSC - FC	5.3	750	434	480	308	59	74

Performance Notes:

- Units are tested in accordance with IEST RP-CC002.2, Recommended Practice for Unidirectional Flow Clean-Air Devices.
- Sound levels were measured with unit installed in a T-Bar ceiling, with gasket, in a standard room. Sound levels in dBA were measured at a distance of 30 inches from the filter face, with the unit set to produce 90 fpm average face velocity. (Note that data is for a clean filter only. If fan speed is increased to compensate for filter loading the noise level will increase.)
- For electrical circuit sizing, consult the "max amps" shown on the submittal for each product configuration and voltage.
- All data is based on a unit with a clean filter.
- 90 fpm values are based on active filter area.
- Heat Gain: BTUh = Watts x 3.413



Product Improvement is a continuing endeavour at Price. Therefore, specifications are subject to change without notice. Consult your Price Sales Representative for current specifications or more detailed information. Not all products may be available in all geographic areas. All goods described in this document are warranted as described in the Limited Warranty shown at priceindustries.com. The complete Price product catalog can be viewed online at priceindustries.com.