



# SYSTEM SOLUTIONS SCHOOLS

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Indoor Air Quality that Makes the Grade

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Indoor Air Quality that Makes the Grade

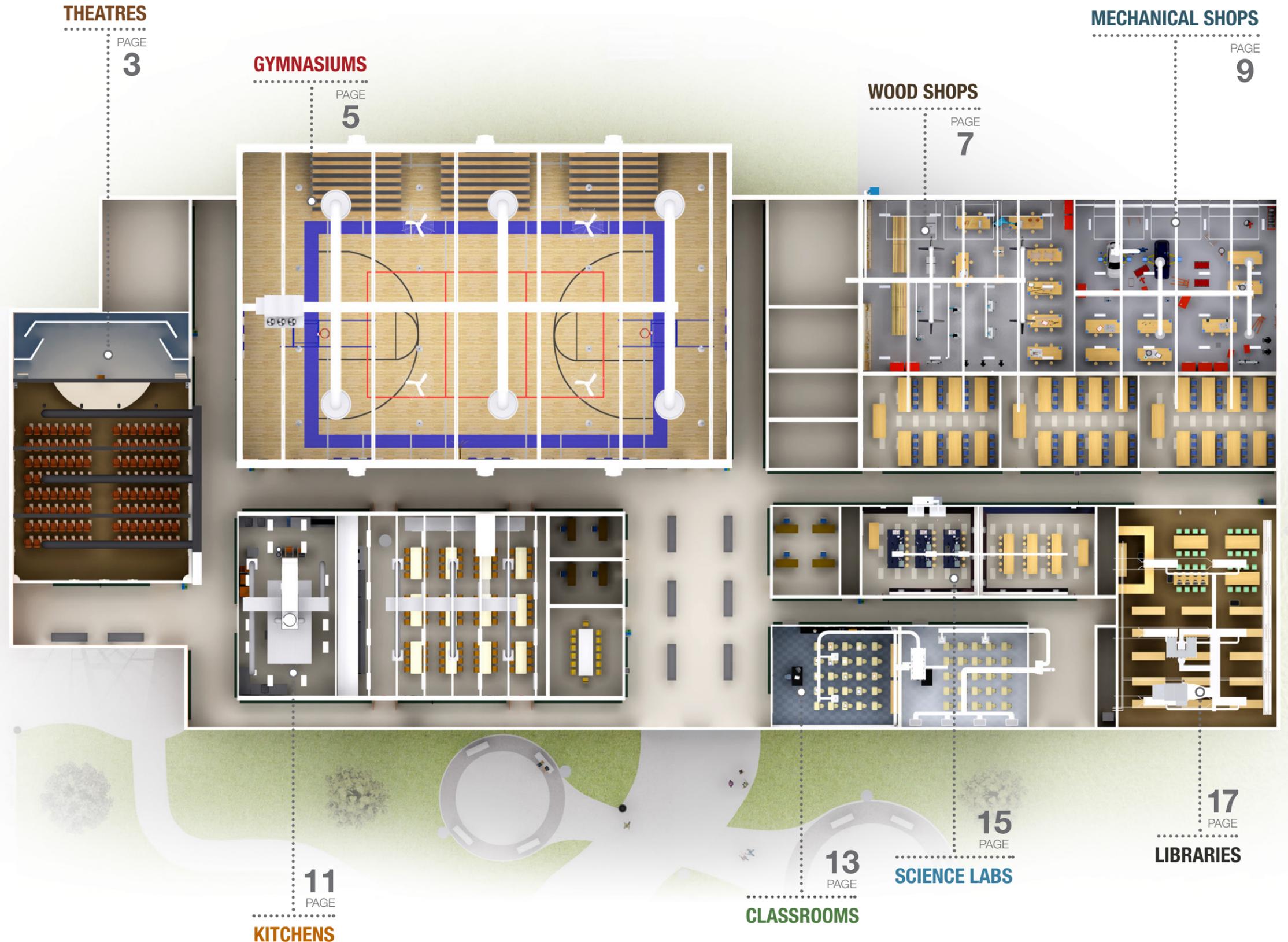
On average, approximately one in five people spends their day in school as a student, teacher or support staff. In the past, the focus of school construction was on simply meeting building codes and not so much on IAQ (Indoor Air Quality) and the comfort of the occupants.

The rapidly growing trend in school design today is a focus on comfort and providing a healthier environment for those who spend their days attending and working in them. E.H. Price recognizes that providing proper IAQ in these facilities translates to improved health, less strain on the environment and huge financial savings in annual operating costs.

We have the ability to offer every component of your HVAC system through an extensive line of Price manufactured products and a large network of vendors represented and sold through E.H. Price.

The following will illustrate examples of equipment that may be used in the many different environments found in your complex.

An experienced and knowledgeable E.H. Price representative can explore all the options that may be suitable for your specific application, and ensure that your system meets all your design and financial requirements.



# THEATRES

Theatres are unique rooms with unique challenges. They may sit unoccupied for long periods of time, then instantly have several hundred occupants. We provide several products to help your system accommodate these changes.

The whisper quiet operation and superior air quality of the combined underfloor, wall and overhead diffusers makes displacement ventilation ideally suited for densely populated auditoriums. In addition, since only the occupied space is cooled, energy is not wasted cooling the significant lighting loads and large amount of space near the ceiling.

## Featured Products:

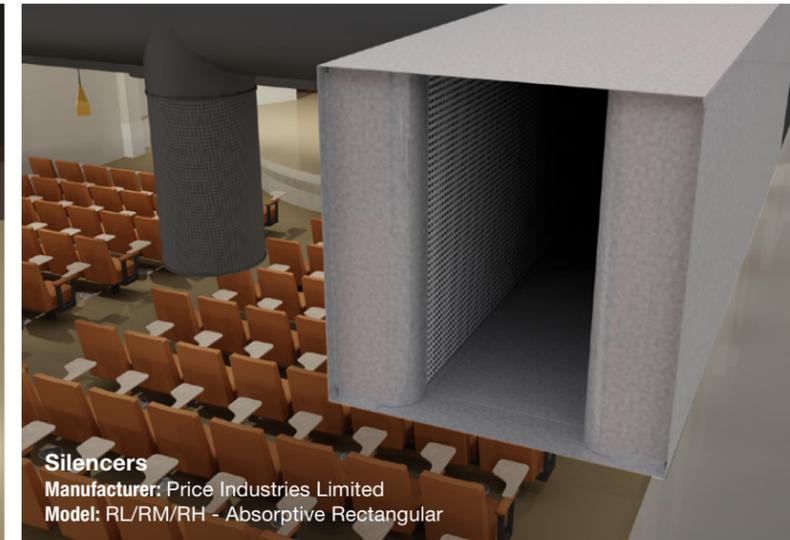
- Round Floor Displacement Diffusers
- Wall Mounted Displacement Diffusers
- Free Standing Displacement Diffusers
- Silencers

## Featured Product Manufacturers:

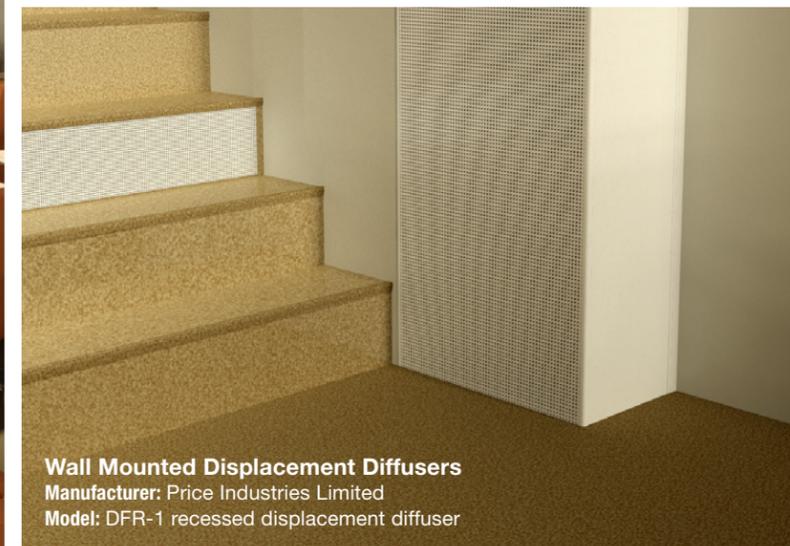
**PRICE**

Also available  
**Acoustic Panels and Enclosures**

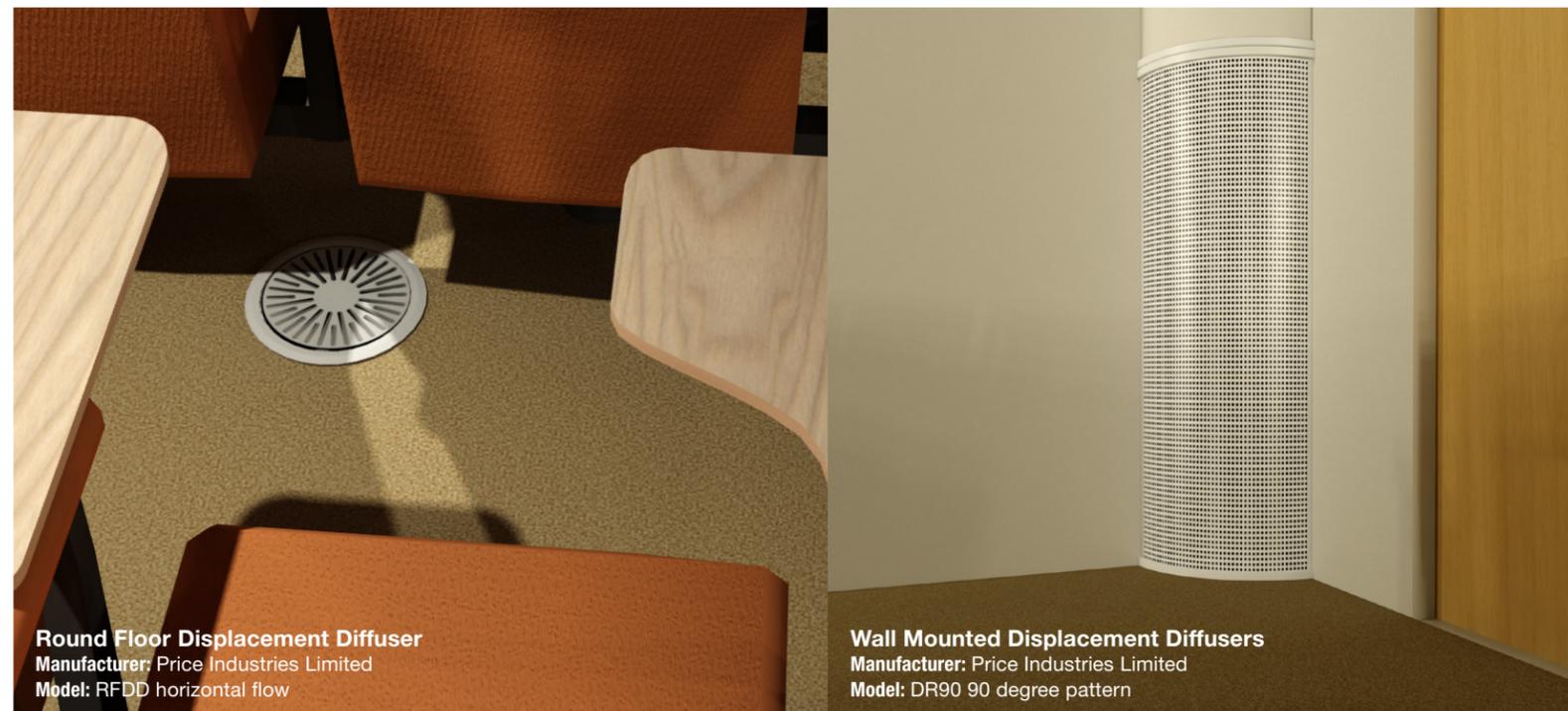
**Manufacturer:** Price Industries Limited  
**Model:** QLP Acoustic Panel, QLPT Acoustic Panel Film Lined



**Silencers**  
**Manufacturer:** Price Industries Limited  
**Model:** RL/RM/RH - Absorptive Rectangular

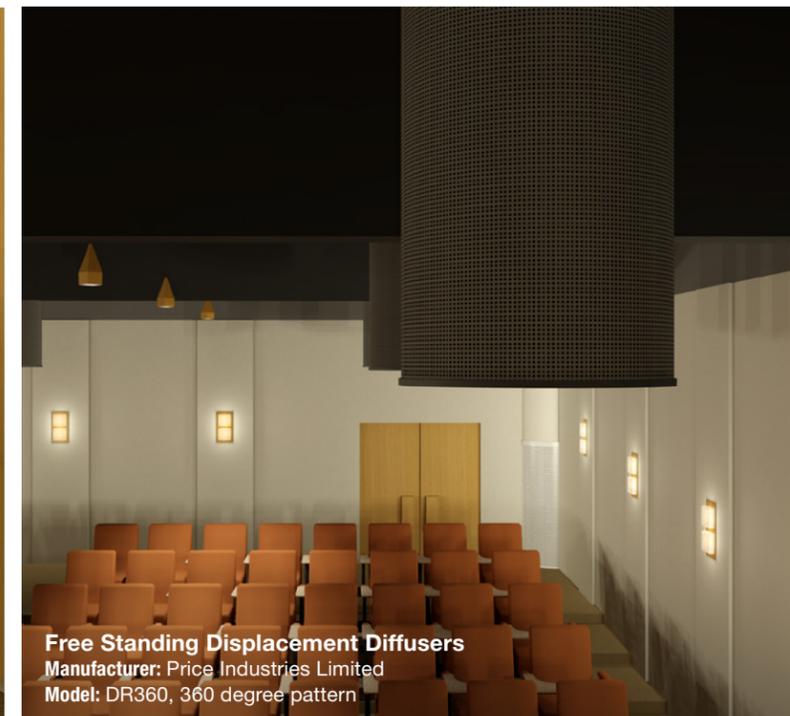


**Wall Mounted Displacement Diffusers**  
**Manufacturer:** Price Industries Limited  
**Model:** DFR-1 recessed displacement diffuser



**Round Floor Displacement Diffuser**  
**Manufacturer:** Price Industries Limited  
**Model:** RFDD horizontal flow

**Wall Mounted Displacement Diffusers**  
**Manufacturer:** Price Industries Limited  
**Model:** DR90 90 degree pattern



**Free Standing Displacement Diffusers**  
**Manufacturer:** Price Industries Limited  
**Model:** DR360, 360 degree pattern

# GYMNASIUMS

Gymnasiums and theatres are alike in that they both share concerns with constantly changing air flow. Gymnasiums must be able to adjust from a typical daily gym class of 30 people to a school function or assembly of 700 or more.

Students involved in high levels of physical activity, such as during a basketball game, to near sedentary spectators can provide a wide range of heating and cooling challenges. This requires a system that allows the total supply air cfm to be adjustable in order to accommodate each scenario.

## Featured Products:

- Ceiling Fan with Wire Guard
- Ceiling Diffuser with Wire Guard
- Rooftop Ventilator
- Return Grilles

## Featured Product Manufacturers:



### <sup>1</sup> Also available Energy Recovery Ventilator (ERV)

**Manufacturer:** Greenheck  
**Model:** Apex ERV with Heating & Cooling

**Manufacturer:** Price Industries Limited  
**Model:** Custom ERV including Heat, Cool and Humidification



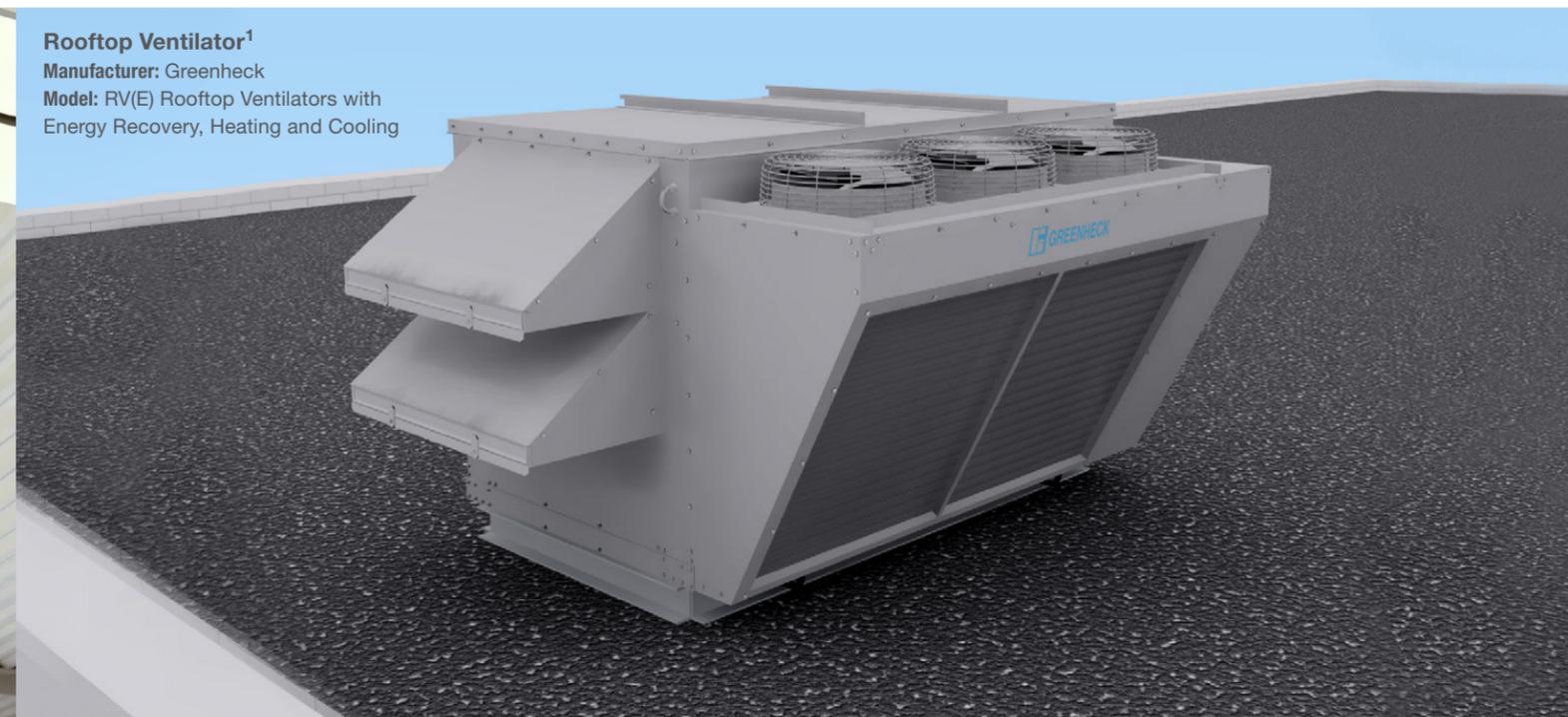
**Supply Diffuser with Wire Guard**  
**Manufacturer:** Price Industries Limited  
**Model:** RCD/RCDE Adjustable Round Cone Ceiling Diffusers  
(Available in heavy gauge steel or aluminum)



**Heavy Duty Gym Return Grille**  
**Manufacturer:** Price Industries Limited  
**Model:** 90 Series Gym Grille



**Ceiling Fan with Wire Guard**  
**Manufacturer:** Canarm  
**Model:** CP56 Commercial Ceiling Fan  
**Model:** CP93-56KD Industrial Guard



**Rooftop Ventilator<sup>1</sup>**  
**Manufacturer:** Greenheck  
**Model:** RV(E) Rooftop Ventilators with Energy Recovery, Heating and Cooling

# WOOD SHOPS

All woods produce fine dust when worked. Its this airborne sawdust and sawdust accumulation that can cause potential respiratory and safety problems. Having an efficient system for extraction and collection of wood dust is important to the health of students and teachers.

A dust collector is a staple in every woodworking shop. They filter large chips and dust from a variety of woodworking machines. The Donaldson/Torit Unimaster dust collector is an economical and effective solution for a diverse range of dust problems.

Nederman offers a variety of vacuum solutions for extracting and managing sawdust and other types of wood waste directly at the source. Extractors can be fitted directly to machines or to hand held tools.

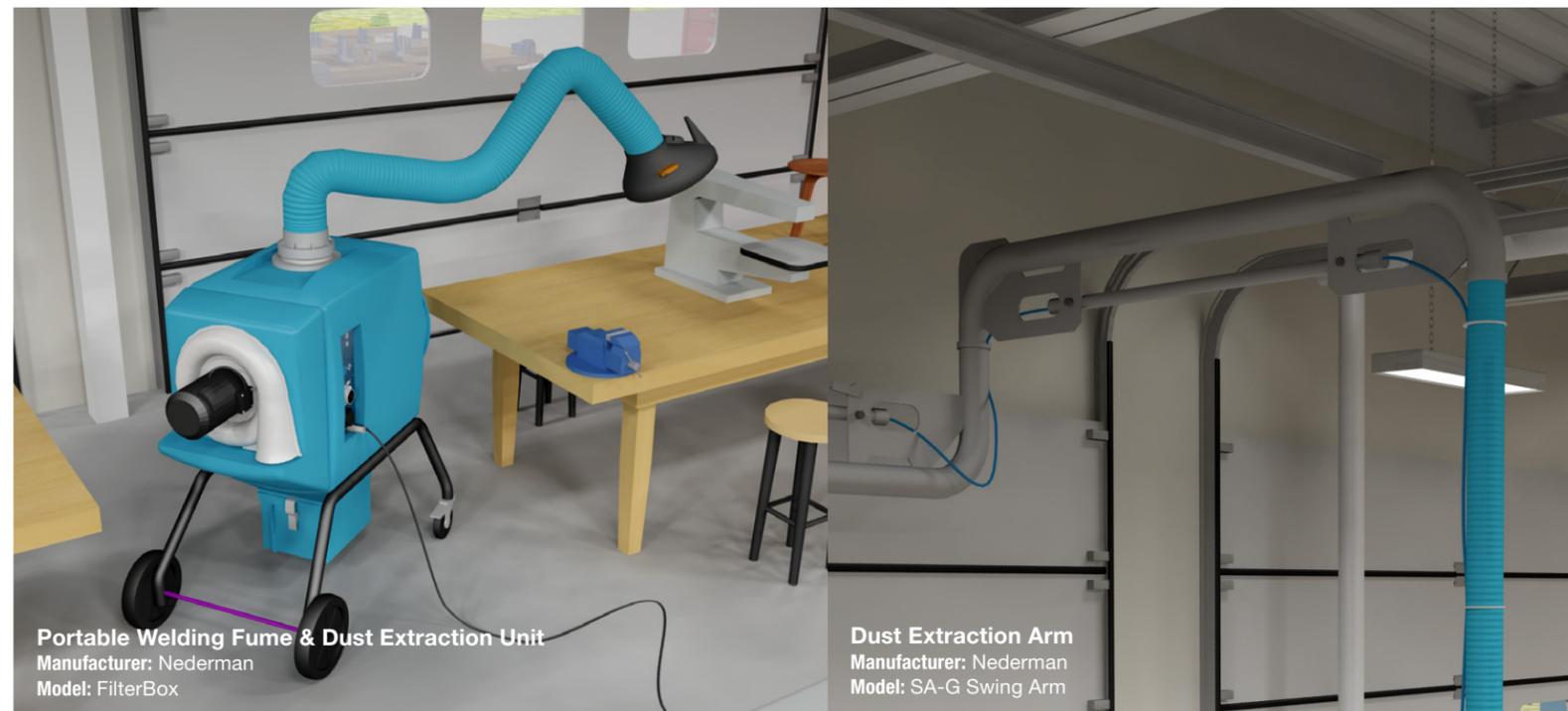
All dust collection systems, including the later, are very effective at the removal of sawdust, as well as various industrial debris present in this type of environment.

## Featured Products:

- Dust Collector
- Dust Extractor
- Supply Diffusers

## Featured Product Manufacturers:

**Nederman**

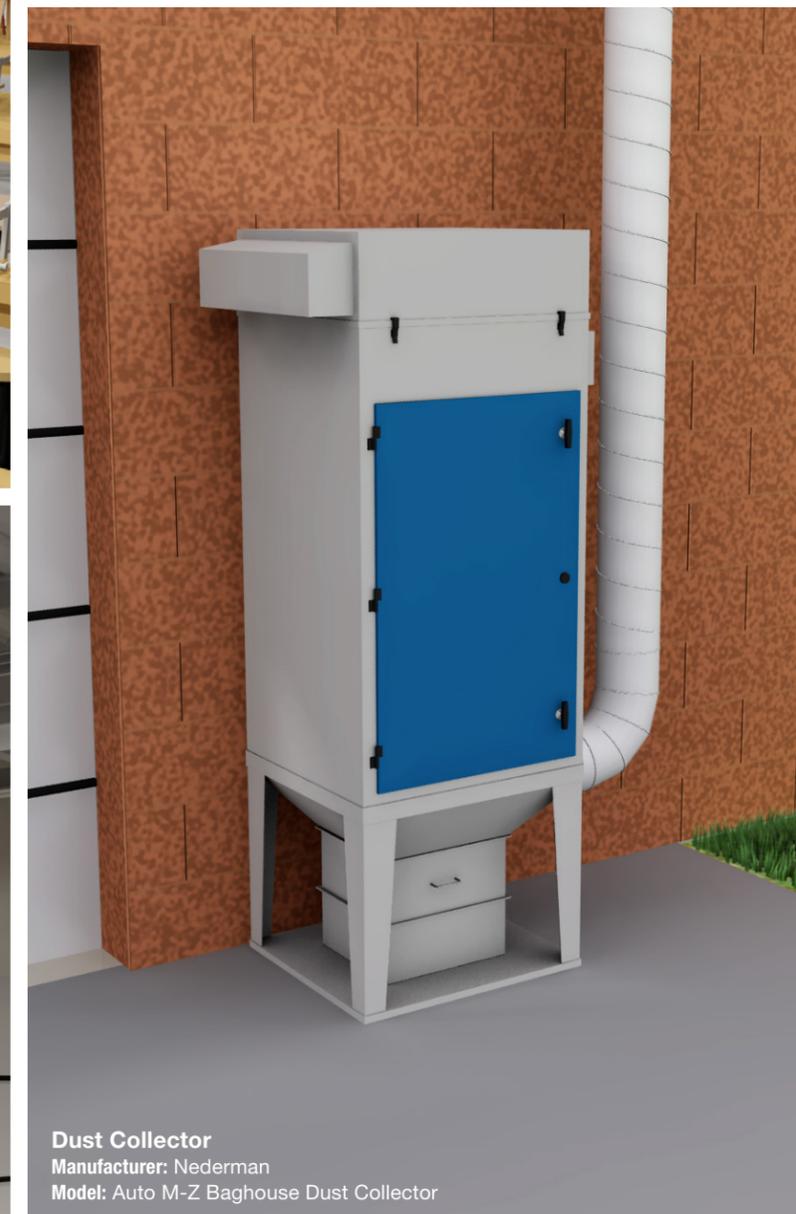


**Portable Welding Fume & Dust Extraction Unit**  
 Manufacturer: Nederman  
 Model: FilterBox

**Dust Extraction Arm**  
 Manufacturer: Nederman  
 Model: SA-G Swing Arm



**Supply Diffuser**  
 Manufacturer: Price Industries Limited  
 Model: RCD Round Cone Diffuser



**Dust Collector**  
 Manufacturer: Nederman  
 Model: Auto M-Z Baghouse Dust Collector

# MECHANICAL SHOPS

Some common pollutants in a typical mechanical shop include vehicle exhaust and welding fumes, engine emissions, sanding and grinding dust, and oil spillage. To maintain a safe learning environment, these hazardous pollutants and fumes need to be efficiently moved out of the occupied zone and away from students and staff.

Air Curtains, installed over the bay doors create a "barrier" that keeps outside temperatures and contaminants from affecting the internal environment. Exhaust extraction hoses capture vehicle exhaust gases at the source preventing the ambient air to be laden with volatile organic compounds and fumes.

Wall or duct-mounted gas detectors for monitoring carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), oxygen (O<sub>2</sub>), methane (CH<sub>4</sub>), hydrogen (H<sub>2</sub>), hydrogen sulphide (H<sub>2</sub>S), and propane (C<sub>3</sub>H<sub>8</sub>). These are just a few choice solutions for maintaining a properly ventilated, sanitary and energy-efficient mechanical shop.

## Featured Products:

- Exhaust Extractor
- Supply Diffusers
- Air Curtains
- Gas Detection System

## Featured Product Manufacturers:



**Air Curtains**  
 Manufacturer: Biddle Climate Solutions  
 Model: CA<sub>2</sub>

**Twin Exhaust Extractor**  
 Manufacturer: Nederman



**Supply Diffuser**  
 Manufacturer: Price Industries Limited  
 Model: RCD Round Cone Diffuser



**Centrifugal Fan**  
 Manufacturer: Greenheck  
 Model: BISW Single Wide Blower



**Wireless Gas Detection System**  
 Manufacturer: Honeywell Analytics  
 Model: E<sup>3</sup>Point

# KITCHENS

Supplying fresh, clean air to students and kitchen staff while removing air laden with contaminants is the main objective of a well designed and ventilated kitchen system.

Ovens, cook-tops and deep fryers require a much higher amount of cfm than usual. Filtered kitchen hoods and special kitchen exhaust fans are among the products E.H. Price Sales can offer to control these areas and make them as comfortable as possible to work in.

## Featured Products:

- Kitchen Hood with Supply Plenum
- Supply Diffusers
- Rooftop Unit
- Exhaust Fans

## Featured Product Manufacturers:



<sup>2</sup>Also available:  
**Make-Up Air Units**

**Manufacturer:** Price Industries Limited  
**Model:** AW-D Series Direct Fired Make-Up Air Units



**Supply Diffuser**  
**Manufacturer:** Price Industries Limited  
**Model:** PDF Perforated Ceiling Diffuser



**Rooftop Units (Make-Up Air Units)<sup>2</sup>**  
**Manufacturer:** Greenheck  
**Model:** DGX Configurable Direct Gas-Fired Make-Up Air Units, CUE Fan with VariGreen Motor



**Supply Plenum**  
**Manufacturer:** Greenheck  
**Model:** Air Curtain External Supply Plenum (ASP)



**Kitchen Hood**  
**Manufacturer:** Greenheck  
**Model:** Double (shown) or Single-Island (V-Bank) Canopy Hood. Optional Filter Bank

# CLASSROOMS

Indoor Environmental Quality (IEQ) has been proven by several independent studies that an improved air quality can increase productivity and decrease the transmission of airborne illnesses.

Classrooms form a large portion of most buildings by square footage and are where students and teachers spend most of their time. The indoor air quality, thermal comfort, and low noise levels of displacement ventilation make it ideal for this application.

## Featured Products:

- Displacement Diffusers
- Air Handling Units
- Terminal Units
- Return Grilles

## Featured Product Manufacturers:



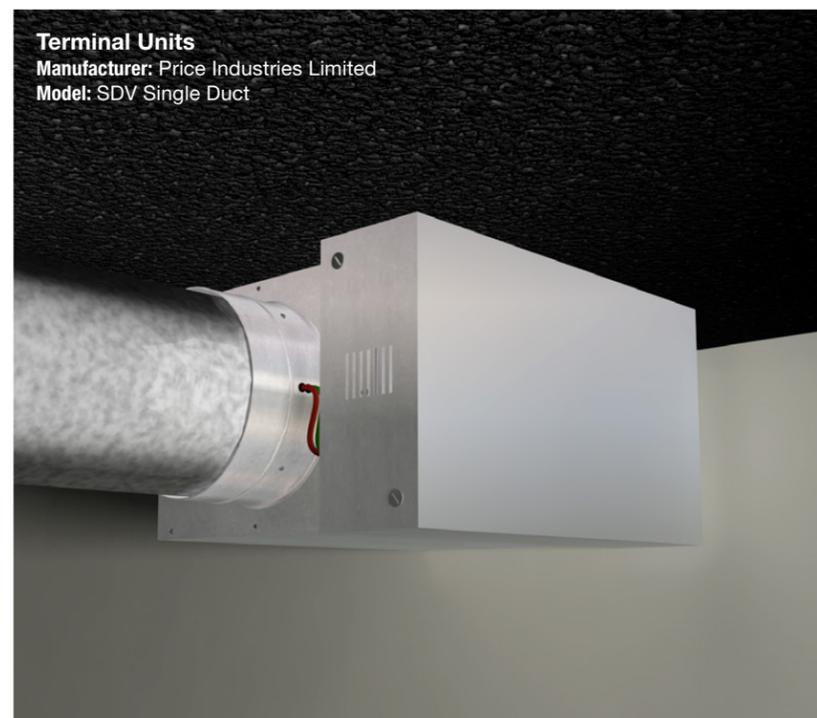
### <sup>3</sup>Also available: Air Handling Units

**Manufacturer:** Greenheck  
**Model:** RV(E) Rooftop Ventilators with Energy Recovery, Heating and Cooling

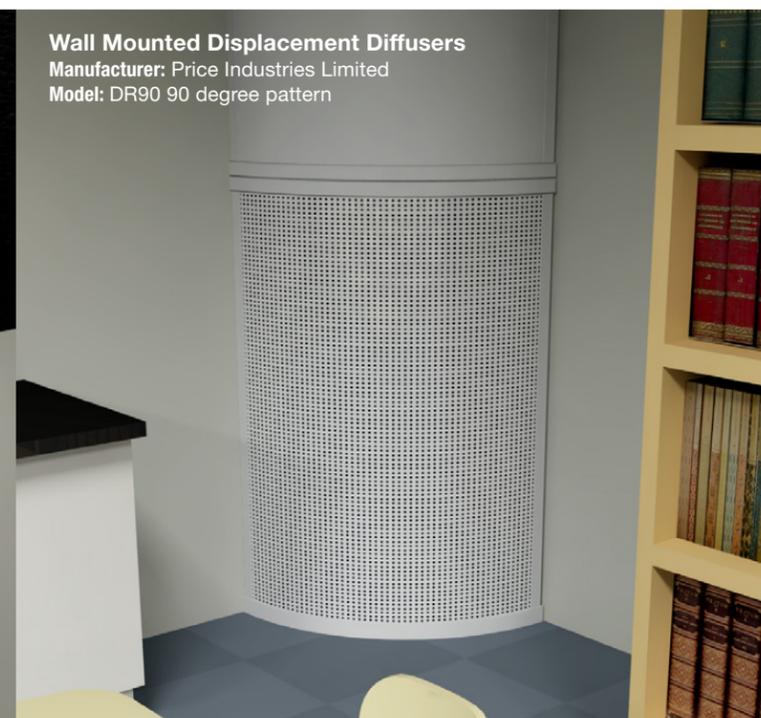
Additional technologies available:

**Manufacturer:** Price  
**Type:** Fan Coils, Radiant Panels, Active Beams

**Manufacturer:** Vulcan  
**Type:** Wall Fin, Panel Radiators



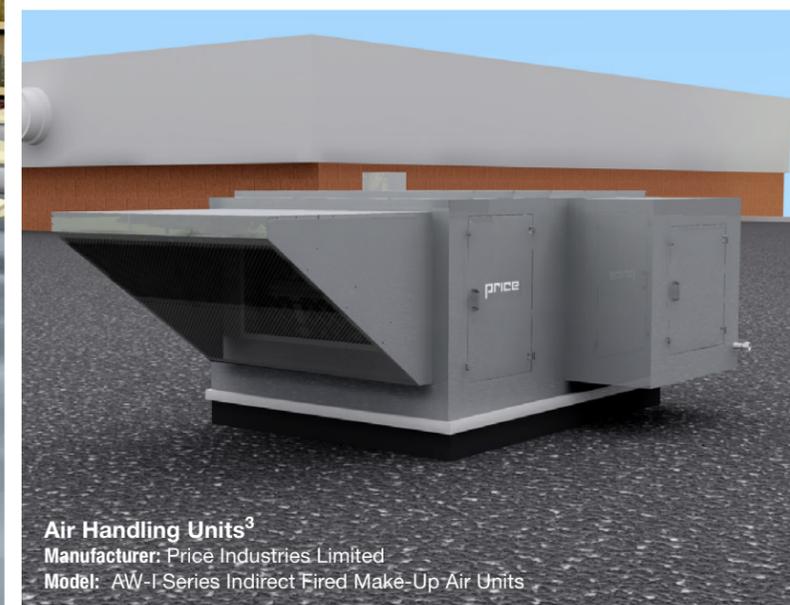
**Terminal Units**  
**Manufacturer:** Price Industries Limited  
**Model:** SDV Single Duct



**Wall Mounted Displacement Diffusers**  
**Manufacturer:** Price Industries Limited  
**Model:** DR90 90 degree pattern



**Return Grilles**  
**Manufacturer:** Price Industries Limited  
**Model:** TLRD Thin Line Return Dissipaters



**Air Handling Units<sup>3</sup>**  
**Manufacturer:** Price Industries Limited  
**Model:** AW-I Series Indirect Fired Make-Up Air Units



**Linear Enclosure Displacement Diffusers**  
**Manufacturer:** Price Industries Limited  
**Model:** DLE-H with heat

# SCIENCE LABS

Labs require extra care when planning an HVAC system. They typically contain fume hoods that change the requirements on supply and exhaust air.

Ideally these rooms should be negative pressure to assist in the containment of any chemicals being worked on within the room. This means more air being exhausted than what is being supplied to the room. The supply air must also be introduced at a very low cfm so as not to interfere with fume hood performance.

Exhausting a lab requires special treatment as well. Normally some sort of high plumed exhaust system is employed to ensure that the lab air is diluted and then dispersed as far away from the building as possible so as not to be entrained back into the supply air and introduce particulates back into the room they were just removed from.

## Featured Products:

- Fume Hoods with Controller
- Venturi Valves
- Exhaust System
- Laboratory Ceiling Diffusers

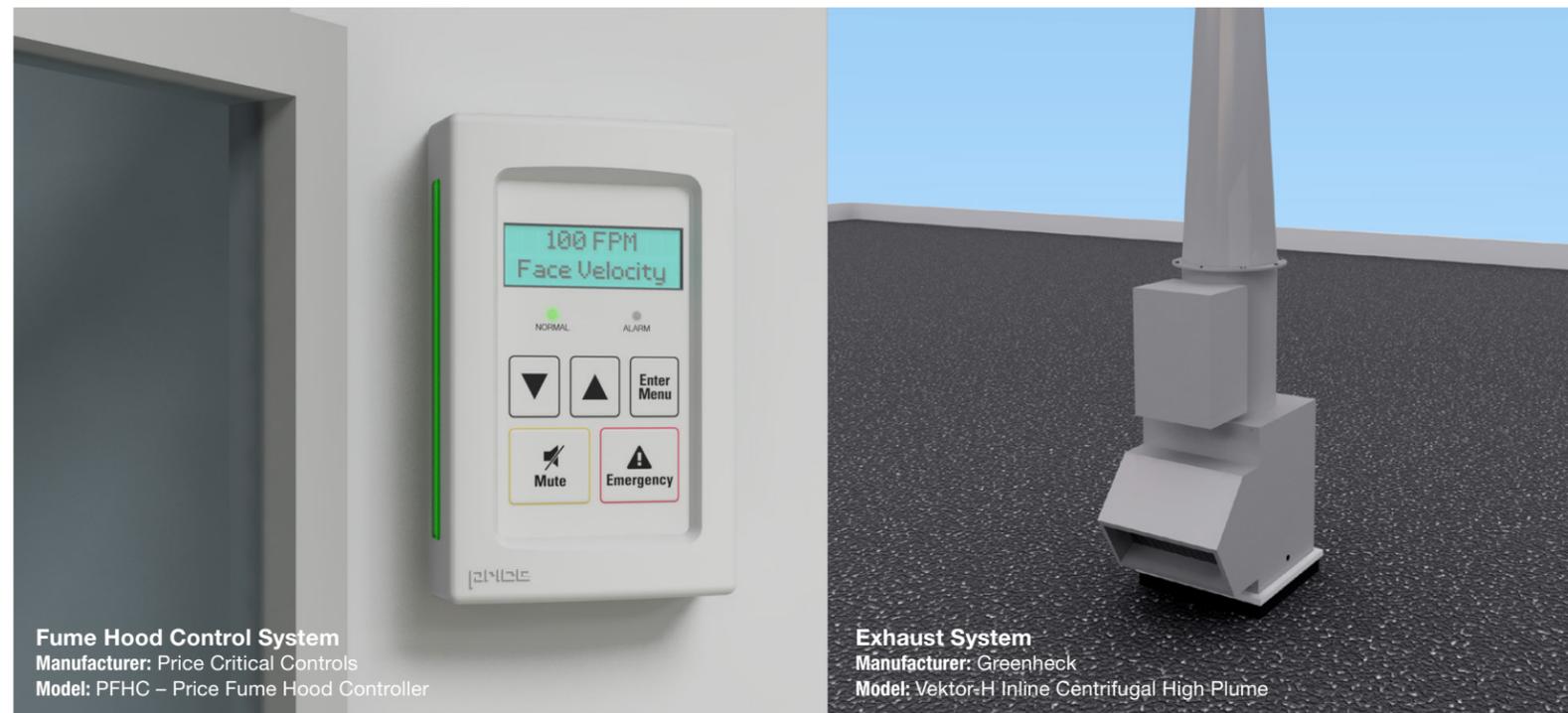
## Featured Product Manufacturers:



**Laboratory Diffuser**  
 Manufacturer: Price Industries Limited  
 Model: RFD Radial Flow Diffuser



**Fume Hoods**  
 Manufacturer: Price Industries Limited  
 Model: HPH High Performance/Low Constant Volume



**Fume Hood Control System**  
 Manufacturer: Price Critical Controls  
 Model: PFHC – Price Fume Hood Controller

**Exhaust System**  
 Manufacturer: Greenheck  
 Model: Vektor-H Inline Centrifugal High Plume

# LIBRARIES

Hydronic heating and cooling systems do not have fan powered devices near the zone, which results in lower zone noise levels than traditional systems.

Hydronic systems effectively provide a high level of occupant comfort, indoor air quality, and energy efficiency. These hybrid systems strategically combine an air-side system, that is designed to meet the ventilation requirements for a space, while a hydronic (or water-side) system is used to balance the sensible heating and cooling loads. Radiant heating and cooling systems or active and passive beams are typical examples of hydronic product solutions.

**Featured Product Manufacturers:**



<sup>4</sup>Also available:  
**Energy Recovery Ventilator**

**Manufacturer:** Nu-Air  
**Model:** NU2540 ERV

Additional technologies available:

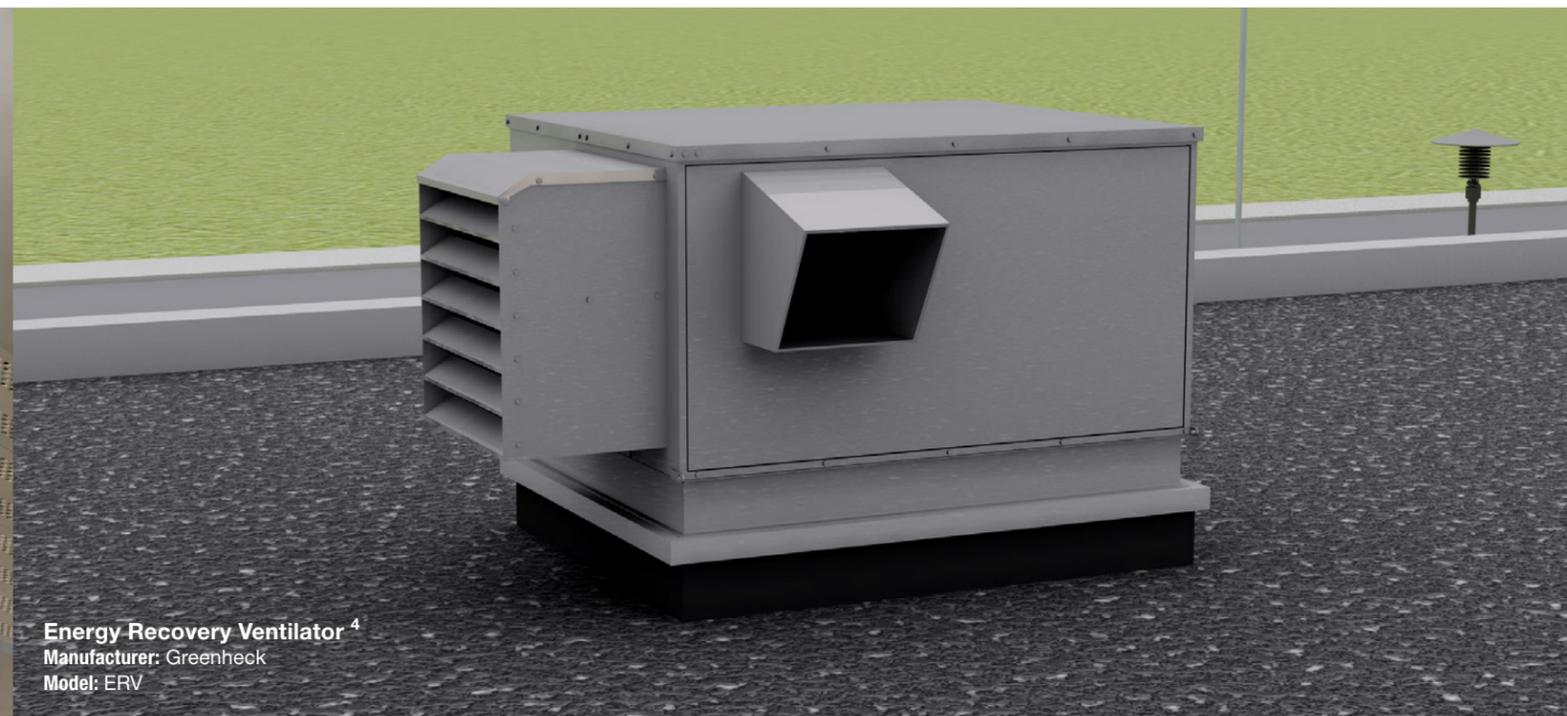
**Manufacturer:** Price Industries Limited  
**Type:** VAV Terminal Units



**Active Chilled Beams**  
**Manufacturer:** Price Industries Limited  
**Model:** ACBL Linear



**Radiant Panels**  
**Manufacturer:** Price Industries Limited  
**Model:** RPM Modular Radiant Panel



**Energy Recovery Ventilator <sup>4</sup>**  
**Manufacturer:** Greenheck  
**Model:** ERV

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