Innovative Products. Proven Performance.

GREENHECK®

Building Value in Air.

At Greenheck, being the easiest company to do business with is not just a catch phrase. It is a core value that we carry out every day in delivering the widest range of reliable air movement, control, conditioning, and distribution products to our customers worldwide. As an industry-leading manufacturer, not only do we build value in air through our products, we also do so by exceeding your expectations for on-time delivery, easy installation, energy-efficient operation, and dependable performance.

Through our commitment to sustainable manufacturing practices that reduce energy consumption and production costs, we ensure competitive prices. We support and invest in our highly skilled employees so they can design and produce the quality products you expect from Greenheck. And we tackle the industry's most complex and everchanging challenges by continually manufacturing innovative new products that meet your needs today—and tomorrow.

Our Mission

To be the market leader in the development, manufacture and worldwide sale of quality air-moving, control, conditioning, and distribution equipment with total commitment to the customer.

Our Purpose

To operate profitable businesses focused on delivering the most effective and efficient products, services and systems to ensure air quality and comfort in the world's buildings.

Our Vision

To be one of the most revered companies in the worldwide HVAC and foodservice market space, respected for outstanding product quality, market-leading innovation, superb customer service and insight, and a results-oriented, entrepreneurial culture.

Building value in air — from the beginning.

Today, Greenheck is the world's largest manufacturer of commercial, institutional, and industrial air movement, control, conditioning, and distribution equipment.

Greenheck's worldwide leadership in providing cost-effective, value-added solutions for air movement, control, conditioning, and distribution challenges evolved from rather humble beginnings. Bernie and Bob Greenheck weren't sure what lay ahead when they opened their small sheet metal shop in Schofield, Wisconsin USA in 1947. But they were determined that no product would ever leave their shop unless it met the most stringent quality standards—their own. At first, the company manufactured a variety of sheet metal products. In 1956, Greenheck engineers developed a highly efficient power roof ventilator. This product and the innovative ventilation solutions that followed ultimately enabled us to expand our brand throughout the world. Today, quality Greenheck products are efficiently moving, controlling, conditioning, and distributing air in commercial, institutional, and industrial buildings throughout North America, Latin America, the Middle East, and Asia.

The first factory.
1947

Bernie and Bob Greenheck
1956

Customer-driven employees.

Every product is designed and built with pride by our employees.

Greenheck employees continue to share an extraordinary commitment to meeting and exceeding customers' expectations. We know our future success depends on the value we bring to the market: reliable, top-quality products and exceptional service. At our headquarters in Schofield, Wisconsin USA, and at additional plants in Frankfort, Kentucky; Rocklin, California; Kings Mountain and Shelby, North Carolina; Bushnell and Clearwater Florida; Tulsa, Oklahoma; Saltillo, Mexico and Bawal, India, you'll find thousands of hardworking and experienced employees designing, manufacturing, and delivering the most dependable air movement and control equipment available.

Bernard A. Greenheck Education Center
Schofield, Wisconsin USA

The value of customer service.

At Greenheck, we embody being the easiest company to do business with—every day. Our dedicated customer care team works with you personally to ensure a smooth process from submittal to delivery. Technical information and other industry resources can be readily accessed through our online library. Our industry-leading CAPS® and eCAPS® product selection software programs allow you to easily select the best value product for your application.

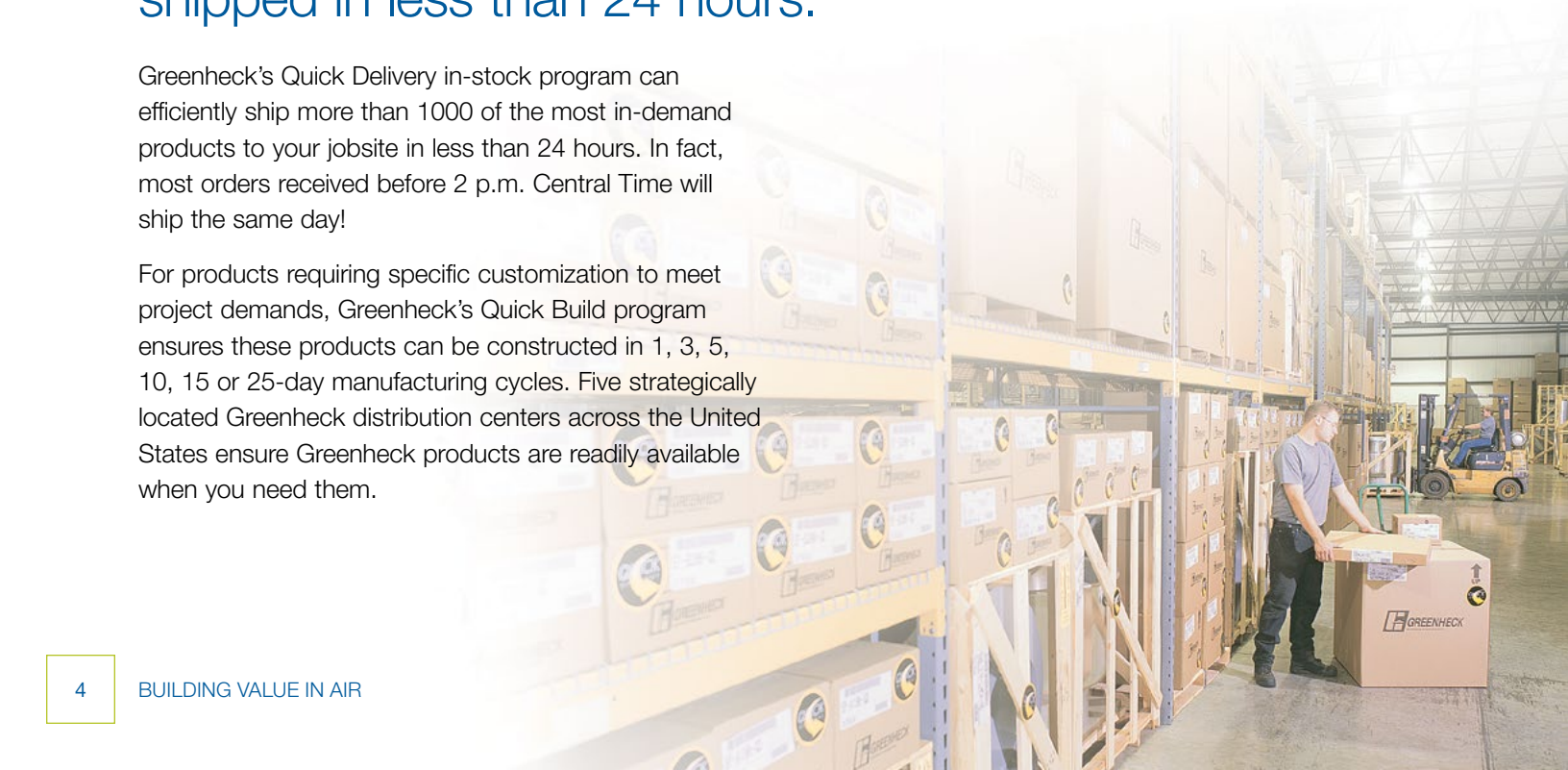
Another important component of our customer service is training. Online classes through Greenheck's HVAC University ensure customers understand industry concepts and product specifics to make informed decisions. Greenheck Education Centers, located in Schofield, Wisconsin, and Saltillo, Mexico, offer visitors a tremendous learning experience through working product demonstrations and simulated and virtual installations of our air movement, control, conditioning, and distribution products.

Education Center
Saltillo, Mexico

Most products can be shipped in less than 24 hours.

Greenheck's Quick Delivery in-stock program can efficiently ship more than 1000 of the most in-demand products to your jobsite in less than 24 hours. In fact, most orders received before 2 p.m. Central Time will ship the same day!

For products requiring specific customization to meet project demands, Greenheck's Quick Build program ensures these products can be constructed in 1, 3, 5, 10, 15 or 25-day manufacturing cycles. Five strategically located Greenheck distribution centers across the United States ensure Greenheck products are readily available when you need them.



Our Products

Engineered and manufactured for
top performance — and value.

Roof-Mounted Fans and Gravity Ventilators

Greenheck offers the world's widest selection of top quality fans and ventilators for commercial, institutional and industrial buildings. This selection offers you a vast variety of products to ensure you can always find the right fan to meet your precise performance requirements. Discover the value of a Greenheck fan with the world's best-selling centrifugal and axial roof upblast fans with one-piece, leakproof construction. Take advantage of our reputation for quality and reliability by experiencing one of our many Greenheck fan and ventilator products.

Centrifugal Roof Exhaust Fans

The centrifugal roof exhaust fans include both direct and belt-driven fans with backward-inclined centrifugal wheels. The fans feature double-studded isolators for true vibration isolation. The fans are a downblast configuration and are suitable for roof-mounted applications exhausting relatively clean air.

Models G/GB

Models G/GB feature a spun aluminum housing design. The Vari-Green® high-efficiency motor is available on model G direct drive, as well as larger belt drive fans. Capacities range from 50 to 44,694 cfm (85 to 75,936 m^3/hr) and 3.25 in. wg (809 Pa). Third-party certified (Florida Product Approved and Miami-Dade County Qualified) for high wind and AMCA Licensed for FEI, Air, and Sound Performance. IBC and HCAI seismic certified. Select models with CE Mark.

Catalog: *Centrifugal Roof Downblast Exhaust Fans — G and GB*

Centrifugal Upblast and Sidewall Exhaust Fans

The centrifugal roof upblast and sidewall exhaust fans include both direct and belt-driven fans with backward-inclined centrifugal wheels. The motors on the fans are out of the airstream. The fans are suitable for applications ranging from storage rooms and fume hood exhaust, to kitchen grease exhaust and smoke control.

Models CUE/CUBE - Roof or Sidewall Mounted

Model CUE/CUBE spun aluminum fans are specifically designed for roof or sidewall mounted applications. The fans feature a one-piece windband continuously welded to the curb cap and double-studded isolators for true vibration isolation. Contaminated or grease-laden exhaust air is discharged directly upward, away from the roof surface or discharged out and away from building walls. The Vari-Green® high-efficiency motor is available on model CUE direct drive and larger CUBE belt drive fans. Capacities range from 70 to 30,000 cfm (119 to 50,970 m^3/hr) and 5 in. wg (1,240 Pa). Third-party certified (Florida Product Approved and Miami-Dade County Qualified) for high wind and AMCA Licensed for FEI, Air, and Sound Performance. IBC and HCAI seismic certified. Select models with CE Mark.

Catalog: *Centrifugal Upblast and Sidewall Exhaust — CUE and CUBE*

Model USGF

Model USGF (Ultimate Steel Grease Fan) is the ideal fan for heavy grease exhaust applications where high amounts of grease are used like charbroilers, solid fuel cooking, and oriental cooking. Constructed of steel, model USGF includes a nonstick coated steel wheel, steel windband, steel curb cap, and steel motor compartment. Standard features include UL 705 Supplement SC Listed, a heat baffle, clean-out port, dual belt and pulley system, and a mounted and wired NEMA-3R disconnect switch. The unit is powder coated for protection. Capacities range from 350 to 6,800 cfm (595 to 11,553 m^3/hr) and 3.25 in. wg (809 Pa). Third-party certified (Florida Product Approved and Miami-Dade County Qualified) for high wind and AMCA Licensed for FEI, Air, and Sound Performance.

Catalog: *Centrifugal Upblast and Sidewall Exhaust — USGF*

Mixed Flow Exhaust and Supply Fans

Mixed flow rooftop supply and exhaust fans can be used for a variety of commercial and industrial applications. Fans are designed for clean untempered air applications and feature a unique wheel designed to excel in applications where low sound is critical. Greenheck's mixed flow fans are more efficient than comparably sized centrifugal and axial impeller fans, reducing the required motor horsepower and lowering operating costs.

Model RSQ

Model RSQ is a direct-driven mixed flow supply or exhaust hooded rooftop fan that features rigid construction, ease of service, high efficiency, and low sound levels. Fans feature a hinged fabra style hood and optional 1 inch washable aluminum filters in supply applications. High-efficiency Vari-Green® motors up to 10 hp are available along with a variety of configurations and accessories. Performance capabilities range up to 27,100 cfm (46,043 m^3/hr) for supply and 25,200 cfm (42,815 m^3/hr) for exhaust and up to 3 in. wg (747 Pa). AMCA licensed for FEI, Sound, and Air Performance.

Model KSQ

Model KSQ is a direct drive, mixed flow roof supply or untempered make-up air fan that provides a unique combination of installation flexibility, ease of service, high efficiency, and low sound levels. These fans deliver on competitive advantages in a wide range of applications including kitchen supply, stairwell/elevator shaft pressurization, and anywhere filtered untempered air is required. High-efficiency Vari-Green® motors up to 10 hp are available as well as a variety of configurations and accessories. Washable aluminum filters are provided with the option to add pleated MERV 13 filters. Capacities up to 16,750 cfm (28,460 m^3/hr) and 2.75 in. wg (685 Pa). AMCA licensed for FEI, Sound, and Air Performance.

Axial Upblast Exhaust Fans

For low to medium pressure applications, tube axial fans include both direct and belt-driven fans with cast aluminum or fabricated steel blades. Propeller tube axial inline fans have a straight-through airflow, compact size and the flexibility to be mounted in any configuration—horizontal, vertical, or any angle. These fans are designed for reliable air movement in ducted commercial and industrial applications. The roof upblast configuration is designed to discharge contaminants up and away from the building in most applications.

Roof Upblast: Models RDU/RBU/RBUMO

Model RBUMO has its motor mounted out of the airstream and is suitable for high temperature emergency smoke removal (500ºF/260ºC for 4 hours or 1000ºF/538ºC for 15 minutes) and is available with UL Power Ventilators for Smoke Control Systems. The RBU/RBUMO has steel blades, and the RDU has cast aluminum blades. Capacities range from 2,800 to 68,000 cfm (4,757 to 115,532 m^3/hr) and 1 in. wg (248 Pa). AMCA Licensed for FEI, Sound, and Air Performance. RBUMO is HCAI seismic certified.

Catalog: Propeller Upblast Roof Fans — RBU, RBUMO and RDU

Roof Upblast: Model TAUB-L/H

Model TAUB-L/H has its motor mounted out of the airstream and is suitable for high temperature emergency UL smoke removal. Typical applications include clean air, industrial processes, and high temperature exhaust. The TAUB-L/H has steel blades. Capacities range from 5,000 to 58,000 cfm (8,459 to 98,543 m^3/hr) and 1 in. wg (248 Pa). For higher pressure capabilities use roof-mounted option on model TBI-FS. AMCA Licensed for FEI, Air, and Sound Performance.

Catalog: Tube Axial Roof Upblast — TAUB

Roof Upblast: Model TAUB-CA

Model TAUB-CA has cast aluminum blades. Typical applications include clean air, fume exhaust, and spark resistant construction. Capacities range from 2,800 to 72,000 cfm (4,757 to 122,329 m^3/hr) and 1.5 in. wg (373 Pa). For higher pressure capabilities use roof-mounted option on model TBI-CA or AX. AMCA Licensed for FEI and Air Performance.

Catalog: Tube Axial Roof Upblast — TAUD and TAUB-CA

Hooded Propeller Exhaust and Supply Fans

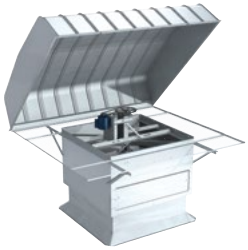
The hooded roof propeller fans include both direct and belt-driven fans with fabricated steel, fabricated aluminum, or cast aluminum blades. These fans are suitable for clean air applications including exhaust, supply, or filtered supply. Typical applications are factories and warehouses.

Models R2/RC3/RB/RBC/RBF/RBCF

Model R2/RC3/RB/RBC hooded roof propeller fans are available with a wide variety of accessories including tall bases, dampers and guards. Capacities range from 500 to 86,500 cfm (850 to 146,964 m^3/hr) and 2 in. wg (498 Pa). Third-party certified (Florida Product Approved and Miami-Dade County NOA certified) for high wind and AMCA Licensed for FEI, Sound, and Air Performance. HCAI seismic certified.

Catalog: *Hooded Roof Propeller Fans — Exhaust, Supply and Reversible*

Models RPDR/RPBR



Models RPDR/RPBR are compatible with ducted and non-ducted systems and offer the ability to exhaust or supply air on demand. Performance is equivalent in both the exhaust and supply modes. Capacities range from 2,900 to 70,500 cfm (4,927 to 119,780 m^3/hr) and 0.5 in. wg (124 Pa). HCAI seismic certified.

Catalog: *Hooded Roof Propeller Fans — Exhaust, Supply and Reversible*

Models AE/AS

Model AE/AS axial roof exhaust and supply fans are designed for low volume, low pressure applications where a spun aluminum hood is desired. Capacities range from 150 to 6,000 cfm (255 to 10,194 m^3/hr) and 1 in. wg (348 Pa). AMCA Licensed for FEI, Air, and Sound Performance.

Catalog: *Hooded Roof Propeller Fans — Series A (AE and AS)*

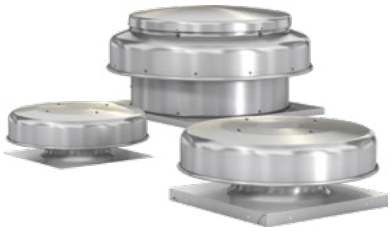
Gravity Ventilators

The gravity intake and relief ventilators are nonpowered and work on pressure differential between the inside and outside of the building.

Model GRS

Model GRS is an aluminum ventilator designed to be used as an intake (model GRSI) or relief unit (model GRSR) on natural gravity systems. The GRS appearance blends with other Greenheck products, and with its low silhouette, avoids the problem of detracting from architectural aesthetics.

Catalog: *Gravity Ventilators — GRSI/GRSR*



Models FGI/FGR

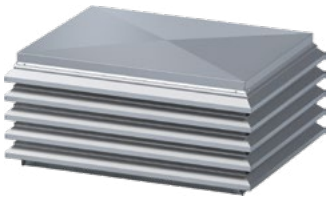
Models FGI (intake) and FGR (relief) have a low silhouette fabra hood design. The Fabra Hood design is superior in appearance, load-bearing strength, weather resistance, and dimensional flexibility. Capacities range from 0 to 109,800 cfm (0 to 186,551 m^3/hr) and 0.35 in. wg (87 Pa). Third-party certified (Florida Product Approved and Miami-Dade County NOA certified) for high wind.

Catalog: *Gravity Ventilators — FGI/FGR*

Models WIH/WRH

Model WIH (intake) and WRH (relief) units feature a stormproof aluminum louver with mitered corners. The louvered design affords lower pressure drops while maintaining low hood heights. The all-aluminum construction assures lasting durability and appearance. The removable hood is lined with insulation to prevent condensation.

Catalog: *Gravity Ventilators — WIH/WRH*



Centrifugal Ceiling and Cabinet, Exhaust and Supply Fans

Greenheck's ceiling and cabinet fans are direct drive models that have forward-curved wheels for low sound and high efficiency. They are suitable for clean air applications, such as bathroom exhaust fans, storage room, or office fans. Models are designed for commercial and multifamily construction.

Ceiling and Cabinet Inline Fans

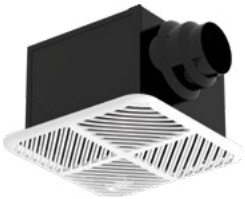
Model SP

Model SP is a direct drive ceiling exhaust fan with airflow range from 25 to 1,600 cfm (42 to 2,718 m3/hr) and 1 in. wg (248 Pa). Available options include the Vari-Green® EC motor, lighted grilles, humidity detectors, ceiling radiation dampers and speed controls. AMCA Licensed for Sound and Air Performance. Many models are ENERGY STAR® Certified and can be used to comply with ASHRAE 62.2 and California Title 24.

Catalog: *Centrifugal Ceiling Exhaust and Inline Cabinet Fans — SP and CSP*

Model SP-AP

Model SP-AP features a virtually silent electronically commutated (EC) motor with three built-in, high-speed airflow settings (50, 80, or 110 cfm). Its standard two-speed operation helps comply with ASHRAE 62.2, Washington State Energy Code and California Title 24 requirements for whole-house continuous ventilation. The fan is certified by Energy Star and the Home Ventilating Institute. Options available include plug-and-play sensors (motion, humidity, and CO_2) and lighted grilles.



Catalog: *SP-AP0511W-1 and SP-AP0511WL-1*

Model SP-LP

Model SP-LP is one of the most powerful low-profile fans on the market, featuring airflow up to 110 cfm. With a 3-1/2" housing depth, the low profile is ideal for wall or ceiling installations, fitting easily into a 2x4 stud bay. The fan is certified by Energy Star and the Home Ventilating Institute. Lighted grilles, an integrated humidity sensor and two-speed operation upgrades are available.

Catalog: *SP-LP0511-1 and SP-LP0511L-1*

Model CSP

Model CSP is a direct drive inline fan designed for clean air exhaust or supply applications where low sound levels are required. Model CSP may be easily converted from horizontal to vertical discharge. The Vari-Green® EC motor is available for these models. Capacities range from 70 to 3,800 cfm (119 to 6,456 m^3/hr) and 1 in. wg (248 Pa). AMCA Licensed for Air Performance.

Catalog: *Centrifugal Ceiling Exhaust and Inline Cabinet Fans — SP and CSP*

Centrifugal Inline, Tubular, Mixed Flow and Axial Fans

Greenheck's centrifugal inline, tubular, mixed flow and axial fans are suitable for a wide range of commercial and industrial applications. Centrifugal inline fans are ideal for clean air applications including intake, exhaust, return, or make-up air. Tubular centrifugal, axial and mixed flow inline products provide higher performance capacity than ceiling and sidewall fans. They are typically horizontally or vertically mounted in duct systems, but can be wall mounted, as well as roof mounted.

Centrifugal Inline Fans

Ceiling, cabinet and centrifugal inline fans include both direct and belt-driven fans.

Centrifugal inline fans have backward-inclined centrifugal wheels. Models feature rugged construction, high-efficiency, and low sound levels that are ideal for clean air applications, including intake, exhaust, return, or make-up air. They have straight-through airflow with compact size and have the flexibility to be mounted in any configuration—horizontal, vertical, or at any angle.

Model BCF

Model BCF is a belt drive inline low profile cabinet fan. It is designed for efficiency and reliability in supply, exhaust, and ducted return applications. Horizontal mounting with either top horizontal or upblast discharge allows the BCF to be applied in a wide range of applications. Capacities range from 170 to 5,850 cfm (289 to 9,939 m^3/hr) and 1.5 in. wg (372 Pa). AMCA Licensed for FEI and Air Performance.

Catalog: Centrifugal Cabinet Fans — BCF

Models SQ/BSQ

Models SQ/BSQ have a square housing design for indoor applications. Easy access for inspection and service is provided by removable side panels. Fans can be configured to discharge air 90 degrees from the inlet for tight space constraints. The Vari-Green® high-efficiency motor is available on model SQ direct drive fans. Capacities range from 50 to 27,000 cfm (85 to 45,873 m^3/hr) and 4 in. wg (992 Pa). AMCA Licensed for FEI, Sound, and Air Performance. Select models with CE Mark.

Catalog: Centrifugal Inline Fans — SQ and BSQ

Mixed Flow Fans

Mixed flow inline fans can be used for a wide variety of commercial, institutional and industrial applications handling everything from clean, grease laden or high-temperature air for supply, exhaust, or return air. Greenheck's unique wheel design excels in applications where low sound is critical. In addition, Greenheck's mixed flow fans are more efficient than comparably sized square inline and tubular centrifugal and vane axial fans, reducing the required motor horsepower and lowering operating costs.

Model SQ

Model SQ is a direct drive square inline mixed flow fan featuring a unique combination of high efficiency, low sound and ease of installation. Fans are ideal for supply, exhaust, return, or make-up air systems in indoor and outdoor clean air applications where space is a prime consideration. Units have multiple mounting options for indoor and outdoor locations, Vari-Green® electronically commutated (EC) motors and a variety of accessories that make this model a great solution for many applications. Capacities up to 27,800 cfm (47,233 m^3/hr) and 3 in. wg (747 Pa). AMCA Licensed for FEI, Sound, and Air Performance.

Catalog: *Mixed Flow Fans - SQ Mixed Flow*

Models QEI/QEID

Models QEI/QEID are mixed flow fans that deliver efficient and quiet performance. Universal mounting allows changing orientation in the field and standard integral airflow straightening vanes improve performance. Multiple series of construction tailor the unit to the application requirements. Typical applications include ventilation of office buildings, concert halls, parking garages, educational facilities, libraries, and dormitories. Capacities range from 700 to 116,000 cfm (1,190 to 197,085 m^3/hr) and 10 in. wg (2,490 Pa). AMCA Licensed for FEI, Sound, and Air Performance and FEI (Fan Energy Index). Model QEI is HCAI seismic certified.

Catalog: *Mixed Flow Fans — QEI (belt drive), QEID (direct drive)*

Model QEID FJ

Model QEID FJ Fume Jet is a direct drive tubular mixed flow inline fan ideal for exhausting lower volumes of light chemical or odor-laden air. The airstream pathway is constructed of corrosion-resistant, lightweight composite materials and includes a durable flanged casing for duct connections. The ventilated EC motor compartment protects the motor from the contaminated airstream to allow classification as a spark-resistant exhaust fan. Capacities range from 640 to 3,000 cfm (1,100 to 5,097 m^3/hr) and 3 in. wg (750 Pa). Model QEID FJ is AMCA Licensed for FEI, Sound, and Air Performance.

Catalog: *Mixed Flow Fans - QEI (belt drive), QEID (direct drive)*

Tube and Vane Axial Fans

Axial inline fans are designed for ducted indoor or outdoor applications. They are available in both direct drive and belt drive and with cast aluminum or fabricated steel propellers.

Inline or Roof Upblast: Model TBI-CA

Model TBI-CA axial fans feature a cast aluminum hub and airfoil blades. The universal mounting system allows for vertical or horizontal installations. Typical applications include clean air, fume exhaust, and spark-resistant construction. Capacities range from 1,300 to 95,000 cfm (2,209 to 161,406 m^3/hr) and 3.5 in. wg (871 Pa). AMCA Licensed for FEI and Air Performance.

Catalogs: *Tube Axial Inline Fans — TDI and TBI-CA Level 3*
Medium Pressure Axial Fans — TBI-CA Level 4 & 5

Inline or Roof Upblast: Model TBI-FS

Model TBI-FS has a fabricated steel hub and airfoil blades. It is suitable for continuous high temperature (400ºF/204ºC max.) for inline configurations, (500ºF/260ºC max.) for roof upblast configuration and is available with UL 705-Supplement SD-Smoke Control. The universal mounting system accommodates any vertical or horizontal installation configuration. Typical applications involve clean air, industrial processes, and high-temperature exhaust. Capacities range from 6,000 to 77,000 cfm (10,194 to 130,824 m^3/hr) for inline configurations and 6,000 to 76,000 cfm (10,194 to 129,125 m^3/hr) for roof upblast configurations and 4.5 in. wg (1,120 Pa). Bolt-on straightening vanes are available for increased efficiency. AMCA Licensed for FEI, Sound, and Air Performance.

Catalog: *Medium Pressure Axial Fans — TBI-FS Levels 3, 4 & 5*

Inline, Roof Upblast and Supply: Model AX

Direct drive axial fan designed for air ventilation in commercial or industrial buildings, model AX features a cast aluminum hub and airfoil blades which have a manually adjustable blade pitch. The universal mounting system allows for vertical or horizontal installations. Typical applications include clean air and are available with UL 705-Supplement SD-Smoke Control. Bolt-on straightening vanes (AX-V) are available for increased efficiency. Capacities range from 500 to 125,000 cfm (849 to 212,376 m^3/hr) and 5 in. wg (1,244 Pa). AMCA Licensed for FEI and Air Performance.

Catalog: *High Performance Axial Fans — AX*

Model VAB

Model VAB belt drive vane axial fans accommodate for final system balancing and have a manually adjustable blade pitch. These fans are an excellent choice for variable air volume HVAC systems, clean rooms, parking garage exhaust, and tunnel ventilation. UL/cUL 705 for electrical is available. A complete vibration test on all fans is performed prior to shipment. Capacities range from 2,000 to 145,000 cfm (3,398 to 246,357 m^3/hr) and 7.5 in. wg (1,866 Pa). AMCA Licensed for FEI and Air Performance.

Catalog: *Vane Axial Fans — VAB and VAD*

Model VAD

Model VAD is a direct drive vane axial fan designed for commercial and industrial applications where large volumes of air are required at moderate to high pressures. Direct drive vane axial fans have a manually adjustable blade pitch and require minimal maintenance. These fans are an excellent choice for variable air volume HVAC systems, clean rooms, parking garage exhaust, and tunnel ventilation. UL/cUL 705 for electrical is available. A complete vibration test on all fans is performed prior to shipment. Capacities range from 1,200 to 240,000 cfm (2,039 to 407,763 m^3/hr) and 10 in. wg (2,488 Pa). AMCA Licensed for FEI and Air Performance.

Catalog: *Vane Axial Fans — VAB and VAD*

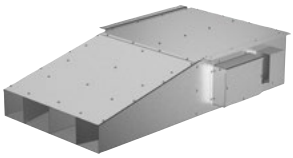
GreenJet® Fans

Vehicles in an underground parking structure or in maintenance facilities emit carbon monoxide (CO) and other noxious fumes into the atmosphere. There is a need for an efficient ventilation system to remove these toxins, circulate fresh air, and assist firefighters in the case of a fire emergency. The GreenJet® series includes a range of performances ideal for parking garage ventilation. Ductless designs use jet fans to dilute and remove contaminants and control smoke. The fans move air toward the exhaust area when installed on the ceiling.

Model GJI

The GJI model, with mixed flow wheel, maximizes the clearance height for vehicles or installations when space and driving clearance is limited. With the lowest GreenJet profile of under 12 inches (305 mm), it easily fits in tight spaces, helping keep clean air in hard-to-ventilate as well as open areas. The GJI utilizes an electronically commutated (EC) motor with either a fan-mounted speed dial or a 0-10 VDC signal for speed and volume control. Capacities of 6-10 lb force of thrust (26-45N).

Catalog: *Jet Fans — GJI*



Model GJX

GJX GreenJet fans are used with inlet and outlet silencers, inlet guards, mounting bracket and aluminum die-cast propellers and blades. The GJX features a true airfoil design propeller to move large volumes of air at a high efficiency using a smaller diameter fan. AMCA Licensed for Air Performance (AMCA 210). UL/cUL Listed for Electrical (UL/cUL-705) and UL 705-Supplement SD-Smoke Control. Capacities of 4-17 lb force of thrust (18-75N).

Catalog: *Jet Fans — GJX*

High Volume Low Speed (HVLS) Fans

High Volume Low Speed (HVLS) overhead fans provide airflow for effective air circulation and enhanced comfort in commercial and industrial spaces. With a variety of benefits including personnel cooling, humidity control, and heat distribution, these fans are an ideal selection for many applications.

Model DC-5

Model DC-5 is a five-blade, direct drive HVLS fan designed for commercial spaces with low to medium ceilings. With its sleek design the DC-5 combines comfortable air movement with a variety of unique color options. These fans are effortless to install with the lightest total hanging weight among comparable HVLS fans. Fan diameters between 4.3 and 14 ft. Up to 55,000 cfm, UL/cUL 507, ENERGY STAR® Certified (4.3 – 7 ft.), and AMCA Licensed for Circulating Fan Performance (8 – 14 ft.).

Catalog: *High Volume, Low Speed Fans - DC and DS*

Model DS-3

Model DS-3 is a three-blade, direct drive HVLS fan designed for commercial or industrial spaces with medium to high ceilings. These economical fans are the ideal balance between cost and performance, making them a smart choice for budget-conscious building owners. Plus, with a lighter weight than comparable HVLS fans, the DS-3 is a breeze to install in any building. Fan diameters between 8 and 24 ft. Up to 176,900 cfm, UL/cUL 507 and AMCA Licensed for Circulating Fan Performance.

Catalog: *High Volume, Low Speed Fans - DC and DS*

Model DS-6

Model DS-6 is a six-blade, direct drive HVLS fan designed for commercial or industrial spaces with medium to high ceilings. As the industry's best performing HVLS fan, the DS-6 delivers unrivaled airflow at incredibly quiet sound levels. Along with reduced operating costs, the DS-6 is clearly the best value HVLS product on the market. Fan diameters between 8 and 24 ft. Up to 243,000 cfm, UL/cUL 507 and AMCA Licensed for Circulating Fan Performance.

Catalog: *High Volume, Low Speed Fans - DC and DS*

Model DC-5 with Northern Light®

Overhead fans with Northern Light® technology combine engineered air movement with the air cleaning benefit of upper-room UV-C lighting making it the right selection for inactivating airborne pathogens. UV-C has been used for decades and the addition of air movement has been shown to increase UV-C's effectiveness in inactivating airborne pathogens in building environments. Fan diameters include 6.7, 9.8, 13.1 and 16.4 ft. Up to 44,000 cfm.

Controls

Maintain easy operation of HVLS fans by using optional controls to maximize efficiency. Designed for convenience and versatility, all HVLS controls run one or multiple HVLS fans with common communication protocols, and are available with surface or recessed mounting kits.

- Keypad
- Standard touchscreen
- Advanced touchscreen with BACnet®
- Bluetooth tablet (Northern Light® only)

Directional and Destratification Fans

Directional air circulators and mancooler fans are designed for applications where localized air direction and circulation are required. Mounting arrangements offer maximum directional flexibility and ease of mounting.

Directional destratification fans provide improved comfort and reduced energy costs by efficiently mixing air from floor to ceiling to improve temperature uniformity. These fans are ideal for a variety of commercial, industrial and institutional applications, especially in buildings with high ceilings.

Models IC/ICO

Models IC/ICO (non-oscillating/oscillating) two-speed air circulators are designed for spot cooling and recirculating air in factories, warehouses, manufacturing facilities and garages. Mounting options include wall, post or ceiling bracket, suspension bracket, I-beam mount and pedestal with optional wheel kit. Capacities range from 3,055 to 9,704 cfm (5,190 to 16,487 m^3/hr) of free air. UL Listed Standard 507.

Catalog: *Industrial Air Circulators — IC and ICO*

Model MAC

Model MAC is a two-speed mancooler suitable for moving high volumes of directed airflow in factories, warehouses and agricultural applications. Fans are direct or belt driven with multiple mounting kits including mobile wheel, mobile tiltable carriage, suspension mount, ceiling mount and wall mount. Capacities range from 2,400 to 21,000 cfm (4,078 to 35,679 m^3/hr) at free air. UL/cUL Listed Standard 507.

Catalog: *Mobile Air Circulators — MAC*

Model DDF

Model DDF is a high-performance, direct-drive fan designed for applications where low sound and energy efficiency are critical. Featuring an aerodynamically optimized housing and Vari-Green® electronically commutated (EC) motor, their powerful directional airflow can destratify spaces with ceilings up to 60 feet tall. Capacities range from 640 to 1,910 cfm.

Sidewall Exhaust, Supply and Reversible Fans

Propeller fans include both direct and belt-driven fans with fabricated steel, aluminum, or cast aluminum blades. These fans are suitable for clean air applications, including exhaust, supply, filtered supply, and reversible. Typical applications are factories and warehouses.

Models AER/S1/S2/BAER/SB/SBC

Sidewall propeller fans are available with a wide variety of accessories including wall housings, wall collars, guards, dampers, and weatherhoods. The Vari-Green® electronically commutated (EC) motor is available on model AER and SE direct-drive fans. Capacities range from 115 to 87,000 cfm (195 to 147,814 m^3/hr) and 3.7 in. wg (920 Pa). AMCA Licensed for FEI, Sound, and Air Performance. HCAI seismic certified.

Catalog: *Sidewall Propeller Fans — S1, S2, SB and SBC*
Sidewall Propeller Fans — AER and BAER

Models SCR3/SBCR

Reversible sidewall fans offer the ability to exhaust or supply air on demand. Performance is equivalent in both the exhaust and supply modes. Capacities range from 2,900 to 70,500 cfm (4,927 to 119,780 m^3/hr) and 0.5 in. wg (124 Pa). HCAI seismic certified.

Catalog: *Sidewall Propeller Fans — SCR3 and SBCR*

Model CBF

Model CBF is designed for economy and reliability in limited space applications. Fits in lieu of standard 16-inch by 8-inch concrete block and is mountable in any wall construction. Works well for ventilating equipment rooms and chases. Capacities range from 300 to 500 cfm (510 to 850 m^3/hr) and 0.4 in. wg (99 Pa).

Catalog: *Transfer Fan — CBF*

Vari-Green® and Motor Starters

Greenheck's Vari-Green products are designed for energy-efficiency, controllability and low maintenance. They are an environmentally progressive option when specifying products for your next project. Greenheck's motor starters are available for both single-phase and three-phase motors in commercial and industrial applications. They include motor protection as well as the ability to provide controllability. Most Greenheck motor starters are available in either indoor or outdoor enclosures.

Vari-Green Motor

The Greenheck Vari-Green motor is an electronically commutated (EC) motor that operates on single or three-phase AC power input and internally converts it to DC power providing better speed control capabilities (up to an 80% turndown) and higher efficiencies than standard motors. The Vari-Green motor blends technology, controllability and energy efficiency in a low maintenance package that is changing the way the industry designs, specifies and operates air movement equipment. Depending on horsepower, Vari-Green motors are available in both single and three phase with a variety of sizes currently available on models AER, RDU, RE/RS, RCE/RCS, SP, CSP, G/GB, CUE/CUBE, SQ, KSQ, USF, SE1, and SS1. Either a dial-mounted potentiometer or (speed control) dial can also be mounted on the fan for models like SQ and AER or it can accept a 0-10 VDC control signal from an external source.

Vari-Green Controls

Greenheck's Vari-Green Controls are designed specifically for the Vari-Green motors. Vari-Green controls are available for applications requiring manual operation or demand controlled ventilation (DCV). Applications utilizing DCV controls provide only the desired amount of ventilation, providing building owners savings on their energy bills. Vari-Green Controls available are:

- Manual Controls
  - Remote Dial
  - Touch Remote
- Demand Controlled Ventilation
  - Two-Speed Control
  - Constant Pressure (indoor or outdoor)
  - Hand/Off/Auto (HOA)
  - Air Quality - Volatile Organic Compound (VOC)
  - Air Quality - Temperature/Humidity

Vari-Green Drive

The Vari-Green Drive (VGD) is a factory-mounted, wired, and programmed drive for AC motors up to 10 hp. This drive expands the Vari-Green concept of variable speed fans to more models and sizes to fit the expanding ventilation and efficiency needs of the industry. The Vari-Green Drive is available on the AER, CUE, CUBE, G, and GB models.

Greenheck Motor Starters

Models MSAC, MS-1P, and MSEM provide a wide range of control logic solutions as well as electronic overload protection for the motor. The MSAC are three-phase controllers that can be used on any single speed, nonreversible fan with a motor between ¾ hp and 25 hp (1-40 amps). They are capable of integrating with other building controls such as building management systems and thermostats. The MSAC and MSEM has have additional advanced control integration that includes emergency shutdown, fireman's override, damper actuator voltage, end switch monitoring and status output. The MS-1P is a single phase controller that will work on any fan with a single phase motor up to 1 hp (1-16 amps). It also has two control inputs and two status outputs—run and fault.

Utility, Centrifugal and Radial Blowers

Greenheck offers a complete line of heavy-duty centrifugal fans and radial blowers for any commercial and industrial application. Greenheck centrifugal products are used for everyday commercial applications such as providing supply, exhaust, and return air in hospitals, schools, and large office buildings or fume exhaust for laboratories and pharmaceuticals. These products are also well suited for industrial applications involving high-temperature process exhaust, filtration systems, corrosive air exhaust, and material handling.

Utility Centrifugal Fans

The utility fans include both direct and belt-driven fans. They are self-contained units consisting of the fan, motor, and drive for a variety of commercial and light industrial applications.

Model USF

Model USF operates in a broad range of fan applications, typically in ducted systems for exhaust, supply or return air. Versatile construction options allow use in general applications or environments which require spark resistance, high temperature tolerance or resistance to corrosive elements. Performances can be selected up to 160,000 cfm (271,842 m3/hr) and up to 21 in. wg (5,226 Pa.)

Options:

- Belt or direct drive configurations
- Spark-resistant construction
- Vari-Green® EC motors and controls
- UL 705-Supplement SD-Smoke Control
- UL 705-Supplement SC-Restaurant Exhaust
- Mounted and ship loose VFD packages

Certifications:

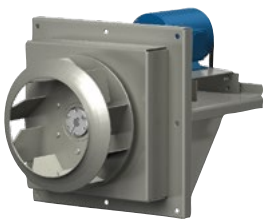
- AMCA Licensed for FEI, Sound, and Air Performance
- HCAI seismic certified
- Miami-Dade NOA high wind certification

Catalog: Centrifugal Fans — USF

Plug Fans

Plug fans are designed and built to provide reliable service in industrial applications where the fan operates unhoused within a pressurized plenum.

Model PLG



Model PLG unhoused plug fans feature compact unit sizes and a high efficiency backward-inclined wheel which makes them ideal selections for HVAC installations, spray booths, air curtains and high temperature applications including ovens, dryers, and kilns. Capacities range from 900 to 71,000 cfm (1,529 to 120,630 m^3/hr) and 8 in. wg (1,991 Pa), and maximum temperature of 800ºF (426ºC).

Catalog: Plug Fans — PLG

Fiberglass Reinforced Plastic (FRP) Fans

FRP fans are designed for exhausting corrosive air in a variety of applications. Typical applications include wastewater treatment odor control, pollution control scrubbers, and other highly corrosive airstreams. Each FRP fan is constructed using hand lay-up or chop spray manufacturing techniques and every FRP component complies with ASTM specifications C582 and 4167 for fiberglass laminates and pressure blowers. All FRP fans use air handling quality bearings and are AMCA Spark A resistant.

Model BCSW-FRP

Model BCSW-FRP uses a backward-curved centrifugal wheel and comes in both direct and belt drive models. The BCSW-FRP is constructed to exceed the industry standard for vibration with 0.078 in./sec velocity for the belt drive. For light duty, clean air up to 15,000 cfm (25,485 m^3/hr) and up to 12 in. wg (249 Pa). AMCA Licensed for FEI and Air Performance.

Catalog: *Fiberglass Centrifugal Fans – BCSW-FRP*

Fabricated Pressure Blowers

Fabricated pressure blowers are suitable for air exhaust or supply applications. Typical applications include cabinet or room pressurization, blow-off systems for moisture removal, combustion air for burners, parts cooling, and fume exhaust.

Model FPB

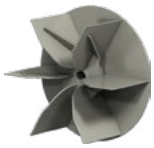
Model FPB fabricated pressure blowers utilize radial aluminum blade wheels to provide peak performance for systems that require low flow and high pressures. FPB pressure blowers are designed with a totally rotatable steel housing with a baked polyester coating. Capacities range from 200 to 2,500 cfm (340 to 4,248 m^3/hr) and 9.5 in. wg (2,364 Pa).

Catalog: *Pressure Blowers — FPB*

Industrial Process Fans

The industrial process fans menu includes fan types engineered and built for reliable operation in harsh environments where high temperatures, high static pressures, and material handling requirements are encountered.

Open Radial Material Handling Wheel can be utilized for most industrial requirements. Applications include: exhausting abrasive dust such as grinding and buffing wheel exhaust, conveying granular materials such as sawdust, wood chips, fume exhaust, and high temperature air handling.



Wool Type Material Handling Wheel is designed for handling long, fibrous, stringy material. Applications include: conveying long wood shavings, yarns, and paper trimmings. It can also be used for similar applications as the open wheel, but has higher efficiencies.

Industrial Air Handling Wheel is designed for clean air exhaust to slight material handling. Applications include: smoke and heat exhaust, corrosives, heavy fumes, and light dust loading. The air handling wheel is the most efficient in the industrial process fan series.

Capacities range from 200 to 143,000 cfm (340 to 242,959 m^3/hr) and 32 in. wg (7,970 Pa). AMCA Licensed for FEI and Air Performance.

Catalog: *Industrial Process Fans*

Plenum Fans (Models APD, APH and APM)

Plenum fans offer excellent performance and reliability. These fans work best in commercial or industrial air handling settings and pressurized plenum applications. Each offers a compact size, the flexibility to supply multiple air take-offs and a competitive price.

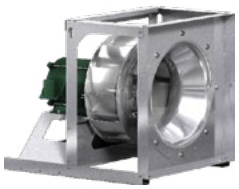
Plenum Fans

Plenum fans are designed for air handling applications where the fan operates unhoused within a pressurized plenum. Plenum fans are designed to be compact in size, have the flexibility to supply multiple air take-offs and are economically priced.

Model APD

The APD is a commercial grade plenum fan that incorporates performance and reliability into a lighter duty, economical design. The compact direct drive APD eliminates the cost, maintenance and complexity of traditional belt drive plenum fans. APD is constructed from a formed and bolted galvanized steel frame with a welded and coated steel seven-bladed, backward-curved wheel. Capacities range from 1,000 to 18,000 cfm (1,699 to 30,582 m^3/hr) and 10 in wg. (2,488 Pa).

Model APM – Light to Medium-Duty Plenum Fan



Designed for light and medium-duty applications, this model has a galvanized framework at a more cost-effective price point. Efficient operation and lower overall sound with a 12-bladed aluminum airfoil wheel. Units are available in belt and direct drive with a simplified selection of accessories. Capacities range from 1,000 to 41,000 cfm (1,699 to 69,659 m^3/hr) and 8 in. wg (1,991 Pa).

Model APH – Medium to Heavy-Duty Plenum Fan

Designed and engineered for medium and heavier duty applications with a fully welded and painted steel configuration. Efficient operation and lower overall sound with a 12-bladed aluminum airfoil wheel. This plenum is available in both belt and direct drive and offers numerous accessories to complement your project. Capacities range from 1,000 to 209,000 cfm (1,699 to 355,093 m^3/hr) and 12.5 in. wg (3,111 Pa).

Fan Arrays (Models HPA and MOA)

Fan arrays are designed and engineered to provide superior performance and reliability in commercial or industrial applications. Greenheck provides made-to-order configurations for new and existing Air Handling Unit (AHU) applications as well as Mission Critical Data Centers. Our products are manufactured with state-of-the-art laser, forming, spinning and welding equipment, and endure our quality control testing to ensure trouble free start-up. We can supply custom configurations to fit your needs.

Fan Arrays

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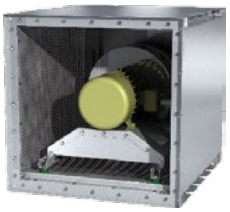
Model HPA

Model HPA housed plenum fans provide high efficiency while maintaining a compact size and low sound power levels. Utilizing a galvanized framework with integral isolation, the HPA uses a high efficiency, low sound 12-blade wheel with a sound attenuating housing to further reduce sound power levels. HPA fans can be easily stacked together in parallel as a fan array offering 100% redundancy. Capacities range from 900 to 45,000 cfm (1,529 to 76,455 m^3/hr) and 7 in. wg (1,742 Pa).

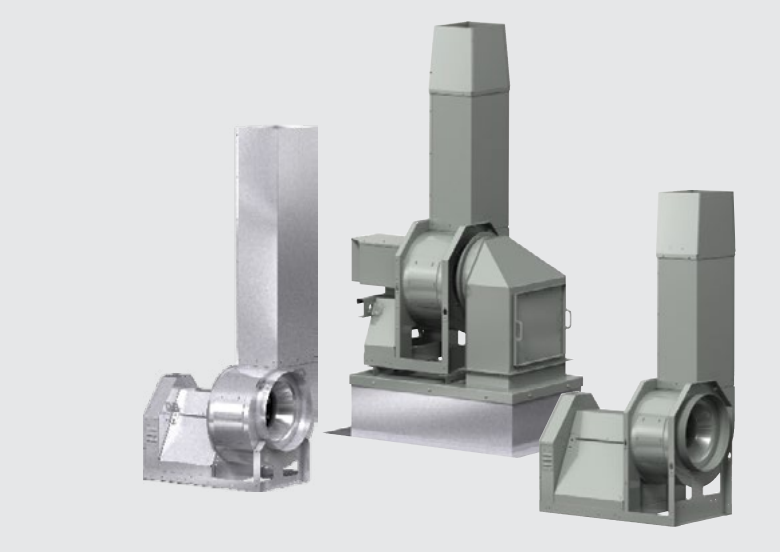


Catalog: *Plenum Fans — APD, APM, APH and HPA*

Model MOA

The new modular open array, model MOA, delivers certified performance with easy-to-assemble components that are designed by you to fit seamlessly in your custom application. Pairing communication and controllability, the MOA is the ultimate turnkey retrofit package. Fan array ships to the job site knocked down for field installation and assembly.

Fume Exhaust Systems



Greenheck's fume exhaust systems are designed to safely handle fumes and odors in commercial, industrial and life safety laboratory applications. All systems are pre-engineered to meet application guidelines provided by ANSI, NFPA, and ASHRAE.

Features include guy wire-free discharge stacks to prevent exhaust re-entrainment, spark resistant construction, corrosive resistance coatings, and AMCA Licensed performance data.

FumeJet® Commercial and Industrial

Greenheck's FumeJet family is a pre-engineered exhaust system that safely removes and disperses contaminated air. Factory-supplied and tested combination of a centrifugal blower with a discharge stack provides a quick and easy alternative to a field built-up system. Designed to follow ANSI Z9.2 standard for local exhaust systems, tested to withstand a force of 34 psf without the need for guy wires (equivalent force to 115 mph (185 km/h) wind speed).

Model FJC

Model FJC is a lower cost commercial fume exhaust fan for low volume and low pressure applications. Belt driven, it is available in two materials, either galvanized or chemical resistant coated steel, for environments requiring increased coating protection. Fan has bolted frame construction and Permalock™ sealed scroll. Capacities range from 200 to 5,000 cfm (340 to 8,495 m^3/hr) and 4.5 in. wg (1,120 Pa). FJC is UL/cUL 705 Power Ventilators Listed. AMCA Licensed for FEI and Air Performance (sizes 6-10); AMCA Licensed for FEI, Sound, and Air Performance (sizes 15-24). HCAI seismic certified.

Model FJI

Model FJI is an industrial fume exhaust fan with higher performance capabilities and additional options for AMCA Spark B or high temperature construction as well as belt or direct drive. Coated steel scrolls are Permalock™ sealed or continuously welded. Airflow capacities range from 200 to 18,000 cfm (340 to 30,582 m^3/hr) and 9 in. wg (2,240 Pa). FJI is available with UL/cUL 705 Power Ventilators Listed. AMCA Licensed for FEI, Sound, and Air Performance.

Catalog for above models: *FumeJet Exhaust Systems*

Discharge Options

Straight Stack
Clean design with uniform straight discharge stack. Most economical discharge option.

Fixed Nozzle
Tapered nozzle discharge increases outlet velocity sending exhaust fumes higher above the roof deck area. Does not negatively impact fan performance.

Adjustable Nozzle
Allows the user to adjust the discharge area based on installed conditions. Four blade positions available.

Laboratory Exhaust Systems

Greenheck has the most extensive line of laboratory exhaust systems in the industry. The main objective of a laboratory exhaust system is to remove hazardous or noxious fumes from a laboratory, dilute the fumes as much as possible and expel them from the laboratory building preventing contamination of the roof areas and re-entrainment into building make-up air systems.

All Vektor® blowers and bypass air plenums are constructed of heavy-gauge welded steel and coated with LabCoat™, a two-part corrosion-resistant zinc-rich coating. Systems are designed to a code-compliant minimum discharge height of 10 feet (3 m) and able to withstand 125 mph (200 km/h) windloads without the use of guy wires. Good for constant or variable volume exhaust applications.

High Plume Discharge

The high plume discharge nozzle is an engineered, tapered outlet nozzle designed to accelerate laboratory exhaust to maximize the effective plume height. Multiple discharge nozzles per fan size are available to custom-tailor discharge velocity and plume rise.

Vektor®-H

Model Vektor-H is a cost-efficient product designed for lower volume, lower pressure applications. Vektor-H uses an inline centrifugal wheel built to AMCA Spark B construction. Capacities range from 500 to 26,000 cfm (850 to 44,174 m^3/hr) and 4 in. wg (995 Pa). Belts, bearings and drives are fully sealed from the contaminated airstream. The direct drive inlet cone, wheel and motor are combined in a single assembly for easy removal. Inspection door provided to view and inspect wheel. Direct drive model is HCAI seismic certified, both belt and direct drive models are NOA approved, UL 705 Power Ventilators Listed, and UL 705-Supplement SC-Restaurant Exhaust Listed. AMCA Licensed for FEI, Sound, and Air Performance.

Catalog: Laboratory Exhaust Systems — Vektor-H

Vektor®-MH

Model Vektor-MH uses an inline mixed flow fan to quietly and efficiently exhaust fumes and odors above a laboratory. This is a low cost application for projects with moderate levels of exhaust and static pressure. Benefits include efficient operation for reduced energy consumption and lower overall sound levels. The Vektor-MH increases safety for maintenance and service by utilizing a bifurcated housing that separates the exhaust airstream around drive components. Vektor-MH is available with AMCA Spark B or C construction. Airflow capacities range from 2,000 to 47,000 cfm (3,398 to 79,854 m^3/hr) and 11 in. wg (2,737 Pa). Model is UL 705 Listed for Power Ventilators. AMCA Licensed for FEI, Sound, and Air Performance.

Catalog: Laboratory Exhaust Systems — Vektor-MH and Vektor-MD

Vektor®-CH

The Greenheck Vektor-CH is a high plume laboratory exhaust system. Vektor-CH utilizes a centrifugal blower to achieve high pressures and flow rates commonly required by filtration systems. Systems are available as single fan with or without bypass air plenum or multiple fan systems with common plenum. Belt and direct drive configurations. Eleven model sizes with a per fan performance range 1,000 to 56,000 cfm (1,699 to 95,145 m^3/hr) and up to 12 in. wg (2,986 Pa). HCAI seismic certified. AMCA licensed for FEI, Sound, and Air Performance.

Catalog: *Laboratory Exhaust Systems — Vektor-CH and Vektor-CD*

High Plume with Constant Velocity Discharge

Utilizing Greenheck's Variable Geometry Nozzle (VGN) technology, a constant duct static pressure is maintained by adjusting the fan speed with a variable frequency drive. As airflow through the fan varies, the nozzle discharge area automatically changes to maintain a constant and safe discharge stack velocity regardless of the laboratory exhaust flow. End users will enjoy benefits such as demand-based laboratory ventilation, reduced fan energy consumption, and reduced operating costs.

Vektor®-MS

Model Vektor-MS with increased performance range offers higher building turndowns and more available cost savings. The mixed flow wheel provides higher performance ranges at higher efficiencies and reduced sound levels. The Vektor-MS models incorporate a bifurcated housing for increased personnel safety. Airflow capacities range from 2,000 to 32,000 cfm (3,400 to 54,368 m^3/hr) and 10 in. wg (2,488 Pa). Model is UL 705 Listed for Power Ventilators. AMCA Licensed for Sound and Air Performance.

Catalog: *Laboratory Exhaust Systems — Vektor-HS, Vektor-MS and Vektor-CS*

Vektor®-CS

Model Vektor-CS is a high plume laboratory exhaust system with an energy saving variable geometry nozzle to maintain a constant discharge velocity. The Vektor-CS features an efficient centrifugal airfoil wheel design, air handling quality bearings and is in compliance with ANSI and NFPA standards for laboratory exhaust applications. Belt and direct drive configurations. Eleven model sizes with airflow capacities ranging from 1,500 to 32,000 cfm (2,549 to 54,368 m^3/hr) and up to 10 in. wg (2,488 Pa). HCAI seismic certified.

Catalog: *Laboratory Exhaust Systems — Vektor-HS, Vektor-MS and Vektor-CS*

High Plume with Dilution

The high plume nozzle with dilution entrains additional air for a less concentrated exhaust. High plume nozzles and the dilution windband entrain ambient air to assist in the dilution of the laboratory exhaust and to maximize the plume rise. This nozzle and windband combination is especially effective with high demand levels of exhaust at moderate to high external static pressures.

Vektor®-MD

Model Vektor-MD brings together higher dilution with the high efficiency mixed flow wheel and bifurcated housing. The benefits include an inline style fan mounted on top of the bypass air plenum for increased effect plume heights and reduced footprint requirements. Vektor-MD units available in AMCA Spark B or C construction. Airflow capacities range from 1,500 to 83,000 cfm (2,549 to 141,018 m^3/hr) and 11.5 in. wg (2,862 Pa). Model is UL 705 Listed for Power Ventilators. AMCA Licensed for Sound, Air, and Induced Air Performance.

Catalog: Laboratory Exhaust Systems — Vektor-MH and Vektor-MD

Vektor®-CD

Model Vektor-CD utilizes a backward inclined, flat blade or airfoil blade centrifugal wheel with efficient scroll housing. Vektor-CD units are available in AMCA Spark B or C construction. Airflow capacities range from 1,500 to 122,000 cfm (2,548 to 207,279 m^3/hr) and 13.5 in. wg (3,359 Pa). Model is UL 705 Listed for Power Ventilators. AMCA Licensed for Sound, Air, and Induced Air Performance.

Catalog: Laboratory Exhaust Systems — Vektor-CH and Vektor-CD

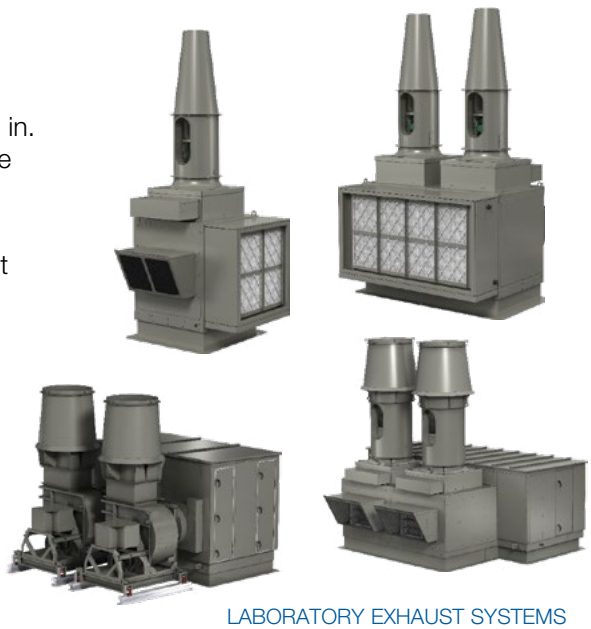
Energy Recovery Systems

Models Vektor-M and C Series can be integrated for use with an energy recovery plenum to reduce the operating cost of your laboratory. Greenheck Vektor energy recovery systems utilize glycol filled, runaround coil loops to safely transfer energy between the laboratory's exhaust and supply airstreams. These sensible only heat transfer systems allow the supply and exhaust duct systems to be separated safely and prevent the possibility of cross contamination.

The energy recovery system utilizes a cost-saving pre-engineered plenum with capabilities to handle a range from 2,000 to 66,000 cfm (3,400 to 112,200 m^3/hr) and external static pressure up to 8 in. wg (2,000 Pa). This system offers single source responsibility while providing up to 55% efficiency of energy recovery.

The plenum is manufactured with an insulated double-wall exterior design, a steel interior and comes complete with corrosion-resistant coated energy recovery coils. Systems can be manufactured for constant or variable volume systems as well as options for multiple blower configurations when redundancy is required.

Catalog: Energy Recovery Laboratory Exhaust
Model Vektor-ERS For Vektor-C and Vektor-M Series



Kitchen Ventilation Systems

Greenheck offers a wide selection of top quality kitchen hoods, exhaust fans, make-up air units, variable volume control systems, fire suppression systems and utility distribution systems. These systems can be designed by using our Computer Aided Product Selection CAPS® program. This program enables you to select and configure products as well as view real-time drawings and create AutoCAD® files instantly.

*For detailed information and application of these products visit www.greenheck.com. For personalized training and a live kitchen demonstration, talk with your local Greenheck representative to schedule a visit to Greenheck in Schofield, WI.

Type I Kitchen Hoods

Designed for grease-laden air. Kitchen hoods are available in canopy and proximity (backshelf) styles. Canopy hoods are available as exhaust only with external supply plenum options. All hoods are UL/cUL 710 Listed and available in single-section lengths from 3 to 16 feet. Longer hoods are available in multiple sections with our continuous capture option. Available canopy hood configurations: wall, island, double-island, self-cleaning, and V-bank. Standard construction is stainless steel where exposed and galvanized steel in the unexposed plenum. 100% stainless steel construction is available. Either option is available in 300 series or 430 stainless steel.

Exhaust Only Hood with External Supply Plenum Options		Recommended Application
	ASP Air Curtain Supply 4-inch	Non-Tempered/Heat Only; To minimize mixing with air in the space by distributing airflow at the hood, downward.
	BSP Back Supply	Non-Tempered or Marginally Tempered Air; Air is kept near hood to minimize mixing with air in the space.
	Split ASP Split Air Curtain Supply	Non-Tempered and Tempered Air; Non-tempered air is utilized to supply hood, while tempered air provides comfort to the user.

Crossover Hoods

The Crossover fills the gap between a wall canopy and a back-shelf hood. The target application includes quick service restaurants, griddle / fryer cooking lines, or in place of a tapered wall canopy when possible. A lower airflow rate can also be achieved in heavy-duty applications due to the design and lower hanging height. The Crossover is available in lengths up to 144 inches, with widths of either 30 or 36 inches. Many accessories are available including lights, mini end skirts, and user interface among others.

Auto Scrubber™

The Auto Scrubber can be used with any of our filters and provides superior cleaning of the inside of the exhaust plenum and the filters. Filter and fire system components are easily inspected and serviced via toolless access panels located within the hood. Large two-inch drains capture grease with ease. The Auto Scrubber can connect to a building automation system which is compatible with our Kitchen Fan Control Center (KFCC), Vari-Flow and Melink® control systems.

Residential Range Hood

Greenheck's Fire Ready hood operates both as a functional ventilation hood and a fire suppression system. Fan and lights are controlled from the face of the hood or from an optional handicap accessible remote panel.

Filtration Options

Greenheck has the most efficient mechanical grease filters in the industry. All of our grease filters are UL/cUL 1046 Classified and NSF Certified. Efficiency ratings were obtained by testing to the ASTM F2519-2005 test standard.

Grease Grabber™

High-efficiency dual-filtration system (*100% efficient, Greenheck patented). Grease-X-Tractor is the primary filter.

Grease-X-Tractor™

High-efficiency filter (*69% efficient) with superior performance over a standard baffle filter without the initial expense of other grease removal systems; Spark arrestor certified.

Baffle Filter

Standard industry baffle (*28% efficient, purchased filter).

**Filter efficiencies measured at 8 microns.*

Grease Grabber

Grease-X-Tractor

Baffle

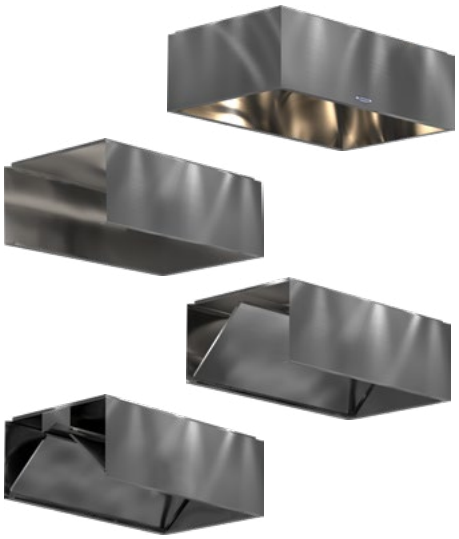
Type II Kitchen Hoods

Designed for non-grease applications. Nonfiltered heat and condensate hoods.

Heat and Fume Hoods

Model GO

Primarily used for oven applications. Can be used for other heat and fume removal applications. No gutter or drain. Lighting options available.



Condensate Hoods

Available with a gutter and drain connection.

Model GD1

No baffles. Most economical and flexible. Lighting options available.

Model GD2

One baffle. Designed for moderate condensation applications. Great for vertical door dishwasher applications. Lighting options available.

Model GD3

Two baffles. Designed for heavy condensate applications.

Fire Suppression Systems

The first line of defense against fire in a commercial kitchen is the hood fire protection system. Greenheck has a variety of factory prepiped fire protection systems available.

Amerex® KP, Amerex® Zone Defense™, Wet Chemical - ANSUL® R-102™, ANSUL® Overlapping Coverage

The Amerex KP and ANSUL R-102 Wet Chemical Fire Suppression Systems are automatic, pre-engineered systems designed to protect ventilating equipment including hoods, ducts, plenums, filters, and cooking equipment. Once activated, the system discharges a wet chemical through all nozzles simultaneously. Amerex Zone Defense and ANSUL Overlapping Coverage offers full flood fire protection that allows flexibility in equipment placement.

Catalog: Type I Hood Fire Suppression Systems

Dual Agent

The ANSUL® PIRANHA Restaurant Wet Agent Fire Suppression System is a dual-agent, pre-engineered fixed, automatic fire extinguishing system, designed to protect ventilating equipment including hoods, ducts, plenums, filters, and the cooking equipment. Once activated, the system discharges a wet chemical followed by water through all nozzles simultaneously.

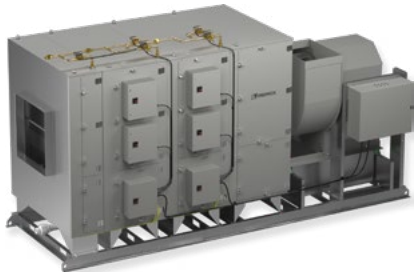
Catalog: Type I Hood Fire Suppression Systems

Amerex® STRIKE

Amerex STRIKE is a kitchen fire suppression electronic control system designed to work with Amerex's KP and KP Zone Defense fire suppression packages. Amerex STRIKE utilizes linear electronic detection, a safer and more effective solution to fire detection, while also simplifying installation and reducing maintenance.

Catalog: Type I Hood Fire Suppression Systems

Pollution Control Units



Specifically designed to eliminate grease particles and smoke while mitigating odor from your kitchen exhaust system.

Grease Trapper™, Grease Trapper ESP™

The Grease Trapper unit utilizes a mechanical filter arrangement to remove grease and smoke particles from the exhaust air. The Grease Trapper ESP uses electrostatic precipitator modules and carbon filters to remove grease, smoke and odors from the exhaust airstream. Both are UL 8782 listed to grease duct standards.

Catalog: Pollution Control Units

Kitchen Controls

Control your entire kitchen ventilation system with ease — from fans, make-up air and lighting to all components of a constant or variable volume ventilation system. The Greenheck controls platform provides increased value using high-quality products integrated seamlessly for a streamlined, efficient operation. VAV systems allow speeds to vary from 50-100% proportional with cooking demand, which in return yields cost savings to the end user.

The interface can be programmed to allow you to see and control only functions you select without requiring you to go through a series of screens not applicable to your needs — a truly innovative solution, simplifying the control of your total kitchen ventilation system.

Catalog: Kitchen Ventilation System Controls

Utility Distribution Systems

FlexConnect™ utility distribution systems provide flexibility, convenience and safety in commercial cooking operations. Factory-built systems offer a cost-effective way to replace contractor-built utilities in walls. These systems provide a single point of connection for gas, electricity, water, and steam. Utility distribution systems are available in wall and island styles.

Flexible

FlexConnect™ Utility Distribution System (UDS) model M allows for future expansion or relocation of appliances without expensive modifications. Gas appliance drops are located every 12 inches, hot and cold water drops every 24 inches to allow for equipment lineup changes. Optional electrical service can be supplied as a point of use breaker, panel board, receptacle only configuration.

Convenient

Modules are available in incremental lengths, expandable to accommodate virtually any cooking lineup.

Fast

Installation requires only limited trade involvement to bring incoming utility services in for hookup.

Catalog: Utility Distribution System

Energy Recovery Ventilators

With Greenheck, you get a comprehensive energy recovery line ranging from a 150 cfm to 12,000 cfm energy recovery ventilator with stand-alone controls. Each unit provides fresh outdoor air to your system to meet ASHRAE 62.1 ventilation requirements, while recovering energy from the exhaust airstream with a total energy wheel or core to meet energy codes. The energy recovery technologies give your system the advantage of sensible and latent energy recovery which improves indoor humidity, maximizes energy savings, and provides lowest first-cost ventilation air for air conditioning (by reducing outdoor air load). Supplemental cooling and heating options provide you total control over outdoor air conditions entering your system.

Energy Recovery Ventilators

Greenheck offers a complete line of energy recovery ventilators (ERVs) to reduce your commercial or institutional building's tempering loads in all climates. From outdoor roof-mounted applications to indoor ceiling-mounted units, Greenheck's ERVs offer the installation flexibility for both new construction and retrofit applications. These units package a total energy wheel or core with exhaust and supply blowers and factory-prewired electrical components.

Model ERV: Interior or Exterior Installation

Model ERV provides a total enthalpy wheel with optional frost control, economizer control, variable frequency drives, stand-alone microprocessor, and BMS communication. Offers installation flexibility for both interior and exterior applications. Available in five sizes. Capacities range from 300 to 12,000 cfm (850 to 20,388 m^3/hr) and 1.5 in. wg (372 Pa). ETL Listed.

Catalog: Energy Recovery Ventilators - MiniVent, ERV, ERVe, MiniCore, ECV, and ERM

Model ERVe: Exterior Installation

Model ERVe is specifically designed to handle conditions experienced in outdoor installations. The ERVe is a stand-alone unit for 100% outdoor air to be provided directly into the space or an air handler. Multiple wheel options provide functionality and flexibility. Capacities range from 1,000 to 6,000 cfm (3,398 to 10,194 m^3/hr) and 1.5 in. wg (248 Pa). ETL Listed.

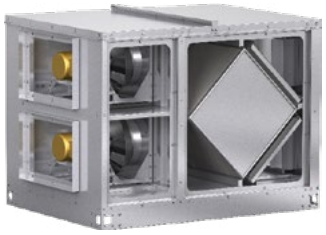
Catalog: Energy Recovery Ventilators - MiniVent, ERV, ERVe, MiniCore, ECV, and ERM

Model MiniVent: Interior Installation

Model MiniVent is an indoor energy recovery ventilator. The compact design provides an economical solution for individual spaces, such as classrooms and small offices. Pleated one-inch deep filters, duct flanges, backdraft dampers, and Vari-Green® EC motors are standard. Capacities range from 150 to 1000 cfm (255 to 1,444 m^3/hr) and 1 in. wg (248 Pa). ETL Listed.

Catalog: *Energy Recovery Ventilators — MiniVent, ERV, ERVe, MiniCore, ECV and ERM*

Model ECV: Interior or Exterior Installation



Model ECV utilizes an air-to-air total energy core manufactured out of a fiber or polymer membrane, designed for indoor or outdoor mounting for commercial and institutional applications. Model ECV-10 comes standard with direct drive, forward curved fans and Vari-Green® EC motors while models ECV-20, -30, and -40 come standard with direct drive, mixed flow plenum fans and VFDs. Optional controls and accessories include stand-alone microprocessor control, BMS communication, bypass damper for economizer and hinged access. Available in four sizes with capacities ranging from 300 to 5,000 cfm (850 to 8,495 m^3/hr) and 1 in. wg (248 Pa). ETL Listed.

Catalog: *Energy Recovery Ventilators — MiniVent, ERV, ERVs, MiniCore, ECV, and ERM*

Model MiniCore: Interior Installation

Model MiniCore utilizes a total energy core manufactured out of a fiber or polymer membrane, direct drive fans with Vari-Green® EC motors, and backdraft dampers. Designed for indoor installations, the MiniCore can be hung in any orientation and features configurable intake and discharge connections. Capacities range from 150 to 1,000 cfm (255 to 1,444 m^3/hr) and 1 in. wg (248 Pa). ETL Listed.

Catalog: *Energy Recovery Ventilators — MiniVent, ERV, ERVe, MiniCore, ECV and ERM*

Energy Recovery Modules

Model ERM energy recovery modules offer the advantages of Greenheck's energy recovery wheel for use in built-up ventilation systems. Modules are ideal for new construction or retrofit applications where a model ERV energy recovery ventilator may not meet space limitation requirements.

Model ERM

Model ERM is a module consisting of the energy recovery wheel, wheel motor and pulley in a cassette. This module is utilized in a field-built system where a standard energy recovery model will not meet space restraints. Can be mounted in vertical or horizontal applications. Capacities range from 600 to 10,000 cfm (1,019 to 16,990 m^3/hr). ETL Listed.

Catalog: *Energy Recovery Ventilators — MiniVent, ERV, ERVe, MiniCore, ECV and ERM*

Dedicated Outdoor Air Systems

A dedicated outdoor air system (DOAS) is a unit supplying cooled, dehumidified outside air to a building in the summer and heated outside air in the winter. Greenheck's comprehensive line of up to 100% outdoor air units is designed to meet a wide range of heating, cooling, dehumidification, and ventilation requirements. Pre-engineered and factory-tested rooftop ventilator units can be specified with a variety of options and can also include a total enthalpy wheel or total enthalpy core to meet performance requirements while offering significant energy savings.

Models RV, RVE, and RVC

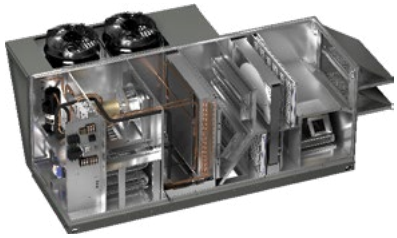
Heating Options: Indirect gas, electric, hot water, or air-source heat pump (ASHP)
Cooling options: Packaged direct expansion (DX), chilled water, and ASHP

Model RV

Pre-engineered rooftop ventilator ideal for 100% outdoor air, variable air volume, and single zone applications.

Airflow range from 500 - 18,000 cfm, cooling capacity of 3 - 70 tons.

Model RVE (Enthalpy Wheel)



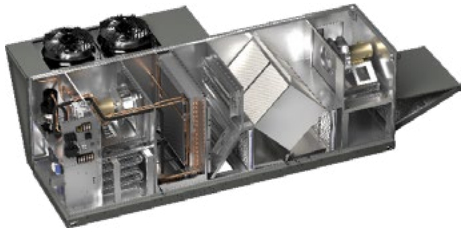
Pre-engineered rooftop ventilator with total enthalpy wheel for energy recovery in high percentage outdoor air applications.

Airflow range from 500 - 18,000 cfm, cooling capacity of 3 - 70 tons.

Polymer wheel embedded with silica gel desiccant
- 70-80% total effectiveness
- Removable segments washable with water and mild detergent

Aluminum wheel with molecular sieve
- 70-80% total effectiveness
- Maintained by vacuuming off surfaces, purging with compressed air, or wiping surface

Model RVC (Enthalpy Core)



Pre-engineered rooftop ventilator with total enthalpy core for energy recovery in applications requiring low maintenance.

Airflow range from 500 - 6,500 cfm, cooling capacity of 5 - 30 tons.

Polymer core (nano-graphene hybrid material)
- 55-65% total effectiveness
- Wash with mild detergent and low-pressure tap water

Fiber core coated with hydrophilic resin
- 50-60% total effectiveness
- Maintained by vacuuming off surfaces

Catalog: Dedicated Outdoor Air Systems for high percentage and 100% outdoor air - RV, RVE, and RVC

Make-Up Air

Greenheck offers a wide range of make-up air units for commercial, industrial, and kitchen applications. Heating options include direct gas-fired, indirect gas-fired, steam, hot water, and electric heat. Available cooling options are evaporative cooling, packaged direct expansion, and chilled water coils. In addition to Greenheck's make-up air units, Greenheck also offers industrial space heating systems. Industrial space heating systems use direct gas-fired heating technology to deliver high discharge air temperatures into the space. These systems are an economical and efficient option to meet the needs of any industrial space heating application.

Direct Gas-Fired

Models DGX and TSU are direct gas-fired make-up air units that feature burners that are 92% efficient and capable of up to 25:1 turndown. These units can be configured with different cooling options, air volume arrangements, and control options to fit a wide variety of applications.

Model DGX

Model DGX is a highly configurable direct gas-fired heating and cooling system. The unit incorporates a modular design to maximize configuration flexibility. In addition, constant volume, 100% outdoor air, recirculation, and VAV airflow arrangements are available. The DGX can be configured with a forward-curved, backward-curved or mixed flow plenum supply fan allowing for either belt-driven or direct-drive arrangements.

Features: 800 to 48,000 cfm (1,359 to 81,533 m^3/hr) and 5 in. wg (996 Pa). Up to 4,800,000 BTU/hr. Cooling options: packaged direct expansion (DX), chilled water, or evaporative cooling. ETL listed.

Catalog: *Direct Gas-Fired Make-Up Air - DGX, TSU, and VSU*

Model TSU

Model TSU is a configurable, direct gas-fired heating make-up air unit. In addition, constant volume 100% outdoor air operation, recirculation, and VAV airflow arrangements are also available.

Features: 33,000 to 64,000 cfm (56,067 to 108,737 m^3/hr) and 2.5 in. wg (747 Pa) Up to 7,000,000 BTU/hr. Optional evaporative cooling. ETL Listed.

Catalog: *Direct Gas-Fired Make-Up Air - DG, DGX, TSU, and VSU*

Model VSU

Model VSU is a vertically configured direct gas-fired heating make-up air unit that offers a wide range of CFMs. The vertical configuration removes the equipment weight loading from the roof and offers a simplified means of installation. Ground level filters, dampers, and controls greatly simplify equipment start-up and maintenance.

Features: 800 to 64,000 cfm (1,359 to 108,737 m^3/hr) and 2.5 in. wg (747 Pa)
Up to 7,000,000 BTU/hr. ETL listed.

Catalog: *Direct Gas-Fired Make-Up Air - DG, DGX, TSU, and VSU*

Indirect Gas-Fired

Indirect gas-fired heating make-up air units feature 81% total efficient furnaces offering modulating control options with up to 16:1 turndown per furnace. These units can be configured with different cooling options, air volume arrangements, and control options to fit a wide variety of applications.

Model IGX

Model IGX is a highly configurable indirect gas-fired heating system. The unit has a modular design for maximum flexibility. Recirculation and VAV options are available in addition to constant volume, 100% outdoor air operation. The IGX has heating, cooling, and airflow capacities to provide make-up air across a broad range of applications.

Features: 800 to 15,000 cfm (1,359 to 25,485 m^3/hr) and 2.5 in. wg (747 Pa).
Heating capacity up to 1,200,000 BTU/hr. Cooling options: chilled water, or evaporative cooling. ETL listed.

Catalog: *Indirect Gas-Fired Make-Up Air — IGX*

Non-Gas-Fired Heating

Non-gas-fired make-up air units are configurable with electric, hot water, or steam coils to meet the needs of a variety of applications. These units can be configured with different cooling options, air volume arrangements, and control options to fit a wide variety of applications.

Model MSX

The MSX is a highly configurable make-up air unit that can be utilized to meet the needs of a variety of applications. The MSX's modular design allows for a wide range of heating, cooling, and filtration options.

Features: 800 to 48,000 cfm (1,359 to 81,522 m^3/hr) and 4 in. wg (996 Pa)
Heating options: hot water, steam, electric heat.
Cooling options: packaged direct expansion, chilled water, or evaporative cooling. ETL listed.

Catalog: *Modular Make-Up Air Unit — MSX*

Non-Tempered

Models KSQ and TSF are configurable for applications that do not call for heating or cooling. Configurable air volume arrangements are available for a wide variety of applications.

Model KSQ

Model KSQ is a direct drive, mixed flow roof supply or untempered make-up air fan that provides a unique combination of installation flexibility, ease of service, high efficiency, and low sound levels. These fans deliver on competitive advantages in a wide range of applications including kitchen supply, stairwell/elevator shaft pressurization, and anywhere filtered untempered air is required. High-efficiency Vari-Green® motors up to 10 hp are available as well as a variety of configurations and accessories. Washable aluminum filters are provided with the option to add pleated MERV 13 filters. Capacities up to 16,750 cfm (28,460 m^3/hr) and 2.75 in. wg (685 Pa). AMCA licensed for FEI, Sound and Air Performance.

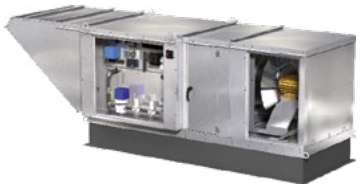
Model TSF

Model TSF is a full feature make-up air unit commonly used for industrial and commercial applications. The TSF can be configured as constant volume 100% outside air or variable air volume. The TSF model can also be configured to include evaporative cooling.
Features: 33,000 - 64,000 cfm (56,067 to 108,737 m^3/hr) and 3 in. wg (747 Pa). ETL Listed.

Industrial Space Heat

Industrial space heating systems heat large spaces comfortably and economically. The 92% thermally efficient direct gas-fired burners promote excellent space comfort and low operating cost. The space heating line includes 100% outdoor air and 80/20 recirculation systems. These systems provide many options to meet the needs of any space heating application.

100% Outdoor Air Space Heating Systems



The 100% outdoor air systems provide a great option for low insulated spaces with high infiltration rates such as warehouses and distribution centers. These units cycle the blower and burner on a call for heat from the space, supplying air at a high velocity and high discharge temperatures (120°F to 140°F).
Features: 5,000 to 19,000 cfm (8,495 to 32,821 m^3/hr and 1.3 in. wg (322 Pa).

80/20 Recirculation System

The 80/20 recirculation system is a hybrid make-up air system. Supply air is a variable mixture of return air and fresh outdoor air. Outdoor air volumes vary from 20% to 100% of total airflow, often configured to respond to building pressure fluctuations. The 80/20 units are excellent for facilities with mechanical exhaust systems, especially when the exhaust volume is variable. The supply fan will run continuously to respond to varying exhaust volumes, and the burner will modulate to satisfy the remote space set point. Discharge temperatures typically range from 80°F to 110°F.
Features: 3,100 to 48,000 cfm (5,266 to 81,552 m^3/hr) and 4 in. wg (996 Pa).

Catalog: *Industrial Space Heating — Direct Gas-Fired Heating*

Duct Heaters

Greenheck duct heaters are specifically designed to meet the demanding requirements for many applications including space heating, primary heating, supplemental heating or reheating. Greenheck duct heaters are configurable, giving you the flexibility to customize your heater for a specific application while maintaining the quality, consistency, and value of a standardized product.

Duct Heaters

All heaters are UL/CSA Listed. All models feature a fan interlock, power terminal board, control terminal board, grounding lugs, automatic limit switch for primary over temperature protection, and manual reset limit switch for secondary over temperature protection.

Model IDHB

The IDHB series is the most cost-conscious model, offering limited sizes and the most basic option and control packages.

Model IDHE

The IDHE series is designed for universal airflow orientation, making it the industry's most versatile and easiest to configure electric duct heater.

Model IDHE-O

The IDHE-O is a duct heater that is UL listed for outdoor applications. This duct heater can be mounted in multiple positions like the IDHE.

Dampers

Greenheck offers the largest selection of AMCA certified dampers and UL classified life-safety dampers in the industry. Our state-of-the-art damper test lab allows us to accelerate new product development to meet the most challenging applications. And our five regional manufacturing locations give us unmatched production capacity and proximity to market.

Air Measuring Products

Air measuring products help buildings meet the minimum outdoor air requirements of ASHRAE Standard 62 or California Title 24 by providing accurate monitoring and control of outside air.

Airflow Measuring Station Model AMS

The AMS is an accurate airflow measuring station and is furnished with a properly sized pressure transducer that outputs a signal proportional to CFM. The AMS is compatible with a field-supplied controller or a factory-supplied LON controller to indicate airflow volume.

Airflow Measuring Station with Damper - Pressure Differential Model AMD

The AMD series combines the function of an accurate airflow measuring station and a low-leakage control damper into one compact assembly that both measures and regulates airflow volumes to a target set point. The AMD series is compatible with a field-supplied controller or a factory-supplied analog controller. The four available models are:

AMD-23 featuring a 3-V blade control damper
AMD-33 featuring a fabricated airfoil blade control damper
AMD-42 featuring an extruded airfoil blade control damper
AMD-42V featuring a vertical extruded airfoil blade control damper

Control Dampers

Control dampers are used in buildings to regulate the flow of air in an HVAC system. Greenheck control dampers are configurable to meet the requirements of most commercial applications. Configurable features include: material type (galvanized steel, stainless steel, and aluminum), blade type (3V, airfoil, and round), and actuator type (two position, three position and modulating). When provided with blade and jamb seals, Greenheck control dampers meet the IECC (International Energy Conservation Code) leakage requirement of 3 cfm/ft^2 at 1 in. wg (5 m^3/hr at 248 Pa).

3-V Blade Type: Models VCD/SEVCD*

3-V blades are typically used in low to medium static pressure and velocity systems. Fabricated blades are reinforced with three longitudinal structurally designed vee's. Available with blade and jamb seals for low leakage applications.

Airfoil Blade Type: Models VCD/SEVCD*

Airfoil blades are typically used in medium to high static pressure and velocity systems. Airfoil blades are constructed with structural reinforcement through the entire length of the blade. All models include blade and jamb seals for low leakage and ultra-low leakage applications.

Round Blade Type: Models VCDR/VCDRM

Round blade types are typically used in low to medium static pressure and velocity systems. Available with blade and jamb seals for low leakage applications. The VCDR uses a single blade design while the model VCDRM uses a multiblade design.

Face and Bypass Type: Model FBV

Face and Bypass models consist of two dampers connected allowing one damper to open while the other damper closes. The FBV series is a vertical assembly (dampers stacked on top of each other).

Catalog: HVAC Control and Balancing Dampers — VCD, MBD and RBD

Insulated/Thermally Broken Dampers

Model ICD series of dampers were developed for applications where it is necessary to minimize thermal transfer and reduce condensation.

Insulated Control Damper Model ICD

Model ICD-44 features a thermally broken insulated blade. ICD-45 features a thermally broken, insulated frame and blade. The ICD series meets the IECC (International Energy Conservation Code) requirements with a leakage rating of 3 cfm/ft^2 (5 m^3/hr) at 1 in. wg (248 Pa) or less.

Catalog: HVAC Control & Balancing Dampers — VCD, MBD and RBD

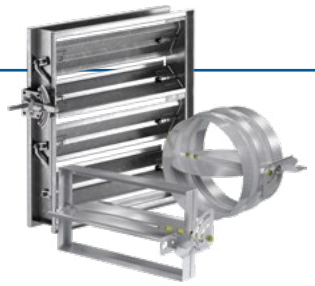
Access Doors

Access doors are designed for use in low to medium pressure duct systems. They provide a durable, practical, and inexpensive means of gaining access to damper components inside the ductwork.

Hinged Style: Model HAD
Cam Style: Model CAD
Round Style: Model RAD
Pressure Relief: Models PRAD/VRAD

* SE in model name denotes 316 stainless steel.
**SS in model name denotes 304 stainless steel.

Balancing



Models MBD/MBDR

Models MBD and MBDR are designed to regulate the flow of air in an HVAC system. Round and rectangular single-blade, and multiblade construction models are available. Models are standard with a locking manual quadrant. Cable operator is optional.

Catalog: HVAC Control and Balancing Dampers — VCD, MBD and RBD

Models RBD/RBDR

Models RBD and RBDR series offer the same function as MBD/MBDR series plus the added benefit of remote damper control at the diffuser or wall plate. These remote balancing dampers are ideal for applications where it is difficult to get access to manually adjust the dampers and balance airflow. The “EZ Balance” remote control operates the damper motor by connecting to the wall, ceiling, or diffuser mounted RJ11 connector.

Catalog: HVAC Control and Balancing Dampers — VCD, MBD and RBD

Model BTDR-50

The BTDR-50 is a cable-operated radial blade balancing damper (also known as a bowtie damper) that is designed for easy airflow adjustment at an air outlet or plenum neck.

Catalog: HVAC Control and Balancing Dampers — VCD, MBD and RBD

Automatic Balancing Dampers

Automatic balancing dampers self adjust to system pressure changes to maintain constant airflow. They are used in residential or commercial buildings to provide precise and automatic airflow regulation in supply or exhaust ventilation systems.

Model ABD

The ABD is an automatic balancing damper with the blade calibrated to automatically adjust to changing pressures.

Model ABD-FD

The ABD-FD is an automatic balancing damper with a UL 555 rated 1½ or 3 hour static fire damper.

ABD-RB

The ABD-RB combines an automatic balancing damper (model ABD) with the convenience of a factory-supplied register box.

Model ABD-T

The ABD-T is an automatic balancing damper with a square transition.

Model ABD-Z1 and ABD-Z2

The ABD-Z1 has a shutoff damper with an electric actuator, automatic balancing damper, and a plenum box as one assembly. The ABD-Z2 has an integrated automatic balancing damper that can be toggled between two pressure independent cfm set points by way of an electric actuator.

Backdraft and Pressure Relief Dampers

Backdraft dampers are designed to allow airflow in one direction and prevent reverse airflow. A variety of mounting orientations, airflow directions, operation types, and performance ratings are available.

Backdraft
Models BD/WD/EM/HB/HBR/WDR/SSWDR**

Exhaust Backdraft Damper models are designed to allow exhaust airflow but prevent airflow in the reverse direction and are typically used with a fan or power roof exhauster. Available in vertical or horizontal mount.

Intake Backdraft Damper models are designed to allow supply airflow into a building but prevent airflow in the reverse direction and are typically used with a fan or gravity intake ventilator. Available in vertical or horizontal mount.

Barometric Relief
Models BR/SEBR*

Barometric relief backdraft dampers have an adjustable start-open pressure for low velocity systems. Typically used for gravity hood ventilation, ductwork outlets, and room or stairwell pressurization.

Pressure Relief
Model HPR

Pressure relief backdraft dampers have an adjustable start-open pressure which is capable of maintaining pressure at various airflows and closes upon a decrease in differential pressure. Pressure relief dampers are typically used in industrial systems to relieve unexpected overpressure, or to admit additional air to a direct gas-fired burner or fume exhaust.

Catalog: *Backdraft and Pressure Relief Dampers*

Fire Dampers

Fire dampers are required by building codes to maintain the fire resistance ratings of walls, partitions, and floors that are penetrated by air ducts or transfer openings. Fire dampers are UL 555 Classified with a fire resistance rating of 1½ or 3 hours.

Dynamic-Rated
Models DFD/SEDFD*/DFDR/ODFD/SSDFDR**

Dynamic-rated fire dampers are designed to close under airflow and in HVAC systems that are operational in the event of a fire emergency. Fire dampers can be mounted either vertically or horizontally with airflow in either direction.

Catalog: *Life Safety Dampers*

Static-Rated
Models FD/OFD/SSFD**

Static-rated fire dampers are designed for use in HVAC systems that are automatically shut down in the event of a fire emergency. Static fire dampers are not designed to close against airflow.

Catalog: *Life Safety Dampers*

* SE in model name denotes 316 stainless steel.
**SS in model name denotes 304 stainless steel.

Ceiling Radiation Dampers

Ceiling radiation dampers are designed and tested to protect penetrations through the ceiling membrane of fire-resistive floor ceiling and/or ceiling assemblies.

Ceiling Radiation – Model CRD

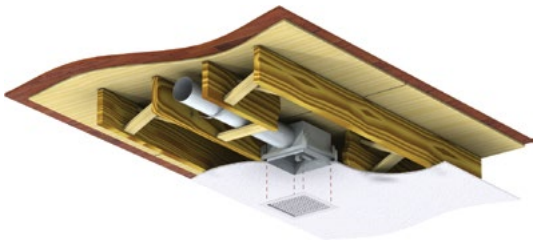
Model CRD is a UL 555C Classified ceiling radiation damper that is used for protection of ceiling openings in fire-rated floor/ceiling assemblies with fire resistance ratings of 3 hours or less. In addition, Greenheck CRDs are Warnock Hersey Listed for application in gypsum board ceilings or ceiling grid systems with fire resistance ratings of up to 3 hours. Models are available in round or rectangular shapes with butterfly-type blades or a curtain blade.

Catalog: *Life Safety Dampers*

Model CRD-1WJ

The CRD-1WJ is a UL 555C Classified ceiling radiation damper for installation in wood joist ceiling construction and approved for use in 17 ceiling designs as detailed in the UL Fire Resistance Directory. The CRD-1WJ provides the ceiling radiation damper installed in an insulated steel enclosure with R inlet shapes to connect to ductwork. The damper is positioned in the enclosure to accommodate 1½ in. (38 mm) grille depth.

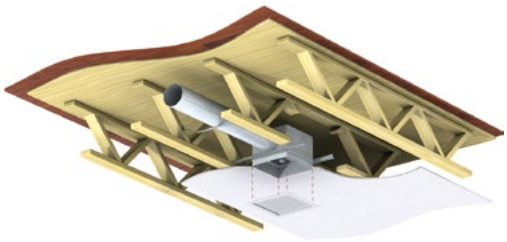
Catalog: *Life Safety Dampers*



Models CRD-1WT/CRD-2WT

The CRD-1WT and CRD-2WT are UL 555C Classified ceiling radiation dampers for installation in wood truss ceiling construction. These assemblies are given proprietary design numbers listed in the UL Fire Resistance Directory. The CRD-1WT and CRD-2WT models are provided with a flange attached around the perimeter of the damper. The damper is positioned either flush with the ceiling or above the ceiling for grille installation.

Catalog: *Life Safety Dampers*



Model CRD-501

The CRD-501 is a round ceiling radiation damper with low leakage. This model is UL 555C and UL 555S Classified. The CRD-501 has been qualified to 3000 ft./min (15 m/s) and 4 in. wg (1,000 Pa) for operational closure in emergency smoke control situations for use in HVAC systems.

Catalog: *Life Safety Dampers*

* SE in model name denotes 316 stainless steel.
**SS in model name denotes 304 stainless steel.

Combination Fire Smoke Dampers

Combination fire smoke dampers perform the function of both a fire damper and a smoke damper. Combination fire smoke dampers are UL 555 and UL 555S Classified with fire resistance for 1½ or 3 hours. Models are rated for use in systems up to 4000 ft./min or 8 in. wg. Greenheck's combination fire smoke dampers have a factory-installed actuator.

Traditional Fire Smoke – Models FSD/FSDR/SEFSD*/SSFSD**/SSFSDR**

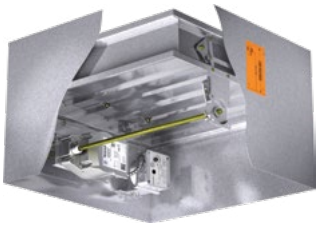
Combination fire smoke dampers are Classified to UL 555 and UL 555S and must be mounted within the plane of the wall or floor.

Catalog: *Life Safety Dampers*

Corridor Fire Smoke – Model CFSD

Corridor fire smoke dampers have a one hour fire resistance rating and UL 555S Leakage Rating. The dampers can be installed horizontally behind grilles and diffusers in corridor penetrations.

Catalog: *Life Safety Dampers*



Out-Of-Wall Fire Smoke – Model OFSD

OFSD dampers are Classified to UL 555 and UL 555S and can be installed outside of the plane of the wall or floor. The entire installation can be done from the grille side of the opening.

Catalog: *Life Safety Dampers*

Grille Access Out-Of-Wall Fire Smoke Model GFSD

GFSD dampers are Classified to UL 555 and UL 555S and can be installed outside of the plane of the wall or floor. This allows the actuator to be mounted internally with convenient access to the damper, actuator, and heat responsive device through the grille. A separate compartment houses the actuator allowing for a shallow operating depth.

Catalog: *Life Safety Dampers*

* SE in model name denotes 316 stainless steel.
**SS in model name denotes 304 stainless steel.

Smoke Dampers

Smoke dampers are designed to be used in conjunction with barriers within a building to control the spread of smoke in the event of a fire. Greenheck smoke dampers have been certified to UL 555S for use in systems up to 4000 ft./min or 8 in. wg. All models are rated for airflow and leakage in either direction.

Smoke – Models SMD/SMDR/SESMD*/SSSMD**/ SSSMDR**

Smoke damper models are available in leakage class I and II. Smoke dampers can be constructed of galvanized steel, 304SS, or 316SS and are available with a variety of actuators to meet the requirements of any application.

Catalog: *Life Safety Dampers*

Bubble-Tight Dampers

A bubble-tight damper is a heavy-duty damper designed for isolation applications to meet the requirement for zero leakage. Every bubble-tight damper is factory leakage tested to ensure a bubble-tight seal up to 30 in. wg. Galvanized, 304 or 316 stainless steel. These models are recommended for two-position shutoff applications.

Models HBTR/HBT

Model HBTR-151 is rated for pressures up to 10 in. wg (2.5 kPa)
Model HBTR-451 is rated for pressures up to 30 in. wg (7.5 kPa)
Model HBTR-551 is rated for pressures up to 40 in. wg (10 kPa)
Model HBT-221 is rated for pressures up to 10 in. wg (2.5 kPa)
Model HBT-321 is rated for pressures up to 20 in. wg (5 kPa)

Catalog: *Bubble-Tight Dampers*
Catalog: *Heavy-Duty/Industrial Dampers*

Blast Dampers

A blast damper is a heavy-duty damper designed to protect against blasts and rapid pressure changes. A blast damper remains open under normal operating conditions to allow normal airflow.

Model HBS

Model HBS-330/430 will close in the same direction as normal flow. Closing in the opposite direction as normal flow is an option.

Catalog: *Heavy-Duty/Industrial Dampers*

Industrial Control Dampers

Heavy-duty flanged-style frame dampers with various blade styles and pressure classes. Designed to control airflow and provide shutoff in HVAC or industrial process control systems.

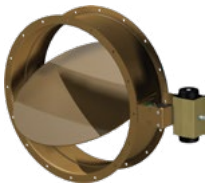
Models HCD: Rectangular

Models HCD/SEHCD are rectangular dampers available with pressure and velocity capacities up to 45 in. wg (11,161 Pa) and 6000 ft./min (30 m/s).

Model HCDR: Round

Model HCDR is a true round industrial damper available for pressure and velocity capacities up to 20 in. wg (4,960 Pa) and 6500 ft./min (33 m/s).

Catalog: Heavy-Duty/Industrial Dampers



Tornado Dampers

A tornado damper is a heavy-duty damper designed to protect against tornadoes and rapid pressure changes. A blast damper remains open under normal operating conditions to allow normal airflow.

Models HTOD

Model HTOD-330 will close in the same direction as normal flow. Closing in the opposite direction as normal flow is an option.

Catalog: Heavy-Duty/Industrial Dampers

Tunnel Transit Dampers

Underground road and metro tunnels are some of the most challenging environments in the world. High humidity, dust-laden air, and limited access can make the installation and operation of ventilation systems problematic. Greenheck's HTD series dampers for tunnel specific applications are designed to meet these challenges. Tunnel transit dampers are designed to meet specific portions of UL 555S, NFPA 130 and NFPA 502. They can be designed to 24 in. wg (6 kPa) of pressure and 4000 fpm (20.3 m/s) of velocity. These dampers are leakage tested in accordance with AMCA 500-D.

Models HTD

Model HTD-621 has a double skin flat blade with perimeter seal. Leakage rated at 4 cfm per sq. foot at 12 in. wg (less than .02 $m^3/s/m^2$ at 3 kPa), approximately 25% of UL Class I allowable.

Model HTD-630 features a fabricated airfoil blade. Leakage meets UL Class I @ 12 in. wg (3 kPa).

Model HTD-636 has a fire-rated airfoil blade. This model has been tested in accordance to BS476 for 2 hours. Leakage meets UL Class I @ 8 in. wg (3 kPa).

HTD-640 features an extruded airfoil blade. Leakage meets UL Class I @ 12 in. wg (3 kPa).

Catalog: Tunnel Transit Dampers — HTD
Catalog: Heavy-Duty/Industrial Dampers

Louvers

Greenheck offers industry-leading AMCA Licensed louvers. Our experienced sales staff and engineers can configure, design and manufacture a wide range of air control and architectural products to meet your highest standards for both performance and aesthetic appeal. Choose from extruded aluminum in a variety of designs: stationary, combination, adjustable, acoustic, sightproof, thinline, wind-driven rain, Florida Product Approved and Miami-Dade County Qualified, or FEMA 361 Tornado louvers. Louvered penthouses, equipment screens, and brick vents are also available. Most products can be finished as painted or anodized in a variety of standard colors or as a custom color match.

Stationary Extruded Louvers

Available in non-drainable, drainable head, drainable blade, and dual drainable blade models. J and K blades with 30 or 45 degree blade angles. AMCA Licensed for Water Penetration and Air Performance.

Drainable Blade: Models ESD/EDD/EHM

Model ESD drainable blade and EDD dual drainable blade louvers have outstanding resistance to water penetration. Optional 35º blades are also available to maximize free area (ESD-435, 635 and 635HP). EHM louvers offer a recessed mullion design providing a continuous blade appearance. Frame depths: ESD - 2, 4, 6 in.; EDD - 4, 6 in.; EHM - 6 in.

Drainable Head: Models EDJ/EDK

Models EDJ and EDK incorporate a drainable head member, which further decreases water penetration. Optional 30º blades are also available to maximize free area (EDJ/EDK-430). Frame depths: EDJ - 4, 6 in. and EDK - 4 in.

Non-drainable Blades: Models ESJ/ESK

Models ESJ and ESK are quite similar, except the K-blade design incorporates an additional offset or “rain hook” to provide extra protection against water penetration. Both models offer a hidden mullion design for a continuous blade appearance when multiwide sections are necessary. Frame depths: ESJ - 2, 4, 6 in.; ESK - 4 in.

Wind-Driven Rain Louvers

Wind-driven rain louvers are Greenheck's most effective louvers in minimizing water penetration through wall openings. Designed to protect air intake and exhaust openings in building exterior walls that are sensitive to the penetration of wind-driven rain. AMCA Licensed for Water Penetration, Air Performance, and Wind-Driven Rain.

Models EVH/EHH/EHV

Models EVH, EHH, EHV incorporate a drainable head member with vertical (EVH) or horizontal (EHH), or vertical back and horizontal front (EHV) rain-resistant blades to provide maximum resistance to wind-driven rain in even the most stringent AMCA 500L test procedure.
Frame depths: EVH - 3, 5 in.; EHH - 2, 4, 5, 6, 7 in. EHV - 5.5, 9 in.

Florida Product Approved/Miami-Dade County Qualified Louvers

Greenheck manufactures a full line of Florida Building Code Approved and Miami-Dade County Qualified louvers, which may be applied in Florida and throughout the Hurricane Prone Region which spans across all Gulf of Mexico and Atlantic Coastal states, as well as Hawaii.

All Greenheck Florida Building Code Approved and Miami-Dade County Qualified louvers are AMCA 540 Listed for debris impact protection and several are also AMCA 550 Listed for high velocity wind-driven rain.

Greenheck Florida Building Code Approved and Miami-Dade County Qualified louvered penthouses may be applied in any location where high wind loads and debris impact protection is required.

Miami-Dade County Qualified Louvers

Florida Product Approved Louvers

Miami-Dade County Qualified Penthouses

FEMA 361 Louver

Greenheck louver model AFL-501 is a UL Classified Wind-Storm Rated assembly that meets the requirements indicated within FEMA 361. This model retains extremely high wind load ratings while also passing the ICC 500-14 standard for debris impact testing (15 lb. 2x4 traveling at 100 mph).

Model AFL-601 is an all-in-one wind-driven rain FEMA dual-module with horizontal front blades and vertical rear blades designed to protect air intake and exhaust ventilation openings on FEMA 361/320 storm shelters or safe rooms. It is tested in accordance with the stringent ICC 500 (2020 and 2023) test standard and is UL Listed.

Thinline Extruded Louvers

Commonly used for interior or exterior applications where high free area and low airflow resistance are required.

Models ESU/ESJ

Models ESU and ESJ have a narrow frame depth and various frame options that make them ideal products for installation into curtainwalls, windows, door louvers, and as air conditioning grilles. ESU is available in 30º or 48º blade angles. ESJ has J style blades. Frame depths: ESU-153, 154, ESJ-155 - 1.5 in.

Adjustable Extruded Louvers

Designed to protect air intake and exhaust openings in exterior building walls. Operable blades can be closed for tight air shutoff. AMCA Licensed for Water Penetration and Air Performance (excludes EAH-690 with blade angle at 45º).

Drainable Blades: Model EAD

Model EAD louvers are designed with drainable blades for maximum resistance to water penetration. Typically operated by electric or pneumatic actuators with manual actuators available.
Frame depths: 4, 6 in.

Non-drainable Blades: Model EAH

Model EAH louvers have a drainable head design for increased resistance to water penetration. The EAH-690 has the option of opening to either 45º or 90º. Frame depths: EAH-690 (45º or 90º) - 6 in.

Combination Extruded Louver/Dampers

Models combine stationary louver blades and operable blades into one common frame member. Operable blades can be closed for tight air shutoff. AMCA Certified for Water Penetration and Air Performance (excludes EACC and GCE).

Drainable Blades: Models ECD/EAC/EACC/EACA

Model ECD (exposed), and EAC and EACC (concealed) blade linkages are available. Electric, pneumatic, or manual operation. Concealed actuator in the sill member is available (EACC). Airfoil blade available (model EACA).
Frame depths: 4, 6 in.

Gravity: Model GCE

Model GCE features gravity operation which allows airflow in one direction and prevents reverse airflow. GCE is designed for exhaust flow. Note: units must be mounted in direct proximity to an exhaust or intake fan. Frame depth: 4 in.

Sightproof Extruded Louvers

Sightproof extruded louvers are typically used to prevent visual see-through. AMCA Licensed for Water Penetration and Air Performance.

Drainable Blade: Model SED

The drainable blade models are very effective in minimizing water penetration through wall openings. Frame depths: 5 in.

Acoustical Fabricated Louvers

Acoustical fabricated models incorporate acoustically insulated blades to provide for sound attenuation to lower escaping noise. Independently tested for sound per applicable ASTM standards and AMCA Licensed for Water Penetration, Air and Sound Performance.

J-Blade: Model AFJ

Most economical. Frame depths: 6, 8, 12 in.

Airfoil Blade: Model AFA

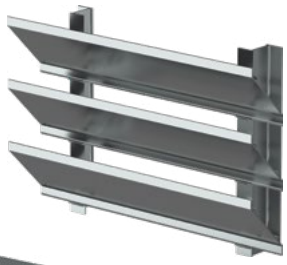
Offers highest free area and lowest airflow resistance. Frame depth: 8 in.

Penthouses and Equipment Screens

Equipment screens and exhaust or intake penthouse products are available in extruded aluminum or fabricated steel louver models. Custom designs to meet your application requirements are available. Numerous options for construction features and finishes are also available.

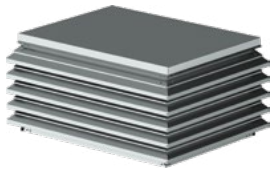
Penthouses: Models WIH/WRH

Penthouse models WIH and WRH offer clean horizontal lines, mitered corners, all aluminum construction, removable hoods, and weather-resistant blades. Custom louvered penthouses are also available to meet your specifications.



Model EES-401

For screen applications, standardized model EES-401 is a horizontal equipment screen offering extruded aluminum inverted “J” style blades.



Brick Vents

Brick vents provide a permanent means of ventilation for crawl spaces, hung ceilings, incinerator rooms, chimney flues, foundations, pipe spaces and corridors. Many standard sizes and finishes are available.

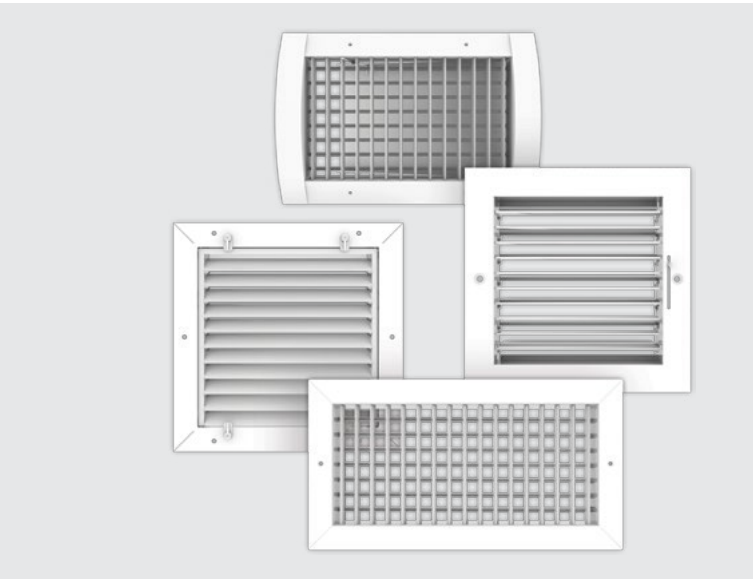
Model BVE

Model BVE features extruded construction that provides a quality, finished appearance. The units are designed with deep-louvered overlapping blades with storm drips on the rear of the blades. The units also have a high water stop at the rear of the unit for maximum protection against rain and weather.

Model BVF

Model BVF features extruded construction that includes an aesthetically pleasing flanged frame for easy installation in existing walls. The units are designed with deep-louvered overlapping blades with storm drips on the rear of the blades. The units also have a water stop at the rear of the unit for maximum protection against rain and weather.

Grilles, Registers and Diffusers



Air distribution products for industrial, commercial and institutional applications. Grilles, registers and diffusers cover supply or return openings for HVAC systems. These devices can be for aesthetic or functional (direction and control) purposes with a wide variation in type, features and mounting locations.

Grilles and Registers

Greenheck offers a variety of functional and aesthetic grilles and registers designed for air distribution and filtering for standard to heavy-duty applications.

XG-RH

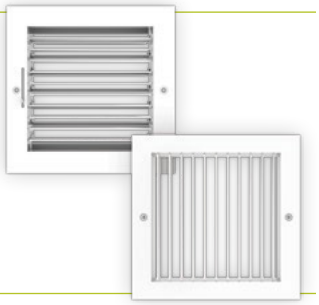
Model XG-RH return grille combines the advantages of corrosion-resistant construction and durability with an attractive design, excellent performance, and competitive pricing.

Catalog: *Grilles and Registers*

SG41/42

The SG41/42 series sets the standard for performance and appearance for supply grilles/registers in the industry. Model SG41 (Single Deflection) and SG42 (Double Deflection) are available in aluminum or is steel construction.

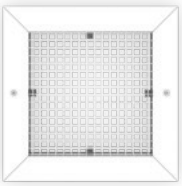
Catalog: *Grilles and Registers*



XG-CC5

Model XG-CC5 is an aluminum sidewall or ceiling return/exhaust grille with 1/2-inch x 1/2-inch x 1/2-inch cube core designed to provide low pressure drops and low sound levels.

Catalog: *Grilles and Registers*



XG-MRSD

Model XG-MRSD is an aluminum round architectural single deflection grille with individually adjustable deflection blades.

Catalog: *Grilles and Registers*

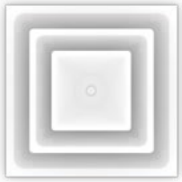
Ceiling Diffusers

Diffusers offer aesthetic or functional properties and have wide variation in their type, features and mounting locations. These diffusers are designed for flexibility including square, louvered, and perforated models covering a wide range of applications.

CDS Series

Model CDS series is a square face diffuser that provides a tight horizontal 360° discharge pattern for superior induction and occupant comfort, offered in steel or aluminum construction and is an excellent choice for VAV applications.

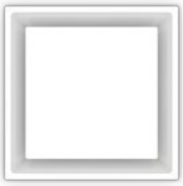
Catalog: Ceiling Diffusers



CDP Series

Model CDP series is a square panel-face ceiling diffuser that offers an attractive, single panel design that blends well with all ceilings and provides a tight 360° discharge pattern. The face panel is easily removable without tools.

Catalog: Ceiling Diffusers



XG-7500 Series

Model XG-7500 Series are perforated ceiling diffusers. The diffusers have a round neck and face-mounted adjustable pattern controllers, making this series an excellent choice for VAV applications.

Catalog: Ceiling Diffusers

Linear Diffusers

Linear diffusers and grilles provide a clean look that uses less space. These diffusers and grilles typically are on walls or ceilings for use as air curtains around entrances and windows.

XG-2000 Series

Model XG-2000 series is engineered for supply and return air distribution in heating, cooling and ventilating applications, and is designed for sidewall, floor, sill and ceiling installation.

XG-6600 Series

Model XG-6600 Series aluminum linear slot diffusers are an excellent choice for continuous linear applications, providing a clean appearance and easy installation.

XG-AFL Series

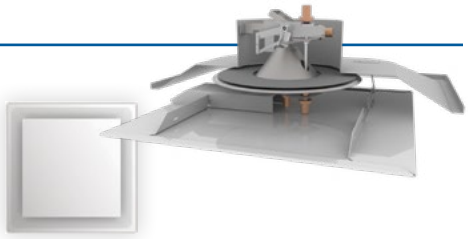
The XG-AFL Series offers superior air distribution performance and sculptured elegance. Its specially designed air pattern controllers easily adjust to satisfy a myriad of applications.

Thermal Diffusers

Thermal control actuators sense the temperature in the indoor space, adjusting the damper position accordingly. The flow of warm or cool air is varied until the optimal temperature is reached.

XG-MSCVH

Model XG-MSCVH is a square plaque face thermally actuated cooling and heating diffuser.



Air Terminal Units

Air terminal units (ATU) are zone-level air distribution devices that regulate airflow for maximum occupant comfort. The ATU controls the zone space temperature to maintain a desired occupied space temperature. In variable air volume (VAV) systems, the flow of air is supplied by a single air handling unit. ATUs are available with pneumatic or digital controls. Low noise levels and available space are important considerations when selecting these units.

Single Duct Air Terminals

Single duct terminal units are at the core of today's variable air volume (VAV) systems, regulating airflow to an occupied space. The staple of today's HVAC system designer, VAV systems lower operating costs by using less central fan energy and less refrigeration energy.

Fan Powered Air Terminal Units - Constant Volume

Series fan-powered terminals typically heat and cool perimeter zones. Using waste heat recovery from the ceiling plenum and reduced central fan horsepower can save on operating costs. In the series fan-powered terminal, the primary air valve and fan are in the primary airstream and sized for the cooling load. The fan runs continuously during both heating and cooling modes. The volume of supply air remains constant at all times.

Fan Powered Air Terminal Units - Variable Volume

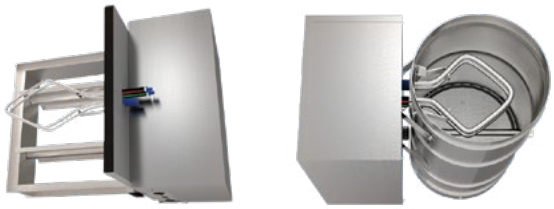
Parallel fan-powered terminals are typically used for heating and cooling of perimeter zones. In the parallel fan-powered terminal, the fan section is outside of the primary airstream and typically only runs in the heating mode. It is typically sized for 50% of the maximum primary airflow, which can result in lower noise levels, lower unit first costs, and reduced energy consumption when compared to a series fan-powered terminal. Conditioned primary air volume is varied during cooling while the fan cycles on during heating.

Dual-Duct Air Terminal Units

Dual-duct terminal units meet any design criteria in a dual duct variable air volume (VAV) system. The dual-duct terminal unit varies the volume of the hot and cold decks as well as the discharge temperature of the terminal unit to maintain optimum conditions in the occupied zone.

Retrofit Air Terminal Units

Retrofit terminal units enable conversion of existing constant volume systems to energy-efficient variable air volume (VAV) systems and achieve lower operating costs due to less central fan energy and less refrigeration energy.



DDC Controls

Model XG-VAV is a universal controller based on BACnet®. XG-VAV is factory-mounted, wired, and preconfigured for standard control sequences.

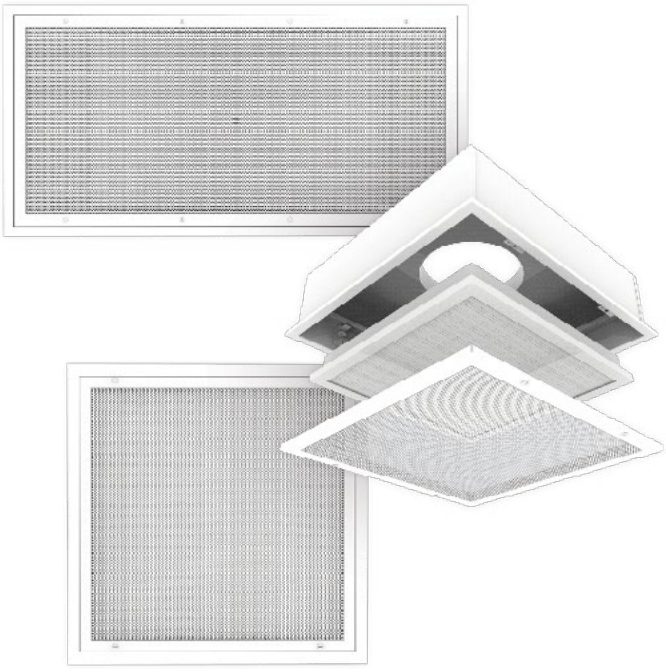
Healthcare, Laboratory, and Cleanrooms

Air Distribution products designed to provide unique airflow patterns to meet the requirements of these specialized applications. Products include laminar flow and radial flow diffusers, as well as fan filter units.

Laminar Flow Diffusers: Models HLC-LFD, HLC-CLF and HLC-GSL

Non-aspirating diffusers, more commonly referred to as Laminar Flow Diffusers, play a critical role in creating an aseptic environment in operating rooms, protective environment patient rooms, and cleanrooms. These diffusers supply low velocity air with minimal entrainment which creates a column of clean air in these critical applications. Models HLC-LFD and HLC-CLF are equipped with internal baffles to ensure the non-aspirating flow of clean filtered air into the space. When the highest levels of air cleanliness are necessary, the HLC-GSL incorporates either HEPA or ULPA gel-seal filters to supply the most sterile air possible.

Catalog: *Healthcare, Laboratories, and Cleanrooms*



Operating and Imaging Room Systems: Models HLC-HCG, HLC-MPA, HLC-SAC and HLC-SPA

Laminar diffuser arrays with integrated lighting maximize diffuser coverage over the patient while simplifying coordination during design and installation. Thoughtfully integrated lighting solutions enhance visibility within the operating and imaging rooms, ensuring optimal conditions for medical procedures.

Catalog: *Healthcare, Laboratories, and Cleanrooms*

Radial Flow Diffusers: Models HLC-FFR and HLC-GFR

These diffusers supply large volumes of clean air to dilute potential contaminants that may escape fume hoods within laboratory spaces. Their unique air pattern has very short throw patterns to prevent disruption of experiments and testing. Diffusers are available with a 2-way (180°) or 1-way (90°) distribution pattern. For applications like Airborne Infection Isolation rooms that necessitate high-efficiency filtration at the diffuser, the HLC-GFR features a knife-edge style filter rack for use with gel-seal HEPA or ULPA filters.

Catalog: *Healthcare, Laboratories, and Cleanrooms*

Fan Filter Diffusers: Models HLC-FPS, HLC-FPR, HLC-FPI and HLC-FPC

Fan filter diffusers are devices used to control the air quality by removing airborne particles, bacteria, and other contaminants from the supply airstream. Fan filter diffusers are an essential component of cleanrooms and compounding pharmacies, as they help to maintain a high level of air quality and prevent contamination. These diffusers incorporate a fan to control airflow into and out of these spaces utilizing gel-seal HEPA or ULPA filters. These are available in supply (HLC-FPS) and reverse flow (HLC-FPR) variants, as well as inline (HLC-FPI) or mobile/cart versions (HLC-FPC).

Catalog: *Healthcare, Laboratories, and Cleanrooms*

Computer Aided Product Selection

All Greenheck products are supported by the industry's best product literature, electronic media and two product selection tools – CAPS®, our Computer Aided Product Selection software program and eCAPS®, our online selection tool. These programs will guide you from initial design through detailed submittals.

And, of course, you can always count on the personal service and expertise of our national and international representative organization. To locate your nearest Greenheck representative call 715-359-6171 or visit our website at www.greenheck.com

Building Value in Air

Greenheck delivers value to mechanical engineers by helping them solve virtually any air quality challenges their clients face with a comprehensive selection of top quality, innovative air-related equipment. We offer extra value to contractors by providing easy-to-install, competitively priced, reliable products that arrive on time. And building owners and occupants value the energy efficiency, low maintenance and quiet dependable operation they experience long after the construction project ends.

Our Commitment

As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.

Product warranties can be found online at Greenheck.com, either on the specific product page or in the literature section of the website at Greenheck.com/Resources/Library/Literature.

GREENHECK
Building Value in Air.

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