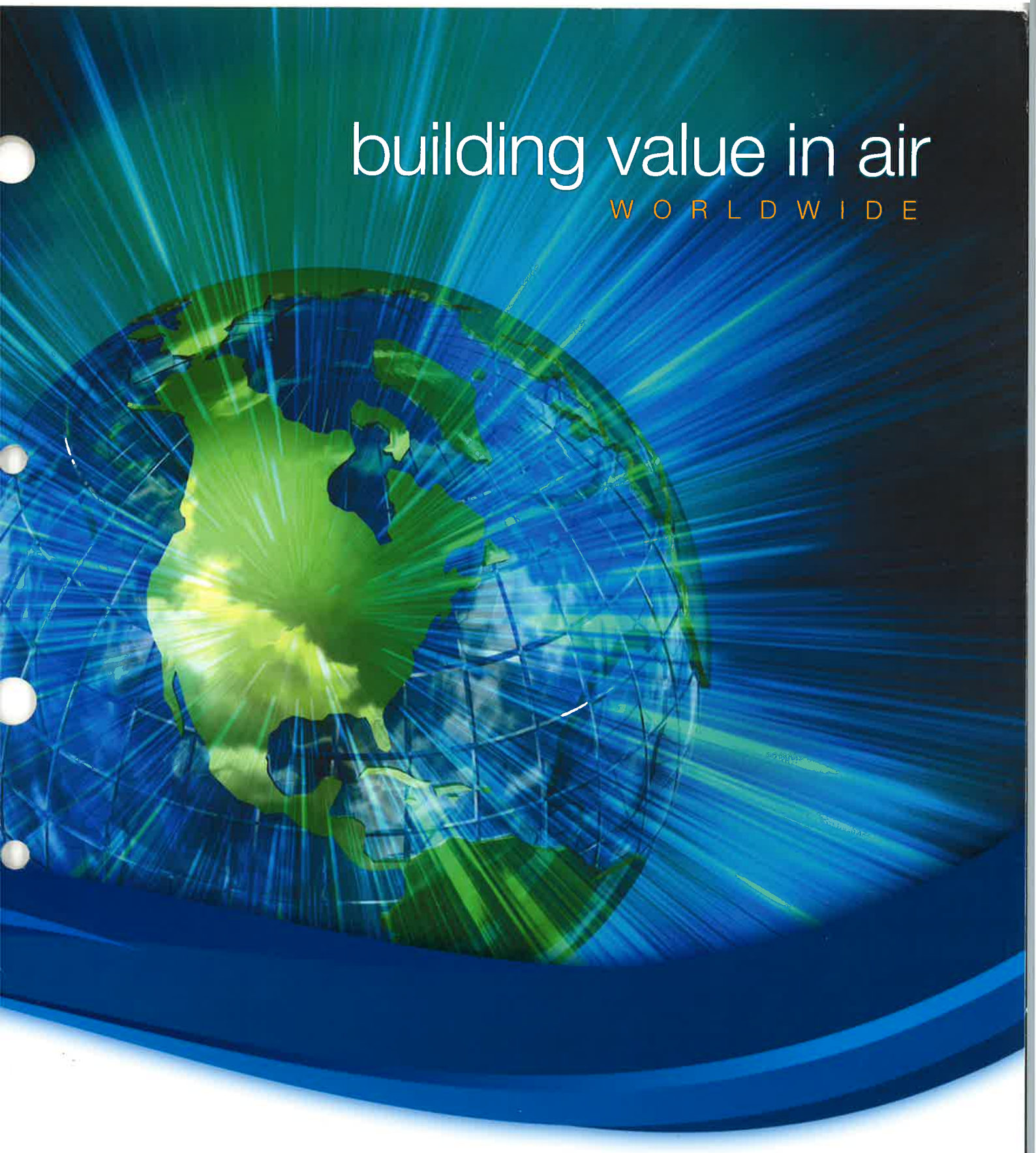


GREENHECK®
Building Value in Air.







Greenheck's employees are deeply committed to being easy to do business with anywhere in the world. As an industry-leading manufacturer, our focus is to ***build value in air***... by offering the widest range of reliable air movement and control products and to exceed your expectations for on-time delivery, easy installation, performance and operating efficiency.

Our commitment to our customers is what drives our long-standing sustainability practices. We continuously strive to reduce energy usage and other production costs to ensure competitive prices for you and ongoing business success. We support the health, safety and training of our employees to achieve the high quality product performance you expect from Greenheck — and deserve. And we take on the industry's most complex challenges by introducing innovative new product solutions to meet your future needs.

Our Mission:

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



Our Vision:

Greenheck will be a company that exceeds customer expectations and that others strive to emulate. We will be the worldwide leader in providing timely, flexible and cost-effective solutions focused on the movement, cleaning, tempering, and control of air.

Building value in air — from the beginning.

Today, we're the world's largest manufacturer of commercial, institutional and industrial air movement, control and conditioning equipment.

Greenheck's worldwide leadership in providing cost-effective, value-added solutions for air movement, control and conditioning 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 distribution throughout the world. Today, quality Greenheck products are efficiently moving air in commercial buildings, institutions and factories 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; Saltillo, Mexico; Kunshan, China and Delhi NCR Region, India, you'll find thousands of hardworking and experienced employees designing, manufacturing and delivering the most dependable air movement and control equipment available.

Manufacturing

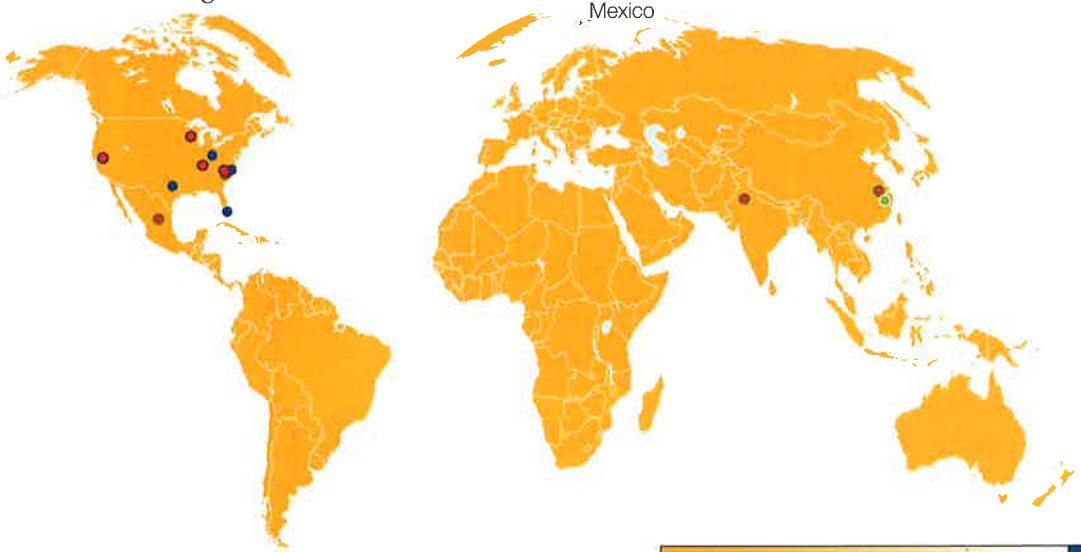
Schofield, WI	Shelby, NC
Rocklin, CA	Kunshan, China
Frankfort, KY	Saltillo, Mexico
Kings Mountain, NC	Delhi NCR Region, India

National Distribution

Schofield, WI	Miami, FL
Rocklin, CA	Greensboro, NC
Dallas, TX	

International Distribution

China	India
Mexico	

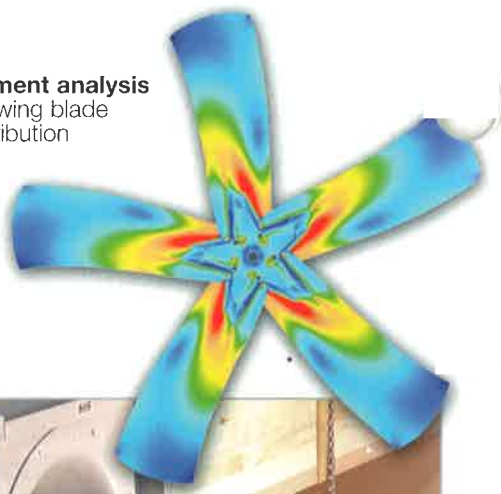


We don't "value engineer" — we engineer value.

Our innovative engineers continuously explore more cost-effective, value-added product solutions.



Our engineers continuously develop and introduce new product solutions based on the input they receive from more than 300 Greenheck manufacturer representatives around the world who listen carefully to what you need. State-of-the-art computer modeling and extensive prototype testing ensure that our newest products offer more efficient performance and easy, lower-cost installation. Whether it's developing compact, quieter fans with the lowest industry sound levels, kitchen exhaust systems that trap more grease, the most advanced energy recovery ventilators available, or more effective laboratory exhaust systems, Greenheck engineers always have one goal in mind: deliver value that exceeds your expectations.



Finite element analysis image showing blade stress distribution

Every product we make is thoroughly tested to ensure top performance and unequaled reliability.

Because we test our products so extensively, Greenheck offers more products with certifications from AMCA, UL, ETL, CSA and AHRI than any other manufacturer. Our real-life testing procedures measure aerodynamic performance, sound levels, structural integrity, mechanical operation, environmental impact, temperatures, vibration levels and more. We also have on-site registered air chambers and registered sound testing facilities. In addition, Greenheck tests new life safety damper products in our on-site UL Certified testing lab. We can also test louver and damper performance on-site with extensive dynamic water tests and missile impact tests.

Bearings, pulleys and motors must also meet the industry's highest standards for reliability and endurance.





Robert C. Greenheck Innovation Center

We have the world's most comprehensive line of top-quality air movement and control products.

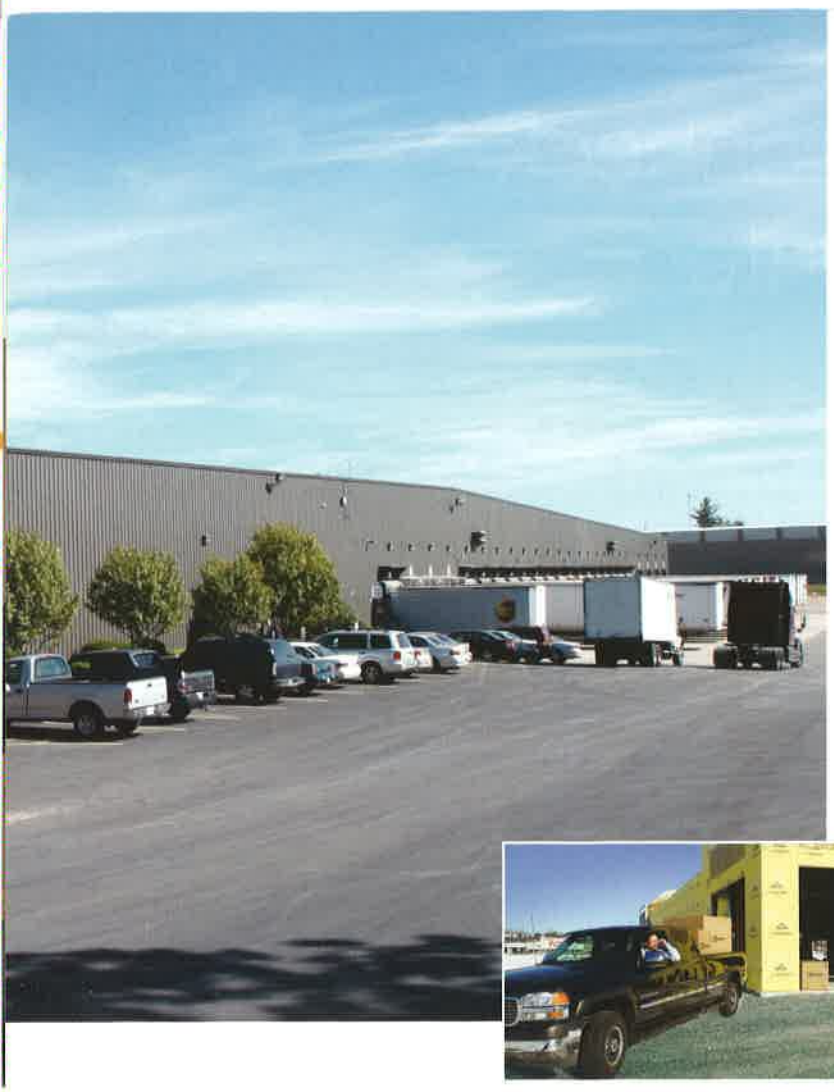
No other manufacturer offers you as many options for air movement and control as Greenheck. Specifying engineers and contractors can rely on us for products that stand at the forefront of technology and performance. To maintain your trust, we assign a knowledgeable product manager, a talented group of engineers and an experienced customer service team to each of our product areas:

- Roof Mounted Fans & Gravity Ventilators
- Inline, Ceiling & Sidewall Fans
- Utility, Centrifugal & Radial Blowers
- Fume Exhaust Systems
- Laboratory Exhaust Systems
- Kitchen Ventilation Systems
- Energy Recovery Ventilators
- Make-Up Air
- Packaged Ventilation Systems
- Indoor Air Handlers & Fan Coils
- Coils
- Duct Heaters
- Dampers
- Louvers

Our engineers design and build many of our machines and dies to accommodate the unique value-added features you'll find in our products. In addition, state-of-the-art, numerically controlled manufacturing systems and a highly efficient, experienced production staff help Greenheck meet the most challenging delivery requirements in the industry. To keep up with the worldwide demand for our products, we operate and maintain over two million square feet of manufacturing and office space.



When you specify Greenheck, you're specifying quality.



The value of Greenheck customer service.

We want to be the easiest company you'll ever do business with.

Giving you the level of customer service that distinguishes us from our competitors has always been a hallmark at Greenheck. Greenheck makes it easy for you to access all the technical information you'll need to specify and select our products. You can go to greenheck.com, navigate our comprehensive product and technical literature or request CAPS — our innovative Computer-Aided Product Selection program. In addition, we offer Internet-based training. And of course, you're always welcome to take a plant tour and visit one of our spectacular Greenheck Product Centers in Schofield, WI, Kunshan, China and Saltillo, Mexico.

Most products can be shipped in less than 24 hours.

Distribution centers around the world ensure that Greenheck products are readily available.

Today, even our most complex ventilation systems and largest products can be built in less than ten days, and many products can be built and shipped the next day. Greenheck provides an efficient Quick Delivery in-stock program that ships products to your jobsite in less than 24 hours. In fact, most orders received before noon can be shipped the same day! Stocking warehouses at our manufacturer's representatives are backed up by strategically located Greenheck distribution centers around the world.





Bernard A. Greenheck Education Center
Schofield, Wisconsin USA



Our Products

Engineered and manufactured for top performance — and value.

8  Roof Mounted Fans and Gravity Ventilators

13  Centrifugal Ceiling and Cabinet, Exhaust and Supply Fans

14  Centrifugal Inline, Tubular, Mixed Flow and Axial Fans

19  Vari-Green® Motors, Vari-Green Controls & Motor Starters

20  Utility, Centrifugal & Radial Blowers

24  Fume Exhaust Systems

25  Laboratory Exhaust Systems

28  Kitchen Ventilation Systems

32  Energy Recovery Ventilators

36  Make-Up Air

39  Packaged Ventilation Systems

40  Indoor Air Handlers, Fan Coils & Coils

42  Duct Heaters

43  Dampers

50  Louvers

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 roof upblast and, sidewall exhaust 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 fans. Capacities range from 50 to 45,000 cfm (85 to 76,455 m^3/hr) and 3.25 in. wg (806 Pa). Third-party certified (Florida Product Approved and Miami-Dade County Qualified) for high wind and AMCA Licensed for Sound and Air Performance. IBC and OSHPD seismic certified. Select models with CE Mark.



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

Models LD/LB

Models LD/LB feature a low silhouette housing design with "rib-lock" construction. The Vari-Green® high-efficiency motor is available on model LD direct drive fans. Capacities range from 100 to 37,500 cfm (170 to 63,713 m^3/hr) and 2 in. wg (496 Pa). AMCA Licensed for Sound and Air Performance.



Catalog: *Centrifugal Roof Exhaust Fans — Series L (LD/LB)*

Models LDP/LBP

Models LDP/LBP feature an extruded aluminum louvered penthouse housing design (severe duty louvered enclosure). The Vari-Green® high-efficiency motor is available on model LDP direct drive fans. Capacities range from 100 to 37,500 cfm (170 to 63,713 m^3/hr) and 2 in. wg (496 Pa). Third-party certified (Florida Product Approved and Miami-Dade County Qualified) for high wind and AMCA Licensed for Sound and Air Performance.



Catalog: *Centrifugal Roof Exhaust Fans — Series L (LDP/LBP)*

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 Mounted
Models CW/CWB - Sidewall Mounted





Model CUE/CUBE spun aluminum fans are specifically designed for roof mounted applications. The fans feature a one piece windband continuously welded to the curb cap and double-studded isolators for true vibration isolation. Models CW/CWB are designed for sidewall mounted applications. 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 and CW direct 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 Sound and Air Performance. IBC and OSHPD seismic certified. Select models with CE Mark.

Catalog: *Centrifugal Upblast and Sidewall Exhaust — CUE/CUBE, CW/CWB*

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 762 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 7,000 cfm (595 to 11,893 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 Sound and Air Performance. IBC and OSHPD seismic certified.

Catalog: *Centrifugal Upblast and Sidewall Exhaust — USGF*

Propeller Tube Axial 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 (500°F/260°C for 4 hours or 1000°F/538°C 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 64,500 cfm (4,757 to 109,586 m^3/hr) and 1 in. wg (248 Pa). AMCA Licensed for Sound and Air Performance. RBUMO is IBC and OSHPD seismic certified.



Catalog: *Propeller Upblast Roof Fans — RBU/RBUMO/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 4,000 to 66,800 cfm (6,796 to 113,494 m^3/hr) and 1 in. wg (248 Pa). For higher pressure capabilities use roof mounted option on model TBI-FS. AMCA Licensed for Sound and Air Performance.



Catalog: *Tube Axial Roof Upblast — TAUB*

Roof Upblast: Models TAUD/TAUB-CA

Models TAUD/TAUB-CA have cast aluminum blades. Typical applications include clean air, fume exhaust, and spark resistant construction. Capacities range from 2,400 to 74,000 cfm (4,078 to 125,727 m^3/hr) and 1.25 in. wg (310 Pa). For higher pressure capabilities use roof mounted option on models TDI/TBI-CA or AX. AMCA Licensed for Air Performance.

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

Centrifugal Supply Fans

The centrifugal roof supply fans include filtered and non-filtered belt-driven units. These fans are suitable for non-tempered kitchen make-up air or building supply air.

Model SAF

Model SAF filtered roof supply fan features a belt-driven, double-width, forward-curved, galvanized blower for low-cost, low sound, and high performance applications. Capacities range from 850 to 14,000 cfm (1,444 to 23,786 m^3/hr) and 3.5 in. wg (868 Pa). AMCA Licensed for Sound and Air Performance.



Catalog: *Centrifugal Roof Supply Fan — SAF*

Models KSFB and KSFD



Models KSFB and KSFD economically supply untempered make-up air where needed. Kitchen make-up air applications are common and an extended weatherhood option provides a 10 foot separation between intake and exhaust fan discharge. Capacities range from 800 to 10,250 cfm (1,359 to 17,415 m^3/hr) and 2.5 in. wg (622 Pa).

Catalog: Untempered Make-Up Air for Kitchen Systems — KSFB and KSFD

Models RSF/RSFP



Model RSF/RSFP fans feature forward-curved wheels designed for high efficiency and low sound. Housing styles include a straight-sided hood (RSF) or a louvered penthouse which features extruded aluminum louvers (RSFP). Capacities range from 700 to 14,500 cfm (1,189 to 24,636 m3/hr) and 2 in. wg (496 Pa). Third-party certified (Florida Product Approved and Miami-Dade County Qualified) for high wind and AMCA Licensed for Air Performance. IBC and OSHPD seismic certified.

Catalog: Centrifugal Roof Supply Fans — RSF and RSFP

Model LSF



Model LSF features a double-width centrifugal blower with a backward-inclined wheel to efficiently supply filtered air. The aluminum louvered penthouse is available with a standard machine finish or multiple decorative coatings for aesthetics. Capacities range from 800 to 37,000 cfm (1,359 to 62,863 m^3/hr) and 5.5 in. wg (1,364 Pa).

Catalog: Centrifugal Fans — LSF

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



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 700 to 86,500 cfm (1,189 to 146,964 m^3/hr) and 1.5 in. wg (372 Pa). Third-party certified (Florida Product Approved and Miami-Dade County Qualified) for high wind and AMCA Licensed for Sound and Air Performance. IBC and OSHPD 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 offers the ability to exhaust or supply air on demand. Performance is equivalent in both the exhaust and supply modes. Capacities range from 2,000 to 70,500 cfm (3,398 to 119,780 m^3/hr) and 1 in. wg (248 Pa). Third-party certified (Florida Product Approved and Miami-Dade County Qualified) for high wind. IBC and OSHPD 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 1.4 in. wg (348 Pa). AMCA Licensed for Sound and Air Performance.

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

Recirculating Roof Fans

The propeller recirculating roof fans include direct driven fans with and without filters. These fans have cast aluminum blades and are available with optional control centers. Suitable for clean air applications, such as factories and warehouses.

Models ESRMD/ESRMDF/ERD

Model ESRMD, also called the four-way fan, offers the flexibility to meet changing needs brought on by production processes or seasonal shifts by exhausting, supplying, recirculating, or mixing air as required. Performance is equivalent in all four modes of operation. Capacities range from 2,800 to 43,000 cfm (4,757 to 73,057 m^3/hr) and 0.375 in. wg (93 Pa).

Catalog: Recirculating Roof Fans — ESRMD, ESRMDF and ERD



Gravity Ventilators

The gravity intake and relief ventilators are non-powered 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. Third-party certified (Florida Product Approved and Miami-Dade County Qualified) 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



Model RGU

Model RGU gravity upblast ventilators are designed for use as a weatherproof outlet on vertical, high velocity exhaust systems.

Catalog: Gravity Ventilators — RGU



Centrifugal Ceiling and Cabinet, Exhaust and Supply



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 construction, high-efficiency, and low sound levels. Centrifugal inline fans are ideal for clean air applications, including intake, exhaust, return, or make-up air.

Ceiling and Cabinet Inline Fans

Ceiling and cabinet fans are direct drive fans. They have forward-curved wheels for low sound and high efficiency and are suitable for clean air applications such as bathrooms, hotels, storage rooms, or offices.

Model SP

Model SP is a direct drive ceiling exhaust fan designed for clean air applications where low sound levels are required. Many options and accessories are available including the Vari-Green® EC motor, lights, motion detectors, ceiling radiation dampers and speed controls. Model SP-A may be easily converted from horizontal to a vertical discharge. Capacities range from 25 to 1,600 cfm (42 to 2,718 m^3/hr) and 1 in. wg (248 Pa). Select models with the CE Mark. AMCA Licensed for Sound and Air Performance. Many models are ENERGY STAR® Qualified.



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

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). Select models with the CE Mark. 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 inline, ceiling, and sidewall exhaust or supply products are suitable for a wide range of commercial and industrial applications. Ceiling and cabinet fans are easily mounted in or above ceilings for efficient and quiet exhaust applications. Sidewall fans are wall mounted supply or exhaust units suitable for clean or fume-laden air applications. 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 200 to 6,000 cfm (340 to 10,194 m^3/hr) and 1.5 in. wg (372 Pa). AMCA Licensed for Air Performance.



Catalog: Centrifugal Cabinet Fans — BCF

Model BDF

Model BDF is a belt drive duct fan designed for efficiency and reliability in supply, exhaust, or return air applications. Capacities range from 300 to 17,000 cfm (510 to 28,883 m^3/hr) and 3 in. wg (744 Pa). AMCA Licensed for Sound and Air Performance.



Catalog: Centrifugal Cabinet Fans — BDF

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 Sound and Air Performance. IBC and OSHPD seismic certified. Select models with CE Mark.



Catalog: Centrifugal Inline Fans — SQ and BSQ

Tubular Centrifugal Fans

Greenheck tubular centrifugal fans, model TCB, TCBRS and TCBRU, have been designed for commercial and industrial inline or roof upblast applications that demand quiet, efficient and reliable air movement. Tubular centrifugal fans can be mounted in any position from horizontal to vertical providing for installations in the smallest possible space.

Model TCB



Model TCB uses a backward-inclined centrifugal wheel for high efficiencies and low sound levels when used in medium pressure ducted systems. All TCB inline fans are belt-driven with the motor out of the airstream. Fan construction includes the roof upblast model TCBRU and roof supply model TCBRS. Capacities range from 360 to 24,000 cfm (612 to 40,776 m^3/hr) and 4.5 in. wg (1,116 Pa). Model TCB is AMCA Licensed for Sound and Air Performance.

Catalog: Tubular Centrifugal Fans — TCB/TCBRU/TCBRS

Model TCBRS



Model TCBRS features aluminum backward-inclined wheels for quiet and efficient supply airflow. Greenheck's Fabra Hood housing on this model provides a strong, weathertight cover, and is available with filters. Capacities range from 360 to 24,000 cfm (612 to 40,776 m^3/hr) and 4 in. wg (992 Pa).

Catalog: Tubular Centrifugal Fans — TCB/TCBRU/TCBRS

Model TCBRU



Model TCBRU is a belt drive upblast roof exhaust fan. It features a tapered outlet which creates high outlet velocities to carry contaminated exhaust away from nearby make-up air units. Capacities range from 360 to 24,000 cfm (612 to 40,776 m^3/hr) and 4.5 in. wg (1,116 Pa).

Catalog: Tubular Centrifugal Fans — TCB/TCBRU/TCBRS

Mixed Flow Fans

Mixed flow fans are an excellent choice for inline ventilation applications. This fan design combines the best axial and centrifugal properties: high fan efficiency, low sound levels, and a smooth, steep fan curve for stable fan selections. Mixed flow fans can be mounted in any position from horizontal to vertical and their compact design allows for installations in space limited areas.

Model EQB



Model EQB is an economical mixed flow fan that delivers efficient and quiet performance. Fans include a universal mounting system to accommodate any vertical or horizontal installation configuration. Slip-fit duct collars also allow for quick and easy connection to ductwork. Plus, model EQB utilizes air handling quality bearings with L_{10} life in excess of 100,000 hours (equivalent to an average L_{50} life of 500,000 hours) for years of reliable operation. Capacities range from 1,200 to 26,500 cfm (2,039 to 45,024 m^3/hr) and 3 in. wg (744 Pa). AMCA Licensed for Sound (inlet and outlet) and Air Performance.

Catalog: Mixed Flow Inline Fan — EQB (belt drive)

Models QEI/QEID

Models QEI/QEID include the universal mounting system for motor position changes in the field. Fans have slip-fit duct collars for quick and easy connection to ductwork. Typical applications include ventilation of office buildings, concert halls, parking garages, educational facilities, libraries, and dormitories. Air handling quality bearings with L_{10} life in excess of 80,000 hours (equivalent to an average life of 400,000 hours) (QEI) and vibration test of complete assembly at the factory prior to shipment. Capacities range from 500 to 115,000 cfm (850 to 195,386 m^3/hr) and 8.5 in. wg (2,108 Pa). AMCA Licensed for Sound (inlet and outlet) 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: Models TDI/TBI-CA

Models TDI/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 800 to 95,000 cfm (1,359 to 161,406 m^3/hr) and 3.25 in. wg (806 Pa). AMCA Licensed for 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: Models TBI-FS

Model TBI-FS has a fabricated steel hub and airfoil blades. It is suitable for continuous high temperature (400°F/204°C max.) for inline configurations, (500°F/260°C max.) for roof upblast configuration and is available with UL Power Ventilators for Smoke Control Systems. 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 3,300 to 76,000 cfm (5,607 to 129,124 m^3/hr) for inline configurations [5,500 to 74,000 cfm (9,345 to 125,727 m^3/hr) for roof upblast configurations] and 4 in. wg (995 Pa). Bolt-on straightening vanes are available for increased efficiency. AMCA Licensed for Sound and Air Performance.

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

Inline or Roof Upblast: Model AX

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 Power Ventilators for Smoke Control Systems and UL 705. Bolt-on straightening vanes (AX-V) are available for increased efficiency. Capacities range from 500 to 150,000 cfm (850 to 254,852 m^3/hr) and 5 in. wg (1,244 Pa). AMCA Licensed for 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. For sound critical applications, belt drive vane axial fans are available with Greenheck's sound trap housing. UL/cUL 705 for electrical is available. A complete vibration test of all fans are performed prior to shipment. Capacities range from 2,000 to 140,000 cfm (3,398 to 237,862 m^3/hr) and 9 in. wg (2,232 Pa). AMCA Licensed for 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. For sound critical applications, direct drive vane axial fans are available with Greenheck's sound trap housing. UL/cUL 705 for electrical is available. A complete vibration test of all fans are performed prior to shipment. Capacities range from 1,200 to 200,000 cfm (2,039 to 339,802 m^3/hr) and 12 in. wg (2,976 Pa). AMCA Licensed for Air Performance.

Catalog: Vane Axial Fans — VAB and VAD



Sound Trap Housing for Models VAB & VAD

Sound trap housings effectively decrease inlet and outlet sound power levels while only slightly increasing fan length and adding no additional pressure drop to the system.

Catalog: Vane Axial Fans — VAB and VAD



Sidewall Exhaust, Supply and Reversible Fans

The sidewall 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 S1/S2/SC3/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® EC motor is available on model SE direct-drive fans. Capacities range from 100 to 87,000 cfm (170 to 147,814 m^3/hr) and 1 in. wg (248 Pa). AMCA Licensed for Sound and Air Performance.

Catalog: *Sidewall Propeller Fans — Exhaust, Supply and Reversible*

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 2,000 to 80,000 cfm (3,398 to 135,921 m^3/hr) and 0.75 in. wg (186 Pa).

Catalog: *Sidewall Propeller Fans — Exhaust, Supply and Reversible*

Models CW/CWB



Models CW/CWB centrifugal spun aluminum fans are specifically designed for sidewall mounted applications. Contaminated or grease-laden exhaust air is discharged out and away from building walls. The fans feature double-studded isolators for true vibration isolation. The Vari-Green® EC motor is available on model CW direct-drive fans. Capacities range from 70 to 12,500 cfm (119 to 21,238 m^3/hr) and 2.5 in. wg (622 Pa). Third-party certified (Florida Product Approved and Miami-Dade County Qualified) for high wind and AMCA Licensed for Sound and Air Performance. IBC and OSHPD seismic certified.

Catalog: *Centrifugal Upblast & Sidewall Exhaust Fans — Series C (CW/CWB)*

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*

Circulators & Mancooler Fans

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

Models IC/ICO



Models IC/ICO (non-oscillating/oscillating) 2-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, 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/ICO*

Models MCY/MCB/MCP



Mounting options include beam (MCY), base (MCB), and portable (MCP) mounts. Capacities range from 3,000 to 27,500 cfm (5,097 to 46,723 m^3/hr) at free air. AMCA Licensed for Air Performance.

Catalog: *Mancoolers — MCY/MCB/MCP*

Vari-Green® and Greenheck 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 basic motor protection as well as the ability to provide advanced motor protection. All Greenheck motor starters are available in either indoor or outdoor enclosures.

Vari-Green® Motor



The Greenheck Vari-Green motor is an electrically commutated (EC) motor that operates on 115V AC power input and internally converts it to DC power providing better speed control capabilities (up to an 80% turndown) and higher efficiencies (85% efficient at all speeds) 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. Vari-Green motors are available in a variety of sizes and are currently available on models SP, CSP, G, CUE, CW, LD, LDP, SQ, SFD, SWD, SE1, and SS1 with either a dial mounted potentiometer (speed control) on the motor 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 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)
  - Air Quality - Volatile Organic Compound (VOC)
  - Air Quality - Temperature/Humidity

Greenheck Motor Starters



Models MSAC, MSSC and MS-1P, MSEM and MSTS provide a wide range of control logic solutions as well as electronic overload protection for the motor. The MSAC and MSSC are 3 phase controllers that can be used on any single speed, non-reversible 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 has some additional advanced control integration that includes emergency shutdown, fireman's over-ride, 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.

Models SFD/SFB

Model SFD (direct drive) and SFB (belt drive) feature quiet and efficient forward-curved wheels. These fans are suitable for ducted exhaust, supply, and return-air applications with clean air. The Vari-Green® EC motor is available on model SFD direct-drive fans. Capacities range from 400 to 25,000 cfm (680 to 42,475 m^3/hr) and 3.25 in. wg (806 Pa). Third-party certified (Florida Product Approved and Miami-Dade County Qualified) for high wind and AMCA Licensed for Air Performance. IBC and OSHPD seismic certified. Select models with CE Mark.

Catalog: Centrifugal Utility Fans — SFD, SFB, SWD and SWB



Model SWB/SWD

Model SWB (belt drive) and SWD fans with Vari-Green® EC motor feature a backward-inclined or airfoil centrifugal wheel. This fan is suitable for ducted exhaust, supply, and return-air applications. Typical applications include commercial kitchens, fume hoods, and emergency smoke control installations. Available in galvanized, aluminum, or painted construction. Capacities range from 70 to 11,400 cfm (119 to 19,369 m^3/hr) and 2.5 in. wg (622 Pa). Third-party certified (Florida Product Approved and Miami-Dade County Qualified) for high wind and AMCA Licensed for Air Performance. IBC and OSHPD seismic certified. Select models with CE Mark.

Catalog: Centrifugal Utility Fans — SFD, SFB, SWD and SWB
Catalog: Centrifugal Fans — SWD, USF and CSW



Model USF

USF tiered models (200, 300, and 400) offer multiple levels of construction for the best value to match the intended application and performance.

- **USF-200** – Constructed of galvanized steel with bolted frame and backward inclined centrifugal wheel makes this model an economical selection when clean air is being moved. Available in 11 sizes (6 in. - 22 in.).
- **USF-300** – Increased performance along with construction of painted steel with bolted frame and backward inclined centrifugal wheel. For use in applications where a special coating on the housing and the airstream is required. Available in 19 sizes (6 in. - 49 in.).
- **USF-400** – This model bridges the gap between traditional utility sets and industrial blowers with heavier duty construction and higher performance capabilities. Constructed with painted steel construction and a backward inclined centrifugal wheel. Available in 19 sizes (7 in. - 49 in.).

Performance capabilities range from 50 to 70,000 cfm (170 to 322,812 m^3/hr) and 9 in. wg (2,240 Pa).
Arrangement available: 10

Catalog: *Centrifugal Fans — SWD, USF and CSW*


USF-200


USF-300


USF-400

Commercial and Industrial Centrifugal Fans

Airfoil (AF) and backward-inclined (BI) centrifugal fans are designed for commercial and industrial applications for exhaust air, supply air, filtration, heating, air conditioning, and industrial process applications. Airfoil centrifugal wheels have the advantage of higher operating efficiencies. Greenheck's centrifugal fans come in two construction options. Greenheck's Permalock™ seam on housing sizes 7-49 for applications up to 8.5 in. wg (2,117 Pa) and heavy-gauge, edge-to-edge, welded housing construction for pressures up to 22 in. wg (5,474 Pa). All AF and BI model fans use air handling quality bearings, are tested with a complete three-plane vibration test prior to shipment and are AMCA Licensed for Sound and Air Performance.

Single-Width – Model CSW

Model CSW operates in a broad range of fan applications, typically in ducted systems. Versatile construction options allow use in environments which require spark resistance, high temperature tolerance, or resistance to corrosive elements. OPTIONS: Spark-resistant construction, UL 705 Power Ventilators Listing, UL 762 Grease Listing, UL Power Ventilators for Smoke Control Systems Listing. Capacities range from 100 to 220,000 cfm (170 to 370,782 m^3/hr) and 22 in. wg (5,474 Pa). AMCA Licensed for Sound and Air Performance.



Catalog: *Centrifugal Fans — SWD, USF and CSW*
CSW Single—Width Centrifugal Fan Performance Supplement

Double-Width – Models BIDW/AFDW

Models BIDW/AFDW operate in non-ducted inlet applications, primarily handling clean air below 200°F. Higher volume capacities allow for a more compact system design than with single-width fans. Air handling quality bearings with L_{10} life in excess of 80,000 hours (equivalent to an average life of 400,000 hours). Each fan is three-plane vibration tested prior to shipment. OPTIONS: UL 705 Power Ventilators Listing. Capacities range from 1,000 to 380,000 cfm (1,699 to 645,624 m^3/hr) and 14 in. wg (3,484 Pa). AMCA Licensed for Sound and Air Performance.



Catalog: *Centrifugal Fans — Models BIDW and AFDW*
Double-Width Centrifugal Fan Performance Supplement

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 to partial particulate/dusty conditions, corrosive airstreams. Capacities range from 300 to 150,000 cfm (510 to 254,851 m^3/hr) and 14 in. wg (3,484 Pa).
AMCA Licensed for 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 10 in. wg (2,480 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 - Model IPO



Model IPO 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 - Model IPW



Model IPW 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 - Model IPA



Model IPA 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 for standard construction up to 60,000 (101,941 m^3/hr) and 22 in. wg (5,456 Pa).
Capacities for heavy-duty construction up to 84,000 (142,717 m^3/hr) and 32 in. wg (7,936 Pa).
AMCA Licensed for Air Performance.

Catalog: *Industrial Process Fans — IPO, IPW, IPA*

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 up to 70,000 cfm (118,931 m^3/hr) and 8 in. wg (1,984 Pa), and maximum temperature of 800°F (426°C).

Catalog: Plug Fans — PLG



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. Quiet and efficient operation is achieved through a 12-bladed, airfoil wheel that helps reduce low frequency tones.

Model APM – Light to Medium Duty Plenum Fan

Model APM plenum fans are designed for light and medium duty applications. This model has a galvanized framework at a more cost-effective price point. Units are available in belt and direct drive with a simplified selection of accessories. Capacities range from 1,000 to 37,000 cfm (1,699 to 62,863 m^3/hr) and 5 in. wg (1,240 Pa).

Catalog: Plenum Fans — APM and APH



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. This plenum is available in both belt and direct drive and offers numerous accessories to complement your project. Capacities range from 700 to 210,000 cfm (1,189 to 356,792 m^3/hr) and 12 in. wg (2,976 Pa).

Catalog: Plenum Fans — APM and APH



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. Housed HPA fans are available in 10 sizes (15-36). Capacities range from 700 to 50,000 cfm (1189 to 84,950 m^3/hr) and 10 in. wg (2,491 Pa).

Catalog: Plenum Fans — HPA





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. They can additionally be configured for specialized applications such as high temperature exhaust, grease exhaust, and multi-fan packs for redundancy on critical ventilation applications.

FumeJet™ Commercial and Industrial

Greenheck's *FumeJet* family is a pre-engineered exhaust system that safely removes and disperses contaminated air in commercial, institutional or industrial applications. 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, the *FumeJet* fan offers an extended discharge to reduce and prevent exposure to harmful fumes. *FumeJet* models are designed and factory tested to withstand a force of 22 psf without the need for guy wires. This force is an equivalent to that produced by prevailing winds at the speed of 92 mph (148 km/h).

Model FJC



FumeJet Model FJC is a lower cost commercial and industrial fume exhaust fan for low volume and low pressure applications. FJC is available two levels of construction either galvanized or coated steel for environments requiring increased corrosion protection. Both are belt drive, arrangement 10; providing for a compact footprint, motor and drives located under a common weatherhood. Also, each utilizes a centrifugal wheel with a backward inclined blades; Permalock™ sealed scroll and bolted frame construction. Capacities range from 250 to 5,000 cfm (460 to 8,495 m^3/hr) and 5 in. wg (1,250 Pa). FJC is UL/cUL 705 Power Ventilators Listed. AMCA Licensed for Air Performance.

Catalog: *FumeJet Exhaust Systems*

Model FJI



FumeJet Model FJI is an industrial fume exhaust fan with higher performance capabilities with additional options for spark resistance or high temperature construction. FJI is available as belt or direct drive; with a flat blade (BI) or higher efficiency airfoil (AF) centrifugal wheel, scrolls either constructed with a Permalock™ seal or continuously welded. Airflow capacities range from 250 to 15,000 cfm (425 to 25,485 m^3/hr) and 8 in. wg (2,000 Pa). FJI is available with AMCA Spark B or C construction, UL/cUL 705 Power Ventilators Listed. AMCA Licensed for Sound and Air Performance.

Catalog: *FumeJet Exhaust Systems*

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 (3m) 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. Belts, bearings and drives are fully sealed from the contaminated airstream. Capacities range from 270 to 24,000 cfm (460 to 40,700 m^3/hr) and 3.5 in. wg (875 Pa). Model is OSHPD seismic certified, UL 705 Power Ventilators Listed and UL 762 Listed Power Ventilator for Restaurant Exhaust Appliances. AMCA Licensed for 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 1,500 to 60,000 cfm (2,500 to 102,000 m^3/hr) and 8 in. wg (2,000 Pa). Model is UL 705 Listed for Power Ventilators. AMCA Licensed for 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 55,000 cfm and up to 14 in. wg of static pressure.

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®-HS



Model Vektor-HS combines the VGN and controls with a base model providing advanced system operation for lower costs. The Vektor-HS uses an inline centrifugal wheel with AMCA Spark B construction. Vektor-HS bypass air plenums are designed to support single or multiple Vektor-HS inline exhaust blowers. Airflow capacities range from 300 to 24,000 cfm (500 to 40,700 m^3/hr) and 3.5 in. wg (875 Pa). Model is UL 705 Listed for Power Ventilators. AMCA Licensed for Air Performance.

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

Vektor®-MS



Model Vektor-MS with increased performance range means higher building turndowns and more cost savings available. The mixed flow wheel provides higher performance ranges at higher efficiencies and reduced sound levels. The Vektor-MS models incorporate the bifurcated housing for increased personnel safety. Airflow capacities range from 1,500 to 38,500 cfm (2,500 to 65,000 m^3/hr) and 8 in. wg (2,000 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 Vector-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. Single or multiple fan systems are available with or without integral variable frequency drive. Belt and direct drive configurations. Eleven model sizes with airflow capacities range from 1,000 to 38,000 cfm (2,500 to 65,000 m^3/hr) and up to 14 in. wg (3,484 Pa)

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 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 80,000 cfm (2,500 to 136,000 m^3/hr) and 8 in. wg (2,000 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. This design is ideal for applications requiring horizontal air intake or for systems with external static pressures in excess of 8 in. wg (2,000 Pa). Vektor-CD units are available in AMCA Spark B or C construction. Airflow capacities range from 500 to 120,000 cfm (850 to 203,881 m^3/hr) and 14 in. wg (3,500 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-MD, Vektor-MH and Vektor-MS 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, run-around coil loops to safely transfer energy between the laboratories' 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 stainless 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 Systems — ERS-MD

Kitchen Ventilation Systems



Greenheck offers a wide selection of top quality kitchen hoods, exhaust fans, make-up air units, variable volume systems, fire suppression systems and utility distribution systems. These systems can be designed by using our state-of-the-art 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 and view the comprehensive Kitchen Ventilation Systems Application and Design Guide. 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 options or as integral supply hoods. All hoods are UL/cUL 710 Listed and available in single-section lengths from 4 to 16 feet. Longer hoods are available in multiple sections with our continuous capture option. Available configurations: wall, island, double-island 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 12-inch up to 24-inch	Non-Tempered/Heat Only; To minimize mixing with air in the space by distributing airflow at the hood, downward.
 HSP Horizontal Supply	Tempered Air (heated and cooling); Provides supply air to mix with room air.
 BSP Back Supply	Non-Tempered or Marginally Tempered Air; Air is kept near hood to minimize mixing with air in the space.
 VSP Variable Supply	Tempered Air (heated and/or cooled); Air is mixed with the room air and kept near the hood depending on damper setting.

Integral Supply Hoods

Available in face supply (shown) or combination face and air curtain.



Proximity Hoods

Typically used in quick service restaurants or low ceiling applications, the hood is hung in close proximity to the cooking surface. Greenheck hoods have several dimensions of flexibility to meet various application requirements. Hoods are offered in lengths from 3 to 16 feet, heights from 24 to 36 inches and are compatible with all filter options. The flue bypass option is available. It directs hot flue gasses behind the filter bank with the benefit of reducing radiant heat load in the space and preventing baking grease onto the filters. Flue bypass is appliance specific. Plate shelf optional.



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 tool-less access panels located within the hood. Large 2-inch drains capture grease with ease. The Auto Scrubber can connect to a building automation system which is compatible with KFCC, Vari-Flow and Melink® control systems.



Residential Range Fire Suppression

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.

Available for the contiguous 48 states only.



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 and manufactured filter). Grease-X-Tractor is the primary filter.



Grease Grabber

Grease-X-Tractor™

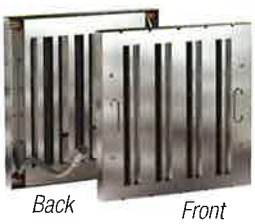
High-efficiency centrifugal filter (*69% efficient, Greenheck patented and manufactured filter).



Grease-X-Tractor

Energy Recovery Filter

*88% efficient, Greenheck patented and manufactured filter.



Energy Recovery Filter

Baffle Filter

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



Baffle

Filter efficiencies measured at 8 microns.

Type II Kitchen Hoods

Designed for non-grease applications. Non-filtered 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.



Specialty Hoods and Options

Features and products designed to meet our customers unique needs.

Model PHEV
This hood is designed for conveyor pizza ovens. The filter bank is rotated perpendicular to the pizza oven to capture effluent from both ends. Exhaust only.

Industrial Process Hoods
Designed for large volume cooking operations (such as food processing factories). Available with pitched tops for full wash down and special high output lighting. Up to 36 in. height. Exhaust only.

Radius corners and cladding available for aesthetics.



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 System is an automatic, pre-engineered system 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.

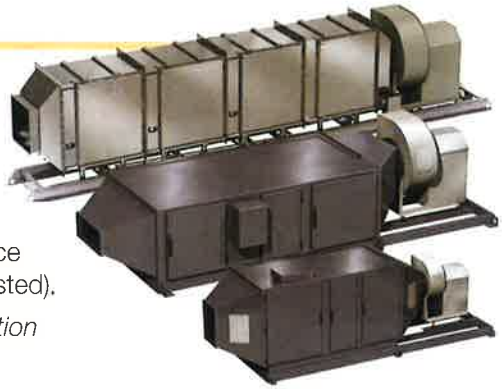
Catalog: Kitchen Ventilation Systems



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: Kitchen Ventilation Systems

Pollution Control Units



Specifically designed to eliminate both smoke and grease particles from your kitchen exhaust system and modules eliminate or reduce odors to acceptable levels.

Grease Trapper, Triple Play and Power Play

Grease Trapper is UL 1978 Listed to Grease Duct Standards. Triple Play and Power Play are ETL Listed to UL Standard 710 and built in accordance with NFPA 96 (Grease Grabber Power Play is additionally ANSI/UL 867 Listed).

Catalogs: Grease Trapper Pollution Control Unit, Grease Grabber™ Pollution Control Units and Pollution Control Units

Controls



Variable volume systems automatically control the speed of the exhaust (and make-up air if applicable) fan to ensure optimal hood performance.

Variable Volume

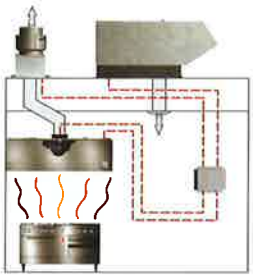
Variable volume systems automatically control the speed of the exhaust fan (and make-up air if applicable) to ensure optimal hood performance and save energy. The systems utilize microprocessor controls and operate solely on demand by monitoring the cooking operation. The exhaust, supply and/or rooftop unit fans are then adjusted by the system so that when the cooking load is reduced, the fans operate at a reduced level. Up to 50% operating cost savings can be realized due to the reduction of tempered air rates and electrical savings. Greeenheck offers two options, the Greenheck Vari-Flow or Melink® Intelli-Hood Systems.

Kitchen Fan Control Center



Model KFCC, kitchen fan control center, is designed to control the exhaust fans, supply fans and lights for the kitchen ventilation system. The KFCC can be interlocked with the fire suppression system. Greenheck offers several value-added options on this control including the temperature interlock to comply with International Mechanical Code (IMC) requirements.

Temperature Interlock



To comply with IMC 507.2.1.1 where enforced, this control will automatically turn on the kitchen ventilation system fans when heat is detected. Greenheck offers this as a separate control or as an option on the kitchen fan control center. Interlock is standard on variable volume systems.

Catalog: Controls and Energy Management

FlexConnect™ 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 line-up 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 line-up.

Fast

Installation requires only limited trade involvement to bring incoming utility services in for hook-up.

Catalog: Utility Distribution System – UDS Model M

Energy Recovery Ventilators



With Greenheck, you get a comprehensive energy recovery line ranging from a 150 cfm inline preconditioner to a 20,000 cfm fully-tempered 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 afford you total control over outdoor air conditions entering your system.

Preconditioners

Energy recovery ventilators package a total energy wheel or core with exhaust and supply blowers and factory prewired electrical components. Designs are available for interior and exterior installations. Airflow volumes range from 150 to 20,000 cfm (225 to 33,980 m^3/hr).

Model ERV: Interior or Exterior Installation



Model ERV provides a total enthalpy wheel with optional frost control, economizer control, demand ventilation control, variable frequency drives, and BMS communication options. Four product arrangements offer installation flexibility for both interior and exterior applications. Available in six sizes. Capacities range from 500 to 12,000 cfm (850 to 20,388 m^3/hr) and 1.5 in. wg (372 Pa). ETL Listed.

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

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 (1,699 to 10,194 m^3/hr) and 1 in. wg (248 Pa). ETL Listed.

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

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 1-inch deep filters, duct flanges, and backdraft dampers are standard. Optional Vari-Green EC motors are also available. Capacities range from 150 to 850 cfm (255 to 1,444 m^3/hr) and 1 in. wg (248 Pa). ETL Listed.

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

Model ECV: Interior or Exterior Installation



Model ECV utilizes an air-to-air total energy core and is designed for indoor and outdoor mounting for commercial and institutional applications. Optional hinged doors provide maintenance access to the internal components and control center. Optional control features such as a bypass damper for economizer, BMS communication and optional Vari-Green EC motors are also available. Available in three sizes with capacities ranging from 500 to 3,300 cfm (850 to 5,607 m^3/hr) and 1 in. wg (248 Pa). ETL Listed.

Catalog: *Energy Core Ventilators — MiniCore and ECV*

Model MiniCore: Interior Installation



Model MiniCore utilizes a total energy core, direct drive fans, backdraft dampers and optional Vari-Green motors. Designed for indoor installations, the MiniCore can be hung in any orientation and features configurable intake and discharge connections. Capacities range from 300 to 1,000 cfm (510 to 1,444 m^3/hr) and 1 in. wg (248 Pa).
ETL Listed.

Catalog: *Energy Core Ventilators — MiniCore and ECV*

Model PVe: Exterior Installation



Model PVe utilizes a cross-flow plate exchanger for sensible only heat transfer. The core plate exchanger is fully gasketed and sealed in the unit without any moving parts between the airstreams. Supply air can be provided directly into the space or conditioned further with an air handler. Common applications include process exhaust, plus locations that have drier climate conditions or indoor areas with high humidity levels that do not want the humidity returned to the space. Four housing sizes are designed for outdoor installations. Airflow capacities from 1,000 to 6,000 cfm (1,699 to 10,194 m^3/hr) and 2 in. wg (496 Pa). AMCA Licensed for Air Performance. ETL Listed.

Catalog: *Heat Recovery Ventilator — PVe*

Ventilators with Heating & Cooling

Combines the benefits of the total energy wheel with supplemental heating and cooling. Fresh outdoor air is preconditioned by the enthalpy wheel, recovering up to 80% of the energy from the exhaust air, while the coil section further conditions the outdoor air to the desired conditions.

Model ERCH



Model ERCH is designed to process 100% outdoor air to desired supply conditions. Capacities from 1,000 to 10,000 cfm (1,699 to 16,990 m^3/hr) and 1.75 in. wg (436 Pa). ETL Listed.

Cooling options: Chilled water, split DX, packaged DX, Indirect/direct evaporative cooling
Heating options: Hot water, indirect gas, electric heat
Heating/Cooling options: Water source heat pump

Catalog: Energy Recovery with Cooling and Heating — ERCH

Model ERT



Model ERT features cooling, heating, and a wraparound heatpipe for providing space neutral air with the lowest operating cost. Capacities range from 2,000 to 10,000 cfm (3,398 to 16,990 m^3/hr) and 1.75 in. wg (436 Pa). ETL Listed.

Cooling options: Chilled water, DX
Heating options: Hot water, electric heat
Heatpipe: Reduces the cooling load and provides free reheat

Catalog: Energy Recovery with Cooling and Heating — ERT

Model APEX



Model APEX provides centralized outdoor air distribution and reduces the need for multiple installations, and is designed for applications that require capacities from 10,000 to 20,000 cfm (16,990 to 33,980 m^3/hr) and 2.5 in. wg (620 Pa). ETL Listed.

Cooling options: Chilled Water, Direct Expansion (DX)
Heating options: Hot water, electric heat

Catalog: Energy Recovery Ventilator — APEX

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 — ERM, MiniVent, ERV and ERVe

Packaged Ventilation Systems



Greenheck Packaged Ventilation Systems are designed specifically for high percentage outdoor air applications. Heating and cooling options include packaged DX cooling, chilled water cooling coils, split DX cooling coils, indirect gas-fired furnaces, electric heaters, and hot water coils which fully temper the supply air volume to desired conditions. Single point wiring and configurable factory-provided controls allow for easy startup in the field and the flexibility for stand-alone operation or BMS interoperability.

Packaged Ventilation Systems

Model RV(E) are pre-engineered systems available in both 100% outdoor air and recirculating configurations. Designed with R-410a refrigerant and 4 to 45 nominal tons of cooling with airflow ranges up to 12,000 cfm (20,388 m^3/hr). Modulating hot gas reheat is also available for precise humidity control.

Model RV(E)

The model RV(E) has been specifically designed to meet the challenges of introducing high percentages of outdoor air into a building and can be used for outdoor installations. Features included in the RV(E) minimize energy consumption, control outdoor air volume and maintain high levels of indoor air quality. This makes the RV(E) ideal for ventilation applications in which the supply air volume consists of 20% or more outdoor air. To maximize unit efficiency, the model RVE is configured with a lightweight total enthalpy wheel for energy recovery.



Catalog: Rooftop Ventilator with Packaged Cooling & Heating — RV/RVE

Make-Up Air



Greenheck offers a wide range of make-up air units for commercial, industrial, and food service applications. Heating options include direct gas-fired, indirect gas-fired, electric heat, hot water coils and steam coils. Available cooling options include direct expansion coils for split systems, packaged direct expansion systems, chilled water coils and evaporative cooling. In addition to Greenheck's Make-Up Air units, Greenheck also offers space heating systems. The GreenHeat® system uses direct gas-fired heating technology to deliver high discharge temperatures into the space. The GreenHeat® system provides efficient and economical heating for warehouses and other industrial or process applications.

Hot Water, Steam and Electric

The MSX model offers multiple tempering options when natural or LP gas is neither available nor desired for heating. The MSX is designed to provide tempered make-up air to food service, commercial and industrial facilities.

Model MSX

The MSX model is ideally suited for make-up air applications where electric heat, hot water or steam is desired. The MSX is assembled using a modular configuration which offers a configurable design. The MSX model is available in multiple airflow arrangements: recirculation, constant volume, and variable air volume with the use of a VFD. Capacities range from 800 to 48,000 cfm (1,359 to 81,552 m^3/hr) and 4 in. wg (996 Pa). ETL Listed.

Heating options: Non-tempered up to 48,000 cfm (81,553 m^3/hr)
Hot water up to 40,000 cfm (67,960 m^3/hr)
Steam up to 40,000 cfm (67,960 m^3/hr)
Electric heat up to 25,000 cfm (42,475 m^3/hr)

Cooling options: Evaporative cooling up to 45,000 cfm (76,455 m^3/hr)
Chilled water or split DX cooling up to 11,700 cfm (19,878 m^3/hr)
Packaged DX cooling up to 7,500 cfm (12,742 m^3/hr)



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

Model MSX-HV

Model MSX-HV is constructed with a modular design that offers broad configuration flexibility. A filtered mixing box with an economizer controller offering is standard. Capacities range from 800 to 16,000 cfm (1,359 to 27,184 m^3/hr) and 3 in. wg (747 Pa). Supply air configuration can be ordered as full recirculation or up to 80% outside air. ETL Listed.

Heating options: Non-tempered up to 48,000 cfm (81,553 m^3/hr)

Cooling options: Evaporative cooling up to 45,000 cfm (76,455 m^3/hr)
Chilled water or split DX cooling up to 11,700 cfm (19,878 m^3/hr)



Catalog: *Heating and Ventilating Units — IG-HV, IGX-HV and MSX-HV*

Non-Tempered

Models KSF, KFSB, and KSFD are designed to provide non-tempered make-up air to food service, commercial and industrial facilities. Note: The MSX model is also available in a untempered arrangement.

Model KSF



Model KSF is intended to supply untempered make-up air. This is most commonly seen in kitchen make-up air applications. Installation may be stand-alone or on a combination curb with an exhaust fan. An extended weatherhood option is available, providing the necessary 10 foot horizontal separation between intake and exhaust fan discharge to comply with NFPA 96. Capacities range from 400 to 12,000 cfm (679 to 20,388 m^3/hr) and 3 in. wg (747 Pa). ETL Listed.

Catalog: Untempered Make-Up Air for Kitchen Systems — KSFB and KSFD

Models KSFB and KSFD



Models KFSB and KSFD offer compact designs, providing untempered make-up air for commercial and institutional kitchen applications. An extended weatherhood option is also available providing the necessary 10 foot horizontal separation between intake and exhaust fan discharge to comply with NFPA 96. The KFSB offers a belt driven arrangement intended for constant volume. The KSFD offers a constant volume direct drive supply fan arrangement and can be ordered with a speed controller to provide an economical means of system balancing. Capacities range from 300 to 10,500 cfm (509 to 17,840 m^3/hr) and 3 in. wg (747 Pa). ETL Listed.

Catalog: Untempered Make-Up Air for Kitchen Systems — KSFB and KSFD

Industrial Space Heat

Space heating systems are designed to heat large spaces as comfortably and economically as possible. Space heating models use high-efficiency direct gas-fired heating and include the same commitment to quality you would expect from a worldwide leader in air movement and control products.

Industrial Space Heat



The space heating line includes the GreenHeat® system 100% outdoor air, GreenHeat® system 50/50 recirculation, and the 80/20 recirculation systems. ETL Listed.

100% Outdoor Air: 800 to 2,800 MBH, Capacities range from 5,000 to 19,000 cfm (8,495 to 32,281 m^3/hr) and 1.3 in. wg (322 Pa)

50/50 Recirculation: 800 to 2,800 MBH, Capacities range from 6,000 to 22,000 cfm (10,194 to 37,378 m^3/hr) and 1.2 in. wg (298 Pa)

80/20 Recirculation: 400 to 4,800 MBH, Capacities range from 2,600 to 48,000 cfm (4,417 to 81,553 m^3/hr) and 4 in. wg (996 Pa)

Catalog: Industrial Space Heating — Direct Gas-Fired Heating

Direct Gas-Fired

Models DGK, DG, DGX, TSU and VSU are designed to deliver fresh, direct gas-fired make-up air to food service, commercial and industrial facilities. Model DGK and DG are most commonly used to provide make-up air to kitchen facilities. Models DGX, TSU and VSU are commonly used in commercial and industrial applications and can be used in conjunction with any GreenHeat® System.

Model DGK



Model DGK is designed to be a simple and compact solution for direct gas-fired kitchen make-up air applications. Capacities range from 1,000 to 8,500 cfm (1,699 to 14,442 m^3/hr) and 2 in. wg (496 Pa) with heating capacities up to 800,000 BTU/hr. ETL Listed.

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

Model DG



Model DG is designed to be an economical approach to direct gas-fired make-up air applications. Capacities range from 800 to 15,000 cfm (1,359 to 25,485 m^3/hr) and 2 in. wg (496 Pa) with heating capacities up to 1,600,000 BTU/hr. ETL Listed.

Cooling option: Evaporative cooling up to 12,000 cfm (20,388 m^3/hr)

Catalog: *Direct Gas-Fired Make-Up Air — DGK, DG and DGX*

Model DGX



Model DGX has a modular design for more configuration flexibility and offers the following arrangements: constant volume, filtered recirculation or variable volume. Capacities range from 800 to 48,000 cfm (1,359 to 81,553 m^3/hr) and 4 in. wg (996 Pa) with heating capacities up to 4,800,000 BTU/hr. ETL Listed.

Cooling options: Evaporative cooling up to 48,000 cfm (81,553 m^3/hr)
Chilled water or split DX cooling up to 11,700 cfm (19,878 m^3/hr)
Packaged DX cooling up to 7,500 cfm (12,742 m^3/hr)

Catalog: *Direct Gas-Fired Make-Up Air — DGK, DG and DGX*

Model TSU



Model TSU offers direct gas-fired make-up air in the following arrangements: constant volume, recirculation or variable volume. Capacities range from 33,000 to 64,000 cfm (56,067 to 108,737 m^3/hr) and 3 in. wg (747 Pa) with heating capacities up to 7,000,000 BTU/hr. ETL Listed.

Cooling option: Evaporative cooling up to 60,000 cfm (101,941 m^3/hr)

Catalog: *Direct Gas-Fired Make-Up Air — TSU*

Model VSU



Model VSU is a vertical unit and offers direct gas-fired make-up air in the following arrangements: constant volume, recirculation or variable volume. Capacities range from 800 to 64,000 cfm (1,359 to 108,737 m^3/hr) and 3 in. wg (747 Pa) with heating capacities up to 7,000,000 BTU/hr. ETL Listed.

Catalog: *Vertical Direct Gas-Fired Make-Up Air — VSU*

Indirect Gas-Fired

Models IGK, IG and IGX are designed to provide fresh, indirect gas-fired make-up air to food service, commercial and industrial facilities. Model IGX-HV is specifically designed to provide space heating and cooling, while ensuring proper ventilation needs are maintained.

Model IGK



Model IGK features a power vented, 80% efficient, indirect gas-fired furnace. Capacities range from 800 to 5,000 cfm (1,359 to 8,495 m^3/hr) and 2 in. wg (496 Pa) with heating capacities up to 400,000 BTU/hr (input). ETL Listed.

Catalog: *Indirect Gas-Fired Make-Up Air — IGK, IG and IGX*

Model IG



Model IG is ideally suited for gas-fired make-up air applications where a direct gas-fired system is not appropriate. The IG is a single-piece housing, offering simplicity in an economical design for indoor or outdoor applications. An optional mixing box with controls is available. Capacities range from 800 to 7,000 cfm (1,359 to 11,893 m^3/hr) and 2 in. wg (496 Pa) with heating capacities up to 400,000 BTU/hr (input). ETL Listed.

Cooling option: Evaporative cooling up to 7,000 cfm (11,893 m^3/hr)

Catalog: *Indirect Gas-Fired Make-Up Air — IGK, IG and IGX*

Model IGX



Model IGX expands on the IG model with a modular design that offers broad configuration flexibility. In addition to basic make-up air operation, recirculation and variable volume airflow options are available. Capacities range from 800 to 15,000 cfm (1,359 to 25,485 m^3/hr) and 3 in. wg (747 Pa) with heating capacities up to 1,200,000 BTU/hr (input). ETL Listed.

Cooling options: Evaporative cooling up to 12,000 cfm (20,388 m^3/hr)
Chilled water or split DX cooling up to 11,700 cfm (19,878 m^3/hr)
Packaged DX cooling up to 7,500 cfm (12,742 m^3/hr)

Catalog: *Indirect Gas-Fired Make-Up Air — IGK, IG and IGX*

Model IGX-HV



Model IGX-HV is designed to provide space heating and cooling while ensuring ventilation needs are met for the facility. Model IGX-HV is constructed with a modular design that offers broad configuration flexibility. A filtered mixing box with an economizer controller offering is standard. Capacities range from 800 to 15,000 cfm (1,359 to 25,485 m^3/hr) and 3 in. wg (747 Pa) with heating capacities up to 1,200,000 BTU/hr (input). ETL Listed.

Cooling options: Evaporative cooling up to 12,000 cfm (20,388 m^3/hr)
Chilled water or DX cooling up to 11,700 cfm (19,829 m^3/hr)

Catalog: *Heating and Ventilating Units — IGX-HV and MSX-HV*

Indoor Air Handlers, Fan Coils and Coils



Greenheck offers a wide range of products with the ability to heat, cool and/or filter air for commercial, educational, institutional, residential and multistory buildings. Our products incorporate premium quality construction features such as double-wall construction, low profile/condensed housing sizes, stainless steel insulated drain pans, internal neoprene or spring isolation, high-efficiency filters and energy efficient motors. These construction features ensure better indoor air quality and the energy efficiency preferred by owners and engineers for LEED- or "green-" type projects. Whether your project calls for horizontal, vertical or low profile installations, we have the product to fit your needs. We also have a comprehensive line of booster and custom-built coils for your HVAC heating and cooling requirements.

Indoor Air Handlers and Fan Coils

Greenheck's indoor air handling and fan coil series, models MSCF, LFC and VFC provide tempered supply air for schools, office buildings, medical facilities, hotels, and many other commercial applications. These units are designed for horizontal or vertical installations, and are ideally suited for retrofit applications as well as new installations. Each model is offered in various sizes to meet a wide range of performance requirements and all are designed with premium quality construction features for years of trouble-free operation.

Model MSCF



Model MSCF incorporates an ultra-low profile and modular design allowing for a highly configurable indoor air handler that is ideally suited for retrofit applications as well as new installations in schools, medical facilities, office buildings, and many other commercial applications. The forward-curved and backward-inclined wheel options offer increased performance capabilities for higher static pressure applications. The unit design provides for easy access to components, double-wall construction, and internal neoprene or spring isolation. Model options include: mixing boxes (with or without filters and dampers), plenums (12 or 24 in.), coils (hot water, steam, chilled water, and direct expansion), and filters (2 or 4 in. 30%, 65%, or 95% efficiencies). Ultra-low profile housings ranging from 11 to 26 inches. Capacities range from 400 to 6,000 cfm (679 to 10,194 m^3/hr) and 4 in. wg (995 Pa)

Catalog: *Indoor Air Handling Units — IAH Series (MSCF)*

Model LFC

Model LFC incorporates an ultra-low profile, condensed housing design that provides a lower cost alternative to the MSCF unit, while still allowing for customizable options. This blower coil unit is ideally suited for horizontal installations with limited space constraints. The unit design provides for easy access to components, double-wall construction, and internal neoprene or spring isolation. Two forward-curved wheel options are available for low or high pressure applications providing a wide performance range and quiet operation. Capacities range from 400 to 5,000 cfm (679 to 8,495 m^3/hr) and 4 in. wg (995 Pa)

Catalog: *Indoor Air Handling Units — IAH Series (LFC)*



Model VFC

Model VFC is a belt drive unit with a forward-curved wheel designed for vertical installations. This fan coil is ideal for concealed applications where a small footprint is required. The unit construction includes a steel double-wall cabinet with hinged access to the blower section. Capacities range from 400 to 4,000 cfm (679 to 6,796 m^3/hr) and 3.5 in. wg (871 Pa)

Catalog: *Indoor Air Handling Units — IAH Series (VFC)*



Model VFCD

Model VFCD is a direct drive unit with a forward-curved wheel designed for vertical installations. This fan coil is ideal for concealed applications where a small footprint is required. Unit construction includes a steel double-wall cabinet with hinged access to the blower section. Capacities range from 400 to 4,000 cfm (679 to 6,796 m^3/hr) and 2 in. wg (498 Pa)

Catalog: *Indoor Air Handling Units — IAH Series (VFCD)*



Custom Coils

Greenheck specializes in manufacturing competitively priced, quality engineered replacement and OEM coils. Every coil we build is leak tested with 450 PSIG of dry nitrogen to guarantee 100% quality assurance. And just to be sure you get the performance you expect, our coils are tested in accordance with AHRI Standard 410-2001. Coils are constructed with copper tubes in ⅜, ½, and ⅝ OD with aluminum or copper fins and galvanized, stainless steel, or copper casings. Insulated coil sections and protective coatings are also available.



Coil Types:

- Chilled Water
- Hot Water
- Heat Reclaim
- DX Evaporator
- Condenser
- Standard Steam
- Non-Freeze Steam Distributing
- Booster/Duct Mounted

Catalog: *Greenheck Coils*

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. Both 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.

Basic Heater
Model IDHB

The IDHB is a basic duct heater configurable for most applications which require up to 39.9 kW of heating capacity.

Catalog: *Electric Duct Heaters*



Customizable Heater
Model IDHC

The IDHC is a customizable duct heater with enhanced features and maximum heating capacity of 500 kW.

Catalog: *Electric Duct Heaters*



Dampers



Greenheck offers the most UL Certified dampers and the largest selection of AMCA Licensed dampers in the industry. Our state-of-the-art testing facility allows us to regularly test our products to ensure quality performance is maintained. With in-house testing capabilities, we are able to accelerate new product development concepts that meet the challenging demands of the ever changing market place. For highly corrosive applications, Greenheck also offers severe environment dampers manufactured with 316 stainless steel (SE). Dampers are also manufactured with 304 stainless steel (SS).

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

Airflow Measuring Station with Damper - Thermal
Model AMD-xx-TD



The AMD series combines the function of an highly accurate thermal dispersion 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-xx-TD series is compatible with a field-supplied controller or a factory-supplied analog or BACnet MS/TP controller. The four available models are:

AMD-23-TD featuring a 3-V blade control damper

AMD-33-TD featuring a fabricated airfoil blade control damper

AMD-42-TD featuring an extruded airfoil blade control damper

AMD-42V-TD featuring a vertical extruded airfoil blade control damper

Catalog: Air Measuring Damper Products – AMS, AMD and AMD-TD

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 meet the IECC (International Energy Conservation Code) requirements with a leakage rating of 3 cfm/ft² (5 m³/hr) at 1 in. wg (248 Pa) or less.

Catalog: Insulated Control Dampers — ICD

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/ft² @ 1 in. wg (55 cmh/m²).

3-V Blade Type: Models VCD/SEVCD*

3-V blades are typically used in low to medium 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 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 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 & Bypass Type: Models FBH/FBV

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

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. An optional standoff bracket is available for installations using insulated duct.

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



Models RBD/RBDR

Models RBD & 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 & Balancing Dampers — VCD, MBD and RBD



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 WD/ES/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 airflow and closes upon a decrease in differential pressure. Pressure relief dampers are typically used in industrial systems to relieve unexpected overpressure, additional air to a direct gas-fired burner or fume exhaust.

Catalog: Backdraft and Pressure Relief Dampers



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

Fire Dampers

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

Dynamic Rated
Models DFD/SEDFD*/DFDR/SEDFDR*/ODFD/SSDFD**/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/FDR/SSFD**/SSFDR**



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

Catalog: *Life Safety Dampers*

Ceiling Radiation Dampers

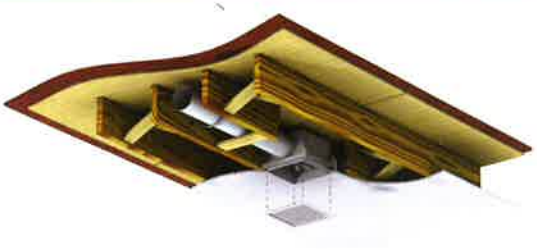
Ceiling radiation dampers are designed and tested to protect penetrations through the ceiling membrane of fire resistive floor ceiling and/or ceiling assemblies.

Ceiling Radiation – Model CRD



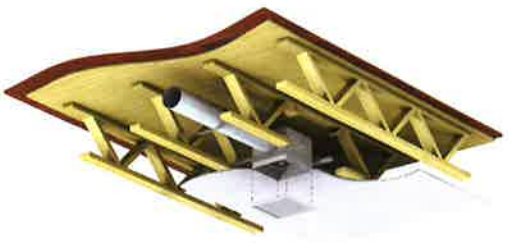
Model CRD is a UL 555C Classified ceiling radiation damper that is used for protection of ceiling openings in fire rated floor/ceiling assemblies with fire resistance ratings of 3 hours or less. In addition, Greenheck CRDs are Warnock Hersey Listed for application in gypsum board ceilings or ceiling 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.

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 C, O or R inlet shapes to connect to ductwork. The damper is positioned in the enclosure to accommodate 1½ in. (38mm) grille depth.

Model CRD-1WT



The CRD-1WT is a UL 555C Classified ceiling radiation damper for installation in wood truss ceiling construction. This model is approved for ceiling designs M-508 and P-554 as detailed in the UL Fire Resistance Directory. The CRD-1WT provides the ceiling radiation damper 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.

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

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 system.

Catalog: *Life Safety Dampers*



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*/SESMDR*/ SSSMD**/SSSMDR**

Smoke damper models are available in leakage class I, II, or III. 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.



Industrial Smoke – Model HSD

Industrial smoke damper models are available in leakage class I. Industrial smoke damper can be constructed of galvanized steel, 304SS, or 316SS with a flanged frame. A variety of actuators are available to meet the requirements of any application.

Catalog: *Life Safety Dampers*
Catalog: *Heavy Duty/Industrial Dampers*



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 combination fire smoke dampers are rated for airflow and leakage in either direction. Combination fire smoke dampers are available in galvanized steel, 304SS, 316SS and are operated with electric or pneumatic actuators.

Traditional Fire Smoke – Models FSD/FSDR/SEFSD*/ SEFSDR*/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.



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



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

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.



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*



Marine Dampers

Marine dampers are United States Coast Guard Class A-60 division approved. The marine dampers were tested at Underwriters Laboratories (UL) in accordance with International Maritime Organization's (IMO) Fire Test Procedure code. Fire and combination fire smoke dampers can be used in marine and offshore ventilation systems.

Models IMO/SSIMO**

Models IMO and SSIMO are Classified to United States Coast Guard Class A-60, United States/European Union MRA Listed (shipswheel) and American Bureau of Shipping (ABS) Approval Design Assessment (ADA).

Catalog: *Marine Products — Dampers, Louvers and Fans*



Bubble-Tight Dampers

A bubble-tight damper is a heavy-duty round 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.

Model HBTR

Model HBTR-151 is rated for pressures up to 10 in. wg (2,490 Pa)
Model HBTR-451/551 is rated for pressures up to 30 in. wg (7,470 Pa)

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



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

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.
Model HBS-331/431 will close in the opposite direction as normal flow.

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 shut off in HVAC or industrial process control systems.

Models HCD/SEHCD*: Rectangular

Models HCD/SEHCD are rectangular dampers available with pressure and velocity capabilities 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.
Model HTOD-331 will close in the opposite direction as normal flow.

Catalog: Heavy-Duty/Industrial Dampers



Tunnel Transit Dampers

Road and underground metro tunnels are some of the most difficult environments in the world. Dampers in subway tunnels and transit systems serve three primary functions, depending on design of the ventilation system: Pressure equalization, portal intake and exhaust, and emergency fire/smoke control. Tunnel transit dampers are designed to meet NFPA-130 and NFPA-502, and have been tested at 482°F (250°C) for 1 or 2 hours. These dampers have also been leakage tested in accordance with AMCA 500-D. Galvanized, 304 or 316 stainless steel. The HTD series are certified to UL 555S.

Models HTD

Model HTD-630 features a fabricated airfoil blade. Model HTD-630 is available for pressure and leakage capabilities up to 24 in. wg (5,952 Pa) and 8 cfm/ft² (14 m³/hr) at 4 in. wg (992 Pa).

Model HTD-636 features a fire rated airfoil blade. This model has been tested in accordance to BS476 for 2 hours. Model HTD-636 is available for pressure and leakage capabilities up to 24 in. wg (5,952 Pa) and 8 cfm/ft² (14 m³/hr) at 4 in. wg (992 Pa).

Model HTD-640 features an extruded airfoil blade and is available for pressure and leakage capacities up to 12 in. wg (2,976 Pa) and 8 cfm/ft² (14 m³/hr) at 4 in. wg (992 Pa).

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



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

Louvers



Greenheck offers the most AMCA Licensed louvers in the industry. 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 or galvanized steel louvers in a variety of designs: stationary, combination, adjustable, acoustic sightproof, thinline, wind-driven rain or Florida Product Approved and Miami-Dade County Qualified. 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 (excludes ESID).

Drainable Blade: Models ESD/EDD/EHM

Model ESD drainable blade and EDD dual drainable blade louvers have outstanding resistance to water penetration. Optional 35° blades are also available to maximize free area (ESD-435 and 635). 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/ESID

Models EDJ and EDK incorporate a drainable head member, which further decreases water penetration. Optional 30° blades are also available to maximize free area (EDJ/EDK-430). The ESID-430 has both high free area exhaust blades at the top and weather protective intake blades at the bottom, allowing both air discharge and intake ductwork to be attached behind the louver while preventing the short cycling of air. Frame depths: EDJ - 2, 4, 6 in.; EDK - 4, 6 in., ESID - 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, 6 in.



Recessed Mullion: Models ESJ-RM/ESK-RM

Models ESJ-RM and ESK-RM offer a hidden mullion design, with J and K style blades and recessed mullion design to offer better blade alignment for a continuous blade appearance. Both models provide more structural integrity between multiwide sections. Frame depths: 4, 6 in.

Catalog: Louver Products (Severe Duty, Stationary, Operable)

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

Models EVH and EHH incorporate a drainable head member and vertical (EVH) or horizontal (EHH) rain-resistant blades to provide maximum resistance to wind-driven rain in even the most stringent AMCA 500L test procedure. Frame depths: EVH - 2, 3, 4, 5, 6, 8 in; EHH - 2, 4, 5, 6, 7 in.



Catalog: *Louver Products (Severe Duty, Stationary, Operable)*
Catalog: *Severe Duty Louvered Products*

Florida Product Approved/Miami-Dade County Qualified Louvers

Greenheck manufacturers 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 from Southwest Texas to Maine and includes 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

Catalog: *Louver Products (Severe Duty, Stationary, Operable)*
Catalog: *Severe Duty Louvered Products*

FEMA 361 Grille

Greenheck louver models AFL-501 and FSG-801 are UL Classified Wind-Storm Rated assemblies that meet the requirements indicated within FEMA 361. These models retain extremely high wind load ratings while also passing the ICC 500 standard for debris impact testing (15 lb. 2 x 4 traveling at 100 MPH).



The AFL-501 product is all aluminum while the FSG-801 product is constructed of heavy gauge steel. The AFL-501 aluminum product is the most economical option while also providing better performance, more and better paint finishes options, and faster lead-times.

Catalog: *Louver Products (Severe Duty, Stationary, Operable)*
Catalog: *Severe Duty Louvered Products*

Florida Product Approved/Miami-Dade County Qualified Louvers

Model Name Max. Wind-load	AMCA Licensed Performance Data	AMCA Listed	Miami-Dade County, FL NOA No.	Florida Product Approved No.	Applicable Protocols
Miami-Dade Qualified Louvers and Penthouses					
AFJ-601D *150 PSF*	Water Penetration, Air Performance, & Sound	AMCA 540 Enhanced Level E	14-0902.07 EXP. 11/20/19	FL16786.1	TAS 201, TAS 202, TAS 203 TAS 100A: ESD-635D, EHH-601D & EVH-602D with VCD-40 Damper TAS 100A: EVH-660D with or without VCD-40 Damper
ESS-502D *110 PSF*	Water Penetration & Air Performance		14-0624.16 EXP. 8/5/19	FL12941.1	
ESD-635D* *150 PSF*		AMCA 540 Basic Level D & Enhanced Level E *(with 0.125 blade/frame)*	12-0830.07 EXP. 12/6/17	FL10088.3	
ESD-635DE *150 PSF*			PENDING	PENDING	
EACA-601D *110 PSF*		AMCA 540 Basic Level D	13-0919.05 EXP. 12/5/18	FL16781.1	
EHH-601D* *150 PSF*	Water Penetration, Air Performance & Wind Driven Rain	AMCA 540 Enhanced Level E	12-0830.08 EXP. 11/1/17	FL10088.1	
EHH-601DE *150 PSF*			15-1013.12 EXP. PENDING	PENDING	
EVH-501D *130 PSF*		AMCA 550, AMCA 540 Enhanced Level E	15-0415.05 EXP. 8/6/2020	FL19277.1	
EVH-602D *150 PSF*			11-1103.01 EXP. 12/7/16	FL8042.1	
EVH-660D *150 PSF*			14-0224.10 EXP. 10/4/17	FL16785.1, FL16086.1	
EHH-601PD *115 PSF*	Not Applicable	Not Applicable	13-0510.06 EXP. 6/19/18	FL11350.1	
ESD-635PD *115 PSF*			13-0510.05 EXP. 6/19/18	FL11350.2	
Florida Product Approved Louvers					
AFJ-601X *Max. 200 PSF*	Water Penetration, Air Performance & Sound	AMCA 540 Enhanced Level E	Not Applicable	FL6876.1, FL15718.1	Standard: TAS 202 Welded: TAS 201, TAS 202, TAS 203
ESD-435X *Max. 200 PSF*	Water Penetration & Air Performance	AMCA 540 Basic Level D		FL6876.3, FL15718.3	
ESD-635X *Max. 200 PSF*		AMCA 540 Basic Level D & Enhanced Level E *(with 0.125 blade/frame)*		FL6876.4, FL15718.4	
EHH-501X *Max. 200 PSF*	Water Penetration, Air Performance & Wind Driven Rain	AMCA 540 Enhanced Level E		FL6876.2, FL15718.2	
EVH-602X *Max. 200 PSF*		AMCA 550, AMCA 540 Enhanced Level E		FL7494.1, FL15719.1	
FEMA 361 Tornado Grille and Louver					
FSG-801 *Max. 248 PSF*	Not Applicable *(UL Listed)*				ICC 500
AFL-501 *Max. 300 PSF*	Water Penetration & Air Performance	Not Applicable *(UL Classified)*			ICC 500

Thinline Extruded Louvers

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

Models ESU/ESF/ESJ

Models ESU, ESF 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 are available in frame or frameless designs and 30° or 50° blade angles. ESF have flat style blades and ESJ has J style blades. Frame depths: ESU -130S, 150S - 1.375 in.; ESU-130, 150, ESF-145, ESJ-150 - 1.5 in.

Catalog: Louver Products (Severe Duty, Stationary, Operable))



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 EADC and EAH-690 with blade angle at 45°).

Drainable Blades: Models EAD/EADC

Models EAD and EADC are designed with drainable blades for maximum resistance to water penetration. Typically operated by electric or pneumatic actuators with manual actuators available. Concealed actuator in the sill member is available (EADC). Frame depths: 4 and 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 45° or 90°. Frame depths: EAH-401 - 4 in.; EAH-690 (45° or 90°) - 6 in.

Catalog: Louver Products (Severe Duty, Stationary, Operable)



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 shut off. AMCA Certified for Water Penetration and Air Performance (excludes EACC, GCI 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.

Non-drainable Blades: Models EACN

Model EACN, non-drainable stationary blades, are combined with non-drainable center pivot adjustable blades. The design does include a drainable head member and concealed blade linkage. Frame depth: 6 in.

Gravity: Models GCE/GCI

Models GCE and GCI feature gravity operation which allows airflow in one direction and prevents reverse airflow. GCE is designed for exhaust flow, while GCI is designed for intake. Note: These units must be mounted in direct proximity to an exhaust or intake fan. Frame depths: 2, 4 in.

Catalog: Louver Products (Severe Duty, Stationary, Operable)



Sightproof Extruded Louvers

Sightproof extruded louvers are typically used to prevent visual see through. Non-drainable, drainable head, and drainable blade models are available. AMCA Licensed for Water Penetration and Air Performance (excludes SEV).

Chevron Blade: Model SES
Non-drainable sightproof louver. Frame depths: 2, 4 in.

Drainable Head: Model SEH
The drainable head member provides an increased level of resistance to water penetration. Frame depths: 2, 4 in.

Drainable Blade: Model SED
The drainable blade models are very effective in minimizing water penetration through wall openings. Frame depths: 2, 4, 5 in.

Vertical Blade: Model SEV
Usually installed as a visual screen only. Frame depths: 4, 5 in.

Catalog: *Louver Products (Severe Duty, Stationary, Operable)*



Acoustical Fabricated Louvers

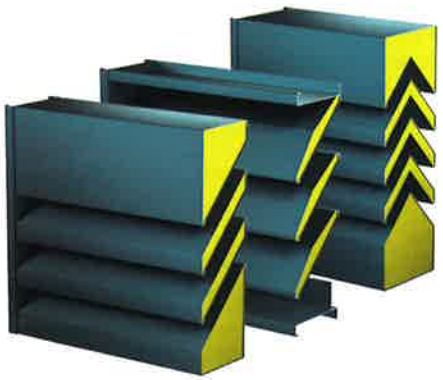
Acoustical fabricated models incorporate acoustically insulated blades to provide for sound attenuation to lower escaping noise. Independently tested for sound per applicable ASTM standards and AMCA Licensed for Water Penetration, Air and Sound Performance.

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.

Sightproof Blade: Model AFS
Offers best sound absorption performance. Frame depth: 12 in.

Catalog: *Louver Products (Severe Duty, Stationary, Operable)*



Fabricated Louvers

Fabricated louvers are typically selected where lowest cost is the primary requirement. Fabricated from galvanized or stainless steel, models are available in both non-drainable and drainable blade designs. AMCA Licensed for Water Penetration and Air Performance.

Stationary Blade: Models FSJ/FDS
Models FSJ and FDS steel blade louvers are available in J style blade (FSJ) and drainable blade designs (FDS). Also available in stainless steel. Frame depths: FSJ/FDS - 4, 6 in.

Adjustable Blade: Models FAJ/FAD
Models FAJ and FAD are adjustable blade louvers fabricated from galvanized steel and provide similar features as the EAD extruded aluminum models. They are available with non-drainable (FAJ) and drainable (FAD) blades. Operable blades can be closed for tight air shut off. Typically operated by electric or pneumatic actuators with manual actuators available. Also available in stainless steel and 35° blade angle (FAD). Frame depths: 4, 6 in.

Catalog: *Louver Products (Severe Duty, Stationary, Operable)*



Sand Louver

Sand louvers are designed to protect air intake and exhaust openings in building exterior walls from wind-driven sand. Design incorporates vertical sightproof blades to separate sand from the airstream which is then channeled out at the sloped sill.



Sightproof Blade: Model FSL-401

Model FSL-401 was tested per ASHRAE Standard Method 52.1-1992 (previously ASHRAE standard 52-76), by an independent third-party test lab using crushed quartz of (150-300mm) dust medium. Standard construction material is galvanized steel and optional formed aluminum is available Frame depth: 4 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 PEV-400

A gravity ventilator comprised of three sides of standard stationary non-drainable louver model ESJ-401, along with one side of 1/8-in. thick plate glass that can be broken with the pressure of a fire hose. A fire smoke damper is located in the throat of the curb and wired into the fire control panel. The unit is shop-assembled and shipped complete.

Model EES-401

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

Catalog: Louver Products (Severe Duty, Stationary, Operable)

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.

Catalog: Louver Products (Severe Duty, Stationary, Operable)



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P.O. Box 410 • Schofield, WI 54476-0410 USA
Phone 715.359.6171 • Fax 715.355.2399
greenheck.com

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