Centrifugal Upblast & Sidewall Exhaust

Models CUE, CUBE and USGF

- General Clean Air
- Restaurant Grease
- High Wind
- Seismic
- Smoke Control
- Contaminants

VARI-GREEN. *performance data included*

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August 2023

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c UL US LISTED

- UL/cUL705 Listed Power Ventilators
  File E40001 (CUE and CUBE)
- UL/cUL 705 Supplement SC Power Ventilators for Restaurant Exhaust Appliances
  File MH11745 (CUE, CUBE and USGF sizes 099 and larger)
- UL/cUL Power Ventilators for Smoke Control Systems
  File MH17511 (CUBE and USGF models 500˚F (260˚C) for 4 hours and 1,000ºF (538°C) for 15 minutes)

Note: UL/cUL is optional and must be specified

Model sizes CUBE-099, 160XP, 240XP, 300HP & 300XP are excluded from Power Ventilators for Smoke Control Systems

CE

Modes CUE, CUBE, and USGF meet CE (Conformité Européenne).

amca WORLDWIDE CERTIFIED RATINGS SOUND AND AIR PERFORMANCE FEI FAN ENERGY INDEX AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.

Greenheck Fan Corporation certifies that the Model CUE, CUBE, and USGF shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. The certified ratings for Model CUBE, CUE and USGF, are shown on pages 19-50.

Enjoy Greenheck's extraordinary service, before, during and after the sale.

Greenheck offers added value to our wide selection of top performing, energy-efficient products by providing several unique Greenheck service programs.

- Our Quick Delivery program ensures shipment of our in-stock products within 24 hours of placing your order. Our Quick Build made-to-order products can be produced in 1-3-5-10-15-20 or 25-day production cycles, depending upon their complexity.
- eCAPS® online selection guides you to choose the best value products for your building projects. eCAPS® includes fan, louver, make-up air, energy recovery preconditioner, and dedicated outdoor air system (DOAS) selections, as well as a damper guide and toolbox.
- Greenheck's free Computer Aided Product Selection (CAPS®) program, rated by many as the best in the industry, helps you conveniently and efficiently select the right products for the challenge at hand.
- Our 3D service allows you to download, at no charge, easy-to-use AutoDesk® Revit® 3D drawings for many of our ventilation products.

Find out more about these special Greenheck services at greenheck.com

Models CUE, CUBE, USGF

Centrifugal Exhaust Fans
Roof Upblast and Sidewall

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Model Comparison

Model	Location		Mounting					Airflow				Application								Drive Type		Impeller Type			Performance	
	Outdoor	Indoor	Roof Curb	Base/Floor	Hanging	Wall	Ceiling Mounted	Exhaust	Supply	Reversible	Recirculate	General/Clean Air	Contaminated Air	Spark Resistant	Grease (UL 705 Supplement SC)	Smoke Control (UL 705 Supplement SD)	High Wind (150 mph)	High Temp (above 200°F)	Seismic Certification	Belt	Direct	Centrifugal	Propeller/Axial	Mixed Flow	Maximum Volume (cfm)	Maximum Static Pressure (in. wg)
CUE	✓		✓			✓		✓				✓	✓	✓	✓		✓	✓	✓		✓	✓			14,700	3
CUBE	✓		✓			✓		✓				✓	✓	✓	✓	✓	✓	✓	✓	✓		✓			30,000	5
USGF	✓		✓					✓				✓	✓		✓	✓	✓	✓		✓		✓			6,800	3.25

When you buy a Greenheck roof upblast or sidewall exhaust fan, you'll receive a fan with the industry's best performance and durability for general clean air, restaurant grease, smoke control, light contaminants, seismic, high wind, and hurricane applications. Both roof upblast and sidewall configurations are specifically designed to discharge air directly away from the mounting surface.

- Performance as cataloged is assured. All fan sizes are tested in our AMCA accredited laboratory and all models are licensed to bear the AMCA Sound, Air and FEI Performance seal.
- UL/cUL Listed for Power Ventilators, Restaurant Exhaust Appliances and Smoke Control Systems.
- Greenheck subjects these products to extensive life testing, ensuring the fans will provide many years of reliable performance.

LEED information

Greenheck became one of the first manufacturers in the air movement and control industry to join the LEED/green movement when they joined the United States Green Building Council (USGBC) in 2005. Greenheck has been actively researching qualification requirements for our products to meet LEED credits and prerequisites.

The Vari-Green® motor significantly helps qualification efforts for the Energy and Atmosphere credits and prerequisites, specifically credit one, Optimize Energy Performance and prerequisite two, Minimum Energy Performance.

Standard Construction Features

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Standard Construction Features			CUE CUBE	USGF
1	Wheel	A backward-inclined, non-overloading centrifugal wheel is utilized to generate high efficiency and minimal sound. Wheel cones are carefully matched to the venturi for maximum efficiency. Each wheel is statically and dynamically balanced for long life and quiet operation.	✓	✓ *Non-Stick, Steel
2	Motor Cooling Tube	Cooling fins located on top of the fan wheel draw outside air through a large breather tube directly into the motor compartment. Positive motor cooling with fresh air results in maximum motor life.	✓	✓
3	Motor	Carefully matched to the fan load and mounted out of the airstream.	✓	✓
4	Fan Shaft	Precisely sized, ground and polished so the first critical speed is at least 25% over the maximum operating speed. Where the shaft makes contact with bearings, close tolerances result in longer bearing life.	✓	✓
5	Drive Assembly	Belts, pulleys and keys are oversized 150% of driven horsepower. Machined-cast pulleys are adjustable for final system balancing. Belts are static-free and oil-resistant.	✓	✓
6	Bearings	100% factory tested and designed specifically for air handling applications with a minimum L_{10} life in excess of 100,000 hours (L_{50} life in excess of 500,000 hours).	✓	✓
7	Motor Cover	Constructed of aluminum. Attached with stainless steel fasteners for easy removal and access to the motor compartment and drive assembly.	✓	✓ *Steel
8	Stainless Steel Fasteners	Allow easy removal and access to the motor compartment and drive assembly.	✓	✓
9	Windband	One-piece, heavy-gauge aluminum with a rolled bead for extra strength directs exhaust air away from the mounting surface.	✓	✓ *Steel
10	Disconnect Switch	NEMA-1 switch is factory-mounted and wiring is provided from the motor as standard (other switches are available). All wiring and electrical components comply with the National Electric Code (NEC) and are either UL/cUL Listed or Recognized.	✓	
		NEMA-3R switch is factory-mounted and wired as standard. All wiring and electrical components comply with the National Electric Code (NEC) and are either UL/cUL Listed or Recognized.		✓
11	Internal Supports	Heavy-gauge supports provide additional strength to withstand wind loads of 150 PSF and support motor and drives.	✓	✓
12	Leakproof Construction	One-piece windband is continuously welded to the curb cap for leakproof protection on models CUE, CUBE, and USGF through size 240 and all sizes with UL/cUL 705 Supplement SC (restaurant exhaust).	✓	✓
13	Curb Cap with Mounting Holes	One-piece for a weathertight fit. Constructed of aluminum with an integral deep spun venturi. Aluminum curb cap has prepunched mounting holes to ensure correct attachment to the roof.	✓	✓ *Steel
14	Drain/Grease Trough	Allows for one-point drainage of water, grease and other residues.	✓	✓
Not Shown	Nameplate	Permanent embossed aluminum nameplate for exact model and serial number identification.	✓	✓
Not Shown	Internal Conduit Chase	For easy internal electrical wiring in applications. Not available on UL 705 Supplement SC (restaurant exhaust) rated fans per NFPA 96.	✓	
15	Dual Drives	Oversized 150%, adjustable, static-free and oil-resistant.		✓
16	Permatector™ Coating	Typically used for applications that require corrosion resistance in indoor and outdoor environments.		✓
17	Clean-Out Port	Allows for easy cleaning of the entire centrifugal wheel through a 4-inch diameter hole on the outside of the fan windband. Meets NFPA 96 standard.		✓
18	Hinged Curb Base with Cables	Allows maintenance personnel to gain access to wheel and ductwork for regular inspection and cleaning by utilizing the factory assembled hinge.		✓
19	Vibration Isolation	True vibration isolators consist of two independent studs separated by a neoprene (rubber) center. Reduces vibration and noise transfer between the drive system and fan housing. (No metal-to-metal contact. Factory-mounted ground wire used to ground system).	✓	✓
20	Lifting Points	Various lifting points located on the drive frame and bearing plate.	✓	✓

*Differences from the standard construction feature.

Model CUE

Model CUBE

Model USGF

Clean Air Applications

Models CUE and CUBE

These spun aluminum fans are designed specifically for roof or wall-mounted applications. General clean or lightly contaminated exhaust air can be discharged directly upward, away from the roof surface, or discharged out and away from building walls.

- Most advanced motor cooling of any fan in its class.
- One-piece windband, continuously welded to the curb cap, ensures leak-proof construction for the life of the fan.
- Performance as cataloged is ensured. All fan sizes are tested in our AMCA accredited laboratory and all models are licensed to bear the AMCA Sound, Air and FEI Performance seal.
- Greenheck subjects these products to extensive life testing, ensuring the fans will provide many years of reliable performance.

Restaurant and Grease Applications

Models CUE and CUBE

When you choose a Greenheck fan, you have selected a fan with the industry's best performance and durability for restaurant and grease applications. Spun aluminum exhaust fans, models CUE and CUBE sizes 099 and larger, are specifically designed for use in restaurant applications to discharge air directly away from the mounting surface.

- Most advanced motor cooling of any fan in its class.
- One-piece windband, continuously welded to the curb cap, ensures leakproof construction for the life of the fan.
- UL/cUL 705 Supplement SC Listed for exhausting restaurant grease exhaust.

Ultimate Steel Grease Fan for Heavy Grease Applications

Model USGF

Fan model USGF is the industry's best for performance and durability for heavy grease applications. This spun steel exhaust fan is specifically designed to remove large amounts of grease and/or contaminants associated with solid fuel cooking and discharge the air directly away from the mounting surface.

- Only spun steel fan in the industry.
- Withstands the most severe cleaning conditions.
- Most advanced motor cooling of any grease fan. Capable of continuously handling 400°F (204°C) airstream temperatures.
- UL/cUL 705 Supplement SC Listed for restaurant grease exhaust.

Emergency Smoke Control

Models CUBE and USGF

When you buy a Greenheck model CUBE or USGF with the smoke control option, you receive a fan with the industry's best performance and durability for smoke control applications (as found in emergency smoke control systems).

Note: Model sizes CUBE-099, 160XP, 240XP, 300HP & 300XP are excluded for Emergency Smoke Control.
Refer to page 18 for size chart.

- UL/cUL Listed for 500°F (260°C) for 4 hours and 1,000°F (538°C) for 15 minutes.
- Half the weight of traditional smoke control fans, an ideal choice for roof load concerns.
- Low profile, height is less than half of traditional smoke control fans, maximum of 48⅛ inches (1,334 mm) from curb cap to top of the fan.
- Multiple applications, capable of exhausting general clean air and satisfying emergency smoke control regulations.

Seismic

Models CUE and CUBE

With changes in building codes and standards, more equipment is being required to be seismically certified in areas of the country not commonly thought of as being in seismically active zones.

The International Building Code (IBC) is designed to provide model code regulations that safeguard public health and safety in all U.S. communities. With this code, the standards are intended to improve the performance and design of nonstructural systems subject to seismic events.

The state of California, one of the most active seismic areas in the United States, has the Health Care Access and Information (HCAI) Department. HCAI regulates the design and construction of health care facilities to ensure they are safe and capable of providing services to the public after a seismic event. HCAI developed their own unique certification process to incorporate the IBC and ASCE testing standards to ensure equipment remains operable after a seismic event.

Protocols designed for seismic standards:

Seismic Testing Criteria	All Greenheck seismically certified models have been tested using the most severe seismic event that is found on the Spectral Response Map per IBC Figures 1613.5 (1-2). Our testing is performed under the worst-case scenario using the highest mapped seismic load, highest level occupancy category, worst-case site class, and highest code mandated importance factor. This testing allows Greenheck seismically certified fans to be used anywhere in the United States under any conditions.
California HCAI Test Protocols	The California Department of Health Care Access and Information (HCAI) requires all certified models to be shake table tested in accordance with ICC ES AC-156, in which the fans are physically subjected to the same or greater forces than they will see during a seismic event. Subjecting models CUE and CUBE fans to this type of testing ensures the fans will operate without problems after a seismic event.
HCAI Certification	The HCAI certification numbers and supporting documents can be viewed on HCAI's website. This ensures that the fan has been subjected to and passed rigorous testing standards.

High Wind and Hurricane

Models CUE and CUBE

Greenheck is leading the High Wind Standard for rooftop fans and ventilators. Forceful winds are the cause of most hurricane damage. While forceful winds are not the only problem, wind-borne debris can also cause detrimental effects to objects and structures. High winds produce extreme forces on buildings and structures. By analyzing calculations, computer simulations, actual testing, and other standards—Greenheck developed the High Wind Standard.

Atlantic, Gulf and Pacific history of major hurricane tracks.

Protocols designed to protect against wind-borne debris and severe wind loads:

Structural Performance Load	A static load that is 1.5 times the design load (195 pounds per square foot pressure) is applied both positive and negative to simulate wind force loads in each direction. Structural Performance per Dade County Protocol TAS-202 (ASTM E-330).
Large Missile Impact Test	Large Missile Impact Testing is required when objects are 30 feet or less from the ground. The test is per Dade County Protocol TAS-201. The test unit is impacted three times with a piece of lumber (2 in. x 4 in. x 6 ft.) weighing approximately nine pounds and traveling at 34 mph. This simulates wind-borne debris striking the fan.
Miami-Dade NOA Numbers	View the certifications on the Miami-Dade County website. Models CUE and CUBE are the first upblast aluminum/steel fans in the industry that have received a Miami-Dade NOA for high wind (150 mph) and hurricane zones.
Certified Independent Third-Party Testing	Each Greenheck model has been subjected to extensive testing procedures. The CUE and CUBE have been certified by an independent third-party to the ASTM E-330 Static Pressure Difference Standard, Florida Building Code Test Protocols TAS-202 Static Pressure Difference and TAS-201 Large Missile Impact. All tests are videotaped for documentation of test method and results.

Large missile impact test

High wind and severe duty roof curbs are available on CUE and CUBE models with high wind certification. The severe duty roof curb models can ship separately to allow for final finishing of the roof prior to the fan arrival and installation.

Description	1 inch (25 mm) Insulation	Flashing Flange	Available Heights Inches (mm)
GPF for flat roofs Curbs are used for high wind/seismic applications. Fully formed on three sides with a single, fully welded seam when dimension (L+Wx2) <118 inches (2,997 mm). Larger sizes are a fully welded assembly.	✓	2 or 5 inches *(50.8 or 127 mm)*	8 to 42 *(203 to 1067)*
GPFHL for heavy load applications Curb construction is intended to support compression loads exceeding 1,000 pounds (454 kg). GPFHL is mounted directly to the roof deck structure. The roofing material is brought to the vertical surface and sealed to the flashing flange. Additional standard construction features include 14-gauge galvanized steel and internal vertical support members.	✓	5 inches *(127 mm)*	12 to 24 *(305 to 610)*
GPFHD for supporting heavy load equipment For severe duty, high wind and seismic applications. The double-thick flashing flange provides an extremely durable surface to secure the curb to the building structure. The roofing material is brought to the vertical surface and sealed to the flashing flange. Additional standard construction features include 12-gauge galvanized steel and internal vertical support members.	✓	Double Thick 5 inches *(127 mm)*	12 to 24 *(305 to 610)*

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Model CUE

VARI-GREEN Motor

Greenheck's electronically commutated (EC) Vari-Green (VG) motor is the industry's first fully controllable motor. It combines motor technology, controllability and energy efficiency into a single low-maintenance unit. When combined with Greenheck fans, all the CFM and static pressure ranges of a belt drive can be attained with the benefits of a direct drive.

Motor Information

HP	Voltages	Phase	Enclosure
1/15	115, 208-230	1	TENV
1/10	115, 208-230, 277	1	TENV
1/10	115, 208-230, 277	1	ODP
1/6	115, 208-230, 277	1	ODP
1/4	115, 208-230, 277	1	ODP
1/2	115, 208-230, 277	1	ODP
1/2	115, 208-230, 277	1	TENV
3/4	115, 208-230, 277	1	ODP
1	115, 208-230, 277	1	ODP
1	115, 208-230, 277	1	TENV
1	115, 208-230	1	TEFC
1	208-240, 380-480	3	TEFC
2	208-230	1	TEFC
2	208-240, 380-480	3	TEFC
3	208-230	1	TEFC
3	208-240. 380-480	3	TEFC
5	208-240. 380-480	3	TEFC
7 1/2	380-480	3	TEFC
10	380-480	3	TEFC

Benefits

- The motor can attain up to IE5 efficiency ratings and reduce energy consumption.
- Watt savings of 30-70% depending on RPM. Note: As motor speed is turned down, efficiency stays high as compared to an AC motor, which decreases dramatically.
- Operates cooler than a standard AC motor at lower RPMs. A cooler motor has longer motor life and reduces energy consumption.
- 75% usable RPM turndown versus 30%, see Motor Turndown Comparison chart at right.
- CUE fans with Vari-Green motors can provide all the CFM and static pressure ranges of a comparable belt drive.
- Maintenance costs are reduced as there are no belts or bearings to replace and no pulleys to adjust.
- Direct drive fans are often preferred where maintenance access is difficult.
- Provides a solution for demand-controlled ventilation applications.

Features

Dial on Motor Control - a potentiometer (dial on motor control) is mounted on the motor for easy speed adjustment for system balance. Simply turn the dial. There are no belts and pulleys to adjust.

Control Wire Inputs - the motor accepts a 0-10V DC signal from Building Automated Systems or other controls to adjust motor speed.

Vari-Green Advantages

- Initial cost is similar to a belt drive
- Lower operating cost
- No maintenance: no belts, pulleys or bearings
- Easy RPM adjustment

Comparisons: Belt, Direct Drive with PSC and Direct Drive with Vari-Green

The length of each curve indicates the practical turndown range. Data is for 1/2 hp motors with load of 0.35 Bhp at full speed

Constant Volume Life Cycle Analysis

Analysis is based on operating costs for a period of three years where the fans operate continuously at 1725 rpm, 24/7, with an energy rate of $0.10/kWh. Maintenance on the CUBE-120 is estimated at $65/yr.

Note: Example is based on a relative cost. Use and installation variables may produce different results.

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Demand Control Ventilation for Multistory Buildings

Applications requiring constant pressure or variable volume can utilize CUE fans with Vari-Green motors and Vari-Green controls. Demand control ventilation systems reduce the amount of energy used by decreasing the speed of the fan when demand is low. This lessens the amount of conditioned air exhausted, and in turn, reduces the total operating costs associated with air conditioning and heating in multistoried buildings including hotels, multifamily complexes, institutional facilities, and high-rise commercial buildings.

Variable Volume Operating Cost Analysis

Example of potential savings based on a northeast city in the USA using Vari-Green components for Variable Volume.

The Vari-Green constant pressure control is preprogrammed and easy to install for applications that include venting dryers, bathrooms, residential-type kitchen space, or industrial process exhaust.

Daily Operating Comparison: Variable Volume and Constant Volume

Demand-controlled ventilation offers significant energy savings by exhausting only the necessary amount of air throughout the day.

Note: A standard VFD compatible motor can also function within a Variable Volume system.

Vari-Green® Controls

Transformer - Provides 24V power from the existing line voltage at the fan to the Vari-Green motor and controls. Dual voltage primary (120/240V) transformer provided with the fan.

Hand/Off/Auto- Creates either a control or an accessory to other controls. Four modes are selectable. Hand mode: control of the motor at this device. Off mode: stops the motor. Auto-Local mode: select a speed at this control and toggle the fan on or off via voltage or dry inputs. Auto-Remote mode: accepts a speed reference signal from other devices and passes that to the motor when a voltage or dry input signal is received. Provides 24V power for other controls and an auxiliary contact for damper control.

Remote Dial - Allows for remote, manual airflow adjustments. Wall plate with dial may be mounted in a standard 2x4 inch electrical junction box.

Two-Speed Control - Control allows motor RPM to be set at two independent speeds (high or low). Meets minimum airflow requirements with the ability to bump up to high speed in an emergency or meet maximum airflow requirements, or reset down to low speed for energy conservation.

Constant Pressure Control - Control the Vari-Green® motor via static (variable volume) or velocity (constant CFM) pressure on the inlet or outlet side of the fan. Available with duct or room probes for use in:

- Multifamily structures including apartments, condos, hotels; residential kitchens and bathrooms
- Institutional facilities such as schools, prisons, multistory office buildings; bathrooms

Air Quality, Volatile Organic Compounds (VOC) - Control a Vari-Green motor via changes in VOCs. VOCs are gasses that are emitted from humans, building materials, perfumes, foods, and furniture off-gassing. Range is 0-2000 CO_2 PPM equivalent.

- Institutional facilities including schools, courthouses, hospital bathrooms, waiting rooms, cafeterias
- Commercial buildings including office space in conference rooms, bathrooms or breakrooms

Air Quality for Temperature and Humidity - Control the Vari-Green motor via changes in temperature, humidity, or both. Range is 32° to 120°F and 0% to 100% relative humidity.

- Multifamily structures including apartments, condos, hotels, with placement in bathrooms and utility rooms
- Commercial buildings such as office buildings for placement in general office space, conference rooms, utility rooms, and bathrooms

Greenheck's Vari-Green Drive is a factory-mounted, wired, and programmed variable frequency drive. Specifically designed for use in air handling applications, the Vari-Green Drive expands variable volume operation and simplifies speed adjustment to three phase applications.

Features

Vari-Green Drive model VGD-100+ is constructed with a NEMA-4X rated enclosure to ensure a long life operating under outdoor environmental conditions. Every Vari-Green Drive is compatible with all Vari-Green controls or any industry control sending a 0-10V signal. Model VGD-100+ is also equipped with Modbus/BACnet® communications allowing for seamless integration to building management systems.

	VGD-100+
Analog Input (0-10V, 4-20mA)	✓
Damper Actuator Output (24VDC)	✓
Control Voltage Output (24VDC)	✓
LED Indication Lights (3)	✓
Relay Output (2)	✓
Digital Input - Dry (2)	✓
Digital Input - Voltage (2)	✓
RS-485 (Modbus/BACnet®)	✓
Bluetooth/Smart Device Interface	✓
On-Board PID Control	✓
Optional Pressure Transducer	✓

Benefits

- Variable volume control from the factory on larger fan sizes where Vari-Green motors are not available.
- R^3 filtering and short leads mitigate harmonics.
- Quick start-up and simplistic commissioning as each drive comes preprogrammed and installed from the factory.
- Eliminate compatibility issues as the motor and drive are factory-matched.
- Induction motors are reliable, efficient and readily available if replacements are needed.

Vari-Green Drive 100+ App

Available on the App Store

GET IT ON Google Play

Vari-Green Drive model VGD-100+ features a smartphone companion app available for download from the app store. Manually control and monitor the drive from the app as well as access any advanced programming features. For more information about the companion app and its capabilities, reference the VGD-100+ Quick Start Guide located on greenheck.com and the documentation section of the app.

Options and Accessories

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The following chart shows options and accessories available on Greenheck's roof upblast and sidewall exhaust fans.

Options and Accessories	CUE	CUBE	USGF
Sidewall Mount	✓	✓	
Roof Curbs	✓	✓	✓
Wall Bracket	✓	✓	
Curb Extensions	✓	✓	✓
Vented Curb Extensions	✓	✓	✓
Adapter/Reducer	✓	✓	
Curb Seal	✓	✓	std.
Windband Extension	✓	✓	✓
Hinged Curb Cap	✓	✓	✓
Hinged Base (Size 300-480)	✓	✓	std.
Tie-Down Points	✓	✓	✓
Grease Trap	✓	✓	✓
Grease Trap with Absorbent Material	✓	✓	✓
Grease Pan Kit	✓	✓	
Clean-Out Port	✓	✓	std.
Heat Baffle		✓	✓
Hood Hasps	✓	✓	✓
Birdscreen	✓	✓	
Wall Grille	✓	✓	
Non-Stick Aluminum Wheel	✓	✓	std.
Disconnect Switches	✓	✓	✓
Dampers	✓	✓	
Speed Controllers	✓		
Motor Starters	✓	✓	✓
UL 705	✓	✓	
UL 705 Supplement SC (Restaurant)	✓	✓	std.
UL 705 Supplement SD (Smoke)		✓	✓
Coatings	✓	✓	✓

Sidewall Mount — Allows for a horizontal discharge with a square mounting base, models CUE and CUBE.

Roof Curbs — Wide variety of roof curbs are available for mounting the fan to the roof including: vented, flanged, pitched and sound-absorbing. For more information on severe duty curbs refer to the information on page 9.

Wall Bracket — Available for our sidewall mounted CUE and CUBE fans for non-grease applications. This is a different option for wall mounting versus using a curb. Note: Your wall opening will be slightly different when using the wall bracket.

Curb Extensions — Mounts between roof curb and fan for additional height from roof top.

Vented Curb Extensions — Mounts between roof curb and roof-mounted fan to meet NFPA requirements of 40-inch (1016 mm) minimum discharge above the roof when mounted on a minimum 8-inch (203 mm) high roof curb.

Adapter/Reducer — This is used when you need to fit a fan to an existing curb. Use the adapter when the fan square size is smaller than the existing curb. The reducer is used when the fan square size is larger than the existing curb.

Curb Seal — Foam or high-temperature seal between fan and curb to assure proper sealing when attached to a curb.

Windband Extension — Aluminum tube raising the fan discharge height.

Hinged Curb Cap — The hinged curb cap allows the entire fan to swing open to allow maintenance personnel access to the wheel and ductwork for regular inspection and cleaning. Available as factory-mounted or shipped loose.

Hinged Base — Available on sizes 300 up to 480, allows for easy maintenance. Hinge and restraining cables are factory-mounted to a sub-base attached directly to the curb without additional height added.

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Tie-Down Points — Four brackets located on the windband for securing the fan in heavy wind applications.

Grease Trap — Polypropylene trap designed to collect grease residue to avoid drainage onto roof surface. Only available with UL 705 Supplement SC (restaurant exhaust).

Shown on a CUBE-180

Grease Trap with Absorbent Material — Same as above with an absorbent material to collect grease residue for easy disposal.

Shown on a CUBE-360

Grease Pan Kit — Used for our sidewall-mounted CUE and CUBE fans.

Clean-Out Port — Patented removable plug allows for easy spray or steam cleaning of wheel through the windband. Available on select models.

Heat Baffle — The heat baffle is an insulation heat barrier mounted to the support pan. The heat baffle is designed to act as a shield against the high temperatures of grease exhaust applications.

Hood Hasp — Additional brackets attached to the motor compartment and vertical hoodband. This provides a location for security lock.

Birdscreen — Stainless rigid wire to protect the fan discharge from birds or small objects.

Wall Grille — Available on sidewall-mounted CUE or CUBE fans.

Non-Stick Aluminum Wheel — Patented coating helps prevent wheel imbalance in heavy grease applications and allows buildup on wheel to be easily removed.

Disconnect Switches — Assorted NEMA-rated switches are available for positive electrical shutoff and safety including: dust-tight, rainproof and corrosion-resistant.

Dampers — Designed to prevent outside air from entering back into the building when fan is off. Includes backdraft and motorized dampers. (Not available with UL/cUL 705 Supplement SC (restaurant exhaust) or USGF fans).

Speed Controllers— Available for use with shaded pole and permanent split capacitor motors on direct drive fans. They provide an economical means of system balancing.

Motor Starters — The fundamental function of a motor starter is to protect the motor from damage that can occur from overheating. With a Greenheck motor starter you will be provided with the best motor protection available.

Specific model components may include: SmartStart™ technology, physical interface, overload protection, disconnect, magnetic contractor, NEMA-1 or NEMA-3R steel enclosures and pre-engineered easy system integration. For complete information on specific Greenheck motor starter models, refer to greenheck.com, motor starters web page.

UL/cUL 705 — Models CUE and CUBE may be Listed for Power Ventilators (Electrical). CUBE for Power Ventilators for Smoke Control Systems comes standard with UL 705.

UL/cUL 705 Supplement SC (Formerly UL-762)— Models CUE and CUBE, sizes 099 and larger, may be Listed for Power Ventilators for Restaurant Exhaust Appliances. Model USGF comes standard with UL 705 Supplement SC.

UL/cUL Power Ventilators for Control Systems — Models CUBE and USGF may be Listed for Power Ventilators for Smoke Control Systems.

Note: Model sizes CUBE-099, 160XP, 240XP, 300HP & 300XP are excluded from Ventilators for Smoke Control Systems

Coatings – A variety of coatings and colors are available for decorative to protective applications.

Permatector™ is our standard coating on steel fans and is typically used for applications that require corrosion resistance in indoor and outdoor environments.

Hi-Pro Polyester is resistant to salt water, chemical fumes and moisture in more corrosive atmospheres. Typically used for applications that require superior chemical resistance, excellent abrasion and outdoor UV protection, this coating exceeds protective qualities of air dried Heresite and air dry phenolic. Customers can choose from seven standard decorative colors or color match any color.

Macropoxy with UV topcoat is a two-coat extreme duty coating system. The base coat of Macropoxy is designed specifically for harsh environments, while the topcoat is used for its chemical and UV resistance. Together this system offers the greatest protection in adverse environments, such as marine or chemical processing applications. Customers can choose from seven standard decorative colors.

Note: Colors are subject to change. See Performance Coatings for Commercial & Industrial Fans catalog for more details.

General Clean Air/Fume Hood (Non-Grease)

All CUE and CUBE exhaust fans are designed for applications ranging from clean air to contaminated air. A typical installation is shown.

Models CUE and CUBE Roof-Mounted

When roofing materials extend to the top of the curb, roof curbs should be 1½-inches (¾-inch on a side) less than the unit curb cap to allow for roofing and flashing.

- For recommended duct size, damper size and roof opening dimensions, refer to the performance data pages.
- Installation must include a means for inspecting, cleaning and servicing the exhaust fan.

Models CUE and CUBE Wall-Mounted

Emergency Smoke Control

The CUBE with smoke option and the USGF are specifically designed for Emergency Smoke Control applications. These fans are UL/cUL Listed for Power Ventilators and Power Ventilators for Smoke Control Systems for 500°F (260°C) for 4 hours and 1,000°F (538°C) for 15 minutes.

- Due to the varying airstreams encountered in commercial ventilation, system designers must be aware of national, state, and local codes and guidelines governing these installations. Consult with local code authorities before proceeding with any ventilation project.
- When roofing materials extend to the top of the curb, roof curbs should be 1½-inches (¾-inch on a side) less than the unit curb cap to allow for roofing and flashing.
- For recommended duct size, damper size and roof opening dimensions, refer to the performance data pages.
- Installation must include a means for inspecting, cleaning and servicing the exhaust fan.
- Exhaust fans used in emergency smoke applications must have external wiring. (Wiring must not be installed in the airstream).

Models CUBE and USGF

GREENHECK
Building Value in Air.

Commercial Kitchen (Grease)

Models CUBE, USGF and model CUE sizes 099 and larger, are designed to meet restaurant and food service applications. These fans are UL/cUL Listed Power Ventilators for Restaurant Exhaust Appliances and have been tested under high temperature [400°F (204°C)] and abnormal flare-up [600°F (316°C)] conditions.

**Models CUE and CUBE
Wall-Mounted**

- Due to high temperatures and grease-laden airstreams in commercial kitchen ventilation, system designers must be aware of governing codes and guidelines. The National Fire Protection Association (NFPA) is the primary source which governs many codes for commercial kitchen ventilation. Selected information from NFPA 96 is shown below. Consult with local code authorities before proceeding with any kitchen ventilation project.
- Exhaust fans used in kitchen ventilation applications must have external wiring. (Wiring must not be installed in the airstream).
- Installation must include a means for inspecting, cleaning and servicing the exhaust fan. Greenheck offers a Hinged Curb Cap option for upblast exhaust fans.
- No dampers are to be installed in the system.

Note:
- *The typical installations shown on these two pages are recommendations based on national codes. Local authority may supersede these recommendations.*
- *Drawing shows NEMA-1 Standard, NEMA-3R is optional.*

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**Models CUE and CUBE
Vented Installation**

**Models CUE and CUBE
Non-Vented Installation**

GREENHECK
Building Value in Air.

Performance & Dimensions Quick Reference

Page Index					Material Thickness		
Model Size	CUBE	CUE	CUBE Smoke Option	USGF	Windband	Motor Cover	Curb Caps
060		19 •			0.051 (1.3)	0.051 (1.3)	0.051 (1.3)
070		20 •					
080		21 •			0.051 (1.3)	0.051 (1.3)	0.064 (1.6)
090		22 •					
095		23 •					
099	24 •				0.051 (1.3)	0.040 (1.0)	0.064 (1.6)
100	25 •		x				
100HP	26 •		x				
120	27 •		x				
130	28 •		x				
140	29 •		x	x			
140HP	30 •		x	x			
160	31 •		x	x			
160HP	32 •		x	x			
160XP	33 •			x			
180	34 •		x	x	0.064 (1.6) USGF 0.051 (1.3)	0.040 (1.0)	0.064 (1.6)
180HP	35 •		x	x			
200	36 •		x	x			
200HP	37 •		x	x			
220	38 •		x				
220HP	39 •		x				
240	40 •		x				
240HP	41 •		x		0.064 (1.6)	0.051 (1.3)	0.064 (1.6)
240XP	42 •						
300	43 •		x		0.080 (2.0)	0.051 (1.3)	0.064 (1.6)
300HP	44 •						
300XP	45 •						
360	46 •		x		0.080 (2.0)	0.064 (1.6)	0.080 (2.0)
360HP	47 •		x				
360XP	48 •						
420	49 •		x		0.080 (2.0)	0.064 (1.6)	0.100 (2.5)
480	50 •		x				

● Vari-Green option available

The Model number system is designed to completely identify the fan. The correct code letters must be specified to designate belt or direct drive. The remainder of the model number is determined by the size and performance.

CUBE-240HP-A-5-VG/VGD-1-34-X

Fan Size
060 thru 480

Wheel Pressure Level
HP - High-Pressure
XP - Extended High-Pressure

Configuration
CUE - Direct Drive Roof or Wall Mounted
CUBE - Belt Drive Roof or Wall Mounted
USGF - Belt Drive Roof Mounted

60 Hz Motor RPM *(Direct Drive Only)*
A = 1725 D = 1550
B = 1140 E = 1050
C = 860 G = 1300

50 Hz Motor RPM *(Direct Drive Only)*
International *(See CAPS for performance)*
K = 950 RPM J = 1425 RPM
L = 1290 RPM

Motor HP
4 = 1/4 10 = 1 30 = 3
3 = 1/3 15 = 1½ 50 = 5
5 = 1/2 20 = 2 75 = 7½
7 = 3/4

VG = Vari-Green® Motor
VGD = Vari-Green® Drive

Performance Revision

Curb Cap Size (inches)

X = UL 705
F = UL 705 Supplement SD (Smoke)
G = UL 705 Supplement SC (Restaurant)

Roof Upblast/Sidewall Exhaust
Size-060: CUE

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUE
^Approximate Weight	29 *(13)*
Damper Size	8 x 8 *(203 x 203)*
Roof/Wall (without wall bracket) Opening	13½ x 13½ *(343 x 343)*
Wall Opening with Wall Bracket	13 x 13 *(330 x 330)*
Wall Opening with Curb Through Wall	17 x 17 *(432 x 432)*

Direct Drive RPM

E-1050 RPM
G-1300 RPM
D-1550 RPM
VG-1725 RPM

Motor HP Direct		Fan RPM		Static Pressure in Inches wg									
				0	0.05	0.1	0.125	0.15	0.2	0.25	0.3	0.35	0.375
060													
VG-1/10	E-1/200	1050	CFM	133	113	94	81	65					
			BHP	0.01	0.01	0.01	0.01	0.01					
			Sones	1.7	1.7	1.7	1.7	1.7					
	G-1/100	1300	CFM	165	148	134	126	117	96	70			
			BHP	0.01	0.01	0.01	0.01	0.01	0.01	0.01			
			Sones	2.9	2.6	2.5	2.5	2.5	2.5	2.5			
	D-1/60	1550	CFM	197	183	169	164	158	143	128	107	85	
			BHP	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
			Sones	4.3	3.9	3.9	3.9	3.9	4.0	4.0	4.0	4.0	
		1725	CFM	219	207	194	188	183	172	159	146	137	118
			BHP	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.029	0.029	0.029
			Sones	5.4	5	5.1	5.2	5.2	5.2	5.3	5.3	5.4	5.5

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Direct Drive RPM

E-1050 RPM
G-1300 RPM
D-1550 RPM
VG-1725 RPM

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUE
^Approximate Weight	29 *(13)*
Damper Size	8 x 8 *(203 x 203)*
Roof/Wall (without wall bracket) Opening	13½ x 13½ *(343 x 343)*
Wall Opening with Wall Bracket	13 x 13 *(330 x 330)*
Wall Opening with a Curb Through Wall	17 x 17 *(432 x 432)*

Motor HP		Fan		Static Pressure in Inches wg									
Direct		RPM		0	0.05	0.1	0.125	0.15	0.2	0.25	0.3	0.35	0.375
070													
VG-1/10 VARI-GREEN	E-1/100	1050	CFM	250	224	193	171	143					
			BHP	0.01	0.01	0.01	0.01	0.01					
			Sones	2.7	2.1	1.7	1.4	1.1					
	G-1/60	1300	CFM	309	288	267	255	241	205	152			
			BHP	0.01	0.01	0.02	0.02	0.02	0.02	0.01			
			Sones	4.1	3.8	3.4	3.3	3.2	2.8	2.5			
	D-1/30	1550	CFM	369	351	333	325	316	293	269	234	187	160
			BHP	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02
			Sones	5.6	5.4	5.2	5.2	5.1	4.9	4.7	4.5	4.1	3.9
		1725	CFM	411	395	379	371	363	346	326	305	289	258
			BHP	0.032	0.032	0.033	0.034	0.035	0.036	0.036	0.036	0.035	0.035
			Sones	6.8	6.7	6.7	6.6	6.6	6.5	6.4	6.2	6.1	5.9

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-080: CUE

GREENHECK
Building Value in Air.

Direct Drive RPM

E-1050 RPM
G-1300 RPM
D-1550 RPM
VG-1725 RPM

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUE
^Approximate Weight	40 *(18)*
Damper Size	10 x 10 *(254 x 254)*
Roof/Wall (without wall bracket) Opening	15½ x 15½ *(394 x 394)*
Wall Opening with Wall Bracket	15 x 15 *(381 x 381)*
Wall Opening with a Curb Through Wall	19 x 19 *(483 x 483)*

Motor HP		Fan		Static Pressure in Inches wg									
Direct		RPM		0	0.1	0.125	0.15	0.2	0.25	0.3	0.375	0.5	0.625
080													
VG-1/10 VARI-GREEN	E-1/40	1050	CFM	325	265	247	230	189	133				
			BHP	0.01	0.01	0.02	0.02	0.02	0.02				
			Sones	3.8	3.7	3.6	3.7	3.9	4.2				
	G-1/30	1300	CFM	403	356	343	330	302	272	239	173		
			BHP	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03		
			Sones	5.4	5.4	5.4	5.4	5.4	5.5	5.6	5.9		
	D-1/20	1550	CFM	480	441	431	421	400	376	352	314	235	
			BHP	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05	0.05	
			Sones	7.3	7.3	7.3	7.3	7.3	7.2	7.2	7.3	7.5	
		1725	CFM	534	500	491	481	463	444	423	390	333	257
			BHP	0.05	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07
			Sones	8.4	8.5	8.5	8.5	8.6	8.6	8.6	8.5	8.7	8.7

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-090: CUE

GREENHECK
Building Value in Air.

Direct Drive RPM

E-1050 RPM
G-1300 RPM
D-1550 RPM
VG-1725 RPM

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUE
^Approximate Weight	40 *(18)*
Damper Size	10 x 10 *(254 x 254)*
Roof/Wall (without wall bracket) Opening	15½ x 15½ *(394 x 394)*
Wall Opening with Wall Bracket	15 x 15 *(381 x 381)*
Wall Opening with a Curb Through Wall	19 x 19 *(483 x 483)*

Motor HP Direct		Fan RPM		Static Pressure in Inches wg									
				0	0.1	0.125	0.15	0.2	0.25	0.3	0.375	0.5	0.625
090													
VG-1/10 VARI-GREEN	E-1/40	1050	CFM	549	470	451	429	381	306	204			
			BHP	0.02	0.02	0.02	0.03	0.03	0.03	0.03			
			Sones	4.0	3.9	3.9	4.0	4.1	4.2	4.5			
	G-1/30	1300	CFM	680	616	600	584	553	517	479	391		
			BHP	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05		
			Sones	5.4	5.4	5.4	5.4	5.4	5.5	5.5	5.6		
	D-1/20	1550	CFM	811	757	744	731	704	677	651	604	501	347
			BHP	0.06	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.09	0.08
			Sones	7.6	7.5	7.5	7.5	7.5	7.5	7.4	7.4	7.4	7.9
		1725	CFM	903	854	842	830	806	782	758	722	652	553
			BHP	0.08	0.09	0.09	0.09	0.1	0.1	0.1	0.11	0.12	0.12
			Sones	8.8	8.8	8.8	8.8	8.8	8.8	8.7	8.7	8.8	8.9

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-095: CUE

Direct Drive RPM

E-1050 RPM
G-1300 RPM
D-1550 RPM
VG-1725 RPM

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUE
^Approximate Weight	40 *(18)*
Damper Size	10 x 10 *(254 x 254)*
Roof/Wall (without wall bracket) Opening	15½ x 15½ *(394 x 394)*
Wall Opening with Wall Bracket	15 x 15 *(381 x 381)*
Wall Opening with a Curb Through Wall	19 x 19 *(483 x 483)*

Motor HP		Fan RPM		Static Pressure in Inches wg									
Direct				0	0.1	0.125	0.15	0.2	0.25	0.3	0.375	0.5	0.625
095													
VG-1/6 VARI-GREEN	E-1/30	1050	CFM	711	603	570	536	468	381	265			
			BHP	0.03	0.04	0.04	0.04	0.04	0.04	0.03			
			Sones	5.4	4.5	4.5	4.5	4.4	4.5	4.6			
	G-1/12	1300	CFM	880	797	774	750	696	641	587	484	199	
			BHP	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.05	
			Sones	7.6	6.9	6.7	6.6	6.5	6.4	6.4	6.4	6.8	
	D-1/8	1550	CFM	1049	983	964	944	905	861	816	747	616	442
			BHP	0.1	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.11
			Sones	9.6	9.4	9.3	9.2	8.9	8.6	8.4	8.3	8.1	7.8
		1725	CFM	1167	1108	1093	1077	1041	1005	967	905	802	680
			BHP	0.14	0.15	0.15	0.15	0.16	0.16	0.16	0.17	0.17	0.17
			Sones	11.3	11.1	11.0	11.0	10.8	10.5	10.2	9.9	9.8	9.6

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE
^Approximate Weight	66 *(30)*	64 *(29)*
Damper Size	12 x 12 *(305 x 305)*	
	16 x 16 *(406 x 406)*	
Roof/Wall (without wall bracket) Opening	15½ x 15½ *(394 x 394)*	
	18½ x 18½ *(470 x 470)*	
Wall Opening with Wall Bracket	15 x 15 *(381 x 381)*	
	18 x 18 *(457 x 457)*	
Wall Opening with a Curb Through Wall	19 x 19 *(483 x 483)*	
	22 x 22 *(559 x 559)*	

Direct Drive RPM

C-860 RPM
B-1140 RPM
A-1725 RPM
VG-1725 RPM

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0	0.125	0.25	0.375	0.5	0.625	0.75	0.875	1	1.125
099														
1/4	VG-1/4 VARI-GREEN		744	CFM	543	414								
				BHP	0.02	0.02								
				Sones	4.5	4.0								
		C-1/8	860	CFM	628	518	376							
				BHP	0.03	0.03	0.03							
				Sones	5.3	4.7	4.3							
			958	CFM	700	603	490							
				BHP	0.04	0.04	0.04							
				Sones	6.1	5.4	4.9							
			1056	CFM	771	685	588	464						
				BHP	0.05	0.06	0.06	0.06						
				Sones	7.1	6.2	5.7	5.3						
		B-1/6	1140	CFM	833	754	665	565	408					
				BHP	0.06	0.07	0.07	0.07	0.07					
				Sones	7.8	7.0	6.3	5.9	5.5					
			1238	CFM	904	832	752	668	559					
				BHP	0.08	0.09	0.09	0.09	0.09					
				Sones	8.8	8.1	7.2	6.7	6.4					
			1336	CFM	976	909	837	760	674	564				
				BHP	0.10	0.11	0.11	0.12	0.12	0.11				
				Sones	9.9	9.4	8.5	7.6	7.3	6.9				
			1434	CFM	1047	986	920	848	776	687	567			
				BHP	0.13	0.13	0.14	0.14	0.14	0.14	0.14			
				Sones	10.8	10.4	9.7	8.8	8.3	8.0	7.6			
			1532	CFM	1119	1062	1001	935	868	794	705	583		
				BHP	0.15	0.16	0.17	0.17	0.18	0.18	0.17	0.16		
				Sones	11.9	11.4	10.9	10.0	9.4	9.1	8.8	8.4		
			1630	CFM	1191	1137	1080	1020	956	893	818	730	609	
				BHP	0.19	0.19	0.20	0.21	0.21	0.21	0.21	0.21	0.20	
				Sones	13.0	12.6	12.1	11.4	10.8	10.4	10.1	9.8	9.4	
		A-1/4	1725	CFM	1260	1209	1156	1100	1041	981	918	846	759	639
				BHP	0.22	0.23	0.23	0.24	0.25	0.25	0.25	0.25	0.24	0.23
				Sones	14.2	13.8	13.4	12.9	12.3	11.7	11.5	11.2	10.8	10.6

MAXIMUM BHP AT A GIVEN RPM = $(RPM/3099)^3$
MAXIMUM RPM = 1725
TIP SPEED (ft/min) = RPM x 2.846
MAXIMUM MOTOR FRAME SIZE = 56
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/1.28

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-100: CUBE • CUE

Previously Size-101

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE
^Approximate Weight	66 *(30)*	64 *(29)*
Damper Size	12 x 12 *(305 x 305)*	
	16 x 16 *(406 x 406)*	
Roof/Wall (without wall bracket) Opening	15½ x 15½ *(394 x 394)*	
	18½ x 18½ *(470 x 470)*	
Wall Opening with Wall Bracket	15 x 15 *(381 x 381)*	
	18 x 18 *(457 x 457)*	
Wall Opening with a Curb Through Wall	19 x 19 *(483 x 483)*	
	22 x 22 *(559 x 559)*	

Direct Drive RPM

C-860 RPM
B-1140 RPM
A-1725 RPM
VG-1725 RPM

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0	0.125	0.25	0.375	0.5	0.625	0.75	0.875	1	1.125
100														
1/4	VG-1/4 VARI-GREEN	C-1/8	860	CFM	732	625	481							
				BHP	0.03	0.035	0.036							
				Sones	4.6	2.1	1.3							
			953	CFM	811	717	603							
				BHP	0.041	0.047	0.05							
				Sones	5.5	4.2	3.1							
			1046	CFM	890	807	707	577						
				BHP	0.054	0.061	0.066	0.065						
				Sones	6.5	6.2	5.6	5.4						
		B-1/6	1140	CFM	970	897	806	707	411					
				BHP	0.07	0.078	0.084	0.085	0.067					
				Sones	7.2	7	6.5	6	5.5					
			1252	CFM	1066	1000	920	834	732					
				BHP	0.092	0.1	0.11	0.11	0.11					
				Sones	8	8	7.6	6.9	6.5					
			1350	CFM	1149	1089	1016	940	856	745				
				BHP	0.12	0.13	0.13	0.14	0.14	0.14				
				Sones	8.9	8.9	8.6	8.1	7.5	7				
			1448	CFM	1233	1176	1112	1040	966	886	763			
				BHP	0.14	0.15	0.16	0.17	0.17	0.17	0.17			
				Sones	10.3	10.2	9.9	9.5	9	8.3	8			
			1546	CFM	1316	1264	1206	1139	1072	999	915	793		
				BHP	0.17	0.19	0.2	0.2	0.21	0.21	0.21	0.23		
				Sones	11.8	11.5	11.3	10.9	10.5	9.8	9.3	8.9		
			1660	CFM	1413	1365	1313	1251	1189	1125	1056	974	861	
				BHP	0.22	0.23	0.24	0.25	0.26	0.26	0.26	0.26	0.25	
				Sones	12.7	12.3	12	11.6	11.3	10.8	10.2	9.6	9.4	
1/3		A-1/4	1725	CFM	1468	1422	1373	1315	1255	1195	1129	1062	970	
				BHP	0.24	0.26	0.27	0.28	0.29	0.29	0.29	0.29	0.29	
				Sones	13.3	12.9	12.5	12	11.7	11.3	10.8	10.2	9.7	
			1820	CFM	1549	1505	1459	1406	1350	1293	1234	1171	1106	900
				BHP	0.28	0.3	0.31	0.32	0.33	0.34	0.35	0.35	0.35	0.33
				Sones	14.3	13.7	13.4	12.7	12.4	12	11.6	11.2	10.6	10.1

MAXIMUM BHP AT A GIVEN RPM = $(RPM/3099)^3$
MAXIMUM RPM = 1820
TIP SPEED (ft/min) = RPM x 2.846
MAXIMUM MOTOR FRAME SIZE = 56
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/1.28

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-100HP: CUBE • CUE

Previously Size-101HP

GREENHECK
Building Value in Air.

Direct Drive RPM

VG-1725 RPM
VG-2500 RPM

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE
^Approximate Weight	66 *(30)*	64 *(29)*
Damper Size	12 x 12 *(305 x 305)*	
	16 x 16 *(406 x 406)*	
Roof/Wall (without wall bracket) Opening	15½ x 15½ *(394 x 394)*	
	18½ x 18½ *(470 x 470)*	
Wall Opening with Wall Bracket	15 x 15 *(381 x 381)*	
	18 x 18 *(457 x 457)*	
Wall Opening with a Curb Through Wall	19 x 19 *(483 x 483)*	
	22 x 22 *(559 x 559)*	

Motor HP Belt	Motor HP Direct	Fan RPM		Static Pressure in Inches wg 0.5	0.625	0.75	1	1.25	1.5	1.75	2	2.25	2.5
100HP													
1/4	VG-1/4 VARI-GREEN	1300	CFM	335	182								
			BHP	0.067	0.056								
			Sones	6	6.3								
		1420	CFM	419	350	191							
			BHP	0.088	0.088	0.073							
			Sones	6.8	6.6	6.9							
		1540	CFM	491	438	371							
			BHP	0.11	0.11	0.11							
			Sones	7.8	7.5	7.3							
		1660	CFM	560	512	461	262						
			BHP	0.14	0.14	0.14	0.12						
			Sones	8.9	8.6	8.4	8.3						
		1780	CFM	627	583	538	430						
			BHP	0.17	0.17	0.17	0.17						
			Sones	10.3	9.9	9.6	9.1						
	VG-1/2	1900	CFM	688	651	610	520	382					
			BHP	0.2	0.21	0.21	0.21	0.19					
			Sones	12.1	11.4	11	10.5	10.2					
		2045	CFM	761	729	693	615	522	346				
			BHP	0.24	0.26	0.26	0.26	0.26	0.23				
			Sones	13.9	13.5	12.7	12.1	11.5	11.4				
1/3		2150	CFM	812	782	752	678	600	500				
			BHP	0.28	0.29	0.3	0.3	0.3	0.3				
			Sones	14.1	14.1	13.5	12.5	12	11.5				
		2250	CFM	860	832	804	737	665	579	456			
			BHP	0.32	0.33	0.34	0.35	0.35	0.35	0.32			
			Sones	14.4	14.4	14.2	13.2	12.5	11.9	11.6			
1/2		2500	CFM	977	954	929	878	815	750	677	595	414	
			BHP	0.44	0.44	0.45	0.48	0.48	0.48	0.48	0.48	0.42	
			Sones	15.9	15.6	15.3	15	14.4	13.6	12.9	12.5	12.2	
		2580	CFM	1014	992	969	919	861	799	735	655	550	323
			BHP	0.48	0.48	0.49	0.52	0.53	0.53	0.53	0.53	0.49	0.43
			Sones	16.8	16.4	16	15.7	15.1	14.4	13.7	13.2	12.9	12.5

MAXIMUM BHP AT A GIVEN RPM = $(RPM/3195)^3$
MAXIMUM RPM = 2580
TIP SPEED (ft/min) = RPM x 2.913
MAXIMUM MOTOR FRAME SIZE = 56
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/1.28

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-120: CUBE • CUE

Previously Size-121

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

Direct Drive RPM

C-860 RPM
B-1140 RPM
A-1725 RPM
VG-1725 RPM

	CUBE	CUE
^Approximate Weight	66 *(30)*	64 *(29)*
Damper Size	12 x 12 *(305 x 305)*	
	16 x 16 *(406 x 406)*	
Roof/Wall (without wall bracket) Opening	15½ x 15½ *(394 x 394)*	
	18½ x 18½ *(470 x 470)*	
Wall Opening with Wall Bracket	15 x 15 *(381 x 381)*	
	18 x 18 *(457 x 457)*	
Wall Opening with a Curb Through Wall	19 x 19 *(483 x 483)*	
	22 x 22 *(559 x 559)*	

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0	0.125	0.25	0.375	0.5	0.625	0.75	1	1.25	1.5
120														
1/4	VG-1/4		684	CFM	808	669								
				BHP	0.02	0.03								
				Sones	4.4	4.4								
			772	CFM	912	789	630							
				BHP	0.04	0.04	0.043							
				Sones	4.8	5	5.1							
		C-1/8	860	CFM	1015	905	781	581						
				BHP	0.05	0.05	0.06	0.06						
				Sones	5.3	5.7	5.6	5.7						
			1000	CFM	1181	1084	993	870	691					
				BHP	0.08	0.08	0.09	0.09	0.09					
				Sones	6.2	6.6	6.8	6.7	6.7					
		B-1/6	1140	CFM	1346	1261	1180	1091	981	833				
				BHP	0.11	0.12	0.13	0.13	0.14	0.14				
				Sones	7.4	7.9	8.2	8.2	8	8.1				
			1250	CFM	1476	1397	1323	1250	1159	1053	916			
				BHP	0.15	0.16	0.17	0.17	0.18	0.18	0.18			
				Sones	8.8	9.3	9.9	9.9	10	9.8	9.8			
			1410	CFM	1665	1595	1528	1463	1398	1315	1224	965		
				BHP	0.21	0.22	0.23	0.24	0.25	0.26	0.26	0.25		
				Sones	11.1	11.6	12.2	12.5	12.6	12.7	12.7	12.3		
1/3	VG-1/2		1480	CFM	1748	1681	1617	1555	1493	1421	1338	1132		
				BHP	0.25	0.26	0.27	0.28	0.29	0.29	0.30	0.30		
				Sones	11.9	12.4	13.1	13.5	13.7	13.8	13.8	13.6		
			1545	CFM	1824	1760	1699	1639	1580	1518	1441	1262	990	
				BHP	0.28	0.29	0.30	0.31	0.32	0.33	0.34	0.34	0.33	
				Sones	12.8	13.4	14	14.5	14.7	14.8	14.9	14.9	14.6	
1/2			1635	CFM	1931	1870	1811	1755	1699	1643	1577	1424	1226	
				BHP	0.33	0.34	0.36	0.37	0.38	0.39	0.40	0.41	0.40	
				Sones	14.1	14.7	15.2	15.9	16.2	16.4	16.6	16.7	16.5	
		A-1/2	1725	CFM	2037	1979	1923	1869	1816	1763	1710	1571	1406	1176
				BHP	0.39	0.40	0.41	0.43	0.44	0.45	0.46	0.47	0.48	0.46
				Sones	15.6	16.1	16.7	17.3	17.9	18.2	18.4	18.7	18.6	18.4

MAXIMUM BHP AT A GIVEN RPM = $(RPM/2199)^3$
MAXIMUM RPM = 1725
TIP SPEED (ft/min) = RPM x 3.419
MAXIMUM MOTOR FRAME SIZE = 56
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/1.28

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-130: CUBE • CUE
Previously Size-131

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

Direct Drive RPM

C-860 RPM
B-1140 RPM
A-1725 RPM
VG-1725 RPM

	CUBE	CUE
^Approximate Weight	66 *(30)*	64 *(29)*
Damper Size	12 x 12 *(305 x 305)*	
	16 x 16 *(406 x 406)*	
Roof/Wall (without wall bracket) Opening	15½ x 15½ *(394 x 394)*	
	18½ x 18½ *(470 x 470)*	
Wall Opening with Wall Bracket	15 x 15 *(381 x 381)*	
	18 x 18 *(457 x 457)*	
Wall Opening with a Curb Through Wall	19 x 19 *(483 x 483)*	
	22 x 22 *(559 x 559)*	

Motor HP			Fan		Static Pressure in Inches wg									
Belt	Direct		RPM		0	0.125	0.25	0.375	0.5	0.625	0.75	1	1.25	1.5
130														
1/4	VG-1/4 VARI-GREEN.		650	CFM	892	724								
				BHP	0.03	0.03								
				Sones	6.2	6.0								
			755	CFM	1036	895	697							
				BHP	0.04	0.05	0.05							
				Sones	7.2	7.0	6.3							
		C-1/8	860	CFM	1180	1057	914	675						
				BHP	0.06	0.07	0.07	0.07						
				Sones	8.5	8.3	7.7	6.9						
			1000	CFM	1372	1267	1158	1016	801					
				BHP	0.10	0.11	0.11	0.12	0.11					
				Sones	10.7	10.5	10.0	9.2	8.3					
		B-1/6	1140	CFM	1564	1471	1379	1280	1144	964				
				BHP	0.14	0.15	0.16	0.17	0.17	0.17				
				Sones	12.5	12.2	11.8	11.2	10.3	9.7				
	VG-1/2		1305	CFM	1790	1709	1629	1547	1458	1340	1201			
				BHP	0.22	0.23	0.24	0.25	0.26	0.26	0.26			
				Sones	14.6	14.3	13.9	13.5	13.0	12.0	11.5			
1/3			1435	CFM	1968	1895	1822	1749	1671	1586	1479	1198		
				BHP	0.29	0.30	0.31	0.32	0.33	0.34	0.35	0.33		
				Sones	15.7	15.5	15.1	14.8	14.3	13.8	13.1	11.9		
1/2	VG-3/4		1488	CFM	2041	1970	1900	1829	1756	1679	1580	1342		
				BHP	0.32	0.33	0.35	0.36	0.37	0.38	0.39	0.38		
				Sones	16.2	15.9	15.7	15.4	15.0	14.5	13.9	12.7		
			1567	CFM	2149	2082	2015	1948	1881	1808	1728	1527	1222	
				BHP	0.37	0.39	0.40	0.41	0.43	0.44	0.45	0.45	0.42	
				Sones	17.0	16.8	16.5	16.3	15.9	15.5	15.0	13.8	12.6	
			1646	CFM	2258	2194	2130	2066	2002	1935	1865	1686	1458	
				BHP	0.43	0.45	0.46	0.47	0.49	0.50	0.51	0.52	0.51	
				Sones	17.9	17.6	17.4	17.2	16.9	16.5	16.1	15.1	14.0	
		A-1/2	1725	CFM	2366	2305	2244	2183	2122	2061	1994	1838	1646	1365
				BHP	0.50	0.51	0.53	0.54	0.56	0.57	0.58	0.60	0.60	0.57
				Sones	18.8	18.6	18.4	18.2	18.0	17.6	17.2	16.4	15.3	14.1

MAXIMUM BHP AT A GIVEN RPM = $(RPM/2041)^3$
MAXIMUM RPM = 1725
TIP SPEED (ft/min) = RPM x 3.420
MAXIMUM MOTOR FRAME SIZE = 56
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/1.28

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-140: CUBE • CUE • USGF

Previously Size-141

GREENHECK
Building Value in Air.

CUBE • CUE • USGF

Direct Drive RPM

C-860 RPM
B-1140 RPM
A-1725 RPM
VG-1725 RPM

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE	USGF
^Approximate Weight	87 *(39)*	90 *(41)*	131 *(59)*
Damper Size	16 x 16 *(406 x 406)*		N/A
	18 x 18 *(457 x 457)*		
Roof/Wall (without wall bracket) Opening	18½ x 18½ *(470 x 470)*		
	22½ x 22½ *(572 x 572)*		N/A
Wall Opening with Wall Bracket	18 x 18 *(457 x 457)*		N/A
	22 x 22 *(559 x 559)*		N/A
Wall Opening with a Curb Through Wall	22 x 22 *(559 x 559)*		N/A
	26 x 26 *(660 x 660)*		N/A

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0	0.125	0.25	0.375	0.5	0.75	1	1.25	1.50	1.75
140														
1/4	VG-1/4		590	CFM	1069	851								
				BHP	0.04	0.04								
				Sones	5.0	4.5								
			725	CFM	1313	1151	917							
				BHP	0.06	0.07	0.07							
				Sones	5.1	5.0	4.4							
		C-1/8	860	CFM	1558	1427	1264	1034						
				BHP	0.11	0.12	0.12	0.12						
				Sones	7.3	7.5	7.1	6.5						
	VARI-GREEN		1105	CFM	2001	1906	1793	1667	1515	998				
				BHP	0.23	0.24	0.25	0.26	0.26	0.23				
				Sones	10.9	10.8	10.6	10.3	10.0	9.6				
1/3	VG-1/2	B-1/4	1140	CFM	2065	1973	1864	1745	1605	1167				
				BHP	0.25	0.26	0.27	0.28	0.29	0.27				
				Sones	11.3	11.3	11.0	10.7	10.3	10.0				
			1210	CFM	2192	2106	2006	1896	1773	1443				
				BHP	0.30	0.31	0.32	0.33	0.34	0.34				
				Sones	12.2	12.2	11.7	11.6	11.2	10.9				
1/2			1390	CFM	2518	2445	2362	2271	2174	1949	1643			
				BHP	0.45	0.47	0.48	0.50	0.51	0.52	0.51			
				Sones	14.9	14.7	14.2	13.2	12.9	12.1	11.0			
3/4	VG-3/4		1495	CFM	2708	2640	2565	2483	2396	2202	1967	1617		
				BHP	0.56	0.58	0.60	0.61	0.62	0.64	0.65	0.61		
				Sones	17.2	16.5	16.3	15.6	13.9	12.5	12.2	10.8		
			1550	CFM	2808	2743	2671	2594	2509	2329	2110	1823	1349	
				BHP	0.63	0.64	0.66	0.68	0.69	0.71	0.72	0.70	0.62	
				Sones	18.7	17.8	17.5	17.7	14.9	12.9	12.5	11.6	10.2	
	VG-1		1595	CFM	2889	2826	2757	2683	2602	2430	2225	1968	1568	
				BHP	0.69	0.70	0.72	0.74	0.75	0.77	0.79	0.78	0.71	
				Sones	20.0	19.0	18.5	19.5	16.1	13.3	12.3	12.6	11.6	
1		A-1	1725	CFM	3124	3066	3005	2936	2865	2711	2539	2339	2085	1704
				BHP	0.87	0.88	0.90	0.92	0.94	0.97	0.99	1.00	0.98	0.91
				Sones	26.0	23.0	22.0	24.0	24.0	15.1	13.4	14.3	13.8	13.8

MAXIMUM BHP AT A GIVEN RPM = $(RPM/1726)^3$
MAXIMUM RPM = 1725
TIP SPEED (ft/min) = RPM x 3.829
MAXIMUM MOTOR FRAME SIZE = 145T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/1.72

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-140HP: CUBE • CUE • USGF

Previously Size-141HP

GREENHECK
Building Value in Air.

CUBE • CUE • USGF

Direct Drive RPM

A-1725 RPM
VG-2200 RPM

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE	USGF
^Approximate Weight	87 *(39)*	90 *(41)*	131 *(59)*
Damper Size	16 x 16 *(406 x 406)*		N/A
	18 x 18 *(457 x 457)*		
Roof/Wall (without wall bracket) Opening	18½ x 18½ *(470 x 470)*		
	22½ x 22½ *(572 x 572)*		N/A
Wall Opening with Wall Bracket	18 x 18 *(457 x 457)*		N/A
	22 x 22 *(559 x 559)*		N/A
Wall Opening with a Curb Through Wall	22 x 22 *(559 x 559)*		N/A
	26 x 26 *(660 x 660)*		N/A

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0.5	0.75	1	1.25	1.5	1.75	2	2.25	2.50	2.75
140HP														
1/4	VG-1/4 VARI-GREEN		895	CFM	331									
				BHP	0.06									
				Sones	5.7									
			1085	CFM	625	377								
				BHP	0.11	0.10								
				Sones	7.5	9.5								
			1275	CFM	833	700	492							
				BHP	0.17	0.17	0.16							
				Sones	11.0	10.5	13.9							
			1465	CFM	1016	920	798	642						
				BHP	0.24	0.26	0.26	0.26						
				Sones	14.2	13.5	13.3	15.5						
1/3	VG-1/2		1605	CFM	1146	1063	965	846	704					
				BHP	0.31	0.33	0.34	0.34	0.34					
				Sones	15.3	14.4	14.2	14.0	15.3					
1/2		A-1/2	1725	CFM	1256	1178	1098	999	879	747				
				BHP	0.38	0.40	0.42	0.43	0.43	0.42				
				Sones	16.2	15.4	15.0	14.9	14.7	15.7				
	VG-3/4		1845	CFM	1363	1292	1219	1137	1042	924	800			
				BHP	0.46	0.48	0.50	0.52	0.52	0.52	0.51			
				Sones	17.1	16.6	16.1	16.0	15.9	15.7	16.2			
3/4			1960	CFM	1463	1399	1330	1260	1176	1086	970	854		
				BHP	0.54	0.57	0.59	0.61	0.62	0.63	0.62	0.62		
				Sones	18.1	17.8	17.4	17.2	17.1	17.0	16.8	17.0		
			2035	CFM	1528	1468	1402	1335	1261	1175	1077	965	826	
				BHP	0.60	0.63	0.66	0.68	0.69	0.70	0.70	0.69	0.67	
				Sones	19.0	18.6	18.3	18.1	18.0	17.9	17.7	17.5	17.9	
			2110	CFM	1592	1536	1473	1409	1341	1262	1178	1073	965	804
				BHP	0.67	0.70	0.72	0.75	0.77	0.78	0.78	0.78	0.77	0.73
				Sones	19.9	19.4	19.2	19.1	19.0	18.8	18.7	18.5	18.3	20.0
			2200	CFM	1669	1617	1557	1496	1434	1364	1284	1200	1097	993
				BHP	0.75	0.78	0.81	0.84	0.86	0.87	0.88	0.89	0.88	0.87
				Sones	21.0	21.0	20.0	20.0	20.0	20.0	19.9	19.7	19.5	19.3

MAXIMUM BHP AT A GIVEN RPM = $(RPM/2285)^3$
MAXIMUM RPM = 2200
TIP SPEED (ft/min) = RPM x 3.829
MAXIMUM MOTOR FRAME SIZE = 145T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/1.72

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-160: CUBE • CUE • USGF

Previously Size-161

GREENHECK
Building Value in Air.

CUBE • CUE • USGF

Direct Drive RPM

C-860 RPM
B-1140 RPM
A-1725 RPM
VG-1725 RPM

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE	USGF
^Approximate Weight	87 *(39)*	90 *(41)*	131 *(59)*
Damper Size	16 x 16 *(406 x 406)*		N/A
	18 x 18 *(457 x 457)*		
Roof/Wall (without wall bracket) Opening	18½ x 18½ *(470 x 470)*		
	22½ x 22½ *(572 x 572)*		N/A
Wall Opening with Wall Bracket	18 x 18 *(457 x 457)*		N/A
	22 x 22 *(559 x 559)*		N/A
Wall Opening with a Curb Through Wall	22 x 22 *(559 x 559)*		N/A
	26 x 26 *(660 x 660)*		N/A

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0	0.125	0.25	0.375	0.5	0.625	0.75	0.875	1	1.5
160														
1/4	VG-1/2		730	CFM	2098	1905	1669	1389						
				BHP	0.13	0.15	0.15	0.15						
				Sones	8.1	8	7.8	7.8						
			805	CFM	2314	2143	1937	1708	1396					
				BHP	0.18	0.20	0.20	0.20	0.19					
				Sones	9.5	9.2	8.9	8.8	8.7					
		C-1/4	860	CFM	2472	2315	2126	1918	1680					
				BHP	0.22	0.24	0.25	0.25	0.24					
				Sones	10.7	10.2	9.9	9.7	9.5					
			875	CFM	2515	2362	2177	1974	1744	1365				
				BHP	0.23	0.26	0.26	0.26	0.26	0.24				
				Sones	11	10.6	10.1	9.9	9.7	9.7				
1/3			965	CFM	2774	2637	2477	2300	2109	1893	1584			
				BHP	0.31	0.34	0.35	0.35	0.35	0.34	0.33			
				Sones	12.4	12	11.5	11.2	10.8	10.6	10.6			
1/2	VG-3/4		1110	CFM	3191	3072	2941	2796	2641	2475	2297	1770		
				BHP	0.47	0.51	0.53	0.53	0.54	0.53	0.52	0.49		
				Sones	15	14.6	14.2	13.8	13.5	13.1	12.9	12.5		
3/4		B-1/2	1140	CFM	3277	3161	3035	2896	2745	2587	2421	1983		
				BHP	0.51	0.55	0.57	0.57	0.58	0.58	0.57	0.55		
				Sones	15.7	15.2	14.8	14.4	14.1	13.8	13.5	13.2		
	VG-1		1265	CFM	3636	3532	3426	3301	3172	3036	2894	2583	2163	
				BHP	0.70	0.74	0.77	0.78	0.79	0.79	0.79	0.78	0.75	
				Sones	18.5	18.1	17.6	17.2	16.8	16.5	16.3	15.8	15.6	
1			1300	CFM	3737	3636	3534	3413	3290	3157	3022	2729	2357	
				BHP	0.76	0.80	0.84	0.85	0.85	0.86	0.86	0.84	0.82	
				Sones	19.1	18.7	18.3	17.9	17.5	17.2	17	16.5	16.3	
	VG-2		1390	CFM	3996	3901	3806	3698	3584	3464	3340	3078	2785	2394
				BHP	0.93	0.97	1.01	1.03	1.04	1.04	1.05	1.04	1.03	1.00
				Sones	21	21	20	19.7	19.3	19	18.8	18.4	18	17.9
		A-2	1725	CFM	4959	4882	4806	4729	4646	4554	4463	4269	4070	3855
				BHP	1.77	1.83	1.88	1.94	1.97	1.97	1.98	2.00	2.01	1.99
				Sones	30	29	29	29	28	28	27	27	27	26

MAXIMUM BHP AT A GIVEN RPM = $(RPM/1365)^3$
MAXIMUM RPM = 1725
TIP SPEED (ft/min) = RPM x 4.352
MAXIMUM MOTOR FRAME SIZE = 145T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/1.72

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-160HP: CUBE • CUE • USGF

Previously Size-161HP

GREENHECK
Building Value in Air.

Direct Drive RPM

B-1140 RPM
A-1725 RPM
VG-1725 RPM

CUBE • CUE • USGF

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE	USGF
^Approximate Weight	87 *(39)*	90 *(41)*	131 *(59)*
Damper Size	16 x 16 *(406 x 406)*		N/A
	18 x 18 *(457 x 457)*		
Roof/Wall (without wall bracket) Opening	18½ x 18½ *(470 x 470)*		
	22½ x 22½ *(572 x 572)*		N/A
Wall Opening with Wall Bracket	18 x 18 *(457 x 457)*		
	22 x 22 *(559 x 559)*		
Wall Opening with a Curb Through Wall	22 x 22 *(559 x 559)*		
	26 x 26 *(660 x 660)*		

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0.5	0.625	0.75	0.875	1	1.25	1.5	1.75	2	2.25
160HP														
1/4	VG-1/2		825	CFM	889									
				BHP	0.12									
				Sones	6.1									
			945	CFM	1213	1062								
				BHP	0.18	0.18								
				Sones	8.9	8.4								
			1065	CFM	1487	1377	1252	1093						
				BHP	0.25	0.26	0.26	0.26						
				Sones	11.1	10.7	10.3	9.7						
1/3	VARI-GREEN	B-1/3	1140	CFM	1645	1552	1444	1322	1175					
				BHP	0.31	0.32	0.32	0.32	0.32					
				Sones	12.7	12.5	12	11.6	11					
			1165	CFM	1697	1608	1504	1395	1252					
				BHP	0.32	0.33	0.34	0.34	0.34					
				Sones	12.9	12.8	12.3	11.8	11.2					
1/2			1255	CFM	1882	1799	1715	1617	1519	1218				
				BHP	0.40	0.41	0.42	0.43	0.43	0.42				
				Sones	13.1	12.8	12.5	12	11.5	10.6				
	VG-3/4		1340	CFM	2053	1975	1897	1816	1724	1513				
				BHP	0.48	0.49	0.50	0.51	0.52	0.52				
				Sones	14.2	13.8	13.3	12.9	12.4	11.3				
3/4			1535	CFM	2433	2368	2301	2233	2165	2015	1855	1638		
				BHP	0.70	0.72	0.73	0.74	0.76	0.78	0.79	0.78		
				Sones	18.1	17.7	17.3	16.9	16.5	15.6	14.7	13.5		
1	VG-1		1550	CFM	2461	2398	2331	2264	2197	2051	1892	1683	1352	
				BHP	0.72	0.74	0.75	0.76	0.78	0.80	0.81	0.81	0.77	
				Sones	18.3	17.9	17.5	17.1	16.7	15.9	15	13.8	14.5	
			1690	CFM	2722	2671	2611	2550	2488	2365	2228	2082	1899	1664
				BHP	0.92	0.94	0.95	0.97	0.98	1.01	1.03	1.05	1.05	1.03
				Sones	21	21	20	19.8	19.4	18.7	18	17.3	16.1	15.1
		A-1 1/2	1725	CFM	2787	2736	2680	2620	2560	2439	2310	2167	2003	1810
				BHP	0.97	0.99	1.01	1.03	1.04	1.07	1.10	1.11	1.12	1.11
				Sones	22	21	21	21	20	19.4	18.7	18	17.1	16

MAXIMUM BHP AT A GIVEN RPM = $(RPM/1660)^3$
MAXIMUM RPM = 1725
TIP SPEED (ft/min) = RPM x 4.352
MAXIMUM MOTOR FRAME SIZE = 145T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/1.72

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-160XP: CUBE • CUE • USGF

Previously Size-161XP

GREENHECK
Building Value in Air.

CUBE • CUE • USGF

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE	USGF
^Approximate Weight	87 *(39)*	90 *(41)*	131 *(59)*
Damper Size	16 x 16 *(406 x 406)*		N/A
	18 x 18 *(457 x 457)*		
Roof/Wall (without wall bracket) Opening	18½ x 18½ *(470 x 470)*		
	22½ x 22½ *(572 x 572)*		N/A
Wall Opening with Wall Bracket	18 x 18 *(457 x 457)*		
	22 x 22 *(559 x 559)*		
Wall Opening with a Curb Through Wall	22 x 22 *(559 x 559)*		
	26 x 26 *(660 x 660)*		

Motor HP Belt	Motor HP Direct	Fan RPM		Static Pressure in Inches wg 1	1.25	1.5	1.75	2	2.25	2.5	2.75	3	3.25
160XP													
1/2	VG-1	1550	CFM	968									
			BHP	0.34									
			Sones	10.0									
		1648	CFM	1157	854								
			BHP	0.42	0.39								
			Sones	11.1	10.1								
		1750	CFM	1322	1116	726							
			BHP	0.52	0.49	0.43							
			Sones	12.1	11.4	10.6							
3/4	VARI-GREEN	1880	CFM	1515	1359	1139	744						
			BHP	0.7	0.6	0.6	0.5						
			Sones	13.7	13.1	12.2	11.8						
		1942	CFM	1599	1456	1271	984						
			BHP	0.71	0.7	0.68	0.63						
			Sones	14.4	14	13.2	12.4						
		2005	CFM	1684	1552	1392	1161	777					
			BHP	0.77	0.78	0.76	0.72	0.63					
			Sones	15.0	14.8	14.1	13.4	13.2					
1		2138	CFM	1861	1743	1611	1451	1226	869				
			BHP	0.9	1.0	0.9	0.9	0.9	0.8				
			Sones	16.6	16.4	15.9	15.4	14.8	14.8				
	VG-2	2205	CFM	1946	1834	1713	1578	1395	1127	634			
			BHP	1.01	1.03	1.04	1.01	0.99	0.92	0.73			
			Sones	17.5	17.3	17	16.4	15.8	15.5	16.4			
1½		2310	CFM	2065	1974	1865	1741	1597	1415	1134	644		
			BHP	1.17	1.18	1.2	1.18	1.16	1.12	1.04	0.83		
			Sones	18.8	18.7	18.5	18.1	17.5	17	16.9	18.2		
		2432	CFM	2206	2132	2031	1926	1804	1660	1483	1225	826	
			BHP	1.36	1.36	1.38	1.4	1.38	1.35	1.31	1.23	1.07	
			Sones	21	20	20	20	19.6	19.1	18.7	18.7	19.8	
		2525	CFM	2313	2241	2155	2056	1946	1828	1676	1487	1221	810
			BHP	1.52	1.52	1.54	1.56	1.56	1.53	1.5	1.45	1.35	1.16
			Sones	22	22	22	22	21	21	20	20	20	22

MAXIMUM BHP AT A GIVEN RPM = $(RPM/2170)^3$
MAXIMUM RPM = 2525
TIP SPEED (ft/min) = RPM x 3.534
MAXIMUM MOTOR FRAME SIZE = 145T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/1.72

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-180: CUBE • CUE • USGF

GREENHECK
Building Value in Air.

Direct Drive RPM

C-860 RPM
B-1140 RPM
VG-1000 RPM

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE	USGF
^Approximate Weight	126 *(57)*	142 *(64)*	190 *(86)*
Damper Size	24 x 24 *(610 x 610)*		N/A
Roof/Wall (without wall bracket) Opening	26½ x 26½ *(673 x 673)*		
Wall Opening with Wall Bracket	26 x 26 *(660 x 660)*		N/A
Wall Opening with a Curb Through Wall	30 x 30 *(762 x 762)*		N/A

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0	0.125	0.25	0.5	0.75	1	1.25	1.5	1.75	2
180														
1/4	VG-3/4		745	CFM	2815	2617	2448	1763						
				BHP	0.22	0.24	0.26	0.25						
				Sones	9.2	8.6	8.1	7.1						
1/3			820	CFM	3098	2916	2759	2257						
				BHP	0.30	0.32	0.34	0.34						
				Sones	11.2	10.4	10	9						
1/2	VARI-GREEN	C-1/2	860	CFM	3249	3074	2922	2474						
				BHP	0.34	0.37	0.39	0.40						
				Sones	12.3	11.7	11.1	10.2						
			940	CFM	3551	3389	3243	2879	2363					
				BHP	0.45	0.47	0.49	0.52	0.50					
				Sones	13.8	13.5	13.1	12.4	11.2					
3/4	VG-1		1000	CFM	3778	3625	3486	3190	2738					
				BHP	0.54	0.57	0.59	0.63	0.62					
				Sones	15.1	14.9	14.7	14.3	13.3					
			1075	CFM	4061	3919	3786	3554	3141	2652				
				BHP	0.67	0.70	0.73	0.78	0.78	0.75				
				Sones	16.5	16.2	15.8	15.5	14.7	13.3				
1	VG-2	B-1	1140	CFM	4307	4173	4045	3822	3470	3072	2477			
				BHP	0.80	0.83	0.86	0.91	0.93	0.92	0.85			
				Sones	17.6	17.1	16.5	16.1	15.4	14.6	13.6			
			1185	CFM	4477	4348	4224	4005	3703	3336	2841			
				BHP	0.90	0.93	0.96	1.01	1.04	1.04	0.99			
				Sones	18.5	17.9	17.1	16.5	16	15.2	14.4			
1½			1275	CFM	4817	4697	4578	4369	4163	3799	3437	2930		
				BHP	1.12	1.15	1.19	1.24	1.30	1.30	1.28	1.22		
				Sones	21	20	19.5	18.7	18.2	17.5	16.7	15.9		
			1360	CFM	5138	5026	4913	4710	4532	4232	3912	3537	3023	
				BHP	1.36	1.39	1.43	1.49	1.56	1.58	1.58	1.54	1.46	
				Sones	23	23	22	21	21	20	19.2	18.3	17.3	
2			1495	CFM	5648	5546	5443	5254	5082	4921	4598	4313	3983	3564
				BHP	1.80	1.84	1.89	1.96	2.02	2.10	2.10	2.10	2.06	1.99
				Sones	28	27	27	26	25	25	24	23	22	21

MAXIMUM BHP AT A GIVEN RPM = $(RPM/1167)^3$
MAXIMUM RPM = 1495
TIP SPEED (ft/min) = RPM x 4.843
MAXIMUM MOTOR FRAME SIZE = 184T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/2.92

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-180HP: CUBE • CUE • USGF

GREENHECK
Building Value in Air.

Direct Drive RPM

A-1725 RPM

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE	USGF
^Approximate Weight	126 *(57)*	142 *(64)*	190 *(86)*
Damper Size	24 x 24 *(610 x 610)*		N/A
Roof/Wall (without wall bracket) Opening	26½ x 26½ *(673 x 673)*		
Wall Opening with Wall Bracket	26 x 26 *(660 x 660)*		N/A
Wall Opening with a Curb Through Wall	30 x 30 *(762 x 762)*		N/A

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0.5	0.75	1	1.25	1.5	1.75	2	2.25	2.5	2.75
180HP														
1/4	VG-1 (VARI-GREEN)		845	CFM	1799									
				BHP	0.26									
				Sones	9.6									
1/3			925	CFM	2104	1688								
				BHP	0.34	0.35								
				Sones	10.8	9.9								
1/2			1065	CFM	2581	2323	1933							
				BHP	0.50	0.52	0.53							
				Sones	14.1	12.6	12.5							
3/4			1215	CFM	3063	2868	2626	2286	1854					
				BHP	0.72	0.76	0.78	0.79	0.75					
				Sones	15.4	14.8	14.2	13.5	12.7					
1			1275	CFM	3253	3066	2853	2566	2209					
				BHP	0.82	0.87	0.89	0.91	0.89					
				Sones	17	16.2	15.6	15.1	14.3					
	VG-2		1335	CFM	3441	3261	3075	2839	2523	2156				
				BHP	0.93	0.98	1.02	1.04	1.04	1.01				
				Sones	19	17.8	17.3	16.8	16.3	15.7				
1½			1430	CFM	3735	3566	3401	3206	2964	2669	2320			
				BHP	1.13	1.19	1.23	1.26	1.27	1.28	1.24			
				Sones	22	21	20	19.6	19.2	18.8	18.2			
			1530	CFM	4035	3884	3728	3574	3376	3135	2859	2534		
				BHP	1.36	1.43	1.48	1.53	1.55	1.56	1.57	1.53		
				Sones	24	23	22	21	21	20	19.7	19.1		
2			1610	CFM	4273	4136	3986	3840	3674	3485	3233	2965	2656	1557
				BHP	1.58	1.64	1.70	1.76	1.79	1.81	1.82	1.82	1.78	1.38
				Sones	26	24	24	23	22	22	21	20	19.8	18.3
			1685	CFM	4495	4369	4226	4085	3945	3768	3575	3325	3061	2766
				BHP	1.79	1.86	1.93	1.99	2.04	2.07	2.08	2.09	2.08	2.04
				Sones	28	27	26	26	25	23	22	22	21	21
		A-2	1725	CFM	4613	4493	4353	4215	4078	3917	3740	3509	3265	2984
				BHP	1.92	1.99	2.06	2.12	2.18	2.21	2.23	2.24	2.25	2.21
				Sones	29	28	27	29	27	25	24	23	22	21

MAXIMUM BHP AT A GIVEN RPM = $(RPM/1315)^3$
MAXIMUM RPM = 1725
TIP SPEED (ft/min) = RPM x 4.843
MAXIMUM MOTOR FRAME SIZE = 184T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/2.92

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-200: CUBE • CUE • USGF

GREENHECK
Building Value in Air.

Direct Drive RPM

C-860 RPM
B-1140 RPM

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE	USGF
^Approximate Weight	142 *(64)*	170 *(77)*	213 *(97)*
Damper Size	24 x 24 *(610 x 610)*		N/A
Roof/Wall (without wall bracket) Opening	26½ x 26½ *(673 x 673)*		
Wall Opening with Wall Bracket	26 x 26 *(660 x 660)*		
Wall Opening with a Curb Through Wall	30 x 30 *(762 x 762)*		N/A

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0	0.125	0.25	0.375	0.5	0.75	1	1.25	1.5	1.75
200														
1/4	VG-1 (VARI-GREEN)		605	CFM	3403	3054	2675	2144						
				BHP	0.25	0.26	0.26	0.25						
				Sones	8.2	7.6	6.8	6.2						
1/3			665	CFM	3740	3422	3096	2699	2073					
				BHP	0.33	0.34	0.35	0.35	0.33					
				Sones	9.6	9	8.3	7.5	7.2					
1/2			760	CFM	4275	3994	3718	3413	3048					
				BHP	0.49	0.51	0.52	0.52	0.51					
				Sones	12.3	11.8	11.1	10.2	9.5					
3/4			820	CFM	4612	4350	4098	3828	3523	2606				
				BHP	0.61	0.63	0.65	0.65	0.65	0.61				
				Sones	14.2	14.1	13.3	12.5	11.5	10.9				
		C-3/4	860	CFM	4837	4587	4346	4093	3815	3084				
				BHP	0.71	0.73	0.74	0.75	0.75	0.73				
				Sones	15.8	15.7	14.9	14.4	13	12				
			875	CFM	4922	4676	4439	4192	3922	3240				
				BHP	0.75	0.77	0.78	0.79	0.79	0.78				
				Sones	16.4	16.4	15.6	15.1	13.7	12.6				
1	VG-2		960	CFM	5400	5176	4958	4742	4508	3985	3169			
				BHP	0.98	1.01	1.03	1.04	1.04	1.04	1.00			
				Sones	18.9	18.6	18	17.4	16.7	15.2	14.7			
1½			1030	CFM	5793	5585	5380	5179	4968	4503	3917	2972		
				BHP	1.22	1.24	1.26	1.28	1.29	1.29	1.27	1.18		
				Sones	21	21	20	19.7	19.2	17.8	16.6	17.1		
			1100	CFM	6187	5992	5798	5610	5421	5006	4529	3861		
				BHP	1.48	1.51	1.53	1.55	1.57	1.57	1.57	1.53		
				Sones	24	23	23	22	22	21	19.7	18.9		
2		B-2	1140	CFM	6412	6224	6036	5855	5674	5283	4837	4276	3445	
				BHP	1.65	1.67	1.7	1.72	1.74	1.74	1.74	1.73	1.63	
				Sones	25	24	24	23	22	22	21	19.6	20	
	VG-3		1210	CFM	6806	6628	6451	6279	6108	5748	5350	4892	4289	3365
				BHP	1.97	2	2.03	2.05	2.07	2.09	2.09	2.08	2.04	1.88
				Sones	24	24	23	23	23	22	21	20	20	21

MAXIMUM BHP AT A GIVEN RPM = $(RPM/946)^3$
MAXIMUM RPM = 1210
TIP SPEED (ft/min) = RPM x 5.595
MAXIMUM MOTOR FRAME SIZE = 184T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/2.92

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-200HP: CUBE • CUE • USGF

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE	USGF
^Approximate Weight	142 *(64)*	145 *(66)*	213 *(97)*
Damper Size	24 x 24 *(610 x 610)*		N/A
Roof/Wall (without wall bracket) Opening	26½ x 26½ *(673 x 673)*		
Wall Opening with Wall Bracket	26 x 26 *(660 x 660*	N/A	
Wall Opening with a Curb Through Wall	30 x 30 *(762 x 762)*	N/A	

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0.5	0.75	1	1.25	1.5	1.75	2	2.25	2.5	2.75
200HP														
1/2	VG-2		740	CFM	2024									
				BHP	0.31									
				Sones	8.2									
			880	CFM	2779	2317								
				BHP	0.51	0.52								
				Sones	10.7	9.6								
3/4	VARI-GREEN		945	CFM	3094	2711	2092							
				BHP	0.62	0.64	0.62							
				Sones	12.3	11.7	10.8							
			1010	CFM	3397	3067	2637							
				BHP	0.75	0.78	0.79							
				Sones	14.7	14.1	13.5							
1			1110	CFM	3851	3561	3242	2806						
				BHP	0.98	1.02	1.04	1.04						
				Sones	17.1	16.5	16	15.8						
1½			1190	CFM	4207	3944	3661	3321	2850					
				BHP	1.2	1.24	1.27	1.29	1.26					
				Sones	19.4	18.5	17.9	17.5	17.9					
			1270	CFM	4558	4312	4055	3789	3433	2944				
				BHP	1.44	1.49	1.53	1.56	1.56	1.53				
				Sones	22	21	21	20	19.3	20				
2			1335	CFM	4837	4606	4369	4116	3826	3482	2946			
				BHP	1.67	1.71	1.76	1.79	1.82	1.82	1.75			
				Sones	23	23	22	21	21	21	22			
	VG-3		1400	CFM	5110	4898	4674	4436	4195	3880	3515	2982		
				BHP	1.91	1.96	2.01	2.05	2.09	2.09	2.08	2.01		
				Sones	25	24	24	23	22	23	23	24		
3	VG-5		1600	CFM	5943	5775	5581	5385	5182	4971	4760	4476	4189	3760
				BHP	2.81	2.88	2.93	2.99	3.03	3.08	3.13	3.13	3.13	3.06
				Sones	29	27	28	28	28	26	26	28	30	31
		A-5	1725	CFM	6457	6302	6135	5954	5772	5582	5386	5190	4948	4682
				BHP	3.50	3.57	3.64	3.69	3.75	3.80	3.85	3.90	3.92	3.92
				Sones	33	30	30	31	32	32	30	28	31	35

MAXIMUM BHP AT A GIVEN RPM = $(RPM/1093)^3$
MAXIMUM RPM = 1725
TIP SPEED (ft/min) = RPM x 5.595
MAXIMUM MOTOR FRAME SIZE = 184T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/2.92

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-220: CUBE

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE
^Approximate Weight	174 *(79)*
Damper Size	24 x 24 *(610 x 610)*
Roof/Wall (without wall bracket) Opening	30½ x 30½ *(775 x 775)*
Wall Opening with Wall Bracket	30 x 30 *(762 x 762)*
Wall Opening with a Curb Through Wall	34 x 34 *(864 x 864)*

Motor HP	Fan RPM		Static Pressure in Inches wg 0	0.125	0.25	0.375	0.5	0.625	0.75	1	1.25	1.5
220												
1/4	450	CFM	3585	3155	2624							
		BHP	0.19	0.21	0.22							
		Sones	7.4	6.8	6.2							
	475	CFM	3784	3377	2896	2268						
		BHP	0.23	0.25	0.26	0.25						
		Sones	8	7.3	6.7	6.2						
1/3	520	CFM	4142	3771	3357	2845						
		BHP	0.3	0.32	0.34	0.34						
		Sones	9.3	8.5	7.7	7.2						
1/2	600	CFM	4779	4457	4124	3736	3279					
		BHP	0.46	0.48	0.51	0.52	0.52					
		Sones	12	11.1	10.2	9.5	8.9					
3/4	645	CFM	5138	4838	4539	4194	3811	3346				
		BHP	0.57	0.6	0.63	0.64	0.65	0.64				
		Sones	13.6	12.7	12	11.3	10.6	10				
	685	CFM	5457	5174	4893	4581	4234	3836	3383			
		BHP	0.68	0.71	0.74	0.76	0.78	0.78	0.77			
		Sones	15	14.2	13.7	13.2	12.3	11.7	11.2			
1	755	CFM	6014	5758	5502	5239	4944	4620	4258			
		BHP	0.91	0.94	0.98	1.01	1.03	1.04	1.04			
		Sones	17.7	17	16.6	16.3	15.8	14.9	14.4			
1½	810	CFM	6452	6213	5975	5737	5470	5185	4883	4156		
		BHP	1.13	1.16	1.2	1.24	1.26	1.28	1.29	1.27		
		Sones	19	18.5	17.9	17.6	17.2	16.5	15.7	14.8		
	865	CFM	6890	6667	6443	6220	5987	5729	5453	4835	4111	
		BHP	1.37	1.41	1.45	1.49	1.52	1.54	1.56	1.57	1.53	
		Sones	21	20	19.6	19.2	18.7	18.1	17.4	16.5	16.1	
2	910	CFM	7249	7036	6823	6612	6400	6158	5909	5365	4704	
		BHP	1.6	1.64	1.68	1.72	1.76	1.78	1.81	1.83	1.81	
		Sones	23	22	22	21	21	20	19.3	18.3	17.4	
	955	CFM	7607	7405	7202	7000	6799	6580	6347	5844	5261	4602
		BHP	1.85	1.89	1.93	1.97	2.02	2.05	2.07	2.11	2.11	2.07
		Sones	25	25	24	24	23	23	22	20	19.4	18.9

MAXIMUM BHP AT A GIVEN RPM = $(RPM/743)^3$
MAXIMUM RPM = 955
TIP SPEED (ft/min) = RPM x 6.413
MAXIMUM MOTOR FRAME SIZE = 184T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/3.76

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-220HP: CUBE

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE
^Approximate Weight	174 *(79)*
Damper Size	24 x 24 *(610 x 610)*
Roof/Wall (without a wall bracket) Opening	30½ x 30½ *(775 x 775)*
Wall Opening with Wall Bracket	30 x 30 *(762 x 762)*
Wall Opening with a Curb Through Wall	34 x 34 *(864 x 864)*

Motor HP	Fan RPM		Static Pressure in Inches wg									
			0.5	0.75	1	1.25	1.5	1.75	2	2.25	2.5	2.75
220HP												
1/2	650	CFM	2909	1940								
		BHP	0.45	0.42								
		Sones	8.7	7.7								
	680	CFM	3151	2405								
		BHP	0.51	0.51								
		Sones	9.7	8.7								
3/4	735	CFM	3582	3006								
		BHP	0.63	0.65								
		Sones	11.9	11								
	780	CFM	3902	3427	2716							
		BHP	0.74	0.78	0.77							
		Sones	13.4	12.5	12.1							
1	860	CFM	4459	4075	3578	2863						
		BHP	0.96	1.02	1.05	1.01						
		Sones	15	14.3	13.9	13.2						
1½	985	CFM	5281	4988	4642	4220	3674	2825				
		BHP	1.39	1.48	1.54	1.57	1.56	1.46				
		Sones	19.1	17.9	17.4	17.1	16.5	14.9				
2	1035	CFM	5602	5335	5033	4659	4209	3630				
		BHP	1.6	1.69	1.77	1.81	1.82	1.79				
		Sones	21	19.8	18.9	18.7	18.3	17.3				
	1085	CFM	5920	5678	5390	5061	4679	4210	3573			
		BHP	1.82	1.92	2	2.06	2.1	2.09	2.03			
		Sones	23	22	20	20	20	19.6	18.1			
3	1135	CFM	6236	6006	5743	5456	5114	4708	4215	3518		
		BHP	2.06	2.17	2.26	2.34	2.39	2.4	2.38	2.28		
		Sones	24	23	22	22	21	21	21	19.5		
	1188	CFM	6570	6350	6111	5848	5540	5202	4792	4286	3563	
		BHP	2.34	2.46	2.56	2.65	2.71	2.75	2.76	2.72	2.59	
		Sones	25	25	24	24	23	23	22	22	22	
	1240	CFM	6895	6684	6469	6217	5950	5637	5283	4885	4374	3633
		BHP	2.64	2.76	2.88	2.97	3.05	3.1	3.13	3.13	3.08	2.92
		Sones	27	26	26	25	25	24	24	24	24	26

MAXIMUM BHP AT A GIVEN RPM = $(RPM/847)^3$
MAXIMUM RPM = 1240
TIP SPEED (ft/min) = RPM x 6.413
MAXIMUM MOTOR FRAME SIZE = 184T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/3.76

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-240: CUBE • CUE

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE
^Approximate Weight	142 *(64)*	226 *(103)*
Damper Size	24 x 24 *(610 x 610)*	
Roof/Wall (without wall bracket) Opening	30½ x 30½ *(775 x 775)*	
Wall Opening with Wall Bracket	30 x 30 *(762 x 762)*	N/A
Wall Opening with a Curb Through Wall	34 x 34 *(864 x 864)*	N/A

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0	0.125	0.25	0.375	0.5	0.625	0.75	1	1.25	1.5
240														
1/4	VG-2		410	CFM	3717	3170	2471							
				BHP	0.16	0.18	0.18							
				Sones	6.4	5.8	5.3							
1/3			510	CFM	4623	4243	3717	3134						
				BHP	0.31	0.33	0.34	0.34						
				Sones	8.9	8.1	7.3	6.9						
1/2			585	CFM	5303	4961	4540	4093	3565					
				BHP	0.46	0.49	0.51	0.52	0.51					
				Sones	11.5	10.5	9.5	8.8	8.4					
3/4	VARI-GREEN		628	CFM	5693	5368	5010	4590	4141	3600				
				BHP	0.57	0.61	0.63	0.64	0.65	0.63				
				Sones	12.9	11.9	11.1	10.4	9.8	9.4				
			670	CFM	6074	5763	5461	5052	4659	4202	3524			
				BHP	0.69	0.74	0.76	0.78	0.79	0.78	0.73			
				Sones	14.3	13.4	12.8	12.2	11.5	11.0	10.6			
1			735	CFM	6663	6370	6133	5764	5409	5037	4618			
				BHP	0.92	0.97	0.99	1.01	1.03	1.04	1.03			
				Sones	16.6	15.9	15.5	15.1	14.6	13.9	13.4			
1½			790	CFM	7162	6883	6661	6361	6011	5693	5332	4453		
				BHP	1.14	1.20	1.22	1.25	1.27	1.28	1.29	1.24		
				Sones	18.2	17.5	17.2	16.8	16.3	15.7	15.0	14.3		
			845	CFM	7660	7400	7184	6947	6615	6304	6002	5282		
				BHP	1.39	1.46	1.49	1.51	1.54	1.56	1.57	1.56		
				Sones	19.6	19.0	18.6	18.2	17.6	17.0	16.4	15.4		
2		C-2	860	CFM	7796	7540	7326	7106	6779	6468	6176	5483	4363	
				BHP	1.47	1.54	1.57	1.59	1.62	1.64	1.66	1.65	1.52	
				Sones	20	19.8	19.4	19.0	18.4	17.8	17.2	16.2	15.9	
	VG-3		930	CFM	8431	8194	7985	7798	7536	7233	6953	6375	5706	4324
				BHP	1.86	1.93	1.98	2.00	2.03	2.06	2.08	2.10	2.07	1.83
				Sones	24	23	23	22	22	21	19.9	18.7	17.8	17.9
	VG-5	B-5	1140	CFM	10335	10142	9948	9789	9637	9484	9240	8747	8306	7820
				BHP	3.42	3.51	3.60	3.64	3.67	3.70	3.74	3.81	3.85	3.87
				Sones	40	40	40	41	40	39	37	33	30	29

MAXIMUM BHP AT A GIVEN RPM = $(RPM/725)^3$
MAXIMUM RPM = 1140
TIP SPEED (ft/min) = RPM x 6.413
MAXIMUM MOTOR FRAME SIZE = 184T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/3.76

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-240HP: CUBE • CUE

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE
^Approximate Weight	175 *(79)*	209 *(95)*
Damper Size	24 x 24 *(610 x 610)*	
Roof/Wall (without wall bracket) Opening	30½ x 30½ *(775 x 775)*	
Wall Opening with Wall Bracket	30 x 30 *(762 x 762)*	N/A
Wall Opening with a Curb Through Wall	34 x 34 *(864 x 864)*	N/A

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0.5	0.625	0.75	1	1.25	1.5	1.75	2	2.25	2.5
240HP														
1/2	VG-1		635	CFM	3046	2673								
				BHP	0.43	0.43								
				Sones	8.1	7.4								
			675	CFM	3405	3070	2607							
				BHP	0.51	0.52	0.51							
				Sones	9.4	8.8	8.4							
3/4	VARI-GREEN.		725	CFM	3824	3547	3222							
				BHP	0.62	0.64	0.65							
				Sones	11.3	10.7	10.3							
			775	CFM	4233	3979	3704	2940						
				BHP	0.75	0.77	0.78	0.77						
				Sones	13.1	12.5	12.1	11.8						
1		C-1	860	CFM	4888	4680	4451	3943	3185					
				BHP	0.99	1.02	1.05	1.07	1.05					
				Sones	15.0	14.5	14.3	13.9	13.2					
1½	VG-3		913	CFM	5286	5094	4890	4448	3932					
				BHP	1.16	1.20	1.23	1.28	1.29					
				Sones	16.4	15.8	15.4	15.2	14.7					
			975	CFM	5737	5567	5387	4988	4539	4006				
				BHP	1.39	1.43	1.48	1.53	1.56	1.56				
				Sones	18.4	17.9	17.3	16.9	16.6	15.9				
2			1023	CFM	6075	5927	5756	5389	4995	4533	3854			
				BHP	1.59	1.63	1.68	1.75	1.80	1.81	1.77			
				Sones	20	19.6	19.0	18.3	18.1	17.7	16.4			
			1070	CFM	6404	6272	6112	5775	5407	4990	4550	3625		
				BHP	1.80	1.84	1.89	1.98	2.04	2.07	2.08	1.95		
				Sones	22	22	21	19.7	19.7	19.4	18.8	16.6		
3		B-3	1140	CFM	6891	6766	6637	6329	5994	5649	5239	4825	4052	
				BHP	2.16	2.20	2.25	2.35	2.42	2.49	2.50	2.52	2.41	
				Sones	24	24	23	22	22	22	21	21	19.8	
			1230	CFM	7513	7395	7280	7016	6730	6410	6090	5709	5326	4722
				BHP	2.68	2.73	2.77	2.88	2.98	3.05	3.13	3.14	3.16	3.09
				Sones	26	25	25	25	25	24	24	23	23	25

MAXIMUM BHP AT A GIVEN RPM = $(RPM/837)^3$
MAXIMUM RPM = 1230
TIP SPEED (ft/min) = RPM x 6.413
MAXIMUM MOTOR FRAME SIZE = 184T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/3.76

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-240XP: CUBE

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE
^Approximate Weight	175 *(79)*
Damper Size	24 x 24 *(610 x 610)*
Roof/Wall (without wall bracket) Opening	30½ x 30½ *(775 x 775)*
Wall Opening with Wall Bracket	30 x 30 *(762 x 762)*
Wall Opening with a Curb Through Wall	34 x 34 *(864 x 864)*

Motor HP	Fan RPM		Static Pressure in Inches wg 1	1.25	1.5	2	2.5	3	3.5	4	4.5	5
240XP												
1/2	1100	CFM	1292	789								
		BHP	0.40	0.34								
		Sones	10.9	11.9								
	1195	CFM	1613	1321	792							
		BHP	0.53	0.51	0.43							
		Sones	11.6	12.1	13.4							
3/4	1365	CFM	2079	1886	1645							
		BHP	0.77	0.78	0.77							
		Sones	13.6	13.4	13.7							
1	1421	CFM	2223	2042	1837	1209						
		BHP	0.86	0.88	0.88	0.79						
		Sones	14.4	14.2	14.2	15.3						
	1500	CFM	2424	2256	2079	1630						
		BHP	1.00	1.03	1.04	1.01						
		Sones	15.9	15.3	15.1	15.5						
1½	1635	CFM	2743	2604	2450	2101	1631					
		BHP	1.28	1.31	1.33	1.34	1.28					
		Sones	18.6	18.0	17.5	17.0	17.7					
	1720	CFM	2939	2815	2671	2366	1975	1336				
		BHP	1.48	1.51	1.53	1.57	1.53	1.35				
		Sones	21	19.8	19.2	18.4	18.4	20				
2	1895	CFM	3333	3222	3109	2847	2566	2202	1706			
		BHP	1.94	1.98	2.01	2.07	2.10	2.05	1.92			
		Sones	24	23	22	21	21	21	22			
3	1956	CFM	3469	3361	3252	3006	2739	2414	2032	1326		
		BHP	2.13	2.16	2.20	2.26	2.30	2.28	2.21	1.89		
		Sones	25	24	23	22	22	21	22	25		
	2030	CFM	3632	3529	3423	3197	2945	2667	2319	1852		
		BHP	2.37	2.40	2.44	2.51	2.56	2.58	2.51	2.38		
		Sones	26	25	25	24	23	23	23	25		
	2165	CFM	3927	3830	3733	3535	3305	3063	2787	2461	2048	1324
		BHP	2.85	2.89	2.93	3.01	3.07	3.12	3.11	3.05	2.93	2.47
		Sones	29	28	28	27	26	25	25	25	27	31

MAXIMUM BHP AT A GIVEN RPM = $(RPM/1478)^3$
MAXIMUM RPM = 2165
TIP SPEED (ft/min) = RPM x 4.778
MAXIMUM MOTOR FRAME SIZE = 184T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/3.76

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-300: CUBE • CUE

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE
^Approximate Weight	313 *(142)*	380 *(172)*
Damper Size	34 x 34 *(864 x 864)*	
Roof/Wall (without wall bracket) Opening	36½ x 36½ *(927 x 927)*	
Wall Opening with Wall Bracket	36 x 36 *(914 x 914)*	
Wall Opening with a Curb Through Wall	40 x 40 *(1016 x 1016)*	N/A

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0	0.125	0.25	0.5	0.75	1	1.25	1.5	1.75	2
300														
1/3	VG-5		355	CFM	5777	5132	4227							
				BHP	0.27	0.30	0.31							
				Sones	6.9	6.3	5.3							
			365	CFM	5940	5316	4464							
				BHP	0.29	0.33	0.34							
				Sones	7.2	6.5	5.7							
1/2			420	CFM	6835	6314	5660							
				BHP	0.45	0.49	0.52							
				Sones	9.0	8.2	7.5							
3/4	VARI-GREEN		480	CFM	7811	7377	6844	5440						
				BHP	0.67	0.72	0.76	0.77						
				Sones	11.0	10.5	9.9	8.5						
1			530	CFM	8625	8231	7772	6636						
				BHP	0.90	0.95	1.00	1.05						
				Sones	13.3	12.7	12.2	11.2						
1½			605	CFM	9845	9501	9127	8226	7084					
				BHP	1.34	1.40	1.46	1.54	1.55					
				Sones	17.0	16.4	15.7	14.8	13.5					
2			665	CFM	10822	10508	10193	9411	8495	7271				
				BHP	1.77	1.85	1.92	2.02	2.07	2.04				
				Sones	20	19.7	18.6	17.5	16.7	15.1				
3			765	CFM	12449	12176	11904	11273	10554	9743	8756	7352		
				BHP	2.70	2.78	2.86	3.00	3.09	3.15	3.14	2.98		
				Sones	24	24	23	22	21	20	18.7	17		
5			795	CFM	12937	12675	12413	11818	11145	10404	9479	8302		
				BHP	3.03	3.12	3.20	3.35	3.46	3.53	3.53	3.43		
				Sones	26	25	24	23	22	22	21	18.5		
		C-5	860	CFM	13995	13753	13510	12987	12392	11721	11002	10124	9007	
				BHP	3.84	3.93	4.02	4.19	4.33	4.41	4.47	4.46	4.34	
				Sones	30	30	29	27	26	26	24	23	21	
			905	CFM	14727	14497	14266	13788	13223	12614	11963	11191	10357	9178
				BHP	4.47	4.57	4.67	4.85	5.00	5.11	5.19	5.21	5.20	5.01
				Sones	32	32	32	29	28	28	27	26	24	22

MAXIMUM BHP AT A GIVEN RPM = $(RPM/522)^3$
MAXIMUM RPM = 905
TIP SPEED (ft/min) = RPM x 7.983
MAXIMUM MOTOR FRAME SIZE = 213T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/5.50

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-300HP: CUBE • CUE

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE	CUE
^Approximate Weight	313 *(142)*	434 *(197)*
Damper Size	34 x 34 *(864 x 864)*	
Roof/Wall (without wall bracket) Opening	36½ x 36½ *(927 x 927)*	
Wall Opening with Wall Bracket	36 x 36 *(914 x 914)*	
Wall Opening with a Curb Through Wall	40 x 40 *(1016 x 1016)*	N/A

Motor HP Belt	Motor HP Direct		Fan RPM		Static Pressure in Inches wg 0.5	0.75	1	1.25	1.5	1.75	2	2.25	2.5	2.75
300HP														
1/2	VG-3		460	CFM	3125									
				BHP	0.44									
				Sones	7.3									
			485	CFM	3639									
				BHP	0.52									
				Sones	7.9									
3/4			555	CFM	4788	3651								
				BHP	0.77	0.76								
				Sones	10.4	9.9								
1			610	CFM	5549	4731								
				BHP	1.00	1.03								
				Sones	12.4	11.3								
1½			700	CFM	6741	6149	5390							
				BHP	1.47	1.53	1.57							
				Sones	16.0	15.2	14.0							
2			770	CFM	7613	7107	6535	5814	4684					
				BHP	1.91	2.00	2.06	2.09	1.99					
				Sones	18.6	18.1	17.4	16.2	16.0					
3		C-3	860	CFM	8712	8289	7812	7292	6647	5834				
				BHP	2.61	2.72	2.80	2.87	2.90	2.85				
				Sones	22	22	22	21	20	19.9				
			885	CFM	9014	8603	8150	7678	7062	6353				
				BHP	2.83	2.94	3.03	3.12	3.15	3.14				
				Sones	23	23	23	22	21	21				
5	VG-7 1/2		991	CFM	10275	9913	9546	9133	8711	8201	7641	6946		
				BHP	3.90	4.03	4.16	4.26	4.35	4.41	4.44	4.39		
				Sones	30	29	29	28	28	27	26	25		
			1045	CFM	10909	10570	10222	9855	9455	9054	8533	8002	7330	6463
				BHP	4.54	4.68	4.82	4.94	5.04	5.13	5.17	5.21	5.15	4.99
				Sones	35	34	34	33	32	31	31	30	28	27
		B-7½	1140	CFM	12016	11713	11394	11075	10733	10366	9999	9562	9075	8586
				BHP	5.83	6.00	6.14	6.29	6.42	6.52	6.63	6.70	6.74	6.77
				Sones	46	47	46	44	42	40	40	40	40	38

MAXIMUM BHP AT A GIVEN RPM = $(RPM/602)^3$
MAXIMUM RPM = 1140
TIP SPEED (ft/min) = RPM x 7.983
MAXIMUM MOTOR FRAME SIZE = 213T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/5.50

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast/Sidewall Exhaust
Size-300XP: CUBE

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE
^Approximate Weight	313 *(142)*
Damper Size	34 x 34 *(864 x 864)*
Roof/Wall (without wall bracket) Opening	36½ x 36½ *(927 x 927)*
Wall Opening with Wall Bracket	36 x 36 *(914 x 914)*
Wall Opening with a Curb Through Wall	40 x 40 *(1016 x 1016)*

Motor HP	Fan RPM		Static Pressure in Inches wg 1	1.25	1.5	2	2.5	3	3.5	4	4.5	4.75
300XP												
3/4	790	CFM	1776									
		BHP	0.48									
		Sones	9.4									
	900	CFM	2958	2273								
		BHP	0.79	0.75								
		Sones	12.2	11.3								
1	990	CFM	3619	3167	2538							
		BHP	1.04	1.05	1.00							
		Sones	14.6	13.4	12.8							
1½	1060	CFM	4073	3708	3255							
		BHP	1.25	1.28	1.28							
		Sones	16.5	15.3	14.4							
	1130	CFM	4511	4201	3833	2773						
		BHP	1.48	1.53	1.56	1.46						
		Sones	18.9	17.8	16.8	15.6						
2	1245	CFM	5182	4930	4648	3943	2705					
		BHP	1.92	1.99	2.04	2.08	1.86					
		Sones	22	21	20	18.6	17.9					
3	1335	CFM	5695	5465	5220	4648	3905					
		BHP	2.32	2.40	2.47	2.56	2.53					
		Sones	24	24	23	21	19.4					
	1425	CFM	6199	5983	5768	5286	4695	3886				
		BHP	2.78	2.86	2.95	3.07	3.14	3.03				
		Sones	27	26	25	24	22	21				
5	1493	CFM	6574	6369	6164	5722	5200	4550	3646			
		BHP	3.16	3.25	3.34	3.49	3.58	3.57	3.37			
		Sones	29	28	28	26	24	23	22			
	1560	CFM	6941	6746	6549	6143	5684	5134	4441	3049		
		BHP	3.57	3.67	3.76	3.93	4.05	4.12	4.02	3.50		
		Sones	31	30	30	28	27	25	24	24		
	1690	CFM	7643	7464	7284	6920	6528	6091	5587	4951	4100	3070
		BHP	4.47	4.57	4.68	4.87	5.04	5.16	5.24	5.14	4.88	4.32
		Sones	36	35	34	33	31	30	29	28	28	28

MAXIMUM BHP AT A GIVEN RPM = $(RPM/972)^3$
MAXIMUM RPM = 1690
TIP SPEED (ft/min) = RPM x 5.825
MAXIMUM MOTOR FRAME SIZE = 213T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/5.50

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast Exhaust
Size-360: CUBE

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE
^Approximate Weight	440 *(200)*
Damper Size	40 x 40 *(1016 x 1016)*
Roof Opening	42½ x 42½ *(1080 x 1080)*

Motor HP		Fan RPM		Static Pressure in Inches wg									
				0	0.125	0.25	0.375	0.5	0.75	1	1.25	1.5	1.75
360													
1/2	VG-1 VARI-GREEN	300	CFM	8092	7206	6023							
			BHP	0.37	0.42	0.43							
			Sones	6.9	5.9	5.4							
		320	CFM	8631	7820	6755	5256						
			BHP	0.44	0.50	0.52	0.51						
			Sones	7.7	6.8	6.0	6.6						
3/4		365	CFM	9845	9142	8299	7286	5767					
			BHP	0.66	0.72	0.77	0.78	0.74					
			Sones	10.2	9.4	8.5	8.0	8.3					
1		400	CFM	10789	10153	9426	8556	7575					
			BHP	0.87	0.94	0.99	1.02	1.02					
			Sones	12.7	11.9	11.1	10.3	9.9					
1½	VG-2	460	CFM	12408	11862	11281	10587	9814	7809				
			BHP	1.32	1.40	1.48	1.53	1.55	1.52				
			Sones	16.8	16.5	15.8	15.1	14.5	13.5				
2		505	CFM	13621	13125	12602	12022	11359	9878				
			BHP	1.74	1.83	1.92	1.99	2.04	2.06				
			Sones	20	20	19.8	19.0	18.6	17.9				
3	VG-3	543	CFM	14646	14184	13705	13209	12606	11302	9606			
			BHP	2.17	2.26	2.36	2.45	2.50	2.56	2.52			
			Sones	22	22	21	21	20	19.3	18.2			
		580	CFM	15644	15212	14769	14306	13783	12597	11287	9381		
			BHP	2.64	2.74	2.84	2.94	3.02	3.10	3.13	3.02		
			Sones	23	23	23	22	22	21	20	18.4		
5		617	CFM	16642	16236	15826	15391	14942	13862	12684	11227		
			BHP	3.18	3.29	3.40	3.50	3.60	3.71	3.76	3.73		
			Sones	25	25	25	24	24	23	22	21		
		654	CFM	17640	17257	16873	16466	16056	15084	14000	12831	11217	
			BHP	3.78	3.90	4.02	4.13	4.24	4.39	4.46	4.48	4.38	
			Sones	27	27	27	26	26	25	23	22	21	
		690	CFM	18611	18248	17884	17504	17115	16236	15243	14187	12985	11290
			BHP	4.44	4.57	4.69	4.81	4.93	5.11	5.21	5.26	5.25	5.09
			Sones	30	29	28	28	28	27	25	24	23	22

MAXIMUM BHP AT A GIVEN RPM = $(RPM/396)^3$
MAXIMUM RPM = 690
TIP SPEED (ft/min) = RPM x 9.425
MAXIMUM MOTOR FRAME SIZE = 213T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/7.25

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast Exhaust
Size-360HP: CUBE

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE
^Approximate Weight	440 *(200)*
Damper Size	40 x 40 *(1016 x 1016)*
Roof Opening	42½ x 42½ *(1080 x 1080)*

Motor HP		Fan RPM		Static Pressure in Inches wg 0.5	0.75	1	1.25	1.5	1.75	2	2.25	2.5	2.75
360HP													
1	VG-1	420	CFM	6407									
			BHP	0.90									
			Sones	9.6									
		440	CFM	7003									
			BHP	1.03									
			Sones	10.8									
1½	VARI-GREEN	505	CFM	8765	7539								
			BHP	1.52	1.57								
			Sones	15.3	14.3								
2	VG-2	555	CFM	10029	9046	7766							
			BHP	1.97	2.06	2.08							
			Sones	17.2	16.2	15.4							
3	VG-3	595	CFM	10996	10129	9094	7488						
			BHP	2.40	2.50	2.57	2.49						
			Sones	18.9	17.7	16.8	16.1						
		635	CFM	11934	11157	10276	9171	7329					
			BHP	2.87	3.00	3.09	3.12	2.95					
			Sones	21	19.5	18.2	17.8	17.3					
5		695	CFM	13321	12662	11902	11053	10026	8393				
			BHP	3.70	3.86	3.98	4.07	4.09	3.92				
			Sones	24	23	22	20	20	19.6				
		755	CFM	14688	14086	13434	12734	11922	10973	9593			
			BHP	4.68	4.86	5.01	5.14	5.23	5.24	5.10			
			Sones	28	27	26	25	24	23	22			
7½		781	CFM	15275	14693	14086	13410	12681	11831	10852	9149		
			BHP	5.15	5.34	5.51	5.64	5.75	5.81	5.79	5.51		
			Sones	30	29	28	27	27	26	24	23		
		824	CFM	16232	15689	15137	14511	13869	13127	12290	11354	9683	
			BHP	6.00	6.20	6.40	6.54	6.69	6.78	6.82	6.79	6.48	
			Sones	31	29	27	28	29	28	26	25	24	
		865	CFM	17129	16631	16105	15544	14933	14315	13565	12738	11789	10197
			BHP	6.89	7.11	7.32	7.50	7.64	7.79	7.87	7.89	7.83	7.50
			Sones	33	32	30	29	29	29	28	27	25	23

MAXIMUM BHP AT A GIVEN RPM = $(RPM/434)^3$
MAXIMUM RPM = 865
TIP SPEED (ft/min) = RPM x 9.425
MAXIMUM MOTOR FRAME SIZE = 213T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/7.25

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast Exhaust
Size-360XP: CUBE

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE
^Approximate Weight	440 *(200)*
Damper Size	40 x 40 *(1016 x 1016)*
Roof Opening	42½ x 42½ *(1080 x 1080)*

Motor HP		Fan RPM		Static Pressure in Inches wg 1	1.25	1.5	2	2.5	3	3.5	4	4.5	5
360XP													
1	VG-1 VARI-GREEN	700	CFM	3210									
			BHP	0.81									
			Sones	10.5									
		760	CFM	4020	3225								
			BHP	1.05	1.01								
			Sones	11.1	11.1								
1½	VARI-GREEN	870	CFM	5243	4740	4112							
			BHP	1.53	1.57	1.55							
			Sones	13.6	12.7	12.3							
2	VG-2	955	CFM	6081	5679	5216	3949						
			BHP	1.97	2.04	2.08	1.98						
			Sones	15.4	15.4	14.2	13.0						
3	VG-3	1025	CFM	6722	6396	6001	5035	3264					
			BHP	2.38	2.47	2.54	2.55	2.18					
			Sones	17.1	16.5	16.2	14.5	13.4					
		1095	CFM	7351	7050	6724	5930	4905					
			BHP	2.85	2.95	3.03	3.13	3.07					
			Sones	19.2	18.4	17.8	16.4	15.4					
5		1163	CFM	7945	7669	7386	6712	5867	4700				
			BHP	3.36	3.47	3.57	3.73	3.75	3.54				
			Sones	21	21	19.9	18.6	17.3	16.5				
		1231	CFM	8528	8278	8011	7422	6711	5824	4551			
			BHP	3.91	4.05	4.15	4.35	4.45	4.40	4.04			
			Sones	23	23	22	21	19.4	18.5	18.0			
		1300	CFM	9113	8881	8635	8125	7502	6764	5867	4286		
			BHP	4.54	4.69	4.82	5.04	5.21	5.24	5.15	4.52		
			Sones	26	25	24	23	22	21	20	20		
7½		1395	CFM	9910	9693	9477	9009	8490	7905	7193	6348	5143	
			BHP	5.50	5.67	5.83	6.08	6.30	6.48	6.48	6.37	5.87	
			Sones	29	28	27	26	25	24	23	23	23	
		1490	CFM	10699	10496	10294	9871	9429	8907	8340	7673	6881	5830
			BHP	6.61	6.78	6.96	7.27	7.52	7.73	7.89	7.90	7.78	7.34
			Sones	33	32	31	30	29	27	26	26	26	27

MAXIMUM BHP AT A GIVEN RPM = $(RPM/748)^3$
MAXIMUM RPM = 1490
TIP SPEED (ft/min) = RPM x 7.069
MAXIMUM MOTOR FRAME SIZE = 213T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/7.25

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast Exhaust
Size-420: CUBE

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE
^Approximate Weight	578 *(262)*
Damper Size	46 x 46 *(1168 x 1168)*
Roof Opening	48½ x 48½ *(1232 x 1232)*

Motor HP		Fan RPM		Static Pressure in Inches wg									
				0	0.125	0.25	0.375	0.5	0.75	1	1.25	1.5	1.75
420													
1/2	VG-1 VARI-GREEN	220	CFM	9353	7846	5075							
			BHP	0.31	0.37	0.35							
			Sones	6.5	6.0	5.5							
		245	CFM	10416	9104	7304							
			BHP	0.43	0.50	0.53							
			Sones	7.2	6.7	6.1							
3/4		280	CFM	11904	10785	9418	7419						
			BHP	0.64	0.73	0.78	0.77						
			Sones	8.3	7.7	7.1	6.6						
1		305	CFM	12966	11959	10781	9272						
			BHP	0.82	0.94	1.00	1.02						
			Sones	9.4	8.8	8.0	7.3						
1½	VG-2	350	CFM	14879	14037	13050	11925	10562					
			BHP	1.24	1.38	1.46	1.52	1.54					
			Sones	11.9	11.2	10.1	9.4	8.6					
2		385	CFM	16367	15629	14731	13791	12701	9246				
			BHP	1.65	1.81	1.91	1.99	2.05	1.92				
			Sones	14.4	13.5	12.4	11.7	10.7	8.5				
3	VG-3	415	CFM	17643	16982	16148	15303	14363	12028				
			BHP	2.07	2.24	2.37	2.45	2.53	2.56				
			Sones	17.2	16.1	14.9	13.8	13.0	10.9				
		440	CFM	18706	18103	17316	16532	15691	13652	10151			
			BHP	2.47	2.65	2.81	2.89	2.98	3.07	2.82			
			Sones	17.7	17.1	16.0	14.7	14.6	12.8	10.6			
5		525	CFM	22319	21817	21220	20560	19904	18497	16795	14802		
			BHP	4.19	4.41	4.61	4.78	4.88	5.10	5.20	5.16		
			Sones	23	22	22	21	20	19.1	18.1	17.6		
7½		565	CFM	24020	23553	23030	22417	21806	20544	19112	17437	15398	
			BHP	5.23	5.46	5.68	5.88	6.02	6.25	6.43	6.50	6.38	
			Sones	26	25	25	25	24	23	21	21	21	
		600	CFM	25508	25069	24604	24027	23451	22295	21023	19561	17884	15479
			BHP	6.26	6.51	6.75	6.96	7.15	7.38	7.63	7.75	7.77	7.47
			Sones	29	29	29	28	28	27	25	24	24	26

MAXIMUM BHP AT A GIVEN RPM = $(RPM/303)^3$
MAXIMUM RPM = 600
TIP SPEED (ft/min) = RPM x 11.06
MAXIMUM MOTOR FRAME SIZE = 213T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/8.99

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Roof Upblast Exhaust
Size-480: CUBE

GREENHECK
Building Value in Air.

All dimensions in inches *(millimeters)*, weight in pounds *(kilograms)*.
* May be greater depending on motor.
^Weight shown is largest cataloged open drip-proof motor.

	CUBE
^Approximate Weight	675 *(306)*
Damper Size	52 x 52 (1321 x 1321)
Roof Opening	54½ x 54½ *(1385 x 1385)*

Motor HP		Fan RPM		Static Pressure in Inches wg 0	0.125	0.25	0.375	0.5	0.625	0.75	1	1.25	1.5
480													
1/2	VG-1	180	CFM	11016	8924								
			BHP	0.33	0.39								
			Sones	5.5	4.9								
		200	CFM	12240	10490	7688							
			BHP	0.45	0.53	0.52							
			Sones	6.3	5.8	5.3							
3/4		225	CFM	13770	12261	10132							
			BHP	0.65	0.73	0.76							
			Sones	7.5	7.0	6.6							
1		250	CFM	15300	13988	12248	9988						
			BHP	0.89	0.98	1.04	1.03						
			Sones	9.0	8.5	8.2	7.9						
1½	VG-2	285	CFM	17442	16332	14991	13240	11154					
			BHP	1.31	1.43	1.52	1.55	1.52					
			Sones	11.1	10.6	10.0	9.6	9.2					
2		315	CFM	19278	18274	17116	15719	14033	11996				
			BHP	1.77	1.90	2.01	2.08	2.09	2.03				
			Sones	12.9	12.5	11.8	11.3	10.4	10.2				
3	VG-3	360	CFM	22032	21153	20222	19142	17848	16410	14749			
			BHP	2.64	2.79	2.93	3.05	3.10	3.12	3.08			
			Sones	16.8	16.5	16.1	15.3	14.7	13.7	12.7			
5	VG-5	395	CFM	24174	23373	22572	21605	20621	19343	18035	14722		
			BHP	3.49	3.65	3.81	3.94	4.07	4.11	4.13	3.97		
			Sones	21	20	20	19.2	18.5	17.6	16.6	14.9		
		425	CFM	26010	25266	24521	23679	22764	21766	20556	17922		
			BHP	4.35	4.52	4.69	4.85	4.98	5.09	5.12	5.09		
			Sones	22	21	21	20	19.4	18.7	17.7	15.6		
7½		460	CFM	28152	27464	26776	26064	25219	24373	23399	21163	18582	
			BHP	5.51	5.70	5.89	6.07	6.22	6.37	6.46	6.52	6.42	
			Sones	25	24	24	23	22	22	21	18.5	18.7	
		490	CFM	29988	29342	28697	28051	27291	26497	25704	23674	21437	18846
			BHP	6.66	6.86	7.06	7.26	7.43	7.59	7.75	7.85	7.84	7.67
			Sones	28	27	27	26	25	25	24	22	20	24

MAXIMUM BHP AT A GIVEN RPM = $(RPM/246)^3$
MAXIMUM RPM = 490
TIP SPEED (ft/min) = RPM x 12.63
MAXIMUM MOTOR FRAME SIZE = 213T
AVERAGE DISCHARGE VELOCITY (FPM) = CFM/11.72

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.

Smoke Control

Fan wheel shall be centrifugal backward-inclined, constructed of steel and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances.

- Dual drives shall be sized for a minimum of 150% of driven horsepower.
- A NEMA-3R disconnect switch is required, but shall be factory or field installed and wired from the fan motor to a junction box installed outside the motor compartment.
- Fans shall be Listed by Underwriters Laboratory for UL/cUL 705 for electrical components and UL/cUL Listed for Emergency Smoke Control Systems [500°F (260°C) for 4 hours and 1,000°F (538°C) for 15 minutes].

Fans shall be Greenheck model CUBE and USGF manufactured in the USA by Greenheck Fan Corporation headquartered in Schofield, Wisconsin.

High Wind

Fans shall meet all Greenheck wind load standards and shall contain the following third-party certifications:

- Miami-Dade Certification (CUE, CUBE)
- Licensed P.E. calculations shall be available for fan per ASCE 7-16 Minimum Design Loads for Buildings and Other Structures for exposure Class C, 60-foot building height, and a type II building.
- Fan shall be tested in accordance with ASTM E-330-02 Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference and Florida Building Code Test Protocol TAS-201, 202 and 203 at the ASCE 7-16 calculated design pressure.
- Licensed P.E. calculations for attachment of fan to curb shall be available for ASCE 7-16 determined design pressure.
- All calculations and testing shall be done by a state licensed P.E. and a certified test lab.

Fans shall be Greenheck model CUE and CUBE manufactured in the USA by Greenheck Fan Corporation headquartered in Schofield, Wisconsin.

Seismic

Fans shall meet International Building Code (IBC) and the California Department of Health Care Access and Information (HCAI) requirements for seismic certifications as listed.

- All Greenheck seismically certified models shall be tested to the most severe seismic event on the Spectral Response Map per IBC Figures 1613.5 (1-2). Testing shall be performed under the worst case scenario, using the highest mapped seismic load, highest level occupancy category, worst case site class, and highest code mandated importance factor.
- Fans shall be shake table tested in accordance with ICC ES AC-156, in which the fans are physically subjected to the same or greater forces as experienced during a seismic event.

Fans shall be Greenheck model CUE and CUBE manufactured in the USA by Greenheck Fan Corporation headquartered in Schofield, Wisconsin.

Quick Delivery and Quick Build Programs

Greenheck offers an extensive selection of Quick Delivery (QD) and Quick Build (QB) offerings. The QD program is Greenheck's stock program and the QB program offers configurable fans in 1, 3, 5, 10, 15 or 25 days.

Hundreds of in stock ventilation products and accessories are available for shipment to your jobsite in less than 24 hours from our strategically located warehouses throughout the world.

Model	Size	Best Available Program
CUE	080 through 120, 140	In Stock
CUBE	099 through 120, 140 through 200, 240 & 300	
High Pressure CUBE	180HP	
All CUE	060 through 200	1 Day
CUBE	099, 130, 220, 360 through 480	
High Pressure CUE	140HP through 180HP	
High Pressure CUBE	100HP, 160HP, 200HP, 220HP, 300HP & 360HP	
Extended Pressure CUBE	160XP through 360XP	

Building Value in Air

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

Our Commitment

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

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

GREENHECK®
Building Value in Air.

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