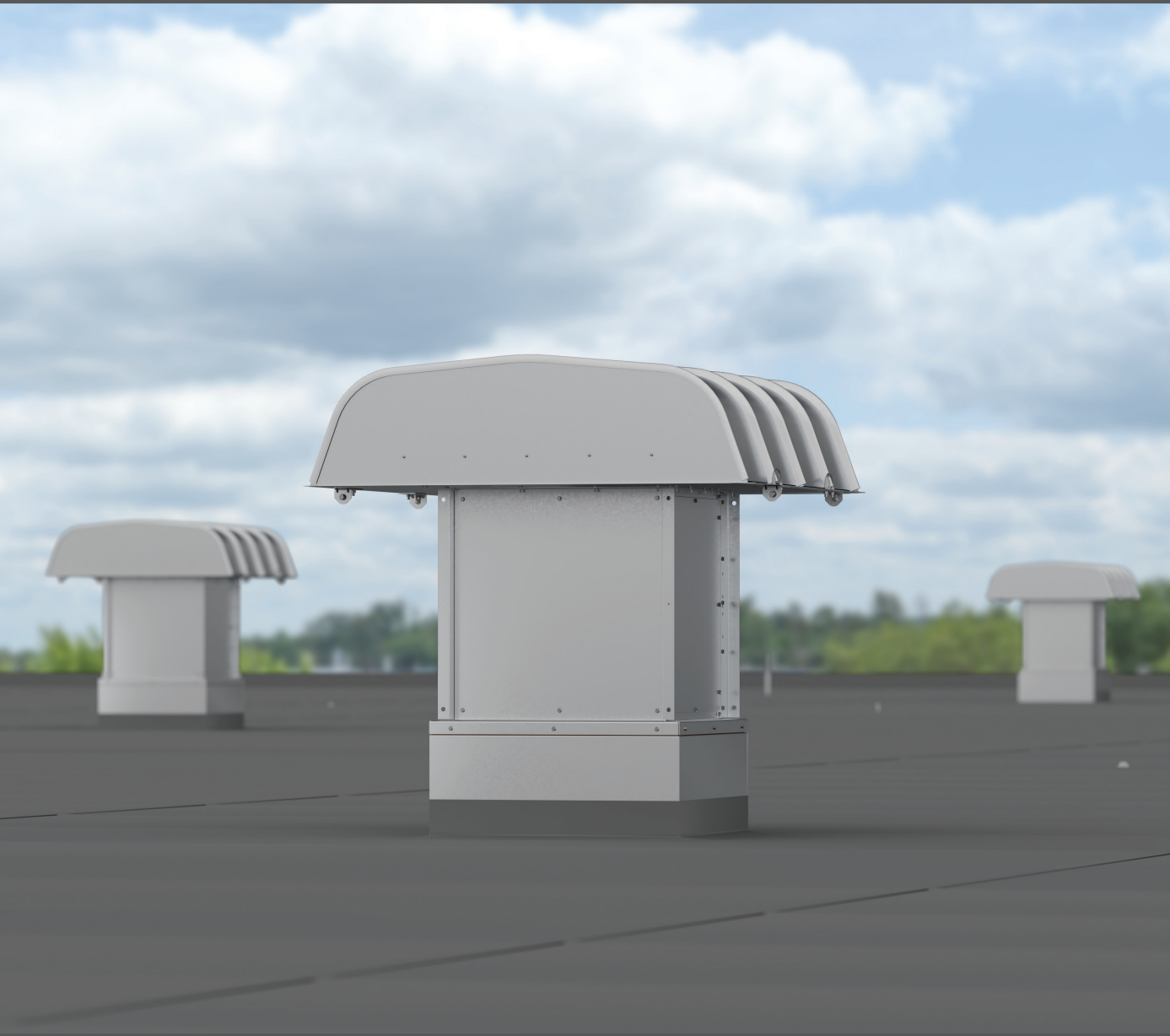


Mixed Flow Hooded Rooftop Fans Model RSQ

Supply and Exhaust



BUILDING VALUE IN AIR.

 **GREENHECK**
Building Value in Air.

September
2024

Mixed Flow Hooded Rooftop Fans

Model RSQ direct drive fans take performance through the roof. Offering unparalleled installation flexibility and ease of maintenance, these compact fans are engineered for both roof supply and exhaust using our latest mixed flow technology—delivering both exceptional efficiency and quiet operation. Supply configurations can be equipped with washable aluminum filters or birdscreen while exhaust configurations are provided with birdscreen only.

SIZES

- 12 Sizes, 7 - 33
- Direct Drive

PERFORMANCE

- Up to 27,100 cfm in supply applications
- Up to 25,200 cfm in exhaust applications
- Up to 3 in. wg of static pressure

CONFIGURATIONS

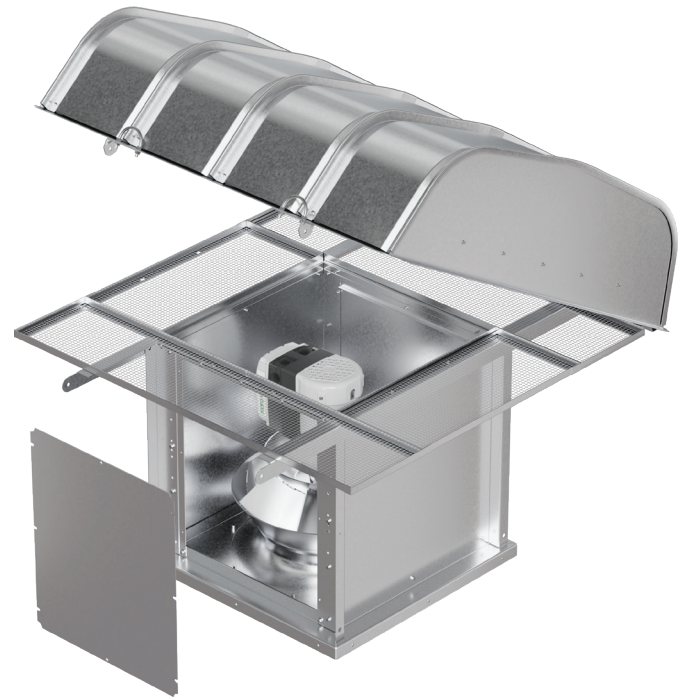
- Supply available with birdscreen as standard or optional 1-inch washable aluminum filters
- Exhaust available with birdscreen as standard

APPLICATIONS

- Filtered/Unfiltered Roof Supply
- Roof Exhaust
- Spark B & C Resistance
- Clean Air Environments

FEATURES AND BENEFITS

- Mixed flow wheel improves airflow and efficiency while reducing sound and footprint
- Panels on either side of a unit provide quick access and inspection
- Hoods constructed of galvanized steel or aluminum are arched and precision roll-formed for strength and weather tightness (ships knocked down for field installation)
- Versatile design allows for both supply or exhaust configurations, creating a consistent and cohesive appearance on the roof deck
- Lifting lugs provide easy rigging and installation
- Vari-Green® motor offering up to and including 10 hp
- Mounted and wired NEMA-3R disconnect



PRODUCT CERTIFICATIONS

Greenheck takes pride in offering a high-quality, reliable product. We invest our resources into designing, testing and manufacturing products to ensure customer satisfaction.



UL/cUL 705
Listed for Electrical
File no. E40001



الهيئة السعودية للمواصفات والمقاييس والجودة
Saudi Standards, Metrology and Quality Org.



Hood

The hood utilizes an interlocking rib design that combines four material thicknesses and I-beam design principles to produce a hood superior in strength to conventional designs. This is an important feature in high snow or high wind load regions. Formed channels adjacent to the ribs provide water drainage to ensure weather tightness. Hoods are available in galvanized steel, painted steel, or aluminum construction. Hood support angles are heavy-gauge galvanized steel. Hood panels and supporting frame members ship knocked-down for field installation.

Filtration

Both supply and exhaust units come standard with birdscreens. One-inch aluminum filters are available only on supply configurations for applications where foreign material must be removed from the airstream.



Birdscreen

Standard birdscreens are constructed of 1/2-inch galvanized steel mesh for minimum airflow restriction. Birdscreen is easily removable for access and maintenance through the use of the quick-release sections on either side of the unit. Separating these birdscreen sections from the fan can be done while leaving the hood in place.

Fan Housing

Fan housing is constructed of rigid structural members and formed galvanized steel panels designed to maximize outlet area for efficiency and quiet operation. Panels are weather-resistant and designed for long lasting durability and dependability.

Wheel

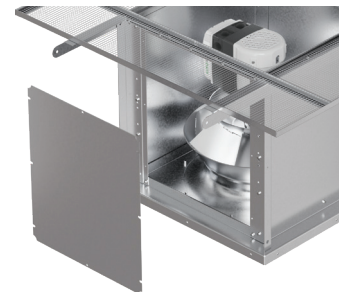
Mixed flow wheel technology delivers industry-leading performance, efficiency and sound. Each wheel is statically and dynamically balanced.

Motor

Totally enclosed motors allow for easier access by not requiring an additional motor cover. Maximize your efficiency and controllability by using Greenheck's Vari-Green[®] motors.

Access Panels

The housing construction features two removable panels permitting easy access to all interior components.



Disconnect Switches

A NEMA-3R disconnect switch is mounted and wired as standard. All wiring and electrical components comply with the National Electric Code (NEC) and materials are UL listed. Other NEMA enclosure disconnect switches are optional.



Coatings

A variety of special coatings ranging from enamels to phenolics are available for decorative or protective purposes. When a special coating is selected for the fan, accompanying accessory items are also coated unless specified. Fan wheel is not coated.



Permatector™ is our standard coating. Typically used for applications that require corrosion resistance in indoor and outdoor environments. The color is RAL 7023 concrete grey.



Hi-Pro Polyester is resistant to salt water, chemical fumes and moisture in more corrosive atmospheres. It has superior chemical resistance, excellent abrasion and outdoor UV protection. This coating has protective qualities that exceed Air Dry Heresite. Color RAL 7023 concrete grey is standard with the option to choose from seven other decorative colors or request a custom color match.

Aluminum Hood

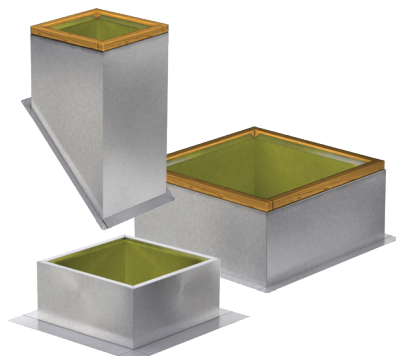
Aluminum provides the same weatherproof rating while providing weight savings for applications requiring lighter units such as roof decks with lower load capacities.

Hood Insulation

1/2-inch fiberglass insulation attached to the underside of the hood to minimize condensation and reduce sound is available.

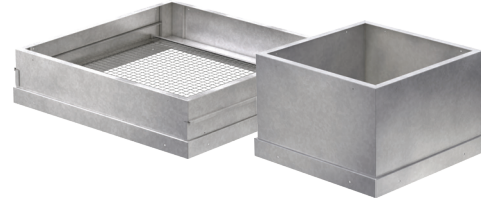
Roof Curbs

Prefabricated roof curbs reduce installation time and costs by ensuring compatibility between the fan, the curb, and the roof opening. All curbs are available with one-inch, two-inch, or no insulation. A wide variety of roof curbs are available including flanged, pitched, and sound-absorbing.



Roof Curb Extensions

Extensions raise the fan discharge above the roof line and provide an accessible mounting location for dampers. Insect screen bases, constructed with a removable fine mesh, are recommended for applications where insect entry must be prevented.

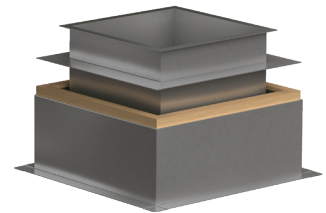


Roof Curb Adapters/Reducers

Welded curb adapters designed to adapt the fan to an existing curb size. Useful in retrofit applications where current curb size is larger/smaller than the RSQ curb dimensions.

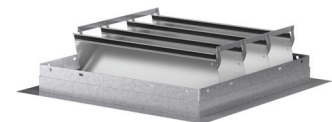
Duct Adapters

Duct adapters fit over the roof curb and support the top of the duct allowing ductwork to be completed before the fan is set in place. Duct adapters also limit performance losses by directing airflow into the duct.



Backdraft Dampers

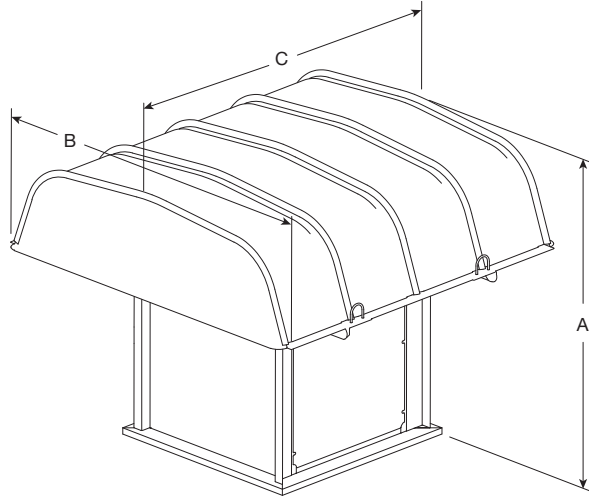
Gravity or motorized parallel blade dampers (model WD-330) are available for duct mounting. These dampers feature sturdy galvanized frames, aluminum blades with vinyl blade seals, and a balanced design for minimal resistance to airflow. Dampers are shipped separate for field installation.



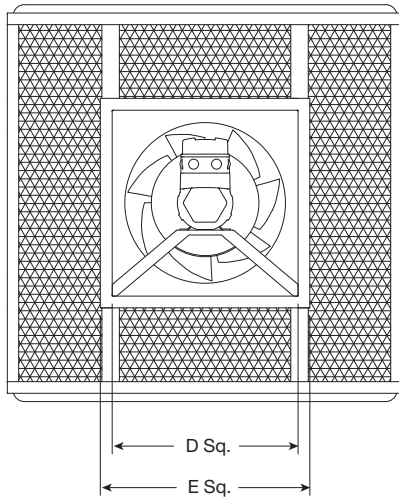
Control Dampers

Square, opposed blade volume control dampers (model VCD) are available for duct mounting. These dampers feature sturdy galvanized frames, and steel blades with optional blade and jamb seals. A balanced design results in minimal resistance to airflow. Dampers are shipped separate for field installation.

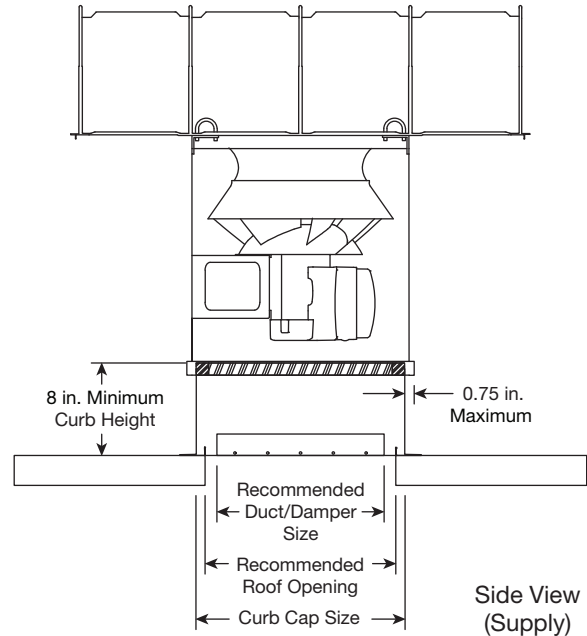




Supply or Exhaust



Bottom View (Supply)



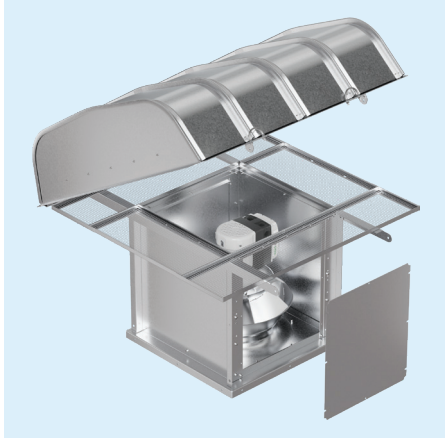
Side View (Supply)

Fan Size	Supply or Exhaust					Max Fan Weight [^]	Recommended Duct/Damper Size	Recommended Roof Opening	Curb Cap Size
	A	B	C	D	E				
7	25	30-1/4	27-1/8	11-3/8	15-7/8	109	11-3/8 x 11-3/8	13-3/4 x 13-3/4	15-7/8 x 15-7/8
9	27	34-7/8	39-1/8	15-1/8	19-5/8	141	15-1/8 x 15-1/8	17-1/2 x 17-1/2	19-5/8 x 19-5/8
12	35-1/2	40-1/4	39-1/8	18-1/4	22-3/4	183	18-1/4 x 18-1/4	20-3/4 x 20-3/4	22-3/4 x 22-3/4
15	40	42-3/4	51-1/8	22	26-1/2	253	22 x 22	24-1/2 x 24-1/2	26-1/2 x 26-1/2
16	41	51	51-1/8	24	28-1/2	282	24 x 24	26-1/2 x 26-1/2	28-1/2 x 28-1/2
18	42-1/8	50-1/8	63-1/8	26-5/8	31-1/8	355	26-5/8 x 26-5/8	29 x 29	31-1/8 x 31-1/8
20	44-3/4	61-3/8	63-1/8	29-1/4	33-3/4	481	29-1/4 x 29-1/4	31-3/4 x 31-3/4	33-3/4 x 33-3/4
22	47-1/2	61-1/2	75-1/8	32	36-1/2	544	32 x 32	34-1/2 x 34-1/2	36-1/2 x 36-1/2
24	55	74-1/2	75-1/8	35-1/2	40	617	35-1/2 x 35-1/2	38 x 38	40 x 40
27	58-1/2	76	87-1/8	39	43-1/2	832	39 x 39	41-1/2 x 41-1/2	43-1/2 x 43-1/2
30	64-1/2	89-3/8	87-1/8	43	47-1/2	929	43 x 43	45-1/2 x 45-1/2	47-1/2 x 47-1/2
33	69-3/4	93-7/8	99-1/8	47-1/4	51-3/4	1049	47-1/4 x 47-1/4	49-3/4 x 49-3/4	51-3/4 x 51-3/4

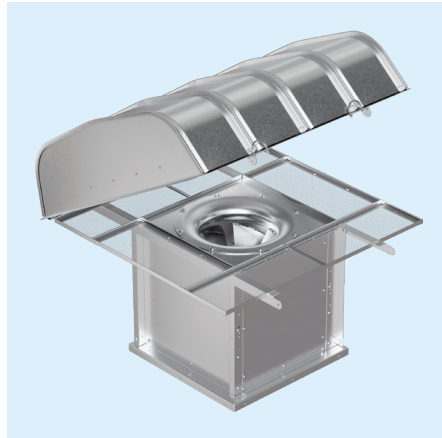
All dimensions in inches and weight is shown in pounds. [^]Weight shown is standard galvanized construction and largest cataloged totally enclosed EC motor.

Configurations

Three different RSQ configurations are available based on the system's requirements. Aluminum filters are only available on supply configurations.



Exhaust with Birdscreen (Standard)



Supply with Birdscreen (Standard)

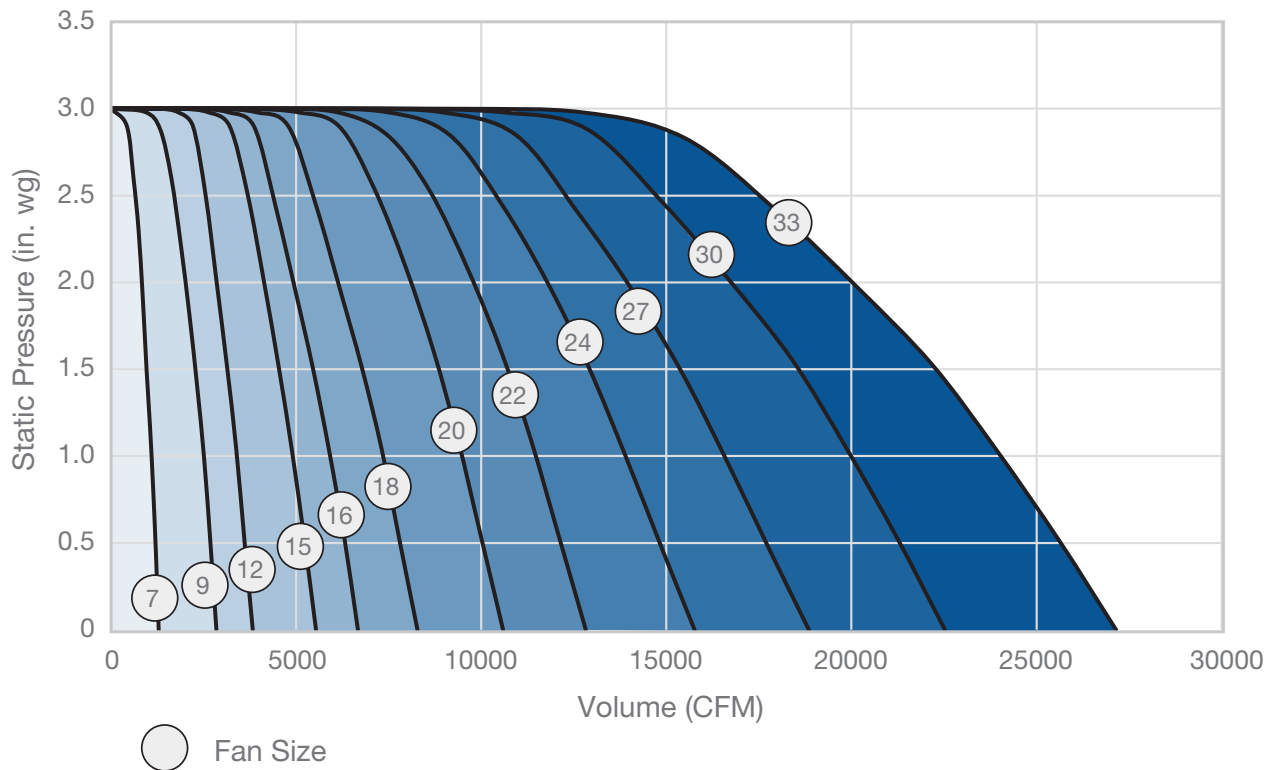


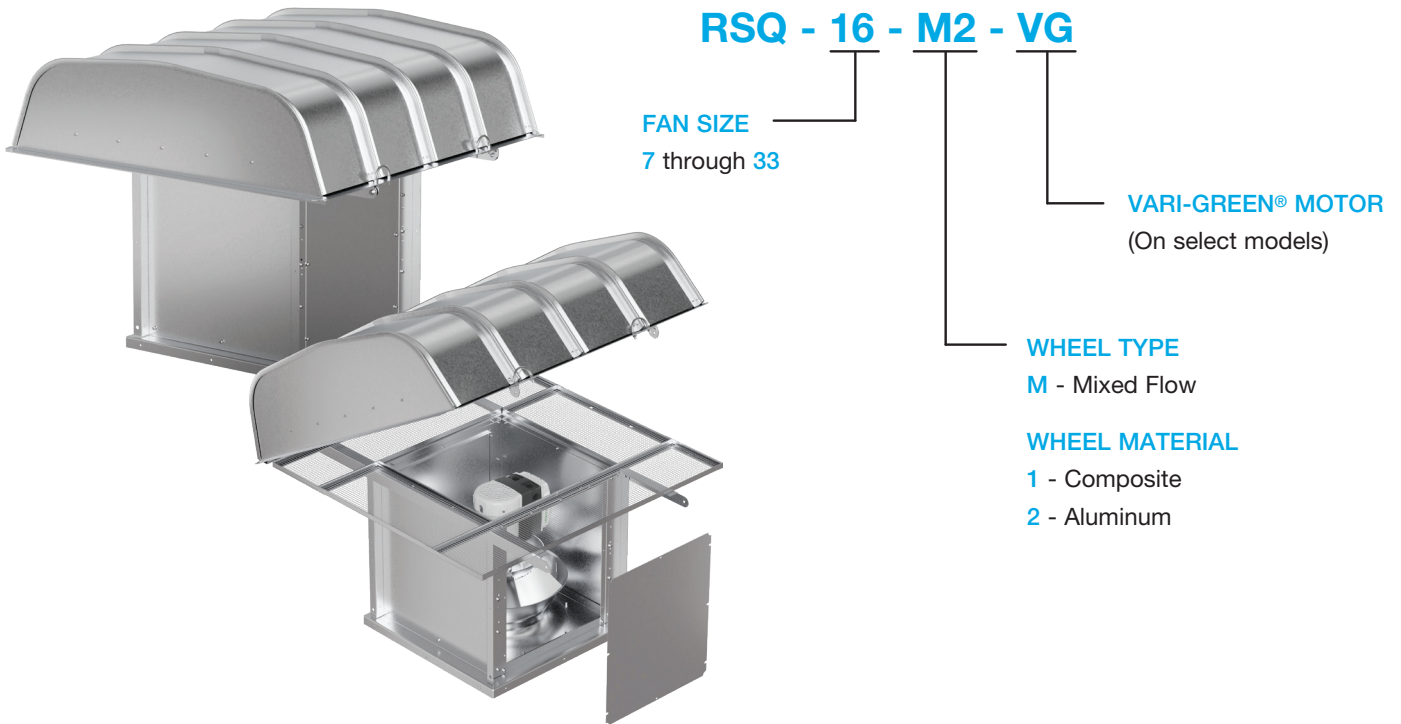
Supply with Filters (Optional)

Important: Supply or exhaust configuration must be properly selected at the time of ordering, as the configuration is not field-configurable. Ensuring the correct selection is crucial for proper operation and integration with your HVAC system.

Performance

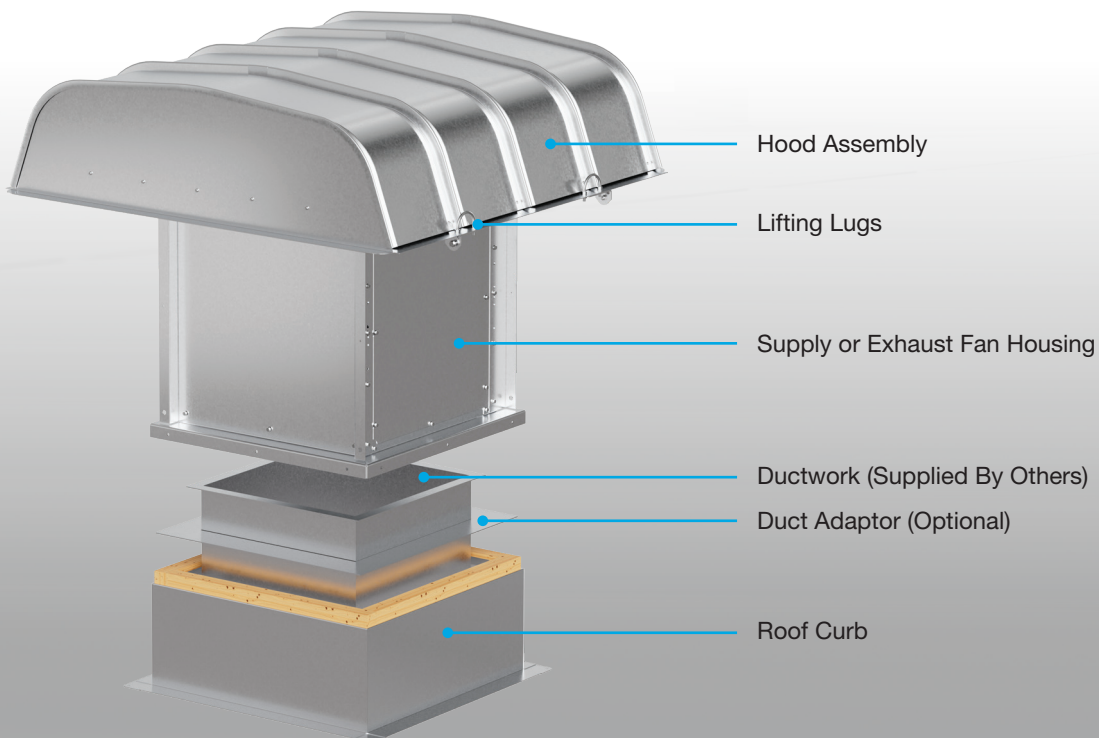
Performance shown is for a RSQ configured for supply applications with filters – alternate configurations will differ.





Typical Installation

Model RSQ hooded roof supply/exhaust fan is designed for roof mounting in clean air systems. The RSQ hood is shipped knocked down for convenience and space-saving, but designed for quick and straight forward assembly on-site. Integrated heavy-duty lifting lugs on the hood are built to withstand the load of the entire fan assembly, ensuring safe and efficient installation.



Model RSQ is available with Greenheck's Vari-Green® technology. Greenheck's Vari-Green products are designed for efficiency, controllability and low maintenance.

Motors

The Greenheck Vari-Green motor is an electronically commutated (EC) motor that operates on single or three phase AC input power and internally converts it to DC power providing improved speed control capabilities (up to an 80% turndown) and higher efficiencies than standard motors. The Vari-Green motor blends technology, controllability and energy efficiency in a low-maintenance package that has changed the way the industry designs, specifies and operates air movement equipment. Depending on power rating, Vari-Green motors are available in both single and three phase with either a mounted dial on fan potentiometer (speed control) or wired to accept a 0-10 VDC control signal from an external source.



Controls

Greenheck offers a wide array of control options for pairing with Vari-Green motors. These controls are available for applications requiring manual operation or demand-controlled ventilation (DCV). Applications utilizing DCV controls provide only the desired amount of ventilation, delivering building owners savings on their energy bills.



Manual Controls

- Dial on Fan
- Remote Dial
- Touch Remote
- Factory Programmed VFD

Demand Controlled Ventilation

- Hand/Off/Auto (HOA)
- Constant Airflow
- Constant Pressure
- Air Quality - Volatile Organic Compound (VOC)
- Air Quality - Temperature/Humidity
- 0-10 VDC Signal from Building Management System (BMS)



Extraordinary Service

Quick Build

Greenheck's Quick Build (QB) program has the industry's most comprehensive offering of configure-to-order ventilation products built just for you, in the time frame you need!

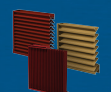
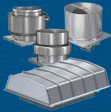
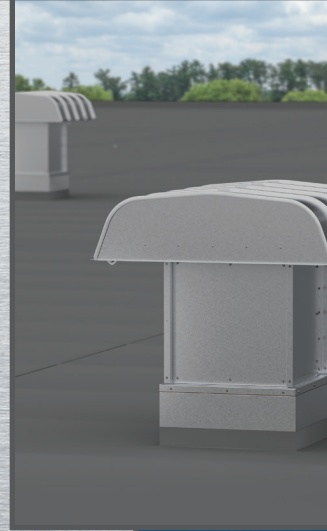
Greenheck's Quick Build (QB) program ensures select products can be manufactured as needed in 1, 3, 5, 10, 15, and 25-day manufacturing cycles.

Computer Aided Product Selection

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



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



Our Commitment

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

Specific Greenheck product warranties are located on greenheck.com within the product area tabs and in the Library under Warranties.

