

# Centrifugal Inline Fans Models SQ and BSQ

Direct and Belt Drive



 **GREENHECK**  
Building Value in Air.

May  
2013

# Models SQ and BSQ

## Centrifugal Square Inline Duct Fans



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Greenheck Fan Corporation certifies the model SQ and BSQ fans 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 models SQ and BSQ are shown on pages 15 to 45.



UL is optional and must be specified. SQ and BSQ models are Listed for Electrical (UL/cUL 705) File no. E40001



Models SQ 100 and greater.  
Models BSQ 70 through BSQ 420

For a CE compliant installation, all electrical connections must be made by a qualified electrician.



### 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- or 15-day production cycles, depending upon their complexity.
- Greenheck’s free Computer Aided Product Selection program (CAPS), rated by many as the best in the industry, helps you conveniently and efficiently select the right products for the challenge at hand.
- Greenheck has been Green for a long time! Our energy-saving products and ongoing corporate commitment to sustainability can help you qualify for LEED credits.
- Our 3D service allows you to download at no charge lightweight, easy-to-use AutoDesk™ Revit™ 3D drawings for many of our ventilation products.

Find out more about these special Greenheck services at [greenheck.com](http://greenheck.com)

# Models SQ and BSQ

## Centrifugal Square Inline Duct Fans



Model Comparison																										
Model	Location		Mounting					Airflow				Application						Drive Type		Impeller Type			Performance		Relative Cost	
	Outdoor	Indoor	Roof Curb	Base/Floor	Hanging	Wall	Ceiling Mounted	Exhaust	Supply	Reversible	Recirculate	General/Clean Air	Contaminated Air	Spark Resistant	Grease (UL 762)	Smoke Control (UL)	High Wind (150 mph)	High Temp (above 200°F)	Belt	Direct	Centrifugal	Propeller/Axial	Mixed Flow	Maximum Volume (cfm)		Maximum Static Pressure (in. wg)
SQ		✓		✓	✓			✓	✓		✓	✓	✓							✓	✓			5,000	2	\$
BSQ		✓		✓	✓			✓	✓		✓	✓	✓						✓		✓			27,200	4	\$

Greenheck’s model SQ and BSQ centrifugal inline fans feature a unique combination of installation flexibility, rugged construction, ease of service, high efficiency and low sound levels. These compact inline fans are the ideal selection for indoor clean air applications including intake, exhaust, return or make-up air systems where space is a prime consideration. The need for costly square-to-round transition pieces is eliminated reducing installation costs. The square housing design, compact size and straight-thru airflow also give the system designer the flexibility to mount SQ and BSQ fans in any configuration - horizontal, vertical or at any angle.

- Broadest performance in the industry, up to 4 in. wg (1,000 Pa) and 28,000 cfm (47,000 m<sup>3</sup>/hr).
- 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 and Air Performance seals.
- UL Listed for Electrical.
- These Greenheck products are subjected to extensive life testing to assure the fans will provide many years of reliable performance.

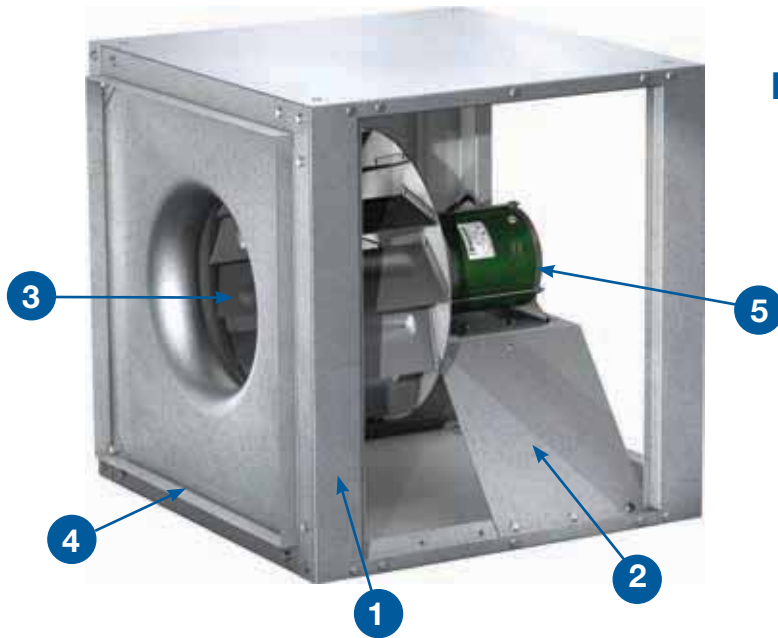
Over the years Greenheck has listened to your needs and input to remain the industry leader.

- Each fan is tested at the factory prior to shipping. The test includes vibration check, adjusting RPM and maximum amp draw.

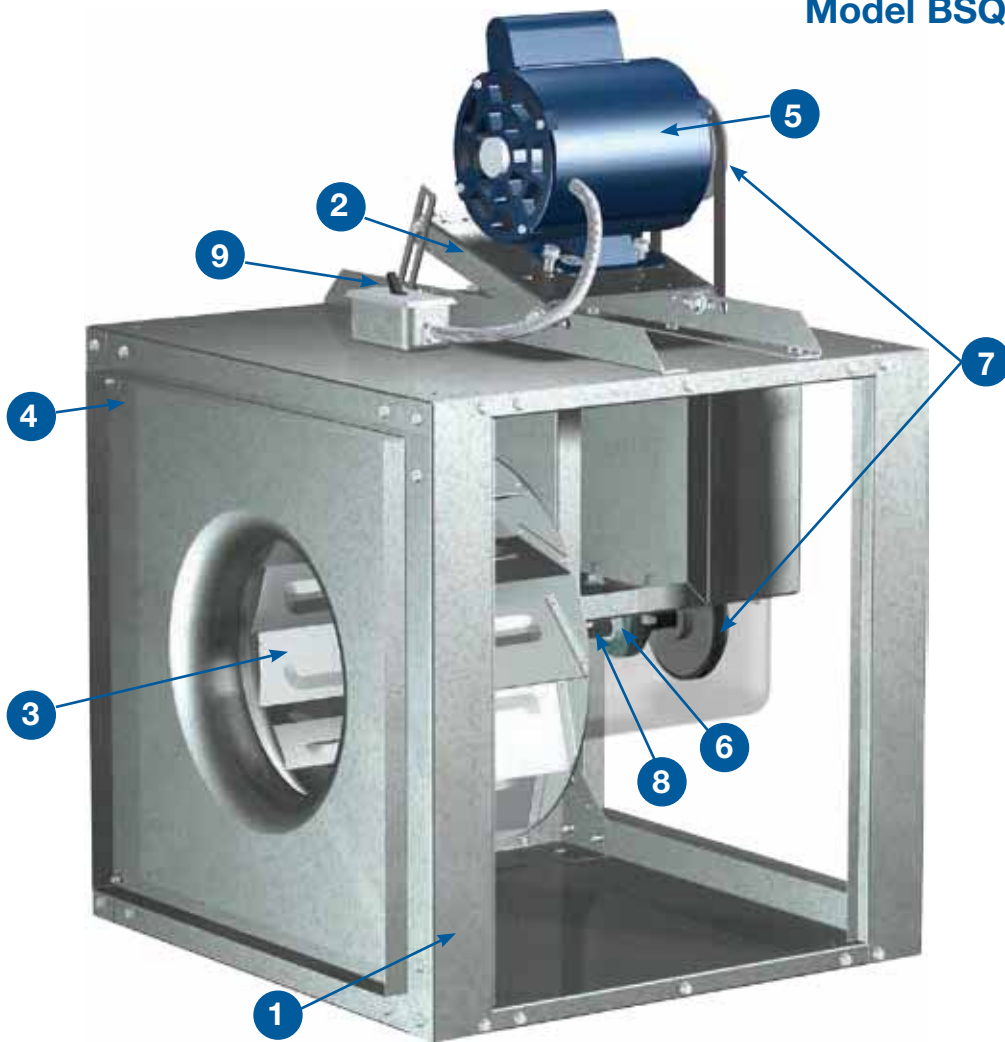


- Each fan displays a permanently stamped metal nameplate with complete model number, mark and unique serial number for future identification.
- Packaged-product is tested in accordance with ISTA (International Safe Transit Association) standards and procedures.

Turn to our inline fans to meet your requirements for applications in office buildings, schools and hospitals to name a few.



**Model SQ Direct Drive**



**Model BSQ Belt Drive**



## 1 Cabinet Construction

The fan housing is constructed of rigid structural members and formed galvanized steel panels. (Aluminum construction is optional in SQ sizes 60-160 and in BSQ sizes 70-300).

## 2 Drive Frame

Constructed from heavy-gauge steel.

## 3 Wheel

An aluminum, backward inclined, non-overloading centrifugal wheel is utilized to deliver maximum efficiency. Each wheel is statically and dynamically balanced.

## 4 Duct Collars

Inlet and discharge duct collars are provided for easy duct connection. The square design provides a larger discharge area than tubular centrifugal and vane axial fans; outlet velocities are reduced for quieter operation.

## 5 Motor

Permanently lubricated, sealed ball bearing motors are selected to provide years of trouble-free operation with minimal maintenance.

## 6 Bearings

100 percent factory tested bearings are designed specifically for air handling applications with a minimum  $L_{10}$  life in excess of 100,000 hours ( $L_{50}$  average life in excess of 500,000 hours).

## 7 Drive Assembly

Drives are sized for a minimum of 150 percent of driven horsepower. Machined cast iron pulleys are factory set to the required RPM and adjustable for final system balancing. Belts are static free and oil resistant. Belt adjustment is accomplished by loosening fasteners, sliding the motor plate and retightening fasteners.

## 8 Fan Shaft

Fan shafts are precisely sized, ground and polished so the first critical speed is at least 25 percent over the maximum operating speed. Close tolerances where the shaft makes contact with bearings result in longer bearing life.

## 9 Disconnect Switch


NEMA-1 disconnect switch is factory-mounted and wiring is provided from the motor as standard. All wiring and electrical components comply with the National Electric Codes and materials are UL Listed. Other NEMA enclosure disconnect switches are optional.

### Access Panels *(not shown on images)*

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



## Vari-Green® Motor - Model SQ

 Greenheck's electronically commutated (EC)

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



**VARI GREEN**  
Motor

The Vari-Green motor is available in:

- 1/6 - 3/4 horsepower 115 volt only.
- 1 horsepower 115/208-230 volt.
- 2 horsepower 208-230 volt.

All motors are available in a 50/60 Hz power.

### Benefits

Operates on AC power that's converted to DC—providing a more efficient motor operation as compared to an AC operation.

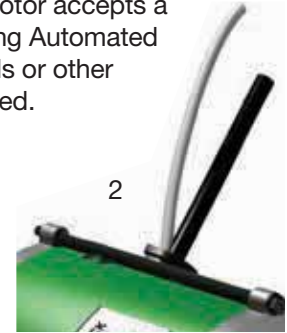
- The motor can attain up to 85% efficiency and reduce energy consumption.
- Watt savings of 30-70% depending on RPM.  
Note: As motor speed is turned down, efficiency stays high as compared to an AC motor that decreases dramatically.
- Operates cooler than a standard AC motor at lower RPMs. A cooler motor has longer motor life and reduces energy consumption.
- 80% usable RPM turndown vs. 30%. (chart at right)
- SQ 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.

### Vari-Green Advantages

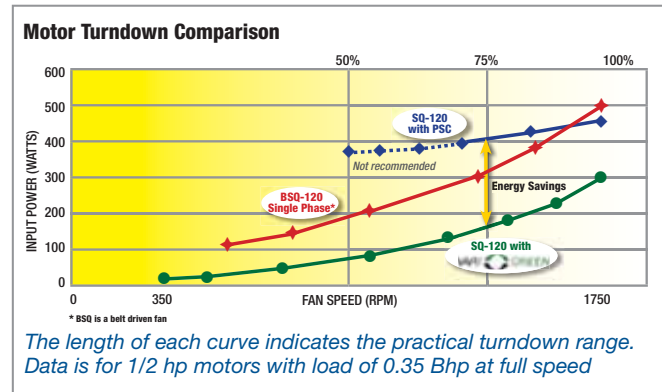
- Initial cost is similar to a belt drive
- Lower operating cost
- No maintenance, no belts, pulleys or bearings
- Easy RPM adjustment

### Features

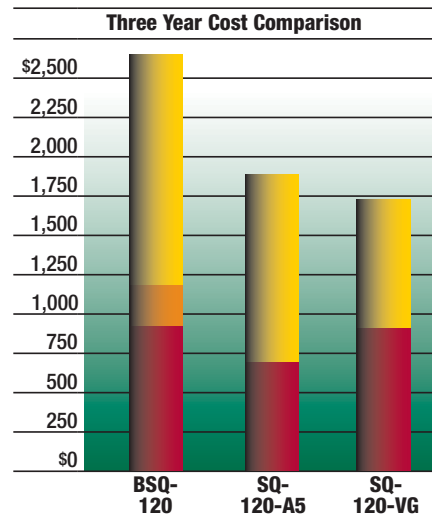
1. **Dial on Motor Control** - A potentiometer (dial on motor control) is mounted on the motor for easy speed adjustment for system balance. Simply turn the dial; there are no belts and pulleys to adjust.
2. **Control Wire Inputs** - the motor accepts a 0-10 VDC signal from Building Automated Systems, Vari-Green Controls or other controls to adjust motor speed.



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



### 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 SQ-120 is estimated at \$65/yr.

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

■ Initial Cost  
■ Maintenance cost over three years  
■ Operating cost over three years

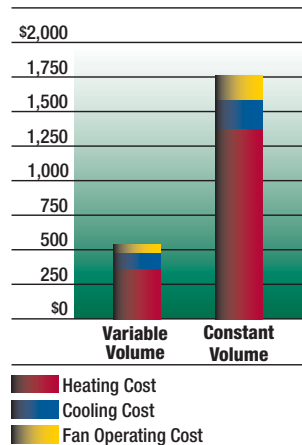
## Demand Control Ventilation for Multistory Buildings



Applications requiring constant pressure or variable volume can utilize SQ 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 in turn lessens the amount of conditioned air exhausted and further reduces total operating costs associated with air conditioning and heating in multistoried buildings such as: hotels, multifamily complexes, institutional facilities, and high rise commercial buildings.

### Variable Volume Operating Cost Analysis

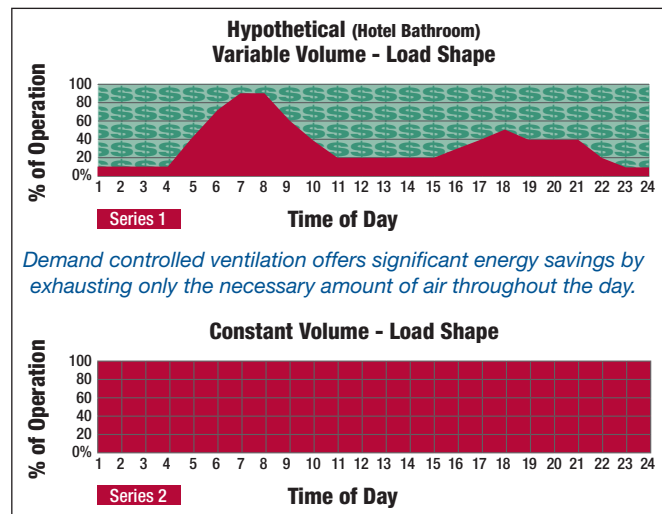


*Example of potential savings based on a northeast city in the USA using Vari-Green components for variable volume.*

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

Contact [fans@greenheck.com](mailto:fans@greenheck.com) for more information.

### 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.

**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 with Integral Transformer** 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 to low for energy conservation.

**Constant Pressure Control - Indoor** - Control Vari-Green motor via static (variable volume) or velocity (constant CFM) pressure on the inlet or outlet side of the fan. Optional, one or two, duct or room probes for use in:

- Multifamily structures - Apartments, condos, hotels; dryers, residential kitchens and bathrooms.
- Institutional facilities - Schools, prisons, multistory office buildings; bathrooms.

### Constant Pressure Control - Outdoor

Control Vari-Green motor via static pressure on the inlet side of the fan. Includes one duct probe and transducer for use in:

- Multifamily structures - Apartments, condos, hotels; residential kitchen, dryer facilities and bathrooms.
- Institutional facilities - Schools, prisons, multistory.

**Air Quality – VOC** - Control a Vari-Green motor via changes in volatile organic compounds (VOC's). VOC's are gasses that are emitted from humans, building materials, perfumes, foods, and furniture off-gassing. Range is 0-2000 CO<sub>2</sub> ppm equivalent.

- Institutional facilities – Schools, court house, hospitals; bathrooms, waiting rooms, cafeteria.
- Commercial buildings – Office space, conference rooms, bathrooms, break room.

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

- Multifamily structures – Apartments, condos, hotels; bathrooms, utility rooms.
- Commercial buildings – Office buildings; office space, conference rooms, utility rooms, bathrooms.



# Options and Accessories



**ALUMINUM CONSTRUCTION** - Aluminum construction is available for all direct drive sizes 60-160 and belt drive sizes 70-300. Some drive frame components may still be of galvanized construction to maintain structural integrity.

**INLET AND OUTLET GUARDS** - Inlet and outlet guards provide protection for non-ducted applications. Guards are fabricated of welded wire on a galvanized steel frame. They are easily removed for maintenance and inspection.

**BELT DRIVE MOTOR COVER AND BELT GUARD** - For belt-driven fans, combination motor cover and belt guards constructed of galvanized steel are available for protection of motors, drives and personnel. Standard on units specified with UL.

**DIRECT DRIVE MOTOR COVER** - Formed, galvanized steel motor covers are available to isolate direct drive motors from the airstream. When motor covers are furnished, vents to the exterior of the fan are provided to ensure sufficient motor cooling.

**INSULATED HOUSING** - For noise reduction and condensation control, the interior of the fan housing can be lined with a 1-inch fiberglass duct liner. The optional motor cover can also be insulated.

The table depicts the radiated sound reduction that can be obtained in each octave band for the insulated housing and motor cover together.

Approximate Radiated Sound Attenuation (dB)								
Octave Band	1	2	3	4	5	6	7	8
Sizes 60 - 130	-2	-7	-4	-4	-6	-13	-13	-9
Sizes 140 - 420	-3	-2	-5	-4	-5	-5	-7	-8

**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.



**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.

**INLET VANE DAMPERS** - Variable inlet vane dampers (model IVDE) are available for models SQ and BSQ sizes 140-420 and are factory-assembled to the fan. They can be specified for either manual or automatic operation (controls furnished by others). These dampers are constructed of heavy-gauge steel and feature uniform blade movement for positive control. Companion inlet rings for round duct connections are also available.

**SPEED CONTROLLERS** - Available for use with shaded pole and permanent split capacitor (PSC) motors on model SQ fans. They provide an economical means of system balancing with direct drive fans.



**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 contactor, 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](http://greenheck.com), Products, Motor Starter page.

**WIRING PIGTAIL** - Allows direct hook-up to the power supply eliminating field wiring at the fan.

**COATINGS** - Wide variety of coatings and colors are available.

**Decorative coatings** are available in sixteen standard colors.

**Protective coatings** are available in a choice of five electrostatic applied powders providing an available selection for most environments.

All Greenheck coatings and resistance charts can be found in our Performance Coatings for Commercial & Industrial Fans brochure.





# Filter Options

The filter box is designed to provide a compact and convenient clean air solution. Factory-assembled as a single unit, this fan eliminates the costly process of designing, fabricating and installing special remote filter box assemblies. Both the fan and filter section feature removable access panels on both sides to remove and replace filters, making fan maintenance simple and fast.



## Model Selection Procedure

1. Calculate system pressure drop and cfm requirements (not including filters).
2. Make a preliminary model size selection.
3. Calculate a filter pressure drop (P) for the preliminary model size selected in step 2 using the equation:  $P = F \times \left(\frac{\text{cfm}}{10,000}\right)^2$ 
  - To determine the filter factor (F) refer to chart below.
4. Add the filter pressure drop (P) to the system pressure drop and make a revised model size selection.

Model	Fan Size	Filter Box Weight	Filter Size	Filter Quantity	Filter Factor (F)			
					1 inch (25)		2 inch (51)	
					Aluminum	Paper Filters (MERV 7)	Aluminum	Paper Filters (MERV 8)
Model SQ	60 - 75	40 (18)	10 x 12 (254 x 305)	1	186	318.06	251.1	303.18
	80 - 95	74 (34)	14 x 25 (356 x 635)	1	21.8	37.28	29.43	35.53
	100	88 (40)	16 x 20 (406 x 508)	2	8.72	14.91	11.77	14.21
	120	114 (52)	16 x 25 (406 x 635)	2	5.58	9.54	7.53	9.10
	130	120 (54)	20 x 20 (508 x 508)	2	5.58	9.54	7.53	9.10
	140	174 (79)	20 x 25 (508 x 635)	2	3.57	6.11	4.82	5.82
	160	246 (112)	20 x 20 (508 x 508)	4	2.09	3.57	2.82	3.41
Model BSQ	70 - 80 - 90	117 (53)	14 x 25 (356 x 635)	1	21.8	37.28	29.43	35.53
	100	120 (54)	16 x 20 (406 x 508)	2	8.72	14.91	11.77	14.21
	120	144 (79)	16 x 25 (406 x 635)	2	5.58	9.54	7.53	9.10
	130 - 130HP	140 (64)	20 x 20 (508 x 508)	2	5.58	9.54	7.53	9.10
	140 - 140HP	181 (82)	20 x 25 (508 x 635)	2	3.57	6.11	4.82	5.82
	160 - 160HP	294 (133)	20 x 20 (508 x 508)	4	2.09	3.57	2.82	3.41
	180 - 180HP	344 (156)	20 x 25 (508 x 635)	4	1.34	2.29	1.81	2.18
	200 - 200HP	441 (200)	12 x 25 (305 x 635)	3	0.77	1.32	1.04	1.26
			16 x 25 (406 x 635)	3				
	240 - 240HP	573 (260)	20 x 25 (508 x 635)	4	0.41	0.70	0.55	0.67
			16 x 25 (406 x 635)	4				
	300 - 300HP	759 (344)	20 x 25 (508 x 635)	8	0.33	0.56	0.45	0.54
	360 - 360HP	957 (434)	16 x 25 (406 x 635)	10	0.15	0.26	0.20	0.25
20 x 25 (508 x 635)			5					
420	1185 (538)	16 x 25 (406 x 635)	5	0.13	0.22	0.18	0.21	
		20 x 25 (508 x 635)	10					

Note: 24-inch side clearance is recommended for accessing and removing filters. All dimensions in inches (millimeters) and weight in pounds (kilograms).

The side discharge option helps to reduce system effect. It will increase performance and reduce installation labor. The most notable is reducing system effects. Note: The figure 1 example shows the air being discharged into the corner. It will take several duct lengths before the airflow becomes laminar or smooth again after making the turn.

In figure 2, the fan is placed in the corner using a side discharge. In this configuration the air flow pattern at discharge is smooth and supports a more predictable system. Remember the duct length on the discharge side, should be approximately two to three wheel diameters to achieve catalog performance.

## Discharge Configuration

Fan performance will change with different discharge positions. Catalog data is based on an inline discharge. Right side discharge will give you 108% of cataloged performance and left side will give you 109% of cataloged performance. Use figure 3 to locate the orientation to fit your application.

Figures 4 and 5 on page 11, illustrate the proper side discharge definitions. Refer to Greenheck's CAPS (Computer Aided Product Selection) program or consult factory for performance modifications.

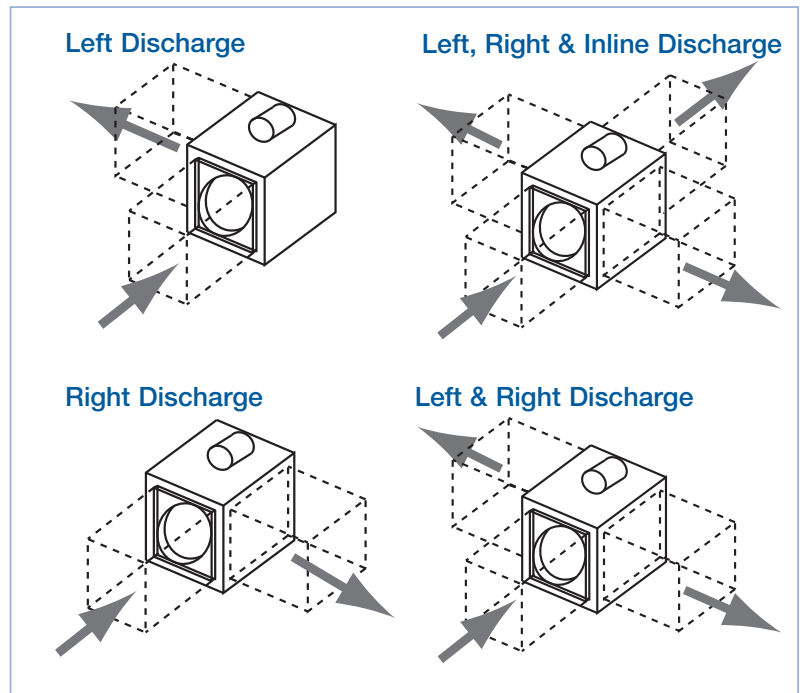
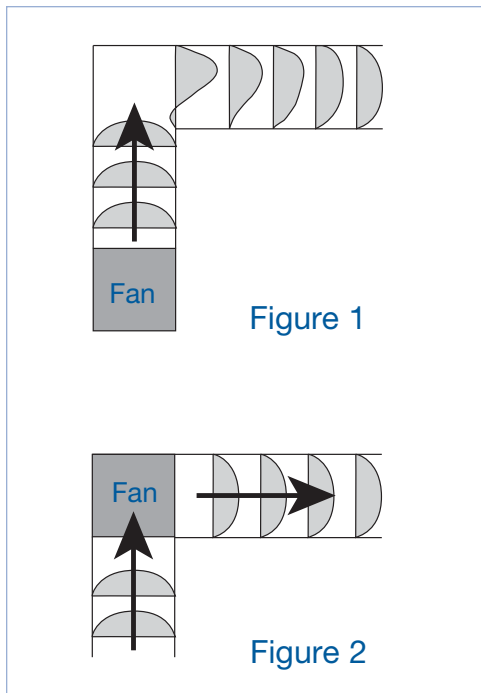


Figure 3

# Side Discharge

## SQ Side Discharge

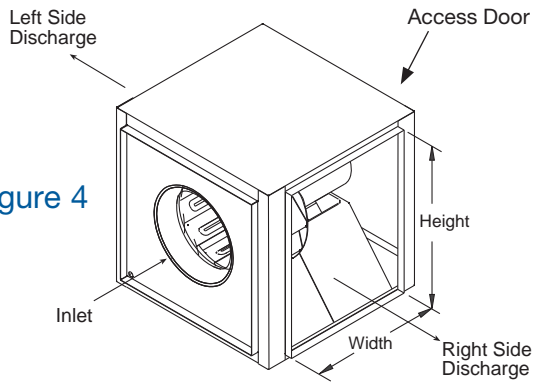


Figure 4

## BSQ Side Discharge

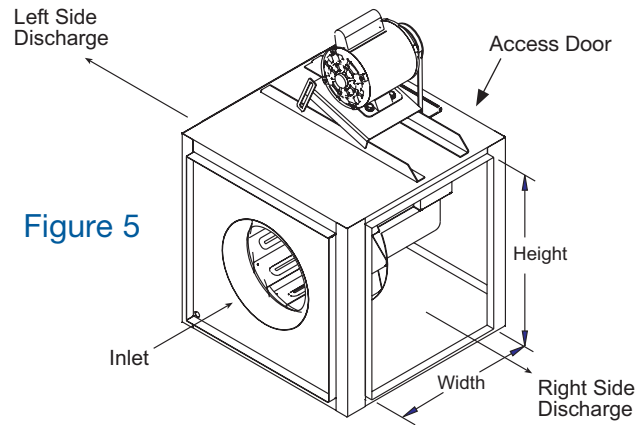


Figure 5

SQ Side Discharge Duct Openings		
Unit Size	Width	Height
60-75	9 <sup>7</sup> / <sub>8</sub> (251)	8 <sup>7</sup> / <sub>8</sub> (225)
80-95	12 <sup>7</sup> / <sub>8</sub> (327)	11 <sup>7</sup> / <sub>8</sub> (302)
100	13 <sup>7</sup> / <sub>8</sub> (352)	13 <sup>7</sup> / <sub>8</sub> (352)
120	15 <sup>7</sup> / <sub>8</sub> (403)	15 <sup>7</sup> / <sub>8</sub> (403)
130	17 <sup>7</sup> / <sub>8</sub> (454)	17 <sup>7</sup> / <sub>8</sub> (454)
140	19 <sup>7</sup> / <sub>8</sub> (505)	19 <sup>7</sup> / <sub>8</sub> (505)
160	22 <sup>7</sup> / <sub>8</sub> (581)	22 <sup>7</sup> / <sub>8</sub> (581)

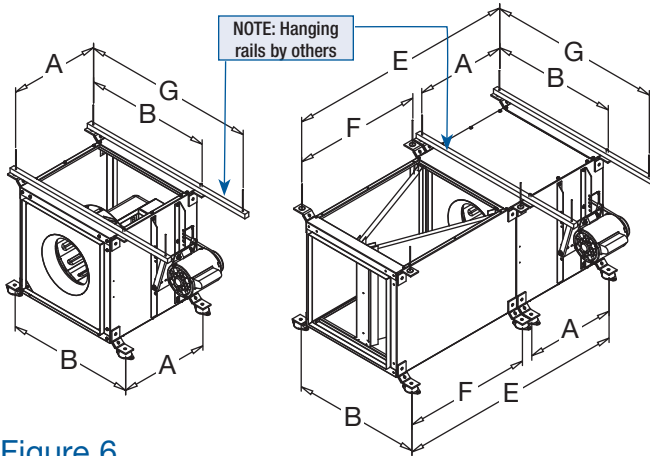
All dimensions in inches (millimeters).

BSQ Side Discharge Duct Openings		
Unit Size	Width	Height
70-80-90	11 <sup>7</sup> / <sub>8</sub> (302)	11 <sup>7</sup> / <sub>8</sub> (302)
100	13 <sup>7</sup> / <sub>8</sub> (352)	13 <sup>7</sup> / <sub>8</sub> (352)
120	15 <sup>7</sup> / <sub>8</sub> (403)	15 <sup>7</sup> / <sub>8</sub> (403)
130-130HP	17 <sup>7</sup> / <sub>8</sub> (454)	17 <sup>7</sup> / <sub>8</sub> (454)
140-140HP	19 <sup>7</sup> / <sub>8</sub> (505)	19 <sup>7</sup> / <sub>8</sub> (505)
160-160HP	22 <sup>7</sup> / <sub>8</sub> (581)	22 <sup>7</sup> / <sub>8</sub> (581)
180-180HP	23 <sup>7</sup> / <sub>8</sub> (606)	23 <sup>7</sup> / <sub>8</sub> (606)
200-200HP	27 <sup>7</sup> / <sub>8</sub> (708)	27 <sup>7</sup> / <sub>8</sub> (708)
240-240HP	28 <sup>7</sup> / <sub>8</sub> (733)	34 <sup>7</sup> / <sub>8</sub> (886)
300-300HP	31 <sup>7</sup> / <sub>8</sub> (810)	41 <sup>7</sup> / <sub>8</sub> (1064)
360-360HP	32 <sup>7</sup> / <sub>8</sub> (835)	48 (1219)
420	34 <sup>7</sup> / <sub>8</sub> (886)	53 <sup>3</sup> / <sub>4</sub> (1114)

All dimensions in inches (millimeters).

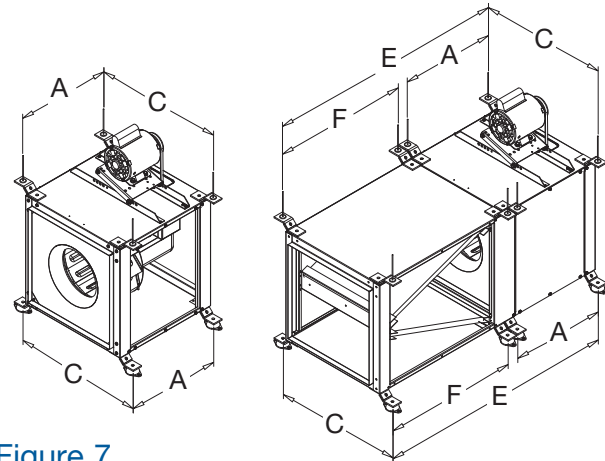
# Horizontal and Vertical Mounting Options

All SQ and BSQ fan models can be mounted horizontally, vertically or at an angle. For ease of installation, knockouts are provided at each location where mounting brackets are shown in figures 6, 7 and 8. Optional brackets are universally adjustable to mount in any of these locations.



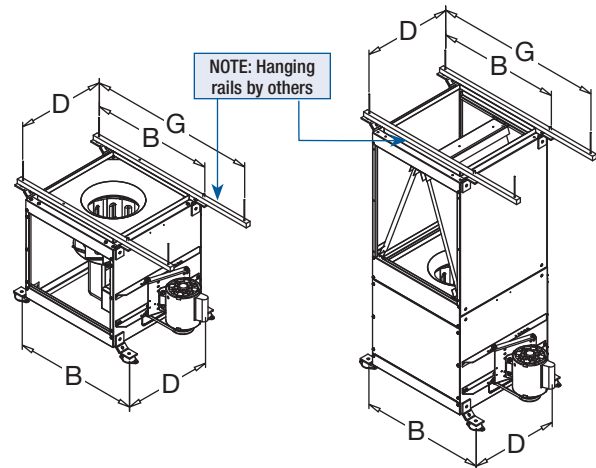
**Figure 6**  
Horizontal Hanging or Base Mount

With either a hanging or base mount the motor may be located on either side. The base mount allows top access panels only.



**Figure 7**  
Horizontal Hanging or Base Mount

With a hanging mount, the motor may be located on either top or bottom. The base mount allows top motor location only. Both options provide access panels on two sides.



**Figure 8**  
Vertical Hanging or Base Mount

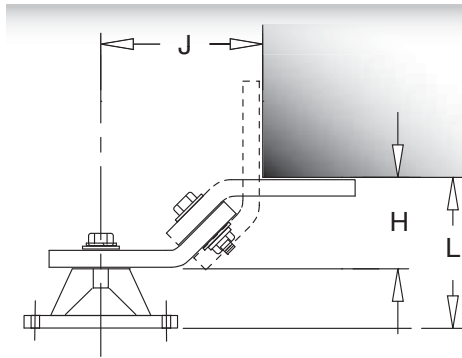
Mounting brackets are turned 90 degrees for vertical mounting. Access panels are located on the two sides adjacent to the motor.

Model	A	B	C	D	E	F	G
SQ 60-75	10 <sup>5</sup> / <sub>8</sub> (270)	17 (432)	15 <sup>3</sup> / <sub>4</sub> (400)	8 <sup>7</sup> / <sub>8</sub> (225)	19 <sup>3</sup> / <sub>4</sub> (502)	7 (178)	Hanging rails not included. Supplied by others.
SQ 80-95	13 <sup>1</sup> / <sub>4</sub> (337)	20 (508)	18 <sup>3</sup> / <sub>4</sub> (476)	11 <sup>7</sup> / <sub>8</sub> (302)	43 (1092)	27 <sup>3</sup> / <sub>8</sub> (695)	
BSQ 70-90	18 <sup>5</sup> / <sub>8</sub> (473)	20 <sup>1</sup> / <sub>8</sub> (511)	18 <sup>3</sup> / <sub>4</sub> (476)	11 <sup>7</sup> / <sub>8</sub> (302)	48 <sup>5</sup> / <sub>16</sub> (1227)	27 <sup>3</sup> / <sub>8</sub> (695)	
SQ-BSQ 100	18 <sup>5</sup> / <sub>8</sub> (473)	22 <sup>1</sup> / <sub>8</sub> (562)	20 <sup>3</sup> / <sub>4</sub> (527)	13 <sup>3</sup> / <sub>8</sub> (352)	44 <sup>7</sup> / <sub>8</sub> (1140)	24 (610)	
SQ-BSQ 120	18 <sup>5</sup> / <sub>8</sub> (473)	24 (610)	22 <sup>3</sup> / <sub>4</sub> (578)	16 (406)	49 <sup>3</sup> / <sub>8</sub> (1254)	28 <sup>1</sup> / <sub>8</sub> (714)	
SQ-BSQ 130	18 <sup>5</sup> / <sub>8</sub> (473)	26 <sup>1</sup> / <sub>8</sub> (664)	24 <sup>3</sup> / <sub>4</sub> (629)	17 <sup>7</sup> / <sub>8</sub> (454)	44 (1118)	23 (584)	
SQ-BSQ 140	19 <sup>5</sup> / <sub>8</sub> (498)	28 <sup>1</sup> / <sub>8</sub> (714)	26 <sup>3</sup> / <sub>4</sub> (679)	19 <sup>7</sup> / <sub>8</sub> (505)	50 <sup>1</sup> / <sub>16</sub> (1272)	28 (711)	
SQ-BSQ 160	23 <sup>1</sup> / <sub>2</sub> (597)	31 (787)	29 <sup>3</sup> / <sub>4</sub> (756)	22 <sup>7</sup> / <sub>8</sub> (581)	49 <sup>3</sup> / <sub>8</sub> (1260)	23 <sup>3</sup> / <sub>8</sub> (600)	Hanging rails not included. Supplied by others.
BSQ 180	25 <sup>1</sup> / <sub>2</sub> (648)	33 <sup>1</sup> / <sub>2</sub> (851)	29 <sup>9</sup> / <sub>16</sub> (751)	22 <sup>3</sup> / <sub>4</sub> (578)	52 <sup>5</sup> / <sub>16</sub> (1335)	24 <sup>1</sup> / <sub>2</sub> (622)	
BSQ 200	29 <sup>1</sup> / <sub>8</sub> (740)	37 (940)	33 <sup>3</sup> / <sub>4</sub> (857)	26 <sup>3</sup> / <sub>4</sub> (679)	64 <sup>1</sup> / <sub>16</sub> (1630)	32 <sup>1</sup> / <sub>4</sub> (819)	
BSQ 240	31 <sup>5</sup> / <sub>8</sub> (803)	44 <sup>1</sup> / <sub>4</sub> (1124)	40 <sup>3</sup> / <sub>4</sub> (1035)	33 <sup>3</sup> / <sub>8</sub> (860)	66 <sup>1</sup> / <sub>2</sub> (1689)	32 <sup>1</sup> / <sub>8</sub> (816)	
BSQ 300	35 (889)	51 (1295)	47 <sup>3</sup> / <sub>4</sub> (1213)	40 <sup>7</sup> / <sub>8</sub> (1038)	69 <sup>1</sup> / <sub>8</sub> (1756)	31 <sup>3</sup> / <sub>8</sub> (797)	
BSQ 360	38 <sup>3</sup> / <sub>4</sub> (974)	57 <sup>1</sup> / <sub>4</sub> (1454)	53 <sup>1</sup> / <sub>2</sub> (1359)	46 <sup>3</sup> / <sub>4</sub> (1187)	76 (1930)	34 <sup>11</sup> / <sub>16</sub> (881)	
BSQ 420	47 <sup>1</sup> / <sub>8</sub> (1197)	63 (1600)	59 <sup>7</sup> / <sub>8</sub> (1521)	59 <sup>7</sup> / <sub>8</sub> (1521)	90 <sup>1</sup> / <sub>2</sub> (2299)	40 <sup>1</sup> / <sub>2</sub> (1029)	

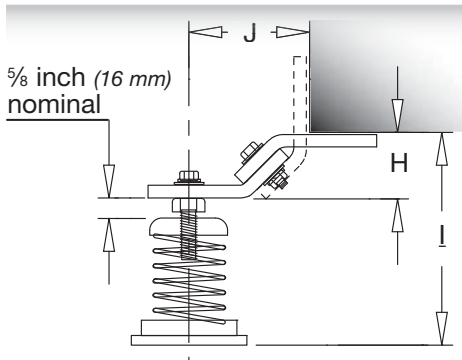
All dimensions in inches (millimeters).



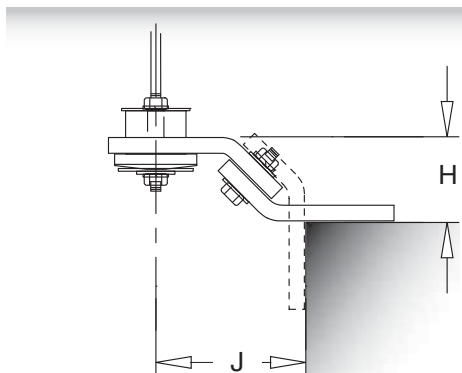
# Base Mount or Hanging Isolators



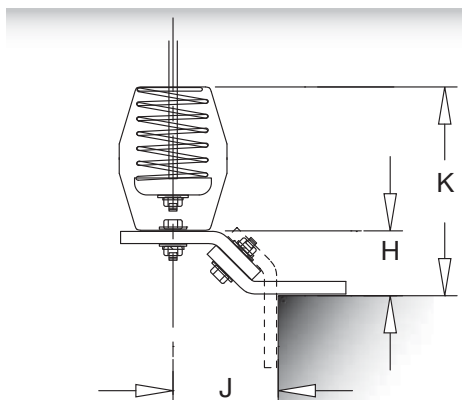
Standing Neoprene Isolator



Standing Spring Isolator



Hanging Neoprene Isolator



Hanging Spring Isolator



Complete isolation kits are available with either neoprene or spring isolators and are sized to match the weight of the specified fan size. The base isolator support brackets are designed to permit mounting of the fan with the motor located on top or either side. The hanging isolator support brackets are designed to permit mounting of the fan with the motor located on top, bottom or side.

*Note: Hanging rods to be supplied by others.*

Model	H	I	J	K	L
SQ 60-75					
SQ 80-95					
BSQ 70-90					
SQ-BSQ 100	1 3/8 (35)	5 1/2 (140)	2 (51)	6 3/4 (171)	2 5/16 (59)
SQ-BSQ 120					
SQ-BSQ 130					
SQ-BSQ 140					
SQ-BSQ 160					
BSQ 180					
BSQ 200					
BSQ 240	1 3/8 (35)	5 1/2 (140)	2 (51)	6 3/4 (171)	2 5/8 (67)
BSQ 300					
BSQ 360					
BSQ 420					

All dimensions in inches (millimeters).

# Typical Installation



Models SQ and BSQ ducted inline fans are designed for the exhaust, supply or recirculation of air in a building. Typical installation requires ductwork on the inlet and outlet side of the fan. A minimum of three duct diameters is required on the inlet and outlet of the fan to minimize system effect losses. See the diagram below for a typical installation.

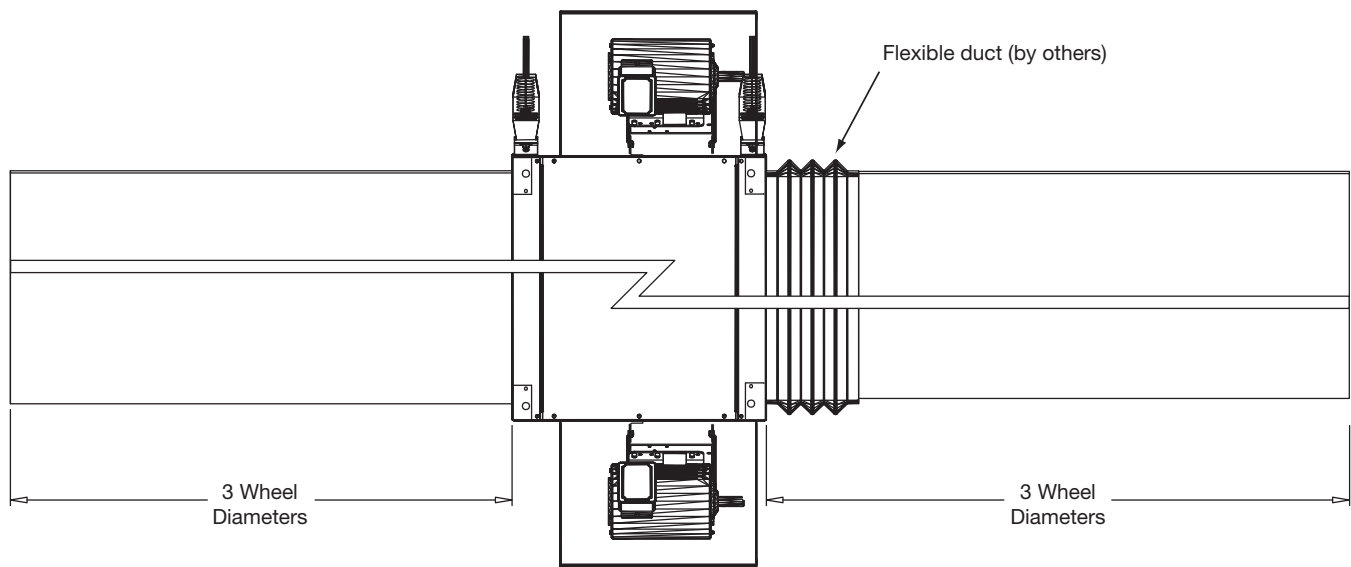
Installations can include flexible duct connections (by others) on either the inlet or outlet side of the fan or

both. The motor is rigidly mounted and can be oriented in any direction (top, bottom, side).

The model BSQ ducted inline fan must be installed with the motor accessible for maintenance and inspection.

External isolators are recommended, hanging (shown below) or base mounted.

Installation must meet all local governing codes and the NEC.



## Model Number Code

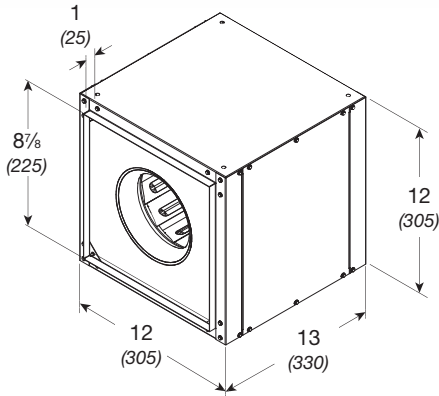
The model number system is designed to completely identify the fan. The correct code letters must be specified to designate belt or direct drive. The remainder of the model number is determined by the size and performance selected from the following pages.

**BSQ - 120 HP - VG/5/A**

<p><b>MODEL CONFIGURATION</b></p> <p>BSQ - Belt Drive Inline Exhaust</p> <p>SQ - Direct Drive Inline Exhaust</p> <p><b>FAN SIZE</b></p> <p>60 through 420</p> <p><b>PRESSURE LEVEL</b> <i>(Belt Drive Only)</i></p> <p>HP - High Pressure Wheel</p>	<p><b>VG</b> = Vari-Green® <i>(Direct Drive only)</i></p> <p><b>MOTOR HP</b> <i>(Belt Drive only)</i></p> <table border="0"> <tr> <td>6 = 1/6</td> <td>7 = 3/4</td> <td>30 = 3</td> </tr> <tr> <td>4 = 1/4</td> <td>10 = 1</td> <td>50 = 5</td> </tr> <tr> <td>3 = 1/3</td> <td>15 = 1½</td> <td>75 = 7½</td> </tr> <tr> <td>5 = 1/2</td> <td>20 = 2</td> <td>100 = 10</td> </tr> </table> <p><b>MOTOR RPM</b> <i>(Direct Drive only)</i></p> <table border="0"> <tr> <td>A = 1725</td> <td>D = 1550</td> </tr> <tr> <td>B = 1140</td> <td>E = 1050</td> </tr> <tr> <td>C = 860</td> <td>G = 1300</td> </tr> </table>	6 = 1/6	7 = 3/4	30 = 3	4 = 1/4	10 = 1	50 = 5	3 = 1/3	15 = 1½	75 = 7½	5 = 1/2	20 = 2	100 = 10	A = 1725	D = 1550	B = 1140	E = 1050	C = 860	G = 1300
6 = 1/6	7 = 3/4	30 = 3																	
4 = 1/4	10 = 1	50 = 5																	
3 = 1/3	15 = 1½	75 = 7½																	
5 = 1/2	20 = 2	100 = 10																	
A = 1725	D = 1550																		
B = 1140	E = 1050																		
C = 860	G = 1300																		

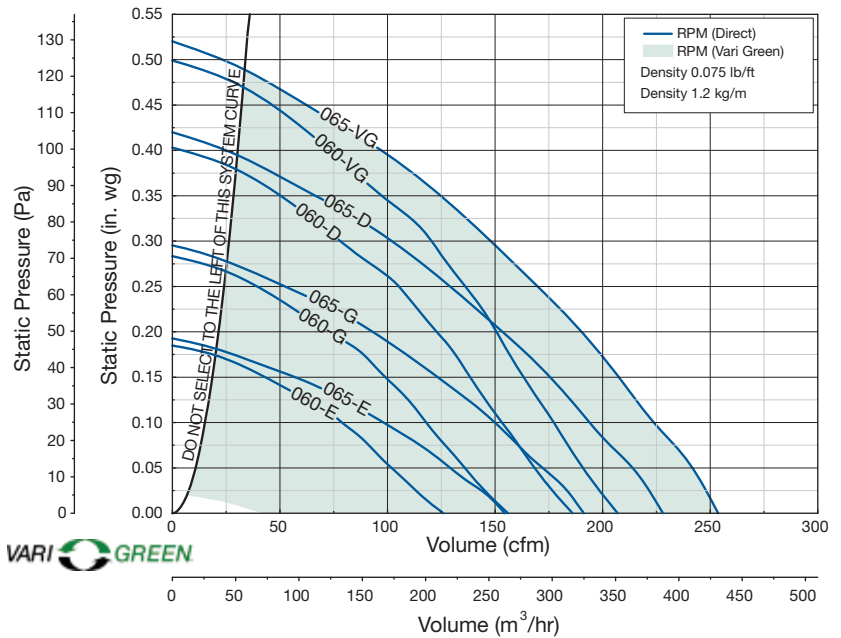
International  
(See CAPS for performance)  
K = 950 RPM J = 1475 RPM

# SQ 60-65 - Direct Drive



Damper size = 9 x 9 (229 x 229)  
 Unit weight\*\* = 26 (12)  
 Housing thickness = 18 ga  
 Outlet velocity = 1.828 x cfm

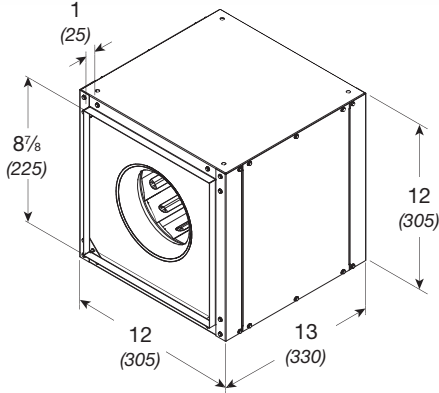
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.



Motor HP	Fan RPM		CFM / Static Pressure in Inches wg										
			0.000	0.050	0.100	0.125	0.150	0.200	0.250	0.300	0.350	0.375	
<b>60</b>													
VARI GREEN	E-1/140	1050	CFM	126	102	79	63	42					
			BHP	0.01	0.01	0.01	0.01	0.01					
			Sones	1.7	1.7	1.7	1.7	1.8					
	G-1/80	1300	CFM	156	136	118	110	99	73	37			
			BHP	0.01	0.01	0.01	0.01	0.01	0.01	0.01			
			Sones	2.9	2.7	2.7	2.6	2.6	2.5	2.5			
	D-1/40	1550	CFM	186	168	153	146	138	123	105	78	48	32
			BHP	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
			Sones	4.3	4.1	3.9	3.9	3.9	3.9	4.0	4.0	4.1	4.1
		1725	CFM	207	191	177	170	163	150	136	120	98	85
			BHP	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
			Sones	5.4	5.2	5.1	5.0	5.0	5.1	5.1	5.3	5.5	5.6
<b>65</b>													
VARI GREEN	E-1/100	1050	CFM	154	129	98	79	57					
			BHP	0.01	0.01	0.01	0.01	0.01					
			Sones	2.2	2.1	2.0	2.0	1.9					
	G-1/50	1300	CFM	191	172	150	137	123	92	52			
			BHP	0.01	0.01	0.02	0.02	0.02	0.02	0.02			
			Sones	3.2	3.1	3.0	2.9	2.9	2.9	2.8			
	D-1/30	1550	CFM	228	213	194	185	175	153	129	101	66	46
			BHP	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.02
			Sones	4.9	4.8	4.5	4.4	4.3	4.1	4.0	3.9	3.7	3.6
		1725	CFM	254	242	224	216	207	190	170	148	124	111
			BHP	0.03	0.03	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			Sones	6.4	6.1	5.8	5.7	5.5	5.3	5.2	5.0	4.8	4.7

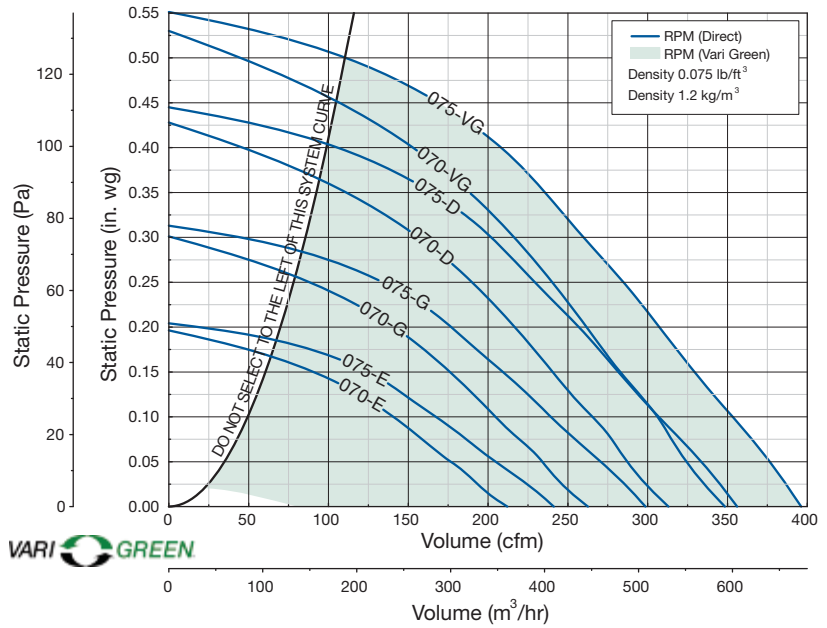
Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).  
 The sound ratings shown are loudness values in fan sones at 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard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

# SQ 70-75 - Direct Drive



Damper size = 9 x 9 (229 x 229)  
 Unit weight\*\* = 26 (12)  
 Housing thickness = 18 ga  
 Outlet velocity = 1.828 x cfm

Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

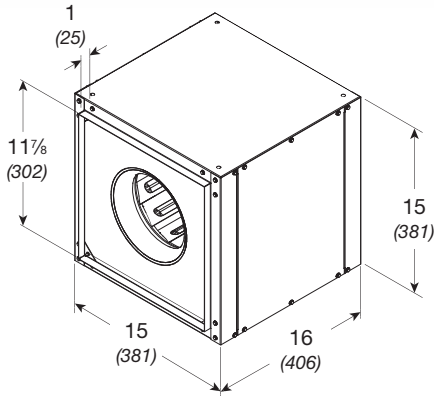


Motor HP	Fan RPM		CFM / Static Pressure in Inches wg										
			0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.350	0.375	0.400	
<b>70</b>													
VARI GREEN VG-1/6	E-1/100	1050	CFM	212	141	119	87						
			BHP	0.01	0.01	0.01	0.01						
			Sones	2.7	1.7	1.5	1.5						
	G-1/50	1300	CFM	263	205	191	176	140	77				
			BHP	0.02	0.02	0.0	0.02	0.02	0.02				
			Sones	4.1	3.4	3.3	3.1	2.9	2.5				
	D-1/30	1550	CFM	313	265	252	240	216	190	155	99	67	
			BHP	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	
			Sones	5.6	5.2	5.1	5.1	4.9	4.7	4.5	4.2	4.0	
		1725	CFM	348	306	295	283	262	240	216	187	171	148
			BHP	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
			Sones	6.8	6.7	6.6	6.6	6.5	6.4	6.2	6.0	5.9	5.8
<b>75</b>													
VARI GREEN VG-1/6	E-1/100	1050	CFM	241	167	147	124						
			BHP	0.01	0.01	0.01	0.01						
			Sones	3.6	2.9	2.8	2.6						
	G-1/50	1300	CFM	299	239	225	209	176	133				
			BHP	0.02	0.02	0.020	0.02	0.02	0.02				
			Sones	4.1	3.7	3.7	3.7	3.6	3.5				
	D-1/30	1550	CFM	356	307	294	282	257	229	202	165	137	99
			BHP	0.03	0.03	0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03
			Sones	6.1	5.5	5.4	5.3	5.1	4.9	4.9	4.8	4.8	4.8
		1725	CFM	396	353	341	330	307	285	260	235.0	223	206
			BHP	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
			Sones	8.0	7.2	7.0	6.8	6.5	6.2	6.1	6.0	6.0	6.0

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



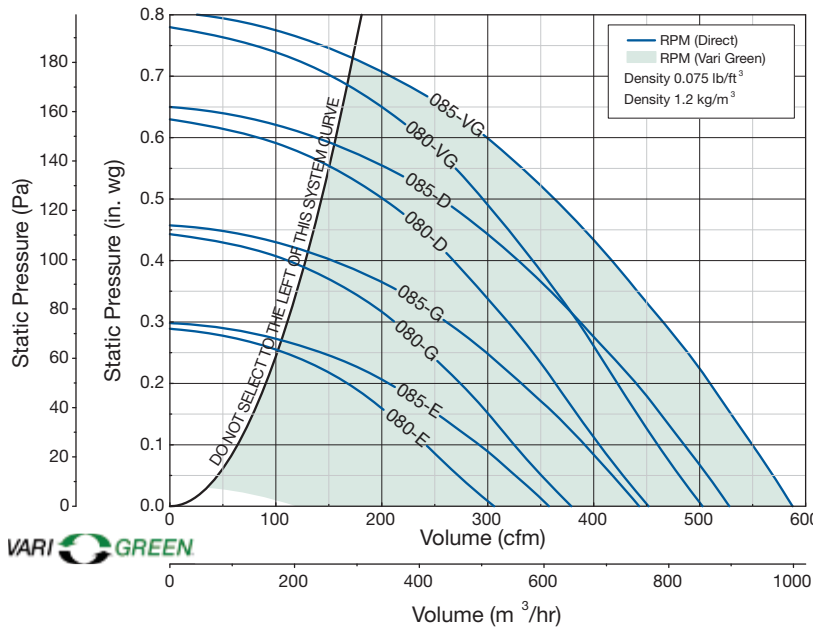
# SQ 80-85 - Direct Drive



Damper size = 12 x 12 (305 x 305)  
 Unit weight\*\* = 41 (19)  
 Housing thickness = 18 ga  
 Outlet velocity = 1.021 x cfm

Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).

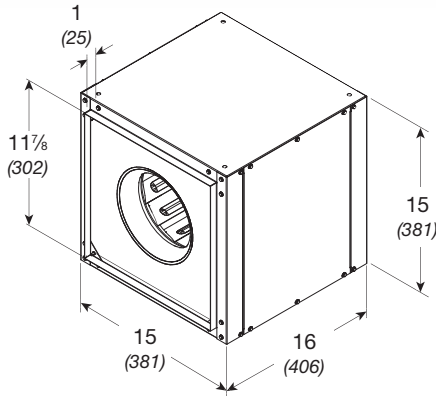
\*\*Weight shown is largest cataloged Open Drip Proof motor.



Motor HP	Fan RPM		CFM / Static Pressure in Inches wg										
			0.000	0.100	0.125	0.200	0.250	0.300	0.375	0.400	0.450	0.500	
<b>80</b>													
VG-1/6 or 1/4	E-1/40	1050	CFM	306	241	225	167	105					
			BHP	0.01	0.01	0.02	0.02	0.02					
			Sones	3.8	3.7	3.6	3.8	4.1					
	G-1/20	1300	CFM	379	325	313	274	244	211	140			
			BHP	0.02	0.03	0.03	0.03	0.03	0.03	0.03			
			Sones	5.4	5.4	5.4	5.4	5.4	5.4	5.5			
	D-1/12	1550	CFM	452	405	395	364	343	319	280	266	238	201
			BHP	0.04	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.06
			Sones	7.3	7.3	7.3	7.3	7.2	7.3	7.3	7.4	7.5	7.6
		1725	CFM	503	461	451	423	404	385	354	342	319	294
			BHP	0.05	0.05	0.05	0.06	0.06	0.07	0.07	0.07	0.08	0.08
			Sones	8.4	8.5	8.6	8.5	8.6	8.6	8.6	8.6	8.7	8.7
<b>85</b>													
VG-1/6 or 1/4	E-1/40	1050	CFM	358	292	272	206	142					
			BHP	0.01	0.02	0.02	0.02	0.02					
			Sones	3.8	3.7	3.6	3.8	4.0					
	G-1/20	1300	CFM	443	391	378	332	299	261	186			
			BHP	0.02	0.03	0.03	0.03	0.03	0.03	0.03			
			Sones	5.4	5.4	5.4	5.4	5.4	5.4	5.5			
	D-1/12	1550	CFM	528	485	474	440	414	387	344	328	294	254
			BHP	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06
			Sones	7.3	7.3	7.3	7.3	7.3	7.2	7.3	7.3	7.4	7.5
		1725	CFM	588	550	540	510	488	465	429	416	391	362
			BHP	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08	0.08	0.08
			Sones	8.7	8.7	8.6	8.6	8.6	8.6	8.7	8.7	8.7	8.8

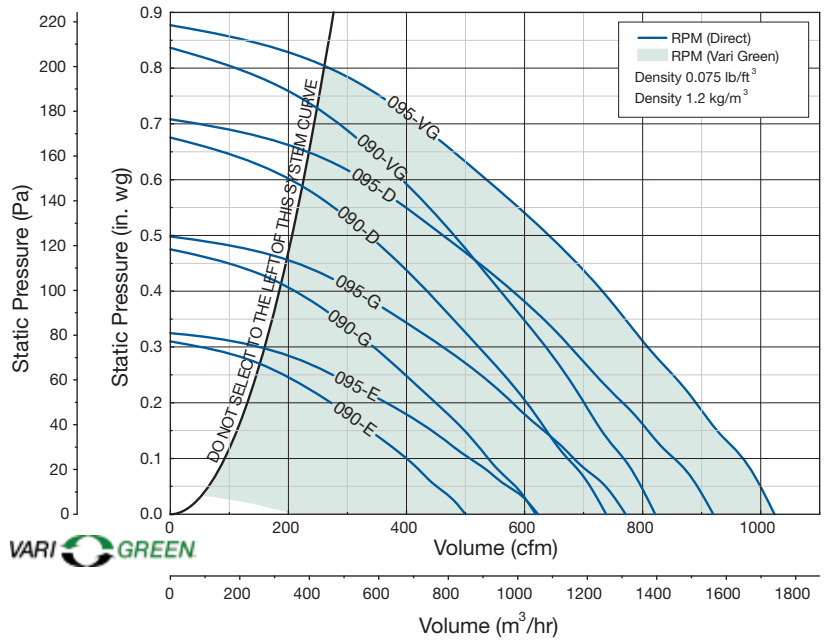
Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).  
 The sound ratings shown are loudness values in fan sones at 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard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

# SQ 90-95 - Direct Drive



Damper size = 12 x 12 (305 x 305)  
 Unit weight\*\* = 41 (19)  
 Housing thickness = 18 ga  
 Outlet velocity = 1.021 x cfm

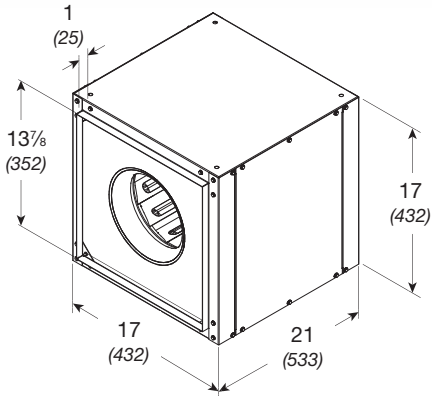
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.



Motor HP		Fan RPM		CFM / Static Pressure in Inches wg												
Direct				0.000	0.125	0.200	0.250	0.300	0.375	0.400	0.500	0.600	0.625			
<b>90</b>																
VARI GREEN	VG-1/6 or 1/4	E-1/50	1050	CFM	500	370	271	188								
				BHP	0.02	0.02	0.02	0.02								
				Sones	4.0	3.9	4.0	4.1								
	G-1/25	1300	CFM	619	519	449	398	343	245	208						
			BHP	0.03	0.04	0.04	0.04	0.04	0.04	0.04						
			Sones	5.4	5.4	5.4	5.5	5.5	5.6	5.6						
	D-1/10	1550	CFM	738	655	603	565	522	457	435	334					
			BHP	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.07					
			Sones	7.6	7.5	7.5	7.4	7.4	7.4	7.4	7.4					
		1725	CFM	821	748	701	669	635	579	559	481	392	366			
			BHP	0.07	0.08	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09			
			Sones	8.8	8.8	8.8	8.7	8.7	8.8	8.8	8.8	8.8	8.8			
<b>95</b>																
VARI GREEN	VG-1/6 or 1/4	E-1/30	1050	CFM	623	475	365	275								
				BHP	0.03	0.03	0.03	0.03								
				Sones	4.9	4.5	4.4	4.5								
	G-1/15	1300	CFM	771	660	580	523	461	352	311						
			BHP	0.05	0.06	0.06	0.06	0.06	0.06	0.06						
			Sones	7.6	6.7	6.5	6.4	6.4	6.4	6.4						
	D-1/8	1550	CFM	920	830	766	720	678	604	579	462	325	276			
			BHP	0.09	0.09	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.09	0.09		
			Sones	9.6	9.3	8.9	8.7	8.4	8.1	8.0	7.6	7.2	7.1			
		1725	CFM	1024	948	890	850	809	751	729	641	535	507			
			BHP	0.12	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.14			
			Sones	11.3	11.0	10.8	10.6	10.4	10.1	9.9	9.8	9.3	9.2			

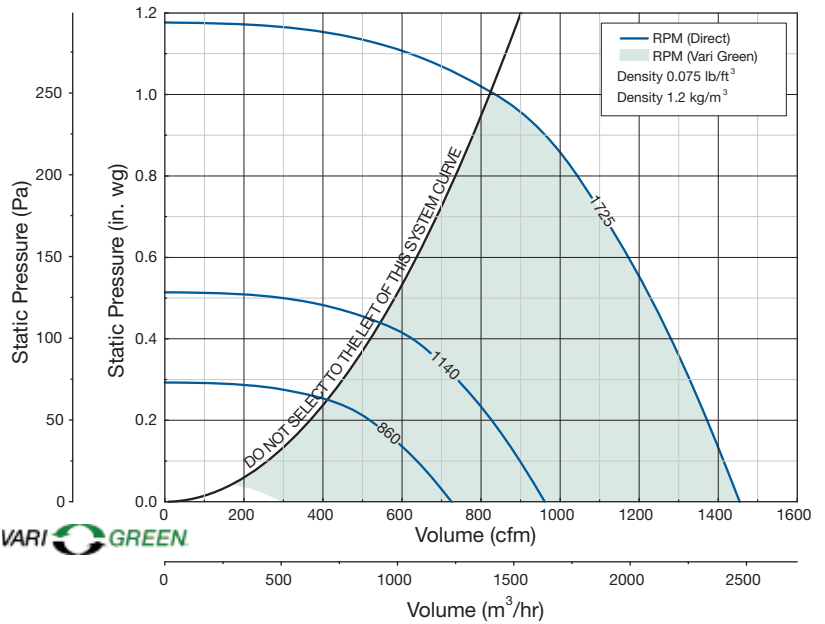
Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).  
 The sound ratings shown are loudness values in fan sones at 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard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

# SQ 100 - Direct Drive



Damper size = 14 x 14 (356 x 356)  
 Unit weight\*\* = 56 (25)  
 Housing thickness = 18 ga  
 Outlet velocity = 0.748 x cfm

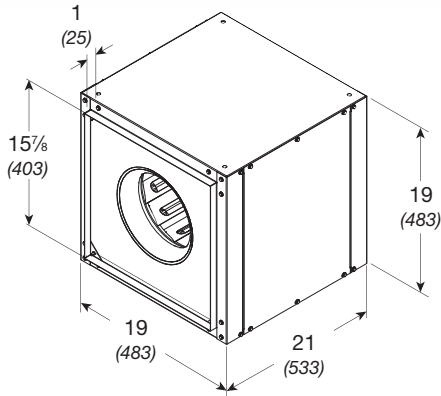
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.



Motor HP	Fan RPM	CFM / Static Pressure in Inches wg																						
		0.000	0.100	0.125	0.250	0.300	0.375	0.500	0.625	0.750	1.000													
<b>100</b>																								
VG-1/4 	C-1/8	860	CFM	725	638	611																		
			BHP	0.03	0.03	0.03																		
			Sones	4.7	3.8	3.7																		
	B-1/6	1140	CFM	961	898	881	786	739	657															
			BHP	0.06	0.07	0.07	0.07	0.07	0.07															
			Sones	7.4	6.6	6.5	6.1	5.9	5.6															
A-1/4	1725	CFM	1455	1413	1403	1350	1327	1292	1227	1156	1078	831												
		BHP	0.22	0.23	0.23	0.23	0.24	0.24	0.24	0.24	0.25	0.25	0.22											
		Sones	13.2	12.6	12.5	11.9	11.7	11.5	11.1	10.7	10.4	9.6												

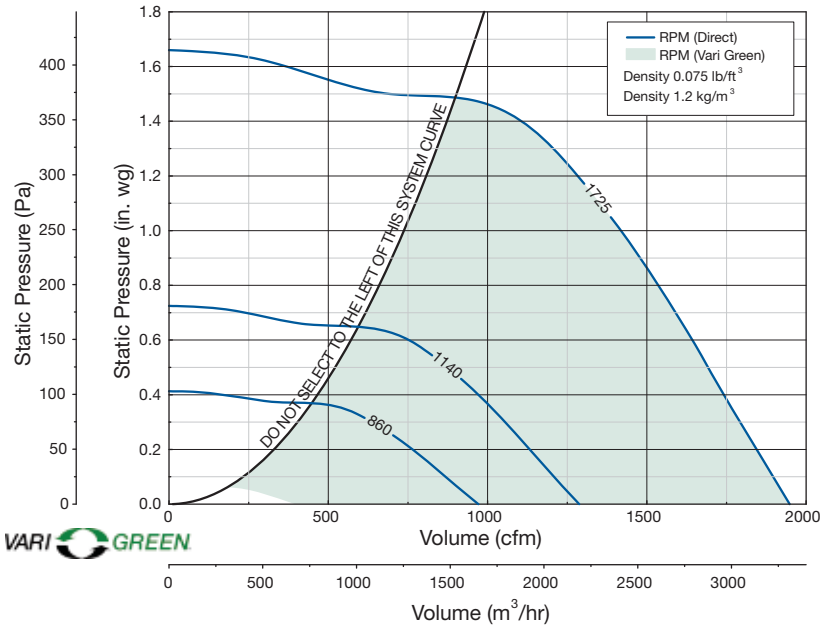
Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).  
 The sound ratings shown are loudness values in fan sones at 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard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

# SQ 120 - Direct Drive



Damper size = 16 x 16 (406 x 406)  
 Unit weight\*\* = 67 (30)  
 Housing thickness = 18 ga  
 Outlet velocity = 0.571 x cfm

Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

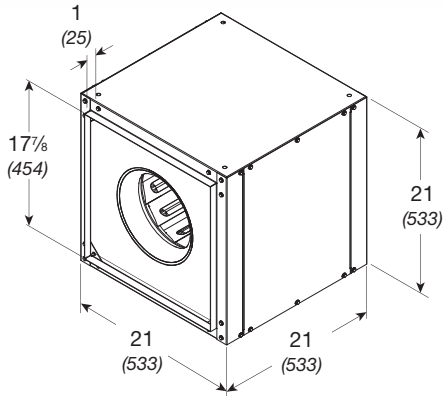


Motor HP	Fan RPM		CFM / Static Pressure in Inches wg										
			0.000	0.125	0.250	0.375	0.500	0.625	0.750	1.000	1.250	1.375	
<b>120</b>													
VG-1/2 	C-1/8	860	CFM	971	843	704							
			BHP	0.05	0.06	0.06							
			Sones	4.4	4.1	3.3							
	B-1/6	1140	CFM	1287	1190	1095	992	873	693				
			BHP	0.12	0.12	0.13	0.14	0.14	0.13				
			Sones	7.4	7.2	7.0	6.3	5.9	5.8				
	A-1/2	1725	CFM	1948	1884	1819	1754	1692	1629	1563	1417	1240	1128
			BHP	0.41	0.42	0.42	0.44	0.45	0.46	0.46	0.48	0.48	0.47
			Sones	14.7	14.1	13.8	13.6	13.5	13.4	13.2	12.6	11.9	11.7

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

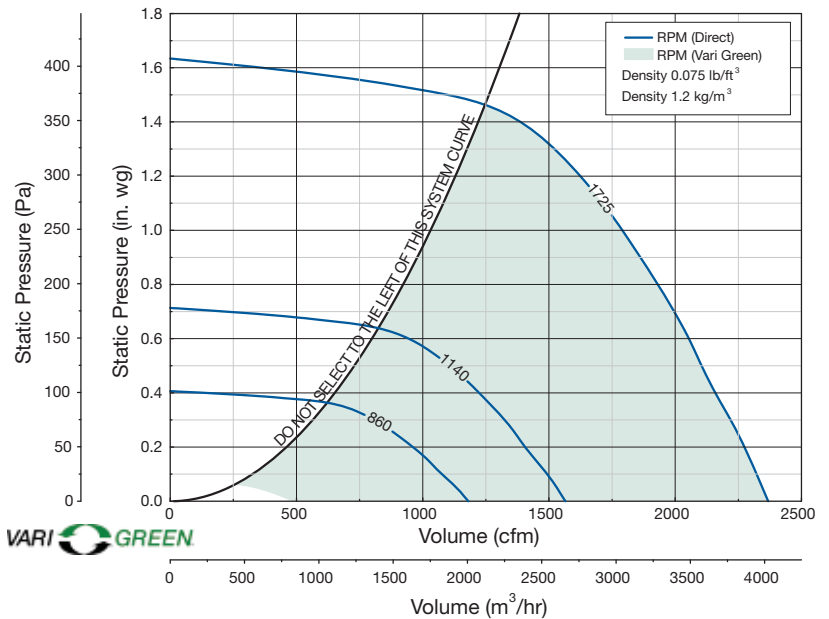


# SQ 130 - Direct Drive



Damper size = 18 x 18 (457 x 457)  
 Unit weight\*\* = 77 (35)  
 Housing thickness = 18 ga  
 Outlet velocity = 0.451 x cfm

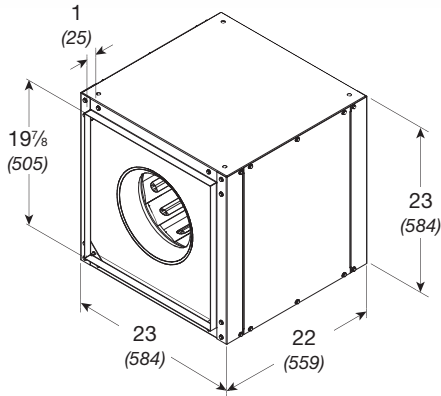
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.



Motor HP	Fan RPM		CFM / Static Pressure in Inches wg										
			0.000	0.125	0.250	0.375	0.500	0.625	0.750	1.000	1.250	1.375	
<b>130</b>													
VG-3/4 	C-1/8	860	CFM	1181	1049	891							
			BHP	0.07	0.08	0.08							
			Sones	6.2	5.2	4.5							
	B-1/4	1140	CFM	1565	1472	1367	1249	1105	865				
			BHP	0.16	0.17	0.18	0.18	0.18	0.17				
			Sones	9.4	8.3	7.4	6.8	6.5	6.4				
	A-3/4	1725	CFM	2368	2308	2247	2175	2105	2039	1961	1791	1559	1409
			BHP	0.54	0.56	0.57	0.59	0.60	0.62	0.62	0.63	0.61	0.59
			Sones	17.4	17.6	17.1	17.1	16.6	16.4	15.9	15.7	15.6	15.6

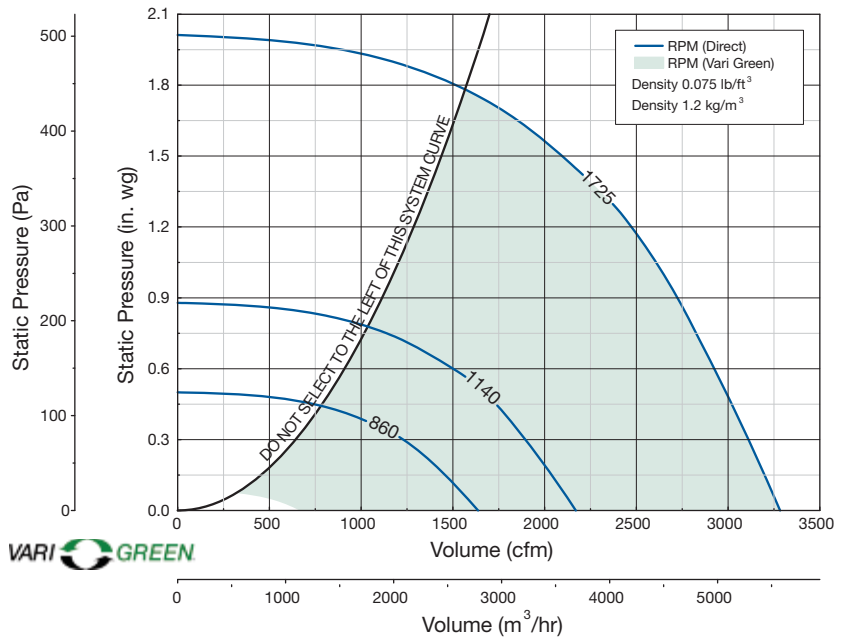
Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).  
 The sound ratings shown are loudness values in fan sones at 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard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

# SQ 140 - Direct Drive



Damper size = 20 x 20 (508 x 508)  
 Unit weight\*\* = 104 (47)  
 Housing thickness = 18 ga  
 Outlet velocity = 0.364 x cfm

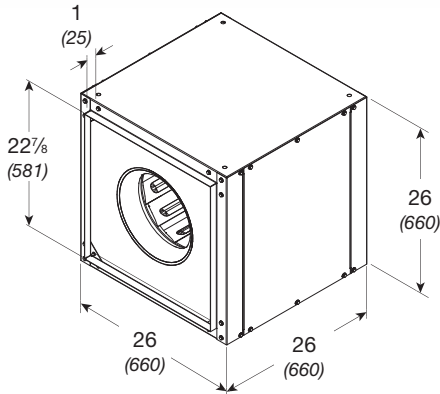
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.



Motor HP	Fan RPM		CFM / Static Pressure in Inches wg										
			0.000	0.250	0.375	0.500	0.625	0.750	1.000	1.375	1.500	1.75	
<b>140</b>													
VARI GREEN VG-3/4	C-1/8	860	CFM	1637	1317	1033							
			BHP	0.12	0.13	0.13							
			Sones	7.0	6.2	5.9							
	B-1/3	1140	CFM	2170	1942	1818	1667	1447	1122				
			BHP	0.270	0.290	0.300	0.300	0.300	0.270				
			Sones	10.8	10.1	10.0	9.8	9.6	9.4				
		1550	CFM	2950	2790	2703	2614	2524	2429	2188	1553		
			BHP	0.67	0.71	0.72	0.74	0.75	0.75	0.75	0.69		
			Sones	16.7	16.2	15.8	15.6	15.5	15.3	14.8	13.7		
VARI GREEN VG-1	A-1	1725	CFM	3284	3140	3065	2985	2906	2826	2646	2268	2085	1625
			BHP	0.930	0.970	0.980	1.000	1.010	1.030	1.030	1.030	1.010	0.930
			Sones	20	19.3	19.0	18.7	18.6	18.4	18.2	17.2	16.7	15.9

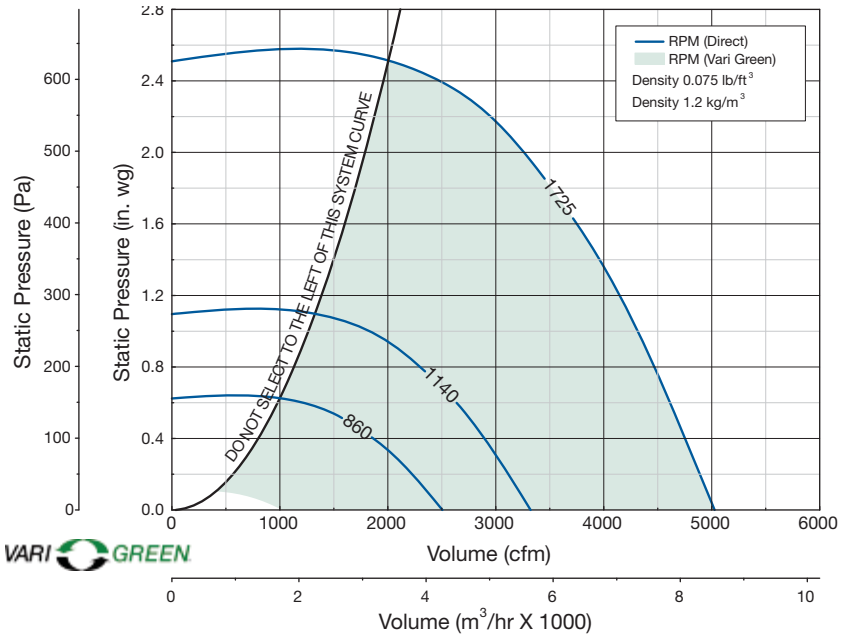
Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).  
 The sound ratings shown are loudness values in fan sones at 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard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

# SQ 160 - Direct Drive



Damper size = 23 x 23 (584 x 584)  
 Unit weight\*\* = 160 (73)  
 Housing thickness = 18 ga  
 Outlet velocity = 0.275 x cfm

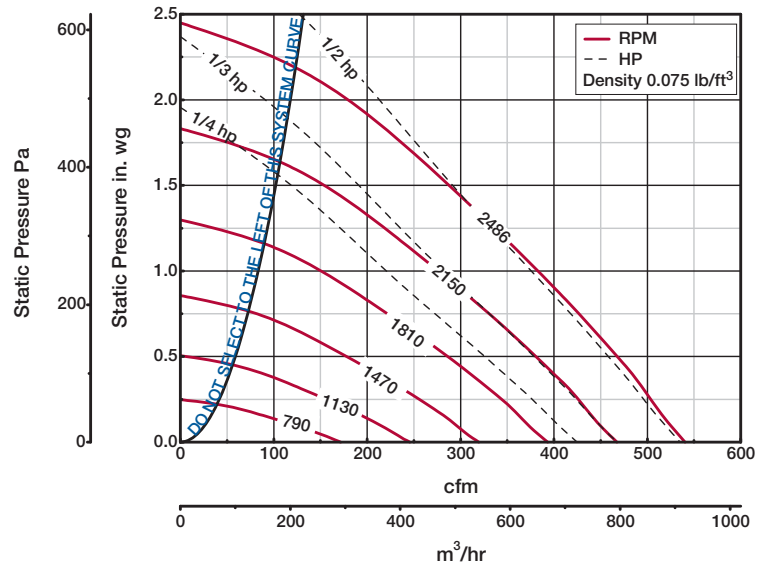
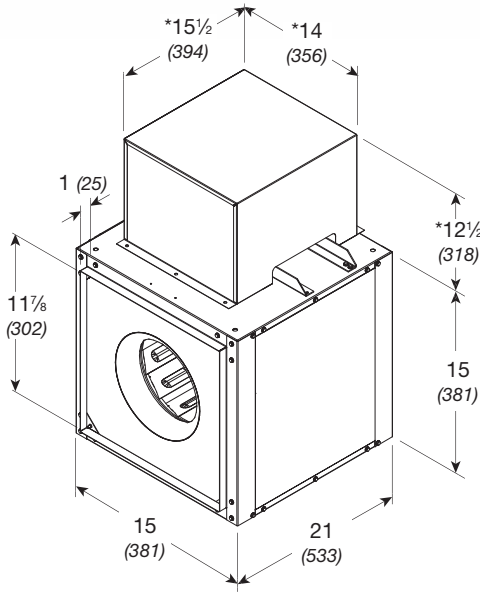
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.



Motor HP	Fan RPM	CFM / Static Pressure in Inches wg											
		0.000	0.250	0.500	0.750	1.000	1.250	1.500	1.750	1.875	2.000		
<b>160</b>													
VG-3/4	C-1/4	860	CFM	2506	2148	1605							
			BHP	0.20	0.23	0.24							
			Sones	8.8	7.2	6.5							
VG-1	B-1/2	1140	CFM	3322	3062	2773	2388	1808					
			BHP	0.470	0.510	0.540	0.560	0.510					
			Sones	14.0	12.8	11.9	11.4	10.8					
VG-1	A-2	1300	CFM	3788	3562	3320	3033	2685	2223				
			BHP	0.70	0.74	0.78	0.81	0.84	0.79				
			Sones	16.8	15.8	14.8	14.5	14.1	13.7				
VG-2	A-2	1725	CFM	5027	4857	4684	4504	4312	4094	3845	3575	3414	3236
			BHP	1.64	1.69	1.74	1.80	1.85	1.89	1.93	1.95	1.94	1.91
			Sones	26	25	24	24	24	24	24	24	24	24

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

# BSQ 70 - Belt Drive



Damper size = 12 x 12 (305 x 305)  
 Unit weight\*\* = 76 (34)  
 Housing thickness = 18 ga

Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

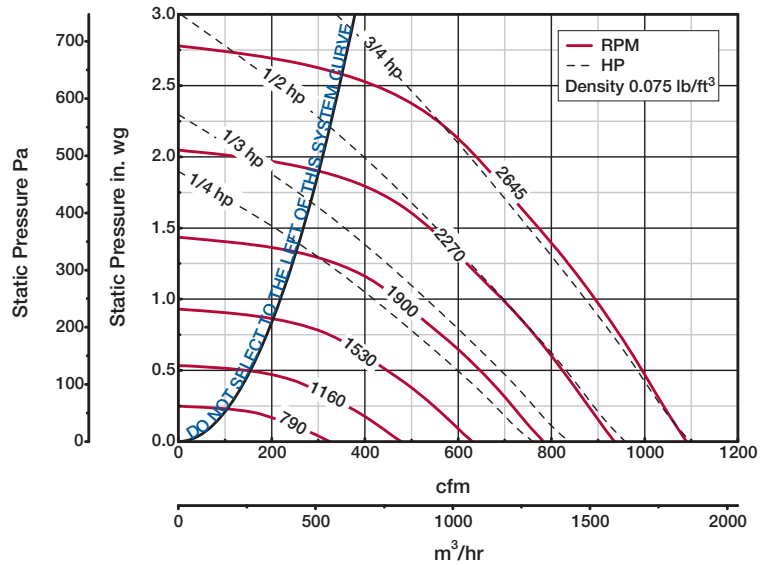
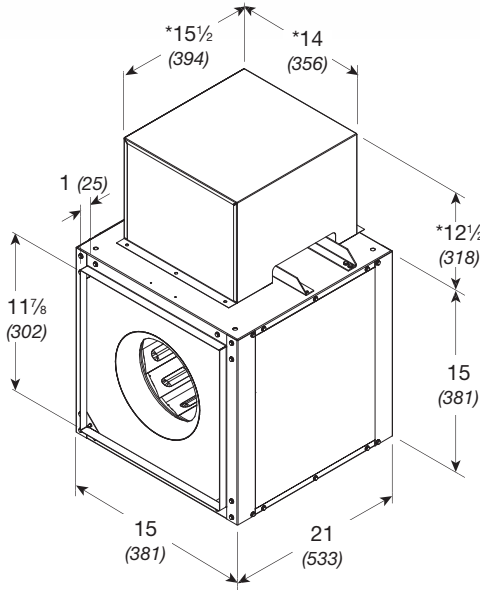
Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.125	0.250	0.500	0.625	0.750	1.000	1.250	1.500	1.750	2.000	
<b>70</b>													
70-4	1/4	1050	CFM	184	129								
			BHP	0.039	0.037								
			Sones	8.0	7.5								
		1313	CFM	251	211	117							
			BHP	0.077	0.076	0.068							
			Sones	11.0	10.4	9.2							
		1445	CFM	284	249	169	122						
			BHP	0.103	0.102	0.097	0.09						
			Sones	12.8	12.3	10.7	10.3						
		1577	CFM	314	284	213	175	131					
			BHP	0.13	0.13	0.13	0.12	0.12					
			Sones	14.9	14.6	12.7	11.9	11.4					
1709	CFM	345	318	254	220	184	97						
	BHP	0.17	0.17	0.17	0.16	0.16	0.14						
	Sones	16.1	15.9	14.5	13.9	13.3	12.4						
1840	CFM	375	351	293	262	231	159						
	BHP	0.21	0.21	0.21	0.21	0.20	0.19						
	Sones	17.3	17.0	16.4	16.0	15.4	14.5						
1972	CFM	405	384	331	302	273	212	142					
	BHP	0.26	0.26	0.26	0.25	0.25	0.24	0.22					
	Sones	19.2	19.1	18.6	18.2	17.9	17.7	16.5					
70-3	1/3	2072	CFM	428	408	360	332	305	249	184	103		
			BHP	0.30	0.30	0.30	0.30	0.29	0.29	0.27	0.24		
			Sones	20	20	19.9	19.5	19.1	18.5	18.2	16.8		
		2172	CFM	450	431	387	361	335	282	224	161		
			BHP	0.34	0.35	0.35	0.34	0.34	0.33	0.32	0.30		
			Sones	21	21	21	21	20	19.7	19.2	18.8		
70-5	1/2	2329	CFM	486	467	428	406	381	332	283	225	166	
			BHP	0.43	0.43	0.43	0.43	0.42	0.42	0.41	0.39	0.36	
			Sones	23	23	23	23	23	22	21	20	21	
		2486	CFM	521	504	468	447	426	380	334	287	232	176
			BHP	0.52	0.52	0.52	0.52	0.52	0.51	0.50	0.49	0.47	0.44
			Sones	25	25	25	25	25	24	23	22	22	23

MAX Bhp AT A GIVEN RPM = (rpm/3084)<sup>3</sup>  
 MAXIMUM RPM = 2486  
 TIP SPEED (ft/min) = rpm x 2.928  
 MAX NEMA MOTOR FRAME SIZE = 145T  
 OUTLET VELOCITY (ft/min) = 1.0212 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.



# BSQ 80 - Belt Drive



Damper size = 12 x 12 (305 x 305)  
 Unit weight\*\* = 79 (36)  
 Housing thickness = 18 ga

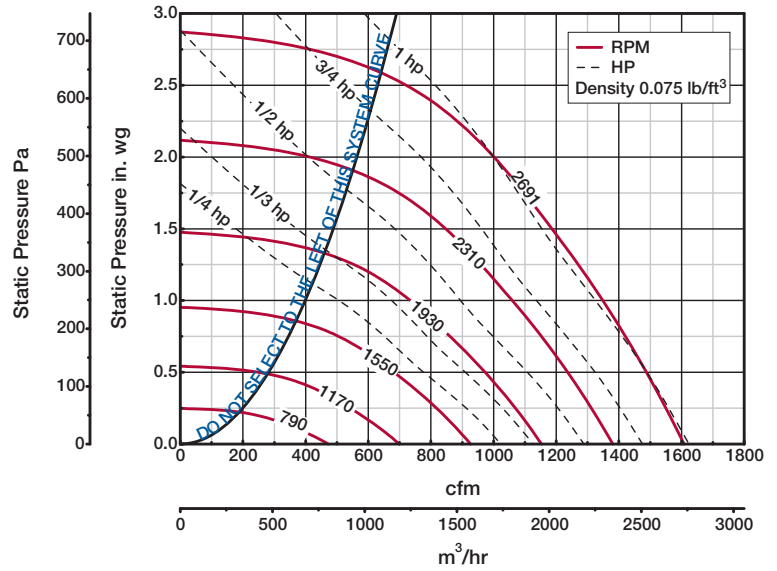
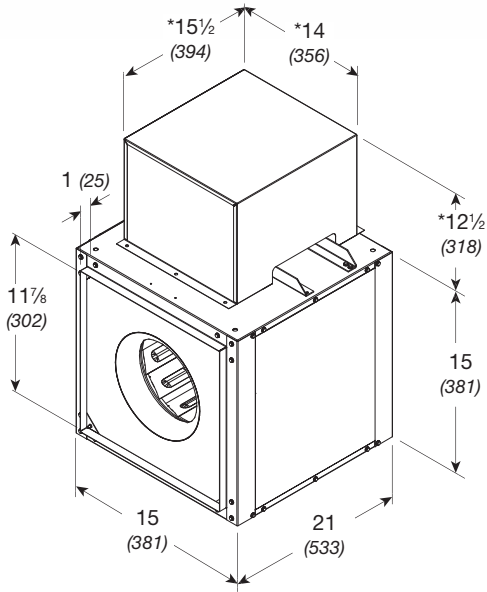
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.125	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	
<b>80</b>													
80-4	1/4	1050	CFM	372	298								
			BHP	0.049	0.049								
			Sones	8.0	7.6								
		1207	CFM	445	386	206							
			BHP	0.073	0.075	0.065							
			Sones	9.7	9.1	8.2							
	1520	CFM	585	542	442	301							
		BHP	0.15	0.15	0.15	0.14							
		Sones	13.9	13.5	11.8	10.8							
	1676	CFM	652	615	530	426	254						
		BHP	0.19	0.20	0.20	0.20	0.17						
		Sones	15.9	15.6	14.1	12.9	11.5						
1833	CFM	720	687	613	524	424							
	BHP	0.25	0.26	0.26	0.26	0.25							
	Sones	17.2	16.9	16.3	15.3	14.3							
80-3	1/3	1926	CFM	760	728	660	579	486	346				
			BHP	0.29	0.30	0.30	0.30	0.30	0.27				
			Sones	18.4	18.3	17.8	17.1	16.9	13.9				
		2018	CFM	799	769	704	630	545	452	269			
			BHP	0.34	0.34	0.35	0.35	0.34	0.34	0.28			
			Sones	19.6	19.5	19.2	18.4	18.1	16.7	13.5			
80-5	1/2	2164	CFM	861	833	774	708	633	550	442			
			BHP	0.41	0.42	0.43	0.43	0.43	0.42	0.40			
			Sones	21	21	21	20	19.6	19.2	17.6			
		2310	CFM	924	897	842	784	716	643	563	445		
			BHP	0.50	0.51	0.52	0.52	0.52	0.52	0.51	0.48		
			Sones	23	23	22	23	21	21	20	19.9		
80-7	3/4	2478	CFM	995	969	919	865	807	743	671	597	486	
			BHP	0.62	0.63	0.63	0.64	0.65	0.65	0.64	0.63	0.59	
			Sones	25	25	24	25	24	23	22	22	23	
		2645	CFM	1065	1041	995	945	894	835	773	705	635	395
			BHP	0.75	0.76	0.77	0.78	0.79	0.79	0.78	0.77	0.77	0.65
			Sones	28	28	27	27	27	26	25	24	24	35

MAX Bhp AT A GIVEN RPM = (rpm/2866)<sup>3</sup>  
 MAXIMUM RPM = 2645  
 TIP SPEED (ft/min) = rpm x 2.928  
 MAX NEMA MOTOR FRAME SIZE = 145T  
 OUTLET VELOCITY (ft/min) = 1.0212 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 90 - Belt Drive



Damper size = 12 x 12 (305 x 305)  
 Unit weight\*\* = 84 (38)  
 Housing thickness = 18 ga

Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

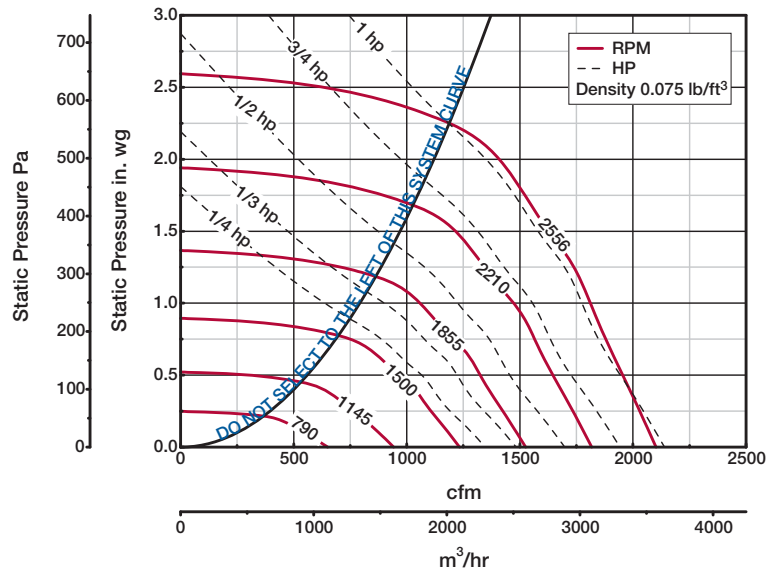
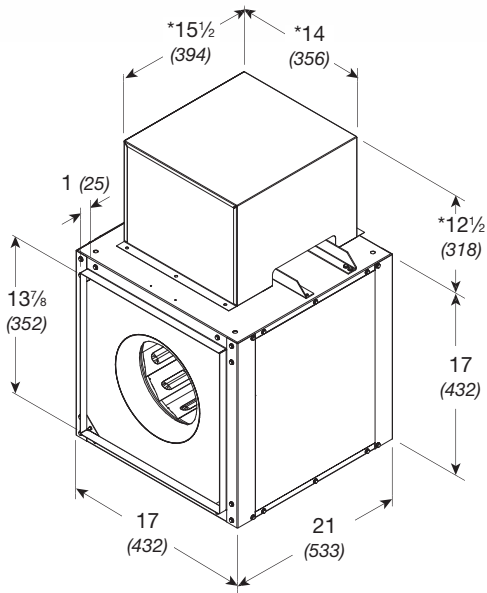
Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.125	0.250	0.500	0.750	1.000	1.500	1.750	2.000	2.250	2.500	
<b>90</b>													
90-4	1/4	1050	CFM	547	443								
			BHP	0.061	0.061								
			Sones	8.0	7.6								
		1211	CFM	655	574	333							
			BHP	0.092	0.095	0.084							
			Sones	9.8	9.1	8.3							
		1533	CFM	864	806	667	477						
			BHP	0.18	0.19	0.19	0.18						
			Sones	14.2	13.8	12.1	11.0						
		1694	CFM	965	914	798	654	437					
			BHP	0.25	0.25	0.26	0.25	0.22					
			Sones	16.0	15.8	14.4	13.1	12.3					
90-3	1/3	1780	CFM	1019	971	863	734	562					
			BHP	0.29	0.29	0.30	0.30	0.28					
			Sones	16.7	16.5	15.6	14.4	13.7					
		1866	CFM	1072	1028	926	808	657					
			BHP	0.33	0.33	0.35	0.35	0.33					
			Sones	17.5	17.3	16.9	15.9	15.4					
90-5	1/2	2136	CFM	1239	1202	1118	1024	917	638				
			BHP	0.49	0.50	0.51	0.52	0.52	0.47				
			Sones	21	21	21	19.9	19.2	18.4				
90-7	3/4	2291	CFM	1334	1300	1223	1138	1045	811	668			
			BHP	0.61	0.61	0.62	0.64	0.65	0.61	0.58			
			Sones	23	23	22	22	21	20	20			
		2445	CFM	1429	1396	1326	1249	1167	976	844	707		
			BHP	0.73	0.74	0.75	0.77	0.79	0.77	0.73	0.70		
			Sones	25	25	24	25	23	22	22	23		
90-10	1	2568	CFM	1504	1473	1407	1336	1258	1082	977	851	704	
			BHP	0.85	0.86	0.87	0.89	0.90	0.90	0.88	0.84	0.80	
			Sones	26	26	26	26	26	24	22	24	25	
		2691	CFM	1579	1549	1488	1420	1347	1186	1097	987	866	713
			BHP	0.98	0.98	1.00	1.02	1.03	1.05	1.03	1.00	0.96	0.91
			Sones	28	28	27	28	28	26	25	24	26	29

MAX Bhp AT A GIVEN RPM = (rpm/2691)<sup>3</sup>  
 MAXIMUM RPM = 2691  
 TIP SPEED (ft/min) = rpm x 2.928  
 MAX NEMA MOTOR FRAME SIZE = 145T  
 OUTLET VELOCITY (ft/min) = 1.0212 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 100 - Belt Drive



Damper size = 14 x 14 (357 x 357)  
 Unit weight\*\* = 91 (41)  
 Housing thickness = 18 ga

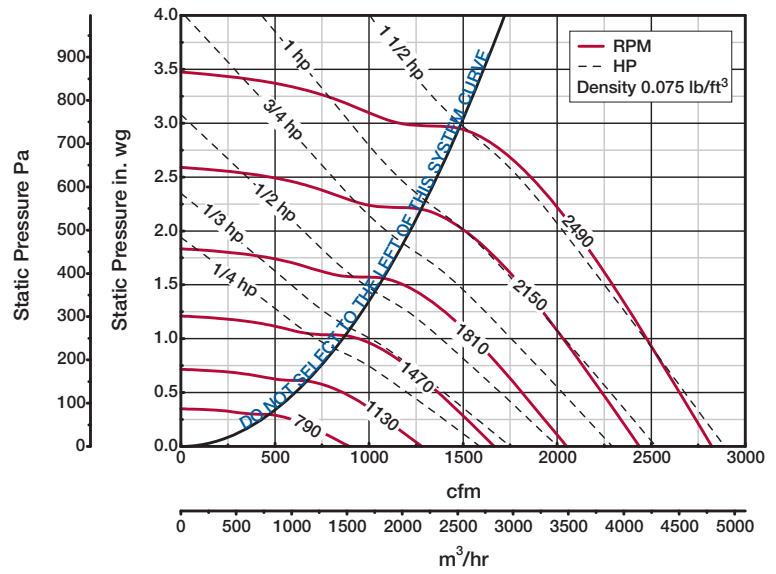
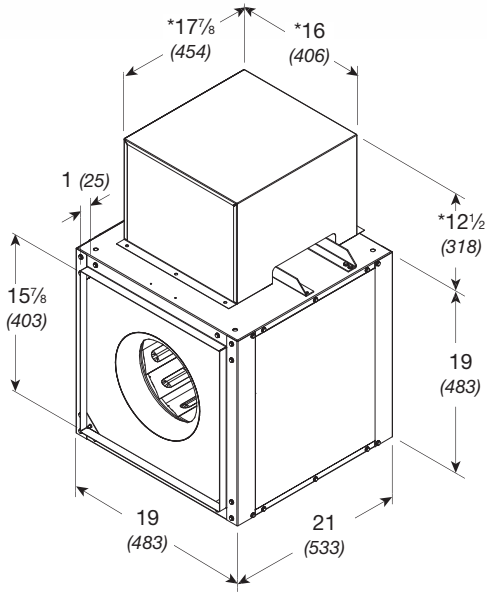
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.125	0.250	0.500	0.625	0.750	1.000	1.250	1.500	1.750	2.000	
<b>100</b>													
100-4	1/4	1050	CFM	774	671								
			BHP	0.072	0.073								
			Sones	7.9	7.6								
		1330	CFM	1024	953	770							
			BHP	0.14	0.15	0.15							
			Sones	11.3	10.6	9.4							
		1469	CFM	1145	1080	931	837						
			BHP	0.19	0.20	0.20	0.20						
			Sones	13.2	12.6	11.0	10.5						
		1609	CFM	1265	1207	1088	1003	917					
			BHP	0.25	0.25	0.26	0.26	0.26					
			Sones	15.4	15.0	13.4	12.4	11.8					
100-3	1/3	1772	CFM	1405	1352	1247	1187	1110	939				
			BHP	0.33	0.34	0.35	0.35	0.35	0.35				
			Sones	16.6	16.4	15.5	14.8	14.3	13.1				
100-5	1/2	1901	CFM	1515	1465	1366	1320	1255	1115				
			BHP	0.40	0.41	0.43	0.43	0.43	0.43				
			Sones	18.0	17.8	17.4	17.1	16.6	16.2				
		2029	CFM	1623	1577	1484	1439	1396	1262	1119			
			BHP	0.49	0.50	0.52	0.52	0.52	0.52	0.52			
			Sones	19.8	19.6	19.4	19.0	18.6	18.2	17.2			
100-7	3/4	2176	CFM	1747	1704	1617	1574	1533	1428	1305	1163		
			BHP	0.60	0.61	0.63	0.64	0.65	0.65	0.65	0.65		
			Sones	21	21	21	21	20	19.8	19.3	18.5		
		2323	CFM	1871	1830	1749	1708	1668	1591	1472	1358	1197	
			BHP	0.73	0.74	0.76	0.78	0.79	0.79	0.79	0.79	0.78	
			Sones	23	23	23	23	23	22	21	20	21	
100-10	1	2440	CFM	1969	1930	1853	1815	1776	1703	1605	1494	1377	1184
			BHP	0.84	0.86	0.88	0.89	0.90	0.91	0.91	0.91	0.91	0.88
			Sones	25	25	24	24	25	23	23	22	22	23
		2556	CFM	2066	2029	1956	1919	1882	1810	1734	1626	1522	1402
			BHP	0.97	0.98	1.01	1.02	1.03	1.05	1.05	1.05	1.05	1.05
			Sones	26	26	25	26	26	25	25	24	22	24

MAX Bhp AT A GIVEN RPM = (rpm/2517)<sup>3</sup>  
 MAXIMUM RPM = 2556  
 TIP SPEED (ft/min) = rpm x 2.928  
 MAX NEMA MOTOR FRAME SIZE = 145T  
 OUTLET VELOCITY (ft/min) = 0.7617 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 120 - Belt Drive



Damper size = 16 x 16 (406 x 406)  
 Unit weight\*\* = 97 (44)  
 Housing thickness = 18 ga

Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

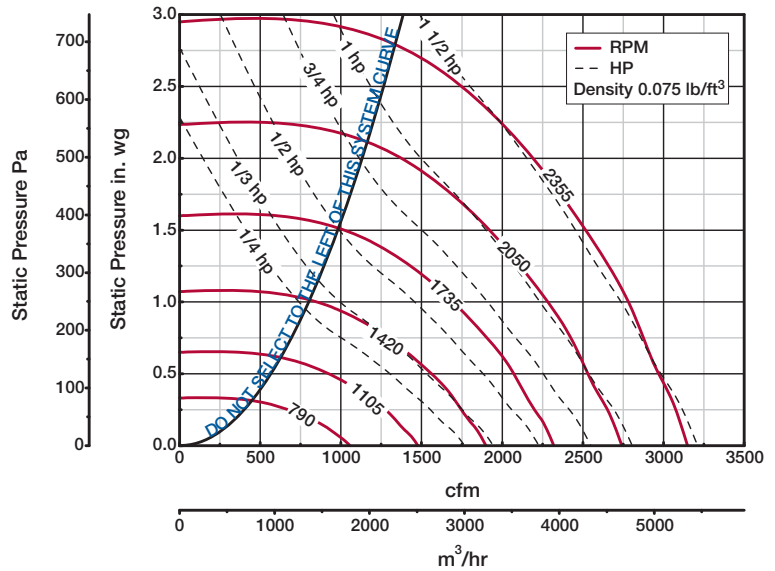
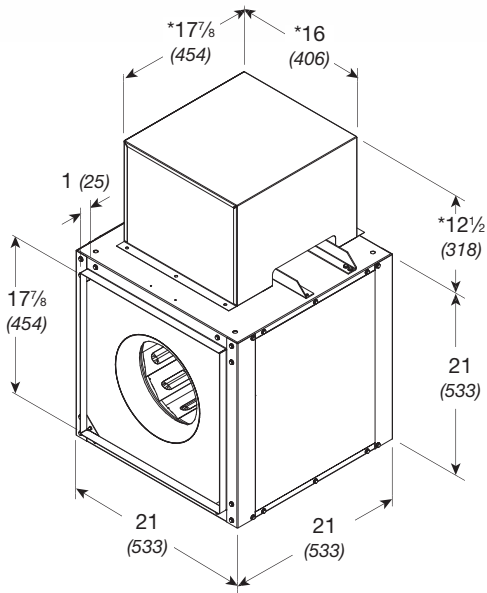
Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.125	0.375	0.750	1.000	1.250	1.500	2.000	2.250	2.500	2.750	
<b>120</b>													
120-4	1/4	1000	CFM	1026	783								
			BHP	0.096	0.102								
			Sones	7.7	7.5								
		1367	CFM	1471	1311	1020							
			BHP	0.24	0.25	0.26							
			Sones	10.9	10.5	10.0							
120-3	1/3	1437	CFM	1555	1403	1145							
			BHP	0.28	0.29	0.30							
			Sones	11.7	11.3	10.4							
		1506	CFM	1636	1492	1252	1027						
			BHP	0.32	0.33	0.35	0.34						
			Sones	12.5	12.1	11.1	10.2						
120-5	1/2	1615	CFM	1764	1631	1418	1245						
			BHP	0.39	0.41	0.43	0.43						
			Sones	13.8	13.6	12.4	11.8						
		1724	CFM	1892	1767	1571	1423	1241					
			BHP	0.47	0.49	0.52	0.52	0.52					
			Sones	15.2	15.3	13.8	13.6	12.4					
120-7	3/4	1974	CFM	2183	2075	1908	1791	1663	1518				
			BHP	0.71	0.73	0.76	0.78	0.78	0.78				
			Sones	19.0	18.9	17.6	16.9	16.4	15.7				
120-10	1	2073	CFM	2298	2195	2037	1928	1813	1683	1293			
			BHP	0.82	0.84	0.88	0.89	0.91	0.91	0.86			
			Sones	21	21	19.0	18.6	17.9	17.5	15.2			
		2172	CFM	2413	2314	2164	2062	1953	1836	1553			
			BHP	0.94	0.97	1.00	1.02	1.04	1.05	1.03			
			Sones	23	23	21	21	19.7	19.0	17.5			
120-15	1 1/2	2329	CFM	2594	2503	2363	2268	2171	2069	1841	1695	1477	
			BHP	1.16	1.19	1.22	1.25	1.27	1.28	1.29	1.28	1.23	
			Sones	26	26	24	23	23	22	21	19.9	18.8	
		2490	CFM	2779	2694	2563	2475	2387	2294	2093	1984	1852	1682
			BHP	1.41	1.44	1.49	1.51	1.54	1.55	1.58	1.58	1.57	1.53
			Sones	31	30	27	26	27	26	24	23	23	22

MAX Bhp at A GIVEN RPM = (rpm/2144)<sup>3</sup>  
 MAXIMUM RPM = 2490  
 TIP SPEED (ft/min) = rpm x 3.436  
 MAX NEMA MOTOR FRAME SIZE = 145T  
 OUTLET VELOCITY (ft/min) = 0.5805 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.



# BSQ 130 - Belt Drive



Damper size = 18 x 18 (457 x 457)  
 Unit weight\*\* = 97 (44)  
 Housing thickness = 18 ga

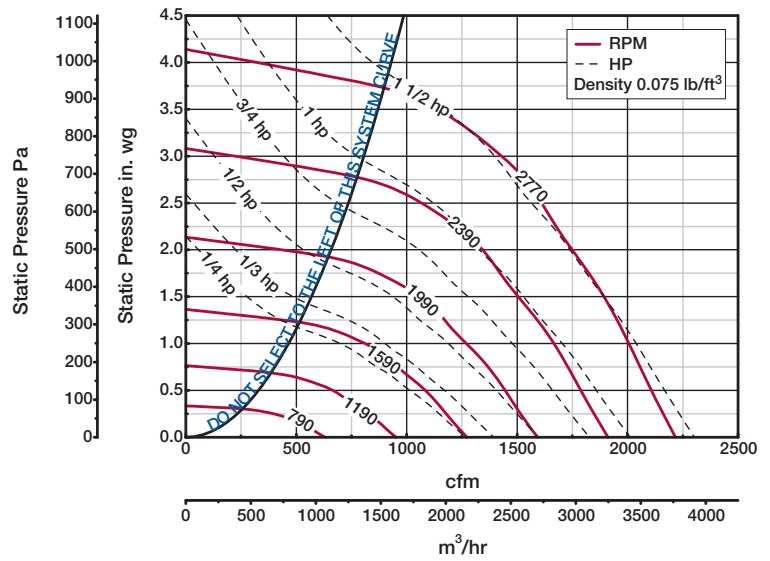
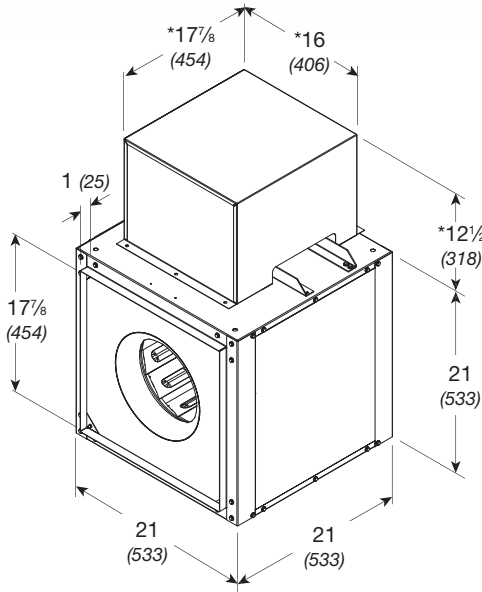
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.125	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	
<b>130</b>													
130-4	1/4	900	CFM	1084	911								
			BHP	0.086	0.087								
			Sones	7.7	7.7								
		1031	CFM	1275	1151	709							
			BHP	0.13	0.13	0.12							
			Sones	8.8	8.7	8.5							
		1293	CFM	1652	1563	1328	958						
			BHP	0.24	0.25	0.26	0.24						
			Sones	11.8	11.6	11.2	10.6						
130-3	1/3	1424	CFM	1838	1754	1568	1299						
			BHP	0.32	0.33	0.35	0.34						
			Sones	13.6	13.3	12.8	12.4						
130-5	1/2	1527	CFM	1984	1902	1743	1515	1204					
			BHP	0.40	0.41	0.43	0.42	0.40					
			Sones	14.8	14.5	13.9	13.3	12.6					
		1630	CFM	2126	2050	1908	1714	1468	1121				
			BHP	0.48	0.49	0.52	0.52	0.51	0.47				
			Sones	15.9	15.6	15.0	14.3	13.6	12.7				
130-7	3/4	1866	CFM	2448	2389	2266	2128	1949	1740	1462			
			BHP	0.72	0.73	0.76	0.78	0.78	0.76	0.73			
			Sones	19.9	19.5	18.8	18.2	17.2	15.9	14.7			
130-10	1	1960	CFM	2576	2523	2403	2279	2120	1934	1714	1419		
			BHP	0.83	0.84	0.87	0.90	0.91	0.89	0.87	0.83		
			Sones	21	21	19.9	19.3	18.4	17.3	16.7	16.2		
		2053	CFM	2702	2655	2537	2426	2286	2117	1926	1686	1319	
			BHP	0.95	0.96	1.00	1.03	1.05	1.03	1.02	0.99	0.89	
			Sones	23	22	21	20	19.8	18.7	18.0	17.9	18.5	
130-15	1 1/2	2202	CFM	2905	2864	2751	2653	2533	2390	2227	2045	1823	
			HP	1.17	1.18	1.22	1.25	1.28	1.28	1.27	1.26	1.22	
			Sones	26	25	24	22	22	21	20	19.9	21	
		2355	CFM	3112	3074	2971	2877	2777	2659	2514	2359	2189	1732
			BHP	1.43	1.44	1.48	1.52	1.55	1.58	1.57	1.55	1.54	1.44
			Sones	30	28	28	25	24	23	22	22	22	27

MAX Bhp AT A GIVEN RPM = (rpm/2022)<sup>3</sup>  
 MAXIMUM RPM = 2355  
 TIP SPEED (ft/min) = rpm x 3.435  
 MAX NEMA MOTOR FRAME SIZE = 145T  
 OUTLET VELOCITY (ft/min) = 0.4571 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 130HP - Belt Drive



Damper size = 18 x 18 (457 x 457)  
 Unit weight\*\* = 97 (44)  
 Housing thickness = 18 ga

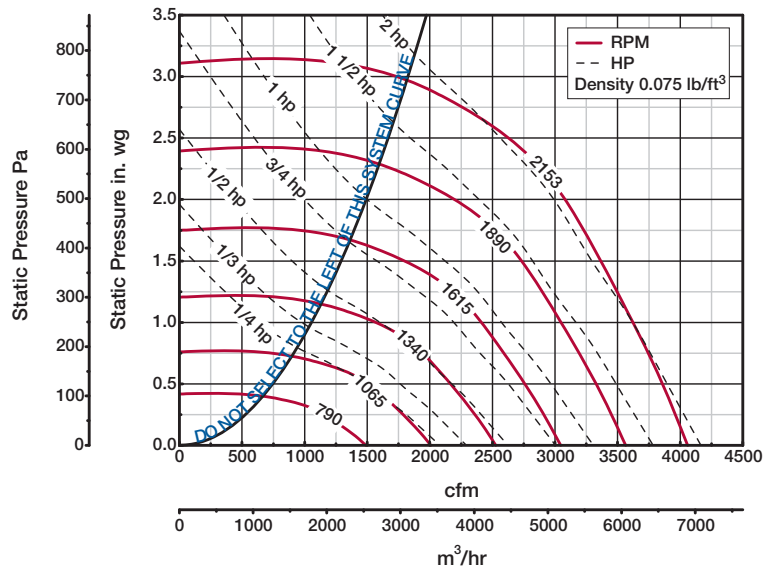
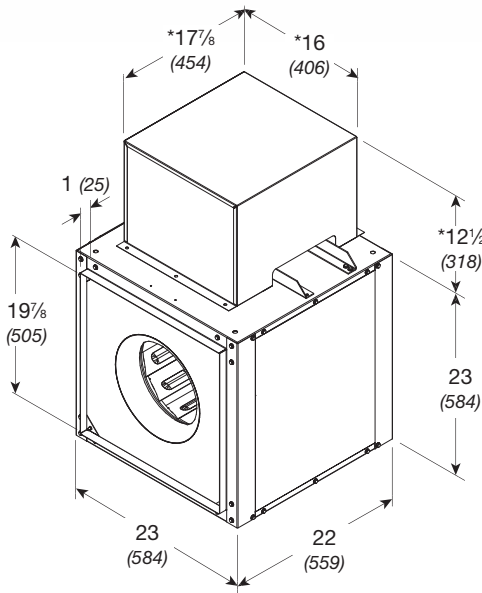
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	3.000	3.500	
<b>130HP</b>													
130HP-4	1/4	1300	CFM	784	549								
			BHP	0.16	0.15								
			Sones	11.2	10.5								
		1520	CFM	1014	884	670							
			BHP	0.25	0.26	0.25							
			Sones	11.4	11.2	10.8							
130HP-3	1/3	1674	CFM	1161	1048	930	700						
			BHP	0.33	0.34	0.35	0.33						
			Sones	12.4	12.5	12.0	11.5						
		1795	CFM	1273	1176	1063	930	691					
			BHP	0.40	0.41	0.42	0.42	0.4					
			Sones	13.3	13.4	13.1	12.6	11.7					
130HP-5	1/2	1916	CFM	1380	1294	1192	1091	925	680				
			BHP	0.48	0.50	0.50	0.52	0.51	0.48				
			Sones	14.6	14.3	14.2	13.9	13.0	11.9				
		2055	CFM	1501	1426	1339	1239	1146	971	756			
			BHP	0.59	0.60	0.62	0.62	0.65	0.62	0.59			
			Sones	16.9	15.9	15.4	15.3	14.9	13.8	12.6			
130HP-7	3/4	2194	CFM	1621	1555	1477	1388	1297	1203	1033			
			BHP	0.71	0.73	0.75	0.76	0.77	0.78	0.76			
			Sones	19.2	18.4	17.1	17.0	17.2	16.5	15.1			
		2304	CFM	1715	1653	1582	1504	1414	1331	1229	865		
			BHP	0.81	0.84	0.86	0.87	0.87	0.90	0.90	0.84		
			Sones	21	20	19.0	18.2	18.6	18.4	17.6	14.5		
130HP-10	1	2414	CFM	1808	1749	1685	1614	1532	1448	1369	1080		
			BHP	0.93	0.95	0.98	1.00	1.01	1.01	1.04	1.00		
			Sones	22	22	21	19.0	19.5	19.7	19.2	16.8		
		2589	CFM	1956	1901	1846	1781	1714	1635	1557	1392	1076	
			BHP	1.14	1.17	1.19	1.22	1.24	1.24	1.25	1.28	1.21	
			Sones	24	25	24	22	21	22	22	20	17.7	
130HP-15	1 1/2	2770	CFM	2108	2056	2005	1950	1888	1825	1750	1608	1421	1110
			BHP	1.39	1.42	1.44	1.47	1.5	1.52	1.52	1.56	1.54	1.48
			Sones	27	28	27	26	25	24	24	23	22	19.2

MAX Bhp AT A GIVEN RPM = (rpm/2377)<sup>3</sup>  
 MAXIMUM RPM = 2770  
 TIP SPEED (ft/min) = rpm x 3.435  
 MAX NEMA MOTOR FRAME SIZE = 145T  
 OUTLET VELOCITY (ft/min) = 0.4571 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 140 - Belt Drive



Damper size = 20 x 20 (508 x 508)  
 Unit weight\*\* = 111 (50)  
 Housing thickness = 18 ga

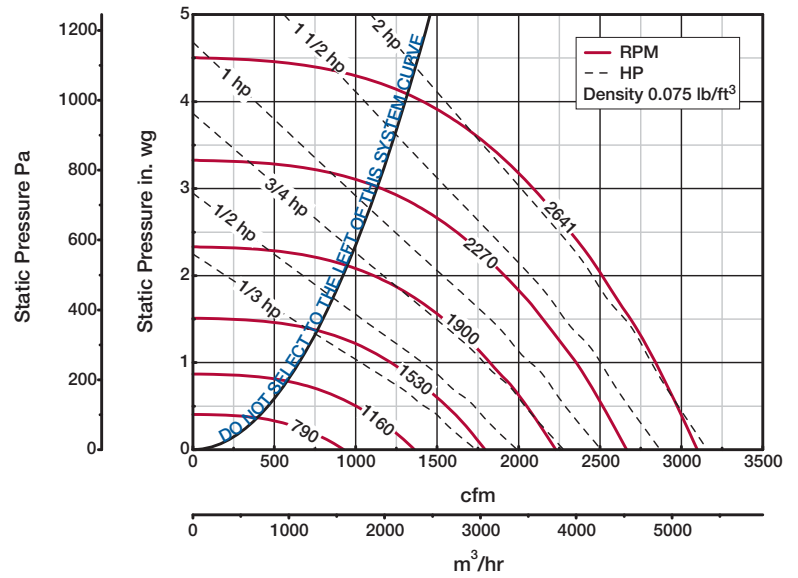
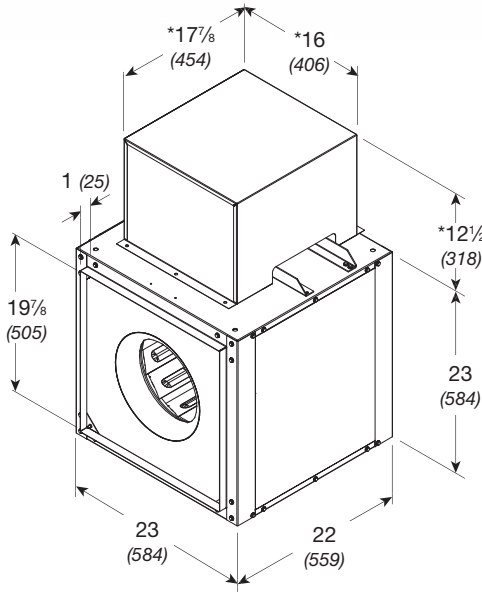
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.125	0.250	0.500	0.750	1.000	1.500	1.750	2.000	2.500	2.750	
<b>140</b>													
140-4	1/4	800	CFM	1362	1185								
			BHP	0.10	0.11								
			Sones	6.3	6.7								
		1076	CFM	1927	1810	1538							
			BHP	0.24	0.25	0.26							
			Sones	10.7	10.7	10.2							
140-3	1/3	1185	CFM	2142	2039	1807	1463						
			BHP	0.32	0.33	0.35	0.34						
			Sones	12.1	11.9	12.0	10.6						
140-5	1/2	1271	CFM	2311	2217	2006	1741	1199					
			BHP	0.39	0.41	0.43	0.43	0.39					
			Sones	13.3	13.0	13.1	13.0	12.7					
		1356	CFM	2476	2392	2197	1979	1636					
			BHP	0.48	0.49	0.51	0.52	0.51					
			Sones	14.2	13.9	13.8	13.8	13.8					
140-7	3/4	1553	CFM	2858	2787	2626	2449	2253	1447				
			BHP	0.71	0.73	0.75	0.78	0.79	0.70				
			Sones	16.2	16.0	16.0	15.6	15.3	13.9				
140-10	1	1631	CFM	3008	2941	2790	2625	2446	1865				
			BHP	0.82	0.84	0.86	0.89	0.91	0.87				
			Sones	17.1	16.9	16.9	16.6	16.1	14.8				
		1709	CFM	3159	3094	2953	2798	2635	2177	1752			
			BHP	0.95	0.96	0.99	1.02	1.05	1.03	0.97			
			Sones	18.2	18.0	17.9	17.7	17.2	16.1	15.1			
140-15	1 1/2	1956	CFM	3633	3576	3461	3330	3193	2894	2705	2457		
			BHP	1.41	1.43	1.47	1.49	1.53	1.57	1.57	1.55		
			Sones	24	23	24	24	23	22	21	20		
140-20	2	2055	CFM	3822	3769	3662	3537	3410	3136	2982	2777	2168	
			BHP	1.63	1.66	1.70	1.73	1.75	1.82	1.82	1.81	1.70	
			Sones	27	26	28	27	26	25	24	23	21	
		2153	CFM	4009	3958	3856	3741	3622	3365	3225	3078	2627	2260
			BHP	1.88	1.90	1.95	1.98	2.00	2.08	2.10	2.10	2.05	1.95
			Sones	30	30	31	31	30	28	28	27	25	23

MAX Bhp AT A GIVEN RPM = (rpm/1682)<sup>3</sup>  
 MAXIMUM RPM = 2153  
 TIP SPEED (ft/min) = rpm x 3.812  
 MAX NEMA MOTOR FRAME SIZE = 145T  
 OUTLET VELOCITY (ft/min) = 0.3692 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 140HP - Belt Drive



Damper size = 20 x 20 (508 x 508)  
 Unit weight\*\* = 111 (50)  
 Housing thickness = 18 ga

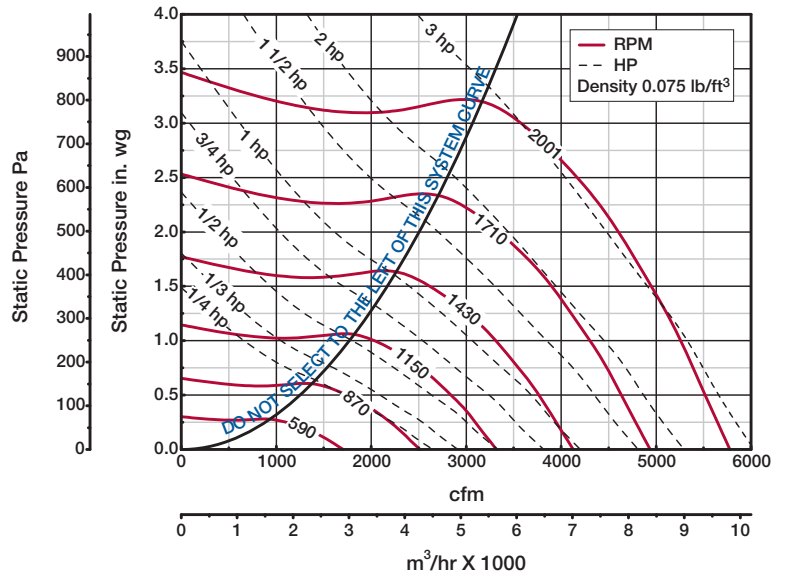
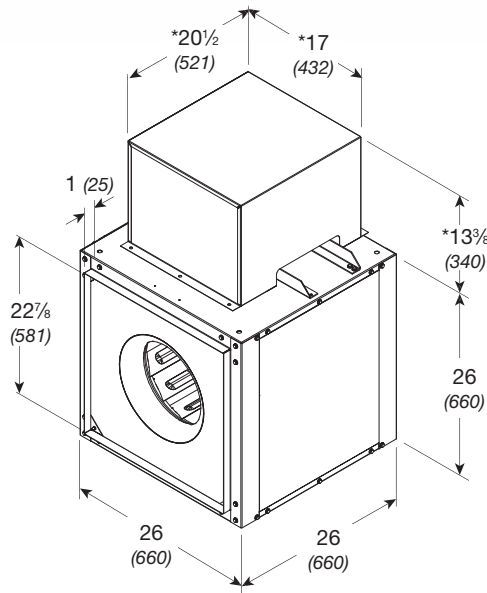
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	3.000	3.500	
<b>140HP</b>													
140HP-3	1/3	1340	CFM	1285	1082								
			BHP	0.27	0.27								
			Sones	11.4	11.2								
		1453	CFM	1449	1281	1058							
			BHP	0.35	0.35	0.34							
			Sones	13.3	12.8	12.4							
140HP-5	1/2	1559	CFM	1601	1452	1270	948						
			BHP	0.42	0.43	0.43	0.39						
			Sones	15.1	14.6	14.2	13.4						
		1664	CFM	1742	1607	1456	1264	800					
			BHP	0.51	0.52	0.52	0.52	0.43					
			Sones	16.5	15.9	15.5	15.0	13.8					
140HP-7	3/4	1785	CFM	1902	1782	1652	1495	1307					
			BHP	0.63	0.64	0.65	0.65	0.64					
			Sones	17.9	17.3	16.7	16.1	15.5					
		1905	CFM	2057	1954	1832	1701	1548	1363				
			BHP	0.76	0.77	0.79	0.79	0.79	0.77				
			Sones	19.7	19.1	18.4	17.7	17.1	16.7				
140HP-10	1	2096	CFM	2298	2211	2108	1998	1878	1741	1581			
			BHP	1.01	1.02	1.03	1.05	1.05	1.05	1.04			
			Sones	24	23	22	21	20	20	19.7			
140HP-15	1½	2197	CFM	2425	2344	2253	2145	2041	1918	1783	1299		
			BHP	1.16	1.18	1.18	1.21	1.21	1.21	1.21	1.08		
			Sones	26	25	24	23	22	22	22	22		
		2399	CFM	2676	2603	2525	2437	2339	2244	2134	1882	1381	
			BHP	1.50	1.52	1.53	1.54	1.57	1.57	1.57	1.56	1.39	
			Sones	30	29	28	27	26	25	24	23	23	
140HP-20	2	2520	CFM	2825	2755	2684	2606	2515	2423	2330	2107	1839	
			BHP	1.73	1.76	1.78	1.78	1.81	1.82	1.82	1.82	1.79	
			Sones	32	31	30	30	28	27	26	25	24	
		2641	CFM	2973	2907	2841	2768	2688	2599	2512	2319	2088	1759
			BHP	1.98	2.01	2.04	2.05	2.06	2.09	2.10	2.10	2.09	2.00
			Sones	33	33	33	32	31	30	29	27	26	24

MAX Bhp AT A GIVEN RPM = (rpm/2064)<sup>3</sup>  
 MAXIMUM RPM = 2641  
 TIP SPEED (ft/min) = rpm x 3.812  
 MAX NEMA MOTOR FRAME SIZE = 145T  
 OUTLET VELOCITY (ft/min) = 0.3692 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 160 - Belt Drive



Damper size = 23 x 23 (584 x 584)  
 Unit weight\*\* = 208 (94)  
 Housing thickness = 18 ga

Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

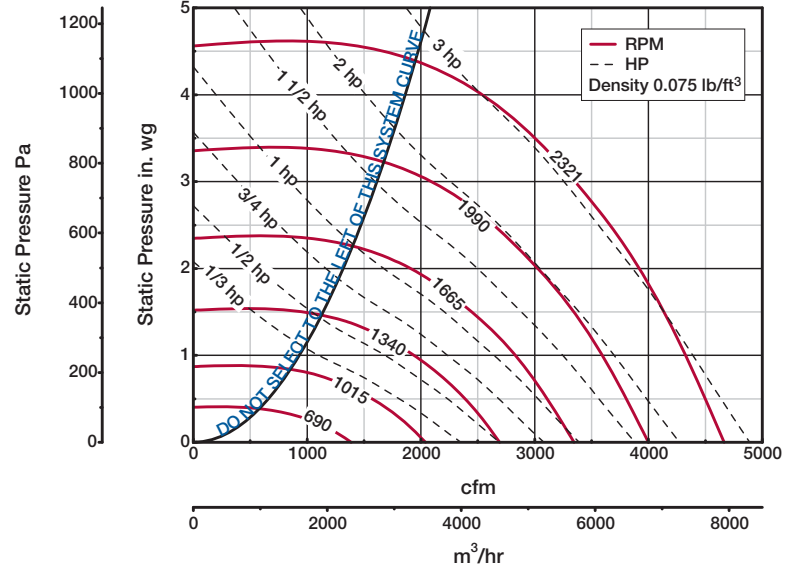
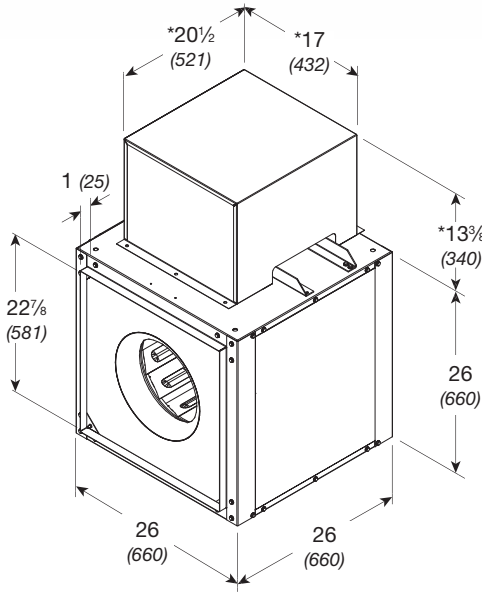
Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.125	0.500	0.750	1.000	1.500	1.750	2.000	2.250	2.500	3.000	
<b>160</b>													
160-4	1/4	650	CFM	1671									
			BHP	0.10									
			Sones	6.6									
		873	CFM	2373	1759								
			BHP	0.23	0.26								
			Sones	8.8	8.2								
160-3	1/3	962	CFM	2643	2150								
			BHP	0.31	0.35								
			Sones	9.9	9.3								
160-5	1/2	1101	CFM	3061	2665	2301							
			BHP	0.46	0.51	0.52							
			Sones	12.4	11.4	11.2							
160-7	3/4	1261	CFM	3538	3212	2946	2611						
			BHP	0.68	0.74	0.78	0.78						
			Sones	15.5	14.6	14.4	13.2						
160-10	1	1387	CFM	3911	3628	3402	3146	2311					
			BHP	0.90	0.97	1.01	1.04	0.96					
			Sones	18.0	17.2	16.9	16.1	13.1					
160-15	1 1/2	1488	CFM	4209	3949	3745	3519	2921	2420				
			BHP	1.10	1.18	1.23	1.27	1.27	1.17				
			Sones	19.9	19.0	18.9	18.4	15.9	14.5				
		1588	CFM	4503	4259	4079	3880	3389	3055	2566			
			BHP	1.33	1.42	1.47	1.52	1.56	1.53	1.42			
			Sones	22	21	22	21	18.9	17.5	16.1			
160-20	2	1748	CFM	4973	4751	4603	4425	4037	3802	3528	3185		
			BHP	1.77	1.88	1.92	1.98	2.08	2.09	2.07	2.01		
			Sones	28	26	27	27	24	23	22	19.9		
160-30	3	1875	CFM	5345	5138	5000	4847	4501	4312	4091	3844	3530	
			BHP	2.18	2.30	2.35	2.41	2.53	2.57	2.58	2.56	2.50	
			Sones	33	31	31	32	30	29	27	25	23	
		2001	CFM	5713	5519	5390	5260	4946	4774	4596	4392	4160	3566
			BHP	2.64	2.77	2.84	2.89	3.03	3.08	3.12	3.14	3.12	2.99
			Sones	40	36	36	38	38	36	34	31	29	26

MAX Bhp AT A GIVEN RPM = (rpm/1366)<sup>3</sup>  
 MAXIMUM RPM = 2001  
 TIP SPEED (ft/min) = rpm x 4.384  
 MAX NEMA MOTOR FRAME SIZE = 184T  
 OUTLET VELOCITY (ft/min) = 0.2782 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.



# BSQ 160HP - Belt Drive



Damper size = 23 x 23 (584 x 584)  
 Unit weight\*\* = 208 (94)  
 Housing thickness = 18 ga

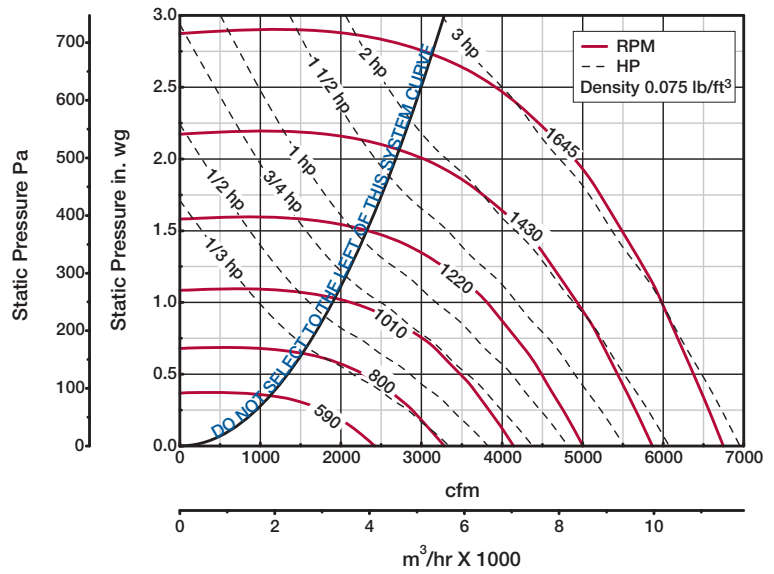
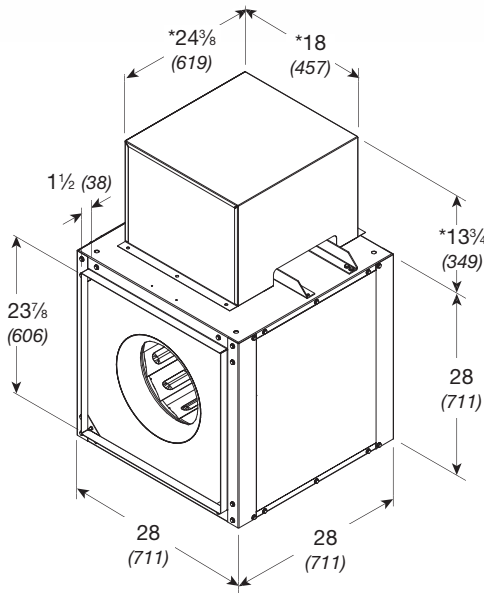
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.500	0.750	1.000	1.250	1.500	2.000	2.500	3.000	3.500	4.000	
<b>160HP</b>													
160HP-3	1/3	1050	CFM	1669	1290								
			BHP	0.29	0.28								
			Sones	7.8	7.2								
		1116	CFM	1844	1533								
			BHP	0.35	0.35								
			Sones	8.6	8.0								
160HP-5	1/2	1277	CFM	2237	2020	1731	1305						
			BHP	0.50	0.52	0.52	0.49						
			Sones	10.8	10.1	9.6	8.9						
160HP-7	3/4	1462	CFM	2664	2497	2299	2050	1720					
			BHP	0.74	0.77	0.79	0.78	0.76					
			Sones	14.1	13.4	12.9	12.7	12.6					
160HP-10	1	1609	CFM	2986	2845	2688	2497	2269	1601				
			BHP	0.97	1.00	1.03	1.05	1.04	0.97				
			Sones	17.8	17.3	16.7	16.3	16.4	16.9				
160HP-15	1 1/2	1726	CFM	3239	3116	2974	2814	2630	2157				
			BHP	1.18	1.22	1.25	1.28	1.29	1.26				
			Sones	22	21	21	19.8	19.8	21				
		1842	CFM	3488	3377	3248	3115	2954	2570	2013			
			BHP	1.42	1.47	1.51	1.54	1.56	1.56	1.49			
			Sones	25	24	24	23	22	23	25			
160HP-20	2	1935	CFM	3686	3580	3464	3338	3200	2859	2435			
			BHP	1.63	1.68	1.73	1.77	1.80	1.82	1.79			
			Sones	27	25	25	25	24	24	25			
		2027	CFM	3881	3780	3676	3555	3434	3135	2763	2248		
			BHP	1.87	1.92	1.97	2.01	2.05	2.09	2.07	1.99		
			Sones	28	28	25	27	26	26	27	28		
160HP-30	3	2174	CFM	4191	4097	4002	3897	3785	3536	3230	2866	2357	
			BHP	2.29	2.34	2.40	2.45	2.49	2.56	2.58	2.55	2.44	
			Sones	32	31	28	28	29	29	29	30	31	
		2321	CFM	4499	4411	4322	4234	4129	3918	3660	3351	3001	2505
			BHP	2.77	2.83	2.89	2.95	3.00	3.09	3.14	3.13	3.09	2.97
			Sones	36	34	34	28	31	32	33	33	33	34

MAX Bhp AT A GIVEN RPM = (rpm/1584)<sup>3</sup>  
 MAXIMUM RPM = 2321  
 TIP SPEED (ft/min) = rpm x 4.384  
 MAX NEMA MOTOR FRAME SIZE = 184T  
 OUTLET VELOCITY (ft/min) = 0.2782 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 180 - Belt Drive



Damper size = 24 x 24 (610 x 610)  
 Unit weight\*\* = 245 (111)  
 Housing thickness = 18 ga

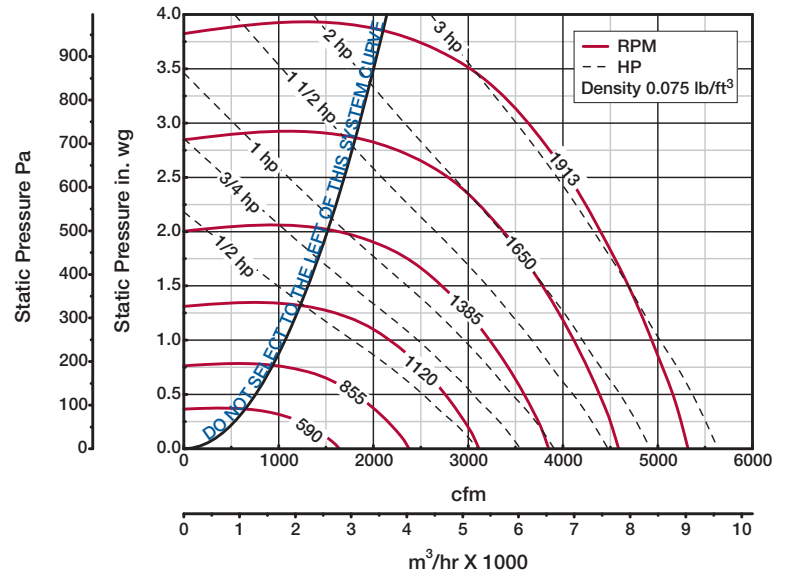
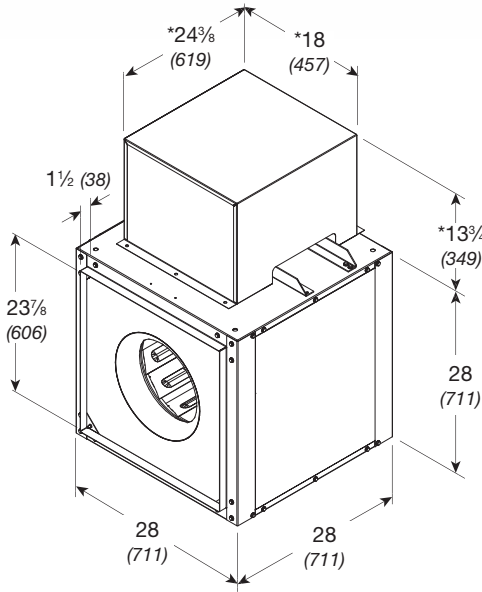
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.125	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	
<b>180</b>													
180-3	1/3	700	CFM	2649	2387								
			BHP	0.23	0.24								
			Sones	10.0	9.6								
		791	CFM	3051	2845	2217							
			BHP	0.32	0.34	0.35							
			Sones	10.6	10.9	9.6							
180-5	1/2	905	CFM	3546	3366	2928	2175						
			BHP	0.48	0.49	0.52	0.49						
			Sones	12.2	12.1	11.6	10.8						
180-7	3/4	1037	CFM	4109	3955	3616	3179	2432					
			BHP	0.71	0.73	0.77	0.79	0.73					
			Sones	14.5	14.2	13.5	13.4	12.8					
180-10	1	1141	CFM	4549	4412	4127	3760	3290	2523				
			BHP	0.94	0.96	1.01	1.04	1.04	0.96				
			Sones	16.5	16.1	15.4	15.0	14.9	13.8				
180-15	1 1/2	1224	CFM	4898	4774	4507	4194	3836	3300	2331			
			BHP	1.15	1.18	1.23	1.28	1.29	1.27	1.08			
			Sones	18.4	17.7	17.1	16.5	16.5	15.8	14.4			
		1306	CFM	5242	5128	4878	4610	4281	3884	3332			
			BHP	1.40	1.43	1.48	1.53	1.56	1.57	1.50			
			Sones	20	19.5	18.8	18.3	17.8	17.5	16.8			
180-20	2	1372	CFM	5519	5410	5174	4937	4630	4308	3854	3218		
			BHP	1.62	1.65	1.71	1.75	1.81	1.82	1.81	1.7		
			Sones	22	21	20	19.8	19.0	18.7	18.3	17.5		
		1437	CFM	5790	5686	5463	5236	4964	4662	4298	3814	3106	
			BHP	1.86	1.89	1.95	2.00	2.06	2.09	2.09	2.04	1.89	
			Sones	23	22	22	21	21	19.7	19.6	19.1	18.2	
180-30	3	1541	CFM	6224	6127	5922	5710	5488	5213	4927	4567	4116	
			BHP	2.29	2.32	2.38	2.45	2.50	2.56	2.58	2.57	2.52	
			Sones	26	25	25	24	24	22	22	21	21	
		1645	CFM	6656	6566	6377	6179	5981	5744	5485	5216	4866	3898
			BHP	2.78	2.81	2.88	2.95	3.01	3.07	3.12	3.14	3.13	2.94
			Sones	29	28	28	27	27	26	24	24	24	23

MAX Bhp at A GIVEN RPM = (rpm/1125)<sup>3</sup>  
 MAXIMUM RPM = 1645  
 TIP SPEED (ft/min) = rpm x 4.843  
 MAX NEMA MOTOR FRAME SIZE = 184T  
 OUTLET VELOCITY (ft/min) = 0.2553 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 180HP - Belt Drive



Damper size = 24 x 24 (610 x 610)  
 Unit weight\*\* = 245 (111)  
 Housing thickness = 18 ga

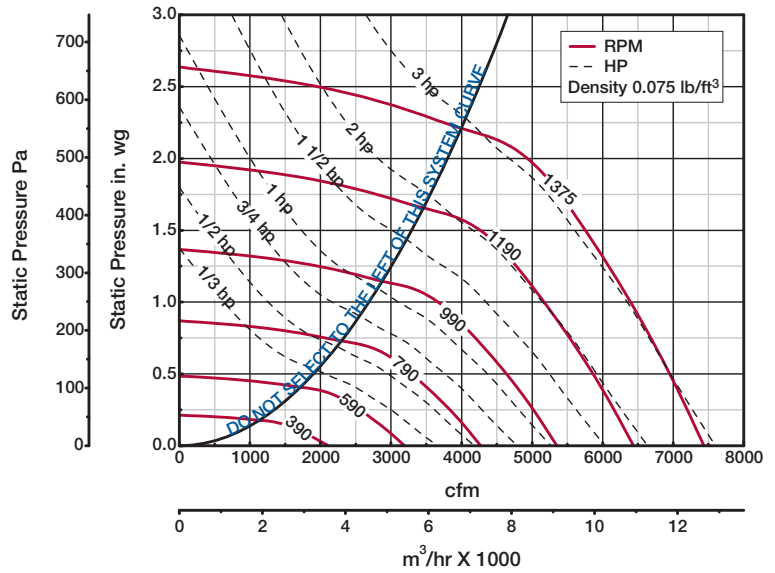
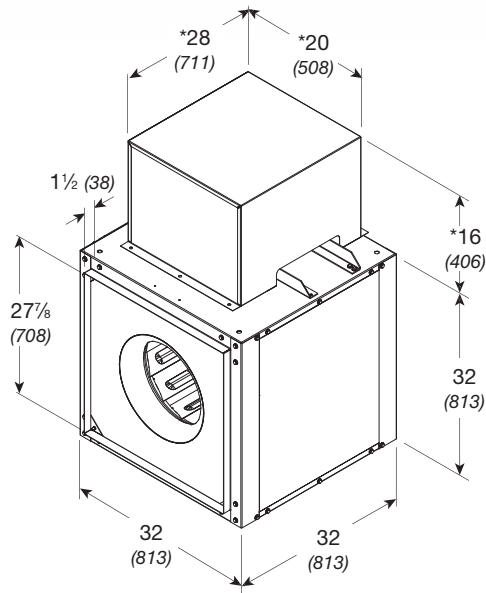
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	3.000	3.500	
<b>180HP</b>													
180HP-5	1/2	1000	CFM	2352	2018								
			BHP	0.44	0.45								
			Sones	10.9	10.0								
		1083	CFM	2636	2364	1984							
			BHP	0.55	0.57	0.56							
			Sones	12.1	11.2	10.5							
180HP-7	3/4	1166	CFM	2907	2672	2379	1951						
			BHP	0.67	0.70	0.71	0.69						
			Sones	13.4	12.6	11.7	10.9						
		1249	CFM	3169	2964	2724	2406	1945					
			BHP	0.81	0.85	0.87	0.87	0.82					
			Sones	14.7	14.1	13.2	12.4	11.4					
180HP-10	1	1332	CFM	3428	3247	3032	2782	2458	1513				
			BHP	0.98	1.02	1.05	1.06	1.05	0.83				
			Sones	16.3	15.7	14.8	14.0	13.1	11.0				
180HP-15	1 1/2	1415	CFM	3681	3518	3328	3116	2857	2537				
			BHP	1.15	1.20	1.24	1.26	1.27	1.26				
			Sones	18.0	17.4	16.6	15.6	14.8	14.0				
		1498	CFM	3931	3782	3614	3423	3212	2944	2622			
			BHP	1.35	1.41	1.45	1.49	1.51	1.50	1.48			
			Sones	19.9	19.1	18.6	17.6	16.8	15.9	15.0			
180HP-20	2	1581	CFM	4180	4043	3893	3718	3528	3312	3049			
			BHP	1.57	1.64	1.69	1.73	1.76	1.77	1.77			
			Sones	22	21	20	19.7	18.9	18.2	17.3			
		1664	CFM	4425	4298	4158	4003	3833	3648	3429	2859		
			BHP	1.81	1.89	1.95	1.99	2.03	2.06	2.07	2.01		
			Sones	24	23	23	22	21	21	19.7	17.9		
180HP-30	3	1747	CFM	4669	4550	4421	4285	4125	3956	3780	3308	2100	
			BHP	2.08	2.16	2.23	2.29	2.33	2.36	2.39	2.38	1.94	
			Sones	27	26	25	24	24	23	23	21	16.9	
		1913	CFM	5155	5050	4938	4816	4691	4545	4396	4058	3620	3006
			BHP	2.70	2.78	2.88	2.95	3.00	3.05	3.09	3.14	3.12	2.96
			Sones	33	32	31	30	30	29	29	28	26	23

MAX Bhp at A GIVEN RPM =  $(rpm/1306)^3$   
 MAXIMUM RPM = 1913  
 TIP SPEED (ft/min) =  $rpm \times 4.843$   
 MAX NEMA MOTOR FRAME SIZE = 184T  
 OUTLET VELOCITY (ft/min) =  $0.2553 \times cfm$

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 200 - Belt Drive



Damper size = 28 x 28 (711 x 711)  
 Unit weight\*\* = 314 (142)  
 Housing thickness = 18 ga

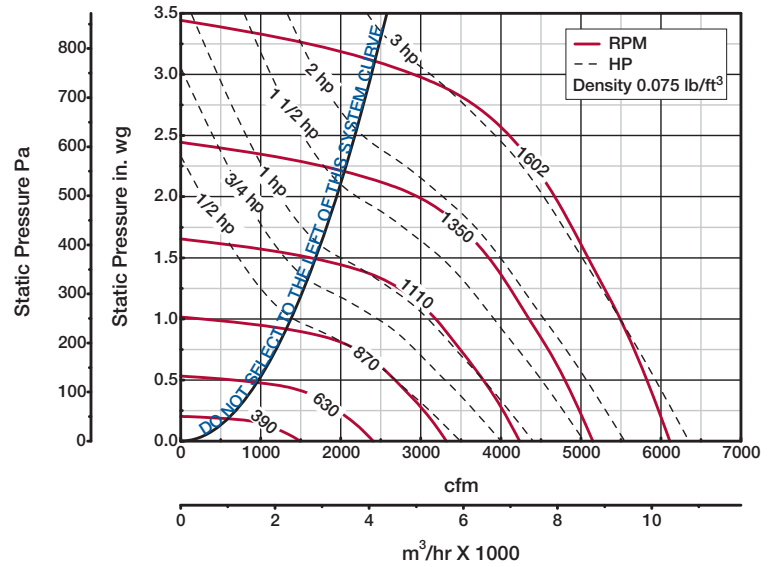
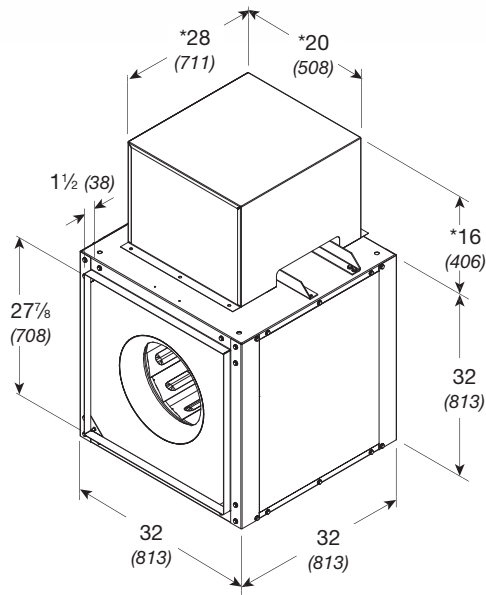
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.125	0.250	0.500	0.750	0.875	1.000	1.250	1.500	1.750	2.000	
<b>200</b>													
200-3	1/3	600	CFM	2960	2616								
			BHP	0.25	0.26								
			Sones	11.1	10.6								
		660	CFM	3315	3018	2042							
			BHP	0.33	0.34	0.33							
			Sones	11.7	11.2	10.5							
200-5	1/2	756	CFM	3867	3624	3036							
			BHP	0.49	0.50	0.52							
			Sones	12.7	12.0	11.7							
200-7	3/4	811	CFM	4179	3959	3442	2563						
			BHP	0.60	0.62	0.64	0.62						
			Sones	13.4	12.8	12.3	13.0						
		865	CFM	4484	4285	3812	3239	2516					
			BHP	0.73	0.75	0.77	0.79	0.72					
			Sones	14.1	13.7	13.1	13.0	13.9					
200-10	1	952	CFM	4972	4796	4391	3916	3646	3203				
			BHP	0.96	0.99	1.01	1.04	1.05	1.03				
			Sones	15.7	15.5	15.1	14.9	14.5	14.4				
200-15	1 1/2	1090	CFM	5741	5587	5253	4874	4672	4452	3878			
			BHP	1.43	1.47	1.51	1.53	1.55	1.56	1.56			
			Sones	19.1	18.9	18.7	18.5	18.6	18.7	17.3			
200-20	2	1145	CFM	6046	5899	5588	5240	5047	4855	4413	3580		
			BHP	1.66	1.69	1.74	1.77	1.79	1.81	1.82	1.73		
			Sones	21	20	20	20	20	20	19.2	18.6		
		1200	CFM	6350	6210	5920	5597	5416	5233	4836	4316		
			BHP	1.90	1.94	2.00	2.02	2.04	2.06	2.09	2.08		
			Sones	22	22	21	21	21	21	21	19.8		
200-30	3	1287	CFM	6830	6699	6439	6138	5988	5818	5475	5088	4557	
			BHP	2.34	2.38	2.46	2.49	2.50	2.52	2.56	2.58	2.56	
			Sones	25	24	24	24	23	23	23	23	22	
		1375	CFM	7314	7192	6948	6677	6537	6396	6076	5753	5379	4862
			BHP	2.85	2.89	2.98	3.02	3.03	3.05	3.09	3.14	3.15	3.13
			Sones	27	27	26	26	26	26	26	25	25	24

MAX Bhp AT A GIVEN RPM = (rpm/937)<sup>3</sup>  
 MAXIMUM RPM = 1375  
 TIP SPEED (ft/min) = rpm x 5.595  
 MAX NEMA MOTOR FRAME SIZE = 184T  
 OUTLET VELOCITY (ft/min) = 0.1870 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 200HP - Belt Drive



Damper size = 28 x 28 (711 x 711)  
 Unit weight\*\* = 314 (142)  
 Housing thickness = 18 ga

Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

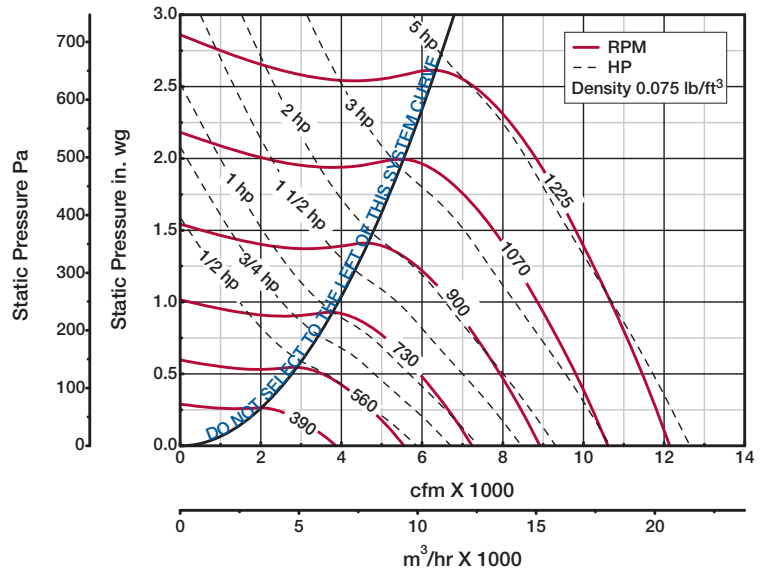
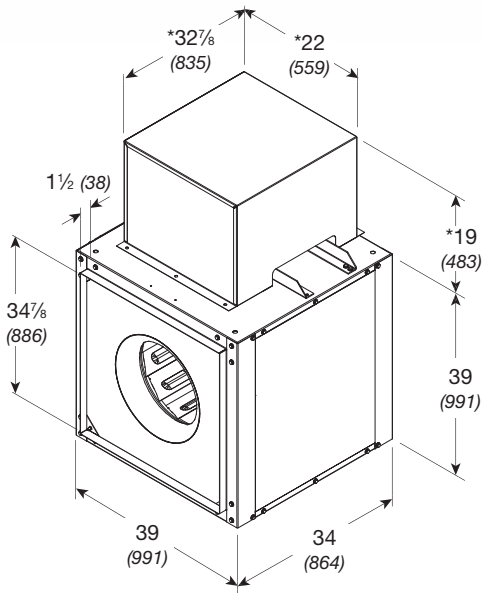
Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	3.000	
<b>200HP</b>													
200HP-5	1/2	850	CFM	2580	2037								
			BHP	0.47	0.47								
			Sones	12.3	11.6								
		880	CFM	2724	2258								
			BHP	0.51	0.52								
			Sones	12.8	12.3								
200HP-7	3/4	945	CFM	3032	2656	1943							
			BHP	0.63	0.65	0.61							
			Sones	14.2	14.1	12.4							
		1009	CFM	3327	3003	2556							
			BHP	0.76	0.78	0.78							
			Sones	15.6	15.9	14.7							
200HP-10	1	1111	CFM	3787	3495	3179	2732						
			BHP	1.00	1.03	1.05	1.04						
			Sones	16.9	17.4	16.9	15.3						
200HP-15	1 1/2	1191	CFM	4129	3870	3594	3263	2760					
			BHP	1.22	1.26	1.28	1.29	1.27					
			Sones	17.9	18.0	18.9	17.2	15.7					
		1271	CFM	4466	4235	3979	3716	3379	2808				
			BHP	1.47	1.51	1.55	1.57	1.57	1.52				
			Sones	18.8	18.9	21	19.8	17.5	16.2				
200HP-20	2	1335	CFM	4733	4523	4282	4035	3748	3382	2732			
			BHP	1.69	1.74	1.78	1.81	1.82	1.81	1.72			
			Sones	19.7	19.9	21	22	19.6	17.7	16.5			
		1399	CFM	4998	4803	4578	4344	4108	3802	3409	2702		
			BHP	1.93	1.99	2.03	2.07	2.09	2.09	2.08	1.95		
			Sones	21	21	21	24	22	19.5	18.1	17.0		
200HP-30	3	1467	CFM	5277	5092	4888	4667	4442	4190	3898	3473	2724	
			BHP	2.22	2.28	2.33	2.37	2.40	2.42	2.42	2.39	2.22	
			Sones	23	22	22	24	25	22	19.6	18.7	17.6	
		1602	CFM	5823	5659	5489	5291	5089	4883	4669	4401	4089	2894
			BHP	2.86	2.93	3.00	3.04	3.08	3.12	3.15	3.15	3.14	2.86
			Sones	26	26	25	25	27	27	25	23	22	20

MAX Bhp at A GIVEN RPM = (rpm/1093)<sup>3</sup>  
 MAXIMUM RPM = 1602  
 TIP SPEED (ft/min) = rpm x 5.595  
 MAX NEMA MOTOR FRAME SIZE = 184T  
 OUTLET VELOCITY (ft/min) = 0.1870 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.



# BSQ 240 - Belt Drive



Damper size = 35 x 35 (889 x 889)  
 Unit weight\*\* = 415 (188)  
 Housing thickness = 18 ga

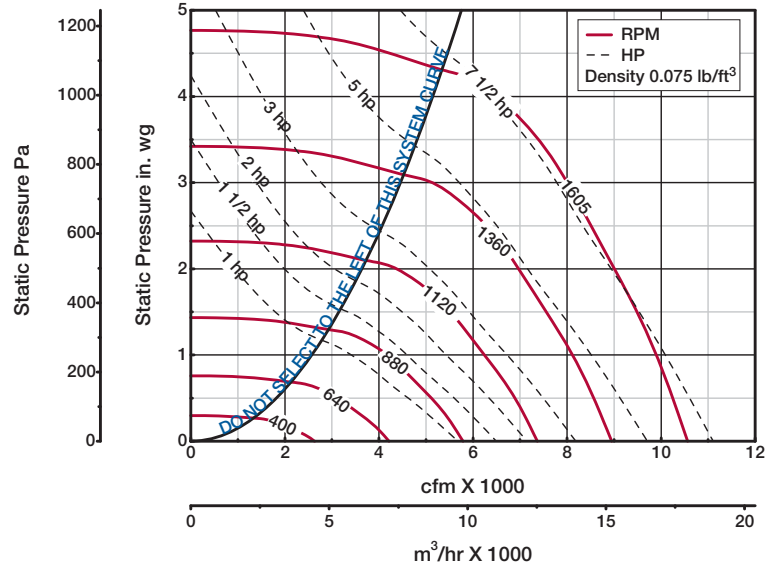
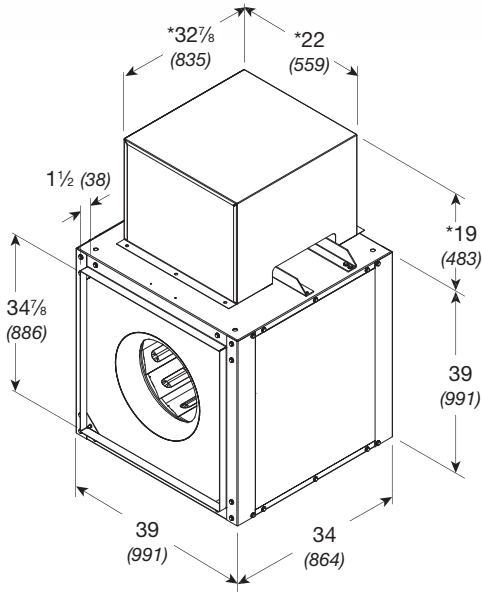
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.125	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	
<b>240</b>													
240-5	1/2	500	CFM	4518	4001								
			BHP	0.33	0.35								
			Sones	10.7	10.2								
		569	CFM	5269	4833	3685							
			BHP	0.48	0.51	0.51							
			Sones	12.3	11.8	10.8							
240-7	3/4	651	CFM	6132	5768	4946							
			BHP	0.70	0.74	0.78							
			Sones	14.3	13.9	12.9							
240-10	1	684	CFM	6475	6135	5368	4273						
			BHP	0.81	0.85	0.90	0.89						
			Sones	15.2	14.9	13.8	12.6						
		717	CFM	6816	6498	5782	4884						
			BHP	0.93	0.97	1.03	1.03						
			Sones	16.2	15.9	14.9	13.6						
240-15	1 1/2	826	CFM	7935	7680	7086	6425	5604					
			BHP	1.41	1.45	1.54	1.59	1.58					
			Sones	19.5	19.5	18.7	17.4	16.2					
240-20	2	903	CFM	8720	8488	7960	7384	6756	5889				
			BHP	1.83	1.88	1.97	2.05	2.09	2.05				
			Sones	22	22	22	20	18.9	17.9				
240-30	3	969	CFM	9390	9174	8695	8176	7612	6962	6075			
			BHP	2.25	2.31	2.41	2.50	2.56	2.57	2.52			
			Sones	25	24	24	23	21	20	19.4			
		1034	CFM	10048	9845	9409	8936	8421	7881	7219	6268		
			BHP	2.73	2.79	2.90	3.01	3.08	3.14	3.11	3.03		
			Sones	28	27	27	26	23	22	22	21		
240-50	5	1098	CFM	10694	10503	10105	9660	9192	8695	8160	7510	6451	
			BHP	3.26	3.32	3.44	3.56	3.65	3.72	3.76	3.72	3.58	
			Sones	31	31	30	29	26	24	24	23	22	
		1225	CFM	11973	11802	11460	11070	10671	10245	9804	9345	8797	7124
			BHP	4.50	4.58	4.72	4.84	4.97	5.07	5.16	5.22	5.20	4.95
			Sones	41	40	38	37	34	31	28	28	28	26

MAX Bhp AT A GIVEN RPM = (rpm/706)<sup>3</sup>  
 MAXIMUM RPM = 1225  
 TIP SPEED (ft/min) = rpm x 6.414  
 MAX NEMA MOTOR FRAME SIZE = 215T  
 OUTLET VELOCITY (ft/min) = 0.1192 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 240HP - Belt Drive



Damper size = 35 x 35 (889 x 889)  
 Unit weight\*\* = 415 (188)  
 Housing thickness = 18 ga

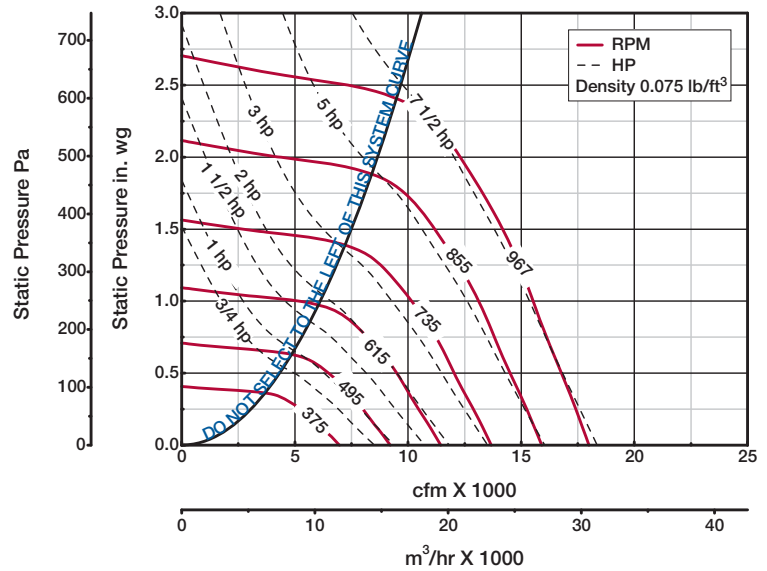
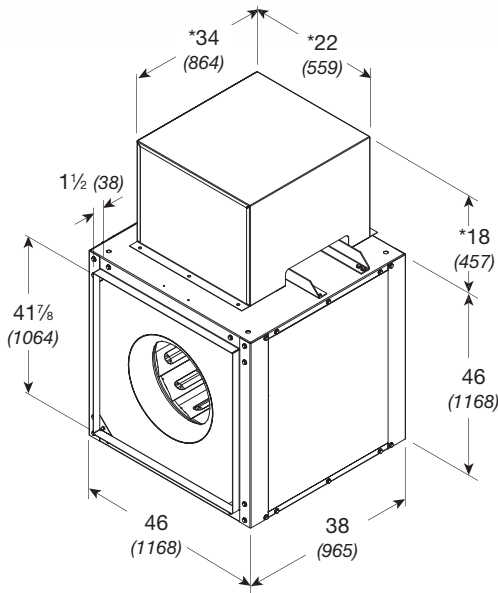
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.50	0.75	1.00	1.25	1.50	2.00	2.50	3.00	3.50	4.00	
<b>240HP</b>													
240HP-10	1	780	CFM	4321	3791	2789							
			BHP	0.88	0.90	0.83							
			Sones	14.4	14.0	13.5							
		820	CFM	4643	4149	3492							
			BHP	1.01	1.04	1.03							
			Sones	15.2	14.8	14.3							
240HP-15	1½	939	CFM	5552	5159	4721	4161						
			BHP	1.48	1.54	1.57	1.55						
			Sones	18.1	17.3	16.8	16.3						
240HP-20	2	986	CFM	5903	5541	5135	4693	4013					
			BHP	1.69	1.76	1.81	1.82	1.76					
			Sones	19.2	18.2	17.9	17.5	17.0					
		1033	CFM	6251	5909	5533	5128	4609					
			BHP	1.93	2.01	2.07	2.09	2.07					
			Sones	20	19.3	18.9	18.6	18.2					
240HP-30	3	1183	CFM	7336	7046	6747	6419	6073	5209				
			BHP	2.85	2.94	3.02	3.09	3.13	3.10				
			Sones	25	24	22	22	22	21				
240HP-50	5	1256	CFM	7843	7589	7307	7016	6700	6030	4920			
			BHP	3.37	3.48	3.57	3.65	3.72	3.77	3.59			
			Sones	27	26	25	24	23	22	22			
		1329	CFM	8346	8125	7859	7593	7304	6686	5897			
			BHP	3.96	4.09	4.18	4.28	4.35	4.44	4.40			
			Sones	30	28	27	26	25	24	23			
		1402	CFM	8848	8657	8405	8152	7897	7327	6721	5790		
			BHP	4.61	4.76	4.86	4.96	5.06	5.20	5.24	5.09		
			Sones	33	31	30	29	27	25	25	24		
240HP-75	7½	1470	CFM	9313	9132	8908	8667	8427	7901	7334	6622	5565	
			BHP	5.28	5.44	5.57	5.67	5.77	5.94	6.02	5.97	5.70	
			Sones	36	34	32	32	31	27	26	25	24	
		1605	CFM	10232	10066	9896	9675	9455	9007	8512	7987	7348	6474
			BHP	6.80	6.98	7.16	7.27	7.38	7.60	7.78	7.84	7.80	7.57
			Sones	43	42	39	38	38	34	30	29	28	27

MAX Bhp AT A GIVEN RPM =  $(rpm/807)^3$   
 MAXIMUM RPM = 1605  
 TIP SPEED (ft/min) =  $rpm \times 6.414$   
 MAX NEMA MOTOR FRAME SIZE = 215T  
 OUTLET VELOCITY (ft/min) =  $0.1192 \times cfm$

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 300 - Belt Drive



Damper size = 42 x 42 (1067 x 1067)  
 Unit weight\*\* = 537 (244)  
 Housing thickness = 16 ga

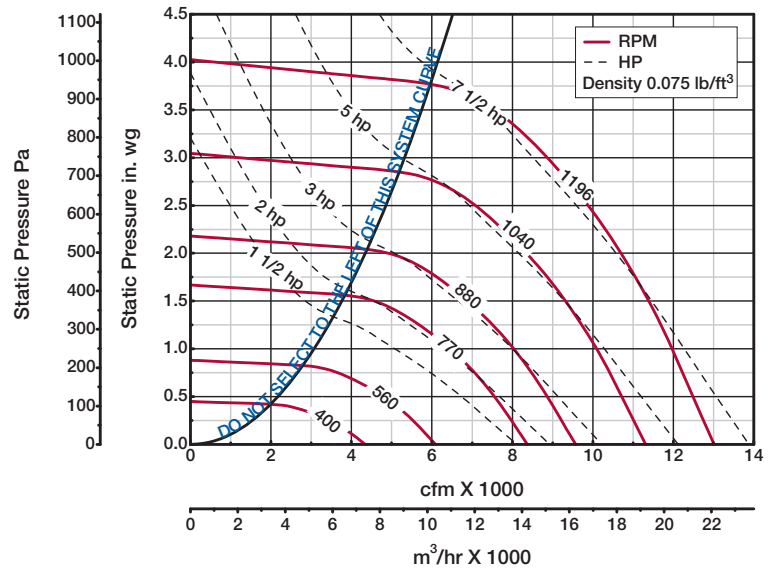
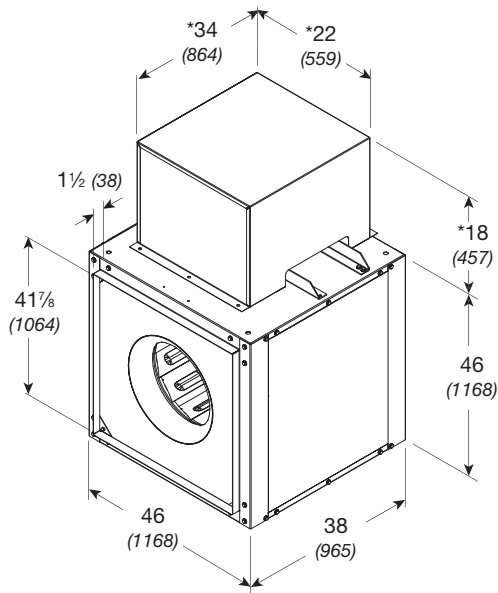
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.125	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.250	
<b>300HP</b>													
300-7	3/4	410	CFM	6897	6141								
			BHP	0.57	0.60								
			Sones	10.4	10.3								
		449	CFM	7693	7033	4827							
			BHP	0.75	0.78	0.73							
			Sones	12.2	11.6	10.5							
300-10	1	494	CFM	8598	7982	6450							
			BHP	0.99	1.02	1.04							
			Sones	14.7	13.8	12.0							
300-15	1 1/2	566	CFM	10022	9469	8363	6662						
			BHP	1.48	1.51	1.57	1.52						
			Sones	17.2	16.6	15.1	13.5						
300-20	2	623	CFM	11129	10636	9676	8418						
			BHP	1.96	2.00	2.08	2.09						
			Sones	19.3	19.0	17.7	16.3						
300-30	3	668	CFM	11997	11546	10647	9617	8157					
			BHP	2.40	2.46	2.54	2.59	2.52					
			Sones	21	21	19.8	18.5	17.2					
		713	CFM	12862	12446	11588	10703	9547	7803				
			BHP	2.91	2.97	3.06	3.13	3.13	2.95				
			Sones	23	23	22	21	19.8	18.5				
300-50	5	757	CFM	13704	13321	12496	11714	10727	9442				
			BHP	3.47	3.55	3.64	3.73	3.76	3.68				
			Sones	25	25	24	23	22	21				
		845	CFM	15380	15041	14307	13604	12860	11957	10839	9309		
			BHP	4.80	4.90	5.01	5.12	5.20	5.23	5.16	4.93		
			Sones	27	27	28	27	26	25	24	23		
300-75	7 1/2	906	CFM	16538	16221	15548	14870	14237	13481	12576	11497	10099	
			BHP	5.91	6.00	6.14	6.25	6.37	6.44	6.44	6.34	6.10	
			Sones	30	30	31	30	29	29	27	26	26	
		967	CFM	17693	17396	16776	16124	15526	14888	14171	13273	12242	11047
			BHP	7.17	7.27	7.44	7.55	7.67	7.78	7.85	7.82	7.71	7.50
			Sones	33	33	34	34	33	33	32	30	29	28

MAX Bhp AT A GIVEN RPM = (rpm/486)<sup>3</sup>  
 MAXIMUM RPM = 967  
 TIP SPEED (ft/min) = rpm x 7.984  
 MAX NEMA MOTOR FRAME SIZE = 215T  
 OUTLET VELOCITY (ft/min) = 0.0826 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 300HP - Belt Drive



Damper size = 42 x 42 (1067 x 1067)  
 Unit weight\*\* = 537 (244)  
 Housing thickness = 16 ga

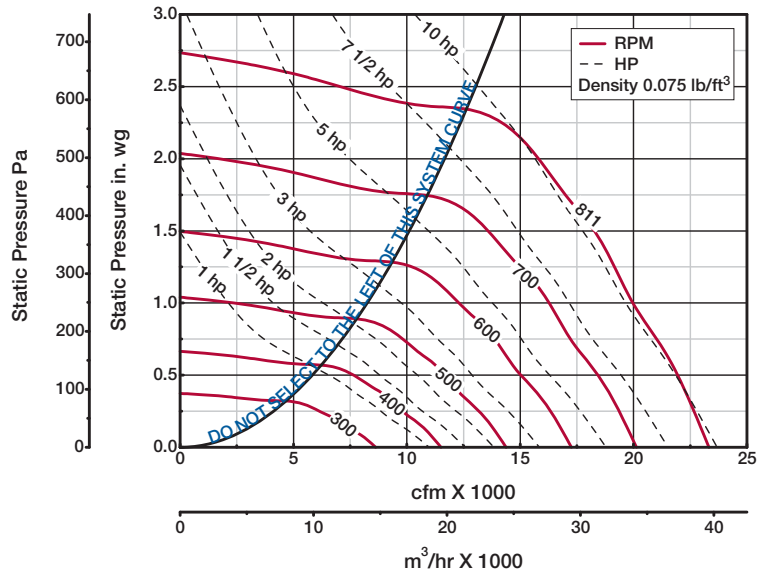
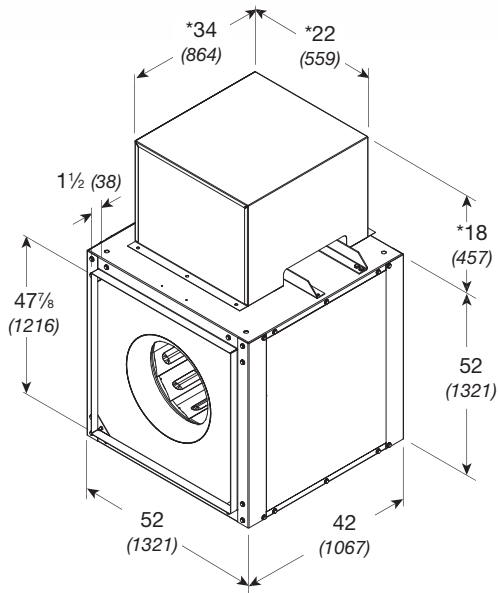
Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	3.000	3.500	
<b>300HP</b>													
300HP-15	1 1/2	620	CFM	5642	4823								
			BHP	1.06	1.10								
			Sones	14.4	14.0								
		694	CFM	6610	6001	5168	3452						
			BHP	1.44	1.51	1.53	1.36						
			Sones	16.5	16.1	15.8	16.3						
300HP-20	2	725	CFM	6998	6436	5729	4747						
			BHP	1.63	1.71	1.75	1.71						
			Sones	17.5	17.2	16.8	16.6						
		777	CFM	7641	7151	6556	5799	4740					
			BHP	1.98	2.07	2.13	2.15	2.07					
			Sones	19.3	19.1	18.5	18.4	18.2					
300HP-30	3	829	CFM	8265	7830	7317	6701	5940	4535				
			BHP	2.36	2.47	2.56	2.61	2.61	2.40				
			Sones	21	21	21	20	20	20				
		934	CFM	9492	9142	8746	8281	7752	7130	6393			
			BHP	3.29	3.44	3.56	3.65	3.72	3.74	3.71			
			Sones	26	26	26	25	25	25	24			
300HP-50	5	987	CFM	10105	9788	9417	9012	8564	8027	7411	5200		
			BHP	3.85	4.02	4.14	4.25	4.34	4.40	4.41	3.99		
			Sones	27	27	27	26	26	25	25	25		
		1039	CFM	10702	10401	10067	9711	9292	8847	8323	7028		
			BHP	4.45	4.63	4.78	4.90	5.00	5.09	5.14	5.09		
			Sones	28	27	27	27	26	26	26	25		
		1091	CFM	11297	11010	10710	10371	10006	9601	9149	8055	6257	
			BHP	5.11	5.30	5.48	5.61	5.73	5.83	5.91	5.95	5.57	
			Sones	29	28	28	28	27	27	26	26	26	
300HP-75	7 1/2	1144	CFM	11900	11626	11353	11036	10713	10336	9950	9020	7832	
			BHP	5.86	6.05	6.25	6.40	6.54	6.65	6.76	6.88	6.82	
			Sones	29	29	29	29	29	28	27	27	26	
		1196	CFM	12489	12228	11966	11681	11372	11047	10677	9853	8840	7545
			BHP	6.65	6.86	7.06	7.24	7.39	7.53	7.64	7.81	7.85	7.63
			Sones	30	30	30	30	30	29	28	28	28	27

MAX Bhp AT A GIVEN RPM = (rpm/602)<sup>3</sup>  
 MAXIMUM RPM = 1196  
 TIP SPEED (ft/min) = rpm x 7.984  
 MAX NEMA MOTOR FRAME SIZE = 215T  
 OUTLET VELOCITY (ft/min) = 0.0826 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 360 - Belt Drive



Damper size = 48 x 48 (1219 x 1219)  
 Unit weight\*\* = 686 (311)  
 Housing thickness = 16 ga

Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

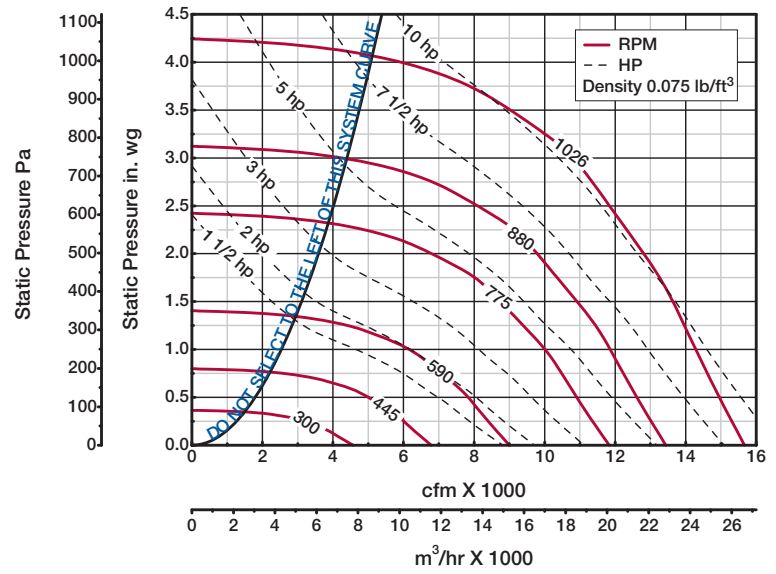
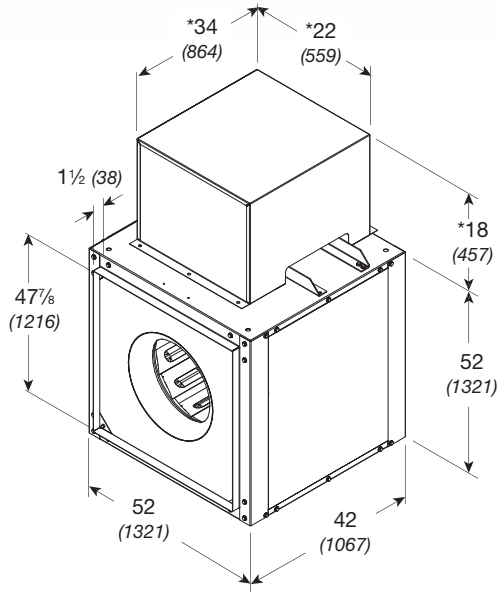
Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.125	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.250	
<b>360</b>													
360-10	1	320	CFM	8205	6979								
			BHP	0.63	0.64								
			Sones	10.8	10.5								
		376	CFM	10039	9008								
			BHP	1.01	1.04								
			Sones	12.6	12.5								
360-15	1 1/2	404	CFM	10898	9941	7828							
			BHP	1.25	1.28	1.25							
			Sones	13.6	13.6	12.2							
		431	CFM	11720	10872	8980							
			BHP	1.51	1.55	1.55							
			Sones	14.7	14.7	13.7							
360-20	2	474	CFM	13018	12323	10736	8489						
			BHP	1.99	2.05	2.09	1.96						
			Sones	16.1	16.6	15.7	14.1						
360-30	3	543	CFM	15081	14544	13112	11627	9553					
			BHP	2.96	3.05	3.12	3.12	2.93					
			Sones	19.1	19.6	19.4	18.1	16.6					
360-50	5	643	CFM	18041	17587	16511	15327	14081	12560				
			BHP	4.87	4.98	5.13	5.19	5.19	5.05				
			Sones	28	27	27	26	25	23				
360-75	7 1/2	690	CFM	19423	19001	18083	16881	15926	14555	13120			
			BHP	6.00	6.12	6.31	6.38	6.45	6.38	6.20			
			Sones	29	29	29	28	28	27	25			
		737	CFM	20802	20407	19615	18505	17515	16475	15153	13704		
			BHP	7.30	7.42	7.66	7.75	7.82	7.84	7.72	7.49		
			Sones	31	31	32	32	31	30	29	28		
360-100	10	774	CFM	21885	21509	20755	19765	18744	17893	16693	15429	13860	
			BHP	8.44	8.57	8.82	8.95	9.03	9.11	9.03	8.86	8.55	
			Sones	32	32	33	34	33	33	32	30	30	
		811	CFM	22967	22607	21888	21011	19986	19146	18195	16996	15786	14128
			BHP	9.69	9.83	10.1	10.27	10.35	10.44	10.45	10.34	10.13	9.73
			Sones	33	34	35	37	36	35	34	33	32	32

MAX Bhp AT A GIVEN RPM = (rpm/370)<sup>3</sup>  
 MAXIMUM RPM = 811  
 TIP SPEED (ft/min) = rpm x 9.424  
 MAX NEMA MOTOR FRAME SIZE = 215T  
 OUTLET VELOCITY (ft/min) = 0.0632 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.



# BSQ 360HP - Belt Drive



Damper size = 48 x 48 (1219 x 1219)  
 Unit weight\*\* = 686 (311)  
 Housing thickness = 16 ga

Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

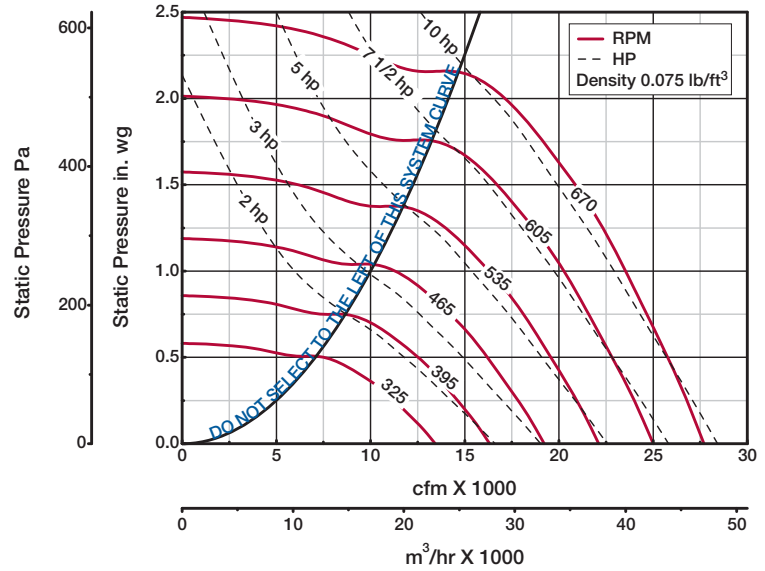
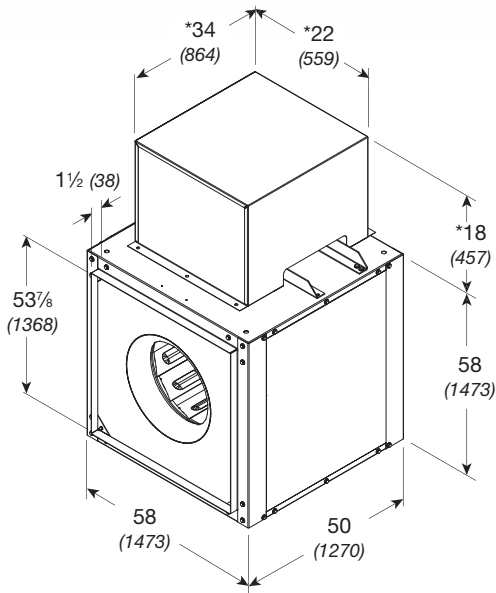
Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.500	0.750	1.000	1.250	1.500	2.000	2.500	3.000	3.500	4.000	
<b>360HP</b>													
360HP-15	1 1/2	490	CFM	5939	4709								
			BHP	1.12	1.12								
			Sones	16.1	15.8								
		545	CFM	7012	6115	4672							
			BHP	1.51	1.55	1.51							
			Sones	17.6	16.9	16.9							
360HP-20	2	600	CFM	8000	7272	6410	4868						
			BHP	1.97	2.06	2.09	1.99						
			Sones	18.4	17.6	17.3	17.4						
360HP-30	3	644	CFM	8745	8143	7381	6424	4630					
			BHP	2.40	2.52	2.55	2.57	2.37					
			Sones	19.0	18.3	17.7	17.7	18.1					
		687	CFM	9463	8955	8277	7528	6453					
			BHP	2.87	3.01	3.09	3.12	3.08					
			Sones	19.5	19.0	18.4	18.2	18.2					
360HP-50	5	730	CFM	10177	9716	9142	8465	7741	4517				
			BHP	3.41	3.56	3.68	3.71	3.77	3.28				
			Sones	20	19.7	19.2	18.6	18.6	20				
		815	CFM	11576	11150	10740	10198	9593	8138	4978			
			BHP	4.63	4.83	4.99	5.13	5.16	5.20	4.55			
			Sones	21	21	21	20	20	19.9	22			
360HP-75	7 1/2	874	CFM	12535	12131	11747	11319	10801	9633	7849			
			BHP	5.64	5.88	6.05	6.22	6.35	6.42	6.29			
			Sones	24	23	23	22	22	22	22			
		933	CFM	13487	13108	12740	12382	11939	10909	9748	7674		
			BHP	6.80	7.04	7.26	7.45	7.61	7.75	7.86	7.52		
			Sones	27	27	25	25	25	24	24	25		
360HP-100	10	980	CFM	14241	13880	13523	13182	12822	11879	10833	9417	6847	
			BHP	7.83	8.08	8.33	8.53	8.72	8.96	9.05	8.99	8.27	
			Sones	30	30	28	27	27	27	26	27	28	
		1026	CFM	14975	14631	14286	13957	13631	12806	11838	10796	8982	5679
			BHP	8.93	9.20	9.47	9.69	9.89	10.25	10.31	10.46	10.12	8.60
			Sones	33	34	32	30	29	30	29	29	30	32

MAX Bhp AT A GIVEN RPM = (rpm/469)<sup>3</sup>  
 MAXIMUM RPM = 1026  
 TIP SPEED (ft/min) = rpm x 9.424  
 MAX NEMA MOTOR FRAME SIZE = 215T  
 OUTLET VELOCITY (ft/min) = 0.0632 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# BSQ 420 - Belt Drive



Damper size = 54 x 54 (1372 x 1372)  
 Unit weight\*\* = 789 (358)  
 Housing thickness = 14 ga

Dimensions shown in inches (millimeters) and weight is shown in pounds (kilograms).  
 \*Motor cover is optional. Size may be greater depending on motor.  
 \*\*Weight shown is largest cataloged Open Drip Proof motor.

Model Number	Motor HP	Fan RPM	CFM / Static Pressure in Inches wg										
			0.125	0.250	0.375	0.500	0.750	1.000	1.250	1.500	1.750	2.000	
<b>420</b>													
420-20	2	270	CFM	9901	8281								
			BHP	0.68	0.70								
			Sones	6.0	3.3								
		349	CFM	13501	12428	11210	9592						
			BHP	1.41	1.48	1.51	1.49						
			Sones	9.4	8.7	8.1	7.8						
		389	CFM	15275	14340	13334	12132						
			BHP	1.93	2.02	2.08	2.09						
			Sones	13.2	12.3	11.5	10.8						
420-30	3	417	CFM	16500	15633	14714	13745	11026					
			BHP	2.37	2.46	2.53	2.58	2.52					
			Sones	16.6	15.7	14.8	13.9	12.5					
		445	CFM	17704	16910	16068	15188	12941					
			BHP	2.86	2.96	3.05	3.11	3.12					
			Sones	20	19.5	18.6	17.7	15.9					
420-50	5	487	CFM	19500	18801	18054	17257	15475	13113				
			BHP	3.71	3.84	3.95	4.02	4.11	4.03				
			Sones	22	21	21	19.8	18.2	16.9				
		528	CFM	21244	20625	19937	19231	17747	15850	13154			
			BHP	4.70	4.85	4.97	5.08	5.22	5.24	4.99			
			Sones	25	24	23	23	21	20	18.7			
420-75	7 1/2	566	CFM	22854	22301	21659	21017	19644	18080	16134	13026		
			BHP	5.76	5.94	6.07	6.19	6.36	6.46	6.39	5.95		
			Sones	28	27	26	25	24	24	22	21		
		604	CFM	24459	23950	23363	22762	21502	20206	18533	16581		
			BHP	6.98	7.17	7.32	7.45	7.66	7.83	7.84	7.71		
			Sones	31	30	30	29	28	27	26	25		
420-100	10	635	CFM	25765	25281	24743	24171	22996	21762	20341	18681	16692	
			BHP	8.09	8.29	8.46	8.60	8.85	9.03	9.12	9.09	8.88	
			Sones	35	33	33	32	31	30	30	29	28	
		670	CFM	27237	26778	26291	25749	24660	23491	22322	20793	19111	16873
			BHP	9.47	9.69	9.88	10.03	10.33	10.52	10.71	10.70	10.61	10.24
			Sones	39	37	36	36	34	34	34	33	32	31

MAX Bhp AT A GIVEN RPM = (rpm/304)<sup>3</sup>  
 MAXIMUM RPM = 670  
 TIP SPEED (ft/min) = rpm x 11.060  
 MAX NEMA MOTOR FRAME SIZE = 215T  
 OUTLET VELOCITY (ft/min) = 0.0496 x cfm

Performance certified is for installation type B: Free inlet, Ducted 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 1.5 m (5 feet) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels.

# Direct Drive Specifications

## Model SQ



Duct mounted supply, exhaust or return fans shall be of the centrifugal, direct-driven, inline type. The fan housing shall be of a square design constructed of heavy-gauge galvanized steel or aluminum and shall include square duct mounting collars.



Fan construction shall include two removable access panels located perpendicular to the motor mounting panel. The access panels must be of sufficient size to permit easy access to all interior components.

The fan wheel shall be centrifugal, backward-inclined, constructed of aluminum, and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced.

Motors shall be permanently lubricated and carefully matched to the fan loads. Motors shall be readily accessible for maintenance.

A NEMA-1 disconnect switch shall be provided as standard, except with explosion resistant motors, where disconnects are optional. Factory wiring shall be provided from motor to the handy box.

All fans shall bear the AMCA Certified Ratings Seal for Sound and Air Performance.

Fan shall bear a permanently affixed manufacturer's nameplate containing the model number and individual serial number for future identification.

Fan shall be model SQ as manufactured by Greenheck Fan Corporation of Schofield, Wisconsin, USA.

### Vari-Green® Motor

Motor to be an electronic commutation (EC) motor specifically designed for fan applications. AC induction type motors are not acceptable. Examples of unacceptable motors are: Shaded Pole, Permanent Split Capacitor (PSC), Split Phase, Capacitor Start and 3 phase induction type motors. Motors shall be permanently lubricated with heavy-duty ball bearings to match the fan load and prewired to the specific voltage and phase. Internal motor circuitry shall convert AC power supplied to the fan to DC power to operate the motor. Motor shall be speed controllable down to 20% of full speed (80% turndown). Speed shall be controlled by either a potentiometer dial mounted on the motor or by a 0-10 VDC signal. Motor shall be a minimum of 85% efficient at all speeds.



### Vari-Green® Controls

#### Constant Pressure

Greenheck's Constant Pressure system shall be a complete package designed to regulate fan speed based on demand while maintaining a constant static pressure. System shall include fan with Vari-Green Motor, Vari-Green Constant Pressure control, transformer, and pressure tap. Vari-Green Constant Pressure control shall have the transducer integrated with a touch button control panel. Control shall have a run mode and a program mode preventing unwanted changes when in run mode. Transformer shall be factory-supplied to provide power to the Vari-Green Constant Pressure controller. System shall include a self-sealing aluminum pressure tube with ¼-inch connection. Fan shall be centrifugal direct drive type in upblast, downblast, or inline configuration with controllable EC Vari-Green motor.

#### Remote Dial

Remote dial shall be a Vari-Green control specifically designed to provide 0-10 VDC signal to Greenheck's Vari-Green Motor.

#### 2-Speed

2-Speed control shall be a Vari-Green Control specifically designed to allow the Vari-Green Motor to operate at two distinct speeds. 2-Speed Control shall include two dials that may be set at any point between 0 and 10 VDC and an integral transformer capable of reducing 115/230 volt AC power to 24 volt AC power.

### 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.

# Belt Drive Specifications

## Model BSQ

Duct mounted supply, exhaust or return fans shall be of the centrifugal, belt-driven, inline type. The fan housing shall be of a square design constructed of heavy-gauge galvanized steel or aluminum and shall include square duct mounting collars.

Fan construction shall include two removable access panels located perpendicular to the motor mounting panel. The access panels must be of sufficient size to permit easy access to all interior components.

The fan wheel shall be centrifugal backward-inclined, constructed of aluminum and shall include a wheel cone carefully matched to the inlet cone for precise running tolerances. Wheels shall be statically and dynamically balanced.

Motors shall be heavy-duty ball bearing type carefully matched to the fan load and furnished at the specified voltage, phase, and enclosure. Motors and drives shall be mounted out of the airstream. Motors shall be readily accessible for maintenance.

Precision ground and polished fan shafts shall be mounted in permanently sealed, lubricated pillow block ball bearings. Bearings shall be selected for a minimum  $L_{10}$  life in excess of 100,000 hours ( $L_{50}$  average life in excess of 500,000 hours) at maximum cataloged operating speed.

Drives shall be sized for a minimum of 150 percent of driven horsepower.

Pulleys shall be of the fully machined cast iron type, keyed and securely attached to the wheel and motor shafts. Motor pulleys shall be adjustable for final system balancing.

A NEMA-1 disconnect switch shall be provided as standard, except with explosion resistant motors, where disconnects are optional. Factory wiring shall be provided from motor to the handy box.

Fan shall bear the AMCA Certified Ratings Seal for Sound and Air Performance.

Fan shall bear a permanently affixed manufacturer's nameplate containing the model number and individual serial number for future identification.

Fan shall be model BSQ as manufactured by Greenheck Fan Corporation of Schofield, Wisconsin, USA.





# Quick Delivery and Quick Build Programs

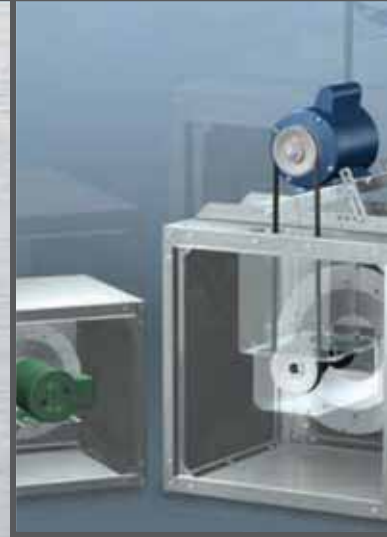


Greenheck Fan Corporation offers an extensive selection of Quick Delivery (QD) and Quick Build (QB) offerings. The QD program is Greenheck's stock program and the QB program offers configurable fans in one, three, five, or ten days.

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.

The Greenheck Stock and Quick Build catalog is a great resource for specific options and accessories available with QD and QB fans.

Model	Best Available Program
SQ-75 through 120 and 140	In Stock
BSQ-70 through 120, 140 through 180 and 240	
SQ-60 through 70, 130 and 160	1 Day
BSQ-130 and 200	
High Pressure BSQ-130HP through 240HP	3 Days
BSQ-300 through 420	
High Pressure BSQ-300HP and 360HP	



## 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](http://greenheck.com) within the product area tabs and in the Library under Warranties.



Prepared to Support Green Building Efforts

