

# Mixed Flow Fans Belt and Direct Drive Models QEI-L, QEI, QEID



BUILDING VALUE IN AIR.



## Mixed Flow Fans

Mixed flow inline fans can be used for supply, exhaust, or return air installations. Our **patented** design excels in commercial applications where low sound is critical. In addition, Greenheck's mixed flow fans are more efficient than comparably sized tubular centrifugal and vane axial fans, thus reducing the required motor horsepower and lowering operating costs.

*Greenheck's mixed flow fans are the quietest tubular inline fans in the industry!*

- Performance as cataloged is assured. All sizes are licensed to bear the AMCA Certified Sound (both inlet and outlet) and Air Performance Seal.

| UL/cUL Listed                   | QEI-L | QEI-I/II | QEID |
|---------------------------------|-------|----------|------|
| 705 - Electrical                | ✓     | ✓        | ✓    |
| Emergency Smoke Evacuation      |       | ✓        | ✓    |
| 762 - Restaurant Grease Exhaust |       | ✓        |      |

- All sizes are tested before they leave the factory to ensure trouble-free operation at the jobsite.
- Compact size and a "Universal Mounting System" make tight space considerations and last minute mounting changes easy to handle at the jobsite.
- The belt drive models use air handling quality bearings that are 100% inspected for swivel torque, noise levels, and bore tolerances.
- These products are subjected to extensive life cycle testing, assuring many years of reliable performance.

## Typical Mixed Flow Applications:

Recommended for any ventilation application that requires low sound and high efficiency, such as office buildings, parking garages, concert halls, libraries, and educational facilities.



Greenheck Fan Corporation certifies that the model QEI-L, QEI-I/II and QEID 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 AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

For QEID performance showing AMCA licensed data for sound and air performance, please refer to the QEID Sound and Air Performance Supplement found on our website at [www.greenheck.com](http://www.greenheck.com).



See page 10 for details.

## Model QEI-L – Belt Drive

- 11 sizes available (12 thru 36)
- Volume Range: 700 - 40,000 cfm (1190 - 67,960 m<sup>3</sup>/hr)
- Static Pressure: Up to 5 in. wg (1245 Pa)



## Model QEI-I/II – Belt Drive

- 17 sizes available (9 thru 60)
- Two classes of construction
- Volume Range: 500 - 115,000 cfm (850 - 195,386 m<sup>3</sup>/hr)
- Static Pressure
  - Up to 5 in. wg (1245 Pa) Class I
  - Up to 8.5 in. wg (2120 Pa) Class II



## Model QEID – Direct Drive

- 15 sizes available (12 thru 54)
- 50 - 100% wheel widths
- Volume Range: 800 - 83,000 cfm (1,360 - 141,000 m<sup>3</sup>/hr)
- Static Pressure: Up to 10.5 in. wg (2370 Pa)



Patented (QEI/QEID): USA Patent No. 7048499  
China (P.R.) Patent No. CN1294361C  
Mexico Patent No. 243465

## Housing

Tubular housings are constructed of welded steel to eliminate air leakage. Integral straightening vanes are constructed from steel and welded into place.

## Wheel – Mixed Flow

Fabricated wheels are constructed from steel. The blade profiles are angled and contoured for the most efficient and quiet performance.

## Bearings (Belt Drive)

Standard bearings are premium air handling quality, grease lubricated, self-aligning, ball or roller type. Bearings are selected with a basic rating fatigue life  $L_{10}$  per ABMA standards, in excess of 80,000 hours ( $L_{50}$  at 400,000 hours) at the maximum operating speed for the QEI-I/II and QEI-L in the horizontal position. The QEI-L bearings are selected with a basic rating fatigue life  $L_{10}$  in excess of 50,000 hours ( $L_{50}$  at 250,000 hours) in vertical position.

## Bolted Access Door

A bolted access door provides an opening through the fan housing for cleaning or visual inspection of the wheel. A hinged access door is available as an accessory.

## Belt Guard (Belt Drive)

A totally enclosed belt guard provides protection from rotating pulleys and belts. Belt guards meet OSHA Standards.

## Slip-Fit Duct Connection (QEI-I/II & QEID)

Inlets and outlets are designed with extended collars for slip-fit duct connections as standard. QEI-L is flanged as standard. Companion flanges can be ordered for slip fit connections.

## Adjustable Motor Bases (Belt Drive)

Rigid, heavy-gauge steel motor bases are welded to the fan housing and include heavy-duty adjustment screws for belt tensioning.

## Extended Lube Lines

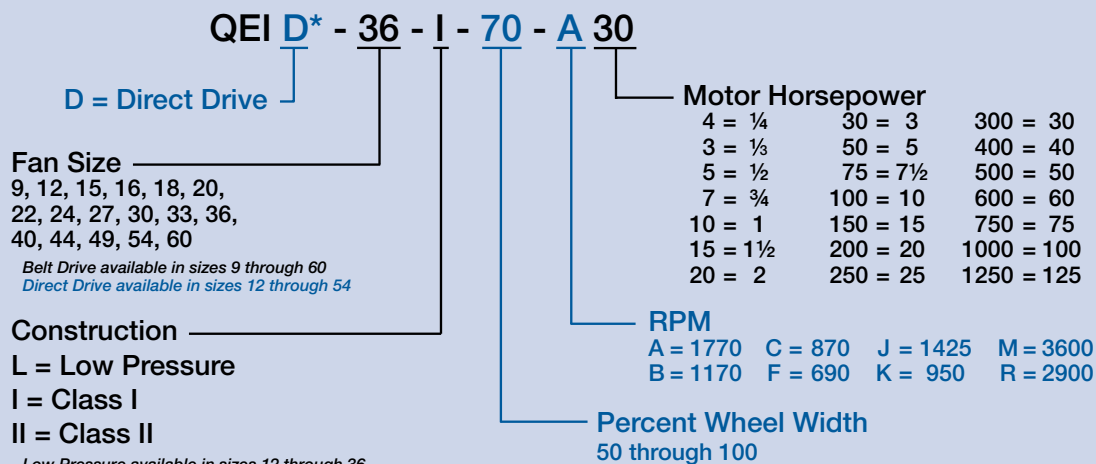
Belt drive units have nylon lubrication lines with grease fittings that allow bearing lubrication without disassembling the fan. Grease fittings are mounted on the outside of the fan housing. Direct drive units have extended lubrication lines for the motor bearings, if required. Smaller frame sized motors are typically sealed and not lubricatable.

## Permatector™ Coating

Greenheck's Permatector coating is a thermosetting polyester urethane, electrostatically applied to provide uniform thickness and a clean appearance. Permatector coatings also provide excellent corrosion characteristics for general applications, both indoor and outdoor. For corrosive environments (ie. coastal), see page 9 for information on our zinc-rich basecoat technology.

## Model Number Nomenclature

The model number code provides a numbering system designed to identify the fan model, size and horsepower.



\* Blue text is specific to direct drive model QEID only



## Quality Assurance Test

Before shipment, all Greenheck mixed flow fans are tested at the design speed after final assembly. QEI-L fans are checked for amp draw and the levels are recorded. QEI-I/II and QEID fans are subjected to a complete vibration analysis. The maximum allowable vibration on a QEI-I/II at the fan bearings is 0.15 in/sec. peak velocity for the specified RPM. QEID maximum vibration is 0.08 in/sec.



peak velocity on the fan housing for the specified RPM. A record of the vibration test result is available upon request.

By performing the vibration test, we are able to provide more than wheel balancing, it is also a diagnostic tool for finding potential problems. A defective bearing or motor, bent shaft or misaligned sheaves may cause excessive vibration. A complete vibration test will uncover these problems before the fan leaves the factory.

## Electrostatic Powder Coatings

Powder coatings offer a uniform, durable and high-quality finish. Standard powder coating is a one-coat process applied over a phosphatized surface that generally meets or exceeds the corrosion resistance of a comparable wet paint.



Greenheck offers a number of in-house coatings applied via "electrostatic powder." The standard coating, Permator™, is excellent for indoor or outdoor applications and is resistance to many common chemicals. Consult Greenheck's Product Application Guide, *Performance Coatings for Ventilation Products*, for a complete listing of coatings and a relative

resistance chart. For corrosive environments (i.e. coastal), see page 9 for information on our zinc-rich basecoat technology.

## Maintenance / Serviceable Construction Advantages

The following value added features are incorporated into the design to allow for quick and easy field service.



### QEI-L and QEI service advantages:

- Bearing lubrication is performed through extended grease fittings located on the outside of the fan housing.
- The entire shaft and bearing assembly can be removed as a single assembly from the inlet end of the fan housing.
- An adjustable motor base is provided for tightening the fan belts.

### QEID service advantages:

- Extended lubrication lines are provided for motor bearing requiring lubrication. Smaller frame motors use sealed bearings and are permanently lubricated.



## Inlet and Outlet Sound Power Levels

All Greenheck mixed flow fans have AMCA licensed sound power levels for both the fan inlet and outlet.

Application and installation determines which sound power reading (inlet, outlet, or both) is critical. The differences between the generated sound from the inlet and outlet are important and noticeable. AMCA licensed inlet and outlet sound power data provides complete sound information to select a fan based on the acoustical requirements. For additional information on sound, refer to page 6.



Greenheck's Sound Lab

## Field Rotatable Housing / Compact Size

The QEI-L and QEI are designed to accommodate changing fan mounting positions and motor orientation in the field. Mounting fixtures are securely bolted to the fan casing and can be relocated to reposition how the fan is installed or the position the motor is oriented. Flexibility in a motor's location is important for easier access and can determine where the unit will fit. Last minute design changes or unexpected obstacles during installation are no longer a problem.

Greenheck's mixed flow fans were designed for compact size. Keeping size to a minimum is important when fitting into tight spaces like mechanical rooms or air handlers.

## Slip-Fit Duct Connections

The inlet and outlet ends of the QEI-I/II and QEID are designed to accept "slip-fit" connections. Often companion flanges are bolted to a fan's inlet/outlet flange to provide a slip-fit connection for a flexible sleeve, as with the QEI-L. This extra step is now eliminated by directly attaching the flexible sleeve to the duct and fan. This saves time and money in the installation process.

It is recommended to use a flexible sleeve connection instead of a rigid duct connection.

The advantages of a flexible transition are:

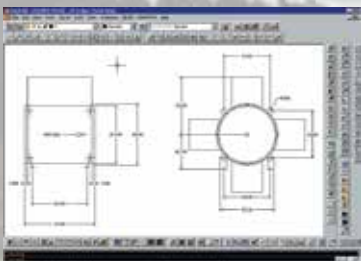
- Decreased sound transmission in the ductwork
- Flexible connections allow for minor misalignment
- Accommodates the use of thrust restraints to resist thrust loads



## Patented (QEI/QEID)

USA Patent No. 7048499  
 China (P.R.) Patent No. CN1294361C  
 Mexico Patent No. 243465

## AutoCAD® and 3-D Revit® Models

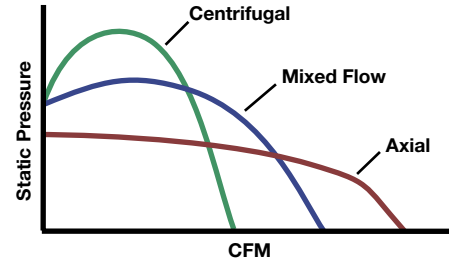


Scaled AutoCAD® drawings and Revit® models are available through Greenheck's website or from the Greenheck CAPS program which retrieves drawings and places them automatically into a job folder.



## Mixed Flow: Axial/Centrifugal Hybrid

A mixed flow wheel is a hybrid between an axial propeller and a centrifugal wheel. The result is a design that combines the best axial and centrifugal properties: highly efficient air movement, increased pressure capabilities, extremely low sound levels, and a steep fan performance curve. To further enhance the fan's performance, straightening vanes are incorporated in the housing. These serve to convert swirling airflow into a straight axial flow with a resulting static pressure rise and energy savings.



## Airflow Profiles



**Axial Fans:** Straight through nearly linear airflow.

**Centrifugal Fans:** Two 90° deflections, before airflow exits the fan.

**Mixed Flow Fans:** Slight airflow deflection from straight through.

## Sound and Efficiency

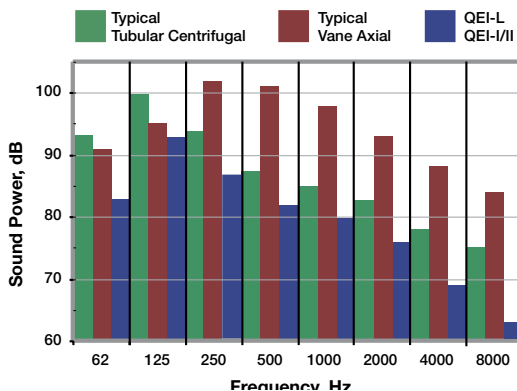
Sound power levels and fan efficiency are two very important factors when selecting a fan. There is a noticeable difference between impeller types. The table and chart below compare the sound power ( $L_{wA}$ ) and the static efficiency of the belt-driven mixed flow fan wheel versus tubular centrifugal and vane axial inline fans. Over a wide range of operating points, the mixed flow fan provides the quietest and most efficient selection.

| Performance             | Mixed Flow Fan Size | Sound Power ( $L_{wA}$ )     |                    |            | Static Efficiency            |                    |            |
|-------------------------|---------------------|------------------------------|--------------------|------------|------------------------------|--------------------|------------|
|                         |                     | Mixed Flow (QEI-L, QEI-I/II) | Inline Centrifugal | Vane Axial | Mixed Flow (QEI-L, QEI-I/II) | Inline Centrifugal | Vane Axial |
| 15,000 cfm @ 1.0 in. wg | 24                  | 90 dB                        | 100 dB             | 103 dB     | 43%                          | 17%                | 34%        |
| 25,000 cfm @ 2.0 in. wg | 36                  | 86 dB                        | 93 dB              | 102 dB     | 68%                          | 45%                | 56%        |
| 50,000 cfm @ 4.0 in. wg | 49                  | 92 dB                        | 98 dB              | 111 dB     | 71%                          | 60%                | 59%        |

Model comparisons based on similar outer tube diameters.

## Lower Sound Power, Better Sound Quality

Sound power levels shown at each frequency:



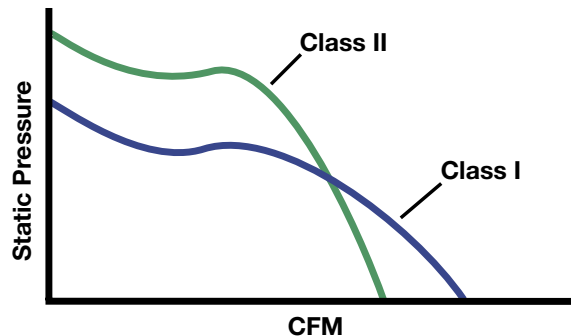
The sound quality of the belt-driven mixed flow fan line is as beneficial to low sound design as is the reduced overall sound power. The sound chart compares units of similar outer tube diameters at an operating point of 20,000 cfm with 1.5 inches wg of static pressure (Ps). Tubular centrifugals (green) have dominant tones in the 63 Hz through 250 Hz octave bands, while vane axials (red) have more mid to high frequency sound. The mixed flow fan (blue) does not have a dominant tone. A bystander would hear a more bland sound that is quieter than a tubular centrifugal or vane axial.

## Belt Drive: Fan Class

Class I and II fans have different wheel designs with different performance characteristics.

Class I mixed flow wheels are optimized for performances involving low pressures and high volumes. Class II wheels are designed for a steeper fan curve with higher pressure capabilities. This is illustrated in the graph with the two different class wheels plotted at identical fan RPMs.

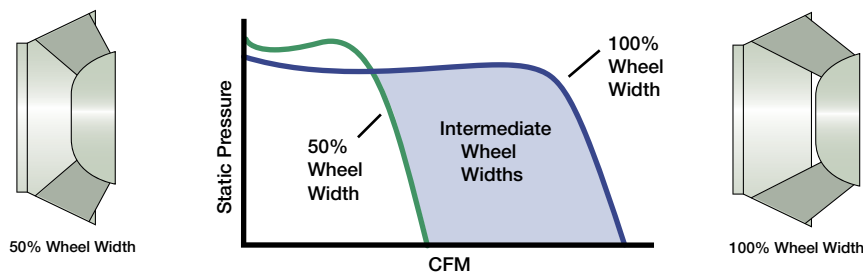
When selecting a mixed flow fan, it cannot be assumed that moving into a Class II fan will produce the same results as a Class I mixed flow fans. Model QEI-L utilizes a Class I wheel.



## Direct Drive: Percent Wheel Width

Direct drive mixed flow fans are optimized for performance requirements by the use of partial width wheels. This is necessary because the fan RPM is commonly fixed and identical to the motor RPM. A reduction in the width of the wheel (or the air passage) results in reduced airflow capacity and a steeper fan curve. This is similar to the effect of a reduced pitch in a direct drive vane axial fan. QEID wheels are available in 5% increments from 50 - 100% wheel width.

QEID fans can be used in conjunction with variable frequency drives (VFD's) for variable air volume (VAV) systems. In these applications, the wheel width is optimized to ensure efficient operation and stable performance throughout the turndown range. VFD's are also used for final system balancing and to reduce the airflow when building requirements are reduced. In this case, the fan and wheel width are selected using the final design CFM and static pressure.



## Sound Power versus Sound Pressure

The sound values displayed on the performance pages are in terms of inlet sound power ( $L_{WiA}$ ) and outlet sound power ( $L_{WoA}$ ). These values are the acoustic power radiating from the inlet and outlet of the fan, respectively. Sound pressure, expressed as dBA, is the acoustic pressure at a point in space which can be measured with a microphone or can be heard. To convert sound power ( $L_{WoA}$ ) into sound pressure (dBA), the following corrections are applied for a hemispherical free field.

$$dBA = L_{WoA} - \text{correction}$$

| Distance from Fan | 3 ft. (0.9 m) | 5 ft. (1.5 m) | 10 ft. (3.0 m) |
|-------------------|---------------|---------------|----------------|
| Correction        | 7 db          | 11.5 db       | 17.5 db        |

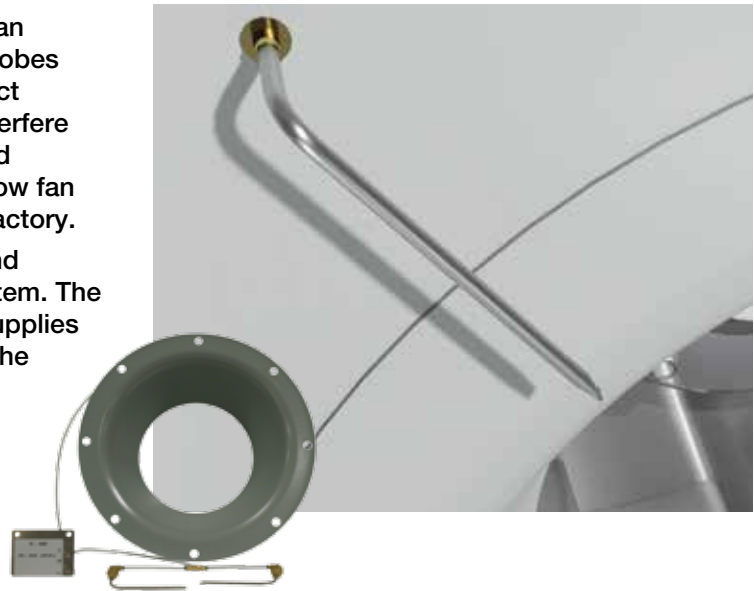
Note: Refer to AMCA Publication 303, Application of Sound Power Level Ratings for additional information on calculating typical sound pressure levels for fan installation.



## Sure-Aire™

The Sure-Aire™ flow monitoring system measures fan flow within a 3% accuracy. Unlike traditional flow probes mounted in the fan venturi that create a system effect hindering fan performance, Sure-Aire™ does not interfere with airflow and will not impact the fan's air or sound performance. This option is available on all mixed flow fan models and ships completely assembled from our factory.

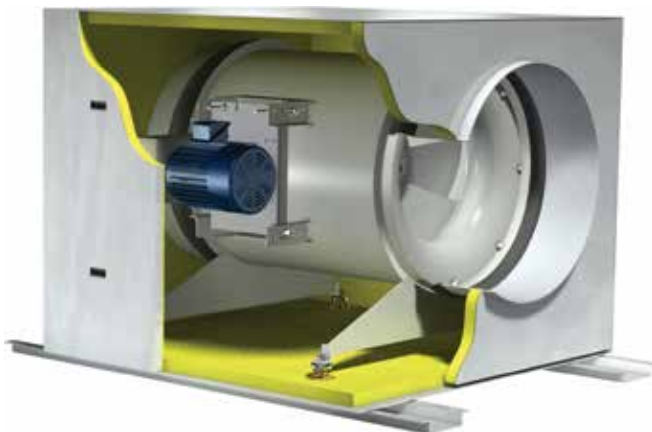
An electronics package with pressure transmitter and digital read out is available with the Sure-Aire™ system. The electronic kits are available for 50 or 60 Hz power supplies and provide a 4-20 mA output that can be tied into the building's automation system.



## Sound Sensitive Areas

### Sound Vault Housing - Radiated Sound Enclosure

The sound vault housing is an excellent product for fans that will be positioned adjacent to an occupied work space or in sound critical applications. It locks in radiated sound from the fan casing, motor and drives, and minimizes vibration transmission. Standard construction includes an acoustically lined housing, integral spring isolators, and internal flexible connections at the fan's inlet and outlet to effectively isolate the fan from the system. Vertical or horizontal mounting configurations are available.



### Why use a Sound Vault?

- Sound power attenuation levels determined by sound intensity tests on actual units
- Ships fully assembled with fan
- Internal isolation to limit breakout noise
- Access panels for inspection of fan and motor
- Bearing lubrication lines extended to outside of enclosure
- Formed mounting rails with prepunched holes for easy installation
- Available on both QEI-I and QEID through size 27 fans

This table lists the radiated sound reductions from total sound power levels for each octave band with the sound vault housing.

| Center Frequencies [Hz] | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
|-------------------------|----|-----|-----|-----|------|------|------|------|
| Attenuation Value (dB)  | 13 | 20  | 25  | 31  | 34   | 35   | 36   | 36   |



In 1972, Greenheck took the lead as the first commercial and industrial fan manufacturer to introduce electrostatic powder coatings. Today, Greenheck continues to lead by being the first to offer a superior zinc-rich powder basecoat and powder coating finish.

This zinc-rich basecoat technology is used extensively outside the HVAC industry to protect bridge beams, automotive components and other heavy-gauge steel products. Now, this advanced technology is available on Greenheck welded steel products.

Greenheck's coating process starts with a minimum of five wash stages to treat all components prior to painting. Cleaner parts result in better coating adhesion and durability. We then use an advanced two-coat powder application method that includes a basecoat of zinc-rich powder and a topcoat of Greenheck's Permator™ or Hi-Pro Polyester. The combination of these two topcoats over the zinc-rich basecoat results in the two-coatings, Perma-Z and Hi-Pro-Z. These oven-cured coatings provide superior corrosion resistance along with a tough, uniform finish to combat the most extreme conditions.

## Zinc Advantage

When compared to a traditional single coat application, the benefits of the two-coat system include:

- An automatic powder coat application that produces uniform coverage and unmatched paint quality.
- A double coat thickness that provides superior durability and protection from air and water.
- A zinc-rich basecoat that includes an epoxy component that provides additional corrosion protection.
- A zinc-rich basecoat that provides chemical protection of exposed steel to prevent corrosion.

The protection offered by the zinc-rich basecoats in Perma-Z and Hi-Pro-Z result in extraordinary corrosion resistance. Test data demonstrates our two-coat paint system offers three (Perma-Z) and four (Hi-Pro-Z) times the corrosion resistance of other coatings commonly available within the fan industry. See table for salt spray life for various coatings.

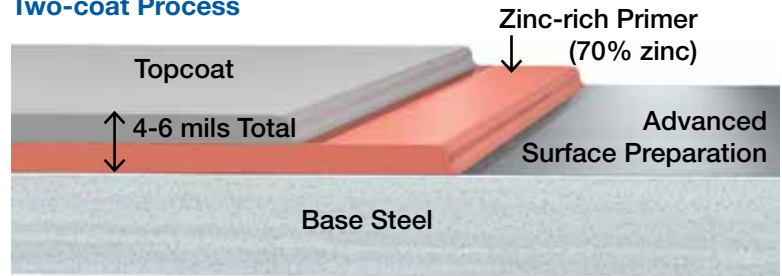
Coating fans with Perma-Z or Hi-Pro-Z has reduced our customers annual paint maintenance costs by three to four times!

For more information, see Greenheck's Coatings for Extreme Applications catalog, available online at [www.greenheck.com](http://www.greenheck.com)

### One Coat Process



### Two-coat Process



| Salt Spray ASTM B117 |            |            |            |      |
|----------------------|------------|------------|------------|------|
| Hours                | 1000       | 2000       | 3000       | 4000 |
| Permator™            | ██████████ |            |            |      |
| Hi-Pro Poly          | ██████████ |            |            |      |
| Perma-Z              | ██████████ | ██████████ |            |      |
| Hi-Pro-Z             | ██████████ | ██████████ | ██████████ |      |
| Baked Phenolic       | ██████████ |            |            |      |
| Epoxy Phenolic       | ██████████ |            |            |      |
| Fluorocarbon         | ██████████ |            |            |      |

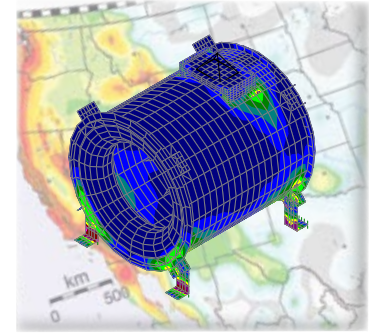
Salt Spray ASTM B117 is a comparative test that indicates the corrosion resistance of powder paint coatings.

## Seismic Certification

The International Building Code (IBC) has been adopted at the state and local level throughout the United States. With the adoption of this code, comes the introduction of standards intended to improve the performance and design of non-structural systems subject to seismic events.

### QEI-I/II and QEID

- Meet the 2006 IBC, 2009 IBC
- California OSHPD requirements (horizontal mount only) OSP 0223-10
- Shake table tested at an independent test facility in accordance with ICC-ES AC 156
- All equipment certified to worst case scenario seismic conditions
  - Importance factor of 1.5 (IP = 1.5)
  - Occupancy Categories (I - IV)
  - Site Classes (A - F)
  - Seismic Design Categories (A - F)



Structural Finite Element Analysis  
Seismic Design Category F

Consult your Greenheck representative or visit [greenheck.com/seismic](http://greenheck.com/seismic) for more details.

## UL 705 Power Ventilator

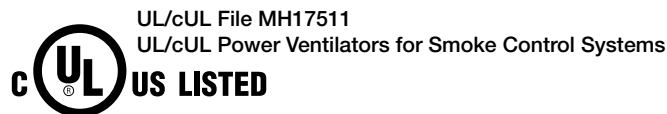
QEI-L, QEI-I/II and QEID models are available with the UL/cUL 705 (Underwriters Laboratory) listing on a wide variety of 50 and 60 Hz motors. This listing ensures the use of UL approved electrical components.

Motors are available as either IEC (IP55) or NEMA (TEAO or ODP) designs. IEC design motors are adjustable speed drive (ASD) compatible, have class F insulation and are capable of wye-delta starting when over 5.5 kW. NEMA motors use across the line starting with options for ASD compatibility. Motor (IEC or NEMA) using 50 Hz power have a 1.0 service factor, while 60 Hz power have 1.15 service factor. Design and construction options for motors include increased thermal insulation, overload protection and extended motor leads.



## UL Emergency Smoke Evacuation

QEI-I/II and QEID models were tested and rated for design time and temperature used in emergency heat and smoke exhaust applications.



| Model    | Operating Temperature |     | Time Duration | Comments                                     |
|----------|-----------------------|-----|---------------|--|
|          | °C                    | °F  | Hours         |  |
| QEID     | 300                   | 572 | 1             | Per British Spec 7346                        |
| QEI-I/II | 300                   | 572 | 2             |  |
| QEI-I/II | 260                   | 500 | 4             | Per Industrial Risk Insurers (North America) |
| QEID     | 260                   | 500 | 5             |  |

Consult your Greenheck representative for time and temperature combinations other than those listed.

## UL 762 Restaurant Exhaust

Inline grease exhaust fans are an excellent alternative for kitchen applications when roof or wall mounted ventilators are not practical. A QEI-I/II with UL 762 grease option is designed to withstand the demands of high temperature kitchen grease exhaust and high-pressure duct washers.

### A Tough Package to Beat

The QEI-I/II inline grease fan is tough to beat when packaged with our full line of kitchen hoods and grease extraction options. Take advantage of Greenheck's expertise in providing a total solution in kitchen ventilation equipment.



UL 762 is concerned with fans designed for removal of smoke and grease laden vapors with airstream temperatures up to 400°F.

- Meets all UL 705 requirements
- UL/cUL File MH1745  
UL/cUL Power Ventilators for Restaurant Exhaust Appliances
- Bolted access door
- Drain connection
- Meets requirements of NFPA 96 Ventilation Control and Fire Protection of Commercial Cooking Operations

## Belt Drive Advantages

- Lower sound levels
- Motor out of the airstream for easy access
- Motor size may be changed to accommodate possible future air capacity requirements
- Final system balancing accomplished by changing drives



## Direct Drive Advantages

- Fewer wear components and less maintenance, no shaft, bearings, pulleys, or belts
- More compact than equivalent belt drive size
- Motor in airstream for increased motor efficiency and cooling
- Equal loading between mounting brackets
- Final system balancing accomplished by adjusting the motor speed (ex. variable frequency drive use).

## High Efficiencies = Lower Operating Costs

### Example of Annual Operating Cost Savings

For a system performance requirement of 25,000 cfm at 2.5 inches of static pressure (wg) the corresponding operating power requirements are 13.97 Bhp with a QEI-I size 36 and 19.8 Bhp for a size 36 tubular centrifugal fan.

Formulas:

- Kilowatt-Hours = (Operating Power (Bhp) x 0.746 x Hours of Operation) / Motor Efficiency

- Operating Cost = Kilowatt-Hours x Power Cost per kW hour

Assumptions:

- Cost of electricity is \$0.09 per kilowatt hour

- 3,120 annual hours of operation (12 hours per day, five days a week, 52 weeks a year)

- 93.0% motor efficiency (equal to NEMA Premium minimum efficiency for 15 and 20 hp, ODP, 1725 rpm motor)

### Tubular Centrifugal Fan

kW-Hours = (19.8 Bhp x 0.746 x 3120) / 0.93 = 49,554

Operating Cost = 49,554 x \$0.09 = \$4,460

### QEI-I - Mixed Flow Fan

kW-Hours = (13.97 Bhp x 0.746 x 3120) / 0.93 = 34,963

Operating Cost = 34,963 x \$0.09 = \$3,147

**Annual Operating Cost Savings = \$4,460 - \$3,147 = \$1,313**



## QEI-I/II Sizes 9-27 and all QEI-L



Fig. 1



Fig. 2



Fig. 3



Fig. 4

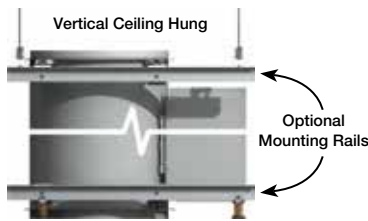


Fig. 5

### Universal Mounting

QEI-I/II models sizes 9-27 and all QEI-L models can be mounted horizontally or vertically. For ease of installation, eight mounting brackets are welded on each fan. These eight brackets along with standard mounting supports provide for Greenheck's Universal Mounting System. Motor positions are viewed from the discharge end.

#### Fig. 1 Horizontal Base Mount

Each fan is shipped as standard in this arrangement. Motor at "A" position (12 o'clock) is standard.

#### Fig. 2 Horizontal Base Mount with motor at "C" or "G" position

A set of optional mounting rails are recommended for this installation.

#### Fig. 3 Horizontal Ceiling Hung

In this installation the supports can be positioned for mounting the motor at "A" or "E" (12 or 6 o'clock).

#### Fig. 4 Horizontal Ceiling Hung with motor at "C" or "G" (3 or 9 o'clock)

A set of optional mounting rails are recommended for this installation.

#### Fig. 5 Vertical Mount

Universal QEI fans can be mounted vertically (ceiling hung or base mount) for either upward or downward airflow. Optional mounting rails are suggested for any vertical installation.

## QEI-I/II Sizes 30-60

QEI-I/II models 30-60 are available in horizontal and vertical mounting configurations. *Lifting lugs are provided on horizontal fans for ease of installation. Vertical units should be lifted by the mounting brackets.*

### Horizontal Mounting

Horizontal mounting configurations, base mount or ceiling hung, are provided with an identical support. The mounting configuration can be changed between base mount or ceiling hung in the field. The motor position can also be field rotated to any of the shown positions. Motor positions are viewed from the discharge end.

**Base Mount:** Rigid steel base provides stable mounting to floor for the housing.

Motor Positions: A, B, C, G and H

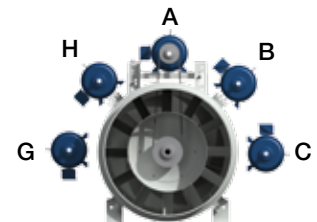
**Ceiling Hung:** Suspend the fan horizontally from the ceiling.

Motor Positions: A, C, D, E, F and G

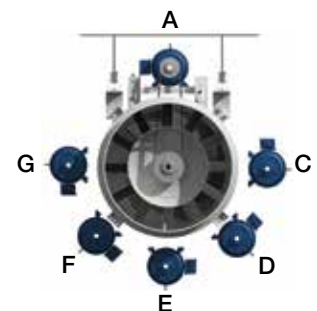
Mounting rails are recommended for horizontal installations with B, C, D, F, G and H motor positions.

### Vertical Mounting

Vertical mounting configurations, upblast or downblast, are provided with heavy duty steel brackets welded to both ends. These brackets permit either floor or ceiling mounting on the same unit. Optional mounting rails are suggested for any vertical installation for sizes 9-27.



Horizontal - Base Mount



Horizontal - Ceiling Hung

## Roof Upblast

Models QEI-I/II sizes 9 through 54 and model QEID sizes 12 through 54, are available in roof upblast configuration. The roof upblast configuration is ideal for exhausting contaminants away from a building to prevent roof damage and re-entrainment of exhaust air. Both QEI-I/II roof upblast models have the high temperature UL rating and can be used for emergency smoke exhaust applications.

Standard construction includes a fully-welded heavy-gauge curb cap to eliminate leaks, a butterfly damper section for backflow prevention, and a windband section to protect the butterfly dampers from debris. A complete line of roof curbs is available for mounting to a roof deck.



## Spark Resistant Construction

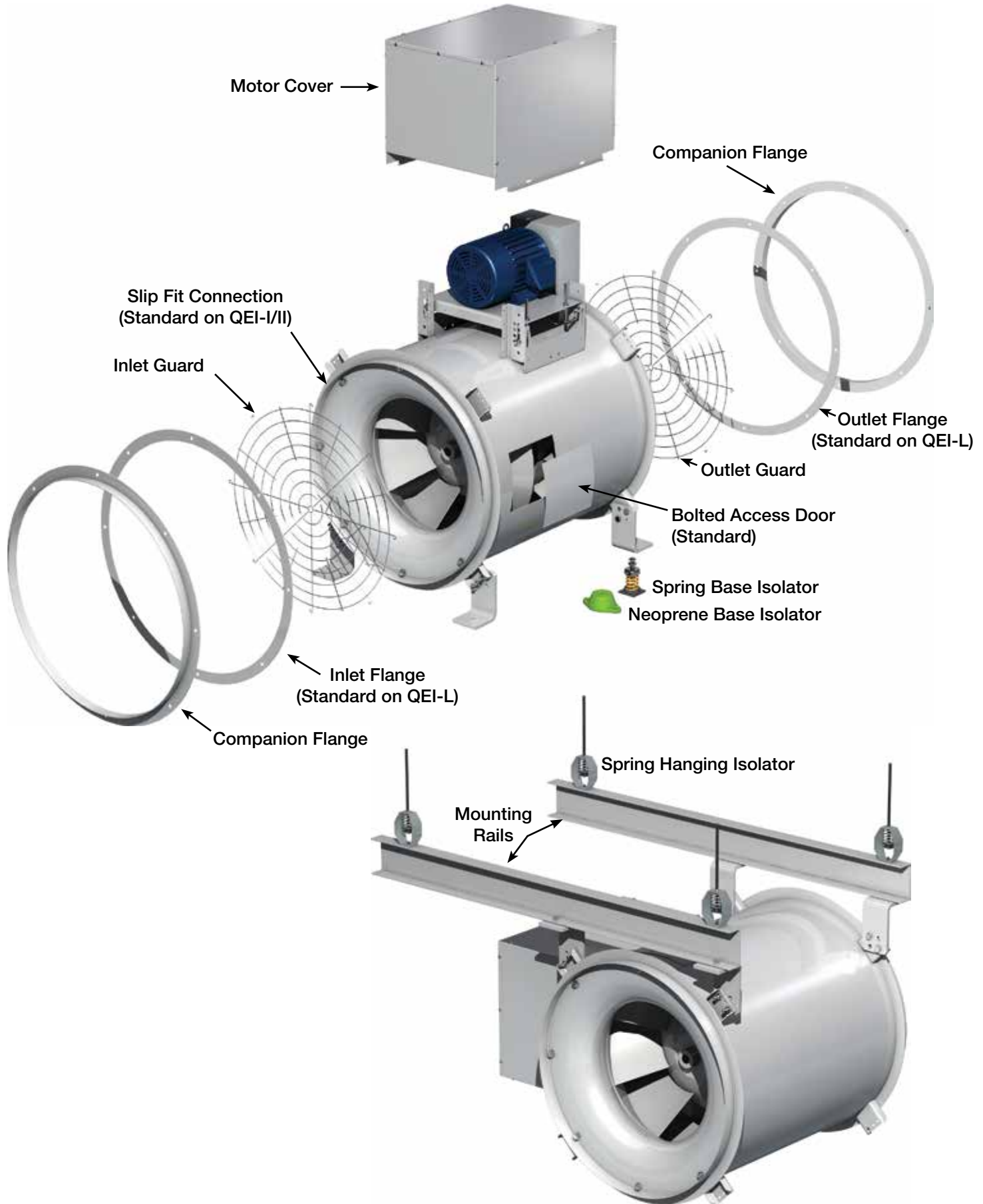
Greenheck mixed flow fans are available with spark resistant designs suitable for applications that involve flammable particles, fumes or vapors. Spark resistant construction options adhere to guidelines defined within AMCA Standard 99-0401-10.

|                   |         |   |
|-------------------|---------|---|
| QEI-I/II          | Spark B | The fan wheel is constructed of a nonferrous material (aluminum). A non-ferrous (aluminum) bearing cover surrounds the driven bearing, shielding it from the airstream. |
| QEI-I/II<br>QEI-L | Spark C | The inlet cone is constructed of non-ferrous material (aluminum). A nonferrous (aluminum) bearing cover surrounds the driven bearing shielding it from the airstream.   |



|                                |   | Availability |       |        |      |
|--------------------------------|---|--------------|-------|--------|------|
|                                |   | QEI-L        | QEI-I | QEI-II | QEID |
| Motor Cover                    | A weatherproof motor cover shields the motor components from dust, dirt and moisture for indoor or outdoor installations. Motor covers also serve as a personnel guards and meet OSHA standards.  | ✓            | ✓     | ✓      |      |
| Hinged Access Door             | Hinged access doors provide an opening through the fan housing for cleaning or visual inspection of the wheel. Bolted access door is standard.  | ✓            | ✓     | ✓      | ✓    |
| Extended Life Bearings         | Air handling quality, flange mounted bearings meet a basic rating fatigue life L <sub>10</sub> per ABMA standards, in excess of 200,000 hours (L <sub>50</sub> at 1,000,000) at maximum operating speed.  |              | ✓     | ✓      |      |
| Copper Lube Lines (Belt Drive) | Copper lube lines can be used as a replacement for standard nylon lube lines.   | ✓            | ✓     | ✓      |      |
| Flanges                        | Inlet and outlet flanges with prepunched holes, welded to the housing, provide an easy means for bolted connection to ductwork. Matching bolt-on companion flanges are also available.  | Std.         | ✓     | ✓      | ✓    |
| Disconnect Switches            | Toggle-type and heavy-duty disconnect switches are available for positive electrical shut-off and safety when servicing fans. The following switches are available to meet individual electrical requirements and can be factory mounted or shipped loose for field mounting. <ul style="list-style-type: none"> <li>• NEMA-1      General purpose</li> <li>• NEMA-3R     Rainproof</li> <li>• NEMA-4      Watertight</li> <li>• NEMA-7 &amp; 9*   Class 1 and 2 hazardous locations</li> </ul> *Greenheck will not factory mount NEMA-7 & 9 disconnect switches. | ✓            | ✓     | ✓      | ✓    |
| Inlet and Outlet Guards        | Removable inlet and outlet guards provide protection for personnel and equipment in ducted or non-ducted installations.   | ✓            | ✓     | ✓      | ✓    |
| Extended Wiring                | Electric leads from the motor junction box are brought out to exterior of unit. This provides an easy means of connecting the motor to the electrical system.   |              |       |        | ✓    |
| Belt Tube                      | A totally enclosed belt tube isolates the belts and drives from the airstream.  | ✓            | ✓     | ✓      |      |
| Sound Vault Housing            | See page 8 for more details on sound vault housing.   |              | ✓     |        | ✓    |
| Mounting Rails                 | Mounting rails are recommended for vertically mounted fans or horizontal mounting when the motor is to be located in the C or G (3 or 9 o'clock) position.  | ✓            | ✓     | ✓      |      |
| Isolators                      | Both base mount and hanging isolators are available in either neoprene or spring mounts.  | ✓            | ✓     | ✓      | ✓    |
| Special Coatings               | Special coatings are available for protective purposes. Consult Greenheck's Product Application Guide, <i>Performance Coatings for Ventilation Products</i> , for a complete list of coatings available and their chemical resistance. Available online at <a href="http://www.greenheck.com">www.greenheck.com</a> .   | ✓            | ✓     | ✓      | ✓    |
| Sure Aire™ Flow Measurement    | Sure-Aire provides real-time flow measurement for use in building automation systems. For additional information, see page 8 or our Sure-Aire Flow Monitoring System catalog available at <a href="http://www.greenheck.com">www.greenheck.com</a> .  | ✓            | ✓     | ✓      | ✓    |



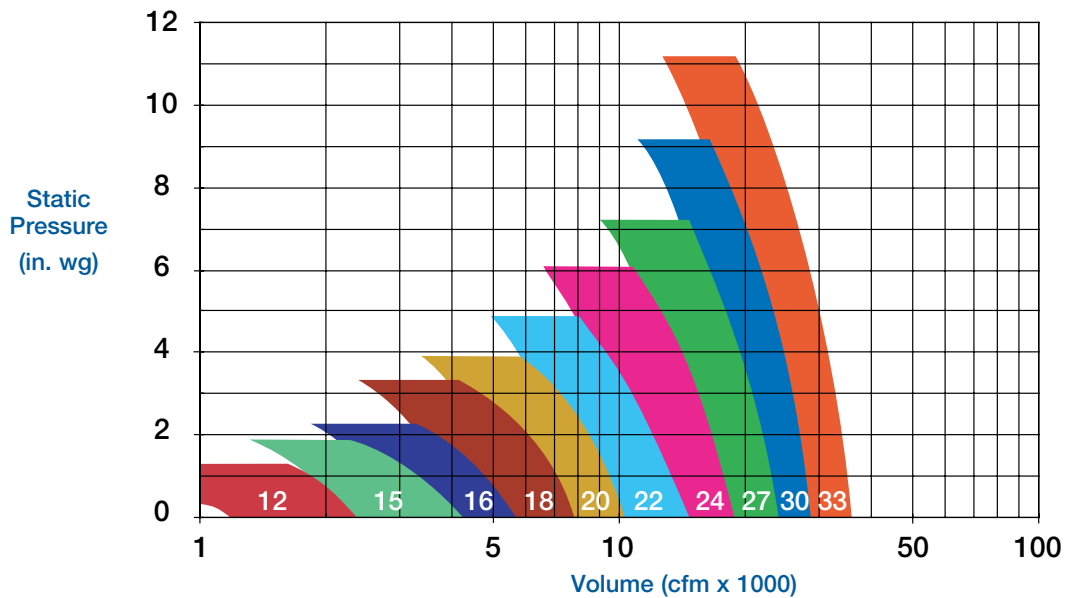


The quick select charts below and on the following page are a convenient method for sizing the fan required for a specific performance. Colored bands for a given size in each chart represent the entire operating range available for that size and speed.

For QEID performance pages showing AMCA Licensed data for sound and air performance please refer to the Model **QEID Sound and Air Performance Supplement** found at [www.greenheck.com](http://www.greenheck.com)

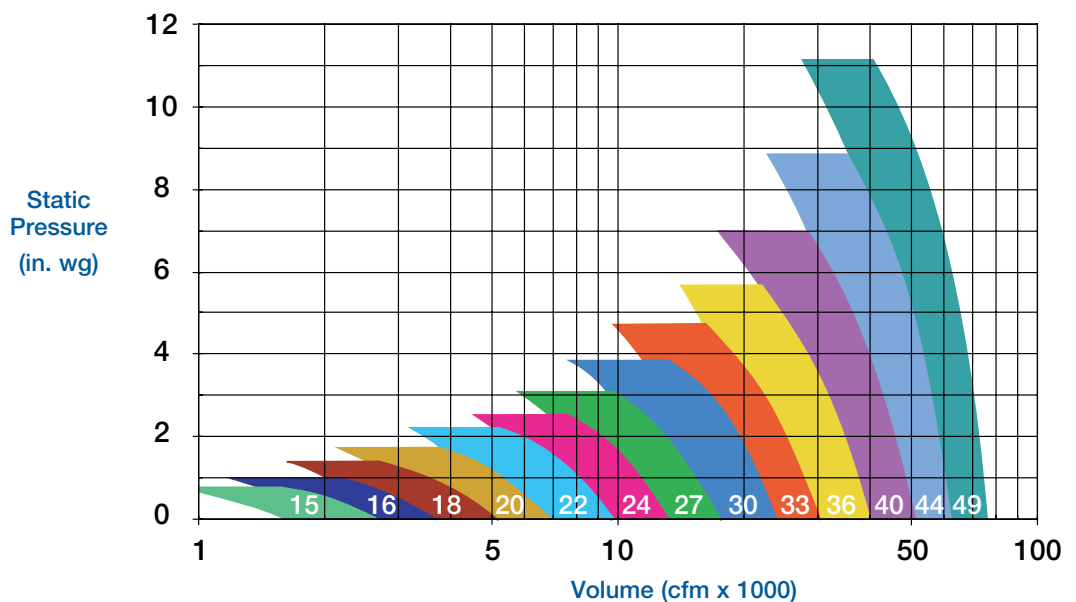
## 1770 RPM (60 Hz)

Model QEID  
12–33



## 1170 RPM (60 Hz)

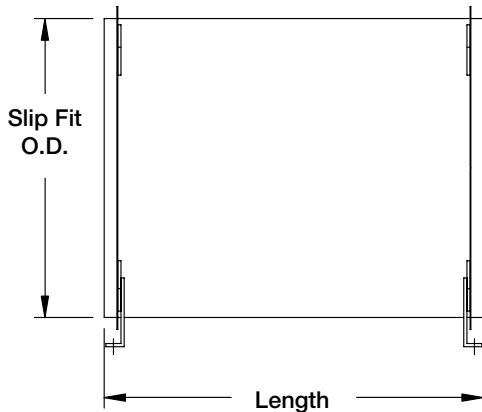
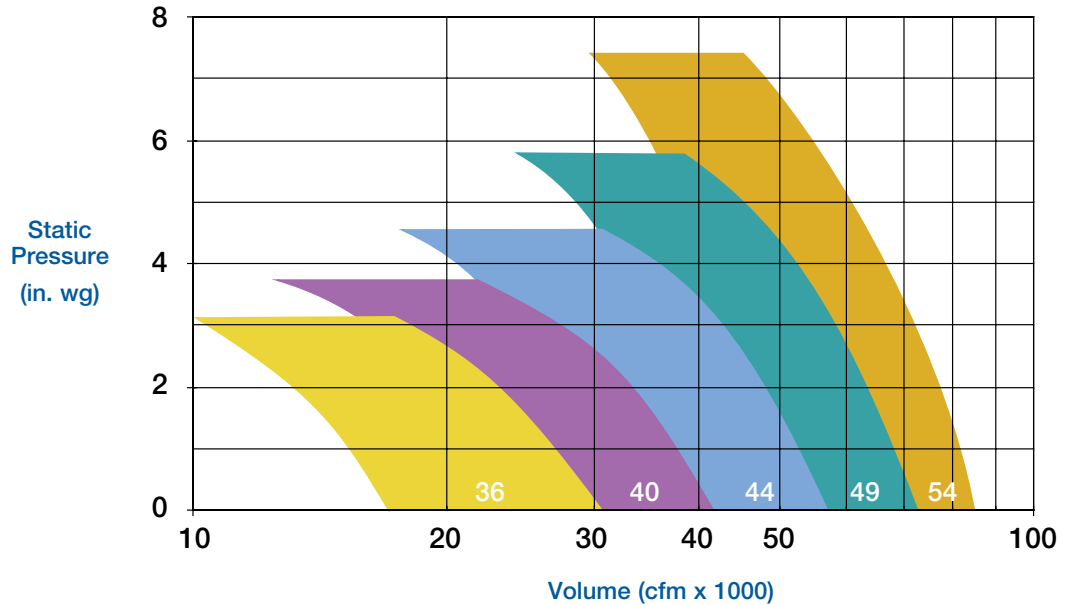
Model QEID  
15–49



# QEID Dimensional Data

**870 RPM  
(60 Hz)**

Model QEID  
36–54



\*Length varies with motor frame size. Refer to Length table shown.

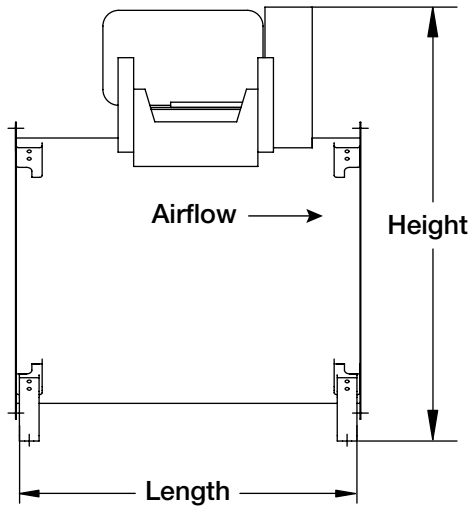
\*\*Weight is for unit only and does not include motor.

| Size | Slip Fit O.D. |      | Length*               |      | Weight** |      |
|------|---------------|------|-----------------------|------|----------|------|
|      | inches        | mm   | inches                | mm   | lbs.     | kg.  |
| 12   | 17.13         | 435  | 25.0                  | 635  | 100      | 45   |
| 15   | 20.88         | 530  | 25.0                  | 635  | 140      | 65   |
| 16   | 23.00         | 584  | 26.0                  | 660  | 170      | 80   |
| 18   | 25.38         | 645  | 29.0                  | 737  | 200      | 95   |
| 20   | 27.81         | 706  | 34.0                  | 864  | 250      | 115  |
| 22   | 30.88         | 784  | 35.5                  | 902  | 370      | 170  |
| 24   | 34.00         | 864  | 41.5                  | 1054 | 480      | 220  |
| 27   | 37.44         | 951  | 45.0                  | 1143 | 570      | 260  |
| 30   | 41.63         | 1057 | Refer to table below. |      | 860      | 390  |
| 33   | 45.75         | 1162 |                       |      | 1140     | 520  |
| 36   | 50.56         | 1284 |                       |      | 1360     | 620  |
| 40   | 55.75         | 1416 |                       |      | 1650     | 750  |
| 44   | 61.63         | 1565 |                       |      | 2190     | 995  |
| 49   | 67.75         | 1721 |                       |      | 2700     | 1225 |
| 54   | 75.00         | 1905 |                       |      | 3130     | 1420 |

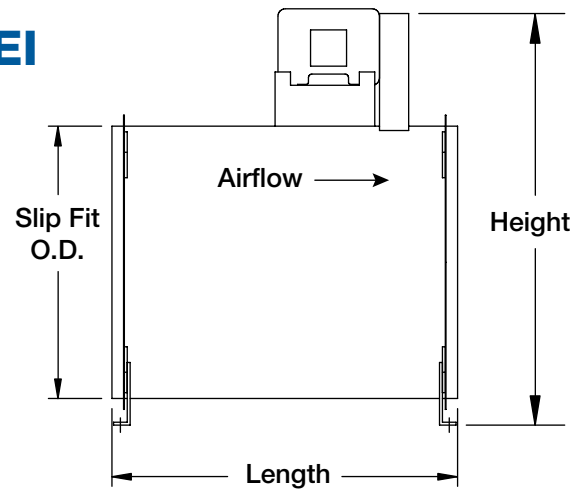
| Length — inches (millimeters) |             |             |             |             |             |             |
|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Size                          | 254/6 T     | 284/6 T     | 324/6 T     | 364/5 T     | 404/5 T     | 444/5 T     |
| 30                            | 45.5 (1156) | 50.0 (1156) | 50.0 (1156) |             |             |             |
| 33                            | 46.5 (1181) | 54.0 (1372) | 54.0 (1372) | 54.0 (1372) |             |             |
| 36                            | 50.5 (1283) | 58.0 (1473) | 58.0 (1372) | 58.0 (1372) |             |             |
| 40                            |             | 56.5 (1435) | 61.0 (1549) | 61.0 (1549) |             |             |
| 44                            |             |             | 64.0 (1626) | 64.0 (1626) | 70.0 (1778) |             |
| 49                            |             |             |             | 74.5 (1892) | 74.5 (1892) | 80.5 (2045) |
| 54                            |             |             |             | 77.0 (1956) | 77.0 (1956) | 83.0 (2108) |



## QEI-L



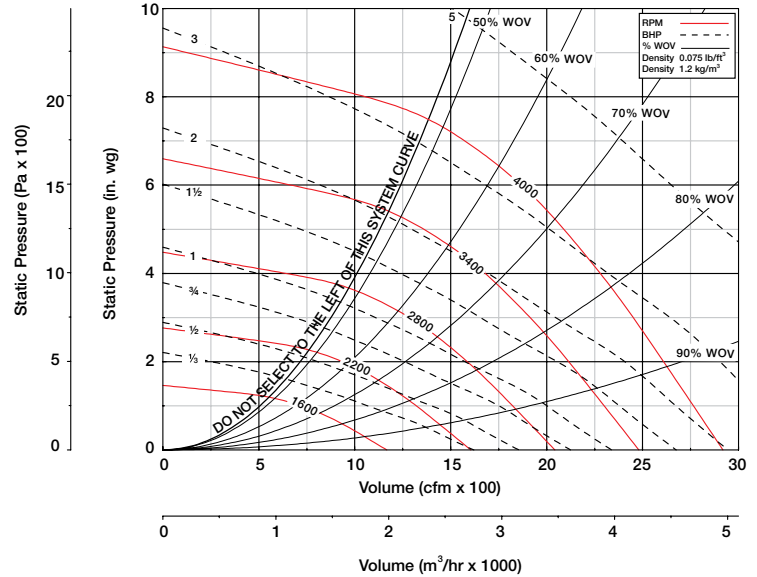
## QEI



| Size | QEI-L         |             |             | Slip-Fit O.D.<br>inches (mm) | QEI Class I |              | QEI Class II |              |
|------|---------------|-------------|-------------|------------------------------|-------------|--------------|--------------|--------------|
|      | Slip-Fit O.D. | Length      | Height      |                              | Length      | Height       | Length       | Height       |
|      | inches (mm)   | inches (mm) |             |                              | inches (mm) |              | inches (mm)  |              |
| 9    | NA            | NA          | NA          | 17.13 (435)                  | NA          | NA           | 28.5 (724)   | 36.5 (927)   |
| 12   | 17.5 (445)    | 26.5 (673)  | 37.5 (953)  | 17.13 (435)                  | 28.5 (724)  | 36.5 (927)   | 30.5 (775)   | 36.5 (927)   |
| 15   | 21.13 (537)   | 29.0 (737)  | 41.5 (1054) | 20.88 (530)                  | 31.0 (787)  | 41.0 (1041)  | 34.0 (864)   | 41.0 (1041)  |
| 16   | 23.31 (592)   | 31.0 (787)  | 44.0 (1118) | 23.00 (584)                  | 33.0 (838)  | 44.0 (1118)  | 34.0 (864)   | 44.0 (1118)  |
| 18   | 25.63 (651)   | 33.0 (838)  | 46.5 (1181) | 25.38 (645)                  | 35.0 (889)  | 46.5 (1181)  | 39.5 (1003)  | 47.5 (1207)  |
| 20   | 28.06 (713)   | 35.5 (902)  | 50.5 (1283) | 27.81 (706)                  | 37.5 (953)  | 50.5 (1283)  | 41.5 (1054)  | 50.5 (1283)  |
| 22   | 31.13 (791)   | 39.0 (991)  | 53.5 (1359) | 30.88 (784)                  | 41.0 (1041) | 53.5 (1359)  | 44.0 (1118)  | 53.5 (1359)  |
| 24   | 34.25 (870)   | 42.5 (1080) | 55.5 (1410) | 34.00 (864)                  | 44.5 (1130) | 57.5 (1461)  | 49.0 (1245)  | 59.5 (1511)  |
| 27   | 37.69 (957)   | 45.0 (1143) | 61.0 (1549) | 37.44 (951)                  | 47.0 (1194) | 61.0 (1549)  | 53.0 (1346)  | 63.0 (1600)  |
| 30   | 42.00 (1067)  | 52.0 (1321) | 64.5 (1638) | 41.62 (1057)                 | 54.0 (1372) | 65.0 (1651)  | 60.5 (1537)  | 72.0 (1829)  |
| 33   | 46.13 (1172)  | 56.5 (1435) | 68.0 (1727) | 45.75 (1162)                 | 58.5 (1486) | 69.0 (1753)  | 65.0 (1651)  | 76.5 (1943)  |
| 36   | 51.06 (1297)  | 62.0 (1575) | 75.0 (1905) | 50.56 (1284)                 | 64.0 (1626) | 75.0 (1905)  | 69.0 (1753)  | 82.5 (2096)  |
| 40   | NA            | NA          | NA          | 55.75 (1416)                 | 68.5 (1740) | 83.0 (2108)  | 75.5 (1918)  | 90.5 (2299)  |
| 44   | NA            | NA          | NA          | 61.62 (1565)                 | 74.0 (1880) | 89.5 (2273)  | 80.5 (2045)  | 97.0 (2464)  |
| 49   | NA            | NA          | NA          | 67.75 (1721)                 | 80.5 (2045) | 96.5 (2451)  | 86.5 (2197)  | 104.0 (2642) |
| 54   | NA            | NA          | NA          | 75.00 (1905)                 | 87.0 (2210) | 105.0 (2667) | 93.5 (2375)  | 111.0 (2819) |
| 60   | NA            | NA          | NA          | 82.88 (2105)                 | 91.5 (2324) | 113.0 (2870) | 102.5 (2604) | 119.0 (3023) |

| Performance Data                            |          |        |
|---|----------|--------|
| Maximum Fan RPM                             | 4000     |        |
| Specification Data                          |          |        |
| Maximum Motor Frame Size                    | 184T     |        |
| Minimum Motor Starting hp                   | 1/3 hp   | .25 kW |
| Wheel Diameter                              | 15 in.   | 381 mm |
| Approximate Weight (Less Motor & Drives)    | 170 lbs. | 77 kg. |
| Maximum Bhp = (Fan RPM / 2671) <sup>3</sup> |          |        |
| Outlet Velocity (FPM) = CFM / 1.56          |          |        |
| Tip Speed (FPM) = Fan RPM x 3.93            |          |        |
| % WOV = (CFM x 100) / (Fan RPM x 0.73)      |          |        |

Imperial data — Metric data



## Performance Data

| CFM  | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|      |      | 0.25                        |      | 0.5  |      | 1    |      | 1.5  |      | 2    |      | 2.5  |      | 3    |      | 3.5  |      | 4    |      |
|      |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 850  | 541  | 1325                        | 0.09 | 1463 | 0.14 | 1709 | 0.25 | 1937 | 0.38 | 2148 | 0.52 | 2341 | 0.67 |      |      |      |      |      |      |
| 1000 | 636  | 1511                        | 0.13 | 1633 | 0.18 | 1854 | 0.31 | 2056 | 0.44 | 2252 | 0.59 | 2432 | 0.75 | 2606 | 0.93 | 2767 | 1.11 |      |      |
| 1150 | 732  | 1700                        | 0.17 | 1811 | 0.23 | 2013 | 0.37 | 2198 | 0.52 | 2371 | 0.68 | 2542 | 0.85 | 2700 | 1.03 | 2858 | 1.22 | 3007 | 1.42 |
| 1300 | 828  | 1893                        | 0.23 | 1994 | 0.29 | 2177 | 0.44 | 2349 | 0.61 | 2511 | 0.78 | 2661 | 0.96 | 2817 | 1.15 | 2961 | 1.35 | 3098 | 1.56 |
| 1450 | 923  | 2088                        | 0.31 | 2181 | 0.37 | 2351 | 0.53 | 2510 | 0.71 | 2658 | 0.89 | 2804 | 1.08 | 2940 | 1.28 | 3079 | 1.49 | 3212 | 1.71 |
| 1600 | 1019 | 2285                        | 0.40 | 2371 | 0.47 | 2530 | 0.63 | 2674 | 0.82 | 2818 | 1.02 | 2951 | 1.23 | 3083 | 1.44 | 3207 | 1.66 | 3331 | 1.88 |
| 1750 | 1114 | 2483                        | 0.50 | 2563 | 0.58 | 2711 | 0.75 | 2849 | 0.95 | 2981 | 1.16 | 3109 | 1.38 | 3230 | 1.61 | 3351 | 1.84 | 3466 | 2.08 |
| 1900 | 1210 | 2682                        | 0.63 | 2757 | 0.72 | 2897 | 0.89 | 3027 | 1.10 | 3149 | 1.32 | 3271 | 1.56 | 3387 | 1.80 | 3498 | 2.04 | 3611 | 2.29 |
| 2050 | 1305 | 2883                        | 0.77 | 2952 | 0.87 | 3084 | 1.06 | 3207 | 1.26 | 3324 | 1.50 | 3435 | 1.75 | 3549 | 2.00 | 3656 | 2.26 | 3758 | 2.53 |
| 2200 | 1401 | 3083                        | 0.94 | 3149 | 1.04 | 3274 | 1.25 | 3390 | 1.45 | 3502 | 1.70 | 3609 | 1.96 | 3713 | 2.22 | 3818 | 2.50 | 3918 | 2.78 |
| 2350 | 1496 | 3285                        | 1.13 | 3347 | 1.24 | 3465 | 1.46 | 3576 | 1.68 | 3683 | 1.92 | 3785 | 2.19 | 3883 | 2.47 | 3981 | 2.76 |      |      |
| 2500 | 1592 | 3487                        | 1.34 | 3545 | 1.46 | 3657 | 1.69 | 3764 | 1.93 | 3865 | 2.16 | 3964 | 2.44 |      |      |      |      |      |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|---|-------|----|----|----|----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |
| 1600  | 100   | 69 | 71 | 74 | 70 | 71 | 67 | 65 | 57 | 75               |
|   | 80    | 71 | 69 | 72 | 68 | 68 | 66 | 62 | 56 | 73               |
|   | 60    | 70 | 70 | 71 | 66 | 63 | 65 | 61 | 55 | 71               |
|   | 50    | 72 | 70 | 71 | 65 | 63 | 65 | 61 | 55 | 71               |
| 2200  | 100   | 74 | 75 | 78 | 75 | 74 | 71 | 65 | 80 |                  |
|   | 80    | 72 | 71 | 73 | 72 | 71 | 66 | 60 | 77 |                  |
|   | 60    | 73 | 72 | 74 | 70 | 69 | 70 | 66 | 76 |                  |
|   | 50    | 75 | 73 | 74 | 70 | 69 | 70 | 66 | 76 |                  |
| 2800  | 100   | 77 | 78 | 82 | 78 | 80 | 79 | 75 | 74 | 85               |
|   | 80    | 77 | 78 | 77 | 74 | 75 | 71 | 66 | 81 |                  |
|   | 60    | 78 | 79 | 78 | 74 | 74 | 70 | 65 | 80 |                  |
|   | 50    | 78 | 79 | 79 | 75 | 74 | 70 | 65 | 80 |                  |
| 3400  | 100   | 78 | 80 | 84 | 80 | 83 | 83 | 79 | 79 | 89               |
|   | 80    | 78 | 81 | 81 | 77 | 79 | 75 | 71 | 84 |                  |
|   | 60    | 80 | 82 | 81 | 77 | 78 | 74 | 70 | 84 |                  |
|   | 50    | 80 | 82 | 82 | 79 | 78 | 74 | 70 | 84 |                  |
| 4000  | 100   | 78 | 82 | 85 | 82 | 87 | 87 | 83 | 83 | 92               |
|   | 80    | 79 | 83 | 84 | 81 | 83 | 83 | 79 | 76 | 88               |
|   | 60    | 82 | 85 | 84 | 80 | 82 | 81 | 78 | 76 | 87               |
|   | 50    | 82 | 84 | 85 | 83 | 82 | 82 | 78 | 75 | 88               |

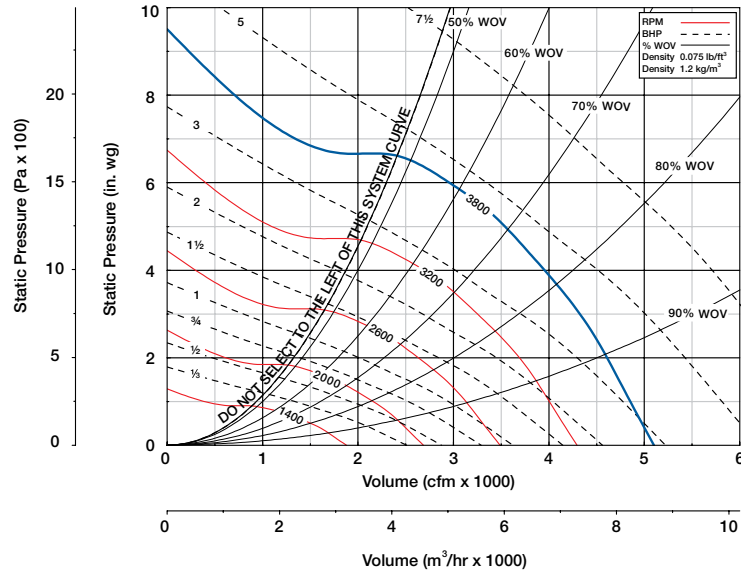
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|--|-------|----|----|----|----|----|----|----|----|------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WoA</sub> |
| 1600   | 100   | 76 | 78 | 78 | 70 | 71 | 65 | 63 | 56 | 76               |
|  | 80    | 77 | 80 | 77 | 67 | 68 | 63 | 58 | 56 | 74               |
|  | 60    | 80 | 78 | 76 | 66 | 66 | 62 | 58 | 56 | 73               |
|  | 50    | 82 | 78 | 77 | 66 | 66 | 62 | 58 | 56 | 73               |
| 2200   | 100   | 86 | 86 | 84 | 77 | 78 | 74 | 69 | 64 | 82               |
|  | 80    | 86 | 85 | 84 | 73 | 74 | 70 | 65 | 61 | 80               |
|  | 60    | 87 | 85 | 82 | 73 | 73 | 69 | 65 | 61 | 79               |
|  | 50    | 88 | 86 | 82 | 74 | 73 | 69 | 65 | 61 | 79               |
| 2800   | 100   | 88 | 85 | 87 | 81 | 83 | 80 | 75 | 72 | 87               |
|  | 80    | 87 | 88 | 85 | 77 | 79 | 76 | 71 | 66 | 84               |
|  | 60    | 91 | 85 | 86 | 78 | 78 | 75 | 70 | 67 | 84               |
|  | 50    | 92 | 86 | 86 | 79 | 79 | 75 | 70 | 67 | 84               |
| 3400   | 100   | 88 | 88 | 91 | 84 | 87 | 85 | 80 | 78 | 92               |
|  | 80    | 90 | 88 | 89 | 80 | 83 | 81 | 76 | 71 | 88               |
|  | 60    | 94 | 87 | 89 | 82 | 83 | 80 | 76 | 72 | 88               |
|  | 50    | 94 | 88 | 89 | 83 | 84 | 81 | 76 | 72 | 89               |
| 4000   | 100   | 88 | 93 | 96 | 87 | 91 | 90 | 85 | 83 | 96               |
|  | 80    | 94 | 86 | 92 | 82 | 87 | 86 | 81 | 75 | 92               |
|  | 60    | 95 | 89 | 92 | 85 | 86 | 85 | 81 | 76 | 92               |
|  | 50    | 95 | 90 | 92 | 86 | 88 | 85 | 81 | 77 | 92               |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.

| Performance Data                            |       |          |        |
|---|-------|----------|--------|
| Maximum Fan RPM                             | QEI-L | 3800     |        |
|   | QEI   | 3800     |        |
| Specification Data                          |       |          |        |
| Maximum Motor Frame Size                    | QEI-L | 184T     |        |
|   | QEI   | 184T     |        |
| Minimum Motor Starting hp                   |       | 1/3 hp   | .25 kW |
| Wheel Diameter                              |       | 15 in.   | 381 mm |
| Approximate Weight (Less Motor & Drives)    | QEI-L | 120 lbs. | 55 kg. |
|   | QEI   | 160 lbs. | 73 kg. |
| Maximum Bhp = (Fan RPM / 2301) <sup>3</sup> |       |          |        |
| Outlet Velocity (FPM) = CFM / 1.56          |       |          |        |
| Tip Speed (FPM) = Fan RPM x 3.93            |       |          |        |
| % WOV = (CFM x 100) / (Fan RPM x 1.34)      |       |          |        |

Imperial data — Metric data



## Performance Data

| CFM  | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|      |      | 0.25                        |      | 0.5  |      | 1    |      | 1.5  |      | 2    |      | 2.5  |      | 3    |      | 3.5  |      | 4    |      |
|      |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 1200 | 764  | 1070                        | 0.09 | 1241 | 0.15 | 1549 | 0.30 | 1823 | 0.49 |      |      |      |      |      |      |      |      |      |      |
| 1500 | 955  | 1257                        | 0.13 | 1399 | 0.20 | 1661 | 0.37 | 1907 | 0.57 | 2137 | 0.79 | 2341 | 1.03 |      |      |      |      |      |      |
| 1800 | 1146 | 1461                        | 0.19 | 1575 | 0.27 | 1807 | 0.46 | 2020 | 0.67 | 2228 | 0.91 | 2423 | 1.16 | 2607 | 1.43 | 2776 | 1.72 |      |      |
| 2100 | 1337 | 1669                        | 0.27 | 1763 | 0.36 | 1967 | 0.56 | 2162 | 0.80 | 2341 | 1.04 | 2523 | 1.31 | 2690 | 1.60 | 2858 | 1.90 | 3016 | 2.22 |
| 2400 | 1528 | 1881                        | 0.38 | 1966 | 0.48 | 2139 | 0.69 | 2317 | 0.94 | 2484 | 1.21 | 2640 | 1.49 | 2801 | 1.79 | 2954 | 2.11 | 3099 | 2.44 |
| 2700 | 1719 | 2095                        | 0.51 | 2172 | 0.62 | 2323 | 0.85 | 2479 | 1.11 | 2636 | 1.40 | 2785 | 1.71 | 2926 | 2.02 | 3067 | 2.35 | 3208 | 2.70 |
| 3000 | 1910 | 2310                        | 0.68 | 2382 | 0.79 | 2514 | 1.04 | 2657 | 1.31 | 2799 | 1.62 | 2938 | 1.94 | 3072 | 2.28 | 3201 | 2.63 | 3322 | 2.98 |
| 3300 | 2101 | 2527                        | 0.88 | 2593 | 1.00 | 2716 | 1.26 | 2840 | 1.55 | 2969 | 1.86 | 3100 | 2.21 | 3226 | 2.57 | 3348 | 2.94 | 3467 | 3.32 |
| 3600 | 2292 | 2745                        | 1.11 | 2806 | 1.25 | 2922 | 1.53 | 3029 | 1.82 | 3150 | 2.16 | 3265 | 2.50 | 3387 | 2.88 | 3503 | 3.28 | 3615 | 3.68 |
| 3900 | 2484 | 2964                        | 1.39 | 3021 | 1.54 | 3129 | 1.84 | 3231 | 2.15 | 3335 | 2.49 | 3446 | 2.86 | 3551 | 3.23 | 3665 | 3.65 | 3772 | 4.08 |
| 4200 | 2675 | 3184                        | 1.71 | 3237 | 1.87 | 3338 | 2.19 | 3435 | 2.53 | 3527 | 2.87 | 3630 | 3.25 | 3731 | 3.65 |      |      |      |      |
| 4500 | 2866 | 3404                        | 2.08 | 3453 | 2.25 | 3549 | 2.59 | 3641 | 2.95 | 3729 | 3.31 |      |      |      |      |      |      |      |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                   |
|---|-------|----|----|----|----|----|----|----|----|-------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wi</sub> A |
| 1400  | 100   | 77 | 78 | 71 | 73 | 67 | 68 | 61 | 52 | 75                |
|   | 80    | 77 | 78 | 69 | 68 | 65 | 64 | 60 | 52 | 72                |
|   | 60    | 78 | 78 | 68 | 65 | 62 | 61 | 60 | 52 | 70                |
|   | 50    | 78 | 77 | 68 | 64 | 62 | 60 | 60 | 52 | 69                |
| 2000  | 100   | 78 | 78 | 78 | 79 | 75 | 75 | 73 | 59 | 82                |
|   | 80    | 74 | 77 | 76 | 75 | 71 | 72 | 66 | 58 | 78                |
|   | 60    | 74 | 76 | 75 | 71 | 68 | 68 | 64 | 58 | 75                |
|   | 50    | 76 | 77 | 75 | 70 | 67 | 67 | 63 | 58 | 74                |
| 2600  | 100   | 83 | 82 | 80 | 80 | 78 | 77 | 83 | 68 | 86                |
|   | 80    | 80 | 82 | 81 | 78 | 75 | 76 | 74 | 65 | 82                |
|   | 60    | 79 | 81 | 79 | 76 | 73 | 74 | 70 | 65 | 80                |
|   | 50    | 81 | 81 | 79 | 75 | 72 | 73 | 69 | 65 | 79                |
| 3200  | 100   | 85 | 85 | 82 | 82 | 81 | 80 | 87 | 79 | 90                |
|   | 80    | 82 | 85 | 83 | 81 | 79 | 78 | 79 | 70 | 86                |
|   | 60    | 83 | 85 | 82 | 81 | 77 | 77 | 74 | 70 | 84                |
|   | 50    | 83 | 84 | 82 | 81 | 77 | 77 | 74 | 70 | 84                |
| 3800  | 100   | 86 | 87 | 85 | 86 | 86 | 84 | 88 | 91 | 95                |
|   | 80    | 80 | 87 | 83 | 83 | 82 | 80 | 80 | 74 | 88                |
|   | 60    | 85 | 88 | 85 | 85 | 80 | 79 | 77 | 74 | 87                |
|   | 50    | 84 | 87 | 84 | 86 | 81 | 80 | 78 | 74 | 88                |

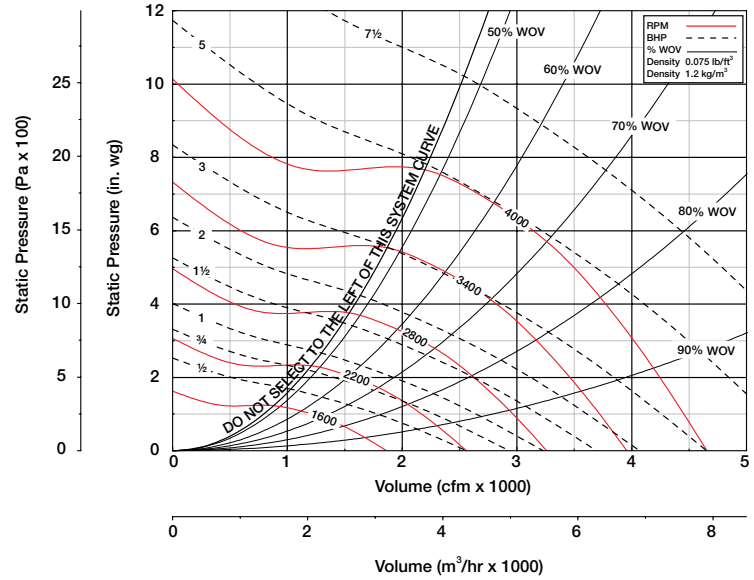
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                   |
|--|-------|----|----|----|----|----|----|----|----|-------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wo</sub> A |
| 1400   | 100   | 87 | 83 | 75 | 74 | 72 | 71 | 63 | 59 | 78                |
|  | 80    | 87 | 81 | 74 | 71 | 70 | 68 | 62 | 58 | 76                |
|  | 60    | 88 | 82 | 74 | 70 | 68 | 67 | 62 | 59 | 75                |
|  | 50    | 89 | 81 | 73 | 70 | 67 | 66 | 62 | 59 | 74                |
| 2000   | 100   | 84 | 84 | 80 | 80 | 80 | 77 | 75 | 64 | 84                |
|  | 80    | 84 | 84 | 77 | 77 | 77 | 75 | 69 | 64 | 81                |
|  | 60    | 85 | 84 | 76 | 75 | 74 | 71 | 67 | 64 | 79                |
|  | 50    | 87 | 84 | 76 | 75 | 73 | 70 | 66 | 64 | 79                |
| 2600   | 100   | 90 | 93 | 83 | 82 | 83 | 80 | 82 | 72 | 89                |
|  | 80    | 92 | 90 | 81 | 79 | 82 | 79 | 75 | 69 | 86                |
|  | 60    | 90 | 89 | 81 | 79 | 79 | 77 | 73 | 69 | 84                |
|  | 50    | 91 | 90 | 81 | 78 | 78 | 76 | 71 | 70 | 84                |
| 3200   | 100   | 93 | 95 | 88 | 85 | 86 | 83 | 86 | 81 | 92                |
|  | 80    | 94 | 92 | 85 | 82 | 85 | 82 | 80 | 74 | 89                |
|  | 60    | 93 | 92 | 85 | 82 | 83 | 81 | 77 | 74 | 88                |
|  | 50    | 95 | 93 | 86 | 81 | 83 | 80 | 76 | 74 | 88                |
| 3800   | 100   | 93 | 94 | 93 | 90 | 90 | 88 | 87 | 92 | 97                |
|  | 80    | 93 | 92 | 89 | 85 | 87 | 84 | 83 | 77 | 92                |
|  | 60    | 96 | 93 | 89 | 85 | 87 | 84 | 81 | 77 | 91                |
|  | 50    | 97 | 94 | 90 | 85 | 87 | 84 | 81 | 77 | 92                |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>Wi</sub>A and outlet L<sub>Wo</sub>, L<sub>Wo</sub>A sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>Wi</sub>A and L<sub>Wo</sub>A values only.

| Performance Data                            |          |        |
|---|----------|--------|
| Maximum Fan RPM                             | 4000     |        |
| Specification Data                          |          |        |
| Maximum Motor Frame Size                    | 184T     |        |
| Minimum Motor Starting hp                   | 1/3 hp   | .25 kW |
| Wheel Diameter                              | 15 in.   | 381 mm |
| Approximate Weight (Less Motor & Drives)    | 180 lbs. | 82 kg. |
| Maximum Bhp = (Fan RPM / 2345) <sup>3</sup> |          |        |
| Outlet Velocity (FPM) = CFM / 1.56          |          |        |
| Tip Speed (FPM) = Fan RPM x 3.93            |          |        |
| % WOV = (CFM x 100) / (Fan RPM x 1.16)      |          |        |

Imperial data — Metric data



## Performance Data

| CFM  | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|      |      | 0                           |      | 0.5  |      | 1    |      | 2    |      | 3    |      | 4    |      | 5    |      | 6    |      | 7    |      |
|      |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 1400 | 891  | 1203                        | 0.08 | 1460 | 0.21 | 1696 | 0.37 | 2131 | 0.75 | 2510 | 1.21 |      |      |      |      |      |      |      |      |
| 1600 | 1019 | 1375                        | 0.12 | 1604 | 0.26 | 1812 | 0.43 | 2213 | 0.84 | 2574 | 1.31 | 2894 | 1.84 |      |      |      |      |      |      |
| 1800 | 1146 | 1547                        | 0.17 | 1752 | 0.33 | 1943 | 0.51 | 2301 | 0.93 | 2641 | 1.43 | 2957 | 1.98 | 3239 | 2.59 |      |      |      |      |
| 2000 | 1273 | 1719                        | 0.24 | 1906 | 0.41 | 2080 | 0.60 | 2410 | 1.05 | 2728 | 1.56 | 3021 | 2.13 | 3302 | 2.76 | 3557 | 3.43 |      |      |
| 2200 | 1401 | 1891                        | 0.32 | 2062 | 0.50 | 2223 | 0.71 | 2522 | 1.17 | 2817 | 1.71 | 3102 | 2.30 | 3366 | 2.95 | 3620 | 3.64 | 3854 | 4.37 |
| 2400 | 1528 | 2062                        | 0.41 | 2221 | 0.61 | 2370 | 0.83 | 2653 | 1.32 | 2924 | 1.88 | 3190 | 2.49 | 3443 | 3.15 | 3684 | 3.86 | 3917 | 4.62 |
| 2600 | 1656 | 2234                        | 0.52 | 2381 | 0.74 | 2519 | 0.97 | 2785 | 1.48 | 3035 | 2.06 | 3283 | 2.70 | 3530 | 3.38 | 3759 | 4.11 | 3981 | 4.88 |
| 2800 | 1783 | 2406                        | 0.65 | 2543 | 0.88 | 2673 | 1.13 | 2921 | 1.66 | 3157 | 2.27 | 3393 | 2.92 | 3618 | 3.63 | 3846 | 4.38 |      |      |
| 3000 | 1910 | 2578                        | 0.80 | 2706 | 1.05 | 2829 | 1.31 | 3064 | 1.87 | 3289 | 2.49 | 3504 | 3.17 | 3722 | 3.90 | 3934 | 4.67 |      |      |
| 3200 | 2038 | 2750                        | 0.98 | 2871 | 1.24 | 2987 | 1.51 | 3209 | 2.10 | 3421 | 2.74 | 3624 | 3.44 | 3831 | 4.19 |      |      |      |      |
| 3400 | 2165 | 2922                        | 1.17 | 3036 | 1.45 | 3145 | 1.74 | 3356 | 2.35 | 3556 | 3.01 | 3755 | 3.74 | 3943 | 4.50 |      |      |      |      |
| 3600 | 2292 | 3094                        | 1.39 | 3202 | 1.68 | 3305 | 1.99 | 3504 | 2.62 | 3699 | 3.32 | 3887 | 4.06 |      |      |      |      |      |      |

Shaded values show where Class I fan selections are more efficient than Class II.

|      |       | Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |    |    |    |    |    |    |    |                   |  |
|------|-------|---|----|----|----|----|----|----|----|-------------------|--|
| RPM  | % WOV | 1   | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wi</sub> A |  |
| 1600 | 100   | 72  | 77 | 77 | 74 | 70 | 69 | 69 | 56 | 77                |  |
|      | 80    | 74  | 79 | 75 | 69 | 66 | 67 | 61 | 55 | 73                |  |
|      | 60    | 73  | 80 | 75 | 66 | 64 | 64 | 58 | 55 | 72                |  |
|      | 50    | 74  | 80 | 76 | 65 | 63 | 63 | 57 | 54 | 72                |  |
| 2200 | 100   | 76  | 77 | 78 | 78 | 76 | 75 | 76 | 67 | 82                |  |
|      | 80    | 76  | 78 | 76 | 74 | 72 | 72 | 68 | 63 | 78                |  |
|      | 60    | 76  | 79 | 75 | 71 | 70 | 70 | 66 | 62 | 76                |  |
|      | 50    | 77  | 79 | 75 | 71 | 69 | 68 | 64 | 62 | 76                |  |
| 2800 | 100   | 83  | 82 | 83 | 80 | 80 | 78 | 78 | 79 | 86                |  |
|      | 80    | 86  | 86 | 81 | 77 | 76 | 75 | 73 | 68 | 82                |  |
|      | 60    | 85  | 91 | 79 | 76 | 75 | 75 | 72 | 67 | 82                |  |
|      | 50    | 86  | 89 | 80 | 76 | 74 | 74 | 70 | 67 | 81                |  |
| 3400 | 100   | 83  | 86 | 85 | 83 | 83 | 82 | 80 | 85 | 90                |  |
|      | 80    | 87  | 86 | 83 | 80 | 80 | 79 | 76 | 72 | 85                |  |
|      | 60    | 87  | 90 | 82 | 79 | 79 | 78 | 76 | 71 | 85                |  |
|      | 50    | 87  | 89 | 83 | 80 | 78 | 78 | 75 | 71 | 85                |  |
| 4000 | 100   | 80  | 89 | 86 | 86 | 87 | 86 | 84 | 89 | 93                |  |
|      | 80    | 82  | 83 | 83 | 81 | 83 | 82 | 79 | 76 | 88                |  |
|      | 60    | 84  | 82 | 85 | 81 | 82 | 81 | 79 | 75 | 87                |  |
|      | 50    | 84  | 83 | 85 | 83 | 82 | 81 | 79 | 75 | 88                |  |

|      |       | Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |    |    |    |    |    |    |    |                   |  |
|------|-------|--|----|----|----|----|----|----|----|-------------------|--|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wo</sub> A |  |
| 1600 | 100   | 87   | 83 | 78 | 75 | 74 | 71 | 69 | 58 | 79                |  |
|      | 80    | 84   | 85 | 73 | 70 | 71 | 69 | 63 | 58 | 76                |  |
|      | 60    | 85   | 84 | 73 | 68 | 68 | 66 | 61 | 58 | 75                |  |
|      | 50    | 87   | 84 | 73 | 68 | 68 | 65 | 60 | 59 | 74                |  |
| 2200 | 100   | 89   | 85 | 80 | 80 | 80 | 77 | 75 | 67 | 84                |  |
|      | 80    | 87   | 84 | 77 | 76 | 77 | 74 | 70 | 66 | 81                |  |
|      | 60    | 88   | 82 | 77 | 74 | 74 | 72 | 67 | 66 | 79                |  |
|      | 50    | 89   | 83 | 77 | 74 | 74 | 71 | 67 | 66 | 79                |  |
| 2800 | 100   | 97   | 89 | 86 | 83 | 84 | 81 | 78 | 78 | 89                |  |
|      | 80    | 91   | 90 | 83 | 80 | 82 | 79 | 75 | 71 | 86                |  |
|      | 60    | 91   | 87 | 83 | 79 | 80 | 77 | 73 | 71 | 85                |  |
|      | 50    | 93   | 88 | 83 | 79 | 79 | 76 | 73 | 70 | 84                |  |
| 3400 | 100   | 98   | 91 | 88 | 86 | 88 | 85 | 81 | 84 | 92                |  |
|      | 80    | 93   | 90 | 86 | 83 | 85 | 82 | 79 | 75 | 89                |  |
|      | 60    | 93   | 89 | 86 | 83 | 84 | 81 | 78 | 75 | 89                |  |
|      | 50    | 95   | 89 | 86 | 83 | 83 | 81 | 77 | 74 | 88                |  |
| 4000 | 100   | 95   | 90 | 90 | 89 | 91 | 89 | 85 | 87 | 96                |  |
|      | 80    | 94   | 88 | 87 | 85 | 88 | 86 | 82 | 78 | 92                |  |
|      | 60    | 94   | 89 | 89 | 85 | 88 | 85 | 82 | 78 | 92                |  |
|      | 50    | 94   | 89 | 88 | 86 | 87 | 84 | 82 | 78 | 91                |  |

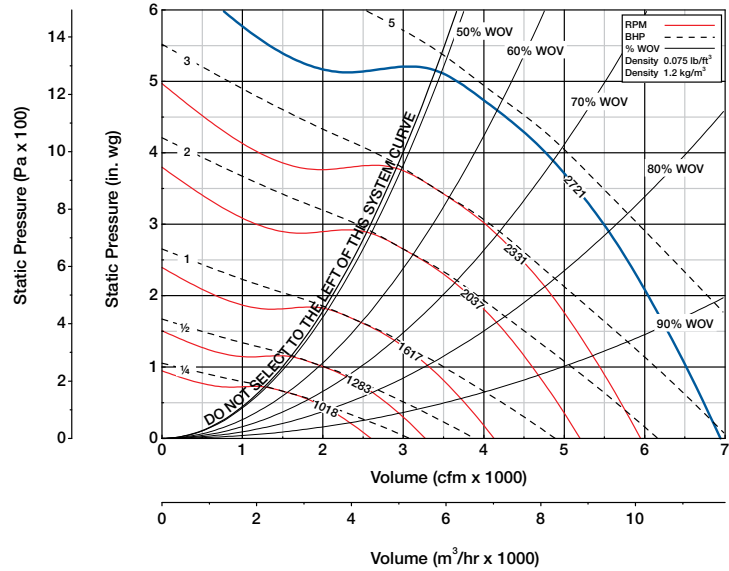
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

The sound power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>Wi</sub>A and outlet L<sub>Wo</sub>, L<sub>Wo</sub>A sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>Wi</sub>A and L<sub>Wo</sub>A values only.



| Performance Data                            |       |           |        |
|---|-------|-----------|--------|
| Maximum Fan RPM                             | QEI-L | 2721      |        |
|   | QEI   | 2721      |        |
| Specification Data                          |       |           |        |
| Maximum Motor Frame Size                    | QEI-L | 184T      |        |
|   | QEI   | 213T      |        |
| Minimum Motor Starting hp                   |       | 1/3 hp    | .25 kW |
| Wheel Diameter                              |       | 18.25 in. | 464 mm |
| Approximate Weight (Less Motor & Drives)    | QEI-L | 140 lbs.  | 64 kg. |
|   | QEI   | 190 lbs.  | 82 kg. |
| Maximum Bhp = (Fan RPM / 1617) <sup>3</sup> |       |           |        |
| Outlet Velocity (FPM) = CFM / 2.32          |       |           |        |
| Tip Speed (FPM) = Fan RPM x 4.78            |       |           |        |
| % WOV = (CFM x 100) / (Fan RPM x 2.55)      |       |           |        |

Imperial data — Metric data



## Performance Data

| CFM  | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|      |      | 0.25                        |      | 0.5  |      | 1    |      | 1.5  |      | 2    |      | 2.5  |      | 3    |      | 3.5  |      | 4    |      |
|      |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 1700 | 732  | 823                         | 0.12 | 965  | 0.21 | 1229 | 0.44 |      |      |      |      |      |      |      |      |      |      |      |      |
| 2100 | 905  | 952                         | 0.17 | 1072 | 0.28 | 1301 | 0.52 | 1508 | 0.81 |      |      |      |      |      |      |      |      |      |      |
| 2500 | 1077 | 1088                        | 0.24 | 1194 | 0.36 | 1391 | 0.62 | 1580 | 0.93 | 1753 | 1.27 | 1915 | 1.64 |      |      |      |      |      |      |
| 2900 | 1250 | 1231                        | 0.33 | 1323 | 0.46 | 1495 | 0.75 | 1662 | 1.07 | 1827 | 1.43 | 1976 | 1.83 | 2122 | 2.24 | 2257 | 2.68 |      |      |
| 3300 | 1422 | 1376                        | 0.44 | 1456 | 0.59 | 1615 | 0.92 | 1763 | 1.25 | 1907 | 1.62 | 2054 | 2.03 | 2188 | 2.47 | 2317 | 2.94 | 2443 | 3.42 |
| 3700 | 1594 | 1524                        | 0.58 | 1597 | 0.74 | 1740 | 1.11 | 1875 | 1.47 | 2008 | 1.86 | 2135 | 2.27 | 2266 | 2.73 | 2390 | 3.22 | 2505 | 3.72 |
| 4100 | 1767 | 1674                        | 0.75 | 1740 | 0.93 | 1870 | 1.31 | 1996 | 1.73 | 2114 | 2.13 | 2236 | 2.56 | 2350 | 3.02 | 2469 | 3.52 | 2583 | 4.05 |
| 4500 | 1939 | 1825                        | 0.95 | 1885 | 1.14 | 2003 | 1.55 | 2121 | 2.01 | 2234 | 2.45 | 2339 | 2.90 | 2451 | 3.38 | 2556 | 3.88 | 2663 | 4.41 |
| 4900 | 2112 | 1977                        | 1.19 | 2031 | 1.40 | 2141 | 1.83 | 2251 | 2.31 | 2356 | 2.82 | 2458 | 3.29 | 2553 | 3.77 | 2657 | 4.30 |      |      |
| 5300 | 2284 | 2130                        | 1.47 | 2180 | 1.69 | 2282 | 2.16 | 2383 | 2.65 | 2483 | 3.20 | 2579 | 3.73 | 2672 | 4.24 |      |      |      |      |
| 5700 | 2456 | 2283                        | 1.79 | 2330 | 2.03 | 2426 | 2.52 | 2517 | 3.04 | 2613 | 3.61 | 2704 | 4.20 |      |      |      |      |      |      |
| 6100 | 2629 | 2436                        | 2.16 | 2481 | 2.41 | 2570 | 2.94 | 2657 | 3.48 |      |      |      |      |      |      |      |      |      |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|---|-------|----|----|----|----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |
| 650   | 100   | 63 | 61 | 59 | 56 | 57 | 52 | 48 | 35 | 60               |
|   | 80    | 62 | 59 | 59 | 53 | 54 | 51 | 48 | 35 | 59               |
|   | 60    | 60 | 59 | 57 | 52 | 54 | 51 | 47 | 35 | 58               |
|   | 50    | 60 | 59 | 56 | 52 | 53 | 51 | 47 | 35 | 58               |
| 1000  | 100   | 65 | 66 | 68 | 65 | 60 | 63 | 52 | 44 | 68               |
|   | 80    | 63 | 63 | 65 | 62 | 58 | 56 | 51 | 42 | 64               |
|   | 60    | 63 | 63 | 63 | 60 | 57 | 55 | 50 | 42 | 63               |
|   | 50    | 66 | 64 | 63 | 59 | 57 | 55 | 50 | 42 | 62               |
| 1400  | 100   | 69 | 77 | 73 | 72 | 69 | 67 | 69 | 53 | 75               |
|   | 80    | 68 | 76 | 70 | 68 | 66 | 63 | 58 | 50 | 71               |
|   | 60    | 67 | 70 | 68 | 66 | 65 | 62 | 57 | 50 | 69               |
|   | 50    | 68 | 71 | 70 | 65 | 64 | 61 | 56 | 50 | 69               |
| 2000  | 100   | 73 | 73 | 82 | 81 | 78 | 74 | 77 | 65 | 84               |
|   | 80    | 68 | 76 | 76 | 78 | 74 | 72 | 67 | 61 | 80               |
|   | 60    | 75 | 77 | 77 | 76 | 72 | 70 | 67 | 62 | 78               |
|   | 50    | 81 | 80 | 77 | 76 | 72 | 71 | 67 | 61 | 78               |
| 2721  | 100   | 79 | 78 | 86 | 88 | 86 | 83 | 80 | 83 | 91               |
|   | 80    | 80 | 73 | 83 | 85 | 81 | 79 | 74 | 69 | 86               |
|   | 60    | 78 | 75 | 78 | 81 | 79 | 77 | 73 | 69 | 84               |
|   | 50    | 80 | 79 | 80 | 81 | 78 | 76 | 74 | 70 | 83               |

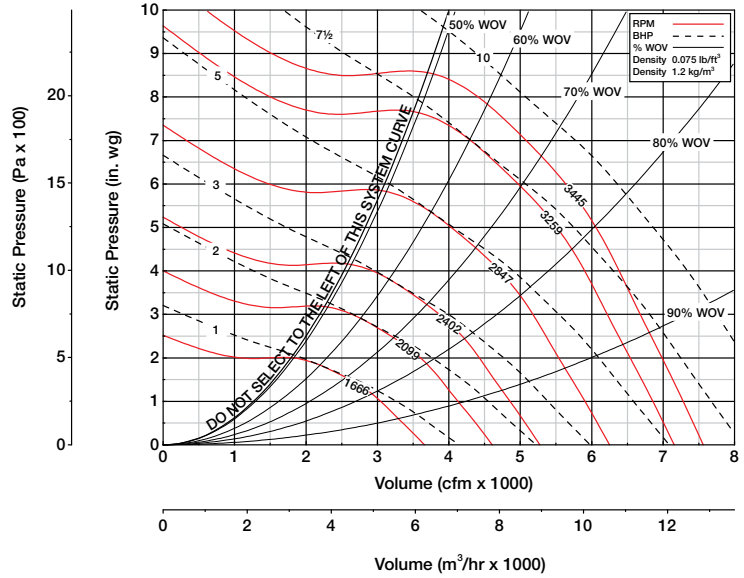
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|--|-------|----|----|----|----|----|----|----|----|------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WoA</sub> |
| 650  | 100   | 74 | 65 | 60 | 58 | 59 | 54 | 52 | 39 | 63               |
|  | 80    | 69 | 64 | 59 | 57 | 57 | 55 | 52 | 40 | 62               |
|  | 60    | 70 | 64 | 58 | 56 | 57 | 54 | 52 | 40 | 61               |
|  | 50    | 71 | 64 | 58 | 56 | 57 | 55 | 52 | 40 | 61               |
| 1000   | 100   | 73 | 73 | 66 | 68 | 65 | 64 | 55 | 47 | 70               |
|  | 80    | 75 | 74 | 64 | 66 | 63 | 60 | 56 | 47 | 68               |
|  | 60    | 76 | 73 | 64 | 65 | 62 | 59 | 55 | 47 | 68               |
|  | 50    | 77 | 74 | 64 | 65 | 62 | 59 | 55 | 47 | 68               |
| 1400   | 100   | 79 | 79 | 74 | 74 | 73 | 69 | 70 | 56 | 78               |
|  | 80    | 79 | 74 | 72 | 71 | 71 | 67 | 61 | 55 | 74               |
|  | 60    | 77 | 75 | 73 | 69 | 68 | 66 | 61 | 55 | 73               |
|  | 50    | 80 | 75 | 72 | 69 | 68 | 65 | 61 | 55 | 73               |
| 2000   | 100   | 83 | 82 | 81 | 83 | 82 | 78 | 78 | 68 | 86               |
|  | 80    | 79 | 78 | 77 | 79 | 79 | 75 | 70 | 63 | 82               |
|  | 60    | 83 | 81 | 78 | 77 | 77 | 74 | 69 | 64 | 81               |
|  | 50    | 86 | 83 | 79 | 77 | 76 | 73 | 69 | 64 | 81               |
| 2721   | 100   | 91 | 85 | 87 | 90 | 90 | 86 | 82 | 84 | 94               |
|  | 80    | 88 | 83 | 81 | 84 | 86 | 84 | 78 | 72 | 90               |
|  | 60    | 87 | 87 | 83 | 82 | 83 | 81 | 77 | 71 | 88               |
|  | 50    | 90 | 89 | 85 | 83 | 83 | 81 | 76 | 72 | 88               |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.

| Performance Data                            |           |         |
|---|-----------|---------|
| Maximum Fan RPM                             | 3445      |         |
| Specification Data                          |           |         |
| Maximum Motor Frame Size                    | 215T      |         |
| Minimum Motor Starting hp                   | 1/3 hp    | .25 kW  |
| Wheel Diameter                              | 18.25 in. | 464 mm  |
| Approximate Weight (Less Motor & Drives)    | 220 lbs.  | 100 kg. |
| Maximum Bhp = (Fan RPM / 1666) <sup>3</sup> |           |         |
| Outlet Velocity (FPM) = CFM / 2.32          |           |         |
| Tip Speed (FPM) = Fan RPM x 4.78            |           |         |
| % WOV = (CFM x 100) / (Fan RPM x 2.20)      |           |         |

Imperial data — Metric data



## Performance Data

| CFM  | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|      |      | 0.5                         |      | 1    |      | 2    |      | 3    |      | 4    |      | 5    |      | 6    |      | 7    |      | 8    |      |
|      |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 2500 | 1077 | 1315                        | 0.42 | 1471 | 0.64 | 1790 | 1.23 | 2082 | 1.91 |      |      |      |      |      |      |      |      |      |      |
| 2800 | 1206 | 1436                        | 0.53 | 1575 | 0.77 | 1864 | 1.38 | 2131 | 2.09 | 2392 | 2.88 |      |      |      |      |      |      |      |      |
| 3100 | 1336 | 1559                        | 0.65 | 1687 | 0.92 | 1948 | 1.54 | 2201 | 2.29 | 2435 | 3.11 | 2670 | 3.99 | 2884 | 4.93 |      |      |      |      |
| 3400 | 1465 | 1684                        | 0.79 | 1805 | 1.10 | 2034 | 1.72 | 2275 | 2.51 | 2500 | 3.36 | 2713 | 4.28 | 2926 | 5.25 | 3122 | 6.28 |      |      |
| 3700 | 1594 | 1810                        | 0.96 | 1926 | 1.30 | 2137 | 1.95 | 2358 | 2.75 | 2570 | 3.64 | 2771 | 4.59 | 2968 | 5.59 | 3164 | 6.66 | 3347 | 7.76 |
| 4000 | 1724 | 1938                        | 1.15 | 2047 | 1.52 | 2242 | 2.21 | 2443 | 3.01 | 2647 | 3.94 | 2841 | 4.92 | 3023 | 5.96 | 3207 | 7.05 | 3389 | 8.20 |
| 4300 | 1853 | 2067                        | 1.37 | 2170 | 1.76 | 2353 | 2.50 | 2538 | 3.31 | 2730 | 4.26 | 2913 | 5.29 | 3093 | 6.36 | 3261 | 7.48 | 3431 | 8.65 |
| 4600 | 1982 | 2197                        | 1.61 | 2294 | 2.04 | 2471 | 2.84 | 2641 | 3.67 | 2816 | 4.61 | 2995 | 5.67 | 3164 | 6.78 | 3331 | 7.94 |      |      |
| 4900 | 2112 | 2328                        | 1.89 | 2420 | 2.34 | 2590 | 3.22 | 2746 | 4.05 | 2908 | 5.01 | 3080 | 6.09 | 3243 | 7.24 | 3402 | 8.43 |      |      |
| 5200 | 2241 | 2460                        | 2.20 | 2546 | 2.67 | 2710 | 3.64 | 2856 | 4.49 | 3011 | 5.47 | 3165 | 6.53 | 3326 | 7.72 |      |      |      |      |
| 5500 | 2370 | 2592                        | 2.55 | 2673 | 3.04 | 2831 | 4.07 | 2973 | 4.99 | 3115 | 5.96 | 3259 | 7.04 | 3411 | 8.23 |      |      |      |      |
| 5800 | 2500 | 2724                        | 2.93 | 2802 | 3.45 | 2953 | 4.53 | 3092 | 5.53 | 3221 | 6.50 | 3362 | 7.61 |      |      |      |      |      |      |

Shaded values show where Class I fan selections are more efficient than Class II.

|      |       | Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |    |    |    |    |    |    |    |                   |  |
|------|-------|---|----|----|----|----|----|----|----|-------------------|--|
| RPM  | % WOV | 1   | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wi</sub> A |  |
| 1000 | 100   | 64  | 70 | 70 | 72 | 66 | 65 | 55 | 48 | 73                |  |
|      | 80    | 62  | 66 | 67 | 66 | 63 | 60 | 52 | 43 | 68                |  |
|      | 60    | 61  | 62 | 63 | 62 | 61 | 58 | 51 | 42 | 65                |  |
|      | 50    | 62  | 63 | 63 | 62 | 60 | 58 | 51 | 41 | 65                |  |
| 1400 | 100   | 67  | 69 | 73 | 74 | 71 | 72 | 64 | 56 | 78                |  |
|      | 80    | 66  | 65 | 71 | 72 | 68 | 67 | 61 | 53 | 75                |  |
|      | 60    | 67  | 66 | 68 | 68 | 66 | 65 | 58 | 51 | 71                |  |
|      | 50    | 69  | 67 | 69 | 67 | 65 | 63 | 57 | 52 | 71                |  |
| 2000 | 100   | 71  | 73 | 78 | 77 | 77 | 75 | 79 | 66 | 84                |  |
|      | 80    | 67  | 69 | 76 | 75 | 74 | 73 | 70 | 62 | 79                |  |
|      | 60    | 71  | 71 | 74 | 74 | 72 | 71 | 68 | 61 | 77                |  |
|      | 50    | 75  | 74 | 76 | 74 | 72 | 71 | 67 | 61 | 77                |  |
| 2700 | 100   | 78  | 78 | 79 | 85 | 85 | 83 | 87 | 77 | 91                |  |
|      | 80    | 79  | 74 | 76 | 85 | 84 | 80 | 77 | 71 | 88                |  |
|      | 60    | 81  | 78 | 77 | 82 | 82 | 78 | 75 | 70 | 85                |  |
|      | 50    | 81  | 80 | 79 | 82 | 81 | 78 | 74 | 70 | 85                |  |
| 3445 | 100   | 79  | 82 | 84 | 89 | 90 | 88 | 91 | 87 | 96                |  |
|      | 80    | 75  | 79 | 81 | 85 | 87 | 85 | 83 | 78 | 91                |  |
|      | 60    | 79  | 83 | 82 | 82 | 84 | 83 | 81 | 77 | 89                |  |
|      | 50    | 81  | 85 | 85 | 86 | 85 | 82 | 80 | 77 | 90                |  |

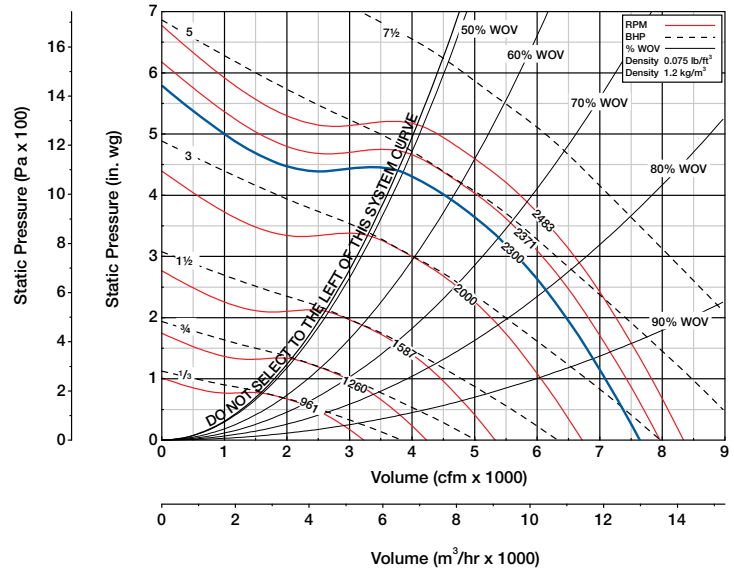
|      |       | Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |    |    |    |    |    |    |    |                   |  |
|------|-------|--|----|----|----|----|----|----|----|-------------------|--|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wo</sub> A |  |
| 1000 | 100   | 76   | 75 | 69 | 72 | 70 | 67 | 55 | 47 | 74                |  |
|      | 80    | 75   | 72 | 67 | 67 | 68 | 62 | 53 | 44 | 71                |  |
|      | 60    | 75   | 72 | 67 | 64 | 66 | 60 | 53 | 44 | 69                |  |
|      | 50    | 75   | 71 | 67 | 64 | 65 | 60 | 52 | 44 | 68                |  |
| 1400 | 100   | 80   | 76 | 74 | 76 | 76 | 73 | 66 | 56 | 80                |  |
|      | 80    | 78   | 74 | 71 | 72 | 74 | 69 | 62 | 52 | 77                |  |
|      | 60    | 79   | 75 | 71 | 70 | 72 | 67 | 60 | 52 | 75                |  |
|      | 50    | 79   | 75 | 71 | 70 | 72 | 67 | 60 | 52 | 75                |  |
| 2000 | 100   | 90   | 81 | 81 | 83 | 82 | 78 | 79 | 66 | 87                |  |
|      | 80    | 88   | 78 | 77 | 79 | 80 | 76 | 72 | 65 | 84                |  |
|      | 60    | 87   | 82 | 78 | 77 | 78 | 74 | 69 | 63 | 82                |  |
|      | 50    | 89   | 83 | 79 | 78 | 78 | 73 | 69 | 64 | 82                |  |
| 2700 | 100   | 87   | 85 | 85 | 88 | 90 | 86 | 86 | 78 | 94                |  |
|      | 80    | 85   | 85 | 83 | 83 | 88 | 83 | 79 | 72 | 90                |  |
|      | 60    | 88   | 89 | 87 | 82 | 86 | 81 | 77 | 71 | 89                |  |
|      | 50    | 89   | 90 | 87 | 83 | 86 | 80 | 77 | 72 | 89                |  |
| 3445 | 100   | 91   | 90 | 91 | 93 | 95 | 93 | 92 | 89 | 100               |  |
|      | 80    | 89   | 92 | 91 | 89 | 92 | 89 | 86 | 80 | 96                |  |
|      | 60    | 92   | 94 | 93 | 87 | 90 | 87 | 84 | 79 | 94                |  |
|      | 50    | 93   | 94 | 93 | 89 | 90 | 87 | 83 | 78 | 94                |  |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>Wi</sub>A and outlet L<sub>Wo</sub>, L<sub>Wo</sub>A sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>Wi</sub>A and L<sub>Wo</sub>A values only.

| Performance Data                            |        |                  |
|---|--------|------------------|
| Maximum Fan RPM                             | QEI-L  | 2300             |
|   | QEI    | 2483             |
| Specification Data                          |        |                  |
| Maximum Motor Frame Size                    | QEI-L  | 184T             |
|   | QEI    | 213T             |
| Minimum Motor Starting hp                   | 1/3 hp | .25 kW           |
| Wheel Diameter                              | 20 in. | 508 mm           |
| Approximate Weight (Less Motor & Drives)    | QEI-L  | 160 lbs. 73 kg.  |
|   | QEI    | 220 lbs. 100 kg. |
| Maximum Bhp = (Fan RPM / 1387) <sup>3</sup> |        |                  |
| Outlet Velocity (FPM) = CFM / 2.79          |        |                  |
| Tip Speed (FPM) = Fan RPM x 5.24            |        |                  |
| % WOV = (CFM x 100) / (Fan RPM x 3.36)      |        |                  |

Imperial data — Metric data



## Performance Data

| CFM  | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|      |      | 0.25                        |      | 0.5  |      | 1    |      | 1.5  |      | 2    |      | 2.5  |      | 3    |      | 3.5  |      | 4    |      |
|      |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 2400 | 860  | 837                         | 0.19 | 951  | 0.31 | 1169 | 0.59 | 1362 | 0.94 |      |      |      |      |      |      |      |      |      |      |
| 2800 | 1003 | 939                         | 0.25 | 1039 | 0.39 | 1230 | 0.69 | 1411 | 1.05 | 1576 | 1.45 |      |      |      |      |      |      |      |      |
| 3200 | 1146 | 1046                        | 0.33 | 1134 | 0.48 | 1307 | 0.81 | 1471 | 1.18 | 1625 | 1.60 | 1770 | 2.06 | 1904 | 2.54 |      |      |      |      |
| 3600 | 1290 | 1155                        | 0.43 | 1235 | 0.59 | 1389 | 0.95 | 1538 | 1.33 | 1684 | 1.77 | 1820 | 2.25 | 1950 | 2.76 | 2073 | 3.29 | 2188 | 3.85 |
| 4000 | 1433 | 1266                        | 0.55 | 1338 | 0.72 | 1479 | 1.11 | 1616 | 1.52 | 1747 | 1.96 | 1879 | 2.46 | 2002 | 2.99 | 2119 | 3.55 | 2233 | 4.13 |
| 4400 | 1577 | 1378                        | 0.69 | 1445 | 0.88 | 1573 | 1.29 | 1700 | 1.73 | 1824 | 2.20 | 1940 | 2.69 | 2062 | 3.25 | 2174 | 3.83 | 2280 | 4.43 |
| 4800 | 1720 | 1492                        | 0.85 | 1554 | 1.06 | 1673 | 1.50 | 1789 | 1.97 | 1901 | 2.46 | 2016 | 2.98 | 2121 | 3.52 | 2234 | 4.13 | 2338 | 4.76 |
| 5200 | 1863 | 1607                        | 1.05 | 1664 | 1.27 | 1774 | 1.74 | 1880 | 2.24 | 1989 | 2.76 | 2093 | 3.30 | 2198 | 3.87 | 2294 | 4.46 | 2399 | 5.11 |
| 5600 | 2007 | 1722                        | 1.27 | 1774 | 1.51 | 1878 | 2.01 | 1979 | 2.54 | 2078 | 3.09 | 2177 | 3.65 | 2274 | 4.25 | 2371 | 4.86 | 2461 | 5.49 |
| 6000 | 2150 | 1837                        | 1.52 | 1886 | 1.77 | 1984 | 2.31 | 2080 | 2.87 | 2170 | 3.45 | 2265 | 4.04 | 2355 | 4.66 | 2447 | 5.29 |      |      |
| 6400 | 2293 | 1954                        | 1.81 | 1999 | 2.08 | 2092 | 2.64 | 2181 | 3.23 | 2269 | 3.84 | 2355 | 4.47 | 2443 | 5.11 |      |      |      |      |
| 6800 | 2437 | 2070                        | 2.14 | 2113 | 2.42 | 2201 | 3.01 | 2284 | 3.63 | 2369 | 4.27 | 2449 | 4.93 |      |      |      |      |      |      |

| Inlet Sound Power, L <sub>wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|---|-------|----|----|----|----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>wiA</sub> |
| 600   | 100   | 65 | 62 | 60 | 57 | 57 | 52 | 47 | 34 | 61               |
|   | 80    | 64 | 61 | 59 | 55 | 55 | 52 | 47 | 35 | 59               |
|   | 60    | 62 | 60 | 57 | 53 | 54 | 52 | 47 | 35 | 59               |
|   | 50    | 62 | 60 | 57 | 53 | 54 | 52 | 47 | 35 | 58               |
| 900   | 100   | 65 | 67 | 68 | 65 | 61 | 62 | 51 | 43 | 68               |
|   | 80    | 64 | 64 | 65 | 62 | 58 | 56 | 50 | 41 | 64               |
|   | 60    | 63 | 63 | 63 | 60 | 57 | 55 | 49 | 41 | 63               |
|   | 50    | 66 | 65 | 63 | 60 | 57 | 55 | 49 | 41 | 62               |
| 1250  | 100   | 71 | 78 | 73 | 72 | 69 | 67 | 67 | 51 | 75               |
|   | 80    | 69 | 78 | 70 | 68 | 65 | 62 | 57 | 49 | 71               |
|   | 60    | 68 | 71 | 68 | 66 | 65 | 61 | 57 | 50 | 69               |
|   | 50    | 69 | 73 | 69 | 65 | 64 | 60 | 55 | 50 | 69               |
| 1750  | 100   | 73 | 75 | 81 | 80 | 77 | 75 | 75 | 62 | 83               |
|   | 80    | 69 | 76 | 76 | 77 | 73 | 71 | 66 | 59 | 79               |
|   | 60    | 75 | 77 | 77 | 75 | 71 | 70 | 66 | 60 | 77               |
|   | 50    | 80 | 80 | 77 | 75 | 71 | 70 | 66 | 60 | 77               |
| 2483  | 100   | 80 | 80 | 88 | 88 | 86 | 83 | 81 | 84 | 92               |
|   | 80    | 80 | 75 | 84 | 85 | 81 | 79 | 74 | 69 | 87               |
|   | 60    | 78 | 77 | 80 | 82 | 79 | 77 | 74 | 70 | 84               |
|   | 50    | 81 | 80 | 82 | 81 | 78 | 77 | 74 | 70 | 84               |

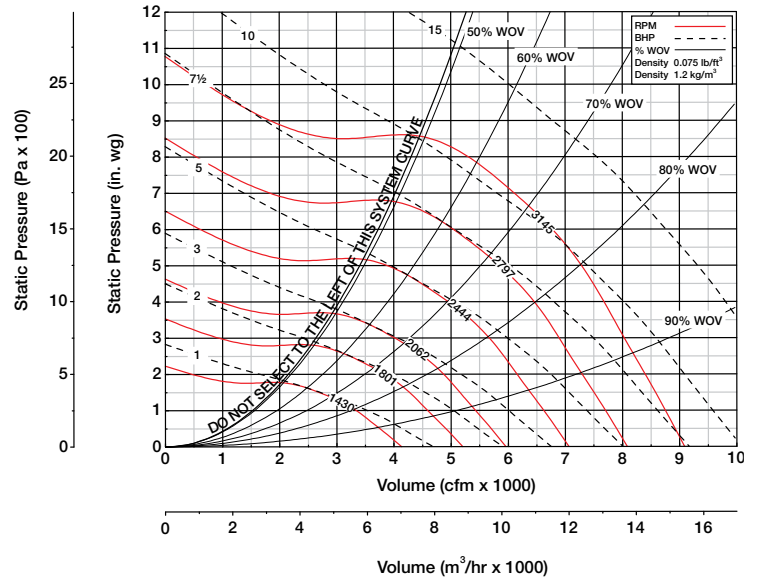
| Outlet Sound Power, L <sub>wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|--|-------|----|----|----|----|----|----|----|----|------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>woA</sub> |
| 600  | 100   | 75 | 66 | 60 | 59 | 60 | 55 | 51 | 39 | 64               |
|  | 80    | 70 | 65 | 60 | 58 | 58 | 55 | 51 | 39 | 62               |
|  | 60    | 71 | 64 | 59 | 57 | 58 | 55 | 51 | 40 | 62               |
|  | 50    | 72 | 64 | 59 | 57 | 57 | 55 | 51 | 40 | 62               |
| 900  | 100   | 74 | 73 | 67 | 68 | 65 | 63 | 55 | 46 | 70               |
|  | 80    | 76 | 73 | 65 | 66 | 63 | 60 | 55 | 46 | 68               |
|  | 60    | 76 | 72 | 64 | 65 | 62 | 59 | 54 | 46 | 67               |
|  | 50    | 77 | 73 | 65 | 65 | 62 | 59 | 54 | 46 | 67               |
| 1250   | 100   | 80 | 80 | 74 | 74 | 72 | 70 | 68 | 54 | 77               |
|  | 80    | 78 | 75 | 72 | 71 | 70 | 66 | 61 | 54 | 74               |
|  | 60    | 77 | 75 | 72 | 69 | 68 | 65 | 60 | 55 | 73               |
|  | 50    | 79 | 76 | 72 | 69 | 68 | 65 | 60 | 55 | 73               |
| 1750   | 100   | 82 | 82 | 81 | 83 | 81 | 78 | 76 | 65 | 86               |
|  | 80    | 79 | 78 | 77 | 79 | 78 | 74 | 69 | 62 | 82               |
|  | 60    | 83 | 80 | 77 | 77 | 76 | 73 | 68 | 62 | 80               |
|  | 50    | 86 | 82 | 79 | 77 | 75 | 72 | 68 | 63 | 80               |
| 2483   | 100   | 91 | 86 | 88 | 90 | 90 | 87 | 83 | 85 | 94               |
|  | 80    | 88 | 84 | 82 | 85 | 87 | 84 | 78 | 72 | 90               |
|  | 60    | 88 | 88 | 85 | 83 | 84 | 81 | 77 | 72 | 88               |
|  | 50    | 90 | 89 | 86 | 84 | 84 | 81 | 77 | 72 | 88               |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>wi</sub>, L<sub>wiA</sub> and outlet L<sub>wo</sub>, L<sub>woA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>wiA</sub> and L<sub>woA</sub> values only.

| Performance Data                            |          |         |
|---|----------|---------|
| Maximum Fan RPM                             | 3145     |         |
| Specification Data                          |          |         |
| Maximum Motor Frame Size                    | 215T     |         |
| Minimum Motor Starting hp                   | 1/3 hp   | .25 kW  |
| Wheel Diameter                              | 20 in.   | 508 mm  |
| Approximate Weight (Less Motor & Drives)    | 240 lbs. | 109 kg. |
| Maximum Bhp = (Fan RPM / 1430) <sup>3</sup> |          |         |
| Outlet Velocity (FPM) = CFM / 2.79          |          |         |
| Tip Speed (FPM) = Fan RPM x 5.24            |          |         |
| % WOV = (CFM x 100) / (Fan RPM x 2.89)      |          |         |

Imperial data — Metric data



## Performance Data

| CFM  | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|      |      | 0.5                         |      | 1    |      | 2    |      | 3    |      | 4    |      | 5    |      | 6    |      | 7    |      | 8    |      |
|      |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 3000 | 1075 | 1199                        | 0.50 | 1342 | 0.77 | 1633 | 1.48 | 1900 | 2.29 |      |      |      |      |      |      |      |      |      |      |
| 3300 | 1182 | 1291                        | 0.61 | 1421 | 0.89 | 1688 | 1.62 | 1934 | 2.47 | 2176 | 3.41 |      |      |      |      |      |      |      |      |
| 3600 | 1290 | 1384                        | 0.73 | 1503 | 1.03 | 1750 | 1.78 | 1987 | 2.66 | 2209 | 3.63 | 2424 | 4.68 |      |      |      |      |      |      |
| 3900 | 1397 | 1478                        | 0.86 | 1592 | 1.20 | 1816 | 1.95 | 2041 | 2.88 | 2249 | 3.88 | 2456 | 4.96 | 2650 | 6.11 |      |      |      |      |
| 4200 | 1505 | 1574                        | 1.01 | 1683 | 1.39 | 1887 | 2.16 | 2100 | 3.10 | 2302 | 4.14 | 2488 | 5.25 | 2682 | 6.44 | 2861 | 7.68 |      |      |
| 4500 | 1612 | 1670                        | 1.18 | 1774 | 1.61 | 1965 | 2.39 | 2163 | 3.35 | 2356 | 4.42 | 2539 | 5.57 | 2715 | 6.78 | 2893 | 8.07 | 3060 | 9.40 |
| 4800 | 1720 | 1767                        | 1.38 | 1867 | 1.83 | 2045 | 2.65 | 2229 | 3.61 | 2415 | 4.73 | 2592 | 5.91 | 2758 | 7.15 | 2926 | 8.46 | 3092 | 9.84 |
| 5100 | 1827 | 1865                        | 1.59 | 1960 | 2.06 | 2128 | 2.94 | 2299 | 3.91 | 2478 | 5.05 | 2646 | 6.27 | 2811 | 7.55 | 2964 | 8.88 | 3124 | 10.3 |
| 5400 | 1935 | 1964                        | 1.83 | 2054 | 2.33 | 2217 | 3.27 | 2377 | 4.26 | 2543 | 5.39 | 2707 | 6.65 | 2865 | 7.97 | 3017 | 9.34 |      |      |
| 5700 | 2043 | 2063                        | 2.10 | 2149 | 2.62 | 2307 | 3.63 | 2457 | 4.63 | 2608 | 5.76 | 2770 | 7.05 | 2920 | 8.41 | 3071 | 9.82 |      |      |
| 6000 | 2150 | 2163                        | 2.39 | 2245 | 2.93 | 2398 | 4.02 | 2537 | 5.03 | 2684 | 6.19 | 2835 | 7.48 | 2983 | 8.87 | 3125 | 10.3 |      |      |
| 6300 | 2258 | 2263                        | 2.71 | 2341 | 3.27 | 2489 | 4.45 | 2623 | 5.48 | 2762 | 6.66 | 2900 | 7.93 | 3046 | 9.36 |      |      |      |      |

Shaded values show where Class I fan selections are more efficient than Class II.

|      |       | Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |    |    |    |    |    |    |    |                  |  |
|------|-------|---|----|----|----|----|----|----|----|------------------|--|
| RPM  | % WOV | 1   | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |  |
| 900  | 100   | 66  | 71 | 71 | 72 | 66 | 64 | 54 | 47 | 72               |  |
|      | 80    | 63  | 67 | 67 | 66 | 63 | 59 | 51 | 42 | 68               |  |
|      | 60    | 62  | 63 | 63 | 63 | 61 | 57 | 50 | 41 | 65               |  |
|      | 50    | 63  | 64 | 63 | 62 | 60 | 57 | 50 | 40 | 65               |  |
| 1250 | 100   | 68  | 70 | 73 | 74 | 71 | 71 | 63 | 55 | 77               |  |
|      | 80    | 66  | 67 | 71 | 72 | 69 | 67 | 60 | 52 | 74               |  |
|      | 60    | 67  | 66 | 68 | 68 | 66 | 64 | 57 | 51 | 71               |  |
|      | 50    | 69  | 68 | 69 | 67 | 65 | 63 | 57 | 51 | 70               |  |
| 1750 | 100   | 71  | 74 | 78 | 77 | 77 | 76 | 77 | 63 | 83               |  |
|      | 80    | 67  | 70 | 77 | 74 | 73 | 72 | 68 | 61 | 79               |  |
|      | 60    | 71  | 72 | 74 | 73 | 72 | 70 | 66 | 60 | 77               |  |
|      | 50    | 74  | 74 | 76 | 74 | 71 | 70 | 65 | 60 | 77               |  |
| 2475 | 100   | 79  | 79 | 81 | 86 | 86 | 84 | 86 | 77 | 92               |  |
|      | 80    | 80  | 75 | 78 | 86 | 84 | 80 | 77 | 71 | 88               |  |
|      | 60    | 82  | 79 | 78 | 83 | 82 | 78 | 75 | 70 | 86               |  |
|      | 50    | 82  | 81 | 80 | 83 | 82 | 78 | 74 | 70 | 86               |  |
| 3145 | 100   | 81  | 84 | 85 | 91 | 91 | 89 | 92 | 87 | 97               |  |
|      | 80    | 77  | 80 | 81 | 86 | 88 | 85 | 83 | 78 | 92               |  |
|      | 60    | 81  | 84 | 83 | 85 | 85 | 83 | 81 | 77 | 90               |  |
|      | 50    | 83  | 86 | 86 | 87 | 85 | 83 | 80 | 77 | 90               |  |

|      |       | Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |    |    |    |    |    |    |    |                  |  |
|------|-------|--|----|----|----|----|----|----|----|------------------|--|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WoA</sub> |  |
| 900  | 100   | 77   | 76 | 70 | 72 | 70 | 66 | 55 | 47 | 74               |  |
|      | 80    | 75   | 73 | 67 | 67 | 67 | 61 | 52 | 43 | 71               |  |
|      | 60    | 75   | 73 | 67 | 65 | 65 | 60 | 52 | 43 | 69               |  |
|      | 50    | 75   | 72 | 67 | 64 | 65 | 59 | 52 | 43 | 68               |  |
| 1250 | 100   | 80   | 76 | 75 | 77 | 76 | 72 | 64 | 54 | 79               |  |
|      | 80    | 78   | 74 | 71 | 73 | 73 | 68 | 60 | 51 | 76               |  |
|      | 60    | 79   | 74 | 71 | 71 | 72 | 66 | 59 | 51 | 75               |  |
|      | 50    | 78   | 75 | 71 | 70 | 71 | 66 | 59 | 51 | 75               |  |
| 1750 | 100   | 88   | 81 | 82 | 83 | 81 | 78 | 76 | 63 | 86               |  |
|      | 80    | 86   | 78 | 77 | 79 | 79 | 75 | 70 | 63 | 83               |  |
|      | 60    | 86   | 81 | 78 | 77 | 77 | 73 | 68 | 62 | 81               |  |
|      | 50    | 88   | 82 | 79 | 78 | 77 | 72 | 68 | 62 | 81               |  |
| 2475 | 100   | 88   | 86 | 86 | 89 | 91 | 87 | 86 | 78 | 95               |  |
|      | 80    | 86   | 86 | 84 | 84 | 88 | 83 | 79 | 72 | 91               |  |
|      | 60    | 89   | 90 | 87 | 83 | 86 | 81 | 77 | 71 | 90               |  |
|      | 50    | 90   | 91 | 87 | 84 | 86 | 81 | 77 | 72 | 89               |  |
| 3145 | 100   | 92   | 91 | 92 | 94 | 96 | 93 | 93 | 90 | 100              |  |
|      | 80    | 90   | 93 | 91 | 90 | 93 | 90 | 86 | 80 | 97               |  |
|      | 60    | 93   | 95 | 93 | 88 | 91 | 88 | 84 | 79 | 95               |  |
|      | 50    | 94   | 95 | 94 | 90 | 91 | 87 | 83 | 79 | 95               |  |

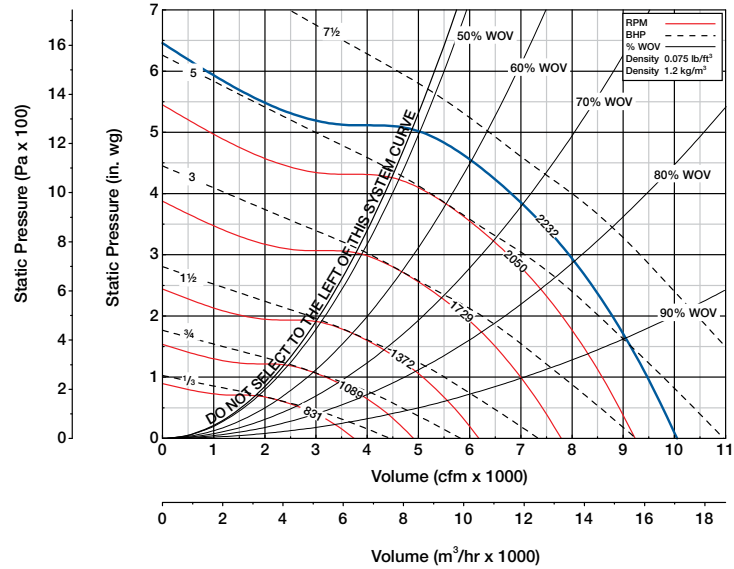
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

The sound power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.



| Performance Data                            |       |          |         |
|---|-------|----------|---------|
| Maximum Fan RPM                             | QEI-L | 2232     |         |
|   | QEI   | 2232     |         |
| Specification Data                          |       |          |         |
| Maximum Motor Frame Size                    | QEI-L | 215T     |         |
|   | QEI   | 215T     |         |
| Minimum Motor Starting hp                   |       | 1/3 hp   | .25 kW  |
| Wheel Diameter                              |       | 22.5 in. | 565 mm  |
| Approximate Weight (Less Motor & Drives)    | QEI-L | 190 lbs. | 87 kg.  |
|   | QEI   | 260 lbs. | 118 kg. |
| Maximum Bhp = (Fan RPM / 1199) <sup>3</sup> |       |          |         |
| Outlet Velocity (FPM) = CFM / 3.45          |       |          |         |
| Tip Speed (FPM) = Fan RPM x 5.83            |       |          |         |
| % WOV = (CFM x 100) / (Fan RPM x 4.50)      |       |          |         |

Imperial data — Metric data



## Performance Data

| CFM  | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|      |      | 0.25                        |      | 0.5  |      | 1    |      | 1.5  |      | 2    |      | 2.5  |      | 3    |      | 3.5  |      | 4    |      |
|      |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 2600 | 753  | 697                         | 0.17 | 814  | 0.30 | 1026 | 0.62 |      |      |      |      |      |      |      |      |      |      |      |      |
| 3100 | 898  | 788                         | 0.23 | 889  | 0.37 | 1080 | 0.72 | 1250 | 1.12 | 1407 | 1.57 |      |      |      |      |      |      |      |      |
| 3600 | 1043 | 886                         | 0.31 | 972  | 0.46 | 1142 | 0.84 | 1300 | 1.26 | 1445 | 1.73 | 1583 | 2.24 |      |      |      |      |      |      |
| 4100 | 1188 | 986                         | 0.42 | 1062 | 0.58 | 1213 | 0.97 | 1358 | 1.43 | 1494 | 1.92 | 1622 | 2.45 | 1746 | 3.03 | 1861 | 3.63 |      |      |
| 4600 | 1333 | 1088                        | 0.54 | 1156 | 0.72 | 1293 | 1.13 | 1425 | 1.61 | 1552 | 2.14 | 1672 | 2.70 | 1785 | 3.28 | 1899 | 3.91 | 2006 | 4.57 |
| 5100 | 1478 | 1192                        | 0.69 | 1254 | 0.89 | 1376 | 1.32 | 1498 | 1.81 | 1616 | 2.37 | 1730 | 2.96 | 1839 | 3.58 | 1940 | 4.22 | 2044 | 4.91 |
| 5600 | 1623 | 1298                        | 0.87 | 1355 | 1.09 | 1466 | 1.55 | 1578 | 2.06 | 1686 | 2.62 | 1793 | 3.25 | 1897 | 3.91 | 1997 | 4.58 | 2090 | 5.28 |
| 6100 | 1768 | 1405                        | 1.08 | 1456 | 1.32 | 1558 | 1.81 | 1660 | 2.33 | 1763 | 2.92 | 1862 | 3.56 | 1959 | 4.25 | 2055 | 4.96 | 2148 | 5.69 |
| 6600 | 1913 | 1513                        | 1.33 | 1558 | 1.58 | 1653 | 2.11 | 1748 | 2.66 | 1843 | 3.26 | 1936 | 3.91 | 2029 | 4.62 | 2118 | 5.37 | 2206 | 6.14 |
| 7100 | 2057 | 1620                        | 1.62 | 1662 | 1.88 | 1752 | 2.44 | 1840 | 3.02 | 1926 | 3.63 | 2016 | 4.31 | 2100 | 5.02 | 2187 | 5.79 |      |      |
| 7600 | 2202 | 1729                        | 1.94 | 1768 | 2.23 | 1851 | 2.82 | 1932 | 3.43 | 2015 | 4.07 | 2097 | 4.75 | 2180 | 5.49 |      |      |      |      |
| 8100 | 2347 | 1837                        | 2.31 | 1875 | 2.61 | 1952 | 3.24 | 2028 | 3.88 | 2106 | 4.56 | 2182 | 5.25 |      |      |      |      |      |      |

| Inlet Sound Power, L <sub>wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|---|-------|----|----|----|----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>wiA</sub> |
| 550   | 100   | 65 | 68 | 68 | 64 | 57 | 52 | 49 | 41 | 65               |
|   | 80    | 61 | 67 | 68 | 64 | 56 | 52 | 48 | 40 | 65               |
|   | 60    | 60 | 67 | 68 | 64 | 56 | 52 | 48 | 39 | 65               |
|   | 50    | 62 | 67 | 67 | 64 | 56 | 51 | 48 | 39 | 64               |
| 800   | 100   | 66 | 70 | 69 | 64 | 59 | 61 | 49 | 41 | 67               |
|   | 80    | 62 | 66 | 68 | 62 | 58 | 56 | 49 | 40 | 65               |
|   | 60    | 61 | 64 | 66 | 60 | 55 | 55 | 49 | 40 | 63               |
|   | 50    | 64 | 64 | 66 | 59 | 55 | 54 | 48 | 40 | 63               |
| 1100  | 100   | 70 | 78 | 73 | 72 | 67 | 68 | 66 | 53 | 75               |
|   | 80    | 64 | 78 | 73 | 69 | 64 | 62 | 57 | 51 | 71               |
|   | 60    | 66 | 73 | 70 | 67 | 62 | 61 | 57 | 52 | 69               |
|   | 50    | 69 | 73 | 70 | 66 | 61 | 61 | 56 | 52 | 69               |
| 1600  | 100   | 77 | 80 | 87 | 82 | 78 | 75 | 77 | 64 | 85               |
|   | 80    | 76 | 75 | 80 | 78 | 74 | 72 | 67 | 61 | 80               |
|   | 60    | 78 | 77 | 83 | 75 | 71 | 70 | 66 | 62 | 79               |
|   | 50    | 79 | 78 | 82 | 76 | 70 | 69 | 66 | 62 | 78               |
| 2232  | 100   | 80 | 83 | 92 | 89 | 87 | 84 | 81 | 83 | 92               |
|   | 80    | 74 | 78 | 87 | 85 | 85 | 81 | 76 | 71 | 89               |
|   | 60    | 80 | 79 | 82 | 82 | 82 | 78 | 74 | 70 | 86               |
|   | 50    | 83 | 82 | 83 | 82 | 81 | 77 | 74 | 71 | 85               |

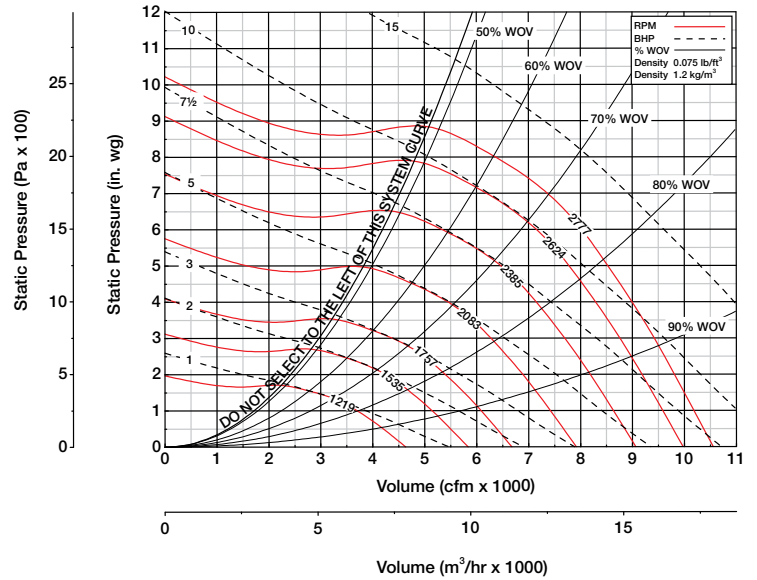
| Outlet Sound Power, L <sub>wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|--|-------|----|----|----|----|----|----|----|----|------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>woA</sub> |
| 550  | 100   | 74 | 74 | 67 | 66 | 63 | 55 | 53 | 45 | 68               |
|  | 80    | 72 | 73 | 68 | 68 | 62 | 56 | 56 | 50 | 68               |
|  | 60    | 69 | 72 | 67 | 67 | 62 | 56 | 56 | 51 | 68               |
|  | 50    | 69 | 72 | 67 | 67 | 62 | 56 | 57 | 52 | 68               |
| 800  | 100   | 74 | 75 | 68 | 67 | 64 | 62 | 54 | 43 | 70               |
|  | 80    | 71 | 73 | 66 | 65 | 63 | 58 | 54 | 43 | 68               |
|  | 60    | 72 | 70 | 66 | 63 | 62 | 57 | 54 | 43 | 66               |
|  | 50    | 72 | 70 | 65 | 63 | 61 | 57 | 54 | 43 | 66               |
| 1100   | 100   | 77 | 84 | 75 | 74 | 72 | 68 | 65 | 51 | 77               |
|  | 80    | 73 | 80 | 70 | 71 | 69 | 64 | 59 | 50 | 74               |
|  | 60    | 75 | 77 | 69 | 69 | 67 | 63 | 58 | 50 | 72               |
|  | 50    | 77 | 77 | 70 | 69 | 66 | 62 | 58 | 51 | 71               |
| 1600   | 100   | 82 | 83 | 84 | 84 | 83 | 77 | 75 | 64 | 87               |
|  | 80    | 78 | 83 | 80 | 80 | 80 | 75 | 70 | 64 | 83               |
|  | 60    | 82 | 82 | 77 | 78 | 77 | 74 | 69 | 64 | 81               |
|  | 50    | 86 | 84 | 78 | 78 | 76 | 73 | 69 | 64 | 81               |
| 2232   | 100   | 88 | 87 | 91 | 93 | 92 | 87 | 82 | 82 | 95               |
|  | 80    | 83 | 83 | 85 | 89 | 90 | 85 | 79 | 72 | 93               |
|  | 60    | 88 | 89 | 83 | 87 | 88 | 82 | 77 | 71 | 91               |
|  | 50    | 93 | 92 | 85 | 86 | 87 | 81 | 76 | 72 | 90               |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>wi</sub>, L<sub>wiA</sub> and outlet L<sub>wo</sub>, L<sub>woA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>wiA</sub> and L<sub>woA</sub> values only.

| Performance Data                            |           |         |
|---|-----------|---------|
| Maximum Fan RPM                             | 2777      |         |
| Specification Data                          |           |         |
| Maximum Motor Frame Size                    | 254T      |         |
| Minimum Motor Starting hp                   | 1/3 hp    | .25 kW  |
| Wheel Diameter                              | 22.25 in. | 565 mm  |
| Approximate Weight (Less Motor & Drives)    | 310 lbs.  | 141 kg. |
| Maximum Bhp = (Fan RPM / 1219) <sup>3</sup> |           |         |
| Outlet Velocity (FPM) = CFM / 3.45          |           |         |
| Tip Speed (FPM) = Fan RPM x 5.83            |           |         |
| % WOV = (CFM x 100) / (Fan RPM x 3.80)      |           |         |

Imperial data — Metric data



## Performance Data

| CFM  | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
|------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
|      |      | 0.5                         |      | 1    |      | 2    |      | 3    |      | 4    |      | 5    |      | 6    |      | 7    |      | 8    |      |  |
|      |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |  |
| 3800 | 1101 | 1124                        | 0.64 | 1239 | 0.97 | 1467 | 1.74 | 1690 | 2.65 | 1900 | 3.67 |      |      |      |      |      |      |      |      |  |
| 4200 | 1217 | 1219                        | 0.79 | 1326 | 1.14 | 1538 | 1.98 | 1738 | 2.88 | 1934 | 3.94 | 2120 | 5.09 | 2290 | 6.31 |      |      |      |      |  |
| 4600 | 1333 | 1315                        | 0.96 | 1414 | 1.34 | 1609 | 2.25 | 1787 | 3.15 | 1977 | 4.24 | 2154 | 5.42 | 2323 | 6.69 | 2478 | 8.02 |      |      |  |
| 5000 | 1449 | 1413                        | 1.16 | 1503 | 1.56 | 1682 | 2.50 | 1858 | 3.50 | 2024 | 4.56 | 2193 | 5.78 | 2356 | 7.09 | 2511 | 8.47 | 2656 | 9.91 |  |
| 5400 | 1565 | 1511                        | 1.40 | 1595 | 1.82 | 1758 | 2.77 | 1929 | 3.89 | 2079 | 4.94 | 2241 | 6.18 | 2394 | 7.51 | 2545 | 8.93 | 2689 | 10.4 |  |
| 5800 | 1681 | 1611                        | 1.66 | 1690 | 2.11 | 1844 | 3.11 | 2001 | 4.29 | 2150 | 5.42 | 2289 | 6.60 | 2441 | 7.98 | 2582 | 9.42 | 2723 | 10.9 |  |
| 6200 | 1797 | 1711                        | 1.96 | 1786 | 2.44 | 1932 | 3.48 | 2075 | 4.66 | 2221 | 5.94 | 2354 | 7.14 | 2489 | 8.48 | 2629 | 9.97 | 2760 | 11.5 |  |
| 6600 | 1913 | 1812                        | 2.29 | 1883 | 2.81 | 2020 | 3.89 | 2150 | 5.07 | 2293 | 6.50 | 2424 | 7.76 | 2544 | 9.06 | 2676 | 10.5 |      |      |  |
| 7000 | 2028 | 1913                        | 2.66 | 1981 | 3.21 | 2110 | 4.34 | 2236 | 5.57 | 2366 | 6.98 | 2495 | 8.42 | 2615 | 9.77 | 2726 | 11.2 |      |      |  |
| 7400 | 2144 | 2015                        | 3.07 | 2079 | 3.66 | 2200 | 4.83 | 2323 | 6.12 | 2440 | 7.49 | 2568 | 9.11 | 2686 | 10.5 |      |      |      |      |  |
| 7800 | 2260 | 2117                        | 3.53 | 2178 | 4.16 | 2295 | 5.38 | 2411 | 6.70 | 2521 | 8.10 | 2641 | 9.71 | 2757 | 11.3 |      |      |      |      |  |
| 8200 | 2376 | 2219                        | 4.03 | 2277 | 4.70 | 2390 | 5.98 | 2500 | 7.34 | 2608 | 8.78 | 2715 | 10.4 |      |      |      |      |      |      |  |

Shaded values show where Class I fan selections are more efficient than Class II.

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                   |
|---|-------|----|----|----|----|----|----|----|----|-------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wi</sub> A |
| 800   | 100   | 66 | 75 | 67 | 66 | 63 | 65 | 51 | 43 | 70                |
|   | 80    | 63 | 71 | 64 | 63 | 62 | 62 | 51 | 41 | 67                |
|   | 60    | 62 | 69 | 63 | 61 | 62 | 63 | 53 | 42 | 67                |
|   | 50    | 77 | 73 | 69 | 65 | 62 | 62 | 50 | 41 | 68                |
| 1100  | 100   | 70 | 78 | 72 | 72 | 68 | 72 | 60 | 51 | 76                |
|   | 80    | 62 | 73 | 68 | 67 | 66 | 66 | 57 | 48 | 71                |
|   | 60    | 63 | 72 | 66 | 66 | 65 | 66 | 57 | 49 | 71                |
|   | 50    | 66 | 72 | 67 | 65 | 64 | 65 | 56 | 49 | 70                |
| 1600  | 100   | 78 | 79 | 82 | 80 | 78 | 76 | 80 | 64 | 85                |
|   | 80    | 71 | 76 | 77 | 75 | 74 | 73 | 67 | 60 | 79                |
|   | 60    | 73 | 76 | 74 | 73 | 72 | 72 | 67 | 61 | 77                |
|   | 50    | 77 | 77 | 76 | 73 | 72 | 71 | 66 | 61 | 77                |
| 2200  | 100   | 81 | 84 | 89 | 88 | 87 | 84 | 87 | 78 | 93                |
|   | 80    | 75 | 78 | 83 | 83 | 82 | 80 | 76 | 69 | 87                |
|   | 60    | 79 | 81 | 84 | 81 | 79 | 78 | 75 | 71 | 85                |
|   | 50    | 83 | 83 | 84 | 81 | 78 | 77 | 74 | 70 | 85                |
| 2777  | 100   | 85 | 88 | 89 | 93 | 93 | 90 | 91 | 87 | 98                |
|   | 80    | 80 | 83 | 85 | 89 | 90 | 87 | 82 | 76 | 93                |
|   | 60    | 84 | 86 | 85 | 88 | 87 | 85 | 80 | 76 | 91                |
|   | 50    | 87 | 89 | 89 | 88 | 86 | 84 | 80 | 76 | 91                |

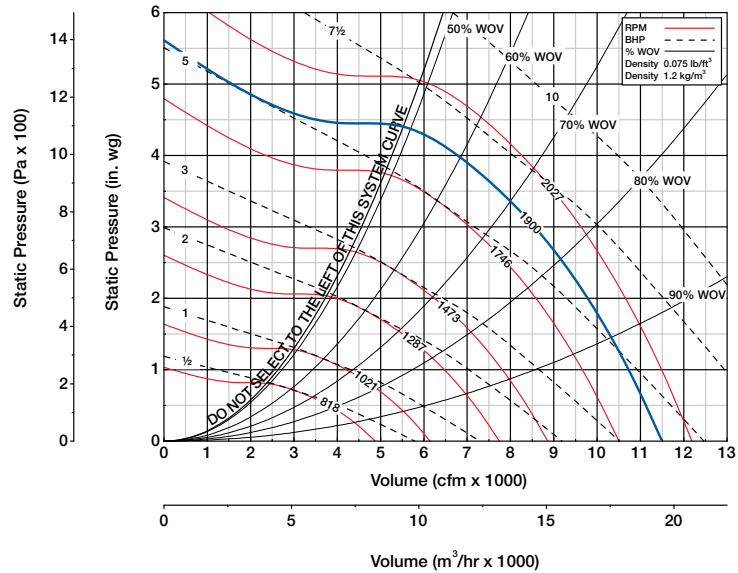
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                   |
|--|-------|----|----|----|----|----|----|----|----|-------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wo</sub> A |
| 800  | 100   | 73 | 79 | 66 | 69 | 68 | 66 | 54 | 45 | 72                |
|  | 80    | 70 | 76 | 63 | 67 | 66 | 63 | 53 | 46 | 70                |
|  | 60    | 70 | 74 | 63 | 65 | 66 | 63 | 53 | 46 | 70                |
|  | 50    | 70 | 75 | 63 | 65 | 65 | 62 | 53 | 47 | 69                |
| 1100   | 100   | 78 | 83 | 74 | 76 | 74 | 72 | 63 | 53 | 79                |
|  | 80    | 73 | 77 | 69 | 73 | 72 | 68 | 60 | 50 | 76                |
|  | 60    | 75 | 75 | 68 | 71 | 71 | 68 | 60 | 52 | 74                |
|  | 50    | 77 | 77 | 70 | 71 | 70 | 68 | 60 | 53 | 75                |
| 1600   | 100   | 87 | 86 | 83 | 85 | 84 | 78 | 79 | 64 | 88                |
|  | 80    | 84 | 80 | 77 | 81 | 80 | 75 | 70 | 61 | 84                |
|  | 60    | 85 | 80 | 77 | 79 | 78 | 74 | 70 | 62 | 82                |
|  | 50    | 86 | 82 | 78 | 79 | 77 | 74 | 69 | 62 | 82                |
| 2200   | 100   | 89 | 89 | 91 | 92 | 91 | 86 | 86 | 80 | 96                |
|  | 80    | 85 | 86 | 85 | 88 | 89 | 83 | 79 | 73 | 92                |
|  | 60    | 89 | 88 | 86 | 86 | 87 | 82 | 78 | 73 | 90                |
|  | 50    | 91 | 89 | 88 | 87 | 86 | 81 | 77 | 73 | 90                |
| 2777   | 100   | 93 | 94 | 93 | 96 | 97 | 93 | 91 | 88 | 101               |
|  | 80    | 88 | 91 | 89 | 92 | 94 | 90 | 86 | 79 | 97                |
|  | 60    | 94 | 94 | 92 | 89 | 92 | 88 | 84 | 79 | 95                |
|  | 50    | 96 | 95 | 92 | 91 | 92 | 88 | 84 | 79 | 96                |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>Wi</sub>A and outlet L<sub>Wo</sub>, L<sub>Wo</sub>A sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>Wi</sub>A and L<sub>Wo</sub>A values only.

| Performance Data                            |       |          |         |
|---|-------|----------|---------|
| Maximum Fan RPM                             | QEI-L | 1900     |         |
|   | QEI   | 2027     |         |
| Specification Data                          |       |          |         |
| Maximum Motor Frame Size                    | QEI-L | 215T     |         |
|   | QEI   | 215T     |         |
| Minimum Motor Starting hp                   |       | 1/3 hp   | .25 kW  |
| Wheel Diameter                              |       | 24.5 in. | 622 mm  |
| Approximate Weight (Less Motor & Drives)    | QEI-L | 230 lbs. | 105 kg. |
|   | QEI   | 310 lbs. | 141 kg. |
| Maximum Bhp = (Fan RPM / 1021) <sup>3</sup> |       |          |         |
| Outlet Velocity (FPM) = CFM / 4.14          |       |          |         |
| Tip Speed (FPM) = Fan RPM x 6.41            |       |          |         |
| % WOV = (CFM x 100) / (Fan RPM x 6.01)      |       |          |         |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.25                        |      | 0.5  |      | 1    |      | 1.5  |      | 2    |      | 2.5  |      | 3    |      | 3.5  |      | 4    |      |
|       |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 3000  | 724  | 613                         | 0.19 | 724  | 0.35 | 923  | 0.73 |      |      |      |      |      |      |      |      |      |      |      |      |
| 3700  | 893  | 708                         | 0.27 | 801  | 0.44 | 975  | 0.86 | 1132 | 1.34 |      |      |      |      |      |      |      |      |      |      |
| 4400  | 1062 | 810                         | 0.39 | 887  | 0.57 | 1040 | 1.02 | 1183 | 1.54 | 1314 | 2.11 | 1440 | 2.73 |      |      |      |      |      |      |
| 5100  | 1231 | 915                         | 0.53 | 982  | 0.74 | 1116 | 1.21 | 1245 | 1.78 | 1368 | 2.38 | 1480 | 3.03 | 1593 | 3.73 | 1697 | 4.47 |      |      |
| 5800  | 1400 | 1023                        | 0.72 | 1082 | 0.95 | 1201 | 1.45 | 1317 | 2.03 | 1428 | 2.70 | 1538 | 3.38 | 1637 | 4.11 | 1738 | 4.88 | 1835 | 5.69 |
| 6500  | 1570 | 1133                        | 0.95 | 1187 | 1.20 | 1292 | 1.74 | 1398 | 2.34 | 1501 | 3.03 | 1599 | 3.78 | 1697 | 4.54 | 1789 | 5.34 | 1875 | 6.17 |
| 7200  | 1739 | 1245                        | 1.23 | 1292 | 1.50 | 1388 | 2.09 | 1483 | 2.71 | 1577 | 3.41 | 1671 | 4.19 | 1759 | 5.02 | 1849 | 5.86 | 1934 | 6.74 |
| 7900  | 1908 | 1357                        | 1.56 | 1400 | 1.86 | 1486 | 2.49 | 1574 | 3.15 | 1662 | 3.88 | 1746 | 4.66 | 1832 | 5.52 | 1913 | 6.42 | 1994 | 7.35 |
| 8600  | 2077 | 1470                        | 1.96 | 1508 | 2.28 | 1590 | 2.95 | 1669 | 3.66 | 1748 | 4.40 | 1830 | 5.22 | 1907 | 6.07 | 1985 | 7.02 |      |      |
| 9300  | 2246 | 1584                        | 2.41 | 1619 | 2.76 | 1694 | 3.48 | 1766 | 4.23 | 1842 | 5.01 | 1915 | 5.84 | 1990 | 6.74 |      |      |      |      |
| 10000 | 2415 | 1698                        | 2.94 | 1731 | 3.32 | 1800 | 4.08 | 1868 | 4.88 | 1937 | 5.71 | 2005 | 6.56 |      |      |      |      |      |      |
| 10700 | 2584 | 1812                        | 3.55 | 1843 | 3.95 | 1907 | 4.76 | 1972 | 5.60 |      |      |      |      |      |      |      |      |      |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|---|-------|----|----|----|----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |
| 500   | 100   | 66 | 69 | 68 | 64 | 57 | 53 | 49 | 40 | 65               |
|   | 80    | 63 | 69 | 68 | 64 | 56 | 52 | 48 | 40 | 65               |
|   | 60    | 62 | 69 | 68 | 64 | 56 | 52 | 48 | 39 | 65               |
|   | 50    | 64 | 68 | 68 | 64 | 56 | 52 | 48 | 39 | 65               |
| 700   | 100   | 66 | 70 | 68 | 63 | 60 | 59 | 48 | 40 | 66               |
|   | 80    | 62 | 67 | 67 | 62 | 57 | 55 | 48 | 38 | 64               |
|   | 60    | 61 | 65 | 65 | 59 | 55 | 54 | 47 | 39 | 62               |
|   | 50    | 63 | 65 | 65 | 59 | 55 | 53 | 47 | 38 | 62               |
| 1000  | 100   | 72 | 79 | 74 | 72 | 68 | 69 | 65 | 52 | 75               |
|   | 80    | 67 | 79 | 73 | 69 | 65 | 62 | 57 | 51 | 72               |
|   | 60    | 68 | 74 | 70 | 67 | 63 | 61 | 57 | 52 | 70               |
|   | 50    | 71 | 74 | 70 | 66 | 62 | 61 | 57 | 52 | 69               |
| 1450  | 100   | 79 | 82 | 87 | 82 | 78 | 76 | 76 | 63 | 85               |
|   | 80    | 77 | 77 | 81 | 78 | 75 | 72 | 67 | 61 | 80               |
|   | 60    | 79 | 79 | 82 | 76 | 71 | 70 | 66 | 63 | 79               |
|   | 50    | 80 | 80 | 82 | 76 | 71 | 69 | 66 | 63 | 79               |
| 2027  | 100   | 82 | 85 | 93 | 90 | 88 | 84 | 82 | 84 | 93               |
|   | 80    | 76 | 80 | 88 | 86 | 85 | 81 | 76 | 71 | 89               |
|   | 60    | 81 | 81 | 83 | 83 | 82 | 78 | 74 | 71 | 86               |
|   | 50    | 84 | 83 | 84 | 83 | 81 | 77 | 74 | 71 | 86               |

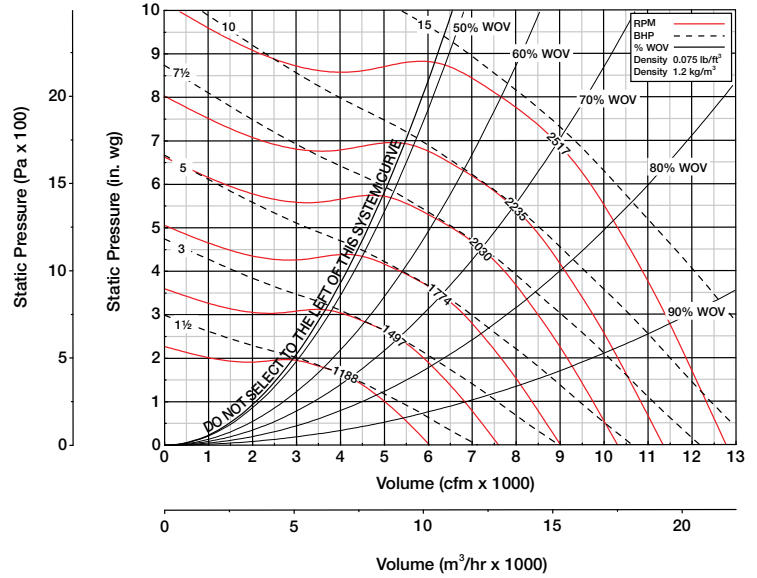
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|--|-------|----|----|----|----|----|----|----|----|------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WoA</sub> |
| 500  | 100   | 75 | 74 | 68 | 67 | 62 | 56 | 53 | 45 | 68               |
|  | 80    | 73 | 73 | 68 | 68 | 62 | 56 | 56 | 50 | 69               |
|  | 60    | 71 | 72 | 68 | 68 | 62 | 57 | 56 | 51 | 68               |
|  | 50    | 70 | 72 | 68 | 67 | 62 | 57 | 57 | 52 | 68               |
| 700  | 100   | 74 | 74 | 68 | 66 | 64 | 60 | 52 | 41 | 69               |
|  | 80    | 72 | 72 | 66 | 64 | 62 | 58 | 52 | 41 | 67               |
|  | 60    | 71 | 69 | 65 | 63 | 61 | 57 | 52 | 41 | 66               |
|  | 50    | 71 | 69 | 65 | 62 | 61 | 56 | 52 | 41 | 65               |
| 1000   | 100   | 79 | 84 | 75 | 75 | 72 | 68 | 64 | 50 | 77               |
|  | 80    | 75 | 80 | 71 | 72 | 70 | 64 | 58 | 50 | 74               |
|  | 60    | 76 | 77 | 70 | 70 | 67 | 63 | 58 | 50 | 72               |
|  | 50    | 78 | 77 | 70 | 69 | 67 | 63 | 58 | 51 | 72               |
| 1450   | 100   | 83 | 84 | 85 | 85 | 83 | 77 | 74 | 63 | 87               |
|  | 80    | 79 | 82 | 81 | 81 | 80 | 75 | 69 | 63 | 84               |
|  | 60    | 83 | 81 | 78 | 79 | 78 | 74 | 69 | 64 | 82               |
|  | 50    | 86 | 83 | 79 | 79 | 76 | 73 | 69 | 64 | 81               |
| 2027   | 100   | 89 | 89 | 92 | 93 | 92 | 87 | 83 | 83 | 96               |
|  | 80    | 84 | 84 | 86 | 90 | 90 | 85 | 79 | 72 | 93               |
|  | 60    | 89 | 89 | 85 | 88 | 88 | 82 | 77 | 72 | 91               |
|  | 50    | 93 | 92 | 86 | 87 | 87 | 81 | 76 | 72 | 90               |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.

| Performance Data                            |          |         |
|---|----------|---------|
| Maximum Fan RPM                             | 2517     |         |
| Specification Data                          |          |         |
| Maximum Motor Frame Size                    | 254T     |         |
| Minimum Motor Starting hp                   | 1/3 hp   | .25 kW  |
| Wheel Diameter                              | 24.5 in. | 622 mm  |
| Approximate Weight (Less Motor & Drives)    | 360 lbs. | 163 kg. |
| Maximum Bhp = (Fan RPM / 1038) <sup>3</sup> |          |         |
| Outlet Velocity (FPM) = CFM / 4.14          |          |         |
| Tip Speed (FPM) = Fan RPM x 6.41            |          |         |
| % WOV = (CFM x 100) / (Fan RPM x 5.07)      |          |         |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.5                         |      | 1    |      | 2    |      | 3    |      | 4    |      | 5    |      | 6    |      | 7    |      | 8    |      |
|       |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 4500  | 1076 | 1002                        | 0.74 | 1110 | 1.14 | 1319 | 2.05 | 1526 | 3.15 | 1719 | 4.38 |      |      |      |      |      |      |      |      |
| 5000  | 1196 | 1090                        | 0.92 | 1189 | 1.34 | 1384 | 2.34 | 1570 | 3.44 | 1750 | 4.71 | 1920 | 6.10 |      |      |      |      |      |      |
| 5500  | 1315 | 1181                        | 1.13 | 1271 | 1.58 | 1451 | 2.67 | 1615 | 3.75 | 1788 | 5.08 | 1951 | 6.51 | 2105 | 8.04 | 2246 | 9.65 |      |      |
| 6000  | 1435 | 1272                        | 1.38 | 1355 | 1.86 | 1519 | 2.99 | 1679 | 4.19 | 1833 | 5.48 | 1986 | 6.95 | 2136 | 8.53 | 2277 | 10.2 | 2408 | 11.9 |
| 6500  | 1555 | 1364                        | 1.66 | 1440 | 2.18 | 1589 | 3.32 | 1745 | 4.67 | 1882 | 5.94 | 2031 | 7.44 | 2170 | 9.05 | 2308 | 10.8 | 2439 | 12.6 |
| 7000  | 1674 | 1457                        | 1.99 | 1529 | 2.54 | 1670 | 3.74 | 1813 | 5.18 | 1948 | 6.53 | 2075 | 7.96 | 2214 | 9.64 | 2342 | 11.4 | 2471 | 13.2 |
| 7500  | 1794 | 1551                        | 2.36 | 1619 | 2.95 | 1751 | 4.20 | 1882 | 5.64 | 2015 | 7.18 | 2135 | 8.64 | 2258 | 10.3 | 2386 | 12.1 | 2505 | 13.9 |
| 8000  | 1913 | 1645                        | 2.77 | 1710 | 3.40 | 1834 | 4.72 | 1953 | 6.14 | 2082 | 7.88 | 2201 | 9.40 | 2310 | 11.0 | 2430 | 12.8 |      |      |
| 8500  | 2033 | 1740                        | 3.24 | 1801 | 3.91 | 1918 | 5.28 | 2033 | 6.77 | 2151 | 8.48 | 2268 | 10.2 | 2376 | 11.9 | 2477 | 13.5 |      |      |
| 9000  | 2153 | 1835                        | 3.75 | 1893 | 4.48 | 2003 | 5.90 | 2115 | 7.45 | 2220 | 9.12 | 2336 | 11.1 | 2443 | 12.8 |      |      |      |      |
| 9500  | 2272 | 1930                        | 4.33 | 1986 | 5.10 | 2092 | 6.59 | 2197 | 8.20 | 2297 | 9.89 | 2404 | 11.8 | 2510 | 13.8 |      |      |      |      |
| 10000 | 2392 | 2026                        | 4.96 | 2079 | 5.78 | 2181 | 7.34 | 2280 | 9.00 | 2378 | 10.7 | 2474 | 12.6 |      |      |      |      |      |      |

Shaded values show where Class I fan selections are more efficient than Class II.

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|---|-------|----|----|----|----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |
| 700   | 100   | 68 | 74 | 67 | 66 | 64 | 62 | 49 | 42 | 69               |
|   | 80    | 65 | 70 | 64 | 63 | 62 | 60 | 49 | 39 | 66               |
|   | 60    | 64 | 68 | 62 | 61 | 62 | 61 | 51 | 40 | 66               |
|   | 50    | 76 | 72 | 68 | 65 | 62 | 60 | 48 | 40 | 68               |
| 1000  | 100   | 72 | 80 | 73 | 72 | 70 | 71 | 60 | 51 | 76               |
|   | 80    | 64 | 75 | 69 | 68 | 67 | 65 | 56 | 48 | 72               |
|   | 60    | 65 | 74 | 67 | 67 | 66 | 65 | 57 | 49 | 71               |
|   | 50    | 68 | 74 | 68 | 66 | 65 | 65 | 56 | 49 | 71               |
| 1450  | 100   | 79 | 80 | 82 | 81 | 79 | 77 | 79 | 63 | 85               |
|   | 80    | 73 | 77 | 77 | 76 | 75 | 73 | 67 | 59 | 79               |
|   | 60    | 75 | 77 | 75 | 73 | 72 | 72 | 67 | 61 | 78               |
|   | 50    | 78 | 78 | 77 | 74 | 72 | 71 | 67 | 61 | 78               |
| 2000  | 100   | 82 | 86 | 91 | 89 | 87 | 85 | 87 | 78 | 93               |
|   | 80    | 76 | 80 | 85 | 84 | 83 | 80 | 76 | 69 | 87               |
|   | 60    | 81 | 83 | 85 | 81 | 80 | 78 | 75 | 71 | 86               |
|   | 50    | 84 | 84 | 85 | 82 | 79 | 78 | 75 | 71 | 85               |
| 2517  | 100   | 88 | 89 | 90 | 94 | 94 | 90 | 92 | 87 | 99               |
|   | 80    | 82 | 85 | 86 | 90 | 91 | 87 | 82 | 76 | 94               |
|   | 60    | 86 | 87 | 85 | 89 | 87 | 85 | 80 | 76 | 92               |
|   | 50    | 89 | 90 | 90 | 89 | 87 | 85 | 80 | 77 | 92               |

| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|--|-------|----|----|----|----|----|----|----|----|------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WoA</sub> |
| 700  | 100   | 74 | 76 | 66 | 69 | 67 | 63 | 52 | 43 | 71               |
|  | 80    | 71 | 73 | 64 | 67 | 66 | 61 | 52 | 44 | 70               |
|  | 60    | 71 | 72 | 63 | 65 | 65 | 61 | 52 | 45 | 69               |
|  | 50    | 71 | 72 | 64 | 65 | 65 | 61 | 52 | 46 | 69               |
| 1000   | 100   | 80 | 85 | 75 | 76 | 75 | 72 | 63 | 52 | 79               |
|  | 80    | 75 | 78 | 70 | 74 | 72 | 68 | 60 | 50 | 76               |
|  | 60    | 76 | 77 | 69 | 71 | 71 | 68 | 60 | 52 | 75               |
|  | 50    | 78 | 79 | 71 | 71 | 71 | 68 | 60 | 52 | 75               |
| 1450   | 100   | 88 | 86 | 84 | 86 | 83 | 79 | 77 | 63 | 88               |
|  | 80    | 84 | 81 | 78 | 82 | 81 | 75 | 70 | 61 | 84               |
|  | 60    | 85 | 80 | 78 | 80 | 79 | 74 | 69 | 62 | 83               |
|  | 50    | 86 | 82 | 79 | 79 | 78 | 74 | 69 | 62 | 82               |
| 2000   | 100   | 90 | 90 | 92 | 93 | 91 | 87 | 86 | 80 | 96               |
|  | 80    | 86 | 87 | 87 | 89 | 89 | 83 | 79 | 73 | 92               |
|  | 60    | 90 | 88 | 87 | 87 | 87 | 82 | 78 | 73 | 90               |
|  | 50    | 92 | 90 | 89 | 87 | 86 | 82 | 78 | 73 | 90               |
| 2517   | 100   | 95 | 94 | 93 | 97 | 98 | 93 | 92 | 89 | 102              |
|  | 80    | 90 | 92 | 89 | 93 | 96 | 90 | 86 | 79 | 98               |
|  | 60    | 95 | 94 | 92 | 90 | 93 | 88 | 85 | 79 | 96               |
|  | 50    | 97 | 96 | 93 | 92 | 93 | 88 | 84 | 79 | 96               |

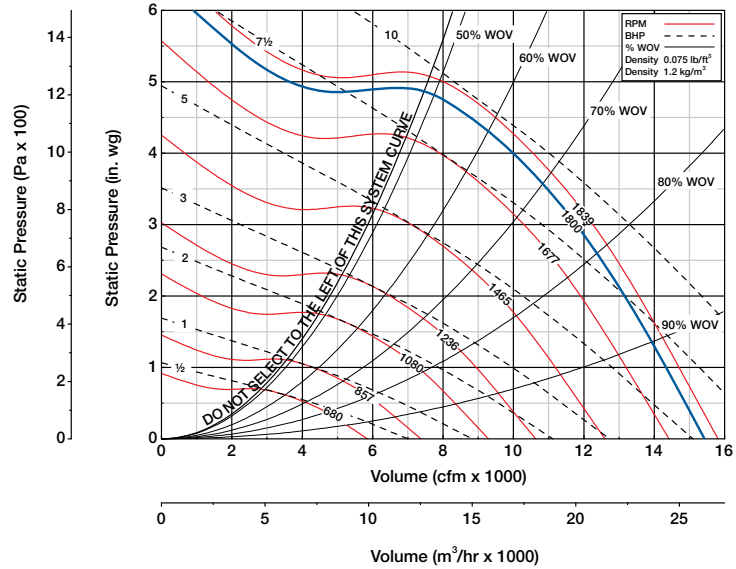
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

The sound power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.



| Performance Data                           |        |                  |
|--|--------|------------------|
| Maximum Fan RPM                            | QEI-L  | 1800             |
|  | QEI    | 1839             |
| Specification Data                         |        |                  |
| Maximum Motor Frame Size                   | QEI-L  | 215T             |
|  | QEI    | 254T             |
| Minimum Motor Starting hp                  | 1/3 hp | .25 kW           |
| Wheel Diameter                             | 27 in. | 686 mm           |
| Approximate Weight (Less Motor & Drives)   | QEI-L  | 270 lbs. 123 kg. |
|  | QEI    | 370 lbs. 168 kg. |
| Maximum Bhp = (Fan RPM / 857) <sup>3</sup> |        |                  |
| Outlet Velocity (FPM) = CFM / 5.12         |        |                  |
| Tip Speed (FPM) = Fan RPM x 7.07           |        |                  |
| % WOV = (CFM x 100) / (Fan RPM x 8.60)     |        |                  |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.25                        |      | 0.5  |      | 1    |      | 1.5  |      | 2    |      | 2.5  |      | 3    |      | 3.5  |      | 4    |      |
|       |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 3900  | 762  | 564                         | 0.25 | 662  | 0.44 | 837  | 0.93 |      |      |      |      |      |      |      |      |      |      |      |      |
| 4700  | 918  | 641                         | 0.34 | 725  | 0.55 | 883  | 1.07 | 1023 | 1.68 |      |      |      |      |      |      |      |      |      |      |
| 5500  | 1075 | 723                         | 0.45 | 796  | 0.69 | 935  | 1.25 | 1066 | 1.90 | 1184 | 2.61 | 1301 | 3.38 |      |      |      |      |      |      |
| 6300  | 1231 | 806                         | 0.60 | 872  | 0.87 | 997  | 1.46 | 1116 | 2.14 | 1228 | 2.90 | 1329 | 3.72 | 1434 | 4.58 |      |      |      |      |
| 7100  | 1388 | 892                         | 0.79 | 953  | 1.08 | 1065 | 1.72 | 1173 | 2.43 | 1277 | 3.22 | 1376 | 4.08 | 1466 | 4.99 | 1560 | 5.94 | 1650 | 6.93 |
| 7900  | 1544 | 979                         | 1.02 | 1035 | 1.33 | 1137 | 2.01 | 1236 | 2.77 | 1332 | 3.60 | 1425 | 4.49 | 1515 | 5.44 | 1598 | 6.44 | 1678 | 7.47 |
| 8700  | 1700 | 1068                        | 1.29 | 1118 | 1.62 | 1213 | 2.35 | 1305 | 3.15 | 1394 | 4.02 | 1480 | 4.94 | 1564 | 5.93 | 1646 | 6.97 | 1723 | 8.05 |
| 9500  | 1857 | 1156                        | 1.61 | 1204 | 1.97 | 1293 | 2.75 | 1377 | 3.59 | 1458 | 4.49 | 1541 | 5.46 | 1619 | 6.48 | 1696 | 7.54 | 1772 | 8.67 |
| 10300 | 2013 | 1246                        | 1.98 | 1290 | 2.37 | 1374 | 3.20 | 1451 | 4.08 | 1529 | 5.03 | 1603 | 6.03 | 1680 | 7.09 | 1751 | 8.19 | 1822 | 9.34 |
| 11100 | 2170 | 1335                        | 2.41 | 1377 | 2.83 | 1456 | 3.70 | 1530 | 4.64 | 1602 | 5.63 | 1673 | 6.67 | 1742 | 7.76 | 1813 | 8.91 |      |      |
| 11900 | 2326 | 1426                        | 2.90 | 1465 | 3.35 | 1539 | 4.27 | 1610 | 5.26 | 1676 | 6.29 | 1745 | 7.38 | 1809 | 8.51 |      |      |      |      |
| 12700 | 2482 | 1516                        | 3.46 | 1554 | 3.94 | 1624 | 4.91 | 1691 | 5.95 | 1755 | 7.03 | 1818 | 8.16 |      |      |      |      |      |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|---|-------|----|----|----|----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |
| 450   | 100   | 68 | 69 | 64 | 60 | 59 | 59 | 52 | 38 | 65               |
|   | 80    | 67 | 68 | 62 | 59 | 57 | 59 | 52 | 38 | 64               |
|   | 60    | 66 | 67 | 60 | 58 | 56 | 58 | 52 | 38 | 63               |
|   | 50    | 67 | 68 | 60 | 58 | 55 | 58 | 52 | 38 | 63               |
| 650   | 100   | 70 | 75 | 70 | 67 | 64 | 65 | 54 | 43 | 70               |
|   | 80    | 67 | 75 | 68 | 64 | 61 | 61 | 54 | 41 | 68               |
|   | 60    | 67 | 74 | 65 | 62 | 59 | 60 | 53 | 41 | 66               |
|   | 50    | 68 | 73 | 65 | 62 | 58 | 60 | 53 | 41 | 66               |
| 900   | 100   | 73 | 79 | 78 | 74 | 71 | 72 | 61 | 53 | 78               |
|   | 80    | 69 | 76 | 77 | 71 | 68 | 66 | 58 | 50 | 74               |
|   | 60    | 70 | 73 | 74 | 68 | 66 | 63 | 56 | 50 | 72               |
|   | 50    | 72 | 74 | 74 | 67 | 65 | 62 | 55 | 49 | 71               |
| 1300  | 100   | 76 | 89 | 85 | 83 | 81 | 78 | 79 | 65 | 87               |
|   | 80    | 72 | 91 | 83 | 79 | 78 | 75 | 69 | 61 | 83               |
|   | 60    | 74 | 83 | 79 | 76 | 74 | 71 | 65 | 61 | 79               |
|   | 50    | 78 | 83 | 79 | 75 | 73 | 69 | 64 | 62 | 78               |
| 1839  | 100   | 81 | 86 | 99 | 94 | 91 | 88 | 88 | 77 | 97               |
|   | 80    | 79 | 82 | 95 | 92 | 87 | 84 | 80 | 72 | 93               |
|   | 60    | 80 | 82 | 87 | 87 | 84 | 81 | 76 | 71 | 89               |
|   | 50    | 84 | 84 | 86 | 86 | 82 | 79 | 75 | 71 | 87               |

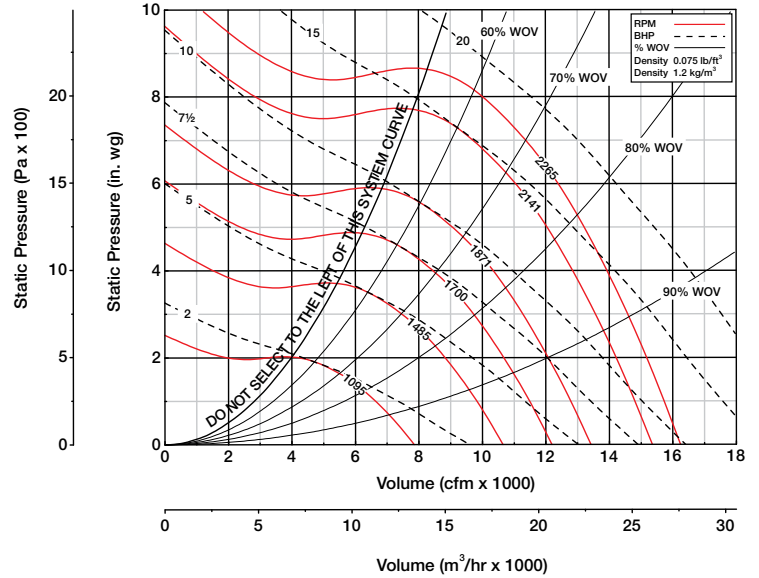
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|--|-------|----|----|----|----|----|----|----|----|------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WoA</sub> |
| 450  | 100   | 71 | 71 | 65 | 64 | 65 | 62 | 56 | 44 | 69               |
|  | 80    | 71 | 70 | 63 | 63 | 64 | 62 | 57 | 44 | 68               |
|  | 60    | 69 | 69 | 62 | 62 | 64 | 62 | 57 | 44 | 68               |
|  | 50    | 72 | 70 | 61 | 61 | 64 | 62 | 57 | 45 | 68               |
| 650  | 100   | 78 | 75 | 70 | 69 | 67 | 66 | 57 | 47 | 72               |
|  | 80    | 76 | 74 | 70 | 69 | 67 | 65 | 58 | 47 | 72               |
|  | 60    | 75 | 74 | 69 | 67 | 66 | 65 | 58 | 48 | 71               |
|  | 50    | 75 | 74 | 69 | 65 | 65 | 65 | 58 | 48 | 71               |
| 900  | 100   | 77 | 83 | 77 | 78 | 75 | 73 | 64 | 53 | 80               |
|  | 80    | 73 | 80 | 74 | 76 | 73 | 69 | 62 | 51 | 78               |
|  | 60    | 74 | 78 | 72 | 72 | 71 | 67 | 60 | 51 | 75               |
|  | 50    | 77 | 79 | 72 | 71 | 70 | 66 | 60 | 51 | 74               |
| 1300   | 100   | 83 | 84 | 84 | 86 | 85 | 81 | 79 | 64 | 89               |
|  | 80    | 81 | 82 | 80 | 83 | 82 | 77 | 71 | 60 | 85               |
|  | 60    | 84 | 81 | 78 | 79 | 77 | 72 | 66 | 59 | 81               |
|  | 50    | 88 | 83 | 79 | 78 | 76 | 71 | 65 | 60 | 81               |
| 1839   | 100   | 87 | 89 | 91 | 96 | 93 | 90 | 88 | 79 | 98               |
|  | 80    | 86 | 84 | 90 | 92 | 90 | 87 | 82 | 72 | 94               |
|  | 60    | 91 | 89 | 87 | 89 | 87 | 83 | 78 | 71 | 91               |
|  | 50    | 94 | 91 | 88 | 88 | 85 | 81 | 76 | 71 | 90               |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.

| Performance Data                           |          |         |
|--|----------|---------|
| Maximum Fan RPM                            | 2265     |         |
| Specification Data                         |          |         |
| Maximum Motor Frame Size                   | 256T     |         |
| Minimum Motor Starting hp                  | 1/3 hp   | .25 kW  |
| Wheel Diameter                             | 27 in.   | 686 mm  |
| Approximate Weight (Less Motor & Drives)   | 420 lbs. | 191 kg. |
| Maximum Bhp = (Fan RPM / 869) <sup>3</sup> |          |         |
| Outlet Velocity (FPM) = CFM / 5.12         |          |         |
| Tip Speed (FPM) = Fan RPM x 7.07           |          |         |
| % WOV = (CFM x 100) / (Fan RPM x 7.17)     |          |         |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.5                         |      | 1    |      | 2    |      | 3    |      | 4    |      | 5    |      | 6    |      | 7    |      | 8    |      |
|       |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 5600  | 1093 | 882                         | 0.81 | 982  | 1.29 | 1174 | 2.43 | 1360 | 3.80 |      |      |      |      |      |      |      |      |      |      |
| 6200  | 1210 | 956                         | 1.00 | 1045 | 1.51 | 1222 | 2.69 | 1395 | 4.11 | 1564 | 5.70 |      |      |      |      |      |      |      |      |
| 6800  | 1328 | 1032                        | 1.22 | 1115 | 1.75 | 1273 | 2.97 | 1434 | 4.43 | 1588 | 6.07 | 1746 | 7.86 |      |      |      |      |      |      |
| 7400  | 1445 | 1109                        | 1.47 | 1185 | 2.03 | 1335 | 3.32 | 1480 | 4.81 | 1626 | 6.49 | 1762 | 8.32 | 1912 | 10.3 |      |      |      |      |
| 8000  | 1562 | 1187                        | 1.76 | 1257 | 2.34 | 1396 | 3.71 | 1531 | 5.22 | 1666 | 6.94 | 1801 | 8.83 | 1925 | 10.8 | 2065 | 13.0 | 2195 | 15.2 |
| 8600  | 1679 | 1265                        | 2.09 | 1331 | 2.71 | 1459 | 4.13 | 1588 | 5.69 | 1714 | 7.45 | 1840 | 9.37 | 1962 | 11.4 | 2078 | 13.6 | 2209 | 15.9 |
| 9200  | 1796 | 1345                        | 2.46 | 1407 | 3.12 | 1528 | 4.60 | 1649 | 6.23 | 1764 | 8.00 | 1882 | 9.96 | 2001 | 12.1 | 2113 | 14.3 | 2222 | 16.6 |
| 9800  | 1914 | 1425                        | 2.87 | 1483 | 3.58 | 1598 | 5.11 | 1711 | 6.81 | 1820 | 8.61 | 1932 | 10.6 | 2040 | 12.8 | 2152 | 15.0 | 2257 | 17.4 |
| 10400 | 2031 | 1505                        | 3.33 | 1560 | 4.10 | 1668 | 5.68 | 1773 | 7.45 | 1881 | 9.32 | 1982 | 11.3 | 2088 | 13.5 | 2192 | 15.8 |      |      |
| 11000 | 2148 | 1586                        | 3.84 | 1637 | 4.66 | 1740 | 6.29 | 1841 | 8.13 | 1942 | 10.1 | 2039 | 12.1 | 2138 | 14.3 | 2237 | 16.7 |      |      |
| 11600 | 2265 | 1667                        | 4.40 | 1715 | 5.28 | 1813 | 6.96 | 1910 | 8.87 | 2005 | 10.9 | 2100 | 13.0 | 2189 | 15.2 |      |      |      |      |
| 12200 | 2382 | 1749                        | 5.02 | 1794 | 5.96 | 1888 | 7.72 | 1980 | 9.66 | 2068 | 11.8 | 2161 | 13.9 | 2249 | 16.2 |      |      |      |      |

Shaded values show where Class I fan selections are more efficient than Class II.

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|---|-------|----|----|----|----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |
| 650   | 100   | 66 | 75 | 70 | 65 | 63 | 64 | 51 | 43 | 70               |
|   | 80    | 64 | 72 | 67 | 62 | 62 | 59 | 51 | 41 | 67               |
|   | 60    | 64 | 70 | 65 | 60 | 60 | 59 | 51 | 41 | 65               |
|   | 50    | 67 | 72 | 66 | 61 | 60 | 59 | 52 | 41 | 66               |
| 900   | 100   | 70 | 79 | 73 | 71 | 69 | 73 | 60 | 52 | 77               |
|   | 80    | 68 | 73 | 69 | 68 | 66 | 66 | 59 | 49 | 72               |
|   | 60    | 70 | 71 | 69 | 66 | 65 | 65 | 59 | 50 | 71               |
|   | 50    | 73 | 75 | 70 | 66 | 65 | 65 | 59 | 50 | 71               |
| 1300  | 100   | 75 | 80 | 89 | 82 | 79 | 76 | 79 | 63 | 86               |
|   | 80    | 71 | 76 | 85 | 79 | 76 | 73 | 68 | 60 | 82               |
|   | 60    | 75 | 76 | 80 | 76 | 74 | 71 | 66 | 61 | 79               |
|   | 50    | 79 | 83 | 86 | 76 | 73 | 71 | 66 | 61 | 81               |
| 1800  | 100   | 81 | 85 | 93 | 89 | 88 | 84 | 87 | 78 | 94               |
|   | 80    | 76 | 79 | 90 | 85 | 85 | 81 | 77 | 69 | 89               |
|   | 60    | 82 | 82 | 87 | 83 | 82 | 78 | 74 | 70 | 87               |
|   | 50    | 85 | 87 | 90 | 83 | 81 | 78 | 74 | 70 | 87               |
| 2265  | 100   | 85 | 88 | 94 | 95 | 94 | 91 | 91 | 89 | 99               |
|   | 80    | 79 | 82 | 89 | 91 | 91 | 87 | 83 | 76 | 95               |
|   | 60    | 85 | 87 | 88 | 88 | 87 | 84 | 80 | 77 | 91               |
|   | 50    | 87 | 92 | 93 | 89 | 87 | 83 | 80 | 77 | 92               |

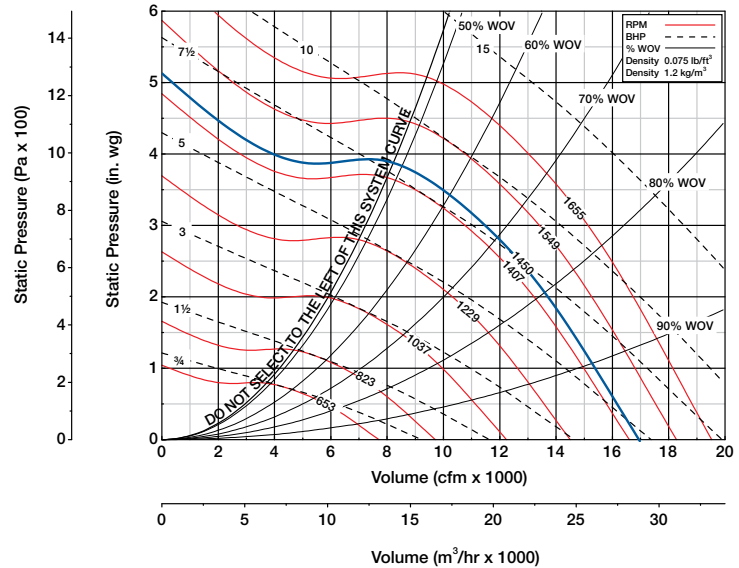
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|--|-------|----|----|----|----|----|----|----|----|------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WoA</sub> |
| 650  | 100   | 74 | 79 | 68 | 69 | 66 | 64 | 55 | 45 | 72               |
|  | 80    | 73 | 78 | 66 | 67 | 65 | 64 | 59 | 49 | 71               |
|  | 60    | 73 | 77 | 65 | 65 | 64 | 63 | 59 | 48 | 70               |
|  | 50    | 75 | 78 | 66 | 65 | 64 | 63 | 58 | 47 | 70               |
| 900  | 100   | 77 | 80 | 74 | 75 | 72 | 72 | 64 | 54 | 78               |
|  | 80    | 73 | 76 | 70 | 73 | 71 | 68 | 63 | 52 | 76               |
|  | 60    | 74 | 76 | 70 | 71 | 69 | 68 | 63 | 53 | 74               |
|  | 50    | 81 | 79 | 71 | 71 | 70 | 68 | 64 | 54 | 75               |
| 1300   | 100   | 82 | 84 | 85 | 86 | 82 | 77 | 78 | 67 | 88               |
|  | 80    | 79 | 79 | 80 | 84 | 80 | 75 | 71 | 65 | 85               |
|  | 60    | 81 | 82 | 80 | 81 | 78 | 74 | 70 | 65 | 83               |
|  | 50    | 82 | 84 | 80 | 81 | 77 | 74 | 70 | 65 | 83               |
| 1800   | 100   | 87 | 89 | 92 | 92 | 91 | 86 | 86 | 80 | 95               |
|  | 80    | 82 | 86 | 88 | 92 | 89 | 84 | 80 | 71 | 93               |
|  | 60    | 86 | 90 | 89 | 88 | 86 | 81 | 79 | 72 | 91               |
|  | 50    | 88 | 91 | 90 | 88 | 86 | 81 | 79 | 72 | 91               |
| 2265   | 100   | 92 | 94 | 96 | 98 | 96 | 92 | 91 | 90 | 101              |
|  | 80    | 87 | 88 | 92 | 93 | 92 | 89 | 85 | 78 | 96               |
|  | 60    | 92 | 93 | 92 | 92 | 91 | 87 | 83 | 77 | 95               |
|  | 50    | 93 | 94 | 93 | 92 | 91 | 87 | 83 | 78 | 95               |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.

| Performance Data                           |        |                  |
|--|--------|------------------|
| Maximum Fan RPM                            | QEI-L  | 1450             |
|  | QEI    | 1655             |
| Specification Data                         |        |                  |
| Maximum Motor Frame Size                   | QEI-L  | 215T             |
|  | QEI    | 254T             |
| Minimum Motor Starting hp                  | 1/3 hp | .25 kW           |
| Wheel Diameter                             | 30 in. | 762 mm           |
| Approximate Weight (Less Motor & Drives)   | QEI-L  | 400 lbs. 182 kg. |
|  | QEI    | 470 lbs. 213 kg. |
| Maximum Bhp = (Fan RPM / 719) <sup>3</sup> |        |                  |
| Outlet Velocity (FPM) = CFM / 6.21         |        |                  |
| Tip Speed (FPM) = Fan RPM x 7.85           |        |                  |
| % WOV = (CFM x 100) / (Fan RPM x 11.8)     |        |                  |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.25                        |      | 0.5  |      | 1    |      | 1.5  |      | 2    |      | 2.5  |      | 3    |      | 3.5  |      | 4    |      |
|       |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 4600  | 740  | 494                         | 0.28 | 584  | 0.52 | 748  | 1.11 |      |      |      |      |      |      |      |      |      |      |      |      |
| 5600  | 901  | 563                         | 0.39 | 640  | 0.65 | 786  | 1.29 | 915  | 2.02 |      |      |      |      |      |      |      |      |      |      |
| 6600  | 1062 | 636                         | 0.53 | 704  | 0.82 | 831  | 1.50 | 951  | 2.29 | 1060 | 3.16 |      |      |      |      |      |      |      |      |
| 7600  | 1223 | 712                         | 0.71 | 772  | 1.03 | 888  | 1.76 | 996  | 2.59 | 1097 | 3.52 | 1191 | 4.51 | 1286 | 5.56 |      |      |      |      |
| 8600  | 1384 | 790                         | 0.93 | 845  | 1.28 | 948  | 2.06 | 1047 | 2.94 | 1142 | 3.91 | 1231 | 4.96 | 1312 | 6.07 | 1400 | 7.24 | 1481 | 8.45 |
| 9600  | 1545 | 869                         | 1.21 | 920  | 1.59 | 1013 | 2.42 | 1103 | 3.35 | 1190 | 4.36 | 1276 | 5.46 | 1357 | 6.63 | 1431 | 7.85 | 1507 | 9.12 |
| 10600 | 1706 | 949                         | 1.54 | 996  | 1.95 | 1082 | 2.84 | 1165 | 3.82 | 1247 | 4.88 | 1324 | 6.02 | 1402 | 7.23 | 1475 | 8.51 | 1545 | 9.83 |
| 11600 | 1867 | 1030                        | 1.93 | 1073 | 2.37 | 1154 | 3.33 | 1231 | 4.36 | 1304 | 5.46 | 1380 | 6.65 | 1450 | 7.90 | 1521 | 9.22 | 1589 | 10.6 |
| 12600 | 2028 | 1112                        | 2.39 | 1152 | 2.86 | 1228 | 3.88 | 1298 | 4.96 | 1369 | 6.13 | 1436 | 7.35 | 1506 | 8.66 | 1570 | 10.0 | 1635 | 11.4 |
| 13600 | 2190 | 1193                        | 2.91 | 1231 | 3.43 | 1303 | 4.50 | 1369 | 5.65 | 1435 | 6.87 | 1499 | 8.15 | 1562 | 9.49 | 1626 | 10.9 |      |      |
| 14600 | 2351 | 1275                        | 3.52 | 1311 | 4.07 | 1378 | 5.21 | 1442 | 6.42 | 1502 | 7.69 | 1564 | 9.03 | 1623 | 10.4 |      |      |      |      |
| 15600 | 2512 | 1358                        | 4.21 | 1392 | 4.80 | 1455 | 6.00 | 1516 | 7.27 | 1574 | 8.60 | 1631 | 9.99 |      |      |      |      |      |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |     |    |    |    |    |    |                  |
|---|-------|----|----|-----|----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2  | 3   | 4  | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |
| 400   | 100   | 69 | 69 | 64  | 61 | 60 | 58 | 50 | 36 | 65               |
|   | 80    | 68 | 68 | 62  | 59 | 58 | 58 | 50 | 36 | 64               |
|   | 60    | 66 | 67 | 60  | 58 | 57 | 58 | 50 | 37 | 63               |
|   | 50    | 67 | 67 | 60  | 58 | 56 | 58 | 50 | 36 | 63               |
| 600   | 100   | 72 | 76 | 71  | 68 | 65 | 65 | 55 | 43 | 71               |
|   | 80    | 70 | 75 | 69  | 65 | 62 | 61 | 54 | 41 | 69               |
|   | 60    | 69 | 75 | 66  | 63 | 60 | 61 | 53 | 41 | 67               |
|   | 50    | 71 | 74 | 66  | 63 | 60 | 61 | 53 | 41 | 67               |
| 850   | 100   | 76 | 81 | 80  | 76 | 73 | 73 | 62 | 55 | 79               |
|   | 80    | 72 | 79 | 79  | 73 | 70 | 67 | 59 | 51 | 76               |
|   | 60    | 72 | 75 | 76  | 69 | 67 | 65 | 57 | 51 | 73               |
|   | 50    | 74 | 77 | 76  | 68 | 66 | 63 | 57 | 51 | 73               |
| 1150  | 100   | 79 | 91 | 85  | 83 | 81 | 79 | 77 | 63 | 87               |
|   | 80    | 76 | 92 | 83  | 80 | 78 | 74 | 68 | 60 | 83               |
|   | 60    | 76 | 85 | 79  | 76 | 74 | 70 | 65 | 61 | 79               |
|   | 50    | 79 | 84 | 79  | 75 | 73 | 69 | 64 | 63 | 78               |
| 1655  | 100   | 83 | 89 | 100 | 95 | 91 | 89 | 87 | 76 | 97               |
|   | 80    | 80 | 85 | 95  | 92 | 88 | 85 | 80 | 72 | 94               |
|   | 60    | 81 | 84 | 88  | 88 | 84 | 81 | 76 | 71 | 89               |
|   | 50    | 85 | 85 | 87  | 86 | 82 | 79 | 75 | 71 | 88               |

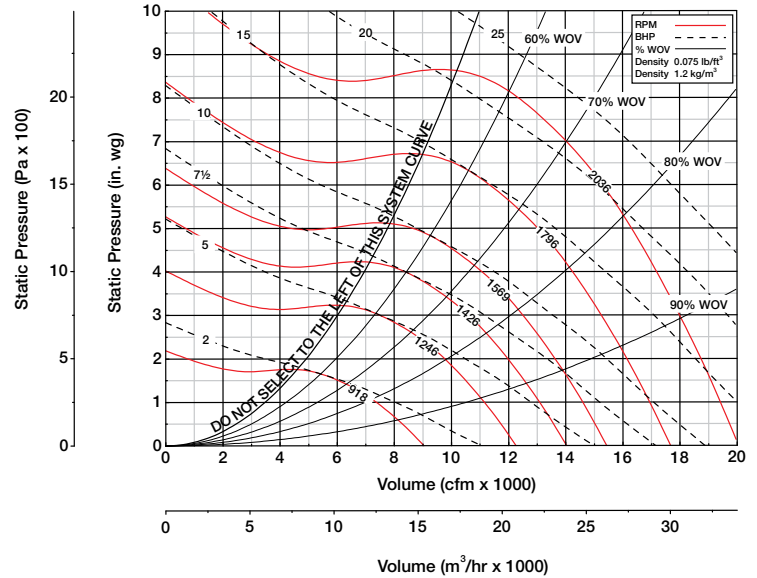
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|--|-------|----|----|----|----|----|----|----|----|------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WoA</sub> |
| 400  | 100   | 72 | 71 | 65 | 65 | 65 | 62 | 55 | 43 | 69               |
|  | 80    | 72 | 70 | 63 | 64 | 64 | 62 | 55 | 43 | 68               |
|  | 60    | 70 | 69 | 63 | 63 | 64 | 62 | 55 | 43 | 68               |
|  | 50    | 72 | 69 | 62 | 63 | 64 | 62 | 56 | 43 | 68               |
| 600  | 100   | 79 | 76 | 72 | 71 | 68 | 67 | 58 | 47 | 73               |
|  | 80    | 77 | 75 | 71 | 70 | 68 | 66 | 58 | 47 | 73               |
|  | 60    | 77 | 75 | 70 | 68 | 67 | 66 | 58 | 48 | 72               |
|  | 50    | 77 | 75 | 70 | 67 | 66 | 65 | 59 | 48 | 72               |
| 850  | 100   | 80 | 84 | 79 | 80 | 77 | 75 | 65 | 54 | 82               |
|  | 80    | 76 | 81 | 76 | 78 | 75 | 70 | 63 | 52 | 79               |
|  | 60    | 77 | 79 | 74 | 74 | 73 | 68 | 61 | 52 | 77               |
|  | 50    | 79 | 80 | 74 | 73 | 72 | 68 | 61 | 52 | 76               |
| 1150   | 100   | 83 | 85 | 85 | 86 | 84 | 81 | 77 | 62 | 89               |
|  | 80    | 82 | 83 | 81 | 83 | 81 | 76 | 69 | 59 | 85               |
|  | 60    | 84 | 82 | 78 | 79 | 77 | 72 | 65 | 58 | 81               |
|  | 50    | 87 | 84 | 79 | 79 | 76 | 71 | 65 | 59 | 81               |
| 1655   | 100   | 88 | 90 | 92 | 96 | 94 | 91 | 88 | 78 | 98               |
|  | 80    | 87 | 86 | 91 | 92 | 90 | 87 | 81 | 71 | 94               |
|  | 60    | 91 | 89 | 88 | 90 | 87 | 83 | 78 | 70 | 91               |
|  | 50    | 94 | 91 | 89 | 89 | 86 | 81 | 76 | 71 | 90               |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.

| Performance Data                           |          |         |
|--|----------|---------|
| Maximum Fan RPM                            | 2036     |         |
| Specification Data                         |          |         |
| Maximum Motor Frame Size                   | 284T     |         |
| Minimum Motor Starting hp                  | 3/4 hp   | .55 kW  |
| Wheel Diameter                             | 30 in.   | 762 mm  |
| Approximate Weight (Less Motor & Drives)   | 550 lbs. | 249 kg. |
| Maximum Bhp = (Fan RPM / 729) <sup>3</sup> |          |         |
| Outlet Velocity (FPM) = CFM / 6.21         |          |         |
| Tip Speed (FPM) = Fan RPM x 7.85           |          |         |
| % WOV = (CFM x 100) / (Fan RPM x 9.84)     |          |         |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.5                         |      | 1    |      | 2    |      | 3    |      | 4    |      | 5    |      | 6    |      | 7    |      | 8    |      |
|       |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 6800  | 1075 | 784                         | 0.97 | 875  | 1.56 | 1051 | 2.96 | 1222 | 4.64 |      |      |      |      |      |      |      |      |      |      |
| 7500  | 1186 | 847                         | 1.18 | 928  | 1.80 | 1090 | 3.25 | 1248 | 4.99 | 1405 | 6.94 |      |      |      |      |      |      |      |      |
| 8200  | 1297 | 911                         | 1.43 | 987  | 2.08 | 1133 | 3.57 | 1281 | 5.36 | 1420 | 7.37 | 1568 | 9.57 |      |      |      |      |      |      |
| 8900  | 1408 | 976                         | 1.71 | 1046 | 2.39 | 1184 | 3.96 | 1318 | 5.78 | 1453 | 7.85 | 1580 | 10.1 | 1717 | 12.5 |      |      |      |      |
| 9600  | 1518 | 1042                        | 2.03 | 1107 | 2.74 | 1236 | 4.39 | 1360 | 6.25 | 1486 | 8.36 | 1607 | 10.7 | 1728 | 13.1 | 1854 | 15.7 |      |      |
| 10300 | 1629 | 1108                        | 2.40 | 1169 | 3.15 | 1289 | 4.87 | 1405 | 6.76 | 1523 | 8.92 | 1641 | 11.3 | 1751 | 13.8 | 1865 | 16.5 | 1983 | 19.3 |
| 11000 | 1740 | 1176                        | 2.81 | 1233 | 3.60 | 1345 | 5.39 | 1457 | 7.36 | 1566 | 9.54 | 1674 | 11.9 | 1784 | 14.5 | 1885 | 17.2 | 1994 | 20.1 |
| 11700 | 1851 | 1244                        | 3.26 | 1298 | 4.11 | 1404 | 5.97 | 1509 | 8.02 | 1609 | 10.2 | 1714 | 12.7 | 1817 | 15.3 | 1918 | 18.1 | 2013 | 21.0 |
| 12400 | 1962 | 1312                        | 3.76 | 1363 | 4.67 | 1464 | 6.59 | 1562 | 8.72 | 1660 | 11.0 | 1757 | 13.5 | 1853 | 16.1 | 1951 | 19.0 |      |      |
| 13100 | 2072 | 1380                        | 4.32 | 1428 | 5.29 | 1524 | 7.27 | 1617 | 9.48 | 1712 | 11.8 | 1800 | 14.3 | 1895 | 17.0 | 1985 | 19.9 |      |      |
| 13800 | 2183 | 1449                        | 4.94 | 1494 | 5.97 | 1585 | 8.00 | 1675 | 10.3 | 1765 | 12.7 | 1851 | 15.3 | 1938 | 18.0 | 2026 | 20.9 |      |      |
| 14500 | 2294 | 1518                        | 5.61 | 1561 | 6.72 | 1648 | 8.82 | 1734 | 11.2 | 1818 | 13.7 | 1903 | 16.3 | 1982 | 19.0 |      |      |      |      |

Shaded values show where Class I fan selections are more efficient than Class II.

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                   |
|---|-------|----|----|----|----|----|----|----|----|-------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wi</sub> A |
| 600   | 100   | 69 | 76 | 71 | 66 | 65 | 64 | 52 | 43 | 71                |
|   | 80    | 67 | 73 | 68 | 64 | 63 | 59 | 51 | 41 | 68                |
|   | 60    | 66 | 71 | 66 | 61 | 61 | 59 | 51 | 41 | 66                |
|   | 50    | 69 | 73 | 67 | 62 | 62 | 60 | 52 | 41 | 67                |
| 850   | 100   | 73 | 81 | 75 | 73 | 71 | 74 | 61 | 53 | 78                |
|   | 80    | 71 | 76 | 71 | 70 | 68 | 67 | 60 | 50 | 74                |
|   | 60    | 72 | 74 | 71 | 68 | 67 | 67 | 61 | 51 | 73                |
|   | 50    | 76 | 78 | 72 | 68 | 67 | 67 | 60 | 51 | 73                |
| 1150  | 100   | 76 | 82 | 88 | 82 | 79 | 77 | 77 | 61 | 86                |
|   | 80    | 72 | 78 | 85 | 79 | 76 | 73 | 67 | 59 | 82                |
|   | 60    | 76 | 77 | 80 | 76 | 74 | 71 | 66 | 60 | 79                |
|   | 50    | 80 | 84 | 85 | 76 | 73 | 71 | 66 | 61 | 81                |
| 1650  | 100   | 83 | 87 | 95 | 90 | 89 | 86 | 87 | 78 | 95                |
|   | 80    | 78 | 82 | 92 | 86 | 86 | 82 | 77 | 69 | 91                |
|   | 60    | 84 | 84 | 89 | 84 | 83 | 79 | 75 | 71 | 88                |
|   | 50    | 86 | 89 | 91 | 84 | 82 | 78 | 75 | 71 | 88                |
| 2036  | 100   | 86 | 89 | 96 | 96 | 95 | 91 | 92 | 90 | 100               |
|   | 80    | 80 | 84 | 91 | 92 | 92 | 88 | 83 | 76 | 95                |
|   | 60    | 87 | 88 | 89 | 89 | 88 | 84 | 80 | 77 | 92                |
|   | 50    | 89 | 94 | 94 | 89 | 87 | 84 | 80 | 77 | 93                |

| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                   |
|--|-------|----|----|----|----|----|----|----|----|-------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wo</sub> A |
| 600  | 100   | 76 | 79 | 70 | 70 | 67 | 65 | 56 | 45 | 73                |
|  | 80    | 76 | 78 | 68 | 68 | 67 | 65 | 59 | 49 | 72                |
|  | 60    | 75 | 77 | 67 | 67 | 66 | 64 | 59 | 49 | 71                |
|  | 50    | 76 | 78 | 67 | 66 | 65 | 64 | 59 | 47 | 71                |
| 850  | 100   | 79 | 82 | 76 | 77 | 74 | 74 | 65 | 55 | 80                |
|  | 80    | 75 | 78 | 73 | 75 | 73 | 70 | 64 | 53 | 77                |
|  | 60    | 76 | 79 | 72 | 73 | 71 | 69 | 65 | 54 | 76                |
|  | 50    | 83 | 81 | 73 | 73 | 71 | 69 | 65 | 55 | 77                |
| 1150   | 100   | 83 | 84 | 86 | 86 | 82 | 78 | 77 | 65 | 87                |
|  | 80    | 80 | 80 | 81 | 83 | 80 | 75 | 71 | 64 | 84                |
|  | 60    | 81 | 82 | 81 | 81 | 78 | 74 | 70 | 65 | 83                |
|  | 50    | 83 | 83 | 81 | 81 | 77 | 74 | 70 | 65 | 82                |
| 1650   | 100   | 88 | 90 | 94 | 94 | 92 | 87 | 87 | 81 | 96                |
|  | 80    | 84 | 87 | 90 | 93 | 90 | 84 | 80 | 72 | 94                |
|  | 60    | 88 | 91 | 91 | 89 | 87 | 82 | 79 | 72 | 92                |
|  | 50    | 89 | 92 | 91 | 89 | 87 | 82 | 80 | 73 | 92                |
| 2036   | 100   | 94 | 95 | 97 | 99 | 97 | 93 | 92 | 91 | 102               |
|  | 80    | 88 | 89 | 93 | 94 | 93 | 89 | 85 | 77 | 97                |
|  | 60    | 93 | 94 | 93 | 93 | 91 | 87 | 83 | 77 | 95                |
|  | 50    | 94 | 95 | 94 | 93 | 91 | 87 | 83 | 78 | 96                |

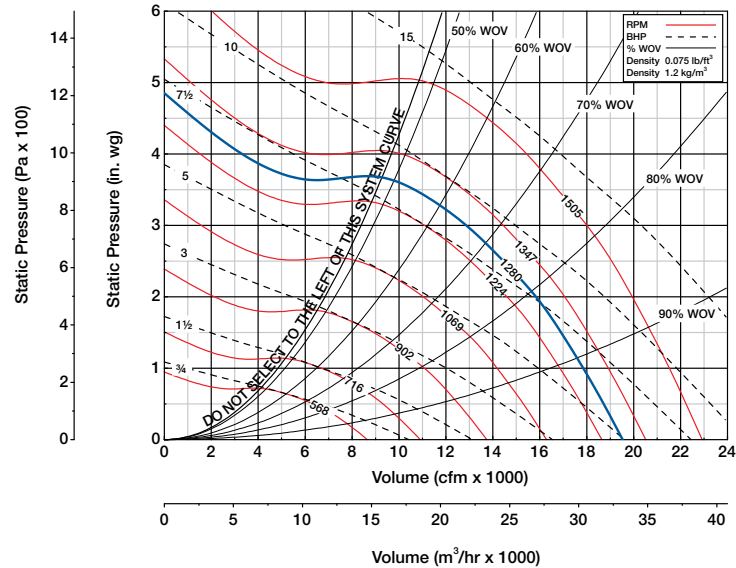
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

The sound power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>Wi</sub>A and outlet L<sub>Wo</sub>, L<sub>Wo</sub>A sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>Wi</sub>A and L<sub>Wo</sub>A values only.



| Performance Data                           |       |          |         |
|--|-------|----------|---------|
| Maximum Fan RPM                            | QEI-L | 1280     |         |
|  | QEI   | 1505     |         |
| Specification Data                         |       |          |         |
| Maximum Motor Frame Size                   | QEI-L | 215T     |         |
|  | QEI   | 256T     |         |
| Minimum Motor Starting hp                  |       | 3/4 hp   | .55 kW  |
| Wheel Diameter                             |       | 33 in.   | 838 mm  |
| Approximate Weight (Less Motor & Drives)   | QEI-L | 470 lbs. | 214 kg. |
|  | QEI   | 540 lbs. | 245 kg. |
| Maximum Bhp = (Fan RPM / 626) <sup>3</sup> |       |          |         |
| Outlet Velocity (FPM) = CFM / 7.54         |       |          |         |
| Tip Speed (FPM) = Fan RPM x 8.64           |       |          |         |
| % WOV = (CFM x 100) / (Fan RPM x 15.2)     |       |          |         |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.25                        |      | 0.5  |      | 1    |      | 1.5  |      | 2    |      | 2.5  |      | 3    |      | 3.5  |      | 4    |      |
|       |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 5700  | 755  | 459                         | 0.35 | 541  | 0.63 | 690  | 1.32 |      |      |      |      |      |      |      |      |      |      |      |      |
| 6900  | 915  | 524                         | 0.48 | 594  | 0.79 | 724  | 1.53 | 843  | 2.40 | 950  | 3.36 |      |      |      |      |      |      |      |      |
| 8100  | 1074 | 593                         | 0.65 | 651  | 0.98 | 767  | 1.79 | 875  | 2.72 | 976  | 3.75 | 1070 | 4.85 |      |      |      |      |      |      |
| 9300  | 1233 | 664                         | 0.87 | 716  | 1.24 | 819  | 2.10 | 916  | 3.08 | 1009 | 4.17 | 1097 | 5.34 | 1182 | 6.58 | 1260 | 7.88 |      |      |
| 10500 | 1392 | 737                         | 1.14 | 783  | 1.54 | 875  | 2.46 | 964  | 3.51 | 1050 | 4.64 | 1131 | 5.87 | 1208 | 7.17 | 1287 | 8.55 | 1359 | 9.98 |
| 11700 | 1551 | 811                         | 1.47 | 853  | 1.91 | 933  | 2.88 | 1017 | 3.99 | 1096 | 5.19 | 1172 | 6.46 | 1246 | 7.83 | 1314 | 9.26 | 1386 | 10.8 |
| 12900 | 1710 | 886                         | 1.88 | 924  | 2.35 | 999  | 3.38 | 1073 | 4.54 | 1148 | 5.81 | 1218 | 7.14 | 1287 | 8.55 | 1355 | 10.0 | 1418 | 11.6 |
| 14100 | 1870 | 962                         | 2.35 | 997  | 2.86 | 1065 | 3.96 | 1131 | 5.15 | 1202 | 6.50 | 1269 | 7.90 | 1332 | 9.36 | 1396 | 10.9 | 1459 | 12.5 |
| 15300 | 2029 | 1038                        | 2.91 | 1070 | 3.46 | 1133 | 4.62 | 1196 | 5.88 | 1259 | 7.25 | 1322 | 8.74 | 1384 | 10.3 | 1442 | 11.9 | 1500 | 13.5 |
| 16500 | 2188 | 1114                        | 3.55 | 1144 | 4.14 | 1203 | 5.37 | 1262 | 6.70 | 1318 | 8.10 | 1379 | 9.64 | 1436 | 11.3 | 1494 | 12.9 |      |      |
| 17700 | 2347 | 1191                        | 4.29 | 1219 | 4.92 | 1275 | 6.23 | 1329 | 7.61 | 1383 | 9.08 | 1436 | 10.6 | 1492 | 12.3 |      |      |      |      |
| 18900 | 2506 | 1268                        | 5.13 | 1294 | 5.80 | 1346 | 7.18 | 1397 | 8.62 | 1449 | 10.2 | 1497 | 11.8 |      |      |      |      |      |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|---|-------|----|----|----|----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |
| 400   | 100   | 70 | 71 | 64 | 59 | 61 | 58 | 52 | 38 | 65               |
|   | 80    | 65 | 68 | 62 | 58 | 57 | 58 | 52 | 40 | 64               |
|   | 60    | 65 | 67 | 62 | 59 | 57 | 58 | 52 | 42 | 63               |
|   | 50    | 67 | 68 | 61 | 58 | 57 | 58 | 53 | 42 | 64               |
| 550   | 100   | 73 | 72 | 70 | 65 | 65 | 67 | 54 | 45 | 71               |
|   | 80    | 70 | 70 | 67 | 63 | 61 | 61 | 54 | 44 | 67               |
|   | 60    | 69 | 69 | 64 | 61 | 60 | 60 | 55 | 44 | 66               |
|   | 50    | 74 | 70 | 64 | 61 | 60 | 60 | 54 | 44 | 66               |
| 750   | 100   | 84 | 83 | 75 | 73 | 70 | 76 | 62 | 54 | 79               |
|   | 80    | 82 | 80 | 73 | 70 | 69 | 66 | 60 | 53 | 74               |
|   | 60    | 79 | 77 | 71 | 68 | 67 | 64 | 59 | 52 | 72               |
|   | 50    | 79 | 78 | 71 | 67 | 66 | 63 | 59 | 52 | 71               |
| 1100  | 100   | 77 | 86 | 86 | 84 | 80 | 78 | 82 | 66 | 88               |
|   | 80    | 73 | 84 | 83 | 80 | 77 | 74 | 70 | 63 | 83               |
|   | 60    | 75 | 84 | 79 | 76 | 75 | 72 | 67 | 64 | 80               |
|   | 50    | 79 | 82 | 82 | 76 | 74 | 71 | 66 | 64 | 80               |
| 1505  | 100   | 80 | 89 | 92 | 93 | 89 | 85 | 90 | 76 | 95               |
|   | 80    | 78 | 87 | 88 | 90 | 86 | 83 | 79 | 72 | 91               |
|   | 60    | 81 | 90 | 88 | 86 | 83 | 80 | 77 | 72 | 89               |
|   | 50    | 85 | 89 | 89 | 86 | 82 | 80 | 76 | 73 | 88               |

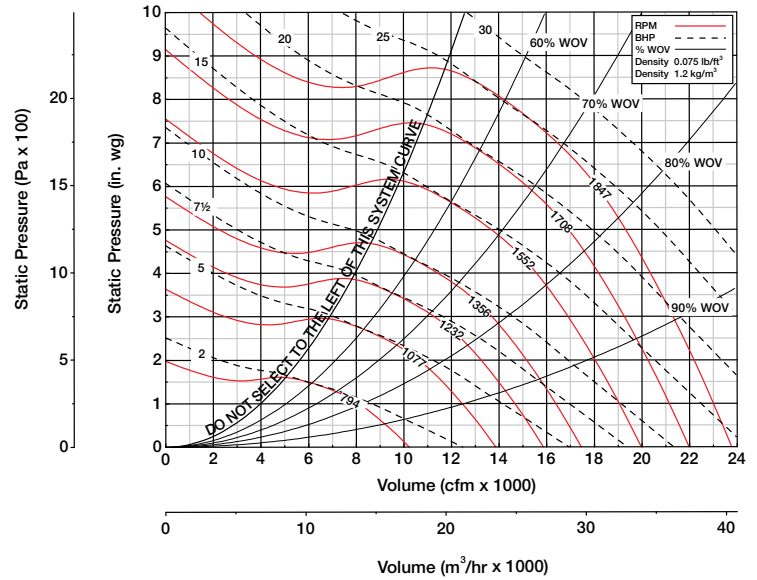
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|--|-------|----|----|----|----|----|----|----|----|------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WoA</sub> |
| 400  | 100   | 70 | 70 | 65 | 67 | 62 | 60 | 55 | 44 | 68               |
|  | 80    | 69 | 68 | 63 | 65 | 59 | 61 | 57 | 45 | 67               |
|  | 60    | 69 | 69 | 63 | 64 | 59 | 61 | 57 | 45 | 67               |
|  | 50    | 68 | 68 | 62 | 64 | 59 | 61 | 56 | 45 | 66               |
| 550  | 100   | 78 | 73 | 71 | 71 | 67 | 67 | 56 | 46 | 73               |
|  | 80    | 75 | 71 | 68 | 69 | 65 | 65 | 57 | 47 | 71               |
|  | 60    | 74 | 70 | 67 | 67 | 65 | 64 | 57 | 47 | 70               |
|  | 50    | 73 | 71 | 66 | 66 | 64 | 64 | 56 | 46 | 70               |
| 750  | 100   | 85 | 82 | 77 | 79 | 74 | 75 | 64 | 55 | 81               |
|  | 80    | 85 | 80 | 75 | 76 | 72 | 68 | 62 | 53 | 78               |
|  | 60    | 83 | 79 | 74 | 75 | 71 | 67 | 61 | 53 | 76               |
|  | 50    | 83 | 79 | 74 | 73 | 71 | 66 | 61 | 52 | 75               |
| 1100   | 100   | 85 | 89 | 86 | 89 | 84 | 81 | 82 | 66 | 90               |
|  | 80    | 81 | 86 | 82 | 86 | 81 | 77 | 72 | 63 | 86               |
|  | 60    | 84 | 87 | 81 | 83 | 78 | 75 | 69 | 63 | 84               |
|  | 50    | 87 | 88 | 83 | 82 | 78 | 74 | 68 | 64 | 84               |
| 1505   | 100   | 88 | 91 | 93 | 97 | 93 | 89 | 89 | 79 | 99               |
|  | 80    | 86 | 89 | 90 | 94 | 90 | 87 | 83 | 73 | 95               |
|  | 60    | 91 | 89 | 88 | 91 | 87 | 84 | 81 | 72 | 92               |
|  | 50    | 93 | 92 | 90 | 92 | 87 | 83 | 80 | 72 | 93               |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.

| Performance Data                           |          |         |
|--|----------|---------|
| Maximum Fan RPM                            | 1847     |         |
| Specification Data                         |          |         |
| Maximum Motor Frame Size                   | 286T     |         |
| Minimum Motor Starting hp                  | 1½ hp    | 1.1 kW  |
| Wheel Diameter                             | 33 in.   | 838 mm  |
| Approximate Weight (Less Motor & Drives)   | 670 lbs. | 304 kg. |
| Maximum Bhp = (Fan RPM / 630) <sup>3</sup> |          |         |
| Outlet Velocity (FPM) = CFM / 7.54         |          |         |
| Tip Speed (FPM) = Fan RPM x 8.64           |          |         |
| % WOV = (CFM x 100) / (Fan RPM x 12.9)     |          |         |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.5                         |      | 1    |      | 2    |      | 3    |      | 4    |      | 5    |      | 6    |      | 7    |      | 8    |      |
|       |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 8300  | 1100 | 727                         | 1.21 | 807  | 1.89 | 967  | 3.57 | 1119 | 5.59 | 1265 | 7.80 |      |      |      |      |      |      |      |      |
| 9100  | 1206 | 782                         | 1.45 | 854  | 2.16 | 1002 | 3.91 | 1147 | 5.98 | 1281 | 8.29 | 1410 | 10.8 |      |      |      |      |      |      |
| 9900  | 1312 | 839                         | 1.73 | 906  | 2.49 | 1038 | 4.28 | 1175 | 6.41 | 1303 | 8.81 | 1427 | 11.4 | 1543 | 14.1 |      |      |      |      |
| 10700 | 1419 | 896                         | 2.05 | 959  | 2.87 | 1082 | 4.71 | 1207 | 6.89 | 1331 | 9.34 | 1444 | 12.0 | 1560 | 14.8 | 1667 | 17.8 |      |      |
| 11500 | 1525 | 953                         | 2.41 | 1012 | 3.28 | 1128 | 5.19 | 1243 | 7.42 | 1359 | 9.91 | 1472 | 12.7 | 1576 | 15.6 | 1684 | 18.6 | 1783 | 21.8 |
| 12300 | 1631 | 1011                        | 2.82 | 1067 | 3.75 | 1174 | 5.71 | 1280 | 7.99 | 1392 | 10.6 | 1500 | 13.4 | 1602 | 16.4 | 1700 | 19.5 | 1800 | 22.7 |
| 13100 | 1737 | 1070                        | 3.28 | 1123 | 4.26 | 1223 | 6.30 | 1325 | 8.65 | 1428 | 11.3 | 1529 | 14.1 | 1630 | 17.2 | 1723 | 20.4 | 1816 | 23.8 |
| 13900 | 1843 | 1130                        | 3.78 | 1179 | 4.82 | 1275 | 6.97 | 1371 | 9.36 | 1464 | 12.0 | 1563 | 14.9 | 1658 | 18.0 | 1752 | 21.3 | 1839 | 24.8 |
| 14700 | 1949 | 1189                        | 4.35 | 1236 | 5.44 | 1327 | 7.69 | 1417 | 10.1 | 1506 | 12.8 | 1599 | 15.8 | 1688 | 18.9 | 1780 | 22.3 |      |      |
| 15500 | 2055 | 1249                        | 4.97 | 1293 | 6.12 | 1380 | 8.48 | 1464 | 11.0 | 1551 | 13.8 | 1635 | 16.7 | 1724 | 20.0 | 1809 | 23.3 |      |      |
| 16300 | 2161 | 1309                        | 5.65 | 1351 | 6.86 | 1434 | 9.33 | 1515 | 11.9 | 1597 | 14.7 | 1676 | 17.8 | 1760 | 21.0 | 1843 | 24.5 |      |      |
| 17100 | 2267 | 1370                        | 6.39 | 1409 | 7.67 | 1488 | 10.2 | 1566 | 12.9 | 1644 | 15.8 | 1721 | 18.9 | 1797 | 22.2 |      |      |      |      |

Shaded values show where Class I fan selections are more efficient than Class II.

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|---|-------|----|----|----|----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |
| 550   | 100   | 81 | 72 | 67 | 64 | 68 | 62 | 50 | 43 | 71               |
|   | 80    | 79 | 71 | 64 | 62 | 62 | 58 | 50 | 44 | 67               |
|   | 60    | 76 | 68 | 62 | 61 | 62 | 59 | 51 | 45 | 66               |
|   | 50    | 74 | 68 | 63 | 61 | 62 | 59 | 51 | 45 | 66               |
| 750   | 100   | 73 | 80 | 75 | 72 | 71 | 77 | 58 | 53 | 79               |
|   | 80    | 65 | 73 | 71 | 68 | 68 | 62 | 56 | 49 | 72               |
|   | 60    | 67 | 70 | 70 | 65 | 67 | 62 | 56 | 50 | 71               |
|   | 50    | 68 | 71 | 69 | 65 | 67 | 62 | 56 | 51 | 70               |
| 1100  | 100   | 78 | 90 | 84 | 83 | 81 | 83 | 78 | 65 | 88               |
|   | 80    | 74 | 89 | 80 | 79 | 78 | 73 | 67 | 61 | 82               |
|   | 60    | 74 | 84 | 76 | 75 | 77 | 72 | 67 | 62 | 80               |
|   | 50    | 78 | 83 | 77 | 74 | 76 | 71 | 67 | 63 | 80               |
| 1500  | 100   | 83 | 86 | 95 | 91 | 89 | 86 | 89 | 75 | 95               |
|   | 80    | 78 | 80 | 91 | 87 | 85 | 80 | 76 | 70 | 89               |
|   | 60    | 80 | 80 | 87 | 83 | 82 | 79 | 75 | 71 | 87               |
|   | 50    | 83 | 83 | 86 | 83 | 81 | 78 | 75 | 72 | 86               |
| 1847  | 100   | 85 | 90 | 97 | 97 | 96 | 92 | 94 | 84 | 101              |
|   | 80    | 82 | 83 | 91 | 92 | 92 | 87 | 84 | 77 | 96               |
|   | 60    | 89 | 86 | 90 | 89 | 89 | 85 | 82 | 78 | 93               |
|   | 50    | 89 | 89 | 91 | 89 | 88 | 84 | 81 | 78 | 92               |

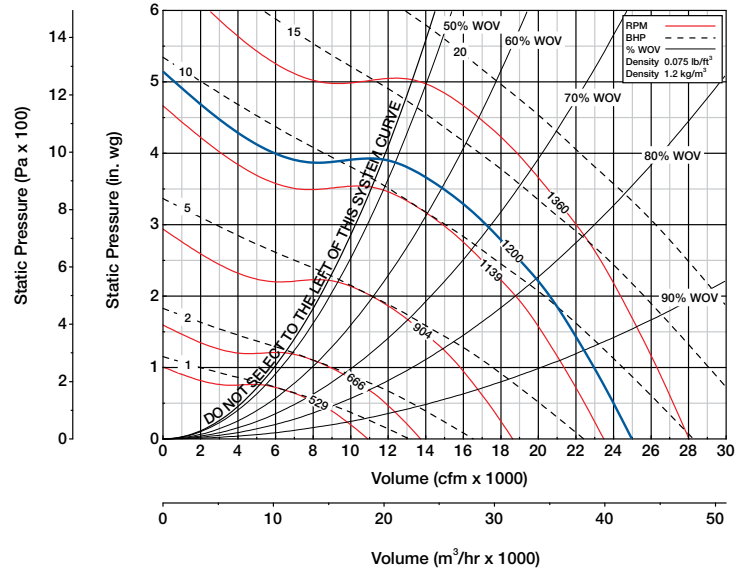
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |     |     |    |    |    |    |                  |
|--|-------|----|----|-----|-----|----|----|----|----|------------------|
| RPM  | % WOV | 1  | 2  | 3   | 4   | 5  | 6  | 7  | 8  | L <sub>WoA</sub> |
| 550  | 100   | 83 | 74 | 70  | 71  | 68 | 64 | 55 | 45 | 73               |
|  | 80    | 82 | 72 | 67  | 70  | 66 | 62 | 56 | 45 | 71               |
|  | 60    | 79 | 69 | 65  | 68  | 65 | 62 | 56 | 45 | 70               |
|  | 50    | 79 | 70 | 65  | 67  | 65 | 62 | 56 | 45 | 70               |
| 750  | 100   | 79 | 81 | 78  | 79  | 74 | 75 | 62 | 55 | 81               |
|  | 80    | 76 | 76 | 75  | 77  | 72 | 67 | 61 | 53 | 77               |
|  | 60    | 75 | 73 | 72  | 74  | 71 | 66 | 61 | 52 | 75               |
|  | 50    | 77 | 75 | 71  | 73  | 70 | 66 | 61 | 53 | 75               |
| 1100   | 100   | 85 | 92 | 88  | 89  | 84 | 84 | 78 | 67 | 91               |
|  | 80    | 81 | 84 | 84  | 86  | 82 | 77 | 69 | 62 | 87               |
|  | 60    | 83 | 82 | 81  | 83  | 79 | 75 | 68 | 63 | 84               |
|  | 50    | 84 | 84 | 81  | 82  | 79 | 74 | 68 | 64 | 84               |
| 1500   | 100   | 90 | 91 | 96  | 96  | 92 | 89 | 90 | 77 | 98               |
|  | 80    | 85 | 86 | 91  | 94  | 89 | 85 | 79 | 72 | 95               |
|  | 60    | 89 | 88 | 88  | 91  | 87 | 82 | 77 | 72 | 92               |
|  | 50    | 91 | 90 | 90  | 90  | 86 | 82 | 77 | 73 | 91               |
| 1847   | 100   | 96 | 95 | 100 | 101 | 99 | 94 | 94 | 86 | 103              |
|  | 80    | 91 | 90 | 98  | 98  | 96 | 91 | 86 | 79 | 100              |
|  | 60    | 97 | 94 | 94  | 95  | 93 | 88 | 83 | 79 | 97               |
|  | 50    | 97 | 96 | 96  | 95  | 92 | 88 | 83 | 79 | 97               |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.

| Performance Data                           |       |          |         |
|--|-------|----------|---------|
| Maximum Fan RPM                            | QEI-L | 1200     |         |
|  | QEI   | 1360     |         |
| Specification Data                         |       |          |         |
| Maximum Motor Frame Size                   | QEI-L | 256T     |         |
|  | QEI   | 284T     |         |
| Minimum Motor Starting hp                  |       | 1 hp     | .75 kW  |
| Wheel Diameter                             |       | 36.5 in. | 927 mm  |
| Approximate Weight (Less Motor & Drives)   | QEI-L | 630 lbs. | 286 kg. |
|  | QEI   | 850 lbs. | 386 kg. |
| Maximum Bhp = (Fan RPM / 528) <sup>3</sup> |       |          |         |
| Outlet Velocity (FPM) = CFM / 9.31         |       |          |         |
| Tip Speed (FPM) = Fan RPM x 9.56           |       |          |         |
| % WOV = (CFM x 100) / (Fan RPM x 20.6)     |       |          |         |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.25                        |      | 0.5  |      | 1    |      | 1.5  |      | 2    |      | 2.5  |      | 3    |      | 3.5  |      | 4    |      |
|       |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 6900  | 748  | 412                         | 0.42 | 487  | 0.76 | 622  | 1.60 |      |      |      |      |      |      |      |      |      |      |      |      |
| 8400  | 910  | 472                         | 0.58 | 536  | 0.96 | 654  | 1.87 | 761  | 2.93 | 858  | 4.10 |      |      |      |      |      |      |      |      |
| 9900  | 1073 | 536                         | 0.79 | 588  | 1.20 | 693  | 2.19 | 791  | 3.32 | 882  | 4.58 | 968  | 5.93 |      |      |      |      |      |      |
| 11400 | 1235 | 602                         | 1.07 | 648  | 1.52 | 742  | 2.58 | 829  | 3.77 | 912  | 5.10 | 992  | 6.54 | 1069 | 8.06 | 1140 | 9.65 |      |      |
| 12900 | 1398 | 669                         | 1.41 | 710  | 1.9  | 793  | 3.03 | 874  | 4.31 | 950  | 5.70 | 1024 | 7.21 | 1093 | 8.80 | 1164 | 10.5 | 1230 | 12.2 |
| 14400 | 1561 | 737                         | 1.83 | 775  | 2.37 | 847  | 3.55 | 923  | 4.92 | 993  | 6.39 | 1062 | 7.95 | 1128 | 9.63 | 1190 | 11.4 | 1254 | 13.2 |
| 15900 | 1723 | 806                         | 2.34 | 841  | 2.92 | 908  | 4.19 | 975  | 5.61 | 1042 | 7.17 | 1104 | 8.80 | 1167 | 10.5 | 1228 | 12.4 | 1285 | 14.3 |
| 17400 | 1886 | 876                         | 2.94 | 908  | 3.57 | 969  | 4.92 | 1028 | 6.39 | 1092 | 8.04 | 1152 | 9.77 | 1209 | 11.6 | 1266 | 13.4 | 1323 | 15.4 |
| 18900 | 2048 | 947                         | 3.65 | 975  | 4.33 | 1032 | 5.76 | 1088 | 7.31 | 1145 | 8.99 | 1202 | 10.8 | 1257 | 12.7 | 1310 | 14.7 |      |      |
| 20400 | 2211 | 1018                        | 4.47 | 1044 | 5.20 | 1097 | 6.72 | 1150 | 8.35 | 1200 | 10.1 | 1254 | 12.0 | 1306 | 14.0 | 1358 | 16.0 |      |      |
| 21900 | 2374 | 1088                        | 5.41 | 1113 | 6.19 | 1163 | 7.81 | 1212 | 9.51 | 1260 | 11.3 | 1307 | 13.2 | 1358 | 15.3 |      |      |      |      |
| 23400 | 2536 | 1160                        | 6.49 | 1183 | 7.32 | 1230 | 9.03 | 1275 | 10.8 | 1321 | 12.7 |      |      |      |      |      |      |      |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                   |
|---|-------|----|----|----|----|----|----|----|----|-------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wi</sub> A |
| 350   | 100   | 70 | 70 | 63 | 60 | 61 | 57 | 49 | 36 | 65                |
|   | 80    | 66 | 67 | 61 | 58 | 57 | 57 | 50 | 38 | 63                |
|   | 60    | 66 | 66 | 61 | 58 | 57 | 57 | 51 | 40 | 63                |
|   | 50    | 67 | 67 | 61 | 58 | 57 | 57 | 51 | 40 | 63                |
| 500   | 100   | 74 | 73 | 70 | 66 | 66 | 67 | 54 | 44 | 72                |
|   | 80    | 71 | 71 | 68 | 64 | 62 | 61 | 54 | 43 | 68                |
|   | 60    | 70 | 70 | 65 | 62 | 61 | 60 | 54 | 44 | 67                |
|   | 50    | 74 | 71 | 65 | 62 | 61 | 60 | 54 | 43 | 66                |
| 700   | 100   | 87 | 84 | 77 | 74 | 73 | 76 | 62 | 55 | 80                |
|   | 80    | 84 | 81 | 74 | 72 | 70 | 67 | 61 | 53 | 75                |
|   | 60    | 81 | 78 | 72 | 69 | 68 | 65 | 60 | 53 | 73                |
|   | 50    | 81 | 79 | 73 | 68 | 67 | 64 | 60 | 53 | 73                |
| 950   | 100   | 78 | 86 | 85 | 83 | 79 | 79 | 79 | 62 | 86                |
|   | 80    | 75 | 84 | 82 | 79 | 77 | 73 | 68 | 61 | 82                |
|   | 60    | 77 | 83 | 78 | 76 | 74 | 71 | 67 | 63 | 79                |
|   | 50    | 79 | 82 | 81 | 76 | 73 | 70 | 66 | 63 | 79                |
| 1360  | 100   | 83 | 91 | 93 | 93 | 89 | 87 | 88 | 75 | 96                |
|   | 80    | 80 | 89 | 90 | 90 | 86 | 83 | 79 | 72 | 92                |
|   | 60    | 84 | 91 | 89 | 86 | 84 | 81 | 77 | 73 | 89                |
|   | 50    | 87 | 91 | 89 | 86 | 83 | 80 | 76 | 73 | 89                |

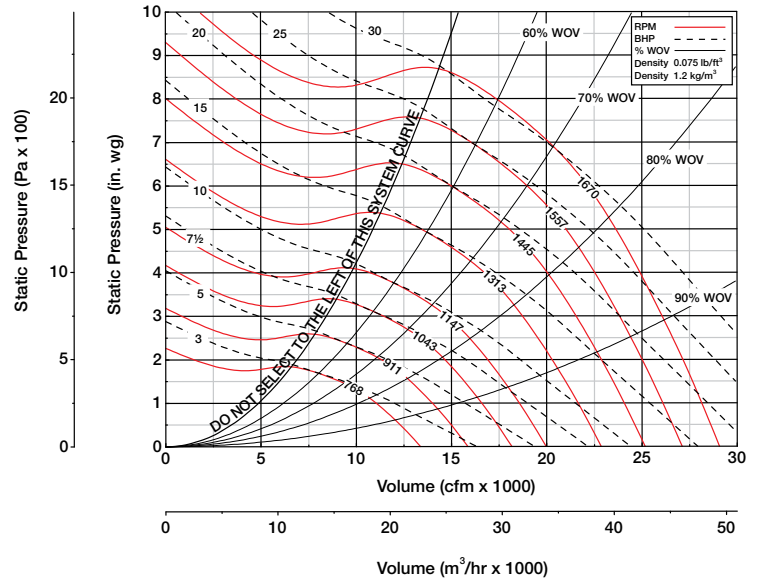
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                   |
|--|-------|----|----|----|----|----|----|----|----|-------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wo</sub> A |
| 350  | 100   | 70 | 69 | 66 | 66 | 62 | 59 | 53 | 42 | 68                |
|  | 80    | 69 | 68 | 64 | 64 | 60 | 60 | 55 | 43 | 66                |
|  | 60    | 69 | 68 | 63 | 63 | 59 | 60 | 55 | 43 | 66                |
|  | 50    | 68 | 67 | 63 | 63 | 59 | 60 | 54 | 43 | 66                |
| 500  | 100   | 78 | 74 | 72 | 72 | 68 | 67 | 56 | 46 | 74                |
|  | 80    | 76 | 71 | 69 | 70 | 66 | 65 | 56 | 46 | 72                |
|  | 60    | 75 | 71 | 68 | 68 | 66 | 64 | 56 | 46 | 71                |
|  | 50    | 74 | 71 | 67 | 67 | 65 | 64 | 56 | 46 | 70                |
| 700  | 100   | 87 | 83 | 79 | 80 | 75 | 76 | 64 | 55 | 82                |
|  | 80    | 87 | 81 | 76 | 78 | 73 | 69 | 63 | 54 | 79                |
|  | 60    | 85 | 80 | 75 | 76 | 72 | 68 | 62 | 53 | 77                |
|  | 50    | 85 | 80 | 75 | 75 | 72 | 67 | 61 | 53 | 77                |
| 950  | 100   | 86 | 89 | 86 | 88 | 84 | 81 | 79 | 63 | 89                |
|  | 80    | 82 | 85 | 83 | 85 | 80 | 76 | 70 | 61 | 85                |
|  | 60    | 84 | 86 | 82 | 82 | 77 | 73 | 68 | 62 | 83                |
|  | 50    | 87 | 87 | 83 | 81 | 77 | 72 | 67 | 63 | 83                |
| 1360   | 100   | 89 | 92 | 95 | 97 | 93 | 90 | 89 | 78 | 99                |
|  | 80    | 87 | 90 | 91 | 94 | 90 | 87 | 82 | 72 | 95                |
|  | 60    | 92 | 91 | 89 | 91 | 87 | 85 | 81 | 72 | 93                |
|  | 50    | 94 | 93 | 91 | 92 | 87 | 84 | 80 | 71 | 93                |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>Wi</sub>A and outlet L<sub>Wo</sub>, L<sub>Wo</sub>A sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>Wi</sub>A and L<sub>Wo</sub>A values only.

| Performance Data                           |           |         |
|--|-----------|---------|
| Maximum Fan RPM                            | 1670      |         |
| Specification Data                         |           |         |
| Maximum Motor Frame Size                   | 324T      |         |
| Minimum Motor Starting hp                  | 1½ hp     | 1.1 kW  |
| Wheel Diameter                             | 36.5 in.  | 927 mm  |
| Approximate Weight (Less Motor & Drives)   | 1000 lbs. | 454 kg. |
| Maximum Bhp = (Fan RPM / 533) <sup>3</sup> |           |         |
| Outlet Velocity (FPM) = CFM / 9.31         |           |         |
| Tip Speed (FPM) = Fan RPM x 9.56           |           |         |
| % WOV = (CFM x 100) / (Fan RPM x 17.4)     |           |         |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.5                         |      | 1    |      | 2    |      | 3    |      | 4    |      | 5    |      | 6    |      | 7    |      | 8    |      |
|       |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 10000 | 1084 | 650                         | 1.43 | 723  | 2.26 | 870  | 4.31 | 1009 | 6.76 | 1141 | 9.50 |      |      |      |      |      |      |      |      |
| 11100 | 1203 | 706                         | 1.76 | 771  | 2.63 | 905  | 4.77 | 1036 | 7.30 | 1158 | 10.1 | 1274 | 13.1 |      |      |      |      |      |      |
| 12200 | 1323 | 763                         | 2.15 | 824  | 3.09 | 942  | 5.28 | 1065 | 7.89 | 1180 | 10.8 | 1291 | 14.0 | 1397 | 17.3 |      |      |      |      |
| 13300 | 1442 | 821                         | 2.60 | 877  | 3.61 | 987  | 5.88 | 1098 | 8.56 | 1209 | 11.6 | 1311 | 14.9 | 1413 | 18.3 | 1510 | 21.9 |      |      |
| 14400 | 1561 | 880                         | 3.11 | 931  | 4.20 | 1034 | 6.56 | 1135 | 9.31 | 1237 | 12.4 | 1339 | 15.8 | 1431 | 19.4 | 1527 | 23.1 | 1617 | 27.0 |
| 15500 | 1681 | 939                         | 3.70 | 988  | 4.86 | 1082 | 7.31 | 1176 | 10.1 | 1273 | 13.3 | 1368 | 16.7 | 1460 | 20.5 | 1545 | 24.4 | 1634 | 28.4 |
| 16600 | 1800 | 999                         | 4.37 | 1045 | 5.60 | 1133 | 8.18 | 1222 | 11.1 | 1310 | 14.3 | 1399 | 17.8 | 1489 | 21.6 | 1573 | 25.6 | 1652 | 29.8 |
| 17700 | 1919 | 1060                        | 5.11 | 1103 | 6.43 | 1186 | 9.15 | 1269 | 12.1 | 1349 | 15.4 | 1436 | 19.0 | 1517 | 22.8 | 1602 | 26.9 |      |      |
| 18800 | 2039 | 1121                        | 5.94 | 1161 | 7.34 | 1240 | 10.2 | 1317 | 13.2 | 1395 | 16.6 | 1473 | 20.3 | 1553 | 24.2 | 1631 | 28.3 |      |      |
| 19900 | 2158 | 1182                        | 6.87 | 1219 | 8.35 | 1294 | 11.4 | 1367 | 14.5 | 1442 | 18.0 | 1513 | 21.7 | 1590 | 25.7 | 1665 | 29.9 |      |      |
| 21000 | 2277 | 1243                        | 7.90 | 1278 | 9.46 | 1349 | 12.6 | 1420 | 15.9 | 1489 | 19.4 | 1559 | 23.2 | 1627 | 27.2 |      |      |      |      |
| 22100 | 2396 | 1304                        | 9.03 | 1338 | 10.7 | 1406 | 14.0 | 1473 | 17.4 | 1537 | 20.9 | 1606 | 24.9 |      |      |      |      |      |      |

Shaded values show where Class I fan selections are more efficient than Class II.

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                  |
|---|-------|----|----|----|----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |
| 500   | 100   | 83 | 72 | 68 | 66 | 68 | 61 | 50 | 43 | 71               |
|   | 80    | 81 | 71 | 65 | 63 | 63 | 58 | 50 | 44 | 67               |
|   | 60    | 78 | 68 | 63 | 62 | 62 | 59 | 51 | 45 | 66               |
|   | 50    | 76 | 68 | 63 | 62 | 62 | 59 | 51 | 46 | 66               |
| 700   | 100   | 75 | 81 | 77 | 74 | 73 | 76 | 59 | 54 | 80               |
|   | 80    | 68 | 74 | 72 | 70 | 69 | 63 | 56 | 50 | 73               |
|   | 60    | 69 | 72 | 71 | 67 | 68 | 63 | 57 | 51 | 72               |
|   | 50    | 70 | 72 | 70 | 67 | 68 | 63 | 57 | 52 | 71               |
| 950   | 100   | 80 | 91 | 83 | 82 | 81 | 82 | 75 | 63 | 87               |
|   | 80    | 76 | 90 | 79 | 78 | 77 | 71 | 66 | 59 | 82               |
|   | 60    | 76 | 85 | 76 | 76 | 76 | 71 | 66 | 61 | 80               |
|   | 50    | 79 | 84 | 77 | 75 | 75 | 70 | 66 | 62 | 79               |
| 1350  | 100   | 84 | 88 | 95 | 92 | 89 | 87 | 88 | 74 | 95               |
|   | 80    | 79 | 82 | 91 | 87 | 85 | 80 | 76 | 69 | 90               |
|   | 60    | 81 | 82 | 87 | 84 | 82 | 79 | 75 | 71 | 87               |
|   | 50    | 84 | 85 | 87 | 83 | 82 | 79 | 75 | 72 | 87               |
| 1670  | 100   | 87 | 91 | 99 | 97 | 97 | 92 | 95 | 84 | 102              |
|   | 80    | 84 | 84 | 93 | 93 | 93 | 87 | 84 | 77 | 96               |
|   | 60    | 91 | 86 | 92 | 90 | 90 | 85 | 82 | 78 | 94               |
|   | 50    | 91 | 90 | 92 | 89 | 89 | 85 | 82 | 79 | 93               |

| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |     |     |    |    |    |    |                  |
|--|-------|----|----|-----|-----|----|----|----|----|------------------|
| RPM  | % WOV | 1  | 2  | 3   | 4   | 5  | 6  | 7  | 8  | L <sub>WoA</sub> |
| 500  | 100   | 84 | 75 | 71  | 72  | 69 | 64 | 54 | 45 | 73               |
|  | 80    | 83 | 72 | 68  | 70  | 66 | 62 | 55 | 44 | 72               |
|  | 60    | 80 | 70 | 66  | 68  | 66 | 62 | 55 | 44 | 70               |
|  | 50    | 80 | 71 | 66  | 68  | 65 | 62 | 56 | 45 | 70               |
| 700  | 100   | 80 | 82 | 80  | 80  | 76 | 75 | 63 | 55 | 82               |
|  | 80    | 77 | 77 | 76  | 78  | 73 | 68 | 62 | 54 | 79               |
|  | 60    | 76 | 74 | 73  | 75  | 72 | 67 | 61 | 53 | 76               |
|  | 50    | 78 | 76 | 73  | 74  | 71 | 67 | 61 | 54 | 76               |
| 950  | 100   | 86 | 93 | 88  | 88  | 84 | 83 | 76 | 64 | 90               |
|  | 80    | 82 | 85 | 84  | 85  | 81 | 75 | 68 | 61 | 86               |
|  | 60    | 83 | 83 | 81  | 82  | 78 | 73 | 67 | 61 | 83               |
|  | 50    | 84 | 85 | 81  | 81  | 78 | 73 | 67 | 63 | 83               |
| 1350   | 100   | 91 | 92 | 97  | 97  | 93 | 90 | 89 | 76 | 98               |
|  | 80    | 86 | 87 | 92  | 94  | 90 | 85 | 79 | 72 | 95               |
|  | 60    | 90 | 89 | 90  | 91  | 87 | 82 | 77 | 72 | 92               |
|  | 50    | 92 | 91 | 91  | 90  | 86 | 82 | 77 | 73 | 91               |
| 1670   | 100   | 98 | 96 | 102 | 102 | 99 | 95 | 95 | 85 | 104              |
|  | 80    | 92 | 91 | 100 | 99  | 97 | 91 | 86 | 79 | 101              |
|  | 60    | 98 | 94 | 95  | 96  | 94 | 89 | 83 | 79 | 98               |
|  | 50    | 99 | 97 | 97  | 95  | 92 | 88 | 83 | 79 | 97               |

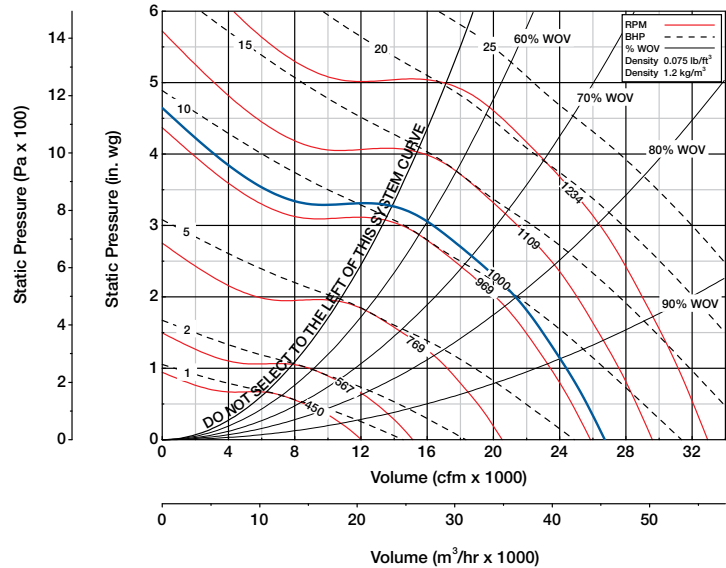
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

The sound power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.



| Performance Data                           |           |                  |
|--|-----------|------------------|
| Maximum Fan RPM                            | QEI-L     | 1000             |
|  | QEI       | 1234             |
| Specification Data                         |           |                  |
| Maximum Motor Frame Size                   | QEI-L     | 256T             |
|  | QEI       | 286T             |
| Minimum Motor Starting hp                  | 1½ hp     | 1.1 kW           |
| Wheel Diameter                             | 40.25 in. | 1022 mm          |
| Approximate Weight (Less Motor & Drives)   | QEI-L     | 730 lbs. 332 kg. |
|  | QEI       | 990 lbs. 449 kg. |
| Maximum Bhp = (Fan RPM / 450) <sup>3</sup> |           |                  |
| Outlet Velocity (FPM) = CFM / 11.27        |           |                  |
| Tip Speed (FPM) = Fan RPM x 10.5           |           |                  |
| % WOV = (CFM x 100) / (Fan RPM x 26.7)     |           |                  |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.25                        |      | 0.5  |      | 1    |      | 1.5  |      | 2    |      | 2.5  |      | 3    |      | 3.5  |      | 4    |      |
|       |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 8400  | 745  | 379                         | 0.52 | 444  | 0.93 | 562  | 1.93 |      |      |      |      |      |      |      |      |      |      |      |      |
| 10200 | 905  | 435                         | 0.72 | 489  | 1.17 | 593  | 2.27 | 687  | 3.52 |      |      |      |      |      |      |      |      |      |      |
| 12000 | 1064 | 494                         | 0.99 | 539  | 1.48 | 631  | 2.67 | 717  | 4.02 | 795  | 5.48 |      |      |      |      |      |      |      |      |
| 13800 | 1224 | 556                         | 1.35 | 595  | 1.88 | 675  | 3.13 | 753  | 4.60 | 827  | 6.17 | 893  | 7.81 | 966  | 9.68 |      |      |      |      |
| 15600 | 1384 | 618                         | 1.79 | 653  | 2.37 | 723  | 3.69 | 793  | 5.22 | 862  | 6.93 | 927  | 8.71 | 988  | 10.6 | 1050 | 12.6 | 1113 | 14.7 |
| 17400 | 1543 | 682                         | 2.32 | 714  | 2.96 | 776  | 4.37 | 840  | 5.97 | 902  | 7.74 | 963  | 9.66 | 1022 | 11.6 | 1077 | 13.7 | 1129 | 15.8 |
| 19200 | 1703 | 747                         | 2.97 | 775  | 3.67 | 832  | 5.17 | 888  | 6.83 | 947  | 8.67 | 1003 | 10.7 | 1058 | 12.8 | 1112 | 15.0 | 1163 | 17.2 |
| 21000 | 1863 | 812                         | 3.74 | 837  | 4.50 | 889  | 6.08 | 940  | 7.83 | 994  | 9.75 | 1045 | 11.8 | 1098 | 14.0 | 1149 | 16.3 | 1198 | 18.7 |
| 22800 | 2023 | 878                         | 4.64 | 900  | 5.46 | 948  | 7.16 | 996  | 8.99 | 1042 | 10.9 | 1093 | 13.1 | 1140 | 15.3 | 1189 | 17.8 |      |      |
| 24600 | 2182 | 944                         | 5.69 | 965  | 6.56 | 1009 | 8.38 | 1053 | 10.3 | 1097 | 12.4 | 1141 | 14.5 | 1188 | 16.9 | 1231 | 19.3 |      |      |
| 26400 | 2342 | 1010                        | 6.89 | 1029 | 7.83 | 1070 | 9.75 | 1111 | 11.8 | 1153 | 13.9 | 1192 | 16.2 |      |      |      |      |      |      |
| 28200 | 2502 | 1076                        | 8.25 | 1094 | 9.25 | 1132 | 11.3 | 1171 | 13.4 | 1209 | 15.6 |      |      |      |      |      |      |      |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                   |
|---|-------|----|----|----|----|----|----|----|----|-------------------|
| RPM   | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wi</sub> A |
| 300   | 100   | 68 | 68 | 62 | 60 | 61 | 48 | 39 | 32 | 64                |
|   | 80    | 66 | 66 | 60 | 60 | 60 | 49 | 40 | 34 | 62                |
|   | 60    | 62 | 65 | 59 | 60 | 60 | 49 | 39 | 32 | 62                |
|   | 50    | 65 | 66 | 60 | 60 | 60 | 49 | 39 | 33 | 62                |
| 450   | 100   | 74 | 76 | 71 | 70 | 70 | 59 | 50 | 45 | 73                |
|   | 80    | 71 | 75 | 68 | 70 | 66 | 58 | 51 | 44 | 70                |
|   | 60    | 69 | 72 | 66 | 70 | 65 | 59 | 52 | 45 | 70                |
|   | 50    | 69 | 72 | 66 | 70 | 65 | 58 | 52 | 44 | 70                |
| 600   | 100   | 83 | 81 | 78 | 74 | 73 | 74 | 59 | 54 | 79                |
|   | 80    | 79 | 80 | 75 | 72 | 72 | 66 | 60 | 53 | 76                |
|   | 60    | 78 | 79 | 73 | 70 | 71 | 66 | 60 | 54 | 75                |
|   | 50    | 78 | 79 | 73 | 70 | 71 | 66 | 60 | 54 | 75                |
| 850   | 100   | 84 | 93 | 88 | 83 | 79 | 84 | 70 | 62 | 88                |
|   | 80    | 82 | 92 | 85 | 80 | 78 | 74 | 67 | 61 | 84                |
|   | 60    | 81 | 90 | 80 | 76 | 75 | 73 | 68 | 63 | 81                |
|   | 50    | 81 | 88 | 80 | 75 | 75 | 73 | 68 | 63 | 81                |
| 1234  | 100   | 88 | 98 | 95 | 94 | 90 | 88 | 90 | 75 | 97                |
|   | 80    | 86 | 96 | 93 | 91 | 88 | 84 | 78 | 72 | 93                |
|   | 60    | 86 | 95 | 88 | 87 | 84 | 82 | 77 | 73 | 90                |
|   | 50    | 86 | 95 | 88 | 87 | 84 | 82 | 77 | 73 | 90                |

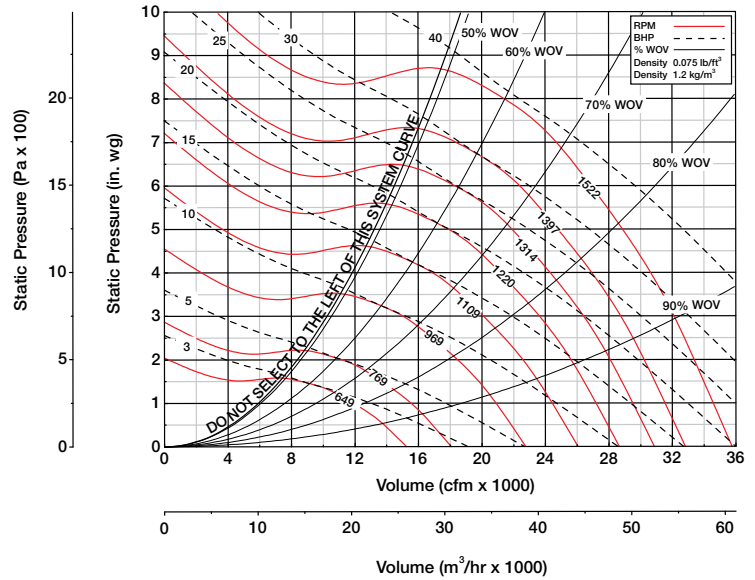
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                   |
|--|-------|----|----|----|----|----|----|----|----|-------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wo</sub> A |
| 300  | 100   | 71 | 67 | 64 | 64 | 64 | 52 | 45 | 38 | 67                |
|  | 80    | 68 | 68 | 63 | 63 | 63 | 52 | 45 | 38 | 66                |
|  | 60    | 67 | 68 | 62 | 63 | 63 | 52 | 46 | 39 | 66                |
|  | 50    | 68 | 69 | 62 | 63 | 64 | 53 | 46 | 40 | 66                |
| 450  | 100   | 80 | 76 | 73 | 72 | 71 | 62 | 54 | 46 | 74                |
|  | 80    | 77 | 76 | 70 | 71 | 68 | 61 | 54 | 46 | 72                |
|  | 60    | 77 | 76 | 68 | 70 | 67 | 60 | 54 | 46 | 71                |
|  | 50    | 78 | 76 | 69 | 70 | 68 | 60 | 54 | 46 | 72                |
| 600  | 100   | 88 | 82 | 79 | 80 | 76 | 74 | 61 | 54 | 81                |
|  | 80    | 86 | 82 | 77 | 78 | 75 | 68 | 61 | 53 | 79                |
|  | 60    | 85 | 82 | 75 | 75 | 73 | 67 | 61 | 53 | 78                |
|  | 50    | 84 | 82 | 75 | 75 | 73 | 67 | 61 | 54 | 77                |
| 850  | 100   | 85 | 90 | 87 | 88 | 83 | 83 | 74 | 65 | 90                |
|  | 80    | 84 | 90 | 84 | 85 | 80 | 76 | 70 | 62 | 86                |
|  | 60    | 84 | 88 | 82 | 83 | 78 | 75 | 69 | 64 | 84                |
|  | 50    | 86 | 89 | 82 | 82 | 78 | 75 | 69 | 64 | 84                |
| 1234   | 100   | 91 | 95 | 97 | 99 | 94 | 91 | 91 | 78 | 100               |
|  | 80    | 89 | 95 | 94 | 96 | 91 | 87 | 82 | 74 | 97                |
|  | 60    | 92 | 93 | 92 | 93 | 88 | 85 | 80 | 74 | 94                |
|  | 50    | 94 | 94 | 92 | 93 | 88 | 85 | 80 | 75 | 94                |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>Wi</sub>A and outlet L<sub>Wo</sub>, L<sub>Wo</sub>A sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>Wi</sub>A and L<sub>Wo</sub>A values only.

| Performance Data                           |           |         |
|--|-----------|---------|
| Maximum Fan RPM                            | 1522      |         |
| Specification Data                         |           |         |
| Maximum Motor Frame Size                   | 324T      |         |
| Minimum Motor Starting hp                  | 2 hp      | 1.5 kW  |
| Wheel Diameter                             | 40.25 in. | 1022 mm |
| Approximate Weight (Less Motor & Drives)   | 1200 lbs. | 544 kg. |
| Maximum Bhp = (Fan RPM / 450) <sup>3</sup> |           |         |
| Outlet Velocity (FPM) = CFM / 11.27        |           |         |
| Tip Speed (FPM) = Fan RPM x 10.5           |           |         |
| % WOV = (CFM x 100) / (Fan RPM x 23.5)     |           |         |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
|-------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
|       |      | 0.5                         |      | 1    |      | 2    |      | 3    |      | 4    |      | 5    |      | 6    |      | 7    |      | 8    |      |  |
|       |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |  |
| 12500 | 1109 | 599                         | 1.76 | 668  | 2.84 | 797  | 5.47 | 923  | 8.58 | 1043 | 11.9 |      |      |      |      |      |      |      |      |  |
| 13900 | 1233 | 652                         | 2.17 | 714  | 3.32 | 833  | 6.06 | 948  | 9.29 | 1059 | 12.8 | 1165 | 16.6 |      |      |      |      |      |      |  |
| 15300 | 1357 | 707                         | 2.64 | 762  | 3.87 | 872  | 6.71 | 975  | 10.0 | 1080 | 13.8 | 1181 | 17.8 | 1277 | 21.9 |      |      |      |      |  |
| 16700 | 1481 | 762                         | 3.20 | 812  | 4.50 | 915  | 7.47 | 1011 | 10.9 | 1107 | 14.8 | 1200 | 18.9 | 1293 | 23.3 | 1381 | 27.8 |      |      |  |
| 18100 | 1606 | 818                         | 3.84 | 862  | 5.22 | 958  | 8.30 | 1050 | 11.9 | 1136 | 15.8 | 1227 | 20.1 | 1311 | 24.7 | 1398 | 29.4 | 1480 | 34.3 |  |
| 19500 | 1730 | 874                         | 4.57 | 916  | 6.03 | 1004 | 9.26 | 1092 | 12.9 | 1174 | 17.0 | 1254 | 21.4 | 1338 | 26.1 | 1415 | 31.1 | 1496 | 36.1 |  |
| 20900 | 1854 | 931                         | 5.40 | 971  | 6.95 | 1053 | 10.3 | 1134 | 14.1 | 1212 | 18.3 | 1288 | 22.8 | 1365 | 27.6 | 1442 | 32.7 | 1514 | 38.0 |  |
| 22300 | 1978 | 988                         | 6.34 | 1026 | 7.98 | 1101 | 11.5 | 1178 | 15.4 | 1253 | 19.7 | 1326 | 24.3 | 1395 | 29.2 | 1469 | 34.4 |      |      |  |
| 23700 | 2102 | 1046                        | 7.38 | 1081 | 9.12 | 1151 | 12.8 | 1224 | 16.8 | 1296 | 21.2 | 1365 | 25.9 | 1433 | 31.0 | 1496 | 36.2 |      |      |  |
| 25100 | 2227 | 1103                        | 8.55 | 1137 | 10.4 | 1201 | 14.2 | 1272 | 18.4 | 1340 | 22.9 | 1407 | 27.7 | 1471 | 32.9 |      |      |      |      |  |
| 26500 | 2351 | 1161                        | 9.85 | 1193 | 11.8 | 1254 | 15.8 | 1320 | 20.1 | 1384 | 24.7 | 1450 | 29.7 | 1510 | 34.9 |      |      |      |      |  |
| 27900 | 2475 | 1219                        | 11.3 | 1249 | 13.3 | 1308 | 17.5 | 1370 | 21.9 | 1432 | 26.7 | 1493 | 31.7 |      |      |      |      |      |      |  |

Shaded values show where Class I fan selections are more efficient than Class II.

|      |       | Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |    |     |     |    |    |    |    |                  |  |
|------|-------|---|----|-----|-----|----|----|----|----|------------------|--|
| RPM  | % WOV | 1   | 2  | 3   | 4   | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |  |
| 450  | 100   | 83  | 74 | 69  | 67  | 71 | 61 | 50 | 44 | 73               |  |
|      | 80    | 80  | 72 | 66  | 66  | 67 | 58 | 48 | 40 | 69               |  |
|      | 60    | 78  | 70 | 63  | 64  | 66 | 57 | 48 | 40 | 69               |  |
|      | 50    | 75  | 69 | 62  | 64  | 66 | 56 | 48 | 40 | 68               |  |
| 600  | 100   | 83  | 83 | 77  | 75  | 74 | 78 | 59 | 53 | 81               |  |
|      | 80    | 79  | 80 | 73  | 72  | 73 | 65 | 56 | 49 | 76               |  |
|      | 60    | 76  | 77 | 70  | 70  | 72 | 64 | 56 | 49 | 75               |  |
|      | 50    | 76  | 77 | 70  | 69  | 72 | 63 | 55 | 49 | 74               |  |
| 850  | 100   | 79  | 93 | 84  | 85  | 81 | 87 | 73 | 65 | 90               |  |
|      | 80    | 75  | 90 | 82  | 82  | 79 | 75 | 67 | 60 | 84               |  |
|      | 60    | 74  | 87 | 77  | 79  | 77 | 74 | 67 | 61 | 82               |  |
|      | 50    | 79  | 88 | 78  | 77  | 76 | 72 | 65 | 61 | 81               |  |
| 1200 | 100   | 85  | 92 | 97  | 94  | 90 | 89 | 92 | 76 | 98               |  |
|      | 80    | 79  | 89 | 94  | 91  | 87 | 83 | 79 | 70 | 93               |  |
|      | 60    | 81  | 86 | 91  | 87  | 85 | 81 | 77 | 70 | 90               |  |
|      | 50    | 83  | 87 | 89  | 86  | 84 | 81 | 76 | 71 | 89               |  |
| 1522 | 100   | 90  | 94 | 101 | 100 | 96 | 94 | 98 | 86 | 104              |  |
|      | 80    | 85  | 89 | 97  | 98  | 94 | 90 | 87 | 79 | 99               |  |
|      | 60    | 87  | 88 | 93  | 94  | 90 | 87 | 84 | 78 | 96               |  |
|      | 50    | 90  | 91 | 93  | 93  | 90 | 87 | 83 | 79 | 95               |  |

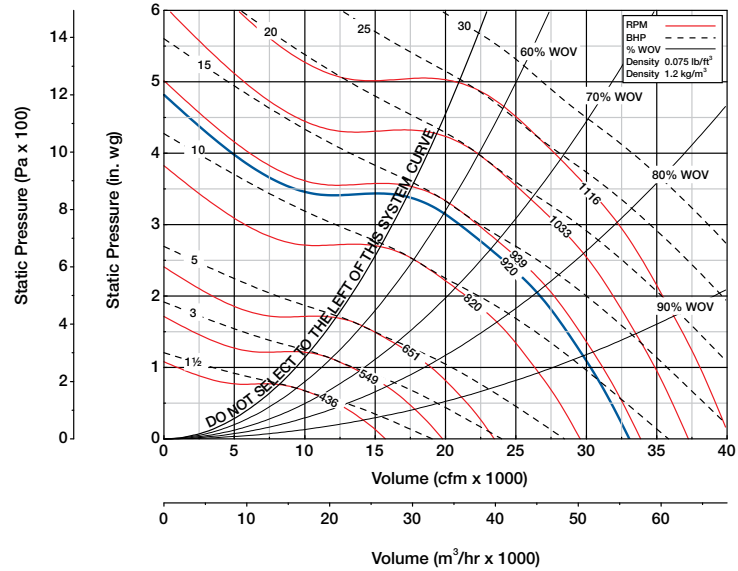
|      |       | Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |    |     |     |    |    |    |    |                  |  |
|------|-------|--|----|-----|-----|----|----|----|----|------------------|--|
| RPM  | % WOV | 1  | 2  | 3   | 4   | 5  | 6  | 7  | 8  | L <sub>WoA</sub> |  |
| 450  | 100   | 87   | 77 | 73  | 73  | 74 | 64 | 54 | 47 | 76               |  |
|      | 80    | 85   | 77 | 71  | 72  | 72 | 61 | 52 | 45 | 75               |  |
|      | 60    | 84   | 76 | 69  | 70  | 72 | 60 | 52 | 45 | 74               |  |
|      | 50    | 83   | 77 | 68  | 68  | 72 | 59 | 52 | 45 | 74               |  |
| 600  | 100   | 82   | 82 | 79  | 80  | 76 | 76 | 62 | 54 | 82               |  |
|      | 80    | 82   | 82 | 77  | 79  | 75 | 68 | 60 | 51 | 80               |  |
|      | 60    | 82   | 81 | 75  | 76  | 75 | 67 | 59 | 52 | 78               |  |
|      | 50    | 82   | 83 | 74  | 75  | 74 | 65 | 58 | 52 | 77               |  |
| 850  | 100   | 85   | 89 | 88  | 90  | 83 | 86 | 75 | 66 | 91               |  |
|      | 80    | 82   | 87 | 85  | 88  | 81 | 77 | 70 | 61 | 88               |  |
|      | 60    | 82   | 85 | 82  | 84  | 79 | 75 | 68 | 62 | 85               |  |
|      | 50    | 85   | 87 | 82  | 83  | 79 | 74 | 67 | 62 | 84               |  |
| 1200 | 100   | 89   | 92 | 95  | 99  | 93 | 90 | 92 | 78 | 100              |  |
|      | 80    | 87   | 89 | 93  | 97  | 91 | 87 | 82 | 73 | 97               |  |
|      | 60    | 88   | 89 | 90  | 94  | 88 | 84 | 79 | 72 | 94               |  |
|      | 50    | 91   | 92 | 92  | 93  | 87 | 83 | 78 | 73 | 93               |  |
| 1522 | 100   | 94   | 96 | 102 | 104 | 99 | 96 | 98 | 87 | 106              |  |
|      | 80    | 92   | 93 | 98  | 102 | 97 | 93 | 89 | 81 | 103              |  |
|      | 60    | 94   | 95 | 95  | 99  | 94 | 90 | 86 | 79 | 100              |  |
|      | 50    | 96   | 97 | 98  | 99  | 94 | 90 | 85 | 80 | 100              |  |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.

| Performance Data                           |          |                   |
|--|----------|-------------------|
| Maximum Fan RPM                            | QEI-L    | 920               |
|  | QEI      | 1116              |
| Specification Data                         |          |                   |
| Maximum Motor Frame Size                   | QEI-L    | 256T              |
|  | QEI      | 286T              |
| Minimum Motor Starting hp                  | 1½ hp    | 1.1 kW            |
| Wheel Diameter                             | 44.5 in. | 1130 mm           |
| Approximate Weight (Less Motor & Drives)   | QEI-L    | 900 lbs. 409 kg.  |
|  | QEI      | 1200 lbs. 544 kg. |
| Maximum Bhp = (Fan RPM / 380) <sup>3</sup> |          |                   |
| Outlet Velocity (FPM) = CFM / 13.79        |          |                   |
| Tip Speed (FPM) = Fan RPM x 11.7           |          |                   |
| % WOV = (CFM x 100) / (Fan RPM x 36.1)     |          |                   |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.25                        |      | 0.5 |      | 1    |      | 1.5  |      | 2    |      | 2.5  |      | 3    |      | 3.5  |      | 4    |      |
|       |      | RPM                         | BHP  | RPM | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 10300 | 746  | 343                         | 0.63 | 402 | 1.14 | 508  | 2.36 |      |      |      |      |      |      |      |      |      |      |      |      |
| 12500 | 906  | 394                         | 0.88 | 443 | 1.44 | 537  | 2.79 | 622  | 4.31 |      |      |      |      |      |      |      |      |      |      |
| 14700 | 1065 | 448                         | 1.22 | 488 | 1.82 | 571  | 3.27 | 649  | 4.93 | 720  | 6.71 |      |      |      |      |      |      |      |      |
| 16900 | 1225 | 503                         | 1.65 | 539 | 2.31 | 611  | 3.83 | 681  | 5.63 | 748  | 7.55 | 808  | 9.57 | 874  | 11.8 |      |      |      |      |
| 19100 | 1385 | 560                         | 2.19 | 592 | 2.90 | 654  | 4.52 | 718  | 6.39 | 780  | 8.49 | 839  | 10.7 | 894  | 12.9 | 950  | 15.4 | 1007 | 18.0 |
| 21300 | 1544 | 618                         | 2.85 | 646 | 3.63 | 702  | 5.35 | 760  | 7.31 | 817  | 9.48 | 872  | 11.8 | 925  | 14.3 | 975  | 16.7 | 1022 | 19.3 |
| 23500 | 1704 | 677                         | 3.64 | 702 | 4.50 | 753  | 6.33 | 803  | 8.36 | 857  | 10.6 | 908  | 13.1 | 958  | 15.7 | 1006 | 18.3 | 1052 | 21.0 |
| 25700 | 1863 | 736                         | 4.59 | 758 | 5.51 | 805  | 7.45 | 851  | 9.59 | 899  | 11.9 | 946  | 14.4 | 994  | 17.1 | 1040 | 20.0 | 1084 | 22.9 |
| 27900 | 2023 | 795                         | 5.69 | 815 | 6.69 | 859  | 8.76 | 902  | 11.0 | 943  | 13.4 | 989  | 16.0 | 1032 | 18.8 | 1076 | 21.7 |      |      |
| 30100 | 2182 | 854                         | 6.97 | 873 | 8.05 | 913  | 10.3 | 953  | 12.6 | 993  | 15.1 | 1033 | 17.8 | 1075 | 20.7 | 1114 | 23.6 |      |      |
| 32300 | 2342 | 914                         | 8.44 | 932 | 9.59 | 969  | 12.0 | 1005 | 14.4 | 1043 | 17.0 | 1079 | 19.8 |      |      |      |      |      |      |
| 34500 | 2501 | 974                         | 10.1 | 991 | 11.3 | 1024 | 13.8 | 1060 | 16.4 | 1094 | 19.1 |      |      |      |      |      |      |      |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |     |    |    |    |    |    |    |                   |
|---|-------|----|-----|----|----|----|----|----|----|-------------------|
| RPM   | % WOV | 1  | 2   | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wi</sub> A |
| 275   | 100   | 70 | 68  | 63 | 62 | 61 | 48 | 39 | 32 | 64                |
|   | 80    | 68 | 67  | 61 | 61 | 59 | 49 | 40 | 34 | 63                |
|   | 60    | 64 | 65  | 60 | 61 | 60 | 49 | 39 | 32 | 63                |
|   | 50    | 66 | 66  | 61 | 61 | 59 | 49 | 39 | 33 | 63                |
| 400   | 100   | 75 | 76  | 71 | 70 | 69 | 58 | 49 | 45 | 72                |
|   | 80    | 72 | 74  | 69 | 70 | 65 | 57 | 50 | 43 | 70                |
|   | 60    | 70 | 72  | 67 | 70 | 65 | 58 | 51 | 44 | 70                |
|   | 50    | 70 | 71  | 67 | 69 | 65 | 58 | 51 | 43 | 70                |
| 550   | 100   | 85 | 82  | 79 | 75 | 75 | 73 | 60 | 54 | 79                |
|   | 80    | 81 | 80  | 76 | 73 | 72 | 66 | 60 | 53 | 76                |
|   | 60    | 80 | 80  | 74 | 72 | 72 | 66 | 61 | 54 | 76                |
|   | 50    | 80 | 80  | 74 | 72 | 72 | 66 | 61 | 55 | 75                |
| 800   | 100   | 87 | 95  | 89 | 84 | 81 | 84 | 71 | 63 | 89                |
|   | 80    | 85 | 93  | 86 | 81 | 79 | 75 | 68 | 62 | 85                |
|   | 60    | 84 | 91  | 82 | 77 | 77 | 74 | 69 | 64 | 82                |
|   | 50    | 84 | 89  | 81 | 77 | 77 | 74 | 69 | 64 | 82                |
| 1116  | 100   | 91 | 100 | 96 | 94 | 91 | 89 | 89 | 74 | 97                |
|   | 80    | 89 | 98  | 94 | 91 | 88 | 84 | 78 | 72 | 93                |
|   | 60    | 88 | 96  | 89 | 87 | 84 | 82 | 78 | 73 | 90                |
|   | 50    | 88 | 96  | 89 | 87 | 84 | 82 | 78 | 73 | 90                |

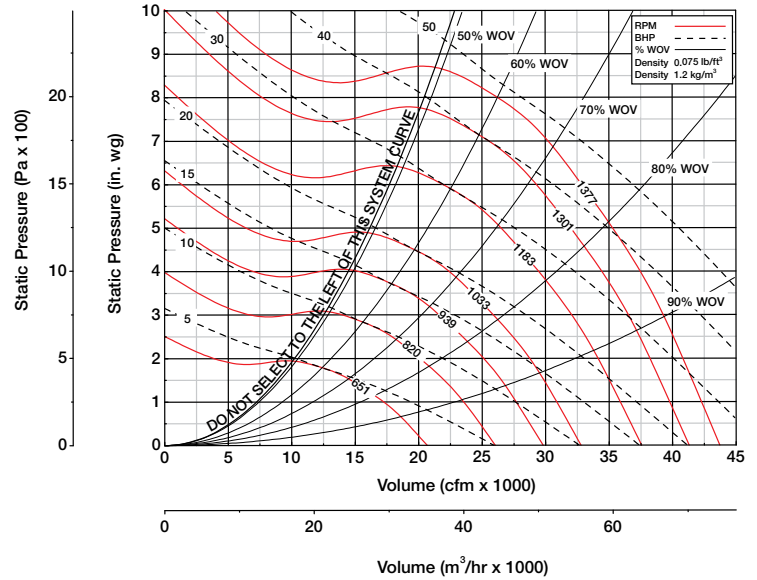
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                   |
|--|-------|----|----|----|----|----|----|----|----|-------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wo</sub> A |
| 275  | 100   | 72 | 68 | 65 | 65 | 64 | 53 | 45 | 38 | 67                |
|  | 80    | 69 | 69 | 64 | 65 | 63 | 53 | 45 | 38 | 66                |
|  | 60    | 69 | 69 | 63 | 64 | 63 | 53 | 46 | 40 | 66                |
|  | 50    | 69 | 69 | 63 | 64 | 64 | 53 | 47 | 40 | 66                |
| 400  | 100   | 80 | 76 | 73 | 72 | 70 | 61 | 53 | 45 | 74                |
|  | 80    | 78 | 75 | 71 | 71 | 67 | 60 | 53 | 45 | 72                |
|  | 60    | 77 | 75 | 69 | 70 | 67 | 60 | 53 | 46 | 71                |
|  | 50    | 78 | 75 | 70 | 70 | 67 | 59 | 53 | 45 | 71                |
| 550  | 100   | 90 | 83 | 80 | 80 | 77 | 74 | 62 | 54 | 82                |
|  | 80    | 88 | 82 | 78 | 79 | 75 | 68 | 61 | 53 | 80                |
|  | 60    | 86 | 82 | 76 | 76 | 74 | 68 | 61 | 53 | 78                |
|  | 50    | 86 | 82 | 76 | 76 | 74 | 67 | 61 | 54 | 78                |
| 800  | 100   | 88 | 91 | 89 | 90 | 85 | 84 | 75 | 66 | 91                |
|  | 80    | 86 | 91 | 86 | 87 | 82 | 77 | 71 | 64 | 87                |
|  | 60    | 86 | 89 | 84 | 84 | 80 | 76 | 71 | 65 | 85                |
|  | 50    | 88 | 90 | 84 | 83 | 80 | 76 | 71 | 65 | 85                |
| 1116   | 100   | 92 | 97 | 98 | 99 | 95 | 92 | 90 | 77 | 100               |
|  | 80    | 91 | 96 | 95 | 97 | 92 | 87 | 82 | 74 | 97                |
|  | 60    | 93 | 94 | 93 | 93 | 89 | 85 | 80 | 74 | 94                |
|  | 50    | 95 | 95 | 93 | 93 | 89 | 85 | 80 | 75 | 94                |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>Wi</sub>A and outlet L<sub>Wo</sub>, L<sub>Wo</sub>A sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>Wi</sub>A and L<sub>Wo</sub>A values only.

| Performance Data                           |           |         |
|--|-----------|---------|
| Maximum Fan RPM                            | 1377      |         |
| Specification Data                         |           |         |
| Maximum Motor Frame Size                   | 326T      |         |
| Minimum Motor Starting hp                  | 3 hp      | 2.2 kW  |
| Wheel Diameter                             | 44.5 in.  | 1130 mm |
| Approximate Weight (Less Motor & Drives)   | 1400 lbs. | 635 kg. |
| Maximum Bhp = (Fan RPM / 381) <sup>3</sup> |           |         |
| Outlet Velocity (FPM) = CFM / 13.79        |           |         |
| Tip Speed (FPM) = Fan RPM x 11.7           |           |         |
| % WOV = (CFM x 100) / (Fan RPM x 31.7)     |           |         |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.5                         |      | 1    |      | 2    |      | 3    |      | 4    |      | 5    |      | 6    |      | 7    |      | 8    |      |
|       |      | RPM                         | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 15000 | 1088 | 534                         | 2.08 | 598  | 3.39 | 716  | 6.58 | 832  | 10.3 | 941  | 14.4 |      |      |      |      |      |      |      |      |
| 16600 | 1204 | 579                         | 2.53 | 636  | 3.91 | 745  | 7.23 | 852  | 11.2 | 955  | 15.4 | 1050 | 20.0 |      |      |      |      |      |      |
| 18200 | 1320 | 625                         | 3.05 | 677  | 4.52 | 778  | 7.96 | 875  | 12.0 | 970  | 16.5 | 1064 | 21.3 | 1151 | 26.3 |      |      |      |      |
| 19800 | 1436 | 671                         | 3.66 | 718  | 5.21 | 814  | 8.78 | 902  | 13.0 | 993  | 17.6 | 1078 | 22.6 | 1165 | 27.8 | 1244 | 33.3 |      |      |
| 21400 | 1552 | 718                         | 4.35 | 760  | 5.99 | 850  | 9.71 | 935  | 14.0 | 1016 | 18.8 | 1099 | 24.0 | 1178 | 29.4 | 1258 | 35.1 | 1332 | 41.0 |
| 23000 | 1669 | 766                         | 5.14 | 805  | 6.87 | 888  | 10.7 | 968  | 15.1 | 1045 | 20.1 | 1122 | 25.4 | 1198 | 31.0 | 1272 | 37.0 | 1346 | 43.0 |
| 24600 | 1785 | 814                         | 6.02 | 851  | 7.86 | 928  | 11.9 | 1005 | 16.4 | 1077 | 21.5 | 1146 | 26.9 | 1221 | 32.7 | 1291 | 38.8 | 1360 | 45.2 |
| 26200 | 1901 | 862                         | 7.02 | 897  | 8.96 | 969  | 13.8 | 1041 | 17.8 | 1110 | 22.9 | 1178 | 28.5 | 1244 | 34.5 | 1314 | 40.8 |      |      |
| 27800 | 2017 | 910                         | 8.13 | 943  | 10.2 | 1010 | 14.6 | 1078 | 19.3 | 1146 | 24.6 | 1210 | 30.3 | 1272 | 36.4 | 1337 | 42.8 |      |      |
| 29400 | 2133 | 959                         | 9.37 | 990  | 11.5 | 1052 | 16.1 | 1118 | 21.0 | 1182 | 26.4 | 1243 | 32.2 | 1305 | 38.4 | 1362 | 44.9 |      |      |
| 31000 | 2249 | 1008                        | 10.7 | 1038 | 13.0 | 1095 | 17.7 | 1159 | 22.9 | 1219 | 28.4 | 1280 | 34.3 | 1337 | 40.6 |      |      |      |      |
| 32600 | 2365 | 1057                        | 12.2 | 1085 | 14.6 | 1140 | 19.5 | 1200 | 24.8 | 1257 | 30.4 | 1316 | 36.5 | 1371 | 42.9 |      |      |      |      |

Shaded values show where Class I fan selections are more efficient than Class II.

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |     |     |    |    |     |    |                  |
|---|-------|----|----|-----|-----|----|----|-----|----|------------------|
| RPM   | % WOV | 1  | 2  | 3   | 4   | 5  | 6  | 7   | 8  | L <sub>WiA</sub> |
| 400   | 100   | 84 | 73 | 69  | 69  | 70 | 60 | 50  | 43 | 73               |
|   | 80    | 81 | 71 | 67  | 66  | 66 | 57 | 47  | 39 | 69               |
|   | 60    | 78 | 69 | 64  | 65  | 65 | 56 | 47  | 39 | 68               |
|   | 50    | 76 | 68 | 63  | 65  | 65 | 55 | 47  | 40 | 67               |
| 550   | 100   | 85 | 84 | 78  | 76  | 76 | 77 | 60  | 54 | 81               |
|   | 80    | 82 | 80 | 74  | 73  | 73 | 65 | 57  | 49 | 76               |
|   | 60    | 78 | 77 | 71  | 71  | 72 | 64 | 56  | 50 | 75               |
|   | 50    | 79 | 78 | 71  | 71  | 72 | 63 | 55  | 50 | 74               |
| 800   | 100   | 82 | 94 | 86  | 86  | 83 | 87 | 74  | 66 | 91               |
|   | 80    | 79 | 92 | 84  | 84  | 80 | 76 | 68  | 61 | 86               |
|   | 60    | 78 | 89 | 79  | 80  | 78 | 75 | 68  | 62 | 83               |
|   | 50    | 82 | 90 | 80  | 79  | 78 | 73 | 67  | 62 | 82               |
| 1100  | 100   | 87 | 94 | 98  | 95  | 91 | 91 | 91  | 75 | 98               |
|   | 80    | 82 | 91 | 95  | 92  | 88 | 84 | 79  | 71 | 94               |
|   | 60    | 83 | 88 | 91  | 88  | 85 | 82 | 77  | 71 | 91               |
|   | 50    | 85 | 88 | 90  | 87  | 84 | 81 | 77  | 72 | 90               |
| 1377  | 100   | 92 | 95 | 103 | 101 | 97 | 94 | 100 | 84 | 105              |
|   | 80    | 87 | 90 | 98  | 98  | 94 | 90 | 88  | 79 | 100              |
|   | 60    | 89 | 89 | 94  | 95  | 91 | 88 | 84  | 78 | 96               |
|   | 50    | 92 | 91 | 94  | 94  | 90 | 87 | 84  | 79 | 96               |

| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |     |     |    |    |     |    |                  |
|--|-------|----|----|-----|-----|----|----|-----|----|------------------|
| RPM  | % WOV | 1  | 2  | 3   | 4   | 5  | 6  | 7   | 8  | L <sub>WoA</sub> |
| 400  | 100   | 87 | 76 | 73  | 74  | 73 | 62 | 53  | 47 | 76               |
|  | 80    | 85 | 77 | 72  | 72  | 71 | 60 | 52  | 44 | 74               |
|  | 60    | 84 | 76 | 69  | 71  | 71 | 59 | 51  | 44 | 73               |
|  | 50    | 84 | 76 | 68  | 70  | 70 | 58 | 51  | 45 | 73               |
| 550  | 100   | 84 | 83 | 80  | 81  | 77 | 76 | 62  | 55 | 83               |
|  | 80    | 84 | 83 | 78  | 80  | 75 | 68 | 60  | 52 | 80               |
|  | 60    | 83 | 82 | 76  | 77  | 75 | 67 | 59  | 52 | 79               |
|  | 50    | 84 | 83 | 75  | 76  | 74 | 66 | 59  | 53 | 78               |
| 800  | 100   | 87 | 91 | 90  | 91  | 85 | 86 | 76  | 67 | 92               |
|  | 80    | 84 | 89 | 87  | 89  | 83 | 78 | 71  | 62 | 89               |
|  | 60    | 84 | 86 | 84  | 86  | 81 | 76 | 69  | 63 | 86               |
|  | 50    | 87 | 89 | 84  | 85  | 80 | 75 | 68  | 63 | 86               |
| 1100   | 100   | 91 | 94 | 97  | 99  | 94 | 92 | 92  | 77 | 100              |
|  | 80    | 88 | 91 | 94  | 98  | 91 | 87 | 82  | 73 | 98               |
|  | 60    | 90 | 90 | 91  | 94  | 89 | 85 | 79  | 73 | 94               |
|  | 50    | 93 | 93 | 93  | 94  | 88 | 84 | 78  | 73 | 94               |
| 1377   | 100   | 96 | 97 | 103 | 105 | 99 | 96 | 100 | 86 | 107              |
|  | 80    | 93 | 93 | 100 | 104 | 97 | 93 | 89  | 80 | 104              |
|  | 60    | 96 | 96 | 97  | 100 | 94 | 91 | 86  | 79 | 100              |
|  | 50    | 98 | 98 | 99  | 100 | 94 | 90 | 85  | 80 | 100              |

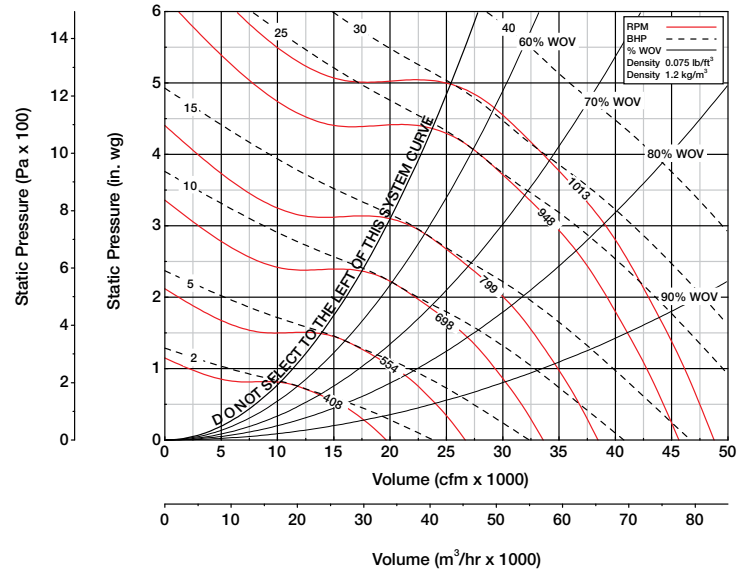
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

The sound power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.



| Performance Data                           |           |         |
|--|-----------|---------|
| Maximum Fan RPM                            | 1013      |         |
| Specification Data                         |           |         |
| Maximum Motor Frame Size                   | 324T      |         |
| Minimum Motor Starting hp                  | 5 hp      | 3.7 kW  |
| Wheel Diameter                             | 49 in.    | 1245 mm |
| Approximate Weight (Less Motor & Drives)   | 1500 lbs. | 680 kg. |
| Maximum Bhp = (Fan RPM / 324) <sup>3</sup> |           |         |
| Outlet Velocity (FPM) = CFM / 16.77        |           |         |
| Tip Speed (FPM) = Fan RPM x 12.8           |           |         |
| % WOV = (CFM x 100) / (Fan RPM x 48.1)     |           |         |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |     |      |     |      |     |      |      |      |     |      |     |      |     |      |     |      |
|-------|------|-----------------------------|------|-----|------|-----|------|-----|------|------|------|-----|------|-----|------|-----|------|-----|------|
|       |      | 0.25                        |      | 0.5 |      | 1   |      | 1.5 |      | 2    |      | 2.5 |      | 3   |      | 3.5 |      | 4   |      |
|       |      | RPM                         | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM  | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  |
| 12500 | 745  | 312                         | 0.77 | 365 | 1.39 | 462 | 2.86 |     |      |      |      |     |      |     |      |     |      |     |      |
| 15200 | 906  | 359                         | 1.08 | 403 | 1.75 | 488 | 3.39 | 565 | 5.23 |      |      |     |      |     |      |     |      |     |      |
| 17900 | 1067 | 408                         | 1.49 | 445 | 2.22 | 520 | 3.98 | 590 | 6.00 | 654  | 8.16 |     |      |     |      |     |      |     |      |
| 20600 | 1228 | 459                         | 2.03 | 491 | 2.82 | 557 | 4.68 | 620 | 6.86 | 681  | 9.20 | 735 | 11.7 | 795 | 14.4 |     |      |     |      |
| 23300 | 1389 | 511                         | 2.70 | 540 | 3.56 | 596 | 5.53 | 654 | 7.81 | 710  | 10.4 | 764 | 13.0 | 813 | 15.7 | 863 | 18.7 | 915 | 21.9 |
| 26000 | 1550 | 565                         | 3.51 | 590 | 4.47 | 641 | 6.56 | 693 | 8.94 | 744  | 11.6 | 794 | 14.4 | 842 | 17.4 | 887 | 20.4 | 930 | 23.5 |
| 28700 | 1711 | 619                         | 4.50 | 641 | 5.54 | 687 | 7.77 | 733 | 10.2 | 781  | 13.0 | 827 | 16.0 | 872 | 19.1 | 916 | 22.4 | 958 | 25.7 |
| 31400 | 1872 | 673                         | 5.67 | 693 | 6.81 | 735 | 9.17 | 777 | 11.8 | 820  | 14.6 | 864 | 17.7 | 906 | 21.0 | 947 | 24.4 | 986 | 28.0 |
| 34100 | 2033 | 727                         | 7.05 | 746 | 8.27 | 785 | 10.8 | 824 | 13.5 | 861  | 16.4 | 903 | 19.7 | 941 | 23.0 | 981 | 26.6 |     |      |
| 36800 | 2194 | 782                         | 8.64 | 799 | 9.96 | 835 | 12.7 | 871 | 15.5 | 907  | 18.6 | 942 | 21.8 | 981 | 25.3 |     |      |     |      |
| 39500 | 2355 | 837                         | 10.5 | 853 | 11.9 | 886 | 14.8 | 919 | 17.7 | 953  | 21.0 | 986 | 24.3 |     |      |     |      |     |      |
| 42200 | 2516 | 892                         | 12.6 | 907 | 14.1 | 937 | 17.1 | 969 | 20.3 | 1000 | 23.6 |     |      |     |      |     |      |     |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |     |    |    |    |    |    |    |                   |
|---|-------|----|-----|----|----|----|----|----|----|-------------------|
| RPM   | % WOV | 1  | 2   | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wi</sub> A |
| 250   | 100   | 71 | 68  | 64 | 63 | 60 | 48 | 39 | 32 | 64                |
|   | 80    | 69 | 67  | 62 | 62 | 59 | 49 | 40 | 34 | 63                |
|   | 60    | 65 | 66  | 61 | 62 | 59 | 48 | 39 | 32 | 63                |
|   | 50    | 68 | 66  | 62 | 62 | 59 | 48 | 39 | 33 | 63                |
| 350   | 100   | 76 | 75  | 71 | 70 | 66 | 56 | 49 | 44 | 71                |
|   | 80    | 73 | 73  | 69 | 69 | 63 | 56 | 49 | 42 | 69                |
|   | 60    | 71 | 71  | 68 | 69 | 64 | 57 | 50 | 42 | 69                |
|   | 50    | 71 | 70  | 68 | 69 | 63 | 57 | 50 | 42 | 69                |
| 500   | 100   | 86 | 82  | 79 | 76 | 76 | 72 | 60 | 54 | 80                |
|   | 80    | 82 | 81  | 76 | 74 | 72 | 66 | 60 | 53 | 77                |
|   | 60    | 81 | 80  | 75 | 73 | 72 | 66 | 61 | 54 | 76                |
|   | 50    | 81 | 80  | 74 | 73 | 72 | 66 | 61 | 55 | 76                |
| 700   | 100   | 90 | 94  | 88 | 84 | 82 | 82 | 69 | 62 | 88                |
|   | 80    | 88 | 92  | 85 | 81 | 78 | 74 | 67 | 61 | 84                |
|   | 60    | 86 | 89  | 81 | 77 | 76 | 73 | 68 | 63 | 82                |
|   | 50    | 86 | 88  | 80 | 77 | 76 | 73 | 68 | 63 | 81                |
| 1013  | 100   | 94 | 101 | 96 | 94 | 91 | 90 | 87 | 72 | 97                |
|   | 80    | 91 | 99  | 94 | 92 | 88 | 84 | 78 | 72 | 94                |
|   | 60    | 90 | 97  | 90 | 88 | 85 | 82 | 78 | 73 | 91                |
|   | 50    | 90 | 97  | 90 | 88 | 85 | 82 | 78 | 73 | 91                |

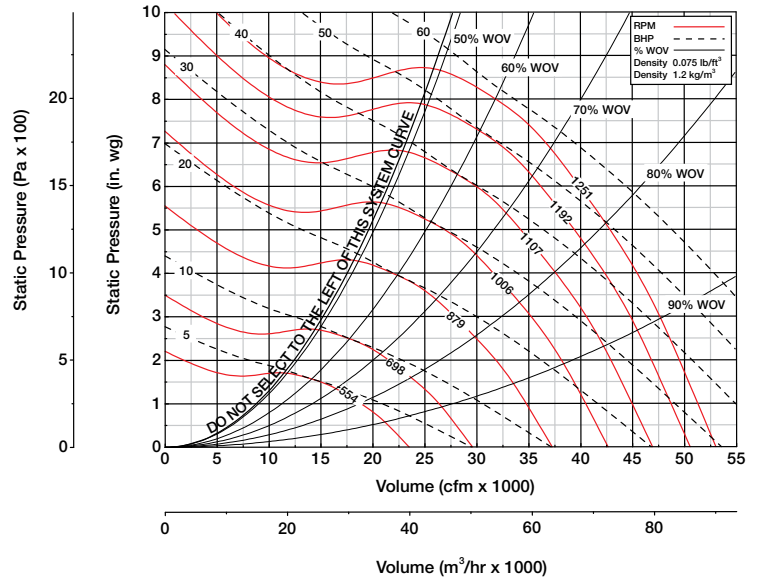
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |    |    |    |    |    |    |                   |
|--|-------|----|----|----|----|----|----|----|----|-------------------|
| RPM  | % WOV | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wo</sub> A |
| 250  | 100   | 72 | 69 | 66 | 66 | 63 | 52 | 45 | 38 | 67                |
|  | 80    | 70 | 69 | 65 | 65 | 62 | 53 | 45 | 38 | 66                |
|  | 60    | 70 | 69 | 64 | 65 | 63 | 53 | 46 | 40 | 66                |
|  | 50    | 70 | 69 | 64 | 65 | 63 | 53 | 46 | 40 | 67                |
| 350  | 100   | 79 | 76 | 73 | 72 | 68 | 60 | 51 | 44 | 73                |
|  | 80    | 77 | 74 | 71 | 70 | 66 | 59 | 51 | 44 | 71                |
|  | 60    | 77 | 74 | 69 | 69 | 65 | 59 | 52 | 44 | 70                |
|  | 50    | 78 | 74 | 70 | 70 | 65 | 58 | 51 | 44 | 71                |
| 500  | 100   | 90 | 83 | 81 | 81 | 77 | 73 | 61 | 54 | 82                |
|  | 80    | 88 | 82 | 79 | 79 | 75 | 68 | 61 | 53 | 80                |
|  | 60    | 87 | 82 | 77 | 77 | 74 | 68 | 61 | 53 | 78                |
|  | 50    | 86 | 82 | 77 | 76 | 73 | 67 | 61 | 54 | 78                |
| 700  | 100   | 89 | 91 | 89 | 89 | 85 | 82 | 73 | 65 | 90                |
|  | 80    | 88 | 90 | 86 | 86 | 81 | 76 | 69 | 62 | 87                |
|  | 60    | 87 | 88 | 84 | 83 | 79 | 75 | 69 | 64 | 85                |
|  | 50    | 88 | 89 | 84 | 83 | 79 | 75 | 70 | 64 | 84                |
| 1013   | 100   | 94 | 98 | 99 | 99 | 95 | 93 | 89 | 76 | 101               |
|  | 80    | 92 | 97 | 96 | 97 | 92 | 87 | 81 | 73 | 97                |
|  | 60    | 94 | 95 | 94 | 93 | 89 | 85 | 80 | 74 | 94                |
|  | 50    | 95 | 96 | 94 | 93 | 89 | 85 | 80 | 75 | 95                |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>Wi</sub>A and outlet L<sub>Wo</sub>, L<sub>Wo</sub>A sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>Wi</sub>A and L<sub>Wo</sub>A values only.

| Performance Data                           |           |         |
|--|-----------|---------|
| Maximum Fan RPM                            | 1251      |         |
| Specification Data                         |           |         |
| Maximum Motor Frame Size                   | 364T      |         |
| Minimum Motor Starting hp                  | 7½ hp     | 5.5 kW  |
| Wheel Diameter                             | 49 in.    | 1245 mm |
| Approximate Weight (Less Motor & Drives)   | 1900 lbs. | 862 kg. |
| Maximum Bhp = (Fan RPM / 324) <sup>3</sup> |           |         |
| Outlet Velocity (FPM) = CFM / 16.77        |           |         |
| Tip Speed (FPM) = Fan RPM x 12.8           |           |         |
| % WOV = (CFM x 100) / (Fan RPM x 42.4)     |           |         |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.5                         |      | 1   |      | 2    |      | 3    |      | 4    |      | 5    |      | 6    |      | 7    |      | 8    |      |
|       |      | RPM                         | BHP  | RPM | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 18000 | 1077 | 481                         | 2.48 | 540 | 4.06 | 649  | 7.91 | 754  | 12.4 | 853  | 17.3 |      |      |      |      |      |      |      |      |
| 20000 | 1197 | 523                         | 3.03 | 575 | 4.70 | 675  | 8.71 | 772  | 13.5 | 866  | 18.6 | 953  | 24.1 |      |      |      |      |      |      |
| 22000 | 1317 | 566                         | 3.68 | 613 | 5.45 | 705  | 9.61 | 794  | 14.5 | 880  | 20.0 | 966  | 25.7 | 1045 | 31.8 |      |      |      |      |
| 24000 | 1437 | 609                         | 4.43 | 652 | 6.31 | 739  | 10.7 | 819  | 15.7 | 902  | 21.3 | 979  | 27.4 | 1058 | 33.7 | 1130 | 40.4 |      |      |
| 26000 | 1556 | 653                         | 5.30 | 691 | 7.29 | 773  | 11.8 | 849  | 17.0 | 923  | 22.8 | 999  | 29.1 | 1071 | 35.7 | 1143 | 42.6 | 1210 | 49.8 |
| 28000 | 1676 | 698                         | 6.29 | 733 | 8.40 | 808  | 13.1 | 881  | 18.4 | 950  | 24.4 | 1021 | 30.9 | 1089 | 37.8 | 1156 | 44.9 | 1223 | 52.3 |
| 30000 | 1796 | 743                         | 7.41 | 776 | 9.65 | 846  | 14.6 | 915  | 20.1 | 981  | 26.2 | 1043 | 32.7 | 1111 | 39.8 | 1174 | 47.3 | 1236 | 55.0 |
| 32000 | 1916 | 788                         | 8.67 | 820 | 11.0 | 884  | 16.2 | 949  | 21.8 | 1011 | 28.1 | 1073 | 34.9 | 1132 | 42.0 | 1195 | 49.7 |      |      |
| 34000 | 2035 | 833                         | 10.1 | 863 | 12.6 | 923  | 17.9 | 984  | 23.7 | 1046 | 30.2 | 1104 | 37.1 | 1160 | 44.5 | 1217 | 52.2 |      |      |
| 36000 | 2155 | 879                         | 11.7 | 907 | 14.3 | 963  | 19.8 | 1022 | 25.9 | 1080 | 32.5 | 1135 | 39.5 | 1190 | 47.1 | 1242 | 55.0 |      |      |
| 38000 | 2275 | 925                         | 13.4 | 951 | 16.2 | 1003 | 21.9 | 1060 | 28.2 | 1114 | 34.9 | 1169 | 42.2 | 1221 | 49.8 |      |      |      |      |
| 40000 | 2395 | 971                         | 15.3 | 996 | 18.2 | 1046 | 24.2 | 1099 | 30.7 | 1150 | 37.6 | 1203 | 45.0 |      |      |      |      |      |      |

Shaded values show where Class I fan selections are more efficient than Class II.

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |     |     |    |    |    |    |                   |
|---|-------|----|----|-----|-----|----|----|----|----|-------------------|
| RPM   | % WOV | 1  | 2  | 3   | 4   | 5  | 6  | 7  | 8  | L <sub>Wi</sub> A |
| 350   | 100   | 82 | 73 | 69  | 69  | 68 | 58 | 49 | 42 | 72                |
|   | 80    | 79 | 70 | 67  | 67  | 64 | 55 | 46 | 38 | 68                |
|   | 60    | 77 | 68 | 64  | 66  | 63 | 54 | 46 | 38 | 67                |
|   | 50    | 75 | 67 | 63  | 65  | 63 | 54 | 46 | 38 | 66                |
| 500   | 100   | 87 | 84 | 78  | 77  | 77 | 75 | 60 | 54 | 81                |
|   | 80    | 83 | 80 | 75  | 74  | 73 | 65 | 56 | 49 | 76                |
|   | 60    | 80 | 77 | 72  | 73  | 72 | 64 | 56 | 50 | 75                |
|   | 50    | 81 | 77 | 72  | 72  | 72 | 63 | 55 | 50 | 75                |
| 700   | 100   | 85 | 93 | 86  | 85  | 84 | 85 | 73 | 64 | 90                |
|   | 80    | 82 | 90 | 84  | 83  | 80 | 75 | 67 | 60 | 85                |
|   | 60    | 80 | 87 | 80  | 80  | 78 | 74 | 67 | 61 | 82                |
|   | 50    | 84 | 88 | 80  | 79  | 77 | 72 | 66 | 62 | 82                |
| 1000  | 100   | 89 | 96 | 98  | 95  | 92 | 92 | 90 | 74 | 99                |
|   | 80    | 85 | 93 | 95  | 92  | 88 | 84 | 79 | 70 | 94                |
|   | 60    | 85 | 90 | 92  | 89  | 86 | 82 | 77 | 71 | 91                |
|   | 50    | 87 | 89 | 90  | 88  | 85 | 81 | 77 | 72 | 90                |
| 1251  | 100   | 93 | 97 | 104 | 101 | 97 | 96 | 99 | 83 | 105               |
|   | 80    | 89 | 92 | 99  | 99  | 94 | 90 | 87 | 78 | 100               |
|   | 60    | 90 | 91 | 95  | 95  | 91 | 88 | 84 | 78 | 97                |
|   | 50    | 93 | 93 | 95  | 94  | 90 | 88 | 84 | 79 | 96                |

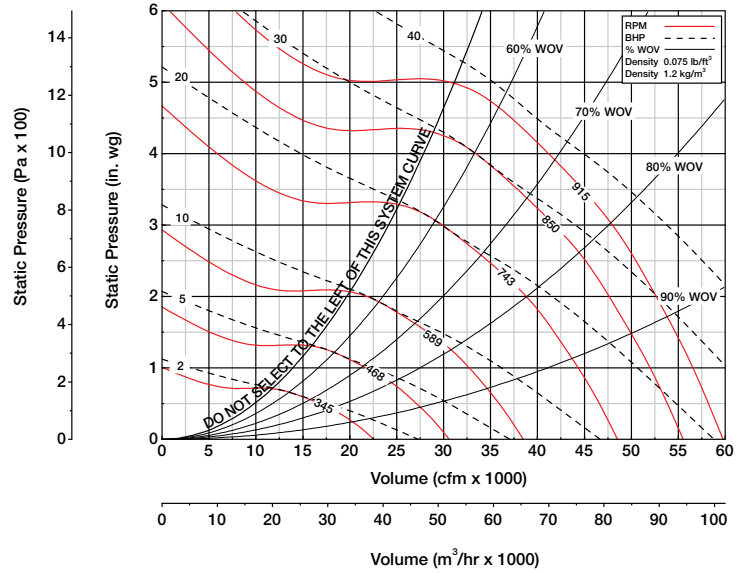
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |     |     |     |    |    |    |                   |
|--|-------|----|----|-----|-----|-----|----|----|----|-------------------|
| RPM  | % WOV | 1  | 2  | 3   | 4   | 5   | 6  | 7  | 8  | L <sub>Wo</sub> A |
| 350  | 100   | 85 | 76 | 73  | 74  | 71  | 61 | 52 | 46 | 75                |
|  | 80    | 83 | 75 | 72  | 72  | 68  | 58 | 50 | 42 | 73                |
|  | 60    | 83 | 74 | 70  | 71  | 68  | 57 | 50 | 43 | 72                |
|  | 50    | 82 | 74 | 68  | 70  | 68  | 57 | 50 | 43 | 72                |
| 500  | 100   | 85 | 84 | 81  | 81  | 78  | 75 | 62 | 54 | 83                |
|  | 80    | 85 | 83 | 80  | 80  | 75  | 68 | 60 | 51 | 81                |
|  | 60    | 85 | 82 | 77  | 78  | 75  | 67 | 59 | 52 | 79                |
|  | 50    | 85 | 82 | 76  | 77  | 74  | 66 | 59 | 53 | 78                |
| 700  | 100   | 88 | 91 | 90  | 90  | 86  | 84 | 74 | 65 | 92                |
|  | 80    | 85 | 89 | 87  | 88  | 82  | 77 | 69 | 61 | 88                |
|  | 60    | 85 | 86 | 84  | 85  | 80  | 75 | 68 | 62 | 85                |
|  | 50    | 87 | 88 | 84  | 84  | 79  | 74 | 67 | 62 | 85                |
| 1000   | 100   | 92 | 95 | 98  | 99  | 94  | 93 | 91 | 76 | 101               |
|  | 80    | 89 | 92 | 96  | 98  | 92  | 88 | 81 | 73 | 98                |
|  | 60    | 91 | 91 | 93  | 94  | 89  | 85 | 79 | 73 | 95                |
|  | 50    | 94 | 93 | 94  | 94  | 88  | 84 | 78 | 74 | 94                |
| 1251   | 100   | 97 | 99 | 104 | 105 | 100 | 97 | 99 | 85 | 107               |
|  | 80    | 94 | 95 | 101 | 104 | 97  | 94 | 89 | 80 | 104               |
|  | 60    | 97 | 97 | 98  | 100 | 94  | 91 | 86 | 79 | 101               |
|  | 50    | 99 | 99 | 100 | 100 | 94  | 90 | 85 | 80 | 100               |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>Wi</sub>A and outlet L<sub>Wo</sub>, L<sub>Wo</sub>A sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>Wi</sub>A and L<sub>Wo</sub>A values only.

| Performance Data                           |           |         |
|--|-----------|---------|
| Maximum Fan RPM                            | 915       |         |
| Specification Data                         |           |         |
| Maximum Motor Frame Size                   | 326T      |         |
| Minimum Motor Starting hp                  | 7½ hp     | 5.5 kW  |
| Wheel Diameter                             | 54.25 in. | 1378 mm |
| Approximate Weight (Less Motor & Drives)   | 2000 lbs. | 907 kg. |
| Maximum Bhp = (Fan RPM / 273) <sup>3</sup> |           |         |
| Outlet Velocity (FPM) = CFM / 20.49        |           |         |
| Tip Speed (FPM) = Fan RPM x 14.2           |           |         |
| % WOV = (CFM x 100) / (Fan RPM x 65.3)     |           |         |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |
|-------|------|-----------------------------|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|
|       |      | 0.25                        |      | 0.5 |      | 1   |      | 1.5 |      | 2   |      | 2.5 |      | 3   |      | 3.5 |      | 4   |      |
|       |      | RPM                         | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  |
| 15200 | 741  | 280                         | 0.93 | 329 | 1.69 | 417 | 3.49 |     |      |     |      |     |      |     |      |     |      |     |      |
| 18500 | 902  | 322                         | 1.30 | 362 | 2.12 | 440 | 4.12 | 510 | 6.39 |     |      |     |      |     |      |     |      |     |      |
| 21800 | 1063 | 367                         | 1.81 | 400 | 2.69 | 468 | 4.84 | 532 | 7.31 | 590 | 9.96 |     |      |     |      |     |      |     |      |
| 25100 | 1224 | 413                         | 2.45 | 442 | 3.42 | 501 | 5.70 | 559 | 8.36 | 613 | 11.2 | 663 | 14.2 | 717 | 17.6 |     |      |     |      |
| 28400 | 1386 | 459                         | 3.26 | 485 | 4.32 | 537 | 6.72 | 589 | 9.51 | 640 | 12.6 | 689 | 15.9 | 733 | 19.2 | 779 | 22.8 | 826 | 26.8 |
| 31700 | 1547 | 507                         | 4.25 | 531 | 5.42 | 577 | 7.97 | 624 | 10.9 | 670 | 14.1 | 715 | 17.6 | 759 | 21.2 | 800 | 24.9 | 838 | 28.7 |
| 35000 | 1708 | 556                         | 5.44 | 577 | 6.72 | 619 | 9.44 | 660 | 12.5 | 704 | 15.8 | 745 | 19.5 | 786 | 23.3 | 826 | 27.3 | 864 | 31.3 |
| 38300 | 1869 | 605                         | 6.86 | 623 | 8.25 | 661 | 11.1 | 700 | 14.3 | 739 | 17.8 | 777 | 21.5 | 816 | 25.6 | 853 | 29.8 | 889 | 34.1 |
| 41600 | 2030 | 654                         | 8.53 | 670 | 10.0 | 706 | 13.1 | 741 | 16.5 | 775 | 20.0 | 813 | 23.9 | 847 | 28.0 | 884 | 32.4 |     |      |
| 44900 | 2191 | 703                         | 10.5 | 719 | 12.1 | 751 | 15.4 | 784 | 18.9 | 816 | 22.6 | 849 | 26.6 | 883 | 30.9 |     |      |     |      |
| 48200 | 2352 | 753                         | 12.7 | 767 | 14.4 | 797 | 17.9 | 827 | 21.6 | 858 | 25.5 | 888 | 29.6 |     |      |     |      |     |      |
| 51500 | 2513 | 802                         | 15.2 | 816 | 17.0 | 843 | 20.8 | 872 | 24.6 | 901 | 28.7 |     |      |     |      |     |      |     |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |     |    |    |    |    |    |    |                  |
|---|-------|----|-----|----|----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2   | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |
| 225   | 100   | 71 | 68  | 64 | 64 | 59 | 47 | 39 | 32 | 64               |
|   | 80    | 70 | 67  | 63 | 63 | 58 | 48 | 40 | 34 | 63               |
|   | 60    | 66 | 65  | 62 | 63 | 58 | 48 | 39 | 32 | 63               |
|   | 50    | 68 | 66  | 63 | 63 | 58 | 47 | 39 | 33 | 63               |
| 325   | 100   | 77 | 76  | 72 | 72 | 67 | 56 | 50 | 45 | 72               |
|   | 80    | 75 | 74  | 71 | 70 | 64 | 57 | 49 | 42 | 70               |
|   | 60    | 73 | 72  | 70 | 70 | 64 | 58 | 51 | 43 | 70               |
|   | 50    | 73 | 71  | 70 | 70 | 64 | 57 | 50 | 42 | 70               |
| 450   | 100   | 86 | 83  | 79 | 77 | 76 | 71 | 60 | 54 | 80               |
|   | 80    | 83 | 81  | 77 | 75 | 72 | 66 | 60 | 53 | 77               |
|   | 60    | 82 | 80  | 75 | 74 | 72 | 66 | 60 | 54 | 76               |
|   | 50    | 82 | 79  | 75 | 74 | 72 | 66 | 61 | 54 | 76               |
| 650   | 100   | 92 | 95  | 89 | 85 | 84 | 82 | 70 | 63 | 89               |
|   | 80    | 91 | 93  | 86 | 82 | 79 | 74 | 68 | 62 | 85               |
|   | 60    | 89 | 90  | 82 | 79 | 78 | 74 | 69 | 64 | 83               |
|   | 50    | 88 | 88  | 81 | 79 | 78 | 74 | 69 | 64 | 82               |
| 915   | 100   | 96 | 101 | 97 | 95 | 92 | 91 | 86 | 71 | 98               |
|   | 80    | 94 | 99  | 95 | 92 | 88 | 84 | 78 | 71 | 94               |
|   | 60    | 93 | 96  | 90 | 88 | 86 | 82 | 78 | 74 | 91               |
|   | 50    | 93 | 96  | 90 | 88 | 86 | 82 | 78 | 74 | 91               |

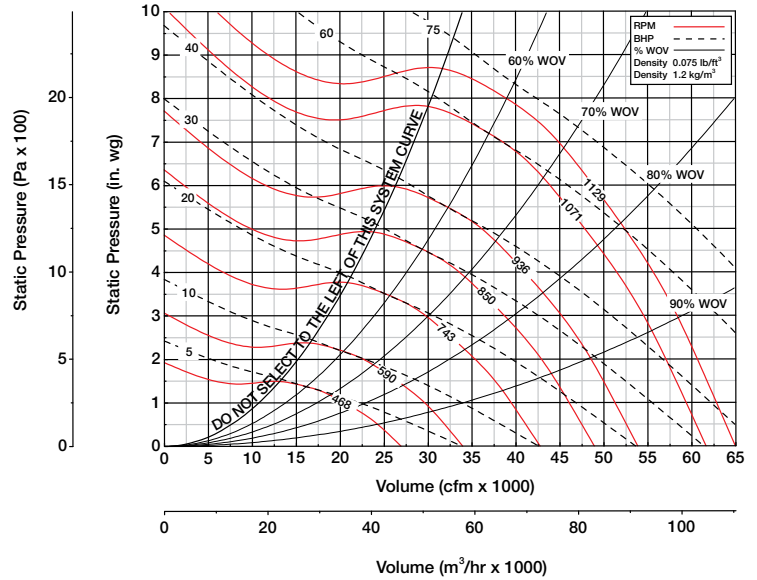
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |     |     |    |    |    |    |                  |
|--|-------|----|----|-----|-----|----|----|----|----|------------------|
| RPM  | % WOV | 1  | 2  | 3   | 4   | 5  | 6  | 7  | 8  | L <sub>WoA</sub> |
| 225  | 100   | 72 | 69 | 67  | 67  | 62 | 52 | 45 | 38 | 67               |
|  | 80    | 71 | 69 | 66  | 66  | 62 | 52 | 45 | 38 | 67               |
|  | 60    | 71 | 68 | 65  | 66  | 62 | 53 | 46 | 39 | 66               |
|  | 50    | 71 | 69 | 65  | 66  | 62 | 53 | 46 | 40 | 67               |
| 325  | 100   | 80 | 77 | 74  | 74  | 69 | 60 | 52 | 45 | 74               |
|  | 80    | 79 | 75 | 73  | 71  | 66 | 59 | 52 | 44 | 72               |
|  | 60    | 78 | 74 | 71  | 71  | 66 | 59 | 52 | 45 | 71               |
|  | 50    | 79 | 75 | 71  | 71  | 66 | 59 | 52 | 45 | 72               |
| 450  | 100   | 90 | 84 | 82  | 81  | 78 | 72 | 61 | 53 | 82               |
|  | 80    | 88 | 83 | 80  | 80  | 75 | 68 | 60 | 52 | 80               |
|  | 60    | 87 | 82 | 78  | 77  | 74 | 68 | 61 | 53 | 79               |
|  | 50    | 87 | 82 | 77  | 77  | 73 | 67 | 61 | 54 | 78               |
| 650  | 100   | 91 | 92 | 91  | 90  | 86 | 83 | 74 | 65 | 91               |
|  | 80    | 90 | 91 | 88  | 87  | 82 | 77 | 70 | 63 | 88               |
|  | 60    | 89 | 89 | 86  | 84  | 80 | 76 | 70 | 65 | 86               |
|  | 50    | 90 | 90 | 85  | 84  | 80 | 76 | 71 | 65 | 86               |
| 915  | 100   | 95 | 99 | 100 | 100 | 95 | 93 | 88 | 75 | 101              |
|  | 80    | 94 | 98 | 97  | 97  | 92 | 88 | 81 | 73 | 98               |
|  | 60    | 95 | 96 | 95  | 93  | 89 | 85 | 80 | 74 | 95               |
|  | 50    | 96 | 97 | 95  | 93  | 89 | 85 | 80 | 75 | 95               |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.

| Performance Data                           |           |          |
|--|-----------|----------|
| Maximum Fan RPM                            | 1129      |          |
| Specification Data                         |           |          |
| Maximum Motor Frame Size                   | 365T      |          |
| Minimum Motor Starting hp                  | 10 hp     | 7.5 kW   |
| Wheel Diameter                             | 54.25 in. | 1378 mm  |
| Approximate Weight (Less Motor & Drives)   | 2300 lbs. | 1043 kg. |
| Maximum Bhp = (Fan RPM / 274) <sup>3</sup> |           |          |
| Outlet Velocity (FPM) = CFM / 20.49        |           |          |
| Tip Speed (FPM) = Fan RPM x 14.2           |           |          |
| % WOV = (CFM x 100) / (Fan RPM x 57.5)     |           |          |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |     |      |     |      |     |      |      |      |      |      |      |      |      |      |      |      |
|-------|------|-----------------------------|------|-----|------|-----|------|-----|------|------|------|------|------|------|------|------|------|------|------|
|       |      | 0.5                         |      | 1   |      | 2   |      | 3   |      | 4    |      | 5    |      | 6    |      | 7    |      | 8    |      |
|       |      | RPM                         | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  | RPM  | BHP  |
| 22000 | 1074 | 434                         | 3.02 | 487 | 4.95 | 585 | 9.67 | 681 | 15.2 | 770  | 21.2 |      |      |      |      |      |      |      |      |
| 24500 | 1196 | 472                         | 3.71 | 519 | 5.75 | 609 | 10.7 | 698 | 16.5 | 782  | 22.8 | 861  | 29.6 |      |      |      |      |      |      |
| 27000 | 1319 | 512                         | 4.52 | 554 | 6.70 | 637 | 11.8 | 717 | 17.8 | 795  | 24.5 | 873  | 31.6 | 944  | 39.0 |      |      |      |      |
| 29500 | 1441 | 552                         | 5.46 | 590 | 7.78 | 668 | 13.1 | 741 | 19.3 | 815  | 26.2 | 885  | 33.7 | 956  | 41.4 | 1021 | 49.6 |      |      |
| 32000 | 1563 | 592                         | 6.55 | 626 | 9.00 | 700 | 14.5 | 769 | 20.9 | 835  | 28.0 | 903  | 35.8 | 968  | 44.0 | 1033 | 52.4 | 1094 | 61.1 |
| 34500 | 1685 | 633                         | 7.80 | 665 | 10.4 | 732 | 16.2 | 798 | 22.8 | 860  | 30.1 | 923  | 38.0 | 985  | 46.5 | 1045 | 55.3 | 1106 | 64.4 |
| 37000 | 1807 | 675                         | 9.21 | 705 | 12.0 | 767 | 18.0 | 829 | 24.8 | 888  | 32.3 | 945  | 40.4 | 1005 | 49.1 | 1062 | 58.2 | 1118 | 67.7 |
| 39500 | 1929 | 716                         | 10.8 | 745 | 13.7 | 803 | 20.0 | 861 | 27.0 | 917  | 34.7 | 972  | 43.0 | 1025 | 51.8 | 1082 | 61.3 |      |      |
| 42000 | 2051 | 758                         | 12.6 | 785 | 15.7 | 839 | 22.3 | 894 | 29.4 | 949  | 37.4 | 1000 | 45.8 | 1051 | 54.9 | 1102 | 64.4 |      |      |
| 44500 | 2173 | 800                         | 14.6 | 825 | 17.8 | 875 | 24.7 | 928 | 32.2 | 980  | 40.2 | 1029 | 48.9 | 1079 | 58.2 | 1126 | 67.9 |      |      |
| 47000 | 2296 | 842                         | 16.8 | 866 | 20.2 | 913 | 27.4 | 963 | 35.1 | 1012 | 43.3 | 1061 | 52.3 | 1107 | 61.7 |      |      |      |      |
| 49500 | 2418 | 885                         | 19.2 | 907 | 22.8 | 952 | 30.3 | 999 | 38.3 | 1046 | 46.7 | 1093 | 55.8 |      |      |      |      |      |      |

Shaded values show where Class I fan selections are more efficient than Class II.

| Inlet Sound Power, L <sub>wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |    |     |     |    |    |    |    |                   |
|---|-------|----|----|-----|-----|----|----|----|----|-------------------|
| RPM   | % WOV | 1  | 2  | 3   | 4   | 5  | 6  | 7  | 8  | L <sub>wi</sub> A |
| 325   | 100   | 82 | 74 | 70  | 71  | 69 | 58 | 49 | 43 | 73                |
|   | 80    | 79 | 71 | 68  | 68  | 64 | 55 | 46 | 38 | 69                |
|   | 60    | 77 | 69 | 66  | 67  | 64 | 55 | 46 | 38 | 68                |
|   | 50    | 75 | 68 | 65  | 67  | 63 | 54 | 46 | 39 | 67                |
| 450   | 100   | 89 | 83 | 79  | 78  | 78 | 73 | 60 | 53 | 82                |
|   | 80    | 85 | 80 | 75  | 75  | 72 | 64 | 56 | 49 | 77                |
|   | 60    | 82 | 77 | 73  | 74  | 72 | 64 | 56 | 50 | 75                |
|   | 50    | 82 | 77 | 72  | 73  | 71 | 62 | 55 | 50 | 75                |
| 650   | 100   | 88 | 93 | 88  | 86  | 86 | 85 | 73 | 65 | 91                |
|   | 80    | 85 | 91 | 85  | 84  | 81 | 75 | 68 | 61 | 86                |
|   | 60    | 83 | 87 | 81  | 81  | 79 | 74 | 68 | 62 | 83                |
|   | 50    | 86 | 88 | 81  | 80  | 78 | 73 | 67 | 63 | 83                |
| 900   | 100   | 91 | 98 | 99  | 95  | 92 | 94 | 88 | 72 | 99                |
|   | 80    | 87 | 95 | 96  | 92  | 88 | 84 | 78 | 70 | 94                |
|   | 60    | 86 | 91 | 92  | 89  | 86 | 82 | 77 | 71 | 91                |
|   | 50    | 88 | 90 | 91  | 88  | 85 | 82 | 77 | 72 | 91                |
| 1129  | 100   | 95 | 99 | 104 | 102 | 98 | 97 | 97 | 82 | 105               |
|   | 80    | 90 | 95 | 100 | 99  | 95 | 91 | 87 | 78 | 100               |
|   | 60    | 91 | 92 | 96  | 95  | 92 | 88 | 84 | 78 | 97                |
|   | 50    | 94 | 94 | 96  | 95  | 91 | 88 | 84 | 80 | 97                |

| Outlet Sound Power, L <sub>wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |     |     |     |     |    |    |    |                   |
|--|-------|----|-----|-----|-----|-----|----|----|----|-------------------|
| RPM  | % WOV | 1  | 2   | 3   | 4   | 5   | 6  | 7  | 8  | L <sub>wo</sub> A |
| 325  | 100   | 85 | 77  | 75  | 75  | 71  | 61 | 53 | 46 | 76                |
|  | 80    | 84 | 76  | 73  | 74  | 69  | 59 | 51 | 43 | 74                |
|  | 60    | 83 | 75  | 71  | 73  | 68  | 58 | 51 | 44 | 73                |
|  | 50    | 83 | 75  | 70  | 72  | 68  | 58 | 51 | 44 | 73                |
| 450  | 100   | 87 | 84  | 82  | 81  | 79  | 73 | 62 | 54 | 83                |
|  | 80    | 86 | 83  | 81  | 80  | 75  | 67 | 59 | 51 | 81                |
|  | 60    | 86 | 81  | 78  | 79  | 74  | 66 | 59 | 52 | 79                |
|  | 50    | 86 | 82  | 77  | 77  | 73  | 65 | 59 | 52 | 78                |
| 650  | 100   | 90 | 92  | 92  | 91  | 87  | 85 | 75 | 66 | 93                |
|  | 80    | 87 | 90  | 89  | 89  | 83  | 78 | 70 | 61 | 89                |
|  | 60    | 86 | 87  | 86  | 86  | 81  | 76 | 69 | 62 | 86                |
|  | 50    | 89 | 89  | 86  | 85  | 80  | 74 | 68 | 63 | 86                |
| 900  | 100   | 93 | 96  | 100 | 99  | 95  | 94 | 89 | 75 | 101               |
|  | 80    | 90 | 93  | 98  | 97  | 92  | 88 | 81 | 72 | 98                |
|  | 60    | 92 | 91  | 94  | 94  | 89  | 85 | 79 | 73 | 95                |
|  | 50    | 94 | 93  | 95  | 94  | 89  | 84 | 79 | 74 | 95                |
| 1129   | 100   | 98 | 101 | 105 | 105 | 100 | 99 | 98 | 84 | 107               |
|  | 80    | 95 | 97  | 103 | 104 | 98  | 94 | 88 | 80 | 104               |
|  | 60    | 98 | 98  | 100 | 100 | 95  | 91 | 86 | 79 | 101               |
|  | 50    | 99 | 100 | 101 | 100 | 94  | 90 | 85 | 80 | 101               |

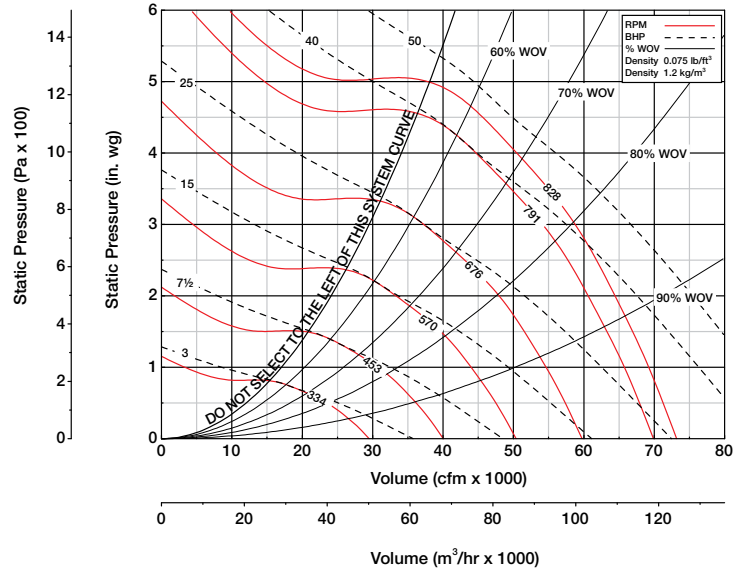
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

The sound power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>wi</sub>, L<sub>wi</sub>A and outlet L<sub>wo</sub>, L<sub>wo</sub>A sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>wi</sub>A and L<sub>wo</sub>A values only.



| Performance Data                           |           |          |
|--|-----------|----------|
| Maximum Fan RPM                            | 828       |          |
| Specification Data                         |           |          |
| Maximum Motor Frame Size                   | 364T      |          |
| Minimum Motor Starting hp                  | 10 hp     | 7.5 kW   |
| Wheel Diameter                             | 60 in.    | 1524 mm  |
| Approximate Weight (Less Motor & Drives)   | 2400 lbs. | 1089 kg. |
| Maximum Bhp = (Fan RPM / 231) <sup>3</sup> |           |          |
| Outlet Velocity (FPM) = CFM / 24.85        |           |          |
| Tip Speed (FPM) = Fan RPM x 15.7           |           |          |
| % WOV = (CFM x 100) / (Fan RPM x 88.4)     |           |          |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |
|-------|------|-----------------------------|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|
|       |      | 0.25                        |      | 0.5 |      | 1   |      | 1.5 |      | 2   |      | 2.5 |      | 3   |      | 3.5 |      | 4   |      |
|       |      | RPM                         | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  |
| 18000 | 724  | 248                         | 1.08 | 293 | 2.00 | 375 | 4.18 |     |      |     |      |     |      |     |      |     |      |     |      |
| 22000 | 885  | 285                         | 1.52 | 323 | 2.51 | 394 | 4.91 | 459 | 7.67 |     |      |     |      |     |      |     |      |     |      |
| 26000 | 1046 | 325                         | 2.10 | 356 | 3.16 | 418 | 5.77 | 477 | 8.73 | 532 | 12.0 |     |      |     |      |     |      |     |      |
| 30000 | 1207 | 366                         | 2.85 | 393 | 4.02 | 448 | 6.77 | 500 | 10.0 | 551 | 13.4 | 597 | 17.1 | 647 | 21.2 |     |      |     |      |
| 34000 | 1368 | 407                         | 3.79 | 432 | 5.06 | 479 | 7.98 | 527 | 11.4 | 574 | 15.1 | 618 | 19.0 | 659 | 23.1 | 703 | 27.6 |     |      |
| 38000 | 1529 | 450                         | 4.95 | 472 | 6.35 | 514 | 9.43 | 558 | 13.0 | 601 | 16.9 | 641 | 21.1 | 682 | 25.5 | 719 | 29.9 | 755 | 34.6 |
| 42000 | 1690 | 494                         | 6.34 | 513 | 7.88 | 552 | 11.2 | 590 | 14.8 | 629 | 18.9 | 668 | 23.3 | 705 | 28.0 | 742 | 32.8 | 776 | 37.7 |
| 46000 | 1851 | 538                         | 8.01 | 554 | 9.67 | 590 | 13.2 | 625 | 17.0 | 661 | 21.3 | 696 | 25.8 | 732 | 30.7 | 766 | 35.8 | 799 | 41.0 |
| 50000 | 2012 | 582                         | 9.96 | 597 | 11.8 | 630 | 15.5 | 662 | 19.5 | 694 | 23.9 | 728 | 28.6 | 759 | 33.6 | 793 | 38.9 | 824 | 44.4 |
| 54000 | 2173 | 626                         | 12.2 | 640 | 14.2 | 670 | 18.1 | 700 | 22.4 | 730 | 26.9 | 760 | 31.7 | 792 | 36.9 | 820 | 42.3 |     |      |
| 58000 | 2334 | 670                         | 14.8 | 683 | 16.9 | 711 | 21.1 | 739 | 25.5 | 767 | 30.3 | 794 | 35.2 | 823 | 40.6 |     |      |     |      |
| 62000 | 2494 | 714                         | 17.8 | 727 | 20.0 | 752 | 24.5 | 779 | 29.2 | 805 | 34.1 |     |      |     |      |     |      |     |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |     |    |    |    |    |    |    |                  |
|---|-------|----|-----|----|----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2   | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |
| 200   | 100   | 72 | 68  | 64 | 64 | 57 | 46 | 38 | 31 | 64               |
|   | 80    | 70 | 66  | 63 | 63 | 57 | 47 | 40 | 34 | 63               |
|   | 60    | 67 | 65  | 63 | 63 | 57 | 47 | 38 | 31 | 63               |
|   | 50    | 69 | 66  | 63 | 63 | 56 | 46 | 39 | 33 | 63               |
| 300   | 100   | 79 | 76  | 73 | 73 | 67 | 57 | 50 | 46 | 73               |
|   | 80    | 77 | 74  | 73 | 71 | 65 | 57 | 50 | 43 | 71               |
|   | 60    | 75 | 72  | 72 | 71 | 65 | 58 | 51 | 44 | 71               |
|   | 50    | 74 | 72  | 71 | 70 | 65 | 58 | 51 | 43 | 71               |
| 425   | 100   | 88 | 84  | 81 | 79 | 78 | 71 | 61 | 55 | 82               |
|   | 80    | 85 | 82  | 78 | 77 | 74 | 67 | 61 | 54 | 78               |
|   | 60    | 84 | 81  | 76 | 76 | 73 | 68 | 62 | 55 | 78               |
|   | 50    | 84 | 81  | 76 | 76 | 73 | 68 | 62 | 56 | 78               |
| 575   | 100   | 94 | 94  | 89 | 84 | 85 | 80 | 69 | 62 | 89               |
|   | 80    | 93 | 92  | 86 | 82 | 79 | 74 | 67 | 61 | 85               |
|   | 60    | 91 | 88  | 81 | 79 | 78 | 74 | 68 | 63 | 82               |
|   | 50    | 90 | 87  | 81 | 79 | 77 | 73 | 68 | 64 | 82               |
| 828   | 100   | 98 | 101 | 98 | 95 | 92 | 93 | 85 | 70 | 99               |
|   | 80    | 96 | 99  | 96 | 93 | 89 | 84 | 78 | 71 | 94               |
|   | 60    | 95 | 96  | 91 | 89 | 86 | 83 | 78 | 74 | 91               |
|   | 50    | 95 | 96  | 91 | 89 | 86 | 83 | 78 | 74 | 91               |

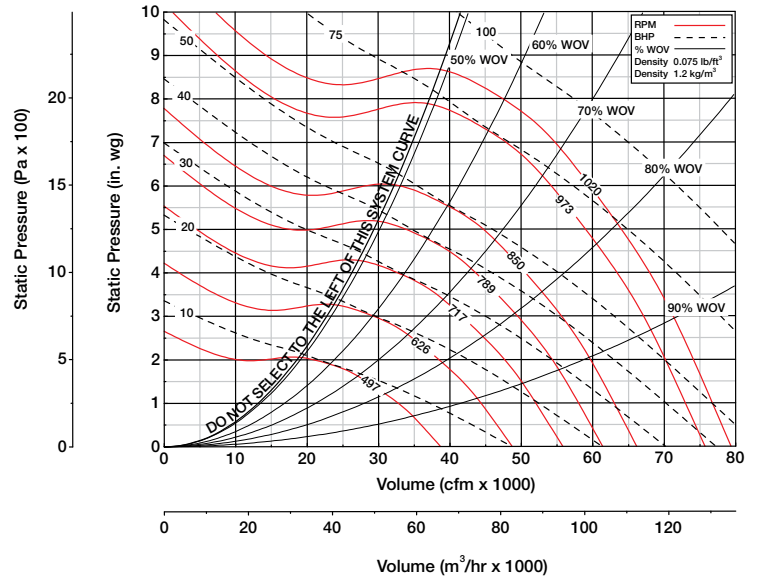
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |     |     |     |    |    |    |    |                  |
|--|-------|----|-----|-----|-----|----|----|----|----|------------------|
| RPM  | % WOV | 1  | 2   | 3   | 4   | 5  | 6  | 7  | 8  | L <sub>WoA</sub> |
| 200  | 100   | 72 | 69  | 67  | 67  | 60 | 51 | 44 | 37 | 67               |
|  | 80    | 72 | 69  | 67  | 67  | 60 | 52 | 44 | 37 | 67               |
|  | 60    | 71 | 68  | 66  | 67  | 60 | 52 | 45 | 39 | 66               |
|  | 50    | 71 | 68  | 66  | 67  | 61 | 52 | 46 | 39 | 67               |
| 300  | 100   | 81 | 78  | 76  | 75  | 69 | 61 | 53 | 45 | 75               |
|  | 80    | 80 | 76  | 74  | 72  | 67 | 60 | 52 | 45 | 73               |
|  | 60    | 79 | 75  | 72  | 72  | 67 | 60 | 53 | 45 | 72               |
|  | 50    | 80 | 75  | 73  | 72  | 67 | 60 | 53 | 45 | 73               |
| 425  | 100   | 91 | 85  | 84  | 82  | 80 | 73 | 62 | 55 | 84               |
|  | 80    | 89 | 84  | 82  | 81  | 76 | 69 | 61 | 53 | 82               |
|  | 60    | 89 | 83  | 80  | 79  | 75 | 69 | 62 | 54 | 80               |
|  | 50    | 88 | 83  | 79  | 79  | 75 | 69 | 62 | 55 | 80               |
| 575  | 100   | 92 | 92  | 91  | 89  | 87 | 81 | 73 | 64 | 91               |
|  | 80    | 92 | 90  | 88  | 86  | 82 | 76 | 69 | 62 | 87               |
|  | 60    | 90 | 88  | 86  | 84  | 80 | 76 | 70 | 64 | 86               |
|  | 50    | 91 | 89  | 86  | 83  | 80 | 75 | 70 | 65 | 85               |
| 828  | 100   | 97 | 100 | 102 | 100 | 96 | 94 | 87 | 74 | 102              |
|  | 80    | 96 | 98  | 99  | 97  | 92 | 88 | 81 | 73 | 98               |
|  | 60    | 96 | 96  | 96  | 94  | 90 | 86 | 80 | 74 | 95               |
|  | 50    | 97 | 97  | 96  | 94  | 90 | 85 | 81 | 75 | 95               |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.

| Performance Data                           |           |          |
|--|-----------|----------|
| Maximum Fan RPM                            | 1020      |          |
| Specification Data                         |           |          |
| Maximum Motor Frame Size                   | 405T      |          |
| Minimum Motor Starting hp                  | 15 hp     | 11 kW    |
| Wheel Diameter                             | 60 in.    | 1524 mm  |
| Approximate Weight (Less Motor & Drives)   | 3100 lbs. | 1406 kg. |
| Maximum Bhp = (Fan RPM / 231) <sup>3</sup> |           |          |
| Outlet Velocity (FPM) = CFM / 24.85        |           |          |
| Tip Speed (FPM) = Fan RPM x 15.7           |           |          |
| % WOV = (CFM x 100) / (Fan RPM x 77.8)     |           |          |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |     |      |     |      |     |      |     |      |     |      |     |      |      |      |      |      |
|-------|------|-----------------------------|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|------|------|------|------|
|       |      | 0.5                         |      | 1   |      | 2   |      | 3   |      | 4   |      | 5   |      | 6   |      | 7    |      | 8    |      |
|       |      | RPM                         | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM  | BHP  | RPM  | BHP  |
| 27000 | 1078 | 393                         | 3.72 | 441 | 6.09 | 530 | 11.9 | 616 | 18.7 | 697 | 26.0 |     |      |     |      |      |      |      |      |
| 30000 | 1198 | 427                         | 4.55 | 470 | 7.05 | 551 | 13.1 | 631 | 20.2 | 707 | 28.0 | 778 | 36.2 |     |      |      |      |      |      |
| 33000 | 1317 | 462                         | 5.52 | 501 | 8.18 | 576 | 14.4 | 648 | 21.8 | 719 | 30.0 | 789 | 38.6 | 853 | 47.7 |      |      |      |      |
| 36000 | 1437 | 498                         | 6.65 | 533 | 9.48 | 604 | 16.0 | 669 | 23.5 | 736 | 32.0 | 800 | 41.1 | 864 | 50.6 | 923  | 60.5 |      |      |
| 39000 | 1557 | 534                         | 7.95 | 565 | 10.9 | 631 | 17.7 | 694 | 25.5 | 754 | 34.2 | 816 | 43.6 | 874 | 53.6 | 933  | 63.9 | 988  | 74.6 |
| 42000 | 1677 | 570                         | 9.43 | 599 | 12.6 | 660 | 19.6 | 719 | 27.7 | 776 | 36.6 | 834 | 46.3 | 890 | 56.6 | 944  | 67.4 | 999  | 78.5 |
| 45000 | 1797 | 607                         | 11.1 | 634 | 14.5 | 691 | 21.8 | 748 | 30.1 | 801 | 39.2 | 852 | 49.1 | 907 | 59.7 | 959  | 70.9 | 1010 | 82.5 |
| 48000 | 1916 | 644                         | 13.0 | 670 | 16.6 | 722 | 24.2 | 775 | 32.7 | 826 | 42.1 | 876 | 52.3 | 925 | 63.0 | 976  | 74.5 |      |      |
| 51000 | 2036 | 681                         | 15.1 | 705 | 18.9 | 754 | 26.9 | 804 | 35.6 | 854 | 45.3 | 901 | 55.6 | 947 | 66.7 | 994  | 78.3 |      |      |
| 54000 | 2156 | 718                         | 17.5 | 741 | 21.4 | 786 | 29.8 | 835 | 38.8 | 882 | 48.7 | 927 | 59.2 | 972 | 70.6 | 1014 | 82.4 |      |      |
| 57000 | 2276 | 755                         | 20.1 | 777 | 24.2 | 820 | 32.9 | 866 | 42.3 | 910 | 52.3 | 955 | 63.2 | 997 | 74.7 |      |      |      |      |
| 60000 | 2396 | 793                         | 23.0 | 814 | 27.3 | 854 | 36.4 | 898 | 46.1 | 940 | 56.4 | 983 | 67.5 |     |      |      |      |      |      |

Shaded values show where Class I fan selections are more efficient than Class II.

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |     |     |     |    |    |    |    |                  |
|---|-------|----|-----|-----|-----|----|----|----|----|------------------|
| RPM   | % WOV | 1  | 2   | 3   | 4   | 5  | 6  | 7  | 8  | L <sub>WiA</sub> |
| 300   | 100   | 82 | 75  | 72  | 73  | 69 | 58 | 50 | 44 | 73               |
|   | 80    | 79 | 72  | 69  | 70  | 65 | 56 | 47 | 39 | 70               |
|   | 60    | 77 | 69  | 67  | 69  | 64 | 55 | 47 | 39 | 69               |
|   | 50    | 76 | 68  | 66  | 68  | 63 | 55 | 47 | 39 | 68               |
| 425   | 100   | 91 | 85  | 81  | 79  | 81 | 73 | 61 | 55 | 83               |
|   | 80    | 87 | 81  | 77  | 74  | 65 | 57 | 50 | 78 |                  |
|   | 60    | 84 | 78  | 75  | 76  | 73 | 65 | 57 | 51 | 77               |
|   | 50    | 84 | 78  | 74  | 75  | 72 | 63 | 57 | 51 | 76               |
| 575   | 100   | 91 | 92  | 88  | 86  | 88 | 83 | 72 | 64 | 91               |
|   | 80    | 88 | 89  | 86  | 84  | 80 | 74 | 67 | 60 | 86               |
|   | 60    | 86 | 86  | 82  | 81  | 79 | 74 | 67 | 61 | 83               |
|   | 50    | 88 | 87  | 81  | 80  | 77 | 72 | 66 | 62 | 82               |
| 825   | 100   | 93 | 100 | 99  | 96  | 93 | 95 | 87 | 71 | 100              |
|   | 80    | 89 | 97  | 97  | 93  | 89 | 85 | 78 | 70 | 95               |
|   | 60    | 88 | 93  | 93  | 90  | 87 | 83 | 77 | 71 | 92               |
|   | 50    | 90 | 92  | 92  | 89  | 86 | 82 | 78 | 73 | 91               |
| 1020  | 100   | 96 | 102 | 105 | 102 | 98 | 99 | 96 | 80 | 105              |
|   | 80    | 91 | 97  | 101 | 99  | 95 | 91 | 86 | 77 | 101              |
|   | 60    | 92 | 94  | 97  | 96  | 92 | 89 | 84 | 78 | 97               |
|   | 50    | 94 | 95  | 97  | 95  | 91 | 88 | 84 | 80 | 97               |

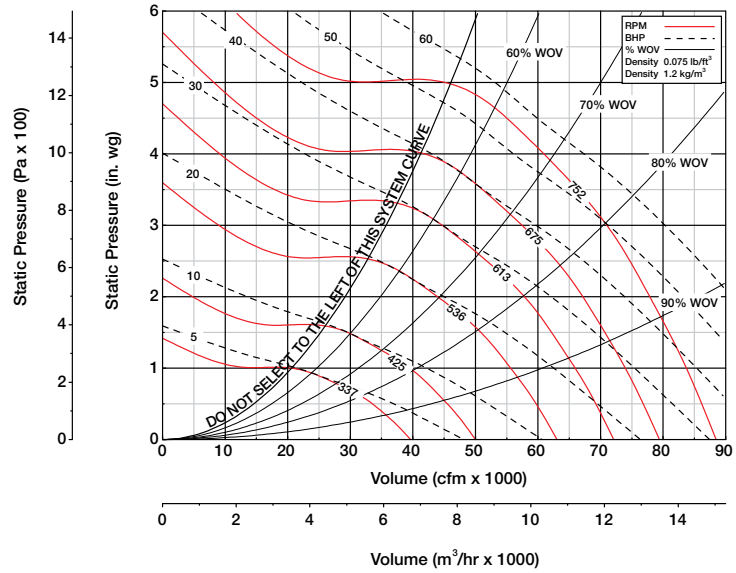
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |     |     |     |     |     |     |    |    |                  |
|--|-------|-----|-----|-----|-----|-----|-----|----|----|------------------|
| RPM  | % WOV | 1   | 2   | 3   | 4   | 5   | 6   | 7  | 8  | L <sub>WoA</sub> |
| 300  | 100   | 85  | 78  | 76  | 77  | 71  | 61  | 53 | 47 | 77               |
|  | 80    | 84  | 77  | 75  | 75  | 69  | 59  | 51 | 44 | 75               |
|  | 60    | 83  | 75  | 73  | 75  | 68  | 59  | 51 | 44 | 74               |
|  | 50    | 83  | 75  | 71  | 74  | 68  | 58  | 51 | 45 | 74               |
| 425  | 100   | 89  | 85  | 84  | 83  | 81  | 74  | 63 | 55 | 85               |
|  | 80    | 88  | 84  | 83  | 82  | 76  | 69  | 60 | 52 | 82               |
|  | 60    | 88  | 83  | 80  | 80  | 75  | 68  | 60 | 53 | 81               |
|  | 50    | 88  | 83  | 79  | 79  | 74  | 67  | 60 | 54 | 80               |
| 575  | 100   | 91  | 93  | 93  | 90  | 88  | 83  | 74 | 64 | 93               |
|  | 80    | 89  | 90  | 90  | 88  | 83  | 77  | 69 | 60 | 89               |
|  | 60    | 87  | 87  | 87  | 85  | 81  | 75  | 68 | 62 | 86               |
|  | 50    | 90  | 88  | 86  | 84  | 80  | 74  | 68 | 63 | 86               |
| 825  | 100   | 95  | 98  | 101 | 99  | 95  | 96  | 89 | 74 | 102              |
|  | 80    | 92  | 95  | 99  | 98  | 93  | 88  | 81 | 72 | 99               |
|  | 60    | 93  | 92  | 96  | 95  | 90  | 85  | 79 | 73 | 96               |
|  | 50    | 96  | 94  | 97  | 94  | 89  | 84  | 79 | 74 | 95               |
| 1020   | 100   | 99  | 103 | 106 | 105 | 101 | 100 | 97 | 83 | 107              |
|  | 80    | 96  | 99  | 104 | 104 | 98  | 94  | 88 | 79 | 104              |
|  | 60    | 98  | 99  | 101 | 100 | 95  | 91  | 86 | 79 | 101              |
|  | 50    | 100 | 101 | 102 | 100 | 95  | 90  | 85 | 80 | 101              |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.

| Performance Data                           |           |          |
|--|-----------|----------|
| Maximum Fan RPM                            | 752       |          |
| Specification Data                         |           |          |
| Maximum Motor Frame Size                   | 365T      |          |
| Minimum Motor Starting hp                  | 10 hp     | 7.5 kW   |
| Wheel Diameter                             | 66 in.    | 1676 mm  |
| Approximate Weight (Less Motor & Drives)   | 2900 lbs. | 1315 kg. |
| Maximum Bhp = (Fan RPM / 197) <sup>3</sup> |           |          |
| Outlet Velocity (FPM) = CFM / 30.46        |           |          |
| Tip Speed (FPM) = Fan RPM x 17.3           |           |          |
| % WOV = (CFM x 100) / (Fan RPM x 118)      |           |          |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |
|-------|------|-----------------------------|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|
|       |      | 0.25                        |      | 0.5 |      | 1   |      | 1.5 |      | 2   |      | 2.5 |      | 3   |      | 3.5 |      | 4   |      |
|       |      | RPM                         | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  |
| 23000 | 755  | 234                         | 1.43 | 272 | 2.56 | 343 | 5.24 |     |      |     |      |     |      |     |      |     |      |     |      |
| 27800 | 912  | 268                         | 1.99 | 300 | 3.21 | 363 | 6.20 | 420 | 9.54 |     |      |     |      |     |      |     |      |     |      |
| 32600 | 1070 | 304                         | 2.73 | 331 | 4.05 | 386 | 7.25 | 439 | 10.9 | 486 | 14.8 | 536 | 19.4 |     |      |     |      |     |      |
| 37400 | 1227 | 341                         | 3.68 | 365 | 5.13 | 414 | 8.50 | 460 | 12.5 | 505 | 16.7 | 546 | 21.2 | 590 | 26.2 |     |      |     |      |
| 42200 | 1385 | 379                         | 4.87 | 400 | 6.44 | 442 | 10.0 | 485 | 14.1 | 527 | 18.8 | 567 | 23.6 | 603 | 28.5 | 641 | 33.9 | 679 | 39.7 |
| 47000 | 1543 | 418                         | 6.32 | 437 | 8.05 | 475 | 11.8 | 514 | 16.2 | 551 | 20.9 | 588 | 26.1 | 624 | 31.5 | 658 | 36.9 | 689 | 42.6 |
| 51800 | 1700 | 457                         | 8.06 | 474 | 9.94 | 508 | 14.0 | 542 | 18.4 | 578 | 23.4 | 612 | 28.8 | 646 | 34.5 | 679 | 40.4 | 710 | 46.4 |
| 56600 | 1858 | 497                         | 10.1 | 511 | 12.2 | 543 | 16.4 | 574 | 21.1 | 607 | 26.3 | 638 | 31.8 | 670 | 37.8 | 701 | 44.0 | 730 | 50.4 |
| 61400 | 2015 | 536                         | 12.5 | 550 | 14.7 | 579 | 19.3 | 608 | 24.2 | 636 | 29.5 | 667 | 35.3 | 695 | 41.3 | 725 | 47.8 |     |      |
| 66200 | 2173 | 576                         | 15.3 | 589 | 17.7 | 616 | 22.6 | 643 | 27.7 | 669 | 33.2 | 696 | 39.1 | 725 | 45.4 | 751 | 52.0 |     |      |
| 71000 | 2330 | 616                         | 18.5 | 628 | 21.1 | 653 | 26.2 | 678 | 31.6 | 703 | 37.4 | 727 | 43.4 |     |      |     |      |     |      |
| 75800 | 2488 | 656                         | 22.2 | 667 | 24.9 | 690 | 30.4 | 714 | 36.0 | 737 | 42.0 |     |      |     |      |     |      |     |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |     |     |    |    |    |    |    |    |                   |
|---|-------|-----|-----|----|----|----|----|----|----|-------------------|
| RPM   | % WOV | 1   | 2   | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wi</sub> A |
| 200   | 100   | 75  | 71  | 67 | 67 | 60 | 49 | 41 | 34 | 67                |
|   | 80    | 73  | 69  | 66 | 66 | 60 | 50 | 43 | 37 | 66                |
|   | 60    | 71  | 68  | 66 | 66 | 60 | 49 | 41 | 34 | 66                |
|   | 50    | 72  | 69  | 66 | 66 | 59 | 49 | 42 | 36 | 66                |
| 275   | 100   | 80  | 77  | 74 | 74 | 66 | 57 | 51 | 47 | 74                |
|   | 80    | 78  | 74  | 74 | 71 | 65 | 57 | 50 | 43 | 72                |
|   | 60    | 76  | 72  | 73 | 71 | 65 | 58 | 51 | 44 | 71                |
|   | 50    | 76  | 72  | 73 | 71 | 65 | 58 | 51 | 43 | 71                |
| 375   | 100   | 87  | 84  | 80 | 79 | 79 | 69 | 60 | 55 | 81                |
|   | 80    | 85  | 82  | 78 | 77 | 73 | 66 | 60 | 53 | 78                |
|   | 60    | 84  | 80  | 76 | 76 | 73 | 67 | 61 | 54 | 77                |
|   | 50    | 84  | 80  | 76 | 76 | 72 | 67 | 61 | 55 | 77                |
| 525   | 100   | 96  | 94  | 89 | 85 | 87 | 79 | 69 | 62 | 90                |
|   | 80    | 95  | 92  | 86 | 83 | 79 | 74 | 67 | 61 | 85                |
|   | 60    | 93  | 88  | 82 | 80 | 78 | 74 | 69 | 64 | 83                |
|   | 50    | 91  | 87  | 81 | 80 | 78 | 74 | 69 | 64 | 83                |
| 752   | 100   | 100 | 101 | 98 | 96 | 93 | 94 | 84 | 69 | 99                |
|   | 80    | 98  | 99  | 96 | 93 | 89 | 84 | 78 | 71 | 95                |
|   | 60    | 97  | 95  | 92 | 89 | 87 | 83 | 79 | 74 | 92                |
|   | 50    | 97  | 95  | 92 | 89 | 87 | 83 | 79 | 74 | 92                |

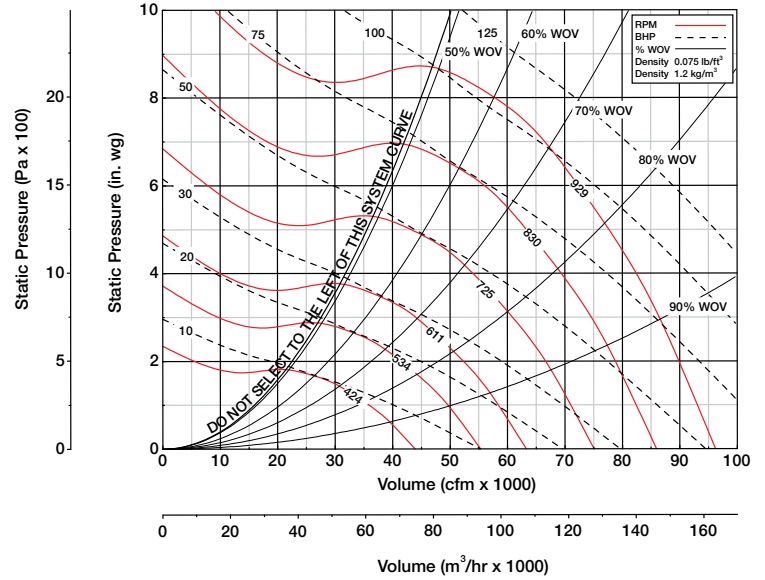
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |     |     |     |    |    |    |    |                   |
|--|-------|----|-----|-----|-----|----|----|----|----|-------------------|
| RPM  | % WOV | 1  | 2   | 3   | 4   | 5  | 6  | 7  | 8  | L <sub>Wo</sub> A |
| 200  | 100   | 75 | 72  | 70  | 70  | 63 | 54 | 47 | 40 | 70                |
|  | 80    | 74 | 71  | 69  | 70  | 63 | 54 | 47 | 40 | 69                |
|  | 60    | 74 | 71  | 69  | 70  | 63 | 55 | 48 | 42 | 69                |
|  | 50    | 74 | 71  | 69  | 70  | 64 | 55 | 49 | 42 | 70                |
| 275  | 100   | 82 | 78  | 77  | 75  | 69 | 61 | 53 | 45 | 76                |
|  | 80    | 81 | 76  | 75  | 73  | 67 | 60 | 52 | 45 | 73                |
|  | 60    | 80 | 75  | 74  | 72  | 67 | 60 | 53 | 45 | 73                |
|  | 50    | 81 | 75  | 74  | 73  | 67 | 60 | 53 | 45 | 73                |
| 375  | 100   | 90 | 85  | 84  | 82  | 80 | 70 | 61 | 53 | 84                |
|  | 80    | 88 | 83  | 83  | 81  | 75 | 68 | 60 | 52 | 81                |
|  | 60    | 88 | 82  | 80  | 79  | 74 | 68 | 61 | 53 | 80                |
|  | 50    | 88 | 82  | 80  | 79  | 74 | 68 | 61 | 54 | 79                |
| 525  | 100   | 94 | 93  | 92  | 89  | 88 | 81 | 72 | 64 | 92                |
|  | 80    | 93 | 91  | 89  | 87  | 82 | 76 | 69 | 62 | 88                |
|  | 60    | 91 | 88  | 87  | 84  | 81 | 76 | 70 | 64 | 86                |
|  | 50    | 93 | 89  | 86  | 84  | 80 | 76 | 70 | 65 | 86                |
| 752  | 100   | 98 | 101 | 103 | 100 | 96 | 95 | 86 | 73 | 102               |
|  | 80    | 98 | 99  | 100 | 97  | 93 | 88 | 81 | 73 | 98                |
|  | 60    | 97 | 97  | 97  | 94  | 90 | 86 | 80 | 74 | 96                |
|  | 50    | 98 | 98  | 97  | 94  | 90 | 86 | 81 | 75 | 96                |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>Wi</sub>A and outlet L<sub>Wo</sub>, L<sub>Wo</sub>A sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>Wi</sub>A and L<sub>Wo</sub>A values only.

| Performance Data                           |           |          |
|--|-----------|----------|
| Maximum Fan RPM                            | 929       |          |
| Specification Data                         |           |          |
| Maximum Motor Frame Size                   | 405T      |          |
| Minimum Motor Starting hp                  | 15 hp     | 11 kW    |
| Wheel Diameter                             | 66 in.    | 1676 mm  |
| Approximate Weight (Less Motor & Drives)   | 3600 lbs. | 1633 kg. |
| Maximum Bhp = (Fan RPM / 197) <sup>3</sup> |           |          |
| Outlet Velocity (FPM) = CFM / 30.46        |           |          |
| Tip Speed (FPM) = Fan RPM x 17.3           |           |          |
| % WOV = (CFM x 100) / (Fan RPM x 104)      |           |          |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |
|-------|------|-----------------------------|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|
|       |      | 0.5                         |      | 1   |      | 2   |      | 3   |      | 4   |      | 5   |      | 6   |      | 7   |      | 8   |      |
|       |      | RPM                         | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  |
| 33500 | 1105 | 364                         | 4.71 | 407 | 7.61 | 485 | 14.7 | 562 | 23.0 | 636 | 32.0 |     |      |     |      |     |      |     |      |
| 37000 | 1221 | 394                         | 5.71 | 433 | 8.78 | 505 | 16.1 | 577 | 24.8 | 645 | 34.3 | 710 | 44.4 |     |      |     |      |     |      |
| 40500 | 1336 | 425                         | 6.88 | 460 | 10.1 | 527 | 17.7 | 592 | 26.7 | 656 | 36.6 | 719 | 47.2 | 777 | 58.3 |     |      |     |      |
| 44000 | 1452 | 457                         | 8.22 | 488 | 11.7 | 552 | 19.6 | 611 | 28.8 | 671 | 39.0 | 728 | 50.1 | 786 | 61.7 | 840 | 73.7 |     |      |
| 47500 | 1567 | 488                         | 9.76 | 516 | 13.4 | 576 | 21.6 | 632 | 31.1 | 687 | 41.6 | 743 | 53.1 | 796 | 65.2 | 849 | 77.7 | 899 | 90.7 |
| 51000 | 1683 | 520                         | 11.5 | 546 | 15.4 | 602 | 23.9 | 655 | 33.6 | 707 | 44.4 | 759 | 56.2 | 810 | 68.7 | 859 | 81.8 | 909 | 95.2 |
| 54500 | 1798 | 552                         | 13.5 | 577 | 17.6 | 629 | 26.5 | 680 | 36.5 | 728 | 47.5 | 775 | 59.5 | 825 | 72.3 | 872 | 85.9 | 918 | 99.9 |
| 58000 | 1914 | 584                         | 15.7 | 608 | 20.0 | 656 | 29.3 | 704 | 39.5 | 750 | 50.8 | 796 | 63.2 | 840 | 76.2 | 887 | 90.1 |     |      |
| 61500 | 2029 | 617                         | 18.1 | 639 | 22.7 | 684 | 32.3 | 729 | 42.9 | 775 | 54.5 | 818 | 67.1 | 860 | 80.4 | 903 | 94.5 |     |      |
| 65000 | 2145 | 650                         | 20.9 | 671 | 25.6 | 712 | 35.7 | 756 | 46.6 | 800 | 58.5 | 840 | 71.2 | 881 | 85.0 | 920 | 99.3 |     |      |
| 68500 | 2260 | 682                         | 23.9 | 702 | 28.9 | 741 | 39.3 | 784 | 50.7 | 824 | 62.8 | 865 | 75.9 | 903 | 89.7 |     |      |     |      |
| 72000 | 2376 | 715                         | 27.2 | 734 | 32.4 | 771 | 43.3 | 811 | 55.0 | 850 | 67.4 | 889 | 80.8 | 926 | 94.9 |     |      |     |      |

Shaded values show where Class I fan selections are more efficient than Class II.

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |    |     |     |     |    |     |    |    |                  |
|---|-------|----|-----|-----|-----|----|-----|----|----|------------------|
| RPM   | % WOV | 1  | 2   | 3   | 4   | 5  | 6   | 7  | 8  | L <sub>WiA</sub> |
| 275   | 100   | 81 | 75  | 72  | 75  | 69 | 58  | 50 | 44 | 74               |
|   | 80    | 79 | 72  | 70  | 71  | 65 | 55  | 47 | 38 | 71               |
|   | 60    | 77 | 70  | 68  | 70  | 64 | 55  | 47 | 39 | 70               |
|   | 50    | 76 | 69  | 68  | 70  | 63 | 55  | 47 | 39 | 69               |
| 375   | 100   | 90 | 84  | 80  | 79  | 81 | 70  | 60 | 54 | 83               |
|   | 80    | 87 | 80  | 77  | 77  | 72 | 64  | 56 | 49 | 78               |
|   | 60    | 83 | 77  | 75  | 76  | 72 | 63  | 56 | 50 | 77               |
|   | 50    | 84 | 77  | 74  | 76  | 70 | 62  | 56 | 50 | 76               |
| 525   | 100   | 93 | 92  | 89  | 87  | 89 | 82  | 72 | 63 | 92               |
|   | 80    | 91 | 89  | 87  | 85  | 81 | 74  | 67 | 60 | 86               |
|   | 60    | 88 | 85  | 83  | 82  | 79 | 74  | 67 | 61 | 84               |
|   | 50    | 90 | 86  | 82  | 81  | 78 | 72  | 67 | 63 | 83               |
| 750   | 100   | 95 | 101 | 100 | 96  | 94 | 97  | 86 | 70 | 101              |
|   | 80    | 91 | 98  | 97  | 94  | 89 | 85  | 78 | 70 | 95               |
|   | 60    | 90 | 95  | 93  | 90  | 87 | 83  | 77 | 71 | 93               |
|   | 50    | 91 | 93  | 92  | 89  | 86 | 82  | 78 | 73 | 92               |
| 929   | 100   | 97 | 104 | 105 | 102 | 99 | 101 | 95 | 79 | 106              |
|   | 80    | 92 | 99  | 102 | 100 | 95 | 92  | 86 | 77 | 101              |
|   | 60    | 93 | 96  | 98  | 96  | 92 | 89  | 84 | 79 | 98               |
|   | 50    | 95 | 96  | 97  | 95  | 92 | 89  | 85 | 80 | 97               |

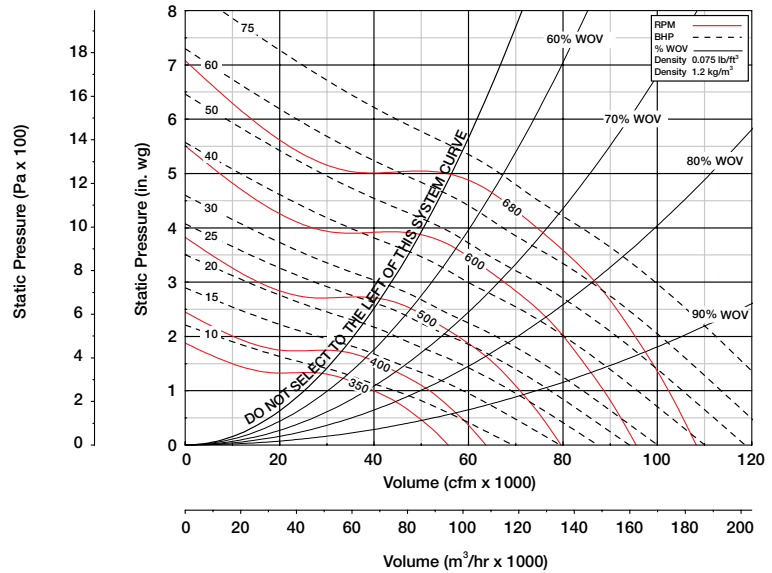
| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |     |     |     |     |     |     |    |    |                  |
|--|-------|-----|-----|-----|-----|-----|-----|----|----|------------------|
| RPM  | % WOV | 1   | 2   | 3   | 4   | 5   | 6   | 7  | 8  | L <sub>WoA</sub> |
| 275  | 100   | 84  | 78  | 77  | 78  | 71  | 61  | 54 | 47 | 78               |
|  | 80    | 84  | 77  | 76  | 76  | 68  | 59  | 51 | 44 | 76               |
|  | 60    | 83  | 75  | 74  | 76  | 68  | 59  | 51 | 44 | 75               |
|  | 50    | 83  | 75  | 73  | 76  | 67  | 58  | 51 | 45 | 75               |
| 375  | 100   | 88  | 85  | 85  | 82  | 81  | 71  | 61 | 54 | 84               |
|  | 80    | 88  | 84  | 83  | 81  | 75  | 67  | 59 | 51 | 82               |
|  | 60    | 88  | 82  | 81  | 80  | 74  | 66  | 59 | 52 | 80               |
|  | 50    | 88  | 81  | 79  | 79  | 73  | 65  | 59 | 53 | 79               |
| 525  | 100   | 93  | 93  | 94  | 90  | 89  | 83  | 73 | 64 | 93               |
|  | 80    | 90  | 90  | 91  | 88  | 83  | 77  | 69 | 60 | 89               |
|  | 60    | 88  | 87  | 88  | 85  | 81  | 75  | 68 | 62 | 87               |
|  | 50    | 91  | 88  | 87  | 85  | 80  | 74  | 68 | 63 | 86               |
| 750  | 100   | 96  | 99  | 103 | 99  | 96  | 97  | 87 | 73 | 103              |
|  | 80    | 93  | 96  | 101 | 98  | 93  | 88  | 81 | 72 | 99               |
|  | 60    | 94  | 94  | 97  | 95  | 90  | 86  | 79 | 73 | 96               |
|  | 50    | 97  | 96  | 98  | 94  | 90  | 84  | 79 | 74 | 96               |
| 929  | 100   | 100 | 104 | 108 | 105 | 101 | 102 | 96 | 82 | 108              |
|  | 80    | 97  | 101 | 105 | 104 | 98  | 94  | 88 | 79 | 105              |
|  | 60    | 99  | 99  | 102 | 100 | 96  | 91  | 86 | 79 | 101              |
|  | 50    | 101 | 102 | 103 | 100 | 95  | 91  | 85 | 80 | 101              |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.

| Performance Data                           |           |          |
|--|-----------|----------|
| Maximum Fan RPM                            | 680       |          |
| Specification Data                         |           |          |
| Maximum Motor Frame Size                   | 405T      |          |
| Minimum Motor Starting hp                  | 15 hp     | 11 kW    |
| Wheel Diameter                             | 73 in.    | 1854 mm  |
| Approximate Weight (Less Motor & Drives)   | 3500 lbs. | 1588 kg. |
| Maximum Bhp = (Fan RPM / 167) <sup>3</sup> |           |          |
| Outlet Velocity (FPM) = CFM / 37.23        |           |          |
| Tip Speed (FPM) = Fan RPM x 19.1           |           |          |
| % WOV = (CFM x 100) / (Fan RPM x 159)      |           |          |

Imperial data — Metric data



## Performance Data

| CFM    | OV   | STATIC PRESSURE (inches wg) |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |     |      |
|--------|------|-----------------------------|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|-----|------|
|        |      | 0.25                        |      | 0.5 |      | 1   |      | 1.5 |      | 2   |      | 2.5 |      | 3   |      | 3.5 |      | 4   |      |
|        |      | RPM                         | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  |
| 34000  | 912  | 242                         | 2.43 | 271 | 3.92 | 328 | 7.58 | 380 | 11.7 |     |      |     |      |     |      |     |      |     |      |
| 40000  | 1073 | 276                         | 3.36 | 300 | 4.98 | 349 | 8.89 | 397 | 13.4 | 439 | 18.2 | 484 | 23.7 |     |      |     |      |     |      |
| 46000  | 1234 | 310                         | 4.56 | 331 | 6.33 | 374 | 10.5 | 417 | 15.3 | 458 | 20.5 | 494 | 26.0 | 534 | 32.1 |     |      |     |      |
| 52000  | 1395 | 345                         | 6.06 | 364 | 8.00 | 402 | 12.4 | 440 | 17.4 | 477 | 23.1 | 514 | 29.0 | 547 | 35.1 | 580 | 41.6 | 615 | 48.8 |
| 58000  | 1556 | 381                         | 7.89 | 398 | 10.0 | 432 | 14.7 | 465 | 20.0 | 500 | 25.8 | 533 | 32.2 | 566 | 38.8 | 596 | 45.5 | 625 | 52.5 |
| 64000  | 1717 | 417                         | 10.1 | 432 | 12.4 | 463 | 17.4 | 493 | 22.9 | 525 | 29.0 | 556 | 35.6 | 586 | 42.6 | 616 | 49.9 | 644 | 57.2 |
| 70000  | 1878 | 454                         | 12.7 | 467 | 15.3 | 495 | 20.5 | 523 | 26.3 | 551 | 32.6 | 580 | 39.4 | 609 | 46.7 | 636 | 54.4 | 663 | 62.3 |
| 76000  | 2039 | 490                         | 15.8 | 502 | 18.5 | 529 | 24.2 | 555 | 30.3 | 579 | 36.7 | 606 | 43.8 | 632 | 51.3 | 659 | 59.2 |     |      |
| 82000  | 2200 | 527                         | 19.4 | 538 | 22.3 | 562 | 28.3 | 586 | 34.7 | 610 | 41.5 | 634 | 48.7 | 659 | 56.5 |     |      |     |      |
| 88000  | 2361 | 564                         | 23.5 | 575 | 26.6 | 597 | 33.0 | 619 | 39.7 | 642 | 46.8 | 663 | 54.3 |     |      |     |      |     |      |
| 94000  | 2522 | 601                         | 28.2 | 611 | 31.5 | 631 | 38.3 | 652 | 45.3 | 673 | 52.7 |     |      |     |      |     |      |     |      |
| 100000 | 2683 | 638                         | 33.5 | 647 | 37.0 | 666 | 44.2 |     |      |     |      |     |      |     |      |     |      |     |      |

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |     |     |    |    |    |    |    |    |                   |
|---|-------|-----|-----|----|----|----|----|----|----|-------------------|
| RPM   | % WOV | 1   | 2   | 3  | 4  | 5  | 6  | 7  | 8  | L <sub>Wi</sub> A |
| 300   | 100   | 85  | 81  | 78 | 78 | 73 | 63 | 56 | 51 | 78                |
|   | 80    | 83  | 79  | 77 | 75 | 69 | 62 | 55 | 49 | 76                |
|   | 60    | 82  | 77  | 76 | 75 | 69 | 63 | 56 | 49 | 75                |
|   | 50    | 81  | 77  | 76 | 75 | 69 | 63 | 56 | 49 | 75                |
| 400   | 100   | 92  | 89  | 84 | 82 | 83 | 72 | 64 | 58 | 86                |
|   | 80    | 91  | 86  | 82 | 80 | 76 | 70 | 63 | 57 | 82                |
|   | 60    | 89  | 84  | 79 | 79 | 76 | 70 | 65 | 59 | 81                |
|   | 50    | 89  | 83  | 79 | 79 | 75 | 70 | 65 | 59 | 81                |
| 500   | 100   | 99  | 96  | 90 | 87 | 89 | 79 | 70 | 63 | 92                |
|   | 80    | 97  | 93  | 87 | 85 | 81 | 75 | 69 | 63 | 87                |
|   | 60    | 95  | 89  | 83 | 82 | 80 | 75 | 70 | 65 | 85                |
|   | 50    | 94  | 88  | 83 | 82 | 80 | 75 | 70 | 65 | 85                |
| 600   | 100   | 101 | 101 | 95 | 91 | 92 | 87 | 76 | 69 | 96                |
|   | 80    | 99  | 99  | 93 | 89 | 86 | 80 | 74 | 68 | 92                |
|   | 60    | 98  | 96  | 88 | 86 | 84 | 80 | 75 | 70 | 89                |
|   | 50    | 96  | 95  | 88 | 86 | 84 | 80 | 75 | 70 | 89                |
| 680   | 100   | 103 | 105 | 99 | 95 | 94 | 92 | 81 | 73 | 100               |
|   | 80    | 101 | 104 | 97 | 92 | 90 | 85 | 78 | 72 | 96                |
|   | 60    | 99  | 101 | 92 | 89 | 88 | 84 | 79 | 74 | 93                |
|   | 50    | 99  | 99  | 92 | 89 | 88 | 84 | 79 | 74 | 93                |

| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |     |     |     |     |    |    |    |    |                   |
|--|-------|-----|-----|-----|-----|----|----|----|----|-------------------|
| RPM  | % WOV | 1   | 2   | 3   | 4   | 5  | 6  | 7  | 8  | L <sub>Wo</sub> A |
| 300  | 100   | 86  | 82  | 82  | 80  | 75 | 65 | 57 | 50 | 80                |
|  | 80    | 85  | 81  | 80  | 78  | 71 | 64 | 57 | 49 | 78                |
|  | 60    | 85  | 79  | 78  | 77  | 71 | 65 | 57 | 49 | 77                |
|  | 50    | 85  | 79  | 78  | 77  | 71 | 64 | 57 | 50 | 77                |
| 400  | 100   | 92  | 89  | 89  | 86  | 84 | 75 | 66 | 58 | 88                |
|  | 80    | 92  | 87  | 87  | 84  | 78 | 72 | 64 | 56 | 85                |
|  | 60    | 91  | 85  | 84  | 82  | 77 | 72 | 65 | 58 | 83                |
|  | 50    | 91  | 85  | 84  | 82  | 77 | 72 | 65 | 59 | 83                |
| 500  | 100   | 96  | 94  | 94  | 91  | 90 | 82 | 73 | 65 | 94                |
|  | 80    | 95  | 92  | 91  | 88  | 83 | 78 | 70 | 63 | 90                |
|  | 60    | 93  | 90  | 89  | 86  | 82 | 77 | 71 | 65 | 88                |
|  | 50    | 95  | 90  | 88  | 86  | 82 | 77 | 72 | 67 | 88                |
| 600  | 100   | 98  | 99  | 98  | 96  | 93 | 88 | 79 | 71 | 98                |
|  | 80    | 98  | 97  | 95  | 93  | 88 | 83 | 76 | 69 | 94                |
|  | 60    | 96  | 95  | 93  | 91  | 87 | 82 | 77 | 71 | 93                |
|  | 50    | 98  | 96  | 92  | 90  | 87 | 82 | 77 | 72 | 92                |
| 680  | 100   | 100 | 102 | 101 | 100 | 96 | 93 | 84 | 76 | 102               |
|  | 80    | 99  | 101 | 98  | 97  | 92 | 87 | 81 | 73 | 98                |
|  | 60    | 98  | 99  | 95  | 95  | 91 | 87 | 81 | 75 | 96                |
|  | 50    | 100 | 100 | 95  | 94  | 90 | 86 | 81 | 76 | 96                |

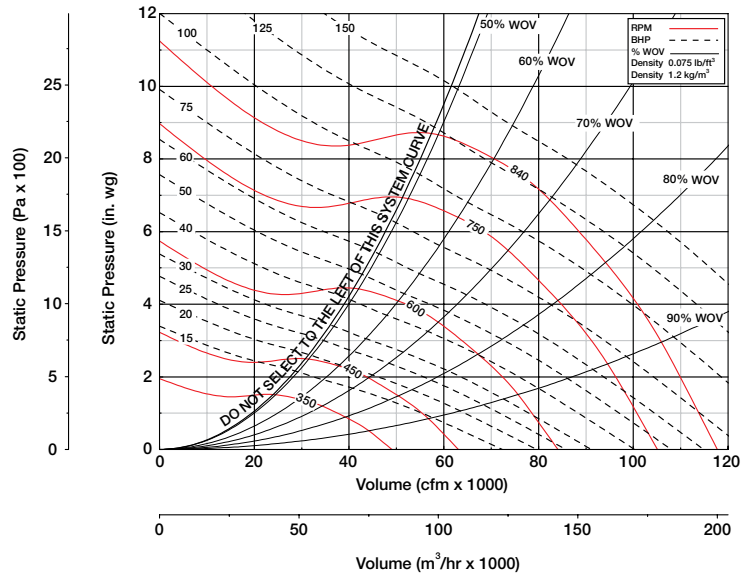
Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

The sound power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>Wi</sub>A and outlet L<sub>Wo</sub>, L<sub>Wo</sub>A sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>Wi</sub>A and L<sub>Wo</sub>A values only.



| Performance Data                           |           |          |
|--|-----------|----------|
| Maximum Fan RPM                            | 840       |          |
| Specification Data                         |           |          |
| Maximum Motor Frame Size                   | 405T      |          |
| Minimum Motor Starting hp                  | 15 hp     | 11 kW    |
| Wheel Diameter                             | 73 in.    | 1854 mm  |
| Approximate Weight (Less Motor & Drives)   | 4200 lbs. | 1905 kg. |
| Maximum Bhp = (Fan RPM / 167) <sup>3</sup> |           |          |
| Outlet Velocity (FPM) = CFM / 37.23        |           |          |
| Tip Speed (FPM) = Fan RPM x 19.1           |           |          |
| % WOV = (CFM x 100) / (Fan RPM x 140)      |           |          |

Imperial data — Metric data



## Performance Data

| CFM   | OV   | STATIC PRESSURE (inches wg) |      |     |      |     |      |     |      |     |      |     |       |     |       |     |       |     |       |
|-------|------|-----------------------------|------|-----|------|-----|------|-----|------|-----|------|-----|-------|-----|-------|-----|-------|-----|-------|
|       |      | 0.5                         |      | 1   |      | 2   |      | 3   |      | 4   |      | 5   |       | 6   |       | 7   |       | 8   |       |
|       |      | RPM                         | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP  | RPM | BHP   | RPM | BHP   | RPM | BHP   | RPM | BHP   |
| 40000 | 1073 | 323                         | 5.51 | 362 | 9.20 | 436 | 17.6 | 507 | 27.6 | 573 | 38.5 |     |       |     |       |     |       |     |       |
| 45000 | 1207 | 355                         | 6.91 | 390 | 10.6 | 455 | 19.6 | 520 | 30.2 | 583 | 41.8 | 641 | 54.1  |     |       |     |       |     |       |
| 50000 | 1341 | 388                         | 8.58 | 418 | 12.6 | 479 | 21.9 | 537 | 32.9 | 595 | 45.1 | 651 | 58.1  | 704 | 71.7  |     |       |     |       |
| 55000 | 1476 | 421                         | 10.6 | 448 | 14.8 | 504 | 24.6 | 557 | 35.9 | 611 | 48.6 | 662 | 62.3  | 713 | 76.6  | 762 | 91.5  |     |       |
| 60000 | 1610 | 454                         | 12.9 | 479 | 17.4 | 531 | 27.6 | 580 | 39.3 | 628 | 52.4 | 678 | 66.6  | 724 | 81.7  | 772 | 97.2  | 817 | 113.4 |
| 65000 | 1744 | 488                         | 15.5 | 511 | 20.4 | 559 | 31.1 | 605 | 43.2 | 651 | 56.6 | 694 | 71.1  | 740 | 86.7  | 783 | 103.1 | 827 | 119.9 |
| 70000 | 1878 | 522                         | 18.6 | 543 | 23.8 | 588 | 35.0 | 631 | 47.5 | 674 | 61.3 | 715 | 76.2  | 757 | 92.1  | 799 | 109.1 | 839 | 126.7 |
| 75000 | 2012 | 556                         | 22.0 | 576 | 27.5 | 617 | 39.3 | 658 | 52.2 | 699 | 66.5 | 738 | 81.8  | 776 | 98.1  | 815 | 115.3 |     |       |
| 80000 | 2147 | 591                         | 25.9 | 610 | 31.8 | 647 | 44.1 | 687 | 57.6 | 724 | 72.2 | 762 | 87.8  | 799 | 104.6 | 834 | 122.1 |     |       |
| 85000 | 2281 | 625                         | 30.3 | 643 | 36.5 | 678 | 49.4 | 715 | 63.4 | 751 | 78.3 | 787 | 94.5  | 822 | 111.5 |     |       |     |       |
| 90000 | 2415 | 660                         | 35.2 | 677 | 41.7 | 710 | 55.3 | 745 | 69.8 | 779 | 85.1 | 813 | 101.7 |     |       |     |       |     |       |
| 95000 | 2549 | 695                         | 40.7 | 711 | 47.5 | 742 | 61.7 | 774 | 76.7 | 808 | 92.6 | 840 | 109.3 |     |       |     |       |     |       |

Shaded values show where Class I fan selections are more efficient than Class II.

| Inlet Sound Power, L <sub>Wi</sub> [dB ref 10 <sup>-12</sup> watts] |       |     |     |     |     |     |     |    |    |                  |
|---|-------|-----|-----|-----|-----|-----|-----|----|----|------------------|
| RPM   | % WOV | 1   | 2   | 3   | 4   | 5   | 6   | 7  | 8  | L <sub>WiA</sub> |
| 300   | 100   | 86  | 80  | 77  | 78  | 76  | 64  | 56 | 49 | 79               |
|   | 80    | 83  | 77  | 75  | 75  | 69  | 60  | 52 | 44 | 75               |
|   | 60    | 81  | 74  | 73  | 75  | 68  | 59  | 52 | 45 | 74               |
|   | 50    | 80  | 73  | 72  | 74  | 67  | 59  | 52 | 45 | 74               |
| 450   | 100   | 95  | 90  | 88  | 86  | 89  | 79  | 70 | 61 | 91               |
|   | 80    | 93  | 87  | 86  | 84  | 79  | 72  | 65 | 58 | 85               |
|   | 60    | 90  | 83  | 82  | 82  | 78  | 72  | 65 | 59 | 83               |
|   | 50    | 91  | 84  | 81  | 81  | 77  | 70  | 65 | 61 | 82               |
| 600   | 100   | 96  | 98  | 96  | 93  | 93  | 91  | 80 | 66 | 98               |
|   | 80    | 94  | 95  | 94  | 91  | 86  | 81  | 73 | 66 | 92               |
|   | 60    | 91  | 91  | 90  | 88  | 84  | 79  | 73 | 67 | 90               |
|   | 50    | 92  | 91  | 89  | 87  | 83  | 78  | 74 | 69 | 89               |
| 750   | 100   | 98  | 103 | 103 | 99  | 97  | 99  | 89 | 73 | 104              |
|   | 80    | 95  | 101 | 100 | 96  | 92  | 88  | 81 | 72 | 98               |
|   | 60    | 93  | 97  | 96  | 93  | 90  | 86  | 80 | 74 | 95               |
|   | 50    | 94  | 97  | 95  | 92  | 89  | 85  | 81 | 76 | 95               |
| 840   | 100   | 100 | 105 | 106 | 102 | 100 | 101 | 94 | 78 | 107              |
|   | 80    | 96  | 102 | 103 | 100 | 95  | 91  | 85 | 76 | 101              |
|   | 60    | 95  | 99  | 99  | 96  | 93  | 89  | 84 | 78 | 99               |
|   | 50    | 97  | 100 | 98  | 95  | 92  | 89  | 84 | 79 | 98               |

| Outlet Sound Power, L <sub>Wo</sub> [dB ref 10 <sup>-12</sup> watts] |       |     |     |     |     |     |     |    |    |                  |
|--|-------|-----|-----|-----|-----|-----|-----|----|----|------------------|
| RPM  | % WOV | 1   | 2   | 3   | 4   | 5   | 6   | 7  | 8  | L <sub>WoA</sub> |
| 300  | 100   | 87  | 82  | 82  | 81  | 77  | 66  | 58 | 51 | 82               |
|  | 80    | 86  | 81  | 81  | 80  | 72  | 64  | 55 | 48 | 80               |
|  | 60    | 86  | 79  | 78  | 80  | 71  | 63  | 56 | 49 | 79               |
|  | 50    | 86  | 78  | 77  | 79  | 70  | 62  | 56 | 49 | 78               |
| 450  | 100   | 93  | 92  | 93  | 89  | 89  | 80  | 71 | 62 | 92               |
|  | 80    | 91  | 89  | 91  | 87  | 82  | 75  | 66 | 58 | 88               |
|  | 60    | 90  | 87  | 88  | 85  | 80  | 73  | 66 | 60 | 86               |
|  | 50    | 92  | 87  | 87  | 84  | 79  | 72  | 67 | 61 | 85               |
| 600  | 100   | 96  | 98  | 100 | 96  | 94  | 92  | 81 | 69 | 99               |
|  | 80    | 93  | 95  | 98  | 94  | 89  | 84  | 76 | 67 | 96               |
|  | 60    | 93  | 93  | 95  | 91  | 87  | 81  | 75 | 69 | 93               |
|  | 50    | 95  | 94  | 95  | 91  | 86  | 80  | 75 | 70 | 92               |
| 750  | 100   | 99  | 102 | 105 | 103 | 99  | 99  | 90 | 76 | 105              |
|  | 80    | 96  | 99  | 104 | 101 | 96  | 91  | 83 | 75 | 102              |
|  | 60    | 97  | 98  | 100 | 98  | 93  | 88  | 82 | 76 | 99               |
|  | 50    | 99  | 100 | 100 | 97  | 92  | 87  | 82 | 77 | 99               |
| 840  | 100   | 101 | 104 | 107 | 106 | 102 | 102 | 95 | 81 | 108              |
|  | 80    | 98  | 101 | 105 | 104 | 99  | 95  | 88 | 79 | 105              |
|  | 60    | 99  | 101 | 102 | 101 | 96  | 92  | 86 | 79 | 102              |
|  | 50    | 102 | 104 | 103 | 101 | 96  | 91  | 86 | 81 | 102              |

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 power level ratings shown are in decibels, referred to 10<sup>-12</sup> watts, calculated per AMCA Standard 301. Values shown are for inlet L<sub>Wi</sub>, L<sub>WiA</sub> and outlet L<sub>Wo</sub>, L<sub>WoA</sub> sound power levels for installation type B: Free inlet, Ducted outlet. Ratings for inlet sound do not include the effects of duct end correction. Ratings for outlet sound include the effects of duct end correction. The A-weighted sound power ratings shown have been calculated per AMCA Standard 301. The AMCA Certified Ratings Seal applies to L<sub>WiA</sub> and L<sub>WoA</sub> values only.

# Specifications

## Model QEI-L, QEI-I/II and QEID

Supply, exhaust, or return air fans shall be of the inline mixed flow type.

The housing shall be constructed of welded heavy-gauge steel to assure no air leakage. Housing shall have inlet and outlet collars for slip-fit duct connections. The housing and bearing and/or motor supports shall be constructed of heavy-gauge steel members to prevent vibration and rigidly support the shaft and bearings. Welded steel vanes shall straighten the flow of air from the fan discharge.

All QEI-L and QEI-I/II units up through size 27 shall incorporate a universal mounting system that allows the fan to be mounted in either vertical or horizontal configurations and field rotation of the motor position in 90 degree increments. Bearing life shall not be reduced below specified level in different configurations. QEI-I/II units size 30 and larger shall allow for field rotation of motor positions. Units shall accommodate base mount or ceiling hung mounting without structural modifications to the fan.

The wheel shall be of the mixed flow type. Wheels shall have a wheel cone, spherical back plate and single thickness cambered blades. Wheels shall be statically and dynamically balanced to balance grade G6.3 per ANSI S2.19. The wheel cone and fan inlet cone shall be carefully matched and shall have precise running tolerances for maximum performance and operating efficiency.

Each assembled fan shall be test run at the factory at the specified fan RPM. The

maximum allowable fan vibration shall be 0.15 in/sec. peak velocity, filter-in for QEI-I/II with signatures taken on each bearing in three planes; horizontal, vertical, and axial. Maximum vibration of 0.08 in/sec. peak velocity, filter-in for QEID in a single plane on the fan housing. This report shall be provided at no charge to the customer upon request.

Inlet and outlet sound power levels shall be provided for each of the eight octave bands at the point of operation.

Fans shall be licensed to bear the AMCA Seal for Sound and Air Performance.

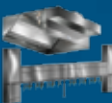
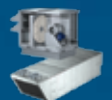
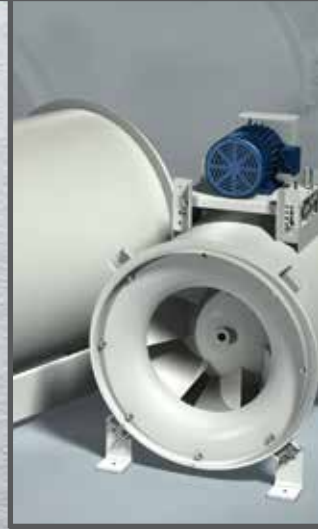
Mixed flow fans shall be Model QEI-L, QEI-I/II or QEID as manufactured by Greenheck Fan Corporation, Schofield, Wisconsin, USA and shall be supplied as shown on the plans and in the fan schedule.

### Additional Belt Drive Specification

Turned, precision ground and polished steel shafts shall be sized so the first critical speed is at least 25% over the maximum operating speed. Close tolerances shall be maintained where the shaft makes contact with the bearings.

Bearings shall be heavy-duty, grease lubricated, self-aligning ball or roller type with extended lubrication lines.

QEI-I/II and QEI-L (horizontal mount) bearings shall be selected for a minimum life  $L_{10}$  of 80,000 ( $L_{50}$  of 400,000) hours at maximum operating speed. QEI-L (vertical mount) bearings shall be selected for a minimum life,  $L_{10}$  of 50,000 ( $L_{50}$  of 250,000) hours at maximum operating speed.



## Our Warranty

Greenheck warrants this equipment to be free from defects in material and workmanship for a period of one year from the shipment date. Any units or parts which prove defective during the warranty period will be replaced at our option when returned to our factory, transportation prepaid. Motors are warranted by the motor manufacturer for a period of one year. Should motors furnished by Greenheck prove defective during this period, they should be returned to the nearest authorized motor service station. Greenheck will not be responsible for any removal or installation costs.

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



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<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

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