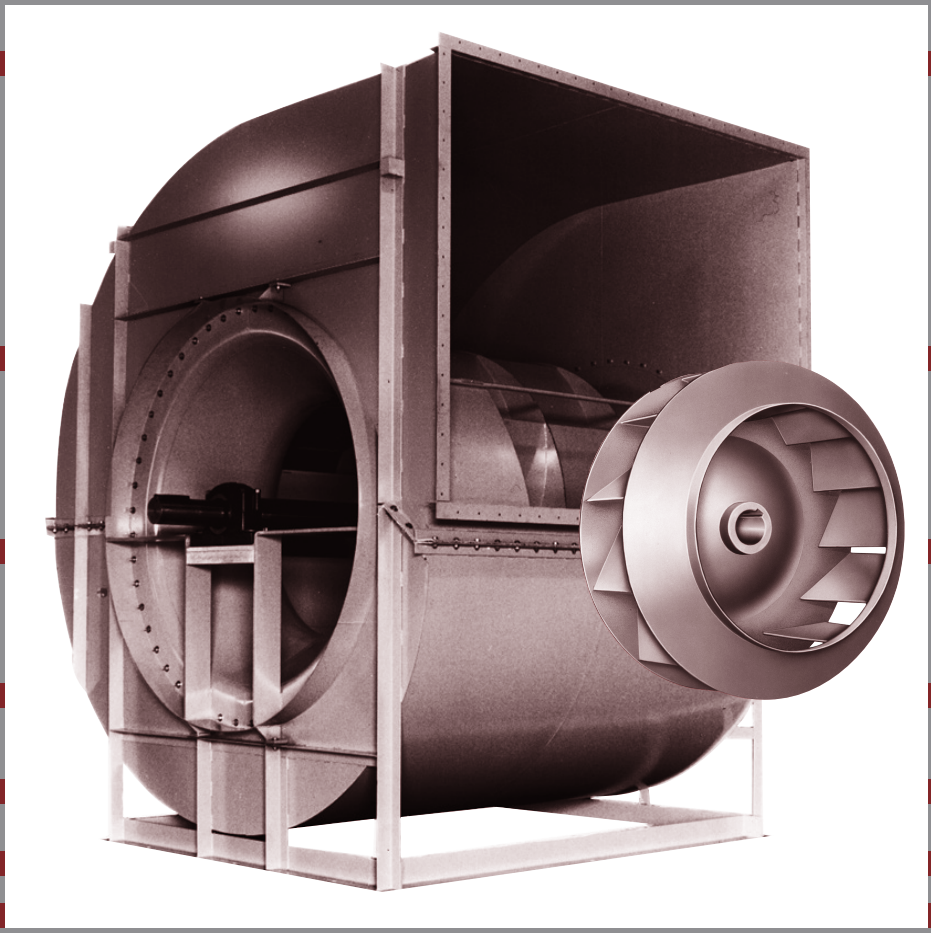
# AIRFOIL HIGH EFFICIENCY CENTRIFUGAL FANS

# 8100 SERIES



ACME

**ACME ENGINEERING & MANUFACTURING CORP.**

MUSKOGEE, OKLAHOMA

Licensed to bear the AMCA seal for Sound and Air Performance

# 8100 SERIES

## DESIGN FEATURES

### GENERAL

The 8100 Series Airfoil Centrifugal Fans utilize the latest design techniques to produce a quiet, highly efficient air mover. Aerodynamically designed airfoil blades and air passages allow more air to be handled with less horsepower and at a lower sound level. This fan has been designed for applications where low operating cost and quiet operation are prime considerations.

### EFFICIENCY

Most important is sustained high efficiency over the range of optimum selection. The ultimate measure of fan performance is operating efficiency. High efficiency means low operating costs throughout the life of the equipment. Normal selection is slightly to the right of peak efficiency, thereby assuring adequate pressure reserve.

### HORSEPOWER

The horsepower curve is self-limiting and reaches a maximum in the normal selection range at a given speed. Motors selected using this self-limiting power as a basis will not overload as long as the speed is not changed.

### QUIET OPERATION

Precise orientation of wheel blades, combined with careful aerodynamic design of wheel and casing, decreases air turbulence and increases pressure conversion efficiency. The result is a quieter operating fan.

### AIRFOIL BLADING

Provides full streamline airflow for greater operating efficiency and perceptibly quieter performance.

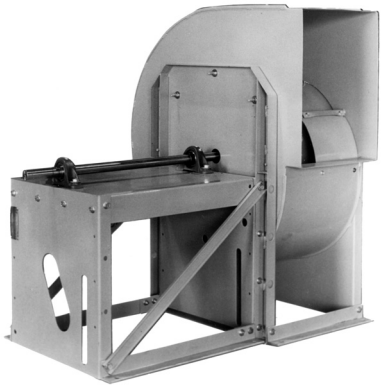
8100 Series A.F.

### THESE ACROSS THE BOARD AIRFOIL ADVANTAGES…

- Steeply Rising Pressure Curve. . .Ensures minimum variation in volume with change in system pressure and provides a pressure reserve above the normal selection range.
- Low Operating Cost. . .Maximum peak and operating efficiencies, with minimum power requirements.
- Quieter Operation. . .Aerodynamically correct airflow provided by airfoil blading permits quiet operation, so important whenever air is moved.
- Full Value. . .Superior design, workmanship, application and service.
- Wide Range of Application. . .Fans are available to meet many commercial and industrial requirements in both general purpose and heavy duty construction.

### ADD UP TO

- **Real Savings . . .** low initial cost . . . minimum operating expense . . . minimum maintenance expense.



General Purpose...Classes I and II for medium pressures

Acme Engineering and Manufacturing Corporation, Industrial Products Division, certifies that the 8100 Series fans shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests & procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. For Sound Performance Data refer to Sound Bulletin S92.

U.L. 762 Listed

*Consult your Acme representative for availability.*

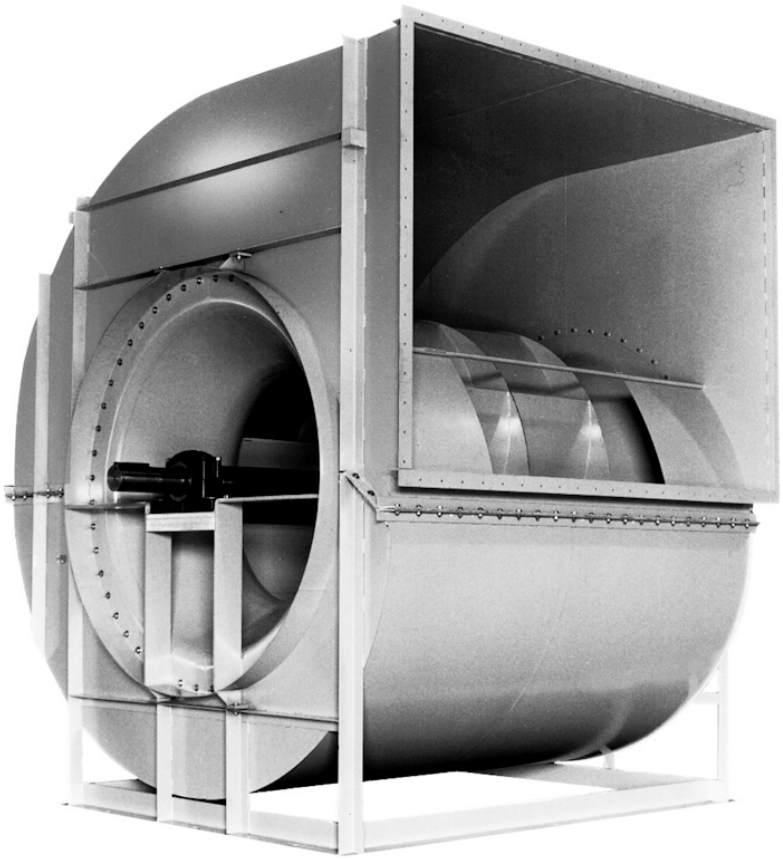
# 8100 SERIES

## TYPICAL CONSTRUCTION FEATURES
## GENERAL PURPOSE FAN

**BEARINGS**
Self-aligning, grease lubricated, anti-friction bearings are standard. Minimum starting friction, simple maintenance and long trouble-free life expectancy make them ideal for fan service. In general, ball bearings are used for the higher speeds and roller bearings for heavy loads and at slower speed.

**SPUN INLETS**
Deep streamlined inlets reduce incoming air turbulence and losses to a minimum. Overlapping of the inlet with the contoured wheel rims allows air to move into the wheel without obstruction.

**REINFORCING BRACES**
Angle bracing, which essentially forms a beam section, eliminates the possibility of casing pulsation and vibration. In certain fan sizes, the bracing angles are used to permit simple connection of square or rectangular ducts directly to the fan. This eliminates the usual duct transition piece.



**HOUSING DESIGN**
The spiral shaped housing is designed to receive the air leaving the wheel and reduce its velocity with a minimum of turbulence, thereby efficiently converting the velocity pressure to static pressure for increased performance.

**CUTOFF**
The discharge cutoff is specially shaped for maximum efficiency and strength.

**WHEEL CONSTRUCTION**
Shock-free flow at the leading edge of the blades, plus streamlined flow over the blade surfaces, increases wheel efficiency and quietness.

Wheels have die-formed airfoil blades welded to backplate and rims to provide a particularly rigid assembly.

All wheels are statically and dynamically balanced to ensure smooth operation.

**BASE**
The base is fabricated from steel angles for maximum support and stiffness.

**HEAVY BEARING SUPPORT**
Heavy steel bearing supports maintain accurate alignment, prevent bearing distortion and offer a minimum of resistance to airflow.

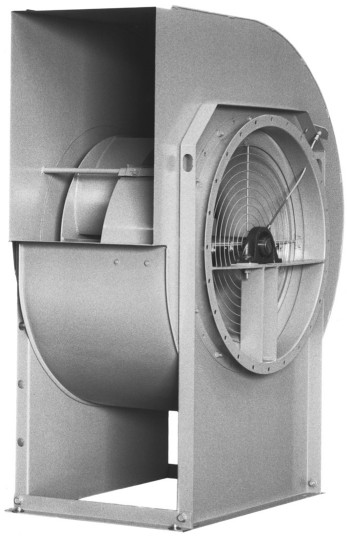
**SHAFTS**
Shafts are fabricated from medium carbon steel (larger fans utilize forged shafts) and all are carefully turned, ground and polished to size. All shafts are correctly designed to give safe deflection and operate well below the first critical speeds.

# 8100 SERIES

## ARRANGEMENTS

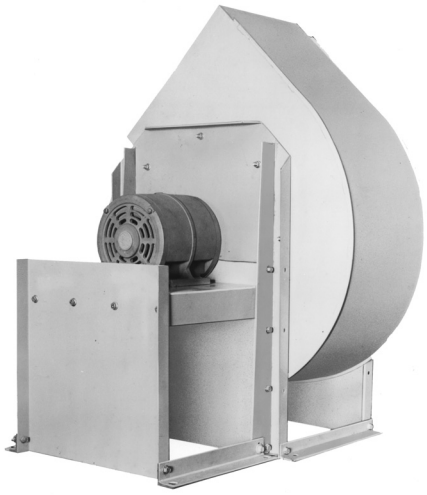
### SINGLE WIDTH (SWSI)

**Arrangement 3. . .**Single width fans are belt driven with bearings supported by heavy steel members on each side of the fan housing. This arrangement is generally used for ventilation, air conditioning and clean ambient air applications, since the bearings are located in the airstream. Available in sizes 8118 through 8154 for Classes I and II.



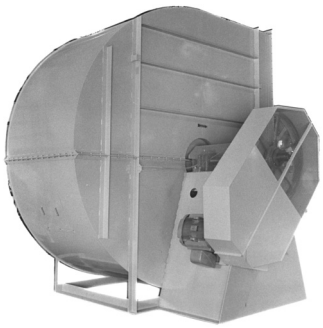
ARR. 3

**Arrangement 4. . .**Direct driven has fan wheel overhung on motor shaft and motor mounted on a pedestal. Available in Classes I and II in sizes 8118 through 8137 only.



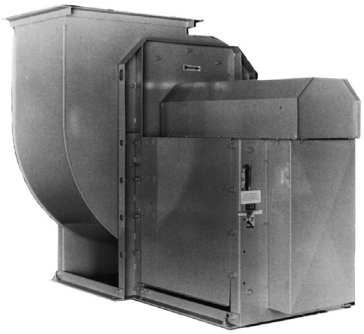
ARR. 4

**Arrangement 9. . .**Similar in construction and application to Arrangement 1, except the fan assembly has provision for mounting the motor on the side of the bearing support pedestal. Mounting the motor integral with the fan provides a package which uses a minimum of floor area and is easily movable. Available in all sizes, Classes I and II. Limited by maximum motor frame.



ARR. 9

**Arrangement 10. . .**Similar to Arrangement 9, except that the motor is mounted within the bearing support base. This package fan uses a minimum of floor space, protects the motor and is available with a weather cover or belt guard. Furnished in Classes I and II, sizes 8118 through 8154.



ARR. 10

### DOUBLE WIDTH (DWDI)

**Arrangement 3. . .**Belt driven with both bearings mounted in the inlets. Similar in construction and application to Arrangement 3, SWSI. Double width fans deliver a maximum volume of air with a minimum amount of space required. Available in sizes 8118 through 8154, Classes I and II.

General purpose, Arrangement 3, Double Width, Double Inlet fan.

# 8100 SERIES

## FAN CONSTRUCTION

**HOUSING**
All SWSI and DWDI housings are fabricated from rigidly braced steel and provided with streamlined spun inlets which guide the air into the wheel with a minimum of interference.

Either fixed or rotatable discharge housings are available for sizes 8118 through 8137, both single and double width. Fixed discharge housings are standard for sizes 8140 and larger, and are continuously welded.

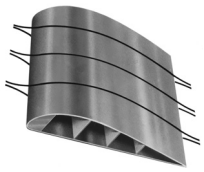
Housings are fabricated using beaded or welded types of construction depending on fan size or class.

**WHEELS**
The rotating elements of a fan are most important and must be designed and fabricated to provide the highest practical aerodynamic performance with smooth vibration-free operation. This complete line of airfoil wheels features:

- Shock-free airflow, minimizing turbulence and sound.
- Hubs designed to guide the air into the blades.
- Wheels statically and dynamically balanced.

8100 DWDI

8100 SWSI



**8100 DWDI AND SWSI AIRFOIL WHEELS**

Welding of the double thickness airfoil blades to the wheel back or center plate and rim(s) provides the necessary strength and rigidity for all classes of construction. Continuous welding of the trailing edge of the blades, not only minimizes trailing eddies which contribute to the sound output of the fan, but helps protect the hollow blading from internal corrosion.

**INTENDED SERVICE**
In general, fans are built to suit the service for which they are intended to perform. Variations in rotation, discharge, class of construction, arrangements, bearing type and location are but a few of the many different options that are available.

**PROTECTIVE COATINGS**
Standard finish for the 8100 Series fans consists of charcoal baked enamel with U.V. inhibitors applied inside and out.

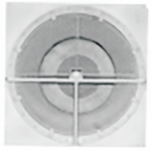
**SPARK RESISTANT FANS**
Application of fans on systems where hazardous, explosive or flammable conditions exist requires careful attention on the part of the designer, manufacturer and installer. The 8100 Series fans are available with spark resistant construction as covered by the following table. Fans with this construction are only available in arrangements 3, 4, 9 and 10. Aluminum wheels for Type A or B construction are available for Class I and II.

Fans must be installed with all fan parts electrically grounded.

## OPTIONAL ACCESSORIES

- Access Doors
- Extended Lube Fittings
- Flanged Inlet & Outlet
- Heat Shield
- Inlet & Outlet Screens
- Inlet Boxes
- Motor & V-Belt Drives
- Outlet Dampers
- Shaft & Bearing Guards
- Shaft Seals
- Spark Resistant Const.
- Special Nameplates
- Std. & Flanged Drains
- Unitary Subbases
- V-Belt Drive Guards
- Weather Covers

Access Doors



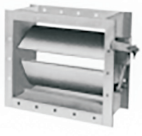
Screens

Shaft Seal

Drain

Vibration Equipment

Drive Guards



Outlet Dampers

# 8100 SERIES

| Table of Standard Classifications for Spark Resistant Construction. | |
|---|---|
| **Type A…** | All parts of the fan in contact with the air or gas being handled shall be made of non-ferrous material. Steps must also be taken to assure that the wheel, bearings, and shaft are adequately attached and/or restrained to prevent a lateral or axial shift in these components. |
| **Type B…** | The fan shall have a non-ferrous wheel and non-ferrous ring about the opening through which the shaft passes. Ferrous hubs, shafts and hardware are allowed if construction is such that a shift of the wheel or shaft will not permit two ferrous parts of the fan to rub or strike. Steps must also be taken to assure that the wheel, bearings, and shaft are adequately attached and/or restrained to prevent a lateral or axial shift in these components. |
| **Type C…** | The fan shall be so constructed that a shift of the wheel or shaft will not permit two ferrous parts of the fan to rub or strike. |
| **Notes:** | **1.** Bearings shall not be placed in the air or gas stream. |
| | **2.** The user shall electrically ground all fan parts. |
| | **3.** Explosion proof motors and static resistant belts should be used. |

Refer to AMCA Standard 99-0401-86 for more detailed information.

## PHYSICAL DATA

AMCA Standard 99-2408-69 defines three performance Classes, I through II.

**Housings**

Class I and II Fans

Sizes 8118 through 8137 SWSI or DWDI, tack welded, beaded seams. Continuous welding optional.

Sizes 8140 and larger, SWSI or DWDI, continuous welded seams.

**Inlets**

SWSI fans size 18-37, Class I and II are furnished with circular Slip Joint Inlets as standard (Arr. 3, 4, 9 and 10). The above applies to all fan Arrangements, except 3, which for Class I and II, sizes 12-37 have a round flange punched inlet as standard for both SW and DW. For Arr. 3, 4, and 9, Class I and II, SW or DW, Sizes 40-54, the standard inlet is a square flange open type unpunched.

**Outlets**

Slip joint outlets are standard for Class I and II fans. If a flanged type outlet damper is specified, a fan outlet flange is also required.

**Wheels**

Class I, and II Fans

All SWSI or DWDI wheels are fabricated with die-formed blades.

**Blades**

Wheel blades are welded to the rim, center or backplate.

**Hubs**

Hubs are fabricated from steel bar and plate or cast iron.

**Shafts**

Turned, ground and polished of SAE 1045 medium carbon steel, designed to operate well below and away from the first critical speeds.

**Shaft Seals**

Plate type sealant, backed by a steel retaining plate secured to fan housing side around shaft opening.

**Bearings**

Class I and II Fans

All sizes and arrangements, SWSI or DWDI, are supplied with pillow block type, ball or roller bearings as standard.

With proper belt tension, Acme bearings are rated at a L-10 life of 40,000 hours. However, certain high speed and high horsepower configurations may lead to reduced bearing life.

**Outlet Dampers**

Class I and II Fans

Dampers for all sizes and arrangements, SWSI or DWDI, have independent frames and slip joint type duct connection. They are multi-louver type, interconnected and fabricated with bearings. A hand lever and locking quadrant are furnished for manual operation and a stub shaft for automatic control.

**TYPICAL SPECIFICATIONS**

**FURNISH AND INSTALL WHERE SHOWN ON THE PLANS, 8100 SERIES, CENTRIFUGAL A.F. FANS.**

**PERFORMANCE:** Fans shall be licensed to bear the AMCA Sound and Air Performance Seal with performance ratings based on tests conducted in accordance with AMCA Publication 211 and AMCA Publication 311, and comply with the requirements of the AMCA Certified Ratings Program. Fans shall have a sharply rising pressure characteristic which shall extend throughout the operating range and continue to rise well beyond the efficiency peak to insure quiet, stable operation under most conditions. The horsepower characteristic shall be truly non-overloading and shall peak within the normal selection range.

**DESIGN AND CONSTRUCTION:** Housings shall be of scroll centrifugal type, rigidly braced and reinforced to help prevent vibration or pulsation. Wheel diameters and outlet areas shall be in accordance with the Standard Sizes adopted by AMCA for non-overloading fans. Inlets shall be fully streamlined.

**WHEELS:** Fan wheels shall be furnished with die-formed airfoil blades for maximum efficiency and quiet operation. Airfoil blades shall be continuously welded to both backplate, rim, and along the back edge of the blade to help prevent internal corrosion due to moisture entry.

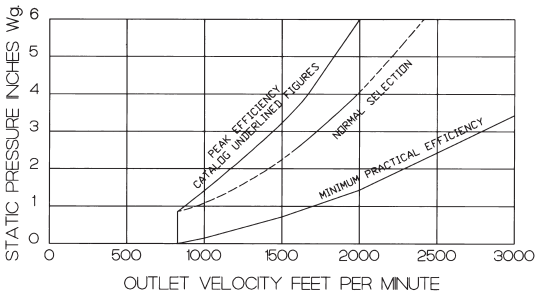
**ACCESSORIES:** Fans shall be furnished with accessories as shown in the schedules.

## SELECTION AND APPLICATION

Efficient fan selection minimizes internal energy losses and sound generation. Acoustical laboratory tests confirm that low sound output occurs at high operating efficiency. The figures with a ] in each pressure column of the performance table are near peak efficiency. Fan selections near the peak efficiency provide low sound output consistent with adequate pressure reserve and self-limiting horsepower - another advantage of carefully coordinated design.

**Selection for relatively quiet operation...**Selection at higher efficiencies minimizes sound generation. For lower sound output, together with other benefits of low power consumption and operating cost throughout fan life, select fans near **Normal Selection Curve**. When higher sound levels are acceptable, together with smaller fans and higher operating costs selection can be made at lower efficiencies. Under these circumstances, sound attenuation may be desirable.

**Recommended Outlet Velocities For Quiet Operation**

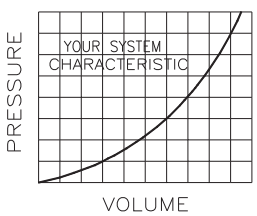



### SELECTION CONSIDERATIONS

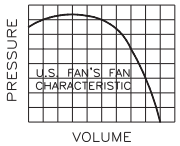
Selection of the proper fan for a given application involves not only the operating characteristics of the fan, but a careful analysis of first cost versus operating cost, as well as expected life, quietness of operation, location of equipment and any other job limitations. Generally speaking, permanent types of fan installations such as public buildings, schools, or hospitals are expected to operate for many years, during which time operating and maintenance costs can be substantial factors. Quite often an analysis of first cost versus operating costs for the life expectancy of the fan can justify a higher initial investment using a larger fan with higher efficiency. Industrial applications, on the other hand, have indeterminate life expectancies and often permit smaller fans to be selected at lower efficiencies. Each installation should be thoroughly analyzed in its design stage to insure that the ultimate objective is accomplished.

### ACME'S FAN...YOUR SYSTEM

Fan selections are based on static pressure capability when handling a given volume of air. The static pressure is calculated for each system by following certain accepted industry practices. This calculation of static pressure is at best an inexact science with the error often compounded by the addition of safety factors.

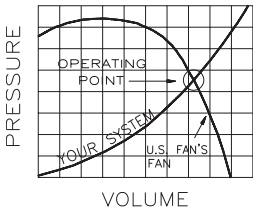



If the system pressure requirements for a given volume of flow is known, the system characteristic curve is a parabola and can be predicted mathematically. Such a system curve is illustrated to the left.




A fan at a given RPM has a characteristic pressure-volume curve from wide open to blocked tight. Such a fan curve is illustrated to the left.

If the curves are superimposed as illustrated to the right, the intersection is the only point on the system at which the fan can operate. If this balance point does not satisfy the system pressure and volume requirements, the system requirements or fan speed must be adjusted until the required operating characteristics are obtained.




In the selection of a fan to meet calculated or specified pressure-volume conditions, it is important to apply, where possible, an adjustable fan drive with sufficient variation to compensate for variances between actual and calculated operating conditions.

### FAN STARTING REQUIREMENTS

A fan is an energy converter. Electrical energy rotates the fan wheel through a driving motor and increases the static pressure (potential energy) of the air handled by the fan in order to overcome resistance to air flow offered by the duct system. The wheel also increases the velocity pressure (kinetic energy) of the air which is the energy required to maintain the air in motion. The driving motor must be capable of starting the fan from rest and accelerating it to operating speed, with a minimum of disturbance to the electrical system. The information given below is useful in understanding the motor problems that may arise.

**To start and accelerate a fan to operating speed it is necessary to:**

1. **Overcome bearing resistance.** This resistance can vary with the type of bearing used. It is low for anti-friction types and relatively high for sleeve types.

2. **Accelerate the inertia of the fan wheel and shaft.** This inertia is generally designated as the moment of inertia or $WR^2$. The motor must provide energy to accelerate it together with the inertia of the drive sheaves or coupling. The moment of inertia for Class III and IV fans will be greater than Class I and II fans, because heavier wheels and shafts are used.

3. **Provide energy to the fan wheel as it begins to deliver air into the duct system.** The horsepower required varies with the cube of the fan speed ratio. It is insignificant at low speeds, but increases rapidly as the fan wheel comes up to operating speed.

At lower static pressures it is possible to select motors that are too small. The fan operating brake horsepower could be significantly less than the $WR^2$ necessary to accelerate the fan to the point of operation. If the motor was sized to the required operating brake horsepower **without** consideration for the fan $WR^2$, drive loss, and bearing loss, then it is very possible to overheat the motor and overload the electrical system. To assure the proper motor size you should refer to the appropriate Application Data Booklet for this product.

## SELECTION AND APPLICATION

The minimum motor sizes indicated in the fan performance data are based upon the use of standard, open dripproof or enclosed, normal torque motors for across-the-line starting. The use of other motors for reduced voltage starting, high or low starting torques, designed with high inertia capabilities, etc., should be checked to be sure they will start and accelerate the fan without overheating the motor or overloading the electrical circuit. The motors listed in the performance data have been selected based on one start per day and operation in an ambient temperature not exceeding 104°F (40°C). More frequent starting or operation in higher temperatures will probably require a motor larger than the minimum sizes listed.

Motor recommendations for fan sizes 8137 through 8154 are based on the use of four pole, 1800 RPM motors. Under certain operating conditions it may be possible to use motors smaller than those listed in the performance tables. The selection of smaller motors should be reviewed with the motor supplier.

In general, smaller fans do not present a starting problem. Hence, when a fractional horsepower is used, its starting and accelerating characteristics should be carefully checked.

A directly driven fan requires a larger motor to bring it up to its operating speed than a belt driven unit. The required inertia capability of the motor to start a fan and accelerate it, varies as the square of the fan-motor speed ratio. Belt driven arrangements are advantageous for the motor since a relatively low motor inertia capability is required due to the effect of the square of the fan-motor speed ratio. However, a fan directly connected to a motor does not have this speed difference and the mechanical advantage of the drive ratio is nonexistent. The driving motor must, of necessity, be larger than that indicated in the performance tables and should be reviewed with the motor supplier.

Whenever outlet dampers are used, the starting load and motor heating are reduced, if such devices are kept closed until after the fan has accelerated to operating speed.

### CORRECTION OF FAN PERFORMANCE FOR OTHER THAN STANDARD AIR CONDITIONS

Air volumes to be handled by the fan must be calculated to satisfy the application. A fan operating on a given system at a given speed is a constant volume machine. The density of air entering the fan (affected by temperature and/or altitude) can vary, but the air volume delivered will remain unchanged. The system resistance, the fan pressure capability and brake horsepower will vary directly with the air density.

In general practice the design system resistance is calculated in the usual manner using standard air density and the fan pressure requirements are determined for “standard” conditions. This is sometimes known as the equivalent pressure ($SP_E$). Select the fan from the catalog in the normal manner using the equivalent pressure ($SP_E$), noting the fan RPM and BHP. As indicated by fan law #2, the design air volume and selected fan speed will remain unchanged, but the fan pressure and horsepower will vary with the air density. The system resistance will also vary with the air density.

The design of many systems involves the calculation and specification of air quantities by weight as in product drying or combustion. Before a fan can be selected, the air quantity must be converted to an air volume based upon actual air density entering the fan inlet. The system resistance equivalent static pressure ($SP_E$) must be determined using the air volume. The fan selection is now made from the catalog using the calculated air volume and the equivalent static pressure ($SP_E$). Fan brake horsepower corrections are made for air density variations as indicated under Fan Law #2C.

For ease in calculations the table to follow contains air density ratios for temperatures from -20°F to 800°F (-29°C to 427°C) and barometric pressures from 29.92" to 20.58" Hg (760 mm to 536 mm Hg).

### FAN LAWS

Two basic fan laws relate performance variables for any fan of a given design (such as the Series 8100). An understanding of these relationships is necessary to select fans when they are handling air or gas which is different than standard or when fan performance adjustments must be made on existing systems. **Both of these laws apply to a given unchanged duct system.**

**FAN LAW #1**
SPEED VARIABLE - CONSTANT AIR DENSITY

A. Volume (CFM)...Varies directly as the ratio of the speeds.

$$CFM_2 = CFM_1 \, X \left( \frac{RPM_2}{RPM_1} \right)$$

B. Pressure (SP or TP)...Varies directly as the square of the speed ratio.

$$Pressure_2 = Pressure_1 \, X \left( \frac{RPM_2}{RPM_1} \right)^2$$

C. Power...Varies directly as the cube of the speed ratio.

$$BHP_2 = BHP_1 \, X \left( \frac{RPM_2}{RPM_1} \right)^3$$

**FAN LAW #2**
AIR DENSITY VARIABLE - CONSTANT SPEED

A. Volume (CFM)...Remains unchanged

B. Pressure (SP or TP)...Varies directly as the ratio of the air densities.

$$Pressure_2 = Pressure_1 \, X \left( \frac{Air\ Density_2}{Air\ Density_1} \right)$$

C. Power...Varies directly as the ratio of the air densities.

$$BHP_2 = BHP_1 \, X \left( \frac{Air\ Density_2}{Air\ Density_1} \right)$$

### SET SCREW TIGHTENING SCHEDULE

1. Before initial operation of the fan, tighten set screws according to the procedure outlined below.
2. After 500 operating hours or three months, whichever comes first, tighten set screws to the full recommended torque.
3. At least once a year, tighten set screws to the full recommended torque.

### PROCEDURE FOR TIGHTENING SET SCREWS IN BEARINGS AND HUBS

One Set Screw Application
Using a torque wrench, tighten the set screw to the torque recommended in Table 1.

Two Set Screw Application

1. Using a torque wrench, tighten one set screw to half of the torque recommended in Table 1.
2. Tighten the second set screw to the full recommended torque.
3. Tighten the first set screw to the full recommended torque.

### VARIABLE FREQUENCY DRIVES AND MOTORS

There are occasions when a Variable Frequency Drive (VFD) will cause poor motor performance and possible damage. To avoid these problems, the Company recommends the following:

1. Select compatible motor and VFD inverter; if possible, the motor and the innverter should be from the same manufacturer or at least the inverter selected should be recommended by the motor manufacturer.
2. A motor shaft grounding system should be used to prevent motor bearing damage from eddy currents.

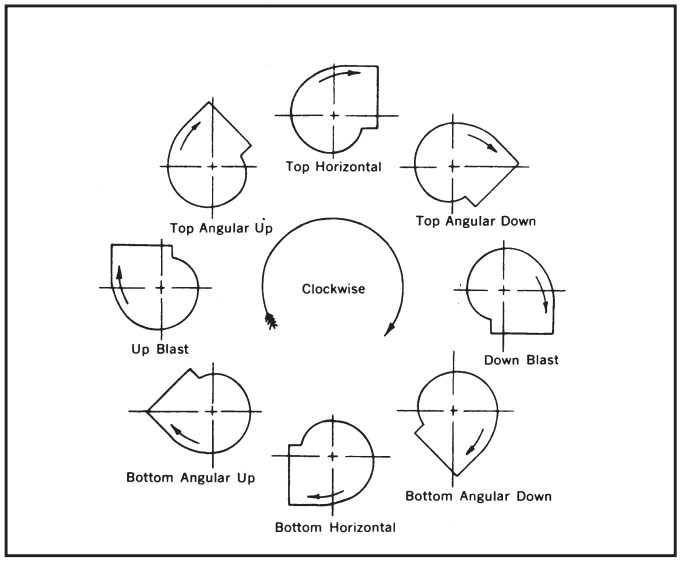
NOTE: The Company will not honor motor warranty claims if the customer fails to follow these recommendations.

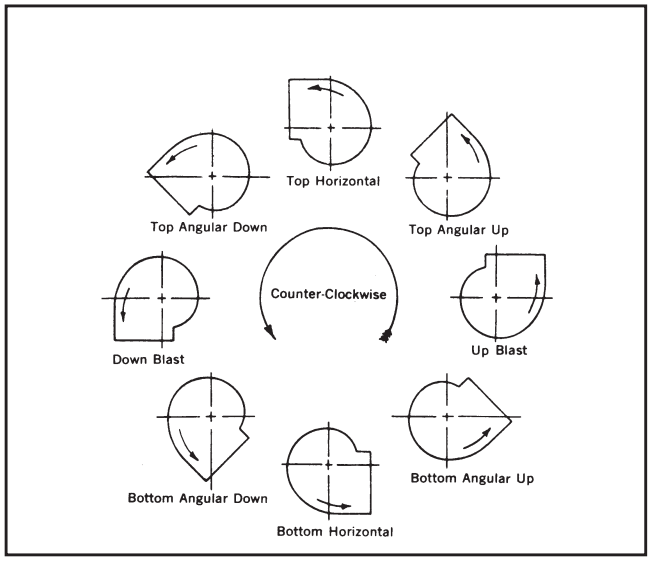
**Table 1. Recommended Tightening Torque for Set Screws**

| Set Screw Diameter | Torque (in-lbs) |
|---|---|
| #10 | 35 |
| 1/4 | 80 |
| 5/16 | 126 |
| 3/8 | 240 |
| 7/16 | 384 |
| 1/2 | 744 |
| 9/16 | 1080 |
| 5/8 | 1500 |
| 3/4 | 2580 |
| 7/8 | 3600 |
| 1 | 5400 |

### DESIGNATION FOR DIRECTION OF ROTATION AND DISCHARGE

Direction of Rotation is determined from the drive side for either single or double width, or single or double inlet fans. (The driving side of a single inlet fan is considered to be the side opposite the inlet, regardless of the actual location of the drive.) For fan inverted for ceiling suspension, the Direction of Rotation and Discharge is determined when the fan is resting on the floor.

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# 8100 SERIES

## SIZE 8118

SINGLE WIDTH
SINGLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

| | | |
|---|---|---|
| Wheel Diameter | 18 ¼ inches | 464 mm |
| Wheel Circumference | 4.78 feet | 1.457 m |
| Inlet Diameter/Area | 20 $\frac{3}{16}$ inches dia./2.18 sq. ft. | 513 mm/.2025 $m^2$ |
| Outlet Size/Area | 19 $\frac{1}{16}$ x 14 ¼ inches I.D./1.90 sq. ft. | 484 x 362 mm/.1765 $m^2$ |
| Tip Speed | 4.78 x RPM ft./minute | 1.457 x RPM m/minute |
| Maximum BHP | .43 x (RPM 1000)$^3$ BHP | .3207 x (RPM 1000)$^3$ kW |

| SIZE 8118 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 2393 |
| CLASS II | 3122 |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 1144 | 600 | •551 | •0.07 | •617 | •0.10 | •679 | •0.12 | •736 | •0.15 | | | | | | | | | | | | |
| 1335 | 700 | 598 | 0.09 | 659 | 0.12 | 715 | 0.15 | 768 | 0.18 | •820 | •0.21 | •868 | •0.25 | | | | | | | | |
| 1526 | 800 | 649 | 0.11 | 704 | 0.14 | 758 | 0.18 | 807 | 0.22 | 852 | 0.25 | 900 | 0.29 | •944 | •0.33 | •1028 | •0.41 | | | | |
| 1716 | 900 | 701 | 0.13 | 754 | 0.17 | 802 | 0.21 | 850 | 0.25 | 894 | 0.29 | 935 | 0.33 | 976 | 0.38 | 1057 | 0.46 | •1131 | •0.54 | | |
| 1907 | 1000 | 755 | 0.16 | 805 | 0.21 | 851 | 0.25 | 894 | 0.29 | 937 | 0.34 | 977 | 0.38 | 1015 | 0.43 | 1089 | 0.52 | 1163 | 0.61 | •1230 | •0.71 |
| 2098 | 1100 | 810 | 0.20 | 858 | 0.24 | 902 | 0.29 | 942 | 0.34 | 981 | 0.39 | 1020 | 0.44 | 1058 | 0.48 | 1127 | 0.59 | 1195 | 0.69 | 1262 | 0.79 |
| 2288 | 1200 | 865 | 0.23 | 911 | 0.29 | 953 | 0.34 | 993 | 0.39 | 1029 | 0.44 | 1065 | 0.49 | 1101 | 0.55 | 1170 | 0.66 | 1233 | 0.77 | 1294 | 0.88 |
| 2479 | 1300 | 922 | 0.28 | 965 | 0.33 | 1006 | 0.39 | 1044 | 0.45 | 1080 | 0.50 | 1114 | 0.56 | 1146 | 0.62 | 1213 | 0.73 | 1275 | 0.85 | 1333 | 0.97 |
| 2670 | 1400 | 979 | 0.33 | 1021 | 0.39 | 1060 | 0.45 | 1097 | 0.51 | 1131 | 0.57 | 1164 | 0.63 | 1196 | 0.69 | 1257 | 0.81 | 1318 | 0.94 | 1375 | 1.07 |
| 2861 | 1500 | 1036 | 0.39 | 1077 | 0.45 | 1114 | 0.51 | 1150 | 0.58 | 1183 | 0.65 | 1215 | 0.71 | 1246 | 0.77 | 1304 | 0.90 | 1362 | 1.04 | 1418 | 1.17 |
| 3051 | 1600 | 1095 | 0.45 | 1133 | 0.52 | 1169 | 0.58 | 1204 | 0.65 | 1236 | 0.72 | 1268 | 0.79 | 1297 | 0.86 | 1354 | 1.00 | 1407 | 1.14 | 1462 | 1.28 |
| 3242 | 1700 | 1154 | 0.52 | 1190 | 0.59 | 1225 | 0.66 | 1258 | 0.74 | 1290 | 0.81 | 1320 | 0.89 | 1349 | 0.96 | 1405 | 1.10 | 1456 | 1.25 | 1506 | 1.40 |
| 3433 | 1800 | 1213 | 0.60 | 1248 | 0.68 | 1281 | 0.75 | 1313 | 0.83 | 1344 | 0.90 | 1374 | 0.98 | 1402 | 1.06 | 1456 | 1.22 | 1507 | 1.37 | 1555 | 1.53 |
| 3623 | 1900 | 1273 | 0.69 | 1306 | 0.77 | 1338 | 0.85 | 1369 | 0.93 | 1399 | 1.01 | 1428 | 1.09 | 1455 | 1.17 | 1508 | 1.34 | 1558 | 1.50 | 1605 | 1.66 |
| 3814 | 2000 | 1333 | 0.78 | 1364 | 0.87 | 1395 | 0.95 | 1425 | 1.04 | 1454 | 1.12 | 1482 | 1.21 | 1509 | 1.29 | 1561 | 1.47 | 1609 | 1.64 | 1656 | 1.81 |
| 4195 | 2200 | 1454 | 1.00 | 1483 | 1.10 | 1511 | 1.19 | 1539 | 1.28 | 1566 | 1.37 | 1593 | 1.47 | 1618 | 1.56 | 1667 | 1.75 | 1714 | 1.94 | 1759 | 2.14 |
| 4577 | 2400 | 1576 | 1.26 | 1603 | 1.37 | 1629 | 1.47 | 1655 | 1.57 | 1680 | 1.67 | 1705 | 1.77 | 1729 | 1.87 | 1776 | 2.07 | 1821 | 2.28 | 1864 | 2.49 |
| 4958 | 2600 | 1698 | 1.57 | 1723 | 1.68 | 1748 | 1.79 | 1771 | 1.90 | 1796 | 2.01 | 1819 | 2.12 | 1842 | 2.23 | 1887 | 2.44 | 1930 | 2.67 | 1971 | 2.89 |
| 5340 | 2800 | 1822 | 1.92 | 1845 | 2.04 | 1868 | 2.16 | 1890 | 2.28 | 1912 | 2.40 | 1935 | 2.52 | 1956 | 2.63 | 1999 | 2.86 | 2040 | 3.10 | 2079 | 3.34 |
| 5721 | 3000 | 1945 | 2.32 | 1967 | 2.45 | 1989 | 2.58 | 2010 | 2.71 | 2030 | 2.84 | 2051 | 2.97 | 2072 | 3.09 | 2112 | 3.34 | 2151 | 3.59 | 2189 | 3.84 |
| 6102 | 3200 | 2069 | 2.78 | 2090 | 2.92 | 2110 | 3.05 | 2130 | 3.19 | 2150 | 3.33 | 2169 | 3.47 | 2188 | 3.60 | 2227 | 3.87 | 2264 | 4.13 | 2301 | 4.40 |
| 6484 | 3400 | 2193 | 3.30 | 2213 | 3.44 | 2232 | 3.59 | 2251 | 3.73 | 2270 | 3.88 | 2288 | 4.03 | 2306 | 4.18 | 2343 | 4.46 | 2379 | 4.74 | 2413 | 5.02 |
| 6865 | 3600 | 2318 | 3.88 | 2336 | 4.03 | 2354 | 4.18 | 2372 | 4.34 | 2390 | 4.49 | 2408 | 4.65 | 2425 | 4.80 | 2459 | 5.11 | 2494 | 5.40 | 2527 | 5.70 |
| 7247 | 3800 | 2442 | 4.53 | 2460 | 4.69 | 2477 | 4.85 | 2494 | 5.01 | 2511 | 5.17 | 2528 | 5.33 | 2545 | 5.50 | 2577 | 5.83 | 2610 | 6.14 | 2642 | 6.45 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 2479 | 1300 | 1389 | 1.09 | 1503 | 1.33 | •1607 | •1.57 | | | | | | | | | | | | | | |
| 2670 | 1400 | 1429 | 1.20 | 1535 | 1.46 | 1638 | 1.71 | •1734 | •1.98 | | | | | | | | | | | | |
| 2861 | 1500 | 1471 | 1.31 | 1570 | 1.59 | 1670 | 1.86 | 1765 | 2.14 | •1854 | •2.42 | | | | | | | | | | |
| 3051 | 1600 | 1514 | 1.42 | 1612 | 1.72 | 1702 | 2.02 | 1797 | 2.31 | 1886 | 2.61 | •1969 | •2.90 | 2053 | 3.24 | | | | | | |
| 3242 | 1700 | 1558 | 1.55 | 1654 | 1.86 | 1743 | 2.17 | 1829 | 2.49 | 1917 | 2.80 | 2001 | 3.11 | •2079 | •3.43 | •2155 | •3.75 | | | | |
| 3433 | 1800 | 1602 | 1.69 | 1697 | 2.01 | 1785 | 2.33 | 1867 | 2.67 | 1949 | 3.01 | 2032 | 3.33 | 2111 | 3.66 | 2186 | 4.00 | •2257 | •4.34 | | |
| 3623 | 1900 | 1650 | 1.83 | 1741 | 2.16 | 1828 | 2.51 | 1909 | 2.86 | 1986 | 3.21 | 2064 | 3.56 | 2142 | 3.91 | 2217 | 4.26 | 2289 | 4.61 | •2357 | •4.97 |
| 3814 | 2000 | 1700 | 1.98 | 1785 | 2.33 | 1871 | 2.69 | 1951 | 3.05 | 2027 | 3.42 | 2099 | 3.80 | 2174 | 4.16 | 2249 | 4.53 | 2320 | 4.89 | 2388 | 5.26 |
| 4195 | 2200 | 1801 | 2.32 | 1882 | 2.70 | 1959 | 3.09 | 2038 | 3.47 | 2112 | 3.87 | 2183 | 4.27 | 2250 | 4.68 | 2315 | 5.10 | 2384 | 5.50 | 2452 | 5.90 |
| 4577 | 2400 | 1905 | 2.70 | 1983 | 3.11 | 2056 | 3.52 | 2126 | 3.95 | 2199 | 4.37 | 2268 | 4.79 | 2335 | 5.23 | 2398 | 5.67 | 2459 | 6.12 | 2518 | 6.57 |
| 4958 | 2600 | 2010 | 3.12 | 2086 | 3.57 | 2156 | 4.01 | 2224 | 4.46 | 2288 | 4.92 | 2355 | 5.37 | 2421 | 5.83 | 2483 | 6.29 | 2543 | 6.77 | 2602 | 7.24 |
| 5340 | 2800 | 2117 | 3.58 | 2190 | 4.07 | 2259 | 4.55 | 2324 | 5.03 | 2387 | 5.51 | 2446 | 6.00 | 2508 | 6.49 | 2570 | 6.98 | 2629 | 7.48 | 2687 | 7.98 |
| 5721 | 3000 | 2226 | 4.10 | 2296 | 4.62 | 2363 | 5.15 | 2427 | 5.65 | 2487 | 6.16 | 2546 | 6.67 | 2602 | 7.20 | 2658 | 7.72 | 2716 | 8.25 | 2773 | 8.77 |
| 6102 | 3200 | 2336 | 4.67 | 2404 | 5.22 | 2469 | 5.78 | 2531 | 6.34 | 2590 | 6.87 | 2647 | 7.42 | 2701 | 7.96 | 2754 | 8.52 | 2806 | 9.08 | 2861 | 9.63 |
| 6484 | 3400 | 2448 | 5.30 | 2513 | 5.88 | 2576 | 6.46 | 2636 | 7.06 | 2694 | 7.66 | 2749 | 8.22 | 2802 | 8.80 | 2854 | 9.38 | 2905 | 9.96 | 2954 | 10.56 |
| 6865 | 3600 | 2560 | 6.00 | 2623 | 6.60 | 2684 | 7.22 | 2742 | 7.84 | 2799 | 8.48 | 2853 | 9.10 | 2905 | 9.70 | 2956 | 10.31 | 3005 | 10.92 | 3053 | 11.54 |
| 7247 | 3800 | 2674 | 6.77 | 2735 | 7.40 | 2794 | 8.04 | 2850 | 8.69 | 2905 | 9.35 | 2958 | 10.02 | 3009 | 10.68 | 3058 | 11.31 | 3106 | 11.95 | | |
| 7628 | 4000 | 2788 | 7.61 | 2847 | 8.27 | 2904 | 8.94 | 2959 | 9.62 | 3012 | 10.30 | 3064 | 11.00 | 3114 | 11.70 | | | | | | |
| 8009 | 4200 | 2903 | 8.52 | 2961 | 9.21 | 3016 | 9.91 | 3069 | 10.61 | 3121 | 11.33 | | | | | | | | | | |
| 8391 | 4400 | 3019 | 9.51 | 3075 | 10.23 | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 4195 | 2200 | 2517 | 6.30 | •2642 | •7.11 | •2759 | •7.93 | | | | | | | | | | | | | | |
| 4577 | 2400 | 2581 | 7.01 | 2705 | 7.88 | 2822 | 8.76 | •2932 | •9.65 | •3040 | •10.58 | | | | | | | | | | |
| 4958 | 2600 | 2658 | 7.73 | 2769 | 8.70 | 2885 | 9.64 | 2995 | 10.58 | 3100 | 11.54 | | | | | | | | | | |
| 5340 | 2800 | 2742 | 8.49 | 2849 | 9.52 | 2949 | 10.57 | 3058 | 11.58 | | | | | | | | | | | | |
| 5721 | 3000 | 2828 | 9.31 | 2933 | 10.39 | 3032 | 11.49 | | | | | | | | | | | | | | |
| 6102 | 3200 | 2915 | 10.19 | 3018 | 11.32 | 3116 | 12.48 | | | | | | | | | | | | | | |
| 6484 | 3400 | 3003 | 11.15 | 3105 | 12.33 | | | | | | | | | | | | | | | | |
| 6865 | 3600 | 3099 | 12.16 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8120

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SINGLE WIDTH
SINGLE INLET

| SIZE 8120 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 2183 |
| CLASS II | 2848 |

| | | |
|---|---|---|
| Wheel Diameter | 20 inches | 508 mm |
| Wheel Circumference | 5.24 feet | 1.597 m |
| Inlet Diameter/Area | $21\frac{15}{16}$ inches dia./2.58 sq. ft. | 557 mm/.2397 $m^2$ |
| Outlet Size/Area | 21 x $15\frac{13}{16}$ inches I.D./2.32 sq. ft. | 533 x 402 mm/.2155 $m^2$ |
| Tip Speed | 5.24 x RPM ft./minute | 1.597 x RPM m/minute |
| Maximum BHP | .67 x (RPM 1000)$^3$ BHP | .4996 x (RPM 1000)$^3$ kW |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 1392 | 600 | •506 | •0.08 | •566 | •0.12 | •622 | •0.15 | •674 | •0.19 | | | | | | | | | | | | |
| 1624 | 700 | 550 | 0.11 | 605 | 0.14 | 656 | 0.18 | 704 | 0.22 | •751 | •0.26 | •795 | •0.30 | •839 | •0.35 | | | | | | |
| 1856 | 800 | 597 | 0.13 | 647 | 0.17 | 696 | 0.22 | 740 | 0.26 | 781 | 0.31 | 824 | 0.35 | 865 | 0.40 | •939 | •0.49 | | | | |
| 2088 | 900 | 646 | 0.16 | 693 | 0.21 | 736 | 0.26 | 780 | 0.31 | 820 | 0.36 | 858 | 0.41 | 894 | 0.46 | 968 | 0.56 | •1036 | •0.66 | | |
| 2320 | 1000 | 695 | 0.20 | 741 | 0.25 | 782 | 0.30 | 821 | 0.36 | 860 | 0.41 | 897 | 0.47 | 931 | 0.52 | 998 | 0.64 | 1065 | 0.75 | •1126 | •0.86 |
| 2552 | 1100 | 746 | 0.24 | 790 | 0.30 | 829 | 0.36 | 866 | 0.41 | 901 | 0.47 | 937 | 0.53 | 971 | 0.59 | 1034 | 0.72 | 1094 | 0.84 | 1156 | 0.96 |
| 2784 | 1200 | 797 | 0.29 | 839 | 0.35 | 877 | 0.42 | 913 | 0.48 | 946 | 0.54 | 978 | 0.61 | 1011 | 0.67 | 1074 | 0.80 | 1131 | 0.94 | 1185 | 1.07 |
| 3016 | 1300 | 850 | 0.34 | 889 | 0.41 | 926 | 0.48 | 961 | 0.55 | 993 | 0.62 | 1024 | 0.68 | 1053 | 0.75 | 1114 | 0.89 | 1170 | 1.04 | 1223 | 1.18 |
| 3248 | 1400 | 903 | 0.41 | 941 | 0.48 | 976 | 0.55 | 1009 | 0.63 | 1041 | 0.70 | 1071 | 0.77 | 1099 | 0.85 | 1154 | 1.00 | 1210 | 1.15 | 1262 | 1.30 |
| 3480 | 1500 | 956 | 0.48 | 992 | 0.55 | 1026 | 0.63 | 1059 | 0.71 | 1089 | 0.79 | 1118 | 0.87 | 1146 | 0.95 | 1199 | 1.11 | 1251 | 1.27 | 1302 | 1.43 |
| 3712 | 1600 | 1010 | 0.56 | 1045 | 0.64 | 1077 | 0.72 | 1109 | 0.80 | 1138 | 0.89 | 1167 | 0.98 | 1194 | 1.06 | 1245 | 1.23 | 1293 | 1.40 | 1342 | 1.57 |
| 3944 | 1700 | 1065 | 0.65 | 1098 | 0.73 | 1129 | 0.82 | 1159 | 0.91 | 1188 | 1.00 | 1215 | 1.09 | 1242 | 1.18 | 1292 | 1.36 | 1339 | 1.53 | 1384 | 1.72 |
| 4176 | 1800 | 1120 | 0.75 | 1151 | 0.84 | 1181 | 0.93 | 1210 | 1.02 | 1238 | 1.11 | 1265 | 1.21 | 1291 | 1.31 | 1340 | 1.50 | 1386 | 1.68 | 1429 | 1.87 |
| 4408 | 1900 | 1175 | 0.85 | 1205 | 0.95 | 1234 | 1.05 | 1262 | 1.14 | 1289 | 1.24 | 1315 | 1.34 | 1340 | 1.44 | 1388 | 1.65 | 1433 | 1.84 | 1476 | 2.04 |
| 4640 | 2000 | 1231 | 0.97 | 1259 | 1.08 | 1287 | 1.18 | 1314 | 1.28 | 1340 | 1.38 | 1365 | 1.49 | 1390 | 1.59 | 1437 | 1.81 | 1481 | 2.02 | 1523 | 2.22 |
| 5104 | 2200 | 1343 | 1.25 | 1369 | 1.36 | 1394 | 1.48 | 1420 | 1.59 | 1444 | 1.70 | 1468 | 1.81 | 1491 | 1.92 | 1536 | 2.15 | 1578 | 2.39 | 1618 | 2.62 |
| 5568 | 2400 | 1455 | 1.57 | 1480 | 1.70 | 1503 | 1.82 | 1526 | 1.94 | 1550 | 2.06 | 1572 | 2.19 | 1594 | 2.31 | 1636 | 2.56 | 1677 | 2.81 | 1716 | 3.07 |
| 6032 | 2600 | 1569 | 1.95 | 1591 | 2.08 | 1613 | 2.22 | 1635 | 2.36 | 1656 | 2.49 | 1678 | 2.62 | 1699 | 2.75 | 1739 | 3.02 | 1778 | 3.29 | 1815 | 3.56 |
| 6496 | 2800 | 1683 | 2.39 | 1704 | 2.53 | 1724 | 2.68 | 1744 | 2.83 | 1764 | 2.98 | 1785 | 3.11 | 1804 | 3.25 | 1843 | 3.54 | 1880 | 3.82 | 1915 | 4.11 |
| 6960 | 3000 | 1797 | 2.89 | 1817 | 3.05 | 1836 | 3.20 | 1855 | 3.36 | 1874 | 3.52 | 1892 | 3.68 | 1911 | 3.82 | 1948 | 4.12 | 1983 | 4.43 | 2018 | 4.74 |
| 7424 | 3200 | 1911 | 3.46 | 1930 | 3.63 | 1948 | 3.80 | 1966 | 3.96 | 1984 | 4.13 | 2002 | 4.30 | 2019 | 4.47 | 2054 | 4.78 | 2088 | 5.11 | 2121 | 5.43 |
| 7888 | 3400 | 2026 | 4.11 | 2044 | 4.29 | 2061 | 4.46 | 2078 | 4.64 | 2095 | 4.82 | 2112 | 4.99 | 2128 | 5.17 | 2161 | 5.52 | 2194 | 5.86 | 2225 | 6.20 |
| 8352 | 3600 | 2141 | 4.84 | 2158 | 5.02 | 2175 | 5.20 | 2191 | 5.39 | 2207 | 5.58 | 2223 | 5.77 | 2238 | 5.96 | 2269 | 6.33 | 2300 | 6.69 | 2331 | 7.05 |
| 8816 | 3800 | 2257 | 5.64 | 2273 | 5.84 | 2288 | 6.03 | 2304 | 6.23 | 2319 | 6.42 | 2334 | 6.62 | 2349 | 6.82 | 2378 | 7.22 | 2408 | 7.61 | 2437 | 7.99 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 3016 | 1300 | 1273 | 1.33 | 1376 | 1.62 | •1471 | •1.92 | | | | | | | | | | | | | | |
| 3248 | 1400 | 1311 | 1.46 | 1406 | 1.78 | 1500 | 2.09 | •1588 | •2.41 | 1675 | 2.77 | | | | | | | | | | |
| 3480 | 1500 | 1350 | 1.60 | 1440 | 1.94 | 1530 | 2.27 | 1617 | 2.61 | •1698 | •2.95 | 1778 | 3.32 | | | | | | | | |
| 3712 | 1600 | 1390 | 1.74 | 1479 | 2.10 | 1561 | 2.46 | 1646 | 2.82 | 1727 | 3.18 | •1803 | •3.54 | •1875 | •3.91 | | | | | | |
| 3944 | 1700 | 1431 | 1.90 | 1518 | 2.27 | 1599 | 2.65 | 1676 | 3.04 | 1756 | 3.42 | 1832 | 3.80 | 1904 | 4.18 | •1972 | •4.57 | | | | |
| 4176 | 1800 | 1472 | 2.07 | 1558 | 2.45 | 1638 | 2.85 | 1713 | 3.26 | 1786 | 3.67 | 1861 | 4.07 | 1933 | 4.47 | 2001 | 4.88 | •2067 | •5.29 | 2134 | 5.76 |
| 4408 | 1900 | 1517 | 2.24 | 1599 | 2.65 | 1678 | 3.06 | 1752 | 3.49 | 1821 | 3.92 | 1891 | 4.35 | 1962 | 4.77 | 2030 | 5.19 | 2095 | 5.62 | •2158 | •6.05 |
| 4640 | 2000 | 1563 | 2.43 | 1640 | 2.86 | 1718 | 3.29 | 1791 | 3.73 | 1860 | 4.17 | 1925 | 4.63 | 1992 | 5.08 | 2060 | 5.52 | 2124 | 5.97 | 2187 | 6.42 |
| 5104 | 2200 | 1657 | 2.85 | 1730 | 3.31 | 1799 | 3.78 | 1871 | 4.25 | 1938 | 4.73 | 2003 | 5.22 | 2064 | 5.71 | 2123 | 6.22 | 2184 | 6.71 | 2245 | 7.19 |
| 5568 | 2400 | 1753 | 3.33 | 1824 | 3.82 | 1890 | 4.32 | 1953 | 4.83 | 2019 | 5.34 | 2082 | 5.86 | 2142 | 6.39 | 2200 | 6.92 | 2256 | 7.46 | 2310 | 8.01 |
| 6032 | 2600 | 1851 | 3.84 | 1919 | 4.39 | 1983 | 4.92 | 2044 | 5.46 | 2103 | 6.02 | 2163 | 6.57 | 2222 | 7.13 | 2279 | 7.69 | 2334 | 8.27 | 2387 | 8.84 |
| 6496 | 2800 | 1950 | 4.41 | 2016 | 5.01 | 2079 | 5.59 | 2138 | 6.17 | 2194 | 6.75 | 2249 | 7.35 | 2304 | 7.94 | 2360 | 8.54 | 2414 | 9.14 | 2466 | 9.75 |
| 6960 | 3000 | 2051 | 5.05 | 2115 | 5.68 | 2175 | 6.33 | 2233 | 6.94 | 2288 | 7.56 | 2341 | 8.18 | 2392 | 8.82 | 2441 | 9.46 | 2494 | 10.09 | 2546 | 10.73 |
| 7424 | 3200 | 2153 | 5.76 | 2214 | 6.42 | 2273 | 7.10 | 2329 | 7.79 | 2383 | 8.44 | 2434 | 9.10 | 2484 | 9.76 | 2532 | 10.44 | 2579 | 11.12 | 2627 | 11.80 |
| 7888 | 3400 | 2256 | 6.55 | 2315 | 7.25 | 2372 | 7.96 | 2427 | 8.68 | 2479 | 9.42 | 2529 | 10.10 | 2578 | 10.80 | 2625 | 11.50 | 2671 | 12.21 | 2715 | 12.93 |
| 8352 | 3600 | 2360 | 7.41 | 2418 | 8.15 | 2472 | 8.89 | 2525 | 9.65 | 2576 | 10.42 | 2625 | 11.19 | 2673 | 11.92 | 2719 | 12.65 | 2764 | 13.39 | 2807 | 14.14 |
| 8816 | 3800 | 2465 | 8.37 | 2521 | 9.13 | 2574 | 9.91 | 2625 | 10.70 | 2675 | 11.51 | 2723 | 12.32 | 2769 | 13.14 | 2814 | 13.90 | | | | |
| 9280 | 4000 | 2571 | 9.41 | 2625 | 10.21 | 2676 | 11.03 | 2726 | 11.85 | 2774 | 12.68 | 2821 | 13.53 | | | | | | | | |
| 9744 | 4200 | 2678 | 10.55 | 2730 | 11.39 | 2780 | 12.23 | 2828 | 13.09 | | | | | | | | | | | | |
| 10208 | 4400 | 2786 | 11.79 | 2836 | 12.66 | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 5104 | 2200 | 2305 | 7.68 | 2419 | 8.67 | •2526 | •9.66 | | | | | | | | | | | | | | |
| 5568 | 2400 | 2364 | 8.56 | 2477 | 9.61 | 2584 | 10.68 | •2684 | •11.75 | •2781 | •12.85 | | | | | | | | | | |
| 6032 | 2600 | 2438 | 9.43 | 2537 | 10.62 | 2642 | 11.76 | 2742 | 12.90 | 2838 | 14.06 | | | | | | | | | | |
| 6496 | 2800 | 2516 | 10.36 | 2613 | 11.62 | 2705 | 12.89 | 2801 | 14.13 | | | | | | | | | | | | |
| 6960 | 3000 | 2596 | 11.38 | 2691 | 12.69 | 2782 | 14.02 | | | | | | | | | | | | | | |
| 7424 | 3200 | 2676 | 12.47 | 2770 | 13.84 | | | | | | | | | | | | | | | | |
| 7888 | 3400 | 2758 | 13.65 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8122

SINGLE WIDTH
SINGLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

| | | |
|---|---|---|
| Wheel Diameter | 22 ¼ inches | 565 mm |
| Wheel Circumference | 5.83 feet | 1.777 m |
| Inlet Diameter/Area | 24 3/16 inches dia./3.14 sq. ft. | 614 mm/.2917 $m^2$ |
| Outlet Size/Area | 23 5/16 x 17 7/16 inches I.D./2.82 sq. ft. | 592 x 443 mm/.2620 $m^2$ |
| Tip Speed | 5.83 x RPM ft./minute | 1.777 x RPM m/minute |
| Maximum BHP | 1.15 x (RPM 1000)$^3$ BHP | .8576 x (RPM 1000)$^3$ kW |

| SIZE 8122 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 1962 |
| CLASS II | 2560 |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 1692 | 600 | •451 | •0.10 | •505 | •0.14 | •556 | •0.18 | •603 | •0.22 | | | | | | | | | | | | |
| 1974 | 700 | 489 | 0.13 | 540 | 0.17 | 585 | 0.22 | 629 | 0.27 | •672 | •0.32 | •711 | •0.37 | | | | | | | | |
| 2256 | 800 | 531 | 0.16 | 576 | 0.21 | 620 | 0.26 | 660 | 0.32 | 698 | 0.37 | 737 | 0.43 | •773 | •0.48 | •843 | •0.60 | | | | |
| 2538 | 900 | 573 | 0.20 | 616 | 0.25 | 656 | 0.31 | 695 | 0.37 | 731 | 0.43 | 765 | 0.49 | 800 | 0.56 | 866 | 0.68 | •927 | •0.80 | | |
| 2820 | 1000 | 617 | 0.24 | 658 | 0.30 | 696 | 0.37 | 731 | 0.43 | 767 | 0.50 | 800 | 0.56 | 831 | 0.63 | 892 | 0.77 | 952 | 0.91 | •1008 | •1.05 |
| 3102 | 1100 | 661 | 0.29 | 701 | 0.36 | 737 | 0.43 | 770 | 0.50 | 802 | 0.57 | 835 | 0.64 | 866 | 0.72 | 923 | 0.87 | 978 | 1.02 | 1034 | 1.17 |
| 3384 | 1200 | 707 | 0.34 | 745 | 0.42 | 779 | 0.50 | 812 | 0.57 | 842 | 0.65 | 871 | 0.73 | 901 | 0.81 | 957 | 0.97 | 1009 | 1.13 | 1060 | 1.30 |
| 3666 | 1300 | 753 | 0.41 | 789 | 0.49 | 822 | 0.58 | 854 | 0.66 | 883 | 0.74 | 911 | 0.82 | 937 | 0.91 | 993 | 1.08 | 1043 | 1.25 | 1091 | 1.43 |
| 3948 | 1400 | 799 | 0.48 | 834 | 0.57 | 866 | 0.66 | 896 | 0.75 | 925 | 0.84 | 952 | 0.93 | 978 | 1.02 | 1028 | 1.20 | 1079 | 1.38 | 1125 | 1.57 |
| 4230 | 1500 | 846 | 0.57 | 879 | 0.66 | 910 | 0.75 | 940 | 0.85 | 967 | 0.95 | 994 | 1.04 | 1019 | 1.14 | 1066 | 1.33 | 1114 | 1.53 | 1161 | 1.73 |
| 4512 | 1600 | 894 | 0.66 | 926 | 0.76 | 955 | 0.86 | 984 | 0.96 | 1010 | 1.07 | 1036 | 1.17 | 1061 | 1.27 | 1107 | 1.47 | 1151 | 1.68 | 1196 | 1.89 |
| 4794 | 1700 | 942 | 0.77 | 972 | 0.87 | 1001 | 0.98 | 1028 | 1.08 | 1054 | 1.19 | 1079 | 1.30 | 1103 | 1.41 | 1148 | 1.63 | 1191 | 1.84 | 1232 | 2.07 |
| 5076 | 1800 | 990 | 0.88 | 1019 | 0.99 | 1047 | 1.10 | 1073 | 1.22 | 1098 | 1.33 | 1123 | 1.45 | 1146 | 1.57 | 1190 | 1.79 | 1232 | 2.02 | 1272 | 2.25 |
| 5358 | 1900 | 1039 | 1.01 | 1066 | 1.13 | 1093 | 1.24 | 1118 | 1.36 | 1143 | 1.48 | 1167 | 1.60 | 1189 | 1.73 | 1233 | 1.97 | 1274 | 2.21 | 1312 | 2.45 |
| 5640 | 2000 | 1088 | 1.15 | 1114 | 1.28 | 1140 | 1.40 | 1164 | 1.52 | 1188 | 1.65 | 1211 | 1.77 | 1233 | 1.90 | 1276 | 2.16 | 1316 | 2.42 | 1354 | 2.67 |
| 6204 | 2200 | 1187 | 1.47 | 1211 | 1.61 | 1234 | 1.75 | 1257 | 1.88 | 1280 | 2.02 | 1301 | 2.16 | 1322 | 2.29 | 1363 | 2.58 | 1401 | 2.86 | 1438 | 3.14 |
| 6768 | 2400 | 1286 | 1.85 | 1308 | 2.00 | 1330 | 2.16 | 1351 | 2.31 | 1372 | 2.45 | 1393 | 2.60 | 1413 | 2.75 | 1451 | 3.05 | 1488 | 3.36 | 1523 | 3.67 |
| 7332 | 2600 | 1386 | 2.30 | 1407 | 2.46 | 1427 | 2.63 | 1447 | 2.79 | 1466 | 2.95 | 1486 | 3.11 | 1505 | 3.27 | 1542 | 3.59 | 1577 | 3.92 | 1610 | 4.26 |
| 7896 | 2800 | 1487 | 2.81 | 1506 | 2.99 | 1525 | 3.17 | 1543 | 3.35 | 1562 | 3.52 | 1580 | 3.69 | 1598 | 3.86 | 1633 | 4.21 | 1667 | 4.56 | 1699 | 4.91 |
| 8460 | 3000 | 1588 | 3.40 | 1606 | 3.59 | 1623 | 3.78 | 1641 | 3.97 | 1658 | 4.17 | 1675 | 4.35 | 1692 | 4.54 | 1725 | 4.90 | 1758 | 5.27 | 1789 | 5.65 |
| 9024 | 3200 | 1689 | 4.08 | 1706 | 4.28 | 1722 | 4.48 | 1739 | 4.68 | 1755 | 4.89 | 1771 | 5.09 | 1787 | 5.29 | 1819 | 5.68 | 1850 | 6.07 | 1880 | 6.47 |
| 9588 | 3400 | 1790 | 4.83 | 1806 | 5.05 | 1822 | 5.26 | 1838 | 5.48 | 1853 | 5.69 | 1868 | 5.91 | 1883 | 6.13 | 1913 | 6.54 | 1943 | 6.96 | 1972 | 7.37 |
| 10152 | 3600 | 1892 | 5.69 | 1907 | 5.91 | 1922 | 6.13 | 1937 | 6.36 | 1951 | 6.59 | 1966 | 6.82 | 1980 | 7.05 | 2008 | 7.50 | 2037 | 7.94 | 2064 | 8.38 |
| 10716 | 3800 | 1993 | 6.63 | 2008 | 6.87 | 2022 | 7.11 | 2036 | 7.34 | 2050 | 7.58 | 2064 | 7.83 | 2078 | 8.07 | 2104 | 8.56 | 2131 | 9.02 | 2158 | 9.48 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 3666 | 1300 | 1137 | 1.61 | 1231 | 1.97 | •1316 | •2.33 | | | | | | | | | | | | | | |
| 3948 | 1400 | 1170 | 1.77 | 1257 | 2.15 | 1342 | 2.53 | •1421 | •2.92 | | | | | | | | | | | | |
| 4230 | 1500 | 1204 | 1.93 | 1285 | 2.34 | 1368 | 2.75 | 1446 | 3.16 | •1519 | •3.58 | | | | | | | | | | |
| 4512 | 1600 | 1239 | 2.10 | 1319 | 2.54 | 1394 | 2.98 | 1472 | 3.41 | 1545 | 3.85 | •1613 | •4.29 | 1683 | 4.80 | | | | | | |
| 4794 | 1700 | 1275 | 2.29 | 1354 | 2.74 | 1427 | 3.21 | 1498 | 3.68 | 1570 | 4.14 | 1639 | 4.60 | •1703 | •5.07 | •1767 | •5.57 | | | | |
| 5076 | 1800 | 1311 | 2.49 | 1389 | 2.96 | 1461 | 3.45 | 1528 | 3.95 | 1597 | 4.44 | 1664 | 4.92 | 1729 | 5.41 | 1790 | 5.91 | •1849 | •6.41 | | |
| 5358 | 1900 | 1349 | 2.70 | 1425 | 3.19 | 1496 | 3.70 | 1563 | 4.22 | 1625 | 4.75 | 1691 | 5.26 | 1755 | 5.77 | 1816 | 6.29 | 1875 | 6.81 | •1931 | •7.34 |
| 5640 | 2000 | 1390 | 2.92 | 1461 | 3.44 | 1531 | 3.97 | 1597 | 4.50 | 1659 | 5.05 | 1718 | 5.61 | 1781 | 6.15 | 1842 | 6.69 | 1900 | 7.23 | 1956 | 7.78 |
| 6204 | 2200 | 1473 | 3.42 | 1539 | 3.98 | 1603 | 4.55 | 1667 | 5.13 | 1728 | 5.71 | 1786 | 6.31 | 1842 | 6.91 | 1895 | 7.53 | 1952 | 8.12 | 2008 | 8.71 |
| 6768 | 2400 | 1557 | 3.98 | 1621 | 4.58 | 1681 | 5.20 | 1739 | 5.82 | 1799 | 6.44 | 1856 | 7.08 | 1911 | 7.72 | 1963 | 8.37 | 2013 | 9.03 | 2062 | 9.71 |
| 7332 | 2600 | 1643 | 4.59 | 1705 | 5.26 | 1763 | 5.91 | 1818 | 6.57 | 1871 | 7.25 | 1927 | 7.92 | 1981 | 8.60 | 2032 | 9.29 | 2082 | 9.99 | 2129 | 10.70 |
| 7896 | 2800 | 1730 | 5.27 | 1790 | 6.00 | 1847 | 6.70 | 1900 | 7.41 | 1952 | 8.12 | 2001 | 8.85 | 2052 | 9.57 | 2103 | 10.30 | 2151 | 11.03 | 2199 | 11.78 |
| 8460 | 3000 | 1819 | 6.03 | 1877 | 6.80 | 1932 | 7.59 | 1984 | 8.33 | 2034 | 9.08 | 2082 | 9.84 | 2128 | 10.62 | 2175 | 11.39 | 2223 | 12.16 | 2269 | 12.95 |
| 9024 | 3200 | 1909 | 6.87 | 1965 | 7.68 | 2018 | 8.51 | 2069 | 9.34 | 2117 | 10.13 | 2164 | 10.93 | 2209 | 11.74 | 2253 | 12.56 | 2295 | 13.39 | 2341 | 14.21 |
| 9588 | 3400 | 2000 | 7.79 | 2053 | 8.65 | 2105 | 9.52 | 2154 | 10.40 | 2202 | 11.28 | 2247 | 12.11 | 2291 | 12.96 | 2334 | 13.82 | 2375 | 14.69 | 2416 | 15.57 |
| 10152 | 3600 | 2091 | 8.82 | 2143 | 9.71 | 2193 | 10.62 | 2241 | 11.55 | 2287 | 12.48 | 2332 | 13.41 | 2375 | 14.29 | 2417 | 15.19 | 2457 | 16.09 | 2496 | 17.01 |
| 10716 | 3800 | 2184 | 9.94 | 2234 | 10.88 | 2283 | 11.83 | 2329 | 12.79 | 2374 | 13.77 | 2418 | 14.76 | 2460 | 15.73 | 2500 | 16.66 | 2540 | 17.61 | | |
| 11280 | 4000 | 2277 | 11.17 | 2326 | 12.15 | 2373 | 13.14 | 2418 | 14.15 | 2462 | 15.16 | 2504 | 16.19 | 2545 | 17.24 | | | | | | |
| 11844 | 4200 | 2371 | 12.51 | 2418 | 13.53 | 2464 | 14.57 | 2508 | 15.61 | 2550 | 16.67 | | | | | | | | | | |
| 12408 | 4400 | 2466 | 13.97 | 2511 | 15.03 | 2555 | 16.11 | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 6204 | 2200 | 2062 | 9.30 | •2164 | •10.51 | •2260 | •11.73 | | | | | | | | | | | | | | |
| 6768 | 2400 | 2114 | 10.35 | 2215 | 11.64 | 2311 | 12.94 | •2402 | •14.25 | •2492 | •15.69 | | | | | | | | | | |
| 7332 | 2600 | 2176 | 11.42 | 2268 | 12.85 | 2363 | 14.23 | 2453 | 15.63 | 2539 | 17.05 | | | | | | | | | | |
| 7896 | 2800 | 2244 | 12.53 | 2332 | 14.06 | 2415 | 15.62 | 2505 | 17.10 | | | | | | | | | | | | |
| 8460 | 3000 | 2314 | 13.74 | 2400 | 15.34 | 2482 | 16.97 | 2560 | 18.64 | | | | | | | | | | | | |
| 9024 | 3200 | 2385 | 15.04 | 2470 | 16.71 | 2550 | 18.42 | | | | | | | | | | | | | | |
| 9588 | 3400 | 2457 | 16.44 | 2540 | 18.19 | | | | | | | | | | | | | | | | |
| 10152 | 3600 | 2535 | 17.93 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I☐ CL. II☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8124

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SINGLE WIDTH
SINGLE INLET

| SIZE 8124 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 1782 |
| CLASS II | 2325 |

| | | |
|---|---|---|
| Wheel Diameter | 24 ½ inches | 622 mm |
| Wheel Circumference | 6.41 feet | 1.954 m |
| Inlet Diameter/Area | 27 3/16 inches dia./3.98 sq. ft. | 691 mm/.3697 $m^2$ |
| Outlet Size/Area | 25 1/16 x 19 5/16 inches I.D./3.46 sq. ft. | 652 x 491 mm/.3214 $m^2$ |
| Tip Speed | 6.41 x RPM ft./minute | 1.954 x RPM m/minute |
| Maximum BHP | 1.80 x (RPM 1000)$^3$ BHP | 1.342 x (RPM 1000)$^3$ kW |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 2076 | 600 | •412 | •0.12 | •461 | •0.17 | •507 | •0.23 | •550 | •0.28 | | | | | | | | | | | | |
| 2422 | 700 | 447 | 0.16 | 493 | 0.21 | 534 | 0.27 | 573 | 0.33 | •612 | •0.39 | •648 | •0.45 | | | | | | | | |
| 2768 | 800 | 486 | 0.20 | 526 | 0.26 | 566 | 0.32 | 603 | 0.39 | 636 | 0.46 | 672 | 0.53 | •705 | •0.59 | •766 | •0.73 | | | | |
| 3114 | 900 | 525 | 0.24 | 564 | 0.31 | 599 | 0.38 | 635 | 0.46 | 668 | 0.53 | 698 | 0.61 | 729 | 0.68 | 789 | 0.83 | •844 | •0.99 | | |
| 3460 | 1000 | 565 | 0.30 | 602 | 0.37 | 636 | 0.45 | 668 | 0.53 | 700 | 0.61 | 730 | 0.69 | 758 | 0.78 | 813 | 0.95 | 868 | 1.12 | •918 | •1.29 |
| 3806 | 1100 | 606 | 0.36 | 642 | 0.44 | 674 | 0.53 | 704 | 0.62 | 733 | 0.70 | 763 | 0.79 | 790 | 0.88 | 842 | 1.07 | 892 | 1.25 | 942 | 1.44 |
| 4152 | 1200 | 648 | 0.43 | 682 | 0.52 | 713 | 0.62 | 742 | 0.71 | 770 | 0.80 | 796 | 0.90 | 823 | 1.00 | 874 | 1.19 | 921 | 1.39 | 966 | 1.60 |
| 4498 | 1300 | 690 | 0.51 | 723 | 0.61 | 753 | 0.71 | 781 | 0.82 | 808 | 0.92 | 833 | 1.02 | 857 | 1.12 | 906 | 1.33 | 953 | 1.54 | 996 | 1.76 |
| 4844 | 1400 | 733 | 0.60 | 764 | 0.71 | 793 | 0.82 | 821 | 0.93 | 846 | 1.04 | 871 | 1.15 | 894 | 1.26 | 939 | 1.48 | 985 | 1.71 | 1027 | 1.94 |
| 5190 | 1500 | 776 | 0.71 | 806 | 0.82 | 834 | 0.94 | 860 | 1.06 | 885 | 1.18 | 909 | 1.29 | 932 | 1.41 | 975 | 1.64 | 1018 | 1.88 | 1060 | 2.13 |
| 5536 | 1600 | 820 | 0.83 | 849 | 0.95 | 875 | 1.07 | 901 | 1.19 | 925 | 1.32 | 948 | 1.45 | 971 | 1.57 | 1013 | 1.82 | 1052 | 2.08 | 1092 | 2.33 |
| 5882 | 1700 | 864 | 0.96 | 891 | 1.08 | 917 | 1.21 | 942 | 1.35 | 965 | 1.48 | 988 | 1.61 | 1010 | 1.75 | 1051 | 2.01 | 1089 | 2.28 | 1126 | 2.55 |
| 6228 | 1800 | 909 | 1.10 | 935 | 1.24 | 960 | 1.37 | 983 | 1.51 | 1006 | 1.65 | 1028 | 1.79 | 1049 | 1.94 | 1089 | 2.22 | 1127 | 2.50 | 1163 | 2.78 |
| 6574 | 1900 | 954 | 1.26 | 978 | 1.41 | 1002 | 1.55 | 1025 | 1.69 | 1047 | 1.84 | 1069 | 1.99 | 1089 | 2.14 | 1128 | 2.45 | 1165 | 2.74 | 1200 | 3.03 |
| 6920 | 2000 | 999 | 1.44 | 1022 | 1.59 | 1045 | 1.74 | 1067 | 1.89 | 1089 | 2.05 | 1110 | 2.20 | 1130 | 2.36 | 1168 | 2.68 | 1204 | 2.99 | 1238 | 3.30 |
| 7612 | 2200 | 1090 | 1.84 | 1111 | 2.01 | 1132 | 2.18 | 1153 | 2.35 | 1173 | 2.51 | 1193 | 2.68 | 1212 | 2.85 | 1248 | 3.19 | 1283 | 3.55 | 1316 | 3.89 |
| 8304 | 2400 | 1181 | 2.32 | 1201 | 2.50 | 1220 | 2.69 | 1240 | 2.88 | 1259 | 3.05 | 1277 | 3.24 | 1295 | 3.42 | 1330 | 3.79 | 1363 | 4.17 | 1395 | 4.55 |
| 8996 | 2600 | 1273 | 2.88 | 1292 | 3.08 | 1310 | 3.28 | 1327 | 3.49 | 1345 | 3.68 | 1363 | 3.87 | 1380 | 4.07 | 1413 | 4.47 | 1444 | 4.87 | 1475 | 5.28 |
| 9688 | 2800 | 1366 | 3.52 | 1383 | 3.74 | 1400 | 3.96 | 1416 | 4.18 | 1433 | 4.40 | 1449 | 4.61 | 1465 | 4.81 | 1497 | 5.24 | 1527 | 5.66 | 1557 | 6.10 |
| 10380 | 3000 | 1458 | 4.27 | 1474 | 4.50 | 1490 | 4.73 | 1506 | 4.96 | 1521 | 5.20 | 1537 | 5.43 | 1552 | 5.66 | 1582 | 6.10 | 1611 | 6.56 | 1639 | 7.02 |
| 11072 | 3200 | 1551 | 5.11 | 1566 | 5.36 | 1582 | 5.60 | 1596 | 5.85 | 1611 | 6.10 | 1625 | 6.36 | 1639 | 6.60 | 1668 | 7.08 | 1696 | 7.56 | 1723 | 8.04 |
| 11764 | 3400 | 1644 | 6.06 | 1659 | 6.32 | 1673 | 6.58 | 1687 | 6.85 | 1701 | 7.11 | 1714 | 7.38 | 1728 | 7.65 | 1755 | 8.16 | 1782 | 8.67 | 1807 | 9.18 |
| 12456 | 3600 | 1738 | 7.13 | 1751 | 7.40 | 1765 | 7.68 | 1778 | 7.96 | 1791 | 8.24 | 1804 | 8.52 | 1817 | 8.80 | 1842 | 9.36 | 1868 | 9.90 | 1893 | 10.43 |
| 13148 | 3800 | 1831 | 8.32 | 1844 | 8.61 | 1857 | 8.90 | 1870 | 9.19 | 1882 | 9.49 | 1895 | 9.78 | 1907 | 10.08 | 1931 | 10.68 | 1955 | 11.25 | 1979 | 11.81 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 4498 | 1300 | 1037 | 1.99 | 1122 | 2.42 | •1199 | •2.86 | | | | | | | | | | | | | | |
| 4844 | 1400 | 1067 | 2.17 | 1146 | 2.65 | 1223 | 3.11 | •1294 | •3.59 | | | | | | | | | | | | |
| 5190 | 1500 | 1099 | 2.37 | 1173 | 2.88 | 1247 | 3.38 | 1317 | 3.89 | •1384 | •4.39 | 1450 | 4.97 | | | | | | | | |
| 5536 | 1600 | 1132 | 2.59 | 1204 | 3.12 | 1271 | 3.67 | 1341 | 4.20 | 1407 | 4.73 | •1469 | •5.28 | •1530 | •5.85 | | | | | | |
| 5882 | 1700 | 1164 | 2.82 | 1236 | 3.38 | 1302 | 3.95 | 1365 | 4.53 | 1431 | 5.09 | 1493 | 5.66 | 1552 | 6.23 | •1608 | •6.81 | | | | |
| 6228 | 1800 | 1198 | 3.07 | 1268 | 3.65 | 1334 | 4.24 | 1395 | 4.85 | 1455 | 5.46 | 1517 | 6.06 | 1575 | 6.66 | 1631 | 7.26 | •1684 | •7.88 | 1742 | 8.62 |
| 6574 | 1900 | 1234 | 3.33 | 1301 | 3.94 | 1366 | 4.56 | 1426 | 5.19 | 1483 | 5.84 | 1541 | 6.48 | 1599 | 7.10 | 1654 | 7.74 | 1708 | 8.37 | •1759 | •9.02 |
| 6920 | 2000 | 1271 | 3.61 | 1334 | 4.25 | 1398 | 4.89 | 1458 | 5.55 | 1514 | 6.22 | 1568 | 6.90 | 1623 | 7.57 | 1678 | 8.23 | 1731 | 8.89 | 1782 | 9.56 |
| 7612 | 2200 | 1347 | 4.23 | 1407 | 4.92 | 1464 | 5.62 | 1523 | 6.32 | 1578 | 7.04 | 1631 | 7.76 | 1681 | 8.51 | 1729 | 9.26 | 1779 | 9.99 | 1830 | 10.71 |
| 8304 | 2400 | 1425 | 4.93 | 1483 | 5.67 | 1537 | 6.42 | 1589 | 7.18 | 1643 | 7.95 | 1695 | 8.72 | 1744 | 9.51 | 1791 | 10.30 | 1837 | 11.11 | 1881 | 11.94 |
| 8996 | 2600 | 1504 | 5.69 | 1560 | 6.51 | 1613 | 7.31 | 1663 | 8.12 | 1710 | 8.95 | 1760 | 9.77 | 1809 | 10.60 | 1855 | 11.45 | 1900 | 12.30 | 1944 | 13.17 |
| 9688 | 2800 | 1585 | 6.54 | 1639 | 7.43 | 1690 | 8.30 | 1738 | 9.16 | 1785 | 10.03 | 1829 | 10.92 | 1875 | 11.81 | 1920 | 12.70 | 1965 | 13.60 | 2007 | 14.51 |
| 10380 | 3000 | 1666 | 7.48 | 1719 | 8.43 | 1768 | 9.39 | 1815 | 10.31 | 1860 | 11.23 | 1904 | 12.16 | 1946 | 13.11 | 1987 | 14.06 | 2030 | 15.01 | 2072 | 15.96 |
| 11072 | 3200 | 1749 | 8.53 | 1800 | 9.53 | 1848 | 10.54 | 1894 | 11.57 | 1937 | 12.54 | 1980 | 13.51 | 2020 | 14.51 | 2060 | 15.51 | 2098 | 16.53 | 2138 | 17.54 |
| 11764 | 3400 | 1833 | 9.69 | 1881 | 10.74 | 1928 | 11.80 | 1972 | 12.88 | 2015 | 13.97 | 2056 | 15.00 | 2096 | 16.03 | 2135 | 17.08 | 2172 | 18.14 | 2209 | 19.22 |
| 12456 | 3600 | 1917 | 10.97 | 1964 | 12.07 | 2009 | 13.18 | 2052 | 14.31 | 2094 | 15.46 | 2134 | 16.61 | 2173 | 17.69 | 2211 | 18.79 | 2247 | 19.89 | 2283 | 21.01 |
| 13148 | 3800 | 2002 | 12.38 | 2048 | 13.53 | 2091 | 14.69 | 2133 | 15.87 | 2174 | 17.07 | 2213 | 18.28 | 2251 | 19.49 | 2288 | 20.63 | 2324 | 21.78 | | |
| 13840 | 4000 | 2088 | 13.92 | 2132 | 15.12 | 2174 | 16.33 | 2215 | 17.56 | 2255 | 18.81 | 2293 | 20.07 | | | | | | | | |
| 14532 | 4200 | 2175 | 15.60 | 2217 | 16.85 | 2258 | 18.12 | 2298 | 19.40 | | | | | | | | | | | | |
| 15224 | 4400 | 2262 | 17.43 | 2303 | 18.73 | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 7612 | 2200 | 1879 | 11.44 | •1971 | •12.91 | •2059 | •14.40 | | | | | | | | | | | | | | |
| 8304 | 2400 | 1926 | 12.74 | 2019 | 14.31 | 2106 | 15.90 | •2188 | •17.52 | •2266 | •19.15 | | | | | | | | | | |
| 8996 | 2600 | 1985 | 14.04 | 2067 | 15.82 | 2153 | 17.51 | 2235 | 19.22 | 2313 | 20.95 | | | | | | | | | | |
| 9688 | 2800 | 2049 | 15.43 | 2128 | 17.30 | 2203 | 19.21 | 2283 | 21.04 | | | | | | | | | | | | |
| 10380 | 3000 | 2113 | 16.93 | 2191 | 18.89 | 2265 | 20.88 | | | | | | | | | | | | | | |
| 11072 | 3200 | 2178 | 18.55 | 2255 | 20.60 | | | | | | | | | | | | | | | | |
| 11764 | 3400 | 2245 | 20.30 | 2320 | 22.44 | | | | | | | | | | | | | | | | |
| 12456 | 3600 | 2318 | 22.14 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8127

SINGLE WIDTH
SINGLE INLET

| | | |
|---|---|---|
| Wheel Diameter | 27 inches | 686 mm |
| Wheel Circumference | 7.07 feet | 2.155 m |
| Inlet Diameter/Area | 29 1/16 inches dia./4.75 sq. ft. | 754 mm/.4413 $m^2$ |
| Outlet Size/Area | 28 3/8 x 21 5/16 inches I.D./4.20 sq. ft. | 721 x 541 mm/.3902 $m^2$ |
| Tip Speed | 7.07 x RPM ft./minute | 2.155 x RPM m/minute |
| Maximum BHP | 3.05 x (RPM 1000)$^3$ BHP | 2.274 x (RPM 1000)$^3$ kW |

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

| SIZE 8127 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 1548 |
| CLASS II | 2020 |

| VOL CFM | OUT VEL | 1/4" SP | | 3/8" SP | | 1/2" SP | | 5/8" SP | | 3/4" SP | | 7/8" SP | | 1" SP | | 1 1/4" SP | | 1 1/2" SP | | 1 3/4" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 2520 | 600 | •356 | •0.14 | •401 | •0.19 | •446 | •0.25 | 494 | 0.32 | | | | | | | | | | | | |
| 2940 | 700 | 386 | 0.17 | 427 | 0.23 | 465 | 0.30 | •501 | •0.37 | 544 | 0.45 | | | | | | | | | | |
| 3360 | 800 | 418 | 0.21 | 455 | 0.28 | 490 | 0.36 | 523 | 0.43 | •556 | •0.51 | •591 | •0.59 | 627 | 0.68 | | | | | | |
| 3780 | 900 | 451 | 0.26 | 486 | 0.34 | 518 | 0.42 | 550 | 0.50 | 579 | 0.59 | 609 | 0.67 | •637 | •0.76 | 702 | 0.96 | | | | |
| 4200 | 1000 | 486 | 0.32 | 518 | 0.40 | 549 | 0.49 | 577 | 0.58 | 606 | 0.67 | 633 | 0.76 | 659 | 0.86 | •710 | •1.05 | 770 | 1.28 | 825 | 1.51 |
| 4620 | 1100 | 522 | 0.38 | 552 | 0.47 | 581 | 0.57 | 608 | 0.67 | 634 | 0.77 | 660 | 0.87 | 685 | 0.97 | 733 | 1.18 | •779 | •1.39 | 833 | 1.63 |
| 5040 | 1200 | 558 | 0.46 | 586 | 0.56 | 614 | 0.66 | 640 | 0.77 | 664 | 0.87 | 688 | 0.98 | 712 | 1.09 | 758 | 1.31 | 802 | 1.54 | •844 | •1.77 |
| 5460 | 1300 | 595 | 0.55 | 622 | 0.65 | 647 | 0.76 | 672 | 0.87 | 696 | 0.99 | 719 | 1.11 | 741 | 1.22 | 784 | 1.46 | 826 | 1.70 | 866 | 1.94 |
| 5880 | 1400 | 632 | 0.64 | 658 | 0.76 | 682 | 0.88 | 705 | 0.99 | 728 | 1.12 | 750 | 1.24 | 771 | 1.37 | 812 | 1.62 | 853 | 1.87 | 891 | 2.13 |
| 6300 | 1500 | 669 | 0.75 | 694 | 0.88 | 718 | 1.00 | 740 | 1.13 | 761 | 1.26 | 783 | 1.39 | 803 | 1.52 | 842 | 1.79 | 880 | 2.06 | 917 | 2.33 |
| 6720 | 1600 | 707 | 0.87 | 731 | 1.02 | 754 | 1.14 | 775 | 1.28 | 795 | 1.41 | 816 | 1.55 | 835 | 1.69 | 873 | 1.98 | 909 | 2.26 | 944 | 2.55 |
| 7140 | 1700 | 745 | 1.01 | 768 | 1.16 | 790 | 1.30 | 811 | 1.44 | 830 | 1.58 | 849 | 1.73 | 868 | 1.87 | 905 | 2.17 | 940 | 2.48 | 973 | 2.78 |
| 7560 | 1800 | 784 | 1.16 | 806 | 1.32 | 827 | 1.47 | 847 | 1.62 | 866 | 1.77 | 884 | 1.92 | 902 | 2.07 | 938 | 2.38 | 971 | 2.71 | 1004 | 3.03 |
| 7980 | 1900 | 822 | 1.32 | 843 | 1.49 | 864 | 1.66 | 883 | 1.82 | 901 | 1.97 | 919 | 2.13 | 936 | 2.29 | 970 | 2.61 | 1004 | 2.95 | 1035 | 3.29 |
| 8400 | 2000 | 861 | 1.51 | 881 | 1.68 | 901 | 1.86 | 920 | 2.03 | 937 | 2.19 | 955 | 2.36 | 971 | 2.52 | 1004 | 2.86 | 1036 | 3.21 | 1067 | 3.56 |
| 9240 | 2200 | 939 | 1.93 | 958 | 2.12 | 976 | 2.31 | 994 | 2.51 | 1011 | 2.70 | 1027 | 2.87 | 1043 | 3.05 | 1073 | 3.42 | 1102 | 3.79 | 1132 | 4.17 |
| 10080 | 2400 | 1018 | 2.42 | 1035 | 2.63 | 1052 | 2.84 | 1069 | 3.05 | 1085 | 3.26 | 1100 | 3.47 | 1115 | 3.67 | 1144 | 4.06 | 1172 | 4.45 | 1199 | 4.86 |
| 10920 | 2600 | 1097 | 3.00 | 1113 | 3.22 | 1129 | 3.45 | 1144 | 3.68 | 1160 | 3.91 | 1174 | 4.14 | 1189 | 4.37 | 1216 | 4.79 | 1243 | 5.21 | 1268 | 5.64 |
| 11760 | 2800 | 1176 | 3.67 | 1191 | 3.91 | 1206 | 4.15 | 1221 | 4.39 | 1235 | 4.64 | 1249 | 4.89 | 1263 | 5.14 | 1289 | 5.62 | 1315 | 6.07 | 1339 | 6.53 |
| 12600 | 3000 | 1255 | 4.44 | 1270 | 4.70 | 1284 | 4.95 | 1298 | 5.21 | 1312 | 5.47 | 1325 | 5.74 | 1338 | 6.00 | 1363 | 6.54 | 1388 | 7.03 | 1411 | 7.52 |
| 13440 | 3200 | 1335 | 5.32 | 1349 | 5.59 | 1362 | 5.86 | 1375 | 6.13 | 1388 | 6.41 | 1401 | 6.69 | 1413 | 6.97 | 1438 | 7.54 | 1461 | 8.11 | 1484 | 8.62 |
| 14280 | 3400 | 1415 | 6.30 | 1428 | 6.59 | 1441 | 6.88 | 1453 | 7.17 | 1466 | 7.46 | 1478 | 7.75 | 1490 | 8.05 | 1513 | 8.65 | 1535 | 9.26 | 1557 | 9.85 |
| 15120 | 3600 | 1496 | 7.41 | 1508 | 7.71 | 1520 | 8.01 | 1532 | 8.32 | 1543 | 8.63 | 1555 | 8.94 | 1566 | 9.25 | 1588 | 9.88 | 1610 | 10.52 | 1631 | 11.16 |
| 15960 | 3800 | 1576 | 8.64 | 1588 | 8.96 | 1599 | 9.28 | 1610 | 9.60 | 1622 | 9.92 | 1632 | 10.25 | 1643 | 10.58 | 1665 | 11.24 | 1685 | 11.90 | 1706 | 12.58 |

| VOL CFM | OUT VEL | 2" SP | | 2 1/2" SP | | 3" SP | | 3 1/2" SP | | 4" SP | | 4 1/2" SP | | 5" SP | | 5 1/2" SP | | 6" SP | | 6 1/2" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 5880 | 1400 | 928 | 2.40 | •1002 | •2.94 | 1087 | 3.58 | | | | | | | | | | | | | | |
| 6300 | 1500 | 953 | 2.61 | 1023 | 3.18 | •1095 | •3.79 | 1173 | 4.48 | | | | | | | | | | | | |
| 6720 | 1600 | 980 | 2.84 | 1046 | 3.44 | 1111 | 4.04 | 1181 | 4.72 | 1253 | 5.46 | | | | | | | | | | |
| 7140 | 1700 | 1007 | 3.09 | 1071 | 3.71 | 1133 | 4.35 | •1193 | •5.00 | 1261 | 5.74 | 1329 | 6.52 | 1394 | 7.33 | | | | | | |
| 7560 | 1800 | 1035 | 3.35 | 1098 | 4.00 | 1157 | 4.67 | 1216 | 5.35 | •1272 | •6.04 | 1337 | 6.83 | 1401 | 7.66 | 1463 | 8.51 | | | | |
| 7980 | 1900 | 1066 | 3.63 | 1125 | 4.31 | 1183 | 5.01 | 1238 | 5.72 | 1294 | 6.43 | •1346 | •7.16 | 1409 | 8.01 | 1470 | 8.88 | 1529 | 9.78 | | |
| 8400 | 2000 | 1097 | 3.92 | 1153 | 4.64 | 1210 | 5.36 | 1264 | 6.10 | 1316 | 6.85 | 1368 | 7.60 | •1418 | •8.37 | •1478 | •9.26 | 1537 | 10.18 | 1593 | 11.12 |
| 9240 | 2200 | 1160 | 4.56 | 1214 | 5.34 | 1265 | 6.13 | 1317 | 6.93 | 1367 | 7.73 | 1415 | 8.55 | 1463 | 9.37 | 1510 | 10.20 | •1555 | •11.04 | •1608 | •12.01 |
| 10080 | 2400 | 1226 | 5.27 | 1278 | 6.12 | 1327 | 6.98 | 1373 | 7.84 | 1421 | 8.70 | 1467 | 9.57 | 1512 | 10.45 | 1555 | 11.35 | 1599 | 12.24 | 1642 | 13.15 |
| 10920 | 2600 | 1293 | 6.08 | 1343 | 6.98 | 1390 | 7.90 | 1435 | 8.83 | 1478 | 9.75 | 1521 | 10.69 | 1565 | 11.63 | 1607 | 12.57 | 1648 | 13.53 | 1687 | 14.50 |
| 11760 | 2800 | 1363 | 6.99 | 1409 | 7.94 | 1454 | 8.91 | 1498 | 9.90 | 1540 | 10.90 | 1580 | 11.90 | 1619 | 12.91 | 1661 | 13.91 | 1700 | 14.92 | 1739 | 15.94 |
| 12600 | 3000 | 1434 | 8.01 | 1477 | 9.00 | 1520 | 10.03 | 1562 | 11.07 | 1603 | 12.13 | 1642 | 13.20 | 1680 | 14.27 | 1717 | 15.34 | 1754 | 16.42 | 1792 | 17.49 |
| 13440 | 3200 | 1506 | 9.14 | 1548 | 10.19 | 1588 | 11.26 | 1628 | 12.35 | 1667 | 13.47 | 1705 | 14.60 | 1742 | 15.74 | 1778 | 16.87 | 1813 | 18.01 | 1847 | 19.17 |
| 14280 | 3400 | 1578 | 10.39 | 1619 | 11.50 | 1658 | 12.62 | 1695 | 13.76 | 1733 | 14.92 | 1770 | 16.11 | 1806 | 17.31 | 1840 | 18.52 | 1874 | 19.72 | 1907 | 20.92 |
| 15120 | 3600 | 1651 | 11.78 | 1691 | 12.93 | 1728 | 14.11 | 1764 | 15.30 | 1799 | 16.51 | 1835 | 17.74 | 1870 | 18.99 | 1904 | 20.26 | 1937 | 21.54 | 1969 | 22.82 |
| 15960 | 3800 | 1725 | 13.26 | 1763 | 14.50 | 1800 | 15.73 | 1835 | 16.98 | 1869 | 18.24 | 1902 | 19.52 | 1936 | 20.82 | 1969 | 22.14 | 2001 | 23.47 | | |
| 16800 | 4000 | 1800 | 14.84 | 1837 | 16.22 | 1872 | 17.50 | 1906 | 18.80 | 1939 | 20.11 | 1971 | 21.44 | 2002 | 22.79 | | | | | | |
| 17640 | 4200 | 1875 | 16.56 | 1910 | 18.06 | 1944 | 19.42 | 1977 | 20.77 | 2009 | 22.14 | | | | | | | | | | |
| 18480 | 4400 | 1950 | 18.43 | 1984 | 19.99 | 2018 | 21.51 | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 10080 | 2400 | •1683 | •14.06 | 1780 | 16.15 | 1876 | 18.36 | 1966 | 20.62 | | | | | | | | | | | | |
| 10920 | 2600 | 1728 | 15.47 | •1806 | •17.43 | •1891 | •19.60 | 1982 | 21.97 | | | | | | | | | | | | |
| 11760 | 2800 | 1776 | 16.97 | 1851 | 19.05 | 1924 | 21.16 | •1997 | •23.35 | | | | | | | | | | | | |
| 12600 | 3000 | 1829 | 18.57 | 1900 | 20.77 | 1969 | 23.00 | | | | | | | | | | | | | | |
| 13440 | 3200 | 1883 | 20.30 | 1952 | 22.60 | 2018 | 24.94 | | | | | | | | | | | | | | |
| 14280 | 3400 | 1940 | 22.14 | 2006 | 24.57 | | | | | | | | | | | | | | | | |
| 15120 | 3600 | 2001 | 24.08 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SINGLE WIDTH
SINGLE INLET

# SIZE 8130

| SIZE 8130 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 1391 |
| CLASS II | 1818 |

| | | |
|---|---|---|
| Wheel Diameter | 30 inches | 762 mm |
| Wheel Circumference | 7.85 feet | 2.393 m |
| Inlet Diameter/Area | 32 1/16 inches dia./5.76 sq. ft. | 830 mm/.5351 $m^2$ |
| Outlet Size/Area | 23 7/16 x 31 ½ inches I.D./5.13 sq. ft. | 595 x 800 mm/.4766 $m^2$ |
| Tip Speed | 7.85 x RPM ft./minute | 2.393 x RPM m/minute |
| Maximum BHP | 5.15 x (RPM 1000)$^3$ BHP | 3.840 x (RPM 1000)$^3$ kW |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 3078 | 600 | •350 | •0.19 | •394 | •0.27 | •433 | •0.35 | 467 | 0.44 | 502 | 0.53 | 534 | 0.62 | 564 | 0.72 | 627 | 0.95 | 684 | 1.19 | 736 | 1.44 |
| 3591 | 700 | 378 | 0.23 | 419 | 0.32 | 457 | 0.42 | •491 | •0.51 | 522 | 0.61 | 551 | 0.71 | 581 | 0.82 | 636 | 1.05 | 689 | 1.29 | 741 | 1.56 |
| 4104 | 800 | 409 | 0.29 | 445 | 0.38 | 482 | 0.49 | 516 | 0.60 | •546 | •0.71 | •574 | •0.82 | 600 | 0.93 | 652 | 1.17 | 702 | 1.43 | 747 | 1.69 |
| 4617 | 900 | 442 | 0.35 | 476 | 0.46 | 507 | 0.57 | 540 | 0.69 | 571 | 0.81 | 598 | 0.93 | •625 | •1.06 | 673 | 1.31 | 719 | 1.58 | 764 | 1.86 |
| 5130 | 1000 | 475 | 0.43 | 508 | 0.55 | 538 | 0.67 | 566 | 0.80 | 595 | 0.92 | 623 | 1.06 | 649 | 1.19 | •697 | •1.47 | 740 | 1.74 | 781 | 2.03 |
| 5643 | 1100 | 509 | 0.51 | 541 | 0.65 | 569 | 0.78 | 595 | 0.91 | 621 | 1.05 | 648 | 1.19 | 674 | 1.34 | 721 | 1.63 | •764 | •1.93 | 804 | 2.24 |
| 6156 | 1200 | 544 | 0.61 | 574 | 0.76 | 601 | 0.90 | 627 | 1.04 | 651 | 1.19 | 674 | 1.34 | 699 | 1.50 | 746 | 1.81 | 789 | 2.14 | •828 | •2.46 |
| 6669 | 1300 | 579 | 0.73 | 608 | 0.88 | 634 | 1.04 | 659 | 1.19 | 682 | 1.35 | 704 | 1.51 | 725 | 1.67 | 771 | 2.01 | 814 | 2.36 | 853 | 2.70 |
| 7182 | 1400 | 615 | 0.86 | 642 | 1.02 | 667 | 1.18 | 691 | 1.36 | 714 | 1.52 | 735 | 1.69 | 756 | 1.86 | 796 | 2.21 | 838 | 2.58 | 878 | 2.96 |
| 7695 | 1500 | 651 | 1.00 | 677 | 1.18 | 701 | 1.35 | 724 | 1.53 | 746 | 1.71 | 767 | 1.89 | 787 | 2.07 | 825 | 2.44 | 864 | 2.82 | 903 | 3.22 |
| 8208 | 1600 | 688 | 1.17 | 712 | 1.35 | 736 | 1.54 | 758 | 1.73 | 779 | 1.92 | 800 | 2.12 | 819 | 2.30 | 856 | 2.69 | 890 | 3.08 | 928 | 3.50 |
| 8721 | 1700 | 725 | 1.35 | 748 | 1.54 | 770 | 1.74 | 792 | 1.94 | 813 | 2.15 | 832 | 2.35 | 851 | 2.55 | 887 | 2.96 | 921 | 3.37 | 954 | 3.81 |
| 9234 | 1800 | 762 | 1.55 | 784 | 1.76 | 805 | 1.96 | 826 | 2.17 | 846 | 2.38 | 866 | 2.61 | 884 | 2.82 | 919 | 3.25 | 952 | 3.68 | 984 | 4.13 |
| 9747 | 1900 | 800 | 1.78 | 821 | 2.00 | 841 | 2.21 | 861 | 2.43 | 880 | 2.65 | 899 | 2.88 | 917 | 3.11 | 952 | 3.57 | 984 | 4.02 | 1015 | 4.48 |
| 10260 | 2000 | 838 | 2.04 | 858 | 2.26 | 877 | 2.48 | 896 | 2.70 | 915 | 2.94 | 933 | 3.18 | 951 | 3.42 | 984 | 3.90 | 1016 | 4.38 | 1046 | 4.85 |
| 11286 | 2200 | 914 | 2.61 | 932 | 2.84 | 950 | 3.09 | 967 | 3.33 | 985 | 3.59 | 1002 | 3.84 | 1019 | 4.11 | 1051 | 4.64 | 1081 | 5.17 | 1110 | 5.69 |
| 12312 | 2400 | 990 | 3.29 | 1007 | 3.54 | 1024 | 3.81 | 1040 | 4.07 | 1056 | 4.34 | 1072 | 4.62 | 1088 | 4.90 | 1119 | 5.47 | 1148 | 6.05 | 1176 | 6.64 |
| 13338 | 2600 | 1067 | 4.08 | 1083 | 4.36 | 1099 | 4.65 | 1114 | 4.93 | 1129 | 5.22 | 1143 | 5.50 | 1158 | 5.80 | 1187 | 6.41 | 1215 | 7.02 | 1242 | 7.65 |
| 14364 | 2800 | 1144 | 5.00 | 1159 | 5.30 | 1174 | 5.61 | 1188 | 5.90 | 1202 | 6.21 | 1216 | 6.53 | 1230 | 6.85 | 1257 | 7.48 | 1284 | 8.14 | 1310 | 8.81 |
| 15390 | 3000 | 1222 | 6.06 | 1236 | 6.38 | 1250 | 6.71 | 1263 | 7.02 | 1277 | 7.36 | 1290 | 7.69 | 1303 | 8.03 | 1328 | 8.70 | 1354 | 9.40 | 1379 | 10.10 |
| 16416 | 3200 | 1299 | 7.25 | 1313 | 7.60 | 1326 | 7.94 | 1339 | 8.29 | 1352 | 8.65 | 1364 | 8.99 | 1376 | 9.34 | 1400 | 10.05 | 1424 | 10.78 | 1448 | 11.53 |
| 17442 | 3400 | 1377 | 8.61 | 1390 | 8.98 | 1402 | 9.33 | 1415 | 9.71 | 1427 | 10.08 | 1439 | 10.45 | 1450 | 10.81 | 1473 | 11.56 | 1495 | 12.32 | 1518 | 13.11 |
| 18468 | 3600 | 1455 | 10.12 | 1467 | 10.51 | 1479 | 10.89 | 1491 | 11.29 | 1502 | 11.66 | 1514 | 12.07 | 1525 | 12.46 | 1547 | 13.25 | 1568 | 14.05 | 1589 | 14.86 |
| 19494 | 3800 | 1534 | 11.83 | 1545 | 12.23 | 1556 | 12.62 | 1567 | 13.03 | 1578 | 13.44 | 1589 | 13.85 | 1600 | 14.27 | 1621 | 15.10 | 1642 | 15.96 | 1662 | 16.81 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 7182 | 1400 | •915 | •3.34 | •982 | •4.10 | 1043 | 4.88 | 1102 | 5.70 | 1162 | 6.57 | 1218 | 7.46 | 1271 | 8.38 | 1322 | 9.32 | 1378 | 10.36 | 1431 | 11.40 |
| 7695 | 1500 | 939 | 3.62 | 1006 | 4.43 | 1067 | 5.25 | 1124 | 6.10 | 1179 | 6.98 | 1235 | 7.91 | 1288 | 8.86 | 1338 | 9.82 | 1387 | 10.83 | 1436 | 11.86 |
| 8208 | 1600 | 964 | 3.92 | 1031 | 4.78 | •1092 | •5.65 | 1148 | 6.53 | 1201 | 7.44 | 1252 | 8.37 | 1305 | 9.36 | 1355 | 10.36 | 1404 | 11.40 | 1450 | 12.45 |
| 8721 | 1700 | 989 | 4.24 | 1056 | 5.15 | 1117 | 6.07 | •1172 | •6.98 | 1225 | 7.93 | 1274 | 8.88 | 1322 | 9.88 | 1372 | 10.91 | 1420 | 11.97 | 1467 | 13.07 |
| 9234 | 1800 | 1015 | 4.58 | 1081 | 5.53 | 1141 | 6.49 | 1197 | 7.46 | •1249 | •8.44 | 1298 | 9.43 | 1345 | 10.45 | 1390 | 11.50 | 1438 | 12.61 | 1484 | 13.72 |
| 9747 | 1900 | 1044 | 4.95 | 1106 | 5.92 | 1166 | 6.93 | 1222 | 7.97 | 1274 | 8.99 | •1323 | •10.02 | 1369 | 11.06 | 1414 | 12.15 | 1457 | 13.25 | 1501 | 14.39 |
| 10260 | 2000 | 1075 | 5.34 | 1131 | 6.34 | 1191 | 7.39 | 1246 | 8.45 | 1298 | 9.54 | 1347 | 10.62 | •1393 | •11.70 | 1438 | 12.83 | 1480 | 13.94 | 1521 | 15.09 |
| 11286 | 2200 | 1138 | 6.21 | 1191 | 7.29 | 1242 | 8.40 | 1296 | 9.53 | 1348 | 10.71 | 1397 | 11.91 | 1443 | 13.10 | •1487 | •14.28 | •1529 | •15.48 | 1569 | 16.68 |
| 12312 | 2400 | 1203 | 7.21 | 1254 | 8.35 | 1301 | 9.51 | 1347 | 10.71 | 1398 | 11.96 | 1446 | 13.22 | 1492 | 14.52 | 1536 | 15.82 | 1578 | 17.12 | •1618 | •18.40 |
| 13338 | 2600 | 1268 | 8.29 | 1318 | 9.54 | 1364 | 10.78 | 1408 | 12.05 | 1450 | 13.35 | 1497 | 14.69 | 1542 | 16.04 | 1585 | 17.41 | 1627 | 18.82 | 1668 | 20.26 |
| 14364 | 2800 | 1335 | 9.48 | 1383 | 10.86 | 1428 | 12.18 | 1471 | 13.52 | 1512 | 14.90 | 1551 | 16.28 | 1593 | 17.71 | 1636 | 19.17 | 1677 | 20.63 | 1717 | 22.13 |
| 15390 | 3000 | 1403 | 10.82 | 1449 | 12.26 | 1493 | 13.72 | 1534 | 15.12 | 1574 | 16.56 | 1613 | 18.05 | 1650 | 19.54 | 1687 | 21.04 | 1728 | 22.60 | 1767 | 24.15 |
| 16416 | 3200 | 1471 | 12.27 | 1516 | 13.81 | 1558 | 15.36 | 1599 | 16.90 | 1638 | 18.42 | 1675 | 19.93 | 1712 | 21.52 | 1747 | 23.10 | 1781 | 24.71 | 1818 | 26.33 |
| 17442 | 3400 | 1541 | 13.91 | 1584 | 15.51 | 1625 | 17.14 | 1665 | 18.83 | 1703 | 20.44 | 1739 | 22.03 | 1775 | 23.68 | 1809 | 25.32 | | | | |
| 18468 | 3600 | 1611 | 15.70 | 1653 | 17.39 | 1693 | 19.10 | 1731 | 20.83 | 1768 | 22.60 | 1804 | 24.31 | | | | | | | | |
| 19494 | 3800 | 1682 | 17.67 | 1722 | 19.41 | 1761 | 21.21 | 1798 | 23.02 | | | | | | | | | | | | |
| 20520 | 4000 | 1754 | 19.82 | 1792 | 21.63 | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 12312 | 2400 | •1657 | •19.71 | 1731 | 22.36 | 1801 | 25.08 | | | | | | | | | | | | | | |
| 13338 | 2600 | 1706 | 21.64 | •1780 | •24.46 | | | | | | | | | | | | | | | | |
| 14364 | 2800 | 1756 | 23.66 | | | | | | | | | | | | | | | | | | |
| 15390 | 3000 | 1805 | 25.72 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8133

SINGLE WIDTH
SINGLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

| | | |
|---|---|---|
| Wheel Diameter | 33 inches | 838 mm |
| Wheel Circumference | 8.64 feet | 2.633 m |
| Inlet Diameter/Area | 35 1/16 inches dia./6.87 sq. ft. | 906 mm/.6382 $m^2$ |
| Outlet Size/Area | 34 1/16 x 26 inches I.D./6.26 sq. ft. | 881 x 660 mm/.5816 $m^2$ |
| Tip Speed | 8.64 x RPM ft./minute | 2.633 RPM m/minute |
| Maximum BHP | 8.25 x (RPM 1000)$^3$ BHP | 6.152 x (RPM 1000)$^3$ kW |

| SIZE 8133 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 1265 |
| CLASS II | 1652 |

| VOL CFM | OUT VEL | 1/4" SP | | 3/8" SP | | 1/2" SP | | 5/8" SP | | 3/4" SP | | 7/8" SP | | 1" SP | | 1 1/4" SP | | 1 1/2" SP | | 1 3/4" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 3756 | 600 | •291 | •0.20 | •328 | •0.29 | •365 | •0.38 | 404 | 0.48 | | | | | | | | | | | | |
| 4382 | 700 | 315 | 0.25 | 349 | 0.35 | 380 | 0.45 | •410 | •0.55 | 445 | 0.67 | | | | | | | | | | |
| 5008 | 800 | 341 | 0.31 | 372 | 0.42 | 401 | 0.53 | 428 | 0.64 | •455 | •0.75 | •483 | •0.88 | 513 | 1.02 | | | | | | |
| 5634 | 900 | 368 | 0.39 | 397 | 0.50 | 423 | 0.62 | 449 | 0.75 | 474 | 0.87 | 498 | 1.00 | •521 | •1.13 | 574 | 1.43 | | | | |
| 6260 | 1000 | 397 | 0.47 | 424 | 0.60 | 448 | 0.73 | 472 | 0.87 | 495 | 1.00 | 517 | 1.14 | 539 | 1.28 | •581 | •1.56 | 630 | 1.90 | 675 | 2.26 |
| 6886 | 1100 | 426 | 0.57 | 451 | 0.71 | 475 | 0.85 | 497 | 1.00 | 518 | 1.14 | 539 | 1.29 | 560 | 1.44 | 599 | 1.75 | •637 | •2.07 | 681 | 2.44 |
| 7512 | 1200 | 456 | 0.68 | 479 | 0.83 | 501 | 0.98 | 523 | 1.14 | 543 | 1.30 | 562 | 1.46 | 582 | 1.62 | 619 | 1.95 | 655 | 2.29 | •690 | •2.63 |
| 8138 | 1300 | 486 | 0.81 | 508 | 0.97 | 529 | 1.13 | 549 | 1.30 | 569 | 1.47 | 587 | 1.65 | 605 | 1.82 | 641 | 2.17 | 675 | 2.53 | 708 | 2.90 |
| 8764 | 1400 | 516 | 0.96 | 537 | 1.13 | 557 | 1.30 | 576 | 1.48 | 595 | 1.66 | 613 | 1.85 | 630 | 2.03 | 663 | 2.41 | 697 | 2.79 | 728 | 3.18 |
| 9390 | 1500 | 547 | 1.12 | 567 | 1.31 | 586 | 1.49 | 604 | 1.68 | 622 | 1.87 | 639 | 2.07 | 656 | 2.27 | 688 | 2.67 | 719 | 3.07 | 750 | 3.48 |
| 10016 | 1600 | 577 | 1.30 | 597 | 1.51 | 616 | 1.70 | 633 | 1.90 | 650 | 2.10 | 666 | 2.30 | 683 | 2.51 | 714 | 2.94 | 743 | 3.37 | 772 | 3.80 |
| 10642 | 1700 | 609 | 1.50 | 627 | 1.72 | 645 | 1.94 | 662 | 2.14 | 678 | 2.35 | 694 | 2.57 | 709 | 2.79 | 740 | 3.23 | 768 | 3.69 | 795 | 4.14 |
| 11268 | 1800 | 640 | 1.72 | 658 | 1.96 | 675 | 2.19 | 691 | 2.41 | 707 | 2.63 | 722 | 2.85 | 737 | 3.08 | 766 | 3.55 | 794 | 4.03 | 820 | 4.51 |
| 11894 | 1900 | 671 | 1.97 | 689 | 2.21 | 705 | 2.47 | 721 | 2.70 | 736 | 2.93 | 751 | 3.17 | 765 | 3.40 | 793 | 3.89 | 820 | 4.39 | 846 | 4.90 |
| 12520 | 2000 | 703 | 2.24 | 720 | 2.50 | 736 | 2.76 | 751 | 3.02 | 766 | 3.26 | 780 | 3.51 | 794 | 3.75 | 820 | 4.26 | 846 | 4.78 | 872 | 5.31 |
| 13772 | 2200 | 767 | 2.86 | 782 | 3.14 | 797 | 3.43 | 812 | 3.72 | 825 | 4.01 | 839 | 4.27 | 852 | 4.54 | 877 | 5.08 | 901 | 5.64 | 925 | 6.20 |
| 15024 | 2400 | 831 | 3.60 | 845 | 3.90 | 859 | 4.21 | 873 | 4.53 | 886 | 4.85 | 899 | 5.16 | 911 | 5.45 | 935 | 6.03 | 957 | 6.63 | 979 | 7.23 |
| 16276 | 2600 | 895 | 4.46 | 909 | 4.79 | 922 | 5.12 | 935 | 5.46 | 947 | 5.80 | 959 | 6.15 | 971 | 6.50 | 993 | 7.12 | 1015 | 7.75 | 1036 | 8.39 |
| 17528 | 2800 | 960 | 5.45 | 973 | 5.81 | 985 | 6.17 | 997 | 6.53 | 1009 | 6.89 | 1020 | 7.26 | 1031 | 7.64 | 1053 | 8.35 | 1074 | 9.02 | 1094 | 9.71 |
| 18780 | 3000 | 1025 | 6.59 | 1037 | 6.97 | 1048 | 7.36 | 1060 | 7.74 | 1071 | 8.13 | 1082 | 8.52 | 1093 | 8.92 | 1113 | 9.72 | 1133 | 10.46 | 1152 | 11.18 |
| 20032 | 3200 | 1090 | 7.89 | 1101 | 8.29 | 1112 | 8.70 | 1123 | 9.11 | 1134 | 9.52 | 1144 | 9.94 | 1154 | 10.36 | 1174 | 11.20 | 1193 | 12.06 | 1212 | 12.82 |
| 21284 | 3400 | 1156 | 9.36 | 1166 | 9.78 | 1177 | 10.21 | 1187 | 10.64 | 1197 | 11.08 | 1207 | 11.52 | 1216 | 11.96 | 1235 | 12.85 | 1254 | 13.76 | 1272 | 14.64 |
| 22536 | 3600 | 1221 | 11.00 | 1231 | 11.45 | 1241 | 11.90 | 1251 | 12.36 | 1260 | 12.82 | 1270 | 13.28 | 1279 | 13.74 | 1297 | 14.68 | 1315 | 15.63 | 1332 | 16.59 |
| 23788 | 3800 | 1287 | 12.82 | 1296 | 13.30 | 1306 | 13.78 | 1315 | 14.26 | 1324 | 14.74 | 1333 | 15.22 | 1342 | 15.71 | 1359 | 16.70 | 1376 | 17.69 | 1393 | 18.70 |

| VOL CFM | OUT VEL | 2" SP | | 2 1/2" SP | | 3" SP | | 3 1/2" SP | | 4" SP | | 4 1/2" SP | | 5" SP | | 5 1/2" SP | | 6" SP | | 6 1/2" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 8764 | 1400 | 759 | 3.57 | •820 | •4.38 | 889 | 5.34 | | | | | | | | | | | | | | |
| 9390 | 1500 | 779 | 3.89 | 837 | 4.73 | •896 | •5.65 | 959 | 6.68 | | | | | | | | | | | | |
| 10016 | 1600 | 801 | 4.23 | 855 | 5.12 | 908 | 6.03 | 966 | 7.04 | 1025 | 8.14 | | | | | | | | | | |
| 10642 | 1700 | 823 | 4.60 | 876 | 5.53 | 926 | 6.48 | •976 | •7.45 | 1032 | 8.55 | 1087 | 9.73 | 1140 | 10.93 | | | | | | |
| 11268 | 1800 | 846 | 4.99 | 897 | 5.96 | 946 | 6.96 | 994 | 7.97 | •1040 | •8.99 | 1094 | 10.19 | 1146 | 11.43 | 1196 | 12.69 | | | | |
| 11894 | 1900 | 871 | 5.40 | 919 | 6.42 | 967 | 7.46 | 1012 | 8.52 | 1058 | 9.58 | •1101 | •10.67 | 1153 | 11.94 | 1203 | 13.25 | 1251 | 14.58 | | |
| 12520 | 2000 | 896 | 5.84 | 942 | 6.91 | 989 | 7.99 | 1033 | 9.08 | 1076 | 10.20 | 1119 | 11.33 | •1159 | •12.47 | •1209 | •13.81 | 1257 | 15.18 | 1303 | 16.58 |
| 13772 | 2200 | 948 | 6.78 | 992 | 7.95 | 1034 | 9.13 | 1077 | 10.31 | 1118 | 11.51 | 1156 | 12.73 | 1196 | 13.96 | 1234 | 15.20 | •1271 | •16.45 | •1316 | •17.91 |
| 15024 | 2400 | 1001 | 7.85 | 1044 | 9.11 | 1084 | 10.38 | 1122 | 11.67 | 1161 | 12.96 | 1199 | 14.25 | 1236 | 15.57 | 1271 | 16.90 | 1307 | 18.24 | 1342 | 19.59 |
| 16276 | 2600 | 1056 | 9.05 | 1097 | 10.38 | 1136 | 11.76 | 1173 | 13.14 | 1208 | 14.52 | 1243 | 15.92 | 1279 | 17.31 | 1314 | 18.73 | 1347 | 20.16 | 1379 | 21.60 |
| 17528 | 2800 | 1113 | 10.40 | 1151 | 11.81 | 1188 | 13.26 | 1224 | 14.74 | 1258 | 16.23 | 1291 | 17.71 | 1323 | 19.22 | 1357 | 20.71 | 1390 | 22.21 | 1421 | 23.74 |
| 18780 | 3000 | 1171 | 11.91 | 1207 | 13.39 | 1242 | 14.92 | 1277 | 16.47 | 1310 | 18.06 | 1342 | 19.65 | 1373 | 21.24 | 1403 | 22.85 | 1434 | 24.45 | 1465 | 26.05 |
| 20032 | 3200 | 1230 | 13.59 | 1264 | 15.15 | 1297 | 16.75 | 1330 | 18.38 | 1362 | 20.04 | 1393 | 21.73 | 1423 | 23.44 | 1453 | 25.12 | 1481 | 26.82 | 1509 | 28.54 |
| 21284 | 3400 | 1289 | 15.45 | 1322 | 17.09 | 1354 | 18.77 | 1385 | 20.47 | 1416 | 22.21 | 1446 | 23.97 | 1475 | 25.76 | 1504 | 27.58 | 1532 | 29.35 | 1559 | 31.15 |
| 22536 | 3600 | 1349 | 17.50 | 1381 | 19.23 | 1412 | 20.98 | 1441 | 22.76 | 1470 | 24.56 | 1499 | 26.40 | 1528 | 28.27 | 1556 | 30.16 | 1583 | 32.07 | 1609 | 33.96 |
| 23788 | 3800 | 1409 | 19.71 | 1440 | 21.56 | 1470 | 23.39 | 1499 | 25.25 | 1526 | 27.13 | 1554 | 29.04 | 1581 | 30.98 | 1608 | 32.94 | 1635 | 34.93 | | |
| 25040 | 4000 | 1470 | 22.06 | 1500 | 24.11 | 1529 | 26.02 | 1557 | 27.96 | 1584 | 29.91 | 1610 | 31.90 | 1635 | 33.90 | | | | | | |
| 26292 | 4200 | 1531 | 24.62 | 1560 | 26.85 | 1588 | 28.88 | 1615 | 30.89 | 1641 | 32.92 | | | | | | | | | | |
| 27544 | 4400 | 1592 | 27.39 | 1621 | 29.72 | 1648 | 31.97 | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 15024 | 2400 | •1376 | •20.95 | 1456 | 24.09 | 1534 | 27.38 | 1608 | 30.75 | | | | | | | | | | | | |
| 16276 | 2600 | 1413 | 23.05 | •1477 | •25.97 | •1547 | •29.22 | 1621 | 32.76 | | | | | | | | | | | | |
| 17528 | 2800 | 1452 | 25.28 | 1513 | 28.38 | 1573 | 31.52 | •1634 | •34.82 | | | | | | | | | | | | |
| 18780 | 3000 | 1495 | 27.66 | 1553 | 30.94 | 1609 | 34.26 | | | | | | | | | | | | | | |
| 20032 | 3200 | 1539 | 30.23 | 1596 | 33.66 | 1650 | 37.15 | | | | | | | | | | | | | | |
| 21284 | 3400 | 1585 | 32.97 | 1639 | 36.58 | | | | | | | | | | | | | | | | |
| 22536 | 3600 | 1635 | 35.85 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SINGLE WIDTH
SINGLE INLET

# SIZE 8137

| SIZE 8137 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 1129 |
| CLASS II | 1473 |

| | | |
|---|---|---|
| Wheel Diameter | 36 ½ inches | 927 mm |
| Wheel Circumference | 9.56 feet | 2.914 m |
| Inlet Diameter/Area | 39 3/16 inches dia./8.30 sq. ft. | 995 mm/.7711 $m^2$ |
| Outlet Size/Area | 38 3/8 x 28 5/8 inches I.D./7.63 sq. ft. | 975 x 727 mm/.7088 $m^2$ |
| Tip Speed | 9.56 x RPM ft./minute | 2.914 x RPM m/minute |
| Maximum BHP | 13.04 x (RPM 1000)$^3$ BHP | 9.724 x (RPM 1000)$^3$ kW |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 4578 | 600 | •264 | •0.24 | •298 | •0.34 | •335 | •0.45 | | | | | | | | | | | | | | |
| 5341 | 700 | 285 | 0.29 | 317 | 0.41 | 345 | 0.53 | •377 | •0.65 | 407 | 0.79 | | | | | | | | | | |
| 6104 | 800 | 306 | 0.35 | 337 | 0.49 | 364 | 0.62 | 389 | 0.75 | •415 | •0.90 | 443 | 1.05 | 469 | 1.20 | | | | | | |
| 6867 | 900 | 329 | 0.43 | 357 | 0.57 | 384 | 0.73 | 408 | 0.88 | 431 | 1.02 | •452 | •1.18 | •478 | •1.34 | 525 | 1.69 | | | | |
| 7630 | 1000 | 354 | 0.52 | 379 | 0.67 | 404 | 0.84 | 428 | 1.01 | 450 | 1.17 | 471 | 1.34 | 490 | 1.50 | •533 | •1.86 | 576 | 2.24 | | |
| 8393 | 1100 | 379 | 0.62 | 402 | 0.79 | 426 | 0.96 | 448 | 1.14 | 470 | 1.33 | 490 | 1.51 | 509 | 1.69 | 544 | 2.06 | •585 | •2.46 | 624 | 2.88 |
| 9156 | 1200 | 405 | 0.75 | 427 | 0.92 | 447 | 1.10 | 469 | 1.30 | 490 | 1.49 | 510 | 1.70 | 528 | 1.90 | 563 | 2.29 | 595 | 2.70 | •632 | •3.13 |
| 9919 | 1300 | 431 | 0.88 | 452 | 1.07 | 472 | 1.26 | 491 | 1.46 | 511 | 1.67 | 530 | 1.89 | 548 | 2.11 | 582 | 2.54 | 614 | 2.97 | 644 | 3.41 |
| 10682 | 1400 | 458 | 1.04 | 478 | 1.24 | 497 | 1.44 | 514 | 1.65 | 532 | 1.87 | 551 | 2.10 | 569 | 2.33 | 602 | 2.81 | 633 | 3.27 | 662 | 3.73 |
| 11445 | 1500 | 485 | 1.21 | 504 | 1.43 | 522 | 1.64 | 539 | 1.87 | 555 | 2.09 | 572 | 2.33 | 590 | 2.57 | 622 | 3.08 | 653 | 3.59 | 682 | 4.07 |
| 12208 | 1600 | 512 | 1.40 | 530 | 1.64 | 548 | 1.87 | 564 | 2.10 | 580 | 2.34 | 595 | 2.58 | 611 | 2.84 | 643 | 3.36 | 673 | 3.90 | 701 | 4.45 |
| 12971 | 1700 | 539 | 1.61 | 557 | 1.88 | 574 | 2.12 | 590 | 2.36 | 605 | 2.61 | 619 | 2.86 | 633 | 3.12 | 664 | 3.67 | 693 | 4.23 | 721 | 4.81 |
| 13734 | 1800 | 567 | 1.85 | 584 | 2.13 | 600 | 2.39 | 615 | 2.64 | 630 | 2.90 | 644 | 3.17 | 658 | 3.44 | 686 | 4.00 | 714 | 4.59 | 741 | 5.19 |
| 14497 | 1900 | 594 | 2.11 | 611 | 2.40 | 626 | 2.68 | 641 | 2.95 | 655 | 3.23 | 669 | 3.50 | 682 | 3.79 | 708 | 4.36 | 735 | 4.97 | 762 | 5.59 |
| 15260 | 2000 | 622 | 2.39 | 638 | 2.70 | 653 | 3.01 | 667 | 3.29 | 681 | 3.58 | 695 | 3.86 | 707 | 4.16 | 732 | 4.76 | 757 | 5.38 | 783 | 6.02 |
| 16786 | 2200 | 678 | 3.04 | 693 | 3.38 | 707 | 3.72 | 720 | 4.06 | 733 | 4.36 | 746 | 4.68 | 758 | 4.99 | 782 | 5.64 | 804 | 6.29 | 826 | 6.97 |
| 18312 | 2400 | 734 | 3.82 | 748 | 4.18 | 761 | 4.54 | 774 | 4.91 | 786 | 5.28 | 798 | 5.62 | 810 | 5.96 | 832 | 6.65 | 854 | 7.35 | 874 | 8.07 |
| 19838 | 2600 | 791 | 4.72 | 804 | 5.11 | 816 | 5.50 | 828 | 5.90 | 840 | 6.30 | 851 | 6.70 | 862 | 7.06 | 884 | 7.80 | 904 | 8.55 | 924 | 9.31 |
| 21364 | 2800 | 848 | 5.76 | 860 | 6.17 | 872 | 6.60 | 883 | 7.02 | 894 | 7.45 | 905 | 7.89 | 916 | 8.32 | 936 | 9.10 | 955 | 9.90 | 974 | 10.71 |
| 22890 | 3000 | 905 | 6.95 | 917 | 7.40 | 928 | 7.84 | 938 | 8.30 | 949 | 8.75 | 959 | 9.21 | 969 | 9.68 | 989 | 10.57 | 1007 | 11.41 | 1025 | 12.27 |
| 24416 | 3200 | 963 | 8.31 | 973 | 8.78 | 984 | 9.25 | 994 | 9.73 | 1004 | 10.22 | 1014 | 10.71 | 1023 | 11.20 | 1042 | 12.19 | 1060 | 13.10 | 1077 | 14.00 |
| 25942 | 3400 | 1020 | 9.83 | 1030 | 10.33 | 1040 | 10.84 | 1050 | 11.34 | 1059 | 11.86 | 1069 | 12.37 | 1078 | 12.89 | 1096 | 13.94 | 1113 | 14.98 | 1130 | 15.93 |
| 27468 | 3600 | 1078 | 11.55 | 1087 | 12.07 | 1097 | 12.60 | 1106 | 13.14 | 1115 | 13.68 | 1124 | 14.22 | 1133 | 14.77 | 1150 | 15.87 | 1166 | 16.98 | 1183 | 18.05 |
| 28994 | 3800 | 1136 | 13.45 | 1145 | 14.01 | 1154 | 14.56 | 1162 | 15.13 | 1171 | 15.69 | 1179 | 16.26 | 1188 | 16.84 | 1204 | 17.99 | 1220 | 19.16 | 1236 | 20.34 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 10682 | 1400 | 690 | 4.20 | •752 | •5.22 | 812 | 6.28 | | | | | | | | | | | | | | |
| 11445 | 1500 | 709 | 4.57 | 761 | 5.59 | 821 | 6.71 | 876 | 7.85 | | | | | | | | | | | | |
| 12208 | 1600 | 728 | 4.96 | 778 | 6.02 | •830 | •7.15 | 885 | 8.35 | 936 | 9.57 | | | | | | | | | | |
| 12971 | 1700 | 747 | 5.39 | 796 | 6.49 | 842 | 7.63 | •894 | •8.86 | 945 | 10.13 | 993 | 11.43 | | | | | | | | |
| 13734 | 1800 | 767 | 5.81 | 816 | 6.99 | 860 | 8.17 | 903 | 9.39 | •954 | •10.72 | 1002 | 12.07 | 1047 | 13.44 | | | | | | |
| 14497 | 1900 | 787 | 6.23 | 835 | 7.52 | 879 | 8.75 | 921 | 10.01 | 962 | 11.32 | •1010 | •12.72 | 1056 | 14.15 | 1099 | 15.59 | | | | |
| 15260 | 2000 | 808 | 6.69 | 855 | 8.05 | 899 | 9.36 | 940 | 10.66 | 978 | 11.99 | 1019 | 13.39 | •1065 | •14.87 | 1108 | 16.37 | 1149 | 17.89 | | |
| 16786 | 2200 | 850 | 7.68 | 896 | 9.13 | 938 | 10.63 | 978 | 12.08 | 1016 | 13.50 | 1052 | 14.95 | 1086 | 16.43 | •1125 | •17.99 | •1166 | •19.61 | 1206 | 21.26 |
| 18312 | 2400 | 894 | 8.80 | 938 | 10.34 | 979 | 11.93 | 1018 | 13.56 | 1055 | 15.16 | 1090 | 16.70 | 1124 | 18.27 | 1156 | 19.86 | 1188 | 21.47 | •1223 | •23.17 |
| 19838 | 2600 | 943 | 10.08 | 980 | 11.68 | 1021 | 13.36 | 1059 | 15.09 | 1094 | 16.85 | 1129 | 18.63 | 1162 | 20.28 | 1194 | 21.96 | 1225 | 23.66 | 1255 | 25.38 |
| 21364 | 2800 | 992 | 11.53 | 1027 | 13.20 | 1063 | 14.94 | 1100 | 16.76 | 1135 | 18.61 | 1169 | 20.50 | 1201 | 22.43 | 1233 | 24.24 | 1263 | 26.03 | 1292 | 27.84 |
| 22890 | 3000 | 1043 | 13.13 | 1077 | 14.90 | 1109 | 16.70 | 1143 | 18.59 | 1177 | 20.53 | 1210 | 22.51 | 1242 | 24.52 | 1272 | 26.57 | 1302 | 28.60 | 1331 | 30.50 |
| 24416 | 3200 | 1094 | 14.92 | 1127 | 16.77 | 1158 | 18.66 | 1187 | 20.60 | 1220 | 22.62 | 1252 | 24.69 | 1283 | 26.79 | 1313 | 28.92 | 1342 | 31.09 | 1370 | 33.29 |
| 25942 | 3400 | 1146 | 16.88 | 1177 | 18.83 | 1207 | 20.82 | 1236 | 22.84 | 1263 | 24.89 | 1294 | 27.04 | 1325 | 29.24 | 1354 | 31.46 | 1383 | 33.71 | 1410 | 36.00 |
| 27468 | 3600 | 1198 | 19.05 | 1229 | 21.09 | 1258 | 23.17 | 1285 | 25.28 | 1312 | 27.42 | 1338 | 29.60 | 1367 | 31.88 | 1396 | 34.19 | 1424 | 36.53 | 1451 | 38.91 |
| 28994 | 3800 | 1251 | 21.43 | 1280 | 23.56 | 1308 | 25.73 | 1335 | 27.93 | 1362 | 30.16 | 1387 | 32.43 | 1411 | 34.73 | 1439 | 37.12 | 1466 | 39.55 | | |
| 30520 | 4000 | 1304 | 24.03 | 1333 | 26.26 | 1360 | 28.51 | 1386 | 30.81 | 1411 | 33.13 | 1436 | 35.48 | 1460 | 37.87 | | | | | | |
| 32046 | 4200 | 1358 | 26.73 | 1385 | 29.18 | 1412 | 31.53 | 1437 | 33.92 | 1462 | 36.33 | | | | | | | | | | |
| 33572 | 4400 | 1412 | 29.66 | 1438 | 32.35 | 1464 | 34.80 | | | | | | | | | | | | | | |
| 35098 | 4600 | 1466 | 32.83 | | | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 18312 | 2400 | •1261 | •24.94 | 1333 | 28.52 | 1401 | 32.16 | | | | | | | | | | | | | | |
| 19838 | 2600 | 1283 | 27.12 | •1351 | •30.85 | 1418 | 34.70 | | | | | | | | | | | | | | |
| 21364 | 2800 | 1321 | 29.67 | 1375 | 33.40 | •1436 | •37.35 | | | | | | | | | | | | | | |
| 22890 | 3000 | 1359 | 32.42 | 1412 | 36.32 | 1463 | 40.29 | | | | | | | | | | | | | | |
| 24416 | 3200 | 1397 | 35.38 | 1450 | 39.45 | | | | | | | | | | | | | | | | |
| 25942 | 3400 | 1437 | 38.31 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8140

SINGLE WIDTH
SINGLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

| | | |
|---|---|---|
| Wheel Diameter | 40 ¼ inches | 1022 mm |
| Wheel Circumference | 10.5 feet | 3.200 m |
| Inlet Diameter/Area | 49 ½ inches sq./10.31 sq. ft. | 1257 mm/.9578 $m^2$ |
| Outlet Size/Area | 42 7/16 x 31 1/16 inches I.D./9.35 sq. ft. | 1078 x 805 mm/.8686 $m^2$ |
| Tip Speed | 10.5 x RPM ft./minute | 3.200 x RPM m/minute |
| Maximum BHP | 21.29 x (RPM 1000)$^3$ BHP | 15.88 x (RPM 1000)$^3$ kW |

| SIZE 8140 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 1023 |
| CLASS II | 1335 |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 5610 | 600 | •240 | •0.29 | •271 | •0.41 | •304 | •0.55 | | | | | | | | | | | | | | |
| 6545 | 700 | 259 | 0.36 | 288 | 0.50 | 314 | 0.64 | •342 | •0.80 | 369 | 0.96 | | | | | | | | | | |
| 7480 | 800 | 278 | 0.44 | 306 | 0.60 | 331 | 0.76 | 354 | 0.93 | •377 | •1.10 | •402 | •1.28 | 426 | 1.47 | | | | | | |
| 8415 | 900 | 300 | 0.53 | 325 | 0.71 | 349 | 0.89 | 371 | 1.08 | 392 | 1.26 | 411 | 1.44 | •434 | •1.65 | 476 | 2.06 | | | | |
| 9350 | 1000 | 323 | 0.64 | 345 | 0.83 | 368 | 1.03 | 389 | 1.24 | 409 | 1.44 | 428 | 1.64 | 446 | 1.85 | •484 | •2.29 | 523 | 2.75 | | |
| 10285 | 1100 | 346 | 0.77 | 367 | 0.97 | 388 | 1.18 | 408 | 1.41 | 427 | 1.64 | 446 | 1.86 | 463 | 2.08 | 495 | 2.53 | •531 | •3.02 | 566 | 3.52 |
| 11220 | 1200 | 370 | 0.92 | 390 | 1.13 | 408 | 1.36 | 427 | 1.59 | 446 | 1.84 | 464 | 2.09 | 481 | 2.34 | 512 | 2.81 | 541 | 3.31 | •574 | •3.84 |
| 12155 | 1300 | 394 | 1.09 | 413 | 1.32 | 430 | 1.56 | 447 | 1.80 | 465 | 2.06 | 483 | 2.32 | 499 | 2.59 | 530 | 3.13 | 559 | 3.65 | 585 | 4.18 |
| 13090 | 1400 | 418 | 1.29 | 436 | 1.53 | 453 | 1.78 | 469 | 2.04 | 485 | 2.30 | 502 | 2.58 | 518 | 2.87 | 548 | 3.45 | 576 | 4.02 | 603 | 4.58 |
| 14025 | 1500 | 443 | 1.50 | 460 | 1.77 | 476 | 2.03 | 491 | 2.30 | 506 | 2.58 | 521 | 2.87 | 537 | 3.17 | 567 | 3.78 | 594 | 4.42 | 620 | 5.01 |
| 14960 | 1600 | 467 | 1.73 | 484 | 2.03 | 500 | 2.31 | 514 | 2.59 | 529 | 2.88 | 542 | 3.18 | 557 | 3.49 | 586 | 4.13 | 612 | 4.80 | 638 | 5.47 |
| 15895 | 1700 | 492 | 2.00 | 508 | 2.32 | 523 | 2.61 | 538 | 2.91 | 551 | 3.22 | 564 | 3.53 | 577 | 3.85 | 605 | 4.51 | 631 | 5.20 | 656 | 5.91 |
| 16830 | 1800 | 517 | 2.29 | 533 | 2.63 | 547 | 2.95 | 561 | 3.26 | 574 | 3.58 | 587 | 3.91 | 599 | 4.24 | 624 | 4.92 | 650 | 5.64 | 675 | 6.38 |
| 17765 | 1900 | 543 | 2.61 | 557 | 2.97 | 572 | 3.32 | 585 | 3.65 | 598 | 3.98 | 610 | 4.32 | 622 | 4.67 | 645 | 5.37 | 670 | 6.11 | 694 | 6.88 |
| 18700 | 2000 | 568 | 2.97 | 582 | 3.34 | 596 | 3.72 | 609 | 4.07 | 621 | 4.42 | 633 | 4.77 | 645 | 5.13 | 667 | 5.86 | 689 | 6.62 | 713 | 7.41 |
| 20570 | 2200 | 619 | 3.78 | 632 | 4.18 | 645 | 4.60 | 657 | 5.02 | 669 | 5.40 | 680 | 5.78 | 692 | 6.16 | 713 | 6.95 | 733 | 7.76 | 752 | 8.58 |
| 22440 | 2400 | 671 | 4.74 | 683 | 5.18 | 695 | 5.62 | 706 | 6.08 | 718 | 6.53 | 728 | 6.94 | 739 | 7.36 | 759 | 8.21 | 778 | 9.07 | 797 | 9.94 |
| 24310 | 2600 | 723 | 5.86 | 734 | 6.33 | 745 | 6.81 | 756 | 7.30 | 767 | 7.79 | 777 | 8.29 | 787 | 8.73 | 806 | 9.63 | 825 | 10.55 | 842 | 11.48 |
| 26180 | 2800 | 775 | 7.15 | 785 | 7.66 | 796 | 8.17 | 806 | 8.70 | 816 | 9.22 | 826 | 9.75 | 835 | 10.29 | 854 | 11.25 | 871 | 12.23 | 888 | 13.21 |
| 28050 | 3000 | 827 | 8.63 | 837 | 9.18 | 847 | 9.73 | 857 | 10.28 | 866 | 10.84 | 875 | 11.40 | 884 | 11.97 | 902 | 13.07 | 919 | 14.10 | 935 | 15.15 |
| 29920 | 3200 | 879 | 10.32 | 889 | 10.90 | 898 | 11.48 | 907 | 12.07 | 916 | 12.66 | 925 | 13.26 | 934 | 13.86 | 951 | 15.08 | 967 | 16.20 | 983 | 17.30 |
| 31790 | 3400 | 932 | 12.22 | 941 | 12.83 | 950 | 13.45 | 959 | 14.07 | 967 | 14.69 | 976 | 15.32 | 984 | 15.96 | 1000 | 17.24 | 1016 | 18.53 | 1031 | 19.69 |
| 33660 | 3600 | 985 | 14.35 | 993 | 14.99 | 1002 | 15.64 | 1010 | 16.30 | 1018 | 16.96 | 1026 | 17.62 | 1034 | 18.29 | 1049 | 19.64 | 1065 | 21.01 | 1079 | 22.32 |
| 35530 | 3800 | 1037 | 16.72 | 1046 | 17.40 | 1054 | 18.08 | 1062 | 18.77 | 1069 | 19.46 | 1077 | 20.16 | 1085 | 20.86 | 1099 | 22.28 | 1114 | 23.71 | 1128 | 25.16 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 13090 | 1400 | 628 | 5.15 | •683 | •6.39 | 738 | 7.69 | | | | | | | | | | | | | | |
| 14025 | 1500 | 645 | 5.61 | 691 | 6.85 | 746 | 8.22 | 796 | 9.62 | | | | | | | | | | | | |
| 14960 | 1600 | 662 | 6.10 | 707 | 7.39 | •754 | •8.76 | 803 | 10.23 | 850 | 11.72 | | | | | | | | | | |
| 15895 | 1700 | 680 | 6.62 | 725 | 7.97 | 766 | 9.36 | •811 | •10.86 | 858 | 12.41 | 902 | 14.00 | | | | | | | | |
| 16830 | 1800 | 698 | 7.13 | 742 | 8.59 | 783 | 10.03 | 821 | 11.52 | •866 | •13.13 | 909 | 14.78 | 951 | 16.46 | | | | | | |
| 17765 | 1900 | 717 | 7.66 | 760 | 9.24 | 800 | 10.74 | 838 | 12.28 | 874 | 13.87 | •917 | •15.59 | 959 | 17.33 | 998 | 19.10 | | | | |
| 18700 | 2000 | 736 | 8.22 | 778 | 9.89 | 818 | 11.50 | 855 | 13.09 | 890 | 14.72 | 926 | 16.42 | •967 | •18.22 | 1006 | 20.06 | 1043 | 21.91 | 1079 | 23.79 |
| 20570 | 2200 | 774 | 9.45 | 815 | 11.22 | 854 | 13.06 | 890 | 14.84 | 924 | 16.58 | 957 | 18.35 | 988 | 20.16 | •1022 | •22.05 | •1059 | •24.03 | 1095 | 26.04 |
| 22440 | 2400 | 815 | 10.84 | 854 | 12.72 | 891 | 14.66 | 926 | 16.66 | 960 | 18.64 | 992 | 20.52 | 1022 | 22.43 | 1052 | 24.37 | 1080 | 26.35 | •1111 | •28.40 |
| 24310 | 2600 | 859 | 12.43 | 893 | 14.38 | 929 | 16.43 | 964 | 18.54 | 996 | 20.70 | 1027 | 22.90 | 1057 | 24.92 | 1086 | 26.97 | 1114 | 29.05 | 1141 | 31.15 |
| 26180 | 2800 | 905 | 14.22 | 936 | 16.26 | 968 | 18.39 | 1002 | 20.61 | 1034 | 22.87 | 1064 | 25.18 | 1093 | 27.54 | 1122 | 29.79 | 1149 | 31.98 | 1176 | 34.19 |
| 28050 | 3000 | 951 | 16.21 | 982 | 18.37 | 1010 | 20.57 | 1041 | 22.87 | 1072 | 25.25 | 1102 | 27.67 | 1130 | 30.13 | 1158 | 32.63 | 1185 | 35.16 | 1211 | 37.48 |
| 29920 | 3200 | 998 | 18.42 | 1027 | 20.69 | 1055 | 23.01 | 1082 | 25.37 | 1111 | 27.83 | 1140 | 30.36 | 1168 | 32.93 | 1195 | 35.54 | 1221 | 38.19 | 1247 | 40.87 |
| 31790 | 3400 | 1045 | 20.86 | 1074 | 23.25 | 1101 | 25.67 | 1127 | 28.15 | 1152 | 30.66 | 1179 | 33.28 | 1206 | 35.96 | 1233 | 38.68 | 1259 | 41.43 | 1284 | 44.23 |
| 33660 | 3600 | 1093 | 23.56 | 1121 | 26.05 | 1147 | 28.59 | 1172 | 31.17 | 1196 | 33.80 | 1220 | 36.46 | 1245 | 39.23 | 1272 | 42.06 | 1297 | 44.92 | 1321 | 47.82 |
| 35530 | 3800 | 1142 | 26.51 | 1168 | 29.12 | 1193 | 31.77 | 1218 | 34.46 | 1241 | 37.19 | 1264 | 39.96 | 1286 | 42.77 | 1310 | 45.68 | 1335 | 48.66 | | |
| 37400 | 4000 | 1190 | 29.71 | 1216 | 32.46 | 1240 | 35.22 | 1264 | 38.03 | 1287 | 40.87 | 1309 | 43.75 | 1331 | 46.67 | | | | | | |
| 39270 | 4200 | 1239 | 33.06 | 1264 | 36.09 | 1288 | 38.97 | 1311 | 41.88 | 1333 | 44.84 | | | | | | | | | | |
| 41140 | 4400 | 1289 | 36.70 | 1313 | 40.03 | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 22440 | 2400 | •1145 | •30.56 | 1211 | 34.94 | 1272 | 39.39 | | | | | | | | | | | | | | |
| 24310 | 2600 | 1167 | 33.28 | •1226 | •37.81 | 1288 | 42.52 | | | | | | | | | | | | | | |
| 26180 | 2800 | 1201 | 36.43 | 1251 | 40.98 | •1304 | •45.77 | | | | | | | | | | | | | | |
| 28050 | 3000 | 1236 | 39.83 | 1285 | 44.59 | 1331 | 49.45 | | | | | | | | | | | | | | |
| 29920 | 3200 | 1271 | 43.49 | 1319 | 48.47 | | | | | | | | | | | | | | | | |
| 31790 | 3400 | 1308 | 47.06 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I☐ CL. II☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SINGLE WIDTH
SINGLE INLET

# SIZE 8145

| SIZE 8145 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 926 |
| CLASS II | 1208 |

| | | |
|---|---|---|
| Wheel Diameter | 44 ½ inches | 1130 mm |
| Wheel Circumference | 11.65 feet | 3.551 m |
| Inlet Diameter/Area | 53 ½ inches sq./12.42 sq. ft. | 1359 mm/1.154 $m^2$ |
| Outlet Size/Area | 46 15/16 x 35 inches I.D./11.41 sq. ft. | 1192 x 889 mm/1.060 $m^2$ |
| Tip Speed | 11.65 x RPM ft./minute | 3.551 x RPM m/minute |
| Maximum BHP | 35.09 x (RPM 1000)$^3$ BHP | 26.17 x (RPM 1000)$^3$ kW |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 6846 | 600 | •217 | •0.36 | •245 | •0.50 | •275 | •0.67 | | | | | | | | | | | | | | |
| 7987 | 700 | 234 | 0.44 | 261 | 0.61 | 284 | 0.79 | •309 | •0.98 | 334 | 1.18 | | | | | | | | | | |
| 9128 | 800 | 252 | 0.53 | 277 | 0.73 | 300 | 0.93 | 320 | 1.13 | •341 | •1.34 | •364 | •1.56 | 385 | 1.79 | | | | | | |
| 10269 | 900 | 271 | 0.65 | 294 | 0.86 | 316 | 1.09 | 336 | 1.31 | 354 | 1.53 | 371 | 1.76 | •392 | •2.01 | 431 | 2.52 | | | | |
| 11410 | 1000 | 292 | 0.78 | 312 | 1.01 | 333 | 1.25 | 352 | 1.51 | 370 | 1.76 | 387 | 2.00 | 403 | 2.25 | •438 | •2.79 | 473 | 3.35 | | |
| 12551 | 1100 | 313 | 0.94 | 331 | 1.18 | 350 | 1.44 | 369 | 1.71 | 386 | 2.00 | 403 | 2.27 | 418 | 2.54 | 448 | 3.08 | •480 | •3.68 | 512 | 4.30 |
| 13692 | 1200 | 334 | 1.12 | 352 | 1.38 | 368 | 1.65 | 386 | 1.94 | 403 | 2.24 | 419 | 2.55 | 434 | 2.85 | 463 | 3.43 | 489 | 4.03 | •519 | •4.68 |
| 14833 | 1300 | 356 | 1.33 | 373 | 1.61 | 389 | 1.90 | 404 | 2.20 | 421 | 2.51 | 436 | 2.83 | 451 | 3.17 | 479 | 3.81 | 505 | 4.45 | 529 | 5.10 |
| 15974 | 1400 | 378 | 1.57 | 394 | 1.86 | 409 | 2.17 | 424 | 2.48 | 438 | 2.81 | 454 | 3.15 | 468 | 3.50 | 495 | 4.21 | 521 | 4.90 | 545 | 5.58 |
| 17115 | 1500 | 400 | 1.83 | 415 | 2.15 | 430 | 2.47 | 444 | 2.80 | 457 | 3.14 | 471 | 3.50 | 485 | 3.86 | 512 | 4.61 | 537 | 5.38 | 560 | 6.10 |
| 18256 | 1600 | 422 | 2.11 | 437 | 2.47 | 451 | 2.81 | 465 | 3.16 | 478 | 3.52 | 490 | 3.88 | 503 | 4.26 | 529 | 5.04 | 554 | 5.85 | 576 | 6.67 |
| 19397 | 1700 | 445 | 2.43 | 459 | 2.83 | 473 | 3.18 | 486 | 3.55 | 498 | 3.92 | 510 | 4.30 | 521 | 4.69 | 547 | 5.50 | 571 | 6.35 | 593 | 7.21 |
| 20538 | 1800 | 467 | 2.79 | 481 | 3.20 | 494 | 3.59 | 507 | 3.98 | 519 | 4.37 | 530 | 4.76 | 542 | 5.17 | 564 | 6.00 | 588 | 6.88 | 610 | 7.78 |
| 21679 | 1900 | 490 | 3.18 | 504 | 3.62 | 516 | 4.04 | 528 | 4.45 | 540 | 4.85 | 551 | 5.27 | 562 | 5.69 | 583 | 6.55 | 605 | 7.45 | 627 | 8.39 |
| 22820 | 2000 | 513 | 3.61 | 526 | 4.07 | 538 | 4.53 | 550 | 4.96 | 561 | 5.38 | 572 | 5.81 | 583 | 6.25 | 603 | 7.14 | 623 | 8.07 | 644 | 9.04 |
| 25102 | 2200 | 559 | 4.60 | 571 | 5.09 | 583 | 5.60 | 594 | 6.11 | 604 | 6.57 | 615 | 7.04 | 625 | 7.51 | 644 | 8.47 | 662 | 9.45 | 680 | 10.46 |
| 27384 | 2400 | 606 | 5.76 | 617 | 6.30 | 628 | 6.85 | 638 | 7.40 | 648 | 7.96 | 658 | 8.46 | 667 | 8.97 | 686 | 10.00 | 703 | 11.05 | 720 | 12.12 |
| 29666 | 2600 | 653 | 7.13 | 663 | 7.71 | 673 | 8.29 | 683 | 8.89 | 692 | 9.49 | 702 | 10.09 | 711 | 10.63 | 728 | 11.74 | 745 | 12.86 | 761 | 13.99 |
| 31948 | 2800 | 700 | 8.70 | 709 | 9.32 | 719 | 9.95 | 728 | 10.59 | 737 | 11.23 | 746 | 11.88 | 755 | 12.53 | 771 | 13.70 | 787 | 14.89 | 803 | 16.10 |
| 34230 | 3000 | 747 | 10.51 | 756 | 11.17 | 765 | 11.84 | 774 | 12.52 | 782 | 13.20 | 791 | 13.89 | 799 | 14.58 | 815 | 15.92 | 830 | 17.18 | 845 | 18.46 |
| 36512 | 3200 | 794 | 12.56 | 803 | 13.26 | 811 | 13.97 | 820 | 14.69 | 828 | 15.41 | 836 | 16.14 | 844 | 16.88 | 859 | 18.37 | 874 | 19.73 | 888 | 21.08 |
| 38794 | 3400 | 842 | 14.87 | 850 | 15.61 | 858 | 16.37 | 866 | 17.12 | 873 | 17.89 | 881 | 18.66 | 889 | 19.43 | 903 | 21.00 | 917 | 22.57 | 931 | 23.98 |
| 41076 | 3600 | 889 | 17.46 | 897 | 18.24 | 905 | 19.04 | 912 | 19.84 | 919 | 20.64 | 927 | 21.45 | 934 | 22.27 | 948 | 23.92 | 962 | 25.58 | 975 | 27.19 |
| 43358 | 3800 | 937 | 20.34 | 944 | 21.17 | 952 | 22.00 | 959 | 22.85 | 966 | 23.69 | 973 | 24.54 | 980 | 25.40 | 993 | 27.13 | 1006 | 28.87 | 1019 | 30.64 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 15974 | 1400 | 567 | 6.29 | •618 | •7.80 | 667 | 9.39 | | | | | | | | | | | | | | |
| 17115 | 1500 | 583 | 6.84 | 625 | 8.36 | 674 | 10.03 | 719 | 11.74 | | | | | | | | | | | | |
| 18256 | 1600 | 599 | 7.43 | 639 | 9.01 | •681 | •10.69 | 727 | 12.48 | 769 | 14.30 | | | | | | | | | | |
| 19397 | 1700 | 615 | 8.07 | 655 | 9.72 | 692 | 11.42 | •734 | •13.25 | 776 | 15.15 | 815 | 17.09 | | | | | | | | |
| 20538 | 1800 | 631 | 8.70 | 671 | 10.47 | 707 | 12.24 | 742 | 14.05 | •783 | •16.02 | 822 | 18.04 | 860 | 20.09 | | | | | | |
| 21679 | 1900 | 648 | 9.34 | 687 | 11.27 | 723 | 13.10 | 757 | 14.98 | 790 | 16.93 | •830 | •19.02 | 867 | 21.15 | 902 | 23.31 | | | | |
| 22820 | 2000 | 665 | 10.02 | 703 | 12.06 | 739 | 14.02 | 773 | 15.97 | 804 | 17.96 | 837 | 20.03 | •874 | •22.24 | 909 | 24.47 | 943 | 26.74 | 976 | 29.04 |
| 25102 | 2200 | 700 | 11.52 | 737 | 13.69 | 772 | 15.93 | 804 | 18.10 | 835 | 20.23 | 865 | 22.39 | 893 | 24.59 | •924 | •26.90 | •958 | •29.33 | 990 | 31.78 |
| 27384 | 2400 | 736 | 13.21 | 772 | 15.51 | 805 | 17.88 | 837 | 20.32 | 867 | 22.73 | 896 | 25.03 | 924 | 27.36 | 951 | 29.73 | 976 | 32.14 | •1005 | •34.66 |
| 29666 | 2600 | 776 | 15.15 | 807 | 17.53 | 840 | 20.04 | 871 | 22.61 | 900 | 25.24 | 928 | 27.92 | 956 | 30.39 | 982 | 32.90 | 1007 | 35.43 | 1032 | 38.00 |
| 31948 | 2800 | 818 | 17.33 | 846 | 19.82 | 875 | 22.42 | 905 | 25.13 | 934 | 27.89 | 962 | 30.71 | 988 | 33.59 | 1014 | 36.33 | 1039 | 39.01 | 1063 | 41.71 |
| 34230 | 3000 | 859 | 19.75 | 887 | 22.38 | 913 | 25.08 | 940 | 27.89 | 969 | 30.79 | 996 | 33.74 | 1022 | 36.74 | 1047 | 39.80 | 1071 | 42.87 | 1094 | 45.71 |
| 36512 | 3200 | 902 | 22.44 | 928 | 25.21 | 953 | 28.04 | 978 | 30.93 | 1004 | 33.93 | 1030 | 37.02 | 1056 | 40.16 | 1080 | 43.34 | 1104 | 46.58 | 1127 | 49.86 |
| 38794 | 3400 | 944 | 25.42 | 970 | 28.32 | 994 | 31.29 | 1018 | 34.31 | 1040 | 37.38 | 1065 | 40.58 | 1090 | 43.85 | 1114 | 47.17 | 1138 | 50.53 | 1160 | 53.94 |
| 41076 | 3600 | 988 | 28.69 | 1012 | 31.74 | 1036 | 34.84 | 1059 | 37.99 | 1081 | 41.19 | 1102 | 44.44 | 1125 | 47.83 | 1149 | 51.28 | 1172 | 54.78 | 1194 | 58.32 |
| 43358 | 3800 | 1031 | 32.28 | 1055 | 35.47 | 1078 | 38.70 | 1100 | 41.99 | 1121 | 45.33 | 1142 | 48.71 | 1162 | 52.14 | 1184 | 55.70 | 1207 | 59.33 | | |
| 45640 | 4000 | 1075 | 36.18 | 1098 | 39.53 | 1121 | 42.91 | 1142 | 46.33 | 1163 | 49.80 | 1183 | 53.32 | 1202 | 56.88 | | | | | | |
| 47922 | 4200 | 1119 | 40.27 | 1142 | 43.95 | 1163 | 47.47 | 1184 | 51.03 | 1204 | 54.63 | | | | | | | | | | |
| 50204 | 4400 | 1164 | 44.70 | 1186 | 48.74 | 1207 | 52.40 | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 27384 | 2400 | •1036 | •37.29 | 1095 | 42.64 | 1150 | 48.08 | | | | | | | | | | | | | | |
| 29666 | 2600 | 1055 | 40.60 | •1109 | •46.14 | 1164 | 51.89 | | | | | | | | | | | | | | |
| 31948 | 2800 | 1086 | 44.44 | 1130 | 50.00 | •1179 | •55.86 | | | | | | | | | | | | | | |
| 34230 | 3000 | 1117 | 48.58 | 1161 | 54.39 | 1203 | 60.32 | | | | | | | | | | | | | | |
| 36512 | 3200 | 1149 | 53.03 | 1193 | 59.12 | | | | | | | | | | | | | | | | |
| 38794 | 3400 | 1182 | 57.39 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/$m^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8149

SINGLE WIDTH
SINGLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

| | | |
|---|---|---|
| Wheel Diameter | 49 inches | 1245 mm |
| Wheel Circumference | 12.8 feet | 3.901 m |
| Inlet Diameter/Area | 58 ½ inches sq./15.02 sq. ft. | 1486 mm/1.395 $m^2$ |
| Outlet Size/Area | 51⅝ x 38 $^{13}/_{16}$ inches I.D./13.9 sq. ft. | 1311 x 986 mm/1.291 $m^2$ |
| Tip Speed | 12.8 x RPM ft./minute | 3.901 x RPM m/minute |
| Maximum BHP | 56.78 x (RPM 1000)$^3$ BHP | 42.34 x (RPM 1000)$^3$ kW |

| SIZE 8149 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 840 |
| CLASS II | 1097 |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 8346 | 600 | •198 | •0.44 | •223 | •0.62 | •250 | •0.82 | | | | | | | | | | | | | | |
| 9737 | 700 | 213 | 0.53 | 237 | 0.75 | 258 | 0.96 | •281 | •1.19 | 303 | 1.43 | | | | | | | | | | |
| 11128 | 800 | 229 | 0.65 | 252 | 0.89 | 273 | 1.14 | 291 | 1.38 | •310 | •1.63 | •331 | •1.91 | 350 | 2.18 | | | | | | |
| 12519 | 900 | 247 | 0.79 | 268 | 1.05 | 288 | 1.33 | 306 | 1.60 | 322 | 1.87 | 338 | 2.15 | •356 | •2.45 | 391 | 3.07 | | | | |
| 13910 | 1000 | 266 | 0.96 | 284 | 1.23 | 303 | 1.53 | 321 | 1.84 | 337 | 2.15 | 352 | 2.44 | 367 | 2.75 | •398 | •3.40 | 430 | 4.09 | | |
| 15301 | 1100 | 285 | 1.15 | 302 | 1.45 | 319 | 1.76 | 336 | 2.09 | 352 | 2.44 | 367 | 2.77 | 381 | 3.10 | 407 | 3.76 | •436 | •4.49 | 465 | 5.24 |
| 16692 | 1200 | 305 | 1.38 | 321 | 1.69 | 336 | 2.02 | 352 | 2.37 | 367 | 2.74 | 382 | 3.11 | 396 | 3.48 | 422 | 4.19 | 445 | 4.92 | •472 | •5.71 |
| 18083 | 1300 | 324 | 1.63 | 340 | 1.97 | 354 | 2.32 | 368 | 2.69 | 383 | 3.07 | 397 | 3.46 | 411 | 3.87 | 436 | 4.66 | 460 | 5.43 | 482 | 6.22 |
| 19474 | 1400 | 344 | 1.92 | 359 | 2.29 | 373 | 2.66 | 386 | 3.04 | 399 | 3.44 | 413 | 3.85 | 426 | 4.27 | 451 | 5.15 | 474 | 5.98 | 496 | 6.82 |
| 20865 | 1500 | 365 | 2.24 | 379 | 2.64 | 392 | 3.03 | 405 | 3.43 | 417 | 3.85 | 429 | 4.28 | 442 | 4.72 | 466 | 5.63 | 489 | 6.58 | 510 | 7.46 |
| 22256 | 1600 | 385 | 2.59 | 399 | 3.03 | 412 | 3.45 | 424 | 3.87 | 435 | 4.30 | 446 | 4.75 | 458 | 5.20 | 482 | 6.16 | 504 | 7.14 | 525 | 8.14 |
| 23647 | 1700 | 406 | 2.99 | 419 | 3.47 | 431 | 3.90 | 443 | 4.35 | 454 | 4.80 | 465 | 5.27 | 475 | 5.74 | 498 | 6.73 | 520 | 7.75 | 540 | 8.81 |
| 25038 | 1800 | 426 | 3.42 | 439 | 3.93 | 451 | 4.41 | 462 | 4.88 | 473 | 5.35 | 484 | 5.83 | 494 | 6.33 | 514 | 7.34 | 535 | 8.41 | 555 | 9.50 |
| 26429 | 1900 | 447 | 3.91 | 459 | 4.44 | 471 | 4.96 | 482 | 5.45 | 492 | 5.95 | 503 | 6.45 | 512 | 6.96 | 531 | 8.01 | 551 | 9.11 | 571 | 10.25 |
| 27820 | 2000 | 468 | 4.44 | 480 | 4.99 | 491 | 5.56 | 502 | 6.08 | 512 | 6.60 | 522 | 7.12 | 531 | 7.66 | 550 | 8.74 | 568 | 9.87 | 587 | 11.04 |
| 30602 | 2200 | 510 | 5.65 | 521 | 6.26 | 532 | 6.88 | 542 | 7.50 | 551 | 8.06 | 561 | 8.63 | 570 | 9.21 | 587 | 10.38 | 604 | 11.57 | 619 | 12.80 |
| 33384 | 2400 | 553 | 7.09 | 563 | 7.74 | 573 | 8.41 | 582 | 9.09 | 591 | 9.77 | 600 | 10.38 | 609 | 11.00 | 625 | 12.25 | 641 | 13.53 | 656 | 14.83 |
| 36166 | 2600 | 596 | 8.77 | 605 | 9.47 | 614 | 10.19 | 623 | 10.91 | 632 | 11.65 | 640 | 12.39 | 648 | 13.05 | 664 | 14.39 | 679 | 15.75 | 694 | 17.14 |
| 38948 | 2800 | 639 | 10.71 | 647 | 11.46 | 656 | 12.23 | 664 | 13.01 | 673 | 13.79 | 681 | 14.58 | 688 | 15.38 | 703 | 16.81 | 718 | 18.26 | 732 | 19.73 |
| 41730 | 3000 | 682 | 12.93 | 690 | 13.74 | 698 | 14.55 | 706 | 15.38 | 714 | 16.21 | 721 | 17.05 | 729 | 17.90 | 743 | 19.54 | 757 | 21.07 | 771 | 22.63 |
| 44512 | 3200 | 725 | 15.46 | 733 | 16.31 | 740 | 17.18 | 748 | 18.05 | 755 | 18.94 | 763 | 19.83 | 770 | 20.72 | 784 | 22.53 | 797 | 24.21 | 810 | 25.85 |
| 47294 | 3400 | 768 | 18.30 | 776 | 19.21 | 783 | 20.13 | 790 | 21.05 | 797 | 21.98 | 804 | 22.92 | 811 | 23.87 | 824 | 25.78 | 837 | 27.70 | 849 | 29.43 |
| 50076 | 3600 | 812 | 21.49 | 819 | 22.45 | 826 | 23.42 | 832 | 24.40 | 839 | 25.38 | 846 | 26.36 | 852 | 27.36 | 865 | 29.36 | 877 | 31.40 | 889 | 33.37 |
| 52858 | 3800 | 855 | 25.05 | 862 | 26.06 | 869 | 27.08 | 875 | 28.10 | 881 | 29.13 | 888 | 30.17 | 894 | 31.21 | 906 | 33.31 | 918 | 35.44 | 929 | 37.60 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 19474 | 1400 | 516 | 7.67 | •562 | •9.51 | 606 | 11.44 | | | | | | | | | | | | | | |
| 20865 | 1500 | 530 | 8.35 | 568 | 10.20 | 613 | 12.22 | 654 | 14.30 | | | | | | | | | | | | |
| 22256 | 1600 | 545 | 9.08 | 582 | 11.00 | •619 | •13.04 | 660 | 15.21 | 699 | 17.43 | | | | | | | | | | |
| 23647 | 1700 | 559 | 9.86 | 596 | 11.87 | 630 | 13.93 | •667 | •16.15 | 705 | 18.47 | 741 | 20.82 | | | | | | | | |
| 25038 | 1800 | 575 | 10.62 | 611 | 12.79 | 644 | 14.94 | 675 | 17.14 | •712 | •19.54 | 748 | 21.99 | 781 | 24.48 | | | | | | |
| 26429 | 1900 | 590 | 11.41 | 625 | 13.77 | 658 | 16.00 | 689 | 18.29 | 718 | 20.64 | •754 | •23.19 | 788 | 25.78 | 820 | 28.41 | | | | |
| 27820 | 2000 | 606 | 12.25 | 640 | 14.72 | 673 | 17.13 | 703 | 19.50 | 732 | 21.92 | 761 | 24.42 | •795 | •27.11 | 827 | 29.83 | 857 | 32.59 | 887 | 35.38 |
| 30602 | 2200 | 637 | 14.08 | 671 | 16.72 | 703 | 19.45 | 732 | 22.11 | 760 | 24.70 | 787 | 27.33 | 813 | 30.01 | •840 | •32.80 | •871 | •35.75 | 900 | 38.74 |
| 33384 | 2400 | 671 | 16.16 | 703 | 18.95 | 733 | 21.84 | 762 | 24.81 | 790 | 27.77 | 816 | 30.57 | 841 | 33.41 | 865 | 36.29 | 888 | 39.22 | •913 | •42.26 |
| 36166 | 2600 | 708 | 18.55 | 735 | 21.44 | 765 | 24.49 | 793 | 27.62 | 820 | 30.83 | 845 | 34.10 | 870 | 37.12 | 894 | 40.17 | 917 | 43.26 | 939 | 46.39 |
| 38948 | 2800 | 745 | 21.22 | 771 | 24.26 | 797 | 27.42 | 825 | 30.71 | 851 | 34.08 | 876 | 37.51 | 900 | 41.01 | 923 | 44.39 | 945 | 47.64 | 967 | 50.93 |
| 41730 | 3000 | 784 | 24.20 | 808 | 27.41 | 832 | 30.69 | 857 | 34.10 | 882 | 37.63 | 907 | 41.22 | 930 | 44.88 | 953 | 48.60 | 975 | 52.37 | 996 | 55.84 |
| 44512 | 3200 | 822 | 27.51 | 846 | 30.88 | 869 | 34.33 | 891 | 37.84 | 914 | 41.49 | 938 | 45.25 | 961 | 49.07 | 984 | 52.95 | 1005 | 56.88 | 1026 | 60.87 |
| 47294 | 3400 | 861 | 31.17 | 884 | 34.71 | 907 | 38.32 | 928 | 41.99 | 948 | 45.73 | 970 | 49.61 | 993 | 53.60 | 1015 | 57.64 | 1036 | 61.73 | 1057 | 65.88 |
| 50076 | 3600 | 901 | 35.20 | 923 | 38.91 | 945 | 42.68 | 965 | 46.52 | 985 | 50.42 | 1004 | 54.38 | 1025 | 58.48 | 1047 | 62.69 | 1067 | 66.94 | 1088 | 71.25 |
| 52858 | 3800 | 941 | 39.62 | 962 | 43.50 | 983 | 47.44 | 1003 | 51.44 | 1022 | 55.50 | 1041 | 59.62 | 1059 | 63.80 | 1079 | 68.11 | | | | |
| 55640 | 4000 | 981 | 44.39 | 1002 | 48.50 | 1022 | 52.61 | 1041 | 56.78 | 1060 | 61.00 | 1078 | 65.28 | 1096 | 69.62 | | | | | | |
| 58422 | 4200 | 1021 | 49.42 | 1042 | 53.94 | 1061 | 58.22 | 1080 | 62.55 | | | | | | | | | | | | |
| 61204 | 4400 | 1062 | 54.87 | 1082 | 59.83 | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 33384 | 2400 | •941 | •45.47 | 995 | 51.97 | 1045 | 58.59 | | | | | | | | | | | | | | |
| 36166 | 2600 | 960 | 49.55 | •1008 | •56.25 | 1058 | 63.25 | | | | | | | | | | | | | | |
| 38948 | 2800 | 988 | 54.25 | 1029 | 61.01 | •1072 | •68.10 | | | | | | | | | | | | | | |
| 41730 | 3000 | 1017 | 59.33 | 1057 | 66.41 | 1095 | 73.62 | | | | | | | | | | | | | | |
| 44512 | 3200 | 1046 | 64.79 | 1086 | 72.20 | | | | | | | | | | | | | | | | |
| 47294 | 3400 | 1076 | 70.08 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I☐ CL. II☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8154

MAXIMUM CLASS OPERATING RPM

FAN TEMPERATURE

| SIZE 8154 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 759 |
| CLASS II | 991 |

SINGLE WIDTH
SINGLE INLET

| | | |
|---|---|---|
| Wheel Diameter | 54 ¼ inches | 1378 mm |
| Wheel Circumference | 14.2 feet | 4.328 m |
| Inlet Diameter/Area | 65 inches sq./18.49 sq. ft. | 1651 mm/1.718 $m^2$ |
| Outlet Size/Area | 57 ¼ x 42 ¾ inches I.D./16.98 sq. ft. | 1454 x 1086 mm/1.577 $m^2$ |
| Tip Speed | 14.2 x RPM ft./minute | 4.328 x RPM m/minute |
| Maximum BHP | 94.51 x (RPM 1000)$^3$ BHP | 70.48 x (RPM 1000)$^3$ kW |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 10188 | 600 | •178 | •0.53 | •201 | •0.75 | •225 | •1.00 | | | | | | | | | | | | | | |
| 11886 | 700 | 192 | 0.65 | 214 | 0.91 | 233 | 1.17 | •254 | •1.45 | 274 | 1.75 | | | | | | | | | | |
| 13584 | 800 | 207 | 0.79 | 227 | 1.09 | 246 | 1.39 | 263 | 1.68 | •280 | •1.99 | •298 | •2.33 | 316 | 2.67 | | | | | | |
| 15282 | 900 | 222 | 0.96 | 241 | 1.28 | 259 | 1.62 | 276 | 1.95 | 291 | 2.28 | 305 | 2.62 | •322 | •2.99 | 353 | 3.75 | | | | |
| 16980 | 1000 | 239 | 1.17 | 256 | 1.50 | 273 | 1.87 | 289 | 2.25 | 304 | 2.62 | 318 | 2.98 | 331 | 3.35 | •359 | •4.15 | 388 | 4.99 | | |
| 18678 | 1100 | 257 | 1.40 | 272 | 1.76 | 287 | 2.15 | 303 | 2.55 | 317 | 2.97 | 331 | 3.38 | 343 | 3.78 | 367 | 4.59 | •394 | •5.48 | 420 | 6.40 |
| 20376 | 1200 | 274 | 1.67 | 289 | 2.06 | 302 | 2.46 | 317 | 2.89 | 331 | 3.34 | 344 | 3.79 | 357 | 4.24 | 380 | 5.11 | 402 | 6.01 | •426 | •6.97 |
| 22074 | 1300 | 292 | 1.98 | 306 | 2.40 | 319 | 2.83 | 332 | 3.27 | 345 | 3.74 | 358 | 4.22 | 370 | 4.71 | 393 | 5.68 | 414 | 6.62 | 434 | 7.59 |
| 23772 | 1400 | 310 | 2.34 | 324 | 2.78 | 336 | 3.23 | 348 | 3.70 | 360 | 4.18 | 372 | 4.69 | 384 | 5.21 | 406 | 6.27 | 427 | 7.29 | 447 | 8.31 |
| 25470 | 1500 | 328 | 2.72 | 341 | 3.21 | 353 | 3.69 | 365 | 4.18 | 375 | 4.68 | 387 | 5.21 | 398 | 5.75 | 420 | 6.86 | 441 | 8.02 | 460 | 9.09 |
| 27168 | 1600 | 347 | 3.15 | 359 | 3.68 | 371 | 4.19 | 382 | 4.71 | 392 | 5.24 | 402 | 5.78 | 413 | 6.34 | 434 | 7.50 | 454 | 8.71 | 473 | 9.92 |
| 28866 | 1700 | 365 | 3.63 | 377 | 4.21 | 388 | 4.74 | 399 | 5.29 | 409 | 5.84 | 419 | 6.41 | 428 | 6.98 | 449 | 8.20 | 468 | 9.45 | 487 | 10.74 |
| 30564 | 1800 | 384 | 4.16 | 395 | 4.78 | 406 | 5.36 | 416 | 5.93 | 426 | 6.51 | 436 | 7.10 | 445 | 7.70 | 463 | 8.94 | 482 | 10.25 | 501 | 11.58 |
| 32262 | 1900 | 403 | 4.74 | 413 | 5.39 | 424 | 6.03 | 434 | 6.63 | 443 | 7.23 | 453 | 7.85 | 461 | 8.47 | 478 | 9.75 | 497 | 11.10 | 515 | 12.49 |
| 33960 | 2000 | 421 | 5.38 | 432 | 6.06 | 442 | 6.76 | 452 | 7.39 | 461 | 8.02 | 470 | 8.66 | 478 | 9.31 | 495 | 10.64 | 511 | 12.02 | 529 | 13.45 |
| 37356 | 2200 | 459 | 6.85 | 469 | 7.59 | 479 | 8.35 | 488 | 9.11 | 496 | 9.79 | 505 | 10.49 | 513 | 11.19 | 529 | 12.62 | 544 | 14.08 | 558 | 15.58 |
| 40752 | 2400 | 498 | 8.59 | 507 | 9.40 | 515 | 10.21 | 524 | 11.04 | 532 | 11.86 | 540 | 12.61 | 548 | 13.36 | 563 | 14.90 | 577 | 16.46 | 591 | 18.05 |
| 44148 | 2600 | 536 | 10.63 | 544 | 11.49 | 553 | 12.37 | 561 | 13.25 | 569 | 14.15 | 576 | 15.04 | 584 | 15.85 | 598 | 17.49 | 612 | 19.15 | 625 | 20.85 |
| 47544 | 2800 | 575 | 12.98 | 583 | 13.90 | 590 | 14.84 | 598 | 15.78 | 605 | 16.74 | 613 | 17.71 | 620 | 18.68 | 633 | 20.42 | 646 | 22.19 | 659 | 23.99 |
| 50940 | 3000 | 613 | 15.67 | 621 | 16.66 | 628 | 17.65 | 635 | 18.66 | 642 | 19.68 | 649 | 20.70 | 656 | 21.74 | 669 | 23.73 | 682 | 25.60 | 694 | 27.50 |
| 54336 | 3200 | 652 | 18.73 | 659 | 19.78 | 666 | 20.84 | 673 | 21.90 | 680 | 22.98 | 686 | 24.06 | 693 | 25.16 | 705 | 27.37 | 717 | 29.41 | 729 | 31.41 |
| 57732 | 3400 | 691 | 22.18 | 698 | 23.29 | 705 | 24.41 | 711 | 25.54 | 717 | 26.67 | 724 | 27.82 | 730 | 28.97 | 742 | 31.30 | 753 | 33.64 | 765 | 35.75 |
| 61128 | 3600 | 730 | 26.04 | 737 | 27.21 | 743 | 28.39 | 749 | 29.58 | 755 | 30.78 | 761 | 31.99 | 767 | 33.20 | 778 | 35.65 | 790 | 38.13 | 800 | 40.53 |
| 64524 | 3800 | 769 | 30.34 | 776 | 31.58 | 781 | 32.82 | 787 | 34.07 | 793 | 35.33 | 799 | 36.60 | 804 | 37.87 | 815 | 40.44 | 826 | 43.04 | 837 | 45.67 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 23772 | 1400 | 466 | 9.36 | •507 | •11.61 | 547 | 13.97 | | | | | | | | | | | | | | |
| 25470 | 1500 | 478 | 10.18 | 513 | 12.44 | 553 | 14.92 | 590 | 17.46 | | | | | | | | | | | | |
| 27168 | 1600 | 491 | 11.07 | 525 | 13.42 | •559 | •15.91 | 596 | 18.57 | 631 | 21.28 | | | | | | | | | | |
| 28866 | 1700 | 504 | 12.02 | 537 | 14.47 | 568 | 17.00 | •602 | •19.72 | 636 | 22.55 | 669 | 25.43 | | | | | | | | |
| 30564 | 1800 | 518 | 12.95 | 550 | 15.59 | 581 | 18.22 | 609 | 20.91 | •642 | •23.85 | 675 | 26.85 | 705 | 29.89 | | | | | | |
| 32262 | 1900 | 532 | 13.91 | 564 | 16.78 | 593 | 19.51 | 621 | 22.30 | 648 | 25.19 | •681 | •28.31 | 711 | 31.47 | 740 | 34.68 | | | | |
| 33960 | 2000 | 546 | 14.92 | 577 | 17.95 | 607 | 20.88 | 634 | 23.77 | 660 | 26.73 | 687 | 29.81 | •717 | •33.09 | 746 | 36.42 | 774 | 39.79 | 801 | 43.21 |
| 37356 | 2200 | 574 | 17.15 | 605 | 20.38 | 633 | 23.71 | 660 | 26.95 | 686 | 30.11 | 710 | 33.33 | 733 | 36.61 | •758 | •40.04 | •786 | •43.65 | 812 | 47.29 |
| 40752 | 2400 | 604 | 19.67 | 633 | 23.09 | 661 | 26.62 | 687 | 30.25 | 712 | 33.84 | 736 | 37.26 | 758 | 40.74 | 780 | 44.26 | 801 | 47.84 | •824 | •51.58 |
| 44148 | 2600 | 637 | 22.57 | 662 | 26.11 | 689 | 29.84 | 715 | 33.67 | 739 | 37.58 | 762 | 41.57 | 784 | 45.25 | 806 | 48.97 | 827 | 52.75 | 847 | 56.57 |
| 47544 | 2800 | 671 | 25.81 | 695 | 29.53 | 718 | 33.39 | 743 | 37.42 | 767 | 41.53 | 789 | 45.73 | 811 | 50.00 | 832 | 54.10 | 852 | 58.07 | 872 | 62.09 |
| 50940 | 3000 | 706 | 29.43 | 728 | 33.35 | 749 | 37.36 | 772 | 41.53 | 795 | 45.84 | 817 | 50.23 | 839 | 54.70 | 859 | 59.25 | 879 | 63.84 | 898 | 68.06 |
| 54336 | 3200 | 740 | 33.44 | 762 | 37.56 | 783 | 41.77 | 803 | 46.06 | 824 | 50.53 | 846 | 55.13 | 867 | 59.79 | 887 | 64.53 | 906 | 69.34 | 925 | 74.22 |
| 57732 | 3400 | 775 | 37.88 | 796 | 42.20 | 816 | 46.61 | 836 | 51.10 | 854 | 55.67 | 875 | 60.43 | 895 | 65.29 | 915 | 70.23 | 934 | 75.24 | 952 | 80.31 |
| 61128 | 3600 | 811 | 42.76 | 831 | 47.29 | 851 | 51.90 | 869 | 56.59 | 887 | 61.36 | 905 | 66.20 | 924 | 71.22 | 943 | 76.36 | 962 | 81.57 | 980 | 86.83 |
| 64524 | 3800 | 847 | 48.12 | 866 | 52.86 | 885 | 57.67 | 903 | 62.56 | 921 | 67.53 | 938 | 72.56 | 954 | 77.66 | 972 | 82.95 | 991 | 88.35 | | |
| 67920 | 4000 | 883 | 53.93 | 902 | 58.92 | 920 | 63.94 | 938 | 69.04 | 955 | 74.20 | 971 | 79.43 | 987 | 84.73 | | | | | | |
| 71316 | 4200 | 919 | 60.02 | 938 | 65.51 | 955 | 70.74 | 972 | 76.04 | 989 | 81.40 | | | | | | | | | | |
| 74712 | 4400 | 956 | 66.63 | 974 | 72.66 | 991 | 78.09 | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 40752 | 2400 | •850 | •55.50 | 898 | 63.45 | 944 | 71.54 | | | | | | | | | | | | | | |
| 44148 | 2600 | 866 | 60.44 | •910 | •68.66 | 955 | 77.22 | | | | | | | | | | | | | | |
| 47544 | 2800 | 891 | 66.16 | 928 | 74.42 | •967 | •83.13 | | | | | | | | | | | | | | |
| 50940 | 3000 | 917 | 72.32 | 953 | 80.98 | 987 | 89.79 | | | | | | | | | | | | | | |
| 54336 | 3200 | 943 | 78.96 | 979 | 88.01 | | | | | | | | | | | | | | | | |
| 57732 | 3400 | 970 | 85.45 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/$m^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8118

DOUBLE WIDTH
DOUBLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

| | | |
|---|---|---|
| Wheel Diameter | 18 ¼ inches | 464 mm |
| Wheel Circumference | 4.78 feet | 1.457 m |
| Inlet Diameter/Area | 20 3/16 inches dia./4.36 sq. ft. | 513 mm/.4050 $m^2$ |
| Outlet Size/Area | 19 3/16 x 25 5/8 inches I.D./3.39 sq. ft. | 484 x 651 mm/.3149 $m^2$ |
| Tip Speed | 4.78 x RPM ft./minute | 1.457 x RPM m/minute |
| Maximum BHP | .85 x (RPM 1000)$^3$ BHP | .6338 x (RPM 1000)$^3$ kW |

| SIZE 8118 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 2228 |
| CLASS II | 2904 |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 2034 | 600 | •508 | •0.11 | •581 | •0.16 | 665 | 0.22 | | | | | | | | | | | | | | |
| 2373 | 700 | 547 | 0.14 | 609 | 0.19 | •672 | •0.25 | 744 | 0.32 | 811 | 0.40 | | | | | | | | | | |
| 2712 | 800 | 588 | 0.17 | 648 | 0.23 | 700 | 0.29 | •753 | •0.35 | 816 | 0.43 | 879 | 0.52 | 935 | 0.60 | | | | | | |
| 3051 | 900 | 631 | 0.20 | 688 | 0.27 | 738 | 0.34 | 785 | 0.40 | •832 | •0.47 | 886 | 0.56 | 941 | 0.65 | 1046 | 0.85 | | | | |
| 3390 | 1000 | 677 | 0.24 | 729 | 0.32 | 778 | 0.39 | 823 | 0.47 | 865 | 0.54 | •906 | •0.62 | •951 | •0.70 | 1052 | 0.91 | 1148 | 1.13 | | |
| 3729 | 1100 | 724 | 0.29 | 772 | 0.37 | 819 | 0.45 | 862 | 0.54 | 903 | 0.62 | 942 | 0.70 | 978 | 0.78 | 1061 | 0.97 | 1153 | 1.20 | 1242 | 1.44 |
| 4068 | 1200 | 772 | 0.35 | 818 | 0.43 | 861 | 0.52 | 903 | 0.61 | 943 | 0.70 | 980 | 0.79 | 1016 | 0.88 | •1084 | •1.06 | 1162 | 1.27 | 1245 | 1.52 |
| 4407 | 1300 | 821 | 0.41 | 864 | 0.50 | 904 | 0.60 | 945 | 0.69 | 983 | 0.79 | 1020 | 0.89 | 1055 | 0.98 | 1120 | 1.17 | •1183 | •1.37 | 1255 | 1.60 |
| 4746 | 1400 | 870 | 0.48 | 912 | 0.58 | 951 | 0.68 | 987 | 0.78 | 1025 | 0.89 | 1060 | 0.99 | 1094 | 1.10 | 1158 | 1.30 | 1217 | 1.50 | •1277 | •1.72 |
| 5085 | 1500 | 921 | 0.56 | 960 | 0.67 | 997 | 0.77 | 1032 | 0.88 | 1067 | 0.99 | 1102 | 1.10 | 1135 | 1.22 | 1197 | 1.44 | 1255 | 1.66 | 1310 | 1.88 |
| 5424 | 1600 | 972 | 0.65 | 1009 | 0.76 | 1045 | 0.87 | 1079 | 0.99 | 1111 | 1.10 | 1144 | 1.22 | 1176 | 1.34 | 1237 | 1.59 | 1294 | 1.82 | 1348 | 2.05 |
| 5763 | 1700 | 1024 | 0.75 | 1058 | 0.87 | 1093 | 0.99 | 1126 | 1.11 | 1157 | 1.23 | 1187 | 1.35 | 1218 | 1.48 | 1278 | 1.73 | 1334 | 1.99 | 1387 | 2.24 |
| 6102 | 1800 | 1076 | 0.86 | 1109 | 0.99 | 1142 | 1.11 | 1173 | 1.24 | 1204 | 1.36 | 1233 | 1.49 | 1261 | 1.63 | 1320 | 1.89 | 1374 | 2.17 | 1426 | 2.44 |
| 6441 | 1900 | 1128 | 0.99 | 1160 | 1.12 | 1191 | 1.25 | 1222 | 1.38 | 1251 | 1.51 | 1280 | 1.65 | 1307 | 1.79 | 1362 | 2.06 | 1415 | 2.35 | 1466 | 2.64 |
| 6780 | 2000 | 1181 | 1.12 | 1211 | 1.26 | 1240 | 1.40 | 1270 | 1.53 | 1299 | 1.67 | 1327 | 1.81 | 1353 | 1.96 | 1404 | 2.25 | 1457 | 2.54 | 1507 | 2.84 |
| 7458 | 2200 | 1287 | 1.43 | 1315 | 1.58 | 1342 | 1.73 | 1369 | 1.88 | 1396 | 2.03 | 1422 | 2.19 | 1447 | 2.34 | 1496 | 2.65 | 1542 | 2.98 | 1590 | 3.30 |
| 8136 | 2400 | 1393 | 1.79 | 1420 | 1.96 | 1445 | 2.12 | 1470 | 2.29 | 1494 | 2.45 | 1519 | 2.62 | 1543 | 2.78 | 1590 | 3.12 | 1634 | 3.46 | 1676 | 3.81 |
| 8814 | 2600 | 1501 | 2.22 | 1525 | 2.39 | 1549 | 2.57 | 1573 | 2.75 | 1595 | 2.93 | 1617 | 3.11 | 1640 | 3.29 | 1685 | 3.65 | 1727 | 4.01 | 1768 | 4.39 |
| 9492 | 2800 | 1609 | 2.71 | 1632 | 2.90 | 1654 | 3.09 | 1676 | 3.28 | 1698 | 3.47 | 1719 | 3.67 | 1739 | 3.86 | 1782 | 4.25 | 1822 | 4.63 | 1861 | 5.03 |
| 10170 | 3000 | 1717 | 3.28 | 1739 | 3.48 | 1760 | 3.68 | 1781 | 3.88 | 1801 | 4.09 | 1821 | 4.29 | 1840 | 4.50 | 1879 | 4.92 | 1919 | 5.33 | 1956 | 5.74 |
| 10848 | 3200 | 1826 | 3.92 | 1846 | 4.13 | 1866 | 4.35 | 1886 | 4.56 | 1905 | 4.78 | 1924 | 5.00 | 1943 | 5.22 | 1979 | 5.66 | 2016 | 6.10 | 2052 | 6.54 |
| 11526 | 3400 | 1935 | 4.64 | 1954 | 4.87 | 1973 | 5.09 | 1992 | 5.32 | 2010 | 5.55 | 2028 | 5.78 | 2046 | 6.02 | 2081 | 6.49 | 2115 | 6.96 | 2149 | 7.42 |
| 12204 | 3600 | 2044 | 5.45 | 2062 | 5.69 | 2081 | 5.93 | 2098 | 6.17 | 2116 | 6.41 | 2133 | 6.66 | 2150 | 6.90 | 2183 | 7.40 | 2215 | 7.90 | 2248 | 8.39 |
| 12882 | 3800 | 2154 | 6.36 | 2171 | 6.61 | 2188 | 6.86 | 2205 | 7.11 | 2222 | 7.37 | 2238 | 7.62 | 2255 | 7.88 | 2286 | 8.40 | 2317 | 8.92 | 2347 | 9.45 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 4068 | 1200 | 1328 | 1.78 | | | | | | | | | | | | | | | | | | |
| 4407 | 1300 | 1332 | 1.87 | 1483 | 2.44 | | | | | | | | | | | | | | | | |
| 4746 | 1400 | 1343 | 1.97 | 1487 | 2.55 | 1620 | 3.16 | | | | | | | | | | | | | | |
| 5085 | 1500 | •1366 | •2.11 | 1493 | 2.67 | 1627 | 3.31 | 1748 | 3.95 | | | | | | | | | | | | |
| 5424 | 1600 | 1399 | 2.28 | •1505 | •2.80 | 1630 | 3.44 | 1757 | 4.14 | 1868 | 4.82 | | | | | | | | | | |
| 5763 | 1700 | 1437 | 2.48 | 1533 | 2.99 | 1642 | 3.59 | 1760 | 4.29 | 1877 | 5.04 | 1981 | 5.76 | | | | | | | | |
| 6102 | 1800 | 1475 | 2.69 | 1568 | 3.22 | •1661 | •3.78 | 1769 | 4.46 | 1880 | 5.21 | 1991 | 6.00 | 2089 | 6.77 | | | | | | |
| 6441 | 1900 | 1515 | 2.92 | 1606 | 3.46 | 1690 | 4.03 | •1781 | •4.65 | 1888 | 5.40 | 1994 | 6.20 | 2098 | 7.04 | 2192 | 7.85 | | | | |
| 6780 | 2000 | 1554 | 3.15 | 1644 | 3.73 | 1727 | 4.31 | 1810 | 4.92 | •1900 | •5.61 | 2000 | 6.40 | 2101 | 7.25 | 2200 | 8.13 | 2292 | 9.00 | | |
| 7458 | 2200 | 1636 | 3.63 | 1723 | 4.30 | 1804 | 4.93 | 1880 | 5.56 | 1952 | 6.21 | •2031 | •6.93 | 2119 | 7.74 | 2209 | 8.61 | 2301 | 9.55 | 2392 | 10.51 |
| 8136 | 2400 | 1720 | 4.16 | 1804 | 4.88 | 1883 | 5.62 | 1957 | 6.30 | 2028 | 6.99 | 2095 | 7.69 | •2164 | •8.43 | •2235 | •9.21 | 2319 | 10.13 | 2401 | 11.09 |
| 8814 | 2600 | 1807 | 4.76 | 1887 | 5.53 | 1964 | 6.31 | 2036 | 7.11 | 2105 | 7.84 | 2171 | 8.58 | 2234 | 9.34 | 2295 | 10.11 | •2361 | •10.93 | •2426 | •11.78 |
| 9492 | 2800 | 1899 | 5.43 | 1972 | 6.24 | 2047 | 7.07 | 2117 | 7.91 | 2184 | 8.77 | 2249 | 9.56 | 2311 | 10.36 | 2370 | 11.17 | 2428 | 11.98 | 2484 | 12.82 |
| 10170 | 3000 | 1993 | 6.17 | 2062 | 7.03 | 2131 | 7.90 | 2200 | 8.79 | 2265 | 9.69 | 2328 | 10.61 | 2389 | 11.47 | 2447 | 12.32 | 2504 | 13.18 | 2558 | 14.05 |
| 10848 | 3200 | 2087 | 6.99 | 2155 | 7.89 | 2219 | 8.81 | 2284 | 9.75 | 2348 | 10.70 | 2409 | 11.66 | 2468 | 12.63 | 2525 | 13.58 | 2581 | 14.48 | 2635 | 15.39 |
| 11526 | 3400 | 2183 | 7.89 | 2249 | 8.84 | 2311 | 9.81 | 2370 | 10.79 | 2432 | 11.78 | 2492 | 12.79 | 2550 | 13.81 | 2606 | 14.84 | 2660 | 15.87 | 2713 | 16.83 |
| 12204 | 3600 | 2280 | 8.88 | 2344 | 9.88 | 2404 | 10.89 | 2461 | 11.92 | 2517 | 12.97 | 2576 | 14.01 | 2632 | 15.08 | 2687 | 16.15 | 2740 | 17.24 | 2792 | 18.34 |
| 12882 | 3800 | 2378 | 9.97 | 2440 | 11.01 | 2498 | 12.07 | 2554 | 13.14 | 2608 | 14.23 | 2660 | 15.34 | 2716 | 16.44 | 2770 | 17.56 | 2822 | 18.69 | 2873 | 19.84 |
| 13560 | 4000 | 2477 | 11.16 | 2536 | 12.24 | 2593 | 13.34 | 2648 | 14.46 | 2700 | 15.60 | 2751 | 16.75 | 2801 | 17.91 | 2854 | 19.07 | | | | |
| 14238 | 4200 | 2579 | 12.43 | 2634 | 13.58 | 2689 | 14.73 | 2742 | 15.89 | 2794 | 17.07 | 2843 | 18.26 | 2891 | 19.47 | | | | | | |
| 14916 | 4400 | 2681 | 13.81 | 2733 | 15.03 | 2786 | 16.22 | 2838 | 17.43 | 2888 | 18.65 | | | | | | | | | | |
| 15594 | 4600 | 2783 | 15.31 | 2833 | 16.58 | 2884 | 17.83 | | | | | | | | | | | | | | |
| 16272 | 4800 | 2887 | 16.92 | | | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 7458 | 2200 | 2479 | 11.50 | | | | | | | | | | | | | | | | | | |
| 8136 | 2400 | 2485 | 12.09 | 2650 | 14.20 | 2796 | 16.21 | | | | | | | | | | | | | | |
| 8814 | 2600 | 2504 | 12.79 | 2657 | 14.88 | 2812 | 17.14 | | | | | | | | | | | | | | |
| 9492 | 2800 | •2546 | •13.72 | 2678 | 15.70 | 2819 | 17.92 | | | | | | | | | | | | | | |
| 10170 | 3000 | 2611 | 14.93 | •2722 | •16.79 | •2843 | •18.86 | | | | | | | | | | | | | | |
| 10848 | 3200 | 2687 | 16.30 | 2787 | 18.16 | 2891 | 20.14 | | | | | | | | | | | | | | |
| 11526 | 3400 | 2764 | 17.78 | 2863 | 19.73 | | | | | | | | | | | | | | | | |
| 12204 | 3600 | 2842 | 19.38 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I☐ CL. II☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8120

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

DOUBLE WIDTH
DOUBLE INLET

| SIZE 8120 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 2033 |
| CLASS II | 2650 |

| | | |
|---|---|---|
| Wheel Diameter | 20 inches | 508 mm |
| Wheel Circumference | 5.24 feet | 1.597 m |
| Inlet Diameter/Area | $21\frac{15}{16}$ inches dia./5.16 sq. ft. | 557 mm/.4794 $m^2$ |
| Outlet Size/Area | 21 x 28 $\frac{7}{16}$ inches I.D./4.15 sq. ft. | 533 x 722 mm/.3855 $m^2$ |
| Tip Speed | 5.24 x RPM ft./minute | 1.597 x RPM m/minute |
| Maximum BHP | 1.34 x (RPM 1000)$^3$ BHP | .9992 x (RPM 1000)$^3$ kW |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 2490 | 600 | •468 | •0.14 | •532 | •0.19 | 607 | 0.27 | | | | | | | | | | | | | | |
| 2905 | 700 | 504 | 0.17 | 560 | 0.23 | •615 | •0.30 | 679 | 0.39 | 742 | 0.48 | | | | | | | | | | |
| 3320 | 800 | 543 | 0.21 | 596 | 0.28 | 644 | 0.35 | •691 | •0.43 | 746 | 0.52 | 803 | 0.63 | 855 | 0.74 | | | | | | |
| 3735 | 900 | 583 | 0.25 | 634 | 0.33 | 680 | 0.42 | 722 | 0.50 | •763 | •0.58 | •810 | •0.68 | 860 | 0.79 | 957 | 1.04 | | | | |
| 4150 | 1000 | 626 | 0.30 | 673 | 0.39 | 717 | 0.49 | 758 | 0.58 | 796 | 0.67 | 832 | 0.76 | •871 | •0.86 | 961 | 1.10 | 1049 | 1.37 | | |
| 4565 | 1100 | 670 | 0.37 | 713 | 0.46 | 755 | 0.56 | 795 | 0.67 | 832 | 0.76 | 867 | 0.86 | 900 | 0.96 | •971 | •1.18 | 1052 | 1.45 | 1134 | 1.75 |
| 4980 | 1200 | 715 | 0.43 | 756 | 0.54 | 795 | 0.65 | 833 | 0.76 | 869 | 0.87 | 903 | 0.97 | 935 | 1.08 | 996 | 1.30 | •1063 | •1.55 | 1137 | 1.84 |
| 5395 | 1300 | 760 | 0.51 | 800 | 0.63 | 836 | 0.74 | 872 | 0.86 | 907 | 0.98 | 940 | 1.10 | 971 | 1.21 | 1030 | 1.44 | 1087 | 1.68 | •1148 | •1.95 |
| 5810 | 1400 | 806 | 0.61 | 844 | 0.72 | 879 | 0.85 | 912 | 0.97 | 946 | 1.10 | 978 | 1.23 | 1008 | 1.36 | 1066 | 1.61 | 1120 | 1.85 | 1172 | 2.12 |
| 6225 | 1500 | 854 | 0.71 | 889 | 0.83 | 923 | 0.96 | 954 | 1.09 | 985 | 1.23 | 1016 | 1.36 | 1046 | 1.50 | 1103 | 1.78 | 1156 | 2.04 | 1205 | 2.31 |
| 6640 | 1600 | 901 | 0.82 | 935 | 0.96 | 967 | 1.09 | 998 | 1.23 | 1027 | 1.37 | 1056 | 1.52 | 1085 | 1.66 | 1140 | 1.96 | 1192 | 2.25 | 1241 | 2.53 |
| 7055 | 1700 | 950 | 0.95 | 981 | 1.09 | 1012 | 1.23 | 1042 | 1.38 | 1070 | 1.53 | 1097 | 1.68 | 1124 | 1.83 | 1179 | 2.14 | 1229 | 2.46 | 1277 | 2.76 |
| 7470 | 1800 | 998 | 1.09 | 1028 | 1.24 | 1057 | 1.39 | 1086 | 1.54 | 1114 | 1.70 | 1140 | 1.86 | 1165 | 2.02 | 1217 | 2.34 | 1267 | 2.68 | 1314 | 3.01 |
| 7885 | 1900 | 1047 | 1.24 | 1075 | 1.40 | 1103 | 1.56 | 1131 | 1.72 | 1158 | 1.89 | 1183 | 2.05 | 1208 | 2.22 | 1257 | 2.56 | 1305 | 2.90 | 1351 | 3.26 |
| 8300 | 2000 | 1096 | 1.41 | 1123 | 1.58 | 1150 | 1.75 | 1176 | 1.92 | 1202 | 2.09 | 1227 | 2.26 | 1251 | 2.43 | 1297 | 2.79 | 1344 | 3.15 | 1390 | 3.52 |
| 9130 | 2200 | 1195 | 1.80 | 1220 | 1.99 | 1245 | 2.17 | 1268 | 2.36 | 1293 | 2.54 | 1316 | 2.73 | 1339 | 2.92 | 1383 | 3.30 | 1425 | 3.69 | 1467 | 4.09 |
| 9960 | 2400 | 1294 | 2.27 | 1318 | 2.46 | 1341 | 2.66 | 1363 | 2.87 | 1384 | 3.07 | 1407 | 3.27 | 1429 | 3.48 | 1470 | 3.89 | 1510 | 4.30 | 1549 | 4.73 |
| 10790 | 2600 | 1394 | 2.81 | 1416 | 3.02 | 1438 | 3.24 | 1459 | 3.45 | 1479 | 3.68 | 1499 | 3.90 | 1519 | 4.12 | 1559 | 4.55 | 1598 | 5.00 | 1634 | 5.45 |
| 11620 | 2800 | 1495 | 3.43 | 1515 | 3.66 | 1536 | 3.89 | 1555 | 4.13 | 1575 | 4.36 | 1593 | 4.60 | 1612 | 4.84 | 1650 | 5.31 | 1686 | 5.78 | 1722 | 6.26 |
| 12450 | 3000 | 1596 | 4.15 | 1615 | 4.39 | 1634 | 4.64 | 1653 | 4.89 | 1671 | 5.14 | 1689 | 5.39 | 1706 | 5.65 | 1741 | 6.16 | 1776 | 6.66 | 1810 | 7.17 |
| 13280 | 3200 | 1697 | 4.97 | 1715 | 5.22 | 1733 | 5.49 | 1751 | 5.75 | 1768 | 6.02 | 1785 | 6.28 | 1802 | 6.55 | 1834 | 7.10 | 1867 | 7.64 | 1900 | 8.17 |
| 14110 | 3400 | 1798 | 5.88 | 1816 | 6.16 | 1833 | 6.44 | 1849 | 6.71 | 1866 | 7.00 | 1882 | 7.28 | 1898 | 7.56 | 1929 | 8.14 | 1959 | 8.72 | 1991 | 9.28 |
| 14940 | 3600 | 1900 | 6.91 | 1916 | 7.20 | 1933 | 7.50 | 1949 | 7.79 | 1964 | 8.09 | 1980 | 8.38 | 1995 | 8.68 | 2025 | 9.29 | 2054 | 9.90 | 2082 | 10.51 |
| 15770 | 3800 | 2002 | 8.06 | 2017 | 8.37 | 2033 | 8.68 | 2048 | 8.98 | 2063 | 9.30 | 2078 | 9.61 | 2092 | 9.92 | 2121 | 10.56 | 2149 | 11.20 | 2176 | 11.84 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 4565 | 1100 | 1205 | 2.03 | | | | | | | | | | | | | | | | | | |
| 4980 | 1200 | 1213 | 2.16 | | | | | | | | | | | | | | | | | | |
| 5395 | 1300 | 1217 | 2.27 | 1354 | 2.97 | | | | | | | | | | | | | | | | |
| 5810 | 1400 | •1228 | •2.40 | 1357 | 3.10 | 1482 | 3.86 | | | | | | | | | | | | | | |
| 6225 | 1500 | 1254 | 2.59 | 1366 | 3.25 | 1486 | 4.02 | 1599 | 4.83 | | | | | | | | | | | | |
| 6640 | 1600 | 1287 | 2.81 | •1381 | •3.43 | 1491 | 4.19 | 1604 | 5.03 | 1709 | 5.88 | | | | | | | | | | |
| 7055 | 1700 | 1323 | 3.06 | 1408 | 3.68 | •1502 | •4.38 | 1607 | 5.21 | 1714 | 6.12 | 1812 | 7.03 | | | | | | | | |
| 7470 | 1800 | 1359 | 3.33 | 1442 | 3.96 | 1525 | 4.64 | 1618 | 5.43 | 1717 | 6.33 | 1817 | 7.29 | 1911 | 8.26 | | | | | | |
| 7885 | 1900 | 1395 | 3.61 | 1478 | 4.27 | 1554 | 4.96 | •1635 | •5.70 | 1727 | 6.57 | 1820 | 7.53 | 1915 | 8.54 | 2005 | 9.58 | 2083 | 10.51 | | |
| 8300 | 2000 | 1433 | 3.89 | 1514 | 4.60 | 1590 | 5.31 | 1662 | 6.04 | •1739 | •6.84 | 1829 | 7.80 | 1918 | 8.81 | 2009 | 9.87 | 2095 | 10.97 | 2170 | 11.96 |
| 9130 | 2200 | 1509 | 4.49 | 1588 | 5.31 | 1661 | 6.08 | 1731 | 6.86 | 1796 | 7.65 | •1865 | •8.50 | •1938 | •9.43 | 2020 | 10.49 | 2101 | 11.60 | 2184 | 12.77 |
| 9960 | 2400 | 1587 | 5.16 | 1664 | 6.04 | 1735 | 6.94 | 1803 | 7.78 | 1867 | 8.62 | 1928 | 9.48 | 1987 | 10.35 | •2052 | •11.30 | •2121 | •12.34 | 2196 | 13.50 |
| 10790 | 2600 | 1670 | 5.91 | 1741 | 6.85 | 1811 | 7.80 | 1876 | 8.77 | 1939 | 9.69 | 1999 | 10.59 | 2056 | 11.51 | 2111 | 12.45 | 2168 | 13.42 | •2227 | •14.45 |
| 11620 | 2800 | 1756 | 6.75 | 1821 | 7.74 | 1888 | 8.75 | 1952 | 9.78 | 2013 | 10.82 | 2071 | 11.82 | 2128 | 12.79 | 2182 | 13.78 | 2234 | 14.77 | 2284 | 15.78 |
| 12450 | 3000 | 1843 | 7.68 | 1906 | 8.73 | 1967 | 9.80 | 2029 | 10.88 | 2089 | 11.98 | 2146 | 13.10 | 2200 | 14.19 | 2254 | 15.22 | 2305 | 16.27 | 2355 | 17.33 |
| 13280 | 3200 | 1932 | 8.71 | 1993 | 9.82 | 2050 | 10.94 | 2108 | 12.09 | 2166 | 13.24 | 2222 | 14.41 | 2275 | 15.60 | 2327 | 16.79 | 2377 | 17.89 | 2426 | 19.00 |
| 14110 | 3400 | 2021 | 9.85 | 2080 | 11.01 | 2136 | 12.19 | 2190 | 13.39 | 2244 | 14.61 | 2299 | 15.83 | 2351 | 17.07 | 2402 | 18.33 | 2451 | 19.60 | 2499 | 20.80 |
| 14940 | 3600 | 2112 | 11.11 | 2169 | 12.32 | 2223 | 13.56 | 2275 | 14.81 | 2325 | 16.09 | 2377 | 17.37 | 2428 | 18.66 | 2478 | 19.97 | 2526 | 21.30 | 2573 | 22.64 |
| 15770 | 3800 | 2203 | 12.48 | 2258 | 13.75 | 2311 | 15.04 | 2362 | 16.35 | 2411 | 17.68 | 2458 | 19.03 | 2507 | 20.38 | 2556 | 21.74 | 2603 | 23.12 | 2649 | 24.51 |
| 16600 | 4000 | 2296 | 13.98 | 2349 | 15.31 | 2400 | 16.65 | 2449 | 18.02 | 2497 | 19.40 | 2543 | 20.80 | 2587 | 22.22 | 2634 | 23.64 | | | | |
| 17430 | 4200 | 2391 | 15.59 | 2440 | 17.00 | 2490 | 18.40 | 2538 | 19.82 | 2584 | 21.25 | 2629 | 22.71 | | | | | | | | |
| 18260 | 4400 | 2486 | 17.33 | 2532 | 18.83 | 2580 | 20.29 | 2627 | 21.76 | | | | | | | | | | | | |
| 19090 | 4600 | 2582 | 19.23 | 2627 | 20.78 | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 9130 | 2200 | 2263 | 13.96 | 2403 | 16.20 | | | | | | | | | | | | | | | | |
| 9960 | 2400 | 2269 | 14.69 | 2420 | 17.24 | 2557 | 19.79 | | | | | | | | | | | | | | |
| 10790 | 2600 | •2291 | •15.58 | 2427 | 18.10 | 2567 | 20.82 | | | | | | | | | | | | | | |
| 11620 | 2800 | 2338 | 16.84 | •2450 | •19.13 | 2578 | 21.82 | | | | | | | | | | | | | | |
| 12450 | 3000 | 2403 | 18.39 | 2500 | 20.61 | •2601 | •22.99 | | | | | | | | | | | | | | |
| 13280 | 3200 | 2474 | 20.12 | 2565 | 22.38 | | | | | | | | | | | | | | | | |
| 14110 | 3400 | 2546 | 21.97 | 2635 | 24.34 | | | | | | | | | | | | | | | | |
| 14940 | 3600 | 2619 | 23.97 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8122

DOUBLE WIDTH
DOUBLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

| | | |
|---|---|---|
| Wheel Diameter | 22 ¼ inches | 565 mm |
| Wheel Circumference | 5.83 feet | 1.777 m |
| Inlet Diameter/Area | 24 3/16 inches dia./6.28 sq. ft. | 614 mm/.5834 $m^2$ |
| Outlet Size/Area | 23 5/16 x 31 5/16 inches I.D./5.07 sq. ft. | 592 x 795 mm/.4710 $m^2$ |
| Tip Speed | 5.83 x RPM ft./minute | 1.777 x RPM m/minute |
| Maximum BHP | 2.27 x (RPM 1000)$^3$ BHP | 1.693 x (RPM 1000)$^3$ kW |

| SIZE 8122 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 1827 |
| CLASS II | 2382 |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 3042 | 600 | •461 | •0.19 | 523 | 0.27 | 578 | 0.36 | 628 | 0.45 | | | | | | | | | | | | |
| 3549 | 700 | 495 | 0.24 | •553 | •0.33 | 606 | 0.43 | 655 | 0.53 | 699 | 0.63 | | | | | | | | | | |
| 4056 | 800 | 533 | 0.29 | 584 | 0.39 | •636 | •0.50 | 682 | 0.61 | 726 | 0.72 | 767 | 0.84 | 805 | 0.96 | | | | | | |
| 4563 | 900 | 574 | 0.36 | 623 | 0.47 | 668 | 0.59 | •713 | •0.71 | 755 | 0.83 | 795 | 0.95 | 832 | 1.08 | 901 | 1.35 | | | | |
| 5070 | 1000 | 617 | 0.44 | 662 | 0.56 | 704 | 0.68 | 744 | 0.81 | •785 | •0.94 | 823 | 1.08 | 859 | 1.22 | 928 | 1.50 | 991 | 1.80 | | |
| 5577 | 1100 | 660 | 0.53 | 702 | 0.66 | 743 | 0.80 | 780 | 0.93 | 817 | 1.07 | •854 | •1.22 | 890 | 1.36 | 956 | 1.67 | 1018 | 1.98 | 1075 | 2.30 |
| 6084 | 1200 | 705 | 0.64 | 744 | 0.78 | 782 | 0.92 | 819 | 1.07 | 853 | 1.22 | 886 | 1.37 | •921 | •1.53 | 986 | 1.85 | 1045 | 2.18 | 1102 | 2.52 |
| 6591 | 1300 | 750 | 0.76 | 788 | 0.91 | 823 | 1.07 | 858 | 1.22 | 891 | 1.38 | 922 | 1.54 | 952 | 1.71 | •1016 | •2.05 | 1075 | 2.40 | 1130 | 2.76 |
| 7098 | 1400 | 796 | 0.90 | 832 | 1.06 | 866 | 1.22 | 898 | 1.39 | 930 | 1.56 | 961 | 1.73 | 990 | 1.90 | 1048 | 2.26 | •1106 | •2.63 | 1160 | 3.01 |
| 7605 | 1500 | 842 | 1.06 | 877 | 1.23 | 909 | 1.40 | 940 | 1.58 | 970 | 1.76 | 1000 | 1.94 | 1028 | 2.12 | 1082 | 2.50 | 1137 | 2.89 | •1190 | •3.28 |
| 8112 | 1600 | 889 | 1.24 | 922 | 1.42 | 953 | 1.60 | 983 | 1.79 | 1011 | 1.97 | 1040 | 2.17 | 1068 | 2.36 | 1120 | 2.75 | 1169 | 3.16 | 1222 | 3.57 |
| 8619 | 1700 | 936 | 1.43 | 968 | 1.63 | 998 | 1.82 | 1026 | 2.01 | 1054 | 2.21 | 1080 | 2.41 | 1107 | 2.62 | 1159 | 3.03 | 1207 | 3.45 | 1253 | 3.89 |
| 9126 | 1800 | 984 | 1.65 | 1014 | 1.85 | 1043 | 2.06 | 1071 | 2.27 | 1097 | 2.47 | 1123 | 2.68 | 1148 | 2.90 | 1198 | 3.33 | 1245 | 3.77 | 1289 | 4.22 |
| 9633 | 1900 | 1032 | 1.89 | 1061 | 2.11 | 1088 | 2.32 | 1115 | 2.54 | 1141 | 2.76 | 1166 | 2.98 | 1190 | 3.20 | 1238 | 3.65 | 1284 | 4.11 | 1327 | 4.58 |
| 10140 | 2000 | 1080 | 2.16 | 1108 | 2.38 | 1134 | 2.61 | 1160 | 2.84 | 1185 | 3.07 | 1209 | 3.30 | 1233 | 3.53 | 1278 | 4.00 | 1323 | 4.48 | 1366 | 4.97 |
| 11154 | 2200 | 1177 | 2.77 | 1203 | 3.02 | 1228 | 3.27 | 1252 | 3.52 | 1275 | 3.77 | 1298 | 4.02 | 1320 | 4.27 | 1362 | 4.78 | 1403 | 5.30 | 1445 | 5.83 |
| 12168 | 2400 | 1275 | 3.50 | 1299 | 3.77 | 1322 | 4.03 | 1345 | 4.30 | 1366 | 4.58 | 1388 | 4.85 | 1409 | 5.12 | 1449 | 5.67 | 1488 | 6.23 | 1525 | 6.80 |
| 13182 | 2600 | 1373 | 4.35 | 1396 | 4.64 | 1417 | 4.93 | 1439 | 5.22 | 1459 | 5.51 | 1479 | 5.81 | 1499 | 6.10 | 1538 | 6.69 | 1575 | 7.29 | 1610 | 7.90 |
| 14196 | 2800 | 1472 | 5.34 | 1493 | 5.64 | 1514 | 5.95 | 1534 | 6.26 | 1553 | 6.58 | 1572 | 6.89 | 1591 | 7.21 | 1627 | 7.85 | 1663 | 8.49 | 1697 | 9.13 |
| 15210 | 3000 | 1571 | 6.47 | 1591 | 6.79 | 1610 | 7.12 | 1629 | 7.46 | 1648 | 7.79 | 1666 | 8.13 | 1684 | 8.47 | 1718 | 9.15 | 1752 | 9.83 | 1785 | 10.50 |
| 16224 | 3200 | 1671 | 7.75 | 1689 | 8.10 | 1708 | 8.45 | 1726 | 8.80 | 1743 | 9.16 | 1760 | 9.52 | 1777 | 9.87 | 1810 | 10.60 | 1842 | 11.30 | 1874 | 12.10 |
| 17238 | 3400 | 1771 | 9.20 | 1788 | 9.57 | 1806 | 9.94 | 1823 | 10.30 | 1839 | 10.70 | 1856 | 11.10 | 1872 | 11.40 | 1904 | 12.20 | 1934 | 13.00 | 1964 | 13.80 |
| 18252 | 3600 | 1871 | 10.80 | 1887 | 11.20 | 1904 | 11.60 | 1920 | 12.00 | 1936 | 12.40 | 1952 | 12.80 | 1967 | 13.20 | 1997 | 14.00 | 2027 | 14.80 | 2055 | 15.60 |
| 19266 | 3800 | 1971 | 12.60 | 1987 | 13.10 | 2003 | 13.50 | 2018 | 13.90 | 2033 | 14.30 | 2048 | 14.70 | 2063 | 15.10 | 2092 | 16.00 | 2120 | 16.80 | 2148 | 17.70 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 6084 | 1200 | 1156 | 2.87 | 1256 | 3.61 | | | | | | | | | | | | | | | | |
| 6591 | 1300 | 1183 | 3.13 | 1281 | 3.89 | | | | | | | | | | | | | | | | |
| 7098 | 1400 | 1211 | 3.40 | 1308 | 4.20 | 1396 | 5.02 | | | | | | | | | | | | | | |
| 7605 | 1500 | 1241 | 3.69 | 1335 | 4.52 | 1423 | 5.39 | 1505 | 6.28 | | | | | | | | | | | | |
| 8112 | 1600 | 1271 | 4.00 | 1363 | 4.87 | 1450 | 5.77 | 1531 | 6.70 | 1607 | 7.65 | 1682 | 8.65 | | | | | | | | |
| 8619 | 1700 | •1302 | •4.33 | •1394 | •5.24 | 1478 | 6.17 | 1559 | 7.14 | 1634 | 8.13 | 1705 | 9.14 | 1775 | 10.20 | | | | | | |
| 9126 | 1800 | 1334 | 4.68 | 1424 | 5.63 | •1507 | •6.60 | 1586 | 7.60 | 1661 | 8.63 | 1732 | 9.68 | 1799 | 10.80 | 1864 | 11.90 | | | | |
| 9633 | 1900 | 1369 | 5.06 | 1456 | 6.04 | 1538 | 7.05 | •1614 | •8.09 | •1688 | •9.15 | 1759 | 10.20 | 1826 | 11.30 | 1890 | 12.50 | 1951 | 13.60 | | |
| 10140 | 2000 | 1407 | 5.47 | 1487 | 6.48 | 1569 | 7.53 | 1645 | 8.61 | 1716 | 9.70 | •1786 | •10.80 | •1853 | •12.00 | 1916 | 13.10 | 1977 | 14.30 | 2036 | 15.50 |
| 11154 | 2200 | 1484 | 6.36 | 1559 | 7.45 | 1631 | 8.57 | 1706 | 9.72 | 1777 | 10.90 | 1843 | 12.10 | 1908 | 13.30 | •1971 | •14.50 | 2031 | 15.80 | 2089 | 17.10 |
| 12168 | 2400 | 1563 | 7.37 | 1636 | 8.53 | 1703 | 9.73 | 1769 | 10.90 | 1839 | 12.20 | 1904 | 13.50 | 1967 | 14.70 | 2027 | 16.10 | •2086 | •17.40 | •2144 | •18.70 |
| 13182 | 2600 | 1644 | 8.51 | 1714 | 9.75 | 1780 | 11.00 | 1842 | 12.30 | 1902 | 13.60 | 1967 | 15.00 | 2029 | 16.30 | 2088 | 17.70 | 2145 | 19.10 | 2200 | 20.50 |
| 14196 | 2800 | 1730 | 9.78 | 1794 | 11.10 | 1858 | 12.40 | 1919 | 13.80 | 1976 | 15.20 | 2032 | 16.60 | 2091 | 18.00 | 2150 | 19.50 | 2206 | 21.00 | 2260 | 22.50 |
| 15210 | 3000 | 1817 | 11.20 | 1878 | 12.60 | 1938 | 14.00 | 1997 | 15.50 | 2053 | 16.90 | 2107 | 18.40 | 2159 | 19.90 | 2213 | 21.40 | 2268 | 23.00 | 2322 | 24.60 |
| 16224 | 3200 | 1905 | 12.80 | 1963 | 14.30 | 2019 | 15.80 | 2076 | 17.30 | 2131 | 18.80 | 2184 | 20.40 | 2235 | 21.90 | 2284 | 23.50 | 2332 | 25.20 | | |
| 17238 | 3400 | 1994 | 14.50 | 2050 | 16.10 | 2105 | 17.70 | 2157 | 19.30 | 2210 | 20.90 | 2262 | 22.50 | 2312 | 24.10 | 2360 | 25.80 | | | | |
| 18252 | 3600 | 2084 | 16.50 | 2139 | 18.10 | 2191 | 19.70 | 2242 | 21.40 | 2291 | 23.10 | 2341 | 24.80 | | | | | | | | |
| 19266 | 3800 | 2175 | 18.60 | 2228 | 20.30 | 2279 | 22.00 | 2328 | 23.80 | 2375 | 25.50 | | | | | | | | | | |
| 20280 | 4000 | 2267 | 20.90 | 2317 | 22.70 | 2367 | 24.50 | | | | | | | | | | | | | | |
| 21294 | 4200 | 2360 | 23.40 | | | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 10140 | 2000 | 2096 | 16.80 | | | | | | | | | | | | | | | | | | |
| 11154 | 2200 | 2145 | 18.40 | 2252 | 21.00 | | | | | | | | | | | | | | | | |
| 12168 | 2400 | •2199 | •20.10 | 2305 | 22.90 | | | | | | | | | | | | | | | | |
| 13182 | 2600 | 2254 | 22.00 | •2359 | •24.90 | | | | | | | | | | | | | | | | |
| 14196 | 2800 | 2313 | 24.00 | | | | | | | | | | | | | | | | | | |
| 15210 | 3000 | 2374 | 26.10 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I☐ CL. II☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

DOUBLE WIDTH
DOUBLE INLET

## SIZE 8124

| SIZE 8124 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 1660 |
| CLASS II | 2163 |

| | | |
|---|---|---|
| Wheel Diameter | 24 ½ inches | 622 mm |
| Wheel Circumference | 6.41 feet | 1.954 m |
| Inlet Diameter/Area | 27 3/16 inches dia./7.96 sq. ft. | 691 mm/.7395 $m^2$ |
| Outlet Size/Area | 25 1/16 x 34 ¾ inches I.D/.6.20 sq. ft. | 652 x 883/.5760 $m^2$ |
| Tip Speed | 6.41 x RPM ft./minute | 1.954 x RPM m/minute |
| Maximum BHP | 3.65 x (RPM 1000)$^3$ BHP | 2.722 x (RPM 1000)$^3$ kW |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 3720 | 600 | •381 | •0.20 | •434 | •0.29 | 495 | 0.41 | | | | | | | | | | | | | | |
| 4340 | 700 | 411 | 0.25 | 457 | 0.35 | •501 | •0.45 | 554 | 0.58 | 605 | 0.72 | | | | | | | | | | |
| 4960 | 800 | 442 | 0.31 | 486 | 0.42 | 525 | 0.53 | •563 | •0.64 | 609 | 0.78 | 655 | 0.94 | 698 | 1.10 | | | | | | |
| 5580 | 900 | 474 | 0.38 | 516 | 0.50 | 554 | 0.62 | 588 | 0.74 | •622 | •0.87 | 661 | 1.02 | 702 | 1.19 | 781 | 1.55 | | | | |
| 6200 | 1000 | 509 | 0.45 | 548 | 0.59 | 584 | 0.73 | 617 | 0.86 | 648 | 0.99 | •678 | •1.13 | •710 | •1.28 | 784 | 1.65 | 857 | 2.06 | | |
| 6820 | 1100 | 545 | 0.54 | 580 | 0.69 | 615 | 0.84 | 647 | 0.99 | 678 | 1.14 | 706 | 1.28 | 733 | 1.43 | •792 | •1.77 | 859 | 2.18 | 926 | 2.62 |
| 7440 | 1200 | 581 | 0.65 | 615 | 0.80 | 647 | 0.96 | 678 | 1.13 | 708 | 1.30 | 735 | 1.45 | 762 | 1.61 | 812 | 1.94 | •867 | •2.32 | 928 | 2.76 |
| 8060 | 1300 | 618 | 0.77 | 651 | 0.93 | 680 | 1.10 | 710 | 1.28 | 738 | 1.46 | 765 | 1.64 | 791 | 1.81 | 840 | 2.15 | 886 | 2.52 | •937 | •2.92 |
| 8680 | 1400 | 656 | 0.90 | 687 | 1.08 | 715 | 1.26 | 742 | 1.45 | 770 | 1.63 | 796 | 1.83 | 821 | 2.02 | 869 | 2.39 | 913 | 2.77 | 956 | 3.16 |
| 9300 | 1500 | 694 | 1.05 | 723 | 1.24 | 751 | 1.43 | 777 | 1.63 | 802 | 1.83 | 828 | 2.03 | 852 | 2.24 | 898 | 2.65 | 942 | 3.05 | 982 | 3.45 |
| 9920 | 1600 | 733 | 1.22 | 760 | 1.42 | 787 | 1.62 | 812 | 1.83 | 836 | 2.04 | 860 | 2.26 | 884 | 2.47 | 929 | 2.92 | 971 | 3.35 | 1011 | 3.77 |
| 10540 | 1700 | 772 | 1.41 | 798 | 1.62 | 823 | 1.84 | 848 | 2.05 | 871 | 2.27 | 893 | 2.50 | 915 | 2.73 | 960 | 3.19 | 1001 | 3.67 | 1040 | 4.12 |
| 11160 | 1800 | 812 | 1.61 | 836 | 1.84 | 860 | 2.07 | 884 | 2.30 | 906 | 2.53 | 928 | 2.77 | 948 | 3.01 | 991 | 3.49 | 1032 | 3.99 | 1070 | 4.49 |
| 11780 | 1900 | 851 | 1.84 | 875 | 2.08 | 897 | 2.32 | 920 | 2.56 | 942 | 2.81 | 963 | 3.05 | 983 | 3.30 | 1023 | 3.81 | 1063 | 4.33 | 1101 | 4.86 |
| 12400 | 2000 | 891 | 2.10 | 914 | 2.35 | 935 | 2.60 | 957 | 2.85 | 978 | 3.11 | 999 | 3.36 | 1018 | 3.62 | 1056 | 4.15 | 1095 | 4.69 | 1132 | 5.24 |
| 13640 | 2200 | 971 | 2.68 | 992 | 2.95 | 1012 | 3.23 | 1032 | 3.51 | 1052 | 3.78 | 1071 | 4.06 | 1090 | 4.34 | 1126 | 4.91 | 1160 | 5.50 | 1195 | 6.09 |
| 14880 | 2400 | 1052 | 3.36 | 1072 | 3.66 | 1090 | 3.96 | 1108 | 4.26 | 1126 | 4.57 | 1144 | 4.87 | 1162 | 5.17 | 1197 | 5.78 | 1229 | 6.41 | 1260 | 7.05 |
| 16120 | 2600 | 1133 | 4.16 | 1152 | 4.48 | 1169 | 4.80 | 1186 | 5.13 | 1203 | 5.46 | 1219 | 5.79 | 1236 | 6.12 | 1269 | 6.77 | 1300 | 7.44 | 1330 | 8.12 |
| 17360 | 2800 | 1215 | 5.09 | 1232 | 5.43 | 1249 | 5.78 | 1265 | 6.12 | 1280 | 6.48 | 1296 | 6.83 | 1311 | 7.19 | 1342 | 7.89 | 1372 | 8.60 | 1401 | 9.32 |
| 18600 | 3000 | 1297 | 6.15 | 1313 | 6.52 | 1329 | 6.88 | 1344 | 7.26 | 1359 | 7.63 | 1373 | 8.01 | 1388 | 8.39 | 1416 | 9.15 | 1445 | 9.90 | 1473 | 10.66 |
| 19840 | 3200 | 1379 | 7.36 | 1394 | 7.75 | 1409 | 8.14 | 1424 | 8.53 | 1438 | 8.93 | 1452 | 9.33 | 1465 | 9.73 | 1492 | 10.55 | 1519 | 11.35 | 1546 | 12.15 |
| 21080 | 3400 | 1462 | 8.72 | 1476 | 9.13 | 1490 | 9.54 | 1504 | 9.96 | 1517 | 10.38 | 1530 | 10.80 | 1543 | 11.23 | 1569 | 12.09 | 1594 | 12.96 | 1620 | 13.80 |
| 22320 | 3600 | 1544 | 10.25 | 1558 | 10.68 | 1571 | 11.12 | 1584 | 11.56 | 1597 | 12.00 | 1610 | 12.44 | 1622 | 12.89 | 1647 | 13.79 | 1670 | 14.71 | 1694 | 15.62 |
| 23560 | 3800 | 1627 | 11.95 | 1640 | 12.40 | 1653 | 12.86 | 1665 | 13.32 | 1677 | 13.79 | 1689 | 14.26 | 1701 | 14.73 | 1725 | 15.67 | 1748 | 16.63 | 1770 | 17.60 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 6820 | 1100 | 983 | 3.04 | | | | | | | | | | | | | | | | | | |
| 7440 | 1200 | 990 | 3.24 | | | | | | | | | | | | | | | | | | |
| 8060 | 1300 | 993 | 3.40 | 1106 | 4.44 | | | | | | | | | | | | | | | | |
| 8680 | 1400 | •1002 | •3.59 | 1108 | 4.64 | 1209 | 5.77 | | | | | | | | | | | | | | |
| 9300 | 1500 | 1022 | 3.87 | 1114 | 4.86 | 1213 | 6.02 | 1305 | 7.22 | | | | | | | | | | | | |
| 9920 | 1600 | 1049 | 4.20 | •1126 | •5.12 | 1216 | 6.26 | 1309 | 7.52 | 1394 | 8.80 | | | | | | | | | | |
| 10540 | 1700 | 1078 | 4.57 | 1148 | 5.49 | 1226 | 6.55 | 1312 | 7.80 | 1399 | 9.16 | 1479 | 10.51 | | | | | | | | |
| 11160 | 1800 | 1107 | 4.96 | 1175 | 5.91 | •1243 | •6.93 | 1320 | 8.13 | 1401 | 9.47 | 1483 | 10.91 | 1559 | 12.35 | | | | | | |
| 11780 | 1900 | 1137 | 5.38 | 1204 | 6.37 | 1267 | 7.39 | •1333 | •8.51 | 1409 | 9.83 | 1486 | 11.27 | 1563 | 12.79 | 1636 | 14.32 | | | | |
| 12400 | 2000 | 1167 | 5.80 | 1233 | 6.86 | 1295 | 7.92 | 1355 | 9.02 | •1418 | •10.22 | 1492 | 11.66 | 1566 | 13.18 | 1640 | 14.78 | 1710 | 16.42 | 1771 | 17.89 |
| 13640 | 2200 | 1229 | 6.69 | 1293 | 7.92 | 1353 | 9.07 | 1410 | 10.23 | 1463 | 11.41 | •1520 | •12.69 | •1581 | •14.10 | 1648 | 15.69 | 1715 | 17.36 | 1782 | 19.11 |
| 14880 | 2400 | 1292 | 7.69 | 1355 | 9.00 | 1413 | 10.34 | 1468 | 11.59 | 1521 | 12.85 | 1571 | 14.13 | 1620 | 15.45 | •1673 | •16.88 | •1730 | •18.46 | 1792 | 20.20 |
| 16120 | 2600 | 1359 | 8.81 | 1418 | 10.20 | 1475 | 11.62 | 1528 | 13.08 | 1579 | 14.44 | 1628 | 15.80 | 1675 | 17.17 | 1720 | 18.57 | 1767 | 20.04 | •1815 | •21.58 |
| 17360 | 2800 | 1429 | 10.05 | 1482 | 11.53 | 1537 | 13.04 | 1590 | 14.57 | 1639 | 16.14 | 1687 | 17.62 | 1733 | 19.07 | 1777 | 20.55 | 1820 | 22.03 | 1861 | 23.54 |
| 18600 | 3000 | 1500 | 11.43 | 1551 | 13.00 | 1601 | 14.60 | 1652 | 16.21 | 1701 | 17.86 | 1747 | 19.53 | 1792 | 21.15 | 1836 | 22.69 | 1878 | 24.26 | 1918 | 25.84 |
| 19840 | 3200 | 1572 | 12.96 | 1622 | 14.61 | 1669 | 16.29 | 1716 | 18.00 | 1764 | 19.73 | 1809 | 21.48 | 1853 | 23.26 | 1895 | 25.03 | 1936 | 26.67 | 1976 | 28.33 |
| 21080 | 3400 | 1645 | 14.65 | 1693 | 16.38 | 1739 | 18.15 | 1782 | 19.95 | 1827 | 21.76 | 1872 | 23.59 | 1915 | 25.45 | 1956 | 27.33 | 1996 | 29.23 | 2035 | 31.01 |
| 22320 | 3600 | 1718 | 16.51 | 1765 | 18.33 | 1809 | 20.17 | 1852 | 22.05 | 1893 | 23.96 | 1935 | 25.87 | 1977 | 27.81 | 2018 | 29.77 | 2057 | 31.75 | 2096 | 33.76 |
| 23560 | 3800 | 1792 | 18.55 | 1837 | 20.45 | 1881 | 22.38 | 1922 | 24.33 | 1962 | 26.32 | 2000 | 28.34 | 2041 | 30.36 | 2081 | 32.39 | 2120 | 34.45 | 2157 | 36.54 |
| 24800 | 4000 | 1868 | 20.77 | 1911 | 22.76 | 1953 | 24.77 | 1993 | 26.81 | 2032 | 28.87 | 2070 | 30.97 | 2106 | 33.09 | 2144 | 35.21 | | | | |
| 26040 | 4200 | 1945 | 23.16 | 1985 | 25.27 | 2026 | 27.36 | 2065 | 29.48 | 2103 | 31.63 | 2139 | 33.80 | | | | | | | | |
| 27280 | 4400 | 2022 | 25.75 | 2060 | 27.99 | 2099 | 30.16 | 2137 | 32.36 | | | | | | | | | | | | |
| 28520 | 4600 | 2099 | 28.55 | 2136 | 30.88 | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 13640 | 2200 | 1847 | 20.89 | 1961 | 24.22 | | | | | | | | | | | | | | | | |
| 14880 | 2400 | 1852 | 21.99 | 1975 | 25.81 | 2086 | 29.58 | | | | | | | | | | | | | | |
| 16120 | 2600 | •1869 | •23.30 | 1980 | 27.07 | 2095 | 31.16 | | | | | | | | | | | | | | |
| 17360 | 2800 | 1906 | 25.14 | •1999 | •28.60 | 2104 | 32.64 | | | | | | | | | | | | | | |
| 18600 | 3000 | 1958 | 27.43 | 2038 | 30.77 | •2122 | •34.37 | | | | | | | | | | | | | | |
| 19840 | 3200 | 2015 | 30.00 | 2090 | 33.38 | | | | | | | | | | | | | | | | |
| 21080 | 3400 | 2074 | 32.76 | 2147 | 36.29 | | | | | | | | | | | | | | | | |
| 22320 | 3600 | 2133 | 35.72 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8127

DOUBLE WIDTH
DOUBLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

| | | |
|---|---|---|
| Wheel Diameter | 27 inches | 686 mm |
| Wheel Circumference | 7.07 feet | 2.155 m |
| Inlet Diameter/Area | 29 1/16 inches dia./9.50 sq. ft. | 754 mm/.8826 $m^2$ |
| Outlet Size/Area | 28 3/8 x 38 3/8 inches I.D/.7.562 sq. ft. | 721 x 975 mm/.7025 $m^2$ |
| Tip Speed | 7.07 x RPM ft./minute | 2.155 x RPM m/minute |
| Maximum BHP | 5.90 x (RPM 1000)$^3$ BHP | 4.400 x (RPM 1000)$^3$ kW |

| SIZE 8127 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 1517 |
| CLASS II | 1977 |

| VOL CFM | OUT VEL | 1/4" SP | | 3/8" SP | | 1/2" SP | | 5/8" SP | | 3/4" SP | | 7/8" SP | | 1" SP | | 1 1/4" SP | | 1 1/2" SP | | 1 3/4" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 4537 | 600 | •344 | •0.24 | •391 | •0.34 | 438 | 0.45 | | | | | | | | | | | | | | |
| 5293 | 700 | 370 | 0.30 | 413 | 0.41 | •453 | •0.53 | •492 | •0.66 | 536 | 0.80 | | | | | | | | | | |
| 6050 | 800 | 398 | 0.36 | 438 | 0.49 | 475 | 0.62 | 510 | 0.76 | •543 | •0.90 | 580 | 1.06 | 618 | 1.23 | | | | | | |
| 6806 | 900 | 429 | 0.44 | 465 | 0.58 | 500 | 0.73 | 532 | 0.88 | 564 | 1.03 | •593 | •1.18 | •624 | •1.35 | 691 | 1.73 | | | | |
| 7562 | 1000 | 460 | 0.53 | 494 | 0.69 | 526 | 0.85 | 557 | 1.01 | 586 | 1.17 | 615 | 1.34 | 642 | 1.51 | •697 | •1.87 | 758 | 2.29 | | |
| 8318 | 1100 | 493 | 0.64 | 524 | 0.81 | 554 | 0.99 | 584 | 1.16 | 611 | 1.33 | 637 | 1.52 | 664 | 1.70 | 714 | 2.07 | •764 | •2.47 | 819 | 2.92 |
| 9074 | 1200 | 526 | 0.77 | 556 | 0.95 | 584 | 1.13 | 611 | 1.32 | 638 | 1.51 | 663 | 1.71 | 687 | 1.90 | 736 | 2.30 | 781 | 2.70 | •826 | •3.14 |
| 9831 | 1300 | 560 | 0.91 | 588 | 1.10 | 615 | 1.30 | 640 | 1.50 | 665 | 1.71 | 690 | 1.91 | 714 | 2.12 | 758 | 2.55 | 803 | 2.98 | 844 | 3.42 |
| 10587 | 1400 | 595 | 1.07 | 621 | 1.27 | 646 | 1.48 | 671 | 1.70 | 694 | 1.92 | 717 | 2.14 | 740 | 2.36 | 784 | 2.81 | 825 | 3.28 | 866 | 3.74 |
| 11343 | 1500 | 630 | 1.25 | 655 | 1.47 | 678 | 1.69 | 702 | 1.92 | 724 | 2.15 | 745 | 2.39 | 767 | 2.63 | 810 | 3.10 | 850 | 3.59 | 888 | 4.08 |
| 12099 | 1600 | 665 | 1.45 | 689 | 1.68 | 711 | 1.92 | 734 | 2.16 | 755 | 2.41 | 776 | 2.66 | 796 | 2.91 | 837 | 3.41 | 876 | 3.92 | 912 | 4.45 |
| 12855 | 1700 | 701 | 1.68 | 723 | 1.92 | 745 | 2.17 | 766 | 2.43 | 787 | 2.68 | 807 | 2.95 | 826 | 3.21 | 864 | 3.75 | 902 | 4.28 | 938 | 4.83 |
| 13612 | 1800 | 737 | 1.93 | 758 | 2.18 | 779 | 2.45 | 799 | 2.72 | 819 | 2.99 | 838 | 3.26 | 857 | 3.54 | 893 | 4.11 | 929 | 4.67 | 965 | 5.24 |
| 14368 | 1900 | 773 | 2.20 | 793 | 2.48 | 813 | 2.75 | 832 | 3.03 | 851 | 3.32 | 870 | 3.60 | 888 | 3.89 | 923 | 4.49 | 957 | 5.09 | 992 | 5.68 |
| 15124 | 2000 | 809 | 2.51 | 829 | 2.79 | 848 | 3.08 | 867 | 3.38 | 884 | 3.67 | 902 | 3.97 | 920 | 4.28 | 954 | 4.89 | 986 | 5.52 | 1019 | 6.15 |
| 16636 | 2200 | 882 | 3.21 | 900 | 3.52 | 918 | 3.83 | 936 | 4.15 | 952 | 4.48 | 969 | 4.80 | 984 | 5.13 | 1017 | 5.80 | 1048 | 6.47 | 1077 | 7.17 |
| 18149 | 2400 | 955 | 4.03 | 972 | 4.38 | 989 | 4.72 | 1006 | 5.06 | 1021 | 5.41 | 1037 | 5.76 | 1052 | 6.12 | 1081 | 6.83 | 1111 | 7.56 | 1139 | 8.30 |
| 19661 | 2600 | 1029 | 5.00 | 1045 | 5.37 | 1061 | 5.74 | 1076 | 6.11 | 1091 | 6.48 | 1106 | 6.86 | 1120 | 7.24 | 1147 | 8.01 | 1175 | 8.79 | 1202 | 9.58 |
| 21174 | 2800 | 1103 | 6.12 | 1118 | 6.51 | 1133 | 6.91 | 1148 | 7.31 | 1162 | 7.71 | 1176 | 8.11 | 1189 | 8.52 | 1215 | 9.34 | 1240 | 10.17 | 1266 | 11.01 |
| 22686 | 3000 | 1177 | 7.40 | 1192 | 7.82 | 1206 | 8.25 | 1220 | 8.68 | 1233 | 9.10 | 1246 | 9.53 | 1259 | 9.96 | 1284 | 10.83 | 1308 | 11.71 | 1331 | 12.61 |
| 24198 | 3200 | 1252 | 8.86 | 1266 | 9.30 | 1279 | 9.76 | 1292 | 10.21 | 1305 | 10.67 | 1317 | 11.12 | 1329 | 11.58 | 1353 | 12.50 | 1376 | 13.43 | 1399 | 14.37 |
| 25711 | 3400 | 1327 | 10.50 | 1340 | 10.97 | 1352 | 11.45 | 1365 | 11.94 | 1377 | 12.42 | 1389 | 12.91 | 1401 | 13.39 | 1423 | 14.36 | 1445 | 15.34 | 1467 | 16.33 |
| 27223 | 3600 | 1402 | 12.34 | 1414 | 12.84 | 1426 | 13.35 | 1438 | 13.86 | 1449 | 14.37 | 1461 | 14.89 | 1472 | 15.40 | 1494 | 16.42 | 1515 | 17.45 | 1536 | 18.49 |
| 28736 | 3800 | 1477 | 14.39 | 1489 | 14.92 | 1500 | 15.45 | 1511 | 15.99 | 1522 | 16.53 | 1533 | 17.07 | 1544 | 17.61 | 1565 | 18.69 | 1585 | 19.77 | 1605 | 20.86 |

| VOL CFM | OUT VEL | 2" SP | | 2 1/2" SP | | 3" SP | | 3 1/2" SP | | 4" SP | | 4 1/2" SP | | 5" SP | | 5 1/2" SP | | 6" SP | | 6 1/2" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 8318 | 1100 | 873 | 3.41 | | | | | | | | | | | | | | | | | | |
| 9074 | 1200 | 876 | 3.62 | | | | | | | | | | | | | | | | | | |
| 9831 | 1300 | •885 | •3.88 | 978 | 4.95 | | | | | | | | | | | | | | | | |
| 10587 | 1400 | 904 | 4.21 | 984 | 5.24 | 1071 | 6.43 | | | | | | | | | | | | | | |
| 11343 | 1500 | 926 | 4.58 | •997 | •5.59 | 1074 | 6.75 | 1156 | 8.05 | | | | | | | | | | | | |
| 12099 | 1600 | 948 | 4.97 | 1018 | 6.04 | •1084 | •7.15 | 1159 | 8.43 | 1235 | 9.82 | | | | | | | | | | |
| 12855 | 1700 | 972 | 5.39 | 1040 | 6.50 | 1104 | 7.65 | •1168 | •8.87 | 1238 | 10.25 | 1310 | 11.73 | | | | | | | | |
| 13612 | 1800 | 998 | 5.82 | 1063 | 7.00 | 1126 | 8.19 | 1184 | 9.41 | 1246 | 10.74 | 1313 | 12.21 | 1381 | 13.78 | | | | | | |
| 14368 | 1900 | 1025 | 6.28 | 1087 | 7.52 | 1148 | 8.77 | 1206 | 10.03 | •1260 | •11.32 | 1321 | 12.76 | 1384 | 14.31 | 1448 | 15.96 | | | | |
| 15124 | 2000 | 1052 | 6.78 | 1113 | 8.06 | 1170 | 9.38 | 1228 | 10.69 | 1282 | 12.02 | •1333 | •13.39 | •1391 | •14.92 | 1451 | 16.55 | 1513 | 18.28 | 1572 | 20.04 |
| 16636 | 2200 | 1106 | 7.87 | 1166 | 9.24 | 1221 | 10.65 | 1272 | 12.10 | 1326 | 13.53 | 1376 | 14.99 | 1425 | 16.47 | •1471 | •17.97 | •1524 | •19.67 | 1578 | 21.42 |
| 18149 | 2400 | 1166 | 9.05 | 1220 | 10.56 | 1274 | 12.07 | 1324 | 13.60 | 1372 | 15.17 | 1420 | 16.74 | 1468 | 18.31 | 1514 | 19.91 | 1558 | 21.52 | •1600 | •23.16 |
| 19661 | 2600 | 1228 | 10.37 | 1278 | 12.00 | 1328 | 13.64 | 1377 | 15.27 | 1424 | 16.92 | 1469 | 18.61 | 1513 | 20.32 | 1558 | 22.01 | 1601 | 23.72 | 1643 | 25.44 |
| 21174 | 2800 | 1291 | 11.85 | 1339 | 13.58 | 1385 | 15.35 | 1432 | 17.10 | 1478 | 18.85 | 1522 | 20.62 | 1564 | 22.43 | 1604 | 24.26 | 1645 | 26.09 | 1687 | 27.91 |
| 22686 | 3000 | 1355 | 13.50 | 1402 | 15.32 | 1446 | 17.18 | 1488 | 19.08 | 1532 | 20.95 | 1575 | 22.82 | 1616 | 24.71 | 1656 | 26.63 | 1694 | 28.58 | 1731 | 30.55 |
| 24198 | 3200 | 1421 | 15.33 | 1465 | 17.25 | 1508 | 19.20 | 1549 | 21.19 | 1588 | 23.22 | 1629 | 25.20 | 1670 | 27.19 | 1709 | 29.20 | 1746 | 31.24 | 1783 | 33.30 |
| 25711 | 3400 | 1488 | 17.33 | 1529 | 19.36 | 1571 | 21.41 | 1611 | 23.49 | 1649 | 25.61 | 1685 | 27.76 | 1724 | 29.88 | 1762 | 31.98 | 1799 | 34.11 | 1835 | 36.26 |
| 27223 | 3600 | 1556 | 19.54 | 1595 | 21.67 | 1635 | 23.82 | 1673 | 26.00 | 1710 | 28.21 | 1746 | 30.45 | 1781 | 32.73 | 1817 | 34.97 | 1853 | 37.19 | 1889 | 39.43 |
| 28736 | 3800 | 1625 | 21.96 | 1662 | 24.19 | 1699 | 26.45 | 1737 | 28.72 | 1773 | 31.03 | 1808 | 33.36 | 1842 | 35.73 | 1874 | 38.12 | 1908 | 40.51 | 1943 | 42.84 |
| 30248 | 4000 | 1694 | 24.60 | 1730 | 26.93 | 1766 | 29.30 | 1801 | 31.68 | 1836 | 34.07 | 1870 | 36.50 | 1903 | 38.96 | 1935 | 41.44 | 1967 | 43.96 | | |
| 31760 | 4200 | 1764 | 27.48 | 1799 | 29.91 | 1833 | 32.37 | 1866 | 34.86 | 1900 | 37.36 | 1933 | 39.88 | 1965 | 42.43 | | | | | | |
| 33273 | 4400 | 1834 | 30.61 | 1868 | 33.13 | 1901 | 35.69 | 1933 | 38.28 | 1964 | 40.90 | | | | | | | | | | |
| 34785 | 4600 | 1905 | 33.99 | 1938 | 36.61 | 1970 | 39.27 | | | | | | | | | | | | | | |
| 36298 | 4800 | 1976 | 37.65 | | | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 16636 | 2200 | 1634 | 23.31 | | | | | | | | | | | | | | | | | | |
| 18149 | 2400 | •1648 | •24.98 | 1748 | 28.87 | 1849 | 33.03 | | | | | | | | | | | | | | |
| 19661 | 2600 | 1683 | 27.19 | •1765 | •30.87 | 1855 | 34.95 | 1950 | 39.40 | | | | | | | | | | | | |
| 21174 | 2800 | 1726 | 29.75 | 1803 | 33.48 | •1876 | •37.31 | 1960 | 41.65 | | | | | | | | | | | | |
| 22686 | 3000 | 1771 | 32.49 | 1846 | 36.41 | 1917 | 40.39 | | | | | | | | | | | | | | |
| 24198 | 3200 | 1818 | 35.38 | 1890 | 39.54 | 1961 | 43.71 | | | | | | | | | | | | | | |
| 25711 | 3400 | 1870 | 38.43 | 1937 | 42.83 | | | | | | | | | | | | | | | | |
| 27223 | 3600 | 1923 | 41.69 | | | | | | | | | | | | | | | | | | |
| 28736 | 3800 | 1977 | 45.19 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

DOUBLE WIDTH
DOUBLE INLET

# SIZE 8130

| SIZE 8130 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 1365 |
| CLASS II | 1779 |

| | | |
|---|---|---|
| Wheel Diameter | 30 inches | 762 mm |
| Wheel Circumference | 7.85 feet | 2.393 m |
| Inlet Diameter/Area | 32 1/16 inches dia./11.5 sq. ft. | 830 mm/1.068 $m^2$ |
| Outlet Size/Area | 31 ½ x 42 ¼ inches I.D./9.242 sq. ft. | 800 x 1073 mm/.8586 $m^2$ |
| Tip Speed ft./minute | 7.85 x RPM ft./minute | 2.393 x RPM m/minute |
| Maximum BHP | 9.94 x (RPM 1000)$^3$ BHP | 7.412 x (RPM 1000)$^3$ kW |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 5545 | 600 | •308 | •0.29 | •350 | •0.41 | 394 | 0.56 | | | | | | | | | | | | | | |
| 6469 | 700 | 332 | 0.36 | 370 | 0.50 | •406 | •0.64 | •442 | •0.80 | 482 | 0.99 | | | | | | | | | | |
| 7394 | 800 | 356 | 0.44 | 392 | 0.60 | 426 | 0.76 | 457 | 0.92 | •488 | •1.10 | 522 | 1.29 | 556 | 1.51 | | | | | | |
| 8318 | 900 | 383 | 0.54 | 416 | 0.71 | 448 | 0.89 | 477 | 1.07 | 505 | 1.25 | •532 | •1.44 | •561 | •1.65 | 622 | 2.12 | | | | |
| 9242 | 1000 | 411 | 0.65 | 441 | 0.84 | 471 | 1.03 | 499 | 1.23 | 525 | 1.43 | 551 | 1.63 | 576 | 1.84 | •626 | •2.29 | 682 | 2.81 | | |
| 10166 | 1100 | 440 | 0.78 | 469 | 0.98 | 496 | 1.20 | 523 | 1.41 | 548 | 1.62 | 571 | 1.85 | 595 | 2.07 | 640 | 2.52 | •686 | •3.02 | 737 | 3.59 |
| 11090 | 1200 | 470 | 0.93 | 497 | 1.15 | 522 | 1.38 | 547 | 1.61 | 571 | 1.84 | 594 | 2.08 | 616 | 2.32 | 660 | 2.80 | 700 | 3.30 | •742 | •3.84 |
| 12015 | 1300 | 500 | 1.09 | 525 | 1.33 | 550 | 1.58 | 572 | 1.83 | 595 | 2.08 | 618 | 2.33 | 639 | 2.58 | 680 | 3.11 | 720 | 3.63 | 757 | 4.17 |
| 12939 | 1400 | 531 | 1.29 | 554 | 1.54 | 578 | 1.80 | 600 | 2.06 | 620 | 2.34 | 642 | 2.60 | 663 | 2.87 | 702 | 3.43 | 739 | 3.99 | 776 | 4.56 |
| 13863 | 1500 | 562 | 1.50 | 585 | 1.77 | 606 | 2.05 | 627 | 2.33 | 648 | 2.61 | 667 | 2.91 | 687 | 3.19 | 725 | 3.77 | 761 | 4.37 | 796 | 4.97 |
| 14787 | 1600 | 594 | 1.75 | 615 | 2.03 | 635 | 2.32 | 656 | 2.62 | 675 | 2.92 | 694 | 3.23 | 712 | 3.54 | 749 | 4.15 | 784 | 4.78 | 817 | 5.42 |
| 15711 | 1700 | 625 | 2.02 | 646 | 2.32 | 665 | 2.63 | 684 | 2.94 | 703 | 3.25 | 721 | 3.57 | 739 | 3.90 | 773 | 4.56 | 808 | 5.21 | 840 | 5.88 |
| 16636 | 1800 | 657 | 2.32 | 677 | 2.64 | 696 | 2.96 | 713 | 3.29 | 732 | 3.62 | 749 | 3.95 | 766 | 4.29 | 799 | 4.99 | 832 | 5.68 | 864 | 6.38 |
| 17560 | 1900 | 689 | 2.65 | 708 | 2.98 | 726 | 3.32 | 743 | 3.67 | 760 | 4.01 | 778 | 4.36 | 794 | 4.72 | 826 | 5.45 | 856 | 6.18 | 888 | 6.91 |
| 18484 | 2000 | 721 | 3.02 | 740 | 3.37 | 757 | 3.72 | 774 | 4.08 | 790 | 4.44 | 806 | 4.81 | 822 | 5.18 | 853 | 5.94 | 882 | 6.71 | 912 | 7.48 |
| 20332 | 2200 | 786 | 3.86 | 803 | 4.24 | 819 | 4.62 | 835 | 5.01 | 850 | 5.41 | 865 | 5.81 | 880 | 6.21 | 909 | 7.03 | 937 | 7.86 | 964 | 8.70 |
| 22181 | 2400 | 851 | 4.85 | 867 | 5.27 | 883 | 5.68 | 897 | 6.10 | 912 | 6.53 | 926 | 6.96 | 939 | 7.39 | 966 | 8.27 | 993 | 9.16 | 1018 | 10.07 |
| 24029 | 2600 | 917 | 6.01 | 932 | 6.46 | 946 | 6.91 | 960 | 7.36 | 974 | 7.82 | 987 | 8.28 | 1000 | 8.75 | 1025 | 9.69 | 1050 | 10.64 | 1074 | 11.60 |
| 25878 | 2800 | 983 | 7.35 | 997 | 7.83 | 1011 | 8.32 | 1024 | 8.81 | 1037 | 9.29 | 1049 | 9.78 | 1061 | 10.28 | 1085 | 11.28 | 1108 | 12.30 | 1131 | 13.33 |
| 27726 | 3000 | 1049 | 8.88 | 1063 | 9.40 | 1075 | 9.92 | 1088 | 10.45 | 1100 | 10.97 | 1112 | 11.49 | 1124 | 12.01 | 1146 | 13.08 | 1168 | 14.16 | 1189 | 15.25 |
| 29574 | 3200 | 1116 | 10.63 | 1128 | 11.18 | 1140 | 11.73 | 1152 | 12.29 | 1164 | 12.85 | 1175 | 13.40 | 1186 | 13.96 | 1208 | 15.08 | 1229 | 16.22 | 1249 | 17.38 |
| 31423 | 3400 | 1183 | 12.60 | 1194 | 13.18 | 1206 | 13.77 | 1217 | 14.36 | 1228 | 14.95 | 1239 | 15.54 | 1250 | 16.13 | 1270 | 17.32 | 1290 | 18.52 | 1310 | 19.73 |
| 33271 | 3600 | 1249 | 14.80 | 1260 | 15.42 | 1271 | 16.04 | 1282 | 16.66 | 1293 | 17.29 | 1303 | 17.92 | 1313 | 18.54 | 1333 | 19.79 | 1352 | 21.05 | 1371 | 22.32 |
| 35120 | 3800 | 1316 | 17.26 | 1327 | 17.91 | 1337 | 18.56 | 1347 | 19.22 | 1358 | 19.88 | 1368 | 20.54 | 1377 | 21.20 | 1396 | 22.51 | 1415 | 23.84 | 1433 | 25.17 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 11090 | 1200 | 788 | 4.44 | | | | | | | | | | | | | | | | | | |
| 12015 | 1300 | •795 | •4.74 | 880 | 6.07 | | | | | | | | | | | | | | | | |
| 12939 | 1400 | 811 | 5.13 | 884 | 6.41 | 963 | 7.88 | | | | | | | | | | | | | | |
| 13863 | 1500 | 831 | 5.58 | •894 | •6.83 | 966 | 8.28 | 1040 | 9.87 | | | | | | | | | | | | |
| 14787 | 1600 | 850 | 6.06 | 913 | 7.36 | •974 | •8.74 | 1042 | 10.33 | 1111 | 12.04 | | | | | | | | | | |
| 15711 | 1700 | 871 | 6.56 | 933 | 7.93 | 990 | 9.33 | 1049 | 10.85 | 1114 | 12.56 | 1178 | 14.38 | | | | | | | | |
| 16636 | 1800 | 894 | 7.09 | 953 | 8.53 | 1009 | 9.99 | •1062 | •11.48 | 1120 | 13.14 | 1181 | 14.97 | 1242 | 16.89 | | | | | | |
| 17560 | 1900 | 918 | 7.65 | 973 | 9.16 | 1029 | 10.69 | 1081 | 12.24 | •1131 | •13.82 | 1187 | 15.61 | 1245 | 17.54 | 1303 | 19.56 | | | | |
| 18484 | 2000 | 942 | 8.24 | 997 | 9.82 | 1049 | 11.42 | 1101 | 13.03 | 1150 | 14.67 | •1196 | •16.35 | •1250 | •18.25 | 1306 | 20.28 | 1361 | 22.40 | | |
| 20332 | 2200 | 990 | 9.56 | 1044 | 11.24 | 1094 | 12.97 | 1140 | 14.74 | 1189 | 16.49 | 1234 | 18.28 | 1278 | 20.09 | •1321 | •21.97 | •1370 | •24.06 | 1419 | 26.26 |
| 22181 | 2400 | 1043 | 10.99 | 1092 | 12.84 | 1141 | 14.68 | 1186 | 16.56 | 1229 | 18.48 | 1274 | 20.40 | 1317 | 22.32 | 1358 | 24.28 | 1397 | 26.26 | •1436 | •28.29 |
| 24029 | 2600 | 1098 | 12.58 | 1143 | 14.58 | 1189 | 16.57 | 1233 | 18.57 | 1276 | 20.60 | 1316 | 22.67 | 1356 | 24.75 | 1397 | 26.82 | 1436 | 28.91 | 1473 | 31.03 |
| 25878 | 2800 | 1154 | 14.37 | 1198 | 16.48 | 1239 | 18.64 | 1281 | 20.77 | 1323 | 22.92 | 1363 | 25.10 | 1401 | 27.31 | 1437 | 29.56 | 1475 | 31.78 | 1512 | 34.01 |
| 27726 | 3000 | 1211 | 16.35 | 1253 | 18.58 | 1293 | 20.86 | 1331 | 23.18 | 1371 | 25.46 | 1410 | 27.75 | 1447 | 30.07 | 1483 | 32.43 | 1518 | 34.81 | 1552 | 37.22 |
| 29574 | 3200 | 1269 | 18.55 | 1309 | 20.89 | 1348 | 23.29 | 1385 | 25.72 | 1420 | 28.21 | 1458 | 30.63 | 1495 | 33.06 | 1530 | 35.53 | 1564 | 38.02 | 1597 | 40.55 |
| 31423 | 3400 | 1329 | 20.96 | 1366 | 23.44 | 1404 | 25.95 | 1440 | 28.50 | 1475 | 31.09 | 1508 | 33.73 | 1543 | 36.30 | 1578 | 38.88 | 1611 | 41.48 | 1644 | 44.12 |
| 33271 | 3600 | 1389 | 23.61 | 1425 | 26.23 | 1461 | 28.85 | 1496 | 31.52 | 1529 | 34.23 | 1562 | 36.98 | 1593 | 39.77 | 1626 | 42.49 | 1659 | 45.21 | 1691 | 47.95 |
| 35120 | 3800 | 1450 | 26.52 | 1485 | 29.25 | 1518 | 32.02 | 1552 | 34.80 | 1585 | 37.62 | 1616 | 40.48 | 1647 | 43.38 | 1677 | 46.32 | 1708 | 49.21 | 1739 | 52.06 |
| 36968 | 4000 | 1512 | 29.69 | 1545 | 32.54 | 1577 | 35.44 | 1609 | 38.35 | 1641 | 41.29 | 1672 | 44.26 | 1702 | 47.27 | 1731 | 50.32 | 1759 | 53.40 | | |
| 38816 | 4200 | 1574 | 33.15 | 1606 | 36.12 | 1637 | 39.14 | 1667 | 42.19 | 1698 | 45.24 | 1728 | 48.33 | 1757 | 51.45 | | | | | | |
| 40665 | 4400 | 1637 | 36.91 | 1668 | 40.00 | 1697 | 43.13 | 1726 | 46.30 | 1755 | 49.50 | | | | | | | | | | |
| 42513 | 4600 | 1700 | 40.97 | 1730 | 44.18 | 1758 | 47.43 | | | | | | | | | | | | | | |
| 44362 | 4800 | 1763 | 45.36 | | | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 20332 | 2200 | 1470 | 28.58 | | | | | | | | | | | | | | | | | | |
| 22181 | 2400 | •1481 | •30.57 | 1573 | 35.39 | 1663 | 40.50 | | | | | | | | | | | | | | |
| 24029 | 2600 | 1510 | 33.17 | •1586 | •37.76 | 1669 | 42.84 | 1754 | 48.31 | | | | | | | | | | | | |
| 25878 | 2800 | 1548 | 36.27 | 1617 | 40.84 | •1685 | •45.64 | 1761 | 50.97 | | | | | | | | | | | | |
| 27726 | 3000 | 1587 | 39.59 | 1656 | 44.39 | 1720 | 49.27 | | | | | | | | | | | | | | |
| 29574 | 3200 | 1629 | 43.10 | 1695 | 48.18 | 1758 | 53.29 | | | | | | | | | | | | | | |
| 31423 | 3400 | 1675 | 46.78 | 1736 | 52.18 | | | | | | | | | | | | | | | | |
| 33271 | 3600 | 1722 | 50.72 | | | | | | | | | | | | | | | | | | |
| 35120 | 3800 | 1770 | 54.95 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8133

DOUBLE WIDTH
DOUBLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

| | | |
|---|---|---|
| Wheel Diameter | 33 inches | 838 mm |
| Wheel Circumference | 8.64 feet | 2.633 m |
| Inlet Diameter/Area | 35 1/16 inches dia./13.7 sq. ft. | 891 mm/1.273 $m^2$ |
| Outlet Size/Area | 34 11/16 x 46 3/4 inches I.D./11.26 sq. ft. | 881 x 1187 mm/1.046 $m^2$ |
| Tip Speed | 8.64 x RPM ft./minute | 2.633 RPM m/minute |
| Maximum BHP | 15.95 x (RPM 1000)$^3$ BHP | 11.89 x (RPM 1000)$^3$ kW |

| SIZE 8133 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 1241 |
| CLASS II | 1618 |

| VOL CFM | OUT VEL | 1/4" SP | | 3/8" SP | | 1/2" SP | | 5/8" SP | | 3/4" SP | | 7/8" SP | | 1" SP | | 1 1/4" SP | | 1 1/2" SP | | 1 3/4" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 6756 | 600 | •281 | •0.35 | •319 | •0.50 | 359 | 0.68 | | | | | | | | | | | | | | |
| 7882 | 700 | 302 | 0.44 | 337 | 0.61 | •370 | •0.78 | •403 | •0.98 | 438 | 1.20 | | | | | | | | | | |
| 9008 | 800 | 325 | 0.54 | 358 | 0.73 | 388 | 0.93 | 417 | 1.12 | •444 | •1.33 | 475 | 1.57 | 506 | 1.83 | | | | | | |
| 10134 | 900 | 350 | 0.66 | 380 | 0.87 | 408 | 1.08 | 435 | 1.30 | 461 | 1.53 | •485 | •1.75 | •510 | •2.00 | 566 | 2.57 | | | | |
| 11260 | 1000 | 376 | 0.79 | 403 | 1.03 | 430 | 1.26 | 455 | 1.50 | 479 | 1.75 | 502 | 1.99 | 525 | 2.24 | •570 | •2.79 | 620 | 3.42 | | |
| 12386 | 1100 | 402 | 0.95 | 428 | 1.20 | 452 | 1.46 | 477 | 1.72 | 499 | 1.98 | 521 | 2.26 | 543 | 2.52 | 583 | 3.07 | •625 | •3.68 | 670 | 4.36 |
| 13512 | 1200 | 429 | 1.14 | 454 | 1.41 | 477 | 1.68 | 499 | 1.97 | 521 | 2.25 | 542 | 2.54 | 562 | 2.83 | 601 | 3.42 | 638 | 4.02 | •676 | •4.67 |
| 14638 | 1300 | 457 | 1.34 | 480 | 1.63 | 502 | 1.93 | 522 | 2.23 | 543 | 2.54 | 564 | 2.85 | 583 | 3.16 | 619 | 3.79 | 656 | 4.43 | 690 | 5.08 |
| 15764 | 1400 | 485 | 1.58 | 507 | 1.89 | 528 | 2.20 | 548 | 2.53 | 566 | 2.86 | 586 | 3.19 | 605 | 3.51 | 640 | 4.19 | 674 | 4.87 | 708 | 5.56 |
| 16890 | 1500 | 514 | 1.85 | 534 | 2.18 | 554 | 2.51 | 573 | 2.85 | 591 | 3.20 | 609 | 3.56 | 627 | 3.91 | 662 | 4.61 | 694 | 5.34 | 726 | 6.07 |
| 18016 | 1600 | 543 | 2.15 | 562 | 2.49 | 580 | 2.85 | 599 | 3.21 | 617 | 3.57 | 634 | 3.95 | 650 | 4.33 | 684 | 5.07 | 715 | 5.83 | 745 | 6.61 |
| 19142 | 1700 | 572 | 2.48 | 590 | 2.85 | 608 | 3.22 | 625 | 3.60 | 642 | 3.99 | 659 | 4.38 | 675 | 4.77 | 706 | 5.57 | 737 | 6.37 | 767 | 7.18 |
| 20268 | 1800 | 601 | 2.86 | 619 | 3.24 | 636 | 3.63 | 652 | 4.03 | 668 | 4.43 | 684 | 4.84 | 700 | 5.26 | 729 | 6.11 | 759 | 6.95 | 788 | 7.79 |
| 21394 | 1900 | 630 | 3.27 | 647 | 3.67 | 664 | 4.08 | 679 | 4.50 | 695 | 4.92 | 710 | 5.35 | 725 | 5.78 | 754 | 6.67 | 781 | 7.56 | 810 | 8.45 |
| 22520 | 2000 | 660 | 3.72 | 676 | 4.14 | 692 | 4.57 | 707 | 5.01 | 722 | 5.45 | 736 | 5.90 | 751 | 6.35 | 779 | 7.27 | 805 | 8.21 | 832 | 9.15 |
| 24772 | 2200 | 719 | 4.75 | 735 | 5.22 | 749 | 5.69 | 763 | 6.16 | 777 | 6.64 | 790 | 7.13 | 804 | 7.62 | 830 | 8.61 | 856 | 9.62 | 880 | 10.65 |
| 27024 | 2400 | 779 | 5.97 | 793 | 6.48 | 807 | 6.99 | 820 | 7.50 | 833 | 8.02 | 846 | 8.54 | 858 | 9.07 | 882 | 10.15 | 907 | 11.23 | 930 | 12.33 |
| 29276 | 2600 | 839 | 7.40 | 853 | 7.95 | 866 | 8.51 | 878 | 9.06 | 890 | 9.61 | 902 | 10.17 | 914 | 10.74 | 936 | 11.89 | 959 | 13.05 | 981 | 14.22 |
| 31528 | 2800 | 900 | 9.06 | 912 | 9.65 | 924 | 10.24 | 936 | 10.84 | 948 | 11.43 | 959 | 12.03 | 970 | 12.63 | 992 | 13.85 | 1012 | 15.09 | 1033 | 16.34 |
| 33780 | 3000 | 960 | 10.95 | 972 | 11.58 | 984 | 12.22 | 995 | 12.86 | 1006 | 13.49 | 1017 | 14.13 | 1027 | 14.77 | 1048 | 16.06 | 1067 | 17.38 | 1087 | 18.71 |
| 36032 | 3200 | 1021 | 13.11 | 1032 | 13.78 | 1043 | 14.45 | 1054 | 15.13 | 1065 | 15.82 | 1075 | 16.49 | 1085 | 17.17 | 1104 | 18.54 | 1123 | 19.92 | 1142 | 21.33 |
| 38284 | 3400 | 1082 | 15.54 | 1093 | 16.25 | 1103 | 16.96 | 1113 | 17.68 | 1123 | 18.41 | 1133 | 19.13 | 1143 | 19.84 | 1161 | 21.29 | 1180 | 22.75 | 1197 | 24.23 |
| 40536 | 3600 | 1143 | 18.27 | 1153 | 19.02 | 1163 | 19.77 | 1173 | 20.53 | 1182 | 21.29 | 1192 | 22.06 | 1201 | 22.82 | 1219 | 24.34 | 1236 | 25.87 | 1253 | 27.42 |
| 42788 | 3800 | 1205 | 21.30 | 1214 | 22.09 | 1224 | 22.88 | 1233 | 23.68 | 1242 | 24.48 | 1251 | 25.29 | 1260 | 26.10 | 1277 | 27.70 | 1294 | 29.31 | 1310 | 30.93 |

| VOL CFM | OUT VEL | 2" SP | | 2 1/2" SP | | 3" SP | | 3 1/2" SP | | 4" SP | | 4 1/2" SP | | 5" SP | | 5 1/2" SP | | 6" SP | | 6 1/2" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 13512 | 1200 | 717 | 5.40 | | | | | | | | | | | | | | | | | | |
| 14638 | 1300 | •724 | •5.77 | 800 | 7.38 | | | | | | | | | | | | | | | | |
| 15764 | 1400 | 739 | 6.26 | 804 | 7.80 | 876 | 9.58 | | | | | | | | | | | | | | |
| 16890 | 1500 | 757 | 6.81 | •815 | •8.32 | 878 | 10.06 | 945 | 12.00 | | | | | | | | | | | | |
| 18016 | 1600 | 775 | 7.40 | 832 | 8.98 | •887 | •10.65 | 948 | 12.56 | 1010 | 14.64 | | | | | | | | | | |
| 19142 | 1700 | 794 | 8.01 | 850 | 9.68 | 902 | 11.38 | •955 | •13.21 | 1013 | 15.28 | 1072 | 17.48 | | | | | | | | |
| 20268 | 1800 | 816 | 8.66 | 868 | 10.42 | 920 | 12.19 | 968 | 14.00 | 1019 | 16.00 | 1074 | 18.20 | 1130 | 20.53 | | | | | | |
| 21394 | 1900 | 837 | 9.34 | 888 | 11.19 | 938 | 13.04 | 985 | 14.93 | •1030 | •16.85 | 1080 | 19.00 | 1132 | 21.33 | 1185 | 23.79 | | | | |
| 22520 | 2000 | 859 | 10.08 | 909 | 11.99 | 956 | 13.95 | 1003 | 15.90 | 1048 | 17.89 | •1090 | •19.92 | •1138 | •22.22 | 1187 | 24.66 | 1238 | 27.24 | 1286 | 29.87 |
| 24772 | 2200 | 903 | 11.69 | 952 | 13.74 | 997 | 15.84 | 1040 | 18.00 | 1083 | 20.13 | 1125 | 22.30 | 1164 | 24.51 | •1202 | •26.75 | •1247 | •29.30 | 1291 | 31.93 |
| 27024 | 2400 | 952 | 13.45 | 996 | 15.70 | 1041 | 17.94 | 1082 | 20.23 | 1121 | 22.57 | 1161 | 24.90 | 1200 | 27.25 | 1237 | 29.62 | 1273 | 32.03 | •1308 | •34.47 |
| 29276 | 2600 | 1003 | 15.41 | 1044 | 17.84 | 1085 | 20.27 | 1125 | 22.70 | 1164 | 25.17 | 1200 | 27.68 | 1236 | 30.22 | 1273 | 32.74 | 1308 | 35.29 | 1343 | 37.86 |
| 31528 | 2800 | 1054 | 17.60 | 1094 | 20.17 | 1131 | 22.81 | 1169 | 25.41 | 1207 | 28.02 | 1243 | 30.67 | 1277 | 33.36 | 1310 | 36.09 | 1344 | 38.80 | 1378 | 41.52 |
| 33780 | 3000 | 1106 | 20.05 | 1144 | 22.76 | 1181 | 25.53 | 1215 | 28.36 | 1251 | 31.13 | 1286 | 33.92 | 1320 | 36.75 | 1353 | 39.61 | 1384 | 42.51 | 1415 | 45.45 |
| 36032 | 3200 | 1159 | 22.75 | 1196 | 25.61 | 1231 | 28.52 | 1265 | 31.48 | 1297 | 34.50 | 1331 | 37.46 | 1364 | 40.42 | 1396 | 43.42 | 1427 | 46.46 | 1457 | 49.53 |
| 38284 | 3400 | 1214 | 25.72 | 1248 | 28.74 | 1282 | 31.79 | 1315 | 34.90 | 1346 | 38.05 | 1376 | 41.26 | 1408 | 44.40 | 1439 | 47.54 | 1470 | 50.71 | 1499 | 53.91 |
| 40536 | 3600 | 1270 | 28.99 | 1302 | 32.17 | 1334 | 35.37 | 1366 | 38.61 | 1397 | 41.91 | 1426 | 45.25 | 1454 | 48.64 | 1484 | 51.98 | 1514 | 55.28 | 1543 | 58.62 |
| 42788 | 3800 | 1326 | 32.57 | 1357 | 35.90 | 1387 | 39.27 | 1418 | 42.65 | 1447 | 46.08 | 1476 | 49.56 | 1504 | 53.09 | 1531 | 56.66 | 1558 | 60.20 | 1587 | 63.67 |
| 45040 | 4000 | 1382 | 36.49 | 1412 | 39.96 | 1441 | 43.48 | 1470 | 47.03 | 1499 | 50.60 | 1527 | 54.21 | 1554 | 57.88 | 1580 | 61.58 | 1606 | 65.33 | | |
| 47292 | 4200 | 1439 | 40.75 | 1468 | 44.36 | 1496 | 48.03 | 1523 | 51.75 | 1551 | 55.47 | 1578 | 59.22 | 1605 | 63.02 | | | | | | |
| 49544 | 4400 | 1497 | 45.38 | 1525 | 49.14 | 1551 | 52.95 | 1578 | 56.81 | 1603 | 60.71 | | | | | | | | | | |
| 51796 | 4600 | 1554 | 50.39 | 1581 | 54.30 | 1607 | 58.25 | | | | | | | | | | | | | | |
| 54048 | 4800 | 1612 | 55.80 | | | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 24772 | 2200 | 1337 | 34.74 | | | | | | | | | | | | | | | | | | |
| 27024 | 2400 | •1348 | •37.21 | 1430 | 43.03 | 1513 | 49.23 | | | | | | | | | | | | | | |
| 29276 | 2600 | 1376 | 40.46 | •1443 | •45.97 | 1517 | 52.09 | 1595 | 58.73 | | | | | | | | | | | | |
| 31528 | 2800 | 1411 | 44.26 | 1473 | 49.82 | •1534 | •55.57 | 1603 | 62.05 | | | | | | | | | | | | |
| 33780 | 3000 | 1447 | 48.33 | 1509 | 54.17 | 1567 | 60.11 | | | | | | | | | | | | | | |
| 36032 | 3200 | 1486 | 52.63 | 1545 | 58.82 | 1602 | 65.03 | | | | | | | | | | | | | | |
| 38284 | 3400 | 1528 | 57.15 | 1583 | 63.72 | | | | | | | | | | | | | | | | |
| 40536 | 3600 | 1571 | 61.99 | | | | | | | | | | | | | | | | | | |
| 42788 | 3800 | 1614 | 67.18 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/$m^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

DOUBLE WIDTH
DOUBLE INLET

# SIZE 8137

| SIZE 8137 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 1111 |
| CLASS II | 1448 |

| | | |
|---|---|---|
| Wheel Diameter | 36 ½ inches | 927 mm |
| Wheel Circumference | 9.56 feet | 2.914 m |
| Inlet Diameter/Area | 39 3/16 inches dia./16.6 sq. ft. | 995 mm/1.542 $m^2$ |
| Outlet Size/Area | 38 3/8 x 51 9/16 inches I.D./13.74 sq. ft. | 975 x 1310 mm/1.276 $m^2$ |
| Tip Speed | 9.56 x RPM ft./minute | 2.914 x RPM m/minute |
| Maximum BHP | 26.95 x (RPM 1000)$^3$ BHP | 20.10 x (RPM 1000)$^3$ kW |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 8244 | 600 | •253 | •0.43 | •287 | •0.61 | | | | | | | | | | | | | | | | |
| 9618 | 700 | 272 | 0.54 | 304 | 0.74 | •332 | •0.95 | •362 | •1.19 | | | | | | | | | | | | |
| 10992 | 800 | 292 | 0.65 | 322 | 0.89 | 349 | 1.12 | 374 | 1.37 | •400 | •1.63 | | | | | | | | | | |
| 12366 | 900 | 313 | 0.79 | 341 | 1.06 | 367 | 1.32 | 391 | 1.58 | 414 | 1.85 | •436 | •2.13 | •460 | •2.44 | | | | | | |
| 13740 | 1000 | 336 | 0.95 | 361 | 1.24 | 386 | 1.55 | 410 | 1.83 | 431 | 2.12 | 452 | 2.42 | 472 | 2.72 | 513 | 3.40 | | | | |
| 15114 | 1100 | 359 | 1.15 | 383 | 1.44 | 406 | 1.77 | 428 | 2.11 | 449 | 2.42 | 469 | 2.74 | 488 | 3.07 | •524 | •3.73 | 563 | 4.48 | | |
| 16488 | 1200 | 383 | 1.37 | 406 | 1.69 | 426 | 2.02 | 448 | 2.39 | 468 | 2.76 | 488 | 3.10 | 506 | 3.44 | 541 | 4.15 | •573 | •4.88 | •609 | •5.70 |
| 17862 | 1300 | 408 | 1.62 | 429 | 1.96 | 449 | 2.31 | 468 | 2.68 | 488 | 3.09 | 506 | 3.49 | 524 | 3.86 | 558 | 4.61 | 590 | 5.38 | 620 | 6.17 |
| 19236 | 1400 | 432 | 1.90 | 453 | 2.27 | 472 | 2.65 | 489 | 3.03 | 508 | 3.44 | 526 | 3.87 | 543 | 4.31 | 576 | 5.11 | 607 | 5.92 | 636 | 6.75 |
| 20610 | 1500 | 457 | 2.21 | 477 | 2.62 | 495 | 3.02 | 512 | 3.42 | 528 | 3.83 | 546 | 4.28 | 563 | 4.75 | 595 | 5.65 | 625 | 6.50 | 653 | 7.38 |
| 21984 | 1600 | 483 | 2.56 | 501 | 3.00 | 519 | 3.43 | 535 | 3.85 | 551 | 4.28 | 566 | 4.73 | 583 | 5.21 | 614 | 6.21 | 644 | 7.13 | 671 | 8.05 |
| 23358 | 1700 | 508 | 2.95 | 526 | 3.42 | 543 | 3.88 | 559 | 4.33 | 574 | 4.78 | 589 | 5.24 | 603 | 5.72 | 634 | 6.76 | 662 | 7.81 | 690 | 8.77 |
| 24732 | 1800 | 534 | 3.39 | 551 | 3.88 | 567 | 4.38 | 583 | 4.85 | 597 | 5.33 | 612 | 5.81 | 625 | 6.30 | 654 | 7.35 | 682 | 8.47 | 708 | 9.55 |
| 26106 | 1900 | 559 | 3.86 | 576 | 4.38 | 592 | 4.91 | 607 | 5.42 | 621 | 5.92 | 635 | 6.42 | 648 | 6.93 | 674 | 7.98 | 702 | 9.15 | 728 | 10.34 |
| 27480 | 2000 | 585 | 4.39 | 601 | 4.93 | 616 | 5.48 | 631 | 6.04 | 645 | 6.56 | 658 | 7.09 | 671 | 7.62 | 696 | 8.71 | 722 | 9.87 | 747 | 11.10 |
| 30228 | 2200 | 637 | 5.60 | 652 | 6.19 | 666 | 6.79 | 680 | 7.39 | 693 | 8.01 | 706 | 8.58 | 718 | 9.16 | 742 | 10.33 | 765 | 11.52 | 787 | 12.78 |
| 32976 | 2400 | 690 | 7.03 | 704 | 7.66 | 717 | 8.31 | 730 | 8.97 | 742 | 9.63 | 754 | 10.30 | 766 | 10.93 | 789 | 12.19 | 811 | 13.47 | 831 | 14.77 |
| 35724 | 2600 | 743 | 8.70 | 756 | 9.38 | 768 | 10.08 | 780 | 10.78 | 792 | 11.49 | 804 | 12.21 | 815 | 12.94 | 837 | 14.31 | 857 | 15.68 | 877 | 17.06 |
| 38472 | 2800 | 796 | 10.63 | 808 | 11.36 | 820 | 12.11 | 832 | 12.86 | 843 | 13.62 | 854 | 14.38 | 864 | 15.16 | 885 | 16.71 | 905 | 18.16 | 924 | 19.63 |
| 41220 | 3000 | 850 | 12.84 | 861 | 13.62 | 872 | 14.41 | 883 | 15.21 | 894 | 16.02 | 904 | 16.84 | 914 | 17.66 | 934 | 19.32 | 953 | 20.95 | 971 | 22.51 |
| 43968 | 3200 | 903 | 15.35 | 914 | 16.18 | 925 | 17.02 | 935 | 17.87 | 945 | 18.73 | 955 | 19.59 | 964 | 20.46 | 983 | 22.22 | 1001 | 24.00 | 1019 | 25.71 |
| 46716 | 3400 | 957 | 18.18 | 967 | 19.06 | 977 | 19.96 | 987 | 20.85 | 997 | 21.76 | 1006 | 22.67 | 1015 | 23.58 | 1033 | 25.43 | 1051 | 27.31 | 1068 | 29.21 |
| 49464 | 3600 | 1011 | 21.35 | 1021 | 22.29 | 1030 | 23.23 | 1039 | 24.17 | 1049 | 25.13 | 1058 | 26.09 | 1066 | 27.05 | 1084 | 29.00 | 1100 | 30.96 | 1117 | 32.95 |
| 52212 | 3800 | 1065 | 24.89 | 1074 | 25.87 | 1083 | 26.86 | 1092 | 27.86 | 1101 | 28.86 | 1109 | 29.86 | 1118 | 30.88 | 1134 | 32.92 | 1151 | 34.98 | 1166 | 37.07 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 17862 | 1300 | •652 | •7.05 | | | | | | | | | | | | | | | | | | |
| 19236 | 1400 | 664 | 7.61 | 724 | 9.50 | | | | | | | | | | | | | | | | |
| 20610 | 1500 | 681 | 8.27 | •734 | •10.15 | | | | | | | | | | | | | | | | |
| 21984 | 1600 | 697 | 8.98 | 748 | 10.91 | •799 | •13.00 | | | | | | | | | | | | | | |
| 23358 | 1700 | 716 | 9.75 | 765 | 11.75 | 811 | 13.82 | 860 | 16.12 | | | | | | | | | | | | |
| 24732 | 1800 | 734 | 10.57 | 782 | 12.65 | 827 | 14.81 | •870 | •17.03 | 918 | 19.51 | | | | | | | | | | |
| 26106 | 1900 | 753 | 11.44 | 800 | 13.61 | 844 | 15.84 | 886 | 18.13 | •928 | •20.54 | 973 | 23.16 | | | | | | | | |
| 27480 | 2000 | 772 | 12.36 | 818 | 14.63 | 861 | 16.94 | 902 | 19.31 | 942 | 21.74 | •982 | •24.32 | 1025 | 27.08 | | | | | | |
| 30228 | 2200 | 811 | 14.13 | 856 | 16.86 | 898 | 19.34 | 937 | 21.87 | 975 | 24.45 | 1011 | 27.09 | •1046 | •29.77 | •1084 | •32.67 | 1123 | 35.71 | | |
| 32976 | 2400 | 851 | 16.11 | 895 | 19.05 | 935 | 22.01 | 974 | 24.71 | 1010 | 27.46 | 1045 | 30.25 | 1079 | 33.09 | 1112 | 35.98 | •1144 | •38.91 | •1179 | •42.08 |
| 35724 | 2600 | 896 | 18.47 | 935 | 21.43 | 974 | 24.63 | 1011 | 27.84 | 1047 | 30.76 | 1081 | 33.72 | 1113 | 36.72 | 1145 | 39.77 | 1177 | 42.86 | 1207 | 45.99 |
| 38472 | 2800 | 942 | 21.12 | 977 | 24.16 | 1014 | 27.44 | 1050 | 30.90 | 1084 | 34.38 | 1118 | 37.52 | 1150 | 40.68 | 1181 | 43.89 | 1210 | 47.14 | 1240 | 50.43 |
| 41220 | 3000 | 989 | 24.08 | 1023 | 27.29 | 1055 | 30.56 | 1090 | 34.15 | 1123 | 37.85 | 1156 | 41.62 | 1187 | 44.99 | 1217 | 48.37 | 1247 | 51.78 | 1275 | 55.23 |
| 43968 | 3200 | 1036 | 27.37 | 1069 | 30.74 | 1100 | 34.18 | 1130 | 37.69 | 1163 | 41.56 | 1195 | 45.50 | 1225 | 49.51 | 1255 | 53.21 | 1283 | 56.80 | 1311 | 60.41 |
| 46716 | 3400 | 1084 | 30.99 | 1116 | 34.54 | 1146 | 38.15 | 1175 | 41.81 | 1204 | 45.58 | 1235 | 49.69 | 1264 | 53.87 | 1293 | 58.11 | 1321 | 62.20 | 1348 | 65.99 |
| 49464 | 3600 | 1133 | 34.97 | 1163 | 38.70 | 1193 | 42.48 | 1221 | 46.31 | 1248 | 50.21 | 1275 | 54.21 | 1304 | 58.55 | 1332 | 62.96 | 1360 | 67.43 | 1386 | 71.96 |
| 52212 | 3800 | 1182 | 39.17 | 1211 | 43.25 | 1240 | 47.20 | 1267 | 51.20 | 1294 | 55.26 | 1319 | 59.37 | 1345 | 63.59 | 1372 | 68.17 | 1399 | 72.80 | 1425 | 77.49 |
| 54960 | 4000 | 1231 | 43.76 | 1260 | 48.21 | 1287 | 52.33 | 1314 | 56.50 | 1340 | 60.72 | 1365 | 65.00 | 1389 | 69.33 | 1413 | 73.74 | 1439 | 78.54 | | |
| 57708 | 4200 | 1281 | 48.74 | 1309 | 53.38 | 1335 | 57.89 | 1361 | 62.23 | 1386 | 66.62 | 1411 | 71.06 | 1434 | 75.55 | | | | | | |
| 60456 | 4400 | 1331 | 54.15 | 1358 | 58.98 | 1384 | 63.88 | 1409 | 68.41 | 1433 | 72.97 | | | | | | | | | | |
| 63204 | 4600 | 1382 | 60.01 | 1408 | 65.02 | 1433 | 70.10 | | | | | | | | | | | | | | |
| 65952 | 4800 | 1432 | 66.32 | | | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 32976 | 2400 | 1214 | 45.38 | | | | | | | | | | | | | | | | | | |
| 35724 | 2600 | •1236 | •49.16 | •1301 | •56.09 | | | | | | | | | | | | | | | | |
| 38472 | 2800 | 1269 | 53.76 | 1324 | 60.52 | •1383 | •67.85 | 1443 | 75.57 | | | | | | | | | | | | |
| 41220 | 3000 | 1302 | 58.71 | 1357 | 65.80 | 1408 | 73.02 | | | | | | | | | | | | | | |
| 43968 | 3200 | 1338 | 64.06 | 1390 | 71.44 | 1441 | 78.99 | | | | | | | | | | | | | | |
| 46716 | 3400 | 1375 | 69.80 | 1426 | 77.52 | | | | | | | | | | | | | | | | |
| 49464 | 3600 | 1412 | 75.96 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/$m^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8140

DOUBLE WIDTH
DOUBLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

| | | |
|---|---|---|
| Wheel Diameter | 40 ¼ inches | 1022 mm |
| Wheel Circumference | 10.54 feet | 3.213 m |
| Inlet Diameter/Area | 49 ½ inches sq./20.62 sq. ft. | 1257 mm/1.916 $m^2$ |
| Outlet Size/Area | 57 ⅛ x 42 7/16 inches I.D./16.83 sq. ft. | 1451 x 1078 mm/1.564 $m^2$ |
| Tip Speed | 10.54 x RPM ft./minute | 3.213 x RPM m/minute |
| Maximum BHP | 43.98 x (RPM 1000)$^3$ BHP | 32.80 x (RPM 1000)$^3$ kW |

| SIZE 8140 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 1007 |
| CLASS II | 1313 |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 10098 | 600 | •230 | •0.53 | •261 | •0.75 | | | | | | | | | | | | | | | | |
| 11781 | 700 | 247 | 0.66 | 276 | 0.91 | •302 | •1.17 | •329 | •1.46 | | | | | | | | | | | | |
| 13464 | 800 | 265 | 0.80 | 293 | 1.10 | 317 | 1.38 | 340 | 1.68 | •363 | •1.99 | | | | | | | | | | |
| 15147 | 900 | 285 | 0.97 | 311 | 1.30 | 334 | 1.63 | 356 | 1.95 | 376 | 2.28 | •396 | •2.61 | •417 | •2.99 | | | | | | |
| 16830 | 1000 | 306 | 1.18 | 329 | 1.52 | 352 | 1.90 | 373 | 2.25 | 392 | 2.61 | 411 | 2.97 | 429 | 3.34 | •466 | •4.16 | | | | |
| 18513 | 1100 | 328 | 1.41 | 349 | 1.78 | 370 | 2.17 | 390 | 2.60 | 409 | 2.98 | 427 | 3.37 | 444 | 3.76 | 477 | 4.58 | •511 | •5.48 | | |
| 20196 | 1200 | 350 | 1.69 | 370 | 2.08 | 388 | 2.48 | 408 | 2.93 | 426 | 3.39 | 444 | 3.81 | 460 | 4.23 | 492 | 5.10 | 521 | 5.99 | •553 | •6.98 |
| 21879 | 1300 | 372 | 2.00 | 391 | 2.42 | 409 | 2.85 | 426 | 3.30 | 444 | 3.79 | 461 | 4.29 | 477 | 4.74 | 508 | 5.66 | 536 | 6.60 | 564 | 7.57 |
| 23562 | 1400 | 394 | 2.34 | 413 | 2.81 | 430 | 3.26 | 446 | 3.73 | 462 | 4.23 | 479 | 4.76 | 494 | 5.30 | 524 | 6.27 | 552 | 7.27 | 579 | 8.29 |
| 25245 | 1500 | 417 | 2.73 | 435 | 3.24 | 451 | 3.72 | 467 | 4.21 | 481 | 4.72 | 497 | 5.26 | 512 | 5.83 | 541 | 6.94 | 569 | 7.99 | 594 | 9.06 |
| 26928 | 1600 | 440 | 3.17 | 457 | 3.71 | 473 | 4.23 | 488 | 4.75 | 502 | 5.28 | 516 | 5.82 | 531 | 6.41 | 559 | 7.63 | 586 | 8.77 | 611 | 9.89 |
| 28611 | 1700 | 463 | 3.65 | 480 | 4.22 | 495 | 4.79 | 509 | 5.34 | 523 | 5.89 | 537 | 6.46 | 549 | 7.03 | 577 | 8.31 | 603 | 9.61 | 628 | 10.78 |
| 30294 | 1800 | 487 | 4.19 | 502 | 4.79 | 517 | 5.41 | 531 | 5.99 | 545 | 6.57 | 558 | 7.16 | 570 | 7.76 | 595 | 9.04 | 621 | 10.40 | 645 | 11.74 |
| 31977 | 1900 | 510 | 4.78 | 525 | 5.42 | 540 | 6.06 | 553 | 6.69 | 566 | 7.30 | 579 | 7.92 | 591 | 8.54 | 614 | 9.82 | 639 | 11.24 | 662 | 12.70 |
| 33660 | 2000 | 534 | 5.44 | 549 | 6.10 | 562 | 6.77 | 575 | 7.46 | 588 | 8.10 | 600 | 8.74 | 612 | 9.39 | 634 | 10.72 | 657 | 12.13 | 680 | 13.64 |
| 37026 | 2200 | 582 | 6.94 | 595 | 7.66 | 608 | 8.39 | 620 | 9.13 | 632 | 9.89 | 644 | 10.59 | 655 | 11.30 | 676 | 12.73 | 697 | 14.19 | 717 | 15.72 |
| 40392 | 2400 | 630 | 8.71 | 642 | 9.49 | 654 | 10.28 | 666 | 11.08 | 677 | 11.90 | 688 | 12.72 | 699 | 13.50 | 719 | 15.04 | 739 | 16.60 | 757 | 18.19 |
| 43758 | 2600 | 678 | 10.78 | 690 | 11.62 | 701 | 12.47 | 712 | 13.33 | 723 | 14.20 | 733 | 15.08 | 743 | 15.97 | 763 | 17.66 | 781 | 19.33 | 799 | 21.03 |
| 47124 | 2800 | 727 | 13.18 | 738 | 14.08 | 748 | 14.99 | 759 | 15.91 | 769 | 16.84 | 779 | 17.78 | 788 | 18.72 | 807 | 20.64 | 825 | 22.41 | 842 | 24.21 |
| 50490 | 3000 | 776 | 15.92 | 786 | 16.89 | 796 | 17.86 | 806 | 18.84 | 815 | 19.82 | 825 | 20.82 | 834 | 21.82 | 852 | 23.86 | 869 | 25.87 | 885 | 27.78 |
| 53856 | 3200 | 825 | 19.04 | 834 | 20.07 | 844 | 21.10 | 853 | 22.14 | 862 | 23.18 | 871 | 24.24 | 880 | 25.30 | 897 | 27.45 | 913 | 29.63 | 929 | 31.74 |
| 57222 | 3400 | 874 | 22.56 | 883 | 23.65 | 892 | 24.74 | 901 | 25.84 | 910 | 26.94 | 918 | 28.06 | 926 | 29.18 | 943 | 31.44 | 958 | 33.74 | 974 | 36.06 |
| 60588 | 3600 | 923 | 26.50 | 932 | 27.65 | 940 | 28.80 | 949 | 29.96 | 957 | 31.12 | 965 | 32.30 | 973 | 33.48 | 989 | 35.86 | 1004 | 38.27 | 1019 | 40.70 |
| 63954 | 3800 | 972 | 30.89 | 981 | 32.10 | 989 | 33.31 | 997 | 34.53 | 1005 | 35.76 | 1013 | 36.99 | 1020 | 38.23 | 1035 | 40.73 | 1050 | 43.25 | 1064 | 45.80 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 21879 | 1300 | •592 | •8.63 | | | | | | | | | | | | | | | | | | |
| 23562 | 1400 | 604 | 9.33 | 658 | 11.64 | | | | | | | | | | | | | | | | |
| 25245 | 1500 | 619 | 10.15 | •666 | •12.43 | 717 | 14.98 | | | | | | | | | | | | | | |
| 26928 | 1600 | 634 | 11.03 | 680 | 13.38 | •726 | •15.91 | | | | | | | | | | | | | | |
| 28611 | 1700 | 651 | 11.98 | 695 | 14.43 | 737 | 16.95 | 781 | 19.73 | | | | | | | | | | | | |
| 30294 | 1800 | 668 | 12.99 | 711 | 15.54 | 752 | 18.17 | •790 | •20.86 | 834 | 23.88 | | | | | | | | | | |
| 31977 | 1900 | 685 | 14.07 | 728 | 16.72 | 767 | 19.45 | 805 | 22.24 | •842 | •25.15 | 883 | 28.36 | | | | | | | | |
| 33660 | 2000 | 702 | 15.18 | 744 | 17.98 | 783 | 20.80 | 820 | 23.70 | 856 | 26.66 | •892 | •29.78 | •930 | •33.15 | | | | | | |
| 37026 | 2200 | 738 | 17.36 | 779 | 20.73 | 817 | 23.76 | 852 | 26.86 | 886 | 30.02 | 919 | 33.24 | 951 | 36.51 | •985 | •40.01 | •1020 | •43.71 | | |
| 40392 | 2400 | 775 | 19.81 | 814 | 23.41 | 851 | 27.06 | 886 | 30.36 | 919 | 33.72 | 950 | 37.14 | 981 | 40.61 | 1011 | 44.14 | 1040 | 47.72 | •1071 | •51.53 |
| 43758 | 2600 | 817 | 22.75 | 851 | 26.35 | 887 | 30.27 | 920 | 34.24 | 953 | 37.81 | 983 | 41.42 | 1013 | 45.09 | 1041 | 48.81 | 1070 | 52.59 | 1097 | 56.42 |
| 47124 | 2800 | 859 | 26.04 | 891 | 29.75 | 923 | 33.74 | 956 | 37.96 | 987 | 42.28 | 1017 | 46.11 | 1046 | 49.99 | 1074 | 53.91 | 1101 | 57.87 | 1127 | 61.90 |
| 50490 | 3000 | 901 | 29.70 | 932 | 33.62 | 961 | 37.63 | 992 | 41.98 | 1023 | 46.50 | 1052 | 51.11 | 1080 | 55.31 | 1108 | 59.44 | 1134 | 63.61 | 1160 | 67.82 |
| 53856 | 3200 | 945 | 33.77 | 975 | 37.90 | 1003 | 42.10 | 1030 | 46.39 | 1059 | 51.09 | 1088 | 55.90 | 1115 | 60.80 | 1142 | 65.43 | 1168 | 69.81 | 1193 | 74.22 |
| 57222 | 3400 | 989 | 38.27 | 1017 | 42.60 | 1045 | 47.01 | 1071 | 51.50 | 1096 | 56.06 | 1124 | 61.08 | 1151 | 66.19 | 1177 | 71.37 | 1202 | 76.49 | 1227 | 81.11 |
| 60588 | 3600 | 1033 | 43.17 | 1061 | 47.76 | 1087 | 52.38 | 1113 | 57.07 | 1137 | 61.83 | 1161 | 66.67 | 1187 | 71.98 | 1213 | 77.37 | 1238 | 82.83 | 1261 | 88.36 |
| 63954 | 3800 | 1078 | 48.38 | 1105 | 53.40 | 1130 | 58.23 | 1155 | 63.12 | 1179 | 68.09 | 1202 | 73.12 | 1224 | 78.21 | 1249 | 83.81 | 1274 | 89.47 | 1297 | 95.20 |
| 67320 | 4000 | 1123 | 54.06 | 1149 | 59.51 | 1174 | 64.58 | 1198 | 69.69 | 1221 | 74.85 | 1244 | 80.08 | 1265 | 85.37 | 1287 | 90.73 | 1310 | 96.57 | | |
| 70686 | 4200 | 1168 | 60.25 | 1194 | 65.92 | 1218 | 71.47 | 1241 | 76.78 | 1264 | 82.15 | 1286 | 87.59 | 1307 | 93.08 | | | | | | |
| 74052 | 4400 | 1214 | 66.96 | 1239 | 72.86 | 1262 | 78.85 | 1285 | 84.44 | 1307 | 90.02 | | | | | | | | | | |
| 77418 | 4600 | 1261 | 74.22 | 1284 | 80.35 | 1307 | 86.56 | | | | | | | | | | | | | | |
| 80784 | 4800 | 1307 | 82.05 | | | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7' SP | | 8' SP | | 9' SP | | 10' SP | | 11' SP | | 12' SP | | 13' SP | | 14" SP | | 15' SP | | 16' SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 40392 | 2400 | •1103 | •55.56 | | | | | | | | | | | | | | | | | | |
| 43758 | 2600 | 1124 | 60.29 | •1181 | •68.68 | | | | | | | | | | | | | | | | |
| 47124 | 2800 | 1154 | 65.97 | 1204 | 74.23 | •1256 | •83.09 | 1310 | 92.51 | | | | | | | | | | | | |
| 50490 | 3000 | 1184 | 72.08 | 1234 | 80.74 | 1280 | 89.56 | | | | | | | | | | | | | | |
| 53856 | 3200 | 1217 | 78.68 | 1264 | 87.71 | 1310 | 96.93 | | | | | | | | | | | | | | |
| 57222 | 3400 | 1251 | 85.78 | 1297 | 95.22 | | | | | | | | | | | | | | | | |
| 60588 | 3600 | 1285 | 93.39 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/$m^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

DOUBLE WIDTH
DOUBLE INLET

# SIZE 8145

| SIZE 8145 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 911 |
| CLASS II | 1188 |

| | | |
|---|---|---|
| Wheel Diameter | 44 ½ inches | 1130 mm |
| Wheel Circumference | 11.65 feet | 3.551 m |
| Inlet Diameter/Area | 53 ½ inches sq./24.84 sq. ft. | 1359 mm/2.308 $m^2$ |
| Outlet Size/Area | 46 15/16 x 63 inches I.D./20.54 sq. ft. | 1192 x 1600 mm/1.908 $m^2$ |
| Tip Speed | 11.65 x RPM ft./minute | 3.551 x RPM m/minute |
| Maximum BHP | 72.50 x (RPM 1000)$^3$ BHP | 54.06 x (RPM 1000)$^3$ kW |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 12324 | 600 | •208 | •0.65 | •236 | •0.91 | | | | | | | | | | | | | | | | |
| 14378 | 700 | 224 | 0.81 | 250 | 1.11 | •273 | •1.43 | •298 | •1.78 | | | | | | | | | | | | |
| 16432 | 800 | 240 | 0.98 | 265 | 1.34 | 287 | 1.68 | 308 | 2.04 | •329 | •2.43 | | | | | | | | | | |
| 18486 | 900 | 258 | 1.18 | 281 | 1.59 | 302 | 1.98 | 322 | 2.37 | 340 | 2.78 | •358 | •3.19 | •377 | •3.65 | | | | | | |
| 20540 | 1000 | 277 | 1.43 | 297 | 1.85 | 318 | 2.32 | 337 | 2.75 | 354 | 3.18 | 371 | 3.62 | 388 | 4.08 | •421 | •5.07 | | | | |
| 22594 | 1100 | 296 | 1.72 | 315 | 2.17 | 334 | 2.65 | 352 | 3.17 | 370 | 3.63 | 386 | 4.11 | 401 | 4.59 | 431 | 5.59 | •462 | •6.69 | | |
| 24648 | 1200 | 316 | 2.06 | 334 | 2.53 | 351 | 3.03 | 369 | 3.58 | 385 | 4.14 | 401 | 4.64 | 416 | 5.16 | 444 | 6.22 | 471 | 7.31 | •500 | •8.51 |
| 26702 | 1300 | 336 | 2.44 | 353 | 2.95 | 369 | 3.47 | 385 | 4.03 | 401 | 4.63 | 417 | 5.23 | 431 | 5.78 | 459 | 6.90 | 485 | 8.06 | 509 | 9.24 |
| 28756 | 1400 | 356 | 2.85 | 373 | 3.42 | 388 | 3.97 | 403 | 4.54 | 418 | 5.16 | 433 | 5.80 | 447 | 6.47 | 474 | 7.65 | 499 | 8.86 | 523 | 10.11 |
| 30810 | 1500 | 377 | 3.33 | 393 | 3.95 | 408 | 4.53 | 422 | 5.14 | 435 | 5.75 | 449 | 6.42 | 463 | 7.11 | 489 | 8.47 | 514 | 9.74 | 537 | 11.05 |
| 32864 | 1600 | 398 | 3.86 | 413 | 4.52 | 427 | 5.15 | 441 | 5.79 | 454 | 6.43 | 466 | 7.09 | 480 | 7.81 | 505 | 9.31 | 529 | 10.69 | 552 | 12.06 |
| 34918 | 1700 | 419 | 4.45 | 433 | 5.15 | 447 | 5.84 | 460 | 6.51 | 473 | 7.18 | 485 | 7.87 | 496 | 8.57 | 521 | 10.13 | 545 | 11.72 | 567 | 13.15 |
| 36972 | 1800 | 440 | 5.10 | 454 | 5.84 | 467 | 6.59 | 480 | 7.29 | 492 | 8.00 | 504 | 8.72 | 515 | 9.46 | 538 | 11.02 | 561 | 12.69 | 583 | 14.32 |
| 39026 | 1900 | 461 | 5.83 | 475 | 6.60 | 487 | 7.38 | 500 | 8.15 | 512 | 8.90 | 523 | 9.65 | 534 | 10.41 | 555 | 11.97 | 577 | 13.71 | 599 | 15.48 |
| 41080 | 2000 | 482 | 6.62 | 495 | 7.43 | 508 | 8.25 | 520 | 9.09 | 531 | 9.87 | 542 | 10.65 | 553 | 11.45 | 573 | 13.07 | 594 | 14.80 | 615 | 16.64 |
| 45188 | 2200 | 526 | 8.45 | 538 | 9.32 | 549 | 10.22 | 560 | 11.13 | 571 | 12.05 | 582 | 12.91 | 592 | 13.77 | 611 | 15.52 | 630 | 17.30 | 648 | 19.17 |
| 49296 | 2400 | 569 | 10.60 | 580 | 11.56 | 591 | 12.52 | 602 | 13.50 | 612 | 14.49 | 622 | 15.50 | 631 | 16.45 | 650 | 18.32 | 667 | 20.23 | 684 | 22.18 |
| 53404 | 2600 | 613 | 13.12 | 623 | 14.15 | 633 | 15.19 | 643 | 16.24 | 653 | 17.30 | 662 | 18.38 | 671 | 19.46 | 689 | 21.52 | 706 | 23.56 | 722 | 25.63 |
| 57512 | 2800 | 657 | 16.04 | 666 | 17.14 | 676 | 18.25 | 685 | 19.38 | 695 | 20.51 | 703 | 21.65 | 712 | 22.81 | 729 | 25.15 | 745 | 27.31 | 761 | 29.51 |
| 61620 | 3000 | 701 | 19.38 | 710 | 20.56 | 719 | 21.74 | 728 | 22.94 | 737 | 24.14 | 745 | 25.36 | 753 | 26.58 | 769 | 29.07 | 785 | 31.52 | 800 | 33.84 |
| 65728 | 3200 | 745 | 23.18 | 754 | 24.43 | 762 | 25.68 | 771 | 26.95 | 779 | 28.23 | 787 | 29.52 | 795 | 30.82 | 810 | 33.44 | 825 | 36.10 | 840 | 38.67 |
| 69836 | 3400 | 789 | 27.46 | 798 | 28.78 | 806 | 30.11 | 814 | 31.45 | 822 | 32.80 | 829 | 34.16 | 837 | 35.53 | 852 | 38.30 | 866 | 41.10 | 880 | 43.93 |
| 73944 | 3600 | 834 | 32.26 | 842 | 33.65 | 849 | 35.06 | 857 | 36.47 | 864 | 37.89 | 872 | 39.33 | 879 | 40.77 | 893 | 43.67 | 907 | 46.61 | 920 | 49.59 |
| 78052 | 3800 | 878 | 37.60 | 886 | 39.07 | 893 | 40.55 | 900 | 42.03 | 908 | 43.53 | 915 | 45.03 | 921 | 46.55 | 935 | 49.60 | 948 | 52.68 | 961 | 55.79 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 26702 | 1300 | •536 | •10.53 | | | | | | | | | | | | | | | | | | |
| 28756 | 1400 | 546 | 11.39 | 595 | 14.20 | | | | | | | | | | | | | | | | |
| 30810 | 1500 | 560 | 12.39 | •602 | •15.17 | | | | | | | | | | | | | | | | |
| 32864 | 1600 | 573 | 13.46 | 615 | 16.33 | •656 | •19.42 | | | | | | | | | | | | | | |
| 34918 | 1700 | 588 | 14.61 | 629 | 17.60 | 666 | 20.69 | 707 | 24.08 | | | | | | | | | | | | |
| 36972 | 1800 | 604 | 15.84 | 643 | 18.95 | 680 | 22.16 | •715 | •25.45 | 754 | 29.15 | | | | | | | | | | |
| 39026 | 1900 | 619 | 17.16 | 658 | 20.39 | 693 | 23.72 | 728 | 27.14 | •762 | •30.70 | 799 | 34.61 | | | | | | | | |
| 41080 | 2000 | 635 | 18.52 | 673 | 21.93 | 708 | 25.38 | 742 | 28.91 | 774 | 32.53 | •806 | •36.34 | •841 | •40.47 | | | | | | |
| 45188 | 2200 | 667 | 21.18 | 704 | 25.28 | 738 | 28.98 | 770 | 32.76 | 801 | 36.62 | 831 | 40.55 | 860 | 44.55 | •890 | •48.83 | •922 | •53.36 | | |
| 49296 | 2400 | 701 | 24.16 | 736 | 28.55 | 769 | 33.00 | 801 | 37.03 | 831 | 41.13 | 859 | 45.30 | 887 | 49.55 | 914 | 53.86 | 940 | 58.22 | •968 | •62.89 |
| 53404 | 2600 | 738 | 27.73 | 769 | 32.14 | 801 | 36.91 | 832 | 41.75 | 861 | 46.11 | 889 | 50.52 | 915 | 55.00 | 941 | 59.55 | 967 | 64.16 | 992 | 68.83 |
| 57512 | 2800 | 776 | 31.73 | 805 | 36.27 | 834 | 41.14 | 864 | 46.30 | 892 | 51.56 | 919 | 56.24 | 946 | 60.97 | 971 | 65.75 | 995 | 70.60 | 1019 | 75.51 |
| 61620 | 3000 | 814 | 36.20 | 842 | 40.98 | 869 | 45.87 | 897 | 51.19 | 924 | 56.71 | 951 | 62.34 | 976 | 67.45 | 1001 | 72.49 | 1025 | 77.58 | 1048 | 82.73 |
| 65728 | 3200 | 854 | 41.15 | 881 | 46.19 | 906 | 51.32 | 930 | 56.56 | 957 | 62.30 | 983 | 68.18 | 1008 | 74.16 | 1032 | 79.79 | 1055 | 85.13 | 1078 | 90.53 |
| 69836 | 3400 | 893 | 46.62 | 919 | 51.91 | 944 | 57.30 | 968 | 62.78 | 991 | 68.36 | 1016 | 74.49 | 1040 | 80.72 | 1064 | 87.05 | 1086 | 93.27 | 1109 | 98.92 |
| 73944 | 3600 | 933 | 52.59 | 958 | 58.20 | 982 | 63.83 | 1005 | 69.56 | 1028 | 75.37 | 1049 | 81.30 | 1073 | 87.78 | 1096 | 94.36 | 1118 | 101.02 | 1140 | 107.78 |
| 78052 | 3800 | 974 | 58.94 | 998 | 65.06 | 1021 | 70.96 | 1044 | 76.93 | 1065 | 82.99 | 1086 | 89.13 | 1106 | 95.37 | 1129 | 102.20 | 1151 | 109.11 | 1172 | 116.11 |
| 82160 | 4000 | 1014 | 65.86 | 1038 | 72.51 | 1061 | 78.69 | 1082 | 84.92 | 1103 | 91.23 | 1124 | 97.61 | 1143 | 104.07 | 1163 | 110.61 | 1184 | 117.76 | | |
| 86268 | 4200 | 1056 | 73.39 | 1078 | 80.32 | 1100 | 87.08 | 1121 | 93.56 | 1142 | 100.12 | 1162 | 106.75 | 1181 | 113.46 | | | | | | |
| 90376 | 4400 | 1097 | 81.55 | 1119 | 88.76 | 1140 | 96.07 | 1161 | 102.89 | 1181 | 109.69 | | | | | | | | | | |
| 94484 | 4600 | 1139 | 90.39 | 1160 | 97.87 | 1180 | 105.46 | | | | | | | | | | | | | | |
| 98592 | 4800 | 1181 | 99.92 | | | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 49296 | 2400 | •997 | •67.81 | | | | | | | | | | | | | | | | | | |
| 53404 | 2600 | 1016 | 73.56 | •1068 | •83.83 | | | | | | | | | | | | | | | | |
| 57512 | 2800 | 1043 | 80.48 | 1088 | 90.57 | •1136 | •101.41 | 1185 | 112.92 | | | | | | | | | | | | |
| 61620 | 3000 | 1071 | 87.92 | 1115 | 98.50 | 1157 | 109.27 | | | | | | | | | | | | | | |
| 65728 | 3200 | 1100 | 95.97 | 1143 | 107.00 | 1184 | 118.25 | | | | | | | | | | | | | | |
| 69836 | 3400 | 1131 | 104.61 | 1172 | 116.14 | | | | | | | | | | | | | | | | |
| 73944 | 3600 | 1161 | 113.88 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/$m^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8149

DOUBLE WIDTH
DOUBLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

| | | |
|---|---|---|
| Wheel Diameter | 49 inches | 1245 mm |
| Wheel Circumference | 12.83 feet | 3.911 m |
| Inlet Diameter/Area | 58 ½ inches sq./30.04 sq. ft. | 1486 mm/2.791 $m^2$ |
| Outlet Size/Area | 51⅝ x 69¾ inches I.D./25.34 | 1311 x 1772 mm/2.354 $m^2$ |
| Tip Speed | 12.83 x RPM ft./minute | 3.911 x RPM m/minute |
| Maximum BHP | 117.32 x (RPM 1000)$^3$ BHP | 87.49 x (RPM 1000)$^3$ kW |

| SIZE 8149 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 828 |
| CLASS II | 1079 |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 15024 | 600 | •189 | •0.79 | •215 | •1.12 | | | | | | | | | | | | | | | | |
| 17528 | 700 | 204 | 0.99 | 227 | 1.35 | •249 | •1.74 | •271 | •2.17 | | | | | | | | | | | | |
| 20032 | 800 | 219 | 1.19 | 241 | 1.64 | 261 | 2.06 | 280 | 2.50 | •299 | •2.96 | | | | | | | | | | |
| 22536 | 900 | 235 | 1.45 | 256 | 1.94 | 275 | 2.42 | 293 | 2.90 | 310 | 3.39 | •326 | •3.89 | •343 | •4.45 | | | | | | |
| 25040 | 1000 | 252 | 1.75 | 271 | 2.26 | 289 | 2.83 | 307 | 3.36 | 323 | 3.88 | 338 | 4.42 | 353 | 4.98 | •383 | •6.18 | | | | |
| 27544 | 1100 | 270 | 2.11 | 287 | 2.65 | 304 | 3.24 | 321 | 3.87 | 336 | 4.44 | 351 | 5.02 | 365 | 5.61 | 392 | 6.82 | •420 | •8.16 | | |
| 30048 | 1200 | 288 | 2.52 | 304 | 3.10 | 320 | 3.70 | 336 | 4.37 | 351 | 5.06 | 365 | 5.67 | 379 | 6.30 | 404 | 7.59 | 429 | 8.92 | •454 | •10.38 |
| 32552 | 1300 | 306 | 2.99 | 322 | 3.61 | 337 | 4.25 | 351 | 4.92 | 365 | 5.65 | 379 | 6.40 | 393 | 7.07 | 418 | 8.43 | 441 | 9.83 | 464 | 11.28 |
| 35056 | 1400 | 325 | 3.50 | 340 | 4.19 | 354 | 4.87 | 367 | 5.56 | 381 | 6.30 | 394 | 7.09 | 407 | 7.90 | 431 | 9.35 | 454 | 10.83 | 476 | 12.34 |
| 37560 | 1500 | 344 | 4.08 | 358 | 4.84 | 372 | 5.56 | 384 | 6.29 | 396 | 7.04 | 409 | 7.85 | 422 | 8.69 | 446 | 10.35 | 468 | 11.91 | 489 | 13.49 |
| 40064 | 1600 | 363 | 4.74 | 377 | 5.54 | 390 | 6.32 | 402 | 7.09 | 414 | 7.88 | 425 | 8.68 | 437 | 9.55 | 460 | 11.37 | 482 | 13.07 | 503 | 14.74 |
| 42568 | 1700 | 382 | 5.46 | 395 | 6.31 | 408 | 7.16 | 420 | 7.97 | 431 | 8.80 | 442 | 9.64 | 452 | 10.49 | 475 | 12.38 | 496 | 14.33 | 516 | 16.07 |
| 45072 | 1800 | 401 | 6.27 | 414 | 7.16 | 426 | 8.08 | 438 | 8.94 | 449 | 9.81 | 459 | 10.68 | 469 | 11.58 | 490 | 13.47 | 511 | 15.50 | 531 | 17.51 |
| 47576 | 1900 | 421 | 7.16 | 433 | 8.10 | 445 | 9.06 | 456 | 10.00 | 466 | 10.90 | 477 | 11.82 | 487 | 12.75 | 505 | 14.65 | 526 | 16.75 | 545 | 18.92 |
| 50080 | 2000 | 440 | 8.14 | 452 | 9.12 | 463 | 10.12 | 474 | 11.14 | 484 | 12.10 | 494 | 13.06 | 504 | 14.02 | 523 | 16.00 | 541 | 18.09 | 560 | 20.33 |
| 55088 | 2200 | 480 | 10.39 | 491 | 11.46 | 501 | 12.55 | 511 | 13.65 | 521 | 14.77 | 530 | 15.83 | 540 | 16.88 | 557 | 19.00 | 574 | 21.18 | 590 | 23.44 |
| 60096 | 2400 | 519 | 13.04 | 529 | 14.20 | 539 | 15.38 | 549 | 16.57 | 558 | 17.78 | 567 | 19.00 | 576 | 20.17 | 592 | 22.46 | 608 | 24.78 | 624 | 27.15 |
| 65104 | 2600 | 559 | 16.15 | 569 | 17.40 | 578 | 18.66 | 587 | 19.94 | 596 | 21.24 | 604 | 22.55 | 612 | 23.87 | 628 | 26.39 | 644 | 28.87 | 658 | 31.39 |
| 70112 | 2800 | 599 | 19.74 | 608 | 21.08 | 617 | 22.43 | 625 | 23.80 | 634 | 25.18 | 642 | 26.58 | 650 | 27.99 | 665 | 30.84 | 679 | 33.48 | 694 | 36.16 |
| 75120 | 3000 | 640 | 23.86 | 648 | 25.29 | 656 | 26.73 | 664 | 28.19 | 672 | 29.66 | 680 | 31.14 | 687 | 32.63 | 702 | 35.66 | 716 | 38.66 | 729 | 41.49 |
| 80128 | 3200 | 680 | 28.53 | 688 | 30.05 | 696 | 31.59 | 703 | 33.13 | 711 | 34.69 | 718 | 36.26 | 725 | 37.84 | 739 | 41.03 | 753 | 44.27 | 766 | 47.42 |
| 85136 | 3400 | 721 | 33.81 | 728 | 35.42 | 735 | 37.04 | 743 | 38.67 | 750 | 40.32 | 757 | 41.98 | 763 | 43.64 | 777 | 47.01 | 790 | 50.42 | 802 | 53.88 |
| 90144 | 3600 | 761 | 39.71 | 768 | 41.42 | 775 | 43.13 | 782 | 44.85 | 789 | 46.59 | 796 | 48.33 | 802 | 50.09 | 815 | 53.63 | 827 | 57.21 | 839 | 60.83 |
| 95152 | 3800 | 802 | 46.30 | 809 | 48.09 | 815 | 49.89 | 822 | 51.70 | 828 | 53.53 | 835 | 55.36 | 841 | 57.20 | 853 | 60.92 | 865 | 64.67 | 877 | 68.47 |

| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 32552 | 1300 | •487 | •12.84 | | | | | | | | | | | | | | | | | | |
| 35056 | 1400 | 497 | 13.89 | 541 | 17.31 | | | | | | | | | | | | | | | | |
| 37560 | 1500 | 509 | 15.12 | •548 | •18.49 | 590 | 22.28 | | | | | | | | | | | | | | |
| 40064 | 1600 | 522 | 16.43 | 559 | 19.93 | •597 | •23.67 | | | | | | | | | | | | | | |
| 42568 | 1700 | 536 | 17.85 | 572 | 21.49 | 606 | 25.24 | 642 | 29.35 | | | | | | | | | | | | |
| 45072 | 1800 | 550 | 19.36 | 585 | 23.14 | 619 | 27.05 | •650 | •31.06 | 685 | 35.52 | | | | | | | | | | |
| 47576 | 1900 | 564 | 20.97 | 599 | 24.92 | 631 | 28.96 | 662 | 33.12 | •692 | •37.42 | 726 | 42.18 | | | | | | | | |
| 50080 | 2000 | 578 | 22.62 | 613 | 26.80 | 644 | 30.99 | 675 | 35.30 | 704 | 39.70 | •733 | •44.30 | •765 | •49.31 | | | | | | |
| 55088 | 2200 | 608 | 25.88 | 641 | 30.91 | 672 | 35.42 | 701 | 40.02 | 729 | 44.71 | 756 | 49.50 | 782 | 54.37 | •809 | •59.51 | •838 | •65.02 | | |
| 60096 | 2400 | 638 | 29.55 | 670 | 34.88 | 700 | 40.35 | 729 | 45.26 | 756 | 50.25 | 782 | 55.32 | 807 | 60.49 | 832 | 65.73 | 855 | 71.05 | •880 | •76.66 |
| 65104 | 2600 | 673 | 33.95 | 701 | 39.29 | 730 | 45.11 | 757 | 51.05 | 784 | 56.35 | 809 | 61.73 | 833 | 67.18 | 857 | 72.71 | 880 | 78.33 | 903 | 84.01 |
| 70112 | 2800 | 707 | 38.87 | 733 | 44.39 | 760 | 50.30 | 787 | 56.57 | 812 | 62.98 | 837 | 68.74 | 861 | 74.50 | 884 | 80.33 | 906 | 86.22 | 927 | 92.19 |
| 75120 | 3000 | 743 | 44.36 | 768 | 50.18 | 792 | 56.14 | 817 | 62.58 | 842 | 69.30 | 866 | 76.15 | 889 | 82.46 | 911 | 88.59 | 933 | 94.79 | 954 | 101.05 |
| 80128 | 3200 | 778 | 50.45 | 803 | 56.58 | 826 | 62.83 | 848 | 69.21 | 872 | 76.16 | 895 | 83.31 | 918 | 90.59 | 940 | 97.54 | 961 | 104.05 | 982 | 110.62 |
| 85136 | 3400 | 814 | 57.18 | 838 | 63.62 | 861 | 70.18 | 882 | 76.85 | 903 | 83.63 | 925 | 91.06 | 947 | 98.64 | 969 | 106.34 | 989 | 114.04 | 1010 | 120.92 |
| 90144 | 3600 | 851 | 64.49 | 874 | 71.35 | 896 | 78.21 | 916 | 85.19 | 937 | 92.26 | 956 | 99.44 | 977 | 107.31 | 998 | 115.31 | 1019 | 123.42 | 1038 | 131.64 |
| 95152 | 3800 | 888 | 72.30 | 910 | 79.79 | 931 | 86.97 | 951 | 94.25 | 971 | 101.62 | 990 | 109.10 | 1008 | 116.67 | 1029 | 124.94 | 1048 | 133.35 | 1068 | 141.87 |
| 100160 | 4000 | 925 | 80.81 | 947 | 88.91 | 967 | 96.48 | 987 | 104.07 | 1006 | 111.75 | 1024 | 119.52 | 1042 | 127.39 | 1059 | 135.34 | 1079 | 143.97 | | |
| 105168 | 4200 | 963 | 90.07 | 983 | 98.51 | 1003 | 106.80 | 1022 | 114.69 | 1041 | 122.68 | 1059 | 130.75 | 1076 | 138.92 | | | | | | |
| 110176 | 4400 | 1001 | 100.12 | 1021 | 108.90 | 1040 | 117.81 | 1058 | 126.16 | 1076 | 134.45 | | | | | | | | | | |
| 115184 | 4600 | 1039 | 111.00 | 1058 | 120.11 | 1077 | 129.35 | | | | | | | | | | | | | | |
| 120192 | 4800 | 1077 | 122.73 | | | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 60096 | 2400 | •907 | •82.64 | | | | | | | | | | | | | | | | | | |
| 65104 | 2600 | 924 | 89.76 | •971 | •102.17 | 1018 | 115.28 | | | | | | | | | | | | | | |
| 70112 | 2800 | 949 | 98.24 | 990 | 110.52 | •1032 | •123.60 | 1077 | 137.60 | | | | | | | | | | | | |
| 75120 | 3000 | 974 | 107.37 | 1015 | 120.25 | 1053 | 133.35 | | | | | | | | | | | | | | |
| 80128 | 3200 | 1002 | 117.24 | 1040 | 130.67 | 1078 | 144.36 | | | | | | | | | | | | | | |
| 85136 | 3400 | 1029 | 127.85 | 1067 | 141.88 | | | | | | | | | | | | | | | | |
| 90144 | 3600 | 1058 | 139.23 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/m$^3$ at 21.1°C & 0 m).**

# 8100 SERIES

## SIZE 8154

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

DOUBLE WIDTH
DOUBLE INLET

| SIZE 8154 | -20° to 150°F -29° to 66°C |
|---|---|
| CLASS I | 747 |
| CLASS II | 974 |

| | | |
|---|---|---|
| Wheel Diameter | 54 ¼ inches | 1378 mm |
| Wheel Circumference | 14.2 feet | 4.328 m |
| Inlet Diameter/Area | 65 inches sq./36.98 sq. ft. | 1651 mm/3.435 $m^2$ |
| Outlet Size/Area | 57 ¼ x 76 ⅞ inches I.D./30.56 sq. ft. | 1454 x 1953 mm/2.839 $m^2$ |
| Tip Speed | 14.2 x RPM ft./minute | 4.328 x RPM m/minute |
| Maximum BHP | 195.30 x (RPM 1000)$^3$ BHP | 145.64 x (RPM 1000)$^3$ kW |

| VOL CFM | OUT VEL | ¼" SP | | ⅜" SP | | ½" SP | | ⅝" SP | | ¾" SP | | ⅞" SP | | 1" SP | | 1 ¼" SP | | 1 ½" SP | | 1 ¾" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 18336 | 600 | •171 | •0.96 | •193 | •1.36 | | | | | | | | | | | | | | | | |
| 21392 | 700 | 183 | 1.20 | 205 | 1.65 | •224 | •2.12 | •244 | •2.65 | | | | | | | | | | | | |
| 24448 | 800 | 197 | 1.46 | 217 | 1.99 | 236 | 2.51 | 253 | 3.04 | •270 | •3.62 | | | | | | | | | | |
| 27504 | 900 | 211 | 1.76 | 230 | 2.36 | 248 | 2.95 | 264 | 3.53 | 279 | 4.13 | •294 | •4.75 | •310 | •5.43 | | | | | | |
| 30560 | 1000 | 227 | 2.13 | 244 | 2.76 | 261 | 3.45 | 276 | 4.09 | 291 | 4.73 | 305 | 5.39 | 318 | 6.07 | •346 | •7.55 | | | | |
| 33616 | 1100 | 243 | 2.57 | 259 | 3.22 | 274 | 3.95 | 289 | 4.71 | 303 | 5.41 | 317 | 6.11 | 329 | 6.83 | 354 | 8.32 | •379 | •9.96 | | |
| 36672 | 1200 | 259 | 3.07 | 274 | 3.77 | 288 | 4.50 | 302 | 5.32 | 316 | 6.16 | 329 | 6.91 | 341 | 7.68 | 365 | 9.25 | 387 | 10.88 | •410 | •12.67 |
| 39728 | 1300 | 276 | 3.63 | 290 | 4.39 | 303 | 5.17 | 316 | 5.99 | 329 | 6.88 | 342 | 7.79 | 354 | 8.61 | 377 | 10.27 | 398 | 11.99 | 418 | 13.75 |
| 42784 | 1400 | 293 | 4.25 | 306 | 5.09 | 319 | 5.92 | 331 | 6.77 | 343 | 7.68 | 355 | 8.64 | 367 | 9.62 | 389 | 11.39 | 409 | 13.19 | 429 | 15.05 |
| 45840 | 1500 | 309 | 4.96 | 322 | 5.88 | 335 | 6.75 | 346 | 7.65 | 357 | 8.56 | 369 | 9.55 | 380 | 10.59 | 402 | 12.60 | 422 | 14.50 | 441 | 16.44 |
| 48896 | 1600 | 327 | 5.75 | 339 | 6.73 | 351 | 7.68 | 362 | 8.62 | 373 | 9.58 | 383 | 10.56 | 394 | 11.63 | 415 | 13.85 | 434 | 15.92 | 453 | 17.95 |
| 51952 | 1700 | 344 | 6.63 | 356 | 7.67 | 367 | 8.70 | 378 | 9.69 | 388 | 10.70 | 398 | 11.72 | 407 | 12.77 | 428 | 15.08 | 447 | 17.44 | 466 | 19.58 |
| 55008 | 1800 | 361 | 7.60 | 373 | 8.70 | 384 | 9.81 | 394 | 10.86 | 404 | 11.92 | 414 | 12.99 | 423 | 14.08 | 442 | 16.40 | 460 | 18.89 | 478 | 21.32 |
| 58064 | 1900 | 379 | 8.68 | 390 | 9.83 | 400 | 11.00 | 410 | 12.15 | 420 | 13.25 | 429 | 14.37 | 438 | 15.51 | 455 | 17.83 | 474 | 20.40 | 491 | 23.05 |
| 61120 | 2000 | 396 | 9.87 | 407 | 11.07 | 417 | 12.29 | 427 | 13.54 | 436 | 14.70 | 445 | 15.87 | 454 | 17.05 | 471 | 19.46 | 487 | 22.03 | 505 | 24.76 |
| 67232 | 2200 | 432 | 12.59 | 441 | 13.90 | 451 | 15.23 | 460 | 16.58 | 469 | 17.95 | 477 | 19.23 | 486 | 20.51 | 502 | 23.11 | 517 | 25.76 | 532 | 28.53 |
| 73344 | 2400 | 467 | 15.80 | 476 | 17.22 | 485 | 18.66 | 494 | 20.11 | 502 | 21.59 | 510 | 23.08 | 518 | 24.50 | 533 | 27.29 | 548 | 30.13 | 562 | 33.02 |
| 79456 | 2600 | 503 | 19.56 | 512 | 21.09 | 520 | 22.63 | 528 | 24.20 | 536 | 25.78 | 544 | 27.38 | 551 | 28.99 | 566 | 32.06 | 580 | 35.09 | 593 | 38.17 |
| 85568 | 2800 | 539 | 23.91 | 547 | 25.55 | 555 | 27.20 | 563 | 28.87 | 570 | 30.56 | 578 | 32.26 | 585 | 33.98 | 598 | 37.46 | 612 | 40.68 | 625 | 43.95 |
| 91680 | 3000 | 575 | 28.89 | 583 | 30.64 | 590 | 32.40 | 598 | 34.18 | 605 | 35.97 | 612 | 37.78 | 618 | 39.61 | 632 | 43.30 | 644 | 46.95 | 657 | 50.41 |
| 97792 | 3200 | 612 | 34.55 | 619 | 36.41 | 626 | 38.28 | 633 | 40.17 | 640 | 42.07 | 646 | 43.98 | 653 | 45.91 | 665 | 49.82 | 677 | 53.77 | 689 | 57.60 |
| 103904 | 3400 | 648 | 40.93 | 655 | 42.90 | 662 | 44.88 | 668 | 46.88 | 675 | 48.89 | 681 | 50.91 | 687 | 52.95 | 699 | 57.06 | 711 | 61.22 | 722 | 65.44 |
| 110016 | 3600 | 685 | 48.09 | 691 | 50.16 | 697 | 52.25 | 704 | 54.36 | 710 | 56.48 | 716 | 58.61 | 722 | 60.75 | 733 | 65.07 | 745 | 69.45 | 755 | 73.87 |
| 116128 | 3800 | 721 | 56.05 | 727 | 58.24 | 733 | 60.44 | 739 | 62.65 | 745 | 64.88 | 751 | 67.12 | 757 | 69.37 | 768 | 73.90 | 779 | 78.49 | 789 | 83.12 |

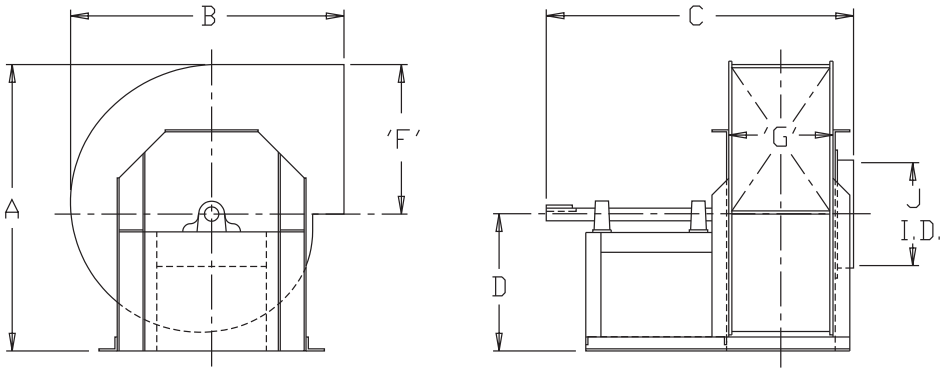
| VOL CFM | OUT VEL | 2" SP | | 2 ½" SP | | 3" SP | | 3 ½" SP | | 4" SP | | 4 ½" SP | | 5" SP | | 5 ½" SP | | 6" SP | | 6 ½" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 39728 | 1300 | •440 | •15.67 | | | | | | | | | | | | | | | | | | |
| 42784 | 1400 | 448 | 16.94 | 488 | 21.13 | | | | | | | | | | | | | | | | |
| 45840 | 1500 | 459 | 18.43 | •494 | •22.56 | | | | | | | | | | | | | | | | |
| 48896 | 1600 | 471 | 20.03 | 505 | 24.30 | •539 | •28.89 | | | | | | | | | | | | | | |
| 51952 | 1700 | 483 | 21.74 | 516 | 26.19 | 547 | 30.78 | 580 | 35.83 | | | | | | | | | | | | |
| 55008 | 1800 | 495 | 23.58 | 527 | 28.21 | 558 | 32.98 | •586 | •37.88 | 618 | 43.36 | | | | | | | | | | |
| 58064 | 1900 | 508 | 25.54 | 540 | 30.36 | 569 | 35.31 | 597 | 40.39 | •625 | •45.67 | 655 | 51.49 | | | | | | | | |
| 61120 | 2000 | 521 | 27.56 | 552 | 32.64 | 581 | 37.77 | 609 | 43.03 | 635 | 48.41 | •662 | •54.07 | •690 | •60.20 | | | | | | |
| 67232 | 2200 | 548 | 31.52 | 578 | 37.63 | 606 | 43.14 | 632 | 48.76 | 657 | 54.50 | 682 | 60.35 | 706 | 66.30 | •730 | •72.64 | •756 | •79.38 | | |
| 73344 | 2400 | 575 | 35.97 | 604 | 42.49 | 631 | 49.12 | 657 | 55.13 | 682 | 61.22 | 705 | 67.42 | 728 | 73.74 | 750 | 80.15 | 771 | 86.64 | •794 | •93.57 |
| 79456 | 2600 | 606 | 41.29 | 631 | 47.84 | 658 | 54.95 | 683 | 62.15 | 707 | 68.63 | 729 | 75.21 | 751 | 81.87 | 772 | 88.62 | 794 | 95.49 | 814 | 102.44 |
| 85568 | 2800 | 637 | 47.26 | 661 | 54.01 | 685 | 61.25 | 709 | 68.91 | 732 | 76.75 | 755 | 83.71 | 776 | 90.75 | 797 | 97.87 | 817 | 105.07 | 836 | 112.37 |
| 91680 | 3000 | 669 | 53.91 | 691 | 61.03 | 713 | 68.30 | 736 | 76.20 | 759 | 84.42 | 780 | 92.79 | 801 | 100.41 | 822 | 107.91 | 841 | 115.48 | 860 | 123.13 |
| 97792 | 3200 | 701 | 61.29 | 723 | 68.79 | 744 | 76.43 | 764 | 84.21 | 786 | 92.74 | 807 | 101.49 | 827 | 110.38 | 847 | 118.78 | 866 | 126.73 | 885 | 134.75 |
| 103904 | 3400 | 733 | 69.45 | 755 | 77.32 | 775 | 85.33 | 794 | 93.48 | 813 | 101.77 | 834 | 110.89 | 854 | 120.16 | 873 | 129.57 | 892 | 138.85 | 910 | 147.25 |
| 110016 | 3600 | 766 | 78.34 | 787 | 86.68 | 806 | 95.07 | 825 | 103.59 | 844 | 112.23 | 861 | 121.04 | 881 | 130.68 | 900 | 140.46 | 918 | 150.37 | 936 | 160.42 |
| 116128 | 3800 | 799 | 87.80 | 819 | 96.92 | 838 | 105.68 | 857 | 114.57 | 874 | 123.59 | 892 | 132.72 | 908 | 141.98 | 927 | 152.14 | 945 | 162.42 | 962 | 172.84 |
| 122240 | 4000 | 833 | 98.11 | 852 | 108.01 | 871 | 117.22 | 888 | 126.48 | 906 | 135.86 | 922 | 145.36 | 939 | 154.97 | 954 | 164.69 | 972 | 175.31 | | |
| 128352 | 4200 | 867 | 109.34 | 885 | 119.64 | 903 | 129.72 | 921 | 139.36 | 937 | 149.11 | 954 | 158.98 | 969 | 168.95 | | | | | | |
| 134464 | 4400 | 901 | 121.51 | 919 | 132.23 | 936 | 143.11 | 953 | 153.25 | 969 | 163.38 | | | | | | | | | | |
| 140576 | 4600 | 935 | 134.68 | 952 | 145.81 | 969 | 157.10 | | | | | | | | | | | | | | |
| 146688 | 4800 | 969 | 148.89 | | | | | | | | | | | | | | | | | | |

| VOL CFM | OUT VEL | 7" SP | | 8" SP | | 9" SP | | 10" SP | | 11" SP | | 12" SP | | 13" SP | | 14" SP | | 15" SP | | 16" SP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP | RPM | BHP |
| 73344 | 2400 | •818 | •100.89 | | | | | | | | | | | | | | | | | | |
| 79456 | 2600 | 834 | 109.46 | •876 | •124.72 | | | | | | | | | | | | | | | | |
| 85568 | 2800 | 856 | 119.77 | 893 | 134.78 | •932 | •150.87 | 972 | 167.99 | | | | | | | | | | | | |
| 91680 | 3000 | 879 | 130.86 | 915 | 146.59 | 950 | 162.61 | | | | | | | | | | | | | | |
| 97792 | 3200 | 903 | 142.85 | 938 | 159.25 | 972 | 175.99 | | | | | | | | | | | | | | |
| 103904 | 3400 | 928 | 155.72 | 962 | 172.86 | | | | | | | | | | | | | | | | |
| 110016 | 3600 | 953 | 169.54 | | | | | | | | | | | | | | | | | | |

**• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐**
The standard AMCA class range is shown by the shaded areas. Standard carbon steel fans may be used up to the Maximum Design RPM as listed above for each fan class.
For minimum motor size required see "Fan Starting Requirements," page 7.
**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).**
**All capacities listed above are based on standard Air Density of 0.075 Lbs./Cu. Ft. at 70°F & 0 Ft. elevation (1.2 kg/$m^3$ at 21.1°C & 0 m).**

# 8100 SERIES

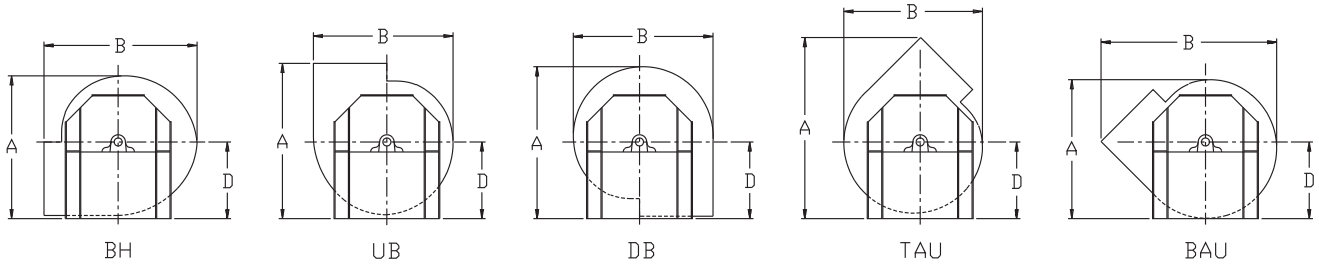
## DIMENSIONAL DATA
## Sizes 8118-8154
## Arrangement 10



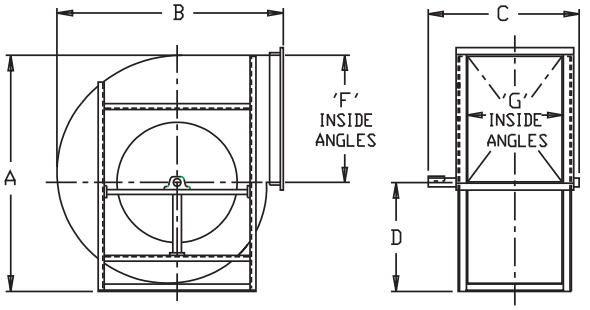

| SIZE | A | | | | | | B | | | | C | D | | | | F | G | J | EST. WGT. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TH | BH | UB | DB | TAU | BAU | TH BH | UB DB | TAU | BAU | | TH | BH BAU | UB TAU | DB | | | | |
| 8118 | 42 | 38 | 38 | 41 | 47 | 37 | 35 | 35 | 34 | 42 | 45 | 22 | 22 | 22 | 22 | 19 ¼ | 14 ½ | 20 | 275 |
| 8120 | 48 | 43 | 43 | 47 | 53 | 42 | 38 | 39 | 37 | 46 | 47 | 26 ¼ | 26 ¼ | 26 ¼ | 26 ¼ | 21⅛ | 16 | 21¾ | 330 |
| 8122 | 50 | 45 | 45 | 49 | 56 | 44 | 41 | 43 | 41 | 51 | 49 | 26 ¼ | 26 ¼ | 26 ¼ | 26 ¼ | 23 ½ | 17 ⅝ | 24 | 380 |
| 8124 | 58 | 52 | 52 | 56 | 64 | 51 | 45 | 47 | 45 | 55 | 54 | 31 ¼ | 31 ¼ | 31 ¼ | 31 ¼ | 25 ⅞ | 19 ½ | 27 | 520 |
| 8127 | 60 | 54 | 53 | 59 | 67 | 53 | 50 | 52 | 50 | 61 | 56 | 31 ¼ | 31 ¼ | 31 ¼ | 31 ¼ | 28 ½ | 21 ½ | 29 ½ | 580 |
| 8130 | 68 | 62 | 60 | 66 | 75 | 59 | 55 | 58 | 55 | 67 | 60 | 35 ⅜ | 35 ⅜ | 35 ⅜ | 35 ⅜ | 31⅝ | 23 ⅝ | 32 ½ | 775 |
| 8133 | 78 | 70 | 69 | 76 | 86 | 69 | 60 | 63 | 61 | 74 | 66 | 42 ¼ | 42 ¼ | 42 ¼ | 42 ¼ | 34 ⅞ | 26 ¼ | 35 ½ | 950 |
| 8137 | 81 | 73 | 71 | 79 | 90 | 71 | 66 | 70 | 67 | 81 | 68 | 42 ¼ | 42 ¼ | 42 ¼ | 42 ¼ | 38 ½ | 28 ⅞ | 39 | 1050 |
| 8140 | 80 | 80 | 76 | 73 | 109 | 78 | 73 | 77 | 74 | 105 | 72 | 37 | 46 | 43 ¾ | 32 | 42 ⅝ | 32 | 43 ¾ | 1350 |
| 8145 | 88 | 88 | 83 | 80 | 118 | 86 | 80 | 85 | 82 | 111 | 75 | 40 ½ | 50 ½ | 48 | 35 | 47 ⅛ | 35 ¼ | 48 | 1530 |
| 8149 | 97 | 97 | 91 | 88 | 128 | 94 | 88 | 94 | 90 | 121 | 79 | 44 ¼ | 55 ¼ | 52 ½ | 38 ¼ | 51⅞ | 39 | 52 ¾ | 1875 |
| 8154 | 107 | 107 | 100 | 97 | 140 | 104 | 97 | 104 | 100 | 133 | 84 | 48 ¾ | 61 | 57 ½ | 42 | 57 ½ | 43 | 58 ½ | 2220 |

Data shown on these pages is for general information only and should not be used for exact installation dimensions. Columns A, B and C have been rounded up to the nearest 1". All other columns are rounded to the nearest 1/8". For detailed dimensional data refer to the appropriate submittal drawing. All dimensional drawings represent clockwise rotation. Counterclockwise would be a mirror image and would not affect dimensions. Rotation is determined from the drive side of the unit.

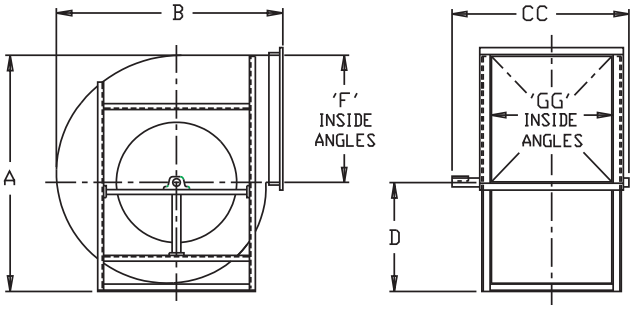
## Angular Discharge Dimensions



## DIMENSIONAL DATA
## Sizes 8118-8154
## Arrangement 3




SINGLE WIDTH



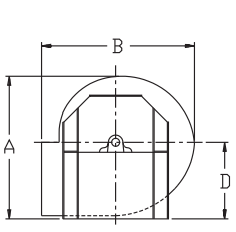

DOUBLE WIDTH

| SIZE | A | | | | | | B | | | | C | CC | D | | | | F | G | GG | J | EST. WGT. * | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TH | BH | UB | DB | TAU | BAU | TH BH | UB DB | TAU | BAU | | | TH | BH BAU | UB TAU | DB | | | | | SW | DW |
| 8118 | 42 | 38 | 38 | 41 | 47 | 37 | 35 | 35 | 34 | 42 | 25 | 37 | 22 | 22 | 22 | 22 | 19 ¼ | 14 ½ | 25 ⅞ | 20 | 235 | 260 |
| 8120 | 48 | 43 | 43 | 47 | 53 | 42 | 38 | 39 | 37 | 46 | 28 | 40 | 26 ¼ | 26 ¼ | 26 ¼ | 26 ¼ | 21 ⅛ | 16 | 28 ⅝ | 21¾ | 300 | 320 |
| 8122 | 50 | 45 | 45 | 49 | 56 | 44 | 41 | 43 | 41 | 51 | 29 | 43 | 26 ¼ | 26 ¼ | 26 ¼ | 26 ¼ | 23 ½ | 17 ⅝ | 31 ½ | 24 | 350 | 400 |
| 8124 | 58 | 52 | 52 | 56 | 64 | 51 | 45 | 47 | 45 | 55 | 31 | 46 | 31 ¼ | 31 ¼ | 31 ¼ | 31 ¼ | 25 ⅞ | 19 ½ | 35 | 27 | 435 | 515 |
| 8127 | 60 | 54 | 53 | 59 | 67 | 53 | 50 | 52 | 50 | 61 | 34 | 52 | 31 ¼ | 31 ¼ | 31 ¼ | 31 ¼ | 28 ½ | 21 ½ | 38 ⅝ | 29 ½ | 500 | 560 |
| 8130 | 68 | 62 | 60 | 66 | 75 | 59 | 55 | 58 | 55 | 67 | 37 | 56 | 35 ⅜ | 35 ⅜ | 35 ⅜ | 35 ⅜ | 31 ⅝ | 23 ⅝ | 42 ½ | 32 ½ | 675 | 750 |
| 8133 | 78 | 70 | 69 | 76 | 86 | 69 | 60 | 63 | 61 | 74 | 40 | 60 | 42 ¼ | 42 ¼ | 42 ¼ | 42 ¼ | 34 ⅞ | 26 ¼ | 47 | 35 ½ | 815 | 900 |
| 8137 | 81 | 73 | 71 | 79 | 90 | 71 | 66 | 70 | 67 | 81 | 43 | 65 | 42 ¼ | 42 ¼ | 42 ¼ | 42 ¼ | 38 ½ | 28 ⅞ | 51¾ | 39 | 940 | 1055 |
| 8140 | 80 | 80 | 76 | 73 | 109 | 78 | 73 | 77 | 74 | 105 | 52 | 78 | 37 | 46 | 43¾ | 32 | 42 ⅝ | 32 | 57 ⅜ | 43¾ | 1195 | 1615 |
| 8145 | 88 | 88 | 83 | 80 | 118 | 86 | 80 | 85 | 82 | 111 | 57 | 84 | 40 ½ | 50 ½ | 48 | 35 | 47 ⅛ | 35 ¼ | 63 ¼ | 48 | 1380 | 1925 |
| 8149 | 97 | 97 | 91 | 88 | 128 | 94 | 88 | 94 | 90 | 121 | 60 | 92 | 44 ¼ | 55 ¼ | 52 ½ | 38 ¼ | 51⅞ | 39 | 70 | 52¾ | 1785 | 2510 |
| 8154 | 107 | 107 | 100 | 97 | 140 | 104 | 98 | 104 | 100 | 133 | 64 | 99 | 48¾ | 61 | 57 ½ | 42 | 57 ½ | 43 | 77 ⅛ | 58 ½ | 2125 | 3055 |

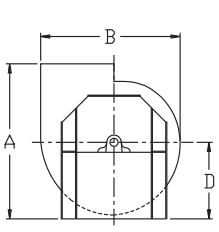
* Class 2 weights (LBS.).

Data shown on these pages is for general information only and should not be used for exact installation dimensions. Columns A, B and C have been rounded up to the nearest 1". All other columns are rounded to the nearest 1/8". For detailed dimensional data refer to the appropriate submittal drawing. All dimensional drawings represent clockwise rotation. Counterclockwise would be a mirror image and would not affect dimensions. Rotation is determined from the drive side of the unit.

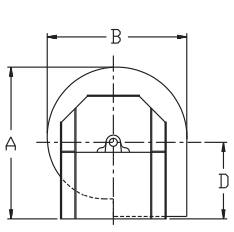
## Angular Discharge Dimensions



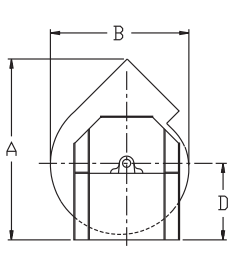

BH



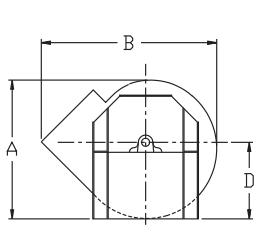

UB




DB




TAU




BAU

## TERMS AND CONDITIONS OF SALE

**ACCEPTANCE** All orders and sales are subject to written approval and acceptance by an executive officer of Acme Engineering & Manufacturing Corporation at Muskogee, Oklahoma, (the "Company") and are not binding on the Company until so approved.

**DELIVERY** All shipping and delivery dates are estimated only. No delays in delivery will subject the Company to any costs, damages or fees for late delivery. Delivery of the products herein specified shall be made F.O.B. point of shipment, unless otherwise stated. The Company shall not be liable for delay due to causes beyond its reasonable control, such as Acts of God, acts of the purchaser, acts of civil or military authorities, priorities, fires, strikes, floods, epidemics, war, riots, delays in transportation, car shortages, and inability, due to reasons beyond its reasonable control, to obtain necessary labor, material, or manufacturing facilities. In the event of such a delay, the date of delivery shall be extended for a period equal to the time lost by reason of the delay.

**TERMS OF PAYMENT** If, in the judgment of the Company, the financial condition of the purchaser at any time does not justify continuation of manufacture or shipment on the terms of payment specified, the Company may require full or partial payment in advance.

Pro rata payments shall become due as shipments are made. Each shipment or delivery shall constitute a separate sale, and the default of any shipment or delivery shall constitute a separate sale, and the default of any shipment or delivery shall not vitiate the contract as to other shipments or deliveries.

**SALES AND SIMILAR TAXES** The Company's prices do not include sales, use, excise, or similar taxes. Consequently, in addition to the price specified herein, the amount of any present or future sales, use, excise, or other similar tax applicable to the sale of the product herein shall be paid by the Purchaser, or in lieu thereof the Purchaser shall provide the Company with a tax exemption certificate acceptable to the taxing authorities.

**CANCELLATION** Any contract resulting from the Purchaser's order may be canceled by the Purchaser only by negotiations and upon payments of reasonable cancellation charges which will take into account expenses already incurred and commitments made by the Company.

**DESIGN CHANGES** The Company reserves the right to make changes in design, improvements and additions in and to its products any time without imposing any liability or obligations to itself to apply or install the same in any product manufactured by it.

**TITLE** The title and right of possession of the products sold herein shall remain with the Company and such products shall remain personal property until all payments herein (including deferred payments whether evidenced by notes or otherwise) shall have been made in full in cash and the Purchaser agrees to do all acts necessary to perfect and maintain such right and title in the Company.

**PRICE ADJUSTMENTS** Prices are subject to change upon notice by the Company. Prices on existing orders are subject to surcharges in the event of cost increases of metals and transportation. All complete component accessory material manufactured by others and furnished with the Company's products such as motors, drives, vibration equipment, controls or other completely assembled component structures, are subject to adjustment to the price at time of shipment regardless of the date of original order entry.

**SAFETY ACCESSORIES** The Company manufactures products designed to serve multiple applications and offers a wide range of safety equipment, including guards and other devices, as may be required to meet customer specifications. Without exception, the Company recommends that all orders include applicable safety devices. Products ordered without applicable safety devices is clearly the responsibility of the Purchaser. Further, the Purchaser warrants that it has determined and acquired any and all safety devices required for products sold by the Company. Weather covers and guards for motor and V-belt drives, couplings, shafts and bearings, along with inlet and outlet screens, are optional accessories noted in the price list.

**GOVERNING LAW** The rights, obligations and remedies of Purchaser and the Company, the interpretation of these terms and conditions and the sale of products by the Company shall be governed by Oklahoma law, without regard to any principles of conflict of laws.

**ARBITRATION** Any dispute arising under or in connection with these terms and conditions or the sale of products shall be settled by binding arbitration administered by the American Arbitration Association under its Commercial Arbitration Rules, and judgment on the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. The dispute shall be resolved by one neutral arbitrator who shall have no affiliation with either Purchaser or the Company and shall be selected by the American Arbitration Association office in Dallas, Texas. The arbitration proceedings shall be held in Muskogee, Oklahoma.

**APPLICABLE DOCUMENTS** The agreement between the Company and the Purchaser relating to the products includes these terms and conditions of sale, any applicable installation and maintenance instructions provided by the Company and any terms appearing on the Company's quotation, sales order acknowledgment and invoice.

**WARNING** Acme products are designed and manufactured to provide reliable performance but they are not guaranteed to be 100% free of defects. Even reliable products will experience occasional failures and this possibility should be recognized by the Purchaser and all End Users. If these products are used in a life support ventilation system where failure could result in loss or injury, the Purchaser and all End Users should provide adequate back-up ventilation, supplementary natural ventilation or failure alarm system, or acknowledge willingness to accept the risk of such loss or injury.

**WARNING** DO NOT use in HAZARDOUS ENVIRONMENTS where fan's electrical system could provide ignition to combustible or flammable materials unless unit is specifically built for hazardous environments. Comply with all local and national safety codes including the National Electrical Code (NEC) and National Fire Protection Act (NFPA).

**CAUTION** Guards must be installed when fan is within reach of personnel or within eight (8) feet (2.5 m) of working level or when deemed advisable for safety.

**DISCLAIMER** The Company has made a diligent effort to illustrate and describe the products accurately in all Company literature; however such illustrations and descriptions are for the sole purpose of identification and do not express or imply any warranty.

## LIMITED WARRANTY

**WARRANTY AND DISCLAIMER:** the Company extends this limited warranty to the original purchaser and warrants that products supplied by the Company, shall be free from original defects in workmanship and materials for two years from date of shipment (except for the warranty periods noted for products listed below), provided same have been properly handled, stored, installed, serviced, maintained and operated. This warranty shall not apply to products which have been altered or repaired without the Company's express authorization, or altered or repaired in any way so as, in the Company's judgment, to affect its performance or reliability, nor which have been improperly installed or subjected to misuse, negligence, or accident, or incorrectly used in combination with other substances. The Purchaser assumes all risks and liability for results of use of all products.

Evaporative cooling pads are warranted to be free of defects in materials and workmanship for a period of two years from date of shipment provided same have been properly handled, stored, installed, serviced, maintained and operated; and further, not subjected to excessive heat, corrosive agents or chemicals, or mechanical abuse that may cause tearing, crushing or undue deterioration, nor used on a system or in a manner other than that for which it was designed as explained in the product literature.

The following products are warranted to be free of defects in materials and workmanship for the periods shown from date of shipment: Acme's exclusive duplex split pillow block bearings and shaft five years, belts one year, Polyethylene tubing 90 days, AIR40 Heater warranty one year, AIR40 Emitter warranty three years and DDP fan lifetime warranty on its propeller, cone, and housing.

**LIMITATION OF REMEDY AND DAMAGES:** All claims under this warranty must be made in writing and delivered to P. O. Box 978, Muskogee, Oklahoma, 74402, within 15 days after discovery of the defect and prior to the expiration of two years from the date of shipment by the Company of the product claimed defective, and Purchaser shall be barred from any remedy if Purchaser fails to make such claim within such period.

Within 30 days after receipt of a timely claim, the Company shall have the option either to inspect the product while in Purchaser's possession or to request Purchaser to return the product to the Company at Purchaser's expense for inspection by the Company. The Company shall replace, or at its option repair, free of charge, any product it determines to be defective, and it shall ship the repaired or replacement product to Purchaser F.O.B. point of shipment; provided, however, if circumstances are such as in the Company's judgment to prohibit repair or replacement to remedy the warranted defects, the Purchaser's sole and exclusive remedy shall be a refund to the Purchaser of any part of the invoice price, paid to the Company, for the defective product or part.

The Company is not responsible for the cost of removal of the defective product or part, damages due to removal, or any expenses incurred in shipping the product or part to or from the Company's plant, or the installation of the repaired or replaced product or part.

The warranties set forth above do not apply to any components, accessories, parts or attachments manufactured by other manufacturers; such being subject to the manufacturer's warranty, if any. To the extent not prohibited by the manufacturer's warranty, the Company shall pass through to Purchaser such manufacturer's warranty.

THE COMPANY'S WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY EXPRESSLY DISCLAIMED AND WAIVED. THIS WARRANTY CONSTITUTES THE COMPANY'S SOLE AND EXCLUSIVE WARRANTY FOR DEFECTIVE GOODS AND PURCHASER'S SOLE AND EXCLUSIVE REMEDY FOR DEFECTIVE PRODUCTS.

No employee, agent, dealer, or other person is authorized to give any warranties on behalf of the Company or to assume for the Company any other liability in connection with any of its products except in writing and signed by an officer of the Company.

**REPLACEMENT PARTS** If replacement parts are ordered, purchaser warrants that the original components in which these replacement parts will be placed are in satisfactory working condition, and when said replacement parts are installed, the resultant installation will operate in a safe manner, at speeds and temperatures for which the original product was purchased.

**TECHNICAL ADVICE AND RECOMMENDATIONS, DISCLAIMER:** Notwithstanding any past practice or dealings or any custom of the trade, sales shall not include the furnishing of technical advice or assistance or system design. Any such assistance shall be at the Company's sole option and may be subject to additional charge.

The Company assumes no obligation or liability on account of any recommendations, opinions or advice as to the choice, installation or use of products. Any such recommendations, opinions or advice are given and shall be accepted at Purchaser's and End User's risk and shall not constitute any warranty or guarantee of such products or their performance.

**LIMITATION OF LIABILITY** The cumulative liability of the Company to the Purchaser and any other persons for all claims in any way relating to or arising out of the products, including, but not limited to, any cause of action sounding in contract, tort, or strict liability, shall not exceed the total amount of the purchase price paid for those products which are the subject of any such claim. This limitation of liability is intended to apply without regard to whether other provisions of this agreement have been breached or have proven ineffective even if the Company has been advised of the possibility of such claims or demands. In no event shall the Company be liable to the Purchaser or any other person for any loss of profits or any incidental, special, exemplary, or consequential damages for any claims or demands brought by the Purchaser or such other persons.

**INDEMNITY** The Company's maximum liability to Purchaser and to any end user is as set forth above. The Company makes no warranty to anyone for any products not manufactured by the Company and shall have no liability for any use or installation of any products (whether manufactured by the Company or other manufacturers) not specifically authorized by this sale. Purchaser acknowledges various warnings by the Company regarding the products and its installation and use. If the Company incurs any claims, lawsuits, settlements, or expenses (including attorney fees) for any loss, injury, death or property damage including, but not limited to, claims arising out of the Purchaser's or any end user's installation or use of the products, the Purchaser shall indemnify and hold the Company harmless.

**ACME ENGINEERING AND MANUFACTURING CORPORATION**
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