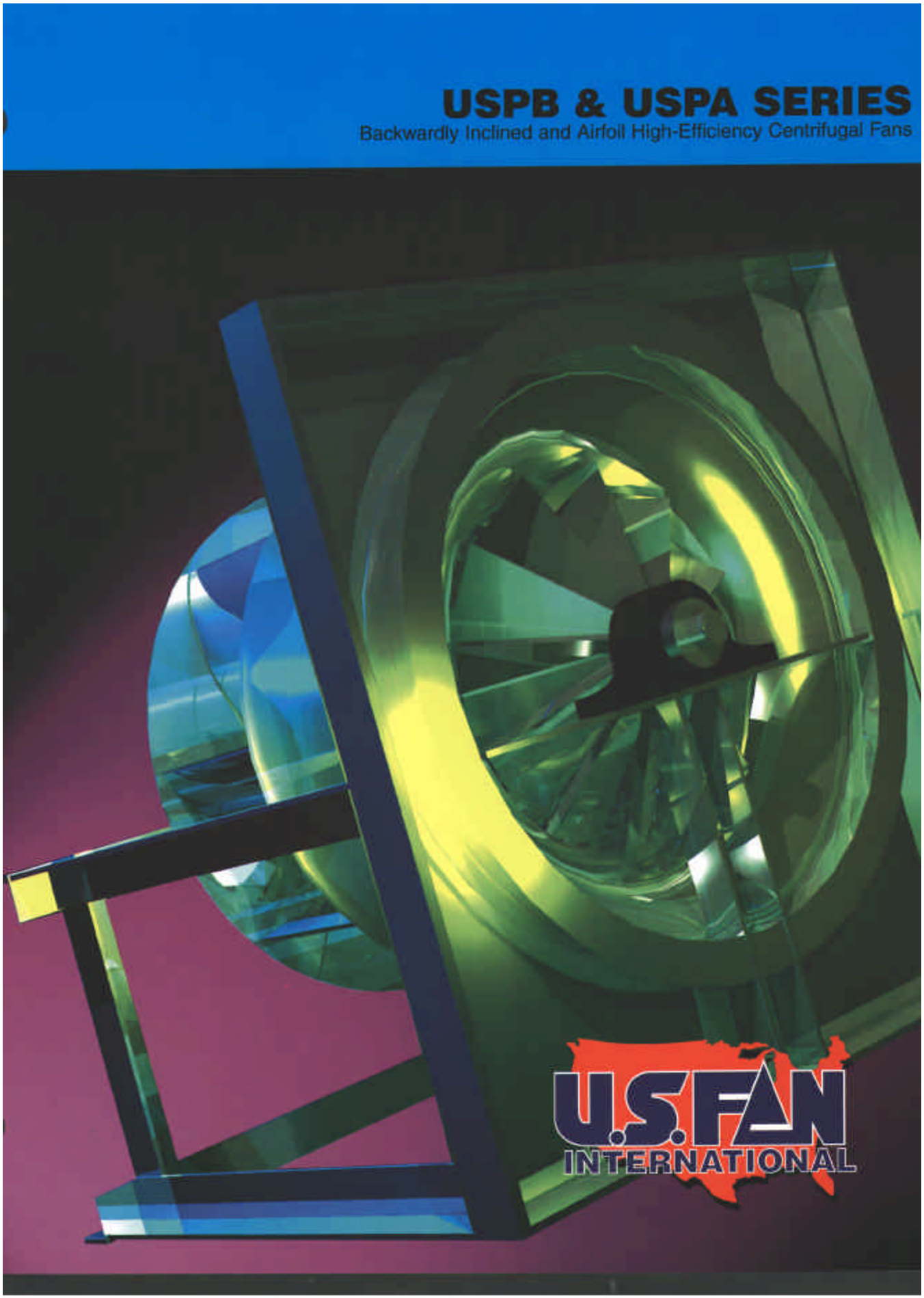
USPB & USPA SERIES

Backwardly Inclined and Airfoil High-Efficiency Centrifugal Fans



USPB and USPA SERIES

U.S. FAN INTERNATIONAL® certifies that the USPB & USPA Series fans shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. For Sound Performance Data refer to Sound Bulletin USS813.

Member Air Movement and Control Association International, Inc.

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U.S. FAN'S GENERAL PURPOSE and HEAVY DUTY USPB Series Backwardly Inclined Plenum Fan is available in standard sizes 12" and 13" (305 mm - 330 mm) diameter. The USPA Series Airfoil bladed Plenum Fan is available in sixteen standard sizes from 15" to 89" (457 mm - 2057 mm) diameter. These units offer volumes from 500 to 217,500 CFM (.3 m^3/s - 88.8 m^3/s) and static pressures up to 14" Wg. (3.9 Kpa) AMCA Classes I, II, and III are available with a full complement of accessories.

DESIGN FEATURES

General

The Plenum fan is primarily used in the air handling industry to pressurize a plenum. Plenum fans are used where space is a premium and tend to be a lower cost alternative to a housed centrifugal fan. They do not have a housing, but do have an optional caged enclosure to protect personnel. **This fan series is available in Arrangement 3 and 4, Class I, II, and III, with horizontal and vertical mounting.**

For further information consult your U.S. Fan representative.

USPB Series Backwardly Inclined and USPA Series Airfoil impellers are of an outstanding design. Aerodynamic air passes with die formed blades allow more air to be handled with less horsepower. This fan has been designed for handling large volumes of air over a wide range of pressure requirements at a low operating cost.

EFFICIENCY

Sustained high efficiency over the range of optimum selection is very important. The ultimate measure of fan performance is operating efficiency. High efficiency means low operating cost 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. This permits the selection of motors based on brake horsepower requirements limiting danger of overload at a given speed.

QUIET OPERATION

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

USPB Series
Backwardly Inclined

Available in Sizes
12 (12")(305 mm)
and 13 (13 ") (330 mm)
for a wide range
of applications

USPA Series
Airfoil Bladed

Available in Sizes
15 (15") (381 mm)
through 89 (89") (2261 mm)
for clean air
applications

THESE ACROSS THE BOARD BACKWARDLY INCLINED ADVANTAGES...

- Efficient economical backwardly inclined wheel design for moving large volumes of air at a wide range of pressure requirements.
- Non-overloading horsepower characteristics.
- Increased stability of operation due to steeply rising pressure curve which minimizes volume variation to changes in system resistance.
- Full streamline airflow.

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.

ADD UP TO

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

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TYPICAL CONSTRUCTION FEATURES
GENERAL PURPOSE PLENUM FAN

STANDARD PAINT FINISH
The standard finish for all fans consist of one coat of primer and one overcoat of gray, acrylic alkyd paint. Other coatings are available.

USPB BACKWARDLY INCLINED WHEEL CONSTRUCTION
Single thickness backwardly inclined design plus streamlined airflow over the blade surfaces provides a non-overloading power characteristic approaching true airfoil efficiency.

Wheels have flat backwardly inclined blades welded to back plate and rims to provide a particularly rigid assembly, well suited for a wide range of air handling applications.

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

USPA AIRFOIL 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 back plate and rims to provide a particularly rigid assembly.

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

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.

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.

HEAVY BEARING SUPPORT - (Arrangement 3)
Heavy steel bearing supports maintain accurate alignment, prevent bearing distortion and offer a minimum of resistance to airflow.

BEARINGS - (Arrangement 3)
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 speeds.

With proper belt tension, U.S. Fan bearings are selected for a minimum L-10 life of 20,000 hours. However, certain high speed and high horsepower configurations may lead to reduced bearing life. Your U.S. Fan Sales Engineer can furnish information on the actual bearing selection for a given configuration along with bearing life estimates. L-10 lives of 40,000 and 80,000 hours are available options.

AVAILABLE IN ARRANGEMENTS 3 AND 4

ARRANGEMENT 3
Belt drive version. Motor is either mounted on a motor slide base on the floor, or on a motor slide base on a structural unitary support. The wheel is supported between one bearing mounted in the airstream and one mounted behind the wheel backplate.

ARRANGEMENT 4
Motor is supported by a rigid steel base and wheel is mounted on motor shaft. **Not available** on 40" through 89" (1015 mm - 2261 mm) wheel sizes and not available for vertical applications.

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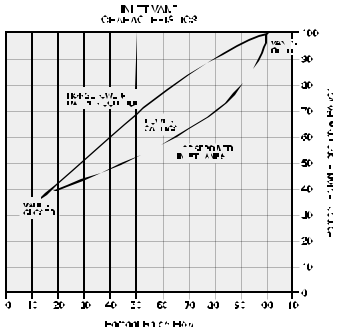
OPTIONAL ACCESSORIES

- Extended Lube Fittings
- Shaft Extensions
- Inlet Screens
- Unit Protective Enclosure
- Inlet Vane Controls
- Motor & V-Belt Drives
- Flanged/Slip Connection Inlet
- Vertical Shaft Mounting
- Special Bearings
- Special Nameplates
- Narrow (Percent) Width
- Drive Guards
- Unitary Bases
- Special Coatings
- Split Pillow Block Bearing

INLET VANE CONTROL (IVC)

Vane control is a simple and efficient means of regulating fan output over a wide range of operating conditions. It combines the advantages of instantaneous regulation of fan capacity (to meet exact pressure and volume requirements of the system) with substantial power savings during those periods when the full rated delivery of the fan is not required. Vanes may be operated automatically or manually without shutting the fan down. Vane control is available in all fan sizes.

The control of fan output by movable inlet vanes has been accepted as one of the most economical means of varying fan capacity at high efficiency.



Typical Inlet Vane Control Horsepower Curve illustrating power savings.

Inlet Vane Control offers these advantages for Variable Air Volume Systems:

- **Immediate Response**… Vane control effects a change in fan pressure and volume without requiring a speed change of either the fan or motor.
- **Saves Power**… As the vanes are closed, a reduction in fan output occurs, with a resulting lower motor power input.
- **Quietness**… Overall sound level will not increase substantially from full open to the closed vane position.
- **Present-Future Operation**… Partially closed vanes permit use of a fan without change for present low occupancy or load. Vanes can be opened as load increases.
- **Usable at all times**… Vanes may be operated without shutting down the fan ensuring continuous system performance.
- **Stabilizes Fan**… Partially closed vanes steepen the fan curve, minimizing volume variation when the system resistance changes.
- **Simple**… Regulating fan output by vane control permits the use of highly efficient squirrel cage motor and simple starting equipment.
- **Economical**… Vane control is a most economical means of controlling fan capacity combining power savings with low first cost.

Internal (Nested) IVC with lever

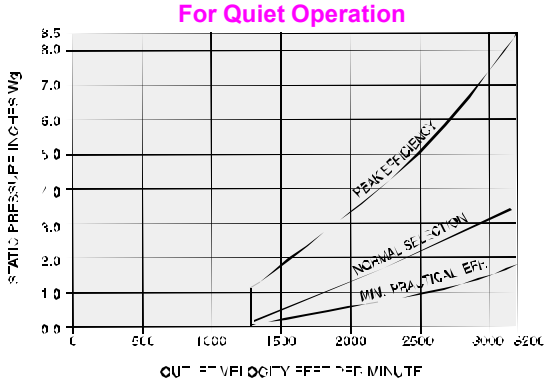
External IVC with stub shaft and lever

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 adding 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 high 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

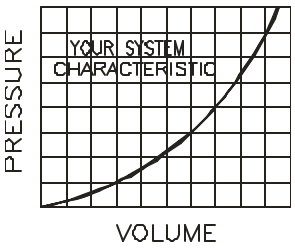


SELECTION CONSIDERATIONS

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 other job limitations. 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 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.

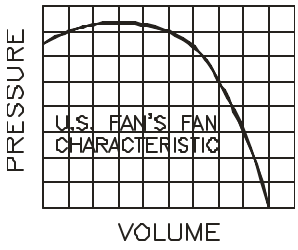
U.S. FAN'S FAN... YOUR SYSTEM

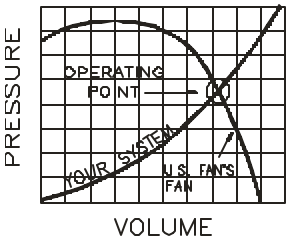
Fan selections are based on static pressure capability when handling a given volume of air. The static pressure is calculated for each system by following certain accepted industry practices. This calculation of static pressure is at best an inexact science with the error often compounded by the addition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





If the curves are superimposed as illustrated to the left, 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 airflow 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 the 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 the 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.

MOTOR SELECTION CONSIDERATIONS

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.

The job engineer, contractor or representative is responsible for the proper motor size and type selection.

Whenever inlet vanes or 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. Consult your Application Data Booklet for more information.

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 fan 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 on page 8 contains air density ratios for temperatures from -20°F to 150°F and barometric pressures from 29.92" to 20.58" Hg.

FAN LAWS

Two basic fan laws relate performance variables for any fan of a given design (such as the USPB & USPA Series). 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.

$$Pressure_2 = Pressure_1 \, X \left(\frac{AirDensity_2}{AirDensity_1} \right)$$

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

$$BHP_2 = BHP_1 \, X \left(\frac{AirDensity_2}{AirDensity_1} \right)$$

USPB and USPA SERIES

SELECTION AND APPLICATION

SAMPLE SELECTION

A size USPB37 fan must deliver 25,956 CFM (12.25 m^3/sec) at 4.0 inches (994.6 Pa) static pressure. The fan must perform at an altitude of 5000 feet (1524 m) with an entering air temperature of 150°F (65.5°C).

1. Obtain the density ratio from the table below. For 150°F (65.5°C) at an altitude of 5000 feet (1524 m) the ratio is 1.38. This same ratio can be obtained by interpolation using the corresponding metric table (see illustration).

°C	1500m	1524m	1750m
50	1.30		1.33
(65.5)	(1.368)	1.37	(1.404)
75	1.41		1.45

2. Convert the actual static pressure to standard conditions (SP_E).
   SP_E = 4 m Wg (994.6 Pa) x 1.38 = 5.5 in. wg. (1367.3 Pa).
3. Use the specified air flow rate and equivalent static pressure (SP_E) to obtain the fan speed and power requirements from the fan rating tables.
   From the fan performance table on page 21, a size 37 fan must operate at 1349 RPM and require 39.91 HP (29.76 kW).
4. The speed is correct as selected from the performance table (when elevated temperatures are involved, compare with the maximum allowable speed of the fan). The power requirements must be converted back to the actual operating conditions by using the ratio of the actual density to standard density.
   Divide the tabular power from step 3 by the density ratio from step 1:
   $$\text{Power} = \frac{39.91\,HP\ (29.76\,kW)}{138} = 28.92\,HP\ (2156\,kW)$$
5. Check specifications to determine if the fan will be expected to operate at lower temperatures (such as at start up of a system). If it is, check the power requirement at this lower temperature.
   Assume the system will be started with the fan handling air at 70°F (21°C).
   a. The air density ratio for 70°F (21°C) and 5000 ft (1524 m) is 1.20.
   b. Convert the power at standard conditions [70°F (21°C) and sea level] to [70°F (21°C) and 5000 feet (1524 m)]:
   $$\text{Power} = \frac{39.91\,HP\ (29.76\,kW)}{120} = 33.3\,HP\ (24.8\,kW)$$
   c. Select a motor based upon the maximum power required or 33.3 HP (24.8 kW).

AIR DENSITY RATIOS AT VARIOUS ALTITUDES AND AIR TEMPERATURES

AIR GAS TEMP °F	ALTITUDE IN FT. ABOVE SEA LEVEL WITH CORRESPONDING BAROMETRIC PRESSURE IN INCHES Hg.										
	0 29.92	1000 28.86	2000 27.82	3000 26.81	4000 25.84	5000 24.89	6000 23.98	7000 23.09	8000 22.22	9000 21.38	10000 20.58
-20	0.83	0.86	0.89	0.93	0.96	1.00	1.04	1.08	1.12	1.16	1.21
0	0.87	0.91	0.94	0.97	1.01	1.04	1.08	1.13	1.17	1.22	1.26
50	0.96	1.00	1.04	1.07	1.11	1.16	1.20	1.25	1.30	1.35	1.40
70	1.00	1.04	1.08	1.12	1.16	1.20	1.25	1.30	1.35	1.40	1.45
100	1.06	1.10	1.14	1.18	1.22	1.27	1.32	1.37	1.42	1.48	1.54
150	1.15	1.19	1.24	1.30	1.33	1.38	1.44	1.49	1.55	1.61	1.67
AIR GAS TEMP °C	**ALTITUDE IN METERS ABOVE SEA LEVEL WITH CORRESPONDING BAROMETRIC PRESSURE IN MILLIMETERS Hg.**										
	0 760	250 738	500 717	750 697	1000 677	1250 657	1500 639	1750 620	2000 603	2500 569	3000 536
0	.93	.95	.98	1.01	1.04	1.08	1.10	1.14	1.16	1.23	1.32
21	1.00	1.03	1.05	1.09	1.12	1.15	1.19	1.22	1.27	1.33	1.41
50	1.10	1.12	1.16	1.19	1.23	1.27	1.30	1.33	1.39	1.47	1.56
75	1.18	1.22	1.25	1.28	1.33	1.37	1.41	1.45	1.49	1.59	1.67

PLENUM FAN CLASSIFICATIONS

Typically, commercial oriented ventilation equipment is defined by an AMCA Class which relates the ability of a fan to obtain specified air/pressure performance points. These points are defined in AMCA Standard 99-86 for housed backward inclined and forward curved fans. There are no present standards for a Plenum fan relating to its performance capability to an AMCA Class.

However, because U.S. Fan uses its basic Series USBI and USAF wheel design in our Plenum fans, it becomes convenient to identify the Plenum fans by a "U.S. Fan Construction Class" equivalent to the same physical wheel construction necessary to obtain the normal AMCA Fan Rating Class for the housed USBI and USAF fan lines. Therefore, a U.S. Fan Class I Plenum wheel and shaft is physically the same as an AMCA Class I USBI and USAF wheel and shaft.

PLENUM FAN OUTLET AREA

A plenum fan does not have a housing to collect the air. Therefore, the traditional concept of an outlet area has to be modified. By definition from AMCA 210, the outlet opening of the wheel is the fan outlet area. This is the circumference of the wheel at the blade tip times the tip width of the wheel.

USPB and USPA SERIES

	CONVERSION TABLE			
	I-P Equivalents of Metric Units		Metric Equivalents of I-P Units	
Area	1 *m* ^{2} (square meter)	=10.764 *ft* ^{2}	1 *ft* ^{2} (square foot)	=.09290 *m* ^{2}
Density	1 *kg/m* ^{3}	=.062428 *lbm/ft* ^{3}	1 *lbm/ft* ^{3}	=16.018 *kg/m* ^{3}
	1 *g/cm* ^{3}	=62.428 *lbm/ft* ^{3}	1 *lbm/ft* ^{3}	=.016018 *g/cm* ^{3}
Energy	1 *J* (Joule) or *N-m* (Newton-meter)	=.73756 *ft-lb*	1 *ft-lb* (foot pound)	=1.3558 *N-m*
	1 *kcal* (kilo calorie)	=3.9683 *Btu*	1 *Btu* (British thermal unit)	=252 *cal*
Flow Rate (Volume)	1 *m* ^{3}*/s* (cubic meter per second) CMS	=2118.9 *CFM*	1 *CFM* (Cu. ft/min)	=.00047195 *m* ^{3}*/s*
	1 *m* ^{3}*/min* (cubic meter per minute) CMM	=35.315 *CFM*	1 *CFM*	=.02832 *m* ^{3}*/min*
	1 *m* ^{3}*/hr* (cubic meter per hour) CMH	=.58858 *CFM*	1 *CFM*	=1.6990 *m* ^{3}*/hr*
	1 *l/s* (liter per second)	=2.1189 *CFM*	1 *CFM*	=.47195 *l/s*
Force	1 *N* (Newton)	=.22481 *lb*	1 *lb* (pound)	=4.4482 *N*
	1 *kp* (kilopond)	=2.2046 *lb*	1 *lb*	=.45359 *kp*
Gas Constant	1 *J/kg-K* (Joule per kilogram Kelvin)	=.18586 *ft-lb/lbm- °R*	1 *ft-lb/lbm- °R**	=5.3803 *J/kg-K*
	1 *m* ^{2}*/s* ^{2}*-K* (sq. mtr per sec. sq. Kelvin)	=5.9800 *ft* ^{2}*/s* ^{2}*- °R*	1 *ft* ^{2}*/s* ^{2} *- °R***	=.16723 *m* ^{2}*/s* ^{2}*-K*
	1 *cal/g-°C* (calorie per gram *°C*)	=4186.8 *J/kg-K*	1 *Btu/lbm - °R*	=1.0000 *cal/g- °C*
			*(foot-pound per poundmass degree Rankine)	
			**(square-foot per second-square degree Rankine)	
Length	1 *mm* (millimeter)	=.03937 *inch*	1" (inch)	=25.4 *mm*
	1 *cm* (centimeter)	=.39370 *inch*	1"	=2.54 *cm*
	1 *m* (meter)	=3.2808 *ft*	1 *ft* (foot)	=.30480 *m*
	1 *km* (kilometer)	=.62137 *mi*	1 *mi* (mile)	=1.6093 *km*
Mass	1 *kg* (kilogram)	=2.2046 *lbm*	1 *lbm* (pound mass)	=.45359 *kg*
Power	1 *W* (Watt)	=.00134 *HP*	1 *hp* (horsepower)	=.7457 *kW*
	1 *kW* (kilo-Watt)	=1.3410 *hp*	1 *hp*	=745.70 *W*
	1 *mhp* (metric horsepower)	=.98632 *hp*	1 *hp*	=1.0139 *mhp*
Pressure or Stress	1 *N/m* ^{2} (Newton per m ^{2}) or *Pa* (Pascal)	=.0040264" *wg*	1" *wg* (inches water gauge)	=248.66 *Pa or N/m*^{2}
	1 *mm Hg* or *torr* (*mm* Mercury)	=.53616" *wg*	1" *wg*	=1.8651 *mm Hg* or *torr*
	1 *kPa* (kilo Pascal)	=.1450 *psi*	1 *psi* (pounds per sq. inch)	=6894.8 *Pa* or *N/m* ^{2}
	1 *atm* (atmosphere)	=29.921" *Hg*	1" *Hg* (inch Mercury)	=3386.4 *Pa* or *N/m* ^{2}
	(*mm Hg* at 0*°C* or 68*°F*)		(inches *wg* at 68*°F* or 20*°C*)	
	1 *oz/in* ^{2}	=1.732" *wg*	1" *wg*	=0.5774 *oz/in* ^{2}
Temperature	For temperature intervals and rise, 1*°C* (degree Celsius)	=9/5 *°F*	For temperature intervals and rise, 1*°F* (degree Fahrenheit)	=5/9 *°C*
	For temperature in *°F* (Fahrenheit)	=t_C x 9/5 + 32	For temperature in *°C*	=(t_F-32) x 5/9
Torque	1 *N-m* (Newton meter)	=8.8507 *in.-lb.*	1 *in.-lb.* (inch pound)	=.11298 *N-m*
	1 *N-m* (Newton-meter)	=.73756 *ft.-lb.*	1 *ft.-lb.* (foot pound)	=1.3558 *N-m*
Velocity & Speed	1 *m/s*	=196.5 *fpm*	1 *fpm* (feet per minute)	=.00508 *m/s*
	1 *km/hr* (kilometer per hour)	=.62137 *mph*	1 *mph* (mile per hour)	=1.6093 *km/hr*
	1 *rps* (revolution per second)	=.016667 *rpm*	1 *rpm* (revolution per minute)	=60 *rps*
Viscosity	1 *cP* (Centipoise)	=.00067197 *lbm/ft-s*	1 *lbm/ft-s* (pound/foot second)	=1488.2 *cP*

USPB SERIES

Backwardly Inclined - Plenum Fan

SIZE 12

SINGLE WIDTH
SINGLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

Wheel Diameter	12 ¼ inches	311 mm
Wheel Circumference	3.21 feet	.9775 m
Inlet Diameter/Area	13 $^{11}/_{16}$ inches dia./.99 sq. ft.	348 mm/.0923 m^2
Outlet Area	.818 sq. ft.	.0760 m^2
Tip Speed	3.21 x RPM ft./minute	.9775 x RPM m/minute
Maximum Power	.0787 x (RPM ÷ 1000)^3 BHP	.0587 x (RPM ÷ 1000)^3 kW

SIZE 12	-20° to 150°F -29° to 66°C
CLASS I	3467
CLASS II	4523
CLASS III	N/A
CLASS IV	N/A

VOL CFM	OV FPM	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		⅞" SP		1" SP		1 ¼" SP		1 ½" SP		1 ¾"	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
491	600	•808	•0.04	•927	•0.06																
573	700	866	0.05	973	0.07	•1073	•0.10														
654	800	931	0.06	1024	0.09	1119	0.11	•1208	•0.14	1303	0.17										
736	900	1002	0.08	1088	0.10	1168	0.13	1254	0.16	•1334	•0.19	1413	0.22								
818	1000	1078	0.10	1154	0.12	1231	0.15	1302	0.18	1380	0.21	•1453	•0.24	•1522	•0.27						
900	1100	1155	0.12	1226	0.14	1296	0.17	1365	0.20	1429	0.23	1500	0.27	1568	0.30	•1693	•0.38				
982	1200	1234	0.14	1301	0.17	1363	0.20	1429	0.23	1492	0.26	1551	0.30	1615	0.34	1739	0.41	•1854	•0.49		
1063	1300	1314	0.17	1378	0.20	1438	0.23	1495	0.26	1556	0.30	1614	0.34	1669	0.37	1785	0.45	1898	0.54	•2003	•0.62
1145	1400	1396	0.20	1456	0.23	1513	0.27	1567	0.30	1622	0.34	1678	0.38	1732	0.41	1833	0.49	1944	0.58	2048	0.67
1227	1500	1480	0.23	1535	0.27	1590	0.31	1642	0.34	1692	0.38	1744	0.42	1796	0.46	1895	0.54	1991	0.63	2094	0.73
1309	1600	1565	0.27	1615	0.31	1668	0.35	1718	0.39	1766	0.43	1812	0.47	1862	0.51	1958	0.60	2048	0.69	2141	0.78
1391	1700	1651	0.32	1697	0.36	1747	0.40	1796	0.44	1842	0.48	1887	0.52	1929	0.57	2023	0.66	2111	0.75	2194	0.85
1472	1800	1737	0.37	1781	0.41	1827	0.45	1874	0.50	1919	0.54	1962	0.58	2004	0.63	2088	0.72	2175	0.82	2257	0.92
1554	1900	1823	0.42	1866	0.47	1907	0.51	1953	0.56	1996	0.60	2038	0.65	2079	0.69	2156	0.79	2240	0.89	2321	1.00
1636	2000	1910	0.49	1951	0.53	1991	0.58	2032	0.62	2075	0.67	2116	0.72	2155	0.77	2231	0.87	2306	0.97	2386	1.08
1800	2200	2085	0.63	2123	0.68	2160	0.72	2195	0.78	2233	0.83	2272	0.88	2310	0.93	2382	1.04	2450	1.15	2517	1.26
1963	2400	2261	0.79	2296	0.85	2331	0.90	2364	0.95	2396	1.01	2431	1.06	2467	1.12	2536	1.24	2601	1.35	2664	1.47
2127	2600	2438	0.99	2471	1.05	2503	1.10	2534	1.16	2565	1.22	2595	1.28	2626	1.34	2692	1.46	2755	1.59	2815	1.72
2290	2800	2616	1.21	2647	1.28	2677	1.34	2706	1.40	2735	1.46	2763	1.53	2791	1.59	2851	1.72	2911	1.86	2969	1.99
2454	3000	2794	1.47	2823	1.54	2852	1.61	2879	1.67	2907	1.74	2933	1.81	2960	1.88	3011	2.01	3069	2.15	3125	2.30
2618	3200	2973	1.77	3000	1.84	3027	1.91	3053	1.98	3079	2.05	3105	2.12	3130	2.20	3179	2.34	3229	2.49	3282	2.64
2781	3400	3152	2.10	3178	2.18	3204	2.25	3228	2.33	3253	2.40	3277	2.48	3301	2.56	3348	2.71	3393	2.86	3442	3.02
2945	3600	3332	2.48	3357	2.56	3381	2.64	3404	2.71	3428	2.79	3451	2.87	3473	2.96	3518	3.12	3562	3.28	3604	3.44
3108	3800	3512	2.90	3535	2.98	3558	3.06	3581	3.15	3603	3.23	3625	3.31	3647	3.40	3690	3.57	3731	3.74	3772	3.91

VOL CFM	OV FPM	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
1063	1300	2126	0.72																		
1145	1400	•2145	•0.77																		
1227	1500	2191	0.82	2385	1.04																
1309	1600	2237	0.89	•2413	•1.10	2605	1.33														
1391	1700	2284	0.95	2459	1.17	•2621	•1.40														
1472	1800	2335	1.02	2506	1.25	2665	1.48	2825	1.73												
1554	1900	2397	1.10	2553	1.33	2711	1.57	•2858	•1.82	3015	2.10										
1636	2000	2461	1.19	2602	1.41	2758	1.66	2904	1.92	•3040	•2.19	3195	2.49								
1800	2200	2590	1.38	2728	1.62	2855	1.87	2997	2.14	3132	2.42	•3260	•2.71	•3382	•3.01	3530	3.35				
1963	2400	2724	1.59	2857	1.85	2981	2.11	3098	2.39	3225	2.68	3352	2.98	3473	3.29	•3588	•3.61	•3702	•3.94	3837	4.31
2127	2600	2873	1.84	2988	2.11	3110	2.39	3224	2.68	3333	2.97	3446	3.28	3566	3.60	3680	3.94	3790	4.28	•3895	•4.62
2290	2800	3025	2.13	3132	2.40	3241	2.69	3353	3.00	3459	3.30	3561	3.62	3660	3.94	3773	4.29	3882	4.64	3987	5.00
2454	3000	3179	2.44	3282	2.74	3380	3.03	3483	3.35	3588	3.67	3687	4.00	3783	4.33	3875	4.67	3976	5.04	4080	5.41
2618	3200	3334	2.79	3434	3.10	3529	3.42	3620	3.74	3718	4.07	3816	4.42	3910	4.77	4001	5.12	4088	5.48	4174	5.85
2781	3400	3492	3.18	3589	3.51	3681	3.84	3769	4.17	3854	4.51	3947	4.87	4039	5.24	4128	5.61	4214	5.98	4298	6.36
2945	3600	3652	3.61	3745	3.96	3834	4.30	3920	4.65	4002	5.01	4082	5.37	4170	5.75	4258	6.13	4342	6.52	4424	6.92
3108	3800	3812	4.09	3903	4.44	3989	4.81	4072	5.17	4153	5.54	4230	5.92	4306	6.30	4389	6.70	4472	7.11		
3272	4000	3980	4.61	4062	4.98	4146	5.36	4227	5.74	4305	6.13	4381	6.52	4454	6.91						
3436	4200	4149	5.18	4223	5.56	4304	5.96	4383	6.35	4459	6.76										

VOL CFM	OV FPM	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2127	2600	•3999	•4.97	4245	5.77																
2290	2800	4088	5.37	•4281	•6.11	4508	6.96														
2454	3000	4180	5.79	4372	6.57																
2618	3200	4274	6.25	4464	7.06																

• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐ CL. III ☐
The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPB SERIES

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SINGLE WIDTH
SINGLE INLET

SIZE 13

SIZE 13	-20° to 150°F -29° to 66°C
CLASS I	3158
CLASS II	4120
CLASS III	N/A
CLASS IV	N/A

Wheel Diameter	13 ½ inches	343 mm
Wheel Circumference	3.53 feet	1.076 m
Inlet Diameter/Area	14 15/16 inches dia./1.19 sq. ft.	379 mm/.1106 m^2
Outlet Area	1.01 sq. ft.	.0938 m^2
Tip Speed	3.53 x RPM ft./minute	1.076 x RPM m/minute
Maximum Power	.128 x (RPM ÷ 1000)^3 BHP	.0954 x (RPM ÷ 1000)^3 kW

VOL CFM	OV FPM	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		⅞" SP		1" SP		1 ¼" SP		1 ½" SP		1 ¾"	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
606	600	•737	•0.05	•845	•0.08																
707	700	793	0.06	887	0.09	•979	•0.12														
808	800	853	0.08	937	0.11	1021	0.14	•1101	•0.17	1185	0.21										
909	900	920	0.10	996	0.13	1068	0.16	1144	0.19	•1216	•0.23	•1285	•0.27	1364	0.31						
1010	1000	990	0.12	1057	0.15	1127	0.19	1191	0.22	1259	0.26	1326	0.30	•1388	•0.34						
1111	1100	1061	0.15	1125	0.18	1187	0.22	1249	0.25	1307	0.29	1369	0.33	1430	0.38	•1544	•0.47				
1212	1200	1134	0.18	1195	0.21	1250	0.25	1309	0.29	1365	0.33	1419	0.37	1474	0.42	1586	0.51	•1689	•0.61	1806	0.72
1313	1300	1208	0.21	1266	0.25	1319	0.29	1370	0.33	1425	0.37	1477	0.42	1526	0.46	1629	0.56	1731	0.66	•1826	•0.77
1414	1400	1284	0.25	1338	0.29	1389	0.33	1438	0.38	1486	0.42	1537	0.47	1585	0.52	1675	0.61	1774	0.72	1868	0.83
1515	1500	1362	0.30	1411	0.34	1461	0.38	1507	0.43	1552	0.48	1597	0.52	1645	0.57	1733	0.68	1818	0.78	1911	0.90
1616	1600	1441	0.35	1485	0.39	1533	0.44	1578	0.49	1621	0.54	1662	0.59	1705	0.64	1792	0.74	1874	0.85	1954	0.97
1717	1700	1520	0.40	1562	0.45	1606	0.50	1649	0.55	1691	0.60	1731	0.65	1770	0.71	1852	0.82	1932	0.93	2007	1.05
1818	1800	1599	0.47	1639	0.52	1679	0.57	1722	0.62	1762	0.68	1801	0.73	1839	0.79	1913	0.90	1992	1.02	2065	1.14
1919	1900	1679	0.54	1718	0.59	1754	0.65	1795	0.70	1834	0.76	1872	0.81	1908	0.87	1978	0.99	2052	1.11	2124	1.24
2020	2000	1760	0.62	1796	0.67	1832	0.73	1868	0.79	1906	0.84	1943	0.90	1979	0.96	2047	1.09	2113	1.21	2184	1.34
2222	2200	1921	0.79	1955	0.86	1988	0.92	2020	0.98	2053	1.04	2088	1.11	2122	1.17	2187	1.30	2248	1.44	2307	1.57
2424	2400	2084	1.01	2115	1.07	2146	1.14	2176	1.21	2205	1.27	2235	1.34	2267	1.41	2329	1.55	2388	1.70	2445	1.85
2626	2600	2247	1.26	2277	1.33	2305	1.40	2333	1.47	2361	1.54	2388	1.62	2415	1.69	2474	1.84	2530	2.00	2584	2.15
2828	2800	2411	1.54	2439	1.62	2466	1.70	2492	1.77	2518	1.85	2543	1.93	2568	2.01	2621	2.17	2675	2.33	2727	2.50
3030	3000	2576	1.88	2602	1.96	2627	2.04	2652	2.12	2677	2.20	2701	2.29	2724	2.37	2770	2.54	2821	2.71	2871	2.89
3232	3200	2741	2.25	2766	2.34	2789	2.43	2813	2.51	2836	2.60	2859	2.69	2881	2.78	2925	2.96	2969	3.14	3017	3.33
3434	3400	2907	2.68	2930	2.77	2952	2.86	2975	2.95	2997	3.05	3018	3.14	3040	3.24	3082	3.43	3122	3.62	3165	3.81
3636	3600	3073	3.16	3094	3.25	3116	3.35	3137	3.45	3158	3.55	3179	3.65	3199	3.74	3239	3.94	3278	4.15	3316	4.35
3838	3800	3239	3.69	3259	3.79	3280	3.89	3300	4.00	3320	4.10	3340	4.20	3359	4.31	3397	4.52	3435	4.73	3471	4.94

VOL CFM	OV FPM	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
1313	1300	1933	0.89																		
1414	1400	•1956	•0.95																		
1515	1500	1998	1.02	2167	1.27																
1616	1600	2041	1.10	•2201	•1.35	2368	1.64														
1717	1700	2085	1.18	2243	1.45	•2389	•1.72	2553	2.04												
1818	1800	2135	1.27	2286	1.54	2431	1.83	•2567	•2.13												
1919	1900	2194	1.37	2330	1.64	2473	1.94	2606	2.25	2741	2.58										
2020	2000	2252	1.48	2380	1.76	2516	2.06	2649	2.38	•2773	•2.70	2904	3.06								
2222	2200	2372	1.72	2496	2.02	2612	2.32	2735	2.65	2857	3.00	•2973	•3.35	•3084	•3.71	3208	4.11				
2424	2400	2499	1.99	2616	2.31	2728	2.63	2834	2.96	2944	3.32	3059	3.69	3168	4.07	•3272	•4.46	•3373	•4.86	3488	5.30
2626	2600	2637	2.31	2737	2.63	2847	2.98	2951	3.33	3049	3.69	3146	4.06	3254	4.46	3357	4.87	3457	5.29	•3552	•5.71
2828	2800	2777	2.67	2873	3.01	2969	3.36	3070	3.73	3166	4.11	3258	4.50	3346	4.89	3444	5.31	3542	5.75	3637	6.19
3030	3000	2919	3.07	3012	3.43	3101	3.80	3191	4.18	3285	4.58	3375	4.98	3461	5.39	3545	5.81	3629	6.24	3723	6.70
3232	3200	3064	3.51	3153	3.90	3239	4.28	3321	4.67	3406	5.08	3494	5.51	3579	5.94	3661	6.38	3740	6.82	3816	7.26
3434	3400	3210	4.01	3296	4.41	3379	4.82	3459	5.23	3535	5.65	3615	6.08	3699	6.53	3779	6.99	3857	7.45	3932	7.91
3636	3600	3357	4.55	3441	4.98	3521	5.40	3598	5.83	3672	6.27	3744	6.71	3820	7.17	3899	7.65	3975	8.13	4049	8.62
3838	3800	3507	5.16	3587	5.60	3665	6.04	3739	6.50	3812	6.95	3882	7.41	3949	7.88	4020	8.36	4096	8.86		
4040	4000	3662	5.82	3734	6.28	3810	6.74	3882	7.21	3953	7.69	4021	8.17	4087	8.66						
4242	4200	3818	6.54	3883	7.01	3956	7.50	4027	7.99	4095	8.49										

VOL CFM	OV FPM	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2424	2400	3606	5.76																		
2626	2600	•3645	•6.14	3859	7.10																
2828	2800	3729	6.64	•3903	•7.55	4098	8.56														
3030	3000	3814	7.17	3988	8.12																
3232	3200	3901	7.74	4073	8.73																

• Approximate Max. Static Efficiency and Quietest Selection. **CL. I** ☐ **CL. II** ☐ **CL. III** ☐
The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

Airfoil - Plenum Fan

SIZE 15

SINGLE WIDTH
SINGLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

Wheel Diameter	15 inches	381 mm
Wheel Circumference	3.93 feet	1.198 m
Inlet Diameter/Area	16 7/16 inches dia./1.44 sq. ft.	418 mm/.1338 m^2
Outlet Area	1.63 sq. ft.	.1514 m^2
Tip Speed	3.93 x RPM ft./minute	1.198 x RPM m/minute
Maximum Power	156 x (RPM ÷ 1000)^3 BHP	.1163 x (RPM ÷ 1000)^3 kW

SIZE 15	-20° to 150°F -29° to 66°C
CLASS I	2838
CLASS II	3700
CLASS III	N/A
CLASS IV	N/A

VOL CFM	OUT VEL	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		⅞" SP		1" SP		1¼" SP		1½" SP		1¾" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
978	600	•825	•0.08	•896	•0.11	•962	•0.14	•1037	•0.17	1117	0.21	1191	0.25								
1141	700	913	0.10	980	0.13	1040	0.17	1098	0.20	•1152	•0.24	•1224	•0.28	1292	0.32						
1304	800	1003	0.13	1067	0.17	1124	0.20	1177	0.24	1229	0.28	1278	0.32	•1326	•0.36	1451	0.46	1564	0.56		
1467	900	1096	0.16	1156	0.20	1211	0.24	1262	0.29	1309	0.33	1355	0.37	1400	0.42	•1484	•0.51	1597	0.62	1701	0.73
1630	1000	1190	0.21	1247	0.25	1300	0.29	1348	0.34	1394	0.38	1437	0.43	1479	0.48	1560	0.58	•1636	•0.68	1734	0.79
1793	1100	1286	0.25	1340	0.30	1390	0.35	1437	0.40	1481	0.45	1523	0.50	1563	0.55	1639	0.65	1713	0.76	•1782	•0.87
1956	1200	1381	0.31	1434	0.36	1482	0.41	1527	0.47	1570	0.52	1610	0.57	1649	0.63	1722	0.74	1791	0.85	1859	0.97
2119	1300	1477	0.37	1529	0.43	1575	0.49	1618	0.54	1659	0.60	1699	0.66	1736	0.72	1807	0.84	1873	0.96	1937	1.08
2282	1400	1573	0.44	1626	0.51	1669	0.57	1711	0.63	1750	0.69	1788	0.75	1825	0.82	1894	0.94	1958	1.07	2020	1.20
2445	1500	1671	0.52	1721	0.59	1765	0.66	1804	0.72	1842	0.79	1879	0.86	1915	0.92	1982	1.06	2045	1.19	2105	1.33
2608	1600	1769	0.61	1816	0.69	1861	0.76	1899	0.83	1936	0.90	1971	0.97	2005	1.04	2071	1.19	2133	1.33	2191	1.47
2771	1700	1868	0.71	1913	0.79	1956	0.87	1995	0.95	2030	1.02	2064	1.10	2097	1.17	2161	1.32	2222	1.48	2278	1.63
2934	1800	1967	0.82	2010	0.91	2052	0.99	2092	1.08	2126	1.16	2159	1.24	2191	1.31	2252	1.47	2311	1.63	2367	1.80
3097	1900	2067	0.95	2108	1.04	2148	1.13	2186	1.22	2222	1.31	2254	1.39	2285	1.47	2344	1.64	2401	1.80	2456	1.98
3260	2000	2167	1.09	2206	1.18	2245	1.27	2282	1.37	2318	1.47	2349	1.55	2379	1.64	2437	1.81	2493	1.99	2546	2.17
3586	2200	2368	1.40	2405	1.51	2440	1.61	2475	1.71	2508	1.82	2541	1.92	2571	2.02	2626	2.21	2678	2.40	2729	2.60
3912	2400	2571	1.78	2604	1.89	2637	2.00	2670	2.12	2701	2.23	2732	2.34	2762	2.46	2817	2.68	2866	2.88	2915	3.09
4238	2600	2774	2.22	2805	2.34	2836	2.46	2866	2.58	2896	2.71	2925	2.83	2953	2.95	3009	3.20	3058	3.43	3103	3.65
4564	2800	2978	2.74	3007	2.87	3036	2.99	3065	3.12	3092	3.25	3120	3.39	3147	3.52	3199	3.79	3250	4.06	3294	4.30
4890	3000	3183	3.33	3210	3.46	3237	3.60	3264	3.74	3290	3.88	3316	4.02	3342	4.16	3392	4.44	3440	4.73	3487	5.02
5216	3200	3388	4.00	3414	4.15	3440	4.29	3465	4.44	3490	4.59	3514	4.73	3538	4.88	3586	5.18	3632	5.49	3677	5.79
5542	3400	3594	4.76	3618	4.91	3642	5.07	3666	5.22	3690	5.38										

VOL CFM	OUT VEL	2" SP		2½" SP		3" SP		3½" SP		4" SP		4½" SP		5" SP		5½" SP		6" SP		6½" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1630	1000	1830	0.92																		
1793	1100	•1864	•1.00	2040	1.27	2200	1.55														
1956	1200	1923	1.09	2073	1.36	2233	1.66	2380	1.97												
2119	1300	2000	1.21	•2118	•1.47	2266	1.77	2413	2.10	2549	2.43										
2282	1400	2079	1.33	2194	1.61	•2301	•1.89	2446	2.23	2582	2.58	2710	2.93								
2445	1500	2162	1.47	2272	1.76	2377	2.05	•2479	•2.36	2615	2.73	2743	3.10	2864	3.48	2980	3.87				
2608	1600	2247	1.62	2352	1.92	2455	2.23	2552	2.55	•2649	•2.88	2776	3.27	2897	3.66	3012	4.06	3123	4.48		
2771	1700	2333	1.78	2436	2.09	2533	2.42	2629	2.75	2719	3.09	•2810	•3.44	2930	3.85	3045	4.27	3155	4.69	3261	5.13
2934	1800	2420	1.96	2521	2.28	2615	2.62	2707	2.96	2796	3.31	2881	3.68	•2964	•4.05	3078	4.48	3188	4.92	3294	5.36
3097	1900	2508	2.15	2607	2.49	2699	2.83	2787	3.19	2874	3.56	2958	3.93	3038	4.31	•3116	•4.70	3221	5.15	3327	5.61
3260	2000	2598	2.35	2694	2.71	2785	3.07	2871	3.44	2953	3.81	3036	4.20	3115	4.59	3191	4.99	•3265	•5.40	•3360	•5.86
3586	2200	2778	2.79	2871	3.19	2958	3.58	3041	3.98	3121	4.38	3197	4.79	3272	5.21	3346	5.63	3418	6.07	3488	6.50
3912	2400	2961	3.30	3051	3.73	3136	4.16	3216	4.59	3292	5.02	3366	5.45	3437	5.89	3505	6.35	3574	6.80	3642	7.27
4238	2600	3148	3.88	3233	4.33	3315	4.80	3393	5.27	3467	5.73	3538	6.19	3607	6.66	3674	7.14				
4564	2800	3337	4.53	3418	5.02	3497	5.51	3572	6.01	3645	6.52										
4890	3000	3528	5.27	3606	5.79	3681	6.31														

• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐ CL. III ☐
The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SINGLE WIDTH
SINGLE INLET

SIZE 16

SIZE 16	-20° to 150°F -29° to 66°C
CLASS I	2580
CLASS II	3363
CLASS III	N/A
CLASS IV	N/A

Wheel Diameter	16 ½ inches	419 mm
Wheel Circumference	4.32 feet	1.317 m
Inlet Diameter/Area	18 7/16 inches dia./1.82 sq. ft.	468 mm/.1691 m^2
Outlet Area	1.97 sq. ft.	.1830 m^2
Tip Speed	4.32 x RPM ft./minute	1.317 x RPM m/minute
Maximum Power	.251 (RPM ÷ 1000)^3 BHP	.1872 x (RPM ÷ 1000)^3 kW

VOL	OUT	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		⅞" SP		1" SP		1¼" SP		1½" SP		1¾" SP	
CFM	VEL	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1182	600	•749	•0.09	•814	•0.13	•874	•0.16	•943	•0.21	1016	0.25	1083	0.30								
1379	700	829	0.12	890	0.16	945	0.20	998	0.24	•1047	•0.29	•1113	•0.34	1175	0.39						
1576	800	911	0.16	969	0.20	1021	0.24	1069	0.29	1116	0.34	1161	0.39	•1205	•0.44	1318	0.55	1421	0.68		
1773	900	995	0.20	1050	0.25	1100	0.30	1146	0.35	1189	0.40	1231	0.45	1272	0.50	•1349	•0.61	1451	0.74	1546	0.88
1970	1000	1081	0.25	1133	0.30	1181	0.36	1225	0.41	1266	0.46	1306	0.52	1344	0.58	1418	0.70	•1487	•0.82	1576	0.96
2167	1100	1168	0.31	1217	0.36	1262	0.42	1305	0.48	1345	0.54	1383	0.60	1420	0.66	1489	0.79	1556	0.92	•1619	•1.05
2364	1200	1254	0.37	1302	0.44	1346	0.50	1387	0.56	1426	0.63	1462	0.69	1498	0.76	1564	0.89	1627	1.03	1689	1.17
2561	1300	1341	0.45	1389	0.52	1430	0.59	1470	0.65	1507	0.73	1543	0.80	1577	0.87	1641	1.01	1702	1.15	1760	1.30
2758	1400	1429	0.53	1476	0.61	1516	0.68	1554	0.76	1590	0.83	1624	0.91	1658	0.99	1720	1.14	1779	1.29	1835	1.45
2955	1500	1517	0.63	1563	0.71	1603	0.80	1639	0.87	1673	0.95	1707	1.03	1739	1.12	1800	1.28	1858	1.44	1912	1.61
3152	1600	1607	0.74	1650	0.83	1691	0.92	1725	1.00	1758	1.09	1790	1.17	1822	1.26	1881	1.43	1937	1.61	1990	1.78
3349	1700	1696	0.86	1737	0.96	1777	1.05	1812	1.15	1844	1.23	1875	1.32	1905	1.41	1963	1.60	2018	1.79	2070	1.97
3546	1800	1786	0.99	1826	1.10	1863	1.20	1900	1.31	1931	1.40	1961	1.49	1990	1.59	2046	1.78	2099	1.97	2150	2.17
3743	1900	1877	1.15	1914	1.25	1951	1.36	1986	1.47	2018	1.58	2047	1.68	2075	1.77	2129	1.97	2181	2.18	2231	2.39
3940	2000	1968	1.31	2004	1.42	2039	1.54	2072	1.65	2105	1.77	2134	1.88	2161	1.98	2214	2.19	2264	2.40	2313	2.62
4334	2200	2151	1.69	2184	1.82	2216	1.94	2247	2.07	2278	2.19	2308	2.32	2335	2.44	2385	2.67	2432	2.90	2478	3.13
4728	2400	2334	2.15	2365	2.28	2395	2.42	2424	2.55	2453	2.69	2481	2.83	2509	2.97	2558	3.23	2603	3.48	2647	3.73
5122	2600	2519	2.68	2548	2.83	2576	2.97	2603	3.12	2630	3.27	2656	3.41	2682	3.56	2733	3.87	2777	4.14	2818	4.41
5516	2800	2704	3.30	2731	3.46	2757	3.61	2783	3.77	2808	3.93	2833	4.09	2858	4.25	2906	4.57	2952	4.89	2992	5.18
5910	3000	2890	4.01	2915	4.18	2940	4.34	2964	4.51	2988	4.68	3012	4.85	3035	5.02	3080	5.36	3124	5.71	3167	6.06
6304	3200	3076	4.82	3100	5.00	3123	5.18	3146	5.35	3169	5.53	3191	5.71	3213	5.89	3256	6.25	3299	6.62	3340	6.99
6698	3400	3263	5.74	3286	5.93	3308	6.11	3329	6.30	3351	6.49										

VOL	OUT	2" SP		2½ " SP		3" SP		3½" SP		4" SP		4 ½" SP		5" SP		5½" SP		6" SP		6½" SP	
CFM	VEL	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1970	1000	1664	1.11																		
2167	1100	•1694	•1.20	1854	1.53	2000	1.88														
2364	1200	1747	1.32	1884	1.65	2029	2.01	2163	2.38												
2561	1300	1817	1.46	•1924	•1.77	2060	2.14	2193	2.53	2317	2.94										
2758	1400	1889	1.61	1994	1.94	•2091	•2.29	2223	2.69	2347	3.11	2463	3.55								
2955	1500	1964	1.77	2065	2.12	2160	2.48	•2253	•2.86	2377	3.29	2493	3.74	2603	4.20	2708	4.68				
3152	1600	2041	1.95	2137	2.32	2230	2.69	2319	3.08	•2407	•3.48	2523	3.95	2633	4.43	2738	4.91	2838	5.41		
3349	1700	2119	2.15	2213	2.53	2302	2.92	2389	3.32	2471	3.73	•2554	•4.16	2663	4.65	2768	5.16	2868	5.67	2964	6.20
3546	1800	2198	2.36	2290	2.76	2376	3.16	2460	3.58	2541	4.01	2618	4.44	•2694	•4.89	2798	5.41	2898	5.94	2993	6.48
3743	1900	2279	2.59	2368	3.00	2452	3.42	2532	3.86	2611	4.30	2688	4.75	2761	5.21	•2831	•5.68	2928	6.22	3023	6.78
3940	2000	2360	2.84	2447	3.27	2530	3.70	2608	4.15	2683	4.61	2758	5.07	2830	5.55	2900	6.03	•2967	•6.53	•3054	•7.08
4334	2200	2523	3.37	2608	3.85	2687	4.32	2763	4.80	2835	5.29	2904	5.79	2972	6.29	3040	6.81	3105	7.33	3169	7.86
4728	2400	2690	3.98	2771	4.50	2848	5.03	2921	5.54	2991	6.06	3058	6.58	3122	7.12	3185	7.67	3247	8.22	3309	8.78
5122	2600	2859	4.68	2937	5.23	3011	5.79	3082	6.37	3149	6.92	3214	7.48	3277	8.04	3337	8.62				
5516	2800	3030	5.47	3105	6.06	3176	6.65	3245	7.26	3311	7.88										
5910	3000	3204	6.37	3275	6.98	3344	7.61														

• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐ CL. III ☐
The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

Airfoil - Plenum Fan

SIZE 18

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 $^{3}/_{16}$ inches dia./2.18 sq. ft.	513 mm/.2025 m^2
Outlet Area	2.42 sq. ft.	.2248 m^2
Tip Speed	4.78 X RPM ft./minute	1.457 x RPM m/minute
Maximum Power	.452 x (RPM ÷ 1000)^3 BHP	.3371 x (RPM ÷ 1000)^3 kW

SIZE 18	-20° to 150°F -29° to 66°C
CLASS I	2393
CLASS II	3122
CLASS III	3933
CLASS IV	N/A

VOL CFM	OUT VEL	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		⅞" SP		1" SP		1¼" SP		1½" SP		1¾" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1450	600	•614	•0.10	•684	•0.14	•748	•0.19	816	0.24	877	0.29										
1692	700	672	0.13	732	0.17	793	0.22	•848	•0.27	•906	•0.33	962	0.39								
1934	800	732	0.16	789	0.21	841	0.26	894	0.32	944	0.38	•991	•0.44	•1043	•0.50	1139	0.63				
2175	900	794	0.20	848	0.25	898	0.31	943	0.37	991	0.43	1036	0.50	1079	0.56	•1168	•0.70	1255	0.85	1335	1.00
2417	1000	858	0.24	909	0.30	956	0.36	1000	0.43	1041	0.49	1083	0.56	1126	0.63	1204	0.78	•1283	•0.94	1363	1.10
2659	1100	924	0.29	972	0.36	1016	0.43	1058	0.50	1098	0.57	1135	0.64	1173	0.71	1250	0.87	1321	1.03	•1392	•1.20
2900	1200	990	0.36	1035	0.43	1078	0.50	1118	0.57	1156	0.65	1193	0.72	1227	0.80	1297	0.97	1367	1.14	1432	1.31
3142	1300	1057	0.43	1100	0.50	1141	0.58	1179	0.66	1215	0.74	1251	0.82	1285	0.90	1348	1.07	1414	1.25	1478	1.44
3384	1400	1124	0.50	1166	0.59	1205	0.67	1241	0.75	1276	0.84	1310	0.92	1343	1.01	1405	1.19	1463	1.38	1525	1.57
3626	1500	1192	0.59	1233	0.69	1270	0.77	1305	0.86	1339	0.95	1371	1.04	1403	1.13	1463	1.32	1520	1.52	1574	1.72
3867	1600	1260	0.69	1300	0.79	1335	0.89	1369	0.98	1402	1.07	1433	1.17	1463	1.27	1522	1.46	1577	1.67	1630	1.88
4109	1700	1329	0.80	1367	0.91	1402	1.01	1434	1.11	1466	1.21	1496	1.31	1525	1.41	1582	1.62	1636	1.83	1687	2.05
4351	1800	1399	0.93	1435	1.04	1469	1.15	1500	1.25	1531	1.36	1560	1.46	1588	1.57	1643	1.79	1695	2.01	1745	2.24
4592	1900	1468	1.06	1503	1.18	1536	1.30	1567	1.41	1596	1.52	1624	1.63	1652	1.74	1705	1.97	1755	2.20	1804	2.44
4834	2000	1538	1.21	1571	1.33	1603	1.46	1634	1.59	1662	1.70	1689	1.82	1716	1.93	1768	2.17	1817	2.41	1864	2.66
5317	2200	1679	1.56	1710	1.69	1739	1.83	1768	1.97	1796	2.10	1821	2.23	1847	2.36	1895	2.61	1942	2.87	1986	3.14
5801	2400	1821	1.96	1849	2.11	1877	2.26	1904	2.41	1930	2.56	1955	2.71	1979	2.85	2025	3.12	2069	3.40	2112	3.69
6284	2600	1963	2.44	1990	2.60	2016	2.76	2041	2.92	2065	3.08	2089	3.25	2113	3.41	2157	3.71	2199	4.01	2240	4.31
6768	2800	2107	3.00	2131	3.17	2156	3.34	2179	3.51	2202	3.68	2225	3.86	2247	4.03	2290	4.38	2331	4.70	2370	5.02
7251	3000	2250	3.63	2273	3.81	2296	4.00	2319	4.18	2340	4.36	2362	4.55	2383	4.74	2424	5.12	2464	5.48	2501	5.82
7734	3200	2394	4.36	2416	4.55	2438	4.74	2459	4.94	2479	5.13	2500	5.33	2520	5.53	2559	5.93	2598	6.34	2634	6.71
8218	3400	2538	5.17	2559	5.38	2579	5.58	2600	5.79	2619	6.00	2639	6.20	2658	6.41	2696	6.84	2732	7.26	2768	7.70
8701	3600	2683	6.09	2703	6.31	2722	6.52	2741	6.74	2760	6.96	2778	7.18	2797	7.40	2833	7.84	2868	8.29	2902	8.75
9185	3800	2828	7.11	2846	7.34	2865	7.57	2883	7.79	2901	8.02	2919	8.26	2936	8.49	2970	8.95	3004	9.43	3037	9.90

VOL CFM	OUT VEL	2" SP		2½" SP		3" SP		3½" SP		4" SP		4½" SP		5" SP		5½" SP		6" SP		6½" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2417	1000	1437	1.27																		
2659	1100	1466	1.38	1602	1.74																
2900	1200	•1495	•1.50	1630	1.88	1753	2.28														
3142	1300	1538	1.63	•1659	•2.03	1781	2.45	1894	2.88												
3384	1400	1584	1.77	1695	2.19	1810	2.62	1922	3.08	2027	3.54										
3626	1500	1631	1.93	1741	2.36	•1841	•2.81	1951	3.28	2055	3.77										
3867	1600	1680	2.09	1787	2.54	1886	3.01	•1980	•3.49	2084	4.00	2182	4.51								
4109	1700	1736	2.27	1834	2.74	1933	3.22	2024	3.72	•2113	•4.24	2211	4.77	2304	5.32						
4351	1800	1794	2.47	1884	2.95	1979	3.45	2070	3.96	2155	4.50	•2240	•5.05	2332	5.61	2420	6.19				
4592	1900	1852	2.68	1940	3.17	2027	3.69	2117	4.22	2201	4.77	2281	5.34	•2361	•5.91	2449	6.51	2533	7.12		
4834	2000	1910	2.91	1998	3.42	2079	3.95	2164	4.50	2248	5.06	2327	5.64	2403	6.24	•2478	•6.85	•2562	•7.47	2642	8.11
5317	2200	2030	3.41	2114	3.96	2193	4.52	2267	5.10	2342	5.69	2420	6.31	2495	6.94	2566	7.58	2635	8.23	•2702	•8.89
5801	2400	2153	3.98	2233	4.56	2309	5.16	2381	5.78	2450	6.40	2517	7.04	2589	7.71	2659	8.38	2727	9.07	2792	9.77
6284	2600	2279	4.62	2355	5.25	2428	5.88	2498	6.53	2565	7.20	2629	7.87	2691	8.56	2754	9.26	2821	9.98	2885	10.72
6768	2800	2407	5.35	2480	6.01	2549	6.69	2617	7.37	2682	8.07	2744	8.78	2805	9.50	2863	10.24	2919	10.98	2980	11.75
7251	3000	2537	6.16	2607	6.86	2674	7.58	2738	8.30	2800	9.04	2861	9.79	2920	10.54	2977	11.31	3032	12.09	3086	12.88
7734	3200	2669	7.07	2736	7.81	2800	8.56	2862	9.33	2921	10.10	2980	10.88	3037	11.68	3093	12.48	3147	13.29	3199	14.12
8218	3400	2801	8.08	2866	8.86	2928	9.65	2988	10.45	3045	11.26	3101	12.08	3157	12.91	3211	13.75	3263	14.60	3315	15.46
8701	3600	2935	9.20	2997	10.01	3057	10.84	3115	11.68	3171	12.53	3225	13.39	3278	14.26	3330	15.14	3382	16.02	3432	16.91
9185	3800	3069	10.38	3130	11.28	3188	12.15	3244	13.02	3298	13.91	3351	14.81	3402	15.71	3452	16.63	3501	17.55	3550	18.48
9668	4000	3204	11.67	3264	12.67	3320	13.57	3374	14.48	3427	15.41	3478	16.34	3528	17.29	3576	18.24	3624	19.20	3670	20.17
10151	4200	3340	13.07	3398	14.13	3453	15.12	3505	16.07	3556	17.03	3606	18.01	3655	18.99	3702	19.98	3748	20.97	3793	21.98
10635	4400	3476	14.60	3533	15.70	3587	16.80	3638	17.79	3687	18.79	3735	19.80	3783	20.82	3829	21.85	3874	22.88	3918	23.92
11118	4600	3614	16.26	3668	17.40	3721	18.56	3771	19.65	3819	20.69	3866	21.73	3912	22.79						

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5317	2200	•2777	•9.58	2924	10.98																
5801	2400	2856	10.48	•2982	•11.93	3119	13.44	3250	14.98												
6284	2600	2948	11.46	3067	12.98	•3180	•14.53	•3307	•16.15	3431	17.80										
6768	2800	3041	12.52	3159	14.11	3271	15.73	3377	17.39	•3488	•19.10	3606	20.85	3719	22.63						
7251	3000	3138	13.68	3253	15.33	3363	17.02	3468	18.75	3569	20.51	•3666	•22.30	•3776	•24.16	•3884	•26.04				
7734	3200	3250	14.95	3349	16.65	3457	18.41	3561	20.20	3660	22.03	3756	23.89	3849	25.79						
8218	3400	3365	16.33	3461	18.09	3553	19.89	3654	21.76	3753	23.66	3848	25.58								
8701	3600	3481	17.82	3575	19.65	3666	21.52	3752	23.42	3847	25.38										
9185	3800	3598	19.42	3690	21.32	3779	23.26	3865	25.23												
9668	4000	3717	21.15	3807	23.12	3894	25.13														
10151	4200	3837	23.00	3926	25.04																

• Approximate Max. Static Efficiency and Quietest Selection. **CL. I ☐ CL. II ☐ CL. III ☐**
The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SINGLE WIDTH
SINGLE INLET

SIZE 20

SIZE 20	-20° to 150°F -29° to 66°C
CLASS I	2183
CLASS II	2848
CLASS III	3588
CLASS IV	N/A

Wheel Diameter	20 inches	508 mm
Wheel Circumference	5.24 feet	1.597 m
Inlet Diameter/Area	21 15/16 inches dia./2.58 sq. ft.	557 mm/.2397 m^2
Outlet Area	2.89 sq. ft.	.2685 m^2
Tip Speed	5.24 X RPM ft./minute	1.597 x RPM m/minute
Maximum Power	.715 (RPM ÷ 1000)^3 BHP	.5332 x (RPM ÷ 1000)^3 kW

VOL CFM	OUT VEL	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		⅞" SP		1" SP		1¼" SP		1½" SP		1¾" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1733	600	•559	•0.12	•623	•0.17	•682	•0.22	744	0.28	800	0.34										
2022	700	611	0.15	666	0.21	722	0.26	•773	•0.33	•826	•0.39	877	0.46								
2311	800	666	0.19	718	0.25	765	0.31	815	0.38	860	0.45	•903	•0.52	951	0.60	1039	0.76				
2600	900	723	0.23	772	0.30	817	0.37	858	0.44	902	0.52	944	0.59	•983	•0.67	1065	0.84	1144	1.02	1217	1.20
2889	1000	781	0.29	827	0.36	870	0.43	910	0.51	947	0.59	987	0.67	1025	0.76	•1096	•0.93	•1170	•1.12	1243	1.31
3178	1100	840	0.35	884	0.43	924	0.51	963	0.59	999	0.67	1033	0.76	1068	0.85	1138	1.04	1203	1.23	•1269	•1.44
3467	1200	900	0.42	941	0.51	980	0.59	1017	0.68	1052	0.77	1085	0.86	1117	0.96	1181	1.15	1245	1.36	1304	1.57
3756	1300	961	0.51	1000	0.60	1037	0.69	1072	0.78	1106	0.88	1138	0.98	1169	1.08	1227	1.28	1287	1.50	1346	1.72
4045	1400	1022	0.60	1060	0.70	1095	0.80	1129	0.90	1161	1.00	1192	1.10	1222	1.21	1279	1.42	1332	1.64	1388	1.88
4334	1500	1083	0.70	1120	0.81	1154	0.92	1187	1.02	1217	1.13	1247	1.24	1276	1.35	1331	1.58	1383	1.81	1432	2.05
4622	1600	1145	0.82	1181	0.94	1214	1.05	1245	1.16	1275	1.28	1303	1.39	1331	1.51	1385	1.75	1435	1.99	1483	2.24
4911	1700	1208	0.95	1242	1.08	1274	1.20	1304	1.32	1333	1.44	1361	1.56	1387	1.68	1439	1.93	1488	2.18	1535	2.45
5200	1800	1271	1.10	1304	1.23	1335	1.37	1364	1.49	1392	1.61	1418	1.74	1444	1.87	1494	2.13	1542	2.40	1588	2.67
5489	1900	1334	1.26	1366	1.40	1396	1.54	1424	1.68	1451	1.81	1477	1.94	1502	2.07	1550	2.35	1597	2.62	1642	2.91
5778	2000	1398	1.44	1428	1.58	1457	1.73	1485	1.88	1511	2.02	1536	2.16	1560	2.30	1607	2.58	1652	2.87	1696	3.16
6356	2200	1526	1.85	1554	2.01	1581	2.17	1607	2.34	1632	2.50	1656	2.65	1679	2.80	1723	3.11	1766	3.42	1807	3.74
6934	2400	1654	2.33	1680	2.50	1705	2.68	1730	2.86	1754	3.04	1777	3.22	1799	3.39	1841	3.71	1882	4.05	1921	4.39
7511	2600	1784	2.90	1808	3.08	1831	3.27	1855	3.47	1877	3.66	1899	3.86	1921	4.06	1961	4.41	1999	4.77	2037	5.13
8089	2800	1914	3.55	1936	3.75	1958	3.96	1980	4.16	2001	4.37	2022	4.58	2043	4.79	2082	5.21	2119	5.59	2154	5.97
8667	3000	2044	4.31	2065	4.52	2086	4.74	2107	4.96	2127	5.18	2146	5.40	2166	5.63	2204	6.08	2239	6.51	2274	6.92
9245	3200	2175	5.16	2195	5.39	2214	5.62	2234	5.86	2253	6.09	2272	6.33	2290	6.56	2326	7.04	2361	7.53	2394	7.97
9823	3400	2306	6.13	2325	6.37	2343	6.62	2362	6.87	2380	7.11	2398	7.36	2415	7.61	2450	8.12	2483	8.63	2516	9.14
10400	3600	2437	7.22	2455	7.47	2473	7.73	2490	7.99	2507	8.25	2524	8.51	2541	8.78	2574	9.31	2606	9.85	2637	10.39
10978	3800	2569	8.42	2586	8.70	2602	8.97	2619	9.24	2635	9.52	2652	9.79	2668	10.07	2699	10.63	2730	11.19	2760	11.76

VOL CFM	OUT VEL	2" SP		2½" SP		3" SP		3½" SP		4" SP		4½" SP		5" SP		5½" SP		6" SP		6½" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2889	1000	1310	1.51																		
3178	1100	1336	1.65	1460	2.09																
3467	1200	•1362	•1.79	1486	2.25	1598	2.73														
3756	1300	1401	1.95	•1512	•2.43	1624	2.93	1727	3.45												
4045	1400	1443	2.12	1544	2.61	1650	3.14	1752	3.68												
4334	1500	1485	2.30	1585	2.82	•1677	•3.35	1778	3.92	1874	4.50										
4622	1600	1529	2.50	1627	3.03	1718	3.59	•1804	•4.17	1900	4.78	1989	5.40								
4911	1700	1580	2.71	1670	3.27	1760	3.85	1844	4.45	•1926	•5.06	2015	5.71	2100	6.37						
5200	1800	1632	2.95	1715	3.52	1802	4.12	1885	4.74	1963	5.37	•2041	•6.03	2126	6.71	2206	7.41				
5489	1900	1685	3.20	1766	3.79	1846	4.40	1928	5.04	2005	5.70	2078	6.38	•2152	•7.07	2232	7.79	2309	8.52		
5778	2000	1738	3.46	1818	4.08	1892	4.71	1970	5.37	2047	6.05	2120	6.74	2189	7.45	•2259	•8.18	•2335	•8.94	2409	9.70
6356	2200	1846	4.06	1923	4.71	1995	5.39	2064	6.08	2133	6.80	2204	7.53	2272	8.29	2337	9.05	2400	9.83	•2461	•10.63
6934	2400	1958	4.73	2031	5.44	2101	6.15	2167	6.89	2230	7.64	2291	8.41	2357	9.20	2422	10.01	2484	10.83	2543	11.67
7511	2600	2073	5.50	2142	6.25	2209	7.01	2273	7.79	2334	8.58	2393	9.39	2449	10.21	2507	11.05	2568	11.92	2627	12.80
8089	2800	2189	6.36	2255	7.15	2319	7.96	2380	8.79	2440	9.62	2497	10.47	2552	11.34	2606	12.21	2657	13.11	2713	14.02
8667	3000	2307	7.33	2371	8.17	2432	9.02	2490	9.89	2548	10.77	2603	11.66	2657	12.57	2709	13.49	2760	14.42	2809	15.37
9245	3200	2426	8.41	2487	9.29	2546	10.19	2603	11.10	2657	12.03	2711	12.97	2764	13.92	2814	14.88	2864	15.85	2912	16.84
9823	3400	2546	9.60	2606	10.53	2662	11.48	2717	12.43	2770	13.41	2821	14.39	2872	15.39	2921	16.39	2969	17.41	3016	18.43
10400	3600	2668	10.93	2725	11.90	2780	12.89	2833	13.89	2884	14.91	2933	15.94	2982	16.98	3029	18.03	3076	19.09	3122	20.16
10978	3800	2790	12.33	2845	13.40	2898	14.44	2950	15.49	2999	16.55	3047	17.62	3094	18.71	3140	19.80	3185	20.91	3230	22.02
11556	4000	2912	13.86	2967	15.05	3018	16.13	3068	17.22	3116	18.33	3163	19.45	3208	20.57	3253	21.72	3296	22.87	3339	24.03
12134	4200	3035	15.53	3089	16.79	3139	17.97	3187	19.11	3233	20.26	3279	21.42	3323	22.59	3366	23.78	3409	24.97	3450	26.18
12712	4400	3159	17.34	3211	18.66	3260	19.96	3307	21.14	3352	22.34	3396	23.55	3439	24.77	3481	25.99	3523	27.23	3563	28.48
13289	4600	3284	19.30	3334	20.67	3382	22.05	3428	23.35	3472	24.59	3515	25.84	3557	27.10						

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6356	2200	•2532	•11.45	2666	13.13																
6934	2400	2601	12.52	•2718	•14.26	2844	16.07	2963	17.92												
7511	2600	2684	13.69	2794	15.50	•2897	•17.36	3014	19.30	3127	21.28										
8089	2800	2769	14.95	2877	16.85	2979	18.80	•3076	•20.78	•3179	•22.83	3287	24.93	3390	27.07						
8667	3000	2856	16.32	2962	18.30	3063	20.33	3159	22.40	3251	24.51	•3339	•26.66	•3442	•28.88	•3541	•31.14				
9245	3200	2958	17.84	3048	19.87	3148	21.98	3243	24.13	3334	26.32	3421	28.55	3506	30.81						
9823	3400	3062	19.47	3150	21.59	3234	23.74	3328	25.98	3418	28.25	3504	30.56	3588	32.90						
10400	3600	3167	21.24	3253	23.43	3336	25.67	3415	27.95	3503	30.30	3588	32.69								
10978	3800	3273	23.14	3358	25.42	3439	27.74	3517	30.10												
11556	4000	3381	25.19	3464	27.56	3544	29.96														
12134	4200	3491	27.39	3572	29.84																

• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐ CL. III ☐

The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

Airfoil - Plenum Fan

SIZE 22

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 Area	3.58 sq. ft.	.3326 m^2
Tip Speed	5.83 x RPM ft./minute	1.777 x RPM m/minute
Maximum Power	1.22 x (RPM ÷ 1000)^3 BHP	.9098 x (RPM ÷ 1000)^3 kW

SIZE 22	-20° to 150°F -29° to 66°C
CLASS I	1962
CLASS II	2560
CLASS III	3226
CLASS IV	N/A

VOL CFM	OUT VEL	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		⅞" SP		1" SP		1¼" SP		1½" SP		1¾" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2149	600	•503	•0.15	•560	•0.21	•613	•0.28	669	0.35	719	0.42										
2507	700	550	0.19	600	0.26	649	0.33	•695	•0.41	•742	•0.49	789	0.57								
2866	800	599	0.23	646	0.31	688	0.39	733	0.47	774	0.56	•812	•0.65	•855	•0.74	934	0.94				
3224	900	650	0.29	694	0.37	735	0.46	772	0.55	812	0.64	849	0.74	884	0.83	957	1.04	1029	1.26	1094	1.49
3582	1000	703	0.36	744	0.45	783	0.54	819	0.63	852	0.73	887	0.83	922	0.94	•986	•1.16	•1052	•1.39	1117	1.63
3940	1100	756	0.44	795	0.53	832	0.63	866	0.73	899	0.84	930	0.95	961	1.06	1024	1.29	1082	1.53	•1141	•1.78
4298	1200	810	0.53	847	0.63	882	0.74	915	0.85	946	0.96	976	1.07	1005	1.19	1062	1.43	1120	1.69	1173	1.95
4657	1300	865	0.63	900	0.74	934	0.85	965	0.97	995	1.09	1024	1.21	1052	1.33	1104	1.59	1158	1.85	1211	2.13
5015	1400	920	0.74	954	0.87	986	0.99	1016	1.11	1045	1.24	1073	1.37	1100	1.50	1151	1.76	1198	2.04	1249	2.33
5373	1500	975	0.87	1009	1.01	1039	1.14	1068	1.27	1096	1.40	1122	1.54	1148	1.68	1198	1.96	1245	2.25	1289	2.54
5731	1600	1031	1.02	1063	1.17	1093	1.31	1121	1.45	1147	1.59	1173	1.73	1198	1.87	1246	2.17	1292	2.47	1335	2.78
6089	1700	1087	1.18	1118	1.34	1147	1.49	1174	1.64	1200	1.79	1225	1.94	1249	2.09	1295	2.40	1339	2.71	1382	3.03
6448	1800	1144	1.36	1174	1.53	1202	1.70	1228	1.85	1253	2.01	1277	2.16	1300	2.32	1345	2.64	1388	2.97	1429	3.31
6806	1900	1201	1.57	1229	1.74	1257	1.92	1282	2.09	1306	2.25	1329	2.41	1352	2.58	1395	2.91	1437	3.26	1477	3.61
7164	2000	1258	1.79	1286	1.97	1312	2.16	1337	2.34	1360	2.51	1383	2.68	1405	2.85	1447	3.21	1487	3.56	1526	3.93
7880	2200	1374	2.29	1399	2.49	1423	2.70	1446	2.90	1469	3.11	1490	3.29	1511	3.48	1551	3.86	1589	4.25	1626	4.64
8597	2400	1489	2.90	1513	3.11	1535	3.33	1557	3.55	1579	3.78	1600	4.00	1619	4.21	1657	4.61	1694	5.03	1729	5.45
9313	2600	1606	3.60	1628	3.84	1649	4.07	1670	4.31	1690	4.55	1710	4.79	1729	5.04	1765	5.48	1800	5.93	1833	6.37
10030	2800	1723	4.42	1743	4.67	1763	4.92	1783	5.18	1802	5.43	1820	5.69	1839	5.96	1874	6.47	1907	6.94	1939	7.42
10746	3000	1840	5.36	1859	5.62	1878	5.89	1897	6.17	1915	6.44	1932	6.72	1950	6.99	1984	7.55	2016	8.09	2047	8.59
11462	3200	1958	6.42	1976	6.71	1994	6.99	2011	7.28	2028	7.57	2045	7.87	2062	8.16	2094	8.75	2126	9.35	2155	9.90
12179	3400	2076	7.63	2093	7.93	2110	8.23	2126	8.54	2143	8.84	2159	9.15	2174	9.46	2205	10.09	2235	10.72	2265	11.36
12895	3600	2194	8.98	2210	9.29	2226	9.62	2242	9.94	2257	10.26	2273	10.59	2288	10.91	2317	11.57	2346	12.24	2374	12.91
13612	3800	2313	10.48	2328	10.82	2343	11.15	2358	11.49	2373	11.83	2387	12.18	2402	12.52	2430	13.21	2458	13.91	2485	14.62

VOL CFM	OUT VEL	2" SP		2½" SP		3" SP		3½" SP		4" SP		4½" SP		5" SP		5½" SP		6" SP		6½" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3582	1000	1178	1.88																		
3940	1100	1202	2.04	1313	2.59																
4298	1200	•1225	•2.22	1336	2.79	1437	3.39														
4657	1300	1260	2.41	•1360	•3.01	1460	3.63	1553	4.28												
5015	1400	1298	2.62	1389	3.24	1483	3.89	1576	4.56												
5373	1500	1336	2.85	1426	3.49	•1508	•4.16	1599	4.86	1685	5.58										
5731	1600	1376	3.10	1464	3.76	1545	4.45	•1623	•5.17	1708	5.92	1789	6.69								
6089	1700	1422	3.37	1503	4.05	1583	4.77	1658	5.51	•1732	•6.28	1812	7.08	1888	7.89						
6448	1800	1469	3.65	1543	4.36	1621	5.11	1696	5.87	1766	6.66	•1836	•7.48	1912	8.32	1984	9.18				
6806	1900	1516	3.97	1589	4.70	1660	5.46	1734	6.26	1803	7.07	1869	7.91	•1935	•8.77	2007	9.65	2077	10.56		
7164	2000	1564	4.30	1636	5.06	1703	5.84	1772	6.66	1841	7.50	1907	8.36	1969	9.24	•2031	•10.15	•2100	•11.08	2166	12.03
7880	2200	1662	5.04	1731	5.85	1796	6.69	1857	7.55	1918	8.43	1983	9.34	2044	10.28	2103	11.23	2159	12.20	•2214	•13.18
8597	2400	1763	5.88	1828	6.75	1891	7.64	1950	8.55	2007	9.48	2061	10.43	2121	11.41	2178	12.42	2234	13.43	2288	14.47
9313	2600	1866	6.83	1928	7.76	1988	8.70	2045	9.67	2100	10.65	2153	11.65	2204	12.67	2256	13.71	2311	14.78	2363	15.87
10030	2800	1970	7.90	2030	8.88	2087	9.89	2142	10.91	2196	11.94	2247	13.00	2297	14.07	2344	15.16	2391	16.26	2441	17.39
10746	3000	2076	9.10	2134	10.14	2188	11.20	2241	12.28	2293	13.37	2343	14.48	2391	15.60	2438	16.74	2483	17.89	2527	19.07
11462	3200	2184	10.44	2239	11.54	2292	12.65	2342	13.79	2391	14.94	2440	16.10	2487	17.27	2532	18.47	2577	19.67	2620	20.89
12179	3400	2292	11.93	2345	13.09	2396	14.26	2445	15.44	2493	16.65	2539	17.87	2584	19.10	2629	20.34	2672	21.60	2714	22.88
12895	3600	2402	13.58	2453	14.79	2502	16.01	2550	17.26	2596	18.52	2640	19.79	2683	21.08	2726	22.38	2768	23.70	2810	25.02
13612	3800	2511	15.33	2561	16.66	2609	17.94	2655	19.24	2699	20.55	2743	21.88	2785	23.23	2826	24.59	2866	25.96	2906	27.34
14328	4000	2621	17.23	2671	18.70	2717	20.04	2761	21.40	2804	22.77	2846	24.15	2887	25.55	2927	26.96	2966	28.39	3005	29.83
15044	4200	2732	19.30	2780	20.87	2825	22.33	2869	23.74	2910	25.16	2951	26.60	2991	28.06	3030	29.53	3068	31.01	3105	32.50
15761	4400	2844	21.55	2890	23.18	2935	24.80	2977	26.27	3017	27.76	3057	29.25	3096	30.76	3134	32.28	3171	33.82	3207	35.37
16477	4600	2956	23.99	3001	25.69	3045	27.41	3086	29.01	3125	30.55	3164	32.10	3201	33.67						

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7880	2200	•2277	•14.20	2397	16.28																
8597	2400	2340	15.52	•2444	•17.68	2557	19.92	2664	22.21												
9313	2600	2415	16.97	2513	19.22	•2606	•21.53	2711	23.93	2812	26.38										
10030	2800	2491	18.55	2588	20.90	2680	23.31	•2767	•25.77	•2859	•28.31	2955	30.91	3048	33.55						
10746	3000	2570	20.25	2664	22.71	2755	25.22	2841	27.78	2924	30.39	•3004	•33.05	•3095	•35.81	•3184	•38.60				
11462	3200	2662	22.13	2743	24.65	2832	27.26	2917	29.93	2999	32.64	3077	35.40	3153	38.21						
12179	3400	2755	24.17	2834	26.78	2910	29.45	2994	32.22	3074	35.04	3152	37.90								
12895	3600	2850	26.36	2927	29.08	3002	31.85	3073	34.68	3151	37.59										
13612	3800	2946	28.73	3022	31.55	3095	34.42	3165	37.35												
14328	4000	3043	31.28	3117	34.20	3189	37.18														
15044	4200	3141	34.01	3214	37.04																

• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐ CL. III ☐
The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SINGLE WIDTH
SINGLE INLET

SIZE 24

SIZE 24	-20° to 150°F -29° to 66°C
CLASS I	1782
CLASS II	2325
CLASS III	2929
CLASS IV	N/A

Wheel Diameter	24½ 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 Area	4.34 sq. ft.	.4032 m^2
Tip Speed	6.41 x RPM ft./minute	1.954 x RPM m/minute
Maximum Power	1.97 x (RPM ÷ 1000)^3 BHP	1.469 x (RPM ÷ 1000)^3 kW

VOL CFM	OUT VEL	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		⅞" SP		1" SP		1¼" SP		1½" SP		1¾" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2604	600	•456	•0.18	•509	•0.26	•557	•0.34	607	0.42	653	0.51										
3038	700	499	0.23	544	0.31	590	0.40	•631	•0.49	•674	•0.59	716	0.69								
3472	800	544	0.28	587	0.37	625	0.47	665	0.57	702	0.68	•738	•0.78	777	0.90	848	1.14				
3906	900	590	0.35	630	0.45	667	0.55	701	0.66	737	0.77	771	0.89	•803	•1.01	869	1.26	934	1.53	994	1.80
4340	1000	638	0.43	675	0.54	710	0.65	743	0.77	774	0.89	806	1.01	837	1.14	•895	•1.40	•955	•1.68	1015	1.97
4774	1100	686	0.53	722	0.64	755	0.76	786	0.89	816	1.01	844	1.15	872	1.28	930	1.56	982	1.85	•1036	•2.16
5208	1200	735	0.64	769	0.76	801	0.89	831	1.02	859	1.16	886	1.30	912	1.44	964	1.73	1016	2.04	1065	2.36
5642	1300	785	0.76	817	0.90	847	1.04	876	1.18	903	1.32	930	1.47	955	1.62	1002	1.92	1051	2.25	1099	2.58
6076	1400	835	0.90	866	1.05	895	1.20	922	1.35	948	1.50	974	1.66	998	1.81	1045	2.14	1088	2.47	1134	2.82
6510	1500	885	1.06	915	1.22	943	1.38	969	1.54	995	1.70	1019	1.86	1042	2.03	1088	2.37	1130	2.72	1170	3.08
6944	1600	936	1.24	965	1.42	992	1.58	1017	1.75	1041	1.92	1065	2.09	1087	2.27	1131	2.62	1173	2.99	1212	3.37
7378	1700	987	1.43	1015	1.62	1041	1.81	1065	1.98	1089	2.16	1112	2.34	1133	2.53	1175	2.90	1216	3.28	1254	3.68
7812	1800	1038	1.65	1065	1.85	1091	2.06	1114	2.24	1137	2.43	1159	2.62	1180	2.81	1221	3.20	1260	3.60	1297	4.01
8246	1900	1090	1.89	1116	2.11	1140	2.32	1164	2.52	1185	2.72	1207	2.92	1227	3.12	1267	3.53	1304	3.95	1341	4.37
8680	2000	1142	2.16	1167	2.38	1190	2.61	1213	2.83	1234	3.04	1255	3.25	1275	3.46	1313	3.88	1350	4.32	1385	4.76
9548	2200	1247	2.78	1269	3.02	1291	3.26	1313	3.51	1333	3.76	1353	3.99	1372	4.21	1408	4.67	1443	5.14	1476	5.62
10416	2400	1352	3.51	1373	3.77	1394	4.03	1414	4.30	1433	4.57	1452	4.85	1470	5.09	1504	5.59	1537	6.09	1569	6.60
11284	2600	1458	4.36	1477	4.64	1497	4.93	1515	5.22	1534	5.51	1552	5.80	1569	6.10	1602	6.64	1634	7.17	1664	7.72
12152	2800	1564	5.35	1582	5.65	1600	5.96	1618	6.27	1635	6.58	1652	6.89	1669	7.21	1701	7.83	1731	8.40	1760	8.98
13020	3000	1670	6.48	1688	6.81	1705	7.13	1721	7.46	1738	7.79	1754	8.13	1770	8.46	1801	9.14	1830	9.79	1858	10.40
13888	3200	1777	7.77	1793	8.12	1810	8.46	1825	8.81	1841	9.17	1856	9.52	1871	9.88	1901	10.60	1929	11.32	1956	11.99
14756	3400	1884	9.23	1900	9.59	1915	9.96	1930	10.33	1945	10.70	1959	11.08	1973	11.45	2002	12.21	2029	12.98	2056	13.76
15624	3600	1991	10.86	2006	11.25	2021	11.64	2035	12.03	2049	12.42	2063	12.81	2076	13.21	2103	14.01	2129	14.82	2155	15.63
16492	3800	2099	12.68	2113	13.09	2127	13.50	2140	13.91	2154	14.32	2167	14.74	2180	15.15	2206	15.99	2231	16.84	2255	17.69

VOL CFM	OUT VEL	2" SP		2½" SP		3" SP		3½" SP		4" SP		4½" SP		5" SP		5½" SP		6" SP		6½" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4340	1000	1070	2.27																		
4774	1100	1091	2.47	1192	3.13																
5208	1200	•1112	•2.69	1213	3.38	1305	4.10														
5642	1300	1144	2.92	•1235	•3.64	1326	4.40	1410	5.18												
6076	1400	1178	3.18	1261	3.92	1347	4.71	1431	5.53												
6510	1500	1213	3.45	1295	4.23	•1369	•5.04	1452	5.89	1530	6.76										
6944	1600	1249	3.75	1329	4.56	1403	5.40	•1473	•6.27	1551	7.18	1624	8.11								
7378	1700	1291	4.08	1364	4.91	1437	5.78	1506	6.68	•1573	•7.61	1646	8.57	1715	9.56						
7812	1800	1333	4.43	1401	5.28	1472	6.18	1540	7.12	1603	8.07	•1667	•9.06	1736	10.08	1802	11.12				
8246	1900	1376	4.80	1442	5.69	1507	6.62	1574	7.58	1637	8.57	1697	9.58	•1757	•10.62	1823	11.70	1886	12.79		
8680	2000	1420	5.21	1485	6.13	1546	7.08	1609	8.07	1672	9.09	1731	10.13	1788	11.20	•1844	•12.29	•1907	•13.42	1967	14.57
9548	2200	1508	6.10	1571	7.09	1630	8.10	1686	9.14	1742	10.21	1800	11.32	1856	12.45	1909	13.60	1960	14.78	•2010	•15.97
10416	2400	1600	7.12	1659	8.17	1716	9.25	1770	10.35	1822	11.48	1871	12.63	1925	13.83	1978	15.04	2028	16.28	2077	17.53
11284	2600	1693	8.27	1750	9.39	1804	10.54	1857	11.71	1907	12.90	1955	14.11	2001	15.35	2048	16.61	2098	17.91	2146	19.23
12152	2800	1788	9.57	1843	10.76	1894	11.97	1944	13.21	1993	14.46	2040	15.74	2085	17.04	2128	18.36	2170	19.70	2216	21.07
13020	3000	1885	11.02	1937	12.28	1987	13.56	2034	14.87	2081	16.19	2127	17.53	2170	18.89	2213	20.27	2254	21.67	2294	23.09
13888	3200	1982	12.64	2032	13.97	2080	15.32	2126	16.69	2171	18.09	2215	19.49	2257	20.92	2299	22.36	2339	23.83	2378	25.31
14756	3400	2080	14.45	2129	15.84	2175	17.26	2220	18.70	2263	20.16	2304	21.64	2346	23.13	2386	24.64	2425	26.16	2464	27.71
15624	3600	2180	16.44	2226	17.90	2271	19.39	2314	20.89	2356	22.42	2396	23.97	2436	25.53	2475	27.11	2513	28.70	2550	30.30
16492	3800	2279	18.55	2325	20.16	2368	21.72	2410	23.29	2450	24.89	2490	26.50	2528	28.13	2565	29.78	2602	31.44	2638	33.11
17360	4000	2379	20.85	2424	22.64	2466	24.26	2506	25.90	2546	27.56	2584	29.24	2621	30.94	2657	32.65	2693	34.38	2727	36.12
18228	4200	2480	23.36	2524	25.26	2564	27.03	2604	28.74	2642	30.47	2679	32.21	2715	33.97	2750	35.75	2785	37.55	2818	39.36
19096	4400	2581	26.09	2623	28.06	2664	30.03	2702	31.81	2739	33.60	2775	35.42	2810	37.24	2844	39.09	2878	40.95	2911	42.83
19964	4600	2683	29.04	2724	31.10	2763	33.18	2801	35.12	2837	36.99	2872	38.87	2906	40.76						

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9548	2200	•2067	•17.20	2177	19.72																
10416	2400	2124	18.80	•2219	•21.42	2322	24.14	2419	26.91												
11284	2600	2192	20.56	2281	23.29	•2366	•26.09	2461	29.00	2553	31.96										
12152	2800	2262	22.47	2350	25.32	2433	28.24	•2512	•31.22	•2596	•34.30	2684	37.45	2768	40.66						
13020	3000	2333	24.53	2419	27.51	2501	30.55	2580	33.65	2655	36.82	•2727	•40.05	•2810	•43.38	•2891	•46.77				
13888	3200	2416	26.81	2490	29.86	2571	33.02	2648	36.25	2723	39.54	2794	42.89	2863	46.29						
14756	3400	2501	29.27	2573	32.44	2642	35.68	2718	39.03	2791	42.44	2862	45.91								
15624	3600	2587	31.93	2657	35.22	2725	38.58	2790	42.00	2861	45.53										
16492	3800	2674	34.79	2743	38.21	2809	41.70	2873	45.24												
17360	4000	2762	37.88	2830	41.42	2895	45.03														
18228	4200	2852	41.18	2918	44.86																

• Approximate Max. Static Efficiency and Quietest Selection. **CL. I** ☐ **CL. II** ☐ **CL. III** ☐
The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

Airfoil - Plenum Fan

SIZE 27

SINGLE WIDTH
SINGLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

Wheel Diameter	27 inches	686 mm
Wheel Circumference	7.07 feet	2.155 m
Inlet Diameter/Area	$29\frac{1}{16}$ inches dia./4.75 sq. ft.	754 mm/.4413 cm^2
Outlet Area	5.27 sq. ft.	.4896 cm^2
Tip Speed	7.07 x RPM ft./minute	2.155 x RPM m/minute
Maximum Power	3.00 x (RPM ÷ 1000)^3 BHP	2.237 x (RPM ÷ 1000)^3 kW

SIZE 27	-20° to 150°F -29° to 66°C
CLASS I	1548
CLASS II	2020
CLASS III	2546
CLASS IV	N/A

VOL CFM	OUT VEL	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		⅞" SP		1" SP		1¼" SP		1½" SP		1¾" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3163	600	•415	•0.21	•458	•0.29	•500	•0.37														
3690	700	457	0.26	495	0.35	531	0.45	•567	•0.55	•602	•0.65										
4218	800	502	0.33	535	0.43	568	0.53	600	0.64	632	0.76	•663	•0.87	•693	•0.99						
4745	900	543	0.40	579	0.52	607	0.63	637	0.75	666	0.88	694	1.00	722	1.13	•776	•1.39				
5272	1000	586	0.49	623	0.63	651	0.75	676	0.88	703	1.01	729	1.14	755	1.28	805	1.56	•854	•1.86		
5799	1100	629	0.59	665	0.74	695	0.88	719	1.02	742	1.16	767	1.30	791	1.45	838	1.76	883	2.07	•928	•2.39
6326	1200	673	0.71	707	0.87	738	1.03	764	1.18	786	1.33	807	1.48	829	1.64	873	1.96	916	2.30	957	2.63
6854	1300	718	0.85	750	1.01	780	1.19	808	1.36	830	1.52	850	1.68	870	1.85	911	2.19	951	2.54	990	2.90
7381	1400	763	1.00	793	1.18	822	1.36	849	1.55	875	1.74	895	1.91	914	2.08	949	2.44	988	2.81	1026	3.19
7908	1500	808	1.17	838	1.37	865	1.56	891	1.76	916	1.96	940	2.16	958	2.34	993	2.72	1026	3.10	1063	3.50
8435	1600	854	1.37	882	1.58	909	1.78	934	1.99	958	2.20	981	2.41	1003	2.63	1037	3.02	1068	3.42	1101	3.84
8962	1700	901	1.58	927	1.81	953	2.02	977	2.24	1001	2.46	1023	2.69	1045	2.91	1081	3.35	1112	3.77	1142	4.20
9490	1800	948	1.82	973	2.06	997	2.29	1021	2.52	1044	2.75	1065	2.99	1086	3.22	1126	3.71	1156	4.15	1185	4.60
10017	1900	995	2.08	1019	2.33	1042	2.59	1065	2.82	1087	3.07	1108	3.31	1129	3.56	1168	4.07	1201	4.56	1229	5.03
10544	2000	1042	2.37	1065	2.64	1088	2.90	1110	3.16	1131	3.41	1151	3.67	1171	3.93	1209	4.46	1245	5.00	1274	5.49
11598	2200	1137	3.04	1158	3.33	1179	3.61	1200	3.91	1219	4.19	1239	4.47	1258	4.75	1294	5.32	1328	5.90	1361	6.49
12653	2400	1232	3.83	1252	4.14	1272	4.45	1291	4.77	1309	5.09	1328	5.39	1345	5.70	1380	6.31	1413	6.93	1444	7.57
13707	2600	1328	4.76	1347	5.09	1365	5.42	1383	5.76	1401	6.11	1418	6.45	1435	6.79	1467	7.44	1499	8.11	1529	8.78
14762	2800	1425	5.83	1442	6.18	1460	6.54	1476	6.91	1493	7.27	1509	7.64	1525	8.02	1556	8.73	1586	9.44	1615	10.15
15816	3000	1522	7.06	1538	7.44	1554	7.82	1570	8.21	1586	8.60	1601	8.99	1616	9.38	1645	10.18	1674	10.93	1702	11.69
16870	3200	1619	8.45	1634	8.86	1650	9.26	1665	9.67	1679	10.09	1694	10.50	1708	10.92	1736	11.77	1763	12.60	1790	13.40
17925	3400	1716	10.03	1731	10.46	1745	10.89	1760	11.32	1774	11.76	1787	12.20	1801	12.64	1828	13.53	1854	14.44	1879	15.30
18979	3600	1814	11.79	1828	12.25	1841	12.70	1855	13.16	1868	13.62	1881	14.08	1894	14.55	1920	15.49	1945	16.44	1969	17.40
20034	3800	1911	13.76	1925	14.24	1938	14.72	1951	15.20	1963	15.68	1976	16.17	1988	16.66	2013	17.65	2037	18.64	2060	19.65

VOL CFM	OUT VEL	2" SP		2½" SP		3" SP		3½" SP		4" SP		4½" SP		5" SP		5½" SP		6" SP		6½" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6326	1200	•999	•2.98																		
6854	1300	1029	3.27	•1104	•4.03																
7381	1400	1062	3.58	1133	4.37	•1203	•5.19														
7908	1500	1098	3.91	1165	4.74	1231	5.60	•1295	•6.49												
8435	1600	1135	4.26	1198	5.14	1262	6.03	1324	6.96	•1383	•7.90										
8962	1700	1173	4.64	1235	5.56	1295	6.50	1354	7.45	1412	8.44	•1468	•9.45								
9490	1800	1213	5.06	1273	6.01	1330	6.99	1386	7.99	1441	9.00	1496	10.04	•1549	•11.11						
10017	1900	1256	5.50	1310	6.48	1367	7.50	1420	8.55	1474	9.60	1525	10.68	1577	11.78	•1628	•12.90				
10544	2000	1300	5.99	1350	7.00	1404	8.05	1456	9.13	1507	10.24	1558	11.35	1606	12.48	1656	13.64	•1704	•14.82	•1750	•16.01
11598	2200	1389	7.06	1437	8.14	1482	9.25	1531	10.40	1580	11.58	1626	12.79	1672	14.00	1718	15.23	1762	16.47	1806	17.74
12653	2400	1475	8.21	1526	9.44	1569	10.62	1611	11.83	1655	13.08	1700	14.35	1743	15.65	1784	16.97	1827	18.29	1869	19.63
13707	2600	1558	9.47	1614	10.87	1658	12.16	1698	13.44	1736	14.75	1775	16.09	1818	17.46	1858	18.85	1897	20.26	1935	21.69
14762	2800	1643	10.88	1697	12.36	1748	13.88	1787	15.24	1824	16.61	1860	18.02	1894	19.44	1933	20.90	1972	22.39	2009	23.89
15816	3000	1729	12.46	1781	14.02	1830	15.62	1877	17.23	1912	18.68	1947	20.15	1981	21.64	2013	23.16	2047	24.71	2084	26.28
16870	3200	1816	14.21	1866	15.86	1914	17.53	1960	19.24	2002	20.95	2036	22.50	2068	24.06	2100	25.65	2131	27.25	2161	28.88
17925	3400	1904	16.15	1952	17.88	1999	19.64	2043	21.43	2086	23.25	2126	25.07	2157	26.70	2188	28.36	2218	30.03	2247	31.73
18979	3600	1993	18.30	2040	20.11	2084	21.95	2127	23.82	2169	25.72	2209	27.65	2247	29.59	2277	31.31	2306	33.06	2335	34.82
20034	3800	2083	20.65	2128	22.55	2171	24.47	2213	26.43	2253	28.40	2292	30.41	2330	32.44	2367	34.50	2396	36.33	2423	38.17
21088	4000	2173	23.17	2217	25.21	2258	27.22	2299	29.25	2338	31.31	2376	33.40	2413	35.51	2449	37.65	2484	39.80	2513	41.78
22142	4200	2265	25.90	2306	28.11	2347	30.20	2386	32.32	2424	34.46	2461	36.63	2497	38.82	2532	41.03				
23197	4400	2357	28.87	2397	31.20	2436	33.43	2474	35.63	2511	37.85										
24251	4600	2449	32.09	2488	34.51	2525	36.91														
25306	4800	2542	35.57																		

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11598	2200	•1851	•19.02																		
12653	2400	1909	20.98	•1991	•23.74	•2070	•26.58														
13707	2600	1975	23.12	2051	26.01	2126	28.98	•2200	•32.01												
14762	2800	2045	25.41	2117	28.49	2188	31.58	2257	34.74	•2327	•37.98	•2395	•41.26								
15816	3000	2119	27.87	2188	31.11	2254	34.40	2321	37.70	2386	41.05	2451	44.47	•2515	•47.95						
16870	3200	2195	30.54	2262	33.92	2326	37.36	2387	40.87	2451	44.36	2512	47.91								
17925	3400	2276	33.44	2337	36.95	2400	40.53	2460	44.18	2518	47.89										
18979	3600	2363	36.60	2416	40.22	2475	43.93	2534	47.72												
20034	3800	2450	40.02	2503	43.77																
21088	4000	2539	43.70																		

• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐ CL. III ☐
The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

SIZE 30

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SINGLE WIDTH
SINGLE INLET

SIZE 30	-20° to 150°F -29° to 66°C
CLASS I	1391
CLASS II	1818
CLASS III	2291
CLASS IV	N/A

Wheel Diameter	30 inches	762 mm
Wheel Circumference	7.85 feet	2.393 m
Inlet Diameter/Area	32 11/16 inches dia./5.76 sq. ft.	830 mm/.5351 m^2
Outlet Area	6.50 sq. ft.	.6039 m^2
Tip Speed	7.85 x RPM ft./minute	2.393 x RPM m/minute
Maximum Power	5.08 x (RPM ÷ 1000)^3 BHP	3.788 x (RPM ÷ 1000)^3 kW

VOL CFM	OUT VEL	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		⅞" SP		1" SP		1¼" SP		1½" SP		1¾" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3904	600	•373	•0.25	•412	•0.35	•450	•0.46														
4554	700	411	0.32	445	0.43	478	0.55	•510	•0.68	•542	•0.80										
5205	800	451	0.41	481	0.53	511	0.66	540	0.79	569	0.93	•596	•1.08	•623	•1.22						
5855	900	489	0.50	521	0.64	546	0.78	573	0.93	599	1.08	625	1.23	649	1.39	•698	•1.72				
6506	1000	527	0.61	561	0.77	585	0.92	608	1.08	633	1.24	656	1.41	679	1.58	724	1.93	•768	•2.29		
7157	1100	566	0.73	598	0.91	626	1.09	647	1.26	668	1.43	690	1.61	712	1.79	754	2.17	795	2.55	•835	•2.95
7807	1200	606	0.88	636	1.07	664	1.27	687	1.46	707	1.64	726	1.83	746	2.02	786	2.42	824	2.83	862	3.25
8458	1300	646	1.05	675	1.25	702	1.46	727	1.68	747	1.88	765	2.08	783	2.28	820	2.70	856	3.14	891	3.58
9108	1400	686	1.24	714	1.46	740	1.68	764	1.91	787	2.14	805	2.36	822	2.57	854	3.01	889	3.47	923	3.94
9759	1500	727	1.45	754	1.69	779	1.92	802	2.17	825	2.41	846	2.66	862	2.89	893	3.35	924	3.83	956	4.32
10410	1600	769	1.69	794	1.94	818	2.19	840	2.45	862	2.71	883	2.98	903	3.24	933	3.72	961	4.22	991	4.73
11060	1700	810	1.95	834	2.23	857	2.49	879	2.76	900	3.04	921	3.31	940	3.60	973	4.13	1001	4.65	1027	5.18
11711	1800	853	2.24	875	2.54	897	2.83	919	3.11	939	3.39	959	3.68	977	3.98	1013	4.58	1040	5.12	1066	5.67
12361	1900	895	2.57	917	2.88	938	3.19	958	3.48	978	3.78	997	4.09	1015	4.39	1051	5.02	1081	5.63	1106	6.20
13012	2000	937	2.93	958	3.25	979	3.58	998	3.89	1017	4.21	1036	4.52	1054	4.84	1088	5.50	1121	6.17	1146	6.78
14313	2200	1023	3.75	1042	4.10	1061	4.46	1079	4.82	1097	5.17	1115	5.51	1131	5.85	1164	6.56	1195	7.28	1225	8.01
15614	2400	1109	4.73	1127	5.11	1144	5.49	1161	5.88	1178	6.28	1194	6.65	1210	7.03	1241	7.78	1271	8.55	1300	9.33
16916	2600	1195	5.87	1212	6.28	1228	6.69	1245	7.11	1260	7.53	1276	7.96	1291	8.37	1320	9.18	1348	10.00	1376	10.83
18217	2800	1282	7.19	1298	7.63	1313	8.07	1328	8.52	1343	8.97	1358	9.43	1372	9.89	1400	10.77	1427	11.64	1453	12.52
19518	3000	1369	8.70	1384	9.17	1398	9.64	1413	10.12	1427	10.60	1441	11.09	1454	11.57	1480	12.56	1506	13.48	1531	14.42
20819	3200	1456	10.42	1470	10.92	1484	11.42	1498	11.93	1511	12.44	1524	12.95	1537	13.47	1562	14.52	1587	15.54	1611	16.53
22120	3400	1544	12.36	1557	12.89	1570	13.43	1583	13.96	1596	14.50	1608	15.04	1620	15.59	1644	16.69	1668	17.81	1691	18.87
23422	3600	1632	14.54	1644	15.10	1657	15.66	1669	16.23	1681	16.80	1693	17.37	1704	17.94	1727	19.10	1750	20.27	1772	21.46
24723	3800	1720	16.97	1731	17.56	1743	18.15	1755	18.74	1766	19.34	1778	19.94	1789	20.55	1811	21.76	1832	22.99	1853	24.23

VOL CFM	OUT VEL	2" SP		2½" SP		3" SP		3½" SP		4" SP		4½" SP		5" SP		5½" SP		6" SP		6½" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7807	1200	•899	•3.68																		
8458	1300	926	4.03	•994	•4.97																
9108	1400	956	4.42	1019	5.39	•1082	•6.41														
9759	1500	988	4.82	1049	5.85	1108	6.91	•1166	•8.01												
10410	1600	1021	5.26	1078	6.34	1136	7.45	1191	8.58	•1245	•9.75										
11060	1700	1055	5.73	1111	6.86	1165	8.02	1218	9.20	1270	10.41	•1321	•11.66								
11711	1800	1091	6.24	1145	7.41	1197	8.62	1248	9.85	1297	11.11	1346	12.39	•1394	•13.71						
12361	1900	1130	6.79	1179	8.00	1230	9.26	1277	10.55	1326	11.85	1372	13.17	1419	14.53	•1465	•15.92				
13012	2000	1170	7.38	1215	8.63	1264	9.93	1311	11.27	1356	12.63	1402	14.00	1445	15.40	1490	16.83	•1533	•18.28	•1575	•19.76
14313	2200	1250	8.70	1293	10.04	1334	11.41	1378	12.84	1421	14.29	1463	15.78	1504	17.28	1546	18.79	1585	20.32	1626	21.89
15614	2400	1327	10.13	1373	11.64	1412	13.10	1449	14.60	1489	16.14	1529	17.71	1568	19.31	1606	20.95	1644	22.57	1682	24.22
16916	2600	1402	11.68	1452	13.41	1492	15.00	1528	16.58	1562	18.20	1598	19.85	1635	21.54	1672	23.26	1707	25.00	1741	26.77
18217	2800	1478	13.42	1527	15.25	1573	17.12	1608	18.80	1641	20.50	1673	22.23	1704	23.99	1740	25.79	1774	27.62	1808	29.48
19518	3000	1556	15.37	1602	17.30	1647	19.27	1689	21.25	1721	23.04	1752	24.86	1782	26.70	1811	28.58	1842	30.48	1875	32.42
20819	3200	1634	17.53	1679	19.56	1722	21.63	1763	23.74	1802	25.85	1832	27.75	1861	29.68	1889	31.64	1917	33.62	1944	35.63
22120	3400	1713	19.93	1757	22.06	1798	24.23	1838	26.44	1877	28.68	1913	30.93	1941	32.94	1969	34.99	1996	37.06	2022	39.15
23422	3600	1793	22.57	1835	24.81	1875	27.08	1914	29.39	1951	31.73	1988	34.11	2022	36.50	2049	38.63	2075	40.78	2101	42.96
24723	3800	1874	25.47	1914	27.81	1953	30.19	1991	32.60	2027	35.04	2062	37.52	2096	40.02	2130	42.56	2155	44.82	2180	47.09
26024	4000	1955	28.58	1994	31.10	2032	33.57	2068	36.09	2104	38.63	2138	41.20	2171	43.81	2203	46.44	2235	49.11	2261	51.55
27325	4200	2038	31.95	2075	34.67	2111	37.25	2147	39.86	2181	42.51	2214	45.18	2247	47.89	2278	50.62				
28626	4400	2120	35.61	2156	38.48	2191	41.23	2226	43.95	2259	46.69	2291	49.47								
29928	4600	2203	39.58	2238	42.56	2272	45.53														
31229	4800	2287	43.87																		

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14313	2200	•1665	•23.48																		
15614	2400	1718	25.89	•1792	•29.30	•1863	•32.79														
16916	2600	1777	28.53	1846	32.10	1913	35.76	•1980	•39.51												
18217	2800	1840	31.35	1905	35.15	1969	38.97	2031	42.87	•2094	•46.86	•2155	•50.92								
19518	3000	1907	34.39	1968	38.39	2028	42.45	2089	46.52	2147	50.66	2205	54.88	•2263	•59.17						
20819	3200	1975	37.68	2035	41.85	2093	46.10	2148	50.43	2205	54.74	2261	59.12								
22120	3400	2048	41.26	2103	45.59	2159	50.01	2213	54.51	2266	59.09										
23422	3600	2126	45.16	2174	49.63	2227	54.21	2280	58.88												
24723	3800	2205	49.37	2252	54.01																
26024	4000	2285	53.92																		

• Approximate Max. Static Efficiency and Quietest Selection. **CL. I** ☐ **CL. II** ☐ **CL. III** ☐

The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

Airfoil - Plenum Fan

SIZE 33

SINGLE WIDTH
SINGLE INLET

Wheel Diameter	33 inches	838 mm
Wheel Circumference	8.64 feet	2.633 m
Inlet Diameter/Area	35 11/16 inches dia./6.87 sq. ft.	906 mm/.6382 m^2
Outlet Area	7.86 sq. ft.	.7302 m^2
Tip Speed	8.64 x RPM ft./minute	2.633 x RPM m/minute
Maximum Power	8.18 x (RPM ÷ 1000)^3 BHP	6.100 x (RPM ÷ 1000)^3 kW

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SIZE 33	-20° to 150°F -29° to 66°C
CLASS I	1265
CLASS II	1652
CLASS III	2083
CLASS IV	N/A

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
4721	600	•339	•0.31	•375	•0.43	•409	•0.56														
5508	700	374	0.39	404	0.52	435	0.67	•464	•0.82	•492	•0.97										
6295	800	410	0.49	437	0.64	464	0.80	491	0.96	517	1.13	•542	•1.30	•567	•1.48						
7082	900	444	0.60	473	0.77	496	0.94	521	1.12	544	1.31	568	1.49	590	1.68	•635	•2.08				
7869	1000	479	0.73	510	0.93	532	1.12	553	1.31	575	1.50	596	1.71	617	1.91	658	2.33	•698	•2.77		
8656	1100	514	0.89	543	1.10	569	1.32	588	1.52	607	1.73	627	1.94	647	2.17	685	2.62	722	3.08	•759	•3.56
9443	1200	550	1.06	578	1.29	604	1.53	625	1.76	643	1.98	660	2.21	678	2.45	714	2.93	749	3.43	783	3.93
10230	1300	587	1.27	613	1.51	638	1.77	661	2.03	679	2.27	695	2.51	711	2.76	745	3.27	778	3.79	810	4.33
11017	1400	624	1.49	649	1.76	672	2.03	695	2.31	716	2.59	732	2.85	747	3.11	776	3.64	808	4.19	839	4.76
11804	1500	661	1.75	685	2.04	708	2.33	729	2.62	749	2.92	769	3.22	783	3.49	812	4.05	839	4.63	869	5.22
12590	1600	699	2.04	721	2.35	743	2.65	764	2.96	784	3.28	803	3.60	820	3.92	848	4.50	874	5.10	900	5.72
13377	1700	737	2.36	758	2.69	779	3.02	799	3.34	818	3.67	837	4.01	854	4.35	884	5.00	909	5.63	934	6.27
14164	1800	775	2.71	796	3.07	816	3.42	835	3.76	853	4.10	871	4.45	888	4.81	921	5.54	946	6.19	969	6.86
14951	1900	813	3.11	833	3.48	852	3.85	871	4.21	889	4.57	906	4.94	923	5.31	955	6.07	982	6.81	1005	7.50
15738	2000	852	3.54	871	3.93	889	4.32	907	4.71	925	5.09	941	5.47	958	5.86	989	6.65	1018	7.45	1042	8.19
17312	2200	929	4.53	947	4.96	964	5.39	981	5.83	997	6.24	1013	6.66	1028	7.08	1058	7.93	1086	8.80	1113	9.69
18886	2400	1007	5.71	1024	6.17	1040	6.64	1055	7.11	1071	7.59	1086	8.04	1100	8.49	1128	9.41	1155	10.34	1181	11.29
20459	2600	1086	7.09	1101	7.59	1116	8.09	1131	8.59	1145	9.11	1159	9.62	1173	10.12	1200	11.10	1225	12.09	1250	13.10
22033	2800	1165	8.69	1179	9.22	1193	9.75	1207	10.30	1221	10.84	1234	11.39	1247	11.95	1272	13.02	1297	14.07	1320	15.14
23607	3000	1244	10.52	1258	11.08	1271	11.65	1284	12.23	1297	12.81	1309	13.40	1321	13.99	1345	15.18	1369	16.30	1392	17.43
25181	3200	1323	12.60	1336	13.20	1349	13.81	1361	14.42	1373	15.04	1385	15.66	1397	16.28	1420	17.55	1442	18.79	1464	19.98
26755	3400	1403	14.94	1415	15.58	1427	16.23	1439	16.87	1450	17.53	1461	18.18	1473	18.84	1494	20.18	1516	21.53	1537	22.82
28328	3600	1483	17.58	1494	18.25	1505	18.93	1516	19.61	1527	20.30	1538	20.99	1549	21.69	1570	23.09	1590	24.51	1610	25.94
29902	3800	1563	20.51	1573	21.22	1584	21.94	1595	22.65	1605	23.38	1615	24.10	1626	24.83	1646	26.31	1665	27.79	1684	29.29

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
9443	1200	•817	•4.45																		
10230	1300	842	4.88	•903	•6.01																
11017	1400	869	5.34	927	6.52	•984	•7.75														
11804	1500	898	5.83	953	7.08	1007	8.36	•1060	•9.68												
12590	1600	928	6.36	980	7.67	1032	9.00	1083	10.38	•1132	•11.80										
13377	1700	959	6.93	1010	8.30	1059	9.70	1107	11.12	1155	12.59	•1201	•14.10								
14164	1800	992	7.54	1041	8.96	1088	10.43	1134	11.92	1179	13.43	1224	14.99	•1267	•16.58						
14951	1900	1027	8.21	1072	9.67	1118	11.19	1161	12.76	1205	14.33	1247	15.93	1290	17.58	•1331	•19.25				
15738	2000	1063	8.93	1104	10.44	1148	12.01	1191	13.63	1232	15.28	1274	16.93	1314	18.62	1354	20.35	•1394	•22.11	•1432	•23.90
17312	2200	1136	10.52	1175	12.14	1212	13.80	1252	15.52	1292	17.28	1329	19.08	1367	20.90	1405	22.72	1441	24.58	1478	26.47
18886	2400	1206	12.25	1248	14.08	1283	15.84	1317	17.65	1353	19.51	1390	21.42	1425	23.36	1459	25.33	1494	27.30	1529	29.29
20459	2600	1274	14.12	1320	16.21	1356	18.14	1389	20.05	1420	22.01	1452	24.00	1486	26.05	1520	28.12	1552	30.23	1583	32.37
22033	2800	1344	16.23	1388	18.44	1429	20.70	1461	22.73	1491	24.79	1521	26.88	1549	29.01	1581	31.19	1613	33.40	1643	35.65
23607	3000	1414	18.58	1456	20.91	1497	23.29	1535	25.70	1564	27.86	1592	30.06	1620	32.29	1646	34.56	1674	36.86	1704	39.21
25181	3200	1485	21.19	1526	23.65	1565	26.15	1602	28.71	1637	31.25	1665	33.56	1691	35.89	1717	38.26	1742	40.66	1767	43.09
26755	3400	1557	24.09	1596	26.67	1634	29.30	1671	31.97	1706	34.68	1738	37.39	1764	39.83	1789	42.30	1814	44.81	1838	47.34
28328	3600	1630	27.28	1668	29.99	1704	32.74	1740	35.53	1773	38.37	1806	41.24	1838	44.13	1862	46.71	1886	49.31	1909	51.95
29902	3800	1703	30.79	1740	33.62	1775	36.50	1809	39.41	1842	42.37	1874	45.36	1905	48.39	1935	51.46	1959	54.20	1982	56.94
31476	4000	1777	34.55	1812	37.59	1847	40.59	1880	43.63	1912	46.70	1943	49.82	1973	52.97	2003	56.16	2031	59.38	2055	62.32
33050	4200	1852	38.62	1886	41.91	1919	45.03	1951	48.19	1982	51.39	2012	54.63	2042	57.90	2070	61.20				
34624	4400	1927	43.05	1959	46.52	1991	49.84	2023	53.13	2053	56.45	2082	59.81								
36197	4600	2002	47.84	2034	51.45	2065	55.04														
37771	4800	2078	53.02																		

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
17312	2200	•1514	•28.39																		
18886	2400	1562	31.31	•1629	•35.43	•1693	•39.66														
20459	2600	1615	34.50	1678	38.82	1739	43.25	•1800	•47.78												
22033	2800	1673	37.92	1731	42.51	1790	47.13	1846	51.85	•1904	•56.68	•1959	•61.59								
23607	3000	1733	41.59	1789	46.42	1844	51.33	1899	56.26	1951	61.26	2005	66.37	•2057	•71.57						
25181	3200	1795	45.57	1850	50.61	1902	55.75	1952	60.99	2005	66.20	2055	71.50								
26755	3400	1861	49.90	1911	55.12	1963	60.47	2012	65.92	2059	71.46										
28328	3600	1932	54.61	1976	60.01	2024	65.55	2072	71.20												
29902	3800	2004	59.70	2047	65.31																
31476	4000	2076	65.19																		

• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐ CL. III ☐
The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

SIZE 37

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SIZE 37	-20° to 150°F -29° to 66°C
CLASS I	1129
CLASS II	1473
CLASS III	1855
CLASS IV	N/A

SINGLE WIDTH
SINGLE INLET

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 Area	9.66 sq. ft.	.8974 m^2
Tip Speed	9.56 x RPM ft./minute	2.914 x RPM m/minute
Maximum Power	13.21 x (RPM ÷ 1000)^3 BHP	9.851 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
5800	600	•302	•0.35	•338	•0.50	•370	•0.66	402	0.83												
6767	700	330	0.43	361	0.60	391	0.78	•419	•0.96	•447	•1.16	474	1.35								
7734	800	359	0.52	388	0.71	414	0.91	442	1.11	466	1.32	•490	•1.54	515	1.76						
8700	900	391	0.64	416	0.84	441	1.06	465	1.28	489	1.50	512	1.74	•533	•1.98	577	2.48				
9667	1000	423	0.77	446	1.00	469	1.23	491	1.46	512	1.71	535	1.96	556	2.22	•595	•2.75	•634	•3.30	672	3.86
10634	1100	456	0.93	478	1.17	498	1.42	519	1.67	539	1.93	559	2.20	579	2.48	617	3.04	652	3.63	•688	•4.23
11600	1200	490	1.11	510	1.37	529	1.63	548	1.91	567	2.18	586	2.47	604	2.76	640	3.36	675	3.98	707	4.62
12567	1300	523	1.32	543	1.60	561	1.88	578	2.17	596	2.46	614	2.76	631	3.07	664	3.71	698	4.36	730	5.03
13534	1400	557	1.54	576	1.85	594	2.15	610	2.46	626	2.77	642	3.09	659	3.41	691	4.08	721	4.77	752	5.47
14501	1500	590	1.80	610	2.14	627	2.45	643	2.78	658	3.11	672	3.45	687	3.79	718	4.49	747	5.21	776	5.95
15467	1600	624	2.08	643	2.45	660	2.79	675	3.13	690	3.48	704	3.83	718	4.19	746	4.93	775	5.68	802	6.45
16434	1700	659	2.40	677	2.78	694	3.16	708	3.52	722	3.88	736	4.25	749	4.63	775	5.41	803	6.19	829	6.99
17401	1800	693	2.75	711	3.16	727	3.57	742	3.95	755	4.33	768	4.72	781	5.11	806	5.92	831	6.74	857	7.58
18367	1900	728	3.14	744	3.56	760	4.00	775	4.41	788	4.81	801	5.22	813	5.63	837	6.47	860	7.33	885	8.20
19334	2000	762	3.57	779	4.01	794	4.46	809	4.92	822	5.34	834	5.76	846	6.19	869	7.06	891	7.96	913	8.87
21267	2200	832	4.55	847	5.03	862	5.52	875	6.02	889	6.52	901	6.99	912	7.45	934	8.39	955	9.35	975	10.33
23201	2400	903	5.71	916	6.23	930	6.76	943	7.30	956	7.84	968	8.39	979	8.91	1000	9.91	1020	10.94	1039	11.98
25134	2600	973	7.07	986	7.63	999	8.19	1011	8.77	1023	9.35	1035	9.94	1046	10.54	1066	11.65	1085	12.74	1104	13.86
27068	2800	1044	8.63	1056	9.23	1068	9.84	1080	10.46	1091	11.08	1102	11.71	1113	12.34	1134	13.62	1152	14.78	1169	15.96
29001	3000	1116	10.43	1127	11.07	1138	11.72	1149	12.37	1159	13.03	1170	13.70	1180	14.37	1200	15.73	1219	17.07	1236	18.32
30934	3200	1187	12.47	1198	13.15	1208	13.84	1218	14.53	1228	15.23	1238	15.94	1248	16.65	1267	18.09	1286	19.55	1303	20.94
32868	3400	1259	14.77	1269	15.49	1278	16.22	1288	16.95	1298	17.69	1307	18.44	1317	19.19	1335	20.70	1353	22.24	1370	23.79
34801	3600	1330	17.35	1340	18.11	1349	18.88	1358	19.65	1367	20.43	1376	21.21	1385	22.00	1403	23.59	1420	25.21	1437	26.84
36735	3800	1402	20.22	1411	21.02	1420	21.83	1429	22.64	1437	23.46	1446	24.28	1455	25.11	1471	26.78	1488	28.47	1504	30.18

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
10634	1100	723	4.85																		
11600	1200	•739	•5.28	804	6.61																
12567	1300	760	5.72	•819	•7.14	878	8.60														
13534	1400	782	6.19	837	7.69	•894	•9.23	948	10.81												
14501	1500	805	6.70	859	8.26	909	9.89	963	11.54	1013	13.23										
15467	1600	828	7.24	882	8.87	932	10.55	•979	•12.30	1029	14.06	1076	15.86								
16434	1700	854	7.82	905	9.51	954	11.26	1000	13.07	•1045	•14.93	1091	16.80	1136	18.71						
17401	1800	881	8.43	928	10.20	977	12.01	1022	13.88	1065	15.81	•1107	•17.77	1151	19.75	1194	21.76				
18367	1900	909	9.09	954	10.92	1000	12.80	1045	14.73	1087	16.72	1127	18.76	•1167	•20.84	1209	22.92	1250	25.04		
19334	2000	937	9.79	982	11.68	1023	13.64	1068	15.64	1109	17.68	1149	19.78	1187	21.94	•1225	•24.12	•1265	•26.30	1304	28.52
21267	2200	994	11.33	1037	13.35	1077	15.43	1116	17.58	1155	19.76	1194	21.98	1232	24.25	1267	26.57	1301	28.94	•1335	•31.34
23201	2400	1057	13.05	1094	15.23	1133	17.44	1170	19.70	1205	22.03	1241	24.40	1277	26.79	1312	29.23	1346	31.71	1379	34.24
25134	2600	1121	14.99	1155	17.30	1190	19.67	1225	22.06	1260	24.50	1293	27.00	1324	29.56	1358	32.12	1392	34.72	1424	37.37
27068	2800	1186	17.16	1219	19.60	1250	22.11	1282	24.66	1315	27.22	1347	29.85	1378	32.52	1408	35.24	1438	38.00	1470	40.76
29001	3000	1252	19.58	1283	22.15	1313	24.79	1342	27.49	1372	30.21	1403	32.96	1433	35.75	1462	38.59	1491	41.48	1518	44.41
30934	3200	1318	22.27	1349	24.98	1377	27.74	1405	30.56	1432	33.44	1460	36.35	1489	39.26	1518	42.23	1545	45.23	1572	48.28
32868	3400	1386	25.25	1414	28.09	1442	30.98	1469	33.93	1495	36.94	1520	40.00	1546	43.08	1574	46.17	1601	49.29	1627	52.46
34801	3600	1453	28.49	1481	31.50	1508	34.53	1534	37.61	1559	40.74	1583	43.92	1607	47.16	1631	50.43	1657	53.67	1683	56.97
36735	3800	1519	31.91	1548	35.24	1574	38.40	1599	41.61	1623	44.87	1647	48.18	1670	51.54	1693	54.94	1715	58.39	1739	61.81
38668	4000	1586	35.63	1615	39.29	1641	42.60	1665	45.95	1688	49.34	1711	52.78	1734	56.26	1756	59.79	1777	63.36	1798	66.97
40601	4200	1653	39.68	1682	43.49	1708	47.17	1731	50.65	1754	54.17	1776	57.73	1798	61.34	1819	65.00	1840	68.70		
42535	4400	1721	44.08	1748	48.04	1775	52.05	1798	55.72	1820	59.37	1842	63.07								
44468	4600	1789	48.84	1816	52.94	1841	57.11														

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
19334	2000	1341	30.78																		
21267	2200	•1372	•33.72	1443	38.59																
23201	2400	1410	36.80	•1474	•42.01	1540	47.27	1602	52.63												
25134	2600	1455	40.05	1514	45.55	•1571	•51.18	•1633	•56.81	1692	62.54	1749	68.37								
27068	2800	1500	43.57	1559	49.29	1615	55.17	1668	61.18	•1723	•67.24	1780	73.33	•1834	•79.52						
29001	3000	1547	47.36	1605	53.32	1660	59.43	1712	65.68	1762	72.06	•1811	•78.56								
30934	3200	1598	51.37	1651	57.65	1705	63.99	1757	70.48	1806	77.09	1854	83.83								
32868	3400	1653	55.67	1702	62.22	1751	68.87	1802	75.59	1851	82.44										
34801	3600	1708	60.30	1756	67.08	1802	74.01	1849	81.04												
36735	3800	1764	65.26	1811	72.28																
38668	4000	1820	70.58																		

• Approximate Max. Static Efficiency and Quietest Selection. **CL. I** ☐ **CL. II** ☐ **CL. III** ☐

The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

Airfoil - Plenum Fan

SIZE 40

SINGLE WIDTH
SINGLE INLET

Wheel Diameter	40 ¼ inches	1022 mm
Wheel Circumference	10.5 feet	3.200 m
Inlet Diameter/Area	49 ½ inches dia./10.31 sq. ft.	1257 mm/.9578 m^2
Outlet Area	11.71 sq. ft.	1.088 m^2
Tip Speed	10.5 x RPM ft./minute	3.200 x RPM m/minute
Maximum Power	21.50 x (RPM ÷ 1000)^3 BHP	16.03 x (RPM ÷ 1000)^3 kW

MAXIMUM CLASS OPERATING RPM

FAN TEMPERATURE

SIZE 40	-20° to 150°F -29° to 66°C
CLASS I	1023
CLASS II	1335
CLASS III	1682
CLASS IV	N/A

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
7026	600	•273	•0.42	•306	•0.60	•335	•0.80	364	1.00												
8197	700	298	0.52	326	0.72	354	0.94	•379	•1.17	•405	•1.40										
9368	800	325	0.63	351	0.86	375	1.10	400	1.34	422	1.60	•444	•1.87	467	2.13						
10539	900	353	0.77	376	1.02	399	1.28	421	1.55	443	1.82	463	2.11	•483	•2.40	523	3.00				
11710	1000	383	0.93	403	1.20	424	1.48	445	1.77	464	2.07	484	2.37	503	2.68	•538	•3.33	•574	•4.00	609	4.68
12881	1100	412	1.12	432	1.41	450	1.71	470	2.02	488	2.34	506	2.67	524	3.00	559	3.68	591	4.40	•623	•5.13
14052	1200	443	1.34	461	1.65	479	1.97	495	2.31	513	2.64	530	2.99	546	3.34	579	4.07	611	4.82	640	5.60
15223	1300	473	1.59	491	1.93	508	2.27	523	2.62	539	2.98	555	3.34	571	3.72	601	4.49	632	5.27	661	6.09
16394	1400	503	1.86	521	2.23	537	2.59	552	2.97	566	3.35	581	3.74	596	4.13	625	4.93	653	5.77	681	6.62
17565	1500	534	2.17	551	2.58	567	2.96	581	3.35	595	3.75	608	4.16	622	4.58	650	5.42	676	6.30	702	7.20
18736	1600	564	2.51	582	2.95	597	3.36	610	3.78	624	4.20	637	4.63	649	5.07	675	5.96	701	6.87	725	7.81
19907	1700	595	2.89	612	3.36	627	3.81	640	4.25	653	4.69	665	5.14	677	5.60	701	6.53	726	7.48	750	8.46
21078	1800	626	3.32	642	3.80	657	4.30	670	4.76	683	5.22	695	5.69	706	6.17	729	7.15	752	8.15	775	9.16
22249	1900	658	3.78	673	4.30	687	4.82	701	5.33	713	5.81	724	6.30	735	6.80	757	7.82	778	8.86	801	9.92
23420	2000	689	4.30	704	4.83	718	5.38	731	5.94	743	6.44	754	6.95	765	7.47	786	8.53	806	9.62	826	10.72
25762	2200	752	5.48	766	6.06	779	6.65	791	7.26	804	7.87	814	8.43	825	8.99	844	10.13	863	11.29	882	12.48
28104	2400	816	6.87	828	7.50	840	8.15	852	8.80	864	9.45	875	10.12	885	10.74	904	11.96	922	13.21	939	14.47
30446	2600	880	8.50	891	9.18	903	9.87	914	10.57	925	11.27	935	11.99	946	12.71	964	14.05	981	15.38	998	16.73
32788	2800	944	10.39	955	11.12	965	11.85	976	12.60	986	13.35	996	14.11	1006	14.88	1025	16.43	1041	17.83	1057	19.26
35130	3000	1008	12.55	1018	13.32	1028	14.11	1038	14.90	1048	15.70	1057	16.51	1067	17.32	1085	18.98	1102	20.59	1117	22.10
37472	3200	1072	15.00	1082	15.83	1092	16.66	1101	17.50	1110	18.35	1119	19.20	1128	20.06	1145	21.81	1162	23.58	1178	25.26
39814	3400	1137	17.77	1146	18.64	1155	19.52	1164	20.41	1173	21.31	1181	22.21	1190	23.12	1206	24.95	1223	26.82	1238	28.70
42156	3600	1202	20.87	1210	21.79	1219	22.72	1227	23.66	1236	24.60	1244	25.55	1252	26.51	1268	28.44	1283	30.39	1298	32.37
44498	3800	1267	24.32	1275	25.29	1283	26.27	1291	27.26	1299	28.25	1307	29.24	1314	30.25	1330	32.27	1344	34.32	1359	36.39

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
12881	1100	655	5.87																		
14052	1200	•670	•6.39	728	8.02																
15223	1300	688	6.93	•742	•8.65																
16394	1400	708	7.50	758	9.32	810	11.18														
17565	1500	729	8.11	778	10.00	•824	•11.98	873	13.97												
18736	1600	750	8.77	799	10.73	844	12.78	•887	•14.90	932	17.03	975	19.22								
19907	1700	773	9.46	819	11.51	864	13.63	905	15.83	•946	•18.08	989	20.35	1029	22.66						
21078	1800	797	10.20	840	12.34	884	14.54	925	16.81	964	19.15	•1003	•21.53	1043	23.93	1082	26.37				
22249	1900	822	10.99	864	13.21	905	15.50	946	17.84	984	20.25	1020	22.73	•1057	•25.24	1096	27.77	1132	30.33		
23420	2000	848	11.84	888	14.13	926	16.51	967	18.93	1004	21.41	1040	23.96	1075	26.57	•1110	•29.22	1146	31.87	1181	34.56
25762	2200	899	13.70	938	16.14	975	18.67	1010	21.27	1046	23.92	1081	26.61	1115	29.37	1147	32.18	•1178	•35.05	•1210	•37.96
28104	2400	956	15.77	990	18.41	1025	21.08	1059	23.83	1091	26.66	1123	29.52	1156	32.43	1188	35.38	1219	38.40	1248	41.46
30446	2600	1014	18.10	1045	20.91	1076	23.77	1109	26.67	1140	29.64	1170	32.67	1198	35.77	1230	38.88	1260	42.03	1289	45.24
32788	2800	1073	20.71	1102	23.68	1131	26.72	1160	29.80	1190	32.92	1219	36.10	1247	39.34	1274	42.64	1302	45.98	1330	49.34
35130	3000	1132	23.63	1160	26.75	1188	29.95	1214	33.22	1241	36.52	1270	39.85	1297	43.23	1323	46.68	1349	50.18	1374	53.74
37472	3200	1192	26.87	1219	30.15	1245	33.50	1271	36.93	1295	40.42	1321	43.94	1347	47.47	1373	51.06	1398	54.71	1423	58.41
39814	3400	1252	30.45	1279	33.89	1304	37.41	1328	40.98	1352	44.63	1375	48.34	1399	52.07	1424	55.81	1448	59.61	1472	63.45
42156	3600	1313	34.37	1339	38.00	1363	41.68	1387	45.41	1410	49.21	1432	53.07	1453	56.99	1475	60.95	1499	64.89	1522	68.88
44498	3800	1373	38.48	1399	42.50	1423	46.33	1446	50.23	1468	54.18	1489	58.19	1510	62.27	1531	66.39	1551	70.57	1573	74.71
46840	4000	1434	42.97	1460	47.40	1483	51.40	1505	55.45	1526	59.56	1547	63.73	1568	67.96	1588	72.23	1607	76.57	1626	80.95
49182	4200	1494	47.84	1520	52.46	1544	56.89	1565	61.11	1586	65.38	1606	69.70	1626	74.08	1645	78.51	1664	82.99	1682	87.53
51524	4400	1556	53.13	1580	57.93	1605	62.80	1625	67.21	1645	71.64	1665	76.12								
53866	4600	1617	58.86	1641	63.83	1664	68.88														
56208	4800	1679	65.03																		

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
23420	2000	1215	37.29																		
25762	2200	•1243	•40.85	1307	46.76																
28104	2400	1277	44.58	•1335	•50.89	1395	57.26	1452	63.77												
30446	2600	1317	48.50	1371	55.16	•1423	•61.99	•1480	•68.82	1533	75.77										
32788	2800	1358	52.74	1412	59.69	1462	66.82	1510	74.12	•1561	•81.45	1612	88.84	•1661	•96.35						
35130	3000	1400	57.31	1453	64.55	1503	71.96	1550	79.54	1596	87.28	•1641	•95.15								
37472	3200	1446	62.16	1494	69.76	1544	77.47	1591	85.33	1636	93.35	1679	101.53								
39814	3400	1495	67.35	1540	75.28	1585	83.35	1632	91.50	1676	99.81										
42156	3600	1545	72.92	1589	81.14	1631	89.55	1673	98.07												
44498	3800	1596	78.90	1639	87.41	1680	96.11														
46840	4000	1647	85.31																		

• Approximate Max. Static Efficiency and Quietest Selection. **CL. I ☐ CL. II ☐ CL. III ☐**
The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

MAXIMUM CLASS OPERATING RPM

FAN TEMPERATURE

SIZE 45	-20° to 150°F -29° to 66°C
CLASS I	926
CLASS II	1208
CLASS III	1521
CLASS IV	N/A

SINGLE WIDTH SINGLE INLET

SIZE 45

Wheel Diameter	44 ½ inches	1130 mm
Wheel Circumference	11.7 feet	3.566 m
Inlet Diameter/Area	53 ½ inches dia./12.42 sq. ft.	1359 mm/1.154 m^2
Outlet Area	14.31 sq. ft.	1.329 m^2
Tip Speed	11.65 x RPM ft./minute	3.566 x RPM m/minute
Maximum Power	35.40 x (RPM ÷ 1000)^3 BHP	26.40 x (RPM ÷ 1000)^3 kW

VOL CFM	OUT VEL	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		⅞" SP		1" SP		1¼" 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
8586	600	•247	•0.51	•276	•0.74	•303	•0.98	330	1.23												
10017	700	270	0.63	295	0.88	320	1.15	•343	•1.43	•367	•1.71										
11448	800	294	0.77	317	1.05	339	1.34	362	1.64	382	1.96	•402	•2.28	422	2.61						
12879	900	320	0.94	340	1.25	361	1.56	380	1.89	400	2.22	419	2.57	•437	•2.93	473	3.67				
14310	1000	346	1.14	365	1.47	384	1.81	402	2.16	419	2.53	438	2.90	455	3.28	•487	•4.07	•519	•4.88	551	5.72
15741	1100	373	1.37	391	1.73	407	2.10	425	2.47	441	2.86	457	3.26	474	3.66	505	4.50	534	5.37	•564	•6.27
17172	1200	400	1.64	417	2.02	433	2.41	448	2.82	464	3.23	479	3.65	494	4.08	524	4.97	552	5.89	579	6.84
18603	1300	428	1.94	444	2.35	459	2.77	473	3.20	487	3.64	502	4.08	516	4.54	543	5.48	571	6.45	597	7.44
20034	1400	455	2.27	471	2.73	485	3.17	499	3.62	512	4.09	525	4.56	539	5.04	565	6.03	590	7.05	616	8.09
21465	1500	483	2.65	499	3.15	512	3.62	525	4.09	538	4.59	550	5.09	562	5.60	588	6.63	612	7.70	635	8.80
22896	1600	510	3.07	526	3.61	540	4.11	552	4.61	564	5.13	576	5.66	587	6.19	611	7.28	634	8.39	656	9.54
24327	1700	538	3.53	553	4.10	567	4.66	579	5.19	591	5.73	602	6.28	613	6.84	634	7.98	657	9.14	678	10.34
25758	1800	566	4.05	581	4.65	594	5.26	606	5.82	617	6.38	628	6.96	639	7.54	659	8.74	680	9.96	701	11.20
27189	1900	595	4.62	608	5.25	622	5.89	634	6.51	644	7.10	655	7.69	665	8.30	685	9.55	703	10.83	724	12.12
28620	2000	623	5.25	636	5.91	649	6.57	661	7.25	672	7.87	682	8.50	692	9.13	711	10.42	729	11.75	747	13.10
31482	2200	680	6.69	692	7.40	704	8.13	716	8.87	727	9.62	736	10.30	746	10.98	764	12.37	781	13.80	797	15.25
34344	2400	738	8.40	749	9.17	760	9.95	771	10.75	781	11.55	791	12.37	800	13.12	817	14.61	834	16.13	849	17.69
37206	2600	795	10.39	806	11.22	816	12.06	826	12.91	836	13.77	846	14.65	855	15.53	872	17.17	887	18.79	902	20.44
40068	2800	853	12.69	863	13.58	873	14.48	882	15.39	892	16.31	901	17.24	910	18.18	927	20.07	942	21.79	956	23.53
42930	3000	911	15.33	921	16.28	930	17.24	939	18.20	948	19.18	956	20.17	965	21.16	981	23.18	997	25.15	1010	27.00
45792	3200	970	18.32	979	19.33	987	20.35	996	21.38	1004	22.41	1012	23.46	1020	24.51	1036	26.64	1051	28.81	1065	30.86
48654	3400	1028	21.70	1036	22.77	1045	23.85	1053	24.93	1061	26.03	1068	27.13	1076	28.24	1091	30.49	1106	32.76	1120	35.07
51516	3600	1087	25.49	1095	26.62	1102	27.75	1110	28.90	1117	30.05	1125	31.21	1132	32.38	1147	34.74	1161	37.13	1174	39.54
54378	3800	1145	29.71	1153	30.90	1160	32.09	1167	33.29	1175	34.50	1182	35.72	1189	36.95	1202	39.42	1216	41.92	1229	44.45

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
15741	1100	593	7.17																		
17172	1200	•606	•7.81	659	9.79																
18603	1300	622	8.47	•671	•10.57																
20034	1400	640	9.16	686	11.39	732	13.66														
21465	1500	659	9.91	704	12.22	•745	•14.64	789	17.08												
22896	1600	678	10.71	722	13.12	763	15.62	•802	•18.20	843	20.81	882	23.48								
24327	1700	699	11.56	741	14.07	781	16.66	819	19.35	•856	•22.10	894	24.87	931	27.70						
25758	1800	721	12.46	760	15.08	800	17.77	837	20.54	872	23.40	•907	•26.31	944	29.24	978	32.23				
27189	1900	744	13.43	781	16.14	819	18.94	855	21.80	890	24.75	923	27.78	•956	•30.84	991	33.93	1024	37.07		
28620	2000	767	14.46	803	17.27	838	20.17	874	23.13	908	26.16	941	29.28	972	32.47	•1004	•35.70	1037	38.94	1068	42.23
31482	2200	813	16.74	849	19.73	882	22.81	913	26.00	946	29.22	978	32.52	1008	35.89	1038	39.32	•1066	•42.83	•1094	•46.38
34344	2400	865	19.26	895	22.49	927	25.76	957	29.12	986	32.57	1016	36.08	1046	39.62	1075	43.24	1102	46.92	1129	50.67
37206	2600	917	22.11	945	25.54	973	29.05	1003	32.59	1031	36.21	1058	39.92	1084	43.71	1112	47.51	1139	51.36	1166	55.29
40068	2800	970	25.31	997	28.93	1022	32.64	1049	36.42	1076	40.22	1103	44.11	1128	48.07	1152	52.11	1177	56.19	1203	60.29
42930	3000	1024	28.87	1049	32.68	1074	36.59	1098	40.59	1122	44.62	1148	48.69	1173	52.83	1197	57.04	1220	61.32	1242	65.67
45792	3200	1078	32.83	1103	36.84	1126	40.93	1149	45.12	1171	49.38	1194	53.68	1218	58.00	1242	62.39	1264	66.85	1286	71.37
48654	3400	1133	37.20	1156	41.41	1179	45.70	1201	50.07	1223	54.53	1243	59.06	1265	63.63	1288	68.20	1310	72.83	1331	77.53
51516	3600	1188	41.99	1211	46.43	1233	50.92	1254	55.48	1275	60.12	1295	64.84	1314	69.63	1334	74.47	1356	79.28	1377	84.16
54378	3800	1242	47.01	1265	51.92	1287	56.61	1307	61.36	1327	66.20	1347	71.10	1366	76.08	1384	81.12	1402	86.23	1423	91.29
57240	4000	1296	52.49	1321	57.90	1341	62.79	1361	67.75	1380	72.77	1399	77.87	1418	83.03	1436	88.26	1453	93.55	1470	98.91
60102	4200	1351	58.45	1375	64.08	1396	69.51	1415	74.66	1434	79.87	1452	85.16	1470	90.51	1488	95.92	1505	101.40	1521	106.94
62964	4400	1407	64.91	1429	70.77	1451	76.72	1470	82.11	1488	87.53	1506	93.00								
65826	4600	1462	71.90	1484	77.98	1505	84.16														
68688	4800	1518	79.44																		

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
28620	2000	1099	45.57																		
31482	2200	•1124	•49.92	1182	57.14																
34344	2400	1155	54.48	•1208	•62.19	1262	69.98	1313	77.93												
37206	2600	1191	59.27	1240	67.41	•1287	•75.76	•1338	•84.10	1387	92.60										
40068	2800	1228	64.45	1277	72.94	1322	81.65	1366	90.57	•1412	•99.53	1458	108.57	•1503	•117.74						
42930	3000	1266	70.03	1314	78.88	1359	87.94	1402	97.20	1443	106.66	•1484	•116.28								
45792	3200	1308	75.96	1351	85.25	1396	94.66	1439	104.27	1479	114.08	1518	124.07								
48654	3400	1352	82.29	1393	91.99	1434	101.85	1476	111.81	1516	121.97										
51516	3600	1397	89.10	1437	99.15	1475	109.43	1513	119.84												
54378	3800	1443	96.41	1482	106.81	1519	117.43														
57240	4000	1489	104.24																		

• Approximate Max. Static Efficiency and Quietest Selection. **CL. I** ☐ **CL. II** ☐ **CL. III** ☐

The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

Airfoil - Plenum Fan

SIZE 49

SINGLE WIDTH
SINGLE INLET

Wheel Diameter	49 inches	1245 mm
Wheel Circumference	12.9 feet	3.932 m
Inlet Diameter/Area	58 ½ inches dia./15.02 sq. ft.	1486 mm/1.395 m^2
Outlet Area	17.31 sq. ft.	1.608 m^2
Tip Speed	12.8 x RPM ft./minute	3.932 x RPM m/minute
Maximum Power	57.50 x (RPM ÷ 1000)^3 BHP	42.88 x (RPM ÷ 1000)^3 kW

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SIZE 49	-20° to 150°F -29° to 66°C
CLASS I	840
CLASS II	1097
CLASS III	1381
CLASS IV	N/A

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
10416	600	•225	•0.62	•251	•0.89	•275	•1.19	299	1.49												
12152	700	245	0.77	268	1.07	291	1.39	•312	•1.73	•333	•2.08										
13888	800	267	0.94	288	1.27	308	1.63	328	1.99	347	2.37	•365	•2.77	383	3.16						
15624	900	290	1.14	309	1.51	328	1.89	346	2.29	364	2.70	381	3.12	•397	•3.56	429	4.45				
17360	1000	314	1.39	331	1.78	349	2.20	365	2.62	381	3.07	398	3.52	413	3.98	•442	•4.94	•472	•5.93	500	6.94
19096	1100	339	1.67	355	2.10	370	2.54	386	3.00	401	3.47	415	3.95	430	4.44	459	5.46	485	6.52	•512	•7.60
20832	1200	364	1.99	379	2.45	393	2.93	407	3.42	422	3.92	436	4.43	449	4.95	476	6.03	502	7.14	526	8.30
22568	1300	389	2.36	403	2.85	417	3.36	430	3.88	443	4.42	456	4.96	469	5.51	493	6.65	519	7.82	543	9.03
24304	1400	413	2.76	428	3.31	441	3.85	453	4.40	465	4.96	477	5.54	490	6.12	514	7.32	536	8.56	560	9.82
26040	1500	438	3.21	453	3.82	465	4.39	477	4.97	489	5.56	500	6.17	511	6.79	534	8.04	556	9.34	577	10.67
27776	1600	464	3.72	478	4.38	490	4.99	502	5.60	512	6.23	523	6.86	533	7.52	555	8.83	576	10.18	596	11.58
29512	1700	489	4.29	503	4.98	515	5.66	526	6.30	537	6.95	547	7.62	557	8.30	576	9.69	597	11.10	616	12.54
31248	1800	515	4.92	528	5.64	540	6.38	551	7.06	561	7.75	571	8.44	580	9.15	599	10.60	618	12.08	637	13.58
32984	1900	540	5.61	553	6.37	565	7.15	576	7.90	585	8.61	595	9.34	604	10.08	622	11.59	639	13.14	658	14.70
34720	2000	566	6.38	578	7.17	590	7.98	601	8.81	610	9.55	619	10.31	628	11.08	646	12.65	662	14.26	679	15.90
38192	2200	618	8.13	629	8.99	640	9.87	650	10.76	660	11.67	669	12.50	677	13.33	694	15.02	709	16.74	724	18.51
41664	2400	670	10.20	680	11.13	690	12.08	700	13.04	710	14.02	719	15.01	727	15.93	743	17.74	757	19.58	772	21.46
45136	2600	723	12.61	732	13.62	742	14.64	751	15.67	760	16.72	768	17.78	777	18.85	792	20.84	806	22.81	820	24.81
48608	2800	775	15.41	784	16.49	793	17.58	802	18.68	810	19.80	818	20.93	826	22.07	842	24.36	856	26.45	869	28.56
52080	3000	828	18.61	837	19.76	845	20.93	853	22.10	861	23.29	869	24.48	876	25.69	891	28.14	905	30.53	918	32.77
55552	3200	881	22.25	889	23.48	897	24.71	905	25.96	912	27.21	920	28.48	927	29.76	941	32.34	955	34.97	968	37.46
59024	3400	934	26.36	942	27.65	949	28.96	956	30.28	964	31.60	971	32.94	978	34.29	991	37.01	1005	39.77	1018	42.57
62496	3600	987	30.95	995	32.32	1002	33.70	1008	35.09	1015	36.49	1022	37.89	1029	39.31	1042	42.17	1054	45.07	1067	48.00
65968	3800	1041	36.08	1048	37.52	1054	38.97	1061	40.43	1067	41.90	1074	43.37	1080	44.86	1092	47.86	1105	50.90	1117	53.96

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
19096	1100	538	8.70																		
20832	1200	•550	•9.47	598	11.88																
22568	1300	565	10.27	•610	•12.83	654	15.45														
24304	1400	582	11.12	623	13.82	665	16.58														
26040	1500	599	12.02	639	14.83	•677	•17.76	717	20.72												
27776	1600	616	13.00	656	15.91	693	18.95	•729	•22.08	766	25.25	801	28.49								
29512	1700	635	14.03	673	17.07	710	20.21	744	23.47	•777	•26.80	812	30.17	845	33.60						
31248	1800	655	15.12	690	18.30	727	21.55	760	24.92	792	28.39	•824	•31.92	857	35.47	888	39.09				
32984	1900	676	16.30	710	19.59	744	22.97	777	26.45	808	30.02	838	33.70	•869	•37.42	900	41.16	930	44.97		
34720	2000	696	17.55	730	20.95	761	24.48	794	28.06	825	31.74	855	35.52	883	39.39	•912	•43.31	942	47.24	970	51.23
38192	2200	739	20.31	771	23.94	801	27.68	829	31.54	859	35.46	888	39.45	916	43.54	943	47.71	•968	•51.96	•994	•56.27
41664	2400	786	23.38	813	27.30	842	31.26	870	35.34	896	39.52	923	43.77	950	48.07	976	52.46	1001	56.92	1026	61.47
45136	2600	833	26.84	859	31.00	884	35.25	911	39.54	936	43.94	961	48.44	985	53.03	1010	57.64	1035	62.32	1059	67.08
48608	2800	881	30.71	906	35.11	929	39.62	953	44.19	978	48.81	1002	53.52	1025	58.33	1047	63.22	1069	68.17	1093	73.15
52080	3000	930	35.04	953	39.67	976	44.41	997	49.25	1020	54.15	1043	59.08	1065	64.10	1087	69.21	1108	74.40	1129	79.68
55552	3200	979	39.85	1002	44.71	1023	49.68	1044	54.75	1064	59.93	1085	65.15	1107	70.39	1128	75.71	1149	81.12	1169	86.60
59024	3400	1029	45.16	1051	50.26	1071	55.47	1091	60.77	1111	66.17	1130	71.67	1149	77.21	1170	82.75	1190	88.38	1209	94.08
62496	3600	1079	50.97	1100	56.36	1120	61.80	1139	67.34	1158	72.97	1176	78.69	1194	84.50	1212	90.37	1232	96.21	1251	102.13
65968	3800	1128	57.07	1150	63.03	1169	68.71	1188	74.48	1206	80.34	1224	86.29	1241	92.33	1258	98.44	1274	104.64	1293	110.78
69440	4000	1178	63.72	1200	70.29	1219	76.22	1237	82.23	1254	88.32	1271	94.50	1288	100.77	1304	107.11	1320	113.53	1336	120.03
72912	4200	1228	70.95	1249	77.79	1268	84.37	1286	90.62	1303	96.95	1319	103.36	1336	109.85	1352	116.42	1367	123.06		
76384	4400	1278	78.80	1299	85.91	1318	93.13	1335	99.67	1352	106.24	1368	112.88								
79856	4600	1329	87.29	1348	94.67	1368	102.15														
83328	4800	1379	96.45																		

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
34720	2000	998	55.28																		
38192	2200	•1021	•60.56	1074	69.31																
41664	2400	1049	66.09	•1097	•75.45	1146	84.89	1192	94.53												
45136	2600	1082	71.91	1127	81.78	•1169	•91.91	•1215	•102.03	1259	112.33										
48608	2800	1116	78.19	1160	88.49	1201	99.05	1241	109.88	•1283	•120.74	1325	131.70	•1365	•142.83						
52080	3000	1150	84.97	1193	95.70	1234	106.68	1273	117.92	1311	129.40	•1348	•141.06								
55552	3200	1188	92.16	1228	103.43	1268	114.85	1307	126.51	1344	138.40	1379	150.52								
59024	3400	1228	99.85	1265	111.62	1302	123.57	1341	135.66	1377	147.97										
62496	3600	1269	108.11	1305	120.30	1340	132.77	1375	145.41												
65968	3800	1311	116.99	1346	129.61	1380	142.49														
69440	4000	1353	126.50																		

• Approximate Max. Static Efficiency and Quietest Selection. **CL. I ☐ CL. II ☐ CL. III ☐**
The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

SIZE 54

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SIZE 54	-20° to 150°F -29° to 66°C
CLASS I	759
CLASS II	991
CLASS III	1248
CLASS IV	N/A

SINGLE WIDTH SINGLE INLET

Wheel Diameter	54 ¼ inches	1378 mm
Wheel Circumference	14.2 feet	4.328 m
Inlet Diameter/Area	65 inches dia./18.49 sq. ft.	1651 mm/1.718 m^2
Outlet Area	21.28 sq. ft.	1.977 m^2
Tip Speed	14.2 x RPM ft./minute	4.328 x RPM m/minute
Maximum Power	95.70 x (RPM ÷ 1000)^3 BHP	71.36 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
12768	600	•203	•0.76	•227	•1.10	•249	•1.45	270	1.82												
14896	700	221	0.94	242	1.31	263	1.71	•282	•2.12	•301	•2.54										
17024	800	241	1.15	260	1.56	278	1.99	297	2.44	313	2.91	•329	•3.39	346	3.88						
19152	900	262	1.40	279	1.85	296	2.32	312	2.81	329	3.31	344	3.83	•358	•4.36	388	5.45				
21280	1000	284	1.70	299	2.19	315	2.69	330	3.22	344	3.76	359	4.31	373	4.88	•400	•6.05	•426	•7.26	452	8.50
23408	1100	306	2.04	321	2.57	334	3.12	349	3.67	362	4.25	375	4.84	389	5.45	415	6.69	438	7.99	•462	•9.32
25536	1200	329	2.44	342	3.00	355	3.59	368	4.19	381	4.80	393	5.43	405	6.07	430	7.39	453	8.75	475	10.17
27664	1300	351	2.89	364	3.50	377	4.12	388	4.76	400	5.41	412	6.08	424	6.75	446	8.15	469	9.59	490	11.07
29792	1400	373	3.38	387	4.06	398	4.71	410	5.39	420	6.08	431	6.79	442	7.50	464	8.97	484	10.49	505	12.04
31920	1500	396	3.94	409	4.69	420	5.38	431	6.09	441	6.82	451	7.57	461	8.32	482	9.86	502	11.45	521	13.08
34048	1600	419	4.56	432	5.37	443	6.12	453	6.87	463	7.63	472	8.41	482	9.21	501	10.83	520	12.48	538	14.19
36176	1700	442	5.26	454	6.10	465	6.93	475	7.72	485	8.52	494	9.34	503	10.17	520	11.88	539	13.60	557	15.38
38304	1800	465	6.03	477	6.92	488	7.82	497	8.66	507	9.50	516	10.35	524	11.22	541	13.00	558	14.81	575	16.65
40432	1900	488	6.88	499	7.81	510	8.76	520	9.68	529	10.56	537	11.45	546	12.35	562	14.21	577	16.11	594	18.02
42560	2000	511	7.82	522	8.79	533	9.78	543	10.80	551	11.71	560	12.64	568	13.58	583	15.51	598	17.48	613	19.49
46816	2200	558	9.96	568	11.02	578	12.10	587	13.20	596	14.31	604	15.32	612	16.34	627	18.41	641	20.52	654	22.69
51072	2400	605	12.50	615	13.64	624	14.81	632	15.99	641	17.19	649	18.40	657	19.53	671	21.74	684	24.00	697	26.31
55328	2600	653	15.46	661	16.70	670	17.95	678	19.21	686	20.50	694	21.80	702	23.11	715	25.55	728	27.96	740	30.41
59584	2800	700	18.89	708	20.21	716	21.55	724	22.90	732	24.27	739	25.65	747	27.05	761	29.86	773	32.42	785	35.02
63840	3000	748	22.82	756	24.23	763	25.65	770	27.09	778	28.55	785	30.01	792	31.50	805	34.50	818	37.43	829	40.17
68096	3200	796	27.28	803	28.78	810	30.29	817	31.82	824	33.36	831	34.91	837	36.48	850	39.65	863	42.86	874	45.92
72352	3400	844	32.31	851	33.90	857	35.50	864	37.11	870	38.74	877	40.38	883	42.03	895	45.37	907	48.75	919	52.18
76608	3600	892	37.95	898	39.62	905	41.31	911	43.01	917	44.73	923	46.45	929	48.19	941	51.70	952	55.25	964	58.84
80864	3800	940	44.22	946	45.99	952	47.77	958	49.56	964	51.36	970	53.17	976	54.99	987	58.67	998	62.39	1009	66.15

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
23408	1100	486	10.67																		
25536	1200	•497	•11.61	540	14.56																
27664	1300	510	12.59	•551	•15.72	590	18.94														
29792	1400	525	13.63	563	16.93	601	20.32														
31920	1500	541	14.74	577	18.18	•611	•21.77	647	25.40												
34048	1600	556	15.93	593	19.51	626	23.23	•658	•27.07	692	30.95	723	34.92								
36176	1700	574	17.20	608	20.92	641	24.78	672	28.77	•702	•32.86	734	36.98	764	41.19						
38304	1800	592	18.54	624	22.43	656	26.42	687	30.54	715	34.80	•744	•39.12	774	43.48	802	47.92				
40432	1900	610	19.98	641	24.01	672	28.16	702	32.42	730	36.80	757	41.30	•785	•45.87	813	50.46	840	55.13		
42560	2000	629	21.51	659	25.68	687	30.00	717	34.40	745	38.91	772	43.54	797	48.29	•823	•53.09	851	57.91	876	62.80
46816	2200	667	24.90	696	29.34	723	33.93	749	38.67	776	43.46	802	48.36	827	53.37	851	58.48	•874	•63.69	•898	•68.98
51072	2400	710	28.66	734	33.46	761	38.32	786	43.32	809	48.44	833	53.66	858	58.93	882	64.30	904	69.78	926	75.35
55328	2600	752	32.90	775	38.00	799	43.21	823	48.47	846	53.87	868	59.38	889	65.01	912	70.65	935	76.39	956	82.22
59584	2800	796	37.65	818	43.03	839	48.56	861	54.17	883	59.83	905	65.61	925	71.50	946	77.50	966	83.57	987	89.66
63840	3000	840	42.95	861	48.62	881	54.43	901	60.37	921	66.38	942	72.42	962	78.58	982	84.84	1001	91.20	1019	97.67
68096	3200	885	48.85	905	54.81	924	60.90	943	67.12	961	73.46	980	79.86	1000	86.28	1019	92.81	1038	99.44	1056	106.16
72352	3400	929	55.36	949	61.61	968	67.99	986	74.50	1003	81.12	1020	87.86	1038	94.65	1057	101.44	1075	108.33	1092	115.32
76608	3600	975	62.48	994	69.09	1012	75.76	1029	82.55	1046	89.45	1063	96.46	1079	103.58	1095	110.78	1112	117.94	1130	125.19
80864	3800	1019	69.96	1039	77.26	1056	84.23	1073	91.30	1089	98.49	1105	105.78	1121	113.18	1136	120.68	1151	128.27	1168	135.80
85120	4000	1064	78.11	1084	86.16	1101	93.44	1117	100.80	1133	108.27	1148	115.85	1163	123.52	1178	131.30	1193	139.17	1207	147.13
89376	4200	1109	86.98	1128	95.36	1146	103.43	1161	111.08	1177	118.84	1192	126.70	1206	134.66	1221	142.71	1235	150.85		
93632	4400	1154	96.60	1173	105.31	1191	114.16	1206	122.18	1221	130.23	1236	138.38								
97888	4600	1200	107.00	1218	116.05	1235	125.23														
102144	4800	1246	118.23																		

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
42560	2000	902	67.77																		
46816	2200	•922	•74.24	970	84.97																
51072	2400	948	81.01	•991	•92.48	1035	104.06	1077	115.88												
55328	2600	977	88.14	1018	100.25	•1056	•112.66	•1098	•125.07	1138	137.70										
59584	2800	1008	95.85	1047	108.47	1085	121.42	1121	134.69	•1158	•148.01	1196	161.44	•1233	•175.09						
63840	3000	1039	104.16	1078	117.31	1115	130.77	1150	144.55	1184	158.62	•1217	•172.91								
68096	3200	1073	112.98	1109	126.79	1145	140.78	1180	155.07	1214	169.65	1246	184.51								
72352	3400	1110	122.40	1143	136.82	1176	151.48	1211	166.29	1244	181.39										
76608	3600	1147	132.53	1179	147.47	1210	162.75	1242	178.24												
80864	3800	1184	143.41	1216	158.87	1246	174.67														
85120	4000	1222	155.06																		

• Approximate Max. Static Efficiency and Quietest Selection. **CL. I** ☐ **CL. II** ☐ **CL. III** ☐

The U.S. FAN class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 26.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

Airfoil - Plenum Fan

SIZE 60

SINGLE WIDTH
SINGLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

Wheel Diameter	60 inches	1524 mm
Wheel Circumference	15.7 feet	4.785 m
Inlet Diameter/Area	77½ inches dia./22.32 sq. ft.	1816 mm/2.074 m^2
Outlet Area	26.02 sq. ft.	2.417 m^2
Tip Speed	15.7 x RPM ft./minute	4.785 x RPM m/minute
Maximum Power	158.70 (RPM ÷ 1000)^3 BHP	118.3 x (RPM ÷ 1000)^3 kW

SIZE 60	-20° to 150°F -29° to 66°C
CLASS I	686
CLASS II	896
CLASS III	N/A
CLASS IV	N/A

VOL CFM	OUT VEL	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		⅞" SP		1" SP		1¼" SP		1½" SP		1¾" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15612	600	•183	•0.93	•205	•1.34	•225	•1.78	244	2.23												
18214	700	200	1.15	219	1.60	238	2.09	•255	•2.59	•272	•3.11										
20816	800	218	1.41	235	1.91	252	2.44	268	2.99	283	3.56	•298	•4.15	313	4.74						
23418	900	237	1.72	252	2.27	268	2.84	282	3.43	297	4.05	311	4.68	•324	•5.33	351	6.66				
26020	1000	257	2.08	271	2.67	285	3.29	298	3.93	311	4.59	325	5.27	337	5.96	•361	•7.40	•385	•8.88	409	10.40
28622	1100	277	2.50	290	3.14	302	3.81	315	4.49	327	5.20	339	5.92	351	6.66	375	8.18	396	9.77	•418	•11.39
31224	1200	297	2.99	309	3.67	321	4.39	332	5.12	344	5.87	356	6.64	366	7.42	389	9.04	410	10.70	430	12.43
33826	1300	317	3.53	329	4.28	340	5.04	351	5.82	361	6.62	373	7.43	383	8.26	403	9.97	424	11.72	443	13.53
36428	1400	338	4.14	350	4.96	360	5.76	370	6.59	380	7.44	390	8.30	400	9.17	419	10.97	438	12.82	457	14.72
39030	1500	358	4.82	370	5.73	380	6.57	390	7.45	399	8.34	408	9.25	417	10.17	436	12.05	454	14.00	471	15.99
41632	1600	379	5.58	390	6.56	400	7.48	409	8.39	418	9.33	427	10.29	435	11.26	453	13.24	470	15.26	487	17.35
44234	1700	399	6.43	410	7.46	421	8.47	429	9.44	438	10.42	446	11.42	454	12.44	470	14.52	487	16.63	503	18.80
46836	1800	420	7.37	431	8.45	441	9.56	450	10.58	458	11.61	466	12.65	474	13.71	489	15.89	504	18.11	520	20.36
49438	1900	441	8.41	451	9.55	461	10.71	470	11.83	478	12.90	486	13.99	493	15.10	508	17.37	522	19.69	537	22.03
52040	2000	462	9.55	472	10.74	481	11.96	490	13.19	498	14.32	506	15.45	513	16.60	527	18.95	541	21.37	554	23.83
57244	2200	505	12.17	514	13.47	522	14.79	531	16.13	539	17.49	546	18.73	553	19.97	566	22.50	579	25.09	591	27.74
62448	2400	547	15.27	556	16.67	564	18.10	572	19.54	579	21.01	587	22.49	594	23.87	606	26.58	618	29.34	630	32.16
67652	2600	590	18.89	598	20.40	605	21.93	613	23.48	620	25.05	627	26.64	634	28.24	647	31.23	658	34.17	669	37.17
72856	2800	633	23.08	640	24.70	647	26.34	655	27.99	661	29.66	668	31.35	675	33.06	688	36.50	698	39.62	709	42.80
78060	3000	676	27.88	683	29.61	690	31.35	696	33.11	703	34.89	709	36.68	716	38.49	728	42.16	739	45.75	749	49.10
83264	3200	719	33.33	726	35.17	732	37.02	739	38.88	745	40.77	751	42.66	757	44.58	768	48.45	780	52.39	790	56.12
88468	3400	763	39.48	769	41.42	775	43.38	781	45.35	787	47.34	792	49.35	798	51.36	809	55.45	820	59.58	831	63.78
93672	3600	806	46.37	812	48.42	818	50.48	823	52.56	829	54.66	834	56.77	840	58.89	850	63.18	861	67.52	871	71.92
98876	3800	850	54.04	855	56.20	861	58.37	866	60.56	871	62.76	877	64.98	882	67.20	892	71.70				

VOL CFM	OUT VEL	2" SP		2½" SP		3" SP		3½" SP		4" SP		4½" SP		5" SP		5½" SP		6" SP		6½" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
28622	1100	440	13.04																		
31224	1200	•449	•14.20	489	17.81																
33826	1300	461	15.40	•498	•19.23																
36428	1400	475	16.66	509	20.71	543	24.84														
39030	1500	489	18.02	522	22.23	•553	•26.62	585	31.05												
41632	1600	503	19.48	536	23.85	566	28.40	•595	•33.10	625	37.84	654	42.70								
44234	1700	518	21.03	550	25.58	579	30.30	607	35.18	•635	•40.18	663	45.21	690	50.36						
46836	1800	535	22.67	564	27.43	593	32.30	621	37.35	647	42.55	•673	•47.84	700	53.17	726	58.60				
49438	1900	552	24.42	579	29.36	607	34.43	634	39.64	660	45.00	684	50.50	•709	•56.08	735	61.70	759	67.41		
52040	2000	569	26.30	596	31.40	621	36.68	648	42.05	674	47.58	698	53.24	721	59.05	•744	•64.92	769	70.81	792	76.79
57244	2200	603	30.44	629	35.87	654	41.49	677	47.27	702	53.14	725	59.13	748	65.25	770	71.50	•791	•77.88	•811	•84.34
62448	2400	641	35.03	664	40.90	688	46.85	710	52.96	732	59.23	753	65.60	776	72.05	797	78.62	818	85.32	837	92.13
67652	2600	680	40.21	701	46.45	722	52.82	744	59.26	765	65.85	785	72.60	804	79.48	825	86.38	845	93.40	865	100.53
72856	2800	719	46.02	739	52.61	758	59.37	778	66.22	798	73.14	818	80.21	837	87.41	855	94.75	873	102.17	892	109.63
78060	3000	759	52.50	778	59.44	797	66.54	814	73.81	833	81.14	852	88.54	870	96.07	888	103.72				
83264	3200	800	59.70	818	66.99	835	74.44	852	82.05	869	89.81	886	97.62								
88468	3400	840	67.66	858	75.31	875	83.11	891	91.06												
93672	3600	881	76.37																		
109284	4200																				
114488	4400																				
119692	4600																				
124896	4800																				

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
52040	2000	815	82.86																		
57244	2200	•834	•90.77	877	103.89																
62448	2400	857	99.05	•896	•113.08																
67652	2600	884	107.77																		

• Approximate Max. Static Efficiency and Quietest Selection. **CL. I** ☐ **CL. II** ☐ **CL. III** ☐

The U.S. Fan class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.

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).

Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 44.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SINGLE WIDTH
SINGLE INLET

SIZE 66

SIZE 66	-20° to 150°F -29° to 66°C
CLASS I	624
CLASS II	814
CLASS III	N/A
CLASS IV	N/A

Wheel Diameter	66 inches	1676 mm
Wheel Circumference	17.3 feet	5.273 m
Inlet Diameter/Area	77 ½ inches dia./26.70 sq. ft.	1969 mm/2.480 m^2
Outlet Area	31.49 sq. ft.	2.925 m^2
Tip Speed	17.3 x RPM ft./minute	5.273 x RPM m/minute
Maximum Power	255.30 x (RPM ÷ 1000)^3 BHP	190.4 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
18894	600	•167	•1.12	•186	•1.62	•204	•2.15	222	2.70												
22043	700	182	1.39	199	1.94	216	2.52	•231	•3.14	•247	•3.76										
25192	800	198	1.71	214	2.31	229	2.95	244	3.61	258	4.30	•271	•5.02	285	5.74						
28341	900	216	2.08	229	2.74	243	3.43	257	4.16	270	4.90	283	5.66	•294	•6.45	319	8.07				
31490	1000	233	2.51	246	3.24	259	3.98	271	4.76	283	5.56	295	6.38	307	7.22	•328	•8.96	•350	•10.75	371	12.58
34639	1100	252	3.02	264	3.80	275	4.61	286	5.44	298	6.29	308	7.17	319	8.06	341	9.90	360	11.82	•380	•13.79
37788	1200	270	3.61	281	4.45	292	5.31	302	6.20	313	7.10	323	8.03	333	8.99	353	10.94	373	12.95	390	15.05
40937	1300	289	4.28	299	5.18	310	6.09	319	7.04	329	8.01	339	8.99	348	9.99	366	12.06	385	14.19	403	16.37
44086	1400	307	5.01	318	6.00	327	6.98	337	7.98	345	9.00	354	10.05	364	11.10	381	13.27	398	15.52	415	17.81
47235	1500	325	5.83	336	6.93	346	7.96	354	9.01	363	10.09	371	11.20	379	12.31	396	14.59	412	16.94	428	19.36
50384	1600	344	6.75	355	7.94	364	9.05	372	10.16	380	11.29	388	12.45	396	13.63	412	16.02	428	18.47	442	21.00
53533	1700	363	7.78	373	9.03	382	10.26	390	11.42	398	12.61	406	13.82	413	15.05	428	17.57	443	20.13	457	22.75
56682	1800	382	8.92	392	10.23	401	11.58	409	12.81	416	14.05	424	15.31	431	16.60	444	19.23	459	21.91	473	24.64
59831	1900	401	10.18	410	11.55	419	12.96	427	14.32	435	15.62	442	16.94	449	18.28	462	21.02	474	23.84	488	26.67
62980	2000	420	11.56	429	13.00	438	14.47	446	15.97	453	17.33	460	18.70	467	20.10	479	22.94	492	25.86	504	28.84
69278	2200	459	14.74	467	16.30	475	17.90	483	19.52	490	21.17	497	22.67	503	24.17	515	27.23	527	30.37	538	33.57
75576	2400	497	18.49	505	20.19	513	21.91	520	23.66	527	25.43	534	27.23	540	28.89	551	32.17	562	35.52	573	38.93
81874	2600	536	22.87	544	24.70	551	26.55	557	28.43	564	30.32	570	32.25	577	34.19	588	37.80	598	41.36	609	44.99
88172	2800	576	27.94	582	29.90	589	31.88	595	33.88	601	35.91	607	37.95	614	40.02	625	44.18	635	47.96	645	51.81
94470	3000	615	33.75	621	35.84	627	37.95	633	40.08	639	42.23	645	44.40	651	46.60	662	51.04	672	55.37	681	59.43
100768	3200	654	40.35	660	42.57	666	44.81	671	47.07	677	49.35	683	51.65	688	53.96	699	58.65	709	63.41	718	67.93
107066	3400	694	47.79	699	50.15	705	52.51	710	54.90	715	57.31	721	59.74	726	62.18	736	67.12	746	72.13	755	77.20
113364	3600	733	56.13	738	58.61	743	61.11	749	63.63	754	66.17	759	68.72	764	71.29	773	76.48	783	81.74	792	87.06
119662	3800	773	65.42	778	68.03	783	70.66	787	73.31	792	75.98	797	78.66	802	81.35	811	86.80				

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
34639	1100	400	15.79																		
37788	1200	•408	•17.19	444	21.55																
40937	1300	420	18.63	•453	•23.27																
44086	1400	432	20.16	462	25.06	494	30.07														
47235	1500	444	21.81	475	26.90	•502	•32.21	532	37.58												
50384	1600	457	23.58	487	28.87	514	34.38	•541	•40.06	568	45.80	595	51.68								
53533	1700	471	25.45	500	30.96	527	36.67	552	42.58	•577	•48.62	603	54.72	628	60.95						
56682	1800	486	27.43	513	33.19	539	39.10	564	45.20	588	51.49	•612	•57.89	636	64.34	660	70.91				
59831	1900	502	29.56	527	35.53	552	41.67	577	47.97	600	54.46	622	61.12	•645	•67.87	668	74.67	690	81.57		
62980	2000	517	31.83	542	38.00	565	44.40	589	50.90	613	57.58	635	64.43	655	71.46	•677	•78.56	699	85.69	720	92.93
69278	2200	549	36.84	572	43.42	595	50.21	616	57.21	638	64.31	659	71.56	680	78.97	700	86.54	•719	•94.25	•738	•102.07
75576	2400	583	42.40	604	49.51	625	56.70	646	64.10	665	71.68	685	79.40	705	87.20	725	95.16	743	103.26	761	111.50
81874	2600	618	48.68	637	56.22	656	63.93	676	71.72	695	79.70	713	87.86	731	96.19	750	104.55	768	113.04	786	121.67
88172	2800	654	55.71	672	63.67	690	71.85	707	80.15	726	88.53	744	97.08	761	105.80	777	114.68	794	123.65	811	132.68
94470	3000	690	63.55	708	71.94	724	80.54	740	89.33	757	98.21	774	107.16	791	116.27	807	125.54				
100768	3200	727	72.27	744	81.09	760	90.10	775	99.31	790	108.70	805	118.16								
107066	3400	764	81.91	780	91.16	795	100.60	810	110.22												
113364	3600	801	92.44																		
132258	4200																				
138556	4400																				
144854	4600																				
151152	4800																				

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
62980	2000	741	100.28																		
69278	2200	•758	•109.86	797	125.73																
75576	2400	779	119.88	•814	•136.86																
81874	2600	803	130.43																		

• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐ CL. III ☐
The U.S. Fan class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 44.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

Airfoil - Plenum Fan

SIZE 73

SINGLE WIDTH
SINGLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

Wheel Diameter	73 inches	1854 mm
Wheel Circumference	19.1 feet	5.822 m
Inlet Diameter/Area	82 $^3/_8$ inches dia./36.3 sq. ft.	2092 mm/3.372 m^2
Outlet Area	38.52 sq. ft.	3.579 m^2
Tip Speed	19.1 x RPM ft./minute	5.822 x RPM m/minute
Maximum Power	422.00 (RPM ÷ 1000)^3 BHP	314.7 x (RPM ÷ 1000)^3 kW

SIZE 73	-20° to 150°F -29° to 66°C
CLASS I	564
CLASS II	736
CLASS III	N/A
CLASS IV	N/A

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
23118	600	•151	•1.38	•169	•1.98	•185	•2.63	201	3.30												
26971	700	164	1.70	180	2.38	195	3.09	•209	•3.84	•223	•4.61										
30824	800	179	2.09	193	2.83	207	3.61	220	4.42	233	5.27	•245	•6.14	257	7.02						
34677	900	195	2.54	207	3.36	220	4.20	232	5.09	244	5.99	256	6.93	•266	•7.89	288	9.87				
38530	1000	211	3.08	222	3.96	234	4.88	245	5.82	256	6.80	267	7.80	277	8.83	•297	•10.96	•317	•13.15	336	15.40
42383	1100	227	3.70	238	4.65	248	5.64	259	6.65	269	7.70	279	8.77	289	9.86	308	12.12	326	14.47	•344	•16.87
46236	1200	244	4.42	254	5.44	264	6.50	273	7.59	283	8.69	292	9.83	301	10.99	319	13.38	337	15.85	353	18.41
50089	1300	261	5.23	271	6.34	280	7.46	289	8.62	297	9.80	306	11.00	315	12.23	331	14.76	348	17.36	364	20.04
53942	1400	278	6.13	287	7.35	296	8.54	304	9.76	312	11.02	320	12.29	329	13.58	345	16.24	360	18.99	376	21.79
57795	1500	294	7.13	304	8.48	312	9.74	320	11.03	328	12.35	335	13.70	343	15.07	358	17.85	373	20.73	387	23.68
61648	1600	311	8.26	321	9.71	329	11.07	337	12.43	344	13.82	351	15.23	358	16.68	372	19.60	387	22.60	400	25.69
65501	1700	328	9.52	337	11.05	346	12.55	353	13.98	360	15.43	367	16.91	374	18.42	387	21.50	401	24.63	414	27.84
69354	1800	345	10.92	354	12.52	363	14.17	370	15.67	377	17.19	383	18.74	390	20.31	402	23.54	415	26.82	427	30.15
73207	1900	363	12.46	371	14.14	379	15.86	386	17.53	393	19.11	399	20.73	406	22.37	418	25.72	429	29.17	441	32.63
77060	2000	380	14.15	388	15.91	396	17.71	403	19.54	410	21.21	416	22.89	422	24.59	433	28.07	444	31.65	456	35.29
84766	2200	415	18.04	422	19.95	429	21.91	436	23.89	443	25.91	449	27.74	455	29.58	466	33.33	476	37.16	486	41.08
92472	2400	450	22.63	457	24.70	463	26.81	470	28.95	476	31.12	483	33.32	488	35.35	498	39.37	508	43.46	518	47.64
100178	2600	485	28.00	492	30.23	498	32.50	504	34.79	510	37.11	516	39.46	522	41.84	532	46.26	541	50.62	550	55.05
107884	2800	520	34.20	526	36.60	532	39.02	538	41.47	544	43.95	549	46.45	555	48.98	565	54.07	574	58.70	583	63.40
115590	3000	556	41.31	562	43.87	567	46.45	573	49.05	578	51.69	583	54.34	588	57.02	598	62.46	608	67.77	616	72.73
123296	3200	591	49.39	597	52.10	602	54.84	607	57.61	612	60.40	617	63.21	622	66.04	632	71.78	641	77.61	650	83.13
131002	3400	627	58.50	632	61.37	637	64.27	642	67.19	647	70.14	652	73.11	656	76.10	665	82.14	674	88.27	683	94.48
138708	3600	663	68.70	668	71.74	672	74.80	677	77.88	682	80.98	686	84.10	690	87.25	699	93.60	708	100.03	716	106.54
146414	3800	699	80.07	703	83.27	708	86.48	712	89.72	716	92.98	721	96.26	725	99.56	733	106.22				

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
42383	1100	361	19.32																		
46236	1200	•369	•21.03	402	26.37																
50089	1300	379	22.80	•409	•28.47	439	34.30														
53942	1400	390	24.67	418	30.66	446	36.79														
57795	1500	402	26.69	429	32.92	•454	•39.41	481	45.98												
61648	1600	413	28.85	440	35.32	465	42.06	•489	•49.02	514	56.04	538	63.23								
65501	1700	426	31.14	452	37.88	476	44.86	499	52.09	•522	•59.49	545	66.95	567	74.57						
69354	1800	440	33.57	463	40.61	488	47.84	510	55.31	532	63.00	•553	•70.84	575	78.73	596	86.77				
73207	1900	454	36.17	476	43.48	499	50.99	522	58.70	543	66.63	563	74.79	•583	•83.05	604	91.36	624	99.81		
77060	2000	467	38.95	490	46.50	511	54.33	533	62.28	554	70.45	574	78.84	593	87.43	•612	•96.13	632	104.85	651	113.71
84766	2200	496	45.08	517	53.13	538	61.44	557	70.01	577	78.70	596	87.56	615	96.63	633	105.88	•650	•115.33	•667	•124.89
92472	2400	527	51.89	546	60.58	565	69.38	584	78.43	601	87.71	619	97.15	638	106.70	655	116.43	672	126.34	688	136.43
100178	2600	559	59.56	576	68.80	593	78.23	611	87.77	629	97.53	645	107.51	661	117.70	678	127.92	695	138.31	711	148.87
107884	2800	591	68.17	608	77.92	624	87.93	640	98.08	656	108.33	672	118.79	688	129.46	703	140.32	718	151.30	734	162.34
115590	3000	624	77.77	640	88.04	655	98.56	669	109.31	684	120.18	700	131.13	715	142.27	730	153.61				
123296	3200	657	88.44	672	99.23	687	110.26	701	121.52	714	133.01	728	144.59								
131002	3400	691	100.23	705	111.55	719	123.11	733	134.88												
138708	3600	724	113.13																		
161826	4200																				
169532	4400																				
177238	4600																				
184944	4800																				

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
77060	2000	670	122.70																		
84766	2200	•685	•134.42	721	153.84																
92472	2400	704	146.68	•736	•167.45																
100178	2600	726	159.59																		

• **Approximate Max. Static Efficiency and Quietest Selection.** **CL. I** ☐ **CL. II** ☐ **CL. III** ☐

The U.S. Fan class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 44.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

SINGLE WIDTH
SINGLE INLET

SIZE 81

SIZE 81	-20° to 150°F -29° to 66°C
CLASS I	510
CLASS II	665
CLASS III	N/A
CLASS IV	N/A

Wheel Diameter	80 ¾ inches	2051 mm
Wheel Circumference	21.1 feet	6.431 m
Inlet Diameter/Area	90 ¼ inches dia./ 43.6 sq. ft.	2289 mm/4.051 m^2
Outlet Area	47.12 sq. ft.	4.378 m^2
Tip Speed	21.1 x RPM ft./minute	6.431 x RPM m/minute
Maximum Power	699.9 x (RPM ÷ 1000)^3 BHP	521.9 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
28278	600	•136	•1.68	•152	•2.43	•167	•3.22	182	4.04												
32991	700	149	2.08	163	2.91	177	3.78	•189	•4.70	•202	•5.63										
37704	800	162	2.55	175	3.46	187	4.42	199	5.41	210	6.44	•221	•7.51	233	8.59						
42417	900	176	3.11	187	4.10	199	5.14	210	6.22	221	7.33	231	8.47	•241	•9.66	260	12.07				
47130	1000	191	3.76	201	4.84	211	5.96	222	7.12	231	8.32	241	9.54	251	10.80	•268	•13.41	•286	•16.09	304	18.83
51843	1100	206	4.53	215	5.69	224	6.90	234	8.14	243	9.41	252	10.73	261	12.06	278	14.82	294	17.70	•311	•20.64
56556	1200	221	5.41	230	6.65	239	7.95	247	9.28	256	10.63	264	12.02	272	13.45	289	16.37	304	19.39	319	22.52
61269	1300	236	6.40	245	7.75	253	9.12	261	10.54	269	11.99	277	13.45	285	14.95	299	18.06	315	21.23	329	24.51
65982	1400	251	7.49	260	8.98	268	10.44	275	11.94	282	13.47	290	15.03	297	16.61	312	19.86	325	23.23	340	26.65
70695	1500	266	8.72	275	10.37	282	11.91	290	13.49	296	15.10	303	16.76	310	18.43	324	21.83	337	25.35	350	28.97
75408	1600	281	10.10	290	11.88	297	13.54	304	15.20	311	16.90	317	18.63	323	20.40	337	23.97	349	27.64	362	31.43
80121	1700	297	11.64	305	13.51	312	15.35	319	17.09	326	18.87	332	20.68	338	22.53	349	26.30	362	30.12	374	34.05
84834	1800	312	13.35	320	15.31	328	17.32	334	19.16	340	21.02	346	22.91	352	24.84	363	28.78	375	32.80	386	36.88
89547	1900	328	15.23	335	17.29	343	19.40	349	21.43	355	23.37	361	25.35	367	27.35	377	31.45	388	35.67	399	39.91
94260	2000	343	17.30	351	19.46	358	21.66	364	23.90	370	25.93	376	27.99	381	30.07	392	34.33	402	38.71	412	43.16
103686	2200	375	22.05	382	24.40	388	26.78	394	29.21	401	31.68	406	33.92	411	36.17	421	40.76	430	45.44	439	50.24
113112	2400	407	27.66	413	30.20	419	32.78	425	35.40	431	38.05	436	40.74	441	43.23	450	48.14	459	53.15	468	58.26
122538	2600	438	34.23	444	36.96	450	39.73	455	42.54	461	45.38	466	48.25	471	51.16	480	56.56	489	61.90	497	67.32
131964	2800	470	41.81	476	44.74	481	47.70	486	50.70	491	53.73	496	56.79	501	59.89	511	66.11	519	71.77	527	77.52
141390	3000	502	50.50	508	53.63	513	56.78	517	59.97	522	63.19	527	66.44	532	69.72	541	76.37	549	82.86	557	88.94
150816	3200	535	60.38	539	63.70	544	67.05	549	70.43	553	73.84	558	77.28	562	80.75	571	87.77	579	94.89	587	101.65
160242	3400	567	71.51	571	75.03	576	78.58	580	82.15	585	85.75	589	89.38	593	93.04	601	100.43	609	107.93	617	115.52
169668	3600	599	83.99	603	87.70	608	91.44	612	95.21	616	99.01	620	102.83	624	106.67	632	114.44	640	122.31	647	130.27
179094	3800	631	97.88	635	101.79	639	105.73	643	109.69	647	113.68	651	117.69	655	121.73	663	129.88				

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
51843	1100	327	23.63																		
56556	1200	•334	•25.72	363	32.26																
61269	1300	343	27.89	•370	•34.82																
65982	1400	353	30.18	378	37.51	404	45.00														
70695	1500	363	32.64	388	40.26	•411	•48.21	435	56.24												
75408	1600	374	35.29	398	43.20	420	51.45	•442	•59.96	465	68.54	486	77.34								
80121	1700	385	38.08	408	46.34	431	54.88	451	63.72	•472	•72.77	493	81.90	513	91.22						
84834	1800	397	41.06	419	49.68	441	58.51	461	67.65	481	77.07	•500	•86.65	520	96.30	539	106.14				
89547	1900	410	44.24	430	53.18	451	62.37	471	71.80	491	81.50	509	91.48	•527	•101.59	546	111.75	564	122.09		
94260	2000	423	47.64	443	56.87	462	66.45	482	76.17	501	86.17	519	96.44	536	106.95	•553	•117.58	571	128.25	589	139.09
103686	2200	448	55.13	468	64.97	486	75.14	503	85.63	521	96.25	539	107.10	556	118.19	572	129.52	•587	•141.07	•603	•152.77
113112	2400	477	63.46	493	74.09	511	84.86	528	95.92	544	107.28	560	118.83	576	130.51	592	142.41	607	154.54	622	166.87
122538	2600	505	72.84	521	84.14	536	95.67	553	107.34	568	119.28	583	131.49	597	143.96	613	156.47	628	169.18	642	182.09
131964	2800	535	83.36	549	95.29	564	107.53	578	119.95	593	132.49	608	145.29	622	158.33	635	171.62	649	185.06	663	198.57
141390	3000	564	95.10	578	107.66	592	120.53	605	133.69	619	146.98	633	160.37	646	174.01	660	187.87				
150816	3200	594	108.14	608	121.34	621	134.84	633	148.62	646	162.67	658	176.83								
160242	3400	624	122.56	637	136.41	650	150.54	662	164.95												
169668	3600	655	138.33																		
197946	4200																				
207372	4400																				
216798	4600																				
226224	4800																				

VOL CFM	OUT VEL	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
94260	2000	606	150.09																		
103686	2200	•620	•164.42	•651	•188.18																
113112	2400	637	179.42																		
122538	2600	657	195.21																		

• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐ CL. III ☐
The U.S. Fan class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 44.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPA SERIES

Airfoil - Plenum Fan

SIZE 89

SINGLE WIDTH
SINGLE INLET

MAXIMUM CLASS OPERATING RPM
FAN TEMPERATURE

Wheel Diameter	89 inches	2261 mm
Wheel Circumference	23.3 feet	7.102 m
Inlet Diameter/Area	99 1/8 inches dia./53.39 sq. ft.	2518 mm/4.960 m^2
Outlet Area	57.25 sq. ft.	5.319 m^2
Tip Speed	23.3 x RPM ft./minute	7.102 x RPM m/minute
Maximum Power	1139 (RPM ÷ 1000)^3 BHP	849.4 x (RPM ÷ 1000)^3 kW

SIZE 89	-20° to 150°F -29° to 66°C
CLASS I	463
CLASS II	604
CLASS III	N/A
CLASS IV	N/A

VOL	OUT	¼" SP		⅜" SP		½" SP		⅝" SP		¾" SP		⅞" SP		1" SP		1 ¼" SP		1 ½" SP		1 ¾" SP	
CFM	VEL	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
34350	600	•124	•2.04	•138	•2.95	•151	•3.91	165	4.90												
40075	700	135	2.52	148	3.53	160	4.59	•172	•5.70	•183	•6.84										
45800	800	147	3.10	159	4.20	170	5.37	181	6.57	191	7.83	•201	•9.12	211	10.43						
51525	900	160	3.77	170	4.99	180	6.24	190	7.56	200	8.90	210	10.29	•218	•11.73	236	14.66				
57250	1000	173	4.57	182	5.88	192	7.24	201	8.65	210	10.11	219	11.59	228	13.12	•244	•16.29	•260	•19.54	275	22.88
62975	1100	187	5.50	195	6.91	204	8.38	212	9.88	221	11.43	229	13.03	237	14.65	253	18.00	267	21.50	•282	•25.07
68700	1200	200	6.57	209	8.08	216	9.65	224	11.27	232	12.91	240	14.60	247	16.33	262	19.88	276	23.55	290	27.36
74425	1300	214	7.77	222	9.41	230	11.08	237	12.80	244	14.56	251	16.34	258	18.16	272	21.93	286	25.79	299	29.77
80150	1400	228	9.10	236	10.91	243	12.68	250	14.50	256	16.37	263	18.26	270	20.18	283	24.13	295	28.21	308	32.38
85875	1500	241	10.60	249	12.60	256	14.47	263	16.38	269	18.35	275	20.36	281	22.39	294	26.52	306	30.80	318	35.19
91600	1600	255	12.27	263	14.43	270	16.45	276	18.46	282	20.53	288	22.63	293	24.78	305	29.12	317	33.58	328	38.17
97325	1700	269	14.14	277	16.41	284	18.64	290	20.76	295	22.92	301	25.12	306	27.36	317	31.95	328	36.59	339	41.36
103050	1800	283	16.21	290	18.60	297	21.04	303	23.28	309	25.54	314	27.83	319	30.17	329	34.96	340	39.84	351	44.79
108775	1900	297	18.50	304	21.00	311	23.56	317	26.03	322	28.39	327	30.79	333	33.22	342	38.21	352	43.33	362	48.47
114500	2000	312	21.02	318	23.63	325	26.31	331	29.03	336	31.50	341	33.99	346	36.53	355	41.70	364	47.02	374	52.42
125950	2200	340	26.78	346	29.63	352	32.53	358	35.48	363	38.48	368	41.21	373	43.94	382	49.50	390	55.20	399	61.02
137400	2400	369	33.60	375	36.69	380	39.82	385	43.00	391	46.22	396	49.49	400	52.51	409	58.47	417	64.56	425	70.76
148850	2600	398	41.57	403	44.89	408	48.26	413	51.67	418	55.12	423	58.61	428	62.14	436	68.70	444	75.18	451	81.78
160300	2800	427	50.79	432	54.34	436	57.94	441	61.58	446	65.26	450	68.98	455	72.74	463	80.30	471	87.18	478	94.17
171750	3000	456	61.34	460	65.14	465	68.97	469	72.85	474	76.76	478	80.71	482	84.69	491	92.76	498	100.65	505	108.03
183200	3200	485	73.33	489	77.37	494	81.44	498	85.55	502	89.69	506	93.87	510	98.08	518	106.61	526	115.26	533	123.47
194650	3400	514	86.86	518	91.13	522	95.44	526	99.78	530	104.16	534	108.57	538	113.01	546	121.99	553	131.10	560	140.32
206100	3600	543	102.01	547	106.53	551	111.07	555	115.65	559	120.26	563	124.90	566	129.57	573	139.01	580	148.56	587	158.24
217550	3800	573	118.89	577	123.64	580	128.42	584	133.24	587	138.08	591	142.96	594	147.86	601	157.75				

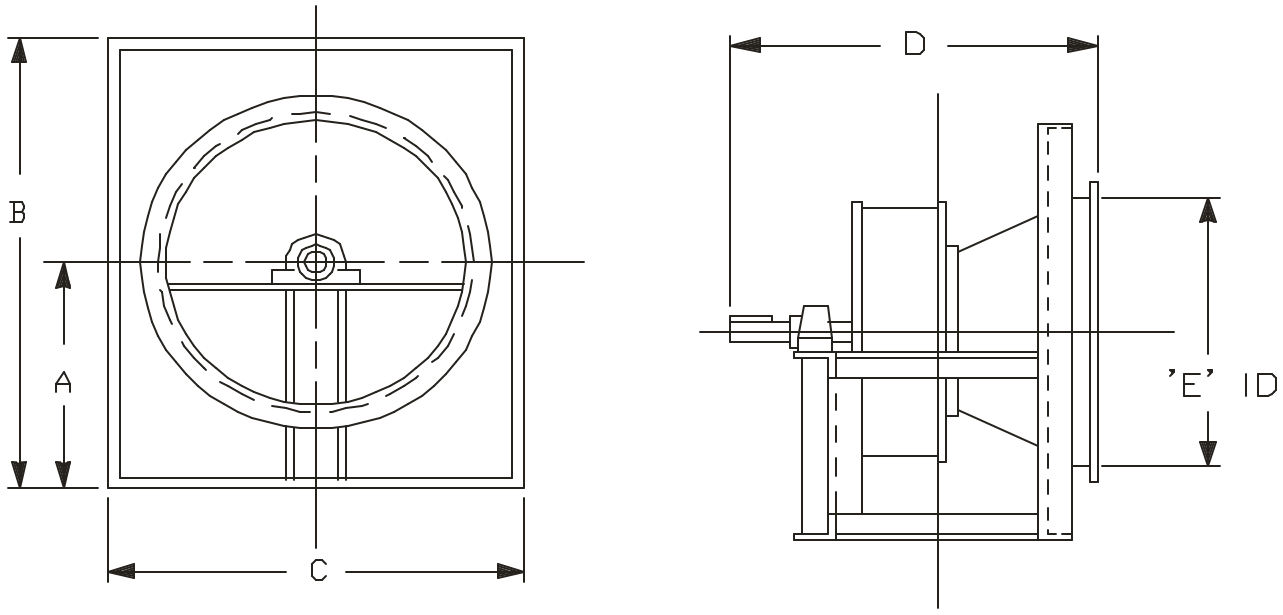
VOL	OUT	2" SP		2 ½" SP		3" SP		3 ½" SP		4" SP		4 ½" SP		5" SP		5 ½" SP		6" SP		6 ½" SP	
CFM	VEL	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
62975	1100	296	28.70																		
68700	1200	•303	•31.25	329	39.19																
74425	1300	311	33.87	•336	•42.30																
80150	1400	320	36.66	343	45.56	366	54.66														
85875	1500	330	39.65	352	48.91	•373	•58.56	395	68.32												
91600	1600	339	42.86	361	52.48	381	62.50	•401	•72.83	422	83.26	441	93.95								
97325	1700	350	46.26	371	56.29	391	66.66	409	77.40	•428	•88.40	447	99.48	465	110.81						
103050	1800	361	49.87	380	60.34	400	71.08	418	82.17	436	93.62	•454	•105.25	472	116.98	489	128.93				
108775	1900	372	53.73	391	64.59	409	75.76	428	87.21	445	99.00	461	111.12	•478	•123.40	495	135.74	512	148.31		
114500	2000	383	57.86	402	69.08	419	80.71	437	92.53	454	104.68	471	117.14	486	129.92	•502	•142.83	•518	•155.79	534	168.95
125950	2200	407	66.97	424	78.93	441	91.28	457	104.01	473	116.92	489	130.10	504	143.57	519	157.33	533	171.36	•547	•185.57
137400	2400	432	77.08	447	90.00	464	103.07	479	116.52	493	130.32	508	144.34	523	158.53	537	172.99	551	187.72	565	202.71
148850	2600	459	88.48	473	102.20	487	116.21	501	130.38	515	144.89	529	159.73	542	174.87	556	190.06	570	205.50	583	221.19
160300	2800	485	101.26	498	115.74	511	130.62	524	145.70	538	160.93	551	176.48	564	192.33	576	208.47	589	224.80	602	241.20
171750	3000	512	115.52	525	130.77	537	146.40	549	162.39	561	178.53	574	194.80	586	211.37	598	228.21				
183200	3200	539	131.35	551	147.39	563	163.78	575	180.52	586	197.59	597	214.79								
194650	3400	566	148.87	578	165.70	590	182.86	601	200.36												
206100	3600	594	168.02																		

VOL	OUT	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		16" SP		18" SP	
CFM	VEL	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
114500	2000	549	182.32																		
125950	2200	•562	•199.72	591	228.59																
137400	2400	577	217.94	604	248.81																
148850	2600	596	237.12																		

• Approximate Max. Static Efficiency and Quietest Selection. CL. I ☐ CL. II ☐ CL. III ☐
The U.S. Fan class range is shown by the shaded areas. Fans may be used up to the maximum RPM as listed above for each fan class; for further explanation, refer to page 8.
For minimum motor size required see "Fan Starting Requirements," page 6.
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).
Refer to factors on page 9 to convert numbers above to the desired metric units.
Performance includes the effect of a plenum wall 44.5 inches from the centerline of the shaft.
Performance shown is for Installation Type C: Ducted Inlet, Free Outlet.
Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

USPB and USPA SERIES

DIMENSIONAL DATA



Size	A	B	C	D	E	Estimated Weights	
						Lbs.	Kg
12	9.79	18.87	17.75	21.25	13.50	120	54
13	10.79	20.78	19.56	22.38	14.75	130	59
15	11.99	23.09	21.75	23.25	16.25	150	68
16	13.19	25.40	23.88	24.62	18.25	160	73
18	14.50	28.00	26.00	25.37	20.00	200	91
20	16.00	31.00	29.00	27.76	21.75	230	104
22	18.00	35.25	32.50	32.30	24.00	275	125
24	19.50	37.75	34.50	31.18	27.00	315	143
27	21.50	41.25	37.50	34.41	29.50	360	163
30	24.00	45.00	42.00	37.22	32.50	450	204
33	26.50	49.50	46.00	39.92	35.50	560	254
37	29.00	53.50	49.00	42.57	39.00	675	306
40	32.00	60.00	54.00	47.75	43.25	830	377
45	33.75	64.00	58.50	57.76	47.50	1020	463
49	37.50	70.00	63.00	59.13	52.25	1360	617
54	40.50	75.00	69.00	63.13	58.00	1770	803
60	44.50	82.00	75.00	67.69	63.75	1980	898
66	49.00	90.00	82.00	75.69	69.75	2820	1279
73	54.25	99.13	90.25	83.19	82.00	3850	1746
81	60.00	109.63	99.50	91.50	89.75	4575	2075
89	66.00	120.50	109.50	100.59	92.00	5415	2456

TERMS AND CON DI TIONS

ACCEPTANCE All or ders and sales are sub ject to writ ten ap proval and ac cep tance by an ex ec u tive of fi cer of U.S. Fan In ter na tional® at Ft. Smith, Ar-kan sas, and are not bind ing on the Com pany un til so ap proved.

DELIVERY De liv ery of the equip ment herein spec i-fied shall be made F.O.B. point of ship ment, un less oth er wise stated. The Com pany shall not be li a ble for de lay due to causes be yond its rea son able con-trol, such as Acts of God, acts of the purchaser, acts of civil or mil i tary au thor i ties, pri or i ties, fires, strikes, floods, epidemics, war, riots, delays in trans por ta tion, car short ages, and in abil ity, due to reasons beyond its reasonable control, to obtain nec es sary la bor, ma te rial, or man u fac tur ing fa cil i-ties. In the event of such a de lay, the date of de liv-ery shall be ex tended for a pe riod equal to the time lost by rea son of the de lay.

TERMS OF PAYMENT If, in the judg ment of the Com pany, the fi nan cial con di tion of the pur chaser at any time does not jus tify con tin u a tion of man u-fac ture or ship ment on the terms of pay ment spec i-fied, the Com pany may re quire full or par tial pay-ment in ad vance.

Pro rata pay ments shall be come due as ship ments are made. Each ship ment or de liv ery shall con sti-tute a sep a rate sale, and the de fault of any ship-ment or de liv ery shall con sti tute a sep a rate sale, and the de fault of any ship ment or de liv ery shall not vi ti ate the con tract as to other ship ments or de-liveries.

PRICE ADJUSTMENT In the event of a price change prior to com ple tion of this of fer, price will be that pre vail ing at time of ship ment.

SALES AND SIMILAR TAXES The Company's prices do not in clude sales, use, ex cise, or sim i lar taxes. Con se quently, in ad di tion to the price spec i-fied herein, the amount of any present or future sales, use, ex cise, or other sim i lar tax ap pli ca ble to the sale of the equip ment herein shall be paid by the Purchaser, or in lieu thereof the Purchaser shall pro vide the Com pany with a tax ex emp tion cer tifi cate ac cept able to the tax ing au thor i ties.

CANCELLATION Any con tract re sult ing from this quo ta tion may be cancelled by the Pur chaser only by ne go ti a tions and upon pay ments of rea son able can cel la tion charges which will take into ac count expenses already incurred and commitments made by the Com pany.

DESIGN CHANGES The company reserves the right to make changes in design, improvements and ad di tions in and to its prod ucts any time with-out im pos ing any li a bil ity or ob li ga tions to it self to ap ply or in stall the same in any prod uct man u fac-tured by it.

TITLE The title and right of possession of the equip ment sold herein shall re main with the Com-pany and such equipment shall remain personal property until all payments herein (including de-ferred payments whether evidenced by notes or otherwise) shall have been made in full in cash and the Pur chaser agrees to do all acts nec es sary to per fect and main tain such right and ti tle in the Company.

PRICE ADJUSTMENTS AND PROTECTION Prices on equipment manufactured by the Com-pany are firm for ship ment up to four months from the date of the orig i nal or der en try. Such prices are sub ject to ad just ment if ship ment is made af ter four months and up to ten months from the date of the original order entry, if equipment is shipped ten months from the date of the original or der en try, prices will be ad justed to the price in ef fect at the time of ship ment au to mat i cally. All com plete com-po nent ac ces sory ma te rial man u fac tured by oth ers and fur nished with the Com pany's equip ment such as mo tors, drives, vi bra tion equip ment, con trols or other com pletely as sem bled com po nent struc tures, are sub ject to ad just ment to the price at time of ship ment re gard less of the date of orig i nal or der entry.

SAFETY AC CES SORIES The Com pany man u fac-tures equip ment de signed to serve mul ti ple ap pli-ca tions and of fers a wide range of safety equip-ment, in clud ing guards and other de vices, as may be re quired to meet cus tomer spec i fi ca tions. With-out ex cep tion, the Com pany rec om mends that all orders include applicable safety devices. Equip-ment or dered with out ap pli ca ble safety de vices is clearly the re spon si bil ity of the Pur chaser. Fur ther, the Purchaser warrants that he has determined and ac quired any and all safety de vices re quired for equip ment sold by the Com pany. Weather cov-ers and guards for mo tor and V-belt drives, cou-plings, shafts and bearings, along with inlet and out let screens, are op tional ac ces so ries noted in the price list.

WARNING U.S. Fan In ter na tional® prod ucts are de signed and man u fac tured to pro vide re li able per for mance but they are not guar an teed to be 100% free of de-fects. Even re li able prod ucts will ex pe ri ence oc ca sional fail ures and this pos si bil ity should be rec og nized by the User. If these prod ucts are used in a life sup port ven ti la tion sys tem where fail ure could re sult in loss or in jury, the User should pro vide ad e quate back-up ven ti la tion, sup ple men tary nat u ral ven ti la tion or fail ure alarm sys tem, or ac knowl edge will ing ness to ac cept the risk of such loss or in jury.

WARNING DO NOT use in HAZ ARD OUS EN VI RON MENTS where fan's elec tri cal sys tem could pro vide ig ni tion to com bus ti ble or flam ma ble ma te ri als un less unit is spe ci fi cally built for haz ard ous en vi ron ments.

CAUTION Guards must be in stalled when fan is within reach of per son nel or within seven (7) feet (2.134 m) of work ing level or when deemed ad vis able for safety.

DISCLAIMER The Com pany has made a dil i gent ef fort to il lus trate and de scribe the prod ucts in this liter a ture ac cu rately; how ever, such il lus tra tions and de scrip-tions are for the sole pur pose of iden ti fi ca tion, and do not ex press or im ply a war ranty that the prod ucts are mer chant able, or fit for a par tic u lar pur pose, or that the prod ucts will nec es sar ily con form to the il lus tra tions or de scrip tions or di men sion.

LIMITED WAR RANTY

WARRANTY AND DISCLAIMER U.S. Fan International® extends this limited warranty to the original buyer and warrants that products manufactured by the Company shall be free from original defects in workmanship and materials for two years from date of shipment, provided same have been properly 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 Buyer assumes all risks and liability for results of use of the products. Warranties on purchased parts, such as but not limited to bearings, sheaves, belts, couplings, electric motors, pumps and controls are limited to the terms of warranty extended by our supplier.

Polyethylene tubing and cooling pads are war-ranted to be free of de fects in ma te rial and work-man ship for a pe riod of 90 days from date of ship-ment and a like war ranty ap plies to the cross fluted cel lu lar type cool ing cells for a pe riod of two years from date of ship ment pro vided same have been prop erly han dled, stored, in stalled, ser viced, main-tained and op er ated. And fur ther, not sub jected to ex ces sive heat, cor ro sive agents or chem i cals, or me chan i cal abuse that may cause tear ing, crush-ing or un due de te ri o ra tion nor used on a sys tem or in a man ner other than that for which it was de-signed as ex plained in the prod uct lit er a ture.

LIMITATION OF REMEDY AND DAMAGES All claims un der this war ranty must be made in writ ing and de liv ered to 408 South Phoe nix, Ft. Smith, Ar kan sas 72916, within 15 days af ter dis cov ery of the de fect and prior to the ex pi ra tion of two years from the date of ship ment by the Com pany of the product claimed defective, and Buyer shall be barred from any rem edy if Buyer fails to make such claim within such pe riod.

Within 30 days af ter re ceipt of a timely claim, the Company shall have the option either to inspect the prod uct while in Buyer's pos ses sion or to re-quest Buyer to re turn the prod uct to the Com pany at Buyer's ex pense for in spec tion by the Com pany. The Com pany shall re place, or at its op tion re pair, free of charge, any prod uct it de ter mines to be de-fec tive, and it shall ship the re paired or re place-ment prod uct to Buyer F.O.B. point of ship ment; pro vided, how ever, if cir cum stances are such as in the Com pany's judg ment to pro hibit re pair or re-placement to remedy the warranted defects, the Buyer's sole and ex clu sive rem edy shall be a re-fund to the Buyer of any part of the in voice price, paid to the Com pany, for the de fec tive prod uct or part.

The Com pany is not re spon si ble for the cost of re-moval of the defective prod uct or part, dam ages due to re moval, or any ex penses in curred in ship-ping the prod uct or part to or from the Com pany's plant, or the in stal la tion of the re paired or re placed prod uct or part.

Implied warranties, when applicable, shall com-mence upon the same date as the ex press war-ranty pro vided above, and shall, ex cept for war-ranties of ti tle, ex tend only for the du ra tion of the ex-press warranty. Some states do not allow limita-tions on how long an im plied war ranty lasts, so the above limitation may not apply to you. The only rem edy pro vided to you un der an ap pli ca ble im-plied war ranty and the ex press war ranty shall be the rem edy pro vided un der the ex press war-ranty, subject to the terms and conditions contained therein. The Company shall not be liable for incidental and consequential losses and dam ages un der the ex press war-ranty, any applicable implied warranty, or claims for neg li gence, ex cept to the ex tent that this lim i ta tion is found to be un en force able un der ap pli-ca ble state law. Some states do not al low the ex-clu sion or lim i ta tion of in ci den tal or con se quen tial dam ages, so the above lim i ta tion or ex clu sion may not ap ply to you. This war ranty gives you spe cific le gal rights, and you may also have other rights which vary from state to state.

No em ployee, agent, dealer, or other per son is au-thorized to give any warranties on behalf of the Com pany or to as sume for the Com pany any other li a bil ity in con nec tion with any of its prod ucts ex-cept in writ ing and signed by an of fi cer of the Com-pany.

RE PLACE MENT PARTS If re place ment parts are or dered, buyer war rants that the orig i nal com po-nents in which these replacement parts will be placed are in satisfactory working condition, and when said re place ment parts are in stalled, the re-sul tant in stal la tion will op er ate in a safe man ner, at speeds and temperatures for which the original equip ment was pur chased.

TECHNICAL ADVICE AND RECOMMENDA-TIONS, DISCLAIMER Notwithstanding any past prac tice or deal ings or any cus tom of the trade, sales shall not in clude the fur nish ing of tech ni cal ad vice or as sis tance or sys tem de sign. Any such as sis tance shall be at the Com pany's sole op tion and may be sub ject to ad di tional charge.

The Com pany as sumes no ob li ga tion or li a bil ity on ac count of any rec om men da tions, opin ions or ad-vice as to the choice, in stal la tion or use of prod-ucts. Any such rec om men da tions, opin ions or ad-vice are given and shall be ac cepted at your own risk and shall not con sti tute any war ranty or guar-an tee of such prod ucts or their per for mance.

GENERAL In no event shall any claim for con se-quential damages be made by either party. The Com pany will com ply with all ap pli ca ble Fed eral, State, and lo cal laws.

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