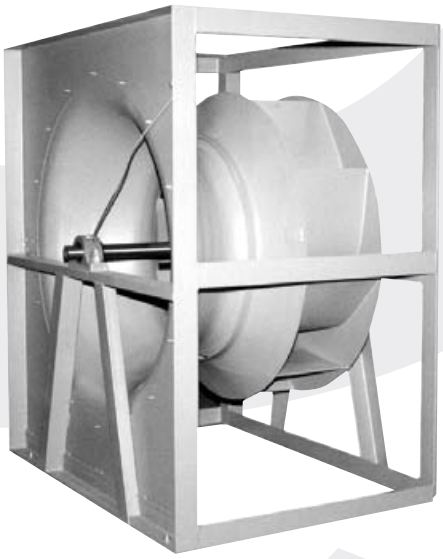
PENN BARRY

Bulletin ESP05



PLENUM FANS

Model: ESP
Unhoused Centrifugal Fans

MOVING YOUR WAY

CERTIFIED RATINGS

PennBarry certifies that the ESP 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.

FANSIZER®
Product Selection Software

FanSizer software allows you to select the best centrifugal or axial unit for your application. Input CFM and static pressure, and FanSizer will make the optimum selection. It allows you to complete job schedules which you can store, modify and print in seconds. Features include: on-line help, on-screen product drawings and dimensions, and complete text specifications. In addition, you can convert job schedules to ASCII code for use with other programs like word processing.

FANCAD®
Library of CAD Drawings

FanCad is a library of drawings for use with computer-aided design (CAD) systems. FanCad's pre-drawn details can save hours of drafting time. Included are all popular PennBarry fans and related items.

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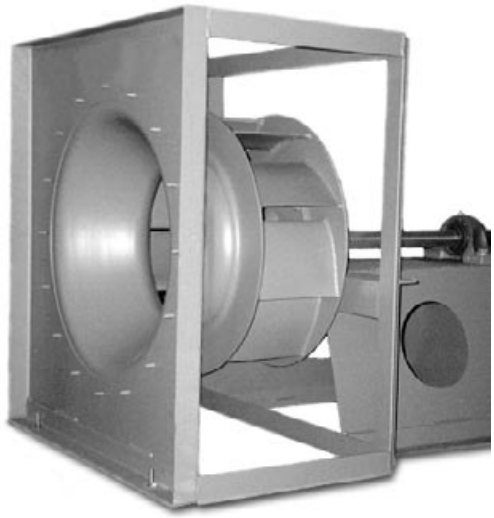
- What's New
- HVAC "Hot Links"

General Information

ESP - Efficient Silent Plenum Fan



The PennBarry Plenum (ESP) fan is a revolutionary unhoused centrifugal fan designed for air handling applications. The fan pressurizes the plenum in which the fan operates and allows for ductwork to be directly connected to the plenum walls of the air handling unit. The plenum fan design saves space by eliminating the fan housing which can detract from system performance. Plenum systems also work especially well with retrofit projects where limited space is a common problem.

- Available sizes 182 through 890
- Capacity range of 400 to 250,000 CFM
- Static pressure to 8" w.g.
- Classes I, II and III
- Arrangements 1, 3, 4, 8 and 9
- Vertical and horizontal shafts
- Piggyback motor mount

Features and Benefits

Efficient Silent Plenum Fan - ESP

PennBarry ESP fans are constructed of heavy-gauge, low carbon steel, phosphatized, primed and coated with an industrial air dried alkyd enamel finish prior to assembly. ESP fans are available with highly efficient, non-overloading airfoil wheels.

ESP airfoil wheels provide the highest efficiency of all centrifugal fan designs. The blades are continuously welded, die-formed, double-surface blades that provide efficient airflow into the fan. ESP airfoil wheels are available in wheel diameters from 18.25" through 89".

Tapered, smooth flowing inlet cones are designed to match wheel cones, assuring maximum efficiency.

In terms of accessibility, the ESP is the best design. The wheel can easily be removed from the top or either side of the fan. Larger size fans (sizes 445 and larger - Class I and II, and sizes 300 and larger - Class III) are equipped with a removable bar on the housing to maintain the high degree of accessibility, while ensuring stability.

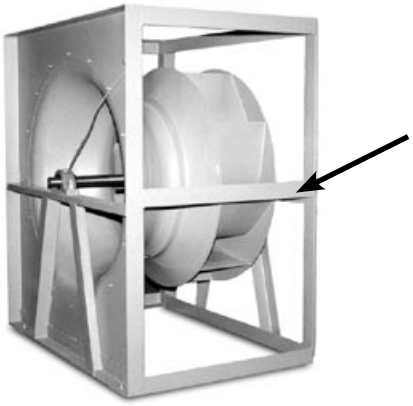
Bearing supports are constructed of full length structural uprights to provide a firm foundation for the shaft and bearings.

Hot rolled steel shafts are turned, ground, polished and sized so that the first critical speed is at least 142% (Class I, II and III) of the fan's maximum operating speed and horsepower.

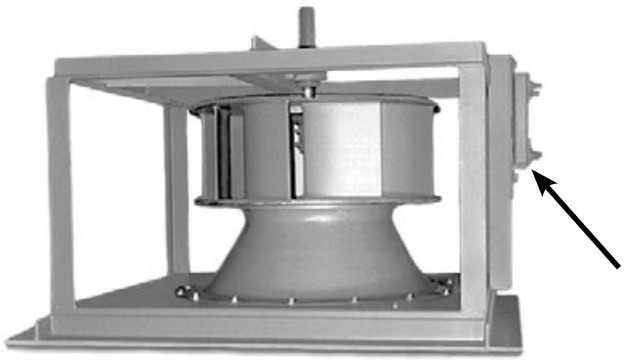
ESP fans are equipped with heavy-duty, self-aligning, pillowblock bearings. The standard L10 bearing life on Class I, II and III fans is 40,000 hours. Optional non-split and split housed bearings are available that increase the L10 life to 80,000 hours.

All ESP fans are statically and dynamically balanced using precision instruments. Each wheel is individually balanced and a final balance test is performed on the completed fan assembly.

The full frame design of the ESP is especially suited for a piggyback motor mount design without the need to modify the fan frame.



Removable Bar for Easy Access to Wheel



Vertical inlet down Arrangement 3 with motor slide base for piggyback mounted motor

Air Performance & Sound

PennBarry ESP fans offer at least a 12% increase in efficiency over the typical plenum design, while also reducing the sound levels. The table below illustrates that the improved efficiency of the ESP is fast approaching the efficiency of housed fans. In fact, the 445 ESP is more efficient than the 445 housed AF fan. The table also shows that a system requiring 28,000 CFM at 3" SP would require a 25 HP motor if a typical plenum fan was used. The same size ESP, and even one size smaller, would need only a 20 HP motor.

CFM: 28,000 SP: 3

Product Type	Size	RPM	BHP	Mtr. HP	SE	Octave Band								LwA
						1	2	3	4	5	6	7	8	
PennBarry ESP	490	658	17.75	20	74.4	94	98	91	88	85	80	74	67	91
PennBarry ESP	445	779	18.12	20	72.9	95	101	93	91	88	84	77	68	94
Typical plenum	490	685	20.01	25	66.0	94	98	92	89	85	81	75	70	92
Typical Housed Fan	490	649	17.03	20	77.5	100	95	89	86	85	80	72	67	90
Typical Housed Fan	445	781	18.61	20	71.0	100	97	88	84	83	77	72	69	89

Options and Accessories

ESP - Efficient Silent Plenum Fan

Variable Inlet Vanes

Two types of variable inlet vanes are available on ESP plenum fans.

- Nested variable inlet vanes, mounted within the fan inlet cone, are available on sizes 182 and larger.
- Externally mounted variable inlet vanes are bolted to the fan's inlet flange and are available on all sizes.

Standard construction of both nested and external inlet vanes is suitable for operating temperatures to 180°F. Both types feature stainless steel rods and bronze oilite bushings. Variable inlet vanes are suitable for either manual or automatic control.

Nested Inlet Vanes

External Mounted Inlet Vane

Shaft Extensions

Shaft extensions are available when there are space limitations and the fan must be driven through the inlet. Rotation is determined from the side opposite the inlet.

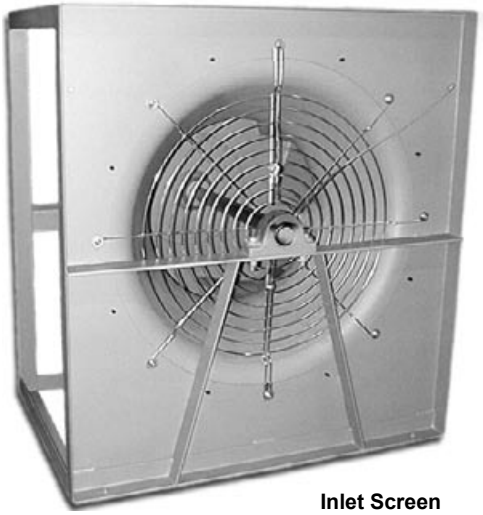
Protective Enclosures

Protective enclosures are constructed of heavy-gauge plated steel wire or an expanded metal screen. Protective enclosures serve as a protective cage to completely enclose the fan wheel and support structure. PennBarry's unique protective enclosure allows for greater airflow versus typical expanded mesh enclosures.

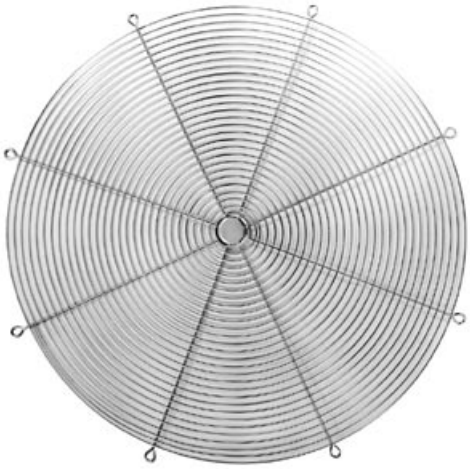
Protective Enclosure

Inlet Screens

Inlet screens are recommended for non-ducted applications. They protect maintenance personnel from injury and guard against foreign objects entering the fan. Inlet screens feature heavy-gauge plated steel wire for corrosion resistance.



Inlet Screen



Inlet Screen

Bearings

ESP plenum fans are equipped with heavy-duty, self-aligning, pillowblock bearings. The standard L10 bearing life on Class I, II and III ESP fans is 40,000 hours; optional bearings are available that increase the L10 life to 80,000 hours.

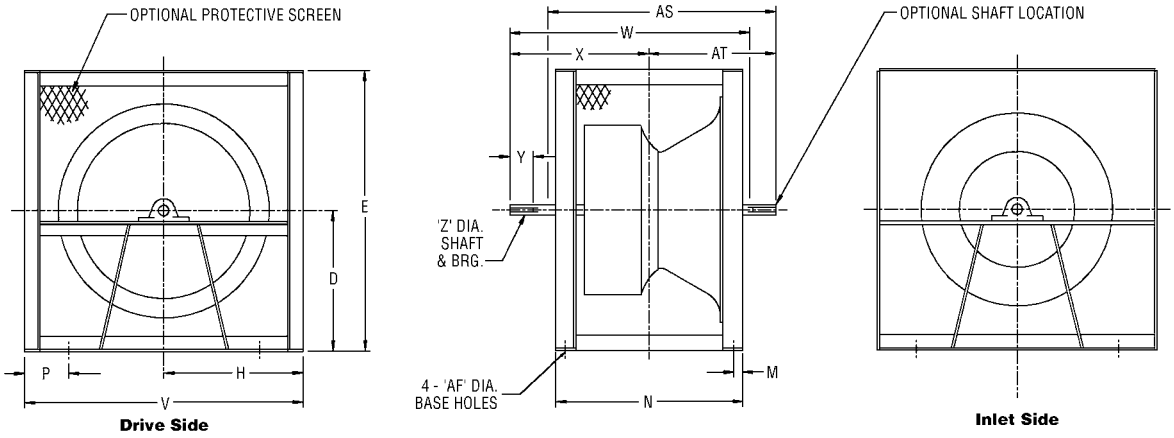
Cross Section View of a Bearing

Inlet Flanges

Inlet flanges are not furnished as standard, but are available as an accessory.

ESP - Centrifugal Fan Data

Horizontal Plenum Fan AF - Standard & Piggyback - Arrangement 3, SWSI, Class I & II



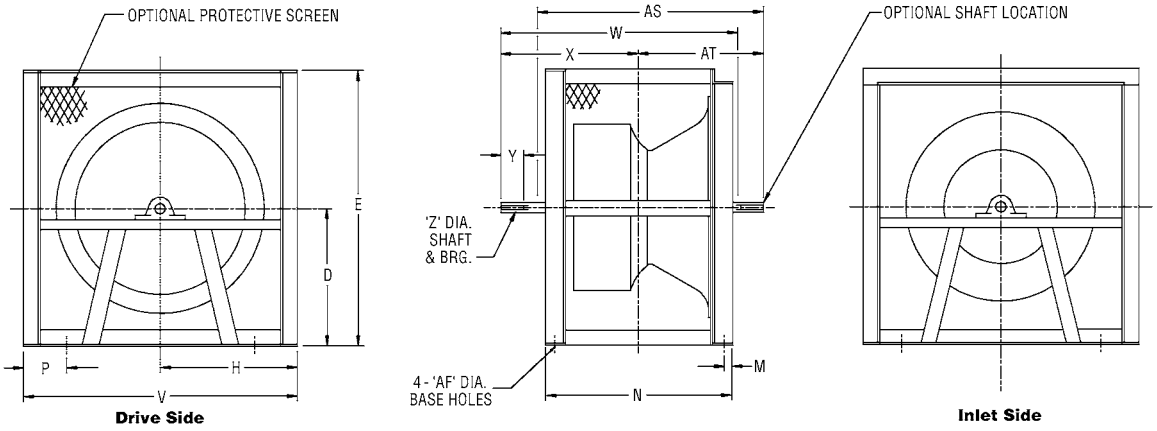
Notes:

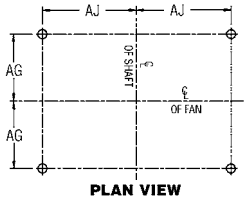
1. CW & CCW rotation available. Rotation and motor position are determined from side opposite inlet.
2. Max. motor applies only to piggyback mounts.
3. Refers to all frame angles unless otherwise specified.
4. Dimensions should not be used for construction. Certified drawings are available upon request.

Size	D	E	H	V	N	Class I		Class II		Y	'Z' - Class I		'Z' - Class II		Class I		Class II		P	M	AF	AG	AJ	Angle (3.)	Max. Mtr. (2.)
						W	X	W	X		Shaft	Keyway	Shaft	Keyway	AS	AT	AS	AT							
182	14.50	28.00	13.00	26.00	18.50	27.00	15.75	27.50	16.06	3.50	1.188	0.25 x 0.13	1.688	0.38 x 0.19	28.13	16.88	28.25	16.88	3.38	0.88	0.56	8.38	9.63	1.50 x 2.00	215T
200	16.00	31.00	14.50	29.00	20.13	28.63	16.50	29.13	16.88	3.50	1.188	0.25 x 0.13	1.688	0.38 x 0.19	29.75	17.75	29.88	17.75	3.63	0.88	0.56	9.19	10.88	1.50 x 2.00	254T
222	18.00	35.25	16.25	32.50	21.63	30.63	17.75	31.13	18.13	4.00	1.188	0.25 x 0.13	1.688	0.38 x 0.19	31.75	19.00	31.88	19.00	5.13	0.88	0.56	9.94	11.13	2.00 x 2.00	254T
245	19.50	37.75	17.25	34.50	23.63	33.25	19.13	33.25	19.13	4.00	1.438	0.38 x 0.19	1.688	0.38 x 0.19	33.88	20.00	33.88	20.00	6.13	0.88	0.56	10.94	11.13	2.00 x 2.00	256T
270	21.50	41.25	18.75	37.50	25.63	35.25	20.19	35.25	20.19	4.00	1.688	0.38 x 0.19	1.688	0.38 x 0.19	36.00	21.00	36.00	21.00	5.63	0.88	0.56	11.94	13.13	2.00 x 2.00	256T
300	24.00	45.00	21.00	42.00	28.81	37.25	21.13	37.63	21.38	4.00	1.688	0.38 x 0.19	1.938	0.50 x 0.25	37.88	21.94	38.00	21.94	4.13	1.13	0.56	13.31	16.88	2.50 x 2.50	284T
330	26.50	49.50	23.00	46.00	31.38	39.88	22.38	40.25	22.63	4.00	1.688	0.38 x 0.19	1.938	0.50 x 0.25	40.38	23.25	40.50	23.25	4.13	1.13	0.56	14.56	18.88	2.50 x 2.50	286T
365	29.00	53.50	24.50	49.00	33.88	43.50	24.75	43.88	25.00	5.00	1.688	0.38 x 0.19	1.938	0.50 x 0.25	44.00	25.50	44.13	25.50	4.13	1.13	0.56	15.81	20.38	2.50 x 2.50	324T
402	32.00	60.00	27.00	54.00	38.06	48.00	27.00	48.63	27.38	5.00	1.938	0.50 x 0.25	2.188	0.50 x 0.25	48.88	28.13	49.13	28.13	4.63	1.38	0.56	17.69	22.38	3.00 x 3.00	326T
445	33.75	64.00	29.25	58.50	41.25	51.75	29.13	52.38	29.50	5.50	1.938	0.50 x 0.25	2.188	0.50 x 0.25	52.50	30.25	52.88	30.25	5.63	1.38	0.81	19.25	23.63	3.00 x 3.00	326T
490	37.50	70.00	31.50	63.00	45.00	56.00	31.38	56.75	31.88	5.50	2.188	0.50 x 0.25	2.438	0.63 x 0.31	56.63	32.13	56.75	32.13	5.63	1.38	0.81	21.13	25.88	3.00 x 3.00	326T
542	40.50	75.00	34.50	69.00	50.75	61.00	34.19	61.13	34.25	6.00	2.438	0.58 x 0.31	2.688	0.63 x 0.31	61.00	34.50	61.00	34.50	5.63	1.88	0.81	23.50	28.88	3.00 x 4.00	326T

Centrifugal Fan Data - ESP

Horizontal Plenum Fan AF - Arrangement 3, SWSI, Class I & II





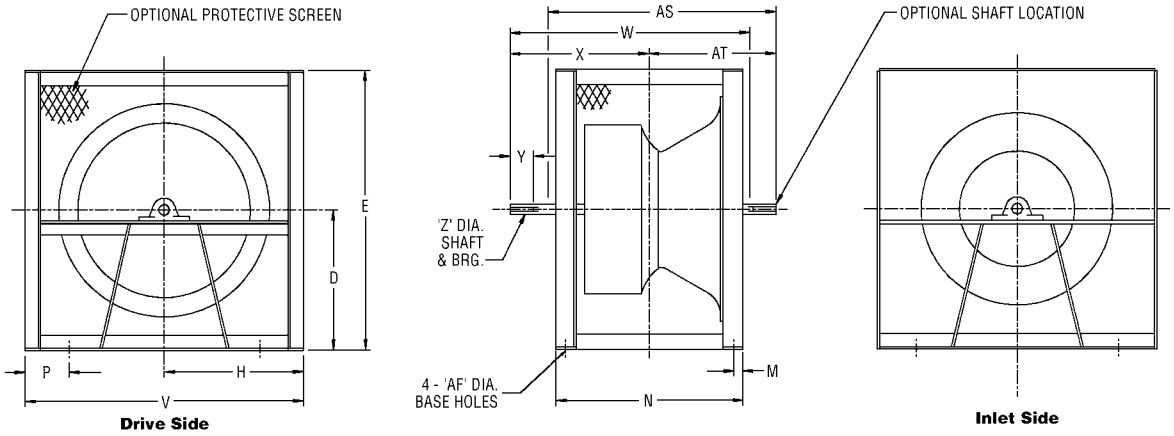
Notes:

1. CW & CCW rotation available. Rotation and motor position are determined from side opposite inlet.
2. Dimensions should not be used for construction. Certified drawings are available upon request.

Size	D	E	H	V	N	Class I		Class II		Y	'Z' - Class I		'Z' - Class II		Class I		Class II		P	M	AF	AG	AJ	Angle
						W	X	W	X		Shaft	Keyway	Shaft	Keyway	AS	AT	AS	AT						
600	44.50	82.00	37.50	75.00	55.38	66.63	37.00	66.88	37.25	6.00	2.438	0.63 x 0.31	2.938	0.75 x 0.38	67.13	37.88	66.88	37.88	5.63	1.88	0.81	25.81	31.88	4.00 x 3.00
660	49.00	90.00	41.00	82.00	62.50	74.88	41.63	76.63	42.75	7.00	2.688	0.63 x 0.31	3.438	0.88 x 0.44	76.38	43.38	76.63	43.38	7.88	2.38	0.81	28.88	33.13	5.00 x 3.50
730	46.00	92.00	46.00	92.00	68.00	80.88	45.00	82.50	46.00	7.50	2.938	0.75 x 0.38	3.438	0.88 x 0.44	82.25	46.63	82.88	46.63	8.88	2.38	0.81	31.63	37.13	5.00 x 3.50
807	48.50	97.00	48.50	97.00	74.00	87.38	48.50	88.88	49.50	8.00	2.938	0.75 x 0.38	3.438	0.88 x 0.44	88.75	50.00	89.25	50.00	7.63	2.38	0.81	34.63	40.88	5.00 x 3.50
890	54.00	108.00	54.00	108.00	80.25	95.25	52.63	95.63	52.75	8.00	3.438	0.88 x 0.44	3.938	1.00 x 0.50	95.63	53.25	95.75	53.25	7.63	2.38	0.81	37.75	46.38	5.00 x 3.50

ESP - Centrifugal Fan Data

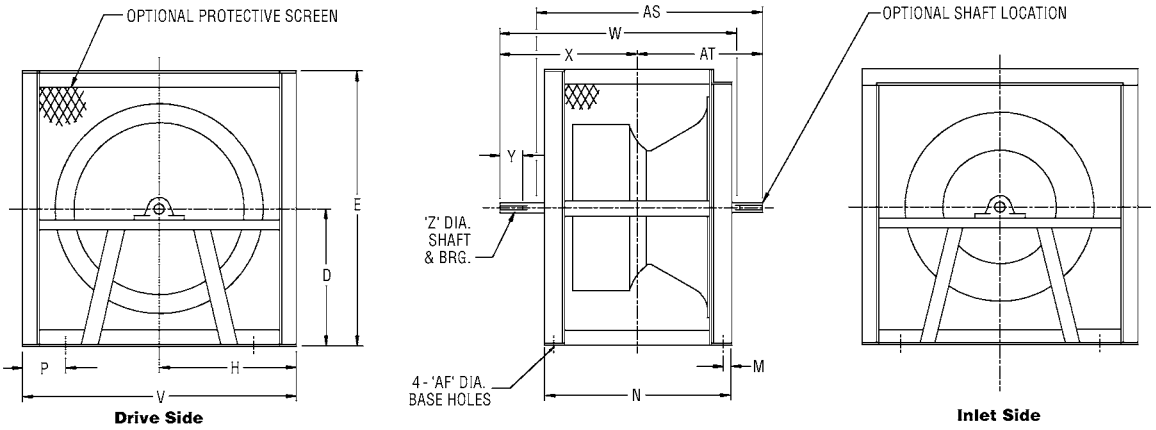
Horizontal Plenum Fan AF - Standard & Piggyback - Arrangement 3, SWSI, Class III

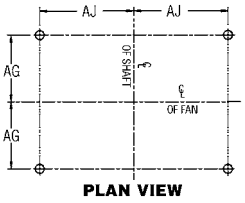


Notes:

1. CW & CCW rotation available. Rotation and motor position are determined from side opposite inlet.
2. Max. motor applies only to piggyback mounts.
3. Refers to all frame angles unless otherwise specified.
4. Dimensions should not be used for construction. Certified drawings are available upon request.

Size	D	E	H	V	N	W	X	Y	Z		AS	AT	P	M	AF	AG	AJ	Angle (3.)	Max Mtr. (2.)
									Shaft	Keyway									
182	14.50	28.00	13.00	26.00	18.50	28.50	17.00	4.50	1.688	0.38 x 0.19	29.13	17.75	3.38	0.88	0.56	8.38	9.63	2.00 x 2.00	215T
200	16.00	31.00	14.50	29.00	20.13	30.13	17.75	4.50	1.688	0.38 x 0.19	30.75	18.63	3.88	0.88	0.56	9.19	10.63	2.00 x 2.00	254T
222	18.00	35.25	16.25	32.50	22.63	32.13	19.00	5.00	1.688	0.38 x 0.19	32.75	19.88	4.75	1.13	0.56	10.19	11.50	2.50 x 2.50	254T
245	19.50	37.75	17.25	34.50	24.63	35.63	21.38	6.00	1.938	0.50 x 0.25	36.00	21.88	4.63	1.13	0.56	11.19	12.63	2.50 x 2.50	256T
270	21.50	41.25	18.75	37.50	26.63	37.75	22.38	6.00	1.938	0.50 x 0.25	38.00	23.00	4.88	1.13	0.56	12.19	13.88	2.50 x 2.50	256T
300	24.00	45.00	21.00	42.00	29.81	42.38	25.25	7.00	2.188	0.50 x 0.25	42.88	26.00	5.38	1.38	0.81	13.56	15.63	3.00 x 3.00	284T
330	26.50	49.50	23.00	46.00	32.44	45.00	26.50	7.00	2.188	0.50 x 0.25	45.50	27.25	5.88	1.38	0.81	14.88	17.13	3.00 x 3.00	286T
365	29.00	53.50	24.50	49.00	34.94	48.25	28.38	7.00	2.438	0.63 x 0.31	48.25	28.63	5.88	1.38	0.81	16.13	18.63	3.00 x 3.00	324T
402	32.00	60.00	27.00	54.00	40.13	52.50	31.00	8.00	2.688	0.63 x 0.31	52.50	31.13	6.63	1.88	0.81	18.19	20.38	4.00 x 3.00	326T
445	33.75	64.00	29.25	58.50	43.31	55.88	32.75	8.00	2.938	0.75 x 0.38	55.75	32.75	6.88	1.88	0.81	19.81	22.38	4.00 x 3.00	326T
490	37.50	70.00	31.50	63.00	47.06	60.63	35.63	9.00	2.938	0.75 x 0.38	60.50	35.63	6.63	1.88	0.81	21.69	24.88	4.00 x 3.00	326T





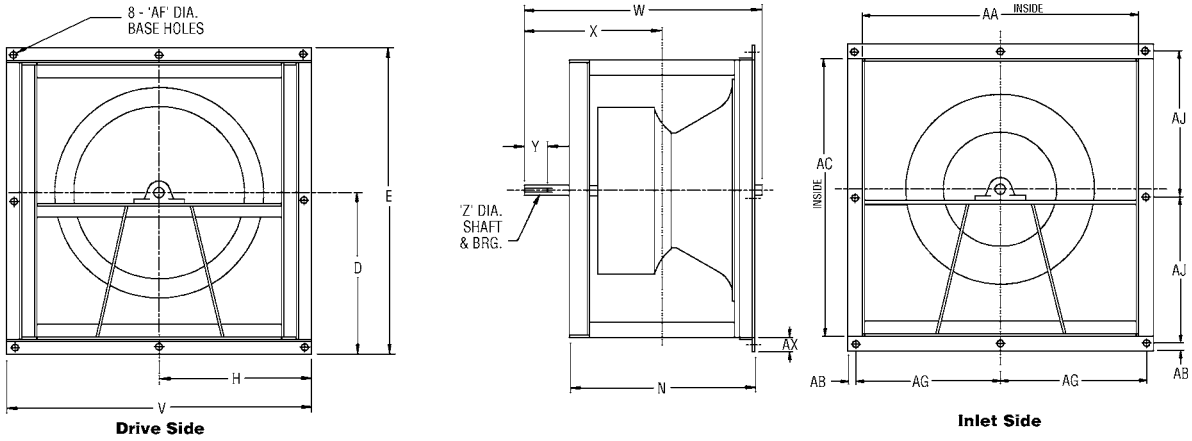
Notes:

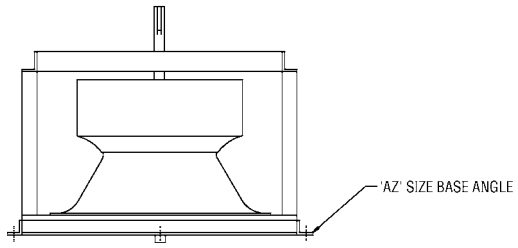
1. CW & CCW rotation available. Rotation and motor position are determined from side opposite inlet.
2. Dimensions should not be used for construction. Certified drawings are available upon request.

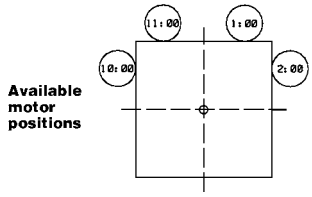
Size	D	E	H	V	N	W	X	Y	Z		AS	AT	P	M	AF	AG	AJ	Angle
									Shaft	Keyway								
542	40.50	75.00	34.50	69.00	52.88	69.00	40.00	9.00	3.438	0.88 x 0.44	69.25	40.50	7.38	2.38	0.81	24.06	27.13	5.00 x 3.50
600	44.50	82.00	37.50	75.00	57.50	74.63	43.13	9.50	3.938	1.00 x 0.50	74.63	43.38	7.38	2.38	0.81	26.38	30.13	5.00 x 3.50
660	49.00	90.00	41.00	82.00	64.63	80.25	46.13	10.00	3.938	1.00 x 0.50	80.25	46.50	8.38	2.88	0.81	29.44	32.63	6.00 x 4.00
730	46.00	92.00	46.00	92.00	70.13	87.25	49.88	10.50	4.438	1.00 x 0.50	86.75	49.63	9.38	2.88	0.81	32.16	36.63	6.00 x 4.00
807	48.50	97.00	48.50	97.00	76.13	93.25	53.00	10.50	4.938	1.25 x 0.63	92.63	52.63	8.13	2.88	0.81	35.19	40.38	6.00 x 4.00
890	54.00	108.00	54.00	108.00	82.38	100.00	56.63	11.00	4.938	1.25 x 0.63	99.38	56.25	8.13	2.88	0.81	38.31	45.88	6.00 x 4.00

ESP - Centrifugal Fan Data

Vertical Plenum Fan AF - Standard & Piggyback - Arrangement 3, SWSI, Class I & II







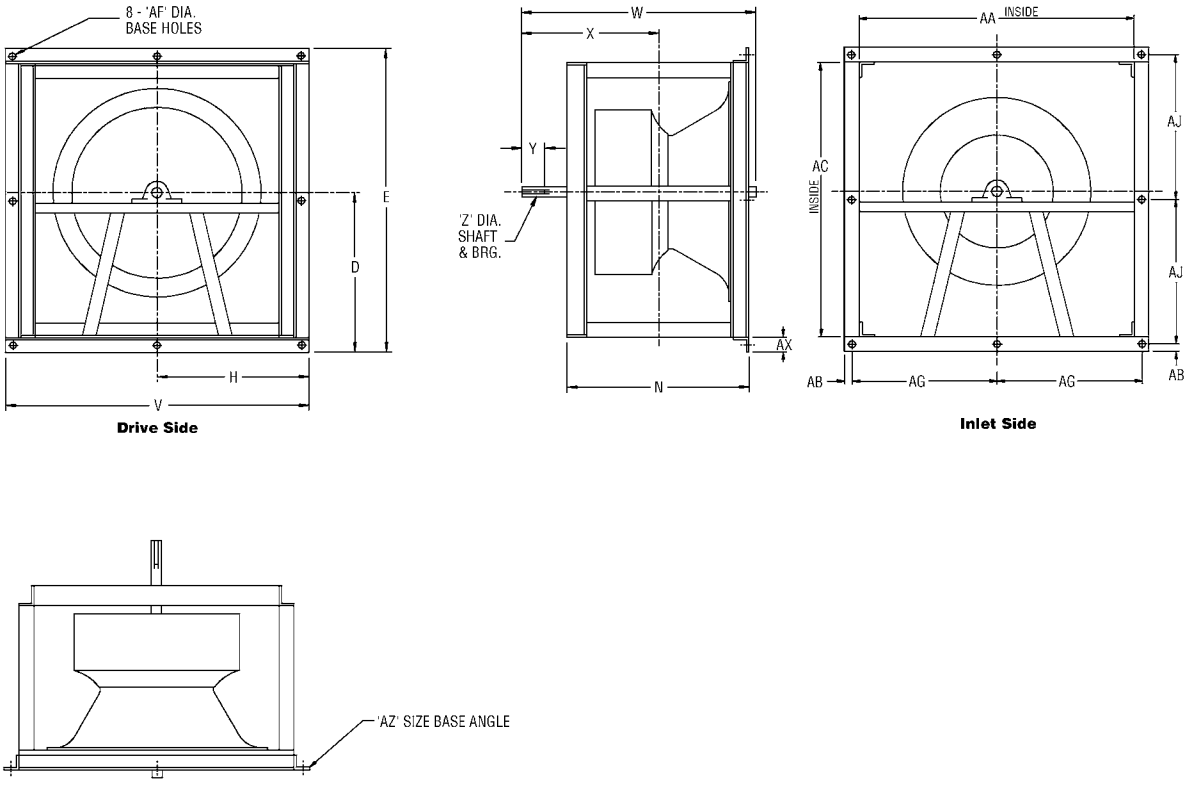
Notes:

1. CW & CCW rotation available. Rotation and motor position are determined from side opposite inlet.
2. Max. motor applies only to piggyback mounts.
3. Refers to all frame angles unless otherwise specified.
4. Dimensions should not be used for construction. Certified drawings are available upon request.

Size	D	E	H	V	N	Class I		Class II		Y	'Z' - Class I		'Z' - Class II		AA	AB	AC	AF	AG	AJ	AX	AZ	(3.) Angle	(2.) Max. Mtr.
						W	X	W	X		Shaft	Keyway	Shaft	Keyway										
182	17.50	34.00	16.00	32.00	19.13	26.00	15.63	26.63	16.00	3.50	1.188	0.25 x 0.13	1.688	0.38 x 0.19	26.00	1.38	28.00	0.56	14.63	15.63	3.00	2.00 x 3.00	1.50 x 2.00	215T
200	19.00	37.00	17.50	35.00	20.75	27.63	16.50	28.25	16.81	3.50	1.188	0.25 x 0.13	1.688	0.38 x 0.19	29.00	1.38	31.00	0.56	16.13	17.13	3.00	2.00 x 3.00	1.50 x 2.00	254T
222	21.00	41.25	19.25	38.50	22.25	29.63	17.75	30.25	18.06	4.00	1.188	0.25 x 0.13	1.688	0.38 x 0.19	32.50	1.38	35.25	0.56	17.88	19.25	3.00	2.00 x 3.00	2.00 x 2.00	254T
245	22.50	43.75	20.25	40.50	24.25	32.25	19.06	32.25	19.06	4.00	1.438	0.38 x 0.19	1.688	0.38 x 0.19	34.50	1.38	37.75	0.56	18.88	20.50	3.00	2.00 x 3.00	2.00 x 2.00	256T
270	24.50	47.25	21.75	43.50	26.25	34.50	20.06	34.50	20.06	4.00	1.688	0.38 x 0.19	1.688	0.38 x 0.19	37.50	1.38	41.25	0.56	20.38	22.25	3.00	2.00 x 3.00	2.00 x 2.00	256T
300	27.50	52.00	24.50	49.00	29.44	36.75	21.19	37.13	21.44	4.00	1.688	0.38 x 0.19	1.938	0.50 x 0.25	42.00	1.63	45.00	0.56	22.88	24.38	3.50	2.50 x 3.50	2.50 x 2.50	284T
330	30.00	56.50	26.50	53.00	32.00	39.75	23.00	40.75	23.50	4.00	1.688	0.38 x 0.19	2.188	0.50 x 0.25	46.00	1.63	49.50	0.56	24.88	26.63	3.50	2.50 x 3.50	2.50 x 2.50	286T
365	32.50	60.50	28.00	56.00	34.50	43.25	25.25	44.25	25.75	5.00	1.688	0.38 x 0.19	2.188	0.50 x 0.25	49.00	1.63	53.50	0.56	26.38	28.63	3.50	2.50 x 3.50	2.50 x 2.50	324T
402	36.00	68.00	31.00	62.00	38.69	47.50	27.38	48.13	27.88	5.00	2.188	0.50 x 0.25	2.438	0.63 x 0.31	54.00	1.88	60.00	0.56	29.13	32.13	4.00	3.00 x 4.00	3.00 x 3.00	326T
445	37.75	72.00	33.25	66.50	41.88	51.13	29.50	51.75	30.00	5.50	2.188	0.50 x 0.25	2.438	0.63 x 0.31	58.50	1.88	64.00	0.81	31.38	34.13	4.00	3.00 x 4.00	3.00 x 3.00	326T
490	41.50	78.00	35.50	71.00	45.63	55.38	31.38	56.38	32.00	5.50	2.188	0.50 x 0.25	2.938	0.75 x 0.38	63.00	1.88	70.00	0.81	33.63	37.13	4.00	3.00 x 4.00	3.00 x 3.00	326T
542	44.50	83.00	38.50	77.00	50.75	62.25	35.75	64.00	36.88	6.00	2.688	0.63 x 0.31	3.438	0.88 x 0.44	69.00	1.88	75.00	0.81	36.63	39.63	4.00	3.00 x 4.00	3.00 x 4.00	326T

Centrifugal Fan Data - ESP

Vertical Plenum Fan AF - Arrangement 3, SWSI, Class I & II



Notes:

1. CW & CCW rotation available. Rotation and motor position are determined from side opposite inlet.
2. Refers to all frame angles unless otherwise specified.
3. Dimensions should not be used for construction. Certified drawings are available upon request.

Size	D	E	H	V	N	Class I		Class II		Y	'Z' - Class I		'Z' - Class II		AA	AB	AC	AF	AG	AJ	AX	AZ	Angle (2.)
						W	X	W	X		Shaft	Keyway	Shaft	Keyway									
600	48.50	90.00	41.50	83.00	55.38	67.13	38.13	69.25	39.50	6.00	2.688	0.58 x 0.31	3.938	1.00 x 0.50	75.00	1.88	82.00	0.81	39.63	43.13	4.00	4.00 x 4.00	4.00 x 3.00
660	52.50	97.00	44.50	89.00	62.50	75.00	42.88	75.38	43.00	7.00	3.438	0.88 x 0.44	3.938	1.00 x 0.50	82.00	1.63	90.00	0.81	42.88	46.88	3.50	5.00 x 3.50	5.00 x 3.50

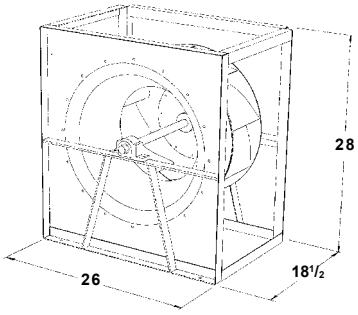
ESP - Performance Data

Efficient Silent Plenum Fan

182

Wheel Diameter = 18.25 in.	Tip Speed, FPM = 4.78 x RPM
Wheel Type = ESP	Maximum BHP = 0.48 x (RPM / 1000)^3

Class	Max. RPM
I	2256
II	2959
III	3735



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1600	605	0.10	**670**	**0.14**	**733**	**0.18**														
1800	648	0.12	708	0.16	**765**	**0.21**	**875**	**0.31**												
2000	693	0.14	749	0.19	802	0.24	**904**	**0.34**	**1000**	**0.46**										
2200	739	0.16	792	0.21	842	0.27	**937**	**0.38**	**1027**	**0.50**	**1114**	**0.63**								
2400	787	0.19	837	0.25	884	0.30	**973**	**0.42**	**1058**	**0.55**	**1140**	**0.68**	**1219**	**0.83**						
2600	836	0.22	883	0.28	928	0.34	1012	0.47	**1092**	**0.60**	**1169**	**0.74**	**1244**	**0.89**						
2800	885	0.25	930	0.32	973	0.38	1053	0.52	1129	0.66	**1202**	**0.81**	**1273**	**0.96**	**1411**	**1.28**				
3000	935	0.29	978	0.36	1019	0.43	1096	0.57	1168	0.72	**1238**	**0.88**	**1305**	**1.03**	**1437**	**1.37**				
3200	985	0.33	1027	0.41	1066	0.48	1140	0.63	1209	0.79	1276	0.95	**1340**	**1.11**	**1465**	**1.46**	**1586**	**1.83**		
3400	1036	0.38	1076	0.46	1114	0.54	1185	0.70	1251	0.86	1315	1.03	1377	1.20	**1497**	**1.56**	**1613**	**1.94**	**1725**	**2.34**
3800	1138	0.49	1176	0.57	1212	0.66	1278	0.84	1340	1.02	1399	1.20	1456	1.39	**1567**	**1.77**	**1673**	**2.18**	**1777**	**2.60**
4200	1241	0.61	1277	0.71	1311	0.81	1373	1.00	1432	1.20	1487	1.40	1540	1.60	1643	2.01	**1743**	**2.45**	**1839**	**2.89**
4600	1346	0.76	1380	0.87	1412	0.97	1471	1.19	1526	1.40	1578	1.62	1629	1.83	1725	2.28	1818	2.74	**1909**	**3.21**
5000	1451	0.94	1483	1.05	1513	1.17	1570	1.40	1622	1.63	1672	1.86	1720	2.10	1812	2.57	1899	3.06	1984	3.57
5400	1556	1.14	1587	1.26	1616	1.39	1670	1.64	1720	1.89	1768	2.14	1813	2.39	1901	2.90	1984	3.42	2065	3.95
5800	1662	1.37	1692	1.50	1719	1.64	1771	1.91	1819	2.17	1865	2.44	1909	2.71	1992	3.25	2072	3.81	2149	4.37
6200	1769	1.63	1797	1.77	1823	1.92	1873	2.20	1919	2.49	1963	2.78	2005	3.06	2086	3.64	2162	4.23	2235	4.82
6600	1876	1.92	1902	2.08	1928	2.23	1976	2.54	2020	2.84	2063	3.15	2103	3.45	2181	4.06	2254	4.68	2325	5.31
7000	1983	2.26	2008	2.42	2033	2.58	2079	2.91	2122	3.23	2163	3.55	2202	3.88	2277	4.52	2348	5.18	2416	5.83
7400	2090	2.62	2115	2.80	2138	2.97	2183	3.31	2225	3.66	2264	4.00	2302	4.34	2374	5.02	2443	5.71	2509	6.40

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4200	**1934**	**3.36**	**2026**	**3.84**	**2117**	**4.34**														
4400	**1964**	**3.53**	**2054**	**4.02**	**2142**	**4.53**	**2228**	**5.05**												
4600	**1997**	**3.70**	**2084**	**4.21**	**2169**	**4.73**	**2253**	**5.26**	**2335**	**5.81**										
4800	**2032**	**3.89**	**2115**	**4.40**	**2198**	**4.93**	**2279**	**5.48**	**2359**	**6.04**	**2438**	**6.61**								
5200	2105	4.28	**2184**	**4.82**	**2262**	**5.38**	**2339**	**5.95**	**2414**	**6.53**	**2489**	**7.12**	**2563**	**7.73**	**2636**	**8.36**				
5600	2183	4.71	2258	5.28	**2332**	**5.86**	**2404**	**6.45**	**2476**	**7.06**	**2547**	**7.68**	**2617**	**8.31**	**2686**	**8.95**	**2755**	**9.61**	**2822**	**10.28**
6000	2265	5.18	2336	5.77	2406	6.38	**2475**	**7.00**	**2544**	**7.63**	**2611**	**8.27**	**2678**	**8.93**	**2743**	**9.59**	**2809**	**10.27**	**2873**	**10.96**
6400	2350	5.68	2418	6.30	2485	6.94	2551	7.59	**2616**	**8.25**	**2680**	**8.91**	**2744**	**9.59**	**2807**	**10.28**	**2869**	**10.98**	**2931**	**11.69**
6800	2437	6.22	2503	6.87	2567	7.54	2630	8.22	2693	8.90	2754	9.60	**2815**	**10.30**	**2875**	**11.02**	**2935**	**11.74**	**2994**	**12.48**
7200	2527	6.79	2590	7.48	2652	8.18	2713	8.89	2773	9.60	2832	10.32	2890	11.06	**2948**	**11.80**	**3005**	**12.55**	**3061**	**13.31**
7600	2619	7.41	2680	8.14	2739	8.86	2798	9.60	2855	10.35	2912	11.10	2968	11.86	3024	12.63	3079	13.41	**3133**	**14.19**
8000	2712	8.08	2771	8.83	2828	9.59	2885	10.36	2941	11.14	2995	11.92	3050	12.71	3103	13.51	3156	14.31	3208	15.13
8400	2806	8.79	2863	9.57	2919	10.37	2974	11.17	3028	11.97	3081	12.79	3133	13.61	3185	14.44	3236	15.27	3287	16.11
8800	2901	9.54	2957	10.36	3011	11.19	3065	12.02	3117	12.86	3168	13.71	3219	14.56	3269	15.41	3319	16.28	3368	17.15
9200	2998	10.34	3052	11.20	3105	12.06	3157	12.93	3207	13.80	3257	14.68	3307	15.56	3355	16.45	3403	17.34	3451	18.24
9600	3095	11.20	3148	12.09	3199	12.99	3250	13.89	3299	14.79	3348	15.70	3396	16.61	3443	17.53	3490	18.46	3536	19.39
20000	3193	12.11	3244	13.03	3295	13.96	3344	14.90	3392	15.83	3440	16.78	3487	17.72	3533	18.68	3578	19.63	3623	20.60
10400	3291	13.07	3342	14.03	3391	15.00	3439	15.96	3486	16.94	3533	17.91	3578	18.89	3623	19.88	3668	20.87	3711	21.86
10800	3391	14.09	3440	15.09	3488	16.09	3535	17.09	3581	18.10	3627	19.11	3671	20.12	3715	21.14				
11200	3491	15.17	3539	16.20	3586	17.24	3632	18.28	3677	19.32	3722	20.36								

Notes:
1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Inlet Sound Power [dB]

% WOV = 27.57 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
600	100	70	68	65	60	53	46	41	40	62
	80	69	67	63	57	50	44	40	40	60
	70	68	67	63	56	50	45	41	41	59
	60	68	67	62	56	50	45	42	41	59
	50	70	67	61	55	50	45	41	41	59
800	100	79	77	73	70	61	56	48	47	71
	80	77	76	72	67	58	53	47	47	69
	70	77	76	72	66	58	54	48	47	68
	60	76	76	71	66	58	54	49	48	68
	50	78	78	70	65	57	54	48	48	68
1100	100	83	86	83	78	72	66	58	53	80
	80	80	83	80	73	67	62	56	53	76
	70	79	83	79	73	67	61	56	53	76
	60	79	83	78	72	66	61	56	54	75
	50	81	84	79	71	65	61	56	53	75
1400	100	85	90	92	84	78	74	66	58	87
	80	79	86	86	77	71	68	62	58	81
	70	79	85	85	76	70	67	62	58	80
	60	80	85	84	75	69	66	62	58	79
	50	81	86	84	75	68	65	61	58	79
1700	100	88	89	99	89	82	81	72	64	93
	80	77	85	91	80	72	72	66	63	85
	70	78	86	89	78	71	70	65	62	83
	60	79	86	88	77	69	69	65	62	82
	50	81	87	88	79	69	68	64	61	82
2000	100	91	93	101	95	87	85	78	69	97
	80	79	87	93	86	76	76	71	67	88
	70	80	88	92	84	75	74	70	66	87
	60	81	88	91	83	74	72	69	66	86
	50	83	90	91	84	74	71	68	65	86

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
2300	100	94	97	103	101	91	88	82	74	101
	80	82	90	96	91	81	79	75	71	92
	70	83	90	95	90	80	77	74	70	91
	60	84	91	94	88	78	75	73	69	89
	50	86	92	95	89	79	74	72	69	90
2600	100	96	100	104	106	95	91	87	78	105
	80	84	92	98	96	85	81	79	74	96
	70	85	92	97	95	84	79	77	73	95
	60	86	93	97	93	82	78	76	72	93
	50	88	95	98	94	83	77	75	72	94
2900	100	98	103	105	110	99	93	91	82	108
	80	86	93	100	101	89	83	82	77	100
	70	87	94	100	99	87	82	81	76	98
	60	88	95	100	98	86	80	79	75	97
	50	90	97	100	98	87	80	78	74	98
3200	100	99	106	106	114	102	95	94	85	112
	80	87	95	101	105	92	85	85	80	103
	70	89	96	102	103	91	84	83	79	102
	60	89	97	102	102	89	82	82	78	101
	50	91	99	103	102	91	82	81	77	101
3500	100	101	108	107	116	105	97	97	88	114
	80	89	96	103	107	95	87	88	82	105
	70	90	98	103	106	94	86	86	81	104
	60	91	98	104	105	92	84	84	80	103
	50	93	100	105	104	94	84	83	79	103
3735	100	102	110	109	117	108	99	99	90	115
	80	90	98	104	109	98	89	89	84	107
	70	91	99	105	107	96	88	87	83	106
	60	92	100	105	106	95	87	86	82	105
	50	94	102	106	106	97	87	85	81	105

Inlet Sound Power [dB]

% WOV = 27.57 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
600	100	72	72	70	67	62	53	44	35	68
	80	71	70	68	64	59	52	42	32	66
	70	70	69	67	64	59	52	43	33	65
	60	69	69	67	64	59	52	43	33	65
	50	71	70	67	64	59	53	44	32	65
800	100	79	80	77	75	71	64	54	45	76
	80	79	78	75	73	67	62	53	43	74
	70	78	78	75	73	67	62	53	43	74
	60	77	78	74	72	67	62	54	44	73
	50	79	79	74	72	67	62	56	44	73
1100	100	82	86	85	82	80	74	65	56	84
	80	82	84	82	80	75	70	63	55	81
	70	81	84	82	79	75	70	63	55	81
	60	80	84	82	78	74	70	63	54	80
	50	82	85	82	78	74	69	64	55	80
1400	100	85	87	90	87	85	81	74	64	90
	80	84	86	87	83	80	76	70	63	86
	70	84	86	87	82	79	75	70	62	85
	60	83	85	86	82	78	74	69	62	84
	50	84	87	87	82	78	74	69	62	84
1700	100	88	86	94	90	88	87	80	71	94
	80	88	84	90	86	83	80	74	69	89
	70	87	85	89	85	81	78	74	68	87
	60	86	85	89	85	80	77	73	66	87
	50	87	86	89	85	80	77	73	67	87
2000	100	91	89	96	94	91	91	85	77	97
	80	91	89	92	90	87	84	79	74	92
	70	90	89	92	89	85	82	78	72	91
	60	89	89	92	89	84	81	78	71	91
	50	89	90	92	89	84	81	77	71	91

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
2300	100	94	94	97	98	95	94	90	81	101
	80	94	94	95	94	90	88	83	78	96
	70	93	93	94	94	89	86	82	77	95
	60	92	93	94	93	88	84	81	76	94
	50	92	94	95	93	88	84	81	75	94
2600	100	96	98	99	102	98	97	94	86	104
	80	96	98	97	98	93	91	87	81	99
	70	95	98	97	97	92	89	86	80	98
	60	94	97	97	97	92	87	84	80	98
	50	94	98	97	97	92	87	84	79	98
2900	100	98	102	100	105	101	99	97	90	107
	80	98	102	98	101	96	94	90	85	102
	70	97	101	99	101	96	92	89	84	102
	60	96	101	99	100	95	90	87	83	101
	50	96	101	100	100	95	90	87	82	101
3200	100	99	105	101	108	103	101	100	93	109
	80	99	105	100	104	99	96	93	87	105
	70	98	104	100	104	98	94	91	87	104
	60	98	104	101	103	98	93	90	86	104
	50	97	104	102	103	98	93	90	85	104
3500	100	101	108	102	110	105	103	103	96	111
	80	101	108	101	106	101	98	96	90	107
	70	100	107	102	106	101	97	94	90	107
	60	99	106	102	105	100	95	92	89	106
	50	99	106	103	105	100	95	92	88	106
3735	100	102	109	105	111	107	105	105	98	113
	80	102	109	104	107	103	100	98	92	109
	70	101	108	104	107	103	98	96	91	108
	60	100	107	104	106	102	97	94	91	107
	50	100	107	105	107	102	97	94	90	108

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

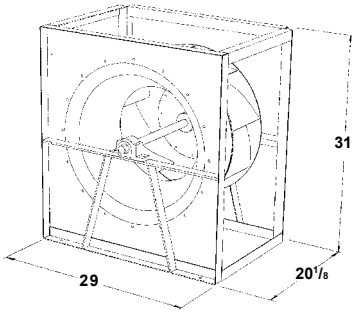
ESP - Performance Data

Efficient Silent Plenum Fan

200

Wheel Diameter = 20.00 in.	Tip Speed, FPM = 5.24 x RPM
Wheel Type = ESP	Maximum BHP = 0.75 x (RPM / 1000)^3

Class	Max. RPM
I	2027
II	2703
III	3409



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2000	564	0.13	622	0.18	**678**	**0.23**														
2200	597	0.14	652	0.20	**703**	**0.25**	**802**	**0.38**												
2400	632	0.17	683	0.22	**732**	**0.28**	**824**	**0.41**	**913**	**0.55**										
2600	667	0.19	716	0.25	762	0.31	**849**	**0.45**	**932**	**0.59**	**1013**	**0.75**								
2800	703	0.22	750	0.28	793	0.35	**876**	**0.49**	**955**	**0.64**	**1031**	**0.80**								
3000	740	0.24	784	0.31	826	0.39	905	0.53	**980**	**0.69**	**1053**	**0.86**	**1123**	**1.03**						
3200	777	0.28	820	0.35	860	0.43	935	0.58	**1007**	**0.75**	**1076**	**0.92**	**1144**	**1.10**						
3400	814	0.31	856	0.39	894	0.47	967	0.63	1036	0.80	**1102**	**0.98**	**1166**	**1.17**	**1291**	**1.56**				
3600	852	0.35	892	0.43	930	0.52	999	0.69	1065	0.87	**1129**	**1.05**	**1191**	**1.24**	**1311**	**1.64**				
4000	929	0.44	967	0.53	1002	0.62	1067	0.81	1128	1.00	1187	1.20	**1245**	**1.40**	**1356**	**1.83**	**1463**	**2.28**		
4400	1006	0.54	1042	0.64	1075	0.74	1137	0.94	1195	1.15	1250	1.37	1304	1.59	**1407**	**2.04**	**1507**	**2.52**	**1604**	**3.01**
4800	1085	0.65	1119	0.77	1150	0.88	1209	1.10	1263	1.32	1316	1.55	1366	1.79	1463	2.27	**1557**	**2.77**	**1648**	**3.29**
5200	1164	0.79	1196	0.91	1226	1.03	1282	1.27	1334	1.51	1384	1.76	1431	2.01	1523	2.52	**1612**	**3.05**	**1698**	**3.60**
5600	1243	0.95	1274	1.08	1303	1.20	1356	1.46	1406	1.72	1454	1.99	1499	2.25	1587	2.79	1671	3.35	**1752**	**3.92**
6000	1323	1.12	1352	1.26	1380	1.40	1431	1.68	1479	1.95	1525	2.23	1569	2.52	1652	3.09	1732	3.68	1810	4.28
6400	1403	1.32	1431	1.47	1458	1.62	1508	1.91	1554	2.21	1597	2.50	1639	2.80	1720	3.41	1796	4.03	1871	4.66
6800	1483	1.54	1511	1.70	1536	1.86	1584	2.17	1629	2.49	1671	2.80	1711	3.12	1789	3.76	1863	4.41	1934	5.07
7200	1564	1.79	1590	1.96	1615	2.13	1661	2.46	1705	2.79	1745	3.12	1785	3.46	1859	4.13	1930	4.81	1999	5.50
7600	1645	2.07	1670	2.24	1694	2.42	1739	2.77	1781	3.12	1820	3.47	1858	3.82	1931	4.53	1999	5.25	2066	5.97
8000	1726	2.37	1751	2.56	1774	2.74	1817	3.11	1858	3.48	1896	3.85	1933	4.22	2003	4.96	2070	5.71	2134	6.47

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5000	**1759**	**4.00**	**1844**	**4.57**	**1928**	**5.17**														
5200	**1782**	**4.16**	**1865**	**4.75**	**1946**	**5.35**	**2026**	**5.98**												
5400	**1807**	**4.34**	**1887**	**4.93**	**1966**	**5.55**	**2044**	**6.19**												
5800	**1858**	**4.70**	**1935**	**5.32**	**2010**	**5.96**	**2084**	**6.62**	**2156**	**7.29**	**2228**	**7.99**								
6200	1914	5.10	**1987**	**5.74**	**2058**	**6.41**	**2129**	**7.09**	**2198**	**7.78**	**2266**	**8.50**	**2334**	**9.23**	**2401**	**9.97**				
6600	1973	5.52	**2042**	**6.19**	**2110**	**6.88**	**2178**	**7.59**	**2244**	**8.31**	**2310**	**9.04**	**2374**	**9.79**	**2438**	**10.56**	**2502**	**11.34**	**2564**	**12.14**
7000	2034	5.97	2101	6.67	**2166**	**7.39**	**2230**	**8.12**	**2294**	**8.87**	**2357**	**9.62**	**2419**	**10.40**	**2480**	**11.19**	**2541**	**11.99**	**2601**	**12.81**
7400	2098	6.45	2162	7.19	2224	7.93	2286	8.69	**2347**	**9.46**	**2408**	**10.24**	**2467**	**11.04**	**2526**	**11.85**	**2585**	**12.67**	**2642**	**13.51**
7800	2163	6.97	2225	7.73	2285	8.50	2345	9.29	2403	10.09	**2461**	**10.89**	**2519**	**11.72**	**2576**	**12.55**	**2632**	**13.40**	**2687**	**14.26**
8200	2230	7.51	2289	8.30	2348	9.11	2405	9.92	2462	10.75	2518	11.58	**2573**	**12.43**	**2628**	**13.29**	**2682**	**14.17**	**2736**	**15.05**
8700	2315	8.24	2372	9.07	2429	9.91	2484	10.77	2538	11.63	2592	12.50	2645	13.38	**2697**	**14.28**	**2749**	**15.18**	**2801**	**16.10**
9200	2402	9.02	2458	9.89	2512	10.78	2565	11.67	2617	12.56	2669	13.47	2720	14.39	2770	15.32	2820	16.26	**2869**	**17.21**
9700	2491	9.86	2544	10.77	2597	11.69	2648	12.62	2698	13.56	2748	14.51	2797	15.47	2846	16.43	2894	17.41	2941	18.39
10200	2580	10.76	2632	11.71	2683	12.68	2733	13.65	2782	14.62	2830	15.61	2877	16.60	2924	17.60	2970	18.62	3016	19.64
10700	2671	11.72	2722	12.71	2771	13.72	2819	14.73	2867	15.75	2913	16.77	2959	17.81	3004	18.85	3049	19.89	3094	20.95
11300	2782	12.95	2830	14.00	2878	15.06	2925	16.12	2970	17.19	3015	18.26	3060	19.34	3103	20.43	3147	21.52	3189	22.62
11800	2874	14.06	2922	15.15	2968	16.25	3014	17.35	3058	18.46	3102	19.57	3145	20.70	3188	21.82	3230	22.96	3271	24.10
12300	2968	15.23	3014	16.37	3060	17.51	3104	18.66	3147	19.81	3190	20.96	3232	22.13	3273	23.29	3314	24.47	3355	25.65
12800	3062	16.48	3107	17.66	3152	18.85	3195	20.04	3237	21.23	3279	22.43	3320	23.63	3360	24.84	3400	26.05		
13300	3157	17.80	3201	19.03	3244	20.26	3287	21.49	3328	22.73	3369	23.97	3409	25.22						

Notes: 1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Sound Power Levels - ESP

Efficient Silent Plenum Fan

Inlet Sound Power [dB]

% WOV = 20.95 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
550	100	71	69	66	60	53	46	42	41	62
	80	70	68	64	57	50	44	41	41	60
	70	69	67	63	56	50	45	42	42	59
	60	69	67	63	56	51	46	43	42	60
	50	71	67	62	55	50	45	42	42	59
800	100	83	81	76	73	64	59	50	49	74
	80	81	80	75	70	61	56	49	49	72
	70	80	79	75	69	61	56	50	50	71
	60	80	79	74	69	61	57	51	50	71
	50	82	81	73	68	60	57	50	50	71
1000	100	85	87	83	79	72	66	57	54	80
	80	83	85	81	75	68	62	56	54	77
	70	83	85	80	74	67	62	56	54	77
	60	82	84	79	73	67	62	57	55	76
	50	84	86	79	73	66	62	56	55	76
1300	100	88	92	92	85	80	74	66	59	88
	80	83	89	87	79	73	68	63	60	82
	70	83	88	86	78	72	68	63	59	82
	60	83	88	85	77	71	67	63	59	81
	50	85	89	86	77	70	66	62	59	81
1600	100	91	93	100	90	84	81	73	65	94
	80	81	89	92	82	75	74	68	64	86
	70	82	89	91	80	74	72	67	64	85
	60	83	89	90	79	72	71	67	63	84
	50	85	90	90	80	72	70	66	63	84
1800	100	93	93	103	94	86	85	77	69	97
	80	81	89	95	84	76	76	71	68	89
	70	82	89	93	82	74	74	70	66	87
	60	83	90	92	81	73	73	69	66	86
	50	85	91	92	83	73	71	68	65	86

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
2100	100	96	97	105	100	91	89	82	74	101
	80	84	91	97	90	81	80	75	72	92
	70	85	92	96	89	79	78	74	70	91
	60	86	93	95	87	78	76	73	70	90
	50	88	94	95	89	78	75	72	69	90
2300	100	97	100	106	104	94	91	85	77	104
	80	85	93	99	94	84	81	78	74	95
	70	86	94	98	93	82	80	77	73	94
	60	87	94	97	91	81	78	75	72	92
	50	89	96	98	92	82	77	74	72	93
2600	100	99	103	107	109	98	93	90	81	108
	80	87	95	101	99	88	84	82	77	99
	70	88	96	100	98	87	82	80	76	98
	60	89	96	100	96	85	81	79	75	96
	50	91	98	101	97	86	80	78	75	97
2900	100	101	107	108	113	102	96	93	85	111
	80	89	97	103	104	92	86	85	80	103
	70	90	98	103	102	90	84	83	79	101
	60	91	98	103	101	89	83	82	78	100
	50	93	100	103	101	90	83	81	77	101
3200	100	103	109	109	117	105	98	97	88	115
	80	91	98	104	108	95	88	88	83	106
	70	92	99	105	106	94	87	86	81	105
	60	93	100	105	105	92	85	85	81	104
	50	95	102	106	105	94	85	83	80	104
3409	100	104	111	110	119	107	99	99	90	117
	80	92	99	105	110	97	89	90	84	108
	70	93	100	106	108	96	88	88	83	106
	60	94	101	106	107	94	87	86	82	106
	50	96	103	107	107	96	86	85	81	106

Outlet Sound Power [dB]

% WOV = 20.95 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
550	100	73	72	71	68	62	53	44	35	69
	80	72	70	69	64	59	52	42	32	66
	70	71	70	68	64	59	52	43	33	66
	60	71	70	68	64	59	52	43	33	66
	50	72	70	68	64	59	54	44	32	66
800	100	83	84	80	78	74	67	57	48	79
	80	83	82	78	76	70	65	56	46	77
	70	81	81	78	76	70	65	56	46	77
	60	80	81	77	75	70	65	57	47	76
	50	83	83	77	75	70	65	58	46	77
1000	100	85	88	86	83	80	74	65	55	85
	80	85	86	84	81	76	71	63	54	82
	70	84	86	83	80	76	71	63	54	82
	60	82	86	83	80	75	70	63	54	82
	50	85	87	83	80	75	70	65	55	82
1300	100	87	91	92	88	86	82	74	64	91
	80	87	89	89	85	82	77	71	64	87
	70	86	89	88	84	81	76	70	63	86
	60	85	88	88	84	80	76	70	62	86
	50	87	90	88	84	80	75	70	63	86
1600	100	90	90	96	92	90	88	81	72	95
	80	90	88	92	88	85	82	76	70	91
	70	89	88	92	87	83	80	75	69	90
	60	88	89	91	87	82	79	75	68	89
	50	89	90	92	87	82	79	74	68	89
1800	100	93	89	97	94	92	91	85	76	98
	80	93	88	93	90	87	84	79	74	93
	70	92	89	93	89	85	82	78	72	91
	60	91	89	93	89	84	81	78	71	91
	50	91	90	93	89	84	81	77	71	91

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
2100	100	96	94	99	98	95	95	90	81	101
	80	96	94	96	94	91	88	83	78	96
	70	95	94	96	94	89	86	82	77	95
	60	94	94	96	93	88	85	82	76	95
	50	94	95	96	93	88	85	81	75	95
2300	100	97	97	100	101	98	97	92	84	104
	80	97	97	98	97	93	91	86	81	99
	70	96	97	97	97	92	89	85	80	98
	60	95	97	97	96	91	87	84	79	97
	50	95	97	98	96	91	87	83	78	97
2600	100	99	102	102	105	101	99	96	89	107
	80	99	101	100	101	96	94	90	84	102
	70	98	101	100	100	95	92	88	83	101
	60	97	100	100	100	94	90	87	82	101
	50	97	101	100	100	94	90	87	82	101
2900	100	101	105	103	108	103	102	100	92	110
	80	101	105	101	104	99	96	93	87	105
	70	100	104	102	103	98	95	91	87	104
	60	99	104	102	103	98	93	90	86	104
	50	99	104	103	103	98	93	90	85	104
3200	100	103	109	104	111	106	104	103	96	112
	80	103	108	103	107	102	99	96	90	108
	70	102	108	103	106	101	97	94	90	107
	60	101	107	104	106	100	96	93	89	106
	50	101	107	105	106	100	96	92	88	106
3409	100	104	111	105	113	107	105	105	98	114
	80	104	111	104	109	103	100	98	92	110
	70	103	110	105	108	103	99	96	92	109
	60	102	109	105	108	102	97	94	91	108
	50	102	109	106	108	102	97	94	90	108

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

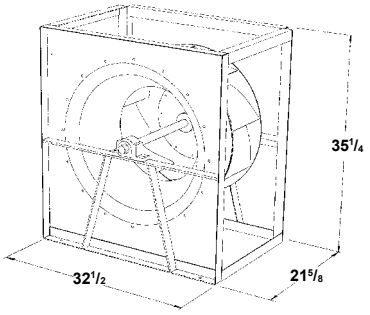
ESP - Performance Data

Efficient Silent Plenum Fan

222

Wheel Diameter = 22.25 in.	Tip Speed, FPM = 5.83 x RPM
Wheel Type = ESP	Maximum BHP = 1.21 x (RPM / 1000)[3]

Class	Max. RPM
I	1875
II	2413
III	3065



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2200	476	0.13	**534**	**0.18**	**587**	**0.24**														
2500	510	0.15	**563**	**0.21**	**613**	**0.27**	**705**	**0.41**												
2800	545	0.18	595	0.24	**641**	**0.31**	**728**	**0.46**	**809**	**0.62**										
3100	581	0.21	629	0.28	**672**	**0.35**	**754**	**0.51**	**830**	**0.68**	**902**	**0.86**								
3400	618	0.24	664	0.32	705	0.40	**782**	**0.57**	**854**	**0.75**	**923**	**0.93**	**989**	**1.13**						
3700	656	0.28	700	0.36	740	0.45	**813**	**0.63**	**881**	**0.82**	**946**	**1.01**	**1009**	**1.22**	**1128**	**1.66**				
4000	695	0.32	737	0.41	775	0.50	846	0.70	**911**	**0.89**	**973**	**1.10**	**1032**	**1.31**	**1146**	**1.77**				
4300	735	0.36	774	0.46	811	0.56	879	0.77	**942**	**0.98**	**1001**	**1.19**	**1058**	**1.42**	**1167**	**1.89**	**1271**	**2.39**		
4600	774	0.41	813	0.52	848	0.63	914	0.84	974	1.07	**1031**	**1.29**	**1086**	**1.53**	**1190**	**2.02**	**1290**	**2.53**	**1386**	**3.08**
4900	814	0.47	852	0.58	886	0.70	949	0.93	1008	1.16	1063	1.40	**1116**	**1.64**	**1216**	**2.15**	**1312**	**2.69**	**1404**	**3.25**
5200	855	0.53	891	0.65	924	0.77	986	1.01	1042	1.26	1096	1.51	**1147**	**1.77**	**1244**	**2.30**	**1336**	**2.85**	**1424**	**3.43**
5600	910	0.62	944	0.75	976	0.88	1035	1.14	1089	1.40	1141	1.67	1190	1.94	**1282**	**2.50**	**1371**	**3.08**	**1455**	**3.68**
6000	965	0.72	997	0.86	1028	1.00	1085	1.28	1138	1.56	1187	1.84	1234	2.13	**1324**	**2.72**	**1408**	**3.33**	**1489**	**3.95**
6400	1020	0.84	1051	0.98	1081	1.13	1136	1.43	1187	1.73	1235	2.03	1280	2.33	1366	2.95	**1448**	**3.59**	**1526**	**4.24**
7000	1104	1.03	1133	1.19	1161	1.35	1213	1.68	1262	2.00	1308	2.33	1351	2.66	1433	3.33	1511	4.01	**1585**	**4.71**
7600	1188	1.26	1216	1.43	1243	1.61	1292	1.96	1339	2.31	1382	2.66	1424	3.02	1503	3.74	1577	4.47	1648	5.21
8200	1273	1.52	1300	1.71	1325	1.89	1372	2.27	1416	2.65	1458	3.03	1498	3.41	1574	4.18	1645	4.96	1713	5.75
8800	1359	1.82	1384	2.02	1408	2.22	1453	2.62	1495	3.03	1536	3.43	1574	3.84	1647	4.67	1716	5.50	1781	6.34
9400	1445	2.16	1468	2.37	1491	2.59	1534	3.01	1575	3.44	1614	3.88	1651	4.31	1722	5.19	1788	6.07	1851	6.97
10000	1531	2.55	1553	2.77	1575	2.99	1617	3.45	1656	3.90	1693	4.36	1729	4.83	1797	5.76	1862	6.69	1923	7.64

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5600	**1537**	**4.31**	**1617**	**4.96**	**1695**	**5.63**														
6000	**1568**	**4.60**	**1644**	**5.27**	**1719**	**5.97**	**1792**	**6.68**												
6400	**1602**	**4.91**	**1675**	**5.61**	**1747**	**6.32**	**1817**	**7.06**	**1886**	**7.82**	**1954**	**8.60**								
6800	**1638**	**5.25**	**1708**	**5.97**	**1778**	**6.70**	**1845**	**7.46**	**1912**	**8.24**	**1977**	**9.04**	**2041**	**9.86**						
7200	**1676**	**5.60**	**1744**	**6.34**	**1811**	**7.11**	**1876**	**7.89**	**1940**	**8.69**	**2003**	**9.50**	**2066**	**10.34**	**2127**	**11.20**	**2187**	**12.08**		
7600	**1716**	**5.97**	**1782**	**6.74**	**1847**	**7.53**	**1910**	**8.33**	**1972**	**9.16**	**2033**	**10.00**	**2093**	**10.86**	**2152**	**11.73**	**2210**	**12.63**	**2268**	**13.54**
8000	**1757**	**6.36**	**1822**	**7.16**	**1884**	**7.97**	**1946**	**8.80**	**2006**	**9.65**	**2065**	**10.51**	**2123**	**11.40**	**2180**	**12.29**	**2236**	**13.21**	**2292**	**14.14**
8600	1822	6.97	**1884**	**7.82**	**1944**	**8.68**	**2003**	**9.55**	**2060**	**10.44**	**2116**	**11.34**	**2172**	**12.26**	**2227**	**13.19**	**2281**	**14.13**	**2334**	**15.10**
9200	1889	7.64	1949	8.53	**2006**	**9.43**	**2063**	**10.35**	**2118**	**11.28**	**2172**	**12.22**	**2226**	**13.17**	**2278**	**14.14**	**2330**	**15.12**	**2381**	**16.12**
9800	1958	8.34	2016	9.28	2071	10.23	2126	11.20	**2179**	**12.17**	**2231**	**13.15**	**2283**	**14.15**	**2333**	**15.16**	**2383**	**16.18**	**2432**	**17.21**
10400	2029	9.09	2085	10.08	2139	11.08	2191	12.09	2243	13.11	**2293**	**14.14**	**2343**	**15.18**	**2392**	**16.23**	**2440**	**17.29**	**2487**	**18.37**
11000	2101	9.89	2155	10.94	2207	11.99	2258	13.04	2308	14.11	2357	15.18	**2405**	**16.27**	**2453**	**17.36**	**2499**	**18.47**	**2545**	**19.58**
11600	2174	10.74	2227	11.84	2278	12.94	2327	14.05	2376	15.16	2423	16.28	2470	17.42	2516	18.56	**2561**	**19.70**	**2606**	**20.86**
12200	2248	11.65	2300	12.79	2349	13.95	2398	15.10	2445	16.27	2491	17.44	2537	18.62	2581	19.81	2625	21.00	**2668**	**22.21**
12800	2323	12.61	2373	13.80	2422	15.01	2469	16.22	2515	17.43	2560	18.66	2604	19.88	2648	21.12	2691	22.36	2733	23.61
13400	2399	13.62	2448	14.87	2496	16.13	2542	17.39	2587	18.66	2631	19.93	2674	21.21	2716	22.49	2758	23.79	2799	25.08
14200	2502	15.07	2549	16.40	2595	17.72	2640	19.05	2683	20.39	2726	21.73	2768	23.08	2809	24.43	2850	25.79	2889	27.15
15000	2606	16.64	2651	18.03	2696	19.43	2739	20.83	2782	22.24	2823	23.65	2864	25.06	2904	26.48	2943	27.91	2982	29.34
15800	2710	18.32	2755	19.79	2798	21.25	2840	22.73	2882	24.20	2922	25.68	2962	27.17	3001	28.66	3039	30.15		
16800	2842	20.61	2885	22.16	2927	23.72	2968	25.28	3008	26.84	3047	28.41								

Notes:
1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Inlet Sound Power [dB]

% WOV = 14.86 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
500	100	67	68	63	58	54	45	40	38	61
	80	65	65	59	53	47	40	37	37	56
	70	64	64	58	52	46	40	38	39	55
	60	63	63	57	51	45	40	39	41	54
	50	63	62	57	51	46	41	37	35	54
700	100	79	76	75	67	63	58	48	46	71
	80	77	74	72	63	57	51	44	44	67
	70	76	73	70	62	56	50	45	46	66
	60	75	71	69	61	55	50	45	47	65
	50	75	71	68	61	56	51	46	44	64
900	100	83	82	81	74	70	66	56	52	77
	80	83	81	79	71	65	59	51	49	74
	70	81	79	77	69	63	58	51	50	73
	60	80	78	76	68	62	57	52	52	72
	50	81	78	76	68	63	58	52	50	72
1200	100	82	86	87	81	77	74	68	60	84
	80	85	88	86	80	73	68	61	56	82
	70	83	86	84	77	70	65	60	56	80
	60	80	83	81	74	68	64	59	57	77
	50	85	87	83	76	70	65	60	56	79
1400	100	81	84	91	83	79	79	73	65	87
	80	87	90	92	84	77	73	65	60	87
	70	84	87	89	80	73	70	64	59	84
	60	80	83	86	76	70	67	63	60	80
	50	88	90	88	80	73	69	63	60	83
1600	100	80	80	95	84	80	83	78	70	90
	80	89	90	97	87	79	77	69	64	91
	70	86	86	94	82	75	73	67	63	87
	60	81	80	90	77	71	69	66	63	83
	50	91	92	93	83	75	72	66	63	87

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
1900	100	82	83	98	89	84	86	83	76	94
	80	81	82	96	86	80	80	74	70	90
	70	79	82	94	85	78	76	72	69	88
	60	78	81	93	83	76	73	70	68	87
	50	95	95	99	91	83	78	73	68	94
2100	100	84	86	98	94	87	87	86	79	96
	80	82	85	96	91	83	82	78	73	92
	70	81	84	95	89	81	79	75	71	91
	60	80	84	93	88	79	76	73	70	89
	50	97	98	101	95	86	81	76	71	96
2300	100	86	89	98	98	90	89	88	82	99
	80	84	87	97	95	85	84	80	75	95
	70	83	86	95	93	83	81	77	74	93
	60	82	86	94	92	82	78	75	73	92
	50	99	101	102	98	89	84	78	74	99
2600	100	88	92	98	103	93	92	91	86	102
	80	86	91	97	100	89	87	84	79	99
	70	85	90	96	98	87	84	81	77	97
	60	84	89	94	97	86	81	78	76	96
	50	101	105	105	103	93	87	82	77	103
2800	100	89	94	98	106	95	93	93	89	105
	80	87	92	97	104	91	88	87	81	102
	70	86	91	96	102	89	85	83	79	100
	60	85	91	95	100	88	83	80	78	98
	50	102	107	106	106	96	89	84	79	105
3065	100	91	97	98	110	98	95	96	92	108
	80	89	95	97	108	94	90	89	83	106
	70	88	94	96	106	92	87	86	81	104
	60	87	93	96	104	91	85	83	80	102
	50	104	109	108	109	99	92	87	81	108

Outlet Sound Power [dB]

% WOV = 14.86 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
500	100	69	69	67	66	62	50	41	34	67
	80	69	67	63	60	54	45	38	32	61
	70	67	66	62	58	52	46	38	30	60
	60	65	65	61	56	50	46	39	29	58
	50	67	65	62	58	53	49	42	33	60
700	100	79	78	76	74	72	64	52	45	76
	80	79	77	74	69	65	57	48	42	71
	70	78	76	72	67	63	56	49	42	70
	60	77	74	71	66	61	55	51	41	68
	50	78	75	72	67	63	58	53	44	70
900	100	83	84	83	80	78	73	61	53	83
	80	83	83	80	75	72	65	57	50	78
	70	82	82	79	74	70	63	57	50	76
	60	81	80	78	72	68	61	58	50	75
	50	82	82	78	74	69	64	60	53	76
1200	100	83	88	89	86	84	81	73	63	89
	80	81	86	87	82	78	74	66	59	84
	70	80	86	86	80	76	71	65	59	83
	60	81	85	84	79	74	69	64	59	81
	50	82	86	85	79	75	70	66	60	82
1400	100	82	87	93	89	87	85	79	69	92
	80	79	85	91	85	81	79	71	64	88
	70	80	85	89	83	79	75	69	63	86
	60	80	84	88	82	77	73	68	63	84
	50	83	86	89	82	77	73	68	64	85
1600	100	82	85	96	91	89	88	84	74	95
	80	77	81	94	86	83	82	75	68	90
	70	78	81	93	85	81	79	73	67	89
	60	80	82	92	84	79	75	71	66	87
	50	83	84	92	84	79	75	71	66	87

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
1900	100	86	89	99	96	94	92	89	81	99
	80	83	85	96	93	89	87	81	75	95
	70	83	86	95	91	87	83	78	73	93
	60	85	87	95	90	84	80	76	71	92
	50	85	87	95	90	84	80	76	71	92
2100	100	88	91	100	99	97	95	92	84	102
	80	85	88	97	96	92	89	84	78	98
	70	85	88	96	94	90	86	81	76	96
	60	87	90	96	93	87	83	79	74	94
	50	87	90	96	93	87	83	79	74	94
2300	100	90	94	100	102	99	97	94	87	104
	80	87	90	98	99	94	92	87	81	100
	70	87	90	97	97	92	89	84	78	98
	60	89	92	97	96	90	86	82	77	97
	50	89	92	97	96	90	86	82	77	97
2600	100	92	97	101	106	102	100	97	92	108
	80	89	93	98	103	97	95	91	84	103
	70	89	94	98	101	95	92	87	82	101
	60	91	95	99	101	94	89	85	80	101
	50	91	95	99	101	94	89	85	80	101
2800	100	93	98	102	108	104	102	99	94	110
	80	90	95	99	105	99	97	93	87	105
	70	90	95	99	104	97	94	90	84	104
	60	92	97	99	103	96	91	87	83	102
	50	92	97	99	103	96	91	87	83	102
3065	100	95	101	103	111	106	104	102	97	112
	80	92	97	100	108	102	99	96	89	108
	70	92	98	100	107	100	96	92	87	106
	60	94	99	100	106	98	94	89	85	105
	50	94	99	100	106	98	94	89	85	105

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

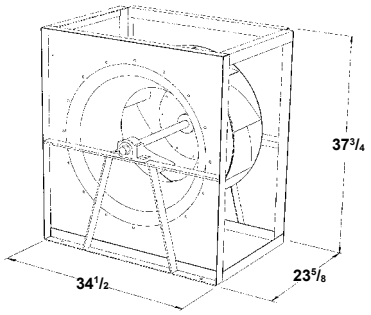
ESP - Performance Data

Efficient Silent Plenum Fan

245

Wheel Diameter = 24.50 in.	Tip Speed, FPM = 6.41 x RPM
Wheel Type = ESP	Maximum BHP = 1.96 x (RPM / 1000)^3

Class	Max. RPM
I	1691
II	2199
III	2780



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2700	**435**	**0.15**	**487**	**0.22**	**535**	**0.30**														
3000	460	0.18	**509**	**0.25**	**554**	**0.33**	**639**	**0.50**												
3300	486	0.20	532	0.28	**575**	**0.37**	**655**	**0.54**	**730**	**0.73**										
3600	513	0.23	557	0.32	598	0.41	**674**	**0.59**	**745**	**0.79**	**812**	**1.00**								
3900	541	0.26	583	0.36	622	0.45	**694**	**0.65**	**762**	**0.85**	**826**	**1.07**	**888**	**1.31**						
4200	569	0.30	610	0.40	647	0.50	**716**	**0.70**	**781**	**0.92**	**842**	**1.15**	**901**	**1.39**						
4500	597	0.34	637	0.44	673	0.55	740	0.77	**802**	**0.99**	**860**	**1.23**	**917**	**1.48**	**1025**	**2.01**				
4800	626	0.38	664	0.49	699	0.60	764	0.83	**823**	**1.07**	**880**	**1.32**	**934**	**1.58**	**1038**	**2.12**				
5100	656	0.42	693	0.54	726	0.66	789	0.90	846	1.15	**901**	**1.41**	**953**	**1.68**	**1054**	**2.24**	**1149**	**2.85**		
5400	686	0.47	721	0.59	754	0.72	815	0.98	870	1.24	**923**	**1.51**	**974**	**1.79**	**1070**	**2.37**	**1163**	**2.98**		
5800	725	0.54	760	0.67	791	0.81	850	1.08	903	1.36	954	1.65	**1003**	**1.94**	**1095**	**2.54**	**1183**	**3.18**	**1268**	**3.86**
6200	766	0.62	799	0.76	829	0.91	886	1.20	937	1.49	986	1.79	1033	2.10	**1122**	**2.73**	**1207**	**3.40**	**1288**	**4.09**
6600	807	0.71	838	0.86	868	1.01	922	1.32	972	1.63	1020	1.95	1065	2.27	**1151**	**2.93**	**1232**	**3.62**	**1310**	**4.34**
7200	868	0.86	898	1.02	926	1.19	978	1.52	1026	1.86	1071	2.20	1115	2.55	1196	3.25	**1273**	**3.98**	**1348**	**4.74**
8000	951	1.09	979	1.27	1006	1.45	1055	1.83	1100	2.20	1143	2.57	1184	2.95	1261	3.72	1333	4.51	**1403**	**5.32**
8800	1035	1.37	1062	1.57	1086	1.77	1133	2.17	1176	2.58	1216	2.99	1255	3.41	1329	4.24	1398	5.10	1464	5.96
9600	1120	1.69	1145	1.91	1168	2.13	1212	2.57	1253	3.01	1292	3.46	1329	3.91	1399	4.81	1465	5.73	1528	6.66
10400	1205	2.07	1228	2.30	1250	2.54	1292	3.01	1331	3.49	1369	3.98	1404	4.46	1471	5.44	1534	6.42	1595	7.42
11200	1291	2.51	1313	2.76	1334	3.01	1373	3.52	1411	4.03	1446	4.55	1481	5.07	1545	6.12	1606	7.17	1664	8.23
12000	1377	3.01	1398	3.27	1417	3.54	1455	4.09	1491	4.63	1525	5.19	1558	5.74	1620	6.86	1679	7.98	1735	9.11

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7000	**1408**	**5.37**	**1479**	**6.17**	**1549**	**7.00**														
7400	**1432**	**5.67**	**1500**	**6.49**	**1567**	**7.34**	**1633**	**8.22**	**1698**	**9.12**										
7800	**1457**	**5.99**	**1524**	**6.83**	**1589**	**7.70**	**1652**	**8.60**	**1715**	**9.52**	**1776**	**10.47**								
8200	**1484**	**6.32**	**1549**	**7.19**	**1612**	**8.08**	**1673**	**9.00**	**1734**	**9.94**	**1793**	**10.91**	**1852**	**11.90**						
8600	**1513**	**6.67**	**1575**	**7.57**	**1636**	**8.48**	**1696**	**9.42**	**1755**	**10.38**	**1813**	**11.37**	**1870**	**12.38**	**1926**	**13.41**	**1981**	**14.47**		
9000	**1542**	**7.03**	**1603**	**7.96**	**1663**	**8.90**	**1721**	**9.86**	**1778**	**10.85**	**1834**	**11.85**	**1889**	**12.88**	**1944**	**13.94**	**1998**	**15.01**	**2051**	**16.11**
9600	1588	7.61	**1647**	**8.57**	**1704**	**9.55**	**1760**	**10.56**	**1815**	**11.58**	**1869**	**12.62**	**1922**	**13.68**	**1974**	**14.76**	**2026**	**15.87**	**2077**	**16.99**
10200	1636	8.22	1693	9.23	**1748**	**10.25**	**1802**	**11.29**	**1855**	**12.35**	**1907**	**13.43**	**1958**	**14.53**	**2008**	**15.64**	**2058**	**16.78**	**2107**	**17.93**
11000	1703	9.08	1757	10.15	1810	11.24	**1862**	**12.34**	**1912**	**13.45**	**1962**	**14.58**	**2011**	**15.73**	**2059**	**16.89**	**2106**	**18.08**	**2153**	**19.28**
11800	1771	10.01	1824	11.15	1874	12.30	1924	13.46	1973	14.63	**2020**	**15.82**	**2067**	**17.02**	**2113**	**18.23**	**2159**	**19.47**	**2203**	**20.72**
12600	1842	11.01	1892	12.21	1941	13.43	1989	14.65	2036	15.88	2082	17.13	**2127**	**18.39**	**2171**	**19.66**	**2215**	**20.95**	**2258**	**22.25**
13400	1914	12.08	1963	13.35	2010	14.63	2056	15.92	2102	17.21	2146	18.52	2189	19.84	2232	21.17	**2274**	**22.52**	**2316**	**23.88**
14200	1987	13.22	2034	14.56	2080	15.91	2125	17.26	2169	18.63	2212	20.00	2254	21.38	2296	22.77	2336	24.18	2377	25.59
15000	2061	14.45	2107	15.85	2152	17.27	2196	18.69	2238	20.12	2280	21.56	2321	23.01	2361	24.46	2401	25.93	2440	27.40
15800	2137	15.75	2182	17.23	2225	18.71	2268	20.20	2309	21.70	2350	23.21	2389	24.72	2429	26.24	2467	27.77	2505	29.31
16600	2213	17.14	2257	18.69	2299	20.24	2341	21.80	2381	23.37	2420	24.94	2459	26.52	2497	28.11	2535	29.71	2572	31.31
17400	2290	18.62	2333	20.24	2374	21.87	2414	23.50	2454	25.13	2492	26.77	2530	28.42	2567	30.08	2604	31.74	2640	33.41
18200	2368	20.20	2409	21.89	2450	23.58	2489	25.28	2528	26.99	2565	28.70	2602	30.42	2639	32.14	2674	33.87	2709	35.60
19200	2466	22.31	2506	24.09	2545	25.87	2584	27.66	2621	29.45	2658	31.25	2694	33.06	2729	34.86	2764	36.68		
20200	2564	24.58	2604	26.45	2642	28.32	2679	30.20	2716	32.08	2751	33.97								

Notes: 1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Inlet Sound Power [dB]

% WOV = 11.13 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
450	100	67	69	62	58	54	43	40	39	61
	80	65	65	59	53	47	39	38	38	56
	70	64	64	57	51	46	39	39	40	55
	60	63	63	56	50	45	39	40	42	54
	50	63	62	56	51	46	40	38	36	54
600	100	77	76	73	66	62	55	47	46	69
	80	75	73	69	62	56	49	44	44	65
	70	74	72	68	60	54	48	45	46	64
	60	73	71	67	59	54	48	45	47	63
	50	73	70	66	60	55	49	45	43	63
800	100	88	82	83	74	70	66	54	52	78
	80	86	81	79	70	64	59	50	50	74
	70	85	79	78	69	63	57	50	51	73
	60	84	78	77	68	62	57	51	53	72
	50	84	78	76	68	63	58	52	50	72
1100	100	86	89	88	82	78	75	67	60	85
	80	88	90	87	80	74	68	61	57	83
	70	86	88	85	78	71	66	60	57	81
	60	83	86	83	75	69	65	60	58	79
	50	87	88	84	77	71	66	61	57	80
1300	100	85	89	92	85	81	80	74	65	89
	80	90	93	92	85	78	73	66	61	88
	70	87	90	89	82	75	71	65	61	85
	60	84	87	87	78	72	68	64	61	82
	50	90	92	89	81	74	70	65	61	85
1500	100	84	86	96	87	83	84	79	70	92
	80	92	94	97	88	81	78	70	65	92
	70	88	90	94	84	77	74	68	64	88
	60	84	85	91	80	74	71	68	64	85
	50	93	95	94	85	77	73	68	64	89

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
1700	100	84	85	100	89	84	86	83	75	95
	80	86	87	100	87	81	81	74	69	93
	70	84	85	97	85	78	77	72	68	90
	60	82	83	94	82	75	73	70	68	87
	50	96	96	99	89	81	78	72	68	93
1900	100	86	87	101	92	87	89	86	79	97
	80	84	86	99	89	83	83	77	73	93
	70	83	85	98	88	81	79	75	72	92
	60	82	84	96	86	79	76	73	71	90
	50	99	99	102	94	86	81	75	71	97
2100	100	88	89	101	97	90	90	89	82	99
	80	86	88	100	94	86	85	80	76	96
	70	85	88	98	92	84	82	78	74	94
	60	84	87	96	91	82	78	76	73	92
	50	101	102	104	98	89	84	78	74	99
2300	100	89	92	101	101	93	92	91	85	102
	80	87	91	100	98	88	87	83	78	98
	70	86	90	98	96	86	84	80	77	96
	60	85	89	97	95	85	81	78	76	95
	50	102	104	105	101	92	87	81	76	102
2600	100	91	95	101	106	96	94	94	89	105
	80	90	94	100	103	92	89	87	81	102
	70	88	93	99	101	90	86	84	80	100
	60	87	92	98	100	89	84	81	79	99
	50	104	108	108	106	96	90	85	80	106
2780	100	93	97	101	109	98	96	96	91	108
	80	91	96	100	106	94	91	89	83	104
	70	90	95	99	104	92	88	86	82	102
	60	89	94	98	103	91	85	83	80	101
	50	106	110	109	108	98	92	87	82	108

Outlet Sound Power [dB]

% WOV = 11.13 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
450	100	65	64	56	59	53	51	45	41	60
	80	63	61	54	55	53	49	42	35	57
	70	62	60	53	54	52	47	41	35	56
	60	61	58	51	54	50	44	40	36	55
	50	60	57	51	54	49	45	42	40	55
600	100	70	74	67	65	63	58	55	49	68
	80	68	71	63	62	59	58	50	43	65
	70	68	70	62	62	58	57	50	44	64
	60	68	68	59	61	58	53	48	43	63
	50	67	67	58	61	57	53	50	47	62
800	100	72	82	78	70	72	65	63	57	76
	80	69	79	75	68	66	65	60	53	73
	70	69	78	74	67	66	64	59	52	72
	60	69	77	71	66	66	62	56	52	71
	50	71	76	71	65	66	61	57	54	70
1100	100	80	90	89	79	79	75	71	68	85
	80	78	88	85	75	76	72	71	63	82
	70	77	87	84	74	75	72	69	62	81
	60	76	87	82	72	75	71	65	61	80
	50	76	85	82	71	75	69	65	63	79
1300	100	84	89	95	87	81	81	75	73	90
	80	82	86	92	84	79	76	75	68	87
	70	81	87	91	83	79	75	74	67	86
	60	79	87	89	80	78	75	71	65	85
	50	79	88	87	79	78	74	70	67	84
1500	100	87	90	98	93	83	85	78	77	94
	80	86	87	95	89	82	80	79	73	91
	70	85	88	94	88	82	79	78	72	90
	60	81	88	93	86	80	79	75	69	89
	50	82	90	92	85	80	79	74	70	88

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
1700	100	90	93	102	97	87	89	82	80	98
	80	89	90	99	93	85	84	82	77	95
	70	88	90	98	92	84	84	81	76	94
	60	84	89	98	90	82	83	79	72	93
	50	85	90	97	90	82	83	78	74	92
1900	100	92	95	103	100	90	91	85	83	101
	80	92	93	100	97	87	87	84	81	97
	70	90	92	100	96	86	87	83	79	97
	60	86	92	99	94	84	86	82	76	95
	50	87	92	99	93	83	86	81	76	95
2100	100	94	98	106	103	93	93	89	85	104
	80	93	96	103	100	89	90	86	84	100
	70	92	95	103	99	88	89	86	83	100
	60	88	94	102	97	86	89	85	79	98
	50	89	94	102	97	86	89	83	79	98
2300	100	96	100	106	107	97	94	92	87	106
	80	95	98	104	103	93	92	88	87	103
	70	93	98	104	102	92	91	88	86	102
	60	89	96	104	100	89	91	87	82	101
	50	90	96	103	100	89	90	86	81	100
2600	100	98	103	106	111	103	96	96	90	110
	80	97	102	103	108	99	94	91	90	107
	70	96	101	104	108	98	94	90	89	106
	60	92	98	104	106	96	93	90	86	105
	50	93	98	106	104	94	93	89	85	104
2780	100	99	105	106	114	106	97	99	92	113
	80	98	104	103	111	103	96	92	92	110
	70	97	102	104	110	102	96	92	91	109
	60	93	99	105	109	100	95	92	88	108
	50	94	100	107	106	98	94	91	87	106

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

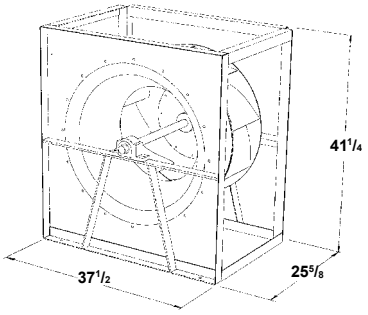
ESP - Performance Data

Efficient Silent Plenum Fan

270

Wheel Diameter = 27.00 in.	Tip Speed, FPM = 7.07 x RPM
Wheel Type = ESP	Maximum BHP = 2.99 x (RPM / 1000)^3

Class	Max. RPM
I	1479
II	1928
III	2423



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3400	405	0.19	**451**	**0.27**	**495**	**0.36**														
4000	444	0.24	485	0.33	**525**	**0.42**	**598**	**0.63**												
4600	486	0.29	524	0.40	**559**	**0.50**	**627**	**0.73**	**690**	**0.97**										
5200	529	0.36	564	0.47	597	0.59	**659**	**0.83**	**718**	**1.09**	**774**	**1.37**	**828**	**1.67**						
5800	573	0.44	606	0.57	637	0.69	695	0.96	**750**	**1.23**	**802**	**1.53**	**853**	**1.83**						
6400	619	0.53	650	0.67	679	0.81	734	1.09	**785**	**1.39**	**834**	**1.70**	**881**	**2.02**	**972**	**2.71**				
7000	665	0.64	695	0.79	722	0.94	774	1.25	822	1.56	**868**	**1.89**	**913**	**2.23**	**998**	**2.95**	**1080**	**3.71**		
7600	712	0.76	740	0.92	766	1.09	815	1.41	861	1.75	905	2.10	**947**	**2.46**	**1028**	**3.21**	**1106**	**4.00**	**1181**	**4.84**
8200	759	0.89	786	1.07	811	1.25	858	1.60	901	1.96	943	2.33	983	2.70	**1060**	**3.49**	**1134**	**4.32**	**1206**	**5.19**
8800	807	1.05	832	1.24	856	1.43	901	1.81	943	2.19	983	2.58	1021	2.97	**1095**	**3.79**	**1165**	**4.65**	**1234**	**5.55**
9400	855	1.22	879	1.42	902	1.63	945	2.03	985	2.44	1024	2.85	1060	3.26	1131	4.12	**1199**	**5.02**	**1264**	**5.95**
10000	903	1.41	926	1.63	948	1.84	990	2.27	1029	2.70	1065	3.14	1101	3.58	1169	4.48	**1234**	**5.41**	**1296**	**6.38**
10600	951	1.62	974	1.85	995	2.08	1035	2.54	1072	2.99	1108	3.45	1142	3.91	1208	4.86	1270	5.83	**1330**	**6.83**
11200	1000	1.85	1022	2.10	1042	2.35	1081	2.83	1117	3.31	1151	3.79	1184	4.28	1248	5.26	1308	6.27	**1366**	**7.31**
11800	1049	2.11	1070	2.37	1090	2.63	1127	3.14	1162	3.65	1195	4.15	1227	4.66	1289	5.69	1347	6.75	1403	7.82
12400	1098	2.39	1118	2.67	1137	2.94	1173	3.48	1207	4.01	1240	4.54	1271	5.07	1330	6.15	1387	7.25	1441	8.37
13000	1147	2.70	1167	2.99	1185	3.27	1220	3.84	1253	4.40	1285	4.96	1315	5.51	1372	6.64	1427	7.78	1480	8.94
13800	1213	3.15	1231	3.46	1249	3.76	1283	4.37	1315	4.96	1345	5.55	1374	6.15	1430	7.33	1483	8.53	1534	9.75
14600	1279	3.65	1297	3.98	1314	4.30	1346	4.94	1377	5.57	1406	6.20	1434	6.83	1488	8.08	1539	9.35	1588	10.62
15400	1345	4.20	1362	4.55	1379	4.89	1410	5.57	1439	6.24	1468	6.91	1495	7.57	1547	8.89	1596	10.22	1644	11.56

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9200	**1318**	**6.78**	**1381**	**7.77**	**1442**	**8.81**														
9600	**1337**	**7.07**	**1398**	**8.09**	**1458**	**9.14**	**1516**	**10.23**												
10000	**1357**	**7.38**	**1417**	**8.42**	**1475**	**9.49**	**1532**	**10.59**	**1588**	**11.73**										
10600	**1389**	**7.87**	**1446**	**8.93**	**1502**	**10.04**	**1557**	**11.17**	**1611**	**12.34**	**1664**	**13.54**								
11200	**1423**	**8.38**	**1478**	**9.48**	**1532**	**10.62**	**1585**	**11.78**	**1637**	**12.98**	**1688**	**14.20**	**1738**	**15.46**	**1788**	**16.75**				
11800	**1458**	**8.93**	**1511**	**10.07**	**1563**	**11.23**	**1614**	**12.43**	**1665**	**13.66**	**1714**	**14.91**	**1763**	**16.19**	**1811**	**17.51**	**1859**	**18.85**		
12600	1506	9.71	**1557**	**10.90**	**1607**	**12.11**	**1656**	**13.35**	**1705**	**14.62**	**1752**	**15.91**	**1799**	**17.23**	**1845**	**18.59**	**1891**	**19.96**	**1936**	**21.37**
13200	1544	10.33	1594	11.56	**1642**	**12.80**	**1690**	**14.08**	**1736**	**15.38**	**1782**	**16.71**	**1828**	**18.06**	**1873**	**19.44**	**1917**	**20.85**	**1961**	**22.28**
13800	1583	10.99	1631	12.25	**1678**	**13.54**	**1724**	**14.85**	**1770**	**16.18**	**1814**	**17.54**	**1858**	**18.93**	**1902**	**20.34**	**1945**	**21.78**	**1987**	**23.24**
14600	1636	11.92	1682	13.23	1728	14.57	**1772**	**15.93**	**1816**	**17.31**	**1859**	**18.72**	**1901**	**20.15**	**1943**	**21.60**	**1985**	**23.08**	**2026**	**24.58**
15400	1690	12.91	1735	14.28	1779	15.67	1822	17.08	1864	18.51	**1906**	**19.97**	**1947**	**21.44**	**1987**	**22.94**	**2027**	**24.46**	**2066**	**26.01**
16200	1745	13.96	1789	15.39	1831	16.84	1873	18.30	1914	19.78	1954	21.29	**1994**	**22.81**	**2033**	**24.36**	**2071**	**25.93**	**2110**	**27.52**
17000	1802	15.08	1844	16.57	1885	18.07	1925	19.59	1965	21.13	2004	22.68	2042	24.26	**2080**	**25.85**	**2118**	**27.47**	**2155**	**29.10**
17800	1859	16.27	1900	17.82	1940	19.38	1979	20.96	2017	22.55	2055	24.16	2092	25.78	2129	27.43	**2166**	**29.09**	**2201**	**30.78**
18600	1916	17.53	1956	19.14	1995	20.76	2033	22.40	2071	24.04	2108	25.71	2144	27.39	2180	29.09	2215	30.80	2250	32.53
19400	1975	18.86	2014	20.53	2052	22.22	2089	23.91	2125	25.62	2161	27.34	2196	29.08	2231	30.83	2266	32.59	2299	34.38
20200	2034	20.27	2072	22.01	2109	23.75	2145	25.51	2180	27.27	2215	29.05	2250	30.85	2284	32.65	2317	34.47	2350	36.31
21000	2093	21.75	2130	23.56	2166	25.37	2202	27.18	2236	29.01	2271	30.85	2304	32.70	2337	34.56	2370	36.44	2402	38.33
21800	2153	23.32	2189	25.19	2225	27.06	2259	28.95	2293	30.83	2327	32.73	2359	34.64	2392	36.56				
22600	2213	24.97	2249	26.90	2283	28.85	2317	30.79	2350	32.74	2383	34.70	2415	36.67						

Notes:
1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Inlet Sound Power [dB]

% WOV = 8.53 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
400	100	63	64	56	64	57	46	39	32	63
	80	63	61	52	53	49	41	35	29	54
	70	62	60	51	50	48	40	34	29	53
	60	61	59	50	48	46	39	34	29	51
	50	63	63	54	50	47	39	35	31	54
500	100	68	70	64	66	65	55	46	39	68
	80	66	68	61	57	55	49	42	36	60
	70	66	67	59	55	53	48	41	35	59
	60	66	66	58	54	52	47	40	35	58
	50	70	69	63	57	53	47	41	37	61
700	100	74	79	76	68	77	67	57	50	78
	80	71	78	74	64	65	60	52	46	71
	70	72	77	72	63	62	59	51	45	69
	60	73	77	71	61	60	58	50	45	68
	50	82	79	75	66	62	58	50	46	71
900	100	77	85	84	75	79	75	66	58	83
	80	74	84	81	72	70	67	60	54	77
	70	75	83	80	71	68	66	60	55	76
	60	76	82	79	70	67	66	61	56	75
	50	86	85	82	74	69	67	62	57	78
1100	100	79	87	91	81	80	81	72	65	87
	80	77	85	89	77	75	72	66	60	83
	70	77	85	87	76	73	72	68	63	82
	60	78	85	85	75	73	72	70	65	81
	50	88	90	88	80	75	74	72	68	84
1300	100	80	87	100	83	82	86	76	70	94
	80	78	85	97	79	79	77	70	65	90
	70	79	86	94	79	78	76	73	69	88
	60	80	87	91	78	77	77	77	74	86
	50	90	92	95	83	80	79	81	78	90

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
1500	100	82	89	101	88	86	88	82	76	96
	80	81	87	98	85	82	81	76	73	92
	70	81	87	96	84	81	81	78	76	91
	60	82	88	94	83	80	81	80	79	90
	50	92	95	97	88	83	82	83	82	93
1700	100	84	88	104	90	89	90	86	81	99
	80	84	87	102	86	85	85	81	79	96
	70	84	87	100	86	84	85	82	81	94
	60	84	87	98	86	83	84	83	84	93
	50	95	97	102	91	86	85	84	84	97
1900	100	85	90	104	94	92	93	89	84	100
	80	86	89	102	90	87	88	85	82	97
	70	86	89	101	90	86	87	85	84	96
	60	87	88	100	90	85	87	86	87	96
	50	97	99	104	95	89	88	87	87	99
2100	100	87	92	104	98	94	95	92	87	102
	80	88	91	103	95	90	90	87	85	99
	70	88	91	101	94	89	89	88	87	98
	60	88	91	100	94	88	88	88	89	98
	50	99	102	106	99	92	90	89	89	102
2300	100	89	94	104	102	96	97	95	90	104
	80	90	94	103	99	92	92	90	87	101
	70	90	93	102	99	91	91	90	89	101
	60	90	93	101	98	90	90	90	91	100
	50	101	104	107	103	95	92	91	91	104
2423	100	90	95	104	105	97	98	96	91	106
	80	91	95	103	102	93	93	91	88	103
	70	91	95	102	101	92	92	91	90	102
	60	91	95	101	100	92	91	92	92	101
	50	102	105	108	105	96	93	92	92	106

Outlet Sound Power [dB]

% WOV = 8.53 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
400	100	72	69	66	71	65	52	42	33	70
	80	67	63	60	61	55	46	37	27	61
	70	67	62	59	59	53	46	36	27	59
	60	67	61	58	57	52	45	36	27	58
	50	67	63	61	58	53	46	37	28	59
500	100	75	76	72	74	72	61	50	41	75
	80	70	71	66	66	62	54	45	35	67
	70	70	70	65	64	60	53	44	35	65
	60	70	69	64	62	58	52	44	35	64
	50	73	71	67	64	60	53	45	36	66
700	100	78	87	81	79	83	75	62	53	85
	80	75	82	76	73	73	65	57	47	77
	70	75	82	74	71	70	64	56	47	75
	60	75	81	73	70	68	63	56	47	73
	50	82	82	76	73	70	64	57	48	76
900	100	81	90	88	84	86	82	71	62	89
	80	78	86	83	79	78	73	65	56	82
	70	79	86	82	78	76	71	64	55	81
	60	79	86	81	76	74	69	63	55	80
	50	86	87	83	78	75	70	64	55	81
1100	100	84	90	94	89	88	87	77	69	93
	80	81	87	89	84	82	79	71	63	87
	70	82	87	88	82	80	76	69	62	86
	60	82	88	88	81	78	74	68	61	85
	50	86	91	89	81	78	74	68	61	85
1300	100	86	89	98	92	89	91	81	74	96
	80	84	87	94	87	85	84	75	68	91
	70	84	89	94	86	83	80	74	67	90
	60	85	91	93	84	81	77	72	65	88
	50	86	94	94	84	80	77	72	65	89

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
1500	100	87	91	100	96	93	93	87	80	99
	80	84	89	97	92	89	87	80	73	95
	70	86	90	96	90	86	83	77	71	93
	60	87	92	96	89	84	80	75	70	92
	50	88	94	96	89	83	80	75	69	92
1700	100	89	91	102	99	96	95	93	85	102
	80	85	89	101	95	92	90	83	78	98
	70	87	90	101	93	89	87	80	75	97
	60	89	92	100	91	87	83	78	73	95
	50	89	93	100	92	86	82	78	72	95
1900	100	90	93	104	101	99	98	96	89	105
	80	87	90	102	98	94	93	86	81	101
	70	89	92	102	96	92	90	84	78	99
	60	91	94	102	95	90	86	81	76	98
	50	91	95	102	96	90	85	80	75	98
2100	100	92	95	104	104	101	100	98	92	107
	80	88	92	103	101	97	96	90	84	103
	70	91	94	103	100	95	92	87	81	102
	60	93	96	103	99	93	89	84	79	100
	50	93	97	103	99	93	88	83	78	100
2300	100	94	97	105	107	104	102	101	95	110
	80	90	94	103	104	99	98	93	87	105
	70	92	96	103	103	97	95	90	84	104
	60	95	98	104	102	96	92	87	82	103
	50	95	99	104	103	95	91	86	81	103
2423	100	95	99	105	109	105	104	102	97	111
	80	91	95	103	106	101	99	94	88	107
	70	93	97	104	105	99	96	91	85	105
	60	96	100	105	104	97	93	88	83	104
	50	96	100	105	104	97	92	88	82	104

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

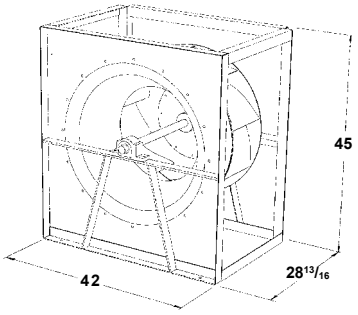
ESP - Performance Data

Efficient Silent Plenum Fan

300

Wheel Diameter = 30.00 in.	Tip Speed, FPM = 7.85 x RPM
Wheel Type = ESP	Maximum BHP = 5.06 x (RPM / 1000)^3

Class	Max. RPM
I	1328
II	1730
III	2182



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4400	374	0.25	**414**	**0.35**	**452**	**0.46**														
4800	393	0.28	**431**	**0.39**	**467**	**0.51**	**534**	**0.76**												
5200	412	0.32	449	0.43	**483**	**0.56**	**547**	**0.82**												
6000	454	0.40	487	0.53	518	0.66	**576**	**0.95**	**632**	**1.26**	**684**	**1.60**								
6800	496	0.50	527	0.64	556	0.79	**610**	**1.11**	**661**	**1.44**	**709**	**1.79**	**756**	**2.16**						
7600	540	0.61	569	0.77	596	0.94	646	1.28	**693**	**1.63**	**738**	**2.01**	**782**	**2.40**	**866**	**3.23**				
8400	585	0.74	612	0.92	637	1.11	684	1.47	729	1.86	**771**	**2.25**	**812**	**2.67**	**890**	**3.54**	**965**	**4.47**		
9200	630	0.90	656	1.10	680	1.29	724	1.69	766	2.10	806	2.52	**844**	**2.96**	**918**	**3.88**	**989**	**4.85**	**1058**	**5.88**
10000	676	1.08	700	1.29	723	1.51	765	1.94	805	2.38	843	2.82	879	3.29	**949**	**4.25**	**1016**	**5.26**	**1081**	**6.33**
10800	722	1.28	745	1.51	767	1.74	807	2.21	845	2.68	881	3.15	916	3.64	**983**	**4.65**	**1046**	**5.71**	**1108**	**6.82**
11600	769	1.50	791	1.76	812	2.01	850	2.50	886	3.00	921	3.51	954	4.03	1018	5.09	**1079**	**6.19**	**1137**	**7.34**
12400	816	1.76	837	2.03	857	2.30	894	2.83	929	3.36	962	3.90	993	4.45	1054	5.56	**1113**	**6.72**	**1169**	**7.91**
13200	863	2.04	883	2.33	902	2.62	938	3.19	971	3.75	1003	4.32	1034	4.90	1092	6.07	1148	7.28	**1202**	**8.52**
14000	910	2.36	930	2.67	948	2.97	982	3.58	1015	4.18	1045	4.78	1075	5.39	1131	6.62	1185	7.88	**1237**	**9.17**
14800	958	2.71	976	3.04	994	3.36	1027	4.00	1058	4.64	1088	5.27	1117	5.91	1171	7.20	1223	8.52	1273	9.87
15600	1006	3.10	1023	3.44	1040	3.79	1073	4.46	1103	5.14	1132	5.80	1159	6.47	1212	7.83	1262	9.20	1311	10.60
16400	1053	3.52	1071	3.89	1087	4.25	1118	4.96	1147	5.67	1175	6.37	1202	7.08	1253	8.49	1302	9.93	1349	11.38
17200	1101	3.98	1118	4.37	1134	4.75	1164	5.50	1192	6.25	1220	6.98	1246	7.72	1295	9.20	1343	10.70	1388	12.21
18000	1150	4.49	1166	4.89	1181	5.29	1210	6.08	1238	6.86	1264	7.64	1289	8.41	1338	9.96	1384	11.51	1428	13.09
18800	1198	5.03	1213	5.46	1228	5.88	1256	6.71	1283	7.52	1309	8.33	1334	9.14	1381	10.76	1426	12.38	1469	14.01

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11600	**1194**	**8.54**	**1250**	**9.79**	**1305**	**11.07**														
12200	**1216**	**9.00**	**1270**	**10.27**	**1323**	**11.59**	**1374**	**12.94**												
12800	**1239**	**9.47**	**1291**	**10.78**	**1342**	**12.12**	**1392**	**13.51**	**1442**	**14.94**	**1490**	**16.40**								
13400	**1263**	**9.98**	**1313**	**11.31**	**1363**	**12.69**	**1412**	**14.11**	**1460**	**15.56**	**1507**	**17.05**	**1553**	**18.59**						
14000	**1288**	**10.50**	**1337**	**11.87**	**1385**	**13.28**	**1432**	**14.73**	**1479**	**16.21**	**1525**	**17.74**	**1570**	**19.29**	**1614**	**20.89**				
14600	**1313**	**11.06**	**1361**	**12.46**	**1408**	**13.90**	**1454**	**15.38**	**1499**	**16.90**	**1544**	**18.45**	**1588**	**20.03**	**1631**	**21.66**	**1674**	**23.31**		
15400	1349	11.83	**1395**	**13.29**	**1440**	**14.77**	**1485**	**16.29**	**1528**	**17.85**	**1571**	**19.44**	**1614**	**21.07**	**1655**	**22.73**	**1697**	**24.42**	**1737**	**26.15**
16200	1385	12.66	1430	14.16	**1474**	**15.69**	**1517**	**17.26**	**1559**	**18.86**	**1601**	**20.50**	**1642**	**22.16**	**1682**	**23.86**	**1722**	**25.59**	**1761**	**27.36**
17000	1423	13.53	1466	15.08	**1509**	**16.67**	**1550**	**18.28**	**1591**	**19.93**	**1631**	**21.60**	**1671**	**23.31**	**1710**	**25.05**	**1749**	**26.83**	**1787**	**28.63**
17800	1461	14.45	1504	16.06	1545	17.69	**1585**	**19.35**	**1625**	**21.05**	**1664**	**22.77**	**1702**	**24.52**	**1740**	**26.31**	**1778**	**28.12**	**1815**	**29.96**
18600	1501	15.42	1542	17.08	1582	18.77	1621	20.48	**1659**	**22.22**	**1697**	**24.00**	**1735**	**25.79**	**1772**	**27.62**	**1808**	**29.48**	**1844**	**31.36**
19400	1541	16.44	1580	18.16	1619	19.90	1658	21.67	1695	23.46	**1732**	**25.28**	**1768**	**27.13**	**1804**	**29.00**	**1840**	**30.90**	**1875**	**32.83**
20200	1581	17.51	1620	19.29	1658	21.09	1695	22.91	1732	24.75	1768	26.62	**1803**	**28.52**	**1838**	**30.44**	**1873**	**32.39**	**1907**	**34.36**
21000	1622	18.64	1660	20.47	1697	22.33	1733	24.21	1769	26.11	1804	28.03	1839	29.97	**1873**	**31.94**	**1906**	**33.94**	**1940**	**35.96**
22000	1674	20.12	1711	22.04	1747	23.97	1782	25.91	1817	27.88	1851	29.87	1884	31.88	1917	33.91	**1950**	**35.97**	**1982**	**38.05**
23000	1727	21.70	1763	23.69	1798	25.70	1832	27.72	1866	29.76	1899	31.81	1931	33.89	1963	35.99	1995	38.11	2026	40.25
24200	1791	23.71	1825	25.80	1859	27.9	1893	30.01	1925	32.14	1957	34.28	1989	36.44	2020	38.62	2051	40.82	2081	43.03
25400	1855	25.87	1889	28.05	1922	30.24	1954	32.45	1986	34.66	2017	36.89	2048	39.14	2078	41.40	2108	43.68	2137	45.98
26600	1920	28.16	1953	30.45	1985	32.74	2017	35.03	2048	37.34	2078	39.66	2108	42.00	2137	44.34	2166	46.71		
28000	1997	31.03	2029	33.43	2060	35.84	2091	38.25	2121	40.67	2150	43.09	2179	45.53						

Notes: 1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Inlet Sound Power [dB]

% WOV = 6.22 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
350	100	64	63	56	65	55	45	38	31	63
	80	63	60	51	53	48	40	34	28	54
	70	62	59	50	50	47	39	34	28	52
	60	62	58	49	48	46	38	33	28	51
	50	64	62	53	50	46	38	34	30	53
500	100	71	74	67	69	68	58	49	42	71
	80	70	72	64	61	59	52	45	39	64
	70	70	71	63	58	57	51	44	39	62
	60	70	70	62	57	55	50	43	38	61
	50	74	73	66	60	56	50	44	40	64
600	100	75	79	74	71	74	65	55	48	76
	80	73	77	71	64	64	58	51	45	69
	70	73	76	70	62	61	57	50	44	68
	60	73	76	69	61	60	56	49	44	67
	50	80	78	73	65	61	56	49	45	70
800	100	80	86	84	75	82	75	65	57	84
	80	77	85	81	71	71	67	60	54	78
	70	78	84	80	70	69	66	59	53	76
	60	79	84	79	69	67	65	58	53	75
	50	89	86	83	73	69	66	59	54	79
1000	100	82	90	91	82	83	82	72	65	89
	80	79	88	88	78	76	73	67	61	84
	70	80	88	87	77	74	72	67	62	82
	60	81	87	85	76	73	72	69	64	81
	50	91	91	89	81	76	74	70	66	85
1200	100	83	91	99	85	84	87	77	71	94
	80	81	89	96	82	80	78	72	66	90
	70	82	89	94	81	79	77	74	69	88
	60	83	90	91	80	78	78	77	73	87
	50	93	95	95	85	81	80	80	76	91

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
1400	100	85	92	103	89	87	90	82	76	97
	80	83	90	101	86	84	82	77	72	94
	70	84	90	98	85	83	82	79	76	92
	60	85	91	95	84	82	82	82	80	91
	50	95	98	99	89	85	84	85	83	95
1500	100	86	92	104	92	89	91	85	79	99
	80	85	91	102	88	85	84	80	76	96
	70	85	91	99	87	84	84	81	79	94
	60	86	91	97	86	83	84	84	83	93
	50	96	99	101	91	87	85	86	85	97
1700	100	87	92	107	93	92	93	89	84	102
	80	88	91	105	90	88	89	84	82	99
	70	88	90	103	89	87	88	85	84	97
	60	88	90	102	89	86	87	87	87	97
	50	99	100	105	94	89	88	88	88	100
1900	100	89	93	107	97	95	96	92	88	103
	80	90	93	106	93	90	91	88	85	100
	70	90	92	104	93	89	90	88	87	99
	60	91	92	103	93	88	90	89	90	99
	50	101	103	107	98	92	91	90	90	102
2100	100	91	95	108	101	97	98	95	90	105
	80	92	95	106	98	93	93	91	88	102
	70	92	95	105	98	92	92	91	90	102
	60	92	95	104	97	91	92	91	92	101
	50	103	105	109	102	95	93	92	92	105
2182	100	92	96	108	103	98	99	96	92	106
	80	93	96	106	100	94	94	92	89	103
	70	93	96	105	99	93	93	92	91	102
	60	93	95	104	99	92	92	92	93	102
	50	104	106	110	104	96	94	93	93	106

Outlet Sound Power [dB]

% WOV = 6.22 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
350	100	72	68	67	71	63	50	41	32	70
	80	67	63	61	61	53	45	35	25	61
	70	67	61	59	58	52	44	35	25	58
	60	67	60	58	56	51	44	35	26	57
	50	67	63	61	58	52	45	36	27	59
500	100	78	79	75	77	75	64	53	44	78
	80	74	74	70	69	65	57	48	38	70
	70	74	73	68	67	63	56	47	38	68
	60	74	73	67	65	61	55	47	38	67
	50	76	74	70	67	63	56	48	39	69
600	100	80	85	80	80	81	72	59	50	83
	80	77	80	75	73	71	63	54	45	75
	70	77	80	73	71	68	62	54	44	73
	60	77	79	72	70	67	61	53	44	72
	50	82	80	75	72	68	62	54	45	74
800	100	83	93	88	85	89	83	70	61	91
	80	81	89	83	79	79	73	65	55	83
	70	81	88	82	78	77	71	64	54	82
	60	81	88	81	77	75	70	63	54	81
	50	89	88	83	79	76	71	64	55	82
1000	100	86	94	95	90	90	88	78	68	95
	80	84	90	90	85	83	79	71	63	88
	70	84	90	89	83	81	77	70	62	87
	60	84	90	88	82	79	75	69	61	85
	50	90	93	89	83	80	75	69	62	86
1200	100	89	93	99	94	91	92	83	75	98
	80	87	91	95	89	87	84	76	69	93
	70	87	92	94	87	85	81	75	68	91
	60	87	93	94	86	83	79	73	66	90
	50	90	96	95	86	82	79	73	66	90

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
1400	100	90	94	102	97	94	95	88	80	101
	80	88	92	99	93	90	88	81	74	96
	70	89	93	98	91	88	85	79	72	95
	60	90	95	98	90	86	82	77	71	94
	50	91	97	98	90	85	82	77	70	94
1500	100	91	95	103	99	96	96	91	83	103
	80	88	93	101	95	92	90	83	77	98
	70	89	94	100	93	90	87	81	75	97
	60	91	96	99	92	88	84	79	73	95
	50	91	97	100	92	87	83	78	72	95
1700	100	92	95	106	102	100	99	96	88	106
	80	89	92	105	98	95	94	86	81	102
	70	91	94	104	96	93	90	84	78	100
	60	93	96	104	95	90	87	82	76	99
	50	93	97	104	95	90	86	81	76	99
1900	100	94	96	107	105	102	101	99	92	108
	80	91	94	106	101	98	96	90	84	104
	70	93	95	105	100	95	93	87	82	102
	60	95	98	105	98	93	89	85	80	101
	50	95	98	105	99	93	89	84	79	101
2100	100	96	99	108	108	105	103	102	95	111
	80	92	96	106	105	100	99	93	87	107
	70	94	98	106	103	98	95	90	85	105
	60	97	100	106	102	96	92	87	82	103
	50	97	101	107	103	96	91	87	82	104
2182	100	97	100	108	109	106	104	103	97	112
	80	93	97	106	106	101	100	94	88	107
	70	95	99	106	105	99	96	91	86	106
	60	98	101	107	103	97	93	89	84	104
	50	98	101	107	104	97	92	88	83	105

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

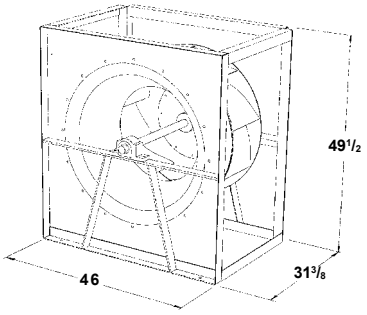
ESP - Performance Data

Efficient Silent Plenum Fan

330

Wheel Diameter = 33.00 in.	Tip Speed, FPM = 8.64 x RPM
Wheel Type = ESP	Maximum BHP = 8.14 x (RPM / 1000)^3

Class	Max. RPM
I	1209
II	1579
III	1984



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5400	342	0.30	**379**	**0.43**	**413**	**0.57**														
5800	357	0.34	**391**	**0.47**	**424**	**0.61**	**486**	**0.92**												
6200	372	0.37	405	0.51	**436**	**0.66**	**495**	**0.98**												
6600	387	0.41	419	0.56	**449**	**0.71**	**505**	**1.04**	**559**	**1.40**										
7000	402	0.45	433	0.61	462	0.77	**516**	**1.11**	**568**	**1.48**										
7600	426	0.52	455	0.69	483	0.86	**534**	**1.21**	**583**	**1.60**	**630**	**2.01**								
8200	450	0.60	478	0.77	504	0.95	**553**	**1.33**	**600**	**1.73**	**644**	**2.16**	**687**	**2.61**						
9000	483	0.71	509	0.90	534	1.10	580	1.50	**624**	**1.93**	**666**	**2.37**	**706**	**2.84**	**783**	**3.84**				
10000	525	0.87	550	1.09	573	1.30	616	1.74	657	2.20	**696**	**2.67**	**733**	**3.17**	**805**	**4.22**	**874**	**5.34**		
11000	567	1.06	591	1.30	613	1.53	653	2.01	692	2.50	728	3.01	**763**	**3.53**	**831**	**4.63**	**896**	**5.80**	**959**	**7.04**
12000	610	1.28	632	1.54	653	1.79	692	2.31	728	2.84	763	3.38	**796**	**3.93**	**860**	**5.09**	**921**	**6.31**	**981**	**7.60**
13000	654	1.53	675	1.81	694	2.09	731	2.65	766	3.21	799	3.79	830	4.37	**891**	**5.59**	**949**	**6.87**	**1005**	**8.21**
14000	697	1.81	717	2.11	736	2.41	771	3.02	804	3.62	836	4.23	866	4.85	924	6.14	**979**	**7.47**	**1033**	**8.86**
15000	741	2.13	760	2.45	779	2.78	812	3.42	844	4.07	874	4.72	903	5.38	958	6.73	**1011**	**8.12**	**1062**	**9.57**
16000	786	2.48	804	2.83	821	3.18	854	3.87	884	4.56	913	5.25	941	5.94	994	7.36	1045	8.82	**1094**	**10.33**
17500	852	3.10	870	3.48	886	3.87	917	4.62	945	5.37	973	6.12	999	6.88	1049	8.41	1097	9.97	1144	11.58
19000	920	3.81	936	4.23	951	4.65	980	5.48	1008	6.29	1034	7.11	1059	7.93	1107	9.57	1152	11.24	1196	12.95
20500	987	4.63	1002	5.09	1017	5.55	1045	6.44	1071	7.33	1096	8.21	1120	9.09	1165	10.85	1209	12.64	1251	14.45
22000	1055	5.57	1069	6.07	1083	6.56	1110	7.53	1135	8.48	1158	9.43	1181	10.37	1225	12.26	1267	14.16	1307	16.09
23500	1123	6.64	1137	7.18	1150	7.70	1175	8.74	1199	9.76	1222	10.78	1244	11.79	1286	13.80	1326	15.83	1364	17.86

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13800	**1080**	**10.16**	**1131**	**11.66**	**1181**	**13.20**														
14600	**1101**	**10.76**	**1150**	**12.29**	**1199**	**13.88**	**1246**	**15.51**												
15400	**1124**	**11.39**	**1171**	**12.97**	**1218**	**14.59**	**1264**	**16.26**	**1309**	**17.99**										
16400	**1154**	**12.23**	**1199**	**13.86**	**1244**	**15.53**	**1288**	**17.26**	**1331**	**19.03**	**1374**	**20.84**	**1415**	**22.71**						
17400	**1185**	**13.13**	**1229**	**14.81**	**1272**	**16.54**	**1315**	**18.32**	**1356**	**20.14**	**1397**	**22.00**	**1437**	**23.91**	**1477**	**25.86**	**1516**	**27.85**		
18400	1218	14.09	**1261**	**15.83**	**1302**	**17.61**	**1343**	**19.44**	**1383**	**21.31**	**1422**	**23.23**	**1461**	**25.18**	**1499**	**27.18**	**1537**	**29.22**	**1575**	**31.30**
19400	1252	15.10	**1293**	**16.91**	**1333**	**18.75**	**1373**	**20.64**	**1411**	**22.56**	**1449**	**24.53**	**1487**	**26.53**	**1524**	**28.58**	**1560**	**30.67**	**1597**	**32.79**
20400	1288	16.18	1327	18.05	**1366**	**19.95**	**1404**	**21.90**	**1441**	**23.88**	**1478**	**25.90**	**1514**	**27.96**	**1550**	**30.06**	**1586**	**32.19**	**1621**	**34.37**
21400	1324	17.32	1362	19.25	1400	21.22	**1436**	**23.23**	**1473**	**25.27**	**1508**	**27.35**	**1543**	**29.46**	**1578**	**31.61**	**1612**	**33.80**	**1646**	**36.02**
22400	1360	18.52	1398	20.53	1434	22.56	1470	24.63	**1505**	**26.73**	**1540**	**28.87**	**1574**	**31.04**	**1607**	**33.24**	**1641**	**35.48**	**1674**	**37.76**
23600	1405	20.05	1441	22.14	1477	24.26	1511	26.41	1545	28.59	**1579**	**30.79**	**1612**	**33.04**	**1644**	**35.31**	**1676**	**37.62**	**1708**	**39.96**
24800	1451	21.68	1486	23.86	1520	26.06	1554	28.29	1587	30.55	1619	32.83	**1651**	**35.15**	**1683**	**37.49**	**1714**	**39.87**	**1744**	**42.28**
25000	1459	21.97	1494	24.16	1528	26.37	1561	28.62	1594	30.89	1626	33.18	1658	35.51	**1689**	**37.87**	**1720**	**40.26**	**1751**	**42.68**
26200	1505	23.71	1539	26.00	1572	28.30	1605	30.63	1636	32.98	1668	35.36	1699	37.76	1729	40.19	**1759**	**42.66**	**1789**	**45.15**
27400	1553	25.57	1586	27.94	1618	30.34	1649	32.75	1680	35.19	1710	37.64	1740	40.13	1770	42.64	1799	45.18	**1828**	**47.74**
28600	1600	27.53	1633	30.00	1664	32.48	1694	34.99	1725	37.51	1754	40.05	1783	42.62	1812	45.21	1840	47.82	1868	50.47
29800	1649	29.60	1680	32.17	1711	34.75	1740	37.34	1770	39.95	1799	42.58	1827	45.23	1855	47.91	1883	50.60	1910	53.32
31000	1697	31.79	1728	34.46	1758	37.13	1787	39.82	1816	42.52	1844	45.24	1871	47.98	1899	50.73	1926	53.51	1952	56.31
32200	1746	34.10	1776	36.87	1806	39.64	1834	42.42	1862	45.22	1889	48.02	1917	50.85	1943	53.69	1969	56.55		
34400	1837	38.66	1866	41.62	1894	44.57	1922	47.53	1948	50.50	1975	53.47								

Notes: 1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Inlet Sound Power [dB]

% WOV = 4.67 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
300	100	63	61	58	62	53	43	36	29	61
	80	62	58	51	52	46	39	33	26	52
	70	61	56	50	49	45	37	32	26	51
	60	61	55	48	48	44	37	32	27	50
	50	63	59	52	49	44	37	33	29	51
400	100	71	71	62	71	63	52	45	38	70
	80	70	68	58	59	55	48	41	35	61
	70	69	67	57	57	54	46	40	35	59
	60	69	66	56	55	53	45	40	35	58
	50	71	70	61	57	53	45	41	37	60
600	100	78	82	77	74	77	68	58	51	79
	80	76	80	74	67	67	61	54	48	72
	70	76	79	73	65	64	60	53	47	71
	60	77	79	72	64	63	59	52	47	70
	50	84	81	76	68	64	59	52	48	73
800	100	83	89	87	78	85	78	68	60	87
	80	80	88	84	74	74	70	63	56	81
	70	81	88	83	73	72	69	62	56	80
	60	82	87	82	72	70	68	61	56	78
	50	92	89	86	76	72	69	62	57	82
900	100	84	92	90	82	85	81	72	64	89
	80	82	90	87	78	76	73	66	60	83
	70	83	89	86	77	75	72	66	61	82
	60	84	89	85	76	73	72	67	62	82
	50	93	92	89	80	76	73	68	63	85
1000	100	85	94	94	85	86	85	75	68	92
	80	83	92	91	81	79	76	70	63	87
	70	84	91	90	80	77	75	70	65	85
	60	85	90	88	79	76	75	72	67	84
	50	94	95	92	84	79	77	73	69	88

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
1200	100	87	94	102	88	87	90	80	74	97
	80	85	92	99	85	83	81	75	69	93
	70	86	92	97	84	82	80	77	72	91
	60	87	93	94	83	81	81	80	76	90
	50	96	98	98	88	84	83	83	79	94
1400	100	88	95	106	92	90	93	85	79	100
	80	87	93	104	89	87	85	80	75	97
	70	87	94	101	88	86	85	82	79	95
	60	88	94	98	87	85	85	85	83	94
	50	98	101	102	92	88	87	88	86	98
1500	100	89	96	107	95	92	94	88	82	102
	80	88	94	105	91	88	87	83	79	99
	70	89	94	102	90	87	87	84	82	97
	60	89	94	100	89	86	87	86	86	96
	50	100	102	104	94	90	88	89	88	100
1600	100	90	96	108	96	94	95	90	84	103
	80	90	94	106	92	90	89	85	82	100
	70	90	94	104	91	89	89	86	85	99
	60	90	94	102	91	88	89	88	88	98
	50	101	103	106	96	91	90	90	89	101
1800	100	92	95	110	97	97	98	94	89	105
	80	93	95	109	94	92	93	89	87	103
	70	93	94	107	93	91	92	90	89	102
	60	93	94	106	94	90	92	91	92	101
	50	104	105	110	99	94	93	92	92	105
1984	100	94	98	111	102	99	100	97	92	107
	80	94	97	109	98	94	95	92	89	104
	70	95	96	107	98	93	94	92	91	103
	60	95	96	106	98	92	94	93	94	103
	50	105	107	111	103	96	95	94	94	107

Outlet Sound Power [dB]

% WOV = 4.67 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
300	100	71	67	67	69	60	47	38	29	68
	80	66	62	60	59	51	42	32	22	59
	70	65	60	59	56	50	42	32	23	57
	60	65	59	57	55	49	41	32	23	56
	50	65	62	60	56	50	42	33	24	57
400	100	79	75	72	77	71	58	48	39	76
	80	74	70	67	67	61	53	43	33	67
	70	74	69	65	65	59	52	42	33	65
	60	74	68	64	63	58	51	42	33	64
	50	74	70	67	65	59	52	43	34	66
600	100	84	88	83	83	84	75	62	53	86
	80	80	84	78	76	74	66	57	47	78
	70	80	83	76	74	71	65	57	47	76
	60	80	83	75	73	70	64	56	47	75
	50	85	83	78	75	71	65	57	48	77
800	100	87	96	91	88	92	86	73	63	94
	80	84	92	86	82	82	76	67	58	86
	70	84	91	85	81	79	74	67	57	84
	60	84	91	84	80	77	73	66	57	83
	50	92	91	86	82	79	74	67	58	85
900	100	88	97	95	90	92	88	77	68	96
	80	86	93	90	85	84	79	71	62	89
	70	86	92	88	84	82	77	70	61	87
	60	86	92	88	82	80	75	69	61	86
	50	93	94	89	84	81	76	70	62	87
1000	100	89	97	98	93	93	91	81	71	98
	80	87	93	93	88	86	82	74	66	91
	70	87	93	92	86	84	80	73	65	90
	60	88	94	91	85	82	78	72	64	88
	50	93	96	92	86	83	78	72	65	89

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
1200	100	92	96	102	97	94	95	86	78	101
	80	90	94	98	92	90	87	79	72	96
	70	90	95	97	90	87	84	78	70	94
	60	91	96	97	89	86	82	76	69	93
	50	93	99	98	89	85	82	76	69	93
1400	100	94	97	105	100	97	98	90	83	104
	80	92	95	102	96	93	91	84	77	99
	70	92	97	101	94	91	88	82	75	98
	60	93	98	101	93	89	85	80	74	97
	50	94	101	101	93	88	85	80	73	97
1500	100	94	98	106	102	99	99	93	86	105
	80	92	96	104	98	95	93	86	80	101
	70	93	97	103	96	93	90	84	77	100
	60	94	99	102	95	90	86	82	76	98
	50	95	100	103	95	90	86	81	75	98
1600	100	95	98	108	104	101	100	96	88	107
	80	92	96	106	100	96	95	88	82	103
	70	94	97	105	98	94	91	85	79	101
	60	95	99	104	96	92	88	83	78	100
	50	96	100	105	97	91	87	82	77	100
1800	100	97	98	110	106	104	103	101	93	110
	80	93	96	109	102	99	98	91	85	106
	70	95	97	108	101	97	94	88	83	104
	60	98	99	108	99	95	91	86	81	103
	50	98	100	108	100	94	90	85	80	103
1984	100	98	101	110	109	106	105	103	96	112
	80	95	98	109	106	102	100	94	88	108
	70	97	100	109	104	100	97	91	86	106
	60	99	102	109	103	98	94	89	84	105
	50	99	102	109	104	97	93	88	83	105

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

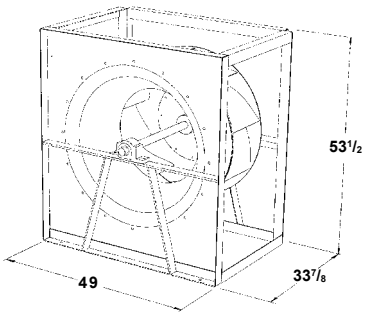
ESP - Performance Data

Efficient Silent Plenum Fan

365

Wheel Diameter = 36.50 in.	Tip Speed, FPM = 9.56 x RPM
Wheel Type = ESP	Maximum BHP = 14.27 x (RPM / 1000)^3

Class	Max. RPM
I	1073
II	1401
III	1759



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	287	0.33	**322**	**0.48**	**355**	**0.63**														
7000	314	0.42	**344**	**0.57**	**373**	**0.74**	**430**	**1.11**												
8000	344	0.52	369	0.69	**395**	**0.87**	**446**	**1.27**	**495**	**1.70**										
9000	375	0.64	397	0.83	420	1.02	**466**	**1.44**	**511**	**1.90**	**555**	**2.39**								
10000	408	0.79	427	0.99	447	1.19	488	1.64	**530**	**2.13**	**570**	**2.64**	**610**	**3.18**						
11000	441	0.97	459	1.18	477	1.40	514	1.87	**551**	**2.38**	**588**	**2.92**	**625**	**3.49**	**697**	**4.69**				
12000	476	1.17	491	1.39	507	1.63	541	2.13	575	2.66	**609**	**3.23**	**644**	**3.82**	**711**	**5.08**				
13000	510	1.41	525	1.65	539	1.89	570	2.42	601	2.98	633	3.57	**664**	**4.19**	**727**	**5.50**	**788**	**6.88**		
14000	545	1.69	559	1.93	572	2.19	600	2.74	628	3.33	658	3.94	687	4.59	**746**	**5.95**	**804**	**7.39**	**860**	**8.91**
15000	581	2.00	593	2.26	605	2.53	631	3.10	657	3.71	684	4.36	712	5.03	**767**	**6.44**	**822**	**7.94**	**875**	**9.51**
16000	616	2.35	628	2.63	639	2.91	663	3.51	688	4.14	713	4.81	738	5.51	**790**	**6.98**	**841**	**8.53**	**892**	**10.15**
17000	652	2.75	663	3.03	674	3.33	696	3.96	719	4.62	742	5.31	766	6.03	814	7.55	**863**	**9.15**	**911**	**10.83**
18000	688	3.19	698	3.49	708	3.80	729	4.45	750	5.14	772	5.85	794	6.60	840	8.17	**885**	**9.83**	**931**	**11.56**
19000	724	3.68	734	3.99	743	4.32	763	5.00	783	5.71	803	6.45	824	7.22	867	8.84	910	10.55	**953**	**12.33**
20000	760	4.22	769	4.55	778	4.89	797	5.59	816	6.33	835	7.10	854	7.89	895	9.56	935	11.32	977	13.15
22000	833	5.46	841	5.82	849	6.19	866	6.95	883	7.74	900	8.56	917	9.40	953	11.17	990	13.03	1027	14.96
24000	906	6.95	913	7.34	921	7.73	936	8.55	951	9.39	967	10.26	983	11.15	1015	13.02	1048	14.98	1082	17.01
26000	979	8.69	986	9.11	993	9.53	1007	10.40	1021	11.30	1035	12.22	1049	13.17	1079	15.14	1109	17.19	1139	19.33
28000	1053	10.71	1059	11.16	1065	11.61	1078	12.54	1091	13.49	1104	14.47	1117	15.47	1144	17.54	1172	19.69	1200	21.93
30000	1126	13.03	1132	13.51	1138	13.99	1150	14.98	1161	15.99	1174	17.02	1186	18.07	1211	20.24	1236	22.50	1262	24.83

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
17000	**959**	**12.57**	**1005**	**14.38**	**1051**	**16.24**														
17800	**973**	**13.20**	**1018**	**15.04**	**1063**	**16.95**	**1107**	**18.91**												
18600	**989**	**13.85**	**1032**	**15.74**	**1076**	**17.68**	**1118**	**19.69**	**1160**	**21.74**										
19400	**1005**	**14.53**	**1047**	**16.46**	**1089**	**18.45**	**1130**	**20.50**	**1171**	**22.59**	**1211**	**24.74**								
20200	**1022**	**15.24**	**1063**	**17.22**	**1104**	**19.25**	**1144**	**21.34**	**1183**	**23.48**	**1222**	**25.67**	**1261**	**27.91**						
21000	**1041**	**15.99**	**1080**	**18.01**	**1119**	**20.09**	**1158**	**22.22**	**1196**	**24.40**	**1234**	**26.63**	**1272**	**28.91**	**1309**	**31.24**				
22000	1065	16.97	**1102**	**19.05**	**1140**	**21.18**	**1177**	**23.37**	**1214**	**25.60**	**1251**	**27.89**	**1287**	**30.22**	**1323**	**32.60**	**1358**	**35.02**	**1393**	**37.49**
23000	1090	18.02	1126	20.15	**1161**	**22.33**	**1197**	**24.57**	**1233**	**26.86**	**1268**	**29.20**	**1303**	**31.59**	**1338**	**34.02**	**1373**	**36.50**	**1407**	**39.01**
24500	1129	19.70	1163	21.91	1196	24.17	**1230**	**26.49**	**1264**	**28.87**	**1297**	**31.29**	**1331**	**33.76**	**1364**	**36.27**	**1397**	**38.82**	**1429**	**41.42**
26000	1170	21.54	1202	23.82	1233	26.16	1265	28.56	**1297**	**31.01**	**1329**	**33.51**	**1360**	**36.06**	**1392**	**38.66**	**1423**	**41.30**	**1455**	**43.97**
27500	1213	23.53	1243	25.89	1273	28.30	1303	30.78	1333	33.31	**1363**	**35.89**	**1393**	**38.52**	**1423**	**41.20**	**1453**	**43.92**	**1482**	**46.68**
29000	1258	25.70	1286	28.13	1314	30.62	1342	33.17	1370	35.78	1399	38.44	**1427**	**41.15**	**1456**	**43.91**	**1484**	**46.71**	**1513**	**49.55**
30500	1304	28.04	1330	30.54	1356	33.11	1383	35.74	1410	38.42	1437	41.16	1464	43.95	1491	46.78	**1518**	**49.66**	**1545**	**52.58**
32000	1350	30.58	1375	33.15	1400	35.79	1425	38.49	1451	41.25	1476	44.07	1502	46.93	1528	49.84	1553	52.80	**1579**	**55.80**
33500	1398	33.31	1421	35.96	1445	38.67	1469	41.45	1493	44.28	1517	47.17	1542	50.11	1566	53.10	1591	56.13	1615	59.21
35000	1446	36.25	1469	38.97	1491	41.76	1514	44.61	1537	47.52	1560	50.48	1583	53.49	1606	56.56	1630	59.67	1653	62.83
36500	1496	39.41	1517	42.20	1538	45.07	1560	47.99	1581	50.97	1603	54.00	1625	57.09	1648	60.23	1670	63.42	1692	66.65
38000	1545	42.79	1565	45.66	1586	48.60	1606	51.59	1627	54.65	1648	57.76	1669	60.92	1690	64.13	1712	67.39	1733	70.70
39500	1595	46.40	1615	49.35	1634	52.36	1654	55.43	1674	58.56	1694	61.74	1714	64.98	1734	68.27	1754	71.60		
41000	1646	50.26	1664	53.28	1683	56.37	1702	59.52	1721	62.72	1740	65.98								

Notes: 1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Inlet Sound Power [dB]

% WOV = 3.72 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
300	100	66	63	60	62	56	49	43	38	62
	80	69	65	59	54	51	42	40	41	57
	70	67	65	59	54	51	43	41	41	57
	60	67	64	59	54	51	43	41	41	57
	50	66	64	58	55	51	44	41	40	57
400	100	77	71	68	66	66	58	52	47	69
	80	80	73	69	62	59	53	46	47	66
	70	78	73	69	62	58	53	47	47	66
	60	79	72	68	62	58	53	47	47	65
	50	77	71	68	62	59	54	48	47	66
500	100	85	77	74	70	74	65	58	53	76
	80	87	79	77	68	65	61	51	51	73
	70	85	79	76	68	64	61	51	52	72
	60	84	78	76	68	64	61	52	52	72
	50	85	77	75	68	65	61	53	52	72
700	100	89	92	84	80	79	75	68	62	84
	80	86	89	81	75	72	69	63	59	80
	70	85	87	80	75	71	68	63	60	79
	60	84	87	80	74	71	68	63	61	78
	50	85	87	80	74	71	68	64	61	78
800	100	89	98	89	83	82	79	71	66	88
	80	84	91	82	76	75	72	66	63	82
	70	83	90	82	75	74	71	67	64	81
	60	83	90	82	75	73	71	67	65	81
	50	84	89	84	75	73	71	67	65	81
900	100	88	102	93	86	86	82	74	69	92
	80	82	92	84	75	77	74	69	66	83
	70	81	91	85	75	76	74	69	67	83
	60	81	90	85	74	75	73	69	68	82
	50	82	90	87	75	75	73	70	68	83

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
1100	100	92	103	103	93	91	88	82	76	99
	80	86	96	95	84	82	80	76	72	90
	70	85	94	93	83	80	78	75	72	89
	60	85	93	92	82	79	77	74	72	88
	50	85	94	92	82	79	77	74	73	88
1200	100	94	103	108	95	93	90	85	79	102
	80	88	98	100	88	85	82	78	75	94
	70	86	96	97	86	82	80	77	75	92
	60	85	96	95	84	80	79	76	74	90
	50	86	96	96	85	80	79	76	75	91
1300	100	95	102	113	97	96	93	88	82	106
	80	89	99	106	90	88	85	81	78	99
	70	87	98	102	88	85	82	79	77	96
	60	86	98	99	86	82	80	78	76	93
	50	87	98	99	86	82	80	77	76	93
1500	100	98	104	118	103	99	97	92	86	111
	80	92	101	111	97	92	89	85	82	104
	70	89	100	106	94	88	86	83	80	100
	60	88	100	103	91	86	84	82	80	97
	50	89	100	103	91	86	84	81	79	97
1600	100	99	105	119	106	101	98	94	88	112
	80	93	102	112	100	94	91	86	83	105
	70	91	101	107	96	90	87	85	82	101
	60	89	100	104	94	88	85	83	81	98
	50	90	100	104	94	88	85	82	81	98
1759	100	101	107	120	111	103	101	97	91	114
	80	95	103	113	104	96	93	89	86	107
	70	92	102	109	101	93	90	87	84	104
	60	91	101	106	98	90	88	86	84	101
	50	92	101	106	98	90	88	85	83	101

Outlet Sound Power [dB]

% WOV = 3.72 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
300	100	75	72	70	68	62	53	45	37	69
	80	76	73	71	67	60	50	41	33	68
	70	75	71	70	66	60	50	41	33	67
	60	74	70	69	66	60	50	41	33	67
	50	72	69	68	66	60	51	42	34	67
400	100	85	80	77	75	71	63	55	47	76
	80	86	81	78	75	70	61	51	43	76
	70	84	80	77	74	69	61	51	43	75
	60	85	79	75	74	69	61	51	43	75
	50	82	77	74	73	69	62	52	44	74
500	100	92	87	82	81	78	71	62	54	83
	80	92	88	84	81	77	70	58	50	83
	70	91	87	82	81	76	69	58	50	82
	60	90	86	81	80	76	69	58	50	81
	50	89	84	79	79	76	70	59	51	81
700	100	94	97	91	89	86	81	73	65	91
	80	90	93	87	85	82	77	69	59	87
	70	90	92	86	84	81	76	68	59	86
	60	90	92	86	83	80	76	68	58	86
	50	89	91	86	82	80	76	68	59	85
800	100	94	101	94	92	89	85	77	69	95
	80	87	95	88	86	83	79	72	63	89
	70	88	94	87	84	82	78	71	62	87
	60	88	95	87	84	81	78	71	61	87
	50	87	94	88	84	81	78	72	62	87
900	100	93	104	96	95	92	88	81	73	97
	80	84	94	88	86	84	80	75	66	89
	70	86	95	87	85	83	80	74	65	88
	60	87	95	87	84	82	79	73	64	88
	50	85	95	89	85	82	80	74	65	88

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
1100	100	95	105	106	101	98	93	88	80	104
	80	90	97	98	93	90	86	81	75	96
	70	90	97	96	91	88	85	80	74	94
	60	91	97	95	90	86	84	79	73	93
	50	90	97	96	91	87	84	80	74	94
1200	100	95	105	111	104	100	96	91	84	107
	80	92	99	102	97	93	89	84	78	99
	70	92	98	99	95	90	87	83	77	97
	60	92	98	98	93	88	85	82	77	95
	50	92	99	99	94	89	86	82	78	96
1300	100	95	104	115	107	103	98	94	87	110
	80	94	100	106	100	96	91	86	82	103
	70	94	100	103	98	92	89	85	80	100
	60	93	99	100	96	90	87	84	80	98
	50	93	101	101	97	91	87	84	81	99
1500	100	97	105	119	112	107	102	98	91	115
	80	97	103	110	105	100	96	91	86	107
	70	96	102	106	103	97	93	89	85	104
	60	96	102	103	101	94	91	88	84	102
	50	96	103	104	101	95	91	88	85	102
1600	100	98	106	120	114	109	104	100	93	116
	80	98	104	111	107	102	97	93	88	109
	70	97	103	107	104	99	94	91	87	105
	60	97	103	104	103	96	92	89	86	103
	50	97	104	105	103	97	93	89	86	104
1759	100	100	107	121	117	111	107	102	96	118
	80	100	105	112	110	105	100	95	90	111
	70	99	105	109	107	102	97	93	89	108
	60	99	104	106	105	99	95	92	88	106
	50	99	106	107	105	100	95	92	89	106

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

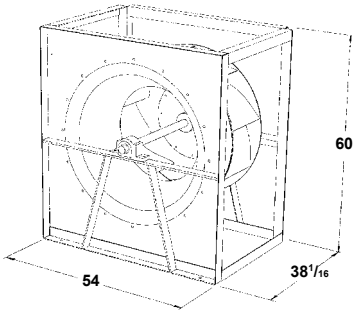
ESP - Performance Data

Efficient Silent Plenum Fan

402

Wheel Diameter = 40.25 in.	Tip Speed, FPM = 10.54 x RPM
Wheel Type = ESP	Maximum BHP = 23.28 x (RPM / 1000)^3

Class	Max. RPM
I	972
II	1264
III	1598



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8000	274	0.46	**303**	**0.65**	**331**	**0.85**														
9000	295	0.55	320	0.75	**346**	**0.96**	**395**	**1.43**												
10000	318	0.66	340	0.87	363	1.10	**408**	**1.59**	**452**	**2.12**										
11000	342	0.79	361	1.01	382	1.25	**423**	**1.77**	**464**	**2.32**	**504**	**2.92**								
12000	366	0.94	384	1.17	402	1.42	440	1.97	**478**	**2.55**	**515**	**3.17**	**551**	**3.82**						
13000	391	1.11	407	1.35	424	1.62	458	2.19	**493**	**2.80**	**528**	**3.44**	**562**	**4.12**						
14000	416	1.30	431	1.56	446	1.84	478	2.43	511	3.07	**543**	**3.74**	**575**	**4.44**	**638**	**5.94**				
15000	442	1.52	456	1.79	470	2.08	499	2.70	529	3.36	**559**	**4.06**	**590**	**4.79**	**649**	**6.34**	**707**	**7.98**		
16000	468	1.77	481	2.05	494	2.36	521	3.00	549	3.68	577	4.41	**606**	**5.17**	**662**	**6.77**	**717**	**8.47**		
17000	494	2.04	506	2.34	518	2.66	543	3.32	569	4.04	596	4.79	**623**	**5.57**	**676**	**7.23**	**729**	**8.98**	**780**	**10.82**
18000	520	2.35	531	2.66	543	2.99	567	3.68	591	4.42	616	5.20	641	6.01	**692**	**7.71**	**742**	**9.52**	**791**	**11.42**
20000	573	3.07	583	3.41	594	3.76	614	4.50	636	5.29	658	6.12	680	6.98	726	8.79	**771**	**10.70**	**816**	**12.71**
22000	627	3.93	636	4.30	645	4.68	664	5.47	683	6.31	703	7.18	723	8.09	764	10.01	805	12.03	**846**	**14.14**
24000	681	4.95	689	5.35	697	5.76	714	6.60	732	7.49	749	8.42	767	9.37	804	11.39	842	13.51	**880**	**15.73**
26000	735	6.15	743	6.57	750	7.01	766	7.91	781	8.85	798	9.83	814	10.83	848	12.94	882	15.17	917	17.49
28000	789	7.53	796	7.99	803	8.45	818	9.41	832	10.40	847	11.43	862	12.49	893	14.70	924	17.02	956	19.44
30000	844	9.12	850	9.61	857	10.10	870	11.11	884	12.16	897	13.24	911	14.35	939	16.66	968	19.08	998	21.59
32000	898	10.93	905	11.44	911	11.97	923	13.04	935	14.14	948	15.27	961	16.43	987	18.84	1014	21.36	1042	23.97
34000	953	12.97	959	13.51	965	14.07	976	15.19	988	16.35	1000	17.54	1012	18.75	1036	21.26	1061	23.88	1087	26.59
36000	1008	15.26	1013	15.83	1019	16.41	1030	17.60	1041	18.81	1052	20.05	1063	21.32	1086	23.94	1109	26.65	1133	29.47

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20000	**861**	**14.79**	**904**	**16.95**	**947**	**19.18**														
21000	**874**	**15.54**	**916**	**17.75**	**957**	**20.03**	**997**	**22.38**												
22000	**887**	**16.33**	**928**	**18.60**	**968**	**20.93**	**1007**	**23.33**	**1046**	**25.80**										
23000	**902**	**17.16**	**941**	**19.48**	**980**	**21.87**	**1018**	**24.32**	**1056**	**26.84**	**1092**	**29.42**								
24000	**918**	**18.03**	**956**	**20.40**	**993**	**22.84**	**1030**	**25.35**	**1066**	**27.92**	**1102**	**30.56**	**1138**	**33.25**						
25000	**934**	**18.94**	**971**	**21.36**	**1007**	**23.86**	**1043**	**26.43**	**1078**	**29.05**	**1113**	**31.74**	**1148**	**34.48**	**1181**	**37.28**				
26000	952	19.89	**987**	**22.37**	**1022**	**24.93**	**1056**	**27.54**	**1091**	**30.22**	**1125**	**32.96**	**1158**	**35.76**	**1191**	**38.61**	**1224**	**41.51**		
27000	970	20.89	**1004**	**23.43**	**1037**	**26.04**	**1071**	**28.71**	**1104**	**31.44**	**1137**	**34.23**	**1170**	**37.08**	**1202**	**39.99**	**1234**	**42.95**	**1266**	**45.96**
28000	989	21.94	1021	24.53	**1054**	**27.19**	**1086**	**29.92**	**1119**	**32.71**	**1151**	**35.55**	**1182**	**38.46**	**1214**	**41.42**	**1245**	**44.43**	**1276**	**47.49**
30000	1028	24.20	1058	26.89	1089	29.66	**1119**	**32.49**	**1149**	**35.39**	**1180**	**38.34**	**1210**	**41.36**	**1240**	**44.42**	**1269**	**47.54**	**1299**	**50.71**
32000	1069	26.68	1098	29.47	1126	32.34	1154	35.28	**1183**	**38.28**	**1211**	**41.35**	**1240**	**44.47**	**1268**	**47.64**	**1296**	**50.87**	**1324**	**54.15**
34000	1113	29.40	1139	32.29	1165	35.26	1192	38.30	1219	41.41	1246	44.58	**1272**	**47.80**	**1299**	**51.09**	**1326**	**54.42**	**1352**	**57.81**
36000	1157	32.37	1182	35.36	1207	38.43	1232	41.57	1257	44.78	1282	48.05	1307	51.38	**1333**	**54.77**	**1358**	**58.22**	**1383**	**61.71**
38000	1203	35.61	1226	38.70	1250	41.86	1273	45.10	1297	48.41	1320	51.79	1344	55.22	1368	58.72	**1392**	**62.27**	**1416**	**65.87**
40000	1250	39.13	1272	42.32	1294	45.58	1316	48.92	1338	52.33	1361	55.80	1383	59.34	1406	62.94	1429	66.59	1451	70.30
42000	1298	42.95	1319	46.24	1339	49.60	1360	53.04	1381	56.54	1402	60.12	1424	63.76	1445	67.45	1467	71.21	1488	75.02
44000	1347	47.09	1366	50.47	1386	53.93	1405	57.47	1425	61.07	1445	64.74	1466	68.48	1486	72.28	1507	76.13	1527	80.05
46000	1396	51.54	1414	55.03	1433	58.59	1452	62.22	1471	65.93	1490	69.70	1509	73.53	1528	77.43	1548	81.38	1567	85.40
48000	1446	56.34	1463	59.93	1481	63.59	1499	67.32	1517	71.12	1535	74.99	1553	78.93	1572	82.92	1590	86.97		
50000	1496	61.49	1513	65.18	1530	68.94	1547	72.78	1564	76.68	1581	80.65								

Notes: 1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Inlet Sound Power [dB]

% WOV = 2.77 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
250	100	62	61	58	62	53	46	41	36	61
	80	65	64	56	53	49	39	39	40	56
	70	64	63	56	52	49	39	40	40	55
	60	63	63	56	52	49	40	40	40	55
	50	62	62	56	53	49	41	40	39	55
400	100	80	74	71	69	69	61	55	50	72
	80	84	76	72	65	62	56	49	50	69
	70	81	76	72	65	61	56	50	50	69
	60	82	75	71	65	61	56	50	50	68
	50	80	74	71	65	62	57	51	50	69
500	100	88	80	77	73	77	68	61	56	79
	80	90	83	80	71	68	64	54	54	76
	70	89	82	79	71	67	64	54	55	75
	60	88	81	79	71	67	64	55	55	75
	50	88	80	78	71	68	64	56	55	75
600	100	91	88	82	79	79	74	66	61	83
	80	90	88	82	76	72	68	61	58	80
	70	89	87	81	75	71	68	61	59	79
	60	88	87	81	75	71	68	62	60	79
	50	89	86	81	75	72	68	62	60	79
700	100	92	95	87	83	82	78	71	65	87
	80	89	92	84	78	75	71	66	62	82
	70	88	91	83	78	74	71	66	63	82
	60	87	90	83	77	74	71	66	64	81
	50	88	90	84	77	74	71	67	64	82
900	100	91	105	96	89	89	85	77	72	95
	80	85	95	87	78	80	77	72	69	86
	70	85	94	88	78	79	77	72	70	86
	60	84	93	88	77	78	76	72	71	85
	50	85	93	90	78	78	76	73	71	86

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
1000	100	94	106	101	93	91	88	81	75	98
	80	88	97	93	83	83	80	75	72	90
	70	87	96	92	82	81	79	75	73	89
	60	87	95	91	81	80	78	75	73	88
	50	87	95	93	82	80	78	75	73	89
1100	100	95	106	106	96	94	91	85	79	102
	80	90	99	98	87	85	83	79	75	93
	70	89	98	96	86	83	81	78	75	92
	60	88	97	95	85	82	80	77	75	91
	50	89	97	96	85	82	80	77	76	91
1300	100	99	106	116	100	99	96	91	85	109
	80	93	102	109	93	91	88	84	81	102
	70	91	102	105	91	88	85	82	80	99
	60	89	101	102	89	85	83	81	79	96
	50	90	101	102	89	85	83	80	79	96
1400	100	100	106	120	103	101	98	93	87	113
	80	94	103	113	96	93	90	86	83	106
	70	92	103	108	94	90	87	84	82	101
	60	90	103	105	92	87	85	83	81	99
	50	91	103	105	92	87	85	82	81	99
1500	100	101	107	121	106	102	100	95	89	114
	80	95	104	114	100	95	92	88	85	107
	70	93	103	109	97	91	89	86	83	103
	60	91	103	106	94	89	87	85	83	100
	50	92	103	106	94	89	87	84	82	100
1598	100	102	108	122	109	104	101	97	91	115
	80	96	105	115	103	97	94	89	86	108
	70	94	104	110	99	93	90	87	85	104
	60	92	103	107	97	91	88	86	84	101
	50	93	104	107	97	91	88	85	84	101

Outlet Sound Power [dB]

% WOV = 2.77 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
250	100	73	69	69	66	59	50	42	34	67
	80	74	71	69	65	57	46	38	30	66
	70	73	69	68	64	57	46	38	30	65
	60	71	68	67	64	57	46	38	30	65
	50	70	66	67	64	58	47	39	31	65
400	100	88	83	80	78	74	66	58	50	79
	80	90	85	81	78	72	64	54	46	79
	70	88	83	80	77	72	64	54	46	78
	60	88	82	78	77	72	64	54	46	78
	50	85	80	77	76	72	65	55	47	77
500	100	95	90	85	84	81	74	65	57	86
	80	95	91	87	84	80	73	61	53	86
	70	94	90	85	83	79	72	61	53	85
	60	93	89	84	83	79	72	61	53	84
	50	92	87	82	82	79	73	62	54	84
600	100	97	96	90	88	85	79	71	63	90
	80	95	94	89	86	83	77	67	58	88
	70	94	93	88	85	82	76	67	58	87
	60	94	93	87	85	82	76	66	58	87
	50	93	91	86	84	82	77	67	59	87
700	100	98	100	94	92	89	84	76	68	94
	80	93	96	91	88	85	80	72	62	90
	70	93	96	89	87	84	79	71	62	89
	60	93	96	89	86	83	79	71	61	89
	50	92	95	89	85	83	79	71	62	88
900	100	96	107	99	98	95	91	84	76	100
	80	88	98	91	89	87	83	78	69	92
	70	89	98	90	88	86	83	77	68	91
	60	90	98	90	87	85	82	76	67	91
	50	88	98	92	88	85	83	77	68	91

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
1000	100	97	108	104	101	98	94	88	80	104
	80	90	99	96	93	90	86	81	74	96
	70	92	99	95	91	88	85	80	73	94
	60	92	99	94	90	87	84	79	72	93
	50	91	99	96	91	87	85	80	73	94
1100	100	98	108	109	104	101	96	91	83	107
	80	93	101	101	96	93	89	84	78	99
	70	94	100	99	94	91	88	83	77	97
	60	94	100	98	93	89	87	82	76	96
	50	93	100	99	94	90	87	83	77	97
1300	100	99	108	118	110	106	101	97	90	113
	80	98	103	109	103	98	94	89	85	105
	70	97	103	106	101	95	92	88	83	103
	60	97	102	103	99	93	90	87	83	101
	50	97	104	104	100	94	90	87	84	102
1400	100	99	108	121	112	108	103	99	92	116
	80	99	104	112	106	101	97	92	87	108
	70	99	104	108	104	98	94	90	86	105
	60	98	104	105	102	95	92	89	85	103
	50	98	106	106	102	96	92	89	86	104
1500	100	100	108	122	115	110	105	101	94	118
	80	101	106	113	108	103	99	94	89	110
	70	100	105	109	106	100	96	92	88	107
	60	99	105	106	104	97	94	91	87	105
	50	99	107	107	104	98	94	91	88	105
1598	100	101	109	123	117	112	107	103	96	119
	80	102	107	114	110	105	100	95	91	111
	70	101	106	110	107	102	97	94	89	108
	60	100	106	107	105	99	95	92	89	106
	50	100	108	108	106	100	96	92	89	107

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

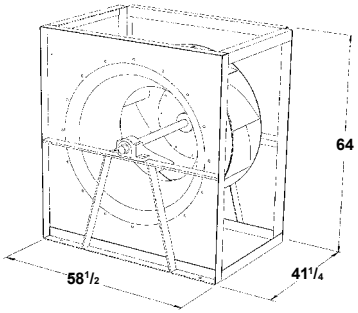
ESP - Performance Data

Efficient Silent Plenum Fan

445

Wheel Diameter = 44.50 in.	Tip Speed, FPM = 11.65 x RPM
Wheel Type = ESP	Maximum BHP = 38.45 x (RPM / 1000)^3

Class	Max. RPM
I	882
II	1150
III	1447



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	237	0.50	**265**	**0.72**	**292**	**0.95**														
10000	252	0.58	**277**	**0.81**	**302**	**1.06**	**350**	**1.60**												
11000	267	0.68	290	0.92	**313**	**1.18**	**358**	**1.74**												
12000	284	0.78	304	1.04	**325**	**1.31**	**367**	**1.90**	**407**	**2.55**										
13000	301	0.90	320	1.17	339	1.46	**378**	**2.08**	**416**	**2.75**	**452**	**3.46**								
14000	319	1.04	336	1.32	354	1.62	**389**	**2.27**	**425**	**2.96**	**460**	**3.70**	**494**	**4.48**						
16000	355	1.37	370	1.68	385	2.00	416	2.70	**448**	**3.45**	**479**	**4.24**	**510**	**5.07**						
18000	393	1.78	406	2.11	419	2.46	446	3.21	474	4.01	**502**	**4.85**	**530**	**5.74**	**584**	**7.61**				
20000	432	2.28	443	2.63	454	3.01	478	3.80	503	4.65	528	5.55	**553**	**6.49**	**603**	**8.47**	**652**	**10.57**	**700**	**12.78**
22000	471	2.87	481	3.26	491	3.66	512	4.50	534	5.40	557	6.35	580	7.34	**626**	**9.43**	**671**	**11.64**	**715**	**13.95**
24000	510	3.58	519	3.99	528	4.41	548	5.31	568	6.26	588	7.26	609	8.30	650	10.49	**692**	**12.81**	**734**	**15.23**
26000	549	4.40	558	4.83	566	5.29	584	6.24	602	7.24	621	8.28	639	9.37	678	11.67	**717**	**14.09**	**755**	**16.62**
28000	589	5.34	597	5.81	605	6.29	621	7.29	638	8.34	655	9.44	672	10.58	707	12.97	743	15.50	**779**	**18.14**
30000	629	6.43	636	6.92	644	7.43	659	8.48	674	9.59	690	10.73	705	11.92	738	14.41	771	17.04	805	19.78
32000	669	7.66	676	8.18	683	8.72	697	9.83	711	10.98	725	12.18	740	13.41	770	16.00	801	18.73	832	21.58
34000	709	9.04	716	9.59	722	10.16	735	11.32	748	12.53	762	13.78	776	15.07	804	17.76	832	20.58	862	23.53
36000	750	10.59	756	11.18	762	11.77	774	12.99	786	14.25	799	15.55	812	16.89	838	19.68	865	22.60	892	25.65
38000	790	12.32	796	12.93	801	13.55	813	14.83	825	16.14	837	17.50	849	18.89	873	21.78	898	24.80	924	27.94
40000	831	14.23	836	14.87	841	15.52	852	16.86	863	18.23	874	19.63	886	21.08	909	24.07	933	27.19	957	30.43
42000	871	16.34	876	17.01	881	17.69	892	19.08	902	20.50	913	21.97	923	23.46	945	26.56	968	29.78	990	33.12

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25000	**784**	**18.49**	**822**	**21.16**	**860**	**23.91**														
26000	**793**	**19.25**	**831**	**21.97**	**868**	**24.78**	**904**	**27.67**												
27000	**804**	**20.05**	**840**	**22.82**	**876**	**25.68**	**912**	**28.63**	**947**	**31.65**										
28000	**815**	**20.88**	**850**	**23.71**	**885**	**26.62**	**920**	**29.61**	**954**	**32.69**	**987**	**35.83**								
30000	**838**	**22.63**	**872**	**25.57**	**905**	**28.59**	**938**	**31.70**	**970**	**34.87**	**1002**	**38.13**	**1034**	**41.45**						
32000	864	24.53	**895**	**27.58**	**927**	**30.71**	**958**	**33.92**	**989**	**37.21**	**1019**	**40.57**	**1050**	**43.99**	**1079**	**47.49**	**1109**	**51.05**		
34000	891	26.58	921	29.73	**950**	**32.97**	**980**	**36.29**	**1009**	**39.69**	**1038**	**43.16**	**1067**	**46.69**	**1096**	**50.30**	**1124**	**53.97**	**1152**	**57.70**
36000	920	28.80	948	32.06	976	35.40	**1004**	**38.83**	**1032**	**42.33**	**1059**	**45.91**	**1087**	**49.56**	**1115**	**53.27**	**1142**	**57.04**	**1169**	**60.88**
38000	950	31.20	976	34.55	1003	38.00	1029	41.54	**1056**	**45.15**	**1082**	**48.83**	**1109**	**52.59**	**1135**	**56.41**	**1161**	**60.29**	**1187**	**64.24**
40000	981	33.78	1006	37.24	1031	40.79	1056	44.43	1081	48.14	**1107**	**51.94**	**1132**	**55.80**	**1157**	**59.73**	**1182**	**63.72**	**1207**	**67.78**
42000	1014	36.57	1037	40.12	1061	43.77	1084	47.51	1108	51.33	1132	55.23	**1156**	**59.20**	**1180**	**63.24**	**1204**	**67.34**	**1228**	**71.50**
44000	1047	39.56	1069	43.22	1091	46.96	1114	50.8	1137	54.73	1159	58.73	1182	62.80	**1205**	**66.94**	**1228**	**71.15**	**1251**	**75.43**
46000	1081	42.78	1102	46.53	1123	50.37	1144	54.31	1166	58.34	1188	62.44	1210	66.62	1232	70.86	**1253**	**75.18**	**1275**	**79.56**
48000	1115	46.22	1135	50.07	1155	54.01	1176	58.05	1197	62.17	1217	66.38	1238	70.66	1259	75.01	1280	79.43	**1301**	**83.91**
50000	1150	49.90	1169	53.85	1189	57.89	1208	62.03	1228	66.25	1248	70.55	1268	74.93	1288	79.38	1308	83.91	1328	88.50
52000	1186	53.83	1204	57.88	1223	62.02	1241	66.26	1260	70.58	1279	74.98	1298	79.46	1317	84.01	1336	88.63	1356	93.33
54000	1222	58.02	1239	62.17	1257	66.41	1275	70.74	1293	75.16	1311	79.66	1329	84.24	1348	88.89	1366	93.61	1384	98.41
56000	1259	62.48	1275	66.73	1292	71.07	1309	75.50	1326	80.01	1344	84.61	1361	89.29	1379	94.04	1396	98.86	1414	103.76
59000	1314	69.69	1330	74.09	1345	78.58	1361	83.16	1378	87.82	1394	92.57	1410	97.39	1427	102.29	1444	107.26		
62000	1370	77.55	1385	82.11	1400	86.75	1415	91.48	1430	96.29	1445	101.19								

Notes: 1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Inlet Sound Power [dB]

% WOV = 2.05 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
250	100	66	64	61	65	56	49	44	39	64
	80	68	67	59	56	52	42	42	43	59
	70	68	67	59	55	52	42	43	43	58
	60	67	66	59	55	52	43	43	43	58
	50	66	65	59	56	52	44	43	42	58
400	100	84	77	74	73	72	64	58	53	76
	80	88	80	75	68	65	59	52	53	73
	70	85	79	75	68	64	59	53	53	72
	60	86	78	75	68	64	59	53	53	72
	50	84	78	74	68	65	60	54	53	72
500	100	92	84	80	76	80	71	64	59	82
	80	94	86	83	74	71	67	57	57	79
	70	92	85	82	74	70	67	58	58	78
	60	91	84	82	74	70	67	58	58	78
	50	92	84	81	74	71	67	59	58	78
600	100	95	91	85	82	82	77	69	64	86
	80	94	91	85	79	75	71	64	61	83
	70	92	90	84	78	74	71	64	62	82
	60	91	90	84	78	74	71	65	63	82
	50	92	89	84	78	75	71	65	63	82
700	100	96	98	90	86	85	81	74	68	90
	80	93	95	87	81	78	75	69	65	86
	70	92	94	87	81	77	74	69	66	85
	60	91	94	86	80	77	74	70	67	85
	50	92	93	87	80	77	74	70	67	85
800	100	96	105	95	89	88	85	77	72	95
	80	91	98	89	82	81	78	72	69	88
	70	90	97	89	81	80	77	73	70	87
	60	90	96	89	81	79	77	73	71	87
	50	91	96	90	81	79	77	74	71	87

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
900	100	95	109	99	92	92	88	80	75	99
	80	89	98	91	81	83	80	75	72	89
	70	88	97	91	81	82	80	75	73	89
	60	88	97	91	80	81	79	75	74	88
	50	89	97	93	81	81	79	76	74	89
1000	100	97	109	104	96	95	91	84	78	101
	80	91	101	96	86	86	83	79	75	93
	70	91	99	95	85	84	82	78	76	92
	60	90	98	95	84	83	81	78	76	91
	50	91	98	96	85	83	81	78	76	92
1100	100	99	109	109	99	97	94	88	82	105
	80	93	102	101	90	88	86	82	78	96
	70	92	101	99	89	86	84	81	78	95
	60	92	100	98	88	85	83	80	78	94
	50	92	100	99	88	85	83	80	79	94
1200	100	101	109	114	101	99	96	91	85	108
	80	95	104	107	94	91	89	84	81	101
	70	94	103	104	92	88	86	83	81	98
	60	92	102	102	90	86	85	82	80	97
	50	93	102	102	91	87	85	82	81	97
1300	100	102	109	120	103	102	99	94	88	113
	80	96	106	112	96	94	91	87	84	105
	70	94	105	108	94	91	88	85	83	102
	60	93	104	105	92	88	86	84	82	99
	50	94	104	105	92	88	86	83	82	99
1447	100	104	110	123	107	105	102	97	91	116
	80	98	107	116	101	97	94	90	87	109
	70	96	106	112	98	94	91	88	86	105
	60	94	106	108	96	91	89	87	85	102
	50	95	106	108	96	91	89	86	85	102

Outlet Sound Power [dB]

% WOV = 2.05 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
250	100	76	72	72	69	62	53	45	37	70
	80	77	74	72	68	61	49	41	33	69
	70	76	72	71	67	60	49	41	33	68
	60	75	71	71	67	60	49	41	33	68
	50	73	69	70	67	61	50	42	34	68
400	100	92	87	83	81	77	69	61	53	82
	80	93	88	84	81	76	67	57	49	82
	70	91	87	83	80	75	67	57	49	81
	60	92	85	82	80	75	67	57	49	81
	50	89	84	80	79	75	68	58	50	80
500	100	99	93	88	87	84	77	68	60	89
	80	99	94	90	87	83	76	64	56	89
	70	98	93	88	87	82	75	64	56	88
	60	97	92	87	86	82	75	64	56	87
	50	96	90	85	85	82	76	65	57	87
600	100	101	99	93	91	88	82	74	66	93
	80	98	98	92	90	86	80	70	61	92
	70	98	96	91	89	85	79	70	61	91
	60	97	96	90	88	85	79	70	61	90
	50	96	95	89	87	85	80	70	62	90
700	100	101	104	97	95	92	87	79	71	97
	80	97	100	94	91	88	83	75	65	94
	70	97	99	93	90	87	82	74	65	93
	60	97	99	92	89	86	82	74	64	92
	50	95	98	92	89	86	82	74	65	92
800	100	101	108	100	98	95	91	83	75	101
	80	94	101	94	92	89	85	78	69	95
	70	95	101	93	91	88	84	77	68	94
	60	95	101	93	90	87	84	77	67	93
	50	94	101	94	90	87	84	78	68	93

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
900	100	100	110	102	101	98	94	87	79	103
	80	91	101	94	92	90	86	81	72	95
	70	93	101	93	91	89	86	80	71	94
	60	94	101	93	90	88	85	79	70	94
	50	92	101	95	91	88	86	80	71	94
1000	100	101	111	107	104	101	97	91	83	107
	80	94	102	99	96	93	89	84	77	99
	70	95	102	98	94	91	88	83	76	97
	60	96	102	97	93	90	87	82	75	96
	50	94	102	99	94	91	88	83	76	97
1100	100	102	112	112	107	104	99	94	87	110
	80	96	104	104	99	96	92	87	81	102
	70	97	103	102	98	94	91	86	80	100
	60	97	103	101	96	92	90	85	79	99
	50	97	103	102	97	93	90	86	80	100
1200	100	102	111	117	110	106	102	97	90	113
	80	99	105	108	103	99	95	90	84	105
	70	99	105	106	101	96	93	89	83	103
	60	99	104	104	99	94	92	88	83	102
	50	99	105	105	100	95	92	88	84	102
1300	100	102	111	121	113	109	104	100	93	116
	80	101	107	112	106	102	97	92	88	109
	70	101	106	109	104	98	95	91	86	106
	60	100	106	106	103	96	93	90	86	104
	50	100	107	107	103	97	93	90	87	105
1447	100	103	111	124	117	112	107	103	96	120
	80	103	108	116	110	105	101	96	91	112
	70	103	108	111	108	102	98	94	90	109
	60	102	108	108	106	99	96	93	89	107
	50	102	109	109	106	100	96	93	90	107

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

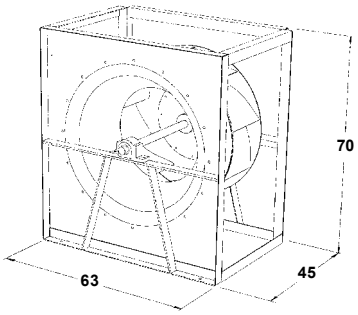
ESP - Performance Data

Efficient Silent Plenum Fan

490

Wheel Diameter = 49.00 in.	Tip Speed, FPM = 12.83 x RPM
Wheel Type = ESP	Maximum BHP = 62.24 x (RPM / 1000)^3

Class	Max. RPM
I	799
II	1043
III	1314



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11000	216	0.61	**241**	**0.88**	**266**	**1.16**														
12000	227	0.69	**250**	**0.97**	**273**	**1.27**	**317**	**1.92**												
13000	239	0.79	260	1.08	**281**	**1.39**	**323**	**2.06**												
14000	251	0.89	270	1.19	**290**	**1.51**	**329**	**2.22**	**367**	**2.98**										
15000	263	1.00	281	1.32	300	1.65	**337**	**2.38**	**372**	**3.18**										
16000	277	1.13	293	1.45	310	1.81	**345**	**2.56**	**379**	**3.38**	**412**	**4.25**								
18000	303	1.42	318	1.77	333	2.15	364	2.96	**394**	**3.83**	**425**	**4.75**	**454**	**5.72**						
20000	331	1.78	344	2.15	357	2.55	384	3.41	**412**	**4.34**	**440**	**5.32**	**467**	**6.34**	**520**	**8.51**				
22000	360	2.20	371	2.60	383	3.03	407	3.94	432	4.91	**457**	**5.94**	**483**	**7.02**	**532**	**9.30**	**579**	**11.73**		
24000	388	2.70	399	3.12	409	3.57	431	4.53	454	5.56	477	6.64	**500**	**7.77**	**546**	**10.16**	**591**	**12.69**	**634**	**15.36**
26000	417	3.27	427	3.73	437	4.20	457	5.21	477	6.28	498	7.42	520	8.60	**562**	**11.10**	**604**	**13.74**	**645**	**16.51**
28000	447	3.93	456	4.42	464	4.92	483	5.98	502	7.10	521	8.28	541	9.52	**580**	**12.12**	**620**	**14.87**	**658**	**17.75**
30000	476	4.69	484	5.20	493	5.73	510	6.84	527	8.01	545	9.24	563	10.53	600	13.23	**637**	**16.09**	**673**	**19.08**
33000	521	6.01	528	6.56	536	7.13	551	8.32	566	9.57	582	10.87	598	12.23	632	15.09	665	18.10	**699**	**21.25**
36000	566	7.58	572	8.17	579	8.78	593	10.05	607	11.38	621	12.76	636	14.19	666	17.19	696	20.36	727	23.67
39000	611	9.41	617	10.05	623	10.71	636	12.06	648	13.46	662	14.92	675	16.42	702	19.57	730	22.89	758	26.35
42000	656	11.54	662	12.22	667	12.92	679	14.35	691	15.84	703	17.37	715	18.95	740	22.25	765	25.71	791	29.33
45000	701	13.98	707	14.71	712	15.45	723	16.96	733	18.53	745	20.14	756	21.80	779	25.25	802	28.86	826	32.62
48000	747	16.76	752	17.53	757	18.31	767	19.91	777	21.56	787	23.25	797	24.99	819	28.59	841	32.35	863	36.26
51000	792	19.89	797	20.71	801	21.53	811	23.22	820	24.95	830	26.73	840	28.54	860	32.30	880	36.21	900	40.26

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30000	**710**	**22.18**	**745**	**25.40**	**780**	**28.72**														
32000	**724**	**23.72**	**758**	**27.04**	**791**	**30.47**	**824**	**34.00**												
34000	**740**	**25.35**	**773**	**28.79**	**804**	**32.32**	**836**	**35.96**	**867**	**39.69**	**897**	**43.50**								
36000	**758**	**27.10**	**789**	**30.64**	**819**	**34.29**	**849**	**38.03**	**879**	**41.86**	**908**	**45.79**	**937**	**49.80**						
38000	**777**	**28.96**	**806**	**32.61**	**835**	**36.37**	**864**	**40.22**	**892**	**44.16**	**920**	**48.19**	**948**	**52.30**	**976**	**56.50**	**1003**	**60.78**		
40000	797	30.95	**824**	**34.71**	**852**	**38.57**	**880**	**42.53**	**907**	**46.58**	**934**	**50.72**	**961**	**54.94**	**987**	**59.24**	**1014**	**63.62**	**1040**	**68.08**
42000	817	33.07	844	36.93	**870**	**40.90**	**897**	**44.97**	**923**	**49.13**	**949**	**53.37**	**975**	**57.70**	**1001**	**62.12**	**1026**	**66.60**	**1051**	**71.17**
44000	839	35.33	864	39.29	890	43.37	**915**	**47.54**	**940**	**51.81**	**965**	**56.17**	**990**	**60.60**	**1015**	**65.12**	**1039**	**69.72**	**1064**	**74.39**
46000	862	37.73	886	41.80	910	45.98	934	50.26	**958**	**54.63**	**982**	**59.10**	**1006**	**63.65**	**1030**	**68.27**	**1054**	**72.98**	**1077**	**77.76**
48000	885	40.30	908	44.46	931	48.74	954	53.12	**977**	**57.61**	**1000**	**62.18**	**1023**	**66.83**	**1046**	**71.57**	**1069**	**76.39**	**1092**	**81.28**
50000	909	43.02	931	47.29	953	51.67	975	56.15	997	60.74	**1019**	**65.41**	**1041**	**70.18**	**1064**	**75.02**	**1086**	**79.95**	**1108**	**84.95**
52000	934	45.92	955	50.28	975	54.76	997	59.35	1018	64.03	1039	68.81	**1061**	**73.68**	**1082**	**78.64**	**1103**	**83.67**	**1124**	**88.78**
54000	959	48.99	979	53.45	999	58.03	1019	62.71	1039	67.50	1060	72.39	1080	77.36	**1101**	**82.42**	**1121**	**87.56**	**1142**	**92.77**
57000	997	53.94	1016	58.55	1035	63.27	1054	68.11	1073	73.05	1092	78.08	1112	83.21	1131	88.43	1150	93.72	**1170**	**99.10**
60000	1036	59.33	1054	64.08	1072	68.96	1090	73.94	1108	79.03	1126	84.21	1144	89.49	1163	94.86	1181	100.31	1199	105.84
63000	1076	65.17	1093	70.08	1110	75.10	1127	80.23	1144	85.46	1161	90.80	1178	96.22	1196	101.74	1213	107.35	1231	113.03
66000	1117	71.50	1133	76.55	1148	81.72	1164	87.00	1181	92.38	1197	97.86	1213	103.44	1230	109.10	1246	114.86	1263	120.70
69000	1158	78.32	1173	83.53	1188	88.84	1203	94.27	1219	99.80	1234	105.43	1250	111.15	1265	116.97	1281	122.87	1297	128.86
72000	1200	85.66	1214	91.03	1228	96.49	1243	102.07	1257	107.75	1272	113.52	1287	119.39	1302	125.36				
75000	1242	93.55	1255	99.07	1269	104.69	1283	110.42	1296	116.24	1310	122.17								

Notes:
1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Inlet Sound Power [dB]

% WOV = 1.54 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
200	100	69	59	61	59	51	48	42	36	59
	80	67	57	57	56	48	40	35	30	56
	70	66	56	56	56	47	41	35	30	56
	60	65	56	55	55	45	42	36	30	55
	50	67	59	56	54	44	39	33	27	54
300	100	82	75	69	69	64	59	54	48	70
	80	81	73	66	66	62	54	47	42	68
	70	79	72	65	65	61	53	47	42	66
	60	78	72	65	64	60	53	48	42	66
	50	78	74	67	64	59	51	46	40	66
400	100	91	87	75	76	74	66	63	57	79
	80	90	85	72	72	71	63	55	50	76
	70	88	84	72	71	71	62	56	50	75
	60	87	83	71	70	70	61	57	51	74
	50	86	84	75	72	69	59	54	48	75
500	100	94	92	83	80	79	73	69	64	84
	80	93	90	80	76	74	69	62	57	80
	70	92	89	79	75	73	68	63	58	80
	60	90	88	78	74	73	67	63	60	79
	50	90	89	81	76	74	69	65	61	80
600	100	96	98	88	83	82	79	74	69	89
	80	94	96	85	79	77	73	68	62	85
	70	94	95	84	78	76	72	68	64	84
	60	93	93	83	77	75	71	68	66	83
	50	94	94	85	79	78	76	73	71	85
700	100	96	104	91	86	86	82	78	73	93
	80	94	102	87	81	79	76	72	66	89
	70	95	100	86	80	78	74	72	69	87
	60	96	99	86	79	77	73	72	71	87
	50	98	99	88	81	81	81	81	80	90

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
800	100	97	108	95	89	88	86	82	77	96
	80	94	106	91	84	82	78	75	70	93
	70	96	104	90	83	81	77	75	72	91
	60	98	103	89	82	80	75	75	75	90
	50	101	103	91	84	83	83	85	85	93
900	100	99	109	100	92	91	89	85	80	99
	80	96	107	97	88	85	81	78	74	95
	70	98	106	96	87	84	80	78	75	94
	60	100	105	95	86	83	79	78	78	93
	50	103	105	96	87	86	86	87	88	96
1000	100	101	110	105	96	93	92	88	83	102
	80	98	108	102	91	87	84	81	77	98
	70	100	107	100	90	86	83	80	78	97
	60	102	107	99	89	85	82	80	80	96
	50	105	108	100	91	88	88	89	90	99
1100	100	103	111	109	98	95	94	91	86	104
	80	100	108	106	94	90	87	83	79	101
	70	101	108	105	93	89	86	82	81	100
	60	103	108	104	92	88	84	82	82	99
	50	107	110	104	94	90	90	91	92	101
1200	100	104	111	113	101	97	96	93	89	107
	80	101	109	110	97	92	89	86	82	104
	70	103	109	109	96	91	88	84	83	103
	60	105	110	107	95	90	87	84	84	102
	50	108	112	108	97	92	92	93	94	104
1314	100	106	112	117	104	99	99	95	91	111
	80	103	109	114	100	94	92	88	85	107
	70	105	110	113	99	93	91	87	85	106
	60	106	112	112	98	92	89	86	86	106
	50	110	114	112	100	94	94	95	96	107

Outlet Sound Power [dB]

% WOV = 1.54 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
200	100	71	67	70	67	59	52	43	34	67
	80	66	64	65	61	53	45	37	29	62
	70	66	63	64	61	51	45	37	29	61
	60	65	62	64	61	50	45	37	29	61
	50	65	61	63	62	49	45	38	31	61
300	100	82	79	77	78	72	65	57	48	78
	80	80	75	73	73	67	59	51	43	73
	70	79	74	72	72	66	57	50	42	72
	60	79	74	72	72	65	57	50	42	72
	50	79	73	71	71	65	56	51	44	71
400	100	90	88	83	85	82	74	67	58	86
	80	89	83	79	80	76	68	61	52	81
	70	89	83	78	80	76	66	60	52	81
	60	89	82	77	79	76	65	60	52	80
	50	88	82	77	78	77	64	60	53	80
500	100	93	94	90	89	87	81	74	65	91
	80	92	90	86	84	81	75	68	59	86
	70	92	90	84	83	80	74	67	59	85
	60	92	89	84	82	80	73	66	59	84
	50	91	89	83	82	80	72	66	59	84
600	100	94	98	95	93	91	87	79	70	96
	80	93	96	91	88	85	80	73	65	90
	70	93	95	89	86	84	79	72	64	89
	60	93	95	88	86	83	78	71	65	88
	50	94	94	88	85	83	78	71	64	88
700	100	94	102	99	97	94	91	85	75	99
	80	93	100	95	91	88	83	78	69	94
	70	94	100	93	90	87	82	77	69	93
	60	94	99	92	89	86	81	76	69	92
	50	96	98	92	88	86	81	76	68	91

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
800	100	95	105	103	101	97	95	89	79	103
	80	94	103	98	94	91	87	82	74	97
	70	95	103	97	93	90	85	81	73	96
	60	95	102	95	92	89	84	80	73	95
	50	98	101	96	91	89	84	80	72	95
900	100	97	106	106	104	100	98	93	84	106
	80	96	105	102	98	94	90	86	78	100
	70	97	104	101	96	93	88	84	77	99
	60	97	104	99	95	92	87	83	77	98
	50	100	103	100	94	91	87	83	76	98
1000	100	99	107	109	106	103	100	96	87	109
	80	98	106	105	101	97	93	89	82	103
	70	98	106	104	99	96	91	87	81	102
	60	99	105	103	98	95	91	86	80	101
	50	102	106	103	97	94	90	86	80	101
1100	100	101	108	111	109	105	102	99	91	111
	80	100	107	108	103	100	96	91	85	106
	70	100	107	107	102	98	94	90	84	105
	60	101	107	106	100	97	93	89	83	103
	50	103	107	106	100	96	93	89	83	103
1200	100	102	109	114	111	108	105	101	94	114
	80	101	108	111	106	102	98	94	88	108
	70	102	108	110	104	100	97	92	87	107
	60	102	108	109	103	99	96	91	86	106
	50	105	109	109	103	99	96	91	86	106
1314	100	104	110	116	113	110	107	104	97	116
	80	103	109	114	108	104	101	96	91	111
	70	103	109	113	106	103	99	95	90	109
	60	104	109	112	105	102	98	94	89	109
	50	107	111	112	105	101	98	93	89	108

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

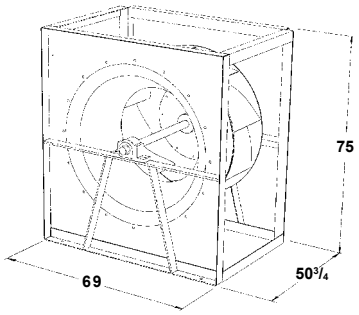
ESP - Performance Data

Efficient Silent Plenum Fan

542

Wheel Diameter = 54.25 in.	Tip Speed, FPM = 14.20 x RPM
Wheel Type = ESP	Maximum BHP = 103.54 x (RPM / 1000)^3

Class	Max. RPM
I	725
II	938
III	1178



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14000	199	0.79	**221**	**1.12**	**243**	**1.48**														
16000	216	0.97	235	1.33	**254**	**1.71**	**292**	**2.54**												
18000	234	1.18	251	1.56	268	1.97	**302**	**2.86**	**335**	**3.82**										
20000	254	1.43	268	1.84	283	2.27	**314**	**3.21**	**344**	**4.23**	**374**	**5.30**								
22000	273	1.73	287	2.16	300	2.62	328	3.61	**356**	**4.68**	**383**	**5.81**	**410**	**7.00**						
24000	294	2.08	306	2.54	318	3.02	343	4.06	**369**	**5.18**	**394**	**6.37**	**419**	**7.61**	**467**	**10.24**				
26000	315	2.48	325	2.96	337	3.47	360	4.56	383	5.73	**407**	**6.97**	**430**	**8.27**	**476**	**11.01**				
28000	336	2.94	346	3.45	356	3.98	377	5.12	398	6.34	**420**	**7.63**	**442**	**8.98**	**486**	**11.83**	**527**	**14.86**		
30000	357	3.46	366	4.00	376	4.55	395	5.74	415	7.01	435	8.36	**456**	**9.76**	**496**	**12.72**	**536**	**15.85**	**575**	**19.15**
32000	378	4.05	387	4.61	396	5.19	414	6.43	432	7.75	451	9.15	470	10.60	**509**	**13.67**	**546**	**16.91**	**583**	**20.31**
34000	400	4.71	408	5.30	416	5.91	433	7.20	450	8.57	468	10.01	486	11.51	**522**	**14.68**	**558**	**18.04**	**593**	**21.55**
37000	433	5.84	440	6.47	447	7.12	463	8.48	478	9.93	494	11.44	510	13.02	543	16.35	**577**	**19.86**	**610**	**23.54**
40000	466	7.15	472	7.82	479	8.52	493	9.96	507	11.48	522	13.07	537	14.72	567	18.20	597	21.87	**628**	**25.71**
43000	499	8.67	505	9.38	511	10.11	524	11.64	537	13.23	550	14.90	564	16.62	592	20.25	620	24.07	**649**	**28.07**
46000	532	10.39	537	11.15	543	11.92	555	13.53	567	15.20	580	16.94	592	18.74	618	22.52	644	26.49	671	30.64
49000	565	12.35	570	13.15	576	13.96	587	15.65	598	17.40	609	19.22	621	21.10	645	25.02	669	29.14	694	33.44
52000	598	14.54	603	15.39	608	16.25	619	18.02	629	19.85	640	21.75	651	23.70	673	27.77	696	32.04	719	36.49
55000	632	17.00	636	17.89	641	18.79	651	20.65	661	22.56	671	24.53	681	26.56	702	30.78	723	35.20	745	39.80
58000	665	19.73	670	20.66	674	21.61	683	23.55	693	25.54	702	27.60	712	29.70	731	34.08	751	38.64	772	43.39
61000	699	22.75	703	23.72	707	24.71	716	26.74	725	28.82	734	30.95	743	33.14	761	37.66	780	42.38	799	47.27

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
36000	**637**	**26.62**	**669**	**30.53**	**701**	**34.56**														
38000	**647**	**28.12**	**679**	**32.13**	**709**	**36.26**	**739**	**40.52**												
40000	**659**	**29.69**	**689**	**33.81**	**718**	**38.05**	**747**	**42.42**	**776**	**46.90**										
42000	**671**	**31.35**	**700**	**35.58**	**728**	**39.93**	**756**	**44.40**	**784**	**48.99**	**811**	**53.69**								
45000	**690**	**34.01**	**718**	**38.40**	**745**	**42.92**	**771**	**47.55**	**798**	**52.30**	**824**	**57.15**	**850**	**62.11**	**875**	**67.18**				
48000	712	36.89	**737**	**41.44**	**763**	**46.12**	**788**	**50.92**	**813**	**55.83**	**838**	**60.85**	**863**	**65.97**	**887**	**71.18**	**911**	**76.50**	**935**	**81.92**
51000	735	40.01	759	44.72	**783**	**49.56**	**807**	**54.52**	**831**	**59.59**	**854**	**64.77**	**878**	**70.05**	**901**	**75.43**	**924**	**80.91**	**947**	**86.48**
54000	759	43.38	781	48.24	804	53.24	**827**	**58.36**	**849**	**63.60**	**872**	**68.94**	**895**	**74.39**	**917**	**79.93**	**939**	**85.57**	**961**	**91.30**
57000	784	47.02	805	52.04	827	57.19	848	62.47	**870**	**67.86**	**891**	**73.37**	**913**	**78.98**	**934**	**84.69**	**955**	**90.49**	**976**	**96.38**
60000	810	50.95	830	56.12	850	61.42	871	66.85	891	72.41	**912**	**78.07**	**932**	**83.84**	**952**	**89.71**	**973**	**95.68**	**993**	**101.74**
63000	837	55.19	856	60.50	875	65.95	894	71.54	914	77.25	933	83.07	**953**	**89.00**	**972**	**95.03**	**992**	**101.16**	**1011**	**107.38**
66000	864	59.75	882	65.21	900	70.81	919	76.54	937	82.40	956	88.38	974	94.47	**993**	**100.66**	**1012**	**106.95**	**1030**	**113.33**
69000	892	64.64	909	70.24	927	75.99	944	81.88	962	87.89	979	94.02	997	100.26	1015	106.60	**1033**	**113.05**	**1051**	**119.60**
72000	921	69.88	937	75.63	954	81.53	970	87.56	987	93.72	1004	100.00	1021	106.39	1038	112.89	1055	119.50	1072	126.20
75000	950	75.49	966	81.39	981	87.43	997	93.61	1013	99.92	1029	106.35	1045	112.89	1062	119.54	1078	126.30	1094	133.16
78000	980	81.47	995	87.53	1010	93.72	1025	100.04	1040	106.5	1055	113.07	1071	119.77	1086	126.57	1102	133.48	1118	140.49
81000	1010	87.86	1024	94.06	1038	100.40	1053	106.87	1067	113.47	1082	120.20	1097	127.04	1112	133.99	1127	141.05	1142	148.21
84000	1040	94.65	1054	101.00	1067	107.49	1081	114.11	1095	120.86	1109	127.73	1123	134.72	1138	141.82	1152	149.03	1166	156.34
87000	1071	101.86	1084	108.36	1097	115.01	1110	121.78	1123	128.67	1137	135.69	1151	142.83	1164	150.07				
90000	1102	109.51	1114	116.17	1127	122.96	1139	129.88	1152	136.93	1165	144.10								

Notes: 1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Inlet Sound Power [dB]

% WOV = 1.13 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
200	100	73	63	64	62	54	51	45	39	62
	80	71	60	60	59	51	43	38	33	59
	70	70	59	59	59	50	44	38	33	59
	60	69	59	58	58	49	45	39	33	58
	50	70	62	60	57	47	42	36	30	58
300	100	86	79	72	72	68	62	57	51	74
	80	84	76	69	69	65	57	50	45	71
	70	83	75	68	68	64	56	50	45	70
	60	82	75	68	67	63	56	51	45	69
	50	82	77	70	68	62	54	49	43	69
400	100	95	90	78	79	77	69	66	60	82
	80	94	88	75	75	74	66	58	53	79
	70	92	87	75	74	74	65	59	53	78
	60	90	86	75	74	73	64	60	54	78
	50	90	88	78	75	72	62	57	51	78
500	100	98	96	86	83	82	76	72	67	87
	80	97	93	83	79	77	72	65	60	84
	70	95	92	82	78	76	71	66	61	83
	60	94	91	81	77	76	71	66	63	82
	50	94	92	84	79	77	72	68	64	83
600	100	99	101	91	86	85	82	77	72	92
	80	98	99	88	82	80	76	71	65	88
	70	97	98	87	81	79	75	71	67	87
	60	97	97	86	80	78	74	72	69	86
	50	98	97	88	82	81	79	76	74	88
650	100	100	104	93	88	87	84	79	74	94
	80	98	102	89	83	81	78	73	67	90
	70	98	101	88	82	80	76	73	69	89
	60	98	99	88	81	79	76	74	72	88
	50	100	99	89	83	83	82	80	79	90

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
700	100	100	107	94	89	89	86	81	76	96
	80	97	105	91	84	82	79	75	69	92
	70	98	104	90	83	81	77	75	72	91
	60	99	102	89	82	80	76	75	74	90
	50	102	102	91	84	84	84	84	83	93
800	100	101	111	98	92	92	89	85	80	99
	80	98	109	94	87	85	81	78	73	96
	70	99	108	93	86	84	80	78	75	95
	60	101	106	92	85	83	78	78	78	93
	50	105	106	94	87	86	87	88	88	96
900	100	103	112	103	96	94	92	88	83	102
	80	100	110	100	91	88	84	81	77	98
	70	102	109	99	90	87	83	81	78	97
	60	103	108	98	89	86	82	81	81	96
	50	107	108	99	91	89	89	90	91	99
1000	100	105	113	108	99	96	95	91	86	105
	80	102	111	105	94	90	87	84	80	101
	70	103	110	104	93	89	86	83	81	100
	60	105	110	102	92	88	85	83	83	99
	50	109	111	104	94	91	91	92	93	102
1100	100	106	114	112	101	98	97	94	89	107
	80	103	112	109	97	93	90	86	82	104
	70	105	112	108	96	92	89	86	84	103
	60	107	112	107	95	91	87	85	85	102
	50	110	113	108	97	93	93	94	95	105
1178	100	107	114	115	104	100	99	96	91	110
	80	105	112	112	99	94	92	88	84	106
	70	106	112	111	98	93	91	87	85	105
	60	108	113	110	97	92	89	86	87	105
	50	111	115	110	99	95	95	96	97	107

Outlet Sound Power [dB]

% WOV = 1.13 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
200	100	75	71	73	70	62	55	46	37	70
	80	70	67	68	65	56	49	41	32	65
	70	69	66	67	64	54	48	40	32	64
	60	69	65	67	64	53	48	40	32	64
	50	69	65	66	65	52	48	41	34	64
300	100	86	83	81	81	75	68	60	51	81
	80	83	78	77	76	70	62	54	46	76
	70	83	78	76	75	69	61	54	46	75
	60	83	77	75	75	68	60	54	46	75
	50	82	77	74	74	68	59	54	47	74
400	100	93	91	86	88	85	77	70	61	89
	80	93	87	82	83	80	72	64	56	84
	70	92	86	81	83	79	69	63	55	84
	60	92	85	80	82	79	68	63	55	83
	50	92	85	80	81	80	67	63	56	83
500	100	96	97	93	92	90	84	77	68	94
	80	95	94	89	87	84	78	71	62	89
	70	95	93	87	86	83	77	70	62	88
	60	95	92	87	86	83	76	69	62	88
	50	95	92	86	85	83	75	69	62	87
600	100	98	102	98	96	94	90	82	73	99
	80	97	99	94	91	88	83	76	68	93
	70	97	98	92	89	87	82	75	67	92
	60	97	98	91	89	86	81	74	68	91
	50	97	97	91	88	86	81	74	67	91
650	100	98	104	101	98	95	92	85	76	101
	80	97	101	96	92	90	85	79	70	95
	70	97	101	94	91	89	84	78	70	94
	60	97	100	93	90	88	83	77	70	93
	50	98	100	93	89	87	83	76	69	93

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
700	100	98	106	102	100	97	94	88	78	103
	80	97	104	98	94	91	87	81	73	97
	70	97	103	96	93	90	85	80	72	96
	60	97	102	95	92	89	84	79	72	95
	50	99	102	95	91	89	84	79	71	95
800	100	99	108	106	104	100	98	92	82	106
	80	98	107	102	97	94	90	85	77	100
	70	98	106	100	96	93	88	84	76	99
	60	99	105	99	95	92	87	83	76	98
	50	101	104	99	94	92	87	83	75	98
900	100	101	110	109	107	103	101	96	87	109
	80	100	108	105	101	97	93	89	81	103
	70	100	108	104	99	96	92	87	80	102
	60	101	107	103	98	95	91	86	80	101
	50	103	107	103	97	95	90	86	79	101
1000	100	102	111	112	109	106	103	99	90	112
	80	102	109	108	104	100	96	92	85	106
	70	102	109	107	102	99	95	90	84	105
	60	102	109	106	101	98	94	89	83	104
	50	105	109	106	101	97	93	89	83	104
1100	100	104	111	114	112	109	106	102	94	114
	80	103	110	111	106	103	99	94	88	109
	70	104	110	110	105	101	97	93	87	108
	60	104	110	109	103	100	96	92	86	106
	50	107	111	109	103	100	96	92	86	106
1178	100	105	112	116	113	110	107	104	96	116
	80	104	111	113	108	104	101	96	90	111
	70	105	111	112	107	103	99	95	89	109
	60	105	111	112	105	102	98	94	89	109
	50	108	112	111	105	101	98	94	88	108

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

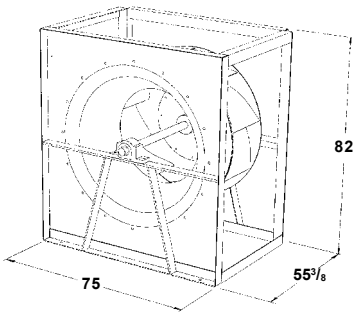
ESP - Performance Data

Efficient Silent Plenum Fan

600

Wheel Diameter = 60.00 in.	Tip Speed, FPM = 15.71 x RPM
Wheel Type = ESP	Maximum BHP = 171.34 x (RPM / 1000)^3

Class	Max. RPM
I	651
II	847
III	1071



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
16000	174	0.88	**195**	**1.27**	**215**	**1.69**														
18000	185	1.04	**204**	**1.46**	**223**	**1.90**	**259**	**2.88**												
20000	198	1.23	215	1.67	**232**	**2.14**	**265**	**3.17**												
22000	212	1.44	227	1.91	242	2.41	**273**	**3.49**	**303**	**4.66**										
24000	226	1.69	240	2.18	253	2.71	**282**	**3.84**	**310**	**5.07**	**336**	**6.37**								
26000	240	1.98	253	2.49	266	3.04	**292**	**4.23**	**318**	**5.51**	**343**	**6.87**	**368**	**8.30**						
28000	255	2.30	267	2.84	278	3.42	302	4.66	**327**	**5.99**	**351**	**7.40**	**374**	**8.88**						
30000	271	2.67	281	3.23	292	3.83	314	5.12	**337**	**6.51**	**359**	**7.97**	**381**	**9.51**	**425**	**12.77**				
33000	294	3.30	303	3.90	313	4.54	333	5.90	353	7.37	**374**	**8.91**	**394**	**10.53**	**434**	**13.95**	**473**	**17.59**		
36000	317	4.04	326	4.69	334	5.36	352	6.80	371	8.34	390	9.96	**409**	**11.66**	**446**	**15.24**	**482**	**19.04**	**518**	**23.04**
39000	341	4.91	349	5.59	357	6.31	373	7.82	390	9.43	407	11.13	424	12.90	**459**	**16.65**	**494**	**20.61**	**527**	**24.76**
42000	365	5.90	372	6.63	379	7.38	394	8.97	410	10.65	426	12.43	442	14.28	**474**	**18.18**	**506**	**22.30**	**538**	**26.62**
46000	397	7.45	404	8.23	410	9.03	424	10.72	438	12.51	452	14.38	466	16.33	495	20.44	**525**	**24.78**	**554**	**29.31**
50000	430	9.26	436	10.10	442	10.96	454	12.76	466	14.64	479	16.61	492	18.66	519	22.97	546	27.51	**573**	**32.27**
55000	470	11.95	476	12.86	481	13.79	492	15.72	503	17.73	515	19.83	526	22.00	550	26.55	575	31.35	599	36.36
60000	511	15.15	516	16.13	521	17.13	531	19.19	541	21.34	552	23.56	562	25.86	584	30.66	606	35.70	628	40.97
65000	552	18.89	557	19.95	561	21.02	570	23.22	580	25.50	589	27.86	599	30.28	618	35.33	638	40.62	659	46.13
70000	594	23.24	598	24.37	602	25.51	610	27.86	619	30.27	627	32.76	636	35.31	654	40.61	673	46.15	691	51.91
76000	643	29.31	647	30.52	651	31.76	658	34.27	666	36.86	674	39.50	682	42.21	698	47.82	715	53.66	732	59.71
82000	693	36.39	696	37.69	700	39.01	707	41.70	714	44.45	721	47.26	729	50.14	744	56.06	759	62.20	774	68.55

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
46000	**583**	**34.03**	**612**	**38.90**	**640**	**43.94**														
48000	**592**	**35.58**	**619**	**40.56**	**646**	**45.71**	**673**	**51.00**												
50000	**600**	**37.20**	**627**	**42.29**	**653**	**47.54**	**679**	**52.94**	**705**	**58.47**										
52000	**609**	**38.89**	**635**	**44.09**	**661**	**49.45**	**686**	**54.95**	**711**	**60.60**	**735**	**66.37**								
54000	**619**	**40.65**	**644**	**45.97**	**669**	**51.43**	**694**	**57.05**	**718**	**62.79**	**742**	**68.68**	**765**	**74.69**						
57000	**634**	**43.45**	**658**	**48.92**	**682**	**54.55**	**705**	**60.33**	**729**	**66.24**	**752**	**72.28**	**774**	**78.45**	**797**	**84.75**	**819**	**91.17**		
60000	651	46.43	**673**	**52.06**	**696**	**57.86**	**718**	**63.80**	**741**	**69.87**	**763**	**76.08**	**785**	**82.41**	**807**	**88.86**	**828**	**95.43**	**849**	**102.12**
63000	668	49.61	689	55.40	**711**	**61.35**	**732**	**67.45**	**754**	**73.69**	**775**	**80.06**	**796**	**86.56**	**817**	**93.17**	**838**	**99.90**	**858**	**106.75**
66000	686	53.00	706	58.95	727	65.06	**747**	**71.32**	**768**	**77.72**	**788**	**84.25**	**809**	**90.91**	**829**	**97.69**	**849**	**104.58**	**869**	**111.59**
70000	710	57.87	730	64.02	749	70.33	768	76.80	**788**	**83.42**	**807**	**90.17**	**826**	**97.04**	**846**	**104.04**	**865**	**111.15**	**884**	**118.38**
74000	736	63.16	754	69.50	772	76.02	791	82.70	809	89.52	**827**	**96.49**	**846**	**103.58**	**864**	**110.79**	**882**	**118.12**	**900**	**125.56**
78000	763	68.90	780	75.44	797	82.16	814	89.03	831	96.06	849	103.23	**866**	**110.54**	**884**	**117.97**	**901**	**125.51**	**918**	**133.17**
82000	790	75.10	806	81.84	822	88.76	839	95.83	855	103.07	871	110.44	888	117.95	905	125.59	**921**	**133.35**	**938**	**141.23**
86000	818	81.81	833	88.74	849	95.85	864	103.13	879	110.56	895	118.14	911	125.85	927	133.70	942	141.67	**958**	**149.76**
90000	847	89.03	861	96.16	875	103.47	890	110.94	905	118.57	920	126.34	935	134.26	950	142.31	965	150.49	980	158.79
94000	876	96.79	889	104.12	903	111.62	917	119.29	931	127.12	945	135.09	959	143.21	974	151.46	988	159.84	1002	168.34
98000	905	105.12	918	112.65	931	120.35	944	128.22	958	136.24	971	144.41	985	152.72	998	161.17	1012	169.75	1026	178.46
102000	935	114.03	947	121.77	960	129.67	972	137.73	985	145.95	998	154.32	1011	162.83	1024	171.48	1037	180.25	1050	189.16
106000	965	123.56	977	131.50	989	139.60	1001	147.86	1013	156.28	1025	164.84	1038	173.55	1050	182.39	1062	191.37		
110000	995	133.72	1007	141.86	1018	150.17	1030	158.63	1041	167.24	1053	176.00	1065	184.91						

Notes: 1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Inlet Sound Power [dB]

% WOV = 0.84 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
200	100	76	66	67	65	57	54	48	42	65
	80	74	63	63	62	54	46	41	36	62
	70	73	63	62	62	53	47	42	36	62
	60	72	62	61	61	52	48	42	36	61
	50	74	65	63	60	50	45	39	33	61
250	100	83	75	72	71	64	60	55	49	72
	80	82	72	68	67	62	54	48	43	68
	70	80	71	67	67	61	54	48	43	68
	60	79	71	67	66	60	54	49	43	67
	50	80	74	69	66	58	52	46	40	67
300	100	89	82	75	75	71	65	60	54	77
	80	88	79	72	72	68	60	53	48	74
	70	86	79	71	71	67	59	53	48	73
	60	85	78	71	70	66	59	54	48	72
	50	85	80	73	71	65	57	52	46	72
400	100	98	93	81	82	80	72	69	63	85
	80	97	91	79	78	77	69	61	56	82
	70	95	90	78	77	77	68	62	57	81
	60	94	89	78	77	76	67	63	57	81
	50	93	91	81	78	75	65	60	54	81
500	100	101	99	89	86	85	79	75	70	90
	80	100	97	86	82	80	75	69	63	87
	70	99	96	85	81	80	74	69	64	86
	60	97	94	85	80	79	74	70	66	85
	50	97	95	87	83	80	75	71	67	87
600	100	103	104	94	89	89	85	80	75	95
	80	101	102	91	85	83	79	74	68	91
	70	101	101	90	84	82	78	74	70	90
	60	100	100	89	83	81	78	75	72	89
	50	101	100	91	85	84	82	80	77	91

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
700	100	103	110	97	92	92	89	84	79	99
	80	101	108	94	87	85	82	78	72	95
	70	102	107	93	86	84	80	78	75	94
	60	103	105	92	85	83	79	78	78	93
	50	105	105	94	87	87	87	87	86	96
750	100	103	113	98	93	93	90	86	81	101
	80	100	111	95	88	86	83	79	74	97
	70	102	110	94	87	85	81	80	77	97
	60	104	108	93	86	84	79	80	80	95
	50	107	108	95	88	88	88	90	90	98
800	100	104	114	101	95	95	92	88	83	102
	80	101	112	98	90	88	84	81	76	99
	70	103	111	97	89	87	83	81	78	98
	60	105	109	96	88	86	81	81	81	96
	50	108	109	97	90	89	90	91	91	99
900	100	106	115	106	99	97	95	91	86	105
	80	103	113	103	94	91	88	84	80	101
	70	105	112	102	93	90	86	84	81	100
	60	107	111	101	92	89	85	84	84	99
	50	110	112	102	94	92	92	93	94	102
1000	100	108	116	111	102	99	98	94	89	108
	80	105	114	108	97	94	90	87	83	104
	70	107	114	107	96	92	89	86	84	103
	60	109	113	106	95	91	88	86	86	102
	50	112	114	107	97	94	94	95	96	105
1071	100	109	117	114	104	101	99	96	91	110
	80	106	115	111	99	95	92	89	85	106
	70	108	115	110	98	94	91	88	86	105
	60	110	115	109	97	93	90	87	88	105
	50	113	116	110	99	96	96	97	98	107

Outlet Sound Power [dB]

% WOV = 0.84 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
200	100	78	74	76	73	65	58	49	40	73
	80	73	70	71	68	59	52	44	35	68
	70	73	69	71	67	57	51	43	35	67
	60	72	68	70	67	56	51	43	35	67
	50	72	68	69	68	55	51	44	37	67
250	100	84	80	80	79	72	65	57	48	79
	80	81	76	76	74	67	59	51	43	74
	70	80	75	75	73	65	58	51	43	73
	60	80	75	74	73	64	57	51	43	73
	50	79	74	74	73	64	57	51	44	73
300	100	89	86	84	84	79	71	63	54	84
	80	87	82	80	79	73	65	57	49	79
	70	86	81	79	78	72	64	57	49	78
	60	86	80	78	78	71	63	57	49	78
	50	85	80	77	78	71	62	57	50	78
400	100	97	94	89	91	88	80	73	64	92
	80	96	90	86	87	83	75	67	59	88
	70	96	89	84	86	82	73	66	58	87
	60	96	89	84	85	82	71	66	58	86
	50	95	88	83	84	83	70	66	59	86
500	100	100	100	96	95	93	87	80	71	97
	80	99	97	92	90	87	81	74	65	92
	70	99	96	91	89	87	80	73	65	91
	60	98	96	90	89	86	79	72	65	91
	50	98	95	89	88	86	79	72	65	90
600	100	101	105	102	99	97	93	86	76	102
	80	100	102	97	94	91	86	79	71	96
	70	100	102	95	93	90	85	78	71	95
	60	100	101	94	92	89	84	77	71	94
	50	100	101	94	91	89	84	77	70	94

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
700	100	101	109	106	103	100	97	91	81	106
	80	100	107	101	97	94	90	84	76	100
	70	100	106	99	96	93	88	83	75	99
	60	101	106	98	95	92	87	82	75	98
	50	103	105	98	94	92	87	82	74	98
750	100	101	110	107	105	101	99	93	83	107
	80	100	109	103	99	96	91	87	78	102
	70	100	108	101	97	94	89	85	77	100
	60	101	108	99	96	93	88	84	77	99
	50	104	106	100	95	93	88	84	76	99
800	100	102	112	109	107	103	101	95	85	109
	80	101	110	105	101	97	93	89	80	104
	70	101	109	103	99	96	91	87	79	102
	60	102	109	102	98	95	90	86	79	101
	50	105	108	102	97	95	90	86	78	101
900	100	104	113	112	110	106	104	99	90	112
	80	103	111	108	104	100	96	92	84	106
	70	103	111	107	102	99	95	90	83	105
	60	104	110	106	101	98	94	89	83	104
	50	107	110	106	101	98	93	89	82	104
1000	100	106	114	115	112	109	106	102	94	115
	80	105	112	112	107	103	99	95	88	110
	70	105	112	110	105	102	98	93	87	108
	60	106	112	109	104	101	97	92	86	107
	50	109	112	109	104	100	97	92	86	107
1071	100	107	114	117	114	111	108	104	96	117
	80	106	113	114	109	105	101	97	90	111
	70	106	113	112	107	104	100	95	89	110
	60	107	113	112	106	103	99	94	89	109
	50	110	113	111	106	102	99	94	88	109

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

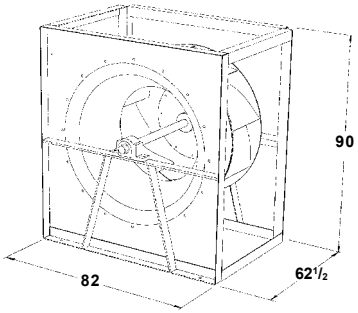
ESP - Performance Data

Efficient Silent Plenum Fan

660

Wheel Diameter = 66.00 in.	Tip Speed, FPM = 17.28 x RPM
Wheel Type = ESP	Maximum BHP = 275.95 x (RPM / 1000)^3

Class	Max. RPM
I	594
II	769
III	972



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20000	161	1.12	**179**	**1.60**	**198**	**2.11**														
23000	174	1.37	190	1.89	**207**	**2.45**	**238**	**3.66**												
26000	189	1.68	203	2.23	**218**	**2.83**	**246**	**4.12**	**274**	**5.52**										
29000	205	2.04	218	2.63	230	3.27	**256**	**4.64**	**281**	**6.13**	**306**	**7.70**								
32000	222	2.48	233	3.11	244	3.78	**267**	**5.23**	**291**	**6.79**	**313**	**8.45**	**336**	**10.19**						
35000	239	2.98	248	3.65	259	4.36	280	5.89	**301**	**7.53**	**322**	**9.27**	**343**	**11.09**						
38000	256	3.57	265	4.28	274	5.02	293	6.62	313	8.35	**332**	**10.17**	**352**	**12.07**	**390**	**16.10**				
41000	273	4.24	282	4.99	290	5.77	308	7.45	326	9.25	**344**	**11.15**	**362**	**13.13**	**398**	**17.32**	**432**	**21.78**		
44000	291	5.01	299	5.80	306	6.62	323	8.37	339	10.24	356	12.22	**373**	**14.28**	**407**	**18.64**	**440**	**23.26**	**472**	**28.12**
48000	315	6.19	322	7.03	329	7.91	343	9.76	358	11.73	374	13.80	389	15.97	**420**	**20.54**	**451**	**25.38**	**481**	**30.45**
52000	339	7.57	345	8.46	352	9.39	365	11.34	379	13.41	393	15.58	407	17.85	**435**	**22.63**	**464**	**27.69**	**492**	**32.98**
56000	363	9.15	369	10.10	375	11.08	387	13.14	400	15.31	412	17.58	425	19.95	452	24.93	**479**	**30.20**	**505**	**35.71**
62000	400	11.96	405	12.99	410	14.06	421	16.27	432	18.59	443	21.01	455	23.53	479	28.81	503	34.39	**527**	**40.22**
68000	437	15.33	441	16.45	446	17.59	456	19.97	466	22.44	476	25.02	486	27.68	507	33.26	529	39.14	551	45.28
74000	473	19.31	478	20.52	482	21.75	491	24.29	500	26.92	509	29.65	519	32.46	538	38.34	557	44.51	577	50.96
80000	511	23.97	515	25.26	519	26.58	527	29.29	535	32.08	543	34.96	552	37.93	569	44.11	587	50.58	605	57.31
86000	548	29.35	551	30.73	555	32.14	563	35.01	570	37.97	578	41.01	586	44.14	602	50.61	618	57.38	635	64.41
92000	585	35.51	588	36.98	592	38.47	599	41.52	606	44.64	613	47.85	620	51.13	635	57.91	650	64.98	666	72.31
98000	622	42.50	625	44.06	629	45.64	635	48.86	642	52.15	648	55.52	655	58.96	669	66.06	683	73.43	697	81.06
104000	660	50.38	663	52.03	666	53.70	672	57.09	678	60.55	684	64.09	691	67.70	703	75.11	717	82.79	730	90.72

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
54000	**526**	**39.93**	**552**	**45.74**	**578**	**51.75**														
58000	**538**	**42.99**	**563**	**49.02**	**587**	**55.23**	**612**	**61.63**												
62000	**551**	**46.27**	**575**	**52.51**	**598**	**58.95**	**621**	**65.56**	**644**	**72.33**	**667**	**79.28**								
66000	**565**	**49.79**	**588**	**56.25**	**610**	**62.91**	**632**	**69.73**	**654**	**76.72**	**676**	**83.88**	**697**	**91.19**						
70000	581	53.57	**602**	**60.25**	**623**	**67.12**	**645**	**74.17**	**666**	**81.37**	**686**	**88.74**	**707**	**96.26**	**727**	**103.93**	**747**	**111.75**		
74000	597	57.63	**618**	**64.53**	**638**	**71.61**	**658**	**78.87**	**678**	**86.30**	**698**	**93.89**	**717**	**101.62**	**737**	**109.50**	**756**	**117.53**	**775**	**125.70**
78000	615	62.00	634	69.09	**653**	**76.39**	**672**	**83.87**	**691**	**91.51**	**710**	**99.32**	**729**	**107.27**	**748**	**115.37**	**766**	**123.61**	**785**	**131.99**
82000	633	66.68	651	73.98	669	81.48	**688**	**89.17**	**706**	**97.03**	**724**	**105.05**	**742**	**113.23**	**760**	**121.54**	**778**	**130.00**	**796**	**138.59**
84000	642	69.14	660	76.54	678	84.15	696	91.94	**713**	**99.91**	**731**	**108.04**	**749**	**116.32**	**766**	**124.75**	**784**	**133.32**	**801**	**142.02**
88000	662	74.33	678	81.93	695	89.74	712	97.74	729	105.92	**746**	**114.26**	**763**	**122.76**	**780**	**131.40**	**797**	**140.19**	**814**	**149.11**
92000	681	79.88	697	87.68	713	95.69	729	103.89	746	112.28	762	120.83	**778**	**129.54**	**794**	**138.40**	**811**	**147.41**	**827**	**156.55**
96000	702	85.81	717	93.81	732	102.02	747	110.42	763	119.01	778	127.77	794	136.69	**810**	**145.77**	**825**	**154.98**	**841**	**164.34**
100000	722	92.14	737	100.33	751	108.74	766	117.34	781	126.13	796	135.09	811	144.22	826	153.51	**840**	**162.94**	**855**	**172.51**
104000	743	98.88	757	107.27	771	115.87	785	124.67	799	133.66	813	142.83	828	152.16	842	161.65	856	171.29	**871**	**181.07**
108000	765	106.05	778	114.63	791	123.43	805	132.43	818	141.62	832	150.98	846	160.52	859	170.21	873	180.06	887	190.05
112000	787	113.66	799	122.45	812	131.44	825	140.63	838	150.02	851	159.58	864	169.32	877	179.21	890	189.26	904	199.46
116000	809	121.73	821	130.72	833	139.91	845	149.30	858	158.88	870	168.64	883	178.57	895	188.67	908	198.92	921	209.33
120000	831	130.28	842	139.47	854	148.86	866	158.44	878	168.22	890	178.18	902	188.31	914	198.60	927	209.06	939	219.66
126000	864	144.03	875	153.52	886	163.21	898	173.09	909	183.16	920	193.42	932	203.84	943	214.43	955	225.18	967	236.09
132000	899	158.94	909	168.73	919	178.72	930	188.91	941	199.28	951	209.82	962	220.54						

Notes: 1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Inlet Sound Power [dB]

% WOV = 0.63 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
150	100	68	63	63	59	52	48	42	36	60
	80	66	60	59	56	48	41	36	31	57
	70	65	59	59	55	47	41	36	31	56
	60	64	58	58	54	47	42	36	30	55
	50	67	61	58	53	45	40	34	28	55
200	100	79	69	70	68	60	57	51	45	68
	80	77	66	66	65	57	49	44	39	65
	70	77	66	65	65	56	50	44	39	65
	60	76	65	64	64	54	51	45	39	64
	50	77	68	66	63	53	48	42	36	64
300	100	92	85	78	78	73	68	63	57	79
	80	91	82	75	75	71	63	56	51	77
	70	90	82	74	74	70	62	56	51	76
	60	88	81	74	73	69	62	57	51	75
	50	88	83	76	74	68	60	55	49	75
400	100	101	96	84	85	83	75	72	66	88
	80	100	94	81	81	80	72	64	59	85
	70	99	93	81	80	80	71	65	59	84
	60	97	92	81	80	79	70	66	60	84
	50	96	94	84	81	78	68	63	57	84
500	100	105	102	92	89	88	82	78	73	93
	80	103	100	89	85	83	78	71	66	90
	70	102	99	88	84	82	77	72	67	89
	60	101	97	88	83	82	77	72	69	88
	50	100	98	90	85	83	78	74	70	89
550	100	105	105	95	91	90	85	80	75	96
	80	104	103	92	86	85	80	74	68	92
	70	103	101	91	86	84	80	75	70	91
	60	102	100	90	85	83	79	75	72	90
	50	102	101	92	87	85	82	78	75	92

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
600	100	106	107	97	92	91	88	83	78	98
	80	104	105	94	88	86	82	77	71	94
	70	104	104	93	87	85	81	77	73	93
	60	103	103	92	86	84	80	77	75	92
	50	104	103	94	88	87	85	82	80	94
650	100	106	110	99	94	93	90	85	80	100
	80	104	108	95	89	87	84	79	73	96
	70	104	107	94	88	86	82	79	75	95
	60	105	106	94	87	85	82	80	78	94
	50	106	106	96	89	89	88	86	85	97
700	100	106	113	100	95	95	92	87	82	102
	80	104	111	97	90	88	85	81	75	98
	70	105	110	96	89	87	83	81	78	97
	60	106	108	95	88	86	82	81	80	96
	50	108	108	97	90	90	90	90	89	99
800	100	107	117	104	98	97	95	91	86	105
	80	105	115	101	93	91	87	84	79	102
	70	106	114	99	92	90	86	84	81	101
	60	108	112	98	91	89	84	84	84	99
	50	111	112	100	93	92	93	94	94	102
900	100	109	119	109	102	100	98	94	89	108
	80	107	116	106	97	94	90	87	83	104
	70	108	115	105	96	93	89	87	84	103
	60	110	114	104	95	92	88	87	87	102
	50	113	115	105	97	95	95	96	97	105
972	100	111	119	113	104	102	100	96	92	110
	80	108	117	110	99	96	93	89	85	106
	70	110	116	108	98	95	91	89	86	105
	60	111	116	107	97	94	90	88	88	105
	50	115	117	108	99	96	97	98	98	107

Outlet Sound Power [dB]

% WOV = 0.63 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
150	100	73	71	71	67	59	51	42	33	68
	80	68	67	66	61	53	45	37	29	62
	70	67	66	66	60	51	44	36	28	62
	60	67	66	65	59	50	44	36	28	61
	50	67	65	65	59	50	45	38	31	61
200	100	81	77	79	76	68	61	52	43	76
	80	76	73	74	71	62	55	46	38	71
	70	76	72	73	70	60	54	46	38	70
	60	75	71	73	70	59	54	46	38	70
	50	75	71	72	71	58	54	47	40	70
300	100	92	89	87	87	81	74	66	57	87
	80	90	85	83	82	76	68	60	52	82
	70	89	84	82	81	75	67	59	51	81
	60	89	83	81	81	74	66	59	51	81
	50	89	83	80	80	74	65	60	53	80
400	100	100	97	92	94	91	83	76	67	95
	80	99	93	88	89	86	78	70	62	90
	70	99	92	87	89	85	75	69	61	90
	60	99	92	87	88	85	74	69	61	89
	50	98	91	86	87	86	73	69	62	89
500	100	103	103	99	98	96	90	83	74	100
	80	102	100	95	93	90	84	77	68	95
	70	102	99	94	92	89	83	76	68	94
	60	102	99	93	92	89	82	75	68	94
	50	101	98	92	91	89	81	75	68	93
550	100	104	106	102	100	98	93	86	77	103
	80	103	103	97	95	92	87	80	71	97
	70	103	102	96	94	91	85	78	71	96
	60	103	101	95	93	91	85	78	71	96
	50	102	101	95	92	91	84	77	71	95

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
600	100	104	108	104	102	100	96	88	79	105
	80	103	105	100	97	94	89	82	74	99
	70	103	105	98	95	93	88	81	73	98
	60	103	104	97	95	92	87	80	74	97
	50	104	104	97	94	92	87	80	73	97
650	100	104	110	107	104	101	98	91	82	107
	80	103	108	102	98	96	91	85	76	101
	70	103	107	100	97	94	90	84	76	100
	60	104	106	99	96	94	89	83	76	99
	50	105	106	99	95	93	89	82	75	99
700	100	104	112	109	106	103	100	94	84	109
	80	103	110	104	100	97	93	87	78	103
	70	104	109	102	99	96	91	86	78	102
	60	104	109	101	98	95	90	85	78	101
	50	106	108	101	97	95	90	85	77	101
800	100	105	115	112	110	106	104	98	88	112
	80	104	113	108	103	100	96	91	83	106
	70	105	112	106	102	99	94	90	82	105
	60	105	112	105	101	98	93	89	82	104
	50	108	111	105	100	98	93	89	81	104
900	100	107	116	115	113	109	107	102	93	115
	80	106	114	111	107	103	99	95	87	109
	70	107	114	110	105	102	97	93	86	108
	60	107	113	109	104	101	97	92	86	107
	50	110	113	109	103	101	96	92	85	107
972	100	109	117	117	115	111	108	104	95	117
	80	108	115	114	109	105	101	97	90	112
	70	108	115	112	107	104	100	95	89	110
	60	108	114	111	106	103	99	94	88	109
	50	111	114	111	106	102	99	94	88	109

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

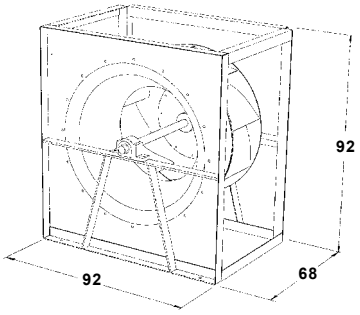
ESP - Performance Data

Efficient Silent Plenum Fan

730

Wheel Diameter = 73.00 in.	Tip Speed, FPM = 19.11 x RPM
Wheel Type = ESP	Maximum BHP = 456.80 x (RPM / 1000)^3

Class	Max. RPM
I	537
II	700
III	879



CFM	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
26000	150	1.49	**166**	**2.09**	**182**	**2.75**														
29000	161	1.76	175	2.40	**189**	**3.10**	**217**	**4.60**												
32000	172	2.07	185	2.75	**197**	**3.49**	**223**	**5.07**	**248**	**6.79**										
35000	184	2.44	195	3.15	207	3.93	**230**	**5.59**	**253**	**7.40**	**276**	**9.31**								
38000	196	2.85	206	3.61	217	4.42	**238**	**6.17**	**260**	**8.05**	**281**	**10.04**	**301**	**12.14**						
41000	208	3.33	217	4.12	227	4.97	247	6.79	**267**	**8.76**	**287**	**10.83**	**307**	**13.01**						
44000	221	3.87	229	4.70	238	5.58	257	7.48	**276**	**9.52**	**294**	**11.68**	**313**	**13.95**	**348**	**18.74**				
48000	238	4.69	246	5.58	254	6.51	270	8.51	287	10.65	**305**	**12.92**	**322**	**15.29**	**355**	**20.30**				
52000	255	5.65	262	6.58	270	7.57	285	9.66	300	11.91	316	14.28	**332**	**16.76**	**364**	**21.99**	**394**	**27.54**		
56000	273	6.75	279	7.73	286	8.77	300	10.96	314	13.31	329	15.78	344	18.36	**373**	**23.81**	**402**	**29.58**	**430**	**35.64**
62000	299	8.68	305	9.75	311	10.86	323	13.20	336	15.70	349	18.32	362	21.05	**389**	**26.82**	**416**	**32.91**	**442**	**39.30**
68000	326	10.99	331	12.14	337	13.33	348	15.83	359	18.47	371	21.24	383	24.12	407	30.20	**431**	**36.61**	**455**	**43.33**
74000	353	13.71	358	14.94	363	16.22	373	18.87	383	21.67	394	24.58	405	27.61	426	33.99	449	40.72	**471**	**47.75**
80000	380	16.87	385	18.20	389	19.56	398	22.37	408	25.32	417	28.38	427	31.56	447	38.23	468	45.27	488	52.61
86000	407	20.53	412	21.94	416	23.38	424	26.36	433	29.46	442	32.68	451	36.01	469	42.97	488	50.31	507	57.96
92000	435	24.70	439	26.20	442	27.73	450	30.87	458	34.13	467	37.51	475	40.99	492	48.25	509	55.87	527	63.83
98000	462	29.43	466	31.02	469	32.63	477	35.94	484	39.37	492	42.90	500	46.53	515	54.09	531	62.01	548	70.26
106000	499	36.67	502	38.37	505	40.10	512	43.64	519	47.28	526	51.03	533	54.87	547	62.83	562	71.15	577	79.79
114000	535	45.05	539	46.87	542	48.71	548	52.48	554	56.35	561	60.31	567	64.36	580	72.74	594	81.45	608	90.49
122000	572	54.65	575	56.59	578	58.55	584	62.55	590	66.64	596	70.82	602	75.09	614	83.88	626	93.01	639	102.44

CFM	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
66000	**475**	**48.80**	**499**	**55.91**	**522**	**63.26**														
70000	**484**	**51.84**	**507**	**59.16**	**529**	**66.71**	**551**	**74.49**												
74000	**493**	**55.05**	**515**	**62.59**	**537**	**70.36**	**558**	**78.35**	**579**	**86.54**										
78000	**504**	**58.46**	**525**	**66.22**	**545**	**74.21**	**566**	**82.41**	**586**	**90.81**	**606**	**99.42**								
82000	**515**	**62.07**	**535**	**70.05**	**555**	**78.25**	**574**	**86.67**	**594**	**95.29**	**613**	**104.11**	**632**	**113.12**	**651**	**122.31**				
84000	**520**	**63.95**	**540**	**72.04**	**560**	**80.35**	**579**	**88.88**	**598**	**97.61**	**617**	**106.54**	**636**	**115.65**	**654**	**124.95**				
88000	532	67.90	**551**	**76.19**	**570**	**84.72**	**588**	**93.47**	**607**	**102.42**	**625**	**111.56**	**643**	**120.89**	**661**	**130.40**	**679**	**140.08**	**697**	**149.94**
92000	545	72.07	563	80.58	**581**	**89.33**	**599**	**98.29**	**616**	**107.46**	**634**	**116.82**	**652**	**126.36**	**669**	**136.08**	**686**	**145.98**	**703**	**156.05**
96000	558	76.50	575	85.21	**592**	**94.17**	**609**	**103.35**	**627**	**112.73**	**644**	**122.31**	**661**	**132.07**	**677**	**142.01**	**694**	**152.12**	**711**	**162.40**
100000	571	81.19	588	90.10	604	99.27	**621**	**108.66**	**637**	**118.26**	**654**	**128.05**	**670**	**138.03**	**686**	**148.19**	**703**	**158.52**	**719**	**169.02**
104000	585	86.15	601	95.27	617	104.63	633	114.23	**649**	**124.04**	**664**	**134.06**	**680**	**144.26**	**696**	**154.63**	**712**	**165.18**	**727**	**175.89**
108000	599	91.39	615	100.71	630	110.28	645	120.09	660	130.11	**676**	**140.33**	**691**	**150.75**	**706**	**161.34**	**721**	**172.11**	**736**	**183.04**
114000	621	99.83	636	109.44	650	119.31	664	129.42	679	139.75	693	150.29	**708**	**161.02**	**722**	**171.94**	**737**	**183.03**	**751**	**194.29**
120000	644	108.96	657	118.87	671	129.04	684	139.45	698	150.08	712	160.93	726	171.98	**739**	**183.21**	**753**	**194.63**	**767**	**206.21**
126000	667	118.85	680	129.05	693	139.51	705	150.22	718	161.15	731	172.30	744	183.66	758	195.21	771	206.94	**784**	**218.84**
132000	691	129.51	703	140.01	715	150.76	727	161.76	739	173.00	752	184.45	764	196.11	777	207.96	789	220.00	802	232.22
140000	723	145.00	734	155.90	746	167.05	757	178.44	768	190.07	780	201.91	791	213.97	803	226.23	815	238.67	827	251.30
148000	756	162.03	766	173.32	777	184.87	788	196.66	798	208.68	809	220.92	820	233.37	831	246.02	842	258.87	853	271.90
156000	789	180.68	799	192.38	809	204.32	819	216.51	829	228.92	839	241.55	849	254.40	860	267.45	870	280.69		
164000	823	201.03	832	213.14	842	225.49	851	238.07	860	250.88	870	263.91								

Notes: 1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Inlet Sound Power [dB]

% WOV = 0.46 (CFM/RPM)

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
150	100	71	66	66	62	56	51	45	39	63
	80	69	63	62	59	51	44	39	34	60
	70	68	62	62	58	50	44	39	34	59
	60	68	62	61	57	50	45	39	33	58
	50	70	64	61	56	48	43	37	31	58
200	100	83	72	73	71	63	60	54	48	72
	80	81	69	69	68	60	52	47	42	68
	70	80	69	68	68	59	53	47	42	68
	60	79	68	67	67	58	54	48	42	67
	50	81	72	69	66	56	51	45	39	67
250	100	90	81	78	77	70	66	61	55	78
	80	88	78	74	73	68	60	54	49	74
	70	87	78	73	73	67	60	54	49	74
	60	86	77	73	72	66	60	55	49	73
	50	87	80	75	72	64	58	52	46	73
300	100	96	88	81	81	77	71	66	60	83
	80	94	86	78	78	74	66	59	54	80
	70	93	85	77	77	73	65	59	54	79
	60	92	84	77	76	72	65	60	54	78
	50	92	87	79	77	71	63	58	52	79
400	100	105	99	87	88	86	78	75	69	91
	80	104	97	85	84	83	75	67	62	88
	70	102	96	84	83	83	74	68	63	87
	60	100	96	84	83	82	73	69	63	87
	50	100	97	87	84	81	71	66	60	87
500	100	108	105	95	92	91	85	81	76	96
	80	107	103	92	88	86	81	74	69	93
	70	105	102	91	87	86	80	75	70	92
	60	104	101	91	86	85	80	75	72	91
	50	104	102	93	89	86	81	77	73	93

RPM	%WOV	Inlet Sound Power, Lwi								
		1	2	3	4	5	6	7	8	LwiA
550	100	109	108	98	94	93	88	83	79	99
	80	107	106	95	89	88	84	77	72	95
	70	106	105	94	89	87	83	78	73	94
	60	105	103	93	88	86	82	78	75	93
	50	106	104	95	90	88	85	81	78	95
600	100	109	111	100	95	95	91	86	81	101
	80	108	109	97	91	89	85	80	74	97
	70	107	107	96	90	88	84	80	76	96
	60	107	106	95	89	87	83	81	78	95
	50	108	106	97	91	90	88	86	83	97
650	100	110	113	102	97	96	93	88	83	103
	80	108	111	99	92	90	87	82	76	99
	70	108	110	98	91	89	86	82	78	98
	60	108	109	97	90	88	85	83	81	97
	50	110	109	99	92	92	91	89	88	100
700	100	110	116	103	98	98	95	90	85	105
	80	107	114	100	93	91	88	84	78	101
	70	108	113	99	92	90	86	84	81	100
	60	109	112	98	91	89	85	84	83	99
	50	112	112	100	93	93	93	93	92	102
800	100	111	120	107	101	101	98	94	89	108
	80	108	118	104	96	94	90	87	82	105
	70	110	117	103	95	93	89	87	84	104
	60	111	116	102	94	92	87	87	87	103
	50	115	115	103	96	95	96	97	97	105
879	100	112	122	111	104	103	100	96	92	111
	80	110	120	108	99	96	93	90	85	107
	70	111	118	107	98	95	91	89	87	106
	60	113	117	106	97	94	90	89	89	105
	50	116	117	107	99	97	98	99	99	108

Outlet Sound Power [dB]

% WOV = 0.46 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
150	100	76	74	74	70	62	54	45	36	71
	80	72	70	69	64	56	48	40	32	65
	70	71	69	69	63	54	47	39	31	65
	60	70	69	69	62	54	47	39	31	64
	50	70	68	68	62	53	48	41	34	64
200	100	84	80	82	79	71	64	55	46	79
	80	80	76	77	74	65	58	50	41	74
	70	79	75	77	73	63	57	49	41	73
	60	79	74	76	73	62	57	49	41	73
	50	78	74	75	74	61	57	50	43	73
250	100	91	87	86	85	78	71	63	54	85
	80	87	83	82	80	73	65	57	49	80
	70	86	82	81	79	71	64	56	48	79
	60	86	81	80	79	70	63	56	48	79
	50	86	81	80	79	70	63	57	50	79
300	100	95	92	90	90	85	77	69	60	90
	80	93	88	86	85	79	71	63	55	85
	70	93	87	85	84	78	70	63	55	84
	60	92	86	84	84	77	69	63	55	84
	50	92	86	83	84	77	68	63	56	84
400	100	103	101	95	97	94	86	79	70	98
	80	102	96	92	93	89	81	73	65	94
	70	102	95	90	92	88	79	72	64	93
	60	102	95	90	91	88	77	72	64	92
	50	101	95	89	90	89	76	72	65	92
500	100	106	106	102	101	99	93	86	77	103
	80	105	103	98	96	93	87	80	71	98
	70	105	102	97	95	93	86	79	71	97
	60	105	102	96	95	92	85	78	71	97
	50	104	101	95	94	92	85	78	71	96

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
550	100	107	109	105	103	101	96	89	80	106
	80	106	106	100	98	95	90	83	74	100
	70	106	105	99	97	94	89	82	74	99
	60	106	105	98	96	94	88	81	74	99
	50	106	104	98	95	94	88	80	74	98
600	100	108	111	108	105	103	99	91	82	108
	80	106	108	103	100	97	92	85	77	102
	70	106	108	101	99	96	91	84	76	101
	60	106	107	100	98	95	90	83	77	100
	50	107	107	100	97	95	90	83	76	100
650	100	108	113	110	107	104	101	94	85	110
	80	107	111	105	101	99	94	88	79	104
	70	107	110	103	100	98	93	87	79	103
	60	107	110	102	99	97	92	86	79	102
	50	108	109	103	98	97	92	85	78	102
700	100	108	115	112	109	106	103	97	87	112
	80	107	113	107	103	100	96	90	82	106
	70	107	112	105	102	99	94	89	81	105
	60	107	112	104	101	98	93	88	81	104
	50	109	111	104	100	98	93	88	80	104
800	100	108	118	115	113	109	107	101	91	115
	80	108	116	111	107	103	99	95	86	110
	70	108	115	109	105	102	97	93	85	108
	60	108	115	108	104	101	96	92	85	107
	50	111	114	108	103	101	96	92	84	107
879	100	110	119	118	115	111	109	104	95	117
	80	109	117	114	109	106	101	97	89	112
	70	110	117	112	108	104	100	96	88	111
	60	110	116	111	107	103	99	95	88	110
	50	113	116	111	106	103	99	94	87	109

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

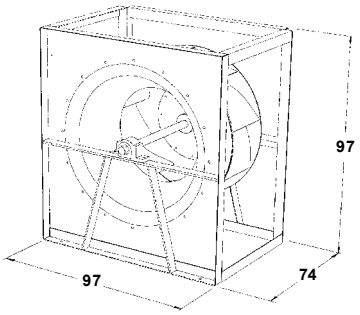
ESP - Performance Data

Efficient Silent Plenum Fan

807

Wheel Diameter = 80.75 in.	Tip Speed, FPM = 21.14 x RPM
Wheel Type = ESP	Maximum BHP = 756.53 x (RPM / 1000)^3

Class	Max. RPM
I	484
II	631
III	796



	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
32000	136	1.84	**151**	**2.58**	**165**	**3.38**														
34000	141	2.01	**155**	**2.78**	**168**	**3.61**	**194**	**5.41**												
38000	152	2.41	164	3.23	**176**	**4.11**	**200**	**6.02**	**223**	**8.10**										
42000	164	2.87	174	3.74	185	4.68	**207**	**6.70**	**228**	**8.88**	**248**	**11.20**								
46000	175	3.42	185	4.34	195	5.32	**214**	**7.45**	**234**	**9.74**	**253**	**12.16**	**272**	**14.72**						
50000	188	4.05	196	5.02	205	6.05	223	8.27	**241**	**10.67**	**259**	**13.21**	**277**	**15.87**						
54000	200	4.77	208	5.79	216	6.87	233	9.19	**249**	**11.70**	**266**	**14.34**	**283**	**17.12**	**315**	**22.99**				
60000	219	6.03	226	7.13	233	8.28	248	10.76	263	13.42	**278**	**16.22**	**293**	**19.16**	**323**	**25.36**	**352**	**31.96**		
66000	238	7.54	245	8.72	251	9.95	264	12.57	278	15.38	291	18.34	**305**	**21.43**	**333**	**27.96**	**360**	**34.88**	**386**	**42.17**
72000	258	9.32	263	10.58	269	11.89	281	14.66	293	17.61	306	20.72	318	23.97	**344**	**30.82**	**369**	**38.07**	**394**	**45.67**
80000	284	12.15	289	13.52	294	14.93	305	17.91	316	21.06	327	24.37	338	27.82	361	35.09	**383**	**42.77**	**406**	**50.80**
88000	311	15.56	315	17.03	320	18.56	329	21.74	339	25.09	349	28.6	359	32.25	379	39.92	**400**	**48.02**	**421**	**56.49**
96000	337	19.60	342	21.19	346	22.82	354	26.22	363	29.77	372	33.48	381	37.32	399	45.39	418	53.90	**437**	**62.79**
104000	364	24.33	368	26.03	372	27.78	380	31.39	388	35.16	396	39.06	404	43.11	421	51.57	438	60.48	455	69.78
112000	391	29.80	395	31.63	398	33.49	405	37.32	413	41.30	420	45.41	428	49.65	443	58.51	459	67.81	475	77.52
120000	418	36.09	421	38.03	425	40.00	431	44.06	438	48.25	445	52.57	452	57.02	466	66.27	481	75.97	496	86.07
128000	445	43.23	448	45.29	451	47.38	457	51.66	464	56.07	470	60.61	477	65.26	490	74.92	503	85.01	517	95.51
136000	472	51.30	475	53.47	478	55.68	484	60.19	490	64.82	496	69.57	502	74.44	514	84.51	526	95.00	539	105.88
144000	499	60.34	502	62.64	505	64.96	510	69.70	516	74.56	521	79.52	527	84.60	538	95.09	550	105.98	562	117.26
152000	527	70.42	529	72.83	532	75.27	537	80.25	542	85.33	547	90.52	553	95.81	563	106.72	574	118.02	586	129.70

	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
82000	**431**	**60.64**	**453**	**69.40**	**474**	**78.45**														
84000	**435**	**62.15**	**456**	**71.02**	**476**	**80.18**	**496**	**89.61**												
88000	**441**	**65.29**	**462**	**74.38**	**482**	**83.74**	**501**	**93.38**												
92000	**449**	**68.57**	**468**	**77.88**	**488**	**87.47**	**507**	**97.32**	**525**	**107.42**	**544**	**117.77**								
96000	**456**	**72.02**	**475**	**81.55**	**494**	**91.35**	**513**	**101.42**	**531**	**111.73**	**549**	**122.29**	**566**	**133.09**						
100000	**464**	**75.64**	**483**	**85.38**	**501**	**95.40**	**519**	**105.68**	**536**	**116.22**	**554**	**126.99**	**571**	**137.99**	**588**	**149.23**				
104000	**473**	**79.43**	**491**	**89.39**	**508**	**99.63**	**525**	**110.13**	**543**	**120.88**	**560**	**131.86**	**576**	**143.08**	**593**	**154.52**	**609**	**166.18**		
108000	482	83.41	**499**	**93.58**	**516**	**104.03**	**533**	**114.75**	**549**	**125.72**	**566**	**136.92**	**582**	**148.35**	**598**	**160.00**	**614**	**171.87**	**630**	**183.95**
114000	496	89.74	512	100.22	**528**	**111.00**	**544**	**122.04**	**560**	**133.34**	**576**	**144.87**	**591**	**156.62**	**607**	**168.60**	**622**	**180.79**	**638**	**193.18**
120000	511	96.53	526	107.32	541	118.41	**556**	**129.78**	**571**	**141.40**	**587**	**153.26**	**602**	**165.34**	**617**	**177.64**	**631**	**190.15**	**646**	**202.87**
128000	531	106.37	545	117.56	559	129.06	574	140.84	**588**	**152.89**	**602**	**165.18**	**616**	**177.70**	**631**	**190.44**	**645**	**203.39**	**659**	**216.54**
136000	552	117.14	565	128.73	579	140.63	592	152.82	606	165.29	**619**	**178.00**	**632**	**190.95**	**646**	**204.12**	**659**	**217.51**	**673**	**231.09**
144000	574	128.91	587	140.89	599	153.19	612	165.79	624	178.66	637	191.79	650	205.16	**662**	**218.76**	**675**	**232.57**	**688**	**246.59**
152000	597	141.74	609	154.12	620	166.81	632	179.81	644	193.08	656	206.61	668	220.40	680	234.41	**692**	**248.65**	**704**	**263.10**
160000	620	155.69	631	168.46	642	181.55	653	194.94	664	208.61	676	222.54	687	236.73	698	251.16	710	265.82	721	280.69
168000	644	170.82	654	183.99	665	197.47	675	211.25	686	225.31	696	239.64	707	254.23	718	269.06	729	284.13	739	299.41
176000	668	187.18	678	200.74	687	214.62	697	228.79	707	243.25	718	257.97	728	272.96	738	288.19	748	303.66	759	319.35
184000	692	204.82	702	218.79	711	233.07	720	247.63	730	262.48	739	277.60	749	292.98	759	308.61	769	324.47	778	340.56
192000	717	223.81	726	238.19	735	252.86	744	267.83	753	283.07	762	298.58	771	314.36	780	330.38	789	346.64		
200000	742	244.20	750	258.99	759	274.07	767	289.43	776	305.07	785	320.98	793	337.14						

Notes: 1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Sound Power Levels - ESP

Efficient Silent Plenum Fan

Inlet Sound Power [dB]

% WOV = 0.34 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
150	100	75	69	69	65	59	54	48	42	66
	80	72	66	66	62	54	47	42	37	63
	70	72	65	65	61	53	47	42	37	62
	60	71	65	64	60	53	48	42	36	61
	50	73	67	65	59	51	46	40	34	61
200	100	86	75	76	74	66	63	57	51	75
	80	84	72	72	71	63	55	50	45	71
	70	83	72	71	71	62	56	51	45	71
	60	82	71	70	70	61	57	51	45	70
	50	84	75	72	69	59	54	48	42	70
250	100	93	84	81	80	74	69	64	58	81
	80	92	81	77	77	71	63	57	52	78
	70	90	81	76	76	70	63	57	52	77
	60	89	80	76	75	69	63	58	52	76
	50	90	83	78	75	67	61	55	49	76
300	100	99	91	85	84	80	74	69	63	86
	80	98	89	81	81	77	69	62	57	83
	70	96	88	81	80	76	68	63	57	82
	60	95	87	80	79	75	68	63	57	81
	50	95	90	83	80	74	66	61	55	82
350	100	104	97	88	88	85	78	74	68	90
	80	103	95	85	84	82	74	67	62	87
	70	101	94	84	83	81	73	67	62	86
	60	100	94	84	83	81	72	68	62	86
	50	99	95	87	84	79	70	65	59	86
400	100	108	102	91	91	89	81	78	72	94
	80	107	100	88	87	86	78	70	65	91
	70	105	100	87	86	86	77	71	66	91
	60	104	99	87	86	85	76	72	66	90
	50	103	100	90	87	84	74	70	64	90

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
450	100	110	105	95	93	92	85	81	76	97
	80	109	103	92	89	88	82	74	69	94
	70	107	102	91	88	87	81	75	70	93
	60	106	101	91	88	87	80	75	71	92
	50	105	102	93	90	87	80	75	70	93
500	100	111	108	98	95	94	88	84	79	99
	80	110	106	95	91	89	84	78	72	96
	70	109	105	94	90	89	83	78	73	95
	60	107	104	94	89	88	83	79	75	94
	50	107	105	96	92	90	84	80	76	96
550	100	112	111	101	97	96	91	86	82	102
	80	111	109	98	93	91	87	80	75	98
	70	110	108	97	92	90	86	81	76	97
	60	109	106	96	91	89	85	81	78	96
	50	109	107	98	93	92	88	84	81	98
600	100	113	114	103	98	98	94	89	84	104
	80	111	112	100	94	92	88	83	77	100
	70	111	110	99	93	91	87	83	79	99
	60	110	109	98	92	90	87	84	81	98
	50	111	109	100	95	93	91	89	86	100
700	100	113	120	107	101	101	98	93	88	108
	80	111	118	103	96	94	91	87	82	105
	70	112	116	102	95	93	89	87	84	103
	60	113	115	101	94	92	88	88	87	102
	50	115	115	103	96	96	96	96	95	105
796	100	114	123	110	104	104	101	97	92	111
	80	111	122	107	99	97	93	90	85	109
	70	113	120	105	98	96	92	90	87	107
	60	115	119	104	97	95	90	90	90	106
	50	118	118	106	99	98	99	100	100	108

Outlet Sound Power [dB]

% WOV = 0.34 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
150	100	79	78	78	73	65	57	48	39	74
	80	75	74	73	67	59	51	43	35	69
	70	74	73	72	66	58	51	43	35	68
	60	73	72	72	65	57	51	43	35	67
	50	73	71	71	66	56	51	44	37	67
200	100	88	83	85	82	74	67	58	49	82
	80	83	79	80	77	69	61	53	45	77
	70	82	78	80	76	66	60	52	44	76
	60	82	77	79	76	65	60	52	44	76
	50	82	77	78	77	64	60	53	46	76
250	100	94	90	89	88	82	74	66	57	88
	80	90	86	85	83	76	68	60	52	83
	70	90	85	84	82	74	67	60	52	82
	60	90	84	84	82	73	66	60	52	82
	50	89	84	83	82	73	66	60	53	82
300	100	99	95	93	93	88	80	72	63	93
	80	96	91	89	88	82	74	66	58	88
	70	96	90	88	87	81	73	66	58	87
	60	96	89	87	87	80	72	66	58	87
	50	95	89	86	87	80	71	66	59	87
350	100	103	100	96	97	93	85	78	69	98
	80	101	95	92	92	87	79	71	63	93
	70	101	94	91	91	86	77	71	63	92
	60	101	94	90	91	86	76	71	63	91
	50	100	94	90	90	87	76	71	64	91
400	100	107	104	98	100	97	89	82	73	101
	80	106	99	95	96	92	84	76	68	97
	70	106	98	94	95	91	82	75	67	96
	60	106	98	93	94	91	80	75	67	95
	50	105	98	92	93	92	79	75	68	95

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
450	100	108	107	102	102	100	93	86	77	104
	80	107	103	98	98	94	87	79	71	99
	70	107	102	97	97	94	86	79	71	99
	60	107	102	96	96	93	84	78	71	98
	50	106	101	96	95	94	84	78	71	98
500	100	110	110	105	104	102	96	89	80	106
	80	108	106	101	99	96	90	83	74	101
	70	108	105	100	98	96	89	82	74	100
	60	108	105	99	98	95	88	81	74	100
	50	108	105	99	97	95	88	81	74	100
550	100	110	112	108	106	104	99	92	83	109
	80	109	109	103	101	98	93	86	77	103
	70	109	108	102	100	97	92	85	77	102
	60	109	108	101	99	97	91	84	77	102
	50	109	107	101	98	97	91	83	77	101
600	100	111	114	111	108	106	102	95	85	111
	80	110	112	106	103	100	95	89	80	106
	70	110	111	105	102	99	94	87	80	105
	60	110	110	104	101	98	93	86	80	104
	50	110	110	103	100	98	93	86	79	103
700	100	111	118	115	112	109	106	100	90	115
	80	110	116	110	106	103	99	94	85	109
	70	110	115	108	105	102	97	92	84	108
	60	110	115	107	104	101	96	91	84	107
	50	112	114	108	103	101	96	91	83	107
796	100	112	121	118	116	112	110	104	94	118
	80	111	119	114	109	106	102	97	89	112
	70	111	118	112	108	105	100	96	88	111
	60	112	118	111	107	104	99	95	88	110
	50	115	117	111	106	104	99	95	87	110

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

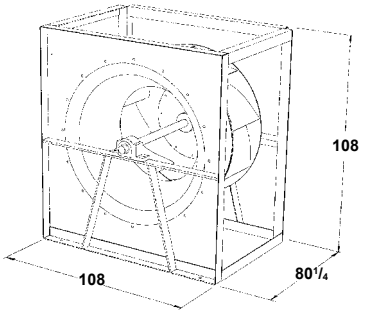
ESP - Performance Data

Efficient Silent Plenum Fan

890

Wheel Diameter = 89.00 in.	Tip Speed, FPM = 23.30 x RPM
Wheel Type = ESP	Maximum BHP = 1230.44 x (RPM / 1000)^3

Class	Max. RPM
I	440
II	575
III	723



	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
38000	122	2.16	**135**	**3.05**	**148**	**4.01**														
42000	130	2.51	142	3.45	**154**	**4.47**	**177**	**6.68**												
46000	138	2.91	148	3.90	**159**	**4.97**	**181**	**7.29**	**202**	**9.80**										
52000	151	3.62	160	4.69	169	5.83	**189**	**8.31**	**208**	**10.99**	**226**	**13.83**								
58000	164	4.47	172	5.62	181	6.84	**198**	**9.47**	**215**	**12.31**	**232**	**15.32**	**249**	**18.48**						
64000	178	5.49	185	6.71	193	8.00	208	10.79	**224**	**13.79**	**239**	**16.96**	**255**	**20.28**						
70000	192	6.68	198	7.98	205	9.35	219	12.28	234	15.44	**248**	**18.77**	**262**	**22.26**	**290**	**29.63**				
76000	206	8.07	212	9.44	218	10.89	231	13.97	244	17.28	257	20.77	**271**	**24.42**	**297**	**32.12**	**322**	**40.30**		
82000	221	9.67	226	11.12	232	12.64	243	15.87	255	19.33	268	22.97	**280**	**26.78**	**304**	**34.81**	**328**	**43.32**	**352**	**52.26**
88000	235	11.49	240	13.03	246	14.63	256	18.01	267	21.61	278	25.40	290	29.36	**313**	**37.71**	**335**	**46.55**	**358**	**55.81**
96000	255	14.30	260	15.95	264	17.65	274	21.24	284	25.03	294	29.03	304	33.19	325	41.96	**346**	**51.23**	**367**	**60.92**
108000	285	19.41	289	21.22	293	23.09	301	26.99	310	31.09	319	35.37	328	39.83	346	49.20	365	59.10	**383**	**69.45**
116000	305	23.47	308	25.39	312	27.37	320	31.48	328	35.78	336	40.27	344	44.92	361	54.69	378	65.00	**396**	**75.77**
124000	325	28.09	328	30.13	332	32.22	339	36.54	346	41.05	354	45.74	361	50.59	377	60.76	393	71.46	409	82.65
132000	345	33.31	348	35.47	351	37.67	358	42.22	365	46.94	372	51.83	379	56.88	393	67.44	408	78.54	423	90.13
140000	365	39.18	368	41.45	371	43.77	377	48.54	384	53.47	390	58.57	397	63.83	410	74.78	424	86.28	438	98.26
150000	390	47.48	393	49.90	396	52.36	402	57.41	408	62.61	414	67.97	420	73.49	432	84.94	445	96.93	458	109.41
160000	415	56.92	418	59.49	421	62.09	426	67.42	432	72.90	437	78.53	443	84.31	454	96.27	466	108.75	478	121.72
170000	441	67.58	443	70.29	446	73.05	451	78.66	456	84.42	461	90.32	466	96.36	477	108.84	488	121.82	499	135.28
180000	466	79.53	468	82.39	471	85.29	475	91.19	480	97.24	485	103.41	490	109.72	500	122.72	511	136.21	521	150.17

	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
100000	**392**	**73.95**	**411**	**84.62**	**430**	**95.64**														
104000	**397**	**77.01**	**416**	**87.90**	**434**	**99.12**	**452**	**110.68**												
108000	**402**	**80.19**	**420**	**91.30**	**438**	**102.74**	**456**	**114.50**	**473**	**126.58**										
114000	**410**	**85.21**	**428**	**96.64**	**445**	**108.40**	**462**	**120.49**	**479**	**132.88**	**495**	**145.57**								
120000	**419**	**90.52**	**436**	**102.28**	**452**	**114.37**	**469**	**126.78**	**485**	**139.50**	**501**	**152.50**	**517**	**165.80**						
128000	432	98.12	**448**	**110.30**	**463**	**122.83**	**479**	**135.68**	**494**	**148.83**	**510**	**162.26**	**525**	**175.98**	**540**	**189.96**	**554**	**204.21**		
136000	446	106.33	460	118.93	**475**	**131.89**	**490**	**145.17**	**505**	**158.76**	**519**	**172.63**	**534**	**186.78**	**548**	**201.19**	**562**	**215.86**	**576**	**230.79**
144000	460	115.20	474	128.22	488	141.60	**502**	**155.31**	**516**	**169.33**	**530**	**183.64**	**544**	**198.23**	**557**	**213.07**	**571**	**228.17**	**584**	**243.52**
152000	475	124.79	488	138.21	501	152.01	515	166.14	**528**	**180.59**	**541**	**195.33**	**554**	**210.35**	**567**	**225.64**	**580**	**241.17**	**593**	**256.96**
160000	491	135.13	503	148.96	516	163.16	528	177.70	541	192.57	**553**	**207.74**	**566**	**223.19**	**578**	**238.91**	**591**	**254.89**	**603**	**271.11**
168000	507	146.27	518	160.49	530	175.09	542	190.04	554	205.33	566	220.92	**578**	**236.79**	**590**	**252.95**	**602**	**269.36**	**614**	**286.01**
176000	523	158.25	534	172.86	546	187.86	557	203.21	568	218.90	580	234.90	591	251.20	**603**	**267.78**	**614**	**284.62**	**626**	**301.71**
184000	540	171.11	551	186.11	561	201.50	572	217.25	583	233.34	594	249.75	605	266.46	616	283.46	**627**	**300.72**	**638**	**318.24**
192000	558	184.88	568	200.28	578	216.06	588	232.20	598	248.69	609	265.51	619	282.62	630	300.03	640	317.71	650	335.65
200000	575	199.61	585	215.40	594	231.58	604	248.12	614	265.00	624	282.21	634	299.73	644	317.54	654	335.63	664	353.99
210000	597	219.42	606	235.71	616	252.38	625	269.41	634	286.79	643	304.49	653	322.50	662	340.82	672	359.42	681	378.29
220000	620	240.87	629	257.66	637	274.82	646	292.35	655	310.21	664	328.40	673	346.91	682	365.72	691	384.82	700	404.19
230000	643	264.01	651	281.31	659	298.98	668	316.99	676	335.35	684	354.04	693	373.04	701	392.34	710	411.93	719	431.80
240000	666	288.93	674	306.74	682	324.91	690	343.43	697	362.28	705	381.46	714	400.95	722	420.74				
250000	690	315.71	697	334.03	704	352.71	712	371.73	719	391.08										

Notes: 1) Performance shown is for Installation Type A: free inlet, free outlet.
2) Power rating (BHP) does not include belt drive losses.
3) Bold figures indicate range of maximum static efficiency.
4) Performance ratings do not include the effects of appurtenances in the airstream.
5) Ratings include the effect of a wall located 2" from the fan base.

Sound Power Levels - ESP

Efficient Silent Plenum Fan

Inlet Sound Power [dB]

% WOV = 0.26 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
150	100	78	72	72	68	62	57	51	45	69
	80	76	69	69	65	57	50	45	40	66
	70	75	68	68	64	56	50	45	40	65
	60	74	68	67	63	56	51	45	39	64
	50	77	70	67	62	54	49	43	37	64
200	100	89	78	79	77	69	66	60	54	78
	80	87	75	75	74	66	58	53	48	74
	70	86	75	74	74	65	59	53	48	74
	60	86	75	73	73	64	60	54	48	73
	50	87	78	75	72	62	57	51	45	73
250	100	96	87	84	83	76	72	67	61	84
	80	95	84	80	80	74	66	60	55	81
	70	94	84	79	79	73	66	60	55	80
	60	93	83	79	78	72	66	61	55	79
	50	93	86	81	78	70	64	58	52	79
300	100	102	94	88	87	83	77	72	66	89
	80	101	92	84	84	80	72	65	60	86
	70	99	91	84	83	79	71	65	60	85
	60	98	90	83	82	78	71	66	60	84
	50	98	93	86	83	77	69	64	58	85
350	100	107	100	91	91	88	81	77	71	93
	80	106	98	88	87	85	77	70	65	90
	70	104	97	87	86	84	76	70	65	89
	60	103	97	87	86	84	75	71	65	89
	50	103	98	90	87	82	73	68	62	89
400	100	111	105	94	94	92	84	81	75	97
	80	110	104	91	90	89	81	73	68	94
	70	109	103	90	89	89	80	74	69	94
	60	107	102	90	89	88	79	75	69	93
	50	106	103	93	90	87	77	72	66	93

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
450	100	113	108	98	96	95	88	84	79	100
	80	112	106	95	92	91	85	77	72	97
	70	110	105	94	91	90	84	78	73	96
	60	109	104	94	91	90	83	78	74	95
	50	108	105	96	93	90	83	78	73	96
500	100	114	111	101	98	97	91	87	82	102
	80	113	109	98	94	92	87	80	75	99
	70	112	108	97	93	92	86	81	76	98
	60	110	107	97	92	91	86	81	78	97
	50	110	108	99	95	92	87	83	79	99
550	100	115	114	104	100	99	94	89	85	105
	80	114	112	101	96	94	90	83	78	101
	70	113	111	100	95	93	89	84	79	100
	60	112	109	99	94	92	88	84	81	99
	50	112	110	101	96	95	91	87	84	101
600	100	116	117	106	101	101	97	92	87	107
	80	114	115	103	97	95	91	86	80	103
	70	114	113	102	96	94	90	86	82	102
	60	113	112	101	95	93	90	87	84	101
	50	114	113	103	97	96	94	92	89	104
650	100	116	120	108	103	102	99	94	89	109
	80	114	118	105	98	96	93	88	82	106
	70	114	116	104	97	95	92	88	84	104
	60	115	115	103	96	94	91	89	87	103
	50	116	115	105	98	98	97	95	94	106
723	100	116	124	110	105	104	101	97	92	112
	80	114	122	106	100	98	94	91	85	109
	70	115	121	105	99	97	93	91	88	108
	60	116	119	104	98	96	91	91	91	106
	50	119	119	106	100	99	99	100	100	109

Outlet Sound Power [dB]

% WOV = 0.26 (CFM/RPM)

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
150	100	82	81	81	76	68	60	51	42	77
	80	78	77	76	70	62	54	46	38	72
	70	77	76	75	69	61	54	46	38	71
	60	77	75	75	68	60	54	46	38	70
	50	76	74	74	68	59	54	47	40	70
200	100	91	86	88	85	77	70	61	52	85
	80	86	82	83	80	71	64	56	47	80
	70	85	81	83	79	69	63	55	47	79
	60	85	81	82	79	68	63	55	47	79
	50	85	80	81	80	67	63	56	49	79
250	100	97	93	92	91	84	77	69	60	91
	80	93	89	88	86	79	71	63	55	86
	70	93	88	87	85	77	70	63	55	85
	60	93	87	87	85	76	69	63	55	85
	50	92	87	86	85	76	69	63	56	85
300	100	102	98	96	96	91	83	75	66	96
	80	99	94	92	91	85	77	69	61	91
	70	99	93	91	90	84	76	69	61	90
	60	99	92	90	90	83	75	69	61	90
	50	98	92	89	90	83	74	69	62	90
350	100	106	103	99	100	96	88	81	72	101
	80	105	98	95	95	90	82	74	66	96
	70	104	98	94	94	89	80	74	66	95
	60	104	97	93	94	89	79	74	66	94
	50	103	97	93	93	90	78	74	67	94
400	100	110	107	101	103	100	92	85	76	104
	80	109	102	98	99	95	87	79	71	100
	70	109	101	97	98	94	85	78	70	99
	60	109	101	96	97	94	83	78	70	98
	50	108	101	95	96	95	82	78	71	98

RPM	%WOV	Outlet Sound Power, Lwo								
		1	2	3	4	5	6	7	8	LwoA
450	100	112	110	105	105	103	96	89	80	107
	80	110	106	101	100	97	90	82	74	102
	70	110	105	100	100	96	89	82	74	101
	60	110	105	99	99	96	87	81	74	101
	50	109	104	99	98	97	87	81	74	101
500	100	113	113	108	107	105	99	92	83	109
	80	112	109	104	102	99	93	86	77	104
	70	111	108	103	101	99	92	85	77	103
	60	111	108	102	101	98	91	84	77	103
	50	111	108	102	100	98	91	84	77	103
550	100	114	115	111	109	107	102	95	86	112
	80	112	112	106	104	101	96	89	80	106
	70	112	111	105	103	100	95	88	80	105
	60	112	111	104	102	100	94	87	80	105
	50	112	110	104	101	100	94	86	80	104
600	100	114	117	114	111	109	105	97	88	114
	80	113	115	109	106	103	98	91	83	109
	70	113	114	107	105	102	97	90	83	107
	60	113	113	107	104	101	96	89	83	107
	50	113	113	106	103	101	96	89	82	106
650	100	114	119	116	113	111	107	100	91	116
	80	113	117	111	107	105	100	94	85	110
	70	113	116	110	106	104	99	93	85	109
	60	113	116	108	105	103	98	92	85	108
	50	114	115	109	104	103	98	91	84	108
723	100	114	122	118	116	113	110	104	94	119
	80	113	120	114	110	107	102	98	89	113
	70	113	119	112	108	106	101	96	88	112
	60	114	119	111	108	105	100	95	88	111
	50	116	118	111	107	104	100	95	87	110

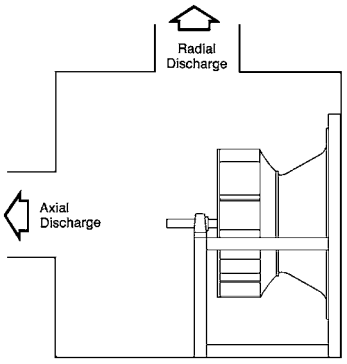
The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA and outlet Lwo and LwoA sound power levels for Installation Type A: free inlet, free outlet. Ratings do not include the effects of duct and correction.

Engineering Notes

ESP - Efficient Silent Plenum Fan

Duct Entrance Losses from Plenum

To compensate for the loss associated with air entering the ductwork, varying corrections are used depending on the type of entrance to the ductwork and the location of the duct relative to the fan's discharge. This additional loss must be added to the system's external static pressure requirements prior to selecting the fan. On fans with more than one discharge, select the discharge type that has the greatest loss as a basis for the pressure loss calculation. See example below.



Discharge Type	Correction Factor
1. Radial and ducted with bell inlet fitting from cabinet	1.1 x Velocity Pressure
2. Radial and ducted without bell inlet fitting from cabinet	1.4 x Velocity Pressure
3. Radial without duct	1.9 x Velocity Pressure
4. Axial and ducted with bell inlet fitting from cabinet	1.6 x Velocity Pressure
5. Axial and ducted without bell inlet fitting from cabinet	1.9 x Velocity Pressure
6. Axial without duct	2.4 x Velocity Pressure

Note: The AMCA Certified Ratings Seal does not apply when the factors are used.

Example:

A system requiring 12,000 CFM at 4" SP at standard conditions has a 30" diameter duct placed radially to the fan without a bell inlet fitting from the cabinet.

Duct Area = (diameter)^2 / 4 = 4.91 ft.
= (30 in. x 1 ft. / 12 in.)^2 / 4 = 4.91 ft.

Duct Velocity = CFM / Duct Area
= 12,000 / 4.91 = 2,444 FPM

Velocity Pressure = (Duct Velocity / 4005)^2
= (2,444 / 4,005)^2 = 0.372

Static Pressure Required = 4" + Correction Factor
= 4" + (1.4 x 0.372) = 4.52" SP

The optimal selection for 12,000 CFM at 4.52" SP at standard conditions would be a size 300 ESP Plenum fan requiring 1318 RPM and 11.46 BHP. However, a size 270 ESP might be a better choice. It would give more of a cushion between fan RPM and maximum RPM, without being penalized with increased horsepower and sound power levels. Notice that the 2ND band sound power levels are much more favorable on the size 270. Compare the performance and sound data below.

Model Type	Wheel Type	Whl. Mtl.	Whl. Wth.	Class	Fan RPM	Max RPM	BHP Oper.	BHP w/ Drive	BHP Std.	Inlet Vanes	OV (fpm)	Tip Spd. (fpm)	Static Eff. %	Mech. Eff. %
ESP 300	ESP	Steel	100	I	1318	1328	11.46	12.05	11.46	None	N/A	10354	74.4	79.9
ESP 270	ESP	Steel	100	II	1576	1928	11.49	12.08	11.49	None	N/A	11140	74.2	82.6

Model Type	Wheel Dia. (in.)	WR^2 1750	WR^2 1150	% WOV	Octave Band								LwA	dBA @ 5 ft.
					1	2	3	4	5	6	7	8		
ESP 300	30.00	66.8	154.7	56	89	95	97	88	84	81	75	69	92	80
ESP 270	27.00	66.9	154.9	64	87	91	98	90	86	82	77	72	93	81

General
Furnish and install, as shown on the plans, PennBarry ESP plenum fans as manufactured by PennBarry. Unless otherwise directed, fans shall conform to the layout on the drawings. **Motor horsepower, sound power levels and inlet velocities shall not be exceeded.**

Fans, which are constructed of low carbon steel, shall have a full four-post frame with wheel removal from three sides. Fans shall be painted with an industrial air dried alkyd enamel finish prior to assembly. Each fan shall receive a documented inspection by a qualified inspector before leaving the factory. The inspection shall include welding, dimensions, bearings and overall workmanship.

Wheels
Wheels shall be in accordance with the standard sizes adopted by AMCA for non-overloading fans. Wheels shall be the highly efficient, non-overloading ESP wheels only. ESP airfoil blades shall be die-formed, double-surface type blades continuously welded (stitch welding unacceptable) to a hub plate and wheel cone on sizes 182 through 730. All fan wheels shall have flat wheel cones and extra wide blades. The standard coating shall be an industrial alkyd enamel.

Shaft and Bearings
Shafts shall be AISI C-1045 hot rolled steel turned, ground and polished. The shaft's first critical speed shall be at least 142% (Class I, II and III) of the fan's maximum operating speed. Bearings shall be designed for heavy-duty service with a minimum L_{10} life of [40,000] [80,000] hours. Bearing ratings are to be based on the fan's maximum catalogued operating speed and horsepower. Pillowblock bearings shall be either single row ball or double row spherical roller type. Bearing bars shall be rigidly supported to the base (bearings supports mounted to the inlet funnel unacceptable). Bearing supports shall consist of two or more full length structure uprights.

Accessories
Optional accessories include special bearings, protective enclosures, variable inlet vanes, inlet screen, inlet ring, inlet flange, companion flange, belt guard, and shaft extension for driving fan from the inlet side.

Performance
Fan air performance shall be AMCA certified per AMCA Standard 210. Fans shall have a sharply rising pressure characteristic extending through the operating range and continuing to rise well beyond the efficiency peak to assure quiet and stable operation under all conditions. Horsepower characteristics shall be truly non-overloading and shall reach a peak in the normal selection area.

Sound Power Levels
Fan manufacturer shall provide **inlet and outlet sound power ratings** in the eight octave bands. Sound power levels shall be AMCA certified per AMCA Standard 301. Sound power ratings shall be in decibels referenced to 10^{-12} watts.

Balancing
A factory dynamic balance shall be made on all fans after assembly. A vibration analyzer shall be used to measure velocity, and the final reading **shall not exceed 0.15 inches per second**. The exact level of vibration shall be recorded on the fan as proof of the final dynamic balance at the factory.

Submittals
Submittals for approval of equipment shall include _____ copies of outline drawings, sound power ratings, and pressure-volume performance curves showing point of operation.

One Year Limited Warranty

Efficient Silent Plenum Fan - ESP

What Products Are Covered

PennBarry Commercial and Industrial Fans (each, a “PennBarry Product”)

One Year Limited Warranty For PennBarry Products

PennBarry warrants to the original commercial purchaser that the PennBarry Products will be free from defects in material and workmanship for a period of one (1) year from the date of shipment.

Exclusive Remedy

PennBarry will, at its option, repair or replace (without removal or installation) the affected components of any defective PennBarry Product; repair or replace (without removal or installation) the entire defective PennBarry Product; or refund the invoiced price of the PennBarry Product. In all cases, a reasonable time period must be allowed for warranty repairs to be completed.

What You Must Do

In order to make a claim under these warranties:

1. You must be the original commercial purchaser of the PennBarry Product.
2. You must promptly notify us within the warranty period of any defect and provide us with any substantiation that we may reasonably request.
3. The PennBarry Product must have been installed and maintained in accordance with good industry practice and any specific PennBarry recommendations.

Exclusions

These warranties do not cover defects caused by:

1. Improper design or operation of the system into which the PennBarry Product is incorporated.
2. Improper installation.
3. Accident, abuse or misuse.
4. Unreasonable use (including any use for non-commercial purposes, failure to provide reasonable and necessary maintenance as specified by PennBarry, misapplication and operation in excess of stated performance characteristics).
5. Components not manufactured by PennBarry.

Limitations

1. In all cases, PennBarry reserves the right to fully satisfy its obligations under the Limited Warranties by refunding the invoiced price of the defective PennBarry Product (or, if the PennBarry Product has been discontinued, of the most nearly comparable current product).
2. PennBarry reserves the right to furnish a substitute or replacement component or product in the event a PennBarry Product or any component of the product is discontinued or otherwise unavailable.
3. PennBarry’s only obligation with respect to components not manufactured by PennBarry shall be to pass through the warranty made by the manufacturer of the defective component.

General

The foregoing warranties are exclusive and in lieu of all other warranties except that of title, whether written, oral or implied, in fact or in law (including any warranty of merchantability or fitness for a particular purpose).

PennBarry hereby disclaims any liability for special, punitive, indirect, incidental or consequential damages, including without limitation lost profits or revenues, loss of use of equipment, cost of capital, cost of substitute products, facilities or services, downtime, shutdown or slowdown costs.

The remedies of the original commercial purchaser set forth herein are exclusive and the liability of PennBarry with respect to the PennBarry Products, whether in contract, tort, warranty, strict liability or other legal theory shall not exceed the invoiced price charged by PennBarry to its customer for the affected PennBarry Product at the time the claim is made.

Inquiries regarding these warranties should be sent to: PennBarry, 1401 North Plano Road, Richardson, TX 75081.

Other PennBarry Products

CENTRIFUGAL PRODUCTS

Domex
Centrifugal
Roof Exhausters

Fumex Fatrap
Kitchen Hood Centrifugal
Roof Exhausters

Zephyr
Ceiling and Inline Fans

Dynamo
Centrifugal Blowers

Centrex Inliner
Centrifugal Inline Fans

LC Dynafan
Low Contour Centrifugal
Roof Exhausters

ESI
Efficient Silent
Inline Fan

Fume Exhaust
Curb Mounted
Centrifugal Fans

AXIAL / GRAVITY PRODUCTS

Breezeway
Propeller Wall Fans

HI-EX
Power Roof Ventilator

Tubeaxial
Inline Fans

Vaneaxial
Inline Fans

Powered Airette
Axial Roof Ventilators

Airette
Gravity Intake/Relief Hood

Domex Axial
Axial Roof Ventilators

Axcentrix
Bifurcator Fan

For more information contact your local PennBarry Sales Manufacturer Representative or visit us at **www.PennBarry.com**

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