

...Simple
...Effective
...Inexpensive to operate
...Economical

No air cooled condenser needed
No chiller or cooling tower needed
No major control center
No refrigerant needed

Dry bulb temperature reduction due to evaporation of WATER

Evaporative cooling has been used for literally thousands of years for comfort cooling and is commonly used around the world in a variety of locations and applications because of its simplicity, effectiveness, and low cost.



The Saudi Factory for Air Conditioning Units

EVAPORATIVE COOLER

MODEL EC2.5 – EC90

1300 to 60000 CFM Nominal Airflow

PC-EC-2.5-90-2004-R0

Simple Effective Inexpensive to purchase and operate

GENERAL

Evaporative cooling works by evaporating water in the air stream. In order for the water to evaporate, the water must absorb heat. In the case of evaporative cooling, the heat comes from the outdoor air being supplied to the building. The amount of heat absorbed by the water is lost (given up) by the air causing the air to become cool.

Evaporative cooling has been used for literally thousands of years for comfort cooling and is commonly used around the world in a variety of locations and applications because of its simplicity, effectiveness, and low cost. Dry bulb temperature reduction due to evaporation of water always result in lower effective temperature, regardless of the relative humidity level and that (evaporative cooling) can provide relief cooling of factories almost regardless of geographical location (1991 ASHRAE Handbook, Chapter 46, Evaporative Air Cooling).

BENEFITS

Economical

No air cooled condenser needed

No chiller or cooling tower needed

No chilled or condenser water pumps needed

No water distribution piping or insulation needed

No major motor control center

No refrigerant needed

FEATURES

UNIT CONSTRUCTION

Unit casing and frame are made up of corrosion resistant galvanized sheet steel with two coats of enamel paint.

Panels are 25mm thick double skin with injected polyurethane insulation that provides rigid, high thermal and acoustic resistance casing make ideal for indoor or outdoor application. Double skin panel improves the unit life and eliminates insulation erosion.

FAN

The indoor fans are manufactured from hot dip galvanized sheet steel scroll with aero-dynamic profile side plates to suit the corresponding air inlet size. Side plates are sheared in a single piece, pressed and have rib formed in one operation to give necessary rigidity at critical points. Impellers are constructed with forward curved blades and are made from galvanized sheet steel, completely cold assembled with the absence of welding. Blades are fixed rigidly to prevent flexing. Impellers are statically and dynamically balanced.

The fan is large enough to handle wide range of air volume in stable condition and low noise. The fan is belt driven using an adjustable pitch motor sheave for precise airflow selection.

MOTOR

Motors are of Totally Enclosed type, class F insulation, with lubricated bearings and inherent thermal overload protection.

COOLING MEDIA

Cooling media is a cellulose material with special chemical composition to prevent deterioration, shrinkage or sagging. It incorporates an internal geometry of transverse alternating flutes. One flute carries the water to the face (intake) side of the media while the other flute is aligned with the direction of airflow.

Flame Spread (E84-94): 45

Maximum Water Temperature: 200°F

Maximum Air Temperature: 150°F (Continuous), 300°F (Intermittent)

AIR FILTER

High dust holding capacity, low resistance filter. It can be cleaned with regular water and prolonged use. It consists of metal aluminum mesh with unique pattern. This will allow the air to have less resistance and have the ability to depth load rather than surface load. Frames are made from formed galvanized steel sheet with aluminum profile railing.

Specifications and data are subject to change without prior notice due to continuous research.

SELECTION PROCEDURE

Given:

Sensible Capacity..... 539,780 BTUH
 Airflow..... 14700 CFM
 Entering air temperature (dry bulb)..... 115°F
 Entering air temperature (wet bulb)..... 78°F
 Leaving air dry bulb temperature..... 81°F
 Maximum face velocity..... 500 FPM
 External static pressure..... 1"
 Altitude..... 2000 ft

Required:

Unit Size, Leaving air temperature (DB, WB)

Solution:

- **Select the model that will deliver 14700 CFM with maximum face velocity of 500 FPM.**

From Table I, model EC30 will provide 14700 CFM with a face velocity of 475 FPM (Airflow ÷ face area of media; 14700 ÷ 30.92).

- **Select the media that will give the required leaving air temperature.**

Start with the 24 inch thick pad with STANDARD MEDIA. Determine the Saturation Efficiency (SE) from Table III-A @ 500 FPM velocity will be 99%.

Calculate the leaving air dry bulb and wet bulb temperature using the formula from Table VII.

Leaving air dry bulb temperature (LDB)

$$= \text{ODB} - [\text{SE} \times (\text{ODB} - \text{OWB})]$$

Leaving air dry bulb temperature (LDB)

$$= 115 - [0.99 \times (115 - 78)]$$

$$= 78.37^\circ\text{F}$$

- **Select the fan and motor to deliver the required airflow**

Pressure drop of across media (Table II-A) = 0.51"

Pressure drop across filter (Table VI) = 0.50"

External static pressure = 1.00"

Total Static Pressure = 2.01"

Table VIII shows that for model EC30 there are two sizes of forward curved fans. Say we use size 710FC.

Compute the velocity pressure using $VP = (V \div 4005)^2$

Velocity (V) = CFM / Outlet Area

From Performance Chart of 710FC, outlet area = 8.7 ft²

$$V = 14700 / 8.7$$

$$V = 1689.7 \text{ FPM}$$

Velocity Pressure (VP)

$$= (1689.7 \div 4005)^2$$

$$= 0.18 \text{ in.}$$

Total Pressure

= Static Pressure + Velocity Pressure

$$= 2.01" + 0.18"$$

$$= 2.19" \text{ (pressure @ given operating conditions)}$$

From Table X "Temperature and Altitude Correction Factor" @ 78.37°F (fan inlet temperature) and 2000 feet, determine correction factor to be 1.096 (by interpolation). Multiply the Total Pressure by the correction factor:

$$2.19 \times 1.096 = 2.40" \text{ (static @ standard air)}$$

Referring to Size 710FC Performance Curve (fan performance @ standard air), it is determined that the fan must operate at 550 RPM to develop 14700 CFM @ sea level or standard air condition. The BHP is read from the curve as 8.9 BHP. The BHP must be corrected to conditions at given altitude by dividing horsepower at standard air by the correction factor.

$$\text{Corrected BHP} = 8.9 \text{ BHP} \div 1.096 = 8.12 \text{ BHP}$$

The Fan RPM must be corrected with new BHP by using the Fan Laws.

$$\text{HP}_2 = \text{HP}_1 \times (\text{RPM}_2 \div \text{RPM}_1)^3$$

$$\text{Corrected Fan RPM (RPM}_2) = 534$$

- **Determine the required motor size**

To determine the required motor size, multiply corrected BHP by 1.2.

$$\text{Motor size} = 8.12 \times 1.2 = 9.744 \text{ HP}$$

Use 10HP motor

- **Determine the temperature rise of the motor**

Temperature rise of a 10HP motor

Temperature Rise, ΔT (°F)

$$= Q_M \div (1.08 \times \text{CFM}) \div \text{correction factor}$$

Where: Q_M – heat gain by motor (Table IX)

$$\Delta T = 30000 \div (1.08 \times 14700) \div 1.096$$

$$\Delta T = 1.72^\circ\text{F}$$

- **Determine the supply air temperature**

Supply air temperature

= Air temp. leaving media + temp. rise of motor

$$= 78.37 + 1.72$$

$$= 80.09^\circ\text{F}$$

QUICK SELECTION CHART

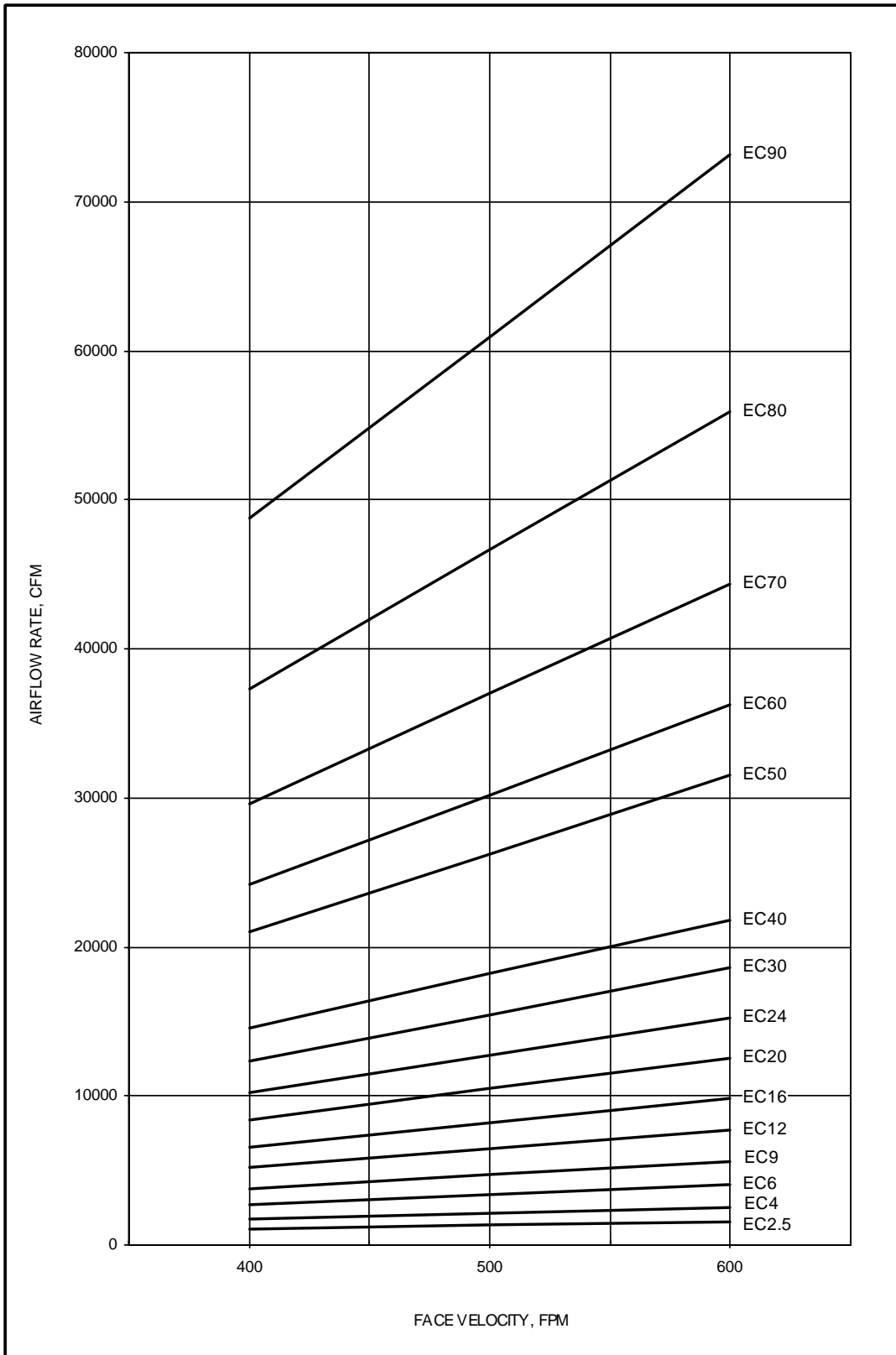


TABLE I. FACE AREA OF EVAPORATIVE MEDIA

UNIT MODEL	FACE VELOCITY, FPM			FACE AREA OF EVAPORATIVE MEDIA, FT ²
	400	500	600	
	AIRFLOW RATE, CFM			
EC2.5	1055	1319	1582	2.64
EC4	1688	2110	2532	4.22
EC6	2721	3401	4082	6.80
EC9	3742	4677	5612	9.35
EC12	5162	6453	7744	12.91
EC16	6570	8213	9855	16.43
EC20	8379	10473	12568	20.95
EC24	10174	12718	15261	25.44
EC30	12370	15462	18555	30.92
EC35	14553	18191	21829	36.38
EC40	17136	21420	25704	42.84
EC50	20992	26240	31488	52.48
EC60	24156	30195	36235	60.39
EC70	29579	36974	44369	73.95
EC80	37295	46618	55942	93.24
EC90	48758	60948	73138	121.90

Note: Velocity above 500 FPM, drip eliminator is mandatory.

TABLE II-A. PRESSURE DROP ACROSS EVAPORATIVE MEDIA

(Inch of Water Gauge)

STANDARD MEDIA

VELOCITY, FPM	PAD THICKNESS, IN.			
	6	8	12	24
400	0.0830	0.1100	0.1650	0.3300
500	0.1290	0.1650	0.2600	0.5100
600	0.1850	0.2275	0.3700	0.7400

TABLE II-B. PRESSURE DROP ACROSS EVAPORATIVE MEDIA

(Inch of Water Gauge)

SUPER SATURATING MEDIA

VELOCITY, FPM	PAD THICKNESS, IN.			
	6	8	12	24
400	0.1000	0.1350	0.2000	0.4000
500	0.1550	0.1975	0.3110	0.6300
600	0.2200	0.2725	0.4500	0.9100

TABLE III-A. EVAPORATIVE MEDIA EFFICIENCY (SE)

STANDARD MEDIA

VELOCITY, FPM	PAD THICKNESS, IN.			
	6	8	12	24
	SATURATION EFFECTIVENESS (EFFICIENCY, %)			
400	77	85	94	99
500	74	83	93	99
600	70	80	91	99

TABLE III-B. EVAPORATIVE MEDIA EFFICIENCY (SE)

SUPER SATURATING MEDIA

VELOCITY, FPM	PAD THICKNESS, IN.			
	6	8	12	24
	SATURATION EFFECTIVENESS (EFFICIENCY, %)			
400	82	90	97	99.9
500	80	88	96	99.9
600	77	86	95	99.9

TABLE IV. TEMPERATURE DROP ACROSS EVAPORATIVE MEDIA (Standard)

(Based on 500 FPM Velocity)

WET BULB DEPRESSION	PAD THICKNESS, IN.			
	6	8	12	24
10.0	7.4	8.3	9.3	9.9
12.5	9.3	10.4	11.6	12.3
15.0	11.1	12.5	14	14.9
17.5	13	14.5	16.3	17.3
20.0	14.8	16.6	18.6	19.8
22.5	16.7	18.7	20.9	22.3
25.0	18.5	20.8	23.3	24.8
27.5	20.3	22.8	25.6	27.2
30.0	22.2	24.9	27.9	29.7
32.5	24	26.9	30.2	32.2
35.0	25.9	29	32.5	34.6
37.5	27.7	31.1	34.9	37.1
40.0	29.6	33.2	37.2	39.6

TABLE V. SUGGESTED AIR CHANGES PER HOUR

(Air Change Method)

LEAVING AIR DRY BULB TEMPERATURE (LDB), °F	TEMPERATURE OVER AMBIENT ^(*)	AIR CHANGES PER HOUR
>78°F	20+	30-60
76°F TO 78°F	15-20	20-40
74°F TO 76°F	10-15	15-30
72°F TO 74°F	5-15	12-20
<72°F	<10	10-15

(*) For Existing Buildings: Average amount indoor temperature exceeds ambient (outdoor) temperature when evaporative cooling is not in use.

TABLE VI. PRESSURE DROP ACROSS DRIP ELIMINATOR AND FILTER

(Inch of Water Gauge)

ACCESSORY		FACE VELOCITY, FPM						
		300	350	400	450	500	550	600
DRIP ELIMINATOR		0.16	0.21	0.28	0.34	0.42	0.50	0.60
2" ALUMINUM FILTER (*)	MED	0.07	0.09	0.12	0.15	0.18	0.22	0.26
	HIGH	0.18	0.25	0.32	0.41	0.50	0.61	0.72
2" PLEATED FILTER (*)	MED	0.08	0.11	0.14	0.18	0.22	0.27	0.32
	HIGH	0.22	0.29	0.38	0.49	0.60	0.73	0.86

(*) Recommended all filter change-out final pressure drop @ 1.0 in. wg. System design may dictate a lower change-out point.

TABLE VII. FORMULAS

• Leaving Air Temperature (LDB), °F	= ODB – [SE x (ODB – OWB)] Where: ODB – outside air dry bulb temperature, °F OWB – outside air wet bulb temperature, °F SE – saturation efficiency of evaporative media
• Saturation Effectiveness (SE), %	= [(ODB – LDB) / (ODB – OWB)] x 100
• Leaving Air Temperature (LWB), °F	= Entering wet bulb (actually, it's slightly less than the entering wet bulb but is normally considered equal)
• Wet Bulb Depression (WBD)	= ODB – OWB
• Evaporative Rate (Gallons per hr)	= CFM x WBD x SE ÷ 8700 ^(*)
• Bleed-off Rate	= approximately 20% of evaporation rate ^(**)
• Re-circulation Rate	= approximately 3 times evaporation rate ^(*)
• Standard CFM	= Sensible BTUH ÷ [1.08 x (T _{ROOM} – LDB)] Where: T _{ROOM} – temperature in space being controlled
• Actual CFM	= Standard CFM ÷ Density Ratio
• Density Ratio	= 1.325 x P _B ÷ [(ODB + 460) x 0.075] Where: P _B – barometric pressure (inches of mercury)
• Velocity Pressure (VP)	= (V ÷ 4005) ^{1/2} Where: V – fan outlet velocity, FPM
• Fan BHP	= CFM x TP / 6356 x EFF _T = CFM x SP / 6356 x EFF _S Where: TP – total pressure, in. SP – static pressure, in. EFF _T – total efficiency EFF _S – static efficiency
• Total Pressure (TP)	= SP + VP Where: SP – static pressure, in. VP – velocity pressure, in.

(*) 8700 conversion factor is based on 8.34 lb. H₂O / gallon and 1043 BTU / lb. H₂O

(**) Bleed off and re-circulation rates will vary with locale, water quality and chemical treatment program. These values are only approximation.

BASIC FAN LAWS

VARIABLE	When speed changes	When density changes
VOLUME	Varies DIRECT with Speed Ratio $CFM_2 = CFM_1 (RPM_2 / RPM_1)$	Does not change
PRESSURE	Varies with SQUARE of Speed Ratio $P_2 = P_1 (RPM_2 / RPM_1)^2$	Varies DIRECT with Density Ratio $P_2 = P_1 (d_2 / d_1)$
HORSEPOWER	Varies with CUBE of Speed Ratio $HP_2 = HP_1 (RPM_2 / RPM_1)^3$	Varies DIRECT with Density Ratio $HP_2 = HP_1 (d_2 / d_1)$

Legends:

CFM – airflow rate (ft³ / min)

HP – horsepower

d – air density, lb / ft³

TABLE VIII. FAN SIZES FOR EACH UNIT MODEL

MODEL	FAN SIZE	
	FORWARD CURVED	AIRFOIL
EC2.5	200FC, 250FC	-
EC4	250FC, 315FC	-
EC6	315FC, 400FC	135AF, 150AF
EC9	400FC, 450FC	150AF, 165AF
EC12	450FC, 500FC	182AF, 200AF
EC16	500FC, 560FC	200AF, 222AF
EC20	560FC, 630FC	222AF, 245AF
EC24	630FC, 710FC	245AF, 270AF
EC30	710FC, 800FC	270AF, 300AF
EC35	710FC, 800FC	300AF, 330AF
EC40	800FC, 900FC	330AF, 365AF
EC50	900FC	365AF
EC60	1000FC	402AF
EC70	-	402AF, 445AF
EC80	-	445AF, 490AF
EC90	-	445AF, 490AF

TABLE IX. HEAT GAIN FROM ELECTRIC MOTOR

(Continuous Operation)

1/2	1820
3/4	2680
1	3220
1-1/2	4770
2	6380
3	9450
5	15600
7-1/2	22500
10	30000
15	44500
20	58500
25	72400
30	85800
40	115000
50	143000
60	172000
75	212000
100	284000

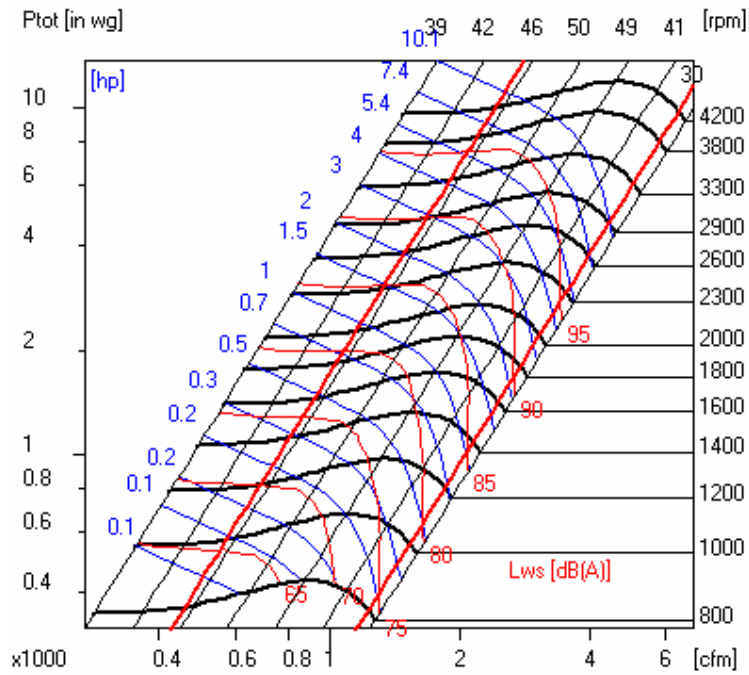
TABLE X. TEMPERATURE AND ALTITUDE CORRECTION FACTORS

AIR TEMP., °F	ALTITUDE (Feet)															
	0	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	6000	7000	8000	9000	10000
	BAROMETRIC PRESSURE (in. Hg.)															
	29.92	29.38	28.86	28.33	27.33	27.31	26.82	26.32	25.84	25.36	24.90	23.98	23.09	22.22	21.39	20.58
-40	0.79	0.81	0.82	0.84	0.85	0.87	0.88	0.90	0.92	0.93	0.95	0.99	1.03	1.08	1.11	1.15
0	0.87	0.88	0.90	0.92	0.93	0.95	0.97	0.99	1.00	1.02	1.04	1.10	1.12	1.18	1.22	1.27
40	0.94	0.96	0.96	1.00	1.01	1.03	1.05	1.07	1.09	1.11	1.13	1.18	1.22	1.27	1.32	1.37
70	1.00	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.16	1.18	1.20	1.25	1.30	1.35	1.41	1.45
80	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.16	1.18	1.20	1.22	1.27	1.32	1.37	1.43	1.48
100	1.06	1.08	1.10	1.12	1.14	1.16	1.18	1.20	1.22	1.25	1.27	1.33	1.37	1.43	1.47	1.54
120	1.09	1.11	1.13	1.16	1.18	1.20	1.22	1.24	1.27	1.29	1.31	1.37	1.42	1.47	1.53	1.59
140	1.13	1.15	1.17	1.20	1.22	1.24	1.26	1.29	1.31	1.34	1.36	1.41	1.47	1.52	1.58	1.65
160	1.17	1.19	1.21	1.24	1.26	1.28	1.31	1.33	1.35	1.38	1.41	1.46	1.52	1.58	1.64	1.70
180	1.21	1.23	1.25	1.28	1.30	1.32	1.35	1.37	1.40	1.42	1.45	1.51	1.56	1.63	1.69	1.76
200	1.25	1.27	1.29	1.32	1.34	1.36	1.39	1.42	1.44	1.47	1.50	1.56	1.61	1.67	1.75	1.82
250	1.34	1.36	1.39	1.41	1.44	1.47	1.49	1.52	1.55	1.58	1.61	1.67	1.72	1.79	1.87	1.96
300	1.43	1.46	1.49	1.51	1.54	1.57	1.60	1.63	1.66	1.69	1.72	1.79	1.85	1.92	2.00	2.08
350	1.53	1.56	1.58	1.61	1.64	1.67	1.70	1.74	1.77	1.80	1.84	1.92	1.96	2.04	2.13	2.22
400	1.62	1.65	1.68	1.71	1.75	1.78	1.81	1.84	1.88	1.91	1.95	2.04	2.08	2.17	2.27	2.38
450	1.72	1.75	1.78	1.81	1.85	1.88	1.92	1.95	1.99	2.03	2.06	2.17	2.22	2.33	2.38	2.50
500	1.81	1.84	1.88	1.91	1.95	1.98	2.02	2.06	2.10	2.14	2.18	2.27	2.33	2.44	2.56	2.63
550	1.91	1.94	1.98	2.01	2.05	2.09	2.13	2.17	2.21	2.25	2.29	2.38	2.44	2.56	2.63	2.78
600	2.00	2.04	2.07	2.11	2.15	2.19	2.23	2.27	2.32	2.36	2.40	2.50	2.56	2.70	2.86	2.94
650	2.09	2.13	2.17	2.21	2.25	2.29	2.34	2.38	2.43	2.47	2.52	2.61	2.71	2.82	2.93	3.04
700	2.19	2.23	2.27	2.31	2.35	2.40	2.44	2.49	2.53	2.58	2.63	2.70	2.86	2.94	3.03	3.13
750	2.28	2.32	2.37	2.41	2.46	2.50	2.55	2.60	2.64	2.69	2.74	2.85	2.96	3.07	3.19	3.32
800	2.38	2.42	2.48	2.51	2.56	2.60	2.65	2.70	2.75	2.80	2.86	3.03	3.13	3.23	3.33	3.45

Fans are rated at standard air: 0.075 lbs. per cubic foot, 29.92 in Hg. barometric pressure and 70°F at sea level. Therefore, pressures corrected to standard air must be used when selecting fans from fan performance curves. Pressure at operating x factor = pressure at standard air. Horsepower at standard air ÷ factor = horsepower at operating conditions. Caution: Size motor for highest density (lowest factor) condition at which it is expected to operate. To calculate density, divide 0.075 lbs per cubic feet by the factor at required condition.

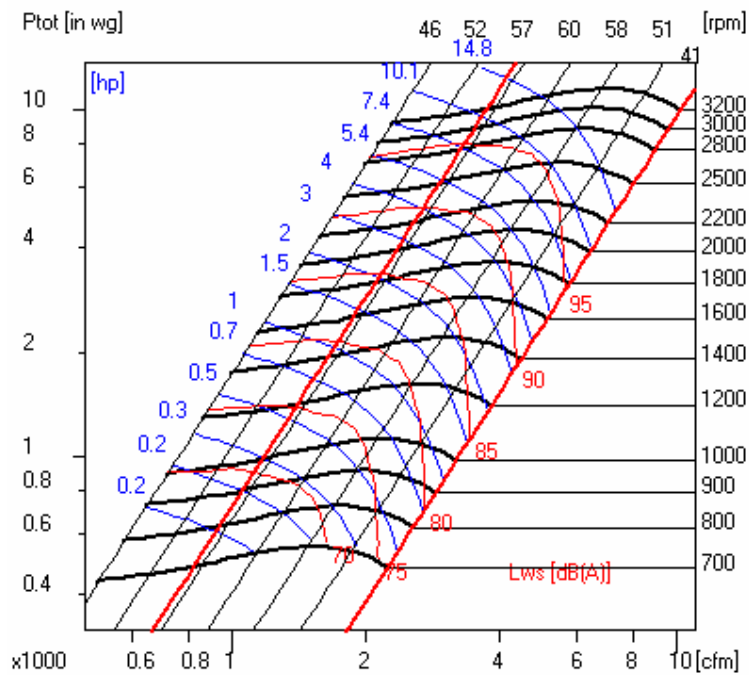
SIZE 200FC

OUTLET AREA: 0.71 SQ. FT.



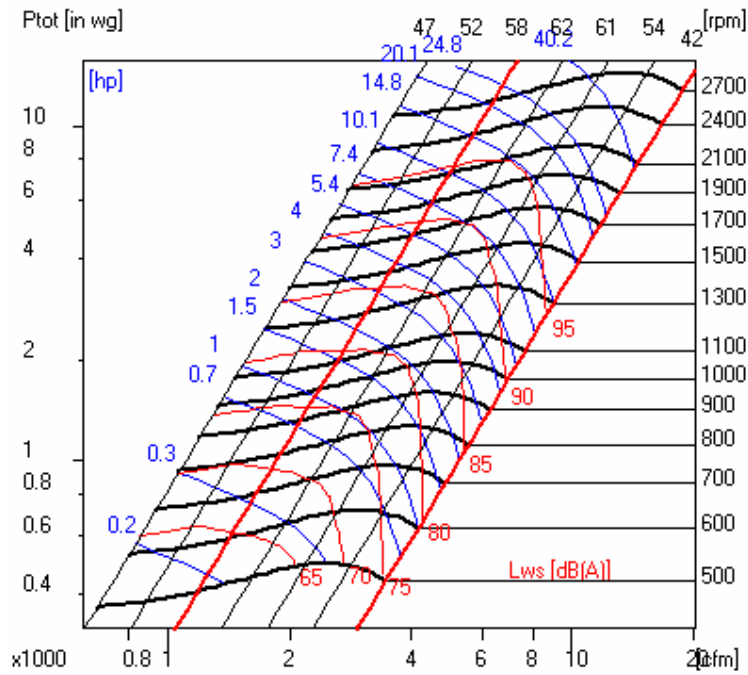
SIZE 250FC

OUTLET AREA: 1.12 SQ. FT.



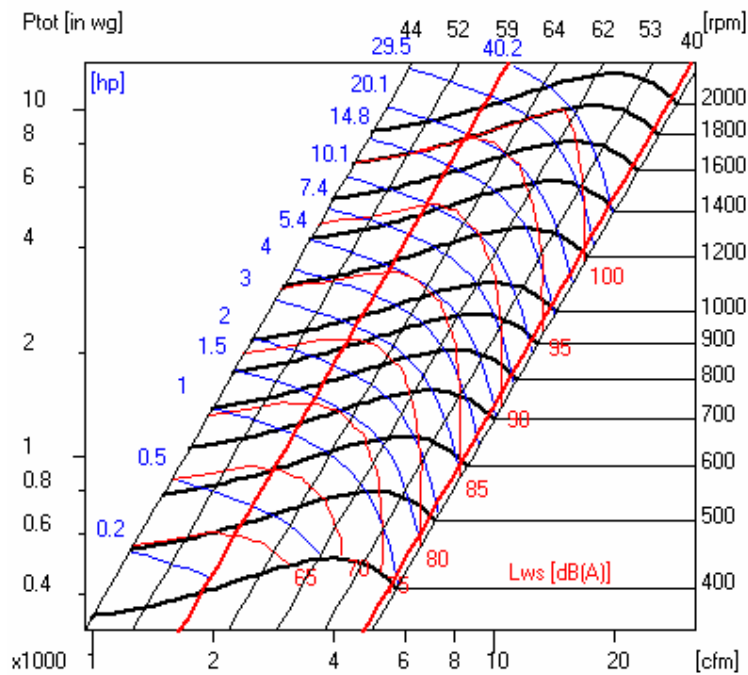
SIZE 315FC

OUTLET AREA: 1.76 SQ. FT.



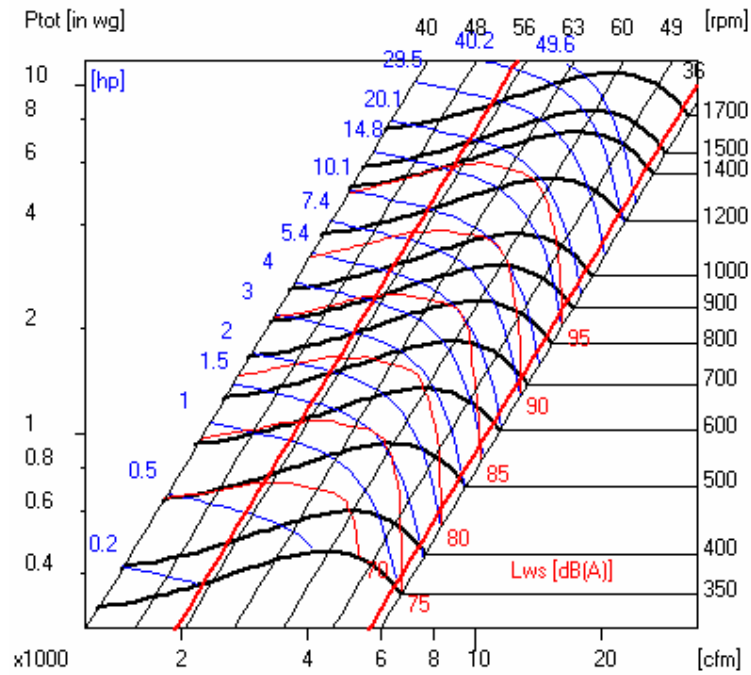
SIZE 400FC

OUTLET AREA: 2.77 SQ. FT.



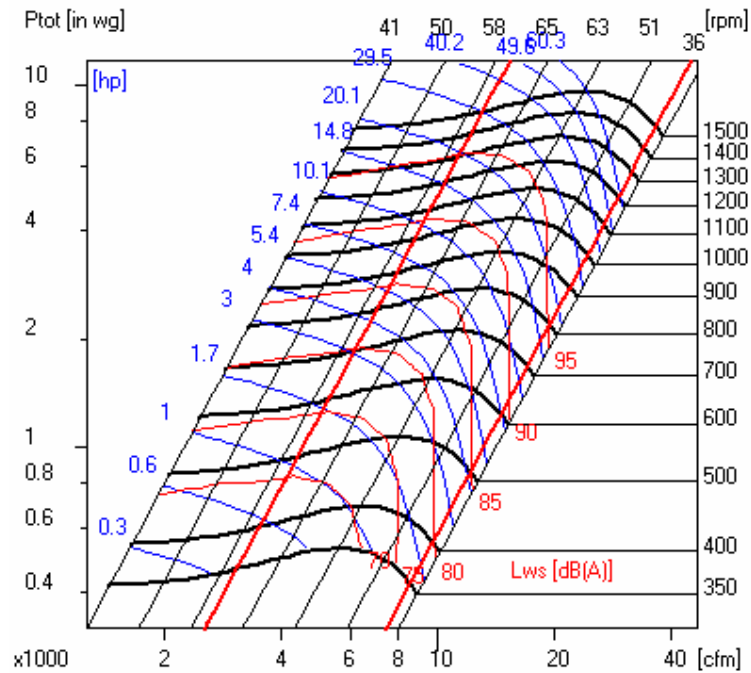
SIZE 450FC

OUTLET AREA: 3.48 SQ. FT.



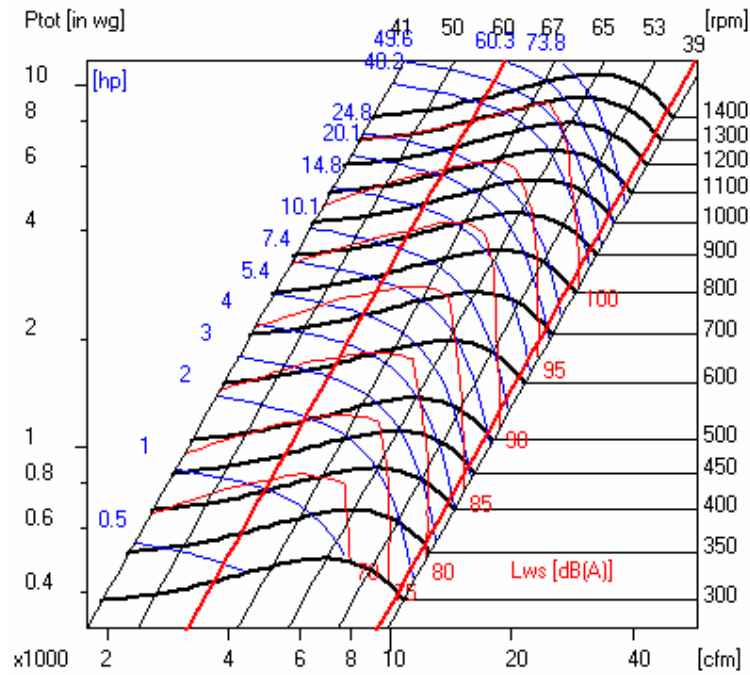
SIZE 500FC

OUTLET AREA: 4.38 SQ. FT.



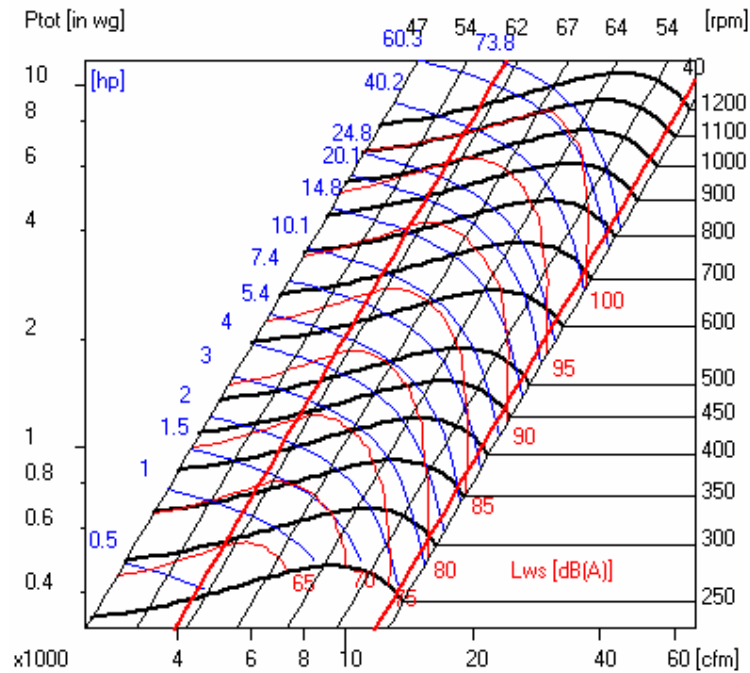
SIZE 560FC

OUTLET AREA: 5.50 SQ. FT.



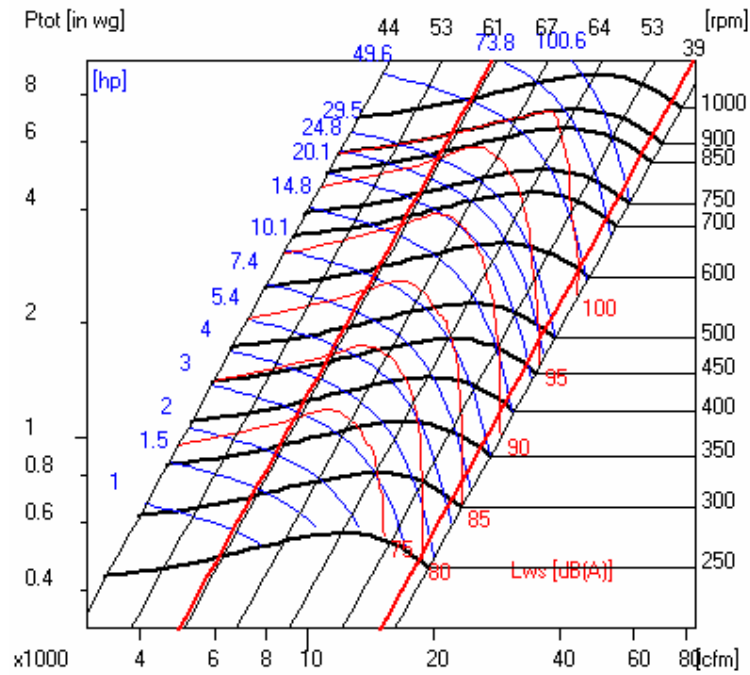
SIZE 630FC

OUTLET AREA: 6.91 SQ. FT.



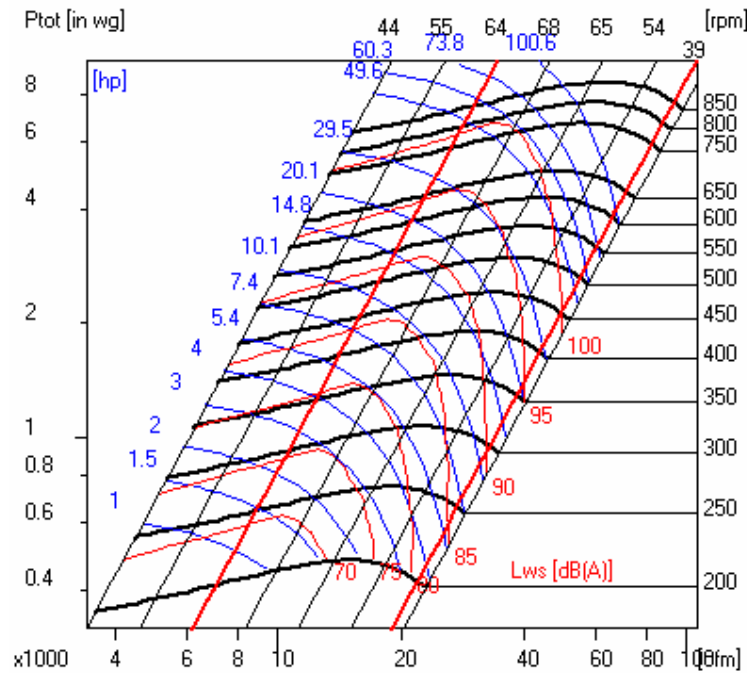
SIZE 710FC

OUTLET AREA: 8.68 SQ. FT.



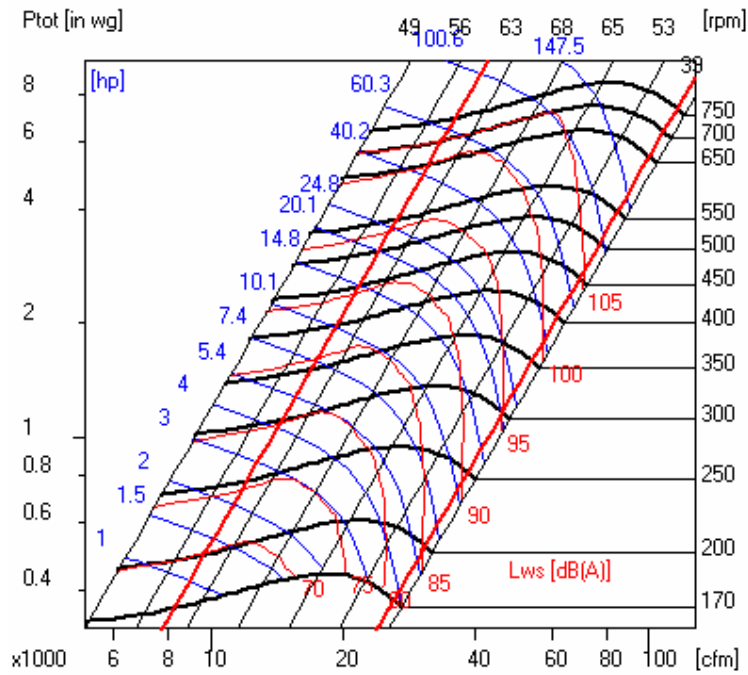
SIZE 800FC

OUTLET AREA: 10.92 SQ. FT.



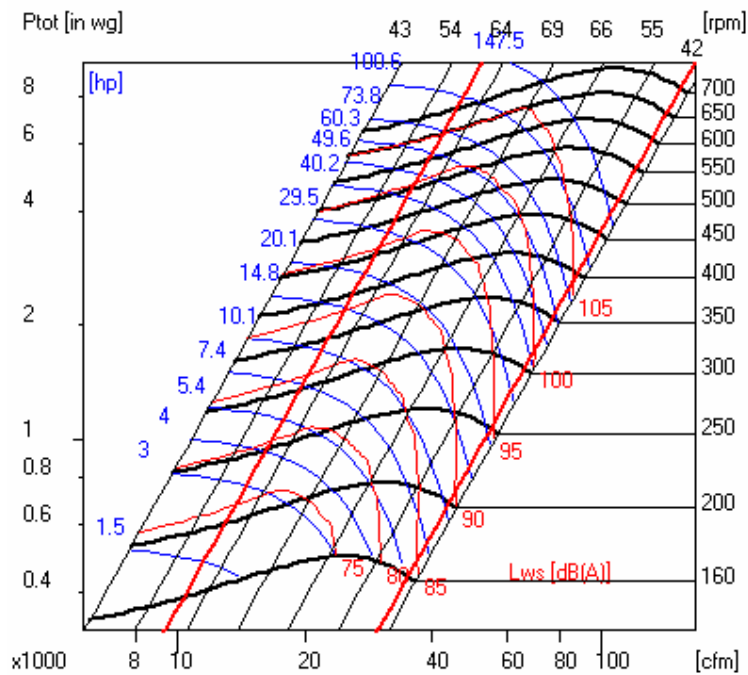
SIZE 900FC

OUTLET AREA: 13.74 SQ. FT.



SIZE 1000FC

OUTLET AREA: 17.28 SQ. FT.



SIZE 135AF

OUTLET AREA: 1.89 SQ. FT.

SPEED LIMITATIONS: CLASS I – 3542 RPM

CLASS II – 4617 RPM

CLASS III – 5818 RPM

OUTLET		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	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1000	529	731	0.05	837	0.08	924	0.10	1096	0.15												
1200	635	792	0.07	889	0.10	980	0.12	1125	0.18	1269	0.24	1411	0.31								
1400	741	870	0.09	946	0.12	1030	0.15	1180	0.21	1303	0.27	1425	0.34	1549	0.43						
1600	847	951	0.12	1020	0.15	1087	0.18	1233	0.25	1358	0.32	1465	0.39	1571	0.47	1788	0.65				
1800	952	1034	0.15	1100	0.18	1159	0.21	1284	0.29	1412	0.38	1521	0.46	1618	0.53	1806	0.71	1999	0.92	2185	1.15
2000	1058	1118	0.19	1182	0.22	1238	0.26	1345	0.33	1462	0.42	1576	0.52	1675	0.61	1847	0.79	2018	0.98	2191	1.22
2500	1323	1336	0.31	1391	0.36	1443	0.41	1537	0.50	1622	0.59	1710	0.68	1804	0.80	1986	1.04	2138	1.26	2275	1.48
3000	1587	1561	0.48	1609	0.54	1655	0.60	1742	0.72	1820	0.83	1892	0.93	1963	1.04	2114	1.29	2271	1.58	2416	1.87
3500	1852	1792	0.72	1833	0.79	1873	0.85	1952	0.99	2026	1.13	2095	1.26	2159	1.38	2280	1.63	2407	1.90	2541	2.23
4000	2116	2025	1.03	2062	1.10	2098	1.18	2168	1.33	2236	1.49	2302	1.65	2363	1.80	2476	2.08	2582	2.36	2690	2.66
4500	2381	2261	1.42	2294	1.51	2326	1.59	2390	1.76	2452	1.93	2512	2.11	2571	2.29	2680	2.63	2779	2.95	2874	3.26
5000	2646	2498	1.91	2528	2.00	2557	2.09	2615	2.28	2672	2.47	2728	2.66	2782	2.86	2887	3.25	2984	3.63	3073	3.98
5500	2910	2737	2.50	2764	2.60	2791	2.70	2844	2.90	2896	3.11	2947	3.32	2998	3.53	3096	3.97	3190	4.39	3278	4.81
6000	3175	2976	3.21	3001	3.31	3026	3.42	3075	3.64	3123	3.87	3170	4.09	3217	4.32	3310	4.79	3399	5.26	3484	5.73
6500	3439	3216	4.04	3239	4.15	3262	4.27	3308	4.51	3352	4.75	3397	4.99	3440	5.24	3527	5.74	3611	6.25	3693	6.76
7000	3704	3456	5.00	3478	5.13	3499	5.25	3542	5.51	3584	5.76	3625	6.02	3666	6.28	3747	6.82	3826	7.36	3904	7.91
7500	3968	3697	6.11	3717	6.25	3738	6.38	3777	6.65	3817	6.93	3856	7.20	3894	7.48	3970	8.05	4045	8.62	4119	9.21
8000	4233	3939	7.38	3958	7.52	3976	7.67	4014	7.95	4051	8.24	4088	8.54	4124	8.83	4196	9.43	4267	10.04	4336	10.66
8500	4497	4180	8.81	4198	8.97	4216	9.12	4251	9.42	4286	9.73	4321	10.04	4355	10.35	4423	10.98	4490	11.62	4557	12.27
9000	4762	4422	10.43	4439	10.58	4456	10.74	4489	11.07	4522	11.39	4555	11.72	4588	12.05	4652	12.71	4716	13.38	4779	14.07
9500	5026	4664	12.22	4680	12.39	4696	12.56	4728	12.90	4759	13.24	4791	13.59	4822	13.93	4883	14.63	4944	15.33	5004	16.05
10500	5556	5148	16.42	5163	16.61	5177	16.79	5206	17.17	5235	17.54	5263	17.92	5292	18.30	5348	19.07	5403	19.84	5458	20.62
11500	6085	5633	21.49	5647	21.70	5660	21.90	5686	22.31	5713	22.72	5739	23.13	5765	23.54	5816	24.38				

OUTLET		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2400	1270	2392	1.65	2537	1.92	2681	2.21	2822	2.52												
2600	1376	2432	1.78	2563	2.04	2697	2.32	2830	2.63	2962	2.95	3091	3.30								
2800	1481	2485	1.95	2605	2.19	2726	2.46	2850	2.76	2974	3.08	3098	3.42	3219	3.78	3338	4.15				
3000	1587	2542	2.13	2658	2.39	2771	2.65	2883	2.93	2998	3.24	3113	3.57	3229	3.92	3345	4.29	3569	5.07		
3200	1693	2598	2.32	2716	2.60	2825	2.87	2930	3.15	3035	3.44	3142	3.76	3250	4.10	3359	4.46	3575	5.23	3786	6.07
3400	1799	2650	2.49	2772	2.81	2882	3.11	2985	3.40	3085	3.69	3183	3.99	3283	4.32	3384	4.66	3589	5.42	3792	6.25
3600	1905	2699	2.65	2824	3.01	2939	3.34	3043	3.66	3141	3.97	3235	4.27	3328	4.59	3422	4.92	3613	5.65	3806	6.46
3800	2011	2750	2.82	2874	3.20	2991	3.57	3099	3.92	3198	4.26	3292	4.58	3382	4.91	3471	5.24	3648	5.94	3829	6.72
4000	2116	2805	3.01	2924	3.39	3041	3.78	3151	4.17	3254	4.55	3349	4.90	3439	5.24	3526	5.58	3694	6.28	3863	7.03
4200	2222	2866	3.22	2977	3.59	3090	4.00	3201	4.41	3306	4.82	3405	5.21	3497	5.59	3583	5.95	3748	6.67	3908	7.41
4400	2328	2933	3.45	3036	3.82	3143	4.22	3251	4.65	3356	5.08	3457	5.51	3552	5.93	3640	6.32	3804	7.08	3960	7.83
4600	2434	3005	3.72	3100	4.08	3200	4.47	3302	4.90	3406	5.34	3506	5.80	3603	6.25	3695	6.68	3862	7.50	4016	8.29
4800	2540	3081	4.01	3169	4.36	3262	4.75	3358	5.16	3457	5.61	3556	6.08	3653	6.55	3746	7.02	3918	7.92	4074	8.77
5000	2646	3159	4.33	3243	4.68	3329	5.05	3419	5.46	3512	5.91	3607	6.38	3702	6.86	3795	7.36	3971	8.33	4131	9.24
5500	2910	3360	5.20	3438	5.58	3515	5.96	3592	6.36	3671	6.77	3753	7.22	3837	7.71	3923	8.21	4095	9.28	4261	10.36
6500	3439	3771	7.26	3846	7.75	3918	8.23	3986	8.68	4052	9.14	4117	9.59	4182	10.04	4248	10.51	4382	11.51	4523	12.63
7500	3968	4191	9.80	4262	10.39	4330	10.97	4396	11.54	4460	12.10	4521	12.65	4581	13.18	4639	13.70	4752	14.74	4865	15.80
8500	4497	4622	12.93	4687	13.60	4751	14.27	4813	14.94	4874	15.60	4933	16.26	4991	16.91	5047	17.54	5155	18.76	5258	19.95
9500	5026	5063	16.77	5122	17.51	5181	18.25	5239	18.99	5296	19.74	5352	20.49	5407	21.24	5461	21.97	5566	23.43	5666	24.84
10500	5556	5513	21.41	5567	22.20	5620	23.01	5674	23.82	5727	24.64	5779	25.47								

PERFORMANCE SHOWN IS WITH DUCTED OUTLET. BHP DOES NOT INCLUDE V-BELT DRIVE LOSS
 WHEN A DESIRED DUTY FALLS BETWEEN PUBLISHED RATINGS EXACT SPEED AND HORSEPOWER CAN BE INTERPOLATED.

SIZE 150AF

OUTLET AREA: 2.33 SQ. FT.

SPEED LIMITATIONS: CLASS I – 3254 RPM

CLASS II – 4242 RPM

CLASS III – 5346 RPM

OUTLET		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	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	515	660	0.06	757	0.09	835	0.12	994	0.18												
1400	601	704	0.08	796	0.11	877	0.14	1012	0.20	1148	0.28	1280	0.38								
1600	687	759	0.10	835	0.13	916	0.17	1049	0.24	1166	0.37	1285	0.40	1403	0.50						
1800	773	819	0.12	885	0.15	954	0.19	1092	0.28	1202	0.36	1305	0.44	1411	0.54	1619	0.76				
2000	858	881	0.15	942	0.19	1001	0.22	1129	0.31	1244	0.41	1341	0.49	1433	0.59	1624	0.81	1810	1.07		
2500	1073	1037	0.24	1094	0.29	1145	0.33	1239	0.42	1340	0.53	1443	0.65	1535	0.77	1690	0.99	1839	1.22	1992	1.50
3000	1288	1200	0.36	1251	0.42	1298	0.48	1383	0.59	1461	0.69	1543	0.81	1629	0.95	1795	1.24	1933	1.51	2058	7.77
3500	1502	1368	0.53	1412	0.60	1455	0.66	1536	0.80	1608	0.93	1675	1.05	1743	1.18	1888	1.48	2034	1.83	2163	2.15
4000	1717	1539	0.74	1578	0.82	1617	0.90	1692	1.05	1761	1.21	1824	1.35	1884	1.49	2001	1.78	2129	2.13	2259	2.52
4500	1931	1712	1.01	1748	1.10	1783	1.18	1851	1.36	1916	1.53	1978	1.71	2035	1.87	2140	2.18	2245	2.51	2357	2.90
5000	2146	1887	1.35	1920	1.44	1951	1.53	2014	1.72	2074	1.92	2133	2.12	2188	2.31	2290	2.67	2384	3.02	2478	3.38
5500	2361	2063	1.75	2093	1.85	2122	1.95	2179	2.16	2236	2.37	2290	2.59	2343	2.81	2442	3.23	2532	3.62	2618	4.00
6000	2575	2241	2.24	2268	2.34	2295	2.45	2348	2.68	2400	2.90	2451	3.14	2501	3.37	2597	3.84	2685	4.29	2767	4.72
6500	2790	2418	2.80	2444	2.92	2469	3.04	2518	3.28	2567	3.52	2614	3.77	2661	4.02	2753	4.54	2839	5.04	2919	5.52
7000	3004	2597	3.46	2621	3.58	2644	3.71	2690	3.97	2735	4.23	2780	4.49	2824	4.76	2911	5.31	2994	5.86	3072	6.40
7500	3219	2776	4.21	2798	4.35	2820	4.48	2863	4.76	2906	5.02	2948	5.32	2989	5.60	3071	6.18	3151	6.78	3227	7.36
8500	3648	3135	6.05	3154	6.20	3174	6.35	3212	6.66	3251	6.97	3288	7.28	3325	7.60	3399	8.25	3471	8.91	3542	9.58
9500	4077	3495	8.36	3512	8.53	3530	8.70	3565	9.04	3599	9.39	3633	9.73	3667	10.08	3733	10.80	3799	11.52	3864	12.26
10500	4506	3856	11.21	3872	11.39	3887	11.58	3919	11.96	3950	12.33	3981	12.72	4012	13.10	4073	13.88	4133	14.67	4192	15.47
11500	4936	4217	14.64	4232	14.85	4246	15.05	4275	15.46	4304	15.87	4332	16.29	4361	16.71	4417	17.55	4472	18.40	4527	19.27
12500	5365	4579	18.72	4592	18.95	4606	19.17	4632	19.61	4659	20.06	4685	20.51	4712	20.96	4763	21.87	4815	22.79	4866	23.72
13500	5794	4941	23.51	4953	23.75	4966	23.98	4991	24.46	5015	24.95	5040	25.43	5064	25.92	5113	26.90	5160	27.88	5208	28.88
14500	6223	5303	29.05	5315	29.31	5327	29.56	5350	30.08												

OUTLET		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2800	1202	2159	1.94	2296	2.27	2430	2.63	2559	3.00												
3000	1288	2182	2.05	2309	2.37	2437	2.72	2563	3.10	2685	3.50										
3500	1502	2276	2.45	2383	2.76	2489	3.07	2597	3.42	2706	3.81	2816	4.22	2924	4.65	3031	5.10				
4000	1717	2380	2.91	2489	3.27	2588	3.62	2682	3.96	2774	4.31	2867	4.68	2962	5.09	3057	5.52	3249	6.45	3437	7.46
4500	1931	2473	3.32	2586	3.77	2692	4.20	2788	4.61	2878	5.00	2963	5.38	3046	5.77	3128	6.77	3294	7.03	3464	8.00
5000	2146	2577	3.79	2681	4.25	2785	4.74	2886	5.23	2981	5.71	3069	6.17	3152	6.61	3230	7.03	3380	7.89	3528	8.79
5500	2361	2703	4.39	2791	4.83	2884	5.31	2979	5.82	3074	6.36	3166	6.91	3253	7.44	3335	7.95	3486	8.92	3626	9.86
6000	2575	2845	5.13	2923	5.56	3002	6.01	3085	6.51	3171	7.05	3259	7.62	3345	8.21	3430	8.80	3589	9.96	3733	11.04
6500	2790	2994	5.98	3067	6.43	3138	6.88	3211	7.36	3285	7.87	3363	8.43	3443	9.02	3524	9.64	3683	10.91	3833	12.18
7000	3004	3147	6.91	3216	7.41	3284	7.89	3351	8.38	3417	8.88	3485	9.41	3556	9.97	3628	10.58	3777	11.87	3925	13.24
7500	3219	3300	7.93	3369	8.49	3434	9.01	3498	9.54	3560	10.06	3622	10.58	3685	11.13	3749	11.70	3882	12.96	4021	14.34
8000	3433	3454	9.04	3522	9.65	3587	10.24	3649	10.81	3709	11.36	3768	11.92	3826	12.48	3884	13.04	4003	14.25	4128	15.59
8500	3648	3610	10.25	3677	10.91	3740	11.55	3802	12.18	3860	12.79	3917	13.38	3973	13.97	4028	14.56	4137	15.77	4249	17.05
9000	3863	3768	11.57	3832	12.27	3895	12.97	3955	13.65	4013	14.32	4069	14.97	4123	15.60	4177	16.23	4280	17.48	4384	18.76
8500	4077	3927	13.00	3990	13.75	4050	14.50	4110	15.23	4167	15.96	4222	16.67	4276	17.36	4328	18.03	4428	19.35	4527	20.67
10000	4292	4088	14.57	4149	15.36	4208	16.15	4265	16.93	4321	17.71	4376	18.47	4429	19.22	4481	19.95	4579	21.37	4674	22.76
10500	4506	4251	16.28	4309	17.10	4366	17.93	4422	18.76	4477	19.58	4531	20.39	4583	21.20	4634	21.99	4732	23.52	4825	25.00
11500	4936	4581	20.15	4635	21.03	4688	21.93	4741	22.83	4793	23.74	4844	24.65	4894	25.55	4943	26.44	5039	28.20	5130	29.91
12500	5365	4916	24.66	4966	25.61	5015	26.57	5065	27.54	5113	28.52	5162	29.50	5209	30.49	5257	31.48	5349	33.43		
13500	5794	5255	29.88	5302	30.90	5348	31.92														

PERFORMANCE SHOWN IS WITH DUCTED OUTLET. BHP DOES NOT INCLUDE V-BELT DRIVE LOSS
 WHEN A DESIRED DUTY FALLS BETWEEN PUBLISHED RATINGS EXACT SPEED AND HORSEPOWER CAN BE INTERPOLATED.

SIZE 165AF

OUTLET AREA: 2.82 SQ. FT.

SPEED LIMITATIONS: CLASS I – 2881 RPM

CLASS II – 3756 RPM

CLASS III – 4733 RPM

OUTLET		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	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1600	567	612	0.09	699	0.12	769	0.16	900	0.24	1031	0.34										
1800	638	647	0.10	726	0.14	800	0.19	919	0.26	1036	0.36	1152	0.47								
2000	709	689	0.12	756	0.16	828	0.21	948	0.30	1052	0.39	1158	0.50	1263	0.63						
2500	887	800	0.19	854	0.24	907	0.28	1021	0.40	1125	0.51	1211	0.62	1294	0.73	1463	1.00	1629	1.33		
3000	1064	914	0.28	965	0.34	1011	0.39	1099	0.50	1194	0.64	1287	0.78	1368	0.92	1509	1.18	1648	1.47	1790	1.82
3500	1241	1031	0.39	1079	0.46	1123	0.53	1201	0.65	1275	0.78	1356	0.93	1439	1.11	1585	1.43	1708	1.73	1825	2.05
4000	1418	1152	0.54	1195	0.62	1236	0.70	1311	0.85	1377	0.99	1442	1.13	1512	1.30	1656	1.68	1785	2.06	1896	2.41
4500	1596	1276	0.73	1314	0.81	1352	0.90	1423	1.08	1487	1.24	1546	1.40	1604	1.56	1727	1.93	1855	2.37	1973	2.80
5000	1773	1401	0.95	1436	1.05	1471	1.14	1537	1.34	1599	1.53	1656	1.71	1709	1.89	1813	2.25	1926	2.68	2042	3.16
5500	1950	1528	1.23	1560	1.33	1591	1.43	1653	1.65	1712	1.86	1768	2.07	1819	2.27	1914	2.65	2010	3.06	2113	3.54
6000	2128	1655	1.55	1685	1.66	1714	1.77	1772	2.00	1827	2.24	1880	2.47	1931	2.70	2023	3.13	2109	3.55	2297	4.00
6500	2305	1783	1.93	1811	2.05	1838	2.17	1892	2.41	1944	2.67	1995	2.92	2043	3.18	2134	3.66	2216	4.11	2295	4.57
7500	2660	2041	2.87	2066	3.01	2090	3.15	2137	3.42	2183	3.71	2229	4.00	2273	4.30	2358	4.88	2437	5.45	2510	5.98
8500	3014	2301	4.09	2323	4.25	2344	4.40	2386	4.71	2428	5.03	2469	5.36	2509	5.68	2588	6.35	2663	7.02	2734	7.66
9500	3369	2562	5.63	2582	5.80	2601	5.97	2639	6.32	2676	6.67	2713	7.03	2750	7.39	2822	8.12	2892	8.87	2960	9.62
10500	3723	2824	7.52	2842	7.71	2859	7.90	2894	8.28	2928	8.66	2962	9.05	2996	9.44	3062	10.24	3126	11.06	3190	11.89
11500	4078	3087	9.80	3103	10.00	3119	10.21	3151	10.62	3182	11.04	3213	11.47	3244	11.89	3305	12.76	3365	13.64	3424	14.53
12500	4433	3350	12.50	3365	12.73	3380	12.95	3409	13.40	3438	13.85	3467	14.31	3496	14.77	3552	15.70	3608	16.64	3663	17.60
13500	4787	3613	15.67	3627	15.91	3641	16.15	3668	16.63	3695	17.12	3722	17.61	3749	18.11	3801	19.10	3853	20.11	3905	21.14
14500	5142	3877	19.34	3890	19.60	3903	19.86	3928	20.37	3953	20.89	3979	21.42	4004	21.95	4053	23.01	4102	24.09	4150	25.18
15500	5496	4141	23.55	4153	23.82	4165	24.10	4189	24.65	4213	25.20	4236	25.76	4260	26.33	4306	27.46	4352	28.60	4398	29.75
16500	5851	4405	28.33	4416	28.62	4428	28.91	4450	29.50	4473	30.09	4495	30.68	4517	31.27	4561	32.48	4604	33.69	4647	34.91
17500	6206	4669	33.72	4680	34.03	4691	34.34	4712	34.96	4733	35.58										

OUTLET		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3400	1206	1940	2.37	2065	2.78	2786	3.22														
3600	1277	1954	2.47	2072	2.87	2190	3.31	2305	3.78												
3800	1348	1974	2.60	2085	2.99	2197	3.42	2308	3.88	2417	4.37	2523	4.88								
4000	1418	2000	2.75	2103	3.13	2209	3.54	2315	4.00	2421	4.49	2525	5.00	2627	5.54						
4500	1596	2076	3.20	2171	3.58	2263	3.98	2355	4.40	2448	4.86	2543	5.35	2638	5.88	2731	6.44	2915	7.61		
5000	1773	2151	3.65	2249	4.11	2338	4.54	2423	4.97	2505	5.40	2588	5.86	2671	6.36	2756	6.89	2926	8.04	3095	9.28
5500	1950	2219	4.07	2321	4.61	2415	5.13	2501	5.62	2581	6.10	2657	6.57	2733	7.04	2807	7.54	2959	8.62	3114	9.82
6000	2128	2291	4.52	2388	5.09	2484	5.68	2574	6.26	2658	6.82	2736	7.35	2809	7.87	2880	8.38	3017	9.43	3155	10.55
6500	2305	2377	5.06	2463	5.62	2553	6.22	2642	6.86	2728	7.50	2810	8.12	2886	8.73	2958	9.30	3092	10.42	3219	11.54
7000	2482	2475	5.73	2551	6.26	2630	6.84	2712	7.48	2796	8.15	2878	8.84	2957	9.53	3032	10.20	3170	11.47	3296	12.68
7500	2660	2580	6.50	2649	7.03	2720	7.59	2793	8.20	2869	8.86	2947	9.57	3024	10.30	3100	11.04	3244	12.50	3374	13.87
8000	2837	2689	7.35	2755	7.91	2819	8.47	2885	9.06	2953	9.70	3023	10.39	3095	11.12	3168	11.88	3312	13.46	3447	15.07
9000	3191	2912	9.28	2974	9.93	3034	10.56	3092	11.18	3149	11.81	3207	12.46	3266	13.14	3327	13.87	3453	15.45	3583	17.17
10000	3546	3138	11.49	3198	12.25	3256	12.99	3312	13.71	3365	14.40	3417	15.10	3469	15.79	3521	16.50	3626	17.99	3737	19.63
11000	3901	3366	14.03	3425	14.89	3481	15.74	3535	16.57	3588	17.38	3638	18.16	3687	18.93	3735	19.70	3829	21.23	3923	22.81
12000	4255	3599	16.95	3654	17.90	3708	18.84	3761	19.78	3812	20.70	3861	21.60	3909	22.48	3956	23.34	4045	25.02	4132	26.68
13000	4610	3836	20.32	3888	21.34	3939	22.36	3990	23.38	4039	24.40	4087	25.41	4134	26.41	4180	27.38	4267	29.28	4350	31.11
14000	4965	4077	24.16	4125	25.25	4174	26.34	4222	27.44	4269	28.55	4315	29.65	4360	30.74	4405	31.83	4491	33.95	4573	36.01
15000	5319	4320	28.53	4366	29.68	4412	30.64	4457	32.01	4502	33.19	4546	34.37	4590	35.55	4633	36.73	4717	39.06		
16000	5674	4566	33.46	4610	34.67	4653	35.80	4696	37.13	4738	38.37										

PERFORMANCE SHOWN IS WITH DUCTED OUTLET. BHP DOES NOT INCLUDE V-BELT DRIVE LOSS
 WHEN A DESIRED DUTY FALLS BETWEEN PUBLISHED RATINGS EXACT SPEED AND HORSEPOWER CAN BE INTERPOLATED.

SIZE 182AF

OUTLET AREA: 3.45 SQ. FT.

SPEED LIMITATIONS: CLASS I – 2639 RPM

CLASS II – 3441 RPM

CLASS III – 4342 RPM

OUTLET		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	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	522	541	0.10	619	0.14	684	0.18	813	0.27												
2000	580	563	0.11	641	0.16	706	0.20	821	0.29	937	0.41										
2500	725	638	0.16	696	0.21	760	0.26	871	0.38	962	0.49	1055	0.62	1148	0.77						
3000	870	722	0.23	772	0.28	820	0.33	924	0.47	1019	0.61	1097	0.74	1173	0.88	1329	1.21	1480	1.60		
3500	1014	807	0.31	855	0.38	897	0.44	980	0.57	1071	0.74	1155	0.91	1227	1.06	1358	1.37	1491	1.74	1623	2.16
4500	1304	984	0.55	1025	0.64	1064	0.72	1133	0.89	1197	1.05	1263	1.22	1334	1.43	1469	1.87	1582	2.27	1684	2.65
5500	1594	1168	0.90	1203	1.00	1237	1.11	1301	1.32	1359	1.53	1413	1.72	1464	1.91	1574	2.36	1690	2.89	1798	3.43
6500	1884	1357	1.39	1387	1.51	1416	1.63	1473	1.88	1528	2.14	1579	2.38	1625	2.62	1714	3.07	1804	3.57	1901	4.15
7500	2174	1548	2.04	1574	2.18	1600	2.32	1651	2.60	1700	2.90	1748	3.19	1793	3.48	1876	4.02	1953	4.54	2029	5.09
8500	2464	1741	2.88	1764	3.03	1787	3.19	1833	3.51	1877	3.84	1921	4.17	1964	4.50	2044	5.16	2117	5.77	2185	6.36
9500	2754	1935	3.94	1956	4.11	1977	4.28	2018	4.63	2059	4.99	2098	5.36	2138	5.73	2213	6.48	2284	7.20	2350	7.90
10500	3043	2130	5.23	2149	5.42	2169	5.61	2206	5.99	2243	6.39	2280	6.78	2316	7.19	2386	8.01	2454	8.84	2518	9.64
11500	3333	2326	6.79	2344	7.00	2361	7.20	2396	7.62	2430	8.05	2463	8.48	2497	8.91	2562	9.80	2626	10.71	2688	11.61
12500	3623	2522	8.64	2539	8.86	2555	9.09	2587	9.54	2618	10.00	2650	10.46	2681	10.93	2741	11.88	2801	12.86	2860	13.84
13500	3913	2719	10.80	2734	11.04	2749	11.29	2779	11.77	2809	12.26	2838	12.76	2866	13.26	2923	14.28	2979	15.32	3035	16.38
14500	4203	2916	13.31	2930	13.57	2944	13.82	2972	14.34	3000	14.87	3027	15.40	3054	15.94	3107	17.02	3160	18.12	3212	19.24
15500	4493	3114	16.18	3127	16.45	3140	16.73	3166	17.28	3192	17.84	3218	18.41	3243	18.98	3293	20.12	3343	21.29	3392	22.48
16500	4783	3311	19.44	3324	19.73	3336	20.02	3361	20.61	3385	21.21	3409	21.81	3433	22.41	3481	23.62	3528	24.85	3574	26.10
17500	5072	3509	23.11	3521	23.42	3532	23.73	3556	24.36	3579	24.98	3602	25.62	3624	26.26	3669	27.54	3714	28.83	3758	30.15
18500	5362	3707	27.23	3718	27.55	3729	27.88	3751	28.54	3773	29.20	3795	29.87	3816	30.54	3859	31.89	3901	33.26	3943	34.64
19500	5652	3905	31.81	3915	32.15	3926	32.50	3947	33.19	3968	33.89	3988	34.59	4009	35.29	4050	36.72	4090	38.15	4130	39.59
20500	5942	4103	36.88	4113	37.24	4123	37.61	4143	38.34	4163	39.07	4182	39.80	4202	40.54	4241	42.03	4280	43.53	4318	45.04
21500	6232	4301	42.47	4311	42.85	4320	43.23	4339	43.99												

OUTLET		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4200	1217	1766	2.90	1878	3.40	1987	3.94	2093	4.50												
4500	1304	1785	3.08	1889	3.55	1993	4.08	2096	4.65	2196	5.24										
5000	1449	1834	3.46	1925	3.91	2017	4.40	2110	4.94	2204	5.53	2297	6.15	2388	6.80	2476	7.47				
5500	1594	1892	3.92	1979	4.39	2061	4.87	2144	5.37	2228	5.92	2313	6.52	2398	7.16	2483	7.83	2649	9.25		
6000	1739	1948	4.37	2037	4.91	2118	5.43	2195	5.94	2270	6.47	2346	7.03	2423	7.63	2501	8.28	2657	9.67	2811	11.19
6500	1884	1999	4.79	2092	5.42	2176	6.02	2253	6.59	2326	7.15	2396	7.71	2466	8.28	2536	8.88	2678	10.22	2823	11.69
7000	2029	2051	5.21	2142	5.90	2229	6.58	2310	7.25	2385	7.87	2454	8.48	2521	9.07	2586	9.67	2715	10.94	2847	12.34
8000	2319	2177	6.28	2254	6.94	2333	7.67	2413	8.45	2491	9.24	2566	10.02	2636	10.77	2702	11.49	2824	12.87	2939	14.24
9000	2609	2331	7.73	2394	8.36	2459	9.04	2527	9.79	2597	10.60	2668	11.45	2739	12.33	2808	13.22	2938	14.96	3056	16.59
10000	2899	2495	9.46	2553	10.15	2610	10.85	2667	11.56	2725	12.32	2786	13.13	2848	14.01	2912	14.93	3040	16.87	3163	18.83
11000	3188	2662	11.43	2719	12.23	2773	12.99	2825	13.76	2877	14.52	2929	15.31	2981	16.13	3036	17.00	3149	18.97	3265	20.98
12000	3478	2831	13.63	2887	14.54	2939	15.42	2990	16.26	3039	17.11	3087	17.94	3134	18.78	3181	19.63	3278	21.44	3380	23.44
13000	3768	3002	16.09	3056	17.11	3107	18.11	3157	19.08	3205	20.02	3251	20.93	3296	21.84	3340	22.74	3428	24.56	3516	26.47
14000	4058	3176	18.87	3227	19.97	3277	21.07	3326	22.15	3373	23.21	3418	24.24	3462	25.24	3505	26.23	3587	28.17	3669	30.12
15000	4348	3352	21.98	3401	23.17	3449	24.35	3496	25.52	3542	26.69	3586	27.83	3630	28.96	3672	30.06	3752	32.18	3830	34.27
16000	4638	3530	25.48	3577	26.73	3623	27.99	3668	29.25	3712	30.50	3756	31.75	3798	32.98	3840	34.20	3919	36.56	3995	38.83
17000	4928	3711	29.37	3755	30.69	3799	32.01	3842	33.35	3885	34.69	3927	36.03	3968	37.36	4009	38.68	4087	41.27	4162	43.78
18000	5217	3893	33.70	3935	35.08	3977	36.47	4019	37.88	4060	39.29	4100	40.71	4140	42.13	4180	43.54	4256	46.34	4330	49.07
19000	5507	4077	38.48	4117	39.92	4157	41.38	4197	42.85	4236	44.33	4275	45.83	4314	47.33						
20000	5797	4263	43.74	4301	45.25	4339	46.77														

PERFORMANCE SHOWN IS WITH DUCTED OUTLET. BHP DOES NOT INCLUDE V-BELT DRIVE LOSS
 WHEN A DESIRED DUTY FALLS BETWEEN PUBLISHED RATINGS EXACT SPEED AND HORSEPOWER CAN BE INTERPOLATED.

SIZE 200AF

OUTLET AREA: 4.14 SQ. FT.

SPEED LIMITATIONS: CLASS I – 2355 RPM

CLASS II – 3071 RPM

CLASS III – 3869 RPM

OUTLET		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	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2200	531	490	0.12	561	0.17	619	0.22	736	0.34												
3000	725	571	0.19	626	0.24	684	0.32	783	0.45	867	0.59	953	0.75	7039	0.93						
4000	966	696	0.33	740	0.41	779	0.48	863	0.64	949	0.84	1022	1.02	1087	1.19	1213	1.57	1343	2.04	7467	2.56
5000	1208	825	0.54	865	0.64	901	0.73	966	0.91	1031	1.10	1101	1.33	1170	1.57	1288	2.03	1390	2.46	7497	2.94
6000	1449	959	0.83	994	0.95	1028	1.07	1089	1.29	1143	1.50	1196	1.72	1251	1.96	1368	2.53	1475	3.11	7567	3.63
7000	1691	1097	1.22	1128	1.36	1157	1.49	1214	1.77	1266	2.03	1313	2.28	1358	2.52	1457	3.06	1552	3.77	1649	4.40
8000	1932	1238	1.74	1265	1.89	1291	2.04	1342	2.35	1391	2.66	1437	2.97	1479	3.25	1559	3.81	1640	4.42	7726	5.13
9000	2174	1379	2.39	1404	2.55	1427	2.72	1474	3.06	1519	3.42	1563	3.77	1604	4.11	1679	4.76	1749	5.39	7820	6.05
10000	2415	1522	3.19	1544	3.37	1566	3.55	1608	3.93	1650	4.32	1691	4.71	1730	5.10	1803	5.86	1870	6.57	1933	7.27
11000	2657	1666	4.16	1686	4.36	1706	4.56	1745	4.97	1783	5.39	1821	5.82	1858	6.25	1928	7.11	1993	7.93	2053	8.71
12000	2899	1811	5.32	1829	5.53	1847	5.75	1883	6.20	1919	6.65	1954	7.11	1988	7.58	2055	8.52	2118	9.45	2177	10.34
13000	3140	1955	6.68	1973	6.91	1990	7.15	2023	7.63	2056	8.11	2089	8.60	2121	9.10	2184	10.12	2245	11.14	2302	12.14
14000	3382	2101	8.26	2117	8.51	2133	8.77	2164	9.28	2195	9.79	2225	10.32	2255	10.85	2315	11.94	2373	13.04	2428	14.14
15000	3623	2246	10.08	2261	10.35	2276	10.62	2306	11.17	2335	11.72	2363	12.28	2392	12.84	2447	13.99	2502	15.16	2556	16.35
16000	3865	2392	12.16	2406	12.45	2420	12.73	2448	13.31	2475	13.90	2502	14.49	2529	15.08	2582	16.30	2634	17.54	2685	18.80
17000	4106	2538	14.51	2552	14.81	2565	15.11	2591	15.73	2617	16.35	2642	16.97	2668	17.60	2718	18.88	2767	20.18	2816	21.51
18000	4348	2685	17.14	2697	17.46	2710	17.79	2734	18.43	2759	19.09	2783	19.75	2807	20.41	2855	21.75	2902	23.12	2948	24.51
19000	4589	2831	20.09	2843	20.42	2855	20.76	2878	21.44	2902	22.13	2925	22.82	2948	23.52	2993	24.93	3038	26.36	3082	27.82
20000	4831	2978	23.35	2989	23.71	3000	24.06	3022	24.78	3045	25.50	3067	26.23	3089	26.96	3132	28.43	3175	29.93	3217	31.45
21000	5072	3124	26.95	3135	27.33	3146	27.70	3167	28.45	3188	29.21	3209	29.97	3230	30.74	3272	32.28	3313	33.84	3353	35.42
22000	5314	3271	30.92	3281	31.31	3292	31.70	3312	32.48	3332	33.27	3352	34.07	3372	34.87	3412	36.48	3451	38.11	3490	39.76
24000	5797	3565	39.98	3574	40.40	3584	40.83	3602	41.68	3621	42.54	3640	43.40	3658	44.28	3695	46.02	3731	47.79	3767	49.56
26000	6280	3859	50.67	3867	51.13	3876	51.59														

OUTLET		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5000	1208	1595	3.49	1698	4.10	1798	4.75														
6000	1449	1651	4.14	1735	4.69	1820	5.30	1907	5.97	1993	6.69	2078	7.45	2160	8.25						
7000	1691	1737	5.05	1815	5.66	1889	6.26	1960	6.87	2032	7.53	2705	8.24	2779	9.00	2253	9.80	2400	11.54	2542	13.38
8000	1932	1815	5.91	1898	6.69	1975	7.44	2045	8.14	2111	8.83	2174	9.57	2237	10.22	2299	10.95	2427	12.57	2556	14.37
9000	2174	1896	6.81	1974	7.65	2052	8.54	2127	9.42	2196	10.27	2267	11.08	2321	11.86	2379	12.63	2491	14.18	2602	15.83
10000	2415	1996	7.99	2062	8.79	2132	9.67	2202	10.62	2273	11.54	2340	12.59	2405	13.55	2465	14.48	2576	16.23	2680	17.93
11000	2657	2111	9.47	2168	10.25	2227	11.08	2288	12.00	2352	12.98	2416	14.03	2480	15.11	2543	16.19	2660	18.31	2767	20.31
12000	2899	2233	11.19	2286	12.02	2338	12.86	2391	13.73	2446	14.67	2502	15.68	2560	16.76	2679	17.89	2736	20.24	2848	22.59
13000	3140	2357	13.11	2408	14.03	2457	14.93	2506	15.84	2554	16.76	2603	17.72	2654	18.74	2706	19.84	2814	22.21	2923	24.73
14000	3382	2481	15.21	2532	16.25	2580	17.25	2626	18.23	2672	19.20	2777	20.77	2762	21.18	2807	22.22	2903	24.49	3002	27.00
15000	3623	2607	17.52	2657	18.67	2704	19.79	2750	20.87	2793	21.92	2836	22.96	2878	24.00	2920	25.05	3005	27.25	3093	29.66
16000	3865	2735	20.06	2783	21.31	2829	22.53	2874	23.73	2917	24.90	2959	26.02	2999	27.14	3039	28.25	3118	30.48	3197	32.82
17000	4106	2863	22.85	2910	24.19	2955	25.51	2999	26.82	3042	28.10	3083	29.35	3123	30.56	3161	31.75	3236	34.11	3310	36.49
18000	4348	2994	25.92	3039	27.34	3083	28.76	3125	30.16	3167	31.55	3206	32.91	3247	34.25	3285	35.55	3358	38.07	3429	40.57
19000	4589	3125	29.29	3169	30.79	3211	32.28	3253	33.78	3293	35.26	3333	36.73	3372	38.18	3409	39.60	3482	42.35	3550	45.00
20000	4831	3259	32.99	3300	34.55	3341	36.12	3381	37.70	3421	39.27	3459	40.84	3497	42.39	3534	43.92	3606	46.90	3674	49.78
21000	5072	3393	37.03	3433	38.65	3472	40.29	3511	41.94	3549	43.60	3587	45.25	3624	46.90	3660	48.53	3731	51.74	3798	54.85
22000	5314	3529	41.42	3567	43.11	3605	44.81	3642	46.54	3679	48.27	3716	50.00	3752	51.73	3787	53.46	3856	56.87		
23000	5556	3665	46.20	3702	47.95	3738	49.71	3774	51.50	3810	53.30	3846	55.11								
24000	5797	3802	51.36	3838	53.18	3873	55.01														

PERFORMANCE SHOWN IS WITH DUCTED OUTLET. BHP DOES NOT INCLUDE V-BELT DRIVE LOSS
 WHEN A DESIRED DUTY FALLS BETWEEN PUBLISHED RATINGS EXACT SPEED AND HORSEPOWER CAN BE INTERPOLATED.

SIZE 222AF

OUTLET AREA: 5.12 SQ. FT.

SPEED LIMITATIONS: **CLASS I – 2202 RPM**

CLASS II – 2870 RPM

CLASS III – 3616 RPM

OUTLET		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	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2600	508	444	0.14	509	0.20	562	0.25	671	0.40												
3000	586	470	0.16	534	0.24	588	0.30	680	0.44	774	0.61										
4000	781	558	0.28	602	0.35	648	0.43	741	0.62	815	0.80	884	0.98	954	1.19	1094	1.69				
5000	977	653	0.43	693	0.53	729	0.61	800	0.81	877	1.05	946	1.28	1005	1.50	1115	1.95	1228	2.50	1340	3.13
6000	1172	752	0.64	788	0.76	822	0.88	881	1.09	940	1.31	1004	1.59	1067	1.88	1175	2.43	1268	2.95	1361	3.52
7000	1367	854	0.92	886	1.06	917	1.20	974	1.46	1024	1.70	1074	1.96	1127	2.25	1236	2.93	1333	3.59	1416	4.19
8000	1563	958	1.29	987	1.44	1015	1.59	1068	1.91	1117	2.20	1161	2.48	1204	2.76	1296	3.42	1392	4.20	1481	4.97
9000	1758	1064	1.74	1090	1.91	1115	2.08	1165	2.44	1211	2.78	1254	3.12	1293	3.43	1370	4.07	1452	4.83	1538	5.69
10000	1953	1171	2.30	1194	2.49	1218	2.68	1263	3.06	1307	3.46	1348	3.84	1387	4.21	1457	4.91	1527	5.63	1601	6.46
11000	2148	1278	2.98	1300	3.18	1322	3.39	1364	3.81	1404	4.24	1444	4.67	1481	5.10	1550	5.89	1613	6.66	1676	7.45
12000	2344	1387	3.79	1407	4.01	1427	4.23	1466	4.68	1504	5.14	1541	5.62	1577	6.09	1644	7.00	1705	7.85	1763	8.69
13000	2539	1496	4.74	1515	4.97	1533	5.21	1569	5.69	1605	6.19	1640	6.70	1674	7.21	1739	8.22	1799	9.19	1854	10.10
14000	2734	1606	5.84	1623	6.09	1640	6.34	1674	6.86	1707	7.39	1740	7.93	1772	8.47	1835	9.58	1893	10.65	1948	11.68
15000	2930	1715	7.10	1732	7.37	1748	7.64	1780	8.19	1811	8.75	1842	9.32	1872	9.90	1932	11.08	1988	12.25	2042	13.39
16000	3125	1826	8.54	1841	8.82	1856	9.11	1886	9.70	1916	10.29	1945	10.89	1973	11.50	2030	12.75	2085	14.01	2137	15.26
18000	3516	2046	11.99	2060	12.31	2074	12.63	2101	13.28	2127	13.94	2153	14.61	2179	15.28	2230	16.66	2281	18.07	2330	19.49
20000	3906	2268	16.27	2280	16.63	2293	16.99	2317	17.71	2341	18.44	2365	19.17	2389	19.91	2435	21.42	2481	22.95	2526	24.51
22000	4297	2490	21.50	2501	21.89	2513	22.28	2535	23.07	2557	23.87	2579	24.67	2600	25.47	2643	27.11	2685	28.77	2727	30.46
24000	4688	2712	27.75	2723	26.17	2733	28.60	2754	29.46	2774	30.32	2794	31.19	2814	32.07	2854	33.83	2893	35.63	2931	37.44
26000	5078	2935	35.12	2945	35.58	2954	36.04	2973	36.97	2992	37.90	3011	38.84	3029	39.78	3066	41.69	3103	43.61	3139	45.55
28000	5469	3158	43.71	3167	44.20	3176	44.70	3194	45.69	3211	46.69	3229	47.70	3246	48.71	3280	50.75	3314	52.81	3348	54.88
30000	5859	3381	53.60	3390	54.13	3398	54.66	3414	55.72	3431	56.79	3447	57.87	3463	58.95	3496	61.13	3528	63.32	3559	65.53
32000	6250	3605	64.90	3612	65.46	3620	66.03														

OUTLET		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6500	1270	1470	4.45	1557	5.15	1644	5.93	1730	6.76	1813	7.62										
7500	1465	1526	5.22	1599	5.88	1673	6.59	1748	7.37	1823	8.22	1899	9.12	1973	10.07	2046	11.06				
8500	1660	1591	6.14	1663	6.89	1730	7.61	1795	8.35	1859	9.13	1925	9.97	1991	10.87	2058	11.83	2191	13.90	2320	16.12
9500	1855	1649	6.98	1726	7.91	1795	8.79	1859	9.62	1919	10.43	1977	11.25	2035	12.09	2093	12.97	2211	14.93	2331	17.09
10500	2051	1709	7.85	1783	8.86	1855	9.89	1922	10.91	1985	11.87	2043	12.79	2098	13.69	2151	14.59	2255	16.44	2361	18.45
11500	2246	1780	8.91	1845	9.90	1912	10.97	1979	12.09	2044	13.23	2106	14.33	2163	15.40	2217	16.41	2317	18.38	2414	20.37
12500	2441	1863	10.25	1919	11.18	1978	12.21	2039	13.34	2101	14.53	2163	15.76	2222	16.99	2279	18.20	2383	20.49	2478	22.65
13500	2637	1953	11.81	2004	12.75	2055	13.74	2109	14.81	2165	15.98	2222	17.23	2279	18.53	2336	19.86	2444	22.50	2543	25.01
14500	2832	2045	13.55	2094	14.56	2141	15.57	2189	16.61	2238	17.72	2289	18.92	2341	20.21	2395	21.56	2501	24.39	2603	27.23
15500	3027	2139	15.45	2186	16.55	2232	17.63	2276	18.71	2321	19.81	2366	20.96	2413	22.19	2461	23.50	2560	26.34	2660	29.36
16500	3223	2234	17.51	2280	18.72	2325	19.89	2367	21.04	2409	22.18	2451	23.34	2493	24.54	2536	25.80	2626	28.54	2719	31.57
17500	3418	2329	19.72	2375	21.05	2419	22.34	2460	23.58	2501	24.80	2541	26.01	2580	27.23	2619	28.48	2700	31.12	2785	34.06
18500	3613	2425	22.12	2470	23.55	2513	24.95	2555	26.32	2594	27.63	2633	28.92	2670	30.20	2708	31.49	2782	34.12	2859	36.94
19500	3809	2522	24.71	2566	26.24	2608	27.75	2649	29.22	2688	30.66	2726	32.06	2763	33.42	2799	34.77	2870	37.48	2941	40.28
20500	4004	2620	27.52	2662	29.14	2704	30.74	2744	32.32	2783	33.88	2820	35.39	2857	36.86	2892	38.30	2960	41.15	3028	44.01
21500	4199	2718	30.56	2760	32.26	2800	33.95	2839	35.63	2878	37.29	2915	38.92	2951	40.51	2986	42.07	3053	45.08	3118	48.07
23500	4590	2919	37.41	2958	39.24	2996	41.09	3033	42.94	3070	44.79	3105	46.62	3141	48.44	3175	50.23	3241	53.71	3303	57.05
25500	4980	3123	45.35	3159	47.32	3194	49.30	3230	51.30	3264	53.31	3299	55.32	3332	57.32	3366	59.31	3430	63.24	3491	67.05
27500	5371	3329	54.50	3363	56.59	3396	58.70	3430	60.83	3462	62.98	3495	65.15	3527	67.31	3559	69.48	3621	73.79		
29500	5762	3538	64.93	3570	67.15	3601	69.39														

PERFORMANCE SHOWN IS WITH DUCTED OUTLET. BHP DOES NOT INCLUDE V-BELT DRIVE LOSS
 WHEN A DESIRED DUTY FALLS BETWEEN PUBLISHED RATINGS EXACT SPEED AND HORSEPOWER CAN BE INTERPOLATED.

SIZE 245AF

OUTLET AREA: 6.21 SQ. FT.

SPEED LIMITATIONS: CLASS I – 1862 RPM

CLASS II – 2427 RPM

CLASS III – 3059 RPM

OUTLET		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	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3500	564	399	0.19	454	0.26	502	0.34	590	0.52												
4000	644	425	0.23	476	0.31	523	0.40	604	0.58	681	0.79	753	1.02								
5000	805	485	0.34	526	0.43	567	0.53	645	0.75	712	0.97	775	1.21	836	1.47						
6000	966	549	0.48	586	0.59	620	0.71	689	0.95	754	1.21	813	1.48	867	1.75	971	2.34	1070	3.00		
7000	1127	617	0.67	650	0.80	681	0.93	740	1.20	799	1.48	856	1.79	909	2.10	1004	2.72	1093	3.39	1181	4.13
8000	1288	686	0.91	716	1.06	745	1.21	799	1.51	850	1.81	907	2.14	952	2.48	1046	3.19	1130	3.90	1208	4.65
9000	1449	757	1.20	785	1.37	811	1.54	861	1.87	908	2.21	953	2.56	999	2.92	1089	3.70	1172	4.49	1247	5.29
10000	1610	829	1.56	855	1.75	879	1.94	925	2.31	969	2.68	1011	3.06	1052	3.44	1134	4.26	1215	5.13	1290	6.01
11000	1771	902	1.99	926	2.20	948	2.40	992	2.81	1033	3.22	1072	3.64	1110	4.05	1185	4.90	1260	5.82	1333	6.78
13000	2093	1050	3.10	1071	3.34	1090	3.58	1129	4.07	1165	4.55	1200	5.04	1235	5.52	1300	6.50	1363	7.49	1426	8.53
15000	2415	1200	4.58	1218	4.85	1235	5.13	1269	5.69	1302	6.25	1334	6.81	1365	7.37	1425	8.49	1482	9.62	1537	10.75
17000	2738	1351	6.48	1367	6.80	1382	7.11	1413	7.74	1443	8.38	1472	9.01	1500	9.65	1555	10.92	1608	12.19	1658	13.46
19000	3060	1502	8.87	1517	9.23	1531	9.58	1559	10.28	1586	10.99	1613	11.70	1639	12.41	1689	13.83	1738	15.25	1785	16.67
21000	3382	1655	11.81	1668	12.20	1681	12.59	1706	13.37	1732	14.15	1756	14.93	1780	15.71	1827	17.28	1872	18.85	1916	20.41
23000	3704	1807	15.35	1820	15.77	1832	16.20	1855	17.05	1878	17.90	1901	18.76	1923	19.61	1967	21.33	2009	23.05	2051	24.76
25000	4026	1961	19.54	1972	20.00	1983	20.46	2005	21.39	2026	22.32	2047	23.24	2068	24.18	2109	26.04	2149	27.90	2188	29.77
27000	4348	2114	24.45	2124	24.95	2135	25.45	2155	26.44	2175	27.44	2195	28.45	2214	29.45	2253	31.46	2290	33.48	2327	35.49
29000	4670	2268	30.13	2277	30.67	2287	31.20	2306	32.27	2325	33.35	2343	34.42	2362	35.50	2398	37.66	2433	39.82	2468	41.98
31000	4992	2421	36.64	2430	37.21	2439	37.78	2457	38.93	2475	40.08	2493	41.22	2510	42.37	2544	44.68	2577	46.99	2610	49.30
33000	5314	2575	44.04	2584	44.65	2592	45.26	2609	46.47	2626	47.69	2642	48.91	2659	50.14	2691	52.59	2723	55.04	2754	57.50
35000	5636	2729	52.38	2737	53.02	2745	53.67	2761	54.96	2777	56.25	2793	57.55	2808	58.85	2839	61.44	2869	64.04	2899	66.65
37000	5958	2883	61.72	2891	62.40	2899	63.09	2914	64.45	2929	65.82	2944	67.18	2958	68.55	2988	71.30	3016	74.05	3045	76.80
39000	6280	3038	72.12	3045	72.84	3052	73.56														

OUTLET		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7500	1208	1274	5.17	1352	6.02																
8000	1288	1286	5.45	1362	6.30	1435	7.21	1507	8.15												
9000	1449	1318	6.11	1387	6.97	1456	7.89	1523	8.85	1589	9.86	1654	10.90								
10000	1610	1359	6.89	1424	7.79	1487	8.72	1549	9.69	1611	10.71	1672	11.77	1732	12.87	1790	14.01				
11000	1771	1402	7.75	1466	8.72	1526	9.69	1585	10.69	1642	11.72	1699	12.79	1755	13.90	1810	15.05	1919	17.46	2025	20.00
12000	1932	1445	8.65	1509	9.71	1569	10.76	1626	11.82	1681	12.90	1734	13.99	1787	15.11	1839	16.27	1941	18.70	2042	21.28
13000	2093	1490	9.62	1552	10.75	1612	11.90	1669	13.04	1723	14.19	1775	15.34	1825	16.50	1875	17.69	1971	20.14	2066	22.73
14000	2254	1539	10.70	1597	11.87	1655	13.08	1712	14.32	1766	15.55	1818	16.79	1867	18.02	1915	19.26	2008	21.79	2098	24.40
15000	2415	1592	11.91	1646	13.11	1701	14.37	1756	15.66	1809	16.97	1861	18.30	1911	19.62	1958	20.94	2049	23.59	2136	26.29
16000	2576	1649	13.26	1700	14.50	1751	15.78	1802	17.11	1854	18.48	1904	19.87	1954	21.29	2001	22.70	2092	25.52	2177	28.34
18000	2899	1769	16.35	1815	17.70	1861	19.07	1907	20.47	1952	21.90	1998	23.37	2043	24.89	2089	26.43	2178	29.59	2263	32.77
20000	3221	1895	19.96	1938	21.46	1981	22.96	2022	24.47	2064	25.99	2104	27.54	2145	29.12	2186	30.72	2268	34.05	2350	37.50
22000	3543	2025	24.15	2066	25.80	2105	27.44	2144	29.09	2183	30.74	2221	32.40	2258	34.07	2296	35.77	2370	39.23	2444	42.81
24000	3865	2158	28.97	2196	30.77	2234	32.56	2271	34.35	2307	36.15	2343	37.94	2378	39.75	2413	41.56	2482	45.21	2550	48.94
26000	4187	2294	34.48	2330	36.42	2366	38.36	2401	40.30	2435	42.25	2469	44.19	2503	46.14	2535	48.08	2600	51.99	2664	55.93
28000	4509	2432	40.72	2466	42.81	2500	44.90	2533	46.99	2566	49.09	2598	51.18	2630	53.27	2662	55.37	2723	59.55	2784	63.76
30000	4931	2572	47.77	2605	50.01	2637	52.25	2668	54.49	2700	56.73	2730	58.97	2761	61.21	2791	63.45	2850	67.94	2907	72.43
32000	5153	2714	55.67	2745	58.06	2775	60.45	2805	62.83	2835	65.22	2865	67.61	2894	70.00	2922	72.39	2979	77.18	3034	81.96
34000	5475	2856	64.49	2886	67.03	2915	69.56	2944	72.10	2973	74.63	3001	77.17	3028	79.71	3056	82.25				
36000	5797	3001	74.28	3029	76.96	3057	79.65														

PERFORMANCE SHOWN IS WITH DUCTED OUTLET. BHP DOES NOT INCLUDE V-BELT DRIVE LOSS
 WHEN A DESIRED DUTY FALLS BETWEEN PUBLISHED RATINGS EXACT SPEED AND HORSEPOWER CAN BE INTERPOLATED.

SIZE 270AF

OUTLET AREA: 7.54 SQ. FT.

SPEED LIMITATIONS: CLASS I – 1691 RPM

CLASS II – 2204 RPM

CLASS III – 2778 RPM

OUTLET	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	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4000	531	354	0.2	405	0.3	449	0.4	532	0.6												
5000	663	392	0.3	437	0.4	479	0.5	552	0.7	620	1.0	685	1.3								
6000	796	437	0.4	475	0.5	512	0.6	583	0.9	644	1.2	702	1.5	758	1.8						
7000	928	485	0.5	519	0.7	551	0.8	616	1.1	676	1.4	729	1.7	779	2.0	876	2.7	968	3.5		
8000	1061	535	0.7	566	0.9	595	1.0	652	1.3	708	1.7	761	2.0	809	2.4	896	3.1	983	3.9	1065	4.8
10000	1326	638	1.2	665	1.4	690	1.6	738	1.9	784	2.3	829	2.7	874	3.1	959	4.0	1034	4.9	1105	5.8
12000	1592	746	1.8	769	2.1	791	2.3	833	2.7	873	3.2	912	3.6	950	4.1	1025	5.0	1099	6.1	1167	7.2
14000	1857	855	2.7	875	3.0	895	3.3	933	3.8	969	4.3	1004	4.8	1037	5.4	1102	6.4	1167	7.5	1231	8.7
16000	2122	966	3.9	984	4.2	1002	4.5	1036	5.1	1069	5.7	1101	6.3	1131	6.9	1190	8.1	1247	9.3	1304	10.6
18000	2387	1078	5.4	1094	5.7	1110	6.1	1142	6.7	1172	7.4	1201	8.1	1229	6.7	1284	10.1	1336	11.4	1387	12.8
20000	2653	1191	7.2	1205	7.6	1220	8.0	1249	8.7	1277	9.4	1304	10.2	1330	10.9	1381	12.4	1429	13.9	1476	15.4
22000	2918	1304	9.4	1318	9.8	1331	10.2	1357	11.1	1383	11.9	1408	12.7	1433	13.5	1480	15.2	1526	16.8	1570	18.5
24000	3183	1417	12.1	1430	12.5	1443	13.0	1467	13.8	1491	14.7	1514	15.6	1537	16.5	1582	18.3	1625	20.1	1667	21.9
26000	3448	1532	15.2	1543	15.7	1555	16.1	1578	17.1	1600	18.1	1622	19.0	1643	20.0	1685	21.9	1726	23.9	1765	25.8
28000	3714	1646	18.8	1657	19.3	1668	19.8	1689	20.9	1710	21.9	1730	22.9	1751	24.0	1790	26.1	1829	28.2	1866	30.3
30000	3979	1760	22.9	1771	23.5	1781	24.1	1801	25.2	1821	26.3	1840	27.4	1859	28.5	1896	30.7	1933	33.0	1969	35.2
32000	4244	1875	27.7	1885	28.3	1894	28.9	1913	30.1	1932	31.2	1950	32.4	1968	33.6	2004	36.0	2038	38.4	2072	40.8
34000	4509	1990	33.1	1999	33.7	2008	34.3	2026	35.6	2043	36.8	2061	38.1	2078	39.3	2112	41.9	2145	44.4	2177	46.9
36000	4775	2105	39.1	2113	39.7	2122	40.4	2139	41.7	2156	43.1	2172	44.4	2189	46.7	2221	48.4	2252	51.1	2283	53.8
38000	5040	2220	45.8	2228	46.5	2236	47.2	2252	48.6	2268	50.0	2284	51.4	2300	52.8	2330	55.6	2360	58.5	2390	61.3
41000	5438	2393	57.3	2400	58.0	2408	58.8	2423	60.3	2438	61.8	2452	63.3	2467	64.8	2496	67.9	2524	70.9	2552	74.0
44000	5836	2566	70.5	2573	71.3	2580	72.2	2594	73.8	2608	75.4	2621	77.0	2635	78.7	2662	81.9	2689	85.2	2715	88.5
47000	6233	2739	85.7	2745	86.6	2752	87.5	2765	89.2	2778	90.9										

OUTLET	3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		8" SP		9" SP		
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	1194	1155	6.2	1227	7.2																
10000	1326	1173	6.8	1241	7.8	1307	8.9	1371	10.1												
11000	1459	1199	7.5	1261	8.5	1323	9.6	1384	10.8	1444	12.0	1502	13.3	1559	14.6						
12000	1592	1229	8.3	1289	9.3	1346	10.5	1403	11.6	1460	12.9	1515	14.2	1570	15.5	1624	16.9				
13000	1724	1261	9.1	1319	10.2	1375	11.4	1429	12.6	1482	13.8	1534	15.1	1586	16.5	1637	17.9	1738	20.8	1835	23.9
14000	1857	1293	10.0	1352	11.2	1406	12.4	1458	13.7	1509	15.0	1559	16.3	1608	17.6	1656	19.0	1752	22.0	1846	25.1
15000	1989	1326	10.9	1384	12.2	1438	13.6	1490	14.9	1539	16.2	1587	17.5	1634	18.9	1680	20.3	1771	23.3	1861	26.4
16000	2122	1360	11.9	1416	13.3	1471	14.7	1522	16.1	1571	17.5	1618	18.9	1664	20.4	1708	21.8	1795	24.8	1881	27.9
18000	2387	1437	14.2	1487	15.6	1537	17.2	1587	18.7	1636	20.3	1683	21.9	1728	23.5	1771	25.1	1854	28.3	1933	31.5
20000	2653	1522	16.9	1567	18.5	1613	20.0	1658	21.7	1703	23.4	1748	25.1	1792	26.8	1836	28.6	1918	32.1	1995	35.6
22000	2918	1613	20.1	1655	21.8	1696	23.4	1737	25.1	1778	26.8	1819	28.7	1860	30.5	1902	32.4	1982	36.2	2060	40.1
24000	3183	1707	23.7	1747	25.5	1786	27.3	1824	29.1	1862	30.9	1899	32.8	1937	34.7	1974	36.7	2050	40.7	2124	44.8
2S000	3448	1804	27.8	1842	29.7	1878	31.7	1914	33.6	1950	35.6	1985	37.5	2020	39.5	2054	41.5	2124	45.7	2193	50.0
28000	3714	1903	32.3	1939	34.4	1974	36.5	2008	38.6	2042	40.7	2075	42.8	2108	44.9	2140	47.1	2205	51.4	2269	55.8
30000	3979	2003	37.5	2037	39.7	2071	41.9	2104	44.2	2136	46.4	2168	48.7	2199	50.9	2230	53.2	2291	57.7	2351	62.3
32000	4244	2105	43.2	2138	45.6	2170	47.9	2201	50.3	2232	52.7	2263	55.1	2293	57.5	2323	59.9	2381	64.7	2438	69.5
34000	4509	2209	49.5	2240	52.0	2271	54.6	2301	57.1	2331	59.6	2360	62.2	2389	64.7	2417	67.3	2473	72.3	2528	77.5
37000	4907	2366	60.2	2395	63.0	2424	65.7	2453	68.5	2481	71.3	2508	74.0	2535	76.8	2562	79.6	2615	85.1	2667	90.6
40000	5305	2526	72.6	2553	75.5	2580	78.5	2607	81.5	2633	84.5	2660	87.5	2685	90.5	2711	93.5	2761	99.4		
43000	5703	2687	86.6	2713	89.6	2738	93.1	2764	96.3												

PERFORMANCE SHOWN IS WITH DUCTED OUTLET. BHP DOES NOT INCLUDE V-BELT DRIVE LOSS
 WHEN A DESIRED DUTY FALLS BETWEEN PUBLISHED RATINGS EXACT SPEED AND HORSEPOWER CAN BE INTERPOLATED.

SIZE 300AF

OUTLET AREA: 9.31 SQ. FT.

SPEED LIMITATIONS: CLASS I – 1555 RPM

CLASS II – 2028 RPM

CLASS III – 2555 RPM

OUTLET		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	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5000	537	325	0.3	371	0.40	410	0.50	485	0.70												
6000	644	353	0.3	395	0.50	433	0.60	500	0.90	562	1.20	621	1.50								
7000	752	386	0.4	422	0.60	458	0.70	522	1.00	579	1.40	632	1.70	684	2.10						
8000	859	421	0.6	454	0.70	485	0.90	546	1.20	601	1.60	651	1.90	698	2.30	790	3.20				
10000	1074	496	0.9	524	1.10	550	1.30	600	1.70	650	2.10	697	2.50	741	3.00	820	3.90	896	4.90	969	5.90
12000	1289	573	1.4	598	1.60	621	1.80	665	2.30	707	2.70	748	3.20	789	3.70	867	4.80	935	5.90	7000	7.00
14000	1504	653	2.0	675	2.30	696	2.50	735	3.10	773	3.60	809	4.10	844	4.70	915	5.80	983	7.70	7045	8.30
16000	1719	734	2.8	754	3.10	773	3.40	809	4.00	843	4.60	876	5.20	907	5.80	970	7.10	1032	8.40	1093	9.80
18000	1933	817	3.8	834	4.20	852	4.50	885	5.20	916	5.90	946	6.50	976	7.20	1032	8.60	1087	10.00	1143	11.50
20000	2148	900	5.1	916	5.50	932	5.80	962	6.60	991	7.30	1020	8.10	1047	8.80	1100	10.30	1150	11.80	1200	13.40
22000	2363	983	6.6	998	7.00	1013	7.40	1041	8.30	1068	9.10	1095	9.90	1120	10.70	1170	12.40	1217	14.00	1263	15.70
24000	2578	1068	8.4	1081	8.90	1095	9.30	1121	10.20	1147	11.10	1171	12.00	1195	12.90	1242	14.70	1287	16.50	1330	18.30
26000	2793	1152	10.5	1165	11.00	1177	11.50	1202	12.50	1226	13.40	1249	14.40	1272	15.40	1316	17.30	1358	19.30	1399	21.20
28000	3008	1237	13.0	1249	13.50	1261	14.00	1284	15.10	1306	16.10	1328	17.20	1350	18.20	1391	20.30	1431	22.40	1470	24.50
30000	3222	1322	15.8	1333	16.40	1344	16.90	1366	18.10	1387	19.20	1408	20.30	1428	21.40	1468	23.60	1506	25.90	1543	28.10
32000	3437	1407	19.1	1418	19.60	1428	20.20	1449	21.40	1469	22.60	1488	23.80	1508	25.00	1545	27.40	1582	29.80	1617	32.20
34000	3652	1492	22.7	1502	23.30	1512	24.00	1532	25.20	1551	26.50	1569	27.70	1588	29.00	1624	31.50	1659	34.10	1693	36.60
36000	3867	1578	26.8	1587	27.40	1597	28.10	1615	29.40	1633	30.80	1651	32.10	1669	33.50	1703	36.10	1736	38.80	1769	41.50
38000	4082	1664	31.3	1673	32.00	1681	32.70	1699	34.10	1716	35.60	1733	37.00	1750	38.40	1783	41.20	1815	44.00	1846	46.90
43000	4619	1878	45.0	1886	45.80	1894	46.50	1909	48.10	1925	49.70	1940	51.30	1955	52.90	1985	56.10	2014	59.30	2042	62.50
48000	5156	2093	62.1	2100	63.00	2107	63.90	2121	65.60	2135	67.40	2149	69.20	2163	71.00	2190	74.50	2216	78.10	2242	81.70
53000	5693	2308	83.2	2315	84.20	2321	85.10	2334	87.10	2347	89.00	2359	91.00	2372	93.00	2396	96.90	2421	100.80	2445	104.80
58000	6230	2523	108.6	2529	109.70	2535	110.70	2547	112.90												

OUTLET		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12000	1289	1062	8.7	1124	9.4	1184	10.7	1243	12.1												
13000	1396	1080	8.8	1139	10.1	1196	11.4	1252	12.8	1307	14.3	1360	15.8								
14000	1504	1102	9.6	1157	10.8	1211	12.2	1265	13.6	1317	15.1	1369	16.7	1420	18.3	1469	19.9				
15000	1611	1125	10.4	1179	11.7	1230	13.1	1281	14.5	1331	16.0	1387	17.6	1429	19.2	1477	20.9	1571	24.4		
16000	1719	1150	11.2	1202	12.6	1253	14.1	1301	15.5	1349	17.0	1396	18.6	1442	20.2	1489	21.9	1579	25.5	1667	29.2
17000	1826	1174	12.1	1226	13.6	1276	15.1	1323	16.6	1369	18.2	1414	19.7	1459	21.4	1503	23.7	1590	26.6	1675	30.4
18000	1933	1198	13.0	1250	14.6	1300	16.2	1347	17.8	1392	19.4	1436	21.0	1478	22.7	1520	24.4	1604	28.0	1686	37.8
19000	2041	1223	14.0	1274	15.6	1324	17.3	1371	19.0	1416	20.7	1458	22.4	1500	24.1	1541	25.8	1621	29.4	1700	33.2
20000	2148	1249	15.0	1299	16.7	1348	18.5	1395	20.3	1440	22.0	1482	23.8	1523	25.5	1563	27.3	1641	31.0	1716	34.8
22000	2363	1308	17.4	1353	19.1	1398	21.0	1443	22.9	1488	24.8	1530	26.8	1571	28.7	1677	30.6	1766	34.5	1757	38.5
24000	2578	1372	20.1	1413	21.9	1454	23.8	1496	25.8	1538	27.8	1579	29.9	1619	32.0	1659	34.1	1773	38.4	1804	42.6
26000	2793	1439	23.2	1478	25.1	1576	27.1	1554	29.2	1592	31.2	1631	33.4	1669	35.6	1707	37.9	1787	42.4	1852	47.0
28000	3008	1508	26.6	1545	28.7	1501	30.8	1617	32.9	1653	35.1	1688	37.3	1723	39.6	1759	41.9	1830	46.7	1900	57.6
30000	3222	1579	30.4	1615	32.6	1549	34.9	1683	37.1	1717	39.4	1750	41.7	1783	44.0	1876	46.4	1882	51.3	1949	56.5
32000	3437	1652	34.6	1636	36.9	1719	39.3	1751	41.7	1783	44.1	1815	46.6	1846	49.0	1877	51.5	1939	56.5	2001	61.8
34000	3652	1726	39.2	1756	41.7	1790	44.2	1822	46.8	1852	49.3	1882	51.9	1912	54.4	1942	57.0	2000	62.2	2059	67.6
39000	4189	1915	52.7	1945	55.6	1974	58.5	2002	61.4	2030	64.3	2058	67.2	2085	70.1	2112	73.1	2165	78.9	2217	84.8
44000	4726	2110	69.3	2137	72.6	2163	75.9	2169	79.2	2215	82.5	2241	85.8	2266	89.1	2291	92.3	2339	98.9	2387	105.5
49000	5263	2308	89.6	2333	93.3	2357	96.9	2381	100.6	2405	104.3	2429	107.9	2452	111.6	2475	115.2	2521	122.6		
54000	5800	2509	113.9	2532	117.9	2555	122.0														

PERFORMANCE SHOWN IS WITH DUCTED OUTLET. BHP DOES NOT INCLUDE V-BELT DRIVE LOSS
 WHEN A DESIRED DUTY FALLS BETWEEN PUBLISHED RATINGS EXACT SPEED AND HORSEPOWER CAN BE INTERPOLATED.

SIZE 330AF

OUTLET AREA: 11.27 SQ. FT.

SPEED LIMITATIONS: **CLASS I – 1416 RPM**

CLASS II – 1846 RPM

CLASS III – 2326 RPM

OUTLET		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	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	532	295	0.3	338	0.4	377	0.6	450	0.9	512	1.3										
8000	710	341	0.5	376	0.6	409	0.8	471	1.2	528	1.6	582	2.0	632	2.5						
10000	887	393	0.7	423	0.9	451	1.1	504	1.5	555	1.9	603	2.4	649	2.9	736	4.0	814	5.2		
12000	1065	449	1.1	475	1.3	500	1.5	546	2.0	591	2.5	634	3.0	676	3.5	755	4.7	829	5.9	899	7.3
14000	1242	506	1.5	530	1.7	553	2.0	595	2.6	634	3.1	673	3.7	710	4.2	783	5.4	851	6.8	917	8.2
16000	1420	566	2.0	587	2.3	607	2.6	646	3.2	683	3.9	717	4.5	751	5.1	817	6.4	881	7.8	941	9.3
18000	1597	626	2.7	645	3.1	664	3.4	700	4.1	734	4.8	766	5.5	797	6.2	857	7.6	916	9.0	972	10.6
20000	1775	687	3.6	705	3.9	722	4.3	755	5.0	787	5.8	817	6.6	846	7.4	902	8.9	956	10.5	1008	12.1
22000	1952	749	4.6	765	5.0	781	5.4	812	6.2	842	7.0	870	7.9	898	8.7	950	10.4	1000	12.2	1049	13.9
24000	2130	812	5.8	827	6.2	841	6.7	870	7.5	897	8.4	924	9.3	951	10.3	1000	12.1	1047	14.0	1093	15.9
26000	2307	875	7.2	889	7.7	902	8.1	929	9.1	955	10.0	980	11.0	1005	12.0	1052	14.0	1097	16.0	1140	18.1
28000	2484	938	8.8	951	9.3	963	9.8	988	10.8	1013	11.9	1037	12.9	1060	14.0	1105	16.1	1149	18.3	1190	20.5
31000	2751	1033	11.7	1045	12.3	1056	12.8	1079	14.0	1101	15.1	1123	16.2	1145	17.4	1187	19.7	1228	22.1	1267	24.5
35000	3106	1161	16.6	1171	17.2	1181	17.8	1202	19.0	1222	20.3	1242	21.6	1261	22.9	1299	25.5	1337	28.1	1373	30.8
39000	3461	1289	22.6	1298	23.3	1308	24.0	1326	25.3	1344	26.7	1362	28.1	1380	29.6	1415	32.4	1449	35.4	1482	38.3
43000	3815	1417	30.0	1426	30.7	1434	31.5	1451	33.0	1468	34.5	1484	36.0	1501	37.6	1533	40.7	1564	43.9	1595	47.1
47000	4170	1546	38.8	1554	39.6	1562	40.4	1577	42.1	1593	43.8	1608	45.4	1623	47.1	1652	50.5	1682	54.0	1710	57.4
51000	4525	1675	49.3	1682	50.1	1689	51.0	1704	52.8	1718	54.6	1732	56.4	1746	58.3	1774	61.9	1801	65.6	1828	69.4
55000	4880	1804	61.5	1811	62.4	1818	63.4	1831	65.3	1844	67.2	1857	69.2	1870	71.1	1896	75.1	1922	79.1	1947	83.1
59000	5235	1933	75.6	1940	76.6	1946	77.6	1959	79.7	1971	81.8	1983	83.8	1995	85.9	2020	90.1	2044	94.4	2067	98.6
63000	5590	2063	91.7	2069	92.8	2075	93.9	2086	96.1	2098	98.3	2110	100.5	2121	102.7	2144	107.2	2166	111.7	2189	116.3
67000	5945	2192	110.0	2198	111.1	2204	112.3	2215	114.6	2226	117.0	2236	119.3	2247	121.7	2269	126.5	2290	131.2	2311	136.0
71000	6300	2322	130.6	2327	131.8																

OUTLET		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14000	1242	980	9.7	1040	11.3	1096	12.9	1149	14.5	1200	16.1										
16000	1420	1000	10.9	1057	12.5	1112	14.3	1165	16.0	1216	17.8	1264	19.6	1311	21.5	1355	23.4				
18000	1597	1027	12.2	1081	13.9	1132	15.7	1183	17.6	1232	19.6	1280	21.5	1326	23.5	1371	25.5	1456	29.7	1536	33.9
20000	1775	1060	13.8	1110	15.5	1159	17.4	1206	19.4	1253	21.4	1299	23.5	1343	25.6	1387	27.7	1472	32.1	1552	36.6
22000	1952	1097	15.7	1144	17.5	1190	19.3	1235	21.3	1279	23.4	1323	25.5	1365	27.8	1407	30.0	1489	34.7	1567	39.5
24000	2130	1138	17.8	1182	19.7	1226	21.6	1268	23.6	1310	25.7	1352	27.9	1392	30.2	1432	32.5	1510	37.3	1585	42.4
26000	2307	1182	20.7	1224	22.2	1265	24.2	1305	26.3	1345	28.4	1384	30.6	1423	32.9	1461	35.3	1536	40.2	1608	45.4
28000	2484	1230	22.7	1269	24.9	1307	27.1	1345	29.3	1383	31.5	1421	33.8	1458	36.1	1494	38.5	1565	43.4	1635	48.7
30000	2662	1279	25.5	1316	27.8	1353	30.2	1389	32.6	1424	34.9	1460	37.3	1495	39.7	1530	42.1	1598	47.1	1665	52.4
32000	2839	1330	28.5	1365	31.0	1400	33.5	1435	36.0	1469	38.6	1502	41.7	1535	43.6	1569	46.1	1634	51.3	1698	56.6
34000	3017	1382	31.8	1416	34.4	1450	37.1	1483	39.8	1515	42.4	1547	45.7	1579	47.8	1610	50.5	1673	55.9	1734	61.4
36000	3194	1434	35.3	1468	38.1	1500	40.9	1532	43.8	1563	46.6	1594	49.4	1624	52.3	1654	55.1	1714	60.8	1773	66.5
38000	3372	1488	39.2	1521	42.2	1552	45.1	1583	48.1	1613	51.0	1643	54.0	1672	57.0	1701	60.0	1758	66.0	1814	72.0
40000	3549	1542	43.4	1574	46.5	1605	49.6	1635	52.7	1664	55.8	1693	58.9	1721	62.1	1749	65.2	1804	71.6	1857	77.9
42000	3727	1598	48.0	1628	51.2	1658	54.4	1687	57.7	1716	60.9	1744	64.2	1771	67.5	1798	70.8	1851	77.4	1903	84.0
46000	4082	1710	58.2	1739	61.6	1767	65.1	1794	68.7	1821	72.2	1848	75.8	1874	79.3	1900	82.9	1950	90.1	1999	97.4
51000	4525	1854	73.1	1880	76.9	1906	80.8	1932	84.7	1957	88.5	1982	92.4	2007	96.4	2031	100.3	2078	108.2	2124	116.2
56000	4969	2001	90.9	2025	95.0	2049	99.2	2073	103.4	2097	107.6	2120	111.8	2143	116.1	2166	120.4	2211	129.0	2254	137.7
61000	5413	2151	111.6	2173	116.1	2195	120.6	2217	125.1	2239	129.6	2261	134.2	2283	138.8	2304	143.4				
66000	5856	2302	135.6	2323	140.4																

PERFORMANCE SHOWN IS WITH DUCTED OUTLET. BHP DOES NOT INCLUDE V-BELT DRIVE LOSS
 WHEN A DESIRED DUTY FALLS BETWEEN PUBLISHED RATINGS EXACT SPEED AND HORSEPOWER CAN BE INTERPOLATED.

SIZE 365AF

OUTLET AREA: 13.79 SQ. FT.

SPEED LIMITATIONS: CLASS I – 1333 RPM

CLASS II – 1698 RPM

CLASS III – 2140 RPM

OUTLET		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	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7000	508	265	0.4	305	0.5	341	0.7	408	1.1												
10000	725	317	0.6	347	0.8	377	1.0	432	1.4	484	1.9	532	2.5	577	3.0	657	4.2				
13000	943	377	1.0	403	1.3	427	1.5	473	2.0	517	2.6	559	3.1	599	3.8	675	5.1	746	6.6	810	8.1
16000	1160	441	1.6	463	1.9	485	2.2	524	2.8	562	3.4	598	4.1	634	4.7	702	6.2	766	7.8	828	9.5
19000	1378	508	2.4	527	2.7	546	3.1	582	3.8	615	4.5	647	5.3	678	6.0	739	7.6	798	9.2	853	11.0
22000	1595	576	3.4	593	3.8	610	4.2	642	5.0	673	5.9	702	6.7	730	7.6	784	9.3	837	11.1	888	12.9
25000	1813	645	4.7	661	5.2	676	5.6	705	6.5	733	7.5	761	8.5	787	9.4	836	11.4	883	13.4	930	15.3
28000	2030	716	6.4	730	6.9	743	7.4	770	8.4	796	9.4	821	10.5	845	11.6	892	13.8	935	16.0	978	18.2
31000	2248	787	8.4	799	8.9	812	9.5	836	10.6	860	11.8	883	12.9	906	14.1	950	16.5	991	18.9	1031	21.4
34000	2466	858	10.8	870	11.4	881	12.0	904	13.2	926	14.5	947	15.8	969	17.0	1010	19.6	1049	22.3	1086	24.9
38000	2756	954	14.7	964	15.4	975	16.1	995	17.4	1015	18.8	1035	20.2	1054	21.6	1092	24.5	1129	27.4	1164	30.4
42000	3046	1050	19.6	1059	20.3	1069	21.1	1087	22.6	1106	24.1	1124	25.6	1142	27.1	1177	30.3	1211	33.5	1244	36.7
46000	3336	1146	25.4	1155	26.2	1164	27.0	1181	28.7	1198	30.3	1214	32.0	1231	33.6	1263	37.0	1295	40.5	1326	44.0
50000	3626	1243	32.3	1251	33.2	1259	34.1	1275	35.8	1291	37.6	1306	39.4	1322	41.2	1352	44.9	1381	48.6	1410	52.3
54000	3916	1340	40.4	1347	41.3	1355	42.3	1370	44.2	1384	46.1	1399	48.0	1413	50.0	1441	53.9	1469	57.9	1496	61.9
58000	4206	1437	49.7	1444	50.7	1451	51.8	1465	53.8	1479	55.8	1492	57.9	1505	60.0	1532	64.2	1558	68.4	1584	72.7
62000	4496	1534	60.4	1541	61.5	1547	62.6	1560	64.8	1573	67.0	1586	69.2	1599	71.4	1624	75.8	1648	80.3	1672	84.9
66000	4786	1632	72.6	1638	73.7	1644	74.9	1656	77.2	1668	79.5	1680	81.9	1692	84.2	1716	88.9	1739	93.7	1762	98.5
70000	5076	1729	86.3	1735	87.5	1741	88.7	1752	91.2	1764	93.7	1775	96.1	1786	98.6	1809	103.6	1831	108.6	1853	113.7
74000	5366	1826	101.7	1832	103.0	1837	104.2	1848	106.8	1859	109.4	1870	112.0	1881	114.6	1902	119.9	1923	125.2	1944	130.5
78000	5656	1924	118.8	1929	120.1	1934	121.5	1945	124.2	1955	126.9	1966	129.7	1976	132.4	1996	138.0	2016	143.5	2036	149.1
82000	5946	2022	137.7	2027	139.1	2032	140.5	2042	143.4	2051	146.3	2061	149.1	2071	152.0	2090	157.8	2110	163.7	2128	169.5
86000	6236	2119	158.5	2124	160.0	2129	161.5	2138	164.5												

OUTLET		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
16000	1160	886	11.2	941	13.0	992	14.9	1041	16.8												
19000	1378	907	12.9	960	14.9	1010	17.0	1058	19.1	1105	21.2	1149	23.4	1191	25.6	1232	27.9				
22000	1595	938	14.9	986	17.0	1033	19.2	1079	21.5	1123	23.8	1167	26.2	1209	28.6	1250	31.1	1345	36.1	1399	41.3
25000	1813	976	17.4	1021	19.5	1064	21.8	1107	24.1	1148	26.6	1189	29.1	1229	31.8	1268	34.4	1345	39.8	1477	45.4
28000	2030	1020	20.4	1061	22.6	1102	24.9	1142	27.3	1181	29.8	1219	32.4	1257	35.2	1294	37.9	1366	43.7	1436	49.7
31000	2248	1069	23.8	1107	26.3	1145	28.7	1182	31.2	1219	33.7	1255	36.4	1290	39.1	1325	42.0	1393	47.9	1460	54.1
34000	2466	1123	27.6	1158	30.3	1193	33.0	1227	35.6	1262	38.3	1296	41.1	1329	43.9	1362	46.7	1427	52.7	1490	59.1
37000	2683	1179	31.8	1212	34.7	1245	37.6	1277	40.6	1309	43.5	1341	46.4	1372	49.3	1403	52.3	1465	58.4	1525	64.8
40000	2901	1237	36.5	1269	39.6	1300	42.8	1330	45.9	1360	49.1	1390	52.2	1419	55.4	1449	58.6	1507	64.9	1564	71.4
43000	3118	1296	41.7	1327	45.1	1356	48.4	1386	51.8	1414	55.2	1442	58.6	1470	62.0	1498	65.4	1552	72.1	1607	79.0
46000	3336	1356	47.5	1386	51.0	1415	54.6	1433	58.2	1470	61.8	1497	65.4	1524	69.0	1550	72.7	1602	79.9	1653	87.2
49000	3553	1418	53.9	1447	57.6	1474	61.4	1501	65.2	1528	69.0	1554	72.8	1579	76.7	1604	80.5	1654	88.3	1702	96.0
52000	3771	1481	60.9	1508	64.8	1535	68.8	1561	72.8	1587	76.9	1612	80.9	1636	85.0	1661	89.0	1708	97.2	1755	105.4
56000	4061	1566	71.3	1592	75.5	1617	79.8	1642	84.1	1667	88.4	1691	92.7	1714	97.1	1738	101.4	1783	110.2	1827	119.0
60000	4351	1653	83.0	1677	87.5	1701	92.1	1725	96.6	1748	101.2	1771	105.8	1794	110.4	1817	115.1	1860	124.4	1903	133.8
64000	4641	1741	96.2	1764	101.0	1787	105.8	1809	110.6	1832	115.4	1854	120.3	1875	125.2	1897	130.1	1939	140.0	1980	150.0
69000	4931	1830	110.9	1851	115.9	1873	120.9	1895	126.0	1916	131.1	1937	136.3	1958	141.5	1979	146.6	2019	157.1	2059	167.6
72000	5221	1919	127.1	1940	132.4	1961	137.7	1982	143.1	2002	148.4	2022	153.9	2042	159.3	2062	164.8	2101	175.8	2139	186.8
76000	5511	2010	145.1	2030	150.7	2050	156.2	2069	161.8	2089	167.5	2108	173.1	2127	178.9						
80000	5801	2101	164.9	2121	170.7	2139	176.5														

PERFORMANCE SHOWN IS WITH DUCTED OUTLET. BHP DOES NOT INCLUDE V-BELT DRIVE LOSS
 WHEN A DESIRED DUTY FALLS BETWEEN PUBLISHED RATINGS EXACT SPEED AND HORSEPOWER CAN BE INTERPOLATED.

SIZE 402AF

OUTLET AREA: 16.77 SQ. FT.

SPEED LIMITATIONS: CLASS I – 1143 RPM

CLASS II – 1491 RPM

CLASS III – 1879 RPM

OUTLET	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	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	537	240	0.5	273	0.6	304	0.9	365	1.3												
13000	775	292	0.8	318	1.1	343	1.3	389	1.9	432	2.5	475	3.1	516	3.9						
17000	1014	349	1.4	372	1.7	394	2.1	433	2.7	469	3.4	504	4.1	537	4.8	603	6.5	667	8.4	727	10.4
21000	1252	411	2.2	431	2.6	450	3.0	485	3.8	517	4.7	548	5.5	577	6.3	633	8.1	686	10.0	739	12.0
25000	1491	475	3.3	492	3.7	509	4.2	540	5.2	570	6.2	598	7.2	624	8.2	675	10.2	722	12.2	768	14.3
29000	1729	541	4.8	556	5.3	570	5.8	599	6.9	626	8.1	652	9.2	676	10.4	723	12.7	766	15.0	808	17.3
33000	1968	608	6.7	621	7.3	634	7.9	659	9.1	684	10.4	708	11.7	731	13.0	774	15.6	815	18.3	854	20.9
37000	2206	675	9.1	687	9.7	699	10.4	722	11.8	744	13.2	766	14.6	788	16.1	829	19.0	867	22.0	904	24.9
41000	2445	743	12.1	754	12.8	764	13.5	785	15.0	806	16.5	826	18.0	846	19.6	885	22.9	921	26.1	956	29.4
45000	2683	812	15.6	821	16.4	831	17.2	850	18.8	869	20.4	888	22.1	907	23.8	943	27.3	977	30.9	1010	34.5
49000	2922	880	19.9	889	20.7	898	21.6	916	23.3	934	25.0	951	26.8	968	28.7	1002	32.4	1035	36.3	1066	40.1
53000	3160	949	24.8	958	25.7	966	26.7	983	28.5	999	30.4	1015	32.3	1031	34.3	1063	38.3	1094	42.4	1124	46.5
57000	3399	1018	30.6	1026	31.6	1034	32.5	1050	34.5	1065	36.5	1080	38.6	1095	40.6	1125	44.9	1154	49.2	1182	53.7
61000	3637	1088	37.2	1095	38.2	1102	39.3	1117	41.4	1131	43.5	1145	45.7	1160	47.9	1187	52.4	1215	56.9	1242	61.6
65000	3876	1157	44.7	1164	45.8	1171	46.9	1185	49.1	1198	51.4	1212	53.7	1225	56.0	1251	60.7	1277	65.6	1303	70.5
70000	4174	1244	55.4	1251	56.6	1257	57.8	1270	60.2	1282	62.7	1295	65.1	1307	67.6	1332	72.6	1356	77.7	1380	83.0
75000	4472	1331	67.8	1337	69.1	1343	70.4	1355	72.9	1367	75.5	1379	78.1	1390	80.8	1413	86.1	1436	91.5	1459	97.0
80000	4770	1418	81.9	1424	83.3	1430	84.6	1441	87.4	1452	90.1	1463	92.9	1474	95.7	1496	101.3	1517	107.1	1539	112.9
85000	5069	1506	97.9	1511	99.3	1516	100.8	1527	103.7	1537	106.6	1548	109.5	1558	112.5	1579	118.4	1599	124.5	1619	130.6
90000	5367	1593	115.9	1598	117.4	1603	118.9	1613	121.9	1623	125.0	1633	128.1	1643	131.2	1662	137.5	1682	143.9	1701	150.3
95000	5665	1681	135.9	1685	137.5	1690	139.1	1700	142.3	1709	145.6	1718	148.8	1728	152.1	1746	158.7	1765	165.4	1783	172.1
100000	5963	1768	158.1	1773	159.8	1777	161.5	1786	164.9	1795	168.3	1804	171.7	1813	175.2	1831	182.1	1848	189.1	1865	196.1
105000	6261	1856	182.7	1860	184.5	1864	186.2	1873	189.8												

OUTLET	3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		8" SP		9" SP		
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20000	1193	789	13.8	840	16.2	888	18.6														
24000	1431	806	15.9	853	18.3	899	20.9	943	23.6	986	26.4	1028	29.3	1067	32.3						
28000	1670	839	18.9	880	21.3	920	23.9	959	26.6	999	29.5	1039	32.5	1077	35.6	1115	38.8	1187	45.4	1255	52.3
32000	1908	880	22.5	918	25.1	954	27.8	989	30.5	1025	33.4	1060	36.4	1094	39.5	1129	42.7	1198	49.6	1265	56.9
36000	2147	927	26.7	961	29.6	995	32.4	1028	35.4	1060	38.4	1092	41.4	1124	44.6	1155	47.8	1217	54.6	1279	61.9
40000	2385	977	31.4	1009	34.6	1041	37.8	1072	40.9	1102	44.1	1132	47.4	1161	50.7	1190	54.0	1247	61.0	1303	68.2
44000	2624	1029	36.7	1060	40.2	1090	43.7	1120	47.2	1148	50.7	1176	54.1	1204	57.7	1231	61.2	1285	68.4	1337	75.9
48000	2862	1083	42.5	1113	46.3	1142	50.2	1170	54.0	1197	57.8	1224	61.6	1250	65.4	1276	69.2	1327	76.9	1376	84.7
52000	3101	1139	49.0	1167	53.1	1195	57.3	1222	61.5	1248	65.6	1274	69.8	1299	73.9	1324	78.0	1372	86.2	1419	94.5
56000	3339	1196	56.2	1223	60.7	1250	65.1	1276	69.6	1301	74.1	1326	78.6	1350	83.0	1374	87.5	1420	96.4	1466	105.2
60000	3578	1254	64.2	1280	69.0	1306	73.7	1331	78.5	1355	83.3	1379	88.1	1403	92.9	1426	97.7	1470	107.3	1514	116.8
64000	3816	1313	73.1	1339	78.1	1363	83.2	1387	88.3	1411	93.3	1434	98.5	1456	103.6	1479	108.7	1522	118.9	1564	129.2
63000	4055	1374	83.0	1398	88.2	1421	93.6	1445	98.9	1467	104.3	1490	109.7	1512	115.1	1533	120.6	1575	131.4	1616	142.3
72000	4293	1435	93.8	1458	99.3	1481	104.9	1503	110.6	1525	116.2	1547	121.9	1568	127.6	1589	133.4	1629	144.9	1669	156.4
76000	4532	1497	105.7	1519	111.5	1541	117.3	1562	123.2	1584	129.2	1604	135.2	1625	141.2	1645	147.2	1685	159.3	1723	171.4
80000	4770	1560	118.8	1581	124.8	1602	130.9	1623	137.0	1643	143.2	1663	149.5	1683	155.8	1703	162.1	1741	174.8	1779	187.5
84000	5009	1623	133.1	1644	139.3	1664	145.6	1683	152.0	1703	158.5	1723	165.0	1742	171.5	1761	178.1	1798	191.4	1835	204.7
88000	5247	1688	148.6	1707	155.1	1726	161.6	1745	168.2	1764	175.0	1783	181.7	1802	188.5	1820	195.4	1856	209.2		
93000	5546	1768	169.8	1787	176.6	1805	183.5	1823	190.4	1841	197.4	1859	204.5	1877	211.6						
98000	5844	1850	193.3	1867	200.3																

PERFORMANCE SHOWN IS WITH DUCTED OUTLET. BHP DOES NOT INCLUDE V-BELT DRIVE LOSS
 WHEN A DESIRED DUTY FALLS BETWEEN PUBLISHED RATINGS EXACT SPEED AND HORSEPOWER CAN BE INTERPOLATED.

SIZE 445AF

OUTLET AREA: 20.49 SQ. FT.

SPEED LIMITATIONS: CLASS I – 1040 RPM

CLASS II – 1356 RPM

CLASS III – 1708 RPM

OUTLET	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	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10000	488	210	0.5	242	0.7	272	1.0	329	1.5												
15000	732	256	0.9	281	1.2	304	1.5	347	2.1	388	2.9	428	3.7	466	4.5						
20000	976	309	1.6	330	2.0	350	2.4	386	3.2	420	4.0	452	4.8	483	5.7	544	7.7	603	10.0	658	12.4
25000	1220	366	2.5	384	3.0	401	3.5	434	4.5	463	5.5	492	6.5	518	7.5	570	9.6	619	11.8	668	14.4
30000	1464	425	3.9	441	4.4	456	5.0	485	6.2	512	7.4	538	8.6	562	9.8	608	12.1	657	14.6	694	17.2
35000	1708	486	5.7	500	6.3	513	7.0	539	8.3	564	9.7	587	11.1	610	12.5	652	15.3	692	18.0	730	20.8
40000	1952	548	8.0	560	8.8	572	9.5	596	11.0	618	12.5	640	14.1	661	15.7	700	18.9	737	22.1	773	25.3
45000	2196	611	11.0	622	11.8	633	12.6	654	14.3	674	16.0	694	17.7	714	19.5	751	23.1	785	26.7	819	30.3
50000	2440	675	14.7	684	15.6	694	16.5	713	18.3	732	20.1	750	22.0	768	24.0	803	27.9	836	31.9	867	35.9
55000	2684	738	19.2	747	20.2	756	21.1	773	23.1	791	25.1	808	27.1	824	29.2	857	33.5	888	37.8	918	42.2
60000	2928	802	24.6	811	25.6	819	26.6	835	28.7	851	30.9	866	33.1	882	35.3	912	39.9	942	44.6	970	49.4
65000	3172	867	30.8	874	32.0	882	33.1	897	35.3	911	37.7	926	40.0	940	42.4	969	47.3	997	52.3	1024	57.4
70000	3416	931	38.1	938	39.3	945	40.5	959	43.0	973	45.4	986	47.9	1000	50.5	1026	55.7	1053	61.0	1078	66.4
75000	3660	996	46.5	1002	47.8	1009	49.1	1022	51.7	1035	54.3	1047	57.0	1060	59.7	1085	65.2	1110	70.8	1134	76.5
80000	3904	1060	56.1	1066	57.5	1073	58.8	1085	61.6	1097	64.4	1109	67.2	1121	70.0	1145	75.8	1168	81.8	1191	87.8
86000	4197	1138	69.3	1144	70.7	1149	72.2	1161	75.1	1172	78.1	1183	81.1	1195	84.1	1217	90.3	1239	96.6	1260	103.0
92000	4490	1216	84.3	1221	85.9	1227	87.5	1237	90.6	1248	93.8	1258	97.0	1269	100.2	1290	106.7	1310	113.4	1331	120.1
98000	4783	1294	101.5	1299	103.2	1304	104.8	1314	108.1	1324	111.5	1334	114.9	1344	118.3	1363	125.2	1383	132.3	1402	139.4
104000	5076	1372	120.9	1376	122.6	1381	124.4	1391	127.9	1400	131.5	1410	135.1	1419	138.7	1438	146.0	1456	153.3	1474	160.8
110000	5368	1450	142.6	1454	144.4	1459	146.3	1468	150.0	1477	153.8	1486	157.6	1495	161.4	1512	169.0	1530	176.8	1547	184.7
116000	5661	1528	166.8	1532	168.7	1536	170.7	1545	174.6	1553	178.6	1562	182.5	1570	186.5	1587	194.6	1604	202.7	1620	211.0
122000	5954	1606	193.6	1610	195.6	1614	197.7	1622	201.8	1630	205.9	1638	210.10	1647	214.3	1663	222.8	1678	231.3	1694	239.9
128000	6247	1684	223.1	1688	225.3	1692	227.4	1700	231.8	1707	236.10										

OUTLET	3-1/2" SP			4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
24000	1171	714	16.6	761	19.5	804	22.4														
29000	1415	730	19.2	772	22.2	814	25.3	855	28.6	894	32.0	931	35.50	967	39.1						
34000	1659	760	22.9	797	25.9	833	29.0	869	32.3	905	35.8	941	39.40	976	43.2	1011	47.1	1076	55.2	1138	63.5
39000	1903	798	27.4	832	30.6	865	33.8	897	37.2	929	40.7	961	44.30	992	48.1	1024	52.1	1086	60.4	1147	69.2
44000	2147	842	32.7	873	36.2	903	39.7	933	43.3	963	46.9	991	50.60	1020	54.5	1048	58.4	1104	66.7	1160	75.6
49000	2391	888	38.6	918	42.5	946	46.4	974	50.3	1002	54.2	1029	58.20	1055	62.2	1081	66.3	1133	74.7	1183	83.6
54000	2635	937	45.2	965	49.5	992	53.9	1019	58.1	1045	62.4	1070	66.70	1095	71.0	1120	75.3	1168	84.2	1215	93.3
59000	2879	987	52.6	1014	57.3	1040	62.0	1066	66.7	1090	71.4	1115	76.10	1138	80.8	1162	85.4	1207	94.9	1252	104.4
64000	3123	1039	60.8	1065	65.9	1090	71.0	1114	76.2	1138	81.3	1161	86.40	1184	91.5	1206	96.5	1250	106.7	1292	116.8
69000	3367	1093	70.0	1117	75.4	1141	80.9	1165	86.5	1187	92.0	1210	97.50	1232	103.0	1253	108.5	1295	119.5	1336	130.4
74000	3612	1147	80.2	1171	86.0	1194	91.9	1216	97.8	1238	103.7	1260	109.60	1281	115.5	1302	121.4	1342	133.3	1381	145.0
79000	3856	1203	91.5	1225	97.7	1247	103.9	1269	110.2	1290	116.5	1311	122.80	1331	129.1	1351	135.4	1390	148.0	1428	160.7
84000	4100	1259	104.1	1281	110.6	1302	117.2	1323	123.8	1343	130.4	1363	137.10	1383	143.8	1402	150.5	1440	163.9	1477	177.4
89000	4344	1316	118.0	1337	124.8	1357	131.7	1377	138.6	1397	145.6	1416	152.70	1435	159.7	1454	166.8	1491	181.0	1526	195.2
94000	4588	1374	133.3	1394	140.4	1413	147.6	1433	154.9	1452	162.2	1470	169.60	1489	177.0	1507	184.4	1543	199.4	1577	214.4
99000	4832	1433	150.1	1452	157.5	1470	165.0	1489	172.6	1507	180.2	1525	187.90	1543	195.7	1561	203.5	1595	219.2	1629	234.9
104000	5076	1492	168.4	1510	176.1	1528	183.9	1546	191.8	1563	199.8	1581	207.80	1598	215.9	1615	224.0	1649	240.4	1681	256.9
109000	5320	1552	188.4	1569	196.4	1586	204.5	1603	212.7	1620	221.0	1637	229.30	1654	237.7	1670	246.2	1703	263.2		
114000	5564	1612	210.1	1629	218.4	1645	226.8	1662	235.3	1678	243.8	1694	252.50								
119000	5808	1673	233.6	1689	242.2	1705	250.9														

PERFORMANCE SHOWN IS WITH DUCTED OUTLET. BHP DOES NOT INCLUDE V-BELT DRIVE LOSS
 WHEN A DESIRED DUTY FALLS BETWEEN PUBLISHED RATINGS EXACT SPEED AND HORSEPOWER CAN BE INTERPOLATED.

SIZE 490AF

OUTLET AREA: 24.85 SQ. FT.

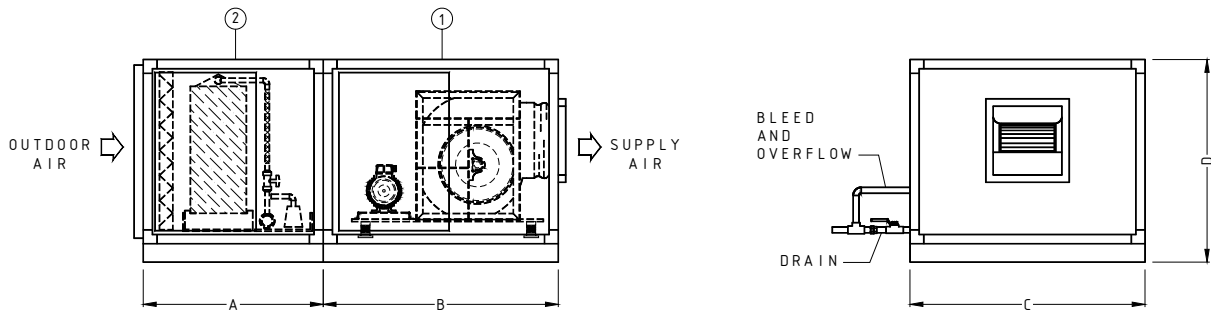
SPEED LIMITATIONS: CLASS I – 936 RPM CLASS II – 1221 RPM CLASS III – 1550 RPM

OUTLET	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	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13000	523	195	0.7	222	0.9	248	1.2	299	2													
19000	765	237	1.2	259	1.6	279	2	317	2.7	353	3.6	389	4.6	423	5.7							
25000	1006	285	2	304	2.5	321	3	354	4	384	5	412	6	440	7.1	494	9.6	547	12.4	596	75.3	
31000	1247	335	3.2	352	3.8	367	4.4	396	5.6	423	6.9	448	8.1	472	9.3	518	11.9	562	14.7	606	17.8	
37000	1489	388	4.8	402	5.5	416	6.2	442	7.7	466	9.2	489	10.6	511	12.1	553	15	592	18.1	630	21.2	
43000	1730	443	7.1	455	7.8	467	8.6	490	10.3	513	12	534	13.7	554	15.4	592	18.8	628	22.2	663	25.7	
49000	1972	498	9.9	509	10.8	520	11.7	541	13.5	561	15.4	580	17.3	599	19.3	635	23.2	668	27.1	700	37	
55000	2213	554	13.5	564	14.5	573	15.5	592	17.5	611	19.6	629	21.7	646	23.9	680	28.3	711	32.7	742	37.1	
61000	2455	610	18	619	19.1	628	20.1	645	22.3	662	24.6	679	26.9	695	29.3	727	34.1	756	38.9	785	43.8	
67000	2696	667	23.4	675	24.5	683	25.7	699	28.1	714	30.5	730	33	745	35.6	775	40.8	803	46.1	830	51.4	
73000	2938	724	29.8	731	31	739	32.3	753	34.9	768	37.5	782	40.2	796	42.9	824	48.5	851	54.2	876	60	
79000	3179	781	37.3	788	38.6	795	40	808	42.7	822	45.5	835	48.4	848	51.3	874	57.3	899	63.4	924	69.6	
36000	3461	848	47.5	854	49	861	50.5	873	53.5	886	56.5	898	59.6	910	62.7	934	69.1	958	75.6	981	82.3	
93000	3742	915	59.6	921	61.1	927	62.7	938	66	950	69.2	961	72.5	973	75.8	995	82.6	1017	89.6	1039	96.7	
100000	4024	982	73.5	988	75.2	993	76.9	1004	80.4	1015	83.8	1025	87.4	1036	90.9	1057	98.1	1078	105.5	1098	113.1	
107000	4306	1049	89.6	1055	91.4	1060	93.2	1070	96.9	1080	100.6	1090	104.3	1100	108.1	1120	115.7	1139	123.5	1158	131.5	
114000	4588	1117	107.8	1122	109.7	1126	111.6	1136	115.5	1146	119.5	1155	123.4	1164	127.4	1183	135.5	1201	143.7	1219	152.1	
121000	4869	1184	128.4	1189	130.4	1193	132.5	1202	136.6	1211	140.8	1220	144.9	1229	149.2	1247	157.7	1264	166.3	1281	175.1	
128000	5151	1252	151.5	1256	153.6	1260	155.8	1269	160.1	1277	164.5	1286	168.9	1294	173.4	1311	182.3	1327	191.4	1344	200.6	
135000	5433	1319	177.2	1323	179.4	1327	181.7	1336	186.3	1344	190.9	1352	195.6	1360	200.2	1376	209.7	1391	219.2	1407	228.8	
142000	5714	1387	205.7	1391	208.1	1395	210.5	1402	215.3	1410	220.1	1418	225	1425	229.9	1440	239.8	1455	249.7	1470	259.8	
149000	5996	1454	237.1	1458	239.6	1462	242.1	1469	247.2	1477	252.2	1484	257.3	1491	262.5	1506	272.8	1520	283.2	1534	293.7	
156000	6278	1522	271.6	1526	274.2	1529	276.9	1536	282.1	1543	287.4	1550	292.8									

OUTLET	3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		8" SP		9" SP			
	CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30000	1207	648	20.7	690	24.2	729	27.8															
36000	1449	663	23.9	700	27.5	738	31.3	774	35.4	810	39.5	844	43.8	876	48.2							
42000	1690	690	28.4	723	32	756	35.8	788	39.9	821	44.1	853	48.6	884	53.2	915	58.0	975	67.9	1030	78.2	
48000	1932	725	33.9	755	37.8	785	41.8	814	45.9	843	50.2	871	54.6	899	59.2	928	64.0	984	74.2	1038	85	
54000	2173	764	40.3	792	44.5	819	48.9	846	53.2	873	57.7	899	62.3	924	67.0	950	71.8	1000	81.9	1051	92.7	
60000	2414	805	47.4	832	52.2	858	56.9	883	61.7	908	66.5	932	71.3	956	76.2	980	81.2	1026	91.6	1072	102.4	
66000	2656	849	55.4	874	60.7	899	65.9	923	71.1	946	76.4	969	81.3	992	86.9	1074	92.2	1057	103	1100	114.1	
72000	2897	894	64.2	918	70.0	941	75.7	964	81.5	987	87.2	1009	92.9	1030	98.6	1051	104.3	1093	115.8	1133	127.5	
78000	3139	940	74.1	963	80.3	986	86.5	1008	92.8	1029	99	1050	105.3	1071	111.5	1091	117.6	1131	130	1169	142.4	
84000	3380	987	85.1	1010	91.7	1031	98.4	1052	105.2	1073	111.9	1093	118.6	1113	125.3	1133	132	1171	145.3	1207	158.6	
90000	3622	1036	97.3	1057	104.4	1078	111.5	1098	118.7	1118	125.9	1138	133.1	1157	140.3	1176	147.5	1212	161.9	1248	176.1	
96000	3863	1085	110.9	1105	118.4	1126	125.9	1145	133.5	1164	141.2	1183	148.8	1202	156.5	1220	164.2	1255	179.5	1290	194.9	
102000	4105	1135	125.9	1155	133.8	1174	141.7	1193	149.8	1211	157.8	1230	165.9	1248	174	1265	182.2	1299	198.5	1333	214.9	
108000	4346	1186	142.4	1205	150.7	1223	159	1241	167.5	1259	176	1277	184.5	1294	193.1	1311	201.7	1344	218.9	1377	236.2	
114000	4588	1237	160.6	1255	169.3	1273	178	1291	186.8	1308	195.7	1325	204.7	1342	213.6	1358	222.7	1390	240.8	1422	259	
120000	4829	1290	180.5	1307	169.5	1324	198.6	1341	207.8	1357	217.1	1374	226.5	1390	235.9	1406	245.4	1437	264.4	1468	283.5	
126000	5070	1342	202.3	1359	211.6	1375	221.1	1391	230.7	1407	240.4	1423	250.1	1439	259.9	1454	269.8	1485	289.7	1514	309.6	
132000	5312	1396	226	1411	235.7	1427	245.5	1442	255.4	1458	265.5	1473	275.6	1488	285.8	1503	296.1	1533	316.8			
138000	5553	1449	251.7	1464	261.8	1473	271.9	1494	282.2	1509	292.6	1524	303.1	1536	313.7							
144000	5795	1503	279.5	1518	269.9	1532	300.5	1546	311.1													

PERFORMANCE SHOWN IS WITH DUCTED OUTLET. BHP DOES NOT INCLUDE V-BELT DRIVE LOSS
 WHEN A DESIRED DUTY FALLS BETWEEN PUBLISHED RATINGS EXACT SPEED AND HORSEPOWER CAN BE INTERPOLATED.

GENERAL ARRANGEMENT AND DIMENSIONS



LEGENDS:

- 1 - Supply fan module complete with fan, motor, fan and motor base, fan sheave, adjustable motor sheave, flexible connector at fan discharge, spring vibration isolator, and suitable V-belts.
- 2 - Evaporative cooler module complete with evaporative media, stainless steel media casing, stainless steel railing, stainless steel water tank, stainless steel distribution basin, PVC supply pipe header and lines, float valve for make-up water line, water pump, 2" thick aluminum washable filter, overflow and drain lines.

UNIT MODEL	A				B	C	D
	EVAPORATIVE MEDIA THICKNESS						
	6"	8"	12"	24"			
EC2.5	680	680	830	980	980	700	775
EC4	680	680	830	980	1280	1000	775
EC6	680	680	830	980	1280	1000	1075
EC9	680	680	830	980	1280	1300	1075
EC12	680	680	830	980	1580	1300	1375
EC16	680	680	830	980	1580	1600	1375
EC20	680	680	830	980	1880	1600	1675
EC24	680	680	830	980	1880	1900	1675
EC30	680	680	830	980	2180	1900	2000
EC35	680	680	830	980	2180	2200	2000
EC40	830	830	980	1130	2480	2200	2300
EC50	830	830	980	1130	2480	2650	2300
EC60	830	830	980	1130	2480	2650	2650
EC70	980	980	980	1130	2480	3200	2650
EC80	980	980	980	1130	2700	3750	2800
EC90	980	980	980	1130	2700	3750	2800

Notes:

1. Add 50mm on the dimensions "C" and "D" for 50mm panel.
2. All dimensions in mm unless specified.
3. D includes unit base frame height. EC2.5 to EC24 = 75mm, EC30 to EC50 = 100mm, EC60 to EC90 = 150mm.

MODULE AND INTERNAL COMPONENTS WEIGHT

UNIT MODEL	PANEL THICKNESS	SUPPLY FAN MODULE	EVAPORATIVE COOLER MODULE			
			6"	8"	12"	24"
2.5	25MM	148	87	87	101	116
	50MM	175	101	101	117	133
4	25MM	218	107	107	123	139
	50MM	254	123	123	141	159
6	25MM	244	125	125	143	161
	50MM	283	143	143	163	183
9	25MM	282	146	146	167	187
	50MM	325	166	166	189	211
12	25MM	360	166	166	188	210
	50MM	411	188	188	212	236
16	25MM	404	190	190	214	238
	50MM	459	214	214	240	266
20	25MM	495	211	211	238	264
	50MM	559	238	238	266	294
24	25MM	546	237	237	265	293
	50MM	613	266	266	296	326
30	25MM	650	261	261	291	321
	50MM	728	291	291	324	356
35	25MM	707	289	289	320	352
	50MM	779	316	316	350	384
40	25MM	825	348	348	382	416
	50MM	898	375	375	411	446
50	25MM	918	395	395	432	469
	50MM	997	426	426	464	503
60	25MM	970	426	426	465	503
	50MM	1053	458	458	499	540
70	25MM	1087	530	530	530	572
	50MM	1178	568	568	568	613
80	25MM	1307	615	615	615	662
	50MM	1412	659	659	659	708
90	25MM	1307	615	615	615	662
	50MM	1412	659	659	659	708

UNIT MODEL	FILTER, ALUMINUM	FILTER, DISPOSABLE	DRIP ELIMINATOR
2.5	5	4	8
4	8	6	12
6	11	8	21
9	16	12	29
12	20	16	38
16	26	20	50
20	28	24	65
24	39	30	80
30	45	36	94
35	54	42	109
40	63	48	131
50	72	56	159
60	80	64	185
70	100	80	226
80	120	96	274
90	140	112	322

FORWARD CURVED FAN WEIGHT	
200FC	12.6
250FC	18
315FC	29
400FC	52
450FC	66
500FC	85
560FC	134
630FC	170
710FC	201
800FC	249
900FC	306
1000FC	333

AIRFOIL FAN WEIGHT	
135AF	73
150AF	82
165AF	102
182AF	122
200AF	163
222AF	193
245AF	238
270AF	317
300AF	390
330AF	478
365AF	558
402AF	701
445AF	882
490AF	1084

NOTE: ALL WEIGHTS IN KG.

MODULE AND INTERNAL COMPONENTS WEIGHT

EVAPORATIVE MEDIA WEIGHT (KGS.)

UNIT MODEL	EVAPORATIVE MEDIA, STANDARD				EVAPORATIVE MEDIA, SUPER SATURATING			
	6"	8"	12"	24"	6"	8"	12"	24"
2.5	2.5	3.3	5.0	10.0	2.8	3.8	5.6	11.2
4	4.0	5.3	8.0	15.9	4.5	6.0	9.0	18.0
6	6.4	8.6	12.8	25.7	7.3	9.7	14.5	29.0
9	8.8	11.8	17.6	35.3	10.0	13.4	19.9	39.9
12	12.2	16.3	24.3	48.7	13.8	18.4	27.5	55.0
16	15.5	20.8	31.0	62.0	17.5	23.5	35.0	70.0
20	19.8	26.5	39.5	79.0	22.3	29.9	44.6	89.3
24	24.0	32.2	48.0	96.0	27.1	36.3	54.2	108.4
30	29.2	39.1	58.3	116.7	33.0	44.2	65.9	131.8
35	34.3	46.0	68.6	137.3	38.8	52.0	77.5	155.1
40	40.4	54.2	80.8	161.6	45.7	61.2	91.3	182.6
50	49.5	66.3	99.0	198.0	55.9	74.9	111.9	223.7
60	57.0	76.3	113.9	227.9	64.4	86.2	128.7	257.4
70	69.8	93.5	139.5	279.0	78.8	105.6	157.6	315.2
80	88.0	117.9	175.9	351.8	99.4	133.2	198.7	397.5
90	115.0	154.1	230.0	459.9	129.9	174.1	259.8	519.6

MOTOR WEIGHT (KGS.)

HP	1	1.5	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100
WEIGHT	11	14	15	19	26	39	56	80	97	113	135	170	205	235	340	445

ROYAL TEMP

SAUDI AIR CONTROL SYSTEM
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AGENCY:

PC-E-C-2.5-90-2004-R0