BULLETIN SQA 109
April 2014

SQA

Airfoil Square Fans

An ISO 9001 Company

CHICAGO BLOWER CORPORATION

Undisputed Reliability

Chicago's SQA fans have been selected for well over 100,000 industrial and commercial installations worldwide. The SQA fans are known for their exceptional durability and efficiency, and are continually updated and expanded to meet today's requirements and tomorrow's visions. This versatile innovative design packs maximum performance into a minimum footprint.

Chicago's SQAD is the direct drive alternative to the SQA fan. Size for size it delivers the same performance and efficiency in a more compact arrangement.

All SQA fans are available for quick delivery.

- **Fan Sizes**
  - **SQA 8-3/4 to 44-1/2**
  - **SQAD 8-3/4 to 30**
- **Volumes to 55,000 CFM**
- **Pressures to 15" W.G.**
- **Arrangements**
  - **SQA 1, 8, 9**
  - **SQAD 4**
- **Construction Classes I, II, III**
- **Discharges: TH, BH, UB, DB**
- **AMCA Licensed Performance**

Universal Applications

- **Supply Air**
- **Clean Air**
- **Packaged Force Air**
- **Pneumatic Conveying**
- **Aeration**
- **Pressurizing**

Features

- **Rugged Construction**

Heavy gauge steel housings are welded by AWS welders to assure structural integrity with extended durability. Flanged housing edges add to the fan's exceptional rigidity.

- **Hyperbolic Wheel Cone**

Chicago's exclusive hyperbolic spun steel wheel cone optimizes the smooth stable air flow across entire operating range.

- **Precision Shafts**

Shafts made from SAE 1045 carbon steel are turned, ground and polished to assure a tight bearing and hub fit. They are also sized to operate at least 20% below the first critical speed.

- **Adjustable Motor Base**

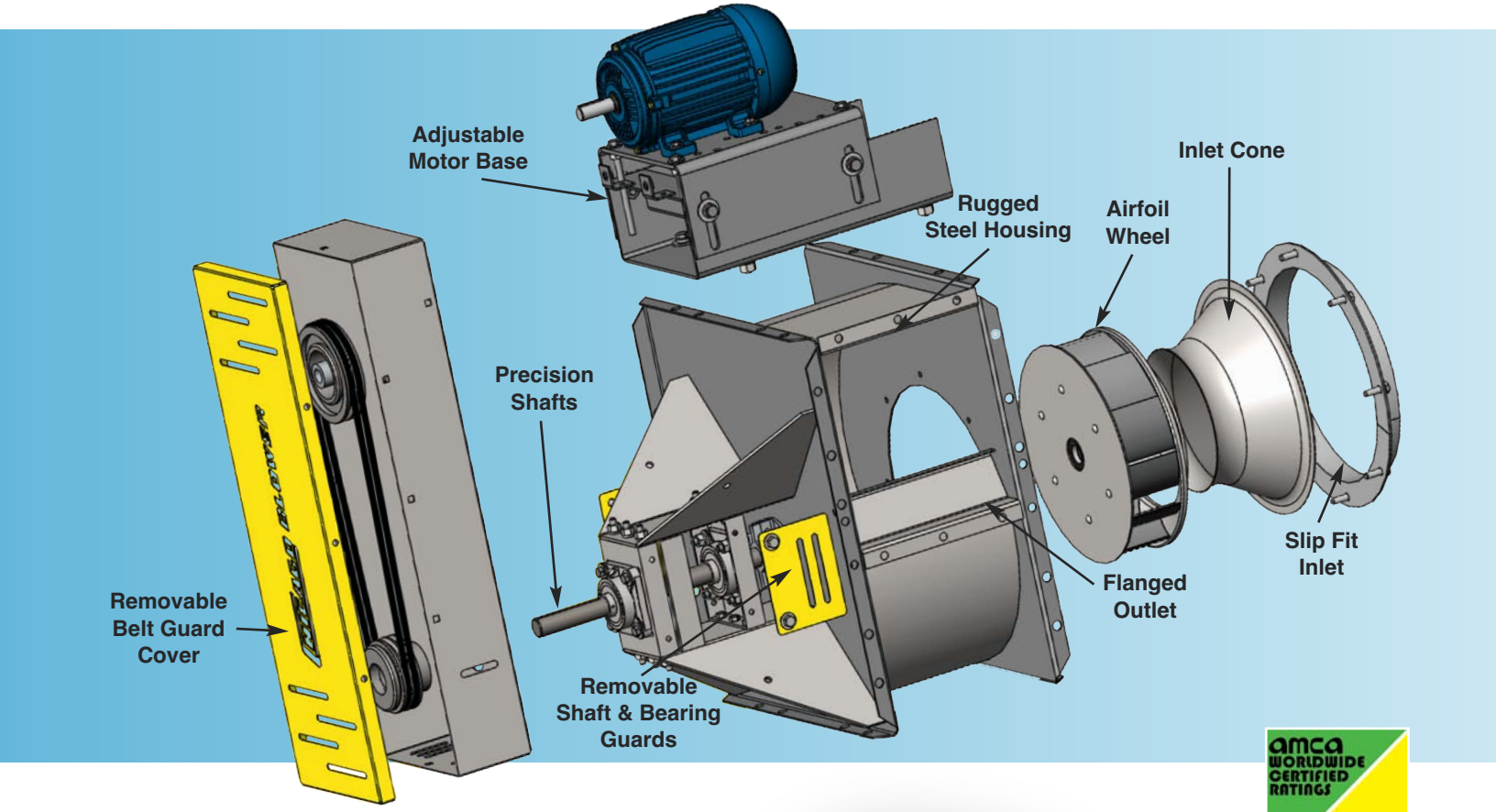
Arrangement 9 bases are pre-punched for popular motor frames, and feature threaded belt tension adjustment and positive locking.

- **Flanged Outlet**

To facilitate duct connection, all models are furnished with pre-punched flanged outlets to match the optional outlet damper.

- **Adjustable Discharge Positions**

The housings are easily rotated without disassembly to simplify installation and relocation while operating efficiently in all four discharge positions.



Airfoil Efficiency

SQA's airfoil wheel provides higher wheel efficiency along with reduced energy costs. SQA blades create a smooth lifting airflow, requiring less horsepower to deliver comparable air volume, with reduced noise levels.

Chicago Blower's airfoil design provides a broad efficiency curve which offers a wide range with more selections for each fan size. The SQA with its steep pressure characteristics is ideal for applications with pressure variations.

AMCA Certified

Chicago Blower Corporation certifies that the Design 36 SQA Airfoil Centrifugal Square Fans shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

Options

Inlets
Open inlets, slip fit inlets and punched flanged inlets are available to meet installation requirements.

Inlet/Outlet Companion Flanges
Structural angle assembly matches fan inlet or outlet flanges and allows fastening of ductwork for a flange-to-flange connection.

Outlet Dampers
Designed to control air flow at low initial cost, outlet dampers (shown below) have punched flanges on both ends to simplify fan and duct connections. Parallel blades are standard with opposed blades available. Air volume is controlled manually or automatically by electric or pneumatic actuator.

Inlet Volume Control
For varying or partial load applications, Chicago's Inlet Volume Control (IVC) provides precise air control and greater efficiency than an outlet damper. IVC is nested within the inlet cone. Air volume is controlled manually or automatically by electric or pneumatic actuator.

Inlet Box
Bolt-on box (shown at right) simplifies duct connection when a horizontal connection is impractical. Assures fan performance when a sharp turn is required at the fan inlet.

Cast Aluminum Wheel
Available on Sizes 12-1/4 and 13-1/2, Class I only. Temperatures to 200°F. Aluminum wheel standard on Sizes 8-3/4 and 10.

Inlet Screen
Steel wire screen mounts within the inlet cone or outside the inlet vanes when furnished with IVC.

Shaft Seals
Split steel or aluminum plate is designed to reduce leakage through the drive side shaft opening. Leak-resistant contact shaft seals are also available. Shaft seals are not gas tight.

Shaft Cooler
For temperature applications over 300°F, an aluminum cooling wheel is required. Maximum temperature is 650°F.

Shaft and Bearing Guard
The metal guard encloses the shaft and bearings. For easier lubrication, extended grease fittings are recommended.

Extended Grease Fittings
For easier lubrication of belt drive fans, fittings are mounted on the bearing support gussets and lube lines extended to the bearings.

Belt Guard
The guard is fully enclosed with a removable cover.

Access Door
The flush mounted door features quick opening clamps and gasket. Bolted door or insulated plug type is also available.

Housing Drain
A 1-1/2" half coupling is welded to the lowest point of the housing. Available with or without drain plug.

Unitary Base
Belt drive fan and adjustable motor base are welded onto a unitary base of structural steel channel. Vibration isolators also available. (Refer to page 18 for dimensions.)

Vibration T-Rails
Vibration isolation T-rails is mounted on anti-vibration springs to isolate all rotating components.

Spark Resistant Construction
AMCA Type B and C spark resistant construction. Maximum temperature is 200°F for Type B and 650°F for Type C.

Special Coatings
Numerous special paint and corrosion resistant coatings are available to meet the most stringent requirements.

Fan Selection

Fan capacity tables are based on standard air at 70°F and sea level. For other operating conditions, correct the required Static Pressure (SP) before using the rating tables. The Brake Horsepower (BHP) is corrected after the fan selection has been made. Finally, determine the Class of fan.

EXAMPLE:

Select an SQA fan to handle 15,000 CFM at 3" SP at 500°F and at 2500 feet above sea level.

1. Refer to Table I. At 2500 feet and 500°F, the correction factor is 1.98. To simplify the calculations, use 2.00. **Corrected SP is 2.00 x 3" SP = 6.00" SP at 70°F and sea level.**

2. Using the fan rating tables, one fan selection for 15,000 CFM at 6" SP is a Size 27. The fan will run at 1797 RPM and require 20.71 BHP at 70°F and sea level. (The actual RPM and BHP were calculated by interpolating between the 14,518 and 15,372 CFM given in the rating tables.)

3. **Correct the BHP. Dividing 20.71 by the correction factor (2.00). 20.71÷ 2.00 = 10.35 BHP at 500°F and 2500' altitude.**

4. To determine fan construction Class, the wheel and shaft must be checked for Maximum RPM using Table II and for Temperature Deration Factors in Table III.

   a. Table III. Divide wheel operating RPM by the Wheel Deration Factor for 500°. Wheel RPM at 70°F is 1797 ÷ .82 = 2191. Then divide the wheel operating RPM by the Shaft Deration Factor for 500°F. Shaft RPM at 70°F is 1797÷.97 = 1853.

   b. Check Table II for maximum RPMs for a Size 27 fan. While the required wheel RPM of 2191 is within safe limits for a Class I fan, the required shaft RPM of 1853 is not. The Class II fan is needed because of high duty temperature.

TABLE I – Temperature and Altitude Correction

AIR TEMP (F°)	ALTITUDE (feet) with BAROMETRIC PRESSURE (HG)							
	0 29.92	500 29.38	1000 28.86	1500 28.33	2000 27.82	2500 27.31	3000 26.82	3500 26.32
-15	.79	.81	.82	.84	.85	.87	.88	.90
0	.87	.88	.90	.92	.93	.95	.97	.99
70	1.00	1.02	1.04	1.06	1.08	1.10	1.12	1.14
100	1.06	1.08	1.10	1.12	1.14	1.16	1.18	1.20
150	1.15	1.17	1.19	1.22	1.24	1.26	1.28	1.31
200	1.25	1.27	1.29	1.32	1.34	1.36	1.39	1.42
250	1.34	1.36	1.39	1.41	1.44	1.47	1.49	1.52
300	1.43	1.46	1.49	1.51	1.54	1.57	1.60	1.63
350	1.53	1.56	1.58	1.61	1.64	1.67	1.70	1.74
400	1.62	1.65	1.68	1.71	1.75	1.78	1.81	1.84
500	1.81	1.84	1.88	1.91	1.95	1.98	2.02	2.06
600	2.00	2.04	2.07	2.11	2.15	2.19	2.23	2.27
650	2.09	2.13	2.17	2.21	2.25	2.29	2.34	2.38

Correction factors for temperature (F°) and altitude (above sea level): standard air = .075 lbs. per cubic foot at sea level, 29.92" barometric pressure and 70° F.

TABLE II – Maximum RPM at 70° F

Note: For temperature deration only, not for air performance.

FAN SIZE	CLASS I		CLASS II		CLASS III	
	Shaft	Wheel	Shaft	Wheel	Shaft	Wheel
12-1/4	4046	4983	4280	4983	—	—
13-1/2	3675	4520	3884	4520	—	—
15	3302	4067	3586	4067	—	—
16-1/2	2992	3633	3509	3632	—	—
18-1/4	2706	3285	3173	3285	—	—
20	2469	2997	2895	2997	3359	3600
22-1/4	2155	2653	2483	2653	2943	3228
24-1/2	2015	2446	2300	2446	2674	3088
27	1829	2219	2087	2219	2425	2692
30	1657	1928	1807	1928	2166	2400
33	1413	1643	1552	1643	1970	2080
36-1/2	1344	1412	1497	1497	1700	1792
40-1/4	903	1043	1179	1334	1541	1549
44-1/2	817	899	1066	1147	1394	1394

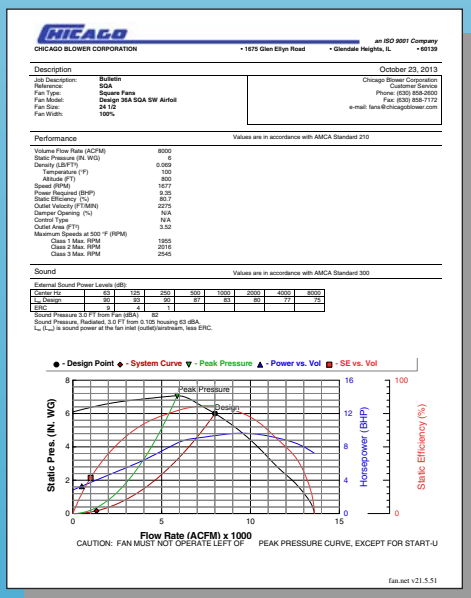
TABLE III – Speed Deration

Deration Factors		
Temp. (F°)	Steel Wheel	Steel Shaft
70	1.00	1.00
200	.94	1.00
300	.90	.99
400	.86	.98
500	.82	.97
600	.79	.96
650	.78	.95

Aluminum same as steel, max. temperature 200° F.

Refer to Chicago Blower's fan.net for performance, fan curves and sound data.

For software and assistance, contact your local Chicago Blower sales engineer.



Size 8 3/4

Outlet Area: .45 sq. ft. • Maximum BHP = .0126 (rpm ÷ 1000)² • Tip Speed (fpm) = 2.47 x rpm

Maximum Safe Speed RPM Class I 5000

FEG 90

CFM	OV FPM	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1-1/4" SP		1-1/2" SP		1-1/3 " SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
225	500	1001	0.01	1139	0.02																
270	600	1097	0.02	1216	0.02	1331	0.03														
315	700	1198	0.02	1307	0.03	1410	0.04	1508	0.04	1605	0.05										
360	800	1306	0.03	1408	0.03	1502	0.04	1591	0.05	1678	0.06	1762	0.07	1846	0.08						
405	900	1420	0.03	1513	0.04	1601	0.05	1683	0.06	1766	0.07	1843	0.08	1917	0.09	2063	0.11				
450	1000	1536	0.04	1623	0.05	1706	0.06	1784	0.07	1860	0.08	1932	0.09	2002	0.1	2139	0.12	2277	0.15		
495	1100	1656	0.05	1735	0.06	1813	0.07	1888	0.08	1960	0.09	2027	0.1	2092	0.12	2222	0.14	2350	0.16	2471	0.19
540	1200	1785	0.06	1851	0.07	1924	0.09	1995	0.1	2063	0.11	2128	0.12	2194	0.13	2313	0.16	2431	0.18	2548	0.21
585	1300	1912	0.08	1971	0.09	2039	0.1	2106	0.11	2170	0.12	2232	0.14	2292	0.15	2407	0.18	2520	0.2	2626	0.23
630	1400	2040	0.09	2097	0.1	2154	0.12	2219	0.13	2281	0.14	2339	0.16	2396	0.17	2509	0.2	2614	0.22	2720	0.25
675	1500	2169	0.11	2225	0.12	2273	0.14	2334	0.15	2390	0.16	2447	0.18	2506	0.19	2610	0.22	2714	0.25	2813	0.28
720	1600	2297	0.13	2352	0.14	2400	0.16	2450	0.17	2506	0.19	2561	0.2	2612	0.22	2717	0.25	2816	0.28	2908	0.31
765	1700	2429	0.15	2481	0.17	2528	0.18	2572	0.2	2622	0.21	2676	0.23	2725	0.24	2825	0.28	2918	0.31	3011	0.34
810	1800	2561	0.18	2609	0.19	2656	0.21	2698	0.22	2741	0.24	2791	0.26	2840	0.27	2935	0.31	3025	0.34	3114	0.37
855	1900	2690	0.20	2738	0.22	2783	0.24	2825	0.25	2862	0.27	2908	0.29	2980	0.31	3043	0.34	3130	0.37	3221	0.41
900	2000	2824	0.23	2868	0.25	2911	0.27	2964	0.29	2990	0.3	3026	0.32	3071	0.34	3158	0.38	3246	0.41	3330	0.45
990	2200	3090	0.30	3130	0.32	3169	0.34	3209	0.36	3264	0.38	3279	0.4	3312	0.42	3393	0.46	3470	0.5	3550	0.54
1080	2400	3359	0.38	3393	0.41	3431	0.43	3464	0.45	3504	0.47	3538	0.49	3569	0.51	3631	0.55	3702	0.59	3774	0.64
1170	2600	3627	0.48	3661	0.51	3692	0.53	3727	0.55	3756	0.57	3783	0.6	3824	0.62	3883	0.66	3941	0.71	4004	0.75
1260	2800	3895	0.59	3927	0.62	3954	0.64	3987	0.67	4016	0.69	4047	0.72	4079	0.74	4139	0.79	4193	0.84	4246	0.88

CFM	OV FPM	2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		7" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
585	1300	2738	0.26	2493	0.32																
630	1400	2820	0.28	3015	0.34	3209	0.41														
675	1500	2912	0.31	3095	0.38	3279	0.44	3461	0.51												
720	1600	3003	0.34	3182	0.41	3356	0.48	3523	0.55	3692	0.62										
765	1700	3103	0.37	3271	0.44	3440	0.52	3602	0.59	3759	0.67	3918	0.74								
810	1800	3201	0.41	3366	0.48	3532	0.56	3685	0.63	3834	0.71	3989	0.8	4126	0.87						
855	1900	3306	0.44	3472	0.52	3628	0.6	3774	0.68	3918	0.76	4064	0.85	4202	0.93	4341	1.02				
900	2000	3412	0.49	3568	0.56	3720	0.64	3863	0.73	4004	0.81	4144	0.9	4278	0.99	4415	1.08	4554	1.17		
990	2200	3626	0.58	3776	0.66	3919	0.75	4054	0.83	4184	0.92	4320	1.02	4444	1.11	4567	1.2	4700	1.31	4942	1.51
1080	2400	3847	0.68	3990	0.77	4126	0.86	4255	0.95	4388	1.05	4512	1.15	4626	1.24	4745	1.35	4862	1.45		
1170	2600	4077	0.80	4211	0.9	4340	1	4463	1.09	4584	1.19	4709	1.3	4814	1.39	4929	1.5				
1260	2800	4307	0.93	4437	1.04	4561	1.15	4678	1.25	4792	1.35	4909	1.46								
1350	3000	4546	1.08	4668	1.2	4780	1.31	4894	1.31												
1440	3200	4795	1.25	4900	1.37																

If V-Belt driven over 3600 RPM, consult factory.

Size 10

Outlet Area: .59 sq. ft. • Maximum BHP = .0227 (rpm ÷ 1000)² • Tip Speed (fpm) = 2.82 x rpm

Maximum Safe Speed RPM Class I 4962

FEG 90

CFM	OV FPM	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1-1/4" SP		1-1/2" SP		1-3/4 " SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
295	500	874	0.02	1006	0.02																
354	600	948	0.03	1063	0.03	1173	0.04														
413	700	1035	0.03	1131	0.03	1232	0.04	1328	0.05	1421	0.06										
472	800	1124	0.04	1216	0.04	1301	0.05	1389	0.06	1474	0.07	1555	0.08	1637	0.1						
531	900	1218	0.05	1305	0.05	1386	0.06	1459	0.07	1535	0.08	1614	0.1	1692	0.11	1832	0.14				
590	1000	1315	0.06	1397	0.06	1473	0.07	1543	0.08	1608	0.1	1678	0.11	1747	0.12	1882	0.15	2012	0.18		
649	1100	1413	0.07	1490	0.07	1563	0.09	1630	0.1	1694	0.11	1753	0.12	1816	0.14	1941	0.17	2066	0.2	2187	0.23
708	1200	1511	0.09	1583	0.09	1655	0.1	1721	0.12	1781	0.13	1840	0.14	1895	0.16	2008	0.19	2125	0.22	2240	0.25
767	1300	1612	0.10	1683	0.1	1749	0.12	1811	0.13	1871	0.15	1928	0.16	1985	0.18	2083	0.21	2191	0.24	2300	0.28
826	1400	1713	0.12	1783	0.12	1844	0.14	1904	0.15	1961	0.17	2017	0.19	2069	0.2	2170	0.23	2262	0.26	2362	0.3
885	1500	1817	0.14	1880	0.14	1942	0.16	2000	0.17	2054	0.19	2108	0.21	2161	0.23	2255	0.26	2347	0.3	2435	0.33
944	1600	1920	0.16	1982	0.16	2041	0.18	2096	0.2	2150	0.22	2199	0.24	2248	0.25	2344	0.29	2432	0.33	2521	0.37
1003	1700	2026	0.19	2083	0.19	2141	0.2	2194	0.23	2247	0.25	2295	0.26	2341	0.28	2434	0.33	2523	0.36	2603	0.4
1062	1800	2130	0.21	2185	0.21	2242	0.23	2294	0.26	2341	0.27	2390	0.3	2435	0.32	2524	0.36	2609	0.4	2692	0.44
1121	1900	2237	0.24	2288	0.24	2343	0.26	2394	0.29	2441	0.31	2487	0.33	2531	0.35	2617	0.4	2700	0.44	2778	0.48
1180	2000	2343	0.28	2394	0.28	2444	0.34	2495	0.32	2539	0.34	2587	0.37	2629	0.39	2711	0.44	2794	0.48	2869	0.53
1298	2200	2556	0.35	2604	0.35	2651	0.38	2696	0.4	2740	0.43	2782	0.45	2825	0.48	2902	0.53	2980	0.58	3038	0.62
1416	2400	2774	0.44	2816	0.44	2860	0.47	2902	0.5	2942	0.52	2983	0.55	3022	0.58	3098	0.63	3169	0.68	3247	0.75
1534	2600	2987	0.55	3028	0.55	3069	0.58	3110	0.6	3450	0.63	3186	0.66	3223	0.69	3295	0.75	3366	0.81	3430	0.87
1652	2800	3204	0.67	3245	0.67	3281	0.7	3320	0.73	3358	0.76	3392	0.79	3426	0.82	3500	0.89	3565	0.95	3625	1.01

CFM	OV FPM	2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP		6" SP		7" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
826	1400	2464	0.34	2656	0.42	2842	0.5														
855	1500	2531	0.37	2717	0.45	2896	0.54	3058	0.62												
944	1600	2601	0.40	2778	0.49	2948	0.57	3110	0.66	3274	0.76										
1003	1700	2684	0.44	2843	0.52	3008	0.61	3165	0.71	3323	0.81	3466	0.9								
1062	1800	2772	0.49	2918	0.57	3070	0.66	3228	0.76	3384	0.86	3518	0.96	3664	1.07						
1121	1900	2856	0.53	2999	0.61	3142	0.71	3291	0.8	3432	0.91	3572	1.01	3714	1.13						
1180	2000	2945	0.58	3086	0.67	3216	0.76	3356	0.86	3494	0.96	3631	1.07	3764	1.18	4024	1.42				
1298	2200	3126	0.68	3260	0.78	3388	0.88	3506	0.98	3632	1.09	3763	1.2	3882	1.32	4132	1.57	4374	1.83		
1416	2400	3309	0.80	3442	0.92	3562	1.02	3690	1.13	3790	1.24	3900	1.35	4016	1.47	4250	1.73	4480	2	4692	2.27
1534	2600	3497	0.93	3622	1.05	3742	1.18	3856	1.3	3970	1.42	4068	1.53	4166	1.64	4382	1.9	4600	2.19	4802	2.47
1652	2800	3687	1.08	3808	1.21	3922	1.34	4034	1.48	4138	1.6	4237	1.72	4340	1.85	4524	2.1	4724	2.38	4928	2.69
1770	3000	3881	1.24	4000	1.38	4108	1.52	4216	1.67	4322	1.81	4414	1.94	4510	2.08	4694	2.35	4870	2.62		
1888	3200	4078	1.42	4192	1.57	4300	1.72	4398	1.87	4496	2.02	4594	2.18	4688	2.32	4864	2.61				
2006	3400	4277	1.62	4388	1.79	4494	1.95	4590	2.1	4682	2.26	4778	2.43	4868	2.58						
2124	3600	4478	1.85	4588	2.03	4682	2.18	4780	2.35	4870	2.52	4962	2.69								
2242	3800	4681	2.09	4788	2.28	4882	2.46														

If V-Belt driven over 3600 RPM, consult factory.

- Performance certified is for installation type B - Free inlet, Ducted outlet.
- Power ratings (BHP) do not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- Performance ratings at 0.075 lbs/ft³ Density, 70°F, Sea Level Elevation.

Size 12¼

Outlet Area: .88 sq. ft. • Maximum BHP = .077 (rpm ÷ 1000)² • Tip Speed (fpm) = 3.46 x rpm

Maximum Safe Speed RPM Class I 4046 Class II 4280

FEG 85

CFM	OV FPM	1/4" SP RPM	1/4" SP BHP	1/2" SP RPM	1/2" SP BHP	3/4" SP RPM	3/4" SP BHP	1" SP RPM	1" SP BHP	1-1/4" SP RPM	1-1/4" SP BHP	1-1/2" SP RPM	1-1/2" SP BHP	1-3/4" SP RPM	1-3/4" SP BHP	2" SP RPM	2" SP BHP	2-1/2" SP RPM	2-1/2" SP BHP	3" SP RPM	3" SP BHP
440	500	684	0.02																		
528	600	743	0.03	921	0.05																
616	700	810	0.04	964	0.06																
704	800	880	0.05	1021	0.08	1154	0.11														
792	900	953	0.06	1086	0.09	1204	0.13	1328	0.17												
880	1000	1027	0.07	1153	0.11	1263	0.15	1369	0.19	1476	0.24	1580	0.29								
968	1100	1104	0.09	1222	0.13	1328	0.18	1425	0.22	1521	0.27	1618	0.32	1714	0.37						
1056	1200	1183	0.11	1294	0.16	1395	0.2	1487	0.25	1576	0.3	1664	0.35	1753	0.41	1841	0.46				
1144	1300	1263	0.14	1368	0.19	1464	0.23	1553	0.28	1636	0.33	1717	0.39	1799	0.44	1881	0.5	2042	0.63		
1232	1400	1344	0.16	1442	0.22	1534	0.27	1620	0.32	1701	0.37	1777	0.43	1853	0.49	1928	0.55	2081	0.68		
1320	1500	1426	0.20	1518	0.25	1607	0.31	1689	0.36	1768	0.42	1841	0.48	1912	0.54	1982	0.6	2125	0.73	2267	0.87
1408	1600	1511	0.23	1597	0.29	1681	0.35	1760	0.41	1836	0.47	1908	0.53	1975	0.59	2041	0.65	2173	0.79	2308	0.93
1496	1700	1594	0.27	1676	0.33	1755	0.39	1832	0.46	1905	0.52	1975	0.58	2042	0.65	2104	0.71	2229	0.85	2355	1
1584	1800	1678	0.31	1756	0.38	1831	0.44	1906	0.51	1975	0.58	2044	0.64	2109	0.71	2171	0.78	2289	0.92	2407	1.07
1672	1900	1762	0.36	1837	0.43	1909	0.5	1980	0.57	2048	0.64	2112	0.71	2177	0.78	2238	0.85	2352	1	2464	1.15
1760	2000	1846	0.41	1918	0.49	1987	0.56	2054	0.63	2122	0.71	2183	0.78	2246	0.85	2305	0.93	2419	1.08	2525	1.24
1936	2200	2017	0.54	2084	0.62	2146	0.7	2208	0.78	2269	0.86	2331	0.94	2388	1.02	2444	1.1	2552	1.27	2656	1.44
2112	2400	2188	0.68	2252	0.77	2308	0.86	2365	0.94	2422	1.03	2478	1.12	2535	1.21	2588	1.3	2690	1.47	2789	1.65
2288	2600	2359	0.85	2418	0.95	2473	1.04	2526	1.13	2579	1.23	2630	1.32	2682	1.42	2734	1.52	2832	1.71	2927	1.9
2464	2800	2536	1.05	2590	1.15	2640	1.25	2688	1.35	2738	1.45	2786	1.56	2786	1.66	2883	1.76	2978	1.97	3067	2.17

CFM	OV FPM	3-1/2" SP RPM	3-1/2" SP BHP	4" SP RPM	4" SP BHP	4-1/2" SP RPM	4-1/2" SP BHP	5" SP RPM	5" SP BHP	5-1/2" SP RPM	5-1/2" SP BHP	6" SP RPM	6" SP BHP	7" SP RPM	7" SP BHP	8" SP RPM	8" SP BHP	9" SP RPM	9" SP BHP	10" SP RPM	10" SP BHP
1320	1500			2534	1.19																
1408	1600	2441	1.09	2566	1.26	2688	1.42														
1496	1700	2480	1.16	2605	1.33	2722	1.5	2839	1.68												
1584	1800	2526	1.23	2644	1.4	2762	1.58	2873	1.76	2982	1.95										
1672	1900	2576	1.31	2689	1.49	2801	1.66	2912	1.85	3016	2.04	3121	2.24	3321	2.66						
1760	2000	2632	1.41	2737	1.58	2845	1.76	2951	1.95	3057	2.15	3157	2.35	3351	2.76	3538	3.21				
1936	2200	2753	1.61	2849	1.79	2946	1.97	3042	2.16	3140	2.37	3237	2.57	3427	3.01	3605	3.46	3777	3.94		
2112	2400	2885	1.84	2974	2.03	3063	2.22	3150	2.42	3239	2.62	3328	2.83	3505	3.27	3682	3.75	3849	4.24	4008	4.74
2288	2600	3019	2.10	3107	2.3	3190	2.5	3271	2.7	3353	2.91	3434	3.13	3598	3.58	3762	4.06	3927	4.57	4083	5.09
2464	2800	3156	2.38	3241	2.6	3324	2.81	3402	3.03	3478	3.24	3553	3.47	3705	3.93	3858	4.42	4010	4.93	4162	5.47
2640	3000	3297	2.71	3378	2.93	3459	3.15	3535	3.38	3611	3.62	3682	3.84	3823	4.32	3964	4.82	4106	5.33		
2816	3200	3439	3.06	3519	3.29	3596	3.53	3671	3.77	3745	4.01	3815	4.26	3950	4.75	4083	5.26				
2992	3400	3585	3.44	3664	3.69	3737	3.94	3809	4.19	3880	4.45	3949	4.7	4083	5.23						
3168	3600	3734	3.86	3812	4.13	3882	4.39	3949	4.65	4019	4.92	4087	5.19								
3344	3800	3884	4.32	3960	4.6	4030	4.88	4095	5.16	4160	5.43										
3520	4000	4038	4.81	4108	5.1	4178	5.41														

If V-Belt driven over 3600 RPM, consult factory.

Size 13½

Outlet Area: 1.07 sq. ft. • Maximum BHP = .125 (rpm ÷ 1000)² • Tip Speed (fpm) = 3.81 x rpm

Maximum Safe Speed RPM Class I 3675 Class II 3884

FEG 85

CFM	OV FPM	1/4" SP RPM	1/4" SP BHP	1/2" SP RPM	1/2" SP BHP	3/4" SP RPM	3/4" SP BHP	1" SP RPM	1" SP BHP	1-1/4" SP RPM	1-1/4" SP BHP	1-1/2" SP RPM	1-1/2" SP BHP	1-3/4" SP RPM	1-3/4" SP BHP	2" SP RPM	2" SP BHP	2-1/2" SP RPM	2-1/2" SP BHP	3" SP RPM	3" SP BHP
535	500	621	0.03																		
642	600	679	0.03	836	0.07																
749	700	735	0.04	875	0.08																
856	800	799	0.06	926	0.09	1047	0.14														
963	900	865	0.07	985	0.11	1093	0.16	1200	0.21												
1070	1000	932	0.09	1046	0.14	1146	0.18	1242	0.24	1339	0.29	1434	0.35								
1177	1100	1002	0.11	1109	0.16	1205	0.21	1293	0.27	1380	0.32	1468	0.39	1555	0.45						
1284	1200	1073	0.14	1174	0.19	1266	0.25	1349	0.3	1430	0.36	1510	0.43	1591	0.49	1671	0.57				
1391	1300	1146	0.14	1241	0.23	1328	0.28	1409	0.34	1485	0.41	1588	0.47	1632	0.54	1707	0.61	1853	0.77		
1498	1400	1220	0.20	1308	0.26	1392	0.33	1470	0.39	1543	0.46	1612	0.52	1681	0.59	1749	0.67	1888	0.83		
1605	1500	1294	0.24	1377	0.31	1458	0.37	1533	0.44	1604	0.51	1671	0.58	1735	0.65	1798	0.73	1928	0.89	2057	1.06
1712	1600	1371	0.28	1449	0.35	1525	0.42	1597	0.49	1666	0.57	1731	0.64	1792	0.72	1852	0.79	1972	0.96	2094	1.13
1819	1700	1446	0.33	1521	0.4	1592	0.48	1662	0.56	1729	0.63	1792	0.71	1853	0.79	1909	0.87	2023	1.04	2137	1.22
1926	1800	1523	0.38	1593	0.46	1661	0.54	1730	0.62	1792	0.7	1855	0.78	1914	0.87	1970	0.95	2077	1.12	2184	1.31
2033	1900	1599	0.44	1667	0.52	1732	0.61	1797	0.69	1858	0.78	1916	0.86	1975	0.95	2031	1.04	2134	1.22	2236	1.4
2140	2000	1675	0.50	1740	0.59	1803	0.68	1864	0.77	1926	0.86	1981	0.95	2038	1.04	2092	1.13	2195	1.32	2291	1.51
2354	2200	1830	0.65	1891	0.75	1947	0.85	2004	0.94	2059	1.04	2115	1.14	2167	1.24	2218	1.34	2316	1.54	2410	1.75
2568	2400	1985	0.29	2043	0.93	3094	1.04	2145	1.14	2198	1.25	2249	1.36	2300	1.47	2348	1.52	2441	1.79	2531	2.01
2782	2600	2141	1.03	2194	1.15	2244	1.26	2292	1.38	2340	1.49	2386	1.61	2434	1.72	2481	1.85	2570	2.07	2656	2.31
2996	2800	2301	1.28	2350	1.4	2396	1.52	2439	1.64	2484	1.77	2528	1.89	2572	2.02	2616	2.14	2702	2.4	2783	2.64

CFM	OV FPM	3-1/2" SP RPM	3-1/2" SP BHP	4" SP RPM	4" SP BHP	4-1/2" SP RPM	4-1/2" SP BHP	5" SP RPM	5" SP BHP	5-1/2" SP RPM	5-1/2" SP BHP	6" SP RPM	6" SP BHP	7" SP RPM	7" SP BHP	8" SP RPM	8" SP BHP	9" SP RPM	9" SP BHP	10" SP RPM	10" SP BHP
1605	1500	2299	1.45																		
1712	1600	2215	1.33	2328	1.53	2441	1.73														
1819	1700	2250	1.41	2364	1.61	2472	1.82	2576	2.04												
1926	1800	2292	1.50	2399	1.7	2506	1.92	2607	2.14	2708	2.37										
2033	1900	2337	1.60	2440	1.81	2542	2.02	2642	2.25	2739	2.48	2832	2.72	3013	3.23						
2140	2000	2388	1.71	2484	1.92	2582	2.14	2678	2.37	2774	2.61	2865	2.86	3041	3.36	3210	3.9				
2354	2200	2498	1.95	2585	2.17	2673	2.4	2760	2.63	2849	2.87	2937	3.13	3110	3.66	3271	4.21	3427	4.79		
2568	2400	2618	2.24	2699	2.46	2779	2.69	2858	2.93	2939	3.18	3020	3.44	3180	3.98	3341	4.56	3493	5.15	3637	5.76
2782	2600	2739	2.55	2819	2.79	2895	3.03	2968	3.28	3043	3.54	3116	3.8	3265	4.35	3414	4.93	3563	5.55	3705	6.18
2996	2800	2864	2.90	2941	3.15	3016	3.42	3087	3.68	3156	3.94	3224	4.21	3362	4.78	3500	5.37	3639	5.99	3777	6.64
3210	3000	2993	3.30	3065	3.55	3139	3.83	3208	4.11	3277	4.39	3341	4.67	3469	5.24	3597	5.85	3726	6.48		
3424	3200	3123	3.72	3193	3.99	3263	4.28	3331	4.58	3398	4.87	3462	5.18	3584	5.77	3705	6.39				
3638	3400	3256	4.19	3325	4.49	3391	4.78	3456	5.09	3521	5.4	3583	5.71	3705	6.35						
3852	3600	3391	4.70	3459	5.02	3523	5.34	3583	5.65	3647	5.97	3709	6.3								
4066	3800	3528	5.26	3593	5.59	3657	5.93	3716	6.27	3775	6.59										
4280	4000	3667	5.86	3728	6.19	3791	6.57														

If V-Belt driven over 3600 RPM, consult factory.

- Performance certified is for installation type B - Free inlet, Ducted outlet.
- Power ratings (BHP) do not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- Performance ratings at 0.075 lbs/ft³ Density, 70°F, Sea Level Elevation.

Size 15

Outlet Area: 1.32 sq. ft. • Maximum BHP = .212 (rpm ÷ 1000)² • Tip Speed (fpm) = 4.24 x rpm

Maximum Safe Speed RPM Class I 3302 Class II 3586

FEG 85

CFM	OV FPM	1/4" SP		1/2" SP		3/4" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
660	500	559	0.03																		
792	600	607	0.04	752	0.08																
924	700	662	0.06	787	0.1																
1056	800	719	0.07	834	0.12	942	0.17														
1188	900	778	0.09	887	0.14	983	0.2	1080	0.26												
1320	1000	839	0.11	942	0.17	1031	0.23	1118	0.29	1290	0.44										
1452	1100	902	0.14	998	0.2	1085	0.27	1164	0.33	1321	0.48										
1584	1200	966	0.17	1057	0.24	1139	0.31	1214	0.38	1359	0.53	1504	0.7								
1716	1300	1031	0.21	1117	0.28	1196	0.35	1268	0.43	1402	0.58	1536	0.76	1668	0.95						
1848	1400	1098	0.25	1178	0.33	1253	0.4	1323	0.48	1451	0.64	1575	0.82	1700	1.02	1819	1.23				
1980	1500	1165	0.30	1240	0.38	1312	0.46	1379	0.54	1504	0.72	1619	0.9	1735	1.1	1851	1.31	1962	1.54	2070	1.78
2112	1600	1234	0.35	1304	0.44	1373	0.52	1437	0.61	1558	0.79	1667	0.98	1775	1.18	1885	1.4	1994	1.64	2096	1.89
2244	1700	1302	0.41	1369	0.5	1433	0.59	1496	0.69	1613	0.88	1718	1.07	1820	1.28	1923	1.5	2025	1.74	2128	1.99
2376	1800	1370	0.47	1434	0.57	1495	0.67	1557	0.77	1669	0.97	1773	1.17	1869	1.39	1966	1.61	2063	1.85	2159	2.1
2508	1900	1439	0.54	1500	0.65	1559	0.75	1617	0.86	1725	1.07	1828	1.28	1921	1.5	2012	1.73	2104	1.97	2196	2.23
2640	2000	1508	0.62	1566	0.73	1623	0.84	1678	0.95	1783	1.17	1882	1.4	1976	1.63	2062	1.86	2150	2.11	2235	2.36
2904	2200	1647	0.81	1702	0.93	1753	1.05	1803	1.17	1904	1.41	1995	1.65	2084	1.9	2169	2.15	2248	2.41	2327	2.68
3168	2400	1787	1.02	1839	1.15	1855	1.28	1931	1.41	2024	1.68	2114	1.95	2197	2.21	2278	2.48	2356	2.76	2429	3.04
3432	2600	1927	1.28	1975	1.42	2020	1.56	2063	1.7	2148	1.99	2233	2.28	2313	2.56	2390	2.85	2466	3.14	2537	3.45
3696	2800	2071	1.58	2115	1.73	2156	1.88	2195	2.03	2275	2.33	2355	2.64	2432	2.96	2505	3.26	2578	3.57	2647	3.89

CFM	OV FPM	4-1/2" SP		5" SP		5-1/2" SP		6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1980	1500	2467	2.03																		
2112	1600	2199	2.13																		
2244	1700	2225	2.25	2319	2.52																
2376	1800	2256	2.37	2346	2.64	2435	2.92														
2508	1900	2288	2.50	2378	2.78	2469	3.07	2543	3.36	2712	3.98										
2640	2000	2324	2.64	2410	2.92	2497	3.22	2578	3.52	2737	4.13	2889	4.81								
2904	2200	2406	2.96	2484	3.25	2564	3.55	2644	3.86	2799	4.51	2945	5.18	3085	5.9						
3168	2400	2502	3.32	2671	3.62	2645	3.93	2718	4.25	2863	4.91	3007	5.62	3143	6.35	3273	7.1	3405	7.89		
3432	2600	2605	3.75	2571	4.05	2738	4.37	2805	4.69	2938	5.37	3072	6.08	3207	6.85	3335	7.63	3335	8.42	3581	9.25
3696	2800	2715	4.22	2778	4.54	2840	4.86	2908	5.19	3026	5.89	3150	6.62	3275	7.39	3399	8.19	3522	9.03		
3960	3000	2825	4.72	2887	5.07	2949	5.42	3007	5.76	3122	6.47	3237	7.22	3353	7.99	3471	8.82	3586	9.65		
4224	3200	2937	5.29	2998	5.65	3059	6.01	3116	6.39	3226	7.12	3335	7.88	3442	8.86	3550	9.5				
4488	3400	3052	5.90	3111	6.28	3163	6.66	3225	7.05	3335	7.84	3437	8.62	3540	9.43						
4752	3600	3170	6.58	3225	6.97	3282	7.37	3338	7.78	3444	8.63	3546	9.43								
5016	3800	3291	7.32	3344	7.73	3397	8.14	3451	8.56	3555	9.42										
5280	4000	3412	8.11	3464	8.55	3518	8.99	3567	9.41												

Size 16 ½

Outlet Area: 1.59 sq. ft. • Maximum BHP = .341 (rpm ÷ 1000)² • Tip Speed (fpm) = 4.66 x rpm

Maximum Safe Speed RPM Class I 2992 Class II 3509

FEG 80

CFM	OV FPM	1/4" SP		1/2" SP		3/4" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
795	500	508	0.04																		
954	600	552	0.05	684	0.1																
1113	700	601	0.07	716	0.12																
1272	800	653	0.09	758	0.14	857	0.21														
1431	900	708	0.11	806	0.17	894	0.24	981	0.31												
1590	1000	762	0.14	856	0.21	938	0.28	1016	0.35	1173	0.53										
1749	1100	820	0.17	907	0.25	986	0.32	1052	0.4	1201	0.58										
1908	1200	878	0.21	961	0.29	1036	0.37	1104	0.46	1235	0.64	1367	0.85								
2067	1300	938	0.25	1016	0.34	1087	0.43	1153	0.52	1275	0.71	1396	0.92	1516	1.15						
2226	1400	998	0.30	1071	0.4	1139	0.49	1203	0.58	1319	0.78	1431	1	1545	1.24	1652	1.49				
2385	1500	1059	0.36	1127	0.46	1193	0.56	1254	0.66	1367	0.87	1471	1.09	1578	1.33	1683	1.59	1782	1.86	1881	2.17
2544	1600	1122	0.42	1186	0.53	1248	0.64	1307	0.74	1416	0.96	1515	1.19	1613	1.43	1713	1.7	1812	1.98	1905	2.29
2703	1700	1183	0.49	1244	0.61	1303	0.72	1360	0.83	1466	1.06	1562	1.3	1655	1.55	1748	1.82	1841	2.1	1934	2.41
2862	1800	1246	0.57	1304	0.69	1359	0.81	1415	0.93	1517	1.17	1612	1.42	1699	1.68	1787	1.95	1875	2.24	1963	2.55
3021	1900	1308	0.66	1364	0.79	1417	0.91	1470	1.04	1568	1.29	1661	1.55	1746	1.82	1829	2.1	1912	2.39	1996	2.7
3180	2000	1370	0.76	1424	0.89	1475	1.02	1525	1.15	1621	1.42	1711	1.69	1796	1.97	1875	2.25	1954	2.55	2032	2.66
3498	2200	1497	0.98	1547	1.12	1593	1.27	1639	1.41	1731	1.71	1814	2	1895	2.3	1972	2.61	2044	2.92	2115	3.24
3816	2400	1624	1.24	1672	1.4	1713	1.56	1756	1.71	1840	2.03	1921	2.36	1997	2.68	2071	3.01	2142	3.34	2208	3.68
4134	2600	1751	1.55	1795	1.72	1836	1.89	1875	2.06	1953	2.41	2030	2.76	2102	3.1	2173	3.45	2241	3.81	2307	4.18
4452	2800	1883	1.91	1923	2	1960	2.28	1996	2.46	2068	2.83	2140	3.2	2211	3.59	2277	3.95	2343	4.33	2406	4.71

CFM	OV FPM	4-1/2" SP		5" SP		5-1/2" SP		6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2385	1500																				
2544	1600	1999	2.57																		
2703	1700	2022	2.72	2107	3.05																
2852	1800	2051	2.87	2133	3.2	2213	3.54														
3021	1900	2079	3.02	2162	3.37	2244	3.72	2317	4.06	2465	4.83										
3180	2000	2112	3.20	2191	3.54	2270	3.9	2344	4.27	2488	5.02	2626	5.83								
3498	2200	2187	3.58	2258	3.93	2331	4.3	2403	4.67	2544	5.47	2676	6.29	2804	7.16						
3816	2400	2274	4.02	2339	4.39	2405	4.76	2471	5.15	2602	5.95	2734	6.81	2858	7.7	2976	8.61	3095	9.58		
4134	2600	2368	4.54	2428	4.91	2489	5.29	2549	5.69	2671	6.51	2793	7.37	2915	8.3	3031	9.24	3143	10.21	3255	11.21
4452	2800	2468	5.11	2526	5.5	2582	5.89	2638	6.29	2751	7.14	2863	8.02	2977	8.95	3090	9.92	3201	10.93	3307	11.97
4470	3000	2568	5.72	2624	6.14	2681	6.56	2734	6.98	2838	7.84	2943	8.75	3048	9.68	3155	10.68	3260	11.69	3365	12.77
5088	3200	2670	6.40	2725	6.84	2780	7.28	2832	7.74	2932	8.63	3031	9.55	3129	10.52	3227	11.5	3328	12.56	3426	13.62
5406	3400	2774	7.14	2828	7.61	2881	8.07	2932	8.54	3031	9.5	3125	10.44	3218	11.42	3310	12.45	3402	13.5	3497	14.59
5724	3600	2882	7.97	2932	8.44	2984	8.93	3034	9.42	3131	10.41	3224	11.42	3311	12.43	3399	13.46	3487	14.54		
6042	3800	2992	8.87	3040	9.36	3088	9.85	3137	10.36	3232	11.4	3322	12.47	3411	13.53	3493	14.59				
6360	4000	3102	9.82	3149	10.35	3198	10.88	3242	11.39	3334	12.48	3423	13.57	3509	14.7						

- Performance certified is for installation type B - Free inlet, Ducted outlet.
- Power ratings (BHP) do not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- Performance ratings at 0.075 lbs/ft³ Density, 70°F, Sea Level Elevation.

Size 18 ¼

Outlet Area: 1.95 sq. ft. • Maximum BHP = .566 (rpm ÷ 1000)² • Tip Speed (fpm) = 5.15 x rpm

Maximum Safe Speed RPM Class I 2706 Class II 3173

FEG 80

CFM	OV FPM	1/4" SP		1/2" SP		3/4" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
975	500	459	0.05																		
1170	600	499	0.07	618	0.13																
1365	700	544	0.09	647	0.15																
1560	800	591	0.11	685	0.18	775	0.26														
1755	900	640	0.14	729	0.21	808	0.29	887	0.39												
1950	1000	689	0.17	774	0.25	848	0.34	919	0.43	1060	0.65										
2145	1100	741	0.21	820	0.3	891	0.4	956	0.49	1086	0.71										
2340	1200	794	0.26	869	0.36	936	0.46	998	0.56	1117	0.78	1236	1.04								
2535	1300	848	0.31	918	0.42	983	0.52	1042	0.63	1152	0.87	1263	1.12	1371	1.41						
2730	1400	902	0.37	968	0.49	1030	0.6	1087	0.72	1193	0.96	1294	1.22	1397	1.51	1496	1.84				
2925	1500	957	0.44	1019	0.56	1079	0.69	1134	0.81	1236	1.06	1330	1.33	1426	1.63	1522	1.95	1612	2.28	1700	2.64
3120	1600	1014	0.52	1072	0.65	1128	0.78	1181	0.91	1281	1.18	1370	1.46	1459	1.75	1549	2.08	1638	2.43	1722	2.79
3315	1700	1070	0.60	1125	0.74	1178	0.88	1230	1.02	1326	1.3	1412	1.59	1496	1.9	1581	2.23	1665	2.57	1748	2.95
3510	1800	1126	0.70	1179	0.85	1229	0.99	1279	1.14	1372	1.44	1457	1.74	1536	2.05	1616	2.36	1695	2.74	1775	3.12
3705	1900	1183	0.81	1233	0.96	1281	1.12	1329	1.27	1418	1.58	1502	1.9	1579	2.23	1654	2.57	1729	2.92	1805	3.31
3900	2000	1239	0.92	1287	1.09	1334	1.25	1379	1.41	1465	1.74	1547	2.07	1624	2.41	1695	2.76	1767	3.13	1837	3.51
4290	2200	1354	1.20	1399	1.37	1440	1.55	1482	1.73	1565	2.09	1640	2.45	1713	2.82	1783	3.19	1848	3.57	1912	3.97
4680	2400	1469	1.52	1512	1.71	1549	1.9	1587	2.1	1663	2.49	1737	2.89	1806	3.28	1872	3.68	1936	4.09	1996	4.5
5070	2600	1583	1.89	1623	2.11	1660	2.31	1695	2.52	1765	2.95	1835	3.38	1901	3.79	1965	4.22	2026	4.66	2085	5.11
5460	2800	1702	2.34	1738	2.56	1772	2.78	1804	3.01	1870	3.46	1935	3.92	1999	4.39	2059	4.83	2118	5.3	2175	5.77

CFM	OV FPM	4-1/2" SP		5" SP		5-1/2" SP		6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2925	1500	1780	3.00																		
3120	1600	1807	3.15																		
3315	1700	1828	3.33	1906	3.74																
3510	1800	1854	3.51	1928	3.92	2001	4.33														
3705	1900	1880	3.70	1955	4.12	2029	4.55	2095	4.99	2229	5.91										
3900	2000	1910	3.91	1981	4.33	2052	4.77	2119	5.23	2249	6.13	2375	7.13								
4290	2200	1977	4.38	2042	4.81	2108	5.26	2173	5.75	2300	6.69	2420	7.69	2535	8.75						
4680	2400	2056	4.92	2114	5.37	2174	5.82	2234	6.3	2353	7.27	2471	8.33	2583	9.42	2690	10.52	2798	11.65		
5070	2600	2141	5.55	2195	6	2251	6.47	2305	6.96	2415	7.96	2525	9.02	2636	10.15	2741	11.3	2842	12.47	2943	13.69
5460	2800	2231	6.25	2283	6.72	2334	7.21	2385	7.7	2487	8.73	2589	9.81	2692	10.95	2794	12.14	2894	13.37	2990	14.57
5850	3000	2322	7.00	2373	7.52	2424	8.03	2471	8.54	2566	9.59	2661	10.7	2756	11.84	2853	13.06	2947	14.3	3043	15.62
6240	3200	2414	7.83	2464	8.37	2514	6.91	2561	9.47	2651	10.55	2741	11.68	2829	12.87	2918	14.07	3009	15.36	3098	16.66
6630	3400	2508	8.74	2557	9.3	2604	9.87	2651	10.45	2741	11.62	2825	12.78	2909	13.97	2993	15.23	3076	16.51	3161	17.85
7020	3600	2606	9.76	2651	10.32	2698	10.92	2743	11.52	2830	12.74	2914	13.98	2994	15.21	3073	16.47	3153	17.79		
7410	3800	2705	10.85	2749	11.46	2792	12.06	2836	12.68	2922	13.95	3004	15.25	3083	16.55	3158	17.85				
7800	4000	2804	12.02	2847	12.67	2891	13.32	2931	13.94	3014	15.26	3095	16.6	3173	17.98						

Size 20

Outlet Area: 2.34 sq. ft. • Maximum BHP = .894 (rpm ÷ 1000)² • Tip Speed (fpm) = 5.65 x rpm

Maximum Safe Speed RPM Class I 2469 Class II 2895 Class III 3359

FEG 80

CFM	OV FPM	1/2" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2106	900	664	0.26	809	0.47	945	0.71														
2340	1000	705	0.31	837	0.52	966	0.78	1084	1.07												
2574	1100	748	0.37	872	0.59	991	0.86	1103	1.15	1208	1.47										
2808	1200	792	0.43	910	0.67	1017	0.94	1127	1.25	1227	1.57	1323	1.93								
3042	1300	836	0.51	950	0.76	1051	1.04	1152	1.35	1249	1.69	1342	2.05	1429	2.44						
3276	1400	881	0.59	991	0.86	1087	1.15	1179	1.46	1274	1.82	1363	2.19	1448	2.58	1530	2.99				
3510	1500	928	0.68	1034	0.97	1126	1.28	1213	1.6	1299	1.95	1387	2.33	1470	2.73	1549	3.15	1625	3.6	1699	4.06
3744	1600	975	0.78	1077	1.1	1166	1.41	1249	1.75	1329	2.1	1412	2.49	1493	2.91	1570	3.33	1645	3.78	1717	4.25
3978	1700	1024	0.89	1121	1.23	1208	1.56	1288	1.91	1364	2.28	1439	2.66	1518	3.09	1594	3.53	1666	3.98	1737	4.46
4212	1800	1073	1.02	1165	1.37	1250	1.73	1328	2.09	1401	2.47	1472	2.86	1544	3.28	1619	3.74	1690	4.2	1758	4.69
4446	1900	1122	1.15	1210	1.53	1293	1.9	1369	2.28	1439	2.67	1508	3.08	1575	3.5	1644	3.95	1715	4.44	1782	4.93
4680	2000	1172	1.31	1255	1.7	1337	2.09	1410	2.49	1479	2.89	1546	3.31	1610	3.74	1673	4.19	1740	4.68	1807	5.19
5148	2200	1274	1.65	1349	2.08	1425	2.51	1496	2.94	1562	3.38	1624	3.82	1685	4.28	1744	4.76	1801	5.24	1860	5.75
5616	2400	1376	2.05	1446	2.52	1515	2.99	1583	3.46	1647	3.93	1707	4.41	1764	4.9	1819	5.39	1874	5.9	1928	6.43
6084	2600	1479	2.52	1544	3.02	1607	3.53	1672	4.04	1733	4.56	1791	5.07	1846	5.59	1900	6.11	1951	6.64	2002	7.19
6552	2800	1582	3.06	1644	3.6	1703	4.15	1762	4.7	1822	5.25	1878	5.8	1931	6.36	1983	6.91	2032	7.48	2080	8.05
7020	3000	1686	3.68	1745	4.26	1800	4.84	1855	5.43	1911	6.02	1966	6.61	2018	7.2	2067	7.8	2116	8.39	2162	8.99
7488	3200	1791	4.39	1846	5	1899	5.62	1950	6.24	2002	6.87	2055	7.5	2105	8.13	2154	8.76	2201	9.4	2246	10.03
7956	3400	1896	5.18	1949	5.83	1999	6.48	2047	7.15	2096	7.81	2145	8.48	2194	9.15	2241	9.82	2287	10.49	2331	11.16
8424	3600	2001	6.07	2051	6.75	2099	7.44	2145	8.14	2191	8.85	2237	9.55	2284	10.26	2330	10.97	2375	11.68	2418	12.39

CFM	OV FPM	6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4212	1800	1890	5.70	2015	6.79																
4446	1900	1910	5.96	2033	7.06	2149	8.23														
4680	2000	1932	6.24	2052	7.35	2167	8.52	2277	9.77												
5148	2200	1982	6.85	2097	8	2207	9.2	2314	10.45	2417	11.78										
5616	2400	2034	7.52	2146	8.72	2253	9.97	2355	11.25	2455	12.59	2552	13.98	2645	15.44						
6084	2600	2101	8.32	2200	9.51	2303	10.8	2403	12.14	2499	13.51	2592	14.93	2683	16.4	2772	17.91	2859	19.49	2943	21.12
6552	2800	2175	9.22	2266	10.44	2358	11.72	2454	13.1	2548	14.53	2638	15.99	2726	17.49	2812	19.02	2897	20.61	2979	22.25
7020	3000	2252	10.22	2340	11.49	2425	12.8	2510	14.15	2599	15.61	2688	17.13	2774	18.68	2858	20.26	2939	21.87	3019	23.53
7488	3200	2333	11.32	2417	12.63	2499	13.99	2579	15.39	2658	16.82	2740	18.34	2825	19.95	2907	21.58	2987	23.25	3064	24.94
7956	3400	2416	12.52	2497	13.89	2575	15.29	2653	16.74	2728	18.22	2803	19.73	2879	21.31	2958	22.98	3037	24.71	3113	26.46
8424	3600	2500	13.82	2579	15.25	2655	16.71	2729	18.2	2802	19.73	2874	21.29	2944	22.88	3015	24.53	3089	26.25	3164	28.06
8892	3800	2586	15.21	2663	16.73	2737	18.25	2809	19.79	2879	21.36	2948	22.97	3016	24.62	3083	26.28	3150	27.99	3218	29.77
9360	4000	2673	16.72	2748	18.3	2821	19.9	2890	21.5	2958	23.12	3025	24.78	3091	26.47	3156	28.2	3220	29.94	3283	31.72
9828	4200	2761	18.34	2835	19.99	2906	21.66	2974	23.34	3040	25.02	3072	26.72	3168	28.46	3231	30.23	3293	32.04	3354	33.86
10296	4400	2850	20.07	2992	21.8	2992	23.54	3059	25.29	3123	27.05	3105	28.81	3248	30.6	3309	32.41				
10764	4600	2939	21.92	3010	23.73	3078	25.55	3144	27.37	3208	29.2	3270	31.03	3330	32.88						
11232	4800	3030	23.90	3090	25.79	3166	27.68	3231	29.57	3293	31.48	3354	33.39								
11700	5000	3122	26.01	3189	27.98	3255	29.94	3318	31.91												

- Performance certified is for installation type B - Free inlet, Ducted outlet.
- Power ratings (BHP) do not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- Performance ratings at 0.075 lbs/ft³ Density, 70°F, Sea Level Elevation.

Size 22 ¼

Outlet Area: 2.90 sq. ft. • Maximum BHP = 1.37 (rpm ÷ 1000)² • Tip Speed (fpm) = 6.28 x rpm

Maximum Safe Speed RPM Class I 2155 Class II 2483 Class III 2943

FEG 90

CFM	OV FPM	1/2" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2900	1000	625	0.33	751	0.58	863	0.84	962	1.14												
3190	1100	661	0.39	780	0.65	887	0.93	984	1.24	1072	1.57										
3480	1200	698	0.45	811	0.73	913	1.03	1008	1.35	1094	1.7	1173	2.06	1250	2.44						
3770	1300	737	0.52	844	0.82	941	1.14	1032	1.48	1117	1.83	1195	2.21	1268	2.6	1339	3.01				
4060	1400	776	0.60	878	0.92	971	1.26	1058	1.61	1141	1.98	1218	2.37	1289	2.77	1358	3.2	1424	3.63		
4350	1500	815	0.68	914	1.03	1003	1.38	1086	1.75	1166	2.14	1241	2.54	1312	2.96	1379	3.39	1443	3.85	1505	4.31
4640	1600	854	0.77	951	1.14	1036	1.52	1116	1.91	1192	2.31	1266	2.73	1336	3.16	1402	3.61	1465	4.07	1525	4.55
4930	1700	894	0.87	989	1.27	1071	1.67	1148	2.08	1221	2.49	1292	2.93	1360	3.37	1426	3.83	1488	4.31	1547	4.8
5220	1800	934	0.98	1027	1.41	1106	1.83	1181	2.25	1251	2.69	1319	3.14	1386	3.6	1450	4.07	1511	4.57	1570	5.07
5510	1900	975	1.10	1067	1.57	1142	2	1215	2.44	1283	2.9	1349	3.37	1413	3.84	1475	4.33	1536	4.84	1594	5.35
5800	2000	1017	1.24	1106	1.73	1180	2.18	1249	2.65	1316	3.12	1380	3.61	1441	4.1	1502	4.61	1561	5.12	1618	5.66
6380	2200	1100	1.53	1184	2.07	1257	2.59	1321	3.09	1384	3.61	1445	4.13	1503	4.66	1559	5.2	1615	5.75	1669	6.31
6960	2400	1186	1.87	1263	2.46	1335	3.05	1397	3.59	1455	4.14	1513	4.71	1568	5.28	1622	5.86	1674	6.44	1725	7.04
7540	2600	1275	2.29	1344	2.91	1413	3.55	1474	4.16	1530	4.74	1584	5.35	1637	5.96	1688	6.58	1738	7.2	1787	7.83
8120	2800	1366	2.78	1426	3.42	1491	4.1	1553	4.79	1607	5.42	1657	6.05	1708	6.71	1757	7.37	1805	8.03	1852	8.7
8700	3000	1457	3.34	1509	3.98	1571	4.72	1630	5.46	1685	6.17	1734	6.84	1781	7.52	1828	8.22	1874	8.93	1919	9.64
9280	3200	1550	3.99	1594	4.61	1652	5.41	1709	6.19	1763	6.98	1812	7.72	1857	8.43	1901	9.16	1945	9.9	1988	10.66
9860	3400	1642	4.72	1681	5.32	1734	6.16	1788	6.99	1841	7.84	1890	8.66	1935	9.43	1977	10.18	2019	10.96	2060	11.75
10440	3600	1736	5.54	1769	6.14	1818	6.99	1869	7.87	1919	8.76	1968	9.65	2013	10.5	2055	11.31	2095	12.11	2134	12.93
11020	3800	1829	6.45	1859	7.05	1901	7.89	1951	8.84	1998	9.76	2046	10.71	2091	11.64	2133	12.53	2172	13.37	2210	14.22

CFM	OV FPM	6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4930	1700	1660	5.83	1768	6.9																
5220	1800	1681	6.12	1786	7.23																
5510	1900	1703	6.43	1806	7.56	1905	8.74														
5800	2000	1727	6.76	1828	7.91	1924	9.12	2017	10.36												
6380	2200	1775	7.47	1874	8.68	1968	9.93	2058	11.23	2144	12.57	2228	13.94								
6960	2400	1826	8.26	1923	9.52	2015	10.82	2103	12.17	2187	13.56	2268	14.99	2347	16.46	2424	17.97	2499	19.5		
7540	2600	1882	9.12	1974	10.44	2064	11.8	2150	13.2	2233	14.65	2313	16.13	2389	17.65	2464	19.2	2537	20.8	2608	22.42
8120	2800	1942	10.06	2030	11.45	2116	12.87	2200	14.33	2281	15.82	2359	17.36	2435	18.93	2508	20.54	2579	22.18	2648	23.86
8700	3000	2006	11.08	2090	12.54	2172	14.03	2253	15.55	2331	17.1	2408	18.69	2483	20.31	2555	21.97	2625	23.66	2692	25.39
9280	3200	2073	12.18	2154	13.71	2232	15.27	2309	16.86	2385	18.48	2459	20.12	2532	21.8	2603	23.51	2672	25.26	2739	27.04
9860	3400	2141	13.36	2220	14.97	2296	16.61	2369	18.27	2442	19.95	2513	21.66	2584	23.4	2653	25.17	2721	26.97	2787	28.8
10440	3600	2212	14.62	2288	16.32	2361	18.04	2433	19.77	2503	21.53	2571	23.31	2639	25.11	2706	26.94	2772	28.8	2836	30.68
11020	3800	2285	15.97	2358	17.76	2429	19.56	2499	21.37	2566	23.2	2632	25.05	2697	26.93	2762	28.82	2825	30.74	2888	32.69
11600	4000	2359	17.42	2429	19.29	2498	21.17	2566	23.07	2632	24.98	2696	26.9	2759	28.85	2821	30.82	2882	32.81	2943	34.82
12180	4200	2435	19.00	2503	20.92	2570	22.88	2635	24.87	2699	26.86	2762	28.86	2823	30.88	2883	32.92	2943	34.99		
12760	4400	2513	20.70	2578	22.67	2643	24.7	2706	26.77	2768	28.85	2829	30.93	2889	33.03						
13340	4600	2591	22.51	2655	24.55	2717	26.64	2778	28.78	2839	30.94	2898	33.12								
13920	4800	2670	24.40	2733	26.57	2793	28.71	2852	30.91	2911	33.15										

Size 24 ½

Outlet Area: 3.52 sq. ft. • Maximum BHP = 2.22 (rpm ÷ 1000)² • Tip Speed (fpm) = 6.92 x rpm

Maximum Safe Speed RPM Class I 2015 Class II 2300 Class III 2674

FEG 90

CFM	OV FPM	1/2" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3520	1000	568	0.40	682	0.7	784	1.03	874	1.38												
3872	1100	600	0.47	708	0.79	806	1.13	894	1.51	974	1.91										
4224	1200	635	0.54	737	0.89	829	1.25	915	1.64	993	2.06	1066	2.5	1135	2.96						
4576	1300	670	0.63	767	1	855	1.38	938	1.79	1014	2.22	1085	2.68	1152	3.15	1216	3.65				
4928	1400	706	0.73	798	1.12	882	1.53	961	1.95	1036	2.4	1106	2.87	1171	3.36	1233	3.88	1293	4.41		
5280	1500	741	0.83	831	1.25	911	1.68	987	2.13	1059	2.59	1128	3.08	1192	3.59	1253	4.12	1311	4.67	1367	5.23
5632	1600	776	0.94	864	1.39	942	1.85	1014	2.32	1083	2.8	1150	3.31	1214	3.83	1274	4.38	1331	4.94	1386	5.52
5984	1700	812	1.06	898	1.55	973	2.03	1043	2.52	1109	3.03	1174	3.55	1236	4.09	1295	4.65	1351	5.23	1405	5.83
6336	1800	849	1.20	934	1.72	1005	2.22	1073	2.74	1137	3.27	1199	3.81	1259	4.37	1317	4.95	1373	5.54	1426	6.15
6688	1900	886	1.34	969	1.9	1038	2.42	1104	2.97	1166	3.52	1225	4.09	1283	4.67	1340	5.26	1395	5.87	1448	6.5
7040	2000	924	1.50	1005	2.1	1072	2.65	1135	3.21	1196	3.79	1253	4.38	1309	4.98	1364	5.59	1418	6.22	1470	6.87
7744	2200	1000	1.86	1076	2.52	1142	3.14	1201	3.75	1258	4.38	1313	5.01	1365	5.66	1417	6.31	1467	6.98	1516	7.66
8448	2400	1078	2.28	1147	2.99	1213	3.71	1269	4.36	1322	5.03	1374	5.72	1425	6.41	1474	7.11	1521	7.82	1568	8.54
9152	2600	1159	2.78	1221	3.54	1284	4.32	1340	5.05	1390	5.76	1439	6.5	1487	7.24	1534	7.99	1579	8.75	1623	9.51
9856	2800	1242	3.38	1296	4.15	1355	4.99	1411	5.82	1460	6.58	1506	7.35	1552	8.15	1596	8.95	1640	9.75	1682	10.56
10560	3000	1325	4.06	1372	4.84	1427	5.73	1482	6.64	1531	7.5	1576	8.31	1619	9.14	1661	9.99	1703	10.85	1744	11.71
11264	3200	1409	4.85	1449	5.6	1501	6.57	1553	7.52	1602	8.48	1647	9.37	1688	10.24	1728	11.12	1768	12.03	1807	12.94
11968	3400	1493	5.74	1528	6.47	1576	7.49	1625	8.49	1673	9.52	1718	10.52	1758	11.45	1797	12.37	1835	13.31	1872	14.27
12672	3600	1578	6.73	1608	7.46	1652	8.49	1698	9.57	1744	10.64	1789	11.72	1830	12.76	1867	13.74	1904	14.71	1939	15.71
13376	3800	1663	7.85	1690	8.56	1728	9.58	1773	10.74	1816	11.86	1859	13.01	1901	14.14	1939	15.21	1974	16.25	2008	17.27

CFM	OV FPM	6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5984	1700	1508	7.07	1606	8.83																
6336	1800	1527	7.43	1622	8.77	1714	10.16														
6688	1900	1547	7.81	1641	9.18	1730	10.6														
7040	2000	1568	8.20	1661	9.6	1748	11.06	1833	12.57												
7744	2200	1612	9.07	1703	10.53	1788	12.05	1869	13.62	1948	15.25	2024	16.92								
8448	2400	1659	10.02	1747	11.55	1831	13.13	1910	14.77	1987	16.46	2060	18.19	2132	19.98	2202	21.8	2270	23.67		
9152	2600	1709	11.07	1794	12.67	1875	14.32	1953	16.02	2029	17.77	2101	19.57	2170	21.42	2238	23.3	2304	25.24	2369	27.21
9856	2800	1764	12.21	1844	13.9	1922	15.62	1999	17.39	2072	19.21	2143	21.07	2212	22.97	2278	24.92	2343	26.92	2405	28.95
10560	3000	1823	13.45	1899	15.22	1973	17.03	2046	18.87	2118	20.76	2188	22.68	2255	24.65	2321	26.66	2384	28.72	2446	30.82
11264	3200	1883	14.79	1957	16.65	2028	18.54	2098	20.47	2167	22.43	2234	24.43	2300	26.46	2364	28.54	2427	30.66	2488	32.82
11968	3400	1946	16.12	2017	18.18	2086	20.16	2153	22.18	2218	24.22	2283	26.3	2347	28.41	2410	30.55	2471	32.73	2531	34.96
12672	3600	2010	17.75	2079	19.82	2146	21.9	2211	24	2274	26.13	2336	28.29	2397	30.48	2458	32.7	2518	34.96	2577	37.24
13376	3800	2076	19.39	2142	21.56	2207	23.75	2270	25.95	2332	28.17	2392	30.41	2451	32.69	2509	34.99	2567	37.32	2624	39.68
14080	4000	2144	21.16	2208	23.42	2270	25.71	2332	28.01	2391	30.33	2450	32.66	2507	35.03	2563	37.41	2619	39.83	2674	42.27
14784	4200	2213	23.08	2275	25.4	2335	27.79	2394	30.2	2453	32.61	2510	35.05	2565	37.5	2620	39.97	2674	42.47		
15488	4400	2284	25.14	2343	27.53	2401	30	2459	32.51	2515	35.03	2571	37.56	2625	40.11						
16192	4600	2355	27.34	2413	29.82	2469	32.35	2525	34.95	2579	37.57	2633	40.21								
16895	4800	2426	29.64	2484	32.28	2538	34.87	2592	37.53	2645	40.25										

- Performance certified is for installation type B - Free inlet, Ducted outlet.
- Power ratings (BHP) do not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- Performance ratings at 0.075 lbs/ft³ Density, 70°F, Sea Level Elevation.

Size 27

Outlet Area: 4.27 sq. ft. • Maximum BHP = 3.60 (rpm ÷ 1000)² • Tip Speed (fpm) = 7.62 x rpm

Maximum Safe Speed RPM Class I 1829 Class II 2087 Class III 2425

FEG 90

CFM	OV FPM	1/2" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4270	1000	515	0.49	619	0.85	711	1.24	793	1.68												
4697	1100	544	0.57	642	0.96	731	1.37	811	1.83	884	2.31										
5124	1200	575	0.66	668	1.08	752	1.52	830	1.99	901	2.5	967	3.03	1030	3.59						
5551	1300	607	0.77	696	1.21	775	1.68	850	2.17	920	2.7	984	3.25	1045	3.83	1103	4.43				
5978	1400	640	0.88	724	1.36	800	1.85	872	2.37	940	2.91	1003	3.48	1063	4.08	1119	4.71	1173	5.35		
6405	1500	672	1.01	753	1.51	827	2.04	895	2.58	961	3.15	1023	3.74	1081	4.36	1137	5	1189	5.66	1241	6.35
6832	1600	704	1.14	783	1.69	854	2.24	920	2.81	983	3.4	1043	4.01	1101	4.65	1155	5.31	1207	5.99	1257	6.7
7259	1700	747	1.29	815	1.87	882	2.46	946	3.06	1006	3.67	1065	4.31	1121	4.96	1175	5.64	1226	6.35	1275	7.07
7686	1800	770	1.45	847	2.08	911	2.69	973	3.32	1031	3.96	1087	4.62	1142	5.3	1195	6	1245	6.72	1294	7.47
8113	1900	804	1.63	879	2.31	941	2.94	1001	3.6	1057	4.27	1111	4.96	1164	5.66	1216	6.38	1265	7.12	1313	7.88
8540	2000	838	1.82	911	2.54	972	3.21	1029	3.9	1084	4.6	1137	5.31	1188	6.04	1238	6.78	1286	7.55	1333	8.33
9394	2200	907	2.25	975	3.05	1035	3.81	1089	4.55	1141	5.31	1190	6.08	1238	6.86	1285	7.66	1331	8.47	1376	9.29
10248	2400	978	2.76	1040	3.63	1100	4.49	1151	5.28	1199	6.1	1247	6.93	1292	7.77	1337	8.62	1380	9.49	1422	10.36
11102	2600	1051	3.37	1107	4.29	1164	5.23	1215	6.13	1260	6.98	1305	7.87	1349	8.78	1391	9.69	1432	10.61	1472	11.53
11956	2800	1125	4.09	1175	5.03	1229	6.04	1279	7.05	1324	7.98	1366	8.91	1407	9.88	1448	10.85	1487	11.83	1526	12.81
12810	3000	1201	4.92	1244	5.86	1294	6.95	1344	8.04	1388	9.09	1429	10.07	1468	11.08	1506	12.11	1544	13.15	1581	14.2
13664	3200	1277	5.87	1313	6.78	1361	7.96	1408	9.12	1453	10.28	1493	11.36	1530	12.41	1567	13.48	1603	14.58	1639	15.69
14518	3400	1353	6.95	1385	7.84	1429	9.07	1473	10.29	1517	11.54	1558	12.75	1594	13.88	1629	14.99	1664	16.14	1698	17.3
15372	3600	1430	8.15	1458	9.04	1498	10.29	1540	11.59	1581	12.9	1622	14.21	1659	15.46	1693	16.65	1726	17.83	1759	19.04
16226	3800	1507	9.50	1532	10.37	1567	11.61	1607	13.01	1647	14.38	1686	15.77	1723	17.14	1758	18.44	1790	19.69	1821	20.94

CFM	OV FPM	6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7259	1700	1368	8.58	1457	10.17																
7686	1800	1385	9.01	1472	10.64																
8113	1900	1404	9.47	1488	11.13	1570	12.86														
8540	2000	1423	9.95	1506	11.65	1586	13.42	1663	15.26												
9394	2200	1462	11.00	1544	12.77	1622	14.62	1696	16.53	1767	18.5	1836	20.53								
10248	2400	1505	12.16	1584	14.01	1661	15.93	1733	17.92	1802	19.97	1869	22.08	1934	24.24	1998	26.45	2060	28.72		
11102	2600	1550	13.43	1627	15.37	1701	17.38	1772	19.44	1840	21.56	1906	23.75	1969	25.99	2030	28.28	2090	30.62	2149	33.01
11956	2800	1600	14.81	1673	16.86	1744	18.95	1813	21.09	1880	23.3	1944	25.56	2007	27.87	2067	30.24	2125	32.66	2182	35.13
12810	3000	1653	16.31	1722	18.46	1790	20.65	1856	22.89	1921	25.18	1984	27.51	2046	29.91	2105	32.35	2163	34.84	2219	37.39
13664	3200	1708	17.93	1775	20.19	1839	22.49	1903	24.83	1965	27.2	2026	29.63	2086	32.1	2145	34.62	2202	37.19	2257	39.81
14518	3400	1765	19.67	1829	22.05	1892	24.45	1952	26.9	2012	29.38	2071	31.89	2129	34.45	2186	37.06	2242	39.71	2296	42.41
15372	3600	1823	21.52	1885	24.03	1946	26.56	2005	29.11	2062	31.69	2119	34.31	2174	36.97	2230	39.67	2284	42.4	2337	45.18
16226	3800	1883	23.51	1943	26.15	2002	28.8	2059	31.46	2115	34.16	2169	36.88	2223	39.64	2276	42.44	2328	45.27	2380	48.13
17080	4000	1944	25.66	2002	28.4	2059	31.17	2114	33.97	2169	36.77	2222	39.61	2274	42.48	2325	45.38	2375	48.3	2425	51.26
17934	4200	2007	27.97	2063	30.8	2117	33.69	2171	36.61	2224	39.55	2276	42.5	2326	45.47	2376	48.48	2425	51.51		
18788	4400	2071	30.47	2125	33.38	2178	36.37	2230	39.41	2281	42.47	2331	45.55	2381	48.64						
19642	4600	2135	33.14	2188	36.15	2239	39.22	2289	42.37	2339	45.56	2388	48.76								
20496	4800	2200	35.93	2252	39.12	2302	42.27	2350	45.51	2399	48.8										

Size 30

Outlet Area: 5.27 sq. ft. • Maximum BHP = 6.01 (rpm ÷ 1000)² • Tip Speed (fpm) = 8.48 x rpm

Maximum Safe Speed RPM Class I 1647 Class II 1807 Class III 2166

FEG 90

CFM	OV FPM	1/2" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5270	1000	459	0.58	552	1.01	626	1.45	697	1.95	768	2.51										
5797	1100	482	0.67	575	1.14	647	1.62	713	2.13	777	2.69	841	3.31								
6324	1200	507	0.78	599	1.29	670	1.81	732	2.33	792	2.91	851	3.53	909	4.19						
6851	1300	536	0.90	623	1.45	693	2	754	2.56	810	3.15	865	3.78	919	4.46	973	5.17				
7378	1400	565	1.04	646	1.62	717	2.22	777	2.82	831	3.42	882	4.07	934	4.76	984	5.48	1034	6.24	1085	7.05
7905	1500	595	1.19	668	1.79	741	2.44	800	3.08	853	3.73	902	4.39	951	5.08	999	5.82	1046	6.59	1092	7.4
8432	1600	625	1.36	692	1.98	765	2.68	824	3.36	877	4.05	925	4.74	971	5.45	1016	6.2	1061	6.99	1105	7.8
8959	1700	656	1.55	718	2.21	788	2.94	848	3.66	900	4.39	948	5.12	992	5.85	1035	6.61	1078	7.41	1121	8.24
9486	1800	687	1.76	746	2.45	810	3.19	872	3.98	924	4.74	971	5.51	1015	6.29	1057	7.07	1098	7.87	1138	8.72
10013	1900	719	1.98	775	2.72	833	3.46	895	4.31	948	5.11	995	5.92	1039	6.74	1080	7.56	1119	8.38	1157	9.23
10540	2000	751	2.23	805	3	858	3.77	918	4.64	972	5.51	1019	6.35	1062	7.21	1103	8.07	1142	8.93	1179	9.8
11594	2200	815	2.79	865	3.64	913	4.49	963	5.35	1019	6.34	1066	7.28	1110	8.21	1150	9.15	1189	10.1	1225	11.05
12648	2400	880	3.44	927	4.37	971	5.3	1015	6.22	1063	7.19	1113	8.28	1158	9.31	1198	10.33	1236	11.35	1272	12.38
13702	2600	945	4.20	989	5.2	1031	6.21	1071	7.21	1112	8.22	1158	9.3	1204	10.48	1246	11.6	1284	12.7	1319	13.81
14756	2800	1012	5.08	1052	6.15	1092	7.24	1130	8.32	1167	8.32	1206	10.49	1248	11.66	1292	12.94	1331	14.17	1367	15.35
15810	3000	1078	6.08	1116	7.23	1154	8.39	1190	9.55	1225	10.71	1260	11.86	1296	13.04	1336	14.3	1377	15.67	1415	17
16864	3200	1145	7.22	1181	8.43	1216	9.66	1250	10.91	1284	12.14	1316	13.38	1349	14.61	1384	15.87	1421	17.21	1460	18.67
17918	3400	1212	8.49	1246	9.78	1280	11.08	1312	12.4	1344	13.72	1375	15.03	1406	16.34	1437	17.65	1469	18.99	1504	20.4
18972	3600	1279	9.91	1312	11.28	1344	12.65	1375	14.04	1405	15.44	1435	16.84	1464	18.22	1493	19.61	1522	21	1553	22.41
20026	3800	1347	11.50	1378	12.93	1408	14.38	1438	15.85	1467	17.32	1495	18.79	1523	20.26	1550	21.73	1578	23.19	1606	24.66

CFM	OV FPM	6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8959	1700	1203	9.99	1286	11.88																
9486	1800	1218	10.50	1295	12.39	1374	14.42														
10013	1900	1234	11.04	1308	12.96	1382	14.99	1457	17.15												
10540	2000	1252	11.63	1324	13.58	1394	15.63	1464	17.78	1535	20.07										
11594	2200	1294	12.95	1360	14.94	1426	17.05	1490	19.25	1554	21.54	1618	23.94	1682	26.46						
12648	2400	1340	14.44	1403	16.52	1463	18.66	1524	20.91	1584	23.27	1643	25.71	1701	28.22	1759	30.83	1818	33.56	1878	36.4
13702	2600	1387	16.03	1449	18.27	1507	20.51	1564	22.81	1619	25.2	1675	27.7	1730	30.28	1785	32.93	1838	35.65	1892	38.46
14756	2800	1434	17.72	1496	20.12	1554	22.53	1608	24.95	1661	27.4	1713	29.92	1765	32.54	1817	35.26	1868	38.05	1918	40.9
15810	3000	1482	19.54	1543	22.09	1601	24.66	1655	27.24	1707	29.82	1756	32.43	1805	35.09	1853	37.83	1902	40.67	1950	43.59
16864	3200	1529	21.48	1591	24.18	1648	26.9	1702	29.64	1753	32.4	1802	35.15	1850	37.92	1896	40.72	1941	43.59	1986	46.53
17918	3400	1576	23.49	1639	26.41	1696	29.28	1749	32.18	1800	35.09	1849	38.01	1896	40.94	1941	43.87	1985	46.82	2028	49.82
18972	3600	1620	25.49	1686	28.75	1743	31.82	1797	34.85	1848	37.92	1896	41	1943	44.09	1988	47.19	2031	50.29	2073	53.4
20026	3800	1666	27.68	1731	31.09	1791	34.47	1845	37.7	1895	40.9	1944	44.14	1990	47.39	2035	50.65	2078	53.92	2120	57.19
21080	4000	1716	30.20	1775	33.5	1836	37.15	1892	40.67	1943	44.06	1991	47.43	2038	50.83	2082	54.25	2125	57.69	2166	61.12
22134	4200	1769	32.94	1822	36.24	1880	39.84	1938	43.69	1991	47.36	2039	50.92	2085	54.46	2129	58.02				
23188	4400	1826	35.88	1874	39.3	1926	42.81	1982	46.7	2037	50.72	2087	54.55	2133	58.27						
24242	4600	1883	39.03	1929	42.57	1976	46.16	2027	49.91	2081	54.05	2133	58.24								
25296	4800	1942	42.37	1985	46.07	2030	49.78	2076	53.55	2126	57.54										

- Performance certified is for installation type B - Free inlet, Ducted outlet.
- Power ratings (BHP) do not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- Performance ratings at 0.075 lbs/ft³ Density, 70°F, Sea Level Elevation.

Size 33

Outlet Area: 6.38 sq. ft. • Maximum BHP = 9.68 (rpm ÷ 1000)^2 • Tip Speed (fpm) = 9.31 x rpm

Maximum Safe Speed RPM Class I 1413 Class II 1552 Class III 1970

FEG 90

CFM	OV	1/2" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP	
	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6380	1000	417	0.70	502	1.22	569	1.76	634	2.36	698	3.04										
7018	1100	438	0.81	523	1.39	588	1.96	648	2.58	706	3.26	765	4								
7656	1200	461	0.94	545	1.56	609	2.19	665	2.82	720	3.52	773	4.27	827	5.08						
8294	1300	487	1.09	566	1.76	630	2.43	685	3.1	736	3.81	787	4.58	836	5.39	885	6.26				
8932	1400	514	1.26	587	1.96	652	2.68	706	3.41	755	4.15	802	4.92	849	5.76	895	6.63	940	7.55	986	8.53
9570	1500	541	1.45	607	2.16	674	2.96	728	3.73	776	4.51	821	5.31	865	6.15	908	7.05	951	7.98	993	8.95
10208	1600	569	1.65	629	2.4	695	3.25	749	4.07	797	4.9	841	5.74	882	6.6	924	7.5	965	8.46	1005	9.44
10846	1700	597	1.88	653	2.67	717	3.56	771	4.43	819	5.31	862	6.2	902	7.09	941	8	980	8.97	1019	9.98
11484	1800	625	2.13	679	2.97	737	3.86	793	4.82	840	5.74	883	6.67	923	7.61	961	8.56	998	9.53	1035	10.55
12122	1900	654	2.40	705	3.29	757	4.19	814	5.22	862	6.19	905	7.17	945	8.16	982	9.15	1018	10.15	1052	11.18
12760	2000	683	2.70	732	3.63	780	4.57	835	5.62	883	6.67	926	7.69	966	8.73	1003	9.77	1038	10.81	1072	11.87
14036	2200	741	3.37	787	4.41	830	5.43	876	6.48	926	7.68	970	8.82	1009	9.95	1046	11.08	1081	12.23	1114	13.37
15312	2400	800	4.17	843	5.29	883	6.41	923	7.54	966	8.71	1012	10.03	1053	11.28	1089	12.5	1124	13.74	1157	14.99
16588	2600	860	5.09	899	6.3	937	7.52	974	8.74	1011	9.96	1053	11.26	1095	12.69	1133	14.05	1167	15.38	1200	16.72
17864	2800	920	6.16	957	7.45	993	8.77	1027	10.08	1061	11.38	1097	12.7	1135	14.12	1175	15.67	1211	17.15	1243	18.58
19140	3000	980	7.37	1015	8.75	1049	10.16	1082	11.57	1114	12.97	1145	14.36	1179	15.79	1215	17.31	1252	18.98	1286	20.58
20416	3200	1041	8.74	1074	10.21	1106	11.71	1137	13.21	1167	14.71	1197	16.2	1227	17.69	1258	19.21	1292	20.83	1328	22.61
21682	3400	1102	10.29	1133	11.84	1164	13.43	1193	15.02	1222	16.62	1250	18.2	1278	19.79	1307	21.38	1336	22.99	1368	24.7
22968	3600	1163	12.01	1193	13.66	1222	15.33	1250	17.01	1278	18.7	1305	20.39	1331	22.07	1357	23.75	1384	25.43	1412	27.14
24244	3800	1225	13.93	1253	15.66	1280	17.42	1307	19.19	1334	20.98	1360	22.76	1385	24.54	1410	26.31	1435	28.08	1460	29.86

CFM	OV	6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP	
	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10846	1700	1094	12.10	1169	14.38																
11484	1800	1107	12.71	1178	15	1249	17.45														
12122	1900	1122	13.37	1190	15.69	1256	18.14	1324	20.76												
12760	2000	1138	14.07	1204	16.44	1268	18.92	1331	21.52	1396	24.29										
14036	2200	1176	15.68	1236	18.08	1296	20.64	1355	23.31	1413	26.08	1471	28.97	1529	32.02						
15312	2400	1218	17.49	1275	20	1331	22.59	1386	25.32	1440	28.17	1494	31.12	1547	34.16	1599	37.32	1653	40.62	1708	44.05
16588	2600	1261	19.41	1317	22.12	1370	24.84	1422	27.62	1472	30.5	1523	33.53	1573	36.65	1623	39.86	1671	43.16	1720	46.56
17864	2800	1304	21.46	1360	24.36	1413	27.28	1462	30.2	1510	33.17	1558	36.22	1605	39.39	1652	42.68	1698	46.06	1744	49.51
19140	3000	1347	23.65	1403	26.74	1455	29.86	1505	32.98	1552	36.11	1597	39.26	1641	42.48	1685	45.8	1729	49.23	1773	52.77
20416	3200	1391	26.01	1446	29.28	1498	32.57	1548	35.89	1594	39.22	1639	42.56	1682	45.91	1724	49.3	1765	52.77	1806	56.33
21692	3400	1433	28.44	1490	31.98	1542	35.45	1591	38.96	1637	42.49	1682	46.02	1724	49.57	1765	53.11	1805	56.69	1844	60.32
22968	3600	1473	30.87	1533	34.81	1585	38.52	1634	42.2	1680	45.91	1724	49.64	1767	53.39	1807	57.14	1847	60.89	1885	64.65
24244	3800	1515	33.52	1574	37.64	1628	41.74	1677	45.64	1723	49.53	1767	53.44	1810	57.38	1850	61.32	1889	65.28	1927	69.24
25520	4000	1560	36.57	1614	40.56	1670	44.98	1721	49.24	1767	53.35	1811	57.43	1853	61.55	1893	65.69	1932	69.84	1970	74.01
26796	4200	1609	39.89	1657	43.88	1710	48.24	1762	52.9	1810	57.34	1854	61.65	1896	65.94	1936	70.26				
28072	4400	1660	43.46	1704	47.59	1752	51.84	1802	56.54	1852	61.41	1897	66.05	1940	70.56						
29348	4600	1712	47.26	1754	51.56	1797	55.9	1843	60.44	1892	65.44	1940	70.52								
30624	4800	1766	51.31	1805	55.79	1846	60.28	1888	64.84	1933	69.67										

Size 36 ½

Outlet Area: 7.80 sq. ft. • Maximum BHP = 18.9 (rpm ÷ 1000)^2 • Tip Speed (fpm) = 10.3 x rpm

Maximum Safe Speed RPM Class I 1344 Class II 1497 Class III 1700

FEG 90

CFM	OV	1/2" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP	
	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7800	1000	356	0.86	434	1.47																
8580	1100	375	0.99	450	1.66	518	2.44														
9360	1200	395	1.15	467	1.9	528	2.65														
10140	1300	417	1.34	484	2.14	543	2.91	600	3.83												
10920	1400	439	1.54	501	2.39	560	3.24	612	4.12	668	5.2										
11700	1500	462	1.77	520	2.65	577	3.59	627	4.48	676	5.51	730	6.73								
12480	1600	484	2.02	539	2.95	594	3.95	643	4.91	689	5.9	736	7.07	788	8.4						
13260	1700	507	2.29	560	3.27	611	4.33	660	5.38	704	6.37	747	7.5	793	8.79	843	10.22				
14040	1800	530	2.58	581	3.63	629	4.72	677	5.86	721	6.92	762	8.01	803	9.26	846	10.66				
14820	1900	553	2.91	603	4.02	648	5.15	695	6.35	738	7.51	778	8.62	816	9.81	855	11.17	897	12.67	942	14.29
15600	2000	576	3.26	625	4.44	668	5.6	712	6.85	755	8.11	795	9.29	832	10.47	868	11.78	905	13.23	945	14.82
17160	2200	623	4.05	671	5.38	711	6.64	750	7.96	790	9.35	829	10.72	865	12.04	899	13.32	932	14.67	966	16.17
18720	2400	670	4.99	716	6.45	755	7.84	790	9.23	827	10.69	864	12.21	899	13.72	933	15.16	965	16.56	996	17.98
20280	2600	718	6.08	762	7.65	800	9.19	834	10.68	866	12.2	900	13.81	934	15.45	967	17.09	999	18.68	1029	20.2
21840	2800	767	7.35	808	9.01	845	10.7	878	12.32	909	13.92	939	15.58	971	17.32	1002	19.09	1033	20.86	1063	22.59
23400	3000	816	8.79	854	10.54	891	12.36	923	14.13	953	15.85	981	17.58	1010	19.37	1039	21.23	1068	23.13	1098	25.03
24960	3200	865	10.42	901	12.26	937	14.2	969	16.13	997	17.98	1024	19.8	1051	21.66	1078	23.58	1105	25.56	1133	27.59
26520	3400	915	12.26	949	14.18	983	16.23	1014	18.3	1043	20.3	1069	22.25	1094	24.2	1119	26.18	1145	28.22	1170	30.32
28080	3600	965	14.32	997	16.32	1029	18.47	1060	20.67	1088	22.83	1114	24.92	1138	26.97	1162	29.04	1186	31.14	1210	33.3
29640	3800	1015	16.61	1045	18.7	1076	20.93	1106	23.25	1134	25.56	1159	27.8	1183	29.99	1206	32.16	1229	34.34	1251	36.56

CFM	OV	6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP	
	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
17160	2200	1036	19.55																		
18720	2400	1057	21.16	1121	24.83																
20280	2600	1086	23.28	1142	26.75	1201	30.68	1265	34.97												
21840	2800	1119	25.89	1172	29.22	1224	32.94	1278	37.09	1335	41.6										
23400	3000	1153	28.73	1205	32.23	1254	35.81	1302	39.75	1352	44.1	1404	48.8	1460	53.81						
24960	3200	1187	31.63	1239	35.52	1287	39.25	1332	43.05	1378	47.19	1424	51.72	1472	56.59	1523	61.77	1577	67.23		
26520	3400	1222	34.62	1273	38.89	1321	43	1366	46.95	1409	50.98	1452	55.28	1495	59.97	1539	64.99	1585	70.33	1634	75.94
28080	3600	1259	37.78	1308	42.35	1355	46.84	1400	51.18	1442	55.36	1483	59.6	1524	64.05	1564	68.89	1605	74.05	1648	79.52
29640	3800	1297	41.17	1343	45.95	1389	50.77	1434	55.5	1476	60.07	1517	64.48	1556	68.93	1594	73.55	1633	78.5	1671	83.78
31200	4000	1336	44.82	1380	49.77	1425	54.83	1468	59.89	1510	64.87	1551	69.68	1589	74.34	1627	78.99	1663	83.78	1700	88.82
32760	4200	1378	48.83	1419	53.88	1461	59.11	1503	64.43	1545	69.74	1585	74.96	1624	80.03	1661	84.94	1696	89.81		
34320	4400	1421	53.14	1460	58.31	1500	63.67	1540	69.18	1580	74.76	1619	80.33	1658	85.8	1695	91.12				
35880	4600	1465	57.78	1502	63.09	1540	68.55	1578	74.22	1616	80	1654	85.84	1692	91.65						
37440	4800	1510	62.72	1546	68.22	1581	73.81	1617	79.58	1654	85.53	1690	91.58								

- Performance certified is for installation type B - Free inlet, Ducted outlet.
- Power ratings (BHP) do not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- Performance ratings at 0.075 lbs/ft^3 Density, 70°F, Sea Level Elevation.

Size 40 ¼

Outlet Area: 9.48 sq. ft. • Maximum BHP = 30.8 (rpm ÷ 1000)² • Tip Speed (fpm) = 11.37 x rpm

Maximum Safe Speed RPM Class I 903 Class II 1179 Class III 1541

FEG 90

CFM	OV FPM	1/2" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9480	1000	323	1.00	394	1.8																
10428	1100	340	1.20	408	2	470	3														
11376	1200	358	1.40	423	2.3	479	3.2														
12324	1300	378	1.60	439	2.6	492	3.5	544	4.7												
13272	1400	398	1.90	454	2.9	507	3.9	555	5	605	6.3										
14220	1500	418	2.10	471	3.2	523	4.4	568	5.4	613	6.7	662	8.2								
15168	1600	439	2.40	489	3.6	538	4.8	583	6	625	7.2	667	8.6	715	10.2						
16116	1700	460	2.80	507	4	554	5.3	599	6.5	639	7.7	678	9.1	719	10.7	764	12.4				
17064	1800	480	3.10	527	4.4	571	5.7	614	7.1	654	8.4	691	9.7	728	11.3	767	13				
18012	1900	501	3.50	547	4.9	588	6.3	630	7.7	669	9.1	705	10.5	740	11.9	776	13.6	813	15.4	854	17.4
18960	2000	522	4.00	567	5.4	606	6.8	646	8.3	685	9.9	721	11.3	754	12.7	787	14.3	821	16.1	857	18
20856	2200	564	4.90	608	6.5	644	8.1	680	9.7	716	11.4	752	13	784	14.6	815	16.2	845	17.8	876	19.7
22752	2400	607	6.10	649	7.8	684	9.5	717	11.2	750	13	783	14.8	815	16.7	846	18.4	875	20.1	903	21.8
24648	2600	651	7.40	691	9.3	725	11.2	756	13	785	14.8	816	16.8	847	18.8	877	20.8	906	22.7	933	24.6
26544	2800	695	8.90	732	10.9	766	13	796	15	824	16.9	852	18.9	880	21	909	23.2	937	25.3	964	27.5
28440	3000	739	10.70	774	12.8	808	15	837	17.2	864	19.3	889	21.4	915	23.5	942	25.8	969	28.1	995	30.4
30336	3200	784	12.70	817	14.9	849	17.3	878	19.6	904	21.8	929	24.1	953	26.3	977	28.7	1002	31.1	1027	33.5
32232	3400	829	14.90	860	17.2	891	19.7	919	22.2	945	24.7	969	27	992	29.4	1015	31.8	1038	34.3	1061	36.8
34128	3600	874	17.40	904	19.8	933	22.4	961	25.1	986	27.7	1010	30.3	1032	32.8	1053	35.3	1075	37.8	1097	40.5
36024	3800	920	20.20	947	22.7	975	25.4	1002	28.2	1028	31	1051	33.8	1073	36.4	1093	39.1	1114	41.7	1134	44.4

CFM	OV FPM	6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20856	2200	939	23.80																		
22752	2400	958	25.70	1016	30.2																
24648	2600	985	28.30	1036	32.5	1089	37.3	1147	42.5												
26544	2800	1015	31.50	1062	35.5	1110	40	1158	45.1	1211	50.6										
28440	3000	1046	34.90	1092	39.2	1137	43.5	1181	48.3	1226	53.6	1273	59.3	1324	65.4						
30336	3200	1077	38.40	1123	43.2	1166	47.7	1208	52.3	1249	57.4	1291	62.9	1335	68.8	1381	75.1	1430	81.7		
32232	3400	1108	42.10	1154	47.3	1197	52.3	1238	57.1	1277	61.9	1316	67.2	1355	72.9	1396	79	1437	85.5	1482	92.3
34128	3600	1141	45.90	1185	51.5	1228	56.9	1269	62.2	1308	67.3	1345	72.4	1381	77.8	1418	83.7	1456	90	1494	96.7
36024	3800	1176	50.00	1218	55.8	1260	61.7	1300	67.4	1339	73	1375	78.4	1411	83.8	1445	89.4	1480	95.4	1515	101.8
37920	4000	1212	54.50	1251	60.5	1292	66.6	1331	72.8	1369	78.8	1406	84.7	1441	90.3	1475	96	1508	101.8	1541	107.9
39816	4200	1249	59.30	1287	65.5	1325	71.8	1363	78.3	1401	84.8	1437	91.1	1472	97.2	1506	103.2	1538	109.1		
41712	4400	1288	64.60	1324	70.9	1360	77.4	1396	84.1	1432	90.9	1468	97.6	1503	104.3	1537	110.7				
43608	4600	1328	70.20	1362	76.7	1396	83.3	1430	90.2	1465	97.2	1500	104.3	1534	111.4						
45504	4800	1369	76.20	1401	82.9	1433	89.7	1466	96.7	1499	103.9	1533	111.3								

Size 44 ½

Outlet Area: 11.58 sq. ft. • Maximum BHP = 51.0 (rpm ÷ 1000)² • Tip Speed (fpm) = 12.57 x rpm

Maximum Safe Speed RPM Class I 817 Class II 1066 Class III 1394

FEG 90

CFM	OV FPM	1/2" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11580	1000	292	1.30	356	2.2																
12738	1100	307	1.50	369	2.5	425	3.6														
13896	1200	324	1.70	383	2.8	433	3.9														
15054	1300	342	2.00	397	3.2	445	4.3	492	5.7												
16212	1400	360	2.30	411	3.5	459	4.8	502	6.1	548	7.7										
17370	1500	378	2.60	426	3.9	473	5.3	514	6.6	554	8.2	599	10								
18528	1600	397	3.00	442	4.4	487	5.9	527	7.3	565	8.8	604	10.5	647	12.5						
19686	1700	416	3.40	459	4.9	501	6.4	541	8	578	9.5	613	11.1	650	13.1	691	15.2				
20844	1800	434	3.80	476	5.4	516	7	555	8.7	591	10.3	625	11.9	658	13.7	694	15.8				
22002	1900	453	4.30	494	6	531	7.6	569	9.4	605	11.1	638	12.8	669	14.6	701	16.6	736	18.8		
23160	2000	472	4.80	513	6.6	548	8.3	584	10.2	619	12	652	13.8	682	15.5	712	17.5	743	19.7	775	22
25476	2200	510	6.00	550	8	582	9.9	615	11.8	648	13.9	680	15.9	709	17.9	737	19.8	764	21.8	792	24
27792	2400	549	7.40	587	9.6	619	11.6	648	13.7	678	15.9	708	18.1	737	20.4	765	22.5	791	26.4	816	26.7
30108	2600	588	9.00	624	11.3	656	13.6	683	15.8	710	18.1	738	20.5	766	22.9	793	25.4	819	27.7	844	30
32424	2800	628	10.90	662	13.4	693	15.9	720	18.3	745	20.7	770	23.1	796	25.7	822	28.3	847	31	872	33.5
34740	3000	668	13.00	700	15.6	730	18.3	757	21	781	23.5	804	26.1	828	28.7	852	31.5	876	34.3	900	37.1
37056	3200	709	15.40	739	18.2	768	21.1	794	23.9	817	26.7	840	29.4	861	32.1	884	35	906	37.9	929	40.9
39372	3400	750	18.20	778	21	805	24.1	831	27.1	855	30.1	876	33	897	35.9	917	38.8	938	41.9	959	45
41688	3600	790	21.20	817	24.2	843	27.4	868	30.7	892	33.9	913	37	933	40	952	43.1	972	46.2	992	49.4
44004	3800	831	24.60	857	27.7	882	31	906	34.5	929	37.9	950	41.2	970	44.5	989	47.7	1007	50.9	1025	54.2

CFM	OV FPM	6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
25476	2200	850	29.00																		
27792	2400	866	31.40	919	36.9																
30108	2600	890	34.60	937	39.7	985	45.6	1037	51.9												
32424	2800	917	38.40	961	43.4	1003	48.9	1048	55.1	1095	61.8										
34740	3000	945	42.60	988	47.8	1028	53.1	1068	59	1109	65.5	1152	72.5	1198	79.9						
37056	3200	973	46.90	1016	52.7	1055	58.2	1092	63.9	1130	70.1	1168	76.8	1207	84	1249	91.7	1293	99.9		
39372	3400	1002	51.40	1044	57.7	1083	63.8	1120	69.7	1155	75.7	1190	82.1	1226	89	1262	96.5	1300	104.5	1340	112.8
41688	3600	1032	56.10	1072	62.8	1111	69.5	1148	75.9	1182	82.2	1216	88.4	1249	95.1	1283	102.3	1316	110	1351	118.1
44004	3800	1063	61.10	1101	68.2	1139	75.3	1176	82.4	1210	89.1	1243	95.7	1275	102.3	1307	109.2	1339	116.5	1370	124.4
46320	4000	1095	66.50	1132	73.9	1168	81.4	1204	88.9	1238	96.3	1271	103.4	1303	110.3	1334	117.2	1364	124.3	1393	131.8
48636	4200	1130	72.40	1163	79.9	1198	87.7	1233	95.6	1267	103.5	1299	111.2	1331	118.8	1361	126	1391	133.3		
50952	4400	1165	78.80	1197	86.5	1229	94.5	1262	102.7	1295	111	1328	119.2	1359	127.3	1389	135.2				
53268	4600	1201	85.70	1231	93.6	1262	101.7	1293	110.1	1325	118.7	1356	127.4	1387	136	.					
55584	4800	1237	93.00	1267	101.2	1296	109.5	1325	118.1	1356	126.9	1386	135.9								

- Performance certified is for installation type B - Free inlet, Ducted outlet.
- Power ratings (BHP) do not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- Performance ratings at 0.075 lbs/ft³ Density, 70°F, Sea Level Elevation.

Sound Levels

Table lists estimated sound levels (dBA) for each size at various speeds within the fan's normal operating range. To determine dBA for a selected fan, locate the intersection of the fan size and the closest RPM.

NOTES:

1. **Sound levels are based on tests conducted in accordance with AMCA Standard 300.**
2. **Sound level computations are based on a distance of 3' from the fan's open Inlet in a free field environment.**
3. **Specific octave band sound power levels and sound pressure levels available on request.**
4. **Sound levels of installed fans can vary greatly from laboratory tests. The dBA ratings are only to be used as estimates. Any comparisons and any detailed calculations should be based on sound power levels, which are independent of the installation.**
5. **AMCA Certified Ratings Seal applies to air performance only.**

FAN SIZE	FAN SPEED - RPM												
	700	800	900	1000	1200	1400	1600	1800	2000	2400	2800	3200	3600
8-3/4	–	–	–	36	41	45	49	52	55	60	64	67	71
10	–	–	–	40	45	49	53	56	59	64	68	72	75
12-1/4	–	–	44	47	52	56	59	63	66	71	75	78	82
13-1/2	–	44	47	50	55	59	63	66	69	74	78	82	85
15	–	47	51	53	58	62	66	69	72	77	81	85	–
16-1/2	–	50	54	56	61	65	69	72	75	80	84	88	–
18-1/4	50	54	57	60	64	69	72	75	78	83	88	–	–
20	53	57	60	62	67	71	75	78	81	86	90	–	–
22-1/4	56	60	63	66	71	75	78	82	85	90	94	–	–
24-1/2	59	63	66	69	74	78	82	85	88	93	–	–	–
27	62	66	69	72	77	81	85	88	91	96	–	–	–
30	66	69	72	75	80	84	88	91	94	–	–	–	–
33	69	72	75	78	83	87	91	94	–	–	–	–	–
36-1/2	72	75	78	81	86	90	94	–	–	–	–	–	–
40-1/4	75	78	81	84	89	93	–	–	–	–	–	–	–
44-1/2	78	81	85	87	92	–	–	–	–	–	–	–	–

Bearing Life

Bearing life may be substantially increased or decreased by variations in the operating speed or changes in the V-belt drive. The table at right lists the design class maximum speeds (RPM) and fan sheave pitch diameters. The graph below plots the increase or decrease in bearing life when the RPM or fan sheave diameter is changed from the values in the table. Minimum average bearing life is 75,000 hours.

EXAMPLE:

Determine the increased bearing life of a Size 22-1/4 Class I fan operating at 1510 RPM. Assume the actual fan sheave pitch diameter of 7.8".

1. Calculate operating RPM as a percent of the design RPM.

   1510 RPM ÷ 2155 RPM = .701 x 100 = 70.1%. (Use 70%)

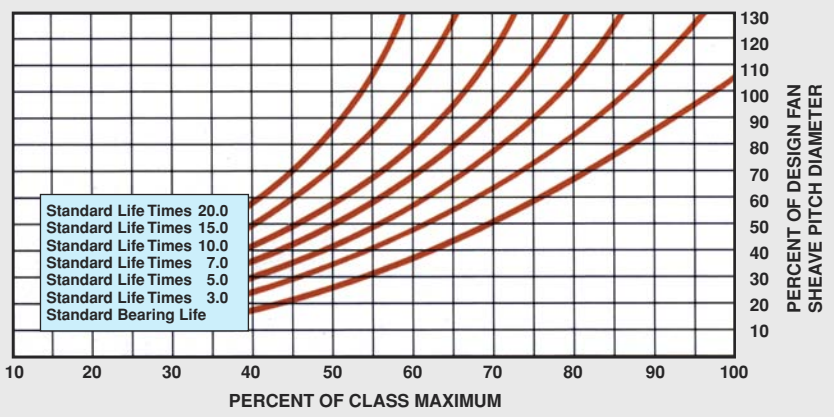
2. Calculate actual fan sheave pitch diameter as a percent of the design fan sheave pitch diameter in the table.

   7.8" ÷ 7.1" = 1.1 x 100 = 110%

3. Locate the intersection of 70% of design RPM and 110% of design fan sheave pitch diameter in the graph. Increased bearing life is 10 times the design minimum bearing life or 750,000 hours minimum average life.

FAN SIZE	CLASS I		CLASS II		CLASS III	
	RPM	Pitch Dia.*	RPM	Pitch Dia.*	RPM	Pitch Dia.*
8-3/4	5000	3.1	NA	NA	NA	NA
10	4962	3.1	NA	NA	NA	NA
12-1/4	4046	3.8	4280	3.7	NA	NA
13-1/2	3675	4.2	3884	4.0	NA	NA
15	3302	4.6	3586	4.3	NA	NA
16-1/2	2992	5.1	3509	4.4	NA	NA
18-1/4	2706	5.6	3173	4.8	NA	NA
20	2469	6.2	2895	5.3	3559	4.8
22-1/4	2155	7.1	2483	6.2	2943	5.2
24-1/2	2215	7.6	2306	6.6	2674	5.7
27	1829	8.4	2087	7.3	2425	6.3
30	1647	9.3	1807	8.5	2166	7.1
33	1413	10.8	1552	9.9	1970	7.8
36-1/2	1344	11.4	1497	11.4	1700	9.0
40-1/4	903	9.9	1179	9.9	1541	9.9
44-1/2	817	11.0	1066	11.0	1394	11.0

* Design Fan Sheave Pitch Diameter (inches)



Arrangement 9T and 9S, SISW

Fan Size	Motor Frame	Discharge Position/Rotation			
		Group A	Group B	Group C	Group D
8-3/4	48 56, 143-145 182-184	20-7/8 21-3/8 22-3/8	18-1/8 18-5/8 19-5/8	19-9/16 20-1/16 21-1/16	NA
10	48 56, 143-145 182-184	22-3/16 22-9/16 23-9/16	19-1/8 19-5/8 20-5/8	20-13/16 21-5/16 22-5/16	NA
12-1/4	56, 143-145 182-184 213-215 254-256	25-1/16 26-1/16 26-13/16 27-13/16	21-1/2 22-1/2 23-1/4 24-1/4	23-1/2 24-1/2 25-1/4 26-1/4	24-1/4 24-1/4 NA NA
13-1/2	56, 143-145 182-184 213-215 254-256	26-1/8 27-1/8 28-1/8 29-1/8	22-1/2 23-1/2 24 1/4 25-1/4	24-3/4 25-3/4 26-1/2 27-1/2	24-1/2 25-7/16 26-3/16 27-1/8
15	56, 143-145 182-184 213-215 254-256	28-5/16 29-5/16 30-1/16 31-1/16	23-3/4 24-3/4 25-1/2 26-1/2	26-1/4 27-1/4 28 29	25-7/16 26-3/8 27-1/8 28-1/8
16-1/2	56, 143-145 182-184 213-215 254-256	29-15/16 30-15/16 31-11/16 32-11/16	25 26 26-3/4 27-3/4	27-3/4 28-3/4 29-1/2 30-1/2	25-1/4 26-1/16 26-3/4 27-3/4
18-1/4	56, 143-145 182-184 213-215 254-256	31-13/16 32-13/16 33-9/16 34-9/16	26-7/16 27-7/16 28-3/16 29-3/16	29-1/2 30-1/2 31-3/4 32-1/4	26-13/16 27-13/16 28-9/16 29-9/16
20	56, 143-145 182-184 213-215 254-256 284-286	33-5/8 34-5/8 35-3/8 36-3/8 37-1/8	28 29 29-3/4 30-3/4 31-1/2	31-3/8 32-3/8 33-1/8 34-1/8 35	28-7/16 28-13/16 29-9/16 30-1/2 31-1/2

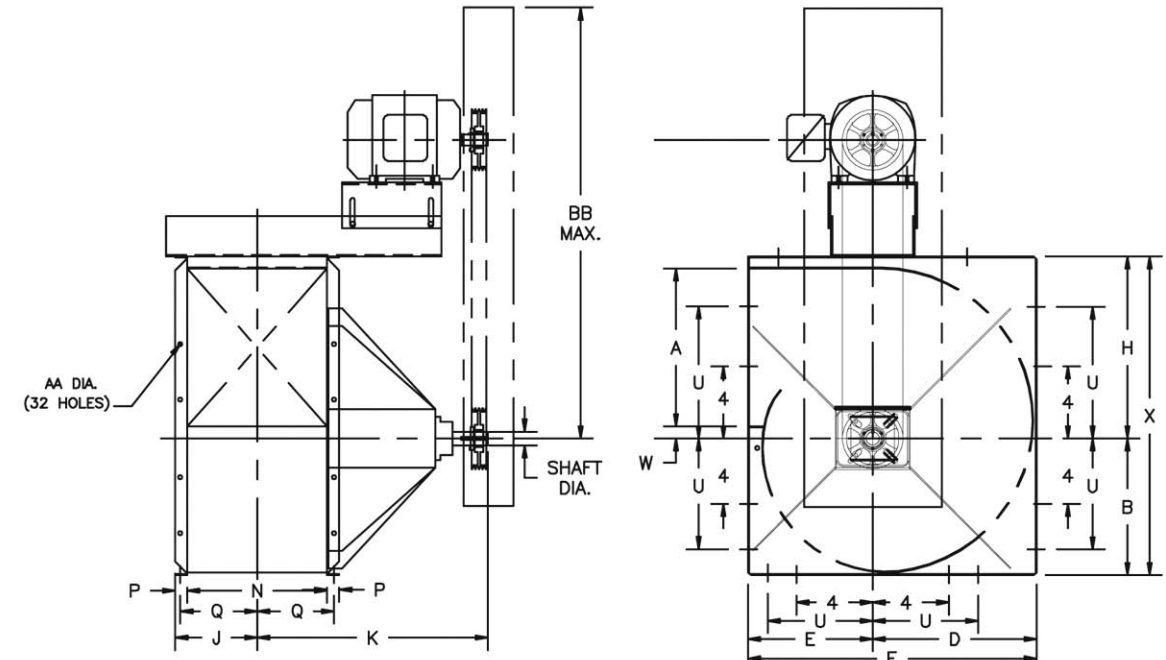
Belt centers include allowances for belt mounting and tensioning.
Motor Frames can be either "U" or "T" frame.
"T" Base (56-256) is available on sizes 12-1/4 - 44-1/2 SISW.
"T" Base (284-286) is available on sizes 20 - 44-1/2 SISW.
Refer to factory for Arrangement 9H.

Fan Size	Motor Frame	Discharge Position/Rotation			
		Group A	Group B	Group C	Group D
22-1/4	56, 143-145 182-184 213-215 254-256 284-286	36 37 37-3/4 38-3/4 39-1/2	29-7/8 30-7/8 31-5/8 32-5/8 33-3/8	33-9/16 34-9/16 35-5/16 36-5/16 37-1/16	29-5/16 30-5/16 31-1/16 32-1/16 33-3/16
24-1/2	56, 143-145 182-184 213-215 254-256 284-286	38-3/8 39-3/8 40-1/8 41-1/8 41-7/8	31-3/4 32-3/4 33-1/2 34-1/2 35-1/4	35-13/16 36-13/16 37-9/16 38-9/16 39-5/16	30-13/16 31-3/4 32-7/16 33-7/16 34-5/8
27	56, 143-145 182-184 213-215 254-256 284-286	41-1/2 42-1/2 43-1/4 44-1/4 45	33-7/8 34-7/8 35-5/8 36-5/8 37-3/8	38-1/4 39-1/4 40 41 41-3/4	32-1/2 33-7/16 34-3/16 35-3/16 38
30	56, 143-145 182-184 213-215 254-256 284-286	44-11/16 45-11/16 46-7/16 47-7/16 48 3/16	36-5/16 37-5/16 38-1/16 39-1/16 39-13/16	42-3/4 43-3/4 44-1/2 45-1/2 46-1/4	34-7/16 35-7/16 36-3/16 37-1/8 40-1/16
33	182-184 213-215 254-256 284-286	48-7/8 49-5/8 50-5/8 51-3/8	39-5/8 40-3/8 41-3/8 42-1/8	45-3/16 45-15/16 46-15/16 47-11/16	37-9/16 38-5/16 39-5/16 42-9/16
36-1/2	182-184 213-215 254-256 284-286	52-9/16 53-5/16 54-5/16 55 1/16	42-11/16 43-7/16 44-7/16 45-3/16	48-11/16 49-7/16 50-7/16 51-3/16	40-9/16 41-5/16 42-5/16 45-3/4
40-1/4	182-184 213-215 254-256 284-286	57 57-3/4 58-3/4 59-1/2	46-1/8 46-7/8 47-7/8 48-5/8	52-7/8 53-5/8 54-5/8 55-3/8	43-1/4 44 45-3/16 48-11/16
44-1/2	182-184 213-215 254-256 284-286	61-1/2 62-1/4 63-1/4 64	49-3/4 50-1/2 51-1/2 52-1/2	57 57-3/4 58-3/4 59-1/2	45-15/16 46-11/16 47-5/8 51-5/8

Discharge Position/Rotation and Motor Position

Group A	Group B	Group C	Group D
TH CW, CCW - TOP	BH CW, CCW - TOP	DB CW, CCW - TOP	UB CW, CCW - TOP
DB CCW - SL	DB CCW - SR	TH CCW - SR	OFFSET MOTOR
DB CW - SR	DB CW - SL	TH CW - SL	BASE
UB CCW - SR	UB CCW - SL	BH CCW - SL	
UB CW - SL	UB CW - SR	UB CW - SR	

SQA Dimensions

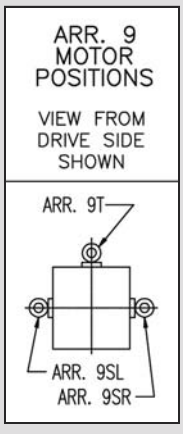


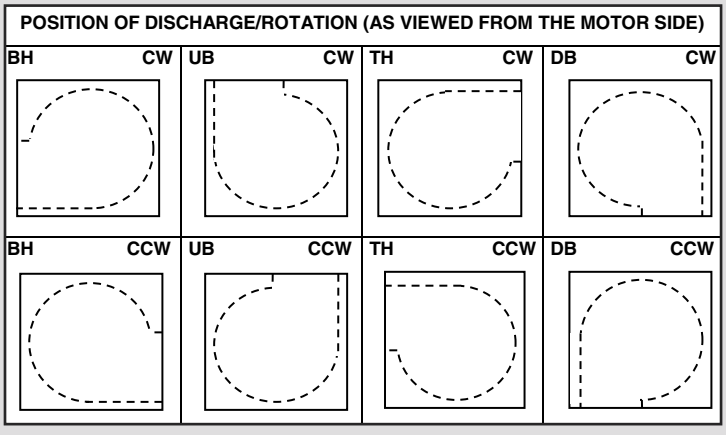
ARRANGEMENT 9T ILLUSTRATED
ARRANGEMENT 1: SAME AS ILLUSTRATED, BUT WITHOUT MOTOR & BASE

TH CCW

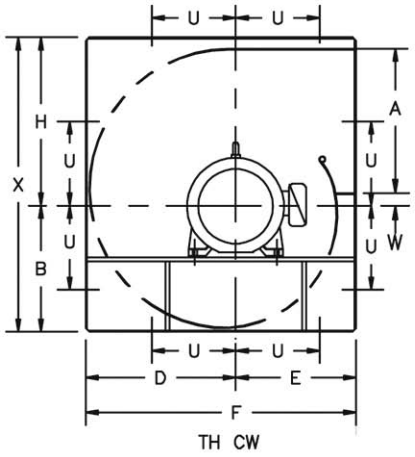
DIMENSIONS - INCHES																		
FAN SIZE	SHAFT DIA.			A	B	D	E	F	H	J	K (MAX)	N	P	Q	U	W	X	AA	BB
	CL. I	CL. II	CL. III																
8-3/4	3/4	N/A	N/A	8-9/16	7-5/8	9-1/16	7-1/2	16-9/16	10-3/8	4-7/8	13-1/8	7-9/16	1-1/8	4-1/2	5-1/16	11/16	18	9/16	29-13/16
10	3/4	N/A	N/A	9-13/16	8-5/8	10-5/16	8-1/2	18-13/16	11-11/16	5-7/16	13-11/16	8-5/8	1-1/8	5	5-11/16	3/4	20-5/16	9/16	32-13/16
12-1/4	1-3/16	1-3/16	N/A	12	10-1/2	12-1/2	10	22-1/2	14-1/16	6-1/2	22-1/2	10-11/16	1-1/8	6	7	15/16	24-9/16	9/16	37-15/16
13-1/2	1-3/16	1-3/16	N/A	13-1/4	11-1/2	13-3/4	11	24-3/4	15-3/8	7	23	11-3/4	1-1/8	6-9/16	7-11/16	1	26-7/8	9/16	37-15/16
15	1-3/16	1-3/16	N/A	14-5/8	12-3/4	15-1/4	12	27-1/4	17-5/16	8	24-1/8	13-1/16	1-1/2	7-3/8	8-9/16	1-3/16	30-1/16	9/16	40-15/16
16-1/2	1-3/16	1-7/16	N/A	16	14	16-3/4	13	29-3/4	18-15/16	8-11/16	24-3/4	14-3/8	1-1/2	8-1/16	9-3/8	1-7/16	33	9/16	43-15/16
18-1/4	1-7/16	1-11/16	N/A	17-13/16	15-7/16	18-1/2	14-1/4	32-3/4	20-13/16	9-7/16	27-13/16	15-7/8	1-1/2	8-13/16	10-3/8	1-1/2	36-1/4	9/16	43-15/16
20	1-7/16	1-11/16	1-15/16	19-7/16	17	20-3/8	15-1/2	35-7/8	22-5/8	10-3/16	29-13/16	17-3/8	1-1/2	9-9/16	11-3/4	1-11/16	39-5/8	9/16	49-1/16
22-1/4	1-7/16	1-11/16	2-3/16	21-5/8	18-7/8	22-9/16	17	39-9/16	25	11-3/16	32-7/8	19-3/8	1-1/2	10-9/16	13-1/4	1-7/8	43-7/8	9/16	52-1/16
24-1/2	1-11/16	1-15/16	2-7/16	23-13/16	20-3/4	24-13/16	18-1/2	43-5/16	27-3/8	12-1/8	33-7/8	21-5/16	1-1/2	11-1/2	14-3/4	2-1/16	48-1/8	9/16	55-1/16
27	1-15/16	2-3/16	2-7/16	26-1/4	22-7/8	27-1/4	20-1/4	47-1/2	30-1/2	13-3/4	37-5/16	23-1/2	2	12-7/8	16-1/2	2-1/4	53-3/8	9/16	58-1/16
30	1-15/16	2-3/16	2-7/16	29-1/8	25-5/16	30-1/4	22-1/4	52-1/2	33-11/16	15-1/16	38-5/8	26-1/8	2	14-3/16	18-1/2	2-9/16	59	9/16	61-1/16
33	1-15/16	2-3/16	2-7/16	32-1/16	27-5/8	33-3/16	24-1/2	57-11/16	36-7/8	16-3/8	41-15/16	28-3/4	2	15-1/2	20-3/4	2-13/16	64-1/2	9/16	64-1/16
36-1/2	2-3/16	2-3/16	2-7/16	35-3/8	30-11/16	36-11/16	27-1/2	64-3/16	40-9/16	17-7/8	43-7/16	31-3/4	2	17	23-1/4	3-3/16	71-1/4	9/16	67-1/16
40-1/4	2-3/16	2-7/16	2-15/16	38-7/8	34-1/8	40-7/8	30-1/4	71-1/8	45	20	49-5/16	35	2-1/2	18-7/8	24	3-5/8	79-1/8	3/4	73-1/16
44-1/2	2-7/16	2-11/16	3-3/16	43	37-3/4	45	33	78	49-1/2	21-7/8	51-9/16	38-11/16	2-1/2	20-3/4	26	4	87-3/16	3/4	76-1/16

DO NOT USE FOR CONSTRUCTION UNLESS CERTIFIED

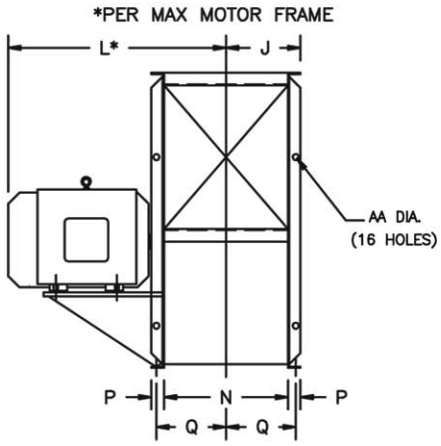




SQAD Dimensions



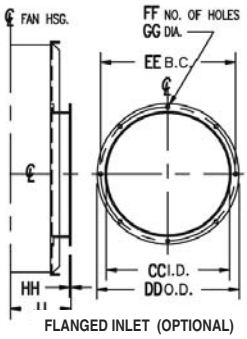
TH CW



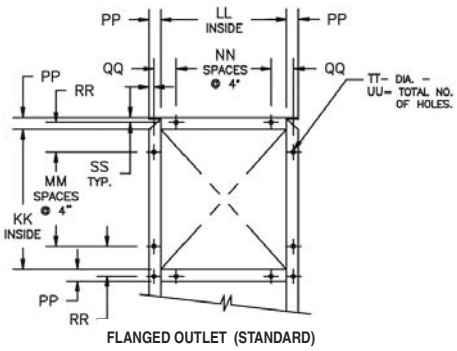
ARRANGEMENT 4 ILLUSTRATED

DIMENSIONS - INCHES															
FAN SIZE	A	B	D	E	F	H	J	L (MAX)	N	P	Q	U	W	X	AA
8-3/4	8-9/16	7-5/8	9-1/16	7-1/2	16-9/16	10-3/8	4-7/8	13-7/16	7-9/16	1-1/8	4-1/2	5-1/16	11/16	18	9/16
10	9-13/16	8-5/8	10-5/16	8-1/2	18-13/16	11-11/16	5-7/16	16-1/2	8-5/8	1-1/8	5	5-11/16	3/4	20-5/16	9/16
12-1/4	12	10-1/2	12-1/2	10	22-1/2	14-1/16	6-1/2	18-3/8	10-11/16	1-1/8	6	7	15/16	24-9/16	9/16
13-1/2	13-1/4	11-1/2	13-3/4	11	24-3/4	15-3/8	7	21-3/16	11-3/4	1-1/8	6-9/16	7-11/16	1	26-7/8	9/16
15	14-5/8	12-3/4	15-1/4	12	27-1/4	17-5/16	8	22-1/2	13-1/16	1-1/2	7-3/8	8-9/16	1-3/16	30-1/16	9/16
16-1/2	16	14	16-3/4	13	29-3/4	18-15/16	8-11/16	26-3/8	14-3/8	1-1/2	8-1/16	9-3/8	1-7/16	33	9/16
18-1/4	17-13/16	15-7/16	18-1/2	14-1/4	32-3/4	20-13/16	9-7/16	29-1/2	15-7/8	1-1/2	8-13/16	10-3/8	1-1/2	36-1/4	9/16
20	19-7/16	17	20-3/8	15-1/2	35-7/8	22-5/8	10-3/16	32-1/2	17-3/8	1-1/2	9-9/16	11-3/4	1-11/16	39-5/8	9/16
22-1/4	21-5/8	18-7/8	22-9/16	17	39-9/16	25	11-3/16	28-3/4	19-3/8	1-1/2	10-9/16	13-1/4	1-7/8	43-7/8	9/16
24-1/2	23-13/16	20-3/4	24-13/16	18-1/2	43-5/16	27-3/8	12-1/8	31-3/4	21-5/16	1-1/2	11-1/2	14-3/4	2-1/16	48-1/8	9/16
27	26-1/4	22-7/8	27-1/4	20-1/4	47-1/2	30-1/2	13-3/4	32-3/4	23-1/2	2	12-7/8	16-1/2	2-1/4	53-3/8	9/16
30	29-1/8	25-5/16	30-1/4	22-1/4	52-1/2	33-11/16	15-1/16	38-3/4	26-1/8	2	14-3/16	18-1/2	2-9/16	59	9/16

SQA/SQAD Inlet/Outlet Flange Dimensions



FLANGED INLET (OPTIONAL)

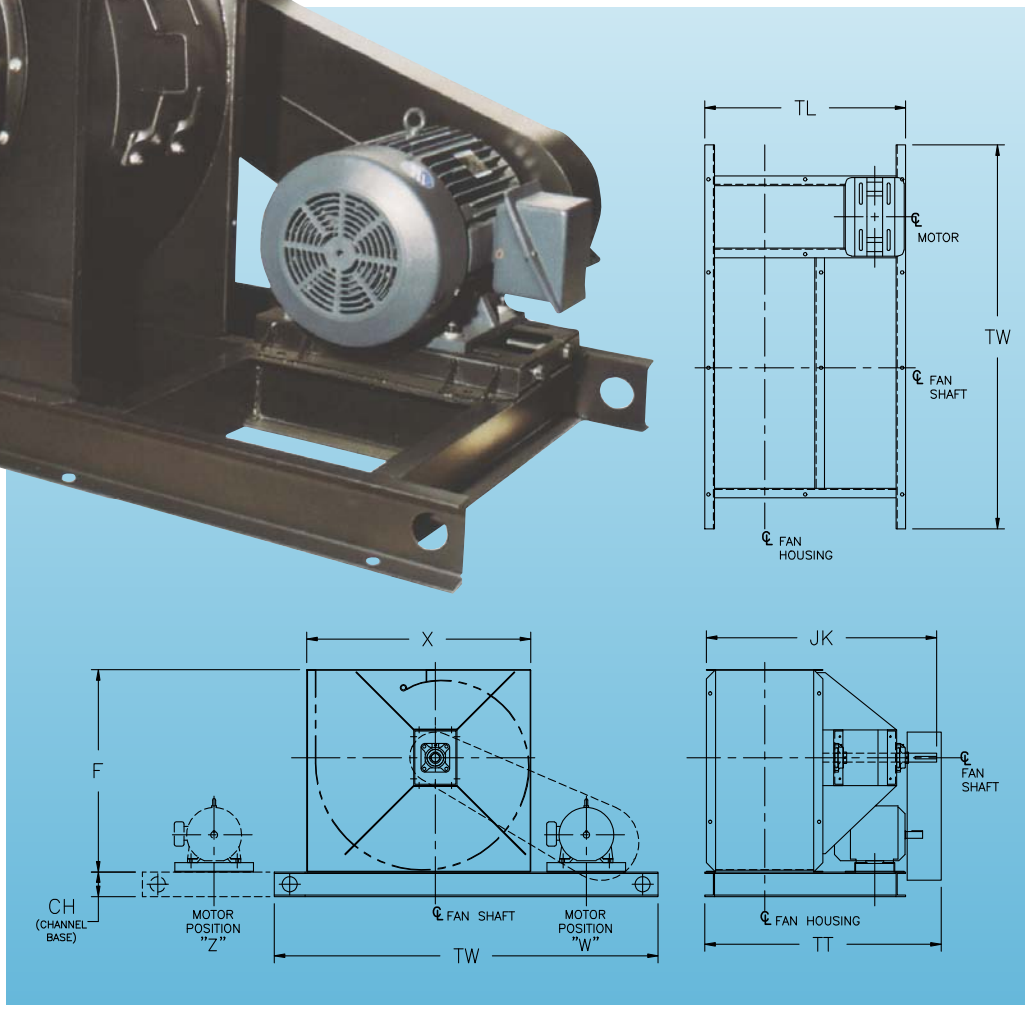


FLANGED OUTLET (STANDARD)

INLET FLANGE - INCHES								OUTLET FLANGE - INCHES									
FAN SIZE	CC I.D	DD O.D	EE B.C	FF	GG	HH	JJ	KK	LL	MM	NN	PP	QQ	RR	SS	TT	UU
8-3/4	9-1/8	11-5/8	10-3/4	8	1/2	1/8	6-7/16	8-9/16	7-9/16	1	1	1-1/8	2-1/2	3	7/16	1/2	10
10	10-1/8	13-1/8	12	8	1/2	1/8	7	9-13/16	8-5/8	1	1	1-1/8	3	2-5/8	7/16	1/2	10
12-1/4	13-3/16	16-3/16	15	8	1/2	1/8	8-1/2	12	10-11/16	2	2	1-1/8	2	2-11/16	7/16	1/2	14
13-1/2	15-3/16	18-3/16	16-1/2	8	1/2	1/8	9-1/16	13-1/4	11-3/4	2	2	1-1/8	2-9/16	3-5/16	7/16	1/2	14
15	16-3/16	19-3/16	18-1/8	8	1/2	3/16	9-3/4	14-5/8	13-1/16	3	2	1-1/2	2-3/8	2-3/16	5/8	5/8	16
16-1/2	18-3/16	21-3/16	20-1/8	8	1/2	3/16	10-3/8	16	14-3/8	3	3	1-1/2	2-1/16	2-7/8	5/8	5/8	18
18-1/4	20-3/16	23-3/16	22-1/4	8	1/2	3/16	11-1/8	17-13/16	15-7/8	3	3	1-1/2	2-13/16	3-3/4	5/8	5/8	18
20	22-3/16	25-3/16	24-1/16	16	1/2	3/16	11-7/8	19-7/16	17-3/8	4	3	1-1/2	3-9/16	2-5/8	5/8	5/8	20
22-1/4	24-3/16	27-3/16	26-1/8	16	1/2	3/16	12-7/8	21-5/8	19-3/8	4	4	1-1/2	2-9/16	3-11/16	5/8	5/8	22
24-1/2	27-3/16	31-3/16	29	16	1/2	3/16	14-7/8	23-13/16	21-5/16	5	4	1-1/2	3-1/2	2-3/4	5/8	5/8	24
27	30-3/16	34-3/16	32-3/16	16	1/2	3/16	16	26-1/4	23-1/2	6	5	2	2-7/8	2-1/4	7/8	3/4	26
30	33-3/16	37-3/16	35-3/8	16	1/2	3/16	17-1/4	29-1/8	26-1/8	6	6	2	2-3/16	3-11/16	7/8	3/4	30
33	36-3/16	40-3/16	38-3/4	16	1/2	3/16	18-5/8	32-1/16	28-3/4	7	6	2	3-1/2	3-1/8	7/8	3/4	32
36-1/2	41-3/16	45-3/16	43	16	5/8	3/16	20-1/8	35-3/8	31-3/4	8	7	2	3	2-13/16	7/8	3/4	36
40-1/4	44-3/16	48-3/16	46-1/2	16	5/8	3/16	21-3/4	38-7/8	35	9	8	2-1/2	2-7/8	2-13/16	1-1/8	7/8	40
44-1/2	49-3/16	53-3/16	51-1/2	24	5/8	3/16	23-5/8	43	38-11/16	10	9	2-1/2	2-3/4	2-7/8	1-1/8	7/8	44

DO NOT USE FOR CONSTRUCTION UNLESS CERTIFIED

Unitary Base



NOTES:

Dimensions shown (in inches) are for clockwise rotation, upblast discharge fans with maximum motor frame in position "W".

Dimensions for counter-clockwise rotation, other discharge positions or other motor frames will vary. Dimensions are not for construction unless certified.

Approximate weights include fan, base, motor, v-belt drive, and belt guard.

SIZE	F	X	JK	TL	TT	TW	CH	WGT- lbs
8-3/4	16-3/16	18	18	14-3/8	20	43-5/16	6	227
to	18-13/16	20-5/16	19-1/8	15-7/16	21-1/8	45-5/8	6	248
12-1/4	22-1/2	24-9/16	29	24-1/2	31	51-13/16	6	394
13-1/2	24-3/4	26-7/8	30	25-1/16	32	58-11/16	6	522
to	27-1/4	30-1/16	32-1/8	27-3/16	34-1/8	61-7/8	6	595
16-1/2	29-3/4	32-15/16	33-7/16	28-7/16	35-7/16	67-3/16	6	769
18-1/4	32-3/4	36-1/4	37-1/4	32-3/16	39-1/4	70-1/2	6	845
to	35-7/8	39-5/8	40	34-15/16	42	79-13/16	6	1350
22-1/4	39-9/16	43-7/8	44-1/16	39	46-1/16	84-1/16	6	1444
24-1/2	43-5/16	48-1/8	46-1/16	40-15/16	48-1/16	88-5/16	6	1625
27	47-1/2	53-3/8	51-1/16	45-9/16	53-1/16	98-9/16	6	2127
30	52-1/2	59	53-11/16	48-3/16	55-11/16	104-3/16	6	2362
33	57-11/16	64-1/2	58-5/16	52-13/16	60-5/16	109-11/16	6	2533
36-1/2	64-3/16	71-1/4	61-5/16	55-1/2	63-5/16	118-11/16	6	3194
40-1/4	71-1/8	79-1/8	69-5/16	62-11/16	71-5/16	133-7/16	8	4517
44-1/2	78	87-3/16	73-3/8	66-3/4	75-3/8	141-1/2	8	5278

Centrifugal SQA Fans

Engineering Specifications

a. General

Provide a high performance, low maintenance, centrifugal fan with airfoil impeller. Fan shall be licensed to bear the AMCA Certified Ratings Seal for Air Performance and Fan Efficiency Grade (FEG) based on tests and procedures in accordance with AMCA Publication 211. Fans must be manufactured and assembled in the U.S.A. Acceptable vendors: Chicago Blower Corporation.

b. Performance

Performance shall include steep pressure and non-overloading horsepower characteristics. Mechanical efficiency shall be no less than 80%. Wheel inlet cone to be designed to ensure smooth, stable air flow across the fan's entire operating range. System static pressure changes of 30% shall result in an approximate 10% volume reduction.

c. Housing

Fan housing shall be rectangular and of welded, heavy gauge construction with four common discharge positions. Scroll is to be continuously welded by welders certified to AWS code. Housing sides shall be flanged to allow the fan to be mounted on any side and for added stiffness. Fan drive train and motor base shall be entirely supported by the housing to minimize the foundation plan. Housing outlet shall be flanged and punched for bolted connection.

d. Bearings

Bearings shall be 4-bolt flange-mount, grease lubricated, ball or spherical roller type. Flange bearings are to mount to steel brackets which are bolted to the fan housing for easy bearing service without removing the rotor. Steel bearing brackets shall have slotted holes to allow for easy alignment of the bearings without shimming. Pillow block bearings are acceptable, provided the bearing pedestal top plate is machined to within 0.005 inches to eliminate shimming.

e. Rotor

Wheel shall be cast aluminum or welded steel. Steel wheel shall have cast iron hub or cast steel hub that is permanently fastened to heavy gauge backplate using Huck lock bolts and collars. Threaded fasteners are not allowed. Steel airfoil blades must be single sheet, die formed, high strength low alloy, ASTM A1008 steel continuously welded to backplate and hyperbolic wheel cone. Wheels to be statically and dynamically balanced to G6.3 standards in accordance with ISO 1940 and ANSI S2.19 specifications. Shaft shall be turned, ground, and polished 1045 SAE cold rolled steel and straightened to a maximum T.I.R. of 0.002 inches. Shaft critical speed shall not be less than 120% times the class maximum safe speed.

f. Mounting

Housing sides shall be flanged for mounting the fan to the foundation. Fan to be capable of mounting on any side using the housing side flanges. When the optional unitary base is required, the housing and adjustable motor base shall be welded to the unitary base.

g. Factory Mounted Motors and Drives

Motors and drives shall be factory mounted. Unit to be tested at running speed for vibration and balance. Filtered vibration readings, taken at the motor bearings and fan bearings (arrangements 1, 8,and 9), not to exceed 0.15 inches per second, in accordance with AMCA Publication 204 "Balance Quality and Vibration Levels for Fans."

h. Inlet Volume Control

Inlet volume control (IVC) device shall be entirely nested within the inlet cone. IVC device shall be 7- bladed, and pre-spin the incoming air in the direction of wheel rotation to control the volume and pressure.

i. Accessories (Choose from the following accessories)

- **Slip-fit Inlet**
- **Flanged Inlet –** Punched Holes
- **Inlet/Outlet Companion Flanges**
- **Type B or C AMCA Spark Resistant Construction**
- **1-1/2" NPT Housing Drain**
- **Shaft Seal**
- **Access Door –** Quick Clamp, Flush Bolted, or Insulated Plug Type
- **Shaft Cooler** (Required from 301°F and above)
- **Inlet Screen**
- **Shaft and Bearing Guard**
- **Adjustable Motor Base -** compatible with motor frames 56 through 286T
- **Extended Grease Fittings**
- **Totally Enclosed Belt Guards -** with Ventilation Panels
- **Constant or Adjustable Speed V-Belt Drives,** minimum 1.3 S.F.
- **Outlet Damper –** Parallel or Opposed Blades Manual or Automatic Operation

Setting the Standard For Quality

CHICAGO

Innovative Engineering Through Application Analysis

Quality Fans Built With Skill and Pride

Global Service Only a Click Away

To locate our representative near you, use this code

Chicago Blower Fans are also manufactured worldwide:

Argentina, Australia, Brazil, Chile, China, Colombia, Denmark, Germany, Greece, Holland, Hong Kong, India, Indonesia, Israel, Italy, Japan, Korea, Malaysia, New Zealand, Norway, Philippines, Portugal, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Thailand, Taiwan, Turkey, Venezuela.

Your Primary Source For Every Fan Requirement

General Duty -

Airfoil and vane axial fans for clean exhaust or supply air

Industrial Duty -

Fans to handle dirty and corrosive environments

Heavy Duty -

Custom engineered fans for specific applications

CHICAGO BLOWER CORPORATION

1675 Glen Ellyn Road, Glendale Heights, Illinois 60139
Phone: 630-858-2600 • Fax: 630-858-7172
www.chicagoblower.com e-mail: fans@chicagoblower.com