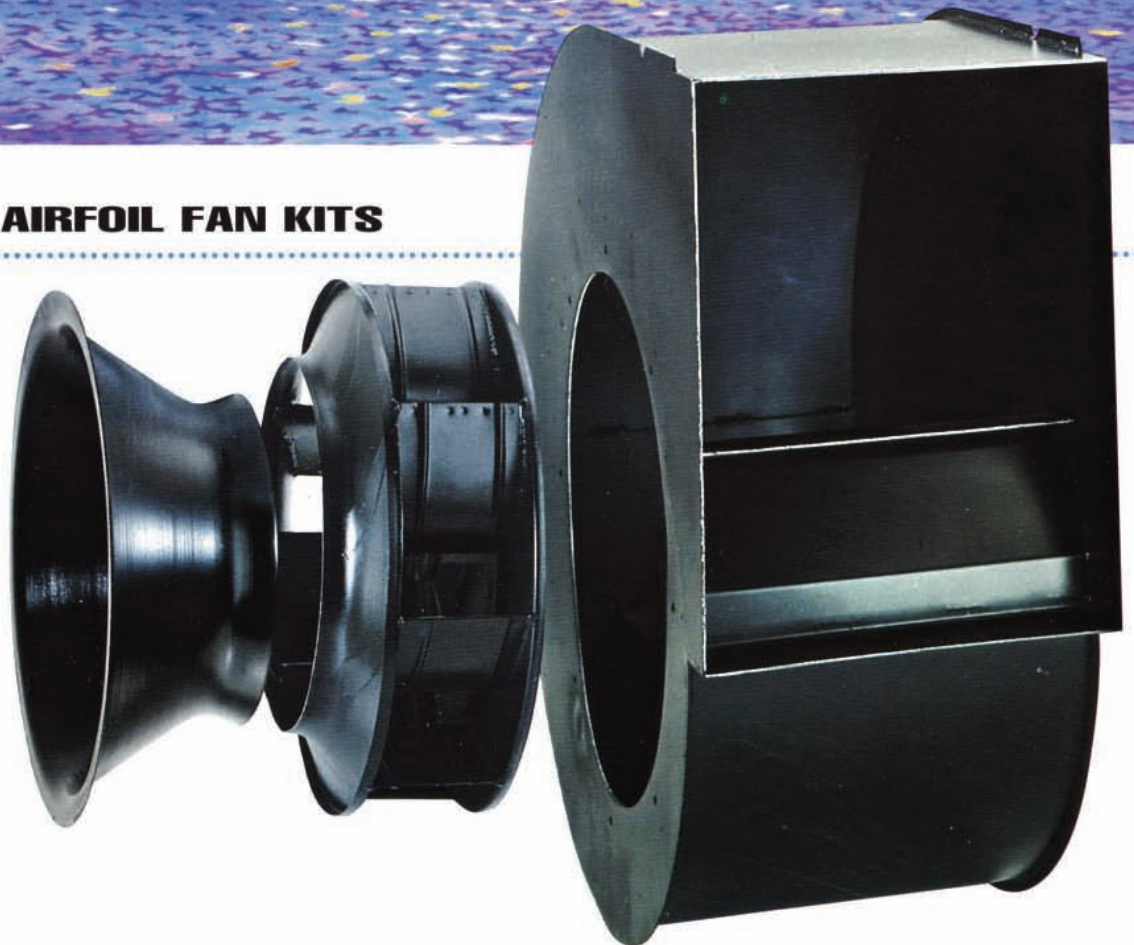


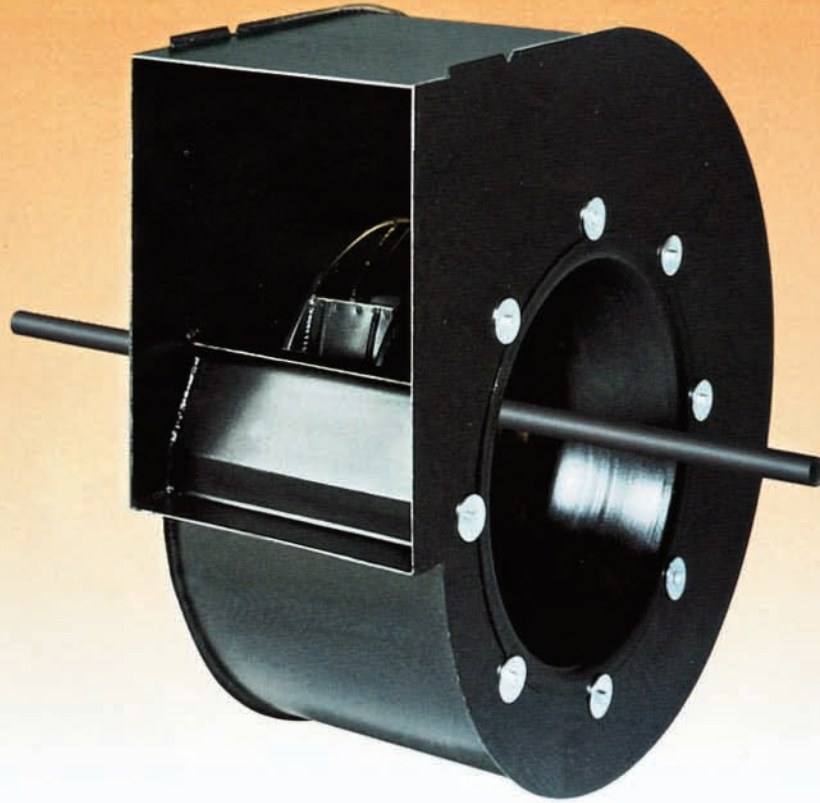
D E S I G N 6 2



SINGLE WIDTH AIRFOIL FAN KITS



- WHEELS
- INLET CONES
- INLET VOLUME CONTROLS
- SHAFTS
- HOUSINGS
- SHAFT COOLER ASSEMBLIES



SINGLE WIDTH AIRFOIL FAN KITS



The manufacturing of all Chicago Fans Kits is monitored by stringent Quality Control and Quality Assurance

Programs. Consistent fan quality and reliability attests to Chicago's dedication to customer satisfaction. "Our fan's most important feature is the reliability we are able to add to your product."

Chicago Blower's Airfoil Fan Kits provide the user with the flexibility to custom build a fan from individual components to meet their specific air performance and configuration requirements. With its airfoil wheel, the Fan Kit is efficient, economical and versatile. Among the components offered are airfoil wheels, inlet cones with or without integral vanes, housings and shaft coolers, as well as shafts and bearings.

UNIVERSAL APPLICATIONS

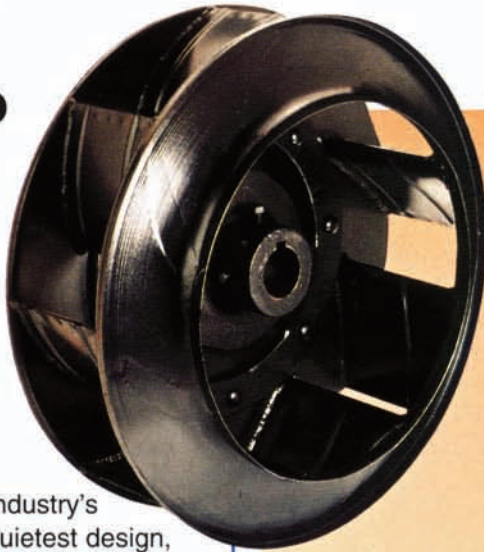
Any supply air or clean exhaust application is ideal for Chicago's Airfoil Fan Kit. The Fan Kits fill most general industrial and commercial air moving needs, including installations handling light dust, fumes or moisture. Applications include ovens,

dryers and kilns as well as pent-houses, plenums and panel walls. Airfoil Fan kits are available in sixteen sizes capable of volumes to 70,000 CFM, pressures to 20" WG, and temperatures to 800° F.

CHICAGO QUALITY

The experience gained as a leading supplier of all types of industrial and custom heavy-duty fans is reflected in the rugged construction of all Chicago built fans. It's called "Industrial Quality" and guarantees exceptional performance and reliability. If you are unsure of the suitability of a particular fan for a specific application, the Chicago air moving professionals will evaluate your needs and provide recommendations. Chicago Blower offices are located throughout North America and around the world.

CHICAGO AIRFOIL WHEEL



The airfoil blade is recognized as the industry's most efficient and quietest design, creating a smooth lifting airflow over the entire surface of the blade. Chicago's airfoil wheel has a broad efficiency curve that offers a wide operating range with more selections from each fan size. Sizes 135 to 490 are available with Standard or Hi-Speed wheels, both constructed of continuously welded high strength steel with either keyed straight bore or with taper-lock bushing. Wheels are statically and dynamically balanced.

REDUCED ENERGY COSTS

Because the airfoil blade glides through the air with less turbulence, the fan requires less horsepower to deliver comparable air volume. Since a downsized motor can be used, energy costs will be reduced substantially. The more efficient airfoil blade also reduces noise levels significantly.

STEEP PRESSURE CURVES

Chicago's airfoil fan with its steep pressure characteristics is ideal for applications with pressure variations. Even if actual pressure should reach 30% higher than anticipated, delivered volume would be typically reduced by only 10%.

AIRFOIL WHEEL TYPES

Standard Wheels

The standard wheel for Chicago's Fan Kits is fitted with hollow true airfoil blades with weep holes to prevent moisture build-up inside the blade. Sizes 135 and larger.

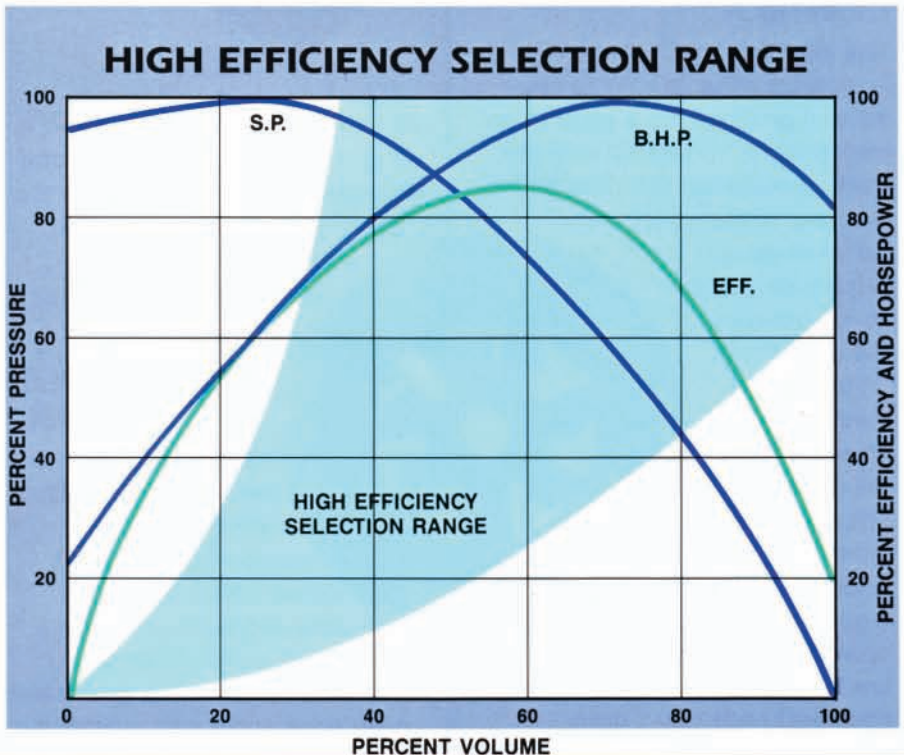
Cast Aluminum Wheels

Aluminum wheels are standard on Sizes 100 and 122, optional on Sizes 135 and 150. The wheels have integral hubs with taperlock bushings. Maximum temperature is 200° F. Aluminum wheels are not available with the high-speed option.



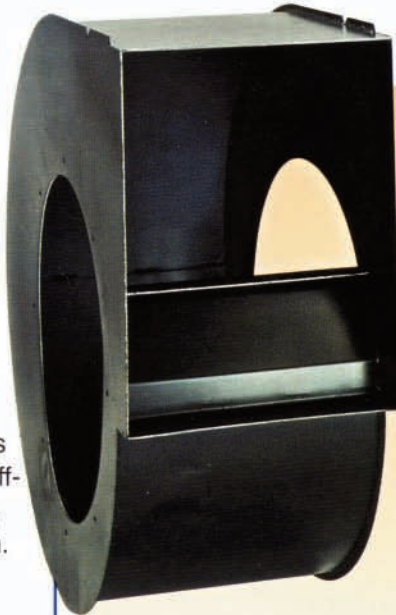
High-Speed Wheels

For higher speed applications internal ribs are added to the standard airfoil blade. High-Speed wheels are available on Sizes 135 to 490. Maximum temperature is 800° F.



HOUSINGS

Housings are fabricated from heavy gauge steel and can be welded or bolted to a panel wall. When the plenum wall does not serve as a side cover, a drive side cover plate can be furnished. Sizes 100 through 402 are suitable for CW or CCW rotation as the inlet cone can be mounted on either side. Sizes 445 and 490 includes welded stiffeners and solid drive side sheet, available in CW or CCW rotation.



72% Width Housings

Same as full width, except with the narrower housing the installation needs less plenum space and will use a correspondingly shorter fan shaft. A matching 72% width inlet cone is necessary. See Width Factors on page 5 for performance corrections.

RA Housing

The Return Air fan offers increased efficiencies for high volume and low pressure applications. It is available in both full and 72% widths, with construction the same as the standard housing.

INLET CONES

Full width cones are used with either full width housings or no housing as an open wheel installation. The cone is held to the housing with flat washers to facilitate proper positioning. A 72% cone is needed for 72% housings, or the cone can be used with no housing.



100% Width
Inlet Cone



72% Width
Inlet Cone

INLET VOLUME CONTROLS

The Inlet Volume Control (IVC) is ideal for variable volume systems. It provides more economical performance at reduced volumes than an outlet damper. The IVC is mounted entirely within the full width cone.

Adjustable guide vanes pre-spin the entering air in the same rotation as the wheel to supply the desired air volume at the exact pressure. Additional advantages include reduced operating costs at partial load and the use of the lowest cost fixed pitch V-belt drive.



Applications are limited to clean air and uncontaminated non-corrosive gases. Temperature limits are 350°F for automatic operation and 650°F for manual operation.

SHAFT COOLER ASSEMBLY

When bearings are outside the air-stream and temperatures exceed 350°F, a shaft cooler between the bearings and the housing or plenum wall is recommended. Assemblies consist of a spun steel cooler cone and a split aluminum

Shaft Cooler
Assembly



shaft cooler. Although the cooler may be used independently, the use of a cooler cone will shorten the bearing centers. If the bearings are in the airstream, consult bearing manufacturer for safe temperature limits. Assemblies are suitable for field mounting.

OPEN WHEEL DATA

Turbulence is caused by sharp bends and abrupt area changes beyond the fan housing. This loss can be prevented by baffles or turning vanes. As an option, open wheel factors can be applied to compensate for the loss.

Apply the following factors to Capacity in the performance tables and maintain a minimum clearance of one wheel radius between the wheel and the wall or walls of the discharge plenum.

Open Wheel Factors

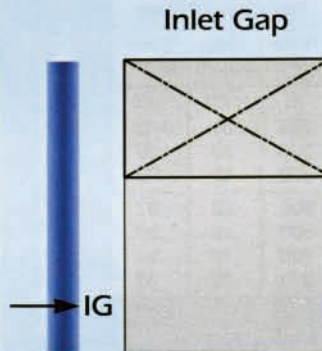
SP/VP	20.0	15.0	10.0	6.67	3.33	1.67	.84	.32
RPM	1.03	1.01	.99	.97	.96	.95	.94	.92
BHP	1.15	1.08	1.01	.95	.89	.82	.79	.73

$$SP/VP = \frac{\text{Static Pressure}}{\text{Velocity Pressure}} \quad VP = (OV^* / 4005)^2$$

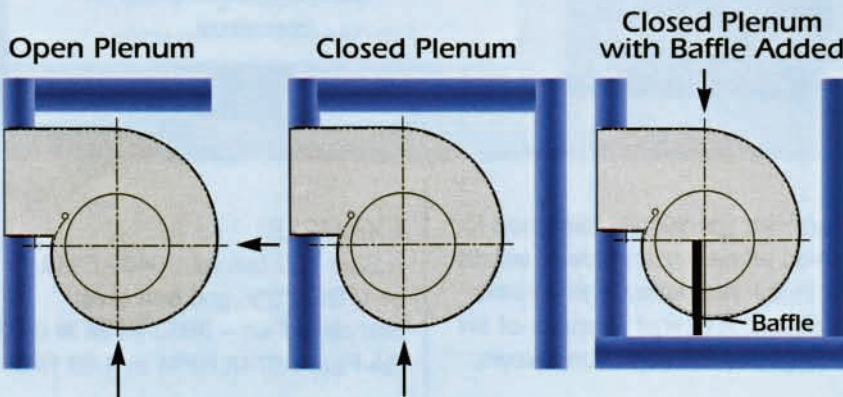
* Note: Assume housing is used – select OV from Rating Tables

OPEN PLENUM	IG	Multiply	
	% of Fan Size*	RPM	BHP
	33-1/3% or more	1.00	1.00
	30%	1.01	1.03
	25%	1.04	1.13
	20%	1.10	1.33
	15% or less	Not Recommended	

CLOSED PLENUM	IG	Multiply	
	% of Fan Size*	RPM	BHP
	70%	1.01	1.05
	60%	1.02	1.06
	50%	1.03	1.08
	40%	1.04	1.11
	33-1/3	1.05	1.16
	30% or less	Not Recommended	



• Fan Size refers to "nominal size" derived by adding a decimal point one place from the right.
Example - 122 = nominal size 12.2".



72% WIDTH FACTORS

When space limitations require the use of 72% width inlet cones, corrections must be made to attain the ratings shown in the tables.

Multiply RPM x 1.05 and BHP x 1.20. These corrections must be made before checking temperature speed factors in Table II. If a housing is required, a matching 72% housing must be specified.

PLENUM EFFECTS

When airfoil kits are used in plenums, performance will be affected by the inlet gap (IG). Correction factors must be applied to obtain catalog ratings.

Open Plenum

In an open plenum, air enters from more than one direction.

Closed Plenum

In a closed plenum, air enters only from one direction. Most efficient designs will center the fan inlet in the plenum. If the inlet is not centered, baffles should be used to prevent air spinning. These baffles should be placed in the inlet gaps on centerline from shaft to closed end of plenum and opposite the plenum inlet.

EXAMPLE:

Assume fan selected is Size 182 (nominal size 18.2"). Plenum is a closed type with an Inlet Gap (IG) of 7", which is 38% of nominal fan size. Use 40%. Using the rating table for the selected fan and the chart at right, multiply the RPM by 1.04 and the BHP by 1.11.

Fan capacity tables are based on standard air at 70°F and sea level. Correct the required Static Pressure (SP) before using the rating tables. The Brake Horsepower (BHP) is Corrected after the fan selection has been made.

EXAMPLE:

Select a D/62 fan kit to handle 2600 CFM at 3" SP, 300°F and at 1500 feet above sea level.

1. Refer to Table 1. At 1500 feet and 300°F, the correction factor is 1.51.

Corrected SP is 1.51 X 3" SP = 4.53" SP at 70°F and sea level.

2. Using the fan rating tables, one fan selection for 2600 CFM at 4.53" SP is a Size 150. The fan will run at 2818 RPM and require 2.47 BHP at 70°F and sea level. (Actual RPM and BHP was calculated by interpolating between the 4" and 5" SP in the tables.)

3. Correct the BHP. Divide 2.47 by the correction factor (1.51). $2.47 \div 1.51 = 1.64$ BHP at 300°F and 1500' altitude.

4. The wheel must be checked for maximum RPM using Table II.

- a. Divide wheel operating RPM by the Wheel Deration factor for 300°F. Wheel RPM at 70°F is $2818 \div .90 = 3131$.

- b. Check Size 150 rating table for maximum RPMs. The required wheel RPM of 3131 is within the safe limits of both 4657 Standard or 6061 HiSpeed.

RA DESIGN

When working with lower pressure, typically below 5" SP, and space and initial cost are primary considerations, the Design 62 SW RA fan in smaller sizes may offer better selections. The

TABLE I – Temperature and Altitude Correction

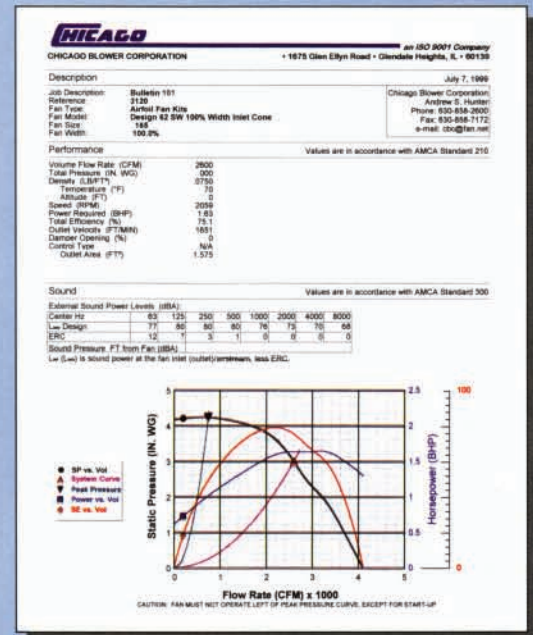
AIR TEMP (°F)	ALTITUDE (feet) with BAROMETRIC PRESSURE (HG)							
	0' 29.92	500' 29.38	1000' 28.86	1500' 28.33	2000' 27.82	3000' 26.82	4000' 25.84	5000' 24.90
-40	.79	.81	.82	.84	.85	.88	.92	.95
0	.87	.88	.90	.92	.93	.97	1.00	1.04
40	.94	.96	.96	1.00	1.01	1.05	1.09	1.13
80	1.02	1.04	1.06	1.08	1.10	1.14	1.18	1.22
120	1.09	1.11	1.13	1.16	1.18	1.22	1.27	1.31
160	1.17	1.19	1.21	1.24	1.26	1.31	1.35	1.41
200	1.25	1.27	1.29	1.32	1.34	1.39	1.44	1.50
300	1.43	1.46	1.49	1.51	1.54	1.60	1.66	1.72
400	1.62	1.65	1.68	1.71	1.75	1.81	1.88	1.95
500	1.81	1.84	1.88	1.91	1.95	2.02	2.10	2.18
600	2.00	2.04	2.07	2.11	2.15	2.23	2.32	2.40
700	2.19	2.23	2.27	2.31	2.35	2.44	2.53	2.63
800	2.38	2.42	2.48	2.51	2.56	2.65	2.75	2.86

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 – Speed Deration

TEMP (°F)	Deration Factors	
	Steel Wheel	Steel Shaft
70	1.00	1.00
200	.93	1.00
300	.89	.99
400	.86	.98
500	.82	.97
600	.79	.96
700	.76	.94
800	.68	.93

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



Contact your local Chicago Blower sales engineer for software and assistance.



RA Fan was specifically designed for improved efficiency and lower sound levels in low pressure, high volume applications. A typical example of an advantageous RA selection follows:

EXAMPLE:

A Size 150 fan with 5400 CFM at 1" SP, 70°F and sea level
 Standard Fan – 3852 RPM at 5.28 BHP
 RA Fan – 3748 RPM at 4.89 BHP



100		SINGLE WIDTH															Standard				
		Wheel Diameter: 9-7/16 Outlet Area: 0.59 sq. ft.															RPM	5650			
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
200	339	930	.01	1245	.02																
300	508	1099	.02	1338	.03	1561	.05	1770	.06												
400	678	1266	.03	1510	.04	1689	.06	1859	.08	2189	.12	2491	.17								
500	847	1470	.04	1679	.06	1867	.08	2016	.10	2290	.15	2558	.20	2814	.25	3055	.31				
600	1017	1691	.06	1855	.08	2037	.11	2197	.13	2447	.18	2676	.24	2902	.30	3122	.36	3336	.43	3540	.50
700	1186	1920	.08	2063	.11	2205	.14	2363	.17	2628	.23	2838	.29	3035	.35	3230	.42	3422	.49	3611	.56
800	1356	2154	.11	2283	.14	2405	.17	2531	.20	2802	.28	3019	.35	3204	.41	3377	.48	3549	.56	3719	.64
900	1525	2391	.15	2509	.18	2619	.22	2727	.25	2963	.33	3197	.41	3386	.49	3552	.56	3708	.64	3861	.72
1000	1695	2630	.19	2739	.23	2841	.27	2939	.31	3138	.39	3358	.48	3563	.57	3735	.65	3888	.74	4031	.83
1100	1864	2872	.25	2972	.29	3067	.33	3158	.37	3336	.46	3524	.55	3726	.65	3911	.75	4070	.85	4213	.94
1200	2034	3115	.31	3208	.36	3297	.40	3383	.45	3546	.54	3710	.64	3888	.74	4073	.85	4244	.96	4394	1.07
1300	2203	3359	.39	3446	.44	3530	.49	3610	.54	3764	.64	3914	.74	4068	.85	4235	.96	4406	1.08	4566	1.20
1400	2373	3605	.48	3686	.53	3764	.58	3840	.64	3986	.74	4126	.85	4265	.97	4411	1.08	4567	1.21	4726	1.34
1500	2542	3851	.58	3927	.64	4001	.69	4073	.75	4211	.86	4344	.98	4473	1.10	4605	1.22	4742	1.35	4888	1.48
1600	2712	4097	.70	4169	.76	4239	.82	4308	.88	4439	1.00	4565	1.12	4688	1.24	4809	1.37	4933	1.50	5063	1.64
1700	2881	4344	.83	4413	.89	4479	.96	4544	1.02	4670	1.15	4790	1.28	4907	1.41	5021	1.54	5136	1.68	5253	1.82
1800	3051	4592	.98	4657	1.05	4720	1.11	4782	1.18	4902	1.31	5017	1.45	5129	1.59	5238	1.73	5346	1.87	5455	2.01
1900	3220	4840	1.14	4902	1.21	4962	1.28	5021	1.35	5136	1.49	5247	1.64	5354	1.78	5459	1.93	5562	2.08		
2000	3390	5088	1.33	5147	1.40	5204	1.47	5261	1.55	5371	1.70	5478	1.84	5581	2.00						
2100	3559	5337	1.53	5393	1.61	5448	1.68	5502	1.76	5608	1.91										
CFM	OV FPM	4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		7-1/2" SP		8" SP		8-1/2" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
600	1017	3736	.57																		
700	1186	3796	.64	3976	.72	4149	.80	4317	.88												
800	1356	3887	.72	4054	.80	4217	.88	4377	.97	4534	1.06	4687	1.16	4836	1.25	4981	1.35				
900	1525	4013	.81	4165	.89	4315	.98	4464	1.07	4610	1.17	4756	1.27	4898	1.37	5038	1.47				
1000	1695	4170	.91	4307	1.00	4444	1.10	4581	1.19	4716	1.29	4851	1.39	4984	1.49	5116	1.60	5247	1.71	5376	1.82
1100	1864	4346	1.03	4475	1.13	4601	1.23	4725	1.33	4850	1.43	4974	1.53	5098	1.64	5221	1.75	5343	1.86	5465	1.97
1200	2034	4529	1.17	4655	1.27	4776	1.37	4893	1.48	5009	1.58	5123	1.69	5237	1.80	5351	1.91	5465	2.03	5578	2.14
1300	2203	4709	1.31	4838	1.42	4958	1.53	5073	1.64	5184	1.76	5292	1.87	5399	1.98	5504	2.10	5610	2.22		
1400	2373	4877	1.46	5015	1.59	5140	1.71	5256	1.83	5366	1.94	5472	2.06								
1500	2542	5037	1.62	5180	1.75	5314	1.89	5435	2.02	5548	2.15										
1600	2712	5200	1.78	5339	1.93	5476	2.07	5605	2.22												
1700	2881	5375	1.96	5504	2.11	5635	2.27														
1800	3051	5566	2.16																		

100 RA Performance shown is for installation type B - Free inlet, Ducted outlet. Power ratings (BHP) do not include drive losses. Performance ratings do not include the effects of appurtenances in the air stream.

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
200	339	935	.01																		
300	508	1082	.02	1344	.03	1563	.05														
400	678	1263	.03	1489	.05	1688	.07	1870	.09	2185	.13										
500	847	1458	.04	1664	.06	1841	.09	2003	.11	2303	.17	2564	.22	2806	.28						
600	1017	1666	.06	1851	.08	2016	.11	2164	.14	2435	.20	2688	.27	2916	.34	3127	.40	3328	.46		
700	1186	1882	.08	2048	.11	2201	.14	2341	.18	2591	.24	2822	.32	3043	.40	3248	.48	3438	.55	3618	.62
800	1356	2105	.10	2254	.14	2394	.18	2525	.22	2764	.29	2978	.37	3181	.46	3377	.55	3564	.64	3740	.72
900	1525	2331	.14	2466	.18	2595	.22	2718	.26	2945	.35	3150	.44	3339	.52	3520	.62	3697	.72	3868	.82
1000	1695	2561	.18	2684	.22	2803	.27	2917	.32	3131	.41	3329	.51	3511	.60	3681	.70	3845	.80	4006	.91
1100	1864	2793	.23	2906	.28	3016	.33	3122	.38	3324	.48	3513	.59	3689	.69	3854	.80	4010	.91	4166	1.02
1200	2034	3027	.29	3131	.34	3233	.39	3332	.45	3522	.56	3702	.67	3872	.79	4032	.90	4184	1.02	4328	1.14
1300	2203	3262	.36	3359	.41	3454	.47	3546	.53	3726	.65	3897	.77	4059	.89	4215	1.02	4362	1.14	4503	1.27
1400	2373	3498	.43	3589	.50	3678	.56	3765	.62	3934	.75	4096	.88	4252	1.01	4401	1.14	4545	1.28	4682	1.41
1500	2542	3735	.53	3820	.59	3904	.66	3986	.72	4145	.86	4300	1.00	4449	1.14	4592	1.28	4731	1.42	4864	1.56
1600	2712	3973	.63	4053	.70	4132	.77	4209	.84	4360	.98	4507	1.13	4650	1.28	4788	1.43	4921	1.58	5051	1.73
1700	2881	4211	.74	4287	.82	4362	.89	4435	.97	4578	1.12	4718	1.27	4854	1.43	4987	1.59	5116	1.75	5241	1.91
1800	3051	4450	.87	4522	.95	4593	1.03	4663	1.11	4799	1.27	4932	1.43	5063	1.60	5190	1.76	5314	1.93	5435	2.10
1900	3220	4689	1.02	4758	1.10	4825	1.18	4892	1.27	5022	1.43	5149	1.61	5274	1.78	5396	1.95	5515	2.13	5632	2.31
2100	3559	5169	1.36	5231	1.45	5293	1.54	5353	1.63	5472	1.81	5589	2.00								
2300	3898	5650	1.76																		
CFM	OV FPM	4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		7-1/2" SP		8" SP		8-1/2" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
700	1186	3792	.70	3963	.77																
750	1271	3846	.75	4010	.83	4170	.91	4329	1.00												
800	1356	3906	.81	4065	.89	4220	.98	4371	1.06	4520	1.15										
900	1525	4032	.92	4189	1.02	4338	1.12	4482	1.21	4621	1.30	4758	1.40	4892	1.49	5025	1.59	5158	1.69		
1000	1695	4163	1.02	4316	1.14	4464	1.25	4606	1.36	4743	1.47	4875	1.57	5003	1.68	5128	1.78	5251	1.89	5373	1.99
1100	1864	4308	1.13	4453	1.25	4595	1.37	4734	1.50	4869	1.62	5000	1.75	5127	1.87	5250	1.99	5369	2.10	5486	2.22
1200	2034	4467	1.26	4604	1.38	4738	1.51	4871	1.64	5001	1.77	5129	1.91	5254	2.04	53					

122		SINGLE WIDTH																			Standard	
		Wheel Diameter: 10-25/32 Outlet Area: 0.88 sq. ft.																			RPM	
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	
200	227	775	.01																			
300	341	850	.02	1103	.03																	
400	455	968	.02	1176	.04	1369	.06	1550	.08													
500	568	1076	.03	1290	.05	1451	.07	1606	.10	1903	.15											
600	682	1205	.04	1407	.07	1565	.09	1699	.12	1958	.18	2207	.24	2439	.31							
700	795	1348	.06	1513	.09	1685	.12	1816	.15	2045	.21	2266	.28	2482	.35	2688	.43	2883	.51	3100	.65	
800	909	1497	.07	1638	.11	1791	.14	1936	.18	2156	.25	2353	.32	2547	.39	2737	.48	2922	.56	3147	.72	
900	1023	1650	.10	1777	.13	1903	.17	2043	.21	2276	.29	2461	.37	2636	.45	2809	.53	2980	.62	3147	.72	
1000	1136	1804	.13	1922	.16	2033	.20	2151	.25	2394	.34	2581	.42	2745	.51	2902	.60	3058	.69	3213	.79	
1100	1250	1961	.16	2070	.20	2173	.24	2275	.29	2500	.38	2701	.48	2864	.58	3012	.67	3155	.77	3297	.87	
1200	1364	2119	.20	2222	.24	2317	.29	2410	.33	2607	.44	2814	.55	2984	.65	3131	.75	3267	.85	3399	.96	
1300	1477	2278	.24	2375	.29	2465	.34	2552	.39	2726	.50	2918	.61	3100	.73	3252	.84	3387	.95	3513	1.06	
1500	1705	2600	.35	2686	.41	2767	.46	2845	.52	2994	.64	3146	.76	3312	.90	3478	1.03	3625	1.16	3754	1.29	
1700	1932	2925	.50	3001	.56	3075	.62	3146	.69	3282	.82	3412	.95	3546	1.09	3690	1.24	3840	1.39	3982	1.55	
1900	2159	3251	.68	3321	.75	3388	.82	3453	.89	3578	1.03	3697	1.18	3814	1.33	3933	1.48	4059	1.64	4192	1.82	
2100	2386	3579	.90	3643	.97	3704	1.05	3765	1.13	3881	1.28	3992	1.44	4099	1.61	4204	1.77	4311	1.94	4422	2.12	
2300	2614	3908	1.16	3967	1.24	4024	1.33	4080	1.41	4188	1.58	4291	1.76	4392	1.93	4489	2.11	4586	2.29	4683	2.48	
2500	2841	4238	1.47	4292	1.57	4345	1.66	4397	1.75	4498	1.93	4596	2.12	4690	2.31	4782	2.50	4872	2.69	4961	2.89	
2700	3068	4569	1.84	4619	1.94	4669	2.04	4717	2.14	4812	2.33	4904	2.54									
2900	3295	4900	2.27	4947	2.37																	
CFM	OV FPM	4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		7-1/2" SP		8" SP		8-1/2" SP		9" SP		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
1000	1136	3365	.89	3515	1.00	3662	1.11	3805	1.22	3945	1.34	4080	1.46	4212	1.58							
1100	1250	3439	.98	3579	1.09	3717	1.20	3853	1.32	3987	1.44	4119	1.56	4247	1.69	4373	1.82	4496	1.95	4616	2.08	
1200	1364	3529	1.07	3659	1.18	3789	1.30	3917	1.42	4043	1.55	4169	1.67	4292	1.80	4414	1.94	4533	2.07	4651	2.21	
1300	1477	3635	1.18	3756	1.29	3876	1.41	3996	1.54	4115	1.67	4233	1.80	4350	1.93	4466	2.07	4581	2.21	4694	2.35	
1400	1591	3751	1.29	3865	1.42	3978	1.54	4089	1.67	4201	1.80	4312	1.93	4423	2.07	4533	2.21	4642	2.35	4750	2.50	
1500	1705	3871	1.42	3983	1.55	4090	1.68	4196	1.81	4300	1.94	4405	2.08	4509	2.22	4613	2.37	4716	2.51	4819	2.66	
1600	1818	3992	1.56	4104	1.69	4209	1.83	4312	1.96	4411	2.10	4510	2.25	4607	2.39	4706	2.54	4803	2.69	4901	2.84	
1700	1932	4109	1.70	4224	1.84	4330	1.99	4431	2.13	4529	2.28	4624	2.42	4717	2.57	4810	2.72	4901	2.88			
1800	2045	4220	1.84	4341	2.00	4451	2.15	4553	2.31	4649	2.46	4743	2.61	4834	2.77	4923	2.92					
1900	2159	4325	1.99	4451	2.16	4557	2.33	4672	2.49	4770	2.65	4864	2.82	4954	2.98							
2000	2273	4430	2.14	4556	2.33	4676	2.51	4787	2.68	4889	2.86											
2100	2386	4539	2.30	4661	2.49	4781	2.69	4896	2.88													
2200	2500	4657	2.48	4770	2.67	4886	2.87															

122 RA Performance shown is for installation type B - Free inlet, Ducted outlet. Power ratings (BHP) do not include drive losses. Performance ratings do not include the effects of appurtenances in the air stream.

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
200	227	772	.01																		
300	341	850	.02	1102	.03																
400	455	953	.02	1181	.05	1372	.07	1545	.09												
500	568	1072	.03	1275	.06	1454	.08	1615	.11	1897	.16										
600	682	1199	.04	1388	.07	1549	.10	1699	.14	1968	.20	2203	.26								
700	795	1333	.06	1508	.09	1659	.12	1796	.16	2051	.24	2278	.31	2483	.39	2679	.46				
800	909	1472	.07	1633	.11	1777	.15	1906	.19	2141	.27	2361	.36	2561	.45	2744	.53				
900	1023	1616	.09	1763	.14	1899	.18	2024	.22	2245	.31	2450	.41	2644	.51	2825	.61	2993	.70	3151	.80
1000	1136	1763	.12	1899	.16	2026	.21	2145	.26	2358	.36	2550	.46	2733	.56	2909	.68	3075	.79	3230	.90
1100	1250	1912	.15	2038	.20	2157	.25	2269	.30	2476	.41	2660	.51	2832	.62	2998	.74	3159	.87	3313	.99
1200	1364	2063	.18	2180	.24	2292	.29	2398	.35	2596	.46	2776	.58	2941	.69	3097	.82	3250	.95	3398	1.08
1300	1477	2216	.22	2325	.28	2429	.34	2530	.40	2720	.52	2894	.65	3055	.77	3205	.90	3349	1.03	3491	1.17
1500	1705	2525	.32	2621	.39	2713	.45	2804	.52	2977	.66	3139	.80	3292	.95	3435	1.09	3570	1.24	3700	1.38
1700	1932	2836	.45	2922	.52	3006	.60	3087	.67	3245	.83	3395	.99	3539	1.15	3675	1.31	3805	1.47	3929	1.64
1900	2159	3151	.60	3228	.68	3304	.77	3378	.85	3522	1.02	3661	1.20	3795	1.38	3924	1.56	4048	1.74	4167	1.92
2100	2386	3466	.79	3537	.88	3606	.98	3674	1.07	3807	1.26	3935	1.45	4060	1.64	4182	1.84	4299	2.03	4413	2.23
2300	2614	3783	1.02	3848	1.12	3912	1.22	3975	1.32	4097	1.53	4217	1.73	4334	1.94	4447	2.16	4558	2.37	4666	2.59
2500	2841	4101	1.30	4162	1.40	4221	1.51	4279	1.62	4393	1.84	4504	2.06	4613	2.29	4720	2.52	4825	2.75	4927	2.98
2700	3068	4420	1.61	4476	1.73	4531	1.84	4585	1.96	4692	2.20	4796	2.44	4898	2.68						
2900	3295	4740	1.98	4792	2.10	4843	2.23	4894	2.35												
CFM	OV FPM	4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP		7" SP		7-1/2" SP		8" SP		8-1/2" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1000	1136	3377	1.00	3519	1.10	3657	1.21	3794	1.32												
1100	1250	3458	1.11	3596	1.23	3729	1.34	3858	1.46	3984	1.57	4108	1.69	4232	1.82						
1200	1364	3542	1.22	3679	1.35	3810	1.48	3936	1.61	4057	1.73	4176	1.86	4292	1.98	4407	2.11	4520	2.24	4634	2.38
1300	1477	3629	1.32	3763	1.46	3893	1.61	4018	1.76	4138	1.90	4254	2.03	4367	2.17	4477	2.30	4585	2.44	4691	2.57
1400	1591	3723	1.42	3852	1.58	3979	1.73	4102	1.89	4221	2.05	4336	2.21	4448	2.36	4556	2.51	4662	2.65	4764	2.80
1500	1705	3825	1.54	3948	1.69	4070	1.86	4189	2.03	4306	2.20</										



SIZE 135

135		SINGLE WIDTH												Standard		Hi-Speed					
		Wheel Diameter: 13-7/32 Outlet Area: 1.05 sq. ft.												RPM 5288		6191					
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
400	381	669	.02	892	.04																
600	571	795	.03	964	.06	1120	.09	1268	.12												
800	762	919	.05	1092	.09	1218	.12	1338	.16	1570	.24	1784	.34								
1000	952	1070	.08	1216	.12	1350	.17	1455	.21	1648	.30	1837	.40	2018	.51	2188	.63				
1200	1143	1233	.12	1348	.17	1475	.22	1589	.27	1766	.37	1927	.48	2086	.60	2241	.72	2392	.85	2537	.99
1400	1333	1402	.17	1502	.22	1601	.28	1711	.34	1900	.46	2049	.58	2187	.71	2324	.84	2459	.98	2592	1.12
1600	1524	1574	.23	1664	.29	1749	.36	1838	.42	2028	.57	2183	.71	2314	.84	2436	.98	2556	1.13	2676	1.28
1800	1714	1748	.31	1830	.38	1907	.45	1983	.52	2147	.68	2313	.84	2448	.99	2566	1.15	2677	1.30	2784	1.46
2000	1905	1924	.41	2000	.49	2071	.56	2139	.64	2278	.80	2432	.98	2578	1.16	2701	1.33	2809	1.50	2911	1.68
2200	2095	2102	.53	2171	.61	2238	.69	2301	.78	2425	.95	2556	1.14	2698	1.34	2830	1.54	2944	1.73	3045	1.91
2600	2476	2460	.84	2520	.93	2578	1.03	2634	1.13	2741	1.33	2846	1.53	2954	1.75	3070	1.98	3190	2.21	3304	2.45
3000	2857	2820	1.25	2873	1.36	2925	1.47	2975	1.58	3071	1.81	3164	2.04	3255	2.28	3346	2.52	3442	2.77	3544	3.04
3400	3238	3183	1.78	3230	1.91	3276	2.03	3321	2.16	3409	2.41	3493	2.67	3575	2.93	3655	3.20	3735	3.47	3817	3.75
3800	3619	3546	2.45	3589	2.59	3631	2.73	3672	2.87	3752	3.16	3829	3.44	3904	3.73	3977	4.02	4049	4.32	4121	4.62
4200	4000	3911	3.28	3950	3.43	3988	3.59	4026	3.74	4099	4.05	4170	4.37	4240	4.68	4308	5.00	4374	5.32	4440	5.65
4600	4381	4276	4.28	4312	4.44	4347	4.61	4382	4.78	4449	5.12	4516	5.46	4581	5.81	4644	6.15	4706	6.50	4767	6.86
5000	4762	4642	5.46	4675	5.64	4708	5.82	4740	6.01	4803	6.37	4864	6.74	4925	7.12	4984	7.49	5043	7.87	5100	8.25
5400	5143	5009	6.84	5039	7.04	5069	7.24	5099	7.43	5158	7.83	5216	8.23	5272	8.63	5328	9.03	5383	9.44	5437	9.85
5800	5524	5375	8.45	5404	8.66	5432	8.87	5460	9.08	5515	9.50	5569	9.93	5622	10.36	5675	10.79	5727	11.23	5778	11.66
6200	5905	5742	10.29	5769	10.51	5795	10.74	5821	10.96	5873	11.42	5924	11.87	5975	12.33	6024	12.79	6073	13.25	6122	13.71
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1400	1333	2850	1.43	3092	1.76																
1600	1524	2911	1.60	3139	1.95	3358	2.31	3567	2.69												
1800	1714	2997	1.80	3207	2.16	3412	2.54	3612	2.93	3991	3.77										
2000	1905	3105	2.03	3297	2.40	3487	2.80	3673	3.21	4035	4.08	4377	5.01								
2200	2095	3231	2.29	3407	2.68	3581	3.09	3754	3.51	4094	4.42	4423	5.38	4736	6.39	5033	7.46				
2400	2286	3364	2.58	3533	2.99	3694	3.42	3854	3.86	4171	4.79	4482	5.78	4783	6.83	5073	7.93	5351	9.07		
2600	2476	3499	2.90	3666	3.34	3821	3.79	3970	4.25	4265	5.21	4557	6.23	4843	7.31	5123	8.44	5393	9.61	5654	10.83
2800	2667	3629	3.24	3801	3.72	3954	4.19	4098	4.67	4374	5.67	4648	6.72	4919	7.83	5185	8.99	5445	10.19	5699	11.45
3000	2857	3750	3.59	3932	4.12	4089	4.63	4231	5.14	4497	6.18	4754	7.26	5009	8.40	5261	9.58	5510	10.82	5755	12.11
3200	3048	3868	3.95	4056	4.53	4221	5.09	4366	5.64	4628	6.73	4872	7.85	5112	9.02	5351	10.23	5588	11.50	5822	12.81
3700	3524	4194	5.00	4357	5.65	4525	6.32	4687	6.99	4963	8.28	5200	9.54	5418	10.81	5629	12.10	5837	13.44	6044	14.83
4200	4000	4569	6.31	4701	7.00	4839	7.71	4985	8.46	5278	9.99	5533	11.47	5754	12.91	5956	14.34	6147	15.78		
4700	4476	4967	7.91	5083	8.65	5200	9.41	5319	10.19	5576	11.85	5840	13.56	6081	15.24						

135 RA Performance shown is for installation type B - Free inlet, Ducted outlet. Power ratings (BHP) do not include drive losses. Performance ratings do not include the effects of appurtenances in the air stream.

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
400	381	673	.02																		
600	571	783	.04	967	.07	1123	.10	1264	.13												
800	762	917	.06	1076	.09	1217	.14	1345	.18	1568	.27										
1000	952	1062	.08	1206	.13	1331	.18	1445	.23	1657	.34	1842	.45	2013	.55						
1200	1143	1215	.12	1345	.17	1461	.23	1565	.29	1756	.41	1935	.55	2097	.68	2246	.81	2388	.93	2527	1.07
1400	1333	1375	.16	1491	.23	1598	.29	1696	.36	1873	.50	2036	.64	2191	.80	2337	.96	2472	1.11	2599	1.25
1600	1524	1539	.22	1643	.30	1741	.37	1833	.45	2002	.60	2152	.76	2295	.92	2433	1.10	2565	1.28	2691	1.46
1800	1714	1706	.30	1800	.38	1890	.46	1976	.54	2135	.71	2280	.89	2413	1.07	2541	1.25	2665	1.45	2786	1.65
2000	1905	1875	.38	1961	.47	2043	.56	2123	.66	2274	.85	2413	1.04	2541	1.23	2661	1.43	2777	1.63	2890	1.84
2200	2095	2045	.49	2124	.59	2201	.69	2275	.79	2417	.99	2549	1.20	2673	1.42	2790	1.63	2900	1.84	3006	2.06
2600	2476	2390	.77	2458	.88	2524	1.00	2589	1.11	2714	1.35	2834	1.59	2948	1.84	3057	2.09	3161	2.34	3260	2.59
3000	2857	2738	1.13	2797	1.26	2856	1.40	2913	1.53	3024	1.80	3132	2.08	3237	2.36	3337	2.64	3435	2.93	3528	3.21
3400	3238	3088	1.61	3141	1.76	3193	1.91	3244	2.06	3344	2.36	3442	2.67	3537	2.98	3630	3.30	3720	3.62	3808	3.94
3800	3619	3439	2.21	3487	2.37	3534	2.54	3580	2.70	3671	3.04	3759	3.38	3847	3.73	3932	4.08	4016	4.43	4098	4.79
4200	4000	3792	2.94	3835	3.12	3878	3.30	3920	3.49	4003	3.86	4084	4.23	4164	4.61	4243	4.99	4321	5.38	4397	5.77
4600	4381	4145	3.82	4185	4.02	4224	4.22	4262	4.42	4339	4.82	4414	5.23	4488	5.64	4561	6.06	4633	6.48	4704	6.90
5000	4762	4499	4.87	4535	5.08	4571	5.30	4607	5.51	4678	5.95	4748	6.40	4817	6.84	4885	7.29	4952	7.74	5018	8.20
5400	5143	4853	6.09	4887	6.32	4921	6.56	4954	6.79	5020	7.26	5085	7.74	5149	8.22	5213	8.70	5275	9.18	5338	9.67
5800	5524	5208	7.51	5239	7.76	5271	8.01	5302	8.26	5363	8.76	5424	9.27	5485	9.79	5544	10.30	5603	10.82	5662	11.34
6200	5905	5563	9.14	5592	9.40	5622	9.67	5651	9.94	5709	10.47	5766	11.02	5823	11.56	5879	12.11	5935	12.66	5990	13.22
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1400	1333	2842	1.55																		
1600	1524	2921	1.80	3137	2.13	3347	2.49														
1800	1714	3013	2.05	3222	2.44	3417	2.81	3605	3.19												
2000	1905	3108	2.29	3314	2.74	3505	3.17	3685	3.59	4026	4.43										
2200	2095	3211	2.53	3410	3.02	3598	3.52	3776	4.01	4104	4.92	4414	5.85								
2400	2286	3325	2.80	3512	3.31	3695	3.85	3869	4.39	4194	5.45	4492	6.44	4776	7.45	5055	8.53				
2600	2476	3447	3.10	3625</																	



SIZE 150

150 SINGLE WIDTH
 Wheel Diameter: 14-9/16 Outlet Area: 1.29 sq. ft. **RPM** Standard **4657** Hi-Speed **6061**

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
400	310	582	.02																		
600	465	657	.03	832	.06	992	.09														
800	620	754	.05	906	.08	1037	.12	1165	.16												
1000	775	849	.07	1005	.11	1119	.15	1225	.20	1431	.30	1623	.42								
1200	930	962	.09	1097	.15	1218	.20	1314	.25	1491	.36	1663	.48	1828	.61	1984	.75				
1400	1085	1084	.13	1192	.19	1313	.25	1414	.31	1576	.43	1727	.56	1875	.70	2020	.85	2160	1.00	2293	1.17
1600	1240	1209	.18	1304	.24	1403	.31	1509	.38	1674	.52	1812	.65	1944	.80	2075	.96	2203	1.12	2329	1.29
1800	1395	1336	.23	1422	.30	1506	.37	1598	.45	1774	.61	1909	.77	2031	.92	2148	1.09	2265	1.26	2381	1.44
2000	1550	1465	.30	1545	.38	1620	.46	1697	.54	1866	.72	2010	.89	2129	1.06	2238	1.24	2344	1.41	2449	1.60
2200	1705	1595	.38	1670	.47	1739	.55	1808	.64	1955	.83	2105	1.03	2229	1.22	2336	1.40	2436	1.59	2533	1.79
2600	2016	1859	.60	1924	.69	1986	.79	2045	.89	2161	1.10	2285	1.32	2416	1.56	2535	1.79	2636	2.01	2728	2.23
3000	2326	2126	.88	2183	.99	2238	1.10	2291	1.22	2393	1.45	2494	1.69	2600	1.94	2714	2.21	2825	2.49	2926	2.75
3400	2636	2395	1.24	2446	1.37	2496	1.50	2544	1.62	2636	1.88	2725	2.15	2814	2.42	2906	2.70	3004	3.01	3105	3.32
3800	2946	2665	1.70	2711	1.84	2756	1.98	2800	2.12	2885	2.41	2967	2.70	3046	3.00	3125	3.30	3206	3.62	3291	3.94
4200	3256	2936	2.27	2978	2.42	3020	2.57	3060	2.73	3138	3.04	3214	3.36	3287	3.69	3359	4.01	3430	4.35	3503	4.69
4600	3566	3208	2.94	3247	3.11	3285	3.28	3322	3.45	3395	3.79	3465	4.14	3534	4.49	3600	4.84	3666	5.20	3731	5.57
5000	3876	3480	3.75	3516	3.93	3551	4.11	3586	4.30	3654	4.67	3720	5.04	3784	5.42	3847	5.80	3908	6.19	3968	6.57
5400	4186	3753	4.69	3786	4.88	3819	5.08	3852	5.28	3915	5.68	3977	6.08	4038	6.49	4097	6.90	4155	7.31	4211	7.72
5800	4496	4026	5.78	4057	5.99	4088	6.20	4119	6.41	4178	6.84	4237	7.27	4294	7.70	4350	8.14	4404	8.58	4458	9.02
6200	4806	4300	7.02	4329	7.25	4358	7.47	4386	7.70	4443	8.16	4498	8.62	4552	9.08	4605	9.54	4657	10.01	4708	10.48

CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	1395	2607	1.82	2822	2.22	3026	2.65														
2000	1550	2658	2.00	2862	2.42	3058	2.86	3246	3.33	3624	4.60										
2200	1705	2725	2.20	2915	2.64	3100	3.10	3281	3.58	3657	4.90	3968	6.03								
2400	1860	2805	2.43	2981	2.88	3155	3.35	3326	3.85	3699	5.23	4000	6.39	4287	7.61						
2600	2016	2898	2.68	3061	3.15	3223	3.64	3384	4.15	3751	5.59	4041	6.78	4320	8.04	4586	9.35	4841	10.71		
2800	2171	2996	2.96	3151	3.45	3303	3.95	3453	4.48	3814	5.99	4090	7.20	4359	8.49	4619	9.83	4869	11.23	5109	12.68
3000	2326	3097	3.27	3248	3.78	3392	4.30	3533	4.84	4015	7.12	4256	8.41	4496	9.77	4733	11.20	4965	12.68	5192	14.21
3500	2713	3339	4.10	3499	4.71	3639	5.30	3769	5.90	4257	8.50	4475	9.88	4688	11.31	4899	12.81	5109	14.36	5316	15.97
4000	3101	3561	5.01	3731	5.74	3885	6.45	4020	7.14	4508	10.07	4723	11.60	4921	13.14	5112	14.71	5300	16.34	5488	18.02
4500	3488	3809	6.08	3956	6.86	4109	7.68	4256	8.50	4744	11.77	4973	13.52	5171	15.22	5355	16.92	5530	18.64	5701	20.40
5000	3876	4088	7.37	4211	8.19	4340	9.05	4477	9.95	4965	13.56	5207	15.56	5419	17.50	5606	19.38	5779	21.24	5942	23.12
5500	4264	4383	8.89	4492	9.76	4603	10.66	4718	11.59	5199	15.55	5428	17.72	5651	19.90	5851	22.03	6029	24.09		
6000	4651	4686	10.65	4786	11.59	4886	12.54	4987	13.51												

150 RA Performance shown is for installation type B - Free inlet, Ducted outlet. Power ratings (BHP) do not include drive losses. Performance ratings do not include the effects of appurtenances in the air stream.

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
400	310	582	.02																		
600	465	653	.03	834	.07																
800	620	745	.05	904	.09	1043	.14	1164	.18												
1000	775	847	.07	990	.12	1115	.17	1231	.23	1432	.33										
1200	930	955	.10	1087	.15	1201	.21	1305	.28	1499	.41	1668	.54	1824	.66						
1400	1085	1069	.13	1190	.20	1297	.26	1393	.33	1571	.48	1736	.64	1884	.79	2021	.93	2153	1.09	2329	1.42
1600	1240	1187	.17	1297	.25	1398	.32	1490	.40	1654	.56	1808	.73	1953	.91	2086	1.09	2210	1.26	2329	1.42
1800	1395	1308	.23	1409	.31	1503	.39	1590	.48	1747	.65	1889	.83	2026	1.03	2156	1.23	2278	1.44	2392	1.63
2000	1550	1431	.29	1524	.38	1611	.47	1693	.57	1845	.76	1980	.95	2107	1.16	2230	1.37	2349	1.60	2462	1.83
2200	1705	1556	.36	1641	.46	1723	.56	1800	.67	1945	.88	2076	1.09	2197	1.30	2312	1.53	2424	1.77	2533	2.01
2600	2016	1810	.55	1883	.67	1954	.79	2023	.91	2154	1.15	2276	1.40	2390	1.65	2497	1.90	2598	2.16	2696	2.42
3000	2326	2067	.81	2131	.94	2194	1.07	2255	1.21	2374	1.49	2486	1.77	2593	2.05	2694	2.34	2790	2.63	2882	2.92
3400	2636	2326	1.13	2383	1.28	2440	1.43	2495	1.59	2602	1.89	2705	2.21	2804	2.53	2900	2.85	2991	3.18	3079	3.50
3800	2946	2586	1.54	2683	1.71	2689	1.87	2739	2.04	2837	2.39	2932	2.73	3024	3.09	3113	3.44	3199	3.80	3283	4.16
4200	3256	2848	2.04	2895	2.22	2942	2.41	2987	2.59	3077	2.97	3164	3.35	3250	3.74	3333	4.12	3414	4.52	3493	4.91
4600	3566	3111	2.64	3154	2.84	3197	3.04	3239	3.24	3321	3.65	3402	4.07	3482	4.49	3559	4.91	3636	5.33	3710	5.76
5000	3876	3374	3.35	3414	3.57	3453	3.79	3492	4.00	3569	4.45	3644	4.90	3718	5.35	3791	5.80	3863	6.26	3933	6.72
5400	4186	3638	4.19	3675	4.42	3711	4.65	3748	4.89	3819	5.36	3890	5.84	3959	6.33	4027	6.82	4094	7.31	4161	7.81
5800	4496	3902	5.15	3936	5.40	3971	5.65	4005	5.90	4072	6.41	4138	6.92	4203	7.44	4267	7.96	4330	8.49	4393	9.02
6200	4806	4166	6.25	4199	6.52	4231	6.78	4263	7.05	4326	7.59	4388	8.14	4449	8.69	4510	9.25	4570	9.81	4629	10.37

CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	1395	2607	2.00	2812	2.39																
2000	1550	2671	2.26	2864	2.67	3050	3.10														
2200	1705	2740	2.51	2929	2.98	3105	3.44	3276	3.90												
2400	1860	2811	2.74	2998	3.28	3171	3.80	3335	4.30	3647	5.31										
2600	2016	2886	2.98	3068	3.57	3241	4.15	3402	4.71	3703	5.79	3989	6.91								
2800	2171	2967	3.23	3143	3.85	3311	4.48	3471	5.11	3767	6.31	4041	7.47	4306	8.68						
3000	2326	3056	3.52	3222	4.14	3385	4.81	3542	5.49	3836	6.83										

165		SINGLE WIDTH																Standard	Hi-Speed		
		Wheel Diameter: 16-3/16 Outlet Area: 1.57 sq. ft.																RPM 4083	5408		
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
600	382	546	.03	728	.06																
900	573	649	.05	787	.09	915	.14	1036	.19												
1200	764	751	.08	892	.13	995	.18	1093	.24	1282	.36	1457	.50								
1500	955	874	.12	993	.18	1103	.25	1189	.31	1346	.45	1500	.60	1648	.76	1787	.94				
1800	1146	1007	.18	1101	.25	1205	.33	1298	.41	1443	.56	1574	.72	1703	.90	1830	1.08	1953	1.28	2072	1.49
2100	1338	1145	.25	1227	.33	1308	.42	1398	.51	1552	.70	1674	.88	1786	1.06	1898	1.26	2009	1.47	2117	1.69
2400	1529	1286	.35	1359	.44	1429	.53	1501	.63	1657	.85	1783	1.06	1890	1.26	1990	1.47	2088	1.69	2185	1.92
2700	1720	1428	.47	1495	.57	1558	.67	1620	.78	1754	1.02	1889	1.26	2000	1.49	2096	1.72	2186	1.95	2274	2.19
3000	1911	1572	.62	1633	.73	1692	.84	1748	.96	1861	1.21	1987	1.47	2106	1.74	2206	2.00	2295	2.26	2378	2.51
3300	2102	1717	.80	1774	.92	1828	1.04	1880	1.17	1981	1.43	2088	1.71	2204	2.01	2312	2.31	2404	2.59	2487	2.87
3800	2420	1960	1.17	2011	1.31	2059	1.45	2106	1.60	2195	1.89	2283	2.19	2375	2.51	2474	2.85	2574	3.20	2666	3.54
4300	2739	2206	1.65	2251	1.81	2294	1.97	2337	2.13	2418	2.46	2497	2.79	2574	3.13	2654	3.49	2739	3.86	2828	4.25
4800	3057	2452	2.25	2493	2.43	2532	2.61	2571	2.78	2646	3.15	2718	3.51	2788	3.89	2857	4.27	2928	4.66	3002	5.07
5300	3376	2699	2.99	2736	3.18	2773	3.38	2808	3.58	2878	3.97	2944	4.37	3009	4.78	3072	5.19	3135	5.61	3199	6.04
5800	3694	2947	3.88	2981	4.09	3015	4.30	3048	4.52	3112	4.95	3174	5.38	3235	5.83	3293	6.27	3352	6.72	3409	7.18
6300	4013	3195	4.93	3227	5.16	3258	5.39	3289	5.62	3349	6.09	3407	6.56	3464	7.03	3519	7.51	3573	7.99	3627	8.49
6800	4331	3444	6.16	3473	6.40	3502	6.65	3531	6.90	3587	7.40	3642	7.91	3695	8.42	3748	8.94	3799	9.45	3849	9.97
7800	4968	3942	9.20	3968	9.48	3994	9.77	4019	10.05	4068	10.63	4117	11.20	4165	11.79	4212	12.37	4258	12.96	4304	13.55
8800	5605	4441	13.13	4464	13.45	4487	13.77	4510	14.09	4554	14.73	4598	15.38	4641	16.03	4684	16.68	4725	17.34	4767	18.00
9800	6242	4941	18.04	4962	18.40	4982	18.76	5003	19.11	5043	19.83	5083	20.55	5122	21.27	5161	21.99	5199	22.72	5237	23.45
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2200	1401	2342	2.23	2537	2.73	2720	3.25														
2500	1592	2399	2.50	2580	3.02	2756	3.57	2924	4.15												
2800	1783	2475	2.81	2642	3.35	2805	3.93	2965	4.53	3270	5.81										
3300	2102	2639	3.44	2782	4.02	2925	4.63	3066	5.27	3344	6.63	3612	8.07	3868	9.59	4110	11.19				
3800	2420	2821	4.19	2958	4.84	3085	5.49	3209	6.17	3456	7.60	3700	9.12	3938	10.72	4169	12.40	4392	14.14	4607	15.95
4300	2739	2998	5.03	3141	5.78	3266	6.51	3383	7.24	3605	8.75	3824	10.34	4040	12.02	4254	13.77	4464	15.60	4669	17.49
4800	3057	3160	5.93	3313	6.80	3448	7.64	3566	8.47	3780	10.10	3979	11.78	4175	13.53	4370	15.35	4564	17.25	4755	19.22
5300	3376	3331	6.94	3475	7.89	3616	8.86	3745	9.80	3963	11.62	4156	13.42	4337	15.26	4515	17.16	4693	19.14	4869	21.18
5800	3694	3525	8.12	3647	9.10	3778	10.14	3909	11.20	4143	13.27	4339	15.25	4516	17.22	4684	19.22	4847	21.27	5009	23.39
6300	4013	3733	9.48	3840	10.51	3952	11.58	4072	12.70	4311	15.00	4519	17.22	4700	19.37	4864	21.51	5021	23.68	5172	25.88
6800	4331	3948	11.03	4046	12.11	4146	13.22	4250	14.38	4472	16.82	4689	19.29	4880	21.68	5048	24.00	5203	26.31	5350	28.63
7300	4650	4168	12.78	4260	13.92	4351	15.09	4444	16.28	4641	18.79	4851	21.44	5050	24.09	5228	26.65	5386	29.15		
7800	4968	4392	14.74	4479	15.94	4564	17.17	4650	18.41	4826	21.00	5016	23.74	5212	26.58	5398	29.41				

165 RA Performance shown is for installation type B - Free inlet, Ducted outlet. Power ratings (BHP) do not include drive losses. Performance ratings do not include the effects of appurtenances in the air stream.

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
600	382	549	.03																		
900	573	639	.05	790	.10	917	.15	1032	.20												
1200	764	749	.08	879	.14	994	.21	1099	.27	1281	.40										
1500	955	867	.12	985	.19	1087	.27	1180	.35	1353	.51	1505	.67	1644	.83						
1800	1146	993	.18	1098	.26	1193	.35	1278	.43	1434	.62	1580	.82	1713	1.02	1834	1.21	1950	1.40	2064	1.60
2100	1338	1123	.25	1218	.34	1305	.44	1386	.54	1530	.75	1663	.97	1789	1.20	1908	1.44	2019	1.66	2123	1.88
2400	1529	1257	.33	1342	.44	1422	.55	1498	.67	1635	.90	1758	1.14	1874	1.38	1987	1.65	2095	1.92	2197	2.19
2700	1720	1393	.44	1470	.57	1544	.69	1614	.82	1744	1.07	1862	1.33	1971	1.60	2075	1.88	2177	2.17	2275	2.47
3000	1911	1532	.58	1602	.71	1669	.85	1734	.99	1857	1.27	1971	1.56	2076	1.85	2174	2.14	2268	2.45	2360	2.76
3300	2102	1671	.74	1735	.88	1798	1.03	1858	1.19	1974	1.49	2082	1.81	2184	2.12	2279	2.44	2368	2.77	2455	3.10
3800	2420	1906	1.07	1962	1.24	2017	1.41	2071	1.58	2176	1.93	2275	2.29	2370	2.65	2460	3.01	2546	3.38	2627	3.75
4300	2739	2142	1.50	2193	1.69	2242	1.88	2291	2.07	2385	2.47	2476	2.86	2564	3.26	2649	3.67	2730	4.08	2808	4.50
4800	3057	2380	2.04	2425	2.25	2470	2.46	2514	2.67	2600	3.11	2684	3.54	2765	3.99	2844	4.44	2921	4.89	2995	5.35
5300	3376	2619	2.70	2660	2.92	2701	3.16	2741	3.39	2820	3.87	2897	4.35	2973	4.83	3046	5.32	3118	5.82	3188	6.32
5800	3694	2858	3.48	2896	3.73	2934	3.99	2971	4.24	3044	4.76	3115	5.28	3185	5.81	3254	6.34	3322	6.88	3388	7.42
6300	4013	3098	4.41	3133	4.69	3168	4.96	3202	5.24	3270	5.79	3337	6.36	3402	6.92	3466	7.50	3530	8.08	3592	8.66
6800	4331	3338	5.50	3371	5.80	3404	6.09	3436	6.39	3499	6.99	3561	7.59	3622	8.20	3682	8.82	3742	9.44	3801	10.06
7800	4968	3820	8.20	3849	8.53	3877	8.87	3906	9.21	3961	9.89	4016	10.58	4070	11.27	4124	11.97	4177	12.67	4229	13.38
8800	5605	4303	11.67	4329	12.05	4354	12.43	4379	12.81	4429	13.58	4478	14.35	4527	15.12	4575	15.91	4623	16.69	4670	17.48
9800	6242	4787	16.02	4809	16.44	4832	16.86	4855	17.28	4900	18.13	4944	18.99	4989	19.85	5032	20.71	5076	21.58	5119	22.46
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2200	1401	2341	2.44																		
2500	1592	2411	2.83	2584	3.35	2749	3.88														
2800	1783	2486	3.20	2656	3.81	2814	4.40	2964	4.98												
3300	2102	2623	3.80	2785	4.54	2939	5.28	3084	6.01	3352	7.39	3605	8.78								
3800	2420	2782	4.50	2929	5.28	3073	6.11	3213	6.96	3476	8.67	3716	10.29	3942	11.86	4160	13.47				

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SINGLE WIDTH

Wheel Diameter: 17-13/16 Outlet Area: 1.92 sq. ft.

Standard **RPM 4071** Hi-Speed **RPM 4747**

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
800	417	512	.04	668	.08			953	.24												
1200	625	618	.07	741	.12	849	.18	1025	.32	1184	.48	1337	.65	1478	.84	1641	1.22	1757	1.45	1868	1.69
1600	833	725	.11	849	.18	943	.25	1130	.44	1264	.61	1393	.80	1519	1.00	1697	1.44	1803	1.68	1905	1.94
2000	1042	854	.18	949	.26	1050	.35	1130	.44	1264	.61	1393	.80	1519	1.00	1697	1.44	1803	1.68	1905	1.94
2400	1250	991	.27	1068	.36	1149	.46	1235	.57	1371	.78	1483	.98	1591	1.20	1697	1.44	1803	1.68	1905	1.94
2900	1510	1165	.42	1232	.53	1296	.64	1362	.76	1503	1.03	1618	1.28	1715	1.52	1806	1.78	1895	2.04	1984	2.32
3400	1771	1344	.63	1403	.75	1458	.88	1512	1.02	1626	1.31	1748	1.61	1852	1.91	1940	2.20	2021	2.49	2099	2.79
3900	2031	1524	.90	1577	1.04	1627	1.19	1675	1.34	1770	1.65	1871	1.99	1979	2.34	2075	2.69	2158	3.03	2233	3.36
4400	2292	1707	1.25	1754	1.41	1800	1.58	1844	1.74	1928	2.08	2012	2.44	2103	2.82	2198	3.22	2289	3.62	2369	4.00
4900	2552	1890	1.68	1933	1.86	1975	2.04	2016	2.23	2093	2.60	2168	2.99	2244	3.39	2324	3.81	2410	4.25	2495	4.69
5400	2813	2074	2.21	2114	2.40	2152	2.61	2190	2.81	2262	3.22	2331	3.63	2399	4.06	2468	4.50	2540	4.96	2617	5.44
5900	3073	2259	2.84	2296	3.05	2331	3.27	2366	3.49	2434	3.93	2498	4.38	2561	4.84	2623	5.31	2686	5.79	2751	6.28
6400	3333	2444	3.58	2478	3.81	2512	4.05	2544	4.29	2607	4.77	2668	5.25	2727	5.74	2785	6.24	2842	6.74	2900	7.26
6900	3594	2630	4.45	2662	4.70	2693	4.95	2723	5.20	2783	5.72	2840	6.24	2896	6.76	2950	7.29	3004	7.83	3057	8.38
7400	3854	2816	5.44	2846	5.71	2875	5.98	2904	6.26	2960	6.80	3014	7.36	3067	7.92	3119	8.48	3169	9.05	3219	9.63
8400	4375	3189	7.87	3216	8.18	3242	8.48	3267	8.79	3317	9.41	3366	10.04	3414	10.67	3461	11.30	3507	11.94	3552	12.58
9400	4896	3563	10.95	3587	11.29	3610	11.63	3633	11.97	3678	12.66	3723	13.36	3767	14.06	3809	14.76	3852	15.47	3893	16.18
10400	5417	3937	14.74	3959	15.12	3980	15.50	4001	15.88	4042	16.64	4083	17.40	4123	18.17	4163	18.95	4201	19.73	4240	20.51
11400	5938	4312	19.33	4331	19.75	4351	20.16	4370	20.57	4408	21.41	4446	22.24	4483	23.08	4519	23.93	4555	24.78	4591	25.63
12400	6458	4687	24.80	4705	25.25	4723	25.70	4741	26.15												

CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2500	1302	2110	2.56	2291	3.15			2655	4.99												
3000	1563	2175	3.00	2341	3.63	2501	4.29	2708	5.63												
3500	1823	2273	3.52	2420	4.19	2565	4.90	2787	6.39	2981	7.20	3237	8.86								
4000	2083	2398	4.16	2529	4.87	2658	5.61	2787	6.39	3039	8.03	3282	9.78	3514	11.62	3735	13.55				
4500	2344	2535	4.91	2659	5.67	2777	6.46	2892	7.27	3121	8.98	3346	10.81	3565	12.73	3778	14.75	3982	16.84	4178	19.01
5000	2604	2670	5.73	2797	6.59	2910	7.44	3018	8.30	3226	10.09	3432	11.98	3636	13.98	3836	16.08	4031	18.25	4221	20.51
5500	2865	2794	6.60	2931	7.58	3048	8.52	3154	9.46	3350	11.35	3539	13.32	3727	15.39	3913	17.56	4096	19.82	4277	22.15
6000	3125	2916	7.53	3055	8.62	3181	9.69	3291	10.73	3485	12.77	3664	14.84	3837	16.99	4009	19.23	4180	21.55	4349	23.96
6500	3385	3049	8.57	3176	9.73	3304	10.91	3422	12.08	3623	14.31	3798	16.53	3962	18.77	4122	21.09	4281	23.49	4440	25.97
7500	3906	3350	11.09	3449	12.32	3555	13.61	3666	14.96	3884	17.69	4072	20.31	4234	22.86	4384	25.42	4527	28.00	4666	30.64
8500	4427	3673	14.23	3760	15.57	3847	16.94	3936	18.35	4128	21.35	4324	24.45	4502	27.49	4658	30.42				
9500	4948	4008	18.03	4086	19.50	4164	20.99	4241	22.50	4400	25.63	4570	28.96	4747	32.42						
10500	5469	4349	22.57	4422	24.17	4493	25.79	4564	27.43	4703	30.76										

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Performance shown is for installation type B - Free inlet, Ducted outlet. Power ratings (BHP) do not include drive losses. Performance ratings do not include the effects of appurtenances in the air stream.

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
800	417	513	.05	666	.09			952	.27												
1200	625	610	.08	740	.14	853	.20	1027	.37	1189	.54	1333	.71								
1600	833	723	.12	837	.20	935	.28	1116	.47	1265	.69	1401	.91	1523	1.12	1638	1.33				
2000	1042	845	.18	946	.27	1035	.37	1116	.47	1265	.69	1401	.91	1523	1.12	1638	1.33				
2400	1250	973	.26	1063	.37	1145	.49	1220	.60	1354	.84	1480	1.10	1598	1.37	1707	1.63	1808	1.88	1905	2.13
2900	1510	1139	.40	1217	.53	1290	.67	1358	.80	1484	1.08	1596	1.37	1701	1.67	1804	1.99	1902	2.32	1995	2.64
3400	1771	1310	.59	1378	.74	1443	.90	1505	1.06	1621	1.38	1727	1.71	1824	2.04	1916	2.38	2006	2.74	2094	3.12
3900	2031	1484	.84	1544	1.01	1602	1.19	1658	1.36	1765	1.73	1864	2.10	1957	2.48	2044	2.85	2127	3.24	2207	3.63
4400	2292	1659	1.15	1713	1.34	1765	1.54	1816	1.74	1914	2.15	2007	2.56	2095	2.98	2179	3.40	2258	3.83	2333	4.26
4900	2552	1836	1.53	1885	1.75	1932	1.97	1979	2.19	2069	2.64	2156	3.09	2239	3.55	2318	4.02	2394	4.49	2467	4.96
5400	2813	2014	2.00	2058	2.24	2102	2.48	2144	2.72	2228	3.21	2309	3.71	2386	4.21	2462	4.72	2534	5.23	2604	5.75
5900	3073	2192	2.56	2233	2.82	2273	3.08	2313	3.34	2390	3.87	2465	4.41	2539	4.96	2610	5.51	2679	6.06	2746	6.62
6400	3333	2371	3.22	2409	3.50	2446	3.78	2483	4.06	2555	4.64	2626	5.22	2694	5.80	2761	6.39	2827	6.99	2891	7.59
6900	3594	2551	3.99	2586	4.29	2621	4.59	2655	4.89	2722	5.51	2788	6.13	2853	6.76	2917	7.39	2979	8.03	3040	8.67
7400	3854	2731	4.87	2764	5.19	2796	5.52	2828	5.84	2892	6.50	2954	7.16	3015	7.83	3075	8.50	3134	9.18	3192	9.87
8400	4375	3091	7.03	3120	7.39	3149	7.75	3178	8.12	3234	8.86	3290	9.60	3344	10.36	3398	11.11	3452	11.88	3504	12.65
9400	4896	3452	9.74	3479	10.15	3505	10.55	3530	10.96	3581	11.78	3631	12.61	3681	13.45	3730	14.29	3778	15.14	3826	15.99
10400	5417	3814	13.10	3838	13.54	3862	13.99	3885	14.44	3931	15.35	3977	16.26	4022	17.18	4067	18.10	4112	19.03	4155	19.97
11400	5938	4177	17.15	4198	17.64	4220	18.13	4241	18.62	4284	19.61	4326	20.61	4368	21.61	4409	22.62	4450	23.63	4490	24.65
12400	6458	4539	21.98	4559	22.51	4579	23.04	4599	23.57	4638	24.64	4677	25.72	4716	26.81						

CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2500	1302	2104	2.77	2343	4.01	2494	4.65														
3000	1563	2185	3.39	2434	4.78	2576	5.52	2711	6.25	2971	7.76										
3500	1823	2280	4.00	2531	5.49	2671	6.40	2803	7.28	3046	8.95	3276	10.63								

200		SINGLE WIDTH														Standard		Hi-Speed			
		Wheel Diameter: 19-11/16 Outlet Area: 2.30 sq. ft.														RPM 3592		4234			
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
800	348	438	.04																		
1200	522	507	.06																		
1600	696	583	.10																		
2000	870	667	.15																		
2400	1043	763	.21																		
2900	1261	889	.32																		
3400	1478	1018	.46																		
3900	1696	1150	.65																		
4400	1913	1283	.90																		
4900	2130	1418	1.19																		
5400	2348	1553	1.55																		
5900	2565	1689	1.99																		
6400	2783	1826	2.49																		
7400	3217	2100	3.76																		
8400	3652	2375	5.42																		
9400	4087	2652	7.50																		
10400	4522	2929	10.08																		
11400	4957	3206	13.19																		
12400	5391	3483	16.89																		
13400	5826	3761	21.23																		
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	1304	1906	3.09																		
3500	1522	1950	3.51																		
4000	1739	2014	4.00																		
4500	1957	2097	4.58																		
5000	2174	2194	5.26																		
5500	2391	2296	6.01																		
6000	2609	2397	6.83																		
6500	2826	2491	7.70																		
7000	3043	2581	8.60																		
7500	3261	2674	9.57																		
8500	3696	2882	11.83																		
9500	4130	3114	14.59																		
10500	4565	3356	17.87																		

200 RA Performance shown is for installation type B - Free inlet, Ducted outlet. Power ratings (BHP) do not include drive losses. Performance ratings do not include the effects of appurtenances in the air stream.

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
800	348	440	.05																		
1200	522	501	.07																		
1600	696	580	.11																		
2000	870	665	.15																		
2400	1043	755	.21																		
2900	1261	874	.31																		
3400	1478	997	.45																		
3900	1696	1123	.62																		
4400	1913	1251	.84																		
4900	2130	1380	1.11																		
5400	2348	1510	1.43																		
5900	2565	1641	1.82																		
6400	2783	1773	2.27																		
7400	3217	2038	3.40																		
8400	3652	2304	4.87																		
9400	4087	2571	6.73																		
10400	4522	2839	9.01																		
11400	4957	3107	11.77																		
12400	5391	3376	15.05																		
13400	5862	3644	18.89																		
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	1304	1899	3.33																		
3500	1522	1956	3.93																		
4000	1739	2025	4.57																		
4500	1957	2097	5.16																		
5000	2174	2177	5.77																		
5500	2391	2265	6.47																		
6000	2609	2360	7.27																		
6500	2826	2459	8.14																		
7000	3043	2560	9.09																		
7500	3261	2663	10.11																		
8500	3696	2875	12.41																		
9500	4130	3096	15.10																		
10500	4565	3323	18.22																		

If V-belt driven, not recommended above 3600 RPM

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SINGLE WIDTH

Wheel Diameter: 21-9/16 Outlet Area: 2.85 sq. ft.

Standard RPM **3225** Hi-Speed RPM **3732**

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
1000	351	403	.05																		
1500	526	472	.08	579	.15	680	.23	773	.32												
2000	702	543	.13	649	.21	729	.30	806	.40	954	.62										
2500	877	626	.19	723	.30	802	.40	868	.51	993	.75	1113	1.01	1228	1.29						
3000	1053	718	.27	794	.39	877	.53	944	.66	1054	.92	1158	1.20	1260	1.50	1360	1.82	1455	2.16	1545	2.52
3500	1228	814	.38	879	.52	946	.67	1017	.83	1129	1.13	1222	1.43	1312	1.75	1400	2.09	1487	2.45	1572	2.83
4000	1404	912	.53	970	.68	1026	.84	1086	1.01	1206	1.37	1298	1.71	1379	2.06	1457	2.42	1535	2.80	1613	3.19
4500	1579	1012	.70	1065	.87	1115	1.05	1165	1.23	1275	1.63	1374	2.03	1455	2.41	1528	2.80	1598	3.20	1668	3.61
5000	1754	1113	.92	1161	1.11	1207	1.30	1252	1.50	1345	1.92	1446	2.37	1532	2.81	1605	3.24	1672	3.66	1736	4.10
5500	1930	1214	1.19	1259	1.39	1302	1.60	1343	1.81	1425	2.25	1514	2.74	1604	3.24	1682	3.72	1749	4.19	1811	4.66
6000	2105	1316	1.50	1358	1.72	1398	1.95	1437	2.17	1511	2.65	1588	3.15	1672	3.69	1754	4.23	1825	4.76	1888	5.27
6500	2281	1419	1.86	1458	2.10	1496	2.35	1532	2.59	1601	3.10	1670	3.62	1743	4.18	1822	4.76	1897	5.35	1964	5.93
7000	2456	1522	2.28	1559	2.54	1594	2.80	1629	3.07	1694	3.60	1758	4.16	1822	4.73	1892	5.34	1965	5.98	2035	6.61
7500	2632	1626	2.77	1661	3.04	1694	3.32	1726	3.60	1788	4.17	1848	4.76	1907	5.36	1969	5.98	2035	6.64	2103	7.33
8000	2807	1730	3.32	1762	3.61	1794	3.91	1825	4.21	1884	4.81	1941	5.43	1996	6.06	2052	6.71	2111	7.38	2173	8.09
9000	3158	1938	4.64	1968	4.97	1996	5.30	2024	5.63	2078	6.31	2130	6.99	2180	7.69	2229	8.39	2279	9.11	2329	9.85
10000	3509	2147	6.28	2174	6.64	2200	7.01	2225	7.38	2275	8.13	2323	8.88	2369	9.64	2415	10.41	2459	11.19	2503	11.98
11000	3860	2357	8.28	2381	8.68	2405	9.08	2428	9.48	2474	10.30	2519	11.12	2562	11.95	2604	12.79	2645	13.64	2686	14.49
12000	4211	2567	10.66	2589	11.10	2611	11.53	2633	11.97	2675	12.86	2717	13.75	2757	14.66	2797	15.56	2835	16.48	2873	17.39
13000	4561	2777	13.47	2798	13.94	2818	14.42	2839	14.89	2878	15.85	2917	16.81	2955	17.78	2992	18.76	3028	19.75	3064	20.74
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4000	1404	1764	4.03	1909	4.92	2046	5.87														
4500	1579	1806	4.49	1941	5.42	2072	6.40	2198	7.43												
5000	1754	1861	5.01	1985	5.98	2107	7.00	2227	8.07	2455	10.34										
5500	1930	1927	5.61	2041	6.62	2154	7.68	2266	8.79	2484	11.13	2691	13.64	2886	16.28						
6000	2105	2002	6.29	2108	7.34	2212	8.43	2316	9.58	2521	12.00	2719	14.59	2910	17.31	3091	20.16				
6500	2281	2079	7.04	2182	8.15	2279	9.28	2376	10.46	2567	12.96	2755	15.62	2938	18.42	3115	21.36	3284	24.42	3447	27.58
7000	2456	2156	7.84	2259	9.03	2353	10.22	2444	11.45	2623	14.02	2800	16.75	2974	19.63	3145	22.65	3310	25.79	3469	29.04
7500	2632	2230	8.68	2336	9.97	2430	11.24	2518	12.53	2687	15.18	2854	17.98	3019	20.94	3181	24.03	3340	27.25	3496	30.59
8500	2982	2367	10.45	2482	12.00	2583	13.49	2673	14.94	2833	17.83	2983	20.81	3130	23.90	3277	27.14	3423	30.51	3566	34.00
9500	3333	2513	12.47	2619	14.16	2725	15.90	2822	17.60	2988	20.87	3132	24.10	3268	27.38	3401	30.77	3532	34.28	3664	37.92
10500	3684	2679	14.87	2767	16.64	2862	18.50	2959	20.41	3138	24.18	3287	27.79	3420	31.36	3545	34.96	3666	38.64		
11500	4035	2857	17.69	2934	19.55	3015	21.47	3100	23.48	3276	27.66	3437	31.78	3575	35.74	3699	39.64				
12500	4386	3041	20.94	3112	22.91	3183	24.92	3256	27.00	3414	31.39	3576	35.95	3724	40.42						

222 RA

Performance shown is for installation type B - Free inlet, Ducted outlet. Power ratings (BHP) do not include drive losses. Performance ratings do not include the effects of appurtenances in the air stream.

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
1000	351	405	.06																		
1500	526	465	.09	582	.17	679	.25														
2000	702	541	.13	641	.23	731	.34	811	.45	951	.66										
2500	877	623	.19	714	.31	792	.44	866	.57	998	.85	1114	1.11								
3000	1053	709	.27	792	.41	865	.56	931	.71	1053	1.03	1165	1.37	1265	1.68	1358	2.00	1450	2.33		
3500	1228	800	.38	874	.54	943	.71	1005	.87	1116	1.22	1220	1.60	1318	2.00	1408	2.38	1492	2.74	1572	3.11
4000	1404	893	.51	960	.69	1023	.88	1082	1.07	1187	1.46	1283	1.86	1374	2.29	1462	2.74	1544	3.19	1621	3.62
4500	1579	988	.67	1049	.87	1107	1.08	1162	1.29	1263	1.72	1354	2.16	1438	2.61	1520	3.10	1599	3.60	1675	4.11
5000	1754	1085	.87	1140	1.09	1194	1.32	1245	1.55	1341	2.03	1428	2.51	1509	3.00	1585	3.50	1659	4.02	1731	4.58
5500	1930	1182	1.10	1233	1.35	1283	1.60	1331	1.85	1421	2.37	1505	2.89	1583	3.43	1656	3.96	1726	4.51	1793	5.08
6000	2105	1281	1.38	1328	1.65	1374	1.92	1419	2.19	1504	2.75	1584	3.32	1660	3.90	1731	4.48	1798	5.06	1862	5.65
6500	2281	1380	1.71	1424	2.00	1466	2.29	1508	2.58	1589	3.18	1666	3.79	1738	4.41	1807	5.04	1872	5.66	1934	6.30
7000	2456	1479	2.09	1520	2.39	1560	2.70	1600	3.02	1676	3.66	1749	4.31	1818	4.97	1885	5.64	1949	6.32	2009	6.99
7500	2632	1579	2.52	1618	2.85	1655	3.18	1692	3.51	1764	4.20	1834	4.89	1901	5.59	1965	6.30	2026	7.02	2086	7.74
8000	2807	1679	3.01	1716	3.36	1751	3.71	1786	4.07	1854	4.79	1921	5.53	1985	6.27	2046	7.02	2106	7.78	2164	8.55
9000	3158	1880	4.18	1913	4.57	1945	4.96	1976	5.36	2038	6.17	2098	6.99	2157	7.82	2214	8.65	2270	9.50	2324	10.35
10000	3509	2082	5.63	2112	6.06	2141	6.50	2169	6.94	2226	7.83	2281	8.73	2335	9.64	2388	10.56	2439	11.49	2490	12.42
11000	3860	2285	7.40	2312	7.87	2338	8.35	2365	8.83	2416	9.80	2467	10.79	2517	11.78	2566	12.78	2614	13.79	2661	14.81
12000	4211	2488	9.51	2513	10.02	2537	10.54	2561	11.06	2609	12.12	2656	13.19	2702	14.26	2748	15.35	2793	16.44	2837	17.54
13000	4561	2691	11.99	2714	12.55	2737	13.11	2759	13.67	2804	14.81	2847	15.96	2890	17.12	2933	18.29	2975	19.46	3017	20.65
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4000	1404	1765	4.45	1902	5.32																
4500	1579	1816	5.10	1945	6.03	2068	6.98														
5000	1754	1869	5.71	1996	6.81	2114	7.85	2227	8.89												
5500	1930	1925	6.29	2050	7.54	2167	8.75	2276	9.92	2482	12.20										
6000	2105	1986	6.90	2106	8.23	2220	9.59	2329	10.93	2530	13.47	2717	15.96								

245		SINGLE WIDTH																Standard		Hi-Speed			
		Wheel Diameter: 24 Outlet Area: 3.45 sq. ft.																RPM		2852		3341	
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		
1000	290	357	.05																				
2000	580	438	.11	539	.20	630	.30	714	.42														
3000	870	564	.22	639	.34	708	.47	776	.60	901	.90	1016	1.24	1123	1.61								
4000	1159	700	.40	766	.56	823	.72	875	.88	979	1.22	1079	1.59	1172	2.00	1260	2.43						
5000	1449	845	.68	899	.87	951	1.08	999	1.28	1084	1.67	1166	2.08	1249	2.52	1329	2.99	1346	2.90	1428	3.38	4.00	
6000	1739	993	1.07	1039	1.30	1084	1.54	1128	1.78	1207	2.26	1278	2.74	1347	3.22	1416	3.72	1485	4.25	1553	4.80	4.80	
7000	2029	1144	1.60	1184	1.86	1223	2.14	1262	2.41	1336	2.99	1403	3.55	1465	4.10	1524	4.66	1583	5.23	1642	5.81	5.81	
8000	2319	1297	2.31	1332	2.60	1366	2.90	1401	3.21	1468	3.86	1532	4.51	1591	5.16	1646	5.79	1699	6.42	1750	7.06	7.06	
9000	2609	1451	3.20	1482	3.52	1513	3.86	1543	4.20	1604	4.91	1663	5.64	1720	6.38	1774	7.10	1823	7.82	1871	8.53	8.53	
10000	2899	1606	4.30	1634	4.66	1662	5.03	1689	5.41	1744	6.18	1798	6.97	1852	7.79	1903	8.61	1952	9.42	1998	10.22	10.22	
11000	3188	1761	5.64	1786	6.04	1812	6.44	1837	6.85	1887	7.68	1937	8.54	1986	9.43	2034	10.32	2081	11.22	2126	12.12	12.12	
12000	3478	1916	7.24	1940	7.67	1963	8.11	1987	8.55	2033	9.45	2078	10.37	2124	11.32	2169	12.29	2213	13.26	2256	14.25	14.25	
13000	3768	2072	9.13	2094	9.59	2116	10.06	2137	10.54	2180	11.51	2222	12.49	2264	13.50	2306	14.53	2348	15.58	2389	16.64	16.64	
14000	4058	2228	11.32	2249	11.82	2269	12.33	2289	12.84	2329	13.87	2368	14.92	2407	15.99	2446	17.08	2485	18.19	2524	19.32	19.32	
15000	4348	2384	13.84	2404	14.38	2422	14.92	2441	15.46	2479	16.56	2516	17.68	2552	18.82	2589	19.97	2625	21.14	2661	22.33	22.33	
16000	4638	2541	16.72	2559	17.30	2577	17.87	2594	18.45	2629	19.61	2664	20.80	2699	22.00	2733	23.22	2767	24.45	2801	25.70	25.70	
17000	4928	2698	19.98	2714	20.58	2731	21.20	2748	21.81	2781	23.04	2814	24.30	2846	25.56	2879	26.84	2911	28.14	2943	29.46	29.46	
18000	5217	2854	23.64	2870	24.28	2886	24.93	2902	25.57	2933	26.88	2964	28.20	2995	29.53	3026	30.88	3057	32.24	3087	33.62	33.62	
19000	5507	3011	27.73	3026	28.40	3041	29.08	3056	29.77	3086	31.14	3116	32.52	3145	33.92	3174	35.34	3203	36.77	3232	38.21	38.21	
20000	5797	3168	32.27	3182	32.97	3197	33.68	3211	34.41	3239	35.85	3267	37.30	3295	38.77	3323	40.25						
5000	1149	1619	5.11	1752	6.29	1878	7.52			2246	12.87												
6000	1739	1681	5.97	1803	7.22	1920	8.55	2033	9.95														
7000	2029	1760	7.04	1874	8.36	1982	9.75	2086	11.22	2286	14.34	2476	17.66	2654	21.12								
8000	2319	1854	8.37	1958	9.75	2059	11.20	2157	12.73	2343	15.98	2521	19.47	2692	23.16	2855	27.00	3011	30.96				
9000	2609	1963	9.96	2055	11.43	2148	12.95	2239	14.54	2416	17.90	2583	21.52	2743	25.35	2898	29.38	3049	33.58	3195	37.90	37.90	
10000	2899	2084	11.80	2167	13.38	2249	15.00	2333	16.67	2498	20.16	2658	23.89	2810	27.84	2957	32.01	3099	36.36	3237	40.87	40.87	
11000	3188	2210	13.88	2289	15.61	2364	17.36	2439	19.12	2590	22.78	2741	26.64	2886	30.70	3027	34.98	3162	39.46	3294	44.11	44.11	
12000	3478	2339	16.20	2415	18.11	2487	20.01	2557	21.90	2694	25.76	2833	29.78	2971	33.98	3105	38.36	3236	42.95				
13000	3768	2468	18.76	2543	20.87	2613	22.94	2680	24.99	2808	29.11	2935	33.32	3063	37.68	3191	42.20	3316	46.90				
14000	4058	2600	21.60	2672	23.89	2742	26.16	2807	28.39	2930	32.81	3048	37.26	3166	41.81	3285	46.50						
15000	4348	2733	24.76	2803	27.21	2871	29.66	2935	32.09	3055	36.86	3168	41.59	3278	46.37								
16000	4638	2869	28.26	2936	30.86	3001	33.48	3064	36.09	3183	41.24	3292	46.30										
17000	4928	3007	32.13	3071	34.87	3134	37.64	3195	40.43	3311	45.96												

245 RA Performance shown is for installation type B - Free inlet, Ducted outlet. Power ratings (BHP) do not include drive losses. Performance ratings do not include the effects of appurtenances in the air stream.

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	
1000	290	356	.06																			
2000	580	414	.11	521	.21	626	.33	711	.46													
3000	870	519	.20	604	.33	669	.45	741	.60	891	.98	1013	1.36									
4000	1159	633	.33	709	.51	775	.69	828	.85	926	1.19	1042	1.64	1154	2.16	1253	2.67	1342	3.17	1423	3.68	
5000	1449	756	.53	818	.74	878	.97	935	1.20	1025	1.61	1103	2.01	1185	2.48	1278	3.05	1372	3.69	1458	4.33	
6000	1739	883	.81	937	1.06	988	1.31	1038	1.58	1132	2.14	1208	2.64	1275	3.11	1339	3.60	1407	4.16	1483	4.81	
7000	2029	1012	1.19	1060	1.47	1105	1.76	1149	2.06	1235	2.69	1315	3.34	1383	3.94	1442	4.49	1498	5.04	1553	5.62	
8000	2319	1144	1.68	1187	1.99	1227	2.32	1266	2.65	1342	3.34	1417	4.08	1488	4.83	1550	5.53	1606	6.18	1656	6.81	
9000	2609	1276	2.29	1315	2.65	1352	3.01	1388	3.38	1456	4.13	1524	4.92	1590	5.76	1654	6.60	1712	7.41	1765	8.18	
10000	2899	1409	3.06	1445	3.45	1479	3.85	1512	4.25	1575	5.07	1636	5.92	1696	6.81	1757	7.74	1815	8.68	1870	9.60	
11000	3188	1543	3.98	1576	4.41	1608	4.84	1638	5.28	1697	6.18	1753	7.09	1809	8.03	1863	9.01	1918	10.03	1972	11.06	
12000	3478	1678	5.08	1708	5.54	1737	6.02	1766	6.49	1821	7.46	1874	8.44	1925	9.45	1976	10.48	2026	11.55	2076	12.65	
13000	3768	1813	6.37	1841	6.87	1868	7.38	1895	7.90	1947	8.94	1996	9.99	2044	11.06	2092	12.16	2138	13.28	2185	14.43	
14000	4058	1948	7.87	1974	8.41	2000	8.96	2025	9.51	2074	10.62	2121	11.75	2166	12.89	2211	14.06	2254	15.24	2298	16.44	
15000	4348	2084	9.59	2108	10.17	2132	10.75	2156	11.34	2202	12.53	2246	13.73	2289	14.95	2332	16.18	2373	17.43	2414	18.70	
16000	4638	2219	11.55	2242	12.17	2265	12.79	2287	13.42	2331	14.68	2373	15.96	2414	17.25	2454	18.55	2494	19.87	2533	21.20	
17000	4928	2355	13.77	2377	14.43	2398	15.09	2420	15.75	2461	17.09	2501	18.44	2540	19.80	2579	21.18	2616	22.56	2653	23.97	
18000	5217	2491	16.27	2512	16.96	2532	17.66	2552	18.36	2592	19.77	2630	21.19	2668	22.63	2704	24.08	2740	25.54	2776	27.01	
19000	5507	2627	19.05	2647	19.78	2666	20.51	2685	21.25	2723	22.74	2760	24.24	2796	25.75	2831	27.27	2865	28.80	2899	30.34	
20000	5797	2764	22.13	2782	22.90	2801	23.67	2819	24.45	2855	26.01	2890	27.59	2924	29.17	2958	30.77	2991	32.37	3024	34.00	
5000	1449	1612	5.60	1747	6.87																	
6000	1739	1640	6.32	1782	7.86	1910	9.38	2027	10.90													
7000	2029	1671	6.94	1806	8.59	1939	10.39	2060	12.18	2277	15.73	2468	19.27									
8000	2319	1753	8.08	1853	9.50	1964	11.20	2083	13.15	2308	17.26	2506	21.33	2683	25.38	2846	29.43					
9000	2609	1858	9.61	1944	11.03	2030	12.54	2123	14.25	2330	18.44	2534	23.06	2718	27.66	2885	32.22	3040	36.78	3184	41.33	
10000	2899	1967	11.32	2050	12.																	



SIZE 300

300		SINGLE WIDTH																Standard		Hi-Speed	
		Wheel Diameter: 29-1/8 Outlet Area: 5.17 sq. ft.																RPM 2359		2735	
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
1500	290	295	.08																		
2500	484	334	.13			508	.40														
3500	677	398	.21	470	.26	539	.52	603	.71	718	1.12										
4500	870	470	.34	532	.52	588	.70	643	.90	745	1.35	839	1.85	927	2.40	1027	3.40	1100	4.06	1168	4.74
5500	1064	546	.51	603	.73	651	.95	696	1.17	787	1.65	872	2.19	952	2.77	1059	3.89	1126	4.59	1190	5.33
6500	1257	625	.74	675	1.00	721	1.26	762	1.52	839	2.04	916	2.61	989	3.23	1100	4.48	1163	5.21	1223	5.98
7500	1451	706	1.04	751	1.33	793	1.63	832	1.94	901	2.53	968	3.14	1035	3.79	1149	5.20	1207	5.96	1264	6.76
8500	1644	789	1.42	829	1.74	867	2.08	904	2.43	970	3.11	1030	3.78	1089	4.48	1204	6.06	1257	6.85	1310	7.68
9500	1838	873	1.89	909	2.25	943	2.62	978	3.01	1042	3.78	1098	4.53	1152	5.28	1268	7.04	1315	7.89	1363	8.76
10500	2031	958	2.47	990	2.86	1022	3.26	1053	3.68	1114	4.54	1169	5.38	1219	6.21	1336	8.16	1380	9.07	1423	10.00
11500	2224	1043	3.16	1073	3.58	1102	4.02	1131	4.47	1187	5.40	1241	6.34	1290	7.26	1406	9.41	1448	10.40	1489	11.38
12500	2418	1129	3.98	1156	4.43	1183	4.90	1210	5.38	1263	6.37	1314	7.40	1362	8.41	1550	12.28	1590	13.45	1628	14.60
14500	2805	1302	6.03	1325	6.55	1349	7.08	1372	7.63	1418	8.75	1463	9.91	1507	11.09	1697	15.70	1735	17.05	1772	18.40
16500	3191	1475	8.70	1496	9.30	1517	9.90	1537	10.51	1578	11.76	1618	13.04	1658	14.36	1848	19.81	1884	21.31	1918	22.82
18500	3578	1649	12.10	1668	12.76	1686	13.43	1705	14.11	1741	15.49	1777	16.90	1813	18.34	2004	24.73	2036	26.35	2068	28.00
20500	3965	1823	16.29	1840	17.03	1857	17.77	1874	18.51	1907	20.02	1939	21.56	1972	23.13	2164	30.54	2193	32.29	2222	34.06
22500	4352	1998	21.38	2014	22.18	2029	22.99	2044	23.80	2074	25.45	2104	27.12	2134	28.82	2326	37.34	2353	39.21	2380	41.11
24500	4739	2173	27.44	2187	28.31	2201	29.19	2215	30.07	2243	31.85	2271	33.66	2298	35.49	2490	45.21	2515	47.21	2540	49.24
26500	5126	2348	34.57	2361	35.50	2375	36.46	2388	37.41	2413	39.32	2439	41.26	2465	43.22	2656	54.23	2679	56.36	2703	58.52
28500	5513	2524	42.84	2536	43.85	2548	44.86	2560	45.89	2584	47.95	2608	50.02	2632	52.11						
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
μ7000	1354	1324	7.24	1436	8.94																
8000	1547	1353	8.03	1459	9.82	1560	11.71	1657	13.67												
9000	1741	1391	8.93	1491	10.79	1586	12.76	1678	14.83	1853	19.18										
10000	1934	1435	9.99	1530	11.91	1620	13.94	1708	16.09	1875	20.63	2033	25.46								
11000	2128	1484	11.22	1574	13.20	1661	15.29	1744	17.49	1903	22.18	2055	27.21	2200	32.48	2337	37.93				
12000	2321	1539	12.63	1623	14.68	1706	16.82	1786	19.08	1938	23.90	2083	29.07	2223	34.53	2357	40.24	2485	46.12	2607	52.14
13000	2515	1600	14.21	1678	16.34	1755	18.56	1832	20.88	1979	25.80	2118	31.10	2251	36.71	2381	42.60	2506	48.73	2626	55.03
14000	2708	1666	15.96	1738	18.20	1810	20.51	1882	22.90	2023	27.94	2158	33.35	2286	39.09	2410	45.12	2531	51.42	2648	57.94
16000	3095	1806	19.95	1871	22.47	1934	25.01	1996	27.59	2122	32.94	2247	38.58	2368	44.54	2485	50.82	2597	57.39	2706	64.21
18000	3482	1949	24.59	2012	27.47	2071	30.31	2127	33.15	2239	38.92	2351	44.89	2463	51.11	2573	57.61	2679	64.39		
20000	3868	2095	29.90	2155	33.17	2213	36.38	2267	39.55	2375	45.87	2470	52.26	2571	58.84	2672	65.63				
22000	4255	2243	36.02	2301	39.62	2357	43.21	2410	46.77	2509	53.76	2602	60.70	2694	67.72						
24000	4642	2395	43.06	2450	46.95	2503	50.88	2555	54.81	2652	62.57										

Performance shown is for installation type B - Free inlet, Ducted outlet. Power ratings (BHP) do not include drive losses. Performance ratings do not include the effects of appurtenances in the air stream.

300 RA		SINGLE WIDTH																			
		Wheel Diameter: 29-1/8 Outlet Area: 5.17 sq. ft.																			
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
1500	290	294	.09																		
2500	484	316	.12	423	.27																
3500	677	374	.20	445	.35	524	.55	598	.77												
4500	870	432	.30	503	.50	556	.68	612	.90	735	1.46	836	2.03								
5500	1064	495	.42	561	.68	615	.91	659	1.13	750	1.64	853	2.33	944	3.03	1024	3.73	1096	4.42		
6500	1257	562	.59	619	.87	673	1.18	719	1.46	793	1.97	870	2.57	958	3.36	1042	4.19	1117	5.02	1186	5.84
8000	1547	667	.94	715	1.27	761	1.62	806	1.99	883	2.70	945	3.33	1003	3.98	1067	4.75	1137	5.68	1209	6.69
9500	1838	774	1.42	816	1.80	856	2.19	894	2.61	970	3.49	1035	4.34	1090	5.10	1139	5.84	1189	6.63	1241	7.50
11000	2128	883	2.05	921	2.49	956	2.94	990	3.40	1057	4.37	1122	5.40	1180	6.39	1230	7.30	1275	8.17	1317	9.03
13000	2515	1031	3.18	1063	3.69	1095	4.21	1125	4.74	1182	5.84	1238	6.99	1294	8.20	1347	9.41	1395	10.57	1438	11.66
15000	2901	1180	4.69	1209	5.28	1236	5.87	1263	6.48	1315	7.70	1364	8.97	1413	10.29	1462	11.67	1509	13.08	1555	14.47
17000	3288	1330	6.64	1355	7.30	1380	7.97	1405	8.65	1451	10.02	1496	11.42	1540	12.86	1583	14.34	1626	15.87	1669	17.48
19000	3675	1480	9.09	1503	9.83	1526	10.57	1548	11.32	1591	12.84	1632	14.38	1673	15.95	1712	17.55	1750	19.19	1789	20.86
21000	4062	1631	12.09	1652	12.90	1673	13.72	1694	14.55	1733	16.22	1771	17.91	1808	19.61	1845	21.35	1880	23.11	1915	24.91
23000	4449	1783	15.71	1802	16.60	1821	17.49	1840	18.39	1877	20.21	1912	22.04	1947	23.90	1981	25.77	2014	27.67	2047	29.60
25000	4836	1934	20.00	1952	20.96	1970	21.93	1988	22.91	2022	24.87	2055	26.86	2088	28.86	2119	30.88	2150	32.91	2181	34.98
27000	5222	2086	25.02	2103	26.06	2119	27.11	2136	28.16	2168	30.27	2199	32.40	2230	34.55	2260	36.72	2289	38.90	2318	41.10
29000	5609	2238	30.83	2254	31.95	2269	33.07	2285	34.19	2315	36.46	2344	38.74	2373	41.04	2401	43.35	2429	45.68	2456	48.03
31000	5996	2391	37.49	2405	38.69	2420	39.88	2434	41.08	2462	43.49	2490	45.92	2517	48.37	2544	50.83	2571	53.31	2597	55.80
33000	6383	2543	45.06	2557	46.33	2570	47.60	2584	48.87	2611	51.44	2637	54.02	2663	56.61	2688	59.22	2713	61.85		
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7000	1354	1320	7.94																		
8000	1547	1339	8.74																		

365		SINGLE WIDTH																Standard		Hi-Speed	
		Wheel Diameter: 35-9/16 Outlet Area: 7.66 sq. ft.																RPM 1885		RPM 2197	
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
3000	392	251	.10	337	.30			483	1.0	582	1.6										
5000	653	309	.30	373	.50	430	.70	483	1.0	582	1.6										
7000	914	386	.50	435	.80	481	1.1	526	1.4	607	2.0	683	2.8	756	3.6	823	4.5				
9000	1175	469	.90	510	1.30	548	1.6	584	2.0	655	2.7	721	3.5	782	4.3	842	5.3	900	6.3	957	7.3
11000	1436	555	1.5	591	1.90	624	2.3	655	2.7	715	3.6	773	4.5	829	5.4	882	6.4	933	7.4	982	8.5
13000	1697	644	2.3	675	2.70	704	3.2	732	3.7	785	4.7	835	5.8	884	6.8	933	7.9	981	9.0	1026	10.1
15000	1958	733	3.3	761	3.80	787	4.4	812	4.9	860	6.1	906	7.3	949	8.5	992	9.7	1035	10.9	1077	12.2
17000	2219	824	4.6	849	5.20	873	5.8	896	6.5	939	7.8	981	9.1	1021	10.4	1060	11.8	1098	13.1	1136	14.5
19000	2480	915	6.3	938	7.00	959	7.6	981	8.3	1021	9.8	1059	11.2	1097	12.7	1132	14.2	1168	15.7	1202	17.2
21000	2742	1007	8.3	1027	9.10	1047	9.8	1067	10.6	1104	12.1	1140	13.7	1175	15.3	1208	17.0	1241	18.6	1273	20.3
23000	3003	1099	10.8	1118	11.6	1136	12.4	1154	13.2	1189	14.9	1223	16.6	1255	18.4	1287	20.1	1318	21.9	1348	23.7
25000	3264	1191	13.7	1209	14.6	1226	15.4	1243	16.3	1275	18.1	1307	20.0	1337	21.8	1367	23.8	1396	25.7	1425	27.6
27000	3525	1284	17.1	1300	18.0	1316	19.0	1332	19.9	1363	21.9	1392	23.8	1421	25.8	1449	27.9	1477	29.9	1504	32.0
29000	3786	1376	21.0	1392	22.0	1407	23.0	1422	24.0	1450	26.1	1478	28.2	1506	30.4	1532	32.5	1559	34.7	1584	36.9
31000	4047	1469	25.5	1484	26.6	1498	27.7	1512	28.8	1539	31.0	1566	33.2	1592	35.4	1617	37.7	1642	40.0	1666	42.4
33000	4308	1562	30.6	1576	31.8	1589	32.9	1602	34.1	1628	36.4	1653	38.8	1678	41.1	1702	43.6	1726	46.0	1749	48.5
35000	4569	1655	36.4	1668	37.6	1681	38.8	1693	40.0	1718	42.5	1742	45.0	1765	47.5	1788	50.1	1811	52.6	1833	55.2
37000	4830	1748	42.8	1761	44.1	1773	45.4	1784	46.7	1808	49.3	1831	51.9	1853	54.6	1875	57.2	1897	59.9	1918	62.7
39000	5091	1842	50.0	1853	51.4	1865	52.7	1876	54.1	1898	56.8	1920	59.6	1942	62.3	1963	65.1	1983	68.0	2004	70.8
41000	5352	1935	58.0	1946	59.4	1957	60.8	1968	62.2	1989	65.1	2010	68.0	2030	70.9	2051	73.8	2071	76.8	2090	79.8
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11000	1436	1079	10.8	1172	13.4	1259	16.2			1504	27.4										
13000	1697	1112	12.5	1195	15.1	1276	17.9	1356	21.0	1504	27.4										
15000	1958	1159	14.7	1235	17.4	1308	20.2	1379	23.3	1520	29.9	1653	37.2								
17000	2219	1211	17.3	1284	20.2	1353	23.2	1419	26.2	1546	32.9	1671	40.3	1792	48.3	1907	56.6				
19000	2480	1270	20.3	1337	23.4	1403	26.6	1466	29.8	1586	36.7	1700	44.0	1812	52.0	1923	60.6	2030	69.7	2131	79.1
21000	2742	1335	23.6	1397	27.0	1458	30.4	1518	33.9	1633	41.1	1742	48.7	1846	56.7	1947	65.2	2048	74.4	2148	84.1
23000	3003	1406	27.4	1463	31.0	1519	34.7	1574	38.5	1684	46.1	1789	54.0	1888	62.3	1984	70.9	2078	80.0	2170	89.7
25000	3264	1480	31.5	1533	35.5	1585	39.5	1637	43.5	1739	51.7	1840	60.0	1936	68.6	2028	77.5	2117	86.8		
27000	3525	1556	36.2	1606	40.4	1656	44.7	1704	49.0	1800	57.7	1894	66.6	1987	75.7	2077	84.9	2163	94.4		
29000	3786	1634	41.4	1682	45.9	1729	50.5	1775	55.1	1865	64.3	1954	73.7	2042	83.3	2128	93.0				
31000	4047	1714	47.1	1760	51.9	1804	56.8	1848	61.7	1934	71.5	2017	81.5	2100	91.5	2182	101.7				
33000	4308	1795	53.5	1839	58.6	1882	63.7	1924	68.9	2005	79.3	2085	89.8	2163	100.4						
35000	4569	1877	60.5	1919	65.8	1960	71.2	2001	76.7	2079	87.7	2155	98.7								

365 RA

Performance shown is for installation type B - Free inlet, Ducted outlet. Power ratings (BHP) do not include drive losses. Performance ratings do not include the effects of appurtenances in the air stream.

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
3000	392	250	.20			430	.08	492	1.1												
5000	653	300	.30	368	.50	430	.08	492	1.1												
7000	914	365	.50	422	.80	473	1.1	519	1.4	608	2.2	695	3.1	784	4.7	854	5.9	918	7.0		
9000	1175	435	.80	486	1.1	529	1.5	570	2.0	645	2.8	714	3.7	784	4.7	854	5.9	918	7.0		
11000	1436	509	1.2	554	1.6	594	2.1	630	2.6	698	3.6	761	4.6	818	5.7	874	6.8	931	8.0	989	9.4
13000	1697	587	1.7	625	2.2	662	2.8	696	3.4	757	4.5	814	5.7	868	6.9	919	8.2	968	9.4	1015	10.7
15000	1958	666	2.4	699	3.0	732	3.7	764	4.3	821	5.6	874	6.9	923	8.3	972	9.7	1018	11.1	1061	12.5
17000	2219	747	3.3	776	4.0	805	4.7	834	5.4	889	6.9	938	8.4	984	9.9	1028	11.4	1071	13.0	1113	14.6
19000	2480	828	4.5	854	5.2	880	6.0	906	6.8	957	8.4	1005	10.0	1048	11.7	1090	13.4	1130	15.1	1169	16.8
21000	2742	910	5.9	934	6.7	957	7.5	980	8.4	1022	10.7	1073	11.9	1115	13.8	1155	15.6	1192	17.4	1229	19.3
23000	3003	993	7.5	1014	8.4	1035	9.4	1057	10.3	1100	12.2	1142	14.1	1183	16.1	1221	18.1	1258	20.1	1292	22.1
25000	3264	1076	9.5	1095	10.5	1115	11.5	1134	12.5	1174	14.5	1213	16.6	1252	18.7	1289	20.9	1324	23.0	1358	25.2
27000	3525	1159	11.8	1177	12.9	1195	13.9	1213	15.0	1249	17.2	1286	19.4	1322	21.7	1358	24.0	1392	26.3	1425	28.6
29000	3786	1242	14.5	1259	15.6	1276	16.7	1293	17.9	1326	20.2	1360	22.6	1394	25.0	1428	27.4	1461	29.9	1493	32.4
31000	4047	1325	17.5	1341	18.7	1357	19.9	1373	21.1	1404	23.6	1436	26.1	1468	28.7	1500	31.3	1531	33.9	1562	36.5
33000	4308	1409	20.9	1424	22.2	1439	23.5	1453	24.8	1483	27.4	1513	30.1	1543	32.7	1573	35.5	1602	38.3	1632	41.0
35000	4569	1492	24.8	1506	26.2	1520	27.5	1534	28.9	1562	31.6	1590	34.4	1618	37.3	1647	40.2	1675	43.1	1703	46.0
37000	4830	1576	29.2	1589	30.6	1603	32.0	1616	33.4	1642	36.3	1669	39.3	1695	42.3	1722	45.3	1749	48.3	1775	51.4
39000	5091	1660	34.0	1672	35.5	1685	37.0	1698	38.5	1723	41.5	1748	44.6	1773	47.8	1798	50.9	1823	54.1	1849	57.3
41000	5352	1743	39.3	1755	40.9	1768	42.5	1780	44.1	1804	47.3	1827	50.5	1851	53.8	1875	57.1	1899	60.4	1923	63.8
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11000	1436	1099	12.2			1300	20.2			1550	33.6										
13000	1697	1112	13.6	1209	16.8	1312	22.1	1396	25.9	1550	33.6										
15000	1958	1145	15.5	1227	18.6	1312	22.1	1396	25.9	1550	33.6	1702	45.2								
17000	2219	1193	17.8	1267	21.1	1339	24.6	1413	28.3	1562	36.5	1702	45.2	1842	58.3	1960	68.1				
19000	2480	1244	20.4	1316	24.0	1384	27.6	1449	31.4	1579	39.5	1713	48								



SIZE 402

402 SINGLE WIDTH
 Wheel Diameter: 39-3/8 Outlet Area: 9.31 sq. ft. **RPM** **Standard 1703** **Hi-Speed 1994**

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
5000	537	246	0.3	309	0.5	366	0.7	418	1.0												
7000	752	295	0.4	346	0.7	393	1.0	436	1.3	517	2.1										
9000	967	349	0.7	394	1.1	433	1.5	471	1.8	541	2.6	605	3.5	668	4.4	726	5.5				
11000	1182	407	1.1	446	1.5	481	2.0	514	2.4	576	3.3	635	4.3	689	5.3	741	6.3	792	7.5	842	8.8
13000	1396	468	1.6	501	2.1	534	2.6	564	3.2	618	4.2	671	5.3	722	6.4	769	7.5	815	8.7	859	10.0
15000	1611	530	2.3	559	2.9	588	3.4	616	4.1	667	5.3	714	6.5	760	7.7	805	9.0	847	10.2	888	11.5
17000	1826	594	3.2	619	3.8	644	4.4	670	5.1	718	6.5	762	7.9	803	9.3	844	10.7	884	12.1	923	13.5
19000	2041	658	4.4	680	5.0	703	5.7	726	6.4	771	7.9	813	9.5	852	11.1	889	12.6	926	14.2	962	15.7
21000	2256	723	5.7	743	6.4	763	7.2	784	7.9	825	9.6	865	11.3	902	13.0	937	14.7	971	16.5	1005	18.2
23000	2470	788	7.4	806	8.1	825	8.9	843	9.7	881	11.5	919	13.3	955	15.2	989	17.1	1021	19.0	1052	20.9
25000	2685	853	9.3	870	10.1	887	11.0	904	11.8	939	13.7	974	15.6	1008	17.6	1041	19.7	1072	21.8	1101	23.8
27000	2900	919	11.6	935	12.5	950	13.4	966	14.3	998	16.2	1030	18.3	1062	20.4	1094	22.6	1124	24.8	1153	27.0
31000	3330	1051	17.3	1065	18.3	1078	19.3	1092	20.3	1119	22.4	1174	24.6	1175	27.0	1203	29.4	1231	31.9	1259	34.4
35000	3759	1183	24.5	1195	25.7	1207	26.8	1219	27.9	1244	30.3	1268	32.7	1292	35.2	1317	37.8	1342	40.5	1367	43.3
39000	4189	1316	33.6	1327	34.9	1337	36.1	1348	37.4	1370	40.0	1392	42.6	1413	45.3	1436	48.1	1458	51.0	1480	54.0
43000	4619	1448	44.8	1458	46.2	1468	47.5	1478	48.9	1498	51.7	1517	54.6	1537	57.5	1557	60.5	1577	63.6	1597	66.7
47000	5048	1581	58.2	1591	59.7	1600	61.2	1609	62.7	1627	65.8	1645	68.8	1663	72.0	1681	75.2	1699	78.5	1717	81.8
51000	5478	1715	74.1	1723	75.7	1731	77.3	1740	79.0	1756	82.2	1773	85.6	1789	88.9	1806	92.4	1823	95.9	1839	99.4
55000	5908	1848	92.7	1855	94.4	1863	96.2	1871	97.9	1886	101.4	1902	105.0	1917	108.6	1932	112.2	1948	115.9	1963	119.7
59000	6337	1981	114.1	1988	116.0																
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18000	1933	1014	17.5	1082	20.7	1147	24.1	1210	27.6	1335	35.4	1452	43.8								
20000	2148	1051	20.2	1116	23.5	1178	26.9	1237	30.6	1352	38.4	1465	47.0	1572	56.2	1671	65.7				
22000	2363	1091	23.1	1153	26.7	1213	30.3	1269	34.0	1378	42.0	1482	50.7	1585	60.1	1684	70.0	1778	80.3		
24000	2578	1135	26.3	1193	30.2	1250	34.1	1305	38.0	1409	46.2	1508	55.0	1603	64.4	1698	74.5	1790	85.2	1879	96.3
26000	2793	1183	29.7	1237	34.0	1290	38.2	1343	42.4	1444	51.0	1539	60.0	1630	69.5	1718	79.6	1806	90.4	1892	101.7
28000	3008	1233	33.4	1284	38.0	1334	42.6	1384	47.2	1481	56.3	1573	65.6	1661	75.3	1745	85.5	1828	96.3	1909	107.7
30000	3222	1284	37.4	1333	42.4	1381	47.3	1428	52.2	1520	62.0	1610	71.8	1695	81.8	1777	92.2	1856	103.2	1933	114.6
32000	3437	1337	41.7	1384	47.0	1430	52.3	1475	57.6	1562	68.1	1648	78.5	1731	88.9	1811	99.6	1887	110.8	1962	122.3
34000	3652	1389	46.5	1436	52.1	1481	57.7	1524	63.3	1607	74.6	1689	85.6	1769	96.6	1847	107.8	1922	119.2	1994	130.9
36000	3867	1443	51.6	1489	57.5	1533	63.4	1574	69.4	1654	81.3	1732	93.1	1809	104.8	1884	116.5	1958	128.3		
38000	4082	1498	57.1	1542	63.3	1585	69.6	1626	75.8	1703	88.4	1778	101.0	1851	113.4	1924	125.7				
40000	4296	1553	63.2	1596	69.6	1638	76.2	1678	82.8	1754	96.0	1826	109.2	1896	122.4	1966	135.4				
42000	4511	1609	69.8	1651	76.4	1691	83.2	1731	90.1	1805	104.0	1875	117.9	1943	131.8						

402 RA Performance shown is for installation type B - Free inlet, Ducted outlet. Power ratings (BHP) do not include drive losses. Performance ratings do not include the effects of appurtenances in the air stream.

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
5000	537	218	0.3																		
7000	752	246	0.4	307	0.8	362	1.2														
9000	967	281	0.6	333	1.0	381	1.5	425	2.0	506	3.3										
11000	1182	319	0.8	366	1.3	408	1.9	447	2.4	521	3.7	588	5.3								
13000	1396	360	1.2	402	1.7	440	2.3	475	3.0	542	4.3	604	5.9	662	7.6	718	9.5				
15000	1611	403	1.6	440	2.2	475	2.9	508	3.6	568	5.0	625	6.6	679	8.4	731	10.3	781	12.4	828	14.6
17000	1826	446	2.1	481	2.8	513	3.6	543	4.4	599	5.9	652	7.6	702	9.4	750	11.4	797	13.5	842	15.7
19000	2041	490	2.7	522	3.5	552	4.4	580	5.2	633	6.9	682	8.7	729	10.6	774	12.6	817	14.8	860	17.0
21000	2256	535	3.5	565	4.4	592	5.3	619	6.2	668	8.1	714	10.0	758	12.0	801	14.1	842	16.3	882	18.6
23000	2470	581	4.4	608	5.3	634	6.3	658	7.4	705	9.4	749	11.5	791	13.6	831	15.8	870	18.1	907	20.4
25000	2685	626	5.4	652	6.5	676	7.5	699	8.6	743	10.9	785	13.1	825	15.4	863	17.7	900	20.1	936	22.5
27000	2900	672	6.6	696	7.8	719	8.9	741	10.1	783	12.5	822	14.9	860	17.3	897	19.8	932	22.3	966	24.8
31000	3330	765	9.6	786	10.9	807	12.2	827	13.6	865	16.3	901	19.0	935	21.8	969	24.6	1001	27.4	1033	30.2
35000	3759	858	13.4	878	14.9	896	16.4	914	17.9	949	20.9	982	24.0	1014	27.1	1044	30.2	1074	33.3	1104	36.5
39000	4189	952	18.2	970	19.8	987	21.5	1003	23.1	1035	26.4	1066	29.8	1095	33.3	1124	36.8	1152	40.2	1179	43.7
43000	4619	1046	24.0	1062	25.8	1078	27.6	1093	29.4	1123	33.1	1151	36.8	1179	40.5	1205	44.3	1231	48.1	1257	52.0
47000	5048	1141	31.0	1155	32.9	1170	34.9	1184	36.8	1211	40.8	1238	44.8	1264	48.9	1289	53.0	1313	57.2	1337	61.3
51000	5478	1235	39.2	1249	41.3	1262	43.4	1275	45.5	1301	49.8	1326	54.2	1350	58.6	1374	63.0	1397	67.5	1420	72.0
55000	5908	1330	48.8	1343	51.1	1355	53.3	1368	55.6	1392	60.2	1415	64.9	1438	69.6	1460	74.3	1482	79.1	1504	83.9
59000	6337	1425	59.9	1437	62.3	1449	64.7	1460	67.2	1483	72.1	1505	77.1	1526	82.1	1548	87.2	1568	92.3	1589	97.4
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18000	1933	934	21.2	1013	26.6																
20000	2148	950	22.7	1025	28.1	1097	34.0														
22000	2363	969	24.5	1041	29.9	1110	35.8	1176	42.1												
24000	2578	992	26.6	1061	32.1	1127	38.0	1190	44.4	1312	58.1										
26000	2793	1018	28.9	1083	34.5	1146	40.5	1207	46.9	1325	60.8	1435	76.0								
28000	3008	1047	31.6	1109	37.3	1169	43.4	1228	49.9	1340	63.8	1448	79.1	1550	95.6						
30000	322																				

445		SINGLE WIDTH																Standard		Hi-Speed	
		Wheel Diameter: 43-7/16 Outlet Area: 11.39 sq. ft.																RPM 1493		1709	
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
7000	615	238	0.4	292	0.7	339	1.0	383	1.4												
10000	878	297	0.7	339	1.1	377	1.5	414	2.0	480	2.9	542	3.9	601	5.1						
13000	1141	360	1.2	396	1.8	429	2.3	459	2.8	517	3.9	570	5.0	620	6.2	669	7.5	716	8.9	761	10.4
16000	1405	428	2.0	458	2.6	487	3.3	514	3.9	564	5.3	611	6.6	657	7.9	700	9.2	740	10.7	780	12.2
19000	1668	498	3.1	523	3.8	548	4.5	573	5.3	618	6.9	660	8.4	700	10.0	740	11.5	778	13.1	814	14.7
22000	1932	569	4.6	590	5.4	612	6.2	634	7.0	677	8.8	715	10.6	751	12.4	786	14.2	821	16.0	855	17.8
25000	2195	641	6.6	660	7.4	679	8.3	698	9.2	737	11.1	773	13.2	807	15.2	839	17.3	870	19.4	901	21.4
28000	2458	714	9.0	731	9.9	748	10.8	764	11.8	799	13.9	833	16.2	866	18.5	896	20.8	925	23.1	953	25.4
31000	2722	787	12.0	802	13.0	817	14.0	833	15.1	863	17.3	894	19.7	925	22.2	955	24.7	982	27.3	1009	29.9
34000	2985	861	15.6	874	16.6	888	17.8	902	18.9	930	21.3	958	23.8	986	26.5	1014	29.2	1041	32.0	1067	34.8
37000	3248	934	19.8	947	21.0	960	22.2	972	23.4	997	26.0	1023	28.7	1049	31.5	1075	34.4	1101	37.4	1126	40.4
40000	3512	1008	24.8	1020	26.1	1031	27.4	1043	28.7	1066	31.4	1090	34.3	1114	37.2	1138	40.3	1162	43.4	1186	46.6
43000	3775	1082	30.6	1093	32.0	1104	33.4	1115	34.8	1136	37.7	1158	40.7	1180	43.7	1202	46.9	1225	50.2	1247	53.6
46000	4039	1156	37.3	1166	38.8	1176	40.2	1187	41.7	1207	44.8	1227	47.9	1248	51.1	1268	54.5	1289	57.9	1310	61.5
49000	4302	1230	44.9	1240	46.4	1249	48.0	1259	49.6	1278	52.8	1297	56.1	1316	59.5	1335	63.0	1355	66.5	1374	70.2
52000	4565	1304	53.4	1313	55.1	1322	56.7	1331	58.4	1349	61.8	1367	65.3	1385	68.8	1403	72.4	1421	76.2	1440	80.0
55000	4829	1378	63.0	1387	64.8	1396	66.5	1404	68.3	1421	71.8	1438	75.5	1455	79.2	1472	83.0	1489	86.8	1506	90.8
58000	5092	1453	73.7	1461	75.5	1469	77.4	1477	79.2	1493	83.0	1509	86.8	1525	90.7	1541	94.6	1558	98.6	1574	102.7
61000	5356	1527	85.5	1535	87.4	1543	89.4	1550	91.3	1566	95.3	1581	99.3	1596	103.3	1611	107.4	1627	111.6	1642	115.8
64000	5619	1601	98.6	1609	100.6	1616	102.6	1624	104.7	1638	108.8	1653	112.9	1667	117.1	1682	121.4	1696	125.8		
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
24000	2107	948	24.1	1007	28.1	1063	32.2	1117	36.6	1223	46.2	1326	56.7	1423	67.8						
27000	2371	992	28.4	1048	32.8	1102	37.3	1153	41.8	1251	51.5	1345	62.1	1438	73.5	1527	85.7	1613	98.3		
30000	2634	1043	33.3	1094	38.2	1144	43.0	1194	47.9	1287	58.0	1375	68.8	1460	80.3	1544	92.6	1627	105.6	1707	119.3
33000	2897	1097	38.6	1144	44.0	1191	49.4	1237	54.8	1327	65.5	1412	76.7	1492	88.4	1570	100.8	1647	113.9		
36000	3161	1154	44.4	1199	50.4	1242	56.3	1285	62.2	1370	73.9	1452	85.7	1529	97.8	1604	110.4	1676	123.7		
39000	3424	1212	50.9	1256	57.3	1297	63.8	1337	70.2	1417	83.0	1494	95.6	1570	108.4	1642	121.4				
42000	3687	1271	58.0	1314	64.9	1354	71.9	1392	78.8	1467	92.7	1540	106.4	1612	120.0	1682	133.7				
45000	3951	1332	65.9	1373	73.3	1412	80.7	1449	88.1	1521	103.1	1590	117.9	1658	132.5						
48000	4214	1393	74.7	1433	82.4	1471	90.3	1507	98.2	1576	114.1	1642	130.0	1707	145.7						
51000	4478	1456	84.4	1493	92.5	1530	100.8	1566	109.1	1634	126.0	1697	142.9								
54000	4741	1520	95.2	1556	103.5	1591	112.2	1626	121.0	1692	138.7										
57000	5004	1585	107.0	1619	115.7	1653	124.6	1686	133.8												
60000	5268	1651	120.0	1683	128.9																

445 RA Performance shown is for installation type B - Free inlet, Ducted outlet. Power ratings (BHP) do not include drive losses. Performance ratings do not include the effects of appurtenances in the air stream.

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
7000	615	206	0.4	268	0.8			380	2.3												
10000	878	241	0.6	292	1.1	337	1.7	380	2.3												
13000	1141	283	1.0	326	1.6	365	2.2	401	2.9	469	4.5	531	6.3								
16000	1405	329	1.5	367	2.2	405	2.9	433	3.6	492	5.3	548	7.2	601	9.3	651	11.6				
19000	1668	377	2.1	410	2.9	441	3.8	470	4.6	523	6.4	574	8.4	622	10.6	668	12.9	712	15.4	754	18.2
22000	1932	426	2.9	456	3.9	483	4.9	510	5.8	559	7.8	605	10.0	649	12.2	691	14.6	732	17.2	771	19.9
25000	2195	475	4.0	503	5.1	528	6.2	552	7.3	598	9.5	640	11.8	681	14.2	720	16.7	757	19.4	794	22.2
28000	2458	526	5.3	551	6.5	574	7.7	597	8.9	639	11.4	679	14.0	717	16.5	753	19.2	788	22.0	822	24.9
31000	2722	577	6.9	600	8.2	622	9.5	643	10.9	682	13.7	719	16.4	755	19.2	789	22.1	822	25.0	854	28.0
34000	2985	628	8.8	650	10.2	670	11.7	689	13.2	726	16.2	761	19.2	795	22.2	827	25.3	859	28.4	889	31.6
37000	3248	680	11.1	700	12.6	719	14.2	737	15.8	772	19.0	805	22.3	837	25.6	868	28.9	897	32.3	926	35.6
40000	3512	732	13.7	751	15.4	768	17.0	786	18.8	819	22.2	850	25.8	880	29.4	909	32.9	938	36.5	965	40.1
43000	3775	784	16.7	802	18.5	818	20.3	835	22.2	866	25.9	896	29.7	924	33.5	952	37.3	979	41.2	1006	45.0
46000	4039	837	20.2	853	22.1	869	24.0	884	26.0	914	29.9	942	34.0	970	38.0	996	42.1	1022	46.2	1047	50.3
49000	4302	889	24.1	905	26.2	920	28.2	934	30.3	962	34.5	989	38.7	1016	43.0	1041	47.4	1066	51.8	1090	56.1
52000	4565	942	28.6	956	30.7	971	32.9	984	35.1	1011	39.5	1037	44.0	1062	48.5	1087	53.1	1111	57.8	1134	62.4
55000	4829	994	33.5	1008	35.8	1022	38.1	1035	40.4	1061	45.1	1086	49.8	1110	54.6	1133	59.4	1156	64.3	1178	69.2
58000	5092	1047	39.1	1060	41.5	1073	43.9	1086	46.3	1111	51.2	1134	56.2	1158	61.2	1180	66.2	1202	71.4	1224	76.5
61000	5356	1100	45.2	1113	47.7	1125	50.2	1137	52.8	1161	57.9	1184	63.1	1206	68.4	1228	73.7	1249	79.0	1270	84.4
64000	5619	1153	51.9	1165	54.6	1177	57.2	1188	59.9	1211	65.3	1233	70.7	1255	76.2	1275	81.7	1296	87.3	1316	92.9
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
24000	2107	858	27.4	927	33.9	993	41.0														
27000	2371	880	30.0	945	36.6	1007	43.8	1067	51.5												
30000	2634	906	33.2	967	40.0	1026	47.2	1084</													



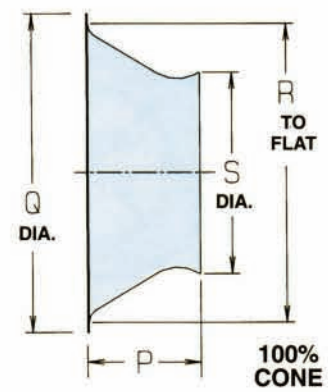
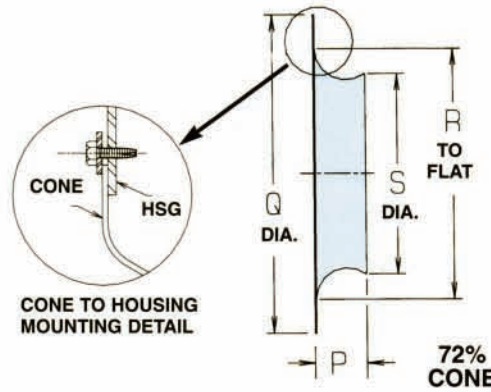
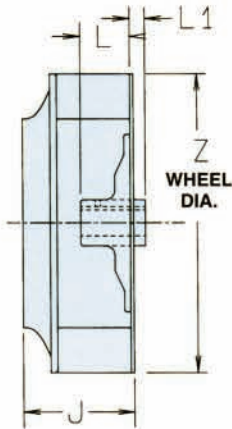
SIZE 490

490		SINGLE WIDTH																Standard		Hi-Speed	
		Wheel Diameter: 48 Outlet Area: 13.8 sq. ft.																RPM 1312		1558	
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
8000	580	209	0.4	259	0.8	303	1.2	345	1.6												
9500	688	229	0.6	274	1.0	314	1.4	351	1.8	421	2.9										
11000	797	251	0.7	291	1.2	329	1.6	363	2.1	427	3.2	487	4.4								
14000	1014	296	1.2	332	1.7	363	2.3	393	2.9	449	4.1	501	5.3	550	6.8	598	8.4	642	10.0	693	13.4
17000	1232	344	1.8	376	2.4	404	3.1	430	3.9	480	5.2	527	6.6	571	8.1	612	9.7	653	11.5		
20000	1449	395	2.6	422	3.4	448	4.2	472	5.0	516	6.7	558	8.3	599	9.9	638	11.6	674	13.4	710	15.3
23000	1667	447	3.8	470	4.6	493	5.4	516	6.4	557	8.3	595	10.2	632	12.1	668	13.9	702	15.8	735	17.8
26000	1884	500	5.2	520	6.1	540	7.0	561	8.0	600	10.2	635	12.3	669	14.5	701	16.6	734	18.7	765	20.8
29000	2101	553	7.0	571	7.9	589	9.0	608	10.0	644	12.4	678	14.7	709	17.1	739	19.5	769	21.9	798	24.3
32000	2319	607	9.1	623	10.2	640	11.3	656	12.4	689	14.9	722	17.5	752	20.2	780	22.8	807	25.5	834	28.1
35000	2536	661	11.7	676	12.9	691	14.1	706	15.3	736	17.9	766	20.7	795	23.5	823	26.4	849	29.3	874	32.2
40000	2899	752	17.1	765	18.4	778	19.7	790	21.1	817	23.9	843	27.0	870	30.1	896	33.4	921	36.7	944	40.0
45000	3261	843	24.0	854	25.4	866	26.9	877	28.4	900	31.5	923	34.8	947	38.2	971	41.7	994	45.4	1017	49.0
50000	3623	934	32.5	944	34.1	955	35.8	965	37.4	986	40.8	1006	44.3	1027	47.9	1049	51.7	1070	55.6	1091	59.6
55000	3986	1025	42.9	1035	44.7	1044	46.5	1054	48.2	1072	51.9	1091	55.7	1110	59.6	1129	63.6	1149	67.7	1168	72.0
60000	4348	1117	55.4	1126	57.3	1134	59.2	1143	61.2	1160	65.1	1177	69.1	1194	73.3	1212	77.5	1229	81.9	1247	86.4
65000	4710	1209	70.1	1217	72.1	1225	74.2	1232	76.3	1248	80.5	1264	84.8	1280	89.3	1296	93.8	1312	98.4	1328	103.1
70000	5072	1300	87.2	1308	89.4	1315	91.6	1323	93.8	1337	98.4	1352	103.0	1367	107.7	1381	112.5	1396	117.3	1411	122.3
75000	5435	1392	106.9	1399	109.2	1406	111.6	1413	114.0	1427	118.8	1440	123.7	1454	128.7	1468	133.8	1482	138.9	1496	144.1
80000	5797	1484	129.4	1491	131.8	1497	134.4	1504	137.0	1517	142.1	1529	147.3	1542	152.5	1555	157.9				
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
27000	1957	834	26.4	890	31.1	943	36.1	995	41.4	1096	53.0	1192	65.5								
30000	2174	865	30.4	918	35.3	969	40.5	1017	45.9	1111	57.5	1203	70.4	1290	84.1	1372	98.2				
33000	2391	899	34.8	949	40.2	998	45.6	1044	51.2	1133	63.0	1218	75.9	1301	89.9	1383	104.8	1460	120.1	1532	135.8
36000	2609	936	39.6	983	45.5	1029	51.3	1074	57.2	1159	69.4	1240	82.5	1318	96.5	1394	111.5	1470	127.5	1543	144.0
39000	2826	975	44.8	1019	51.2	1063	57.6	1106	63.9	1188	76.7	1266	90.1	1340	104.3	1412	119.3	1483	135.3	1554	152.2
42000	3043	1017	50.4	1059	57.3	1099	64.3	1140	71.1	1219	84.7	1294	98.6	1366	113.1	1435	128.4	1502	144.4		
45000	3261	1060	56.5	1100	63.9	1139	71.4	1177	78.8	1252	93.4	1325	108.0	1395	123.0	1461	138.6	1526	154.8		
48000	3478	1103	63.1	1142	71.0	1179	79.0	1216	86.9	1287	102.6	1357	118.2	1425	133.8	1490	149.9	1552	166.5		
51000	3696	1147	70.2	1185	78.6	1222	87.1	1257	95.5	1324	112.4	1391	129.0	1456	145.5	1520	162.2				
54000	3913	1191	78.0	1229	86.9	1265	95.8	1299	104.7	1364	122.6	1427	140.4	1490	157.9	1551	175.4				
57000	4130	1237	86.5	1273	95.8	1308	105.1	1341	114.5	1405	133.4	1456	152.3	1525	170.9						
60000	4348	1283	95.7	1318	105.4	1352	115.2	1385	125.0	1446	144.9	1505	164.8								
63000	4565	1329	105.8	1363	115.7	1396	125.9	1429	136.2	1489	157.0	1546	177.9								

490 RA

Performance shown is for installation type B - Free inlet, Ducted outlet. Power ratings (BHP) do not include drive losses. Performance ratings do not include the effects of appurtenances in the air stream.

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
8000	580	182	0.4	241	1.0																
11000	797	207	0.7	256	1.2	299	1.9	339	2.7												
14000	1014	237	1.0	279	1.6	317	2.3	352	3.1	417	5.1										
17000	1232	269	1.4	306	2.1	340	2.9	371	3.8	430	5.7	485	8.0	535	10.5						
20000	1449	303	1.9	337	2.8	367	3.7	396	4.6	449	6.6	499	9.0	546	11.5	591	14.4	633	17.4		
23000	1667	339	2.5	369	3.5	397	4.6	423	5.6	472	7.8	518	10.2	561	12.8	603	15.7	644	18.8	682	22.1
26000	1884	375	3.3	403	4.5	428	5.6	453	6.8	498	9.2	541	11.7	581	14.4	620	17.3	658	20.5	694	23.8
29000	2101	412	4.3	437	5.6	461	6.8	484	8.1	526	10.7	566	13.4	604	16.3	640	19.3	675	22.5	710	25.9
32000	2319	449	5.5	473	6.9	495	8.3	516	9.7	556	12.6	594	15.5	629	18.5	663	21.6	696	24.9	729	28.4
35000	2536	487	6.9	509	8.4	530	9.9	550	11.5	587	14.6	623	17.7	656	20.9	689	24.2	720	27.7	751	31.2
40000	2899	550	9.8	570	11.5	589	13.2	607	14.9	641	18.5	674	22.1	705	25.6	735	29.3	764	33.0	792	36.8
45000	3261	614	13.4	632	15.3	649	17.2	666	19.2	697	23.1	727	27.1	756	31.2	784	35.2	811	39.2	837	43.4
50000	3623	678	17.9	695	20.0	710	22.1	726	24.3	755	28.6	783	33.0	810	37.5	836	42.0	861	46.4	885	50.9
55000	3986	743	23.4	758	25.7	773	28.0	787	30.3	814	35.1	840	39.9	865	44.8	889	49.7	913	54.6	936	59.5
60000	4348	808	29.9	822	32.4	835	34.9	848	37.4	874	42.6	898	47.8	922	53.0	945	58.4	967	63.7	989	69.1
65000	4710	873	37.5	886	40.2	898	42.9	911	45.7	935	51.2	958	56.8	980	62.5	1002	68.2	1023	74.0	1043	79.8
70000	5072	938	46.4	950	49.3	962	52.2	973	55.2	996	61.1	1018	67.1	1039	73.1	1059	79.3	1079	85.4	1099	91.7
75000	5435	1003	56.6	1015	59.7	1026	62.8	1037	66.0	1058	72.3	1078	78.7	1099	85.1	1118	91.7	1137	98.2	1156	104.8
80000	5797	1069	68.3	1080	71.6	1090	74.9	1100	78.2	1120	84.9	1140	91.7	1159	98.6	1178	105.5	1196	112.5	1214	119.5
85000	6159	1134	81.5	1144	85.0	1154	88.5	1164	92.0	1183	99.1	1202	106.3	1220	113.5	1238	120.8	1255	128.2	1272	135.6
CFM	OV FPM	5" SP		6" SP		7" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP		20" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
27000	1957	767	31.7	831	39.7																
30000	2174	780	34.0	842	42.1	901	50.7	956	59.9												
33000	2391	797	36.7	856	44.8	912	53.6	966	63.0												
36000	2609	816	39.9	872	48.1	926	56.9	978	66.3	1077	86.8										
39000	2826	838	43.5	891	51.8	943	60.8	993	70.2	1088	90.9	1178	113.5								
42000	3043	862	47.5	913	56.1	962	65.1	1010	74.7	1102	95.5	1189	118.2</								



WHEELS

FAN SIZE	Z	J	Wt.-Less Hub	
			Std.	Hi-Spd
100	9-7/16	3-5/8	6.3*	-
122	10-25/32	4-3/16	7.3*	-
135	13-3/8	5-5/32	7	8
150	14-13/16	5-21/32	10	11
165	16-7/16	6-7/32	11	12
182	18-1/16	6-13/16	14	15
200	19-15/16	7-5/8	18	19
222	21-13/16	8-5/16	21	22
245	24-1/4	9-3/16	31	31
270	26-11/16	10-3/32	42	43
300	29-3/8	11-5/32	56	58
330	32-5/8	12-5/16	69	71
365	35-13/16	13-1/2	84	87
402	39-5/8	14-27/32	116	120
445	43-7/16	16-25/32	206*	214*
490	48	18-7/16	238*	247*

* Hub integral to wheel

INLET CONES

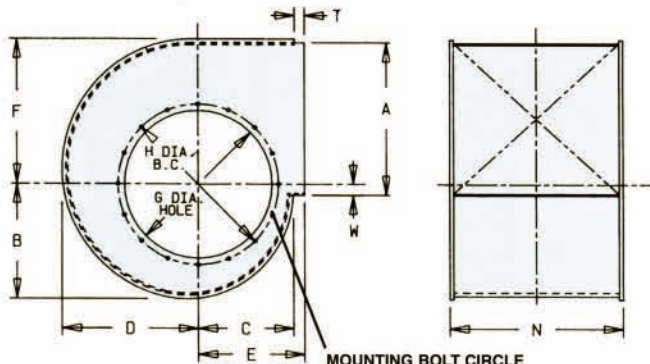
FAN SIZE	P		Q		R		S		WEIGHT	
	100%	72%	100%	72%	100%	72%	100%	72%	100%	72%
100	3-19/64	1-47/64	10-17/64	10-1/4	9-17/32	8-11/16	6-5/32	6-1/8	1.1	0.8
122	3-3/4	1-51/64	11-1/2	11-1/2	10-7/8	9-25/32	7-1/32	6-15/16	1.4	1.0
135	5-1/32	2-11/32	14-3/8	14-3/8	13-11/32	11-31/64	9-3/64	8-25/32	2.7	1.9
150	5-39/64	2-17/32	15-3/4	15-3/4	14-11/16	12-17/32	10	9-23/32	3.2	2.3
165	6-11/64	2-13/16	17-3/8	17-3/8	16-11/32	13-7/8	11-1/8	10-27/32	4.0	2.9
182	6-3/4	3-7/64	19-3/8	19-3/8	17-31/32	15-3/16	12-1/4	11-61/64	4.8	3.5
200	7-33/64	3-25/64	21-1/4	21-1/4	19-7/8	16-5/8	13-17/32	13-5/16	6.0	4.3
222	8-15/64	3-49/64	23-1/4	23-1/4	21-25/32	18-5/16	14-27/32	14-9/16	7.2	5.2
245	9-3/16	4-3/16	25-1/2	25-1/2	24-1/4	20-7/16	16-5/8	16-9/64	8.8	6.3
270	10-5/32	4-9/16	28	28	26-11/16	22-3/16	18-5/16	18-1/32	13.2	9.5
300	11-7/32	5-1/32	31-1/8	31-1/8	29-13/32	24-1/2	20-3/16	19-51/64	16.2	11.7
330	12-7/16	5-17/32	34-1/2	34-1/8	32-43/64	27-1/32	22-1/2	22-3/32	21.6	15.1
365	13-23/32	6-1/4	37-7/8	37-1/2	35-15/16	29-3/4	24-3/4	24-35/64	24.2	17.4
402	15-9/64	6-3/4	42-1/8	41-1/2	39-3/4	32-3/4	27-3/8	27-3/64	29.4	24.4
445	16-21/32	7-9/16	45-1/4	45-3/4	43-13/16	36-1/8	30-3/16	30	36.0	30.4
490	18-1/4	8-17/64	50-1/8	50-1/8	48-7/16	39-15/16	33-1/8	33-3/32	61.5	49.0

STANDARD WHEEL BORE DATA (in.) and HUB WEIGHTS (lbs.)

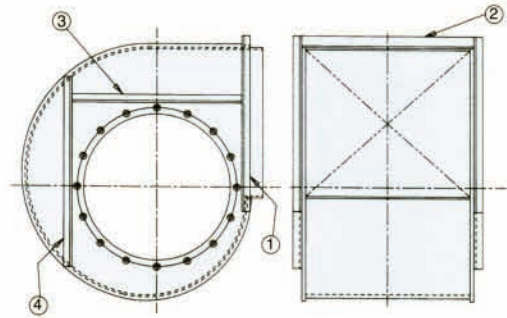
BORE SIZES	FAN SIZES 100 thru 122			FAN SIZES 135 thru 182			FAN SIZES 200 thru 270				FAN SIZES 300 thru 402			FAN SIZES 445 & 490	
	L	L1	KEYWAY	L	KEYWAY	HUB	L	L1	KEYWAY	HUB	L	KEYWAY	HUB	L	KEYWAY
5/8	1	3/4	3/16 x 3/32												
3/4	1	3/4	3/16 x 3/32												
7/8	1	3/4	3/16 x 3/32												
15/16	1	3/4	1/4 x 1/8	2-3/16	1/4 x 1/8	5									
1-1/8	1	3/4	1/4 x 1/8	2-1/2	1/4 x 1/8	5	2	15/16	1/4 x 1/8	10					
1-3/16	1	3/4	1/4 x 1/8	2-3/16	1/4 x 1/8	5	3-5/8	-	1/4 x 1/8	15					
1-3/8	1	3/4	5/16 x 5/32	2-1/2	5/16 x 5/32	5	2	15/16	5/8 x 5/32	10					
1-7/16				2-3/16	3/8 x 3/16	7	3-5/8	-	3/8 x 3/16	15					
1-5/8				2-1/2	3/8 x 3/16	7	2	15/16	3/8 x 3/16	10	2-1/2	3/8 x 3/16	30		
1-11/16				2-3/16	3/8 x 3/16	7	3-5/8	-	3/8 x 3/16	15	5	3/8 x 3/16	31	5-1/2	3/8 x 3/16
1-7/8				-	-	-	-	-	-	-	2-1/2	1/2 x 1/4	30	-	-
1-15/16				2-3/16	1/2 x 1/4	7	3-5/8	-	1/2 x 1/4	18	5	1/2 x 1/4	31	5-1/2	1/2 x 1/4
2-1/8				-	-	-	-	-	-	-	2-1/2	1/2 x 1/4	30	-	-
2-3/16				2-3/16	1/2 x 1/4	7	3-5/8	-	1/2 x 1/4	18	5	1/2 x 1/4	31	5-1/2	1/2 x 1/4
2-3/8				-	-	-	-	-	-	-	2-1/2	5/8 x 5/16	30	-	-
2-7/16				2-1/4	5/8 x 5/16	10	3-5/8	-	5/8 x 5/16	19	3-5/8	5/8 x 5/16	31	5-1/2	5/8 x 5/16
2-11/16							3-5/8	-	5/8 x 5/16	19	3-5/8	5/8 x 5/16	31	5-1/2	5/8 x 5/16
2-15/16							3-5/8	-	3/4 x 3/8	21	3-5/8	3/4 x 3/8	32	5-1/2	3/4 x 3/8
3-3/16											3-5/8	3/4 x 3/8	32	5-1/2	3/4 x 3/8
3-7/16											3-5/8	7/8 x 3/16	30	8-1/8	7/8 x 7/16
3-11/16														8-1/8	7/8 x 7/16
3-15/16														8-1/8	1 x 1-1/2
4-3/16														8-1/8	1 x 1-1/2
4-7/16														8-1/8	1 x 1-1/2
4-11/16														8-1/8	1-1/4 x 5/8

Notes: 1. Wheels available clockwise or counter-clockwise rotation. Hubs mounted on inlet side of wheel.
2. Size 135 thru 402 wheels with 1/16" increment hub bores have cast iron, straight bore hubs.

Bushing hubs furnished for size 100 and 122 aluminum wheels and for larger size wheels with 1/8" increment hub bores.
Hub bore tolerance: Nominal inch diameter +0.001/-0.000 in.



MOUNTING BOLT CIRCLE
 All holes equally spaced
 Sizes 100 - 182: 8 Holes .201" Diameter
 Sizes 200 - 445: 16 Holes .344" Diameter
 Size 490: 24 Threaded Holes 1/2-13" Diameter



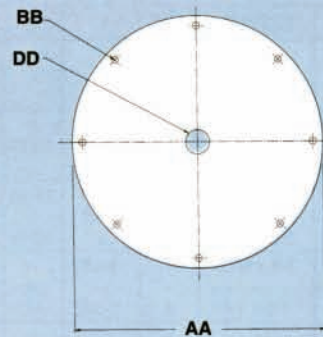
RECOMMENDED BRACING SCHEDULE	Fan Size	Angle Size (In.)	Items Req'd.
	100 & 122	None	None
135 - 182	1/8 x 3/4 x 3/4	3 and 4	
200 - 270	1/8 x 1/2 x 1/2	2, 3 and 4	
300 - 402	1/8 x 2 x 2	1, 2, 3 and 4	
445 - 490	Included		

HOUSINGS

FAN SIZE	A	B	C	D	E	F	G	H	N		W	T	WGT. (lbs)	
									100%	72%			100%	72%
100	10-7/8	7-15/32	6-1/8	8-9/32	7-31/32	9-1/2	9-3/4	10-3/4	7-11/16	6-3/32	1-9/16	1-1/2	21	20
122	14-3/16	8-17/32	7-3/32	10-5/32	8-27/32	10-13/16	11	12	8-23/32	6-3/4	3-9/16	1-1/2	28	26
135	14-1/8	10-15/32	8-11/16	12-15/32	11-5/16	13-1/4	13-5/8	15	10-21/32	7-15/16	1-3/32	2-13/16	42	37
150	15-13/16	11-1/2	9-1/2	13-23/32	12-1/16	14-9/16	15-1/8	16-1/2	11-3/4	8-21/32	1-15/32	2-13/16	50	47
165	17-3/16	12-3/4	10-9/16	15-7/32	12-7/8	16-5/32	16-5/8	18-1/8	13-1/16	9-21/32	1-9/32	2-13/16	60	54
182	19-1/8	14	11-19/32	16-23/32	13-7/8	17-3/4	18-1/2	20-1/8	14-11/32	10-21/32	1-5/8	2-13/16	72	64
200	20-3/4	15-23/32	13-1/16	18-23/32	15-3/8	19-7/8	20-1/4	22-1/4	15-7/8	11-11/16	1-3/8	2-13/16	103	90
222	23-7/16	17-5/32	14-7/32	20-7/16	16-5/16	21-23/32	22-1/16	24-1/16	17-3/8	12-7/8	2-1/4	2-13/16	124	108
245	25-9/16	19	15-13/16	22-21/32	18	24-3/32	24-1/2	26-1/8	19-3/8	14-3/8	1-31/32	3-5/6	152	132
270	28-3/16	20-7/8	17-11/32	24-29/32	19-1/4	26-1/2	27	29	21-5/16	15-21/32	2-7/32	3-5/6	180	156
300	31-9/16	22-15/16	19-1/32	27-3/8	20-7/8	29-1/8	29-3/4	32-3/16	23-1/2	17-15/32	2-31/32	3-5/6	219	191
330	34-3/8	25-3/8	21-1/16	30-5/16	22-9/16	32-1/4	33	35-3/8	26-3/32	19-3/8	2-19/32	3-7/16	303	269
365	38-5/16	27-27/32	23-1/16	33-1/4	24-5/8	35-3/8	36-5/16	38-3/4	28-3/4	21-7/16	3-7/16	3-13/16	365	325
402	42	30-3/4	25-15/32	36-3/4	27-1/2	39-1/8	40	43	31-3/4	23-17/32	3-3/8	4-3/16	448	397
445	46-1/2	33-27/32	28	40-1/2	30-1/16	43-1/8	44	46-1/2	35	26	3-29/32	5	668	605
490	51-1/16	37-11/32	30-29/32	44-11/16	32-15/16	47-9/16	48-3/4	51-1/4	38-11/16	28-17/32	3-31/32	5-1/2	818	733

DRIVE SIDE COVER PLATE

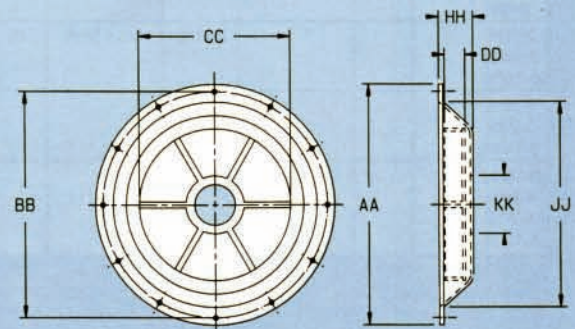
FAN SIZE	AA	BB	CC*	DD	GA.
100	12	1/2	8	1-1/2	12
122	13-1/4	1/2	8	1-1/2	12
135	16-1/4	1/2	8	2	12
150	17-3/4	1/2	8	2	12
165	19-3/8	1/2	8	2	12
182	21-3/8	1/2	8	2	12
200	23-1/2	5/8	8	2-1/2	12
222	26	5/8	16	2-1/2	12
245	28	5/8	16	2-1/2	12
270	30-1/2	5/8	16	2-1/2	12
300	33-3/4	5/8	16	3	12
330	36-7/8	5/8	16	3	10
365	40-1/4	5/8	16	3	10
402	44-1/2	5/8	16	3	10

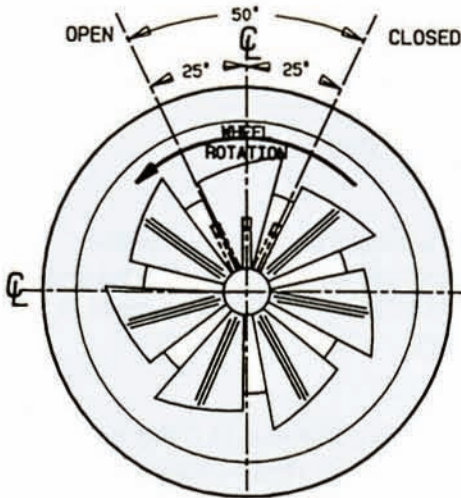


NOTE: Sizes 445 and 490 do not require cover plates.

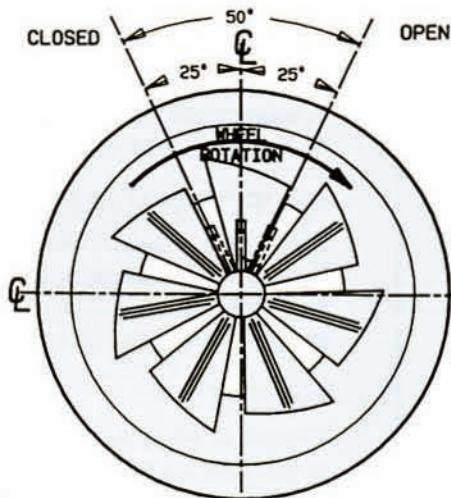
SHAFT COOLER ASSEMBLY

BORE RANGE	AA (O.A. Dia.)	BB (B.C. Dia.)	HH	JJ (To Flat)	KK (Shaft)	WHEEL	
						CC	DD
15/16	15-1/2	14-1/2	2-11/16	13	2-1/2	4	1-1/2
1-3/16 thru 1-11/16	15-1/2	14-1/2	2-11/16	13	2-1/2	6	1-1/2
1-15/16 thru 2-3/16	15-1/2	14-1/2	2-11/16	13	2-1/2	8	2
2-7/16 thru 3-3/16	20-1/2	19-1/4	2-15/16	17-1/2	5	8	2
3-7/16 thru 4-11/16	20-1/2	19-1/4	2-15/16	17-1/2	5	13	2

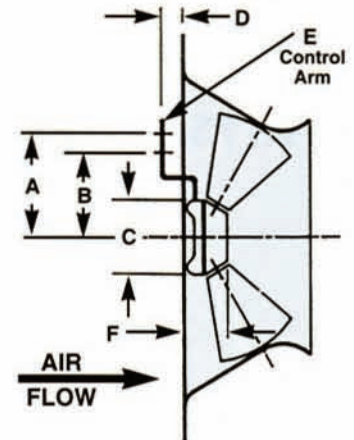




Inlet Side of CW Fan
CW IVC Shown



Inlet Side of CCW Fan
CCW IVC Shown



INLET VOLUME CONTROL

FAN SIZE	CENTER SIZE	A		B		C	D		E		F	WEIGHT (lbs)
		350°F	650°F	350°F	650°F	350/650°F	350°F	650°F	350°F	650°F	350/650°F	
135	2-1/2	6-5/16	6-1/16	NA	NA	6-1/4	1-3/4	3-1/8	3/16 x 1	1/4 x 1-1/2	2-11/16	10
150	2-1/2	6-5/16	6-1/16	NA	NA	6-1/4	1-3/4	3-1/8	3/16 x 1	1/4 x 1-1/2	2-11/16	11
165	2-1/2	6-5/16	6-1/16	NA	NA	6-1/4	1-3/4	3-1/8	3/16 x 1	1/4 x 1-1/2	2-11/16	12
182	2-1/2	7-1/8	6-1/16	6-1/16	NA	6-1/4	1-3/4	3-1/8	3/16 x 1	1/4 x 1-1/2	2-11/16	13
200	2-1/2	7-1/8	6-1/16	6-1/16	NA	6-1/4	1-3/4	3-1/8	3/16 x 1	1/4 x 1-1/2	2-11/16	16
222	2-1/2	7-1/8	6-1/16	6-1/16	NA	6-1/4	1-3/4	3-1/8	3/16 x 1	1/4 x 1-1/2	2-11/16	18
245	2-1/2	7-1/8	6-1/16	6-1/16	NA	6-1/4	1-3/4	3-1/8	3/16 x 1	1/4 x 1-1/2	2-11/16	21
270	3-1/2	8	6-1/16	6-1/16	5-1/16	7-7/8	1-13/16	3-1/4	3/8 x 1	1/4 x 1-1/2	3-7/32	28
300	3-1/2	8	6-1/16	6-1/16	5-1/16	7-7/8	1-13/16	3-1/4	3/8 x 1	1/4 x 1-1/2	3-7/32	31
330	3-1/2	8	6-1/16	6-1/16	5-1/16	7-7/8	1-13/16	3-1/4	3/8 x 1	1/4 x 1-1/2	3-7/32	40
365	3-1/2	8	6-1/16	6-1/16	5-1/16	7-7/8	1-13/16	3-1/4	3/8 x 1	1/4 x 1-1/2	3-7/32	49
402	3-1/2	8	6-1/16	6-1/16	5-1/16	7-7/8	1-13/16	3-1/4	3/8 x 1	1/4 x 1-1/2	3-7/32	78
445	3-1/2	8	6-1/16	6-1/16	5-1/16	7-7/8	1-13/16	3-1/4	3/8 x 1	1/4 x 1-1/2	3-7/32	90
490	3-1/2	8	6-1/16	6-1/16	5-1/16	7-7/8	1-13/16	3-1/4	3/8 x 1	1/4 x 1-1/2	3-7/32	110

CENTER SIZE	MAX. SHAFT DIA. THRU I.V.C.
2-1/2	2-3/36
3-1/2	3-1/2

NOTES:

- For overall I.V.C. dimensions, see Inlet Cone details on page 23.
- Actuating linkage to be furnished by customer for attachment to control arm.
- 350°F Bolt Hole Diameter at "A", 17/32".
650°F Bolt Hole Diameter at "A", 3/8".
- 2-1/2" Center, Bolt Hole Diameter at "B", 1/4".
3-1/2" Center, Bolt Hole Diameter at "B", 3/8".

Formulae for Calculating Operating Torque (T) in Ft. Lbs.

$$T = .086 \left(\frac{D}{10} \right)^4 \left(\frac{N}{1000} \right)^2$$

D = Effective Wheel Diameter (in.)
N = Operating RPM

ENGINEERING SPECIFICATIONS

AIRFOIL FAN KITS

a. **GENERAL:**

Provide high performance, low maintenance, centrifugal airfoil fan components. Fan shall be air performance tested based on tests and procedures in accordance with AMCA 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%. System static pressure changes of 30% shall result in no more than 10% CFM reduction.

c. **WHEEL:**

Wheels to be statically and dynamically balanced to G 6.3 standards in accordance with ISO 1940 and ANSI S2.19 specifications.

STEEL WHEEL:

Wheel shall have cast iron hub (welded integral steel hubs on sizes 445 and 490) lockbolted to a heavy backplate. Blades to be double skinned airfoil, constructed of high strength steel continuously welded to the backplate and hyperbolic wheel cone. High speed wheels shall have internal reinforcement stiffening ribs in the blades.

ALUMINUM WHEEL:

Wheel shall be airfoil constructed of 319 cast aluminum capable of 14,000 FPM tip speed. Hub will be integral cast into wheel with taper-lock bushing for mounting.

d. **INLET CONE and INLET VOLUME CONTROL:**

Inlet cone shall be hyperbolic.

Inlet Volume Control (IVC) device shall be totally enclosed within the inlet cone. IVC shall be 7-bladed, and pre-spin incoming air to control volume pressure.

e. **SHAFTS:**

Shaft shall be select tolerance, turned, ground and polished 1045 hot rolled steel straightened to a maximum T.I.R. of .002 inches.

f. **HOUSING:**

Kit housing shall be reversible for clockwise (CW) or counterclockwise (CCW) (sizes 445 and 490 are either CW or CCW only) and capable of being rotated to all sixteen standard discharge positions. Scroll is to be continuously welded of heavy gauge steel (includes welded angle bracing on Sizes 445 and 490).

g. **SHAFT COOLER:**

Shaft cooler shall be 319 cast aluminum required whenever airstream temperatures exceed 350°F. Cooler shall be designed such that installation or removal will not require bearing removal.



DOUBLE WIDTH FAN KITS

Airfoil Kits are also available as Double Width Fans in both standard and RA configurations. They are used extensively in high capacity variable air volume HVAC systems and industrial supply and exhaust applications. Fan wheels, housings, cones, cooling wheels, and IVC controls are offered in fourteen sizes from 13-1/2" to 49" with volumes to 140,000 CFM, pressures to 20" SP, and temperatures to 800°F.

DESIGN 51 AIRFOIL FANS

Double width, single width and single width plenum Design 51 Airfoil fans are available as ready-to-install fans. Complete fans offer a wider performance range, with sizes from 8-3/4" to 80-3/4", supplying air volumes from 225 to 340,000 CFM. Plenum fans feature cost efficient unhoused wheels that install directly within the plenum. Chicago's double and single width fans both feature conventional housings, with many performance options to extend the flexibility of Design 51 fans.

OEM WHEELS

OEM wheels are available for a wide variety of applications. Heavy Duty Airfoil wheels are capable of Class 4+ performance, such as supplying combustion air for forced draft boilers and air blasts for wave generation in wave pools. Backwardly inclined wheels are ideal for corrosive or dusty airstreams, especially suited for dust collection exhaust or fume exhaust. Industrial "LS" wheels are commonly used for induced draft and industrial oven applications and are designed for material conveying.

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