

An ISO 9001 Company



Bulletin DFO-103T



DESIGN 51

Double Width

Airfoil Fans



High Volume High Efficiency

DESIGN 51 Airfoil Fans



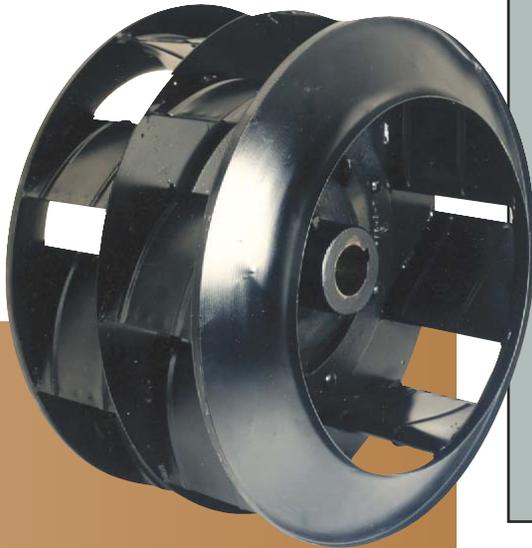
Double Width Performance

Volumes to 425,000 CFM
Pressures to 20" wg
Sizes from 135 to 807
Temperatures to 150° F

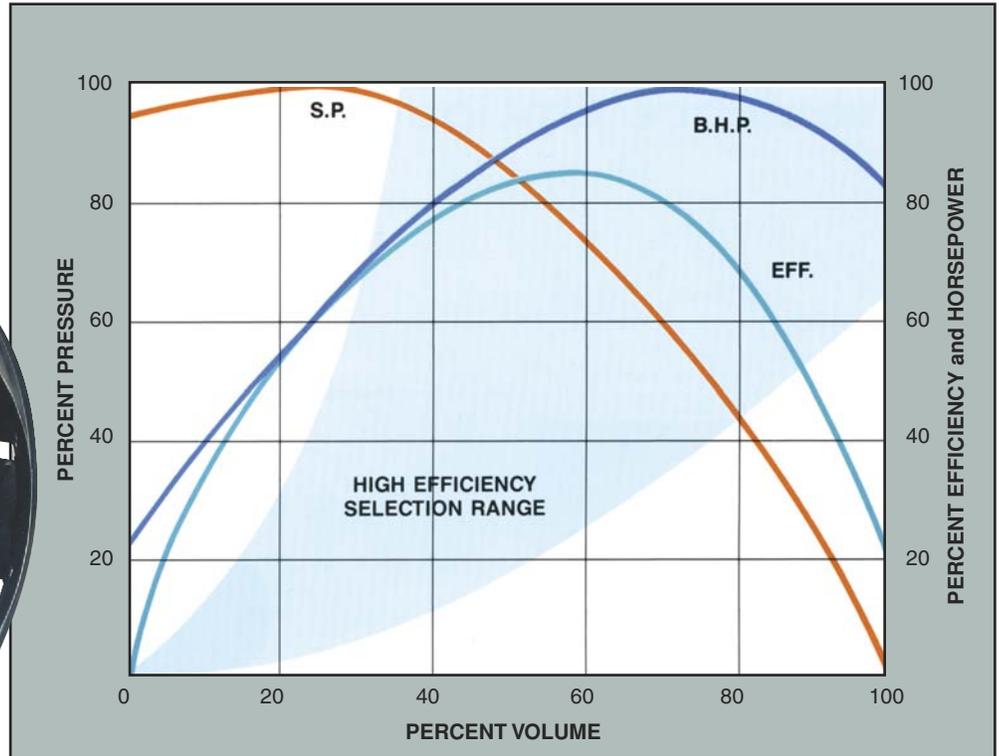
Chicago's Design 51 is a hollow bladed airfoil centrifugal fan, acknowledged as the most efficient fan type for clean air applications. The Double-Width configuration carries an enviable reputation for fan performance and reliability in a multitude of HVAC installations plus many industrial supply or exhaust systems. For single-width or plenum fan applications, Chicago offers the same full range of 19 wheel sizes to meet most every requirement.

The Double-Width is a rugged fan built to Chicago's industrial level of quality and long-term reliability. Like every Chicago fan, the Design 51 is created by skilled craftsmen and displays the label "Proudly Made in the USA".

Contact one of the Chicago Blower Sales Offices worldwide for specifications, performance data, and solutions to your air moving problems.



Chicago Blower's airfoil wheel provides static efficiencies exceeding 82%. Classes I, II, III available.



Built-in Performance

Chicago's Design 51 airfoil wheel has ideal characteristics for variable air volume systems. With a smooth pressure curve, major changes in pressure will cause only minor changes in volume. The broad, high-efficiency curve offers extensive selections from each fan size and also a wide operating range. The smooth

stable air flow over the entire performance range is the result of Chicago's deep spun inlet, wheel cones and generous housing proportions. Sound levels are also diminished with the improved inlet air glide path. A typical performance curve is shown above.

Built-in Reliability

Rugged wheels of continuously welded heavy gauge steel provide maximum integrity and longevity. Wheels are also designed for high-cycle duty common with VFD control. Wheel assembly design has been verified with a finite element analysis. Spun steel wheel cones optimize air flow while precision balancing assures dependable vibration-free operation.

Strengthened housings have continuously welded heavy steel construction with rigid

steel bearing supports. Stiff bracing resists distortion caused by sudden air flow variations.

The finest precision shafts are selected, turned, ground and polished SAE 1040-1045 steel. Heavy-duty bearings are self-aligning ball or roller type, computer selected for a minimum of 75,000 hours average life at maximum class speeds and horsepowers. Bearing life is extended by extremely close tolerance fits.



Certified Ratings

Chicago Blower Corporation certifies that the Design 51 Airfoil Fans shown herein are licensed to bear the AMCA seal. Ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program. Performance shown is for Airfoil fans with inlets open and outlet ducted.



Design 51 RA For Low Pressure Applications

Chicago offers Design 51 RA fans especially suited for certain lower pressure applications or installations. Chicago's RA fans provide a viable alternative. Comparisons of the designs are shown on page 28 of our D/51 Double Width website bulletin.

www.chicagoblower.com.

Quick Selection Methods

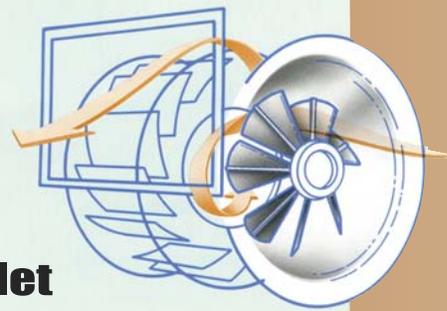
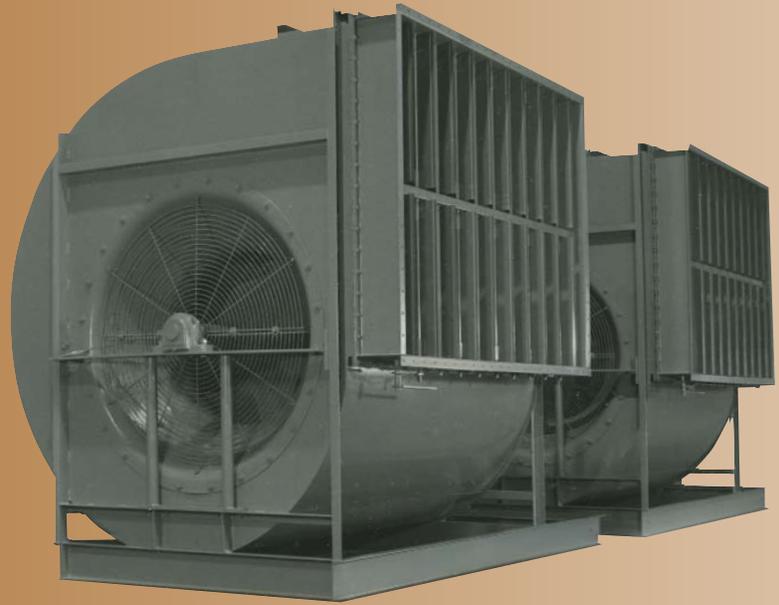
Chicago offers two methods of selecting the desired Design 51 fan. For those whose primary consideration is energy consumption, one method selects the most energy efficient fan size for any required duty.

When the initial concern is maximum fan outlet velocity, an alternate method provides the smallest possible fan size to meet any specified outlet velocity limit. Tables and examples are on pages 6 and 7 of our Design 51 Double Width website bulletin.

www.chicagoblower.com



Performance and Convenience Options



Inlet Volume Control

For economical performance at partial loads and precise air control for systems needing to maintain a positive or negative pressure at minimal flow, the Inlet Volume Control (IVC) is recommended. Adjustable guide vanes pre-spin the entering air to produce the desired volume of air while maintaining the full amount of block off pressure. Inlet vanes are mounted entirely within the inlet cone. The IVC is suitable for automatic or manual operation.



Outlet Dampers

Offered for all classes of fans, outlet dampers feature low initial cost and simple operation. However, they do not offer as large a horsepower savings at reduced air volume as the IVC.

Outlet dampers have punched flanges on both ends to simplify fan and duct connections. Damper shafts are at right angles to fan shaft when possible. Parallel acting blades are standard with opposed blade design optional. To mount damper on the fan, a punched flanged outlet is needed.

Flanged Outlet

A continuously welded angle facilitates attaching flexible connectors matching the ductwork, or dampers, to the discharge of the fan. Custom and special bolt pattern punching available.

Belt Guard

Three sides of the belt guard are solid metal with one side that is slotted for ventilation and inspection.



Inlet Screen

Welded steel wire screen is mounted within the inlet cone or outside the inlet vanes when furnished with Inlet Volume Control.



Clean-out Door

The flush mounted door features quick opening tension clamps and gasket. An all-bolted style is also available.



Housing Drain

A half coupling drain is welded at the lowest point of the housing. Housing drains are available with drain plugs.

Unitary Base

The fan and adjustable motor base are welded onto a unitary base of continuously welded structural steel channel. The height-saving brackets option is recommended for use with available vibration isolators.

Extended Grease Fittings

Fittings are mounted on housing for easy accessibility. They are recommended for all continuous operation installations.

Split Housings

Fan sizes 365 through 660 can be furnished with horizontal split housings to facilitate wheel removal. Sizes 730 and above are furnished as standard with split housings. Splits are bolted and caulked on assembled fans. Larger fans with splits may not be shipped assembled due to shipment dimensional limitations. Consult your local Chicago Blower sales representative.

Special Paint and Corrosive Resistant Coatings

Numerous finishes are available for a variety of applications. Special materials, such as aluminum or stainless can also be provided for most duties.





Quick Fan Selection

For the Energy Efficient Fan

Energy consumption is often a major consideration in every engineer's equipment selection procedure. This Chicago Quick Selection Method selects the most energy efficient fan size for any required duty.

To determine the most efficient fan size, locate the intersection of the required volume (CFM) and static pressure (SP) on the graph below. The area containing the intersection is labeled with the most efficient fan size.

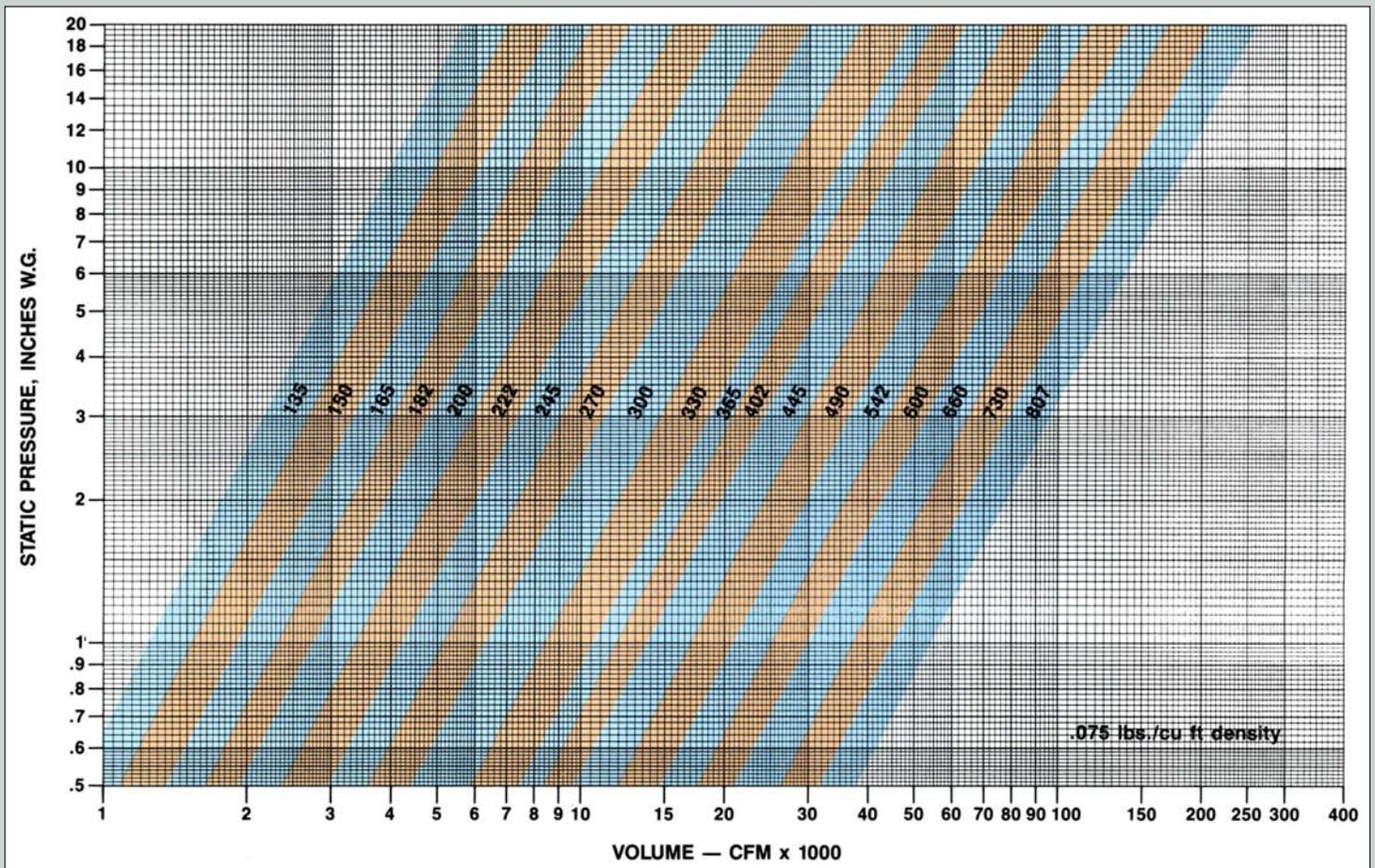
Example:

Select a fan for 20,000 CFM at 3" SP. The intersection of 20,000 CFM and 3" SP shows a Size 365 as the most efficient fan.

Having selected the most efficient fan, refer to the multi-rating table for that fan, either the Design 51 or the Design 51 RA, and find the speed and horsepower required to deliver the CFM and SP specified. Comparison of both designs is on page 28.

Note:

Often the most efficient fan is not the most practical selection because of available space, initial cost, or other considerations. Smaller fan sizes, including the RA models, should be considered.





For Fans with Specified Outlet Velocities

Many engineers specify a maximum fan outlet velocity. Chicago's Quick Selection Method provides the smallest possible fan size that meets any specified outlet velocity limit.

To size a fan with a specified maximum outlet velocity (O.V.), calculate a minimum fan outlet area (O.A.) using the formula below. Then select a fan from the table at right with an outlet area equal to or larger than the calculated minimum.

$$\frac{\text{Required Volume in Cubic Feet Per Minute, CFM}}{\text{Specified Maximum O.V. in Feet Per Minute, FPM}} = \text{Minimum O.A. in Square Feet, Ft}^2$$

Example:

Select a fan for 43,000 CFM with a maximum outlet velocity of 3200 FPM.

$$\frac{43,000}{3,200} = 13.44 \text{ Ft}^2$$

From the table, the first fan with an outlet area of at least 13.44 Ft² is the Size 365. With an outlet velocity of 13.79 Ft², the Size 365 will meet the maximum outlet velocity specified.

The actual velocity will be:

$$\frac{43,000 \text{ CFM}}{13.79 \text{ Ft}^2} = 3118 \text{ FPM}$$

Having sized the fan based on outlet velocity, turn to the multi-rating table on the page indicated, either Design 51 or Design 51 RA. Locate the speed and horsepower required to meet the CFM and static pressure specified.

Outlet Areas and Page Numbers

OUTLET AREA-FT ²	FAN SIZE	D/51 PG. NO.	D/51 RA PG. NO.
1.89	135	9	29
2.33	150	10	30
2.82	165	11	31
3.45	182	12	32
4.14	200	13	33
5.12	222	14	34
6.21	245	15	35
7.54	270	16	36
9.31	300	17	37
11.27	330	18	38
13.79	365	19	39
16.77	402	20	40
20.49	445	21	41
24.85	490	22	42
30.46	542	23	43
37.26	600	24	44
45.08	660	25	45
55.15	730	26	46
67.48	807	27	47

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.





Performance Table Guide

Pages 9 thru 47 contain multi-rating tables for every fan size. Each page provides data for one size ranging from 1/4" static pressure (SP) up to 20" SP. Volume is listed in cubic feet per minute, (CFM) and outlet velocity (VEL). Under each SP rating is the speed (RPM), and horsepower (BHP) required for each corresponding CFM rating. Simply interpolate between ratings for any value not listed.

Ratings in bold italic type on each page are in the high efficiency selection range. (Refer to the graph on page 3.)

Classes I, II and III are indicated by different color tints,

Example 1:

Below is a section of Page 9 showing the performance of a Size 135 fan. For a desired duty of 5,500 CFM (A) at 6" SP (B), the fan will need to run at 3753 RPM (C) and use 7.22 BHP (D).

Example 2:

When a desired duty falls between published ratings, exact speed and horsepower can be interpolated. For 4,500 CFM at 4", use available Table Data (E) and interpolate as shown below. The Outlet Velocity is 2381 and the fan will run at 3068 RPM and use 3.95 BHP.

OUTLET		3 1/2" SP		4" SP		4 1/2" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP
2400	1270	2392	1.65	2537	1.92	2681	2.2
4200	2222	2866	3.22	2977	3.59	3090	4.0
4400	2328	2933	3.45	3036	3.82	3143	4.2
4500	2381	2969	3.58	3068	3.95	3171	4.3
4600	2434	3005	3.72	3100	4.08	3200	4.4
4800	2540	3081	4.01	3169	4.36	3262	4.6

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
2400	1270	2392	1.65	2537	1.92	2681	2.21	2822	2.52	2962	2.95	3091	3.30	3219
2600	1376	2432	1.78	2563	2.04	2697	2.32	2830	2.63	2974	3.08	3098	3.42	3219
2800	1481	2485	1.95	2605	2.19	2726	2.46	2850	2.76	2974	3.08	3098	3.42	3219
3000	1587	2542	2.13	2658	2.39	2771	2.65	2883	2.93	2998	3.24	3113	3.57	3219
3200	1693	2598	2.32	2716	2.60	2825	2.87	2930	3.15	3035	3.44	3142	3.76	3219
3400	1799	2650	2.49	2772	2.81	2882	3.11	2985	3.40	3085	3.69	3183	3.99	3219
3600	1905	2699	2.65	2824	3.01	2939	3.34	3043	3.66	3141	3.97	3235	4.27	3219
3800	2011	2750	2.82	2874	3.20	2991	3.57	3099	3.92	3198	4.26	3292	4.58	3381
4000	2116	2805	3.01	2924	3.39	3041	3.78	3151	4.17	3254	4.55	3349	4.90	3441
4200	2222	2866	3.22	2977	3.59	3090	4.00	3201	4.41	3306	4.82	3405	5.21	3491
4400	2328	2933	3.45	3036	3.82	3143	4.22	3251	4.65	3356	5.08	3457	5.51	3541
4600	2434	3005	3.72	3100	4.08	3200	4.47	3302	4.90	3406	5.34	3506	5.80	3601
4800	2540	3081	4.01	3169	4.36	3262	4.75	3358	5.16	3457	5.61	3556	6.08	3651
5000	2646	3159	4.33	3243	4.68	3329	5.05	3419	5.46	3512	5.91	3607	6.38	3701
5500	2910	3360	5.20	3438	5.58	3515	5.96	3592	6.36	3671	6.77	3753	7.22	3801
6500	3439	3771	7.26	3846	7.75	3918	8.23	3986	8.68	4052	9.14	4117	9.59	4181
7500	3968	4191	9.80	4262	10.39	4330	10.97	4396	11.54	4460	12.10	4521	12.65	4581
8500	4497	4622	12.93	4687	13.60	4751	14.27	4813	14.94	4874	15.60	4933	16.26	4991
9500	5026	5063	16.77	5122	17.51	5181	18.25	5239	18.99	5296	19.74	5352	20.49	5407
10500	5556	5513	21.41	5567	22.20	5620	23.01	5674	23.82	5727	24.64	5779	25.47	



DESIGN 51 Double Width Airfoil Fans

Size 135

SPEED LIMITATIONS

OUTLET AREA

-3542 RPM CLASS II-4617 RPM CLASS III-5818 RPM

1.89 SQ. FT.

OUTLET CFM	VEL.	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1000	529	731	0.05	837	0.08	924	0.10	1096	0.15												
1200	635	792	0.07	889	0.10	980	0.12	1125	0.18	1269	0.24	1411	0.31								
1400	741	870	0.09	946	0.12	1030	0.15	1180	0.21	1303	0.27	1425	0.34	1549	0.43						
1600	847	951	0.12	1020	0.15	1087	0.18	1233	0.25	1358	0.32	1465	0.39	1571	0.47	1788	0.65				
1800	952	1034	0.15	1100	0.18	1159	0.21	1284	0.29	1412	0.38	1521	0.46	1618	0.53	1806	0.71	1999	0.92	2185	1.15
2000	1058	1118	0.19	1182	0.22	1238	0.26	1345	0.33	1462	0.42	1576	0.52	1675	0.61	1847	0.79	2018	0.98	2191	1.22
2500	1323	1336	0.31	1391	0.36	1443	0.41	1537	0.50	1622	0.59	1710	0.68	1804	0.80	1986	1.04	2138	1.26	2275	1.48
3000	1587	1561	0.48	1609	0.54	1655	0.60	1742	0.72	1820	0.83	1892	0.93	1963	1.04	2114	1.29	2271	1.58	2416	1.87
3500	1852	1792	0.72	1833	0.79	1873	0.85	1952	0.99	2026	1.13	2095	1.26	2159	1.38	2280	1.63	2407	1.90	2541	2.23
4000	2116	2025	1.03	2062	1.10	2098	1.18	2168	1.33	2236	1.49	2302	1.65	2363	1.80	2476	2.08	2582	2.36	2690	2.66
4500	2381	2261	1.42	2294	1.51	2326	1.59	2390	1.76	2452	1.93	2512	2.11	2571	2.29	2680	2.63	2779	2.95	2874	3.26
5000	2646	2498	1.91	2528	2.00	2557	2.09	2615	2.28	2672	2.47	2728	2.66	2782	2.86	2887	3.25	2984	3.63	3073	3.98
5500	2910	2737	2.50	2764	2.60	2791	2.70	2844	2.90	2896	3.11	2947	3.32	2998	3.53	3096	3.97	3190	4.39	3278	4.81
6000	3175	2976	3.21	3001	3.31	3026	3.42	3075	3.64	3123	3.87	3170	4.09	3217	4.32	3310	4.79	3399	5.26	3484	5.73
6500	3439	3216	4.04	3239	4.15	3262	4.27	3308	4.51	3352	4.75	3397	4.99	3440	5.24	3527	5.74	3611	6.25	3693	6.76
7000	3704	3456	5.00	3478	5.13	3499	5.25	3542	5.51	3584	5.76	3625	6.02	3666	6.28	3747	6.82	3826	7.36	3904	7.91
7500	3968	3697	6.11	3717	6.25	3738	6.38	3777	6.65	3817	6.93	3856	7.20	3894	7.48	3970	8.05	4045	8.62	4119	9.21
8000	4233	3939	7.38	3958	7.52	3976	7.67	4014	7.95	4051	8.24	4088	8.54	4124	8.83	4196	9.43	4267	10.04	4336	10.66
8500	4497	4180	8.81	4198	8.97	4216	9.12	4251	9.42	4286	9.73	4321	10.04	4355	10.35	4423	10.98	4490	11.62	4557	12.27
9000	4762	4422	10.43	4439	10.58	4456	10.74	4489	11.07	4522	11.39	4555	11.72	4588	12.05	4652	12.71	4716	13.38	4779	14.07
9500	5026	4664	12.22	4680	12.39	4696	12.56	4728	12.90	4759	13.24	4791	13.59	4822	13.93	4883	14.63	4944	15.33	5004	16.05
10500	5556	5148	16.42	5163	16.61	5177	16.79	5206	17.17	5235	17.54	5263	17.92	5292	18.30	5348	19.07	5403	19.84	5458	20.62
11500	6085	5633	21.49	5647	21.70	5660	21.90	5686	22.31	5713	22.72	5739	23.13	5765	23.54	5816	24.38				

OUTLET CFM	VEL.	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
2400	1270	2392	1.65	2537	1.92	2681	2.21	2822	2.52												
2600	1376	2432	1.78	2563	2.04	2697	2.32	2830	2.63	2962	2.95	3091	3.30								
2800	1481	2485	1.95	2605	2.19	2726	2.46	2850	2.76	2974	3.08	3098	3.42	3219	3.78	3338	4.15				
3000	1587	2542	2.13	2658	2.39	2771	2.65	2883	2.93	2998	3.24	3113	3.57	3229	3.92	3345	4.29	3569	5.07		
3200	1693	2598	2.32	2716	2.60	2825	2.87	2930	3.15	3035	3.44	3142	3.76	3250	4.10	3359	4.46	3575	5.23	3786	6.07
3400	1799	2650	2.49	2772	2.81	2882	3.11	2985	3.40	3085	3.69	3183	3.99	3283	4.32	3384	4.66	3589	5.42	3792	6.25
3600	1905	2699	2.65	2824	3.01	2939	3.34	3043	3.66	3141	3.97	3235	4.27	3328	4.59	3422	4.92	3613	5.65	3806	6.46
3800	2011	2750	2.82	2874	3.20	2991	3.57	3099	3.92	3198	4.26	3292	4.58	3382	4.91	3471	5.24	3648	5.94	3829	6.72
4000	2116	2805	3.01	2924	3.39	3041	3.78	3151	4.17	3254	4.55	3349	4.90	3439	5.24	3526	5.58	3694	6.28	3863	7.03
4200	2222	2866	3.22	2977	3.59	3090	4.00	3201	4.41	3306	4.82	3405	5.21	3497	5.59	3583	5.95	3748	6.67	3908	7.41
4400	2328	2933	3.45	3036	3.82	3143	4.22	3251	4.65	3356	5.08	3457	5.51	3552	5.93	3640	6.32	3804	7.08	3960	7.83
4600	2434	3005	3.72	3100	4.08	3200	4.47	3302	4.90	3406	5.34	3506	5.80	3603	6.25	3695	6.68	3862	7.50	4016	8.29
4800	2540	3081	4.01	3169	4.36	3262	4.75	3358	5.16	3457	5.61	3556	6.08	3653	6.55	3746	7.02	3918	7.92	4074	8.77
5000	2646	3159	4.33	3243	4.68	3329	5.05	3419	5.46	3512	5.91	3607	6.38	3702	6.86	3795	7.36	3971	8.33	4131	9.24
5500	2910	3360	5.20	3438	5.58	3515	5.96	3592	6.36	3671	6.77	3753	7.22	3837	7.71	3923	8.21	4095	9.28	4261	10.36
6500	3439	3771	7.26	3846	7.75	3918	8.23	3986	8.68	4052	9.14	4117	9.59	4182	10.04	4248	10.51	4382	11.51	4523	12.63
7500	3968	4191	9.80	4262	10.39	4330	10.97	4396	11.54	4460	12.10	4521	12.65	4581	13.18	4639	13.70	4752	14.74	4865	15.80
8500	4497	4622	12.93	4667	13.60	4714	14.27	4813	14.94	4874	15.60	4933	16.26	4991	16.91	5047	17.54	5155	18.76	5258	19.95
9500	5026	5063	16.77	5122	17.51	5181	18.25	5239	18.99	5296	19.74	5352	20.49	5407	21.24	5461	21.97	5566	23.43	5666	24.84
10500	5556	5513	21.41	5567	22.20	5620	23.01	5674	23.82	5727	24.64	5779	25.47								

OUTLET CFM	VEL.	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
		RPM	BHP																		
3800	2011	4012	7.58	4195	8.50	4374	9.47	4549	10.47												
4000	2116	4035	7.86	4209	8.76	4383	9.72	4554	10.74	4722	11.78	4885	12.86								
4200	2222	4069	8.21	4233	9.08	4399	10.02	4564	11.02	4728	12.07	4889	13.16	5046	14.28						
4400	2328	4112	8.62	4266	9.46	4423	10.37	4581	11.35	4739	12.38	4896	13.47	5051	14.60	5203	15.75	5351	16.94		
4600	2434	4164	9.08	4310	9.90	4457	10.79	4607	11.73	4758	12.75	4909	13.82	5060	14.94	5209	16.10	5355	17.30		
4800	2540	4219	9.58	4360	10.41	4500	11.27	4641	12.19	4785	13.17	4929	14.22	5074	15.32	5219	16.47	5363	17.67	5644	20.16
5000	2646	4277	10.11	4416	10.96	4551	11.82	4685	12.72	4820	13.67	4958	14.69	5096	15.77	5236	16.90	5375	18.08	5650	20.57
5200	2751	4334	10.64	4473	11.53	4605	12.42	4735	13.32	4864	14.25	4994	15.24	5126	16.28	5259	17.39	5393	18.54	5660	21.01
5400	2857	4390	11.16	4530	12.12	4663	13.04	4790	13.96	4915	14.90	5039	15.86	5164	16.87	5291	17.95	5419	19.08	5676	21.50
5600	2963	4442	11.66	4587	12.70	4720	13.68	4847	14.64	4970	15.59	5090	16.56	5210	17.56	5330	18.60	5452	19.70	5699	22.06
5800	3069	4493	12.14	4640	13.25	4777	14.31	4905	15.32	5027	16.32	5145	17.30	5262	18.31	5377	19.34	5493	20.41	5729	22.71
6000	3175	4542	12.62	4691	13.79	4831	14.93	4962	16.01	5085	17.06	5202	18.08	5317	19.10	5429	20.14	5541	21.20	5766	23.44
6200	3280	4591	13.09	4741	14.31	4883	15.5														



DESIGN 51 Double Width Airfoil Fans

Size 150

SPEED LIMITATIONS

CLASS I—3254 RPM CLASS II—4242 RPM CLASS III—5346 RPM

OUTLET AREA

2.33 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	515	660	0.06	757	0.09	835	0.12	994	0.18	1148	0.28	1280	0.38	1403	0.50	1619	0.76	1810	1.07		
1400	601	704	0.08	796	0.11	877	0.14	1012	0.20	1166	0.31	1285	0.40								
1600	687	759	0.10	835	0.13	916	0.17	1049	0.24												
1800	773	819	0.12	885	0.15	954	0.19	1092	0.28	1202	0.36	1305	0.44	1411	0.54	1619	0.76				
2000	858	881	0.15	942	0.19	1001	0.22	1129	0.31	1244	0.41	1341	0.49	1433	0.59	1624	0.81				
2500	1073	1037	0.24	1094	0.29	1145	0.33	1239	0.42	1340	0.53	1443	0.65	1535	0.77	1690	0.99	1839	1.22	1992	1.50
3000	1288	1200	0.36	1251	0.42	1298	0.48	1383	0.59	1461	0.69	1543	0.81	1629	0.95	1795	1.24	1933	1.51	2058	1.77
3500	1502	1368	0.53	1412	0.60	1455	0.66	1536	0.80	1608	0.93	1675	1.05	1743	1.18	1888	1.48	2034	1.83	2163	2.15
4000	1717	1539	0.74	1578	0.82	1617	0.90	1692	1.05	1761	1.21	1824	1.35	1884	1.49	2001	1.78	2129	2.13	2259	2.52
4500	1931	1712	1.01	1748	1.10	1783	1.18	1851	1.36	1916	1.53	1978	1.71	2035	1.87	2140	2.18	2245	2.51	2357	2.90
5000	2146	1887	1.35	1920	1.44	1951	1.53	2014	1.72	2074	1.92	2133	2.12	2188	2.31	2290	2.67	2384	3.02	2478	3.38
5500	2361	2063	1.75	2093	1.85	2122	1.95	2179	2.16	2236	2.37	2290	2.59	2343	2.81	2442	3.23	2532	3.62	2618	4.00
6000	2575	2241	2.24	2268	2.34	2295	2.45	2348	2.68	2400	2.90	2451	3.14	2501	3.37	2597	3.84	2685	4.29	2767	4.72
6500	2790	2418	2.80	2444	2.92	2469	3.04	2518	3.28	2567	3.52	2614	3.77	2661	4.02	2753	4.54	2839	5.04	2919	5.52
7000	3004	2597	3.46	2621	3.58	2644	3.71	2690	3.97	2735	4.23	2780	4.49	2824	4.76	2911	5.31	2994	5.86	3072	6.40
7500	3219	2776	4.21	2798	4.35	2820	4.48	2863	4.76	2906	5.03	2948	5.32	2989	5.60	3071	6.18	3151	6.78	3227	7.36
8500	3648	3135	6.05	3154	6.20	3174	6.35	3212	6.66	3251	6.97	3288	7.28	3325	7.60	3399	8.25	3471	8.91	3542	9.58
9500	4077	3495	8.36	3512	8.53	3530	8.70	3565	9.04	3599	9.39	3633	9.73	3667	10.08	3733	10.80	3799	11.52	3864	12.26
10500	4506	3856	11.21	3872	11.39	3887	11.58	3919	11.96	3950	12.33	3981	12.72	4012	13.10	4073	13.88	4133	14.67	4192	15.47
11500	4936	4217	14.64	4232	14.85	4246	15.05	4275	15.46	4304	15.87	4332	16.29	4361	16.71	4417	17.55	4472	18.40	4527	19.27
12500	5365	4579	18.72	4592	18.95	4606	19.17	4632	19.61	4659	20.06	4685	20.51	4712	20.96	4763	21.87	4815	22.79	4866	23.72
13500	5794	4941	23.51	4953	23.75	4966	23.98	4991	24.46	5015	24.95	5040	25.43	5064	25.92	5113	26.90	5160	27.88	5208	28.88
14500	6223	5303	29.05	5315	29.31	5327	29.56	5350	30.08												

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
2800	1202	2159	1.94	2296	2.27	2430	2.63	2559	3.00												
3000	1288	2182	2.05	2309	2.37	2437	2.72	2563	3.10	2685	3.50										
3500	1502	2276	2.45	2383	2.76	2489	3.07	2597	3.42	2706	3.81	2816	4.22	2924	4.65	3031	5.10				
4000	1717	2380	2.91	2489	3.27	2588	3.62	2682	3.96	2774	4.31	2867	4.68	2962	5.09	3057	5.52	3249	6.45	3437	7.46
4500	1931	2473	3.32	2586	3.77	2692	4.20	2788	4.61	2878	5.00	2963	5.38	3046	5.77	3128	6.17	3294	7.03	3464	8.00
5000	2146	2577	3.79	2681	4.25	2785	4.74	2886	5.23	2981	5.71	3069	6.17	3152	6.61	3230	7.03	3380	7.89	3528	8.79
5500	2361	2703	4.39	2791	4.83	2884	5.31	2979	5.82	3074	6.36	3166	6.91	3253	7.44	3335	7.95	3486	8.92	3626	9.86
6000	2575	2845	5.13	2923	5.56	3002	6.01	3085	6.51	3171	7.05	3259	7.62	3345	8.21	3430	8.80	3589	9.96	3733	11.04
6500	2790	2994	5.98	3067	6.43	3138	6.88	3211	7.36	3285	7.87	3363	8.43	3443	9.02	3524	9.64	3683	10.91	3833	12.18
7000	3004	3147	6.91	3216	7.41	3284	7.89	3351	8.38	3417	8.88	3485	9.41	3556	9.97	3628	10.58	3777	11.87	3925	13.24
7500	3219	3300	7.93	3369	8.49	3434	9.01	3498	9.54	3560	10.06	3622	10.58	3685	11.13	3749	11.70	3882	12.96	4021	14.34
8000	3433	3454	9.04	3522	9.65	3587	10.24	3649	10.81	3709	11.36	3768	11.92	3826	12.48	3884	13.04	4003	14.25	4128	15.59
8500	3648	3610	10.25	3677	10.91	3740	11.55	3802	12.18	3860	12.79	3917	13.38	3973	13.97	4028	14.56	4137	15.77	4249	17.05
9000	3863	3768	11.57	3832	12.27	3895	12.97	3955	13.65	4013	14.32	4069	14.97	4123	15.60	4177	16.23	4280	17.48	4384	18.76
9500	4077	3927	13.00	3990	13.75	4050	14.50	4110	15.23	4167	15.96	4222	16.67	4276	17.36	4328	18.03	4428	19.35	4527	20.67
10000	4292	4088	14.57	4149	15.36	4208	16.15	4265	16.93	4321	17.71	4376	18.47	4429	19.22	4481	19.95	4579	21.37	4674	22.76
10500	4506	4251	16.28	4309	17.10	4366	17.93	4422	18.76	4477	19.58	4531	20.39	4583	21.20	4634	21.99	4732	23.52	4825	25.00
11500	4936	4581	20.15	4635	21.03	4688	21.93	4741	22.83	4793	23.74	4844	24.65	4894	25.55	4943	26.44	5039	28.20	5130	29.91
12500	5365	4916	24.66	4966	25.61	5015	26.57	5065	27.54	5113	28.52	5162	29.50	5209	30.49	5257	31.48	5349	33.43		
13500	5794	5255	29.88	5302	30.90	5348	31.92														

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
4600	1974	3640	9.17	3806	10.29	3969	11.47	4128	12.69												
4800	2060	3656	9.45	3816	10.55	3975	11.72	4131	12.95	4284	14.22										
5000	2146	3679	9.77	3831	10.85	3985	12.00	4137	13.22	4288	14.49	4435	15.81								
5200	2232	3708	10.15	3853	11.19	4000	12.32	4147	13.52	4294	14.79	4439	16.11	4581	17.48	4719	18.87				
5400	2318	3742	10.58	3880	11.59	4020	12.69	4162	13.87	4304	15.12	4445	16.43	4585	17.80	4722	19.21	4857	20.65		
5600	2403	3781	11.05	3913	12.05	4047	13.12	4182	14.26	4319	15.49	4456	16.79	4592	18.14	4727	19.55	4860	21.00	5118	24.00
5800	2489	3823	11.55	3951	12.56	4079	13.60	4208	14.72	4339	15.92	4471	17.19	4603	18.52	4735	19.93	4865	21.38	5121	24.40
6000	2575	3866	12.07	3992	13.10	4116	14.14	4239	15.23	4364	16.40	4490	17.64	4618	18.96	4746	20.34	4873	21.77	5125	24.80
6200	2661	3909	12.60	4034	13.66	4156	14.72	4275	15.81	4394	16.95	4516	18.16	4638	19.44	4761	20.80	4885	22.22	5132	25.22
6600	2833	3992	13.64	4120	14.82	4240	15.96	4356	17.08	4469	18.22	4581	19.39	4693	20.61	4807	21.91	4922	23.27	5154	26.19
7000	3004	4068	14.62	4202	15.96	4326	17.23	4442	18.44	4553	19.64	4660	20.83	4766	22.05	4872	23.30	4978	24.60	5194	27.40
7500	3219	4160	15.80	4296	17.28	4425	18.74	4546	20.14	4660	21.48	4767	22.78	4870	24.06	4971	25.34	5070	26.63	5268	29.32
8000	3433	4258	17.04	4389	18.58	4517	20.16	4642	21.73	4760	23.26	48									



DESIGN 51 Double Width Airfoil Fans

Size 165

SPEED LIMITATIONS

OUTLET AREA

CLASS I—2881 RPM CLASS II—3756 RPM CLASS III—4733 RPM

2.82 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1600	567	612	0.09	699	0.12	769	0.16	900	0.24	1031	0.34										
1800	638	647	0.10	726	0.14	800	0.19	919	0.26	1036	0.36	1152	0.47								
2000	709	689	0.12	756	0.16	828	0.21	948	0.30	1052	0.39	1158	0.50	1263	0.63						
2500	887	800	0.19	854	0.24	907	0.28	1021	0.40	1125	0.51	1211	0.62	1294	0.73	1463	1.00	1629	1.33		
3000	1064	914	0.28	965	0.34	1011	0.39	1099	0.50	1194	0.64	1287	0.78	1368	0.92	1509	1.18	1648	1.47	1790	1.82
3500	1241	1031	0.39	1079	0.46	1123	0.53	1201	0.65	1275	0.78	1356	0.93	1439	1.11	1585	1.43	1708	1.73	1825	2.05
4000	1418	1152	0.54	1195	0.62	1236	0.70	1311	0.85	1377	0.99	1442	1.13	1512	1.30	1656	1.68	1785	2.06	1896	2.41
4500	1596	1276	0.73	1314	0.81	1352	0.90	1423	1.08	1487	1.24	1546	1.40	1604	1.56	1727	1.93	1855	2.37	1973	2.80
5000	1773	1401	0.95	1436	1.05	1471	1.14	1537	1.34	1599	1.53	1656	1.71	1709	1.89	1813	2.25	1926	2.68	2042	3.16
5500	1950	1528	1.23	1560	1.33	1591	1.43	1653	1.65	1712	1.86	1768	2.07	1819	2.27	1914	2.65	2010	3.06	2113	3.54
6000	2128	1655	1.55	1685	1.66	1714	1.77	1772	2.00	1827	2.24	1880	2.47	1931	2.70	2023	3.13	2109	3.55	2197	4.00
6500	2305	1783	1.93	1811	2.05	1838	2.17	1892	2.41	1944	2.67	1995	2.92	2043	3.18	2134	3.66	2216	4.11	2295	4.57
7500	2660	2041	2.87	2066	3.01	2090	3.15	2137	3.42	2183	3.71	2229	4.00	2273	4.30	2358	4.88	2437	5.45	2510	5.98
8500	3014	2301	4.09	2323	4.25	2344	4.40	2386	4.71	2428	5.03	2469	5.36	2509	5.68	2588	6.35	2663	7.02	2734	7.66
9500	3369	2562	5.63	2582	5.80	2601	5.97	2639	6.32	2676	6.67	2713	7.03	2750	7.39	2822	8.12	2892	8.87	2960	9.62
10500	3723	2824	7.52	2842	7.71	2859	7.90	2894	8.28	2928	8.66	2962	9.05	2996	9.44	3062	10.24	3126	11.06	3190	11.89
11500	4078	3087	9.80	3103	10.00	3119	10.21	3151	10.62	3182	11.04	3213	11.47	3244	11.89	3305	12.76	3365	13.64	3424	14.53
12500	4433	3350	12.50	3365	12.73	3380	12.95	3409	13.40	3438	13.85	3467	14.31	3496	14.77	3552	15.70	3608	16.64	3663	17.60
13500	4787	3613	15.67	3627	15.91	3641	16.15	3668	16.63	3695	17.12	3722	17.61	3749	18.11	3801	19.10	3853	20.11	3905	21.14
14500	5142	3877	19.34	3890	19.60	3903	19.86	3928	20.37	3953	20.89	3979	21.42	4004	21.95	4053	23.01	4102	24.09	4150	25.18
15500	5496	4141	23.55	4153	23.82	4165	24.10	4189	24.65	4213	25.20	4236	25.76	4260	26.33	4306	27.46	4352	28.60	4398	29.75
16500	5851	4405	28.33	4416	28.62	4428	28.91	4450	29.50	4473	30.09	4495	30.68	4517	31.27	4561	32.48	4604	33.69	4647	34.91
17500	6206	4669	33.72	4680	34.03	4691	34.34	4712	34.96	4733	35.58										

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
3400	1206	1940	2.37	2065	2.78	2186	3.22														
3600	1277	1954	2.47	2072	2.87	2190	3.31	2305	3.78												
3800	1348	1974	2.60	2085	2.99	2197	3.42	2308	3.88	2417	4.37	2523	4.88								
4000	1418	2000	2.75	2103	3.13	2209	3.54	2315	4.00	2421	4.49	2525	5.00	2627	5.54						
4500	1596	2076	3.20	2171	3.58	2263	3.98	2355	4.40	2448	4.86	2543	5.35	2638	5.88	2731	6.44	2915	7.61		
5000	1773	2151	3.65	2249	4.11	2338	4.54	2423	4.97	2505	5.40	2588	5.86	2671	6.36	2756	6.89	2926	8.04	3095	9.28
5500	1950	2219	4.07	2321	4.61	2415	5.13	2501	5.62	2581	6.10	2657	6.57	2733	7.04	2807	7.54	2959	8.62	3114	9.82
6000	2128	2291	4.52	2388	5.09	2484	5.68	2574	6.26	2658	6.82	2736	7.35	2809	7.87	2880	8.38	3017	9.43	3155	10.55
6500	2305	2377	5.06	2463	5.62	2553	6.22	2642	6.86	2728	7.50	2810	8.12	2886	8.73	2958	9.30	3092	10.42	3219	11.54
7000	2482	2475	5.73	2551	6.26	2630	6.84	2712	7.48	2796	8.15	2878	8.84	2957	9.53	3032	10.20	3170	11.47	3296	12.68
7500	2660	2580	6.50	2649	7.03	2720	7.59	2793	8.20	2869	8.86	2947	9.57	3024	10.30	3100	11.04	3244	12.50	3374	13.87
8000	2837	2689	7.35	2755	7.91	2819	8.47	2885	9.06	2953	9.70	3023	10.39	3095	11.12	3168	11.88	3312	13.46	3447	15.01
9000	3191	2912	9.28	2974	9.93	3034	10.56	3092	11.18	3149	11.81	3207	12.46	3266	13.14	3327	13.87	3453	15.45	3583	17.17
10000	3546	3138	11.49	3198	12.25	3256	12.99	3312	13.71	3365	14.40	3417	15.10	3469	15.79	3521	16.50	3626	17.99	3737	19.63
11000	3901	3366	14.03	3425	14.89	3481	15.74	3535	16.57	3588	17.38	3638	18.16	3687	18.93	3735	19.70	3829	21.23	3923	22.81
12000	4255	3599	16.95	3654	17.90	3708	18.84	3761	19.78	3812	20.70	3861	21.60	3909	22.48	3956	23.34	4045	25.02	4132	26.68
13000	4610	3836	20.32	3888	21.34	3939	22.36	3990	23.38	4039	24.40	4087	25.41	4134	26.41	4180	27.38	4267	29.28	4350	31.11
14000	4965	4077	24.16	4125	25.25	4174	26.34	4222	27.44	4269	28.55	4315	29.65	4360	30.74	4405	31.83	4491	33.95	4573	36.01
15000	5319	4320	28.53	4366	29.68	4412	30.84	4457	32.01	4502	33.19	4546	34.37	4590	35.55	4633	36.73	4717	39.06		
16000	5674	4566	33.46	4610	34.67	4653	35.89	4696	37.13	4738	38.37										

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
5600	1986	3272	11.24	3423	12.63	3571	14.08	3714	15.58												
5800	2057	3282	11.50	3429	12.87	3574	14.33	3716	15.84	3854	17.40										
6000	2128	3296	11.80	3438	13.15	3579	14.59	3719	16.11	3856	17.68	3989	19.29								
6200	2199	3313	12.13	3450	13.45	3587	14.88	3724	16.38	3859	17.96	3991	19.59	4120	21.26						
6600	2340	3359	12.93	3485	14.19	3613	15.56	3742	17.02	3871	18.58	3999	20.21	4125	21.90	4249	23.64	4370	25.41		
7000	2482	3416	13.87	3533	15.11	3651	16.41	3771	17.82	3892	19.33	4014	20.92	4136	22.59	4256	24.33	4375	26.13	4607	29.85
7500	2660	3493	15.17	3607	16.45	3717	17.74	3826	19.09	3937	20.52	4049	22.04	4162	23.65	4276	25.35	4390	27.12	4614	30.85
8000	2837	3571	16.49	3685	17.89	3793	19.26	3897	20.63	4000	22.02	4103	23.48	4207	25.01	4312	26.64	4418	28.35	4631	32.00
8500	3014	3642	17.75	3761	19.34	3871	20.85	3975	22.31	4075	23.76	4172	25.22	4269	26.71	4366	28.27	4464	29.90	4662	33.41
9000	3191	3710	18.94	3832	20.70	3946	22.40	4053	24.03	4153	25.60	4249	27.13	4342	28.67	4434	30.22	4526	31.81	4709	35.17
9500	3369	3778	20.14	3899	22.01	4016	23.87	4126	25.69	4230	27.44	4328	29.12	4421	30.76	4511	32.38	4599	34.00		
10000	3546	3851	21.42	3968	23.33	4083	25.29	4195	27.26	4302	29.20	4403	31.08	4499	32.88	4589	34.62	4677	36.34		
10500	3723	3932	22.86	4041	24.75	4152	26.75	4262	28.80	4370	30.88	4473	32.93	4572	34.93	4666	36.				



DESIGN 51 Double Width Airfoil Fans

Size 182

SPEED LIMITATIONS

CLASS I—2639 RPM CLASS II—3441 RPM CLASS III—4342 RPM

OUTLET AREA

3.45 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	522	541	0.10	619	0.14	684	0.18	813	0.27												
2000	580	563	0.11	641	0.16	706	0.20	821	0.29	937	0.41										
2500	725	638	0.16	696	0.21	760	0.26	871	0.38	962	0.49	1055	0.62	1148	0.77						
3000	870	722	0.23	772	0.28	820	0.33	924	0.47	1019	0.61	1097	0.74	1173	0.88	1329	1.21	1480	1.60		
3500	1014	807	0.31	855	0.38	897	0.44	980	0.57	1071	0.74	1155	0.91	1227	1.06	1358	1.37	1491	1.74	1623	2.16
4500	1304	984	0.55	1025	0.64	1064	0.72	1133	0.89	1197	1.05	1263	1.22	1334	1.43	1469	1.87	1582	2.27	1684	2.65
5500	1594	1168	0.90	1203	1.00	1237	1.11	1301	1.32	1359	1.53	1413	1.72	1464	1.91	1574	2.36	1690	2.89	1798	3.43
6500	1884	1357	1.39	1387	1.51	1416	1.63	1473	1.88	1528	2.14	1579	2.38	1625	2.62	1714	3.07	1804	3.57	1901	4.15
7500	2174	1548	2.04	1574	2.18	1600	2.32	1651	2.60	1700	2.90	1748	3.19	1793	3.48	1876	4.02	1953	4.54	2029	5.09
8500	2464	1741	2.88	1764	3.03	1787	3.19	1833	3.51	1877	3.84	1921	4.17	1964	4.50	2044	5.16	2117	5.77	2185	6.36
9500	2754	1935	3.94	1956	4.11	1977	4.28	2018	4.63	2059	4.99	2098	5.36	2138	5.73	2213	6.48	2284	7.20	2350	7.90
10500	3043	2130	5.23	2149	5.42	2169	5.61	2206	5.99	2243	6.39	2280	6.78	2316	7.19	2386	8.01	2454	8.84	2518	9.64
11500	3333	2326	6.79	2344	7.00	2361	7.20	2396	7.62	2430	8.05	2463	8.48	2497	8.91	2562	9.80	2626	10.71	2688	11.61
12500	3623	2522	8.64	2539	8.86	2555	9.09	2587	9.54	2618	10.00	2650	10.46	2681	10.93	2741	11.88	2801	12.86	2860	13.84
13500	3913	2719	10.80	2734	11.04	2749	11.29	2779	11.77	2809	12.26	2838	12.76	2866	13.26	2923	14.28	2979	15.32	3035	16.38
14500	4203	2916	13.31	2930	13.57	2944	13.82	2972	14.34	3000	14.87	3027	15.40	3054	15.94	3107	17.02	3160	18.12	3212	19.24
15500	4493	3114	16.18	3127	16.45	3140	16.73	3166	17.28	3192	17.84	3218	18.41	3243	18.98	3293	20.12	3343	21.29	3392	22.48
16500	4783	3311	19.44	3324	19.73	3336	20.02	3361	20.61	3385	21.21	3409	21.81	3433	22.41	3481	23.62	3528	24.85	3574	26.10
17500	5072	3509	23.11	3521	23.42	3532	23.73	3556	24.36	3579	24.98	3602	25.62	3624	26.26	3669	27.54	3714	28.83	3758	30.15
18500	5362	3707	27.23	3718	27.55	3729	27.88	3751	28.54	3773	29.20	3795	29.87	3816	30.54	3859	31.89	3901	33.26	3943	34.64
19500	5652	3905	31.81	3915	32.15	3926	32.50	3947	33.19	3968	33.89	3988	34.59	4009	35.29	4050	36.72	4090	38.15	4130	39.59
20500	5942	4103	36.88	4113	37.24	4123	37.61	4143	38.34	4163	39.07	4182	39.80	4202	40.54	4241	42.03	4280	43.53	4318	45.04
21500	6232	4301	42.47	4311	42.85	4320	43.23	4339	43.99												

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
4200	1217	1766	2.90	1878	3.40	1987	3.94	2093	4.50												
4500	1304	1785	3.08	1889	3.55	1993	4.08	2096	4.65	2196	5.24										
5000	1449	1834	3.46	1925	3.91	2017	4.40	2110	4.94	2204	5.53	2297	6.15	2388	6.80	2476	7.47				
5500	1594	1892	3.92	1979	4.39	2061	4.87	2144	5.37	2228	5.92	2313	6.52	2398	7.16	2483	7.83	2569	8.52		
6000	1739	1948	4.37	2037	4.91	2118	5.43	2195	5.94	2270	6.47	2346	7.03	2423	7.63	2501	8.28	2649	9.25	2811	11.19
6500	1884	1999	4.79	2092	5.42	2176	6.02	2253	6.59	2326	7.15	2396	7.71	2466	8.28	2536	8.88	2678	10.22	2823	11.69
7000	2029	2051	5.21	2142	5.90	2229	6.58	2310	7.25	2385	7.87	2454	8.48	2521	9.07	2586	9.67	2715	10.94	2847	12.34
8000	2319	2177	6.28	2254	6.94	2333	7.67	2413	8.45	2491	9.24	2566	10.02	2636	10.77	2702	11.49	2824	12.87	2939	14.24
9000	2609	2331	7.73	2394	8.36	2459	9.04	2527	9.79	2597	10.60	2668	11.45	2739	12.33	2808	13.22	2938	14.96	3056	16.59
10000	2899	2495	9.46	2553	10.15	2610	10.85	2677	11.56	2725	12.32	2786	13.13	2848	14.01	2912	14.93	3040	16.87	3163	18.83
11000	3188	2662	11.43	2719	12.23	2773	12.99	2825	13.76	2877	14.52	2929	15.31	2981	16.13	3036	17.00	3149	18.91	3265	20.98
12000	3478	2831	13.63	2887	14.54	2939	15.42	2990	16.28	3039	17.11	3087	17.94	3134	18.78	3181	19.63	3278	21.44	3380	23.44
13000	3768	3002	16.09	3056	17.11	3107	18.11	3157	19.08	3205	20.02	3251	20.93	3296	21.84	3340	22.74	3428	24.56	3516	26.47
14000	4058	3176	18.87	3227	19.97	3277	21.07	3326	22.15	3373	23.21	3418	24.24	3462	25.24	3505	26.23	3587	28.17	3669	30.12
15000	4348	3352	21.98	3401	23.17	3449	24.35	3496	25.52	3542	26.69	3586	27.83	3630	28.96	3672	30.06	3752	32.18	3830	34.27
16000	4638	3530	25.48	3577	26.73	3623	27.99	3668	29.25	3712	30.50	3756	31.75	3798	32.98	3840	34.20	3919	36.56	3995	38.83
17000	4928	3711	29.37	3755	30.69	3799	32.01	3842	33.35	3885	34.69	3927	36.03	3968	37.36	4009	38.68	4087	41.27	4162	43.78
18000	5217	3893	33.70	3935	35.08	3977	36.47	4019	37.88	4060	39.29	4100	40.71	4140	42.13	4180	43.54	4256	46.34	4330	49.07
19000	5507	4077	38.48	4117	39.92	4157	41.38	4197	42.85	4236	44.33	4275	45.83	4314	47.33						
20000	5797	4263	43.74	4301	45.25	4339	46.77														

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
6800	1971	2974	13.63	3110	15.31	3244	17.07	3375	18.89												
7500	2174	3010	14.67	3134	16.27	3259	17.99	3384	19.82	3506	21.73	3626	23.70	3744	25.72						
8000	2319	3052	15.66	3167	17.19	3283	18.84	3400	20.62	3517	22.50	3633	24.47	3748	26.51	3861	28.62	3971	30.77		
8500	2464	3106	16.85	3212	18.34	3319	19.92	3428	21.62	3538	23.44	3648	25.36	3758	27.39	3868	29.49	3976	31.67	4186	36.17
9000	2609	3164	18.14	3267	19.67	3368	21.24	3469	22.87	3570	24.61	3674	26.47	3777	28.43	3882	30.49	3986	32.65	4191	37.17
9500	2754	3223	19.46	3326	21.10	3424	22.72	3520	24.36	3615	26.05	3710	27.82	3808	29.72	3906	31.71	4004	33.81	4202	38.27
10000	2899	3278	20.75	3384	22.56	3483	24.29	3577	26.00	3668	27.71	3759	29.46	3849	31.28	3941	33.20	4033	35.22	4220	39.56
10500	3043	3330	21.96	3439	23.97	3541	25.88	3636	27.71	3726	29.50	3814	31.29	3901	33.11	3987	34.98	4073	36.92	4249	41.11
11000	3188	3380	23.14	3491	25.30	3596	27.41	3694	29.42	3785	31.35	3872	33.23	3957	35.11	4040	36.99	4123	38.92	4288	42.98
11500	3333	3432	24.34	3542	26.60	3648	28.86	3748	31.07	3842	33.19	3931	35.22	4016	37.20	4098	39.16	4178	41.12	4336	45.14
12000	3478	3486	25.61	3593	27.92	3698	30.28	3800	32.64	3897	34.95	3988	37.18	4074	39.32	4157	41.40	4236	43.45		
12500	3623	3545	27.01	3646	29.30	3749	31.71	3850	34.18	3948	36.63	4042	39.05	4130	41.39	4215	43.65	4295	45.83		
1																					



DESIGN 51 Double Width Airfoil Fans

Size 200

SPEED LIMITATIONS

CLASS I—2355 RPM CLASS II—3071 RPM CLASS III—3869 RPM

OUTLET AREA

4.14 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2200	531	490	0.12	561	0.17	619	0.22	736	0.34												
3000	725	571	0.19	626	0.24	684	0.32	783	0.45	867	0.59	953	0.75	1039	0.93						
4000	966	696	0.33	740	0.41	779	0.48	863	0.64	949	0.84	1022	1.02	1087	1.19	1213	1.57	1343	2.04	1467	2.56
5000	1208	825	0.54	865	0.64	901	0.73	966	0.91	1031	1.10	1101	1.33	1170	1.57	1288	2.03	1390	2.46	1491	2.94
6000	1449	959	0.83	994	0.95	1028	1.07	1089	1.29	1143	1.50	1196	1.72	1251	1.96	1368	2.53	1475	3.11	1567	3.63
7000	1691	1097	1.22	1128	1.36	1157	1.49	1214	1.77	1266	2.03	1313	2.28	1358	2.52	1451	3.06	1552	3.71	1649	4.40
8000	1932	1238	1.74	1265	1.89	1291	2.04	1342	2.35	1391	2.66	1437	2.97	1479	3.25	1559	3.81	1640	4.42	1726	5.13
9000	2174	1379	2.39	1404	2.55	1427	2.72	1474	3.06	1519	3.42	1563	3.77	1604	4.11	1679	4.76	1749	5.39	1820	6.05
10000	2415	1522	3.19	1544	3.37	1566	3.55	1608	3.93	1650	4.32	1691	4.71	1730	5.10	1803	5.86	1870	6.57	1933	7.27
11000	2657	1666	4.16	1686	4.36	1706	4.56	1745	4.97	1783	5.39	1821	5.82	1858	6.25	1928	7.11	1993	7.93	2053	8.71
12000	2899	1811	5.32	1829	5.53	1847	5.75	1883	6.20	1919	6.65	1954	7.11	1988	7.58	2055	8.52	2118	9.45	2177	10.34
13000	3140	1955	6.68	1973	6.91	1990	7.15	2023	7.63	2056	8.11	2089	8.60	2121	9.10	2184	10.12	2245	11.14	2302	12.14
14000	3382	2101	8.26	2117	8.51	2133	8.77	2164	9.28	2195	9.79	2225	10.32	2255	10.85	2315	11.94	2373	13.04	2428	14.14
15000	3623	2246	10.08	2261	10.35	2276	10.62	2306	11.17	2335	11.72	2363	12.28	2392	12.84	2447	13.99	2502	15.16	2556	16.35
16000	3865	2392	12.16	2406	12.45	2420	12.73	2448	13.31	2475	13.90	2502	14.49	2529	15.08	2582	16.30	2634	17.54	2685	18.80
17000	4106	2538	14.51	2552	14.81	2565	15.11	2591	15.73	2617	16.35	2642	16.97	2668	17.60	2718	18.88	2767	20.18	2816	21.51
18000	4348	2685	17.14	2697	17.46	2710	17.79	2734	18.43	2759	19.09	2783	19.75	2807	20.41	2855	21.75	2902	23.12	2948	24.51
19000	4589	2831	20.09	2843	20.42	2855	20.76	2878	21.44	2902	22.13	2925	22.82	2948	23.52	2993	24.93	3038	26.36	3082	27.82
20000	4831	2978	23.35	2989	23.71	3000	24.06	3022	24.78	3045	25.50	3067	26.23	3089	26.96	3132	28.43	3175	29.93	3217	31.45
21000	5072	3124	26.95	3135	27.33	3146	27.70	3167	28.45	3188	29.21	3209	29.97	3230	30.74	3272	32.28	3313	33.84	3353	35.42
22000	5314	3271	30.92	3281	31.31	3292	31.70	3312	32.48	3332	33.27	3352	34.07	3372	34.87	3412	36.48	3451	38.11	3490	39.76
24000	5797	3565	39.98	3574	40.40	3584	40.83	3602	41.68	3621	42.54	3640	43.40	3658	44.28	3695	46.02	3731	47.79	3767	49.56
26000	6280	3859	50.67	3867	51.13	3876	51.59														

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
5000	1208	1595	3.49	1698	4.10	1798	4.75														
6000	1449	1651	4.14	1735	4.69	1820	5.30	1907	5.97	1993	6.69	2078	7.45	2160	8.25						
7000	1691	1737	5.05	1815	5.66	1889	6.26	1960	6.87	2032	7.53	2105	8.24	2179	9.00	2253	9.80	2400	11.54	2542	13.38
8000	1932	1815	5.91	1898	6.69	1975	7.44	2045	8.14	2111	8.83	2174	9.51	2237	10.22	2299	10.95	2427	12.57	2556	14.37
9000	2174	1896	6.81	1974	7.65	2052	8.54	2127	9.42	2196	10.27	2261	11.08	2321	11.86	2379	12.63	2491	14.18	2602	15.83
10000	2415	1996	7.99	2062	8.79	2132	9.67	2202	10.62	2273	11.60	2340	12.59	2405	13.55	2465	14.48	2576	16.23	2680	17.93
11000	2657	2111	9.47	2168	10.25	2227	11.08	2288	12.00	2352	12.98	2416	14.03	2480	15.11	2543	16.19	2660	18.31	2767	20.31
12000	2899	2233	11.19	2286	12.02	2338	12.86	2391	13.73	2446	14.67	2502	15.68	2560	16.76	2619	17.89	2736	20.24	2848	22.59
13000	3140	2357	13.11	2408	14.03	2457	14.93	2506	15.84	2554	16.76	2603	17.72	2654	18.74	2706	19.84	2814	22.21	2923	24.73
14000	3382	2481	15.21	2532	16.25	2580	17.25	2626	18.23	2672	19.20	2717	20.17	2762	21.18	2807	22.22	2903	24.49	3002	27.00
15000	3623	2607	17.52	2657	18.67	2704	19.79	2750	20.87	2793	21.92	2836	22.96	2878	24.00	2920	25.05	3005	27.25	3093	29.66
16000	3865	2735	20.06	2783	21.31	2829	22.53	2874	23.73	2917	24.90	2959	26.02	2999	27.14	3039	28.25	3118	30.48	3197	32.82
17000	4106	2863	22.85	2910	24.19	2955	25.51	2999	26.82	3042	28.10	3083	29.35	3123	30.56	3161	31.75	3236	34.11	3310	36.49
18000	4348	2994	25.92	3039	27.34	3083	28.76	3125	30.16	3167	31.55	3208	32.91	3247	34.25	3285	35.55	3358	38.07	3429	40.57
19000	4589	3125	29.29	3169	30.79	3211	32.28	3253	33.78	3293	35.26	3333	36.73	3372	38.18	3409	39.60	3482	42.35	3550	45.00
20000	4831	3259	32.99	3300	34.55	3341	36.12	3381	37.70	3421	39.27	3459	40.84	3497	42.39	3534	43.92	3606	46.90	3674	49.78
21000	5072	3393	37.03	3433	38.65	3472	40.29	3511	41.94	3549	43.60	3587	45.25	3624	46.90	3660	48.53	3731	51.74	3798	54.85
22000	5314	3529	41.42	3567	43.11	3605	44.81	3642	46.54	3679	48.27	3716	50.00	3752	51.73	3787	53.46	3856	56.87		
23000	5556	3665	46.20	3702	47.95	3738	49.71	3774	51.50	3810	53.30	3846	55.11								
24000	5797	3802	51.36	3838	53.18	3873	55.01														

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
8500	2053	2697	16.91	2818	18.95	2938	21.10	3055	23.34												
9000	2174	2716	17.66	2831	19.64	2946	21.76	3060	24.00	3172	26.33	3281	28.73								
9500	2295	2744	18.57	2852	20.48	2960	22.55	3069	24.75	3178	27.07	3285	29.49	3390	31.98	3493	34.53				
10000	2415	2780	19.67	2880	21.51	2982	23.50	3085	25.64	3189	27.91	3293	30.31	3395	32.80	3496	35.38	3595	38.02		
10500	2536	2821	20.90	2917	22.73	3012	24.65	3109	26.71	3207	28.91	3306	31.25	3404	33.72	3502	36.28	3600	38.94	3789	44.45
11000	2657	2865	22.20	2958	24.08	3049	25.99	3140	27.99	3232	30.12	3325	32.38	3419	34.78	3514	37.30	3608	39.93	3794	45.46
11500	2778	2908	23.53	3001	25.51	3090	27.47	3178	29.46	3265	31.53	3352	33.72	3441	36.05	3531	38.50	3621	41.08	3801	46.55
12000	2899	2950	24.84	3045	26.97	3134	29.03	3219	31.07	3303	33.15	3386	35.29	3470	37.53	3555	39.92	3640	42.42	3813	47.78
12500	3019	2990	26.09	3087	28.42	3177	30.62	3262	32.76	3345	34.90	3425	37.05	3505	39.26	3585	41.57	3666	44.00	3831	49.21
13000	3140	3028	27.29	3127	29.80	3220	32.20	3306	34.49	3388	36.72	3467	38.94	3545	41.17	3622	43.45	3699	45.82	3855	50.88
13500	3261	3065	28.48	3166	31.14	3260	33.73	3349	36.21	3432	38.58	3511	40.90	3587	43.20	3662	45.51	3737	47.87		
14000	3382	3104	29.69	3203	32.44	3299	35.19	3390	37.86	3475	40.43										



DESIGN 51 Double Width Airfoil Fans

Size 222

SPEED LIMITATIONS

CLASS I—2202 RPM CLASS II—2870 RPM CLASS III—3616 RPM

OUTLET AREA

5.12 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2600	508	444	0.14	509	0.20	562	0.25	671	0.40												
3000	586	470	0.16	534	0.24	588	0.30	680	0.44	774	0.61										
4000	781	558	0.28	602	0.35	648	0.43	741	0.62	815	0.80	884	0.98	954	1.19	1094	1.69				
5000	977	653	0.43	693	0.53	729	0.61	800	0.81	877	1.05	946	1.28	1005	1.50	1115	1.95	1228	2.50	1340	3.13
6000	1172	752	0.64	788	0.76	822	0.88	881	1.09	940	1.31	1004	1.59	1067	1.88	1175	2.43	1268	2.95	1361	3.52
7000	1367	854	0.92	886	1.06	917	1.20	974	1.46	1024	1.70	1074	1.96	1127	2.25	1236	2.93	1333	3.59	1416	4.19
8000	1563	958	1.29	987	1.44	1015	1.59	1068	1.91	1117	2.20	1161	2.48	1204	2.76	1296	3.42	1392	4.20	1481	4.97
9000	1758	1064	1.74	1090	1.91	1115	2.08	1165	2.44	1211	2.78	1254	3.12	1293	3.43	1370	4.07	1452	4.83	1538	5.69
10000	1953	1171	2.30	1194	2.49	1218	2.68	1263	3.06	1307	3.46	1348	3.84	1387	4.21	1457	4.91	1527	5.63	1601	6.46
11000	2148	1278	2.98	1300	3.18	1322	3.39	1364	3.81	1404	4.24	1444	4.67	1481	5.10	1550	5.89	1613	6.66	1676	7.45
12000	2344	1387	3.79	1407	4.01	1427	4.23	1466	4.68	1504	5.14	1541	5.62	1577	6.09	1644	7.00	1705	7.85	1763	8.69
13000	2539	1496	4.74	1515	4.97	1533	5.21	1569	5.69	1605	6.19	1640	6.70	1674	7.21	1739	8.22	1799	9.19	1854	10.10
14000	2734	1606	5.84	1623	6.09	1640	6.34	1674	6.86	1707	7.39	1740	7.93	1772	8.47	1835	9.58	1893	10.65	1948	11.68
15000	2930	1715	7.10	1732	7.37	1748	7.64	1780	8.19	1811	8.75	1842	9.32	1872	9.90	1932	11.08	1988	12.25	2042	13.39
16000	3125	1826	8.54	1841	8.82	1856	9.11	1886	9.70	1916	10.29	1945	10.89	1973	11.50	2030	12.75	2085	14.01	2137	15.26
18000	3516	2046	11.99	2060	12.31	2074	12.63	2101	13.28	2127	13.94	2153	14.61	2179	15.28	2230	16.66	2281	18.07	2330	19.49
20000	3906	2268	16.27	2280	16.63	2293	16.99	2317	17.71	2341	18.44	2365	19.17	2389	19.91	2435	21.42	2481	22.95	2526	24.51
22000	4297	2490	21.50	2501	21.89	2513	22.28	2535	23.07	2557	23.87	2579	24.67	2600	25.47	2643	27.11	2688	28.77	2727	30.46
24000	4688	2712	27.75	2723	28.17	2733	28.60	2754	29.46	2774	30.32	2794	31.19	2814	32.07	2854	33.83	2893	35.63	2931	37.44
26000	5078	2935	35.12	2945	35.58	2954	36.04	2973	36.97	2992	37.90	3011	38.84	3029	39.78	3066	41.69	3103	43.61	3139	45.55
28000	5469	3158	43.71	3167	44.20	3176	44.70	3194	45.69	3211	46.69	3229	47.70	3246	48.71	3280	50.75	3314	52.81	3348	54.88
30000	5859	3381	53.60	3390	54.13	3398	54.66	3414	55.72	3431	56.79	3447	57.87	3463	58.95	3496	61.13	3528	63.32	3559	65.53
32000	6250	3605	64.90	3612	65.46	3620	66.03														

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
6500	1270	1470	4.45	1557	5.15	1644	5.93	1730	6.76	1813	7.62										
7500	1465	1526	5.22	1599	5.88	1673	6.59	1748	7.37	1823	8.22	1899	9.12	1973	10.07	2046	11.06				
8500	1660	1591	6.14	1663	6.89	1730	7.61	1795	8.35	1859	9.13	1925	9.97	1991	10.87	2058	11.83	2191	13.90	2320	16.12
9500	1855	1649	6.98	1726	7.91	1795	8.79	1859	9.62	1919	10.43	1977	11.25	2035	12.09	2093	12.97	2211	14.93	2331	17.09
10500	2051	1709	7.85	1783	8.86	1855	9.89	1922	10.91	1985	11.87	2043	12.79	2098	13.69	2151	14.59	2255	16.44	2361	18.45
11500	2246	1780	8.91	1845	9.90	1912	10.97	1979	12.09	2044	13.23	2106	14.33	2163	15.40	2217	16.41	2317	18.38	2414	20.37
12500	2441	1863	10.25	1919	11.18	1978	12.21	2039	13.34	2101	14.53	2163	15.76	2222	16.99	2279	18.20	2383	20.49	2478	22.65
13500	2637	1953	11.81	2004	12.75	2055	13.74	2109	14.81	2165	15.98	2222	17.23	2279	18.53	2336	19.86	2444	22.50	2543	25.01
14500	2832	2045	13.55	2094	14.56	2141	15.57	2199	16.61	2258	17.72	2289	18.92	2341	20.21	2395	21.56	2501	24.39	2603	27.23
15500	3027	2139	15.45	2186	16.55	2232	17.63	2276	18.71	2321	19.81	2366	20.96	2413	22.19	2461	23.50	2560	26.34	2660	29.36
16500	3223	2234	17.51	2280	18.72	2325	19.89	2367	21.04	2409	22.18	2451	23.34	2493	24.54	2536	25.80	2626	28.54	2719	31.57
17500	3418	2329	19.72	2375	21.05	2419	22.34	2460	23.58	2501	24.80	2541	26.01	2580	27.23	2619	28.48	2700	31.12	2785	34.06
18500	3613	2425	22.12	2470	23.55	2513	24.95	2555	26.32	2594	27.63	2633	28.92	2670	30.20	2708	31.49	2782	34.12	2859	36.94
19500	3809	2522	24.71	2566	26.24	2608	27.75	2649	29.22	2688	30.66	2726	32.06	2763	33.42	2799	34.77	2870	37.48	2941	40.28
20500	4004	2620	27.52	2662	29.14	2704	30.74	2744	32.32	2783	33.88	2820	35.39	2857	36.86	2892	38.30	2960	41.15	3028	44.01
21500	4199	2718	30.56	2760	32.26	2800	33.95	2839	35.63	2878	37.29	2915	38.92	2951	40.51	2986	42.07	3053	45.08	3118	48.07
23500	4590	2919	37.41	2958	39.24	2996	41.09	3033	42.94	3070	44.79	3105	46.62	3141	48.44	3175	50.23	3241	53.71	3303	57.05
25500	4980	3123	45.35	3159	47.32	3194	49.30	3230	51.30	3264	53.31	3299	55.32	3332	57.32	3366	59.31	3430	63.24	3491	67.05
27500	5371	3329	54.50	3363	56.59	3396	58.70	3430	60.83	3462	62.98	3495	65.15	3527	67.31	3559	69.48	3621	73.79		
29500	5762	3538	64.93	3570	67.15	3601	69.39														

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
10000	1953	2456	20.00	2569	22.46	2680	25.03	2787	27.70												
10500	2051	2468	20.68	2576	23.09	2684	25.66	2790	28.35	2893	31.13										
11000	2148	2486	21.49	2589	23.84	2692	26.36	2794	29.03	2896	31.83	2995	34.72	3092	37.68						
11500	2246	2509	22.45	2606	24.72	2704	27.18	2803	29.81	2901	32.58	2998	35.48	3094	38.47	3188	41.54				
12000	2344	2537	23.56	2628	25.76	2721	28.15	2815	30.70	2910	33.43	3004	36.30	3098	39.29	3190	42.38	3281	45.55		
12500	2441	2568	24.78	2655	26.97	2743	29.27	2833	31.76	2923	34.41	3014	37.23	3104	40.19	3195	43.27	3284	46.45	3458	53.05
13000	2539	2600	26.06	2686	28.29	2770	30.57	2855	32.98	2941	35.56	3027	38.31	3115	41.21	3202	44.25	3289	47.42	3460	54.05
13500	2637	2633	27.38	2718	29.68	2801	32.00	2882	34.38	2963	36.88	3046	39.56	3129	42.38	3213	45.37	3297	48.48	3464	55.09
14500	2832	2698	29.98	2784	32.58	2866	35.08	2944	37.55	3020	40.04	3095	42.61	3171	45.29	3248	48.12	3325	51.10	3482	57.50
15500	3027	2756	32.41	2847	35.39	2931	38.24	3010	40.95	3085	43.60	3157	46.25	3228	48.92	3299	51.66	3370	54.49	3513	60.59
16500	3223	2813	34.76	2904	38.02	2992	41.23	3074	44.33	3150	47.30	3223	50.16	3293	52.98	3361	55.80	3428	58.63	3561	64.52
17500	3418	2873	37.25	2961	40.62	3048	44.07	3132	47.50	3212	50.86	3288	54.10</								



DESIGN 51 Double Width Airfoil Fans

Size 245

SPEED LIMITATIONS

OUTLET AREA

CLASS I—1862 RPM CLASS II—2427 RPM CLASS III—3059 RPM

6.21 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3500	564	399	0.19	454	0.26	502	0.34	590	0.52												
4000	644	425	0.23	476	0.31	523	0.40	604	0.58	681	0.79	753	1.02								
5000	805	485	0.34	526	0.43	567	0.53	645	0.75	712	0.97	775	1.21	836	1.47						
6000	966	549	0.48	586	0.59	620	0.71	689	0.95	754	1.21	813	1.48	867	1.75	971	2.34	1070	3.00		
7000	1127	617	0.67	650	0.80	681	0.93	740	1.20	799	1.48	856	1.79	909	2.10	1004	2.72	1093	3.39	1181	4.13
8000	1288	686	0.91	716	1.06	745	1.21	799	1.51	850	1.81	901	2.14	952	2.48	1046	3.19	1130	3.90	1208	4.65
9000	1449	757	1.20	785	1.37	811	1.54	861	1.87	908	2.21	953	2.56	999	2.92	1089	3.70	1172	4.49	1247	5.29
10000	1610	829	1.56	855	1.75	879	1.94	925	2.31	969	2.68	1011	3.06	1052	3.44	1134	4.26	1215	5.13	1290	6.01
11000	1771	902	1.99	926	2.20	948	2.40	992	2.81	1033	3.22	1072	3.64	1110	4.05	1185	4.90	1260	5.82	1333	6.78
13000	2093	1050	3.10	1071	3.34	1090	3.58	1129	4.07	1165	4.55	1200	5.04	1235	5.52	1300	6.50	1363	7.49	1426	8.53
15000	2415	1200	4.58	1218	4.85	1235	5.13	1269	5.69	1302	6.25	1334	6.81	1365	7.37	1425	8.49	1482	9.62	1537	10.75
17000	2738	1351	6.48	1367	6.80	1382	7.11	1413	7.74	1443	8.38	1472	9.01	1500	9.65	1555	10.92	1608	12.19	1658	13.46
19000	3060	1502	8.87	1517	9.23	1531	9.58	1559	10.28	1586	10.99	1613	11.70	1639	12.41	1689	13.83	1738	15.25	1785	16.67
21000	3382	1655	11.81	1668	12.20	1681	12.59	1706	13.37	1732	14.15	1756	14.93	1780	15.71	1827	17.28	1872	18.85	1916	20.41
23000	3704	1807	15.35	1820	15.77	1832	16.20	1855	17.05	1878	17.90	1901	18.76	1923	19.61	1967	21.33	2009	23.05	2051	24.76
25000	4026	1961	19.54	1972	20.00	1983	20.46	2005	21.39	2026	22.32	2047	23.24	2068	24.18	2109	26.04	2149	27.90	2188	29.77
27000	4348	2114	24.45	2124	24.95	2135	25.45	2155	26.44	2175	27.44	2195	28.45	2214	29.45	2253	31.46	2290	33.48	2327	35.49
29000	4670	2268	30.13	2277	30.67	2287	31.20	2306	32.27	2325	33.35	2343	34.42	2362	35.50	2398	37.66	2433	39.82	2468	41.98
31000	4992	2421	36.64	2430	37.21	2439	37.78	2457	38.93	2475	40.08	2493	41.22	2510	42.37	2544	44.68	2577	46.99	2610	49.30
33000	5314	2575	44.04	2584	44.65	2592	45.26	2609	46.47	2626	47.69	2642	48.91	2659	50.14	2691	52.59	2723	55.04	2754	57.50
35000	5636	2729	52.38	2737	53.02	2745	53.67	2761	54.96	2777	56.25	2793	57.55	2808	58.85	2839	61.44	2869	64.04	2899	66.65
37000	5958	2883	61.72	2891	62.40	2899	63.09	2914	64.45	2929	65.82	2944	67.18	2958	68.55	2988	71.30	3016	74.05	3045	76.80
39000	6280	3038	72.12	3045	72.84	3052	73.56														

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
7500	1208	1274	5.17	1352	6.02																
8000	1288	1286	5.45	1362	6.30	1435	7.21	1507	8.15												
9000	1449	1318	6.11	1387	6.97	1456	7.89	1523	8.85	1589	9.86	1654	10.90								
10000	1610	1359	6.89	1424	7.79	1487	8.72	1549	9.69	1611	10.71	1672	11.77	1732	12.87	1790	14.01				
11000	1771	1402	7.75	1466	8.72	1526	9.69	1585	10.69	1642	11.72	1699	12.79	1755	13.90	1810	15.05	1919	17.46	2025	20.00
12000	1932	1445	8.65	1509	9.71	1569	10.76	1626	11.82	1681	12.90	1734	13.99	1787	15.11	1839	16.27	1941	18.70	2042	21.28
13000	2093	1490	9.62	1552	10.75	1612	11.90	1669	13.04	1723	14.19	1775	15.34	1825	16.50	1875	17.69	1971	20.14	2066	22.73
14000	2254	1539	10.70	1597	11.87	1655	13.08	1712	14.32	1766	15.55	1818	16.79	1867	18.02	1915	19.26	2008	21.79	2098	24.40
15000	2415	1592	11.91	1646	13.11	1701	14.37	1756	15.66	1809	16.97	1861	18.30	1911	19.62	1958	20.94	2049	23.59	2136	26.29
16000	2576	1649	13.26	1700	14.50	1751	15.78	1802	17.11	1854	18.48	1904	19.87	1954	21.29	2001	22.70	2092	25.52	2177	28.34
18000	2899	1769	16.35	1815	17.70	1861	19.07	1907	20.47	1952	21.90	1998	23.37	2043	24.89	2089	26.43	2178	29.59	2263	32.77
20000	3221	1895	19.96	1938	21.46	1981	22.96	2022	24.47	2064	25.99	2104	27.54	2145	29.12	2186	30.72	2268	34.05	2350	37.50
22000	3543	2025	24.15	2066	25.80	2105	27.44	2144	29.09	2183	30.74	2221	32.40	2258	34.07	2296	35.77	2370	39.23	2444	42.81
24000	3865	2158	28.97	2196	30.77	2234	32.56	2271	34.35	2307	36.15	2343	37.94	2378	39.75	2413	41.56	2482	45.21	2550	48.94
26000	4187	2294	34.48	2330	36.42	2366	38.36	2401	40.30	2435	42.25	2469	44.19	2503	46.14	2535	48.08	2600	51.99	2664	55.93
28000	4509	2432	40.72	2466	42.81	2500	44.90	2533	46.99	2566	49.09	2598	51.18	2630	53.27	2662	55.37	2723	59.55	2784	63.76
30000	4831	2572	47.77	2605	50.01	2637	52.25	2668	54.49	2700	56.73	2730	58.97	2761	61.21	2791	63.45	2850	67.94	2907	72.43
32000	5153	2714	55.67	2745	58.06	2775	60.45	2805	62.83	2835	65.22	2865	67.61	2894	70.00	2922	72.39	2979	77.18	3034	81.96
34000	5475	2856	64.49	2886	67.03	2915	69.56	2944	72.10	2973	74.63	3001	77.17	3028	79.71	3056	82.25				
36000	5797	3001	74.28	3029	76.96	3057	79.65														

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
12500	2013	2150	24.70	2244	27.53	2336	30.48														
13000	2093	2160	25.46	2253	28.31	2343	31.28	2431	34.35												
13500	2174	2173	26.28	2263	29.14	2351	32.13	2438	35.22	2523	38.41										
14500	2335	2203	28.08	2288	30.96	2373	33.97	2456	37.09	2538	40.32	2619	43.65	2698	47.07						
15500	2496	2239	30.12	2320	33.03	2400	36.04	2480	39.18	2559	42.43	2637	45.80	2713	49.26	2789	52.81	2863	56.45		
16500	2657	2280	32.34	2358	35.32	2435	38.38	2510	41.54	2586	44.81	2660	48.19	2734	51.67	2807	55.25	2879	58.93	3020	66.54
17500	2818	2322	34.71	2399	37.81	2474	40.95	2546	44.16	2618	47.46	2689	50.85	2760	54.35	2830	57.95	2900	61.65	3037	69.33
18500	2979	2365	37.18	2442	40.44	2515	43.70	2586	47.01	2656	50.37	2724	53.81	2792	57.32	2859	60.93	2926	64.65	3058	72.37
19500	3140	2408	39.72	2485	43.17	2558	46.59	2628	50.03	2696	53.50	2763	57.02	2828	60.59	2893	64.24	2957	67.97		
20500	3301	2452	42.34	2528	45.96	2601	49.59	2671	53.19	2739	56.80	2804	60.43	2868	64.10	2931	67.82	2993	71.61		
21500	3462	2496	45.09	2571	48.85	2644	52.65	2715	56.45	2782	60.23	2847	64.01	2910	67.81	2972	71.64	3032	75.50		
22500	3623	2543	48.01	2616	51.87	2687	55.80	2757	59.77	2825	63.75	2890	67.72	2953	71.67	3014	75.63				
23500	3784	2592	51.13	2662	55.06	2732	59.10	2801	63.21	2868	67.35	2933	71.50	2996	75.65	3057	79.78				



DESIGN 51 Double Width Airfoil Fans

Size 270

SPEED LIMITATIONS

OUTLET AREA

CLASS I—1691 RPM CLASS II—2204 RPM CLASS III—2778 RPM

7.54 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4000	531	354	0.20	405	0.30	449	0.40	532	0.60	620	1.00	685	1.30								
5000	663	392	0.30	437	0.40	479	0.50	552	0.70	644	1.20	702	1.50								
6000	796	437	0.40	475	0.50	512	0.60	583	0.90	676	1.40	729	1.70	758	1.80						
7000	928	485	0.50	519	0.70	551	0.80	616	1.10	706	1.40	769	2.00	876	2.70	968	3.50				
8000	1061	535	0.70	566	0.90	595	1.00	652	1.30	748	1.70	809	2.40	898	3.10	983	3.90	1065	4.80		
10000	1326	638	1.20	665	1.40	690	1.60	738	1.90	829	2.70	874	3.10	959	4.00	1034	4.90	1105	5.80		
12000	1592	746	1.80	769	2.10	791	2.30	833	2.70	873	3.20	912	3.60	950	4.10	1025	5.10	1099	6.10	1167	7.20
14000	1857	855	2.70	875	3.00	895	3.30	933	3.80	969	4.30	1004	4.80	1037	5.40	1102	6.40	1167	7.50	1231	8.70
16000	2122	966	3.90	984	4.20	1002	4.50	1036	5.10	1069	5.70	1101	6.30	1131	6.90	1190	8.10	1247	9.30	1304	10.60
18000	2387	1078	5.40	1094	5.70	1110	6.10	1142	6.70	1172	7.40	1201	8.10	1229	8.70	1284	10.10	1336	11.40	1387	12.80
20000	2653	1191	7.20	1205	7.60	1220	8.00	1249	8.70	1277	9.40	1304	10.20	1330	10.90	1381	12.40	1429	13.90	1476	15.40
22000	2918	1304	9.40	1318	9.80	1331	10.20	1357	11.10	1383	11.90	1408	12.70	1433	13.50	1480	15.20	1526	16.80	1570	18.50
24000	3183	1417	12.10	1430	12.50	1443	13.00	1467	13.80	1491	14.70	1514	15.60	1537	16.50	1582	18.30	1625	20.10	1667	21.90
26000	3448	1532	15.20	1543	15.70	1555	16.10	1578	17.10	1600	18.10	1622	19.00	1643	20.00	1685	21.90	1726	23.90	1765	25.80
28000	3714	1646	18.80	1657	19.30	1668	19.80	1689	20.90	1710	21.90	1730	22.90	1751	24.00	1790	26.10	1829	28.20	1866	30.30
30000	3979	1760	22.90	1771	23.50	1781	24.10	1801	25.20	1821	26.30	1840	27.40	1859	28.50	1896	30.70	1933	33.00	1969	35.20
32000	4244	1875	27.70	1885	28.30	1894	28.90	1913	30.10	1932	31.20	1950	32.40	1968	33.60	2004	36.00	2038	38.40	2072	40.80
34000	4509	1990	33.10	1999	33.70	2008	34.30	2026	35.60	2043	36.80	2061	38.10	2078	39.30	2112	41.90	2145	44.40	2177	46.90
36000	4775	2105	39.10	2113	39.70	2122	40.40	2139	41.70	2156	43.10	2172	44.40	2189	45.70	2221	48.40	2252	51.10	2283	53.80
38000	5040	2220	45.80	2228	46.50	2236	47.20	2252	48.60	2268	50.00	2284	51.40	2300	52.80	2330	55.60	2360	58.50	2390	61.30
41000	5438	2393	57.30	2400	58.00	2408	58.80	2423	60.30	2438	61.80	2452	63.30	2467	64.80	2496	67.90	2524	70.90	2552	74.00
44000	5836	2566	70.50	2573	71.30	2580	72.20	2594	73.80	2608	75.40	2621	77.00	2635	78.70	2662	81.90	2689	85.20	2715	88.50
47000	6233	2739	85.70	2745	86.60	2752	87.50	2765	89.20	2778	90.90										

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
9000	1194	1155	6.20	1227	7.20																
10000	1326	1173	6.80	1241	7.80	1307	8.90	1371	10.10												
11000	1459	1199	7.50	1261	8.50	1323	9.60	1384	10.80	1444	12.00	1502	13.30	1559	14.60						
12000	1592	1229	8.30	1289	9.30	1346	10.50	1403	11.60	1460	12.90	1515	14.20	1570	15.50	1624	16.90				
13000	1724	1261	9.10	1319	10.20	1375	11.40	1429	12.60	1482	13.80	1534	15.10	1586	16.50	1637	17.90	1738	20.80	1835	23.90
14000	1857	1293	10.00	1352	11.20	1406	12.40	1458	13.70	1509	15.00	1559	16.30	1608	17.60	1656	19.00	1752	22.00	1846	25.10
15000	1989	1326	10.90	1384	12.20	1438	13.60	1490	14.90	1539	16.20	1587	17.50	1634	18.90	1680	20.30	1771	23.30	1861	26.40
16000	2122	1360	11.90	1416	13.30	1471	14.70	1522	16.10	1571	17.50	1618	18.90	1664	20.40	1708	21.80	1795	24.80	1881	27.90
18000	2387	1437	14.20	1487	15.60	1537	17.20	1587	18.70	1636	20.30	1683	21.90	1728	23.50	1771	25.10	1854	28.30	1933	31.50
20000	2653	1522	16.90	1567	18.50	1613	20.00	1658	21.70	1703	23.40	1748	25.10	1792	26.80	1836	28.60	1918	32.10	1995	35.60
22000	2918	1613	20.10	1655	21.80	1696	23.40	1737	25.10	1778	26.90	1819	28.70	1860	30.50	1902	32.40	1982	36.20	2060	40.10
24000	3183	1707	23.70	1747	25.50	1786	27.30	1824	29.10	1862	30.90	1899	32.80	1937	34.70	1974	36.70	2050	40.70	2124	44.80
26000	3448	1804	27.80	1842	29.70	1878	31.70	1914	33.60	1950	35.60	1985	37.50	2020	39.50	2054	41.50	2124	45.70	2193	50.00
28000	3714	1903	32.30	1939	34.40	1974	36.50	2008	38.60	2042	40.70	2075	42.80	2108	44.90	2140	47.10	2205	51.40	2269	55.80
30000	3979	2003	37.50	2037	39.70	2071	41.90	2104	44.20	2136	46.40	2168	48.70	2199	50.90	2230	53.20	2291	57.70	2351	62.30
32000	4244	2105	43.20	2138	45.60	2170	47.90	2201	50.30	2232	52.70	2263	55.10	2293	57.50	2323	59.90	2381	64.70	2438	69.50
34000	4509	2209	49.50	2240	52.00	2271	54.60	2301	57.10	2331	59.60	2360	62.20	2389	64.70	2417	67.30	2473	72.30	2528	77.50
37000	4907	2366	60.20	2395	63.00	2424	65.70	2453	68.50	2481	71.30	2508	74.00	2535	76.80	2562	79.60	2615	85.10	2667	90.60
40000	5305	2526	72.60	2553	75.50	2580	78.50	2607	81.50	2633	84.50	2660	87.50	2685	90.50	2711	93.50	2761	99.40		
43000	5703	2687	86.60	2713	89.80	2738	93.10	2764	96.30												

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
15000	1989	1949	29.70	2035	33.20	2118	36.70														
16000	2122	1965	31.30	2048	34.70	2129	38.30	2209	42.10												
17000	2255	1985	33.00	2065	36.50	2144	40.10	2221	43.90	2297	47.80	2371	51.80								
18000	2387	2010	34.90	2086	38.40	2162	42.00	2236	45.80	2310	49.80	2382	53.80	2453	58.00	2523	62.20				
19000	2520	2038	37.00	2111	40.50	2184	44.20	2255	48.00	2326	51.90	2397	56.00	2466	60.20	2534	64.50	2601	69.00		
20000	2653	2069	39.20	2140	42.80	2210	46.50	2278	50.30	2347	54.30	2414	58.40	2481	62.60	2548	67.00	2613	71.50	2741	80.70
21000	2785	2100	41.50	2170	45.30	2238	49.10	2305	52.90	2371	56.90	2435	61.00	2500	65.30	2565	69.70	2628	74.10	2753	83.40
22000	2918	2133	44.00	2202	47.90	2269	51.80	2334	55.70	2398	59.80	2461	63.90	2523	68.20	2585	72.60	2647	77.10	2768	86.40
23000	3050	2165	46.50	2234	50.60	2301	54.60	2365	58.70	2427	62.80	2488	67.00	2549	71.30	2609	75.70	2668	80.20		
24000	3183	2197	49.10	2267	53.30	2333	57.50	2397	61.80	2458	66.00	2518	70.30	2577	74.70	2635	79.10	2693	83.70		
25000	3316	2229	51.70	2299	56.10	2365	60.50	2429	64.90	2490	69.30	2550	73.80	2607	78.20	2664	82.80	2720	87.40		
26000	3448	2263	54.50	2331	59.00	2397	63.60	2461	68.20	2522	72.80	2581	77.30	2639	81.90	2695	86.60	2750	91.30		
27000	3581	2297	57.30	2364	62.00	2430	66.70	24													



DESIGN 51 Double Width Airfoil Fans

Size 300

SPEED LIMITATIONS

OUTLET AREA

CLASS I—1555 RPM CLASS II—2028 RPM CLASS III—2555 RPM

9.31 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP			
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
5000	537	325	0.3	371	0.4	410	0.5	485	0.7	562	1.2	621	1.5										
6000	644	353	0.3	395	0.5	433	0.6	500	0.9	579	1.4	632	1.7										
7000	752	386	0.4	422	0.6	458	0.7	522	1.0	579	1.4	632	1.7										
8000	859	421	0.6	454	0.7	485	0.9	546	1.2	601	1.6	651	1.9	684	2.1								
10000	1074	496	0.9	524	1.1	550	1.3	600	1.7	650	2.1	697	2.5	741	3.0	790	3.2	820	3.9	896	4.9	969	5.9
12000	1289	573	1.4	598	1.6	621	1.8	665	2.3	707	2.7	748	3.2	789	3.7	867	4.8	935	5.9	1000	7.0		
14000	1504	653	2.0	675	2.3	696	2.5	735	3.1	773	3.6	809	4.1	844	4.7	915	5.8	983	7.1	1045	8.3		
16000	1719	734	2.8	754	3.1	773	3.4	809	4.0	843	4.6	876	5.2	907	5.8	970	7.1	1032	8.4	1093	9.8		
18000	1933	817	3.8	834	4.2	852	4.5	885	5.2	916	5.9	946	6.5	976	7.2	1032	8.6	1087	10.0	1143	11.5		
20000	2148	900	5.1	916	5.5	932	5.8	962	6.6	991	7.3	1020	8.1	1047	8.8	1100	10.3	1150	11.8	1200	13.4		
22000	2363	983	6.6	998	7.0	1013	7.4	1041	8.3	1068	9.1	1095	9.9	1120	10.7	1170	12.4	1217	14.0	1263	15.7		
24000	2578	1068	8.4	1081	8.9	1095	9.3	1121	10.2	1147	11.1	1171	12.0	1195	12.9	1242	14.7	1287	16.5	1330	18.3		
26000	2793	1152	10.5	1165	11.0	1177	11.5	1202	12.5	1226	13.4	1249	14.4	1272	15.4	1316	17.3	1358	19.3	1399	21.2		
28000	3008	1237	13.0	1249	13.5	1261	14.0	1284	15.1	1306	16.1	1328	17.2	1350	18.2	1391	20.3	1431	22.4	1470	24.5		
30000	3222	1322	15.8	1333	16.4	1344	16.9	1366	18.1	1387	19.2	1408	20.3	1428	21.4	1468	23.6	1506	25.9	1543	28.1		
32000	3437	1407	19.1	1418	19.6	1428	20.2	1449	21.4	1469	22.6	1488	23.8	1508	25.0	1545	27.4	1582	29.8	1617	32.2		
34000	3652	1492	22.7	1502	23.3	1512	24.0	1532	25.2	1551	26.5	1569	27.7	1588	29.0	1624	31.5	1659	34.1	1693	36.6		
36000	3867	1578	26.8	1587	27.4	1597	28.1	1615	29.4	1633	30.8	1651	32.1	1669	33.5	1703	36.1	1736	38.8	1769	41.5		
38000	4082	1664	31.3	1673	32.0	1681	32.7	1699	34.1	1716	35.6	1733	37.0	1750	38.4	1783	41.2	1815	44.0	1846	46.9		
43000	4619	1878	45.0	1886	45.8	1894	46.5	1909	48.1	1925	49.7	1940	51.3	1955	52.9	1985	56.1	2014	59.3	2042	62.5		
48000	5156	2093	62.1	2100	63.0	2107	63.9	2121	65.6	2135	67.4	2149	69.2	2163	71.0	2190	74.5	2216	78.1	2242	81.7		
53000	5693	2308	83.2	2315	84.2	2321	85.1	2334	87.1	2347	89.0	2359	91.0	2372	93.0	2396	96.9	2421	100.8	2445	104.8		
58000	6230	2523	108.6	2529	109.7	2535	110.7	2547	112.9														

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
12000	1289	1062	8.1	1124	9.4	1184	10.7	1243	12.1												
13000	1396	1080	8.8	1139	10.1	1196	11.4	1252	12.8	1307	14.3	1360	15.8								
14000	1504	1102	9.6	1157	10.8	1211	12.2	1265	13.6	1317	15.1	1369	16.7	1420	18.3	1469	19.9				
15000	1611	1125	10.4	1179	11.7	1230	13.1	1281	14.5	1331	16.0	1381	17.6	1429	19.2	1477	20.9				
16000	1719	1150	11.2	1202	12.6	1253	14.1	1301	15.5	1349	17.0	1396	18.6	1442	20.2	1489	21.9	1571	24.4	1667	29.2
17000	1826	1174	12.1	1226	13.6	1276	15.1	1323	16.6	1369	18.2	1414	19.7	1459	21.4	1503	23.1	1590	26.6	1675	30.4
18000	1933	1198	13.0	1250	14.6	1300	16.2	1347	17.8	1392	19.4	1436	21.0	1478	22.7	1520	24.4	1604	28.0	1686	31.8
19000	2041	1223	14.0	1274	15.6	1324	17.3	1371	19.0	1416	20.7	1458	22.4	1500	24.1	1541	25.8	1621	29.0	1700	33.2
20000	2148	1249	15.0	1299	16.7	1348	18.5	1395	20.3	1440	22.0	1482	23.8	1523	25.5	1563	27.3	1641	31.0	1716	34.8
22000	2363	1308	17.4	1353	19.1	1398	21.0	1443	22.9	1488	24.8	1530	26.8	1571	28.7	1611	30.6	1686	34.5	1757	38.5
24000	2578	1372	20.1	1413	21.9	1454	23.8	1496	25.8	1538	27.8	1579	29.9	1619	32.0	1659	34.1	1733	38.4	1804	42.6
26000	2793	1439	23.2	1478	25.1	1516	27.1	1554	29.2	1592	31.2	1631	33.4	1669	35.6	1707	37.9	1781	42.4	1852	47.0
28000	3008	1508	26.6	1545	28.7	1581	30.8	1617	32.9	1653	35.1	1688	37.3	1723	39.6	1759	41.9	1830	46.7	1900	51.6
30000	3222	1579	30.4	1615	32.6	1649	34.9	1683	37.1	1717	39.4	1750	41.7	1783	44.0	1816	46.4	1882	51.3	1949	56.5
32000	3437	1652	34.6	1686	36.9	1719	39.3	1751	41.7	1783	44.1	1815	46.6	1846	49.0	1877	51.5	1939	56.5	2001	61.8
34000	3652	1726	39.2	1758	41.7	1790	44.2	1822	46.8	1852	49.3	1882	51.9	1912	54.4	1942	57.0	2000	62.2	2059	67.6
39000	4189	1915	52.7	1945	55.6	1974	58.5	2002	61.4	2030	64.3	2058	67.2	2085	70.1	2112	73.1	2165	78.9	2217	84.8
44000	4726	2110	69.3	2137	72.6	2163	75.9	2189	79.2	2215	82.5	2241	85.8	2266	89.1	2291	92.3	2339	98.9	2387	105.5
49000	5263	2308	89.6	2333	93.3	2357	96.9	2381	100.6	2405	104.3	2429	107.9	2452	111.6	2475	115.2	2521	122.6		
54000	5800	2509	113.9	2532	117.9	2555	122.0														

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP								
19000	2041	1778	37.2	1854	41.4	1929	45.8	2001	50.3												
20000	2148	1791	38.9	1865	43.1	1938	47.5	2009	52.0	2079	56.7										
21000	2256	1808	40.6	1879	44.9	1950	49.3	2019	53.9	2087	58.6	2154	63.5	2220	68.5						
22000	2363	1827	42.6	1896	46.8	1964	51.3	2031	55.9	2098	60.6	2163	65.6	2227	70.6	2291	75.8				
23000	2470	1848	44.7	1915	49.0	1980	53.4	2045	58.0	2110	62.8	2174	67.8	2237	72.9	2299	78.1	2360	83.5		
24000	2578	1871	46.9	1936	51.2	1999	55.7	2062	60.4	2125	65.2	2187	70.1	2248	75.3	2309	80.5	2369	85.9	2485	97.1
25000	2685	1894	49.2	1958	53.7	2020	58.2	2081	62.9	2142	67.7	2202	72.7	2262	77.8	2321	83.1	2379	88.6	2494	99.8
26000	2793	1918	51.6	1981	56.2	2042	60.8	2102	65.6	2161	70.4	2219	75.4	2277	80.6	2334	85.9	2392	91.4	2504	102.7
27000	2900	1942	54.1	2005	58.8	2066	63.6	2124	68.4	2182	73.3	2239	78.4	2295	83.6	2350	88.9	2406	94.3	2516	105.7
28000	3008	1966	56.6	2029	61.5	2089	66.4	2148	71.4	2204	76.4	2260	81.5	2314	86.7	2369	92.1	2422	97.5	2529	108.9
29000	3115	1990	59.1	2053	64.2	2113	69.3	2171	74.4	2227	79.6	2282	84.8	2336	90.1	2388	95.5	2441	101.0	2545	112.4
30000	3222	2014	61.7	2077	67.0	2138	72.3	2195	77.6	2251	82.9	2305	88.2	2358	93.6	2410	99.0	2461	104.6		
31000	3330	2039	64.4	2101	69.9	2161	75.4	2219	80.8	2275	86.3	2329	91.7	2381	97.2	2432	102.8	2482	108.4		
32000	3437	2064	67.2	2125	72.8	2185	78.4	2243	84.1	2299	89.7</										



DESIGN 51 Double Width Airfoil Fans

Size 330

SPEED LIMITATIONS

OUTLET AREA

CLASS I—1416 RPM CLASS II—1846 RPM CLASS III—2326 RPM

11.27 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	532	295	0.3	338	0.4	377	0.6	450	0.9	512	1.3										
8000	710	341	0.5	376	0.6	409	0.8	471	1.2	528	1.6	582	2.0	632	2.5						
10000	887	393	0.7	423	0.9	451	1.1	504	1.5	555	1.9	603	2.4	649	2.9	736	4.0	814	5.2		
12000	1065	449	1.1	475	1.3	500	1.5	546	2.0	591	2.5	634	3.0	676	3.5	755	4.7	829	5.9	899	7.3
14000	1242	506	1.5	530	1.7	553	2.0	595	2.6	634	3.1	673	3.7	710	4.2	783	5.4	851	6.8	917	8.2
16000	1420	566	2.0	587	2.3	607	2.6	646	3.2	683	3.9	717	4.5	751	5.1	817	6.4	881	7.8	941	9.3
18000	1597	626	2.7	645	3.1	664	3.4	700	4.1	734	4.8	766	5.5	797	6.2	857	7.6	916	9.0	972	10.6
20000	1775	687	3.6	705	3.9	722	4.3	755	5.0	787	5.8	817	6.6	846	7.4	902	8.9	956	10.5	1008	12.1
22000	1952	749	4.6	765	5.0	781	5.4	812	6.2	842	7.0	870	7.9	898	8.7	950	10.4	1000	12.2	1049	13.9
24000	2130	812	5.8	827	6.2	841	6.7	870	7.5	897	8.4	924	9.3	951	10.30	1000	12.1	1047	14.0	1093	15.9
26000	2307	875	7.2	889	7.7	902	8.1	929	9.1	955	10.0	980	11.0	1005	12.0	1052	14.0	1097	16.0	1140	18.1
28000	2484	938	8.8	951	9.3	963	9.8	988	10.8	1013	11.9	1037	12.9	1060	14.0	1105	16.1	1149	18.3	1190	20.5
31000	2751	1033	11.7	1045	12.3	1056	12.8	1079	14.0	1101	15.1	1123	16.2	1145	17.4	1187	19.7	1228	22.1	1267	24.5
35000	3106	1161	16.6	1171	17.2	1181	17.8	1202	19.0	1222	20.3	1242	21.6	1261	22.9	1299	25.5	1337	28.1	1373	30.8
39000	3461	1289	22.6	1298	23.3	1308	24.0	1326	25.3	1344	26.7	1362	28.1	1380	29.6	1415	32.4	1449	35.4	1482	38.3
43000	3815	1417	30.0	1426	30.7	1434	31.5	1451	33.0	1468	34.5	1484	36.0	1501	37.6	1533	40.7	1564	43.9	1595	47.1
47000	4170	1546	38.8	1554	39.6	1562	40.4	1577	42.1	1593	43.8	1608	45.4	1623	47.1	1652	50.5	1682	54.0	1710	57.4
51000	4525	1675	49.3	1682	50.1	1689	51.0	1704	52.8	1718	54.6	1732	56.4	1746	58.3	1774	61.9	1801	65.6	1828	69.4
55000	4880	1804	61.5	1811	62.4	1818	63.4	1831	65.3	1844	67.2	1857	69.2	1870	71.1	1896	75.1	1922	79.1	1947	83.1
59000	5235	1933	75.6	1940	76.6	1946	77.6	1959	79.7	1971	81.8	1983	83.8	1995	85.9	2020	90.1	2044	94.4	2067	98.6
63000	5590	2063	91.7	2069	92.8	2075	93.9	2086	96.1	2098	98.3	2110	100.5	2121	102.7	2144	107.2	2166	111.7	2189	116.3
67000	5945	2192	110.0	2198	111.1	2204	112.3	2215	114.6	2226	117.0	2236	119.3	2247	121.7	2269	126.5	2290	131.2	2311	136.0
71000	6300	2322	130.6	2327	131.8																

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
14000	1242	980	9.70	1040	11.3	1096	12.9	1149	14.5	1200	16.1										
16000	1420	1000	10.9	1057	12.5	1112	14.3	1165	16.0	1216	17.8	1264	19.6	1311	21.5	1355	23.4				
18000	1597	1027	12.2	1081	13.9	1132	15.7	1183	17.6	1232	19.6	1280	21.5	1326	23.5	1371	25.5	1456	29.7	1536	33.9
20000	1775	1060	13.8	1110	15.5	1159	17.4	1206	19.4	1253	21.4	1299	23.5	1343	25.6	1387	27.7	1472	32.1	1552	36.6
22000	1952	1097	15.7	1144	17.5	1190	19.3	1235	21.3	1279	23.4	1323	25.5	1365	27.8	1407	30.0	1489	34.7	1567	39.5
24000	2130	1138	17.8	1182	19.7	1226	21.6	1268	23.6	1310	25.7	1352	27.9	1392	30.2	1432	32.5	1510	37.3	1585	42.4
26000	2307	1182	20.1	1224	22.2	1265	24.2	1305	26.3	1345	28.4	1384	30.6	1423	32.9	1461	35.3	1536	40.2	1608	45.4
28000	2484	1230	22.7	1269	24.9	1307	27.1	1345	29.3	1383	31.5	1421	33.8	1458	36.1	1494	38.5	1565	43.4	1635	48.7
30000	2662	1279	25.5	1316	27.8	1353	30.2	1389	32.6	1424	34.9	1460	37.3	1495	39.7	1530	42.1	1598	47.1	1665	52.4
32000	2839	1330	28.5	1365	31.0	1400	33.5	1435	36.0	1469	38.6	1502	41.1	1535	43.6	1569	46.1	1634	51.3	1698	56.6
34000	3017	1382	31.8	1416	34.4	1450	37.1	1483	39.8	1515	42.4	1547	45.1	1579	47.8	1610	50.5	1673	55.9	1734	61.4
36000	3194	1434	35.3	1468	38.1	1500	40.9	1532	43.8	1563	46.6	1594	49.4	1624	52.3	1654	55.1	1714	60.8	1773	66.5
38000	3372	1488	39.2	1521	42.2	1552	45.1	1583	48.1	1613	51.0	1643	54.0	1672	57.0	1701	60.0	1758	66.0	1814	72.0
40000	3549	1542	43.4	1574	46.5	1605	49.6	1635	52.7	1664	55.8	1693	58.9	1721	62.1	1749	65.2	1804	71.6	1857	77.9
42000	3727	1598	48.0	1628	51.2	1658	54.4	1687	57.7	1716	60.9	1744	64.2	1771	67.5	1798	70.8	1851	77.4	1903	84.0
46000	4082	1710	58.2	1739	61.6	1767	65.1	1794	68.7	1821	72.2	1848	75.8	1874	79.3	1900	82.9	1950	90.1	1999	97.4
51000	4525	1854	73.1	1880	76.9	1906	80.8	1932	84.7	1957	88.5	1982	92.4	2007	96.4	2031	100.3	2078	108.2	2124	116.2
56000	4969	2001	90.9	2025	95.0	2049	99.2	2073	103.4	2097	107.6	2120	111.8	2143	116.1	2166	120.4	2211	129.0	2254	137.7
61000	5413	2151	111.6	2173	116.1	2195	120.6	2217	125.1	2239	129.6	2261	134.2	2283	138.8	2304	143.4				
66000	5856	2302	135.6	2323	140.4																

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
20000	1775	1627	41.3	1699	46.0																
21000	1863	1635	42.8	1707	47.6	1775	52.6														
22000	1952	1643	44.3	1715	49.3	1783	54.4	1849	59.6	1911	64.8										
24000	2130	1659	47.5	1730	52.8	1799	58.1	1865	63.5	1928	69.1	1989	74.7	2047	80.4						
26000	2307	1678	50.8	1747	56.3	1815	61.9	1880	67.6	1943	73.4	2005	79.3	2064	85.2	2121	91.3	2176	97.4		
28000	2484	1702	54.2	1769	59.9	1834	65.8	1897	71.7	1959	77.8	2020	83.9	2079	90.2	2136	96.5	2192	102.9	2299	115.8
30000	2662	1730	58.0	1794	63.8	1856	69.8	1918	76.0	1978	82.3	2037	88.7	2095	95.2	2152	101.8	2208	108.4	2314	122.0
32000	2839	1761	62.2	1823	68.1	1883	74.2	1942	80.6	2000	87.0	2057	93.7	2114	100.4	2169	107.2	2224	114.1		
34000	3017	1795	67.0	1854	72.9	1913	79.1	1970	85.5	2026	92.1	2081	98.8	2136	105.8	2190	112.8	2243	120.0		
36000	3194	1831	72.3	1889	78.3	1945	84.4	2000	90.9	2055	97.5	2108	104.4	2161	111.4	2213	118.7	2265	126.0		
38000	3372	1870	78.0	1925	84.1	1980	90.4	2033	96.8	2086	103.5	2138	110.5	2189	117.6	2240	124.9	2290	132.4		
40000	3549	1911	84.2	1964	90.5	2017	96.9	2069	103.5	2120	110.2	2170	117.1	2220	124.3	2269	131.6	2318	139.2		
42000	3727	1954	90.7	2005	97.3	2056	103.9	2106	110.6	2156	117.5	2205	124.5	2253	131.6	2301	139.0				
44000	3904	2000	97.5	2049	104.4	2097	111.3	2146	118.3	2193	125.3	2241	132.4	2288	139.7						
46000	4082	2047	104.6	2094	111.9	2141	119.1	2													



DESIGN 51 Double Width Airfoil Fans

Size 365

SPEED LIMITATIONS

CLASS I—1333 RPM CLASS II—1698 RPM CLASS III—2140 RPM

OUTLET AREA

13.79 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7000	508	265	0.4	305	0.5	341	0.7	408	1.1												
10000	725	317	0.6	347	0.8	377	1.0	432	1.4	484	1.9	532	2.5	577	3.0	657	4.2				
13000	943	377	1.0	403	1.3	427	1.5	473	2.0	517	2.6	559	3.1	599	3.8	675	5.1	746	6.6	810	8.1
16000	1160	441	1.6	463	1.9	485	2.2	524	2.8	562	3.4	598	4.1	634	4.7	702	6.2	766	7.8	828	9.5
19000	1378	508	2.4	527	2.7	546	3.1	582	3.8	615	4.5	647	5.3	678	6.0	739	7.6	798	9.2	853	11.0
22000	1595	576	3.4	593	3.8	610	4.2	642	5.0	673	5.9	702	6.7	730	7.6	784	9.3	837	11.1	888	12.9
25000	1813	645	4.7	661	5.2	676	5.6	705	6.5	733	7.5	761	8.5	787	9.4	836	11.4	883	13.4	930	15.3
28000	2030	716	6.4	730	6.9	743	7.4	770	8.4	796	9.4	821	10.5	845	11.6	892	13.8	935	16.0	978	18.2
31000	2248	787	8.4	799	8.9	812	9.5	836	10.6	860	11.8	883	12.9	906	14.1	950	16.5	991	18.9	1037	21.4
34000	2466	858	10.8	870	11.4	881	12.0	904	13.2	926	14.5	947	15.8	969	17.0	1010	19.6	1049	22.3	1086	24.9
38000	2756	954	14.7	964	15.4	975	16.1	995	17.4	1015	18.8	1035	20.2	1054	21.6	1092	24.5	1129	27.4	1164	30.4
42000	3046	1050	19.6	1059	20.3	1069	21.1	1087	22.6	1106	24.1	1124	25.6	1142	27.1	1177	30.3	1211	33.5	1244	36.7
46000	3336	1146	25.4	1155	26.2	1164	27.0	1181	28.7	1198	30.3	1214	32.0	1231	33.6	1263	37.0	1295	40.5	1326	44.0
50000	3626	1243	32.3	1251	33.2	1259	34.1	1275	35.8	1291	37.6	1306	39.4	1322	41.2	1352	44.9	1381	48.6	1410	52.3
54000	3916	1340	40.4	1347	41.3	1355	42.3	1370	44.2	1384	46.1	1399	48.0	1413	50.0	1441	53.9	1469	57.9	1496	61.9
58000	4206	1437	49.7	1444	50.7	1451	51.8	1465	53.8	1479	55.8	1492	57.9	1505	60.0	1532	64.2	1558	68.4	1584	72.7
62000	4496	1534	60.4	1541	61.5	1547	62.6	1560	64.8	1573	67.0	1586	69.2	1599	71.4	1624	75.8	1648	80.3	1672	84.9
66000	4786	1632	72.6	1638	73.7	1644	74.9	1656	77.2	1668	79.5	1680	81.9	1692	84.2	1716	88.9	1739	93.7	1762	98.5
70000	5076	1729	86.3	1735	87.5	1741	88.7	1752	91.2	1764	93.7	1775	96.1	1786	98.6	1809	103.6	1831	108.6	1853	113.7
74000	5366	1826	101.7	1832	103.0	1837	104.2	1848	106.8	1859	109.4	1870	112.0	1881	114.6	1902	119.9	1923	125.2	1944	130.5
78000	5656	1924	118.8	1929	120.1	1934	121.5	1945	124.2	1955	126.9	1966	129.7	1976	132.4	1996	138.0	2016	143.5	2036	149.1
82000	5946	2022	137.7	2027	139.1	2032	140.5	2042	143.4	2051	146.3	2061	149.1	2071	152.0	2090	157.8	2110	163.7	2128	169.5
86000	6236	2119	158.5	2124	160.0	2129	161.5	2138	164.5												

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
16000	1160	886	11.2	941	13.0	992	14.9	1041	16.8												
19000	1378	907	12.9	960	14.9	1010	17.0	1058	19.1	1105	21.2	1149	23.4	1191	25.6	1232	27.9				
22000	1595	938	14.9	986	17.0	1033	19.2	1079	21.5	1123	23.8	1167	26.2	1209	28.6	1250	31.1	1327	36.1	1399	41.3
25000	1813	976	17.4	1021	19.5	1064	21.8	1107	24.1	1148	26.6	1189	29.1	1229	31.8	1268	34.4	1345	39.8	1417	45.4
28000	2030	1020	20.4	1061	22.6	1102	24.9	1142	27.3	1181	29.8	1219	32.4	1257	35.2	1294	37.9	1366	43.7	1436	49.7
31000	2248	1069	23.8	1107	26.3	1145	28.7	1182	31.2	1219	33.7	1255	36.4	1290	39.1	1325	42.0	1393	47.9	1460	54.1
34000	2466	1123	27.6	1158	30.3	1193	33.0	1227	35.6	1262	38.3	1296	41.1	1329	43.9	1362	46.7	1427	52.7	1490	59.1
37000	2683	1179	31.8	1212	34.7	1245	37.6	1277	40.6	1309	43.5	1341	46.4	1372	49.3	1403	52.3	1465	58.4	1525	64.8
40000	2901	1237	36.5	1269	39.6	1300	42.8	1330	45.9	1360	49.1	1390	52.2	1419	55.4	1449	58.6	1507	64.9	1564	71.4
43000	3118	1296	41.7	1327	45.1	1356	48.4	1386	51.8	1414	55.2	1442	58.6	1470	62.0	1498	65.4	1552	72.1	1607	79.0
46000	3336	1356	47.5	1386	51.0	1415	54.6	1443	58.2	1470	61.8	1497	65.4	1524	69.0	1550	72.7	1602	79.9	1653	87.2
49000	3553	1418	53.9	1447	57.6	1474	61.4	1501	65.2	1528	69.0	1554	72.8	1579	76.7	1604	80.5	1654	88.3	1702	96.0
52000	3771	1481	60.9	1508	64.8	1535	68.8	1561	72.8	1587	76.9	1612	80.9	1636	85.0	1661	89.0	1708	97.2	1755	105.4
56000	4061	1566	71.3	1592	75.5	1617	79.8	1642	84.1	1667	88.4	1691	92.7	1714	97.1	1738	101.4	1783	110.2	1827	119.0
60000	4351	1653	83.0	1677	87.5	1701	92.1	1725	96.6	1748	101.2	1771	105.8	1794	110.4	1817	115.1	1860	124.4	1903	133.8
64000	4641	1741	96.2	1764	101.0	1787	105.8	1809	110.6	1832	115.4	1854	120.3	1875	125.2	1897	130.1	1939	140.0	1980	150.0
68000	4931	1830	110.9	1851	115.9	1873	120.9	1895	126.0	1916	131.1	1937	136.3	1958	141.5	1979	146.6	2019	157.1	2059	167.6
72000	5221	1919	127.1	1940	132.4	1961	137.7	1982	143.1	2002	148.4	2022	153.9	2042	159.3	2062	164.8	2101	175.8	2139	186.8
76000	5511	2010	145.1	2030	150.7	2050	156.2	2069	161.8	2089	167.5	2108	173.1	2127	178.9						
80000	5801	2101	164.9	2121	170.7	2139	176.5														

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
26000	1885	1492	52.6	1557	58.6	1620	64.6	1679	70.8												
28000	2030	1504	55.7	1569	62.0	1631	68.3	1691	74.7	1749	81.2	1804	87.9								
30000	2175	1517	58.9	1581	65.4	1643	72.0	1703	78.7	1761	85.5	1816	92.4	1870	99.4	1922	106.5	1972	113.7		
32000	2321	1533	62.2	1595	69.0	1656	75.8	1715	82.8	1772	89.9	1828	97.0	1882	104.3	1934	111.7	1985	119.1	2081	134.3
34000	2466	1551	65.7	1611	72.6	1670	79.7	1728	86.9	1785	94.3	1840	101.7	1893	109.3	1946	116.9	1996	124.6	2094	140.3
36000	2611	1572	69.5	1630	76.5	1687	83.8	1743	91.2	1798	98.8	1853	106.5	1906	114.3	1957	122.2	2008	130.2	2105	146.5
38000	2756	1595	73.7	1651	80.7	1707	88.1	1761	95.7	1815	103.4	1867	111.4	1919	119.4	1970	127.6	2020	135.8	2117	152.7
40000	2901	1620	78.2	1675	85.3	1728	92.7	1781	100.4	1833	108.3	1884	116.4	1935	124.7	1984	133.1	2033	141.6	2129	158.9
42000	3046	1646	83.2	1700	90.4	1752	97.8	1803	105.5	1854	113.5	1903	121.8	1952	130.2	2001	138.8	2049	147.5	2142	165.3
44000	3191	1674	88.7	1726	95.9	1777	103.3	1827	111.1	1876	119.1	1924	127.4	1972	136.0	2019	144.7	2066	153.6		
46000	3336	1704	94.5	1754	101.8	1803	109.4	1852	117.2	1900	125.2	1947	133.6	1994	142.2	2040	151.0	2085	160.0		
48000	3481	1734	100.6	1783	108.2	1831	115.9	1878	123.8	1925	131.9	1971	140.2	2017	148.8	2062	157.7	2106	166.8		
50000	3626	1767	107.0	1814	114.9	1860	122.8	1906	130.8	1952	139.0	1997	147.4	2041	156.0	2085	165.0	21			



DESIGN 51 Double Width Airfoil Fans

Size 402

SPEED LIMITATIONS

OUTLET AREA

CLASS I—1143 RPM

CLASS II—1491 RPM

CLASS III—1879 RPM

16.77 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	537	240	0.5	273	0.6	304	0.9	365	1.3	432	2.5	475	3.1	516	3.9	603	6.5	667	8.4	727	10.4
13000	775	292	0.8	318	1.1	343	1.3	389	1.9	469	3.4	504	4.1	537	4.8	633	8.1	686	10.0	739	12.0
17000	1014	349	1.4	372	1.7	394	2.1	433	2.7	469	3.4	504	4.1	537	4.8	633	8.1	686	10.0	739	12.0
21000	1252	411	2.2	431	2.6	450	3.0	485	3.8	517	4.7	548	5.5	577	6.3	633	8.1	686	10.0	739	12.0
25000	1491	475	3.3	492	3.7	509	4.2	540	5.2	570	6.2	598	7.2	624	8.2	675	10.2	722	12.2	768	14.3
29000	1729	541	4.8	556	5.3	570	5.8	599	6.9	626	8.1	652	9.2	676	10.4	723	12.7	766	15.0	808	17.3
33000	1968	608	6.7	621	7.3	634	7.9	659	9.1	684	10.4	708	11.7	731	13.0	774	15.6	815	18.3	854	20.9
37000	2206	675	9.1	687	9.7	699	10.4	722	11.8	744	13.2	766	14.6	788	16.1	829	19.0	867	22.0	904	24.9
41000	2445	743	12.1	754	12.8	764	13.5	785	15.0	806	16.5	826	18.0	846	19.6	885	22.9	921	26.1	956	29.4
45000	2683	812	15.6	821	16.4	831	17.2	850	18.8	869	20.4	888	22.1	907	23.8	943	27.3	977	30.9	1010	34.5
49000	2922	880	19.9	889	20.7	898	21.6	916	23.3	934	25.0	951	26.8	968	28.7	1002	32.4	1035	36.3	1066	40.1
53000	3160	949	24.8	958	25.7	966	26.7	983	28.5	999	30.4	1015	32.3	1031	34.3	1063	38.3	1094	42.4	1124	46.5
57000	3399	1018	30.6	1026	31.6	1034	32.5	1050	34.5	1065	36.5	1080	38.6	1095	40.6	1125	44.9	1154	49.2	1182	53.7
61000	3637	1088	37.2	1095	38.2	1102	39.3	1117	41.4	1131	43.5	1145	45.7	1160	47.9	1187	52.4	1215	56.9	1242	61.6
65000	3876	1157	44.7	1164	45.8	1171	46.9	1185	49.1	1198	51.4	1212	53.7	1225	56.0	1251	60.7	1277	65.6	1303	70.5
70000	4174	1244	55.4	1251	56.6	1257	57.8	1270	60.2	1282	62.7	1295	65.1	1307	67.6	1332	72.7	1356	77.7	1380	83.0
75000	4472	1331	67.8	1337	69.1	1343	70.4	1355	72.9	1367	75.5	1379	78.1	1390	80.8	1413	86.1	1436	91.5	1459	97.0
80000	4770	1418	81.9	1424	83.3	1430	84.6	1441	87.4	1452	90.1	1463	92.9	1474	95.7	1496	101.3	1517	107.1	1539	112.9
85000	5069	1506	97.9	1511	99.3	1516	100.8	1527	103.7	1537	106.6	1548	109.5	1558	112.5	1579	118.4	1599	124.5	1619	130.6
90000	5367	1593	115.9	1598	117.4	1603	118.9	1613	121.9	1623	125.0	1633	128.1	1643	131.2	1662	137.5	1682	143.9	1701	150.3
95000	5665	1681	135.9	1685	137.5	1690	139.1	1700	142.3	1709	145.6	1718	148.8	1728	152.1	1746	158.7	1765	165.4	1783	172.1
100000	5963	1768	158.1	1773	159.8	1777	161.5	1786	164.9	1795	168.3	1804	171.7	1813	175.2	1831	182.1	1848	189.1	1865	196.1
105000	6261	1856	182.7	1860	184.5	1864	186.2	1873	189.8												

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP		
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP													
20000	1193	789	13.8	840	16.2	888	18.6															
24000	1431	806	15.9	853	18.3	899	20.9	943	23.6	986	26.4	1028	29.3	1067	32.3							
28000	1670	839	18.9	880	21.3	920	23.9	959	26.6	999	29.5	1039	32.5	1077	35.6	1115	38.8	1187	45.4	1255	52.3	
32000	1908	880	22.5	918	25.1	954	27.8	989	30.5	1025	33.4	1060	36.4	1094	39.5	1129	42.7	1198	49.6	1265	56.9	
36000	2147	927	26.7	961	29.6	995	32.4	1028	35.4	1060	38.4	1092	41.4	1124	44.6	1155	47.8	1217	54.6	1279	61.9	
40000	2385	977	31.4	1009	34.6	1041	37.8	1072	40.9	1102	44.1	1132	47.4	1161	50.7	1190	54.0	1247	61.0	1303	68.2	
44000	2624	1029	36.7	1060	40.2	1090	43.7	1120	47.2	1148	50.7	1176	54.1	1204	57.7	1231	61.2	1285	68.4	1337	75.9	
48000	2862	1083	42.5	1113	46.3	1142	50.2	1170	54.0	1197	57.8	1224	61.6	1250	65.4	1276	69.2	1327	76.9	1376	84.7	
52000	3101	1139	49.0	1167	53.1	1195	57.3	1222	61.5	1248	65.6	1274	69.8	1299	73.9	1324	78.0	1372	86.2	1419	94.5	
56000	3339	1196	56.2	1223	60.7	1250	65.1	1276	69.6	1301	74.1	1326	78.6	1350	83.0	1374	87.5	1420	96.4	1466	105.2	
60000	3578	1254	64.2	1280	69.0	1306	73.7	1331	78.5	1355	83.3	1379	88.1	1403	92.9	1426	97.7	1470	107.3	1514	116.8	
64000	3816	1313	73.1	1339	78.1	1363	83.2	1387	88.3	1411	93.3	1434	98.5	1456	103.6	1479	108.7	1522	118.9	1564	129.2	
68000	4055	1374	83.0	1398	88.2	1421	93.6	1445	98.9	1467	104.3	1490	109.7	1512	115.1	1533	120.6	1575	131.4	1616	142.3	
72000	4293	1435	93.8	1458	99.3	1481	104.9	1503	110.6	1525	116.2	1547	121.9	1568	127.6	1589	133.4	1629	144.9	1669	156.4	
76000	4532	1497	105.7	1519	111.5	1541	117.3	1562	123.2	1584	129.2	1604	135.2	1625	141.2	1645	147.2	1685	159.3	1723	171.4	
80000	4770	1560	118.8	1581	124.8	1602	130.9	1623	137.0	1643	143.2	1663	149.5	1683	155.8	1703	162.1	1741	174.8	1779	187.5	
84000	5009	1623	133.1	1644	139.3	1664	145.6	1683	152.0	1703	158.5	1723	165.0	1742	171.5	1761	178.1	1798	191.4	1835	204.7	
88000	5247	1688	148.6	1707	155.1	1726	161.6	1745	168.2	1764	175.0	1783	181.7	1802	188.5	1820	195.4					
93000	5546	1768	169.8	1787	176.6	1805	183.5	1823	190.4	1841	197.4	1859	204.5	1877	211.6							
98000	5844	1850	193.3	1867	200.3																	

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
32000	1908	1329	64.4	1390	72.1																
34000	2027	1334	66.9	1395	74.9	1454	83.0	1510	91.3												
36000	2147	1340	69.6	1400	77.7	1458	86.1	1514	94.6	1568	103.4										
38000	2266	1348	72.6	1407	80.7	1464	89.2	1519	97.9	1573	106.9	1625	116.0	1675	125.3						
40000	2385	1359	75.9	1415	84.0	1470	92.5	1525	101.4	1578	110.5	1630	119.8	1680	129.3	1729	139.0	1776	148.8		
42000	2504	1373	79.6	1426	87.7	1479	96.1	1532	105.0	1584	114.2	1635	123.7	1685	133.4	1734	143.3	1781	153.4	1872	173.9
44000	2624	1388	83.7	1439	91.7	1490	100.2	1541	109.0	1591	118.2	1641	127.8	1690	137.6	1739	147.6	1786	157.9	1877	178.9
47000	2803	1415	90.3	1463	98.5	1511	107.0	1559	115.8	1606	125.0	1654	134.5	1701	144.3	1748	154.5	1794	165.0		
50000	2982	1445	97.7	1491	106.1	1537	114.7	1582	123.5	1627	132.7	1671	142.2	1716	152.0	1760	162.1	1805	172.6		
53000	3160	1476	105.6	1521	114.3	1565	123.1	1608	132.1	1651	141.4	1693	150.9	1735	160.7	1778	170.8	1820	181.3		
56000	3339	1510	114.1	1553	123.1	1595	132.2	1637	141.5	1678	150.9	1719	160.6	1759	170.5	1799	180.6	1839	191.0		
59000	3518	1544	123.2	1586	132.5	1627	142.0	1668	151.5	1708	161.2	1747	171.1	1786	181.1	1824	191.4	1862	201.9		
62000	3697	1581	132.7	1621	142.5	1661	152.3	1700	162.3	1739	172.3	1777	182.4	1815	192.7	1852	203.1				
650																					



DESIGN 51 Double Width Airfoil Fans

Size 445

SPEED LIMITATIONS

OUTLET AREA

CLASS I—1040 RPM CLASS II—1356 RPM CLASS III—1708 RPM

20.49 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10000	488	210	0.5	242	0.7	272	1.0	329	1.5												
15000	732	256	0.9	281	1.2	304	1.5	347	2.1	388	2.9	428	3.7	466	4.5						
20000	976	309	1.6	330	2.0	350	2.4	386	3.2	420	4.0	452	4.8	483	5.7	544	7.7	603	10.0	658	12.4
25000	1220	366	2.5	384	3.0	401	3.5	434	4.5	463	5.5	492	6.5	518	7.5	570	9.6	619	11.8	668	14.4
30000	1464	425	3.9	441	4.4	456	5.0	485	6.2	512	7.4	538	8.6	562	9.8	608	12.1	651	14.6	694	17.2
35000	1708	486	5.7	500	6.3	513	7.0	539	8.3	564	9.7	587	11.1	610	12.5	652	15.3	692	18.0	730	20.8
40000	1952	548	8.0	560	8.8	572	9.5	596	11.0	618	12.5	640	14.1	661	15.7	700	18.9	737	22.1	773	25.3
45000	2196	611	11.0	622	11.8	633	12.6	654	14.3	674	16.0	694	17.7	714	19.5	751	23.1	785	26.7	819	30.3
50000	2440	675	14.7	684	15.6	694	16.5	713	18.3	732	20.1	750	22.0	768	24.0	803	27.9	836	31.9	867	35.9
55000	2684	738	19.2	747	20.2	756	21.1	773	23.1	791	25.1	808	27.1	824	29.2	857	33.5	888	37.8	918	42.2
60000	2928	802	24.6	811	25.6	819	26.6	835	28.7	851	30.9	866	33.1	882	35.3	912	39.9	942	44.6	970	49.4
65000	3172	867	30.8	874	32.0	882	33.1	897	35.3	911	37.7	926	40.0	940	42.4	969	47.3	997	52.3	1024	57.4
70000	3416	931	38.1	938	39.3	945	40.5	959	43.0	973	45.4	986	47.9	1000	50.5	1026	55.7	1053	61.0	1078	66.4
75000	3660	996	46.5	1002	47.8	1009	49.1	1022	51.7	1035	54.3	1047	57.0	1060	59.7	1085	65.2	1110	70.8	1134	76.5
80000	3904	1060	56.1	1066	57.5	1073	58.8	1085	61.6	1097	64.4	1109	67.2	1121	70.0	1145	75.8	1168	81.8	1191	87.8
86000	4197	1138	69.3	1144	70.7	1149	72.2	1161	75.1	1172	78.1	1183	81.1	1195	84.1	1217	90.3	1239	96.6	1260	103.0
92000	4490	1216	84.3	1221	85.9	1227	87.5	1237	90.6	1248	93.8	1258	97.0	1269	100.2	1290	106.7	1310	113.4	1331	120.1
98000	4783	1294	101.5	1299	103.2	1304	104.8	1314	108.1	1324	111.5	1334	114.9	1344	118.3	1363	125.2	1383	132.3	1402	139.4
104000	5076	1372	120.9	1376	122.6	1381	124.4	1391	127.9	1400	131.5	1410	135.1	1419	138.7	1438	146.0	1456	153.3	1474	160.8
110000	5368	1450	142.6	1454	144.4	1459	146.3	1468	150.0	1477	153.8	1486	157.6	1495	161.4	1512	169.0	1530	176.8	1547	184.7
116000	5661	1528	166.8	1532	168.7	1536	170.7	1545	174.6	1553	178.6	1562	182.5	1570	186.5	1587	194.6	1604	202.7	1620	211.0
122000	5954	1606	193.6	1610	195.6	1614	197.7	1622	201.8	1630	205.9	1638	210.1	1647	214.3	1663	222.8	1678	231.3	1694	239.9
128000	6247	1684	223.1	1688	225.3	1692	227.4	1700	231.8	1707	236.1										

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
24000	1171	714	16.6	761	19.5	804	22.4														
29000	1415	730	19.2	772	22.2	814	25.3	855	28.6	894	32.0	931	35.5	967	39.1						
34000	1659	760	22.9	797	25.9	833	29.0	869	32.3	905	35.8	941	39.4	976	43.2	1011	47.1	1076	55.2	1138	63.5
39000	1903	798	27.4	832	30.6	865	33.8	897	37.2	929	40.7	961	44.3	992	48.1	1024	52.1	1086	60.4	1147	69.2
44000	2147	842	32.7	873	36.2	903	39.7	933	43.3	963	46.9	991	50.6	1020	54.5	1048	58.4	1104	66.7	1160	75.6
49000	2391	888	38.6	918	42.5	946	46.4	974	50.3	1002	54.2	1029	58.2	1055	62.2	1081	66.3	1133	74.7	1183	83.6
54000	2635	937	45.2	965	49.5	992	53.9	1019	58.1	1045	62.4	1070	66.7	1095	71.0	1120	75.3	1168	84.2	1215	93.3
59000	2879	987	52.6	1014	57.3	1040	62.0	1066	66.7	1090	71.4	1115	76.1	1138	80.8	1162	85.4	1207	94.9	1252	104.4
64000	3123	1039	60.8	1065	65.9	1090	71.0	1114	76.2	1138	81.3	1161	86.4	1184	91.5	1206	96.5	1250	106.7	1292	116.8
69000	3367	1093	70.0	1117	75.4	1141	80.9	1165	86.5	1187	92.0	1210	97.5	1232	103.0	1253	108.5	1295	119.5	1336	130.4
74000	3612	1147	80.2	1171	86.0	1194	91.9	1216	97.8	1238	103.7	1260	109.6	1281	115.5	1302	121.4	1342	133.3	1381	145.0
79000	3856	1203	91.5	1225	97.7	1247	103.9	1269	110.2	1290	116.5	1311	122.8	1331	129.1	1351	135.4	1390	148.0	1428	160.7
84000	4100	1259	104.1	1281	110.6	1302	117.2	1323	123.8	1343	130.4	1363	137.1	1383	143.8	1402	150.5	1440	163.9	1477	177.4
89000	4344	1316	118.0	1337	124.8	1357	131.7	1377	138.6	1397	145.6	1416	152.7	1435	159.7	1454	166.8	1491	181.0	1526	195.2
94000	4588	1374	133.3	1394	140.4	1413	147.6	1433	154.9	1452	162.2	1470	169.6	1489	177.0	1507	184.4	1543	199.4	1577	214.4
99000	4832	1433	150.1	1452	157.5	1470	165.0	1489	172.6	1507	180.2	1525	187.9	1543	195.7	1561	203.5	1595	219.2	1629	234.9
104000	5076	1492	168.4	1510	176.1	1528	183.9	1546	191.8	1563	199.8	1581	207.8	1598	215.9	1615	224.0	1649	240.4	1681	256.9
109000	5320	1552	188.4	1569	196.4	1586	204.5	1603	212.7	1620	221.0	1637	229.3	1654	237.7	1670	246.2	1703	263.2		
114000	5564	1612	210.1	1629	218.4	1645	226.8	1662	235.3	1678	243.8	1694	252.5								
119000	5808	1673	233.6	1689	242.2	1705	250.9														

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
39000	1903	1205	78.4	1260	87.8																
42000	2050	1211	82.3	1266	92.0	1319	102.0	1369	112.2												
45000	2196	1218	86.4	1272	96.3	1324	106.6	1375	117.1	1424	127.9	1471	138.8								
48000	2343	1229	91.2	1280	101.1	1331	111.4	1380	122.1	1429	133.2	1476	144.5	1522	156.0	1566	167.7	1609	179.5		
51000	2489	1244	96.6	1292	106.4	1340	116.8	1388	127.5	1435	138.7	1482	150.3	1527	162.1	1571	174.1	1614	186.3	1697	211.2
54000	2635	1261	102.7	1307	112.6	1353	122.8	1398	133.6	1444	144.8	1489	156.4	1533	168.4	1577	180.6	1620	193.2	1702	218.8
57000	2782	1281	109.4	1325	119.4	1369	129.7	1412	140.4	1455	151.5	1498	163.1	1541	175.1	1584	187.5	1625	200.2	1707	226.4
60000	2928	1303	116.7	1345	126.8	1387	137.2	1428	148.0	1470	159.1	1511	170.7	1551	182.6	1592	195.0	1633	207.8		
63000	3075	1326	124.4	1367	134.8	1407	145.4	1447	156.3	1487	167.5	1526	179.1	1565	191.0	1604	203.3	1643	216.1		
66000	3221	1350	132.7	1390	143.3	1429	154.2	1468	165.3	1506	176.7	1544	188.3	1581	200.3	1619	212.6	1656	225.2		
69000	3367	1375	141.3	1414	152.4	1452	163.5	1490	174.9	1527	186.4	1564	198.2	1600	210.3	1636	222.7	1672	235.4		
72000	3514	1402	150.4	1439	161.9	1477	173.4	1513	185.0	1549	196.8	1585	208.8	1620	221.3	1655	233.6	1689	246.4		
75000	3660	1428	160.0	1465	171.8	1502	183.7	1537	195.7	1572	207.8	1607	220.1	1641	232.6	1675	245.3	1709	258.2		
79000	3856	1465	173.2	1501																	



DESIGN 51 Double Width Airfoil Fans

Size 490

SPEED LIMITATIONS

CLASS I—936 RPM CLASS II—1221 RPM CLASS III—1550 RPM

OUTLET AREA

24.85 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13000	523	195	0.7	222	0.9	248	1.2	299	2.0	353	3.6	389	4.6	423	5.7	494	9.6	547	12.4	596	15.3
19000	765	237	1.2	259	1.6	279	2.0	317	2.7	384	5.0	412	6.0	440	7.1	494	9.6	547	12.4	596	15.3
25000	1006	285	2.0	304	2.5	321	3.0	354	4.0	423	6.9	448	8.1	472	9.3	518	11.9	562	14.7	606	17.8
31000	1247	335	3.2	352	3.8	367	4.4	396	5.6	423	6.9	448	8.1	472	9.3	518	11.9	562	14.7	606	17.8
37000	1489	388	4.8	402	5.5	416	6.2	442	7.7	466	9.2	489	10.6	511	12.1	553	15.0	592	18.1	630	21.2
43000	1730	443	7.1	455	7.8	467	8.6	490	10.3	513	12.0	534	13.7	554	15.4	592	18.8	628	22.2	663	25.7
49000	1972	498	9.9	509	10.8	520	11.7	541	13.5	561	15.4	580	17.3	599	19.3	635	23.2	668	27.1	700	31.0
55000	2213	554	13.5	564	14.5	573	15.5	592	17.5	611	19.6	629	21.7	646	23.9	680	28.3	711	32.7	742	37.1
61000	2455	610	18.0	619	19.1	628	20.1	645	22.3	662	24.6	679	26.9	695	29.3	727	34.1	756	38.9	785	43.8
67000	2696	667	23.4	675	24.5	683	25.7	699	28.1	714	30.5	730	33.0	745	35.6	775	40.8	803	46.1	830	51.4
73000	2938	724	29.8	731	31.0	739	32.3	753	34.9	768	37.5	782	40.2	796	42.9	824	48.5	851	54.2	876	60.0
79000	3179	781	37.3	788	38.6	795	40.0	808	42.7	822	45.5	835	48.4	848	51.3	874	57.3	899	63.4	924	69.6
86000	3461	848	47.5	854	49.0	861	50.5	873	53.5	886	56.5	898	59.6	910	62.7	934	69.1	958	75.6	981	82.3
93000	3742	915	59.6	921	61.1	927	62.7	938	66.0	950	69.2	961	72.5	973	75.8	995	82.6	1017	89.6	1039	96.7
100000	4024	982	73.5	988	75.2	993	76.9	1004	80.4	1015	83.8	1025	87.4	1036	90.9	1057	98.1	1078	105.5	1098	113.1
107000	4306	1049	89.6	1055	91.4	1060	93.2	1070	96.9	1080	100.6	1090	104.3	1100	108.1	1120	115.7	1139	123.5	1158	131.5
114000	4588	1117	107.8	1122	109.7	1126	111.6	1136	115.5	1146	119.5	1155	123.4	1164	127.4	1183	135.5	1201	143.7	1219	152.1
121000	4869	1184	128.4	1189	130.4	1193	132.5	1202	136.6	1211	140.8	1220	144.9	1229	149.2	1247	157.7	1264	166.3	1281	175.1
128000	5151	1252	151.5	1256	153.6	1260	155.8	1269	160.1	1277	164.5	1286	168.9	1294	173.4	1311	182.3	1327	191.4	1344	200.6
135000	5433	1319	177.2	1323	179.4	1327	181.7	1336	186.3	1344	190.9	1352	195.6	1360	200.2	1376	209.7	1391	219.2	1407	228.8
142000	5714	1387	205.7	1391	208.1	1395	210.5	1402	215.3	1410	220.1	1418	225.0	1425	229.9	1440	239.8	1455	249.7	1470	259.8
149000	5996	1454	237.1	1458	239.6	1462	242.1	1469	247.2	1477	252.2	1484	257.3	1491	262.5	1506	272.8	1520	283.2	1534	293.7
156000	6278	1522	271.6	1526	274.2	1529	276.9	1536	282.1	1543	287.4	1550	292.8								

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
30000	1207	648	20.7	690	24.2	729	27.8														
36000	1449	663	23.9	700	27.5	738	31.3	774	35.4	810	39.5	844	43.8	876	48.2						
42000	1690	690	28.4	723	32.0	756	35.8	788	39.9	821	44.1	853	48.6	884	53.2	915	58.0	975	67.9	1030	78.2
48000	1932	725	33.9	755	37.8	785	41.8	814	45.9	843	50.2	871	54.6	899	59.2	928	64.0	984	74.2	1038	85.0
54000	2173	764	40.3	792	44.5	819	48.9	846	53.2	873	57.7	899	62.3	924	67.0	950	71.8	1000	81.9	1051	92.7
60000	2414	805	47.4	832	52.2	858	56.9	883	61.7	908	66.5	932	71.3	956	76.2	980	81.2	1026	91.6	1072	102.4
66000	2656	849	55.4	874	60.7	899	65.9	923	71.1	946	76.4	969	81.6	992	86.9	1014	92.2	1057	103.0	1100	114.1
72000	2897	894	64.2	918	70.0	941	75.7	964	81.5	987	87.2	1009	92.9	1030	98.6	1051	104.3	1093	115.8	1133	127.5
78000	3139	940	74.1	963	80.3	986	86.5	1008	92.8	1029	99.0	1050	105.3	1071	111.5	1091	117.6	1131	130.0	1169	142.4
84000	3380	987	85.1	1010	91.7	1031	98.4	1052	105.2	1073	111.9	1093	118.6	1113	125.3	1133	132.0	1171	145.3	1207	158.6
90000	3622	1036	97.3	1057	104.4	1078	111.5	1098	118.7	1118	125.9	1138	133.1	1157	140.3	1176	147.5	1212	161.9	1248	176.1
96000	3863	1085	110.9	1105	118.4	1126	125.9	1145	133.5	1164	141.2	1183	148.8	1202	156.5	1220	164.2	1255	179.5	1290	194.9
102000	4105	1135	125.9	1155	133.8	1174	141.7	1193	149.8	1211	157.8	1230	165.9	1248	174.0	1265	182.2	1299	198.5	1333	214.9
108000	4346	1186	142.4	1205	150.7	1223	159.0	1241	167.5	1259	176.0	1277	184.5	1294	193.1	1311	201.7	1344	218.9	1377	236.2
114000	4588	1237	160.6	1255	169.3	1273	178.0	1291	186.8	1308	195.7	1325	204.7	1342	213.6	1358	222.7	1390	240.8	1422	259.0
120000	4829	1290	180.5	1307	189.5	1324	198.6	1341	207.8	1357	217.1	1374	226.5	1390	235.9	1406	245.4	1437	264.4	1468	283.5
126000	5070	1342	202.3	1359	211.6	1375	221.1	1391	230.7	1407	240.4	1423	250.1	1439	259.9	1454	269.8	1485	289.7	1514	309.6
132000	5312	1396	226.0	1411	235.7	1427	245.5	1442	255.4	1458	265.5	1473	275.6	1488	285.8	1503	296.1	1533	316.8		
138000	5553	1449	251.7	1464	261.8	1479	271.9	1494	282.2	1509	292.6	1524	303.1	1538	313.7						
144000	5795	1503	279.5	1518	289.9	1532	300.5	1546	311.1												

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
49000	1972	1092	97.5	1143	109.2	1190	121.1														
52000	2093	1097	101.4	1147	113.4	1194	125.6	1240	138.2	1285	150.9										
55000	2213	1103	105.7	1151	117.7	1198	130.2	1244	143.1	1289	156.3	1331	169.6								
59000	2374	1114	112.1	1160	124.1	1205	136.7	1250	149.9	1294	163.4	1337	177.2	1378	191.3	1418	205.6	1457	220.1		
63000	2535	1129	119.5	1172	131.5	1215	144.0	1258	157.2	1300	170.9	1342	185.0	1383	199.5	1423	214.2	1462	229.3	1537	259.9
67000	2696	1147	127.8	1188	139.9	1228	152.4	1269	165.5	1309	179.2	1350	193.4	1390	208.0	1429	223.0	1467	238.4	1542	270.0
71000	2857	1167	137.0	1206	149.2	1245	161.9	1283	175.0	1322	188.6	1360	202.7	1398	217.3	1436	232.5	1474	248.0	1547	280.2
75000	3018	1189	147.0	1227	159.5	1264	172.3	1301	185.6	1337	199.2	1374	213.3	1410	227.8	1446	242.9	1482	258.5		
79000	3179	1213	157.7	1249	170.5	1285	183.7	1320	197.1	1355	210.9	1390	225.1	1425	239.6	1459	254.7	1494	270.1		
83000	3340	1237	169.0	1273	182.3	1307	195.8	1342	209.6	1376	223.6	1409	238.0	1442	252.7	1475	267.7	1508	283.2		
87000	3501	1263	181.0	1297	194.8	1331	208.8	1364	222.9	1397	237.3	1429	251.8	1462	266.8	1493	282.0	1525	297.5		
91000	3662	1289	193.6	1323	208.0	1356	222.5	1388	237.0	1420	251.8	1451	266.7	1483	281.9	1513	297.4	1544	313.1		
95000	3823	1316	206.8	1349	221.8	1381	236.8	1413	251.9	1444											



DESIGN 51 Double Width Airfoil Fans

Size 542

SPEED LIMITATIONS

CLASS I—856 RPM CLASS II—1116 RPM CLASS III—1407 RPM

OUTLET AREA

30.46 SQ. FT.

OUTLET CFM	VEL.	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15000	492	173	0.7	199	1.1	224	1.4	270	2.3	321	4.4	353	5.6	384	6.9	450	11.8	497	15.2	542	18.8
23000	755	215	1.4	235	1.9	253	2.4	288	3.3	321	4.4	353	5.6	384	6.9	450	11.8	497	15.2	542	18.8
31000	1018	262	2.5	279	3.1	295	3.8	324	5.0	351	6.2	377	7.5	401	8.8	450	11.8	497	15.2	542	18.8
39000	1280	313	4.2	328	4.9	341	5.7	367	7.2	391	8.8	413	10.4	435	11.9	475	15.1	515	18.5	553	22.2
47000	1543	366	6.6	379	7.4	391	8.3	414	10.1	435	12.0	455	13.9	475	15.8	511	19.5	546	23.3	579	27.2
55000	1806	421	9.8	432	10.8	442	11.8	462	13.9	482	16.0	501	18.2	518	20.4	552	24.8	584	29.2	614	33.5
63000	2068	476	14.0	486	15.1	495	16.3	513	18.6	531	21.0	548	23.5	564	26.0	596	31.0	625	36.0	653	41.0
71000	2331	532	19.4	541	20.6	549	21.9	565	24.5	581	27.1	597	29.8	612	32.6	641	38.2	669	43.9	696	49.6
79000	2594	589	26.1	596	27.4	604	28.8	618	31.6	633	34.5	647	37.5	661	40.5	689	46.7	715	52.9	740	59.3
87000	2856	645	34.2	652	35.7	659	37.2	673	40.3	686	43.4	699	46.6	712	49.9	737	56.5	762	63.4	786	70.3
95000	3119	702	43.9	709	45.5	715	47.2	727	50.5	740	53.9	752	57.3	764	60.8	787	68.0	811	75.3	833	82.8
103000	3381	759	55.3	765	57.1	771	58.9	783	62.4	794	66.1	805	69.8	816	73.5	838	81.1	860	89.0	881	97.0
111000	3644	817	68.7	822	70.5	828	72.4	838	76.3	849	80.2	859	84.1	870	88.1	890	96.2	911	104.5	931	113.0
119000	3907	874	84.0	879	86.0	884	88.0	894	92.1	904	96.3	914	100.5	924	104.7	943	113.3	962	122.1	981	131.1
127000	4169	931	101.5	936	103.7	941	105.8	950	110.2	960	114.6	969	119.0	978	123.5	996	132.6	1014	141.9	1032	151.3
135000	4432	989	121.3	993	123.6	998	125.9	1007	130.5	1016	135.2	1024	139.9	1033	144.6	1050	154.2	1067	164.0	1084	173.9
143000	4695	1047	143.6	1051	146.0	1055	148.4	1063	153.3	1072	158.2	1080	163.2	1088	168.2	1105	178.3	1121	188.5	1137	199.0
151000	4957	1104	168.5	1108	171.1	1112	173.6	1120	178.7	1128	183.9	1136	189.1	1144	194.4	1159	205.0	1175	215.7	1190	226.6
159000	5220	1162	196.2	1166	198.8	1169	201.5	1177	206.9	1185	212.3	1192	217.8	1200	223.3	1214	234.4	1229	245.7	1244	257.1
167000	5483	1220	226.7	1223	229.5	1227	232.3	1234	238.0	1241	243.7	1248	249.4	1256	255.2	1270	266.8	1284	278.5	1298	290.4
175000	5745	1277	260.3	1281	263.2	1284	266.2	1291	272.1	1298	278.0	1305	284.0	1312	290.1	1325	302.2	1339	314.5	1352	326.8
183000	6008	1335	297.1	1338	300.1	1342	303.2	1348	309.4	1355	315.6	1361	321.9	1368	328.2	1381	340.8	1394	353.6	1407	366.5
192000	6303	1400	342.4	1403	345.7	1406	348.9														

OUTLET CFM	VEL.	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
36000	1182	587	24.9	625	29.1	661	33.5	702	42.4	734	47.5	765	52.7	794	57.9						
43000	1412	600	28.5	634	32.9	669	37.6														
50000	1641	623	33.6	653	38.0	683	42.6	713	47.5	743	52.7	773	58.1	802	63.7	830	69.5	884	81.4	941	101.7
57000	1871	652	39.9	680	44.5	707	49.3	734	54.3	761	59.4	787	64.8	813	70.4	839	76.3	891	88.6	941	101.7
64000	2101	685	47.1	711	52.2	737	57.3	762	62.5	786	67.9	810	73.4	834	79.1	857	84.9	904	97.2	951	110.3
71000	2331	721	55.2	746	60.9	769	66.5	793	72.1	816	77.8	838	83.6	860	89.5	882	95.5	925	107.9	967	121.0
78000	2561	759	64.2	782	70.5	805	76.7	827	82.8	848	89.0	869	95.2	890	101.4	911	107.8	951	120.7	990	134.1
85000	2791	797	74.2	820	81.0	841	87.8	863	94.6	883	101.3	903	108.0	923	114.8	943	121.5	981	135.1	1018	149.1
92000	3020	837	85.2	859	92.6	880	99.9	900	107.3	920	114.7	939	122.0	958	129.3	977	136.6	1013	151.1	1049	165.8
99000	3250	878	97.5	899	105.4	919	113.3	938	121.2	958	129.1	976	137.0	994	144.9	1012	152.8	1047	168.5	1081	184.2
106000	3480	920	111.1	940	119.5	959	127.9	978	136.3	996	144.8	1014	153.3	1032	161.8	1049	170.3	1083	187.2	1116	204.0
113000	3710	963	126.1	982	135.0	1000	143.9	1018	152.9	1036	161.9	1054	170.9	1071	180.0	1087	189.0	1120	207.1	1152	225.1
121000	3972	1012	145.2	1030	154.6	1048	164.1	1066	173.6	1083	183.2	1099	192.8	1116	202.5	1132	212.2	1164	231.6	1194	250.9
129000	4235	1063	166.5	1080	176.4	1097	186.4	1114	196.5	1130	206.7	1146	216.9	1162	227.1	1178	237.4	1208	258.0	1238	278.7
137000	4498	1114	190.2	1130	200.6	1147	211.1	1163	221.7	1178	232.4	1194	243.2	1209	254.0	1224	264.8	1254	286.6	1283	308.5
145000	4760	1166	216.3	1181	227.2	1197	238.2	1212	249.3	1227	260.5	1242	271.9	1257	283.2	1272	294.7	1300	317.6	1328	340.7
153000	5023	1218	245.2	1233	256.5	1248	268.0	1263	279.6	1277	291.3	1292	303.2	1306	315.1	1320	327.0	1348	351.2	1375	375.4
161000	5286	1271	276.8	1286	288.6	1300	300.6	1314	312.7	1328	324.9	1341	337.2	1355	349.6	1369	362.2	1396	387.4		
169000	5548	1325	311.4	1338	323.7	1352	336.1	1365	348.7	1379	361.4	1392	374.3	1405	387.2						
177000	5811	1379	349.1	1392	361.9	1405	374.8														

OUTLET CFM	VEL.	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
		RPM	BHP																		
59000	1937	991	117.7	1037	131.8	1080	146.2														
63000	2068	995	122.9	1040	137.3	1084	152.2	1126	167.4	1166	182.9										
67000	2200	1001	128.5	1045	143.2	1088	158.4	1130	174.0	1170	190.0	1209	206.2								
71000	2331	1009	134.9	1051	149.5	1093	164.8	1134	180.7	1174	197.1	1212	213.8	1250	230.9	1286	248.1				
76000	2495	1023	144.0	1062	158.5	1102	173.8	1141	189.8	1180	206.4	1218	223.5	1255	241.0	1291	258.9	1326	277.0	1394	314.1
81000	2659	1040	154.3	1077	168.9	1114	184.1	1151	200.0	1188	216.6	1224	233.8	1261	251.6	1296	269.8	1331	288.4	1399	326.7
86000	2823	1058	165.7	1094	180.6	1129	195.9	1164	211.8	1199	228.3	1234	245.3	1269	263.2	1303	281.5	1337	300.4	1404	339.4
91000	2988	1079	178.2	1113	193.3	1147	208.9	1180	224.9	1214	241.5	1247	258.6	1279	276.2	1312	294.5	1345	313.4		
96000	3152	1101	191.5	1134	207.1	1167	223.1	1199	239.4	1231	256.1	1262	273.3	1293	291.0	1325	309.2	1356	328.0		
101000	3316	1124	205.7	1156	221.9	1188	238.3	1219	255.0	1249	272.0	1280	289.5	1310	307.3	1340	325.6	1369	344.4		
106000	3480	1148	220.7	1179	237.5	1210	254.5	1240	271.7	1270	289.1	1299	306.9	1328	325.0	1357	343.5	1385	362.4		
111000	3644	1173	236.5	1203	254.1	1233	271.7	1262	289.4	1291	307.4	1320	325.6	1348	344.1	1376	362.8	1403	382.0		
116000	3808	1198	253.0	1228	271.4	1257	289.7	1285	308.1	1314	326.7	1341	345.4	1369	364.3	13					



DESIGN 51 Double Width Airfoil Fans

Size 600

SPEED LIMITATIONS

OUTLET AREA

CLASS I—774 RPM

CLASS II—1009 RPM

CLASS III—1271 RPM

37.26 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
19000	510	159	1.0	181	1.4	203	1.8	245	2.9	289	5.3	319	6.8	347	8.4	405	14.2	449	18.3	489	22.7
28000	751	193	1.8	212	2.3	228	2.9	260	4.0	314	7.4	338	8.9	360	10.5	405	14.2	449	18.3	489	22.7
37000	993	233	3.0	248	3.7	263	4.4	289	5.9	314	7.4	338	8.9	360	10.5	405	14.2	449	18.3	489	22.7
46000	1235	275	4.7	288	5.6	301	6.5	325	8.3	347	10.2	367	12.0	387	13.8	425	17.6	461	21.8	497	26.3
55000	1476	319	7.2	330	8.2	341	9.3	363	11.4	383	13.6	401	15.8	419	18.0	453	22.4	485	26.8	516	31.5
65000	1744	369	10.9	379	12.1	388	13.3	407	15.8	425	18.3	443	20.9	459	23.5	490	28.7	519	33.9	547	39.1
75000	2013	420	15.9	428	17.3	437	18.6	454	21.4	470	24.3	486	27.2	501	30.2	530	36.2	557	42.2	583	48.1
85000	2281	471	22.4	479	23.8	487	25.3	502	28.4	516	31.6	531	34.9	545	38.2	572	44.9	597	51.7	621	58.5
95000	2550	523	30.4	530	32.0	537	33.7	551	37.1	564	40.6	577	44.2	590	47.8	615	55.2	639	62.8	662	70.4
105000	2818	576	40.2	582	42.0	588	43.9	600	47.6	613	51.4	625	55.2	636	59.2	660	67.3	682	75.5	704	83.9
115000	3086	628	52.1	634	54.0	640	56.0	651	60.1	662	64.1	673	68.3	684	72.6	706	81.3	727	90.2	747	99.2
125000	3355	681	66.1	686	68.2	691	70.4	702	74.7	712	79.1	722	83.6	733	88.2	753	97.5	772	107.0	792	116.7
135000	3623	734	82.5	739	84.8	743	87.1	753	91.8	763	96.5	772	101.3	782	106.1	801	116.0	819	126.2	837	136.6
145000	3892	787	101.5	791	103.9	796	106.4	805	111.4	814	116.5	823	121.5	832	126.7	849	137.2	867	148.0	884	158.9
155000	4160	840	123.2	844	125.8	848	128.5	857	133.8	865	139.2	874	144.6	882	150.0	898	161.2	915	172.5	931	184.1
165000	4428	893	147.9	897	150.7	901	153.5	909	159.1	917	164.8	925	170.6	933	176.3	948	188.1	964	200.0	979	212.2
175000	4697	946	175.7	950	178.7	953	181.6	961	187.6	969	193.6	976	199.7	984	205.8	998	218.1	1013	230.7	1027	243.5
185000	4965	999	206.9	1003	210.0	1006	213.1	1013	219.4	1021	225.8	1028	232.1	1035	238.6	1049	251.5	1063	264.7	1076	278.1
195000	5233	1052	241.5	1056	244.8	1059	248.1	1066	254.7	1073	261.4	1079	268.1	1086	274.9	1100	288.5	1113	302.2	1126	316.2
205000	5502	1105	279.9	1109	283.3	1112	286.8	1118	293.7	1125	300.7	1131	307.8	1138	314.9	1151	329.1	1163	343.5	1176	358.1
215000	5770	1159	322.2	1162	325.8	1165	329.4	1171	336.7	1177	344.0	1184	351.3	1190	358.8	1202	373.7	1214	388.7	1226	403.9
225000	6039	1212	368.5	1215	372.3	1218	376.1	1224	383.7	1230	391.3	1236	399.0	1242	406.8	1253	422.3	1265	438.0		
235000	6307	1265	419.2	1268	423.1	1271	427.0														

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
44000	1181	531	30.4	565	35.6	598	41.0														
53000	1422	543	35.2	574	40.5	605	46.2	635	52.2	664	58.4	692	64.7	718	71.2						
62000	1664	565	41.8	592	47.2	619	52.9	646	58.8	673	65.2	699	71.8	725	78.7	751	85.8	799	100.5	845	115.6
71000	1906	594	50.0	619	55.7	643	61.6	667	67.8	690	74.1	714	80.7	737	87.6	760	94.7	807	109.9	852	125.9
80000	2147	626	59.5	649	65.8	671	72.2	694	78.7	715	85.3	737	92.1	758	99.1	779	106.3	820	121.3	861	137.4
89000	2389	660	70.2	682	77.3	703	84.3	724	91.4	744	98.5	764	105.7	784	112.9	803	120.4	841	135.7	879	151.8
98000	2630	696	82.1	717	89.9	737	97.7	757	105.5	776	113.2	795	121.0	813	128.8	832	136.7	867	152.7	902	169.3
107000	2872	733	95.3	753	103.9	772	112.4	791	121.0	810	129.5	828	138.0	845	146.4	862	154.9	896	172.0	929	189.3
116000	3113	771	110.1	790	119.3	809	128.6	827	137.9	845	147.2	862	156.4	879	165.7	895	174.9	928	193.2	959	211.6
125000	3355	811	126.6	829	136.5	847	146.4	864	156.4	881	166.4	898	176.4	914	186.4	930	196.4	961	216.2	991	236.0
134000	3596	851	144.9	868	155.4	885	166.1	902	176.7	918	187.4	934	198.1	950	208.9	965	219.6	995	241.0	1025	262.3
143000	3838	891	165.3	908	176.4	925	187.7	941	199.0	957	210.3	972	221.8	987	233.2	1002	244.6	1031	267.5	1059	290.4
152000	4079	933	187.8	949	199.5	965	211.4	980	223.4	996	235.4	1010	247.4	1025	259.5	1040	271.7	1068	296.0	1095	320.4
161000	4321	975	212.7	990	225.0	1006	237.4	1021	250.0	1035	262.6	1050	275.4	1064	288.1	1078	300.9	1105	326.6	1132	352.4
170000	4563	1018	240.1	1032	252.9	1047	265.9	1061	279.1	1075	292.3	1089	305.7	1103	319.1	1117	332.5	1143	359.6	1169	386.7
179000	4804	1061	270.1	1075	283.5	1089	297.1	1103	310.7	1116	324.6	1130	338.5	1143	352.5	1156	366.6	1182	395.0	1207	423.5
188000	5046	1105	302.9	1118	316.8	1131	330.9	1145	345.2	1158	359.6	1171	374.1	1184	388.7	1196	403.4	1221	433.0	1246	462.8
197000	5287	1149	338.6	1162	353.0	1174	367.7	1187	382.5	1200	397.5	1212	412.5	1225	427.7	1237	443.0	1261	473.9		
206000	5529	1193	377.4	1206	392.4	1218	407.5	1230	422.8	1242	438.3	1254	454.0	1266	469.7						
216000	5797	1243	424.2	1255	439.8	1266	455.6														

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
72000	1932	896	143.8	937	161.0	976	178.6														
77000	2067	900	150.3	940	168.0	980	186.2	1017	204.8	1054	223.7										
83000	2228	906	158.8	946	176.8	984	195.4	1022	214.6	1058	234.3	1093	254.3	1127	274.7						
89000	2389	916	168.7	953	186.6	990	205.4	1027	224.9	1063	245.0	1097	265.7	1131	286.8	1164	308.2	1196	330.0		
95000	2550	929	180.2	964	198.0	999	216.6	1034	236.2	1068	256.5	1102	277.5	1136	299.1	1168	321.1	1200	343.6	1262	389.5
101000	2711	945	193.0	978	210.9	1011	229.6	1044	249.0	1076	269.3	1109	290.3	1141	312.1	1173	334.5	1205	357.4	1266	404.6
107000	2872	962	207.1	994	225.3	1025	244.2	1056	263.7	1087	283.8	1118	304.7	1149	326.5	1180	348.9	1210	372.1	1270	420.0
113000	3033	980	222.3	1011	241.0	1041	260.2	1071	279.9	1101	300.2	1130	321.1	1160	342.7	1189	365.0	1218	388.2		
119000	3194	1000	238.6	1030	257.9	1059	277.5	1088	297.6	1116	318.1	1144	339.2	1173	360.9	1200	383.2	1228	406.2		
125000	3355	1021	255.8	1050	275.8	1078	296.1	1106	316.6	1133	337.5	1160	359.0	1187	380.9	1214	403.3	1241	426.3		
131000	3516	1042	274.1	1070	294.8	1098	315.8	1125	336.9	1151	358.4	1178	380.2	1204	402.5	1230	425.2	1255	448.4		
137000	3677	1064	293.2	1091	314.8	1118	336.6	1145	358.5	1171	380.5	1196	402.9	1222	425.6	1247	448.7	1271	472.2		
143000	3838	1087	313.1	1113	335.8	1140	358.4	1165													



DESIGN 51 Double Width Airfoil Fans

Size 660

SPEED LIMITATIONS

CLASS I—692 RPM CLASS II—903 RPM CLASS III—1148 RPM

OUTLET AREA

45.08 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
22000	488	140	1.1	162	1.6	182	2.1	220	3.4												
33000	732	171	2.0	188	2.7	203	3.3	232	4.7	260	6.3	287	8.1	313	10.0						
44000	976	206	3.4	220	4.3	234	5.2	258	6.9	281	8.7	302	10.5	323	12.5	365	17.0	405	22.0	441	27.3
56000	1242	247	5.7	259	6.8	271	7.9	292	10.1	312	12.4	331	14.6	349	16.8	383	21.5	416	26.5	449	32.1
68000	1508	290	9.0	301	10.3	311	11.6	330	14.3	348	17.0	365	19.7	381	22.4	411	27.8	440	33.3	468	39.0
80000	1775	335	13.6	344	15.1	352	16.5	369	19.6	386	22.7	401	25.9	416	29.1	444	35.5	470	41.8	495	48.2
92000	2041	380	19.7	388	21.3	396	22.9	411	26.4	425	29.9	440	33.5	453	37.2	479	44.5	504	51.9	527	59.2
104000	2307	426	27.4	433	29.2	440	31.1	453	34.8	466	38.8	479	42.8	492	46.8	516	55.1	539	63.4	561	71.7
116000	2573	472	37.1	478	39.1	484	41.1	497	45.2	509	49.5	520	53.9	532	58.3	555	67.4	576	76.6	597	85.9
128000	2839	518	48.8	524	51.0	530	53.3	541	57.8	552	62.4	563	67.1	573	72.0	594	81.8	615	91.9	634	102.1
140000	3106	565	62.9	570	65.3	575	67.8	585	72.7	596	77.7	606	82.8	616	87.9	635	98.6	654	109.4	673	120.5
152000	3372	611	79.6	616	82.2	621	84.8	630	90.1	640	95.5	649	101.0	658	106.5	677	117.8	695	129.5	712	141.3
164000	3638	658	99.1	663	101.9	667	104.7	676	110.4	685	116.1	693	122.0	702	127.9	719	139.9	736	152.3	752	164.9
176000	3904	705	121.6	709	124.6	713	127.6	722	133.7	730	139.8	738	146.0	746	152.3	762	165.1	778	178.1	794	191.5
188000	4170	752	147.3	756	150.5	760	153.7	768	160.1	775	166.7	783	173.3	791	179.9	806	193.4	820	207.2	835	221.3
200000	4437	799	176.5	803	179.8	806	183.2	814	190.1	821	197.0	828	204.0	835	211.0	850	225.2	864	239.8	878	254.5
212000	4703	846	209.3	850	212.8	853	216.4	860	223.7	867	231.0	874	238.4	880	245.8	894	260.8	907	276.0	921	291.5
224000	4969	893	246.0	896	249.8	900	253.5	906	261.2	913	268.9	919	276.6	926	284.4	939	300.2	951	316.2	964	332.4
236000	5235	940	286.8	943	290.8	947	294.8	953	302.8	959	310.8	965	319.0	971	327.2	984	343.7	996	360.4	1008	377.4
248000	5501	987	331.9	990	336.1	993	340.3	999	348.7	1005	357.2	1011	365.7	1017	374.3	1029	391.6	1040	409.1	1052	426.8
260000	5768	1035	381.6	1038	386.0	1040	390.4	1046	399.2	1052	408.0	1057	417.0	1063	426.0	1074	444.0	1085	462.3	1096	480.7
272000	6034	1082	436.1	1085	440.7	1087	445.2	1093	454.4	1098	463.7	1104	473.0	1109	482.4	1120	501.2	1130	520.2	1141	539.4
284000	6300	1129	495.5	1132	500.3	1134	505.1	1140	514.7	1145	524.3										

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
54000	1198	480	37.3	511	43.7	540	50.3														
64000	1420	489	42.5	518	49.1	546	56.1	573	63.4	599	70.9	625	78.6								
74000	1642	507	49.6	532	56.2	557	63.2	581	70.5	606	78.3	630	86.4	654	94.8	677	103.4	721	121.2		
85000	1886	532	59.4	555	66.3	577	73.5	599	80.9	620	88.7	642	96.7	664	105.2	685	114.0	728	132.5	769	152.0
96000	2130	560	70.8	581	78.4	602	86.1	622	93.9	642	101.9	662	110.2	681	118.7	700	127.5	738	145.9	777	165.6
107000	2374	591	83.6	611	92.1	630	100.6	649	109.1	668	117.7	686	126.3	704	135.2	722	144.2	756	162.9	791	182.6
118000	2618	623	97.9	642	107.3	660	116.7	678	126.1	696	135.4	713	144.8	730	154.2	747	163.7	779	183.2	811	203.3
129000	2862	656	113.8	674	124.1	692	134.5	709	144.8	726	155.0	742	165.2	758	175.4	774	185.6	805	206.3	835	227.3
140000	3106	691	131.6	708	142.7	725	154.0	741	165.2	757	176.4	773	187.5	788	198.6	804	209.7	833	231.9	862	254.2
151000	3350	726	151.4	743	163.4	759	175.4	775	187.5	790	199.6	805	211.7	820	223.7	834	235.8	863	259.7	890	283.6
162000	3594	762	173.4	778	186.2	794	199.0	809	212.0	824	224.9	838	237.9	852	250.9	866	263.8	894	289.7	920	315.3
173000	3838	799	197.9	814	211.4	829	225.1	844	238.8	858	252.6	872	266.4	886	280.2	899	294.1	926	321.8	951	349.4
184000	4082	836	225.0	851	239.3	865	253.7	879	268.2	893	282.7	907	297.4	920	312.0	933	326.7	959	356.2	983	385.7
195000	4326	874	255.0	888	269.9	902	285.0	915	300.3	929	315.6	942	331.1	955	346.5	967	362.1	992	393.2	1016	424.4
206000	4570	912	287.9	926	303.6	939	319.4	952	335.3	965	351.4	978	367.6	990	383.9	1002	400.2	1026	433.0	1050	465.9
217000	4814	951	324.1	964	340.4	977	356.9	989	373.5	1002	390.4	1014	407.3	1026	424.3	1038	441.4	1061	475.8	1084	510.4
228000	5058	991	363.6	1003	380.6	1015	397.7	1027	415.1	1039	432.6	1051	450.2	1063	468.0	1074	485.9	1097	521.9	1119	558.0
239000	5302	1030	406.7	1042	424.3	1054	442.1	1065	460.1	1077	478.3	1088	496.7	1099	515.1	1111	533.8	1133	571.3		
250000	5546	1070	453.5	1082	471.7	1093	490.2	1104	508.8	1115	527.8	1126	546.8	1137	565.9	1148	585.3				
261000	5790	1111	504.1	1122	523.1	1132	542.3	1143	561.5												

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
88000	1952	809	176.0	846	197.1	882	218.6														
95000	2107	813	185.2	850	206.9	886	229.2	920	252.1	953	275.4										
102000	2263	819	195.2	855	217.2	890	240.1	924	263.6	956	287.8	988	312.4	1019	337.3						
109000	2418	828	206.8	861	228.7	895	251.7	928	275.6	960	300.3	992	325.7	1022	351.5	1052	377.8	1081	404.4		
116000	2573	839	220.2	871	242.0	902	264.8	934	288.8	965	313.7	996	339.4	1026	365.9	1056	392.9	1085	420.3	1140	476.4
123000	2728	852	235.1	882	257.0	912	279.9	942	303.7	972	328.5	1002	354.3	1031	381.0	1060	408.4	1088	436.5	1144	494.1
130000	2884	867	251.3	896	273.6	924	296.6	953	320.5	981	345.2	1009	370.9	1037	397.6	1065	425.1	1093	453.5	1148	512.1
137000	3039	883	268.9	911	291.7	938	315.1	965	339.2	992	364.0	1019	389.6	1046	416.1	1073	443.6	1099	471.9		
144000	3194	900	287.7	927	311.1	953	335.0	979	359.5	1005	384.6	1031	410.4	1057	436.9	1082	464.3	1108	492.5		
151000	3350	917	307.6	943	331.8	969	356.4	995	381.4	1020	406.9	1045	433.0	1069	459.8	1094	487.2	1118	515.4		
158000	3505	935	328.6	961	353.7	986	379.0	1011	404.7	1035	430.7	1059	457.3	1083	484.4	1107	512.1	1130	540.4		
165000	3660	954	350.5	979	376.7	1004	402.9	1028	429.3	1051	456.1	1075	483.2	1098	510.8	1121	538.9	1143	567.6		
172000	3815	973	373.5	998	400.7	1022	427.9	1045	455.3	1068	482.8	1091	510.7	1114	538.8	1136	567.4				
179000	3971	993	397.4	1017																	



DESIGN 51 Double Width Airfoil Fans

Size 730

SPEED LIMITATIONS

CLASS I—636 RPM CLASS II—829 RPM CLASS III—1044 RPM

OUTLET AREA

55.15 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
28000	508	130	1.4	149	2.0	167	2.7	201	4.3												
42000	762	160	2.7	175	3.5	189	4.3	214	6.0	238	8.0	262	10.1	285	12.5						
56000	1015	194	4.6	207	5.7	219	6.8	240	9.0	260	11.2	279	13.5	298	16.0	334	21.4	369	27.5	402	34.1
70000	1269	231	7.4	242	8.8	252	10.1	271	12.9	289	15.7	306	18.5	322	21.3	352	27.0	381	33.2	410	39.9
84000	1523	269	11.5	278	13.0	287	14.6	304	17.9	320	21.2	336	24.6	350	28.0	377	34.6	403	41.4	428	48.4
98000	1777	308	17.0	316	18.7	324	20.5	339	24.3	354	28.1	368	32.0	381	35.9	406	43.8	430	51.5	453	59.3
112000	2031	348	24.1	355	26.1	362	28.1	375	32.3	389	36.6	401	41.0	414	45.4	437	54.4	460	63.3	481	72.2
126000	2285	388	33.2	394	35.4	400	37.6	412	42.2	425	46.9	436	51.8	448	56.7	470	66.7	491	76.8	511	86.8
140000	2539	428	44.4	434	46.8	439	49.3	451	54.3	462	59.4	472	64.7	483	70.1	504	81.0	523	92.2	542	103.4
154000	2792	469	58.0	474	60.6	479	63.3	489	68.8	499	74.3	509	80.0	519	85.8	538	97.7	557	109.8	575	122.1
168000	3046	509	74.2	514	77.1	519	80.0	528	85.9	538	91.9	547	98.0	556	104.2	574	116.9	592	130.0	609	143.2
182000	3300	550	93.3	555	96.4	559	99.5	568	105.8	577	112.3	585	118.8	594	125.4	610	139.0	627	153.0	643	167.2
197000	3572	594	117.1	598	120.5	603	123.8	611	130.7	619	137.6	627	144.6	635	151.7	650	166.2	666	181.0	681	196.2
212000	3844	638	144.8	642	148.4	646	152.1	654	159.4	661	166.7	669	174.2	676	181.8	690	197.2	705	212.9	719	229.0
227000	4116	682	176.7	686	180.5	690	184.4	697	192.2	704	200.1	711	208.0	718	216.0	731	232.3	745	249.0	758	265.9
242000	4388	727	213.0	730	217.1	733	221.2	740	229.4	747	237.8	753	246.2	760	254.7	773	272.0	785	289.5	798	307.4
257000	4660	771	254.0	774	258.3	777	262.7	784	271.4	790	280.3	796	289.2	802	298.2	814	316.3	826	334.8	839	353.6
272000	4932	815	300.0	818	304.6	821	309.2	827	318.4	833	327.8	839	337.2	845	346.6	856	365.7	868	385.1	879	404.8
287000	5204	859	351.3	862	356.2	865	361.0	871	370.7	876	380.5	882	390.5	888	400.4	899	420.5	910	440.7	920	461.4
302000	5476	904	408.3	907	413.3	909	418.4	915	428.6	920	438.9	925	449.4	931	459.8	941	480.8	952	502.0	962	523.5
317000	5748	948	471.1	951	476.4	953	481.7	958	492.5	964	503.2	969	514.1	974	525.1	984	547.0	994	569.2	1004	591.7
332000	6020	993	540.1	995	545.7	997	551.2	1002	562.5	1007	573.7	1012	585.1	1017	596.5	1027	619.5	1036	642.6		
347000	6292	1037	615.6	1039	621.4	1042	627.2														

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
66000	1197	437	45.4	465	53.1	491	61.1														
79000	1432	446	52.4	472	60.3	497	68.7	522	77.6	546	86.8	569	96.2	591	105.9						
92000	1668	465	62.0	487	70.0	509	78.4	531	87.3	553	96.7	575	106.5	596	116.7	617	127.2	657	149.0	694	171.4
105000	1904	488	73.9	508	82.4	528	91.1	548	100.2	567	109.6	586	119.3	606	129.5	625	140.1	663	162.5	700	186.2
118000	2140	513	87.6	532	97.0	551	106.4	569	116.0	587	125.7	605	135.8	622	146.1	639	156.7	673	179.0	708	202.8
131000	2375	541	103.0	559	113.4	576	123.7	593	134.1	610	144.6	627	155.2	643	166.0	659	176.9	690	199.6	721	223.4
144000	2611	569	120.0	586	131.5	603	143.0	619	154.4	635	165.8	651	177.2	666	188.7	681	200.3	711	223.9	740	248.3
157000	2847	599	138.9	615	151.5	631	164.0	647	176.6	662	189.1	677	201.5	692	213.9	706	226.3	734	251.4	761	277.0
170000	3083	630	160.0	645	173.5	661	187.1	676	200.8	690	214.4	704	227.9	718	241.4	732	254.9	759	281.8	785	308.9
183000	3318	661	183.4	676	197.9	691	212.5	705	227.1	719	241.8	733	256.5	746	271.1	760	285.7	785	314.7	810	343.7
196000	3554	693	209.4	708	224.9	722	240.4	736	256.0	749	271.7	762	287.4	775	303.1	788	318.8	813	350.1	837	381.1
209000	3790	726	238.3	740	254.6	753	271.1	767	287.6	780	304.2	792	320.9	805	337.6	817	354.4	841	387.8	865	421.2
222000	4025	759	270.1	772	287.3	785	304.7	798	322.1	811	339.7	823	357.4	835	375.1	847	392.8	870	428.3	893	463.9
236000	4279	795	308.1	808	326.1	820	344.4	833	362.8	845	381.4	857	400.1	868	418.8	880	437.6	902	475.3	924	513.1
250000	4533	832	350.0	844	369.0	856	388.1	868	407.5	879	427.0	891	446.6	902	466.3	913	486.2	935	525.9	957	565.9
264000	4787	869	396.3	881	416.0	892	436.1	903	456.3	915	476.7	926	497.3	937	518.0	948	538.8	969	580.6	989	622.6
278000	5041	907	447.1	918	467.6	929	488.5	940	509.6	950	530.9	961	552.4	972	574.0	982	595.8	1003	639.6	1023	683.7
292000	5295	945	502.6	955	524.0	966	545.7	976	567.6	987	589.9	997	612.2	1007	634.7	1017	657.4	1037	703.1		
306000	5549	983	563.2	993	585.4	1003	607.9	1013	630.7	1023	653.7	1033	677.0	1043	700.3						
320000	5802	1022	628.9	1031	652.0	1041	675.4														

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
107000	1940	736	213.4	770	239.0	802	265.0														
115000	2085	740	223.9	773	250.1	805	277.2	837	304.8	866	333.0										
123000	2230	745	235.4	777	261.9	809	289.5	840	318.0	870	347.1	898	376.8	926	406.9						
131000	2375	752	248.5	783	274.9	813	302.7	843	331.6	873	361.4	901	392.0	929	423.1	956	454.8	983	486.8		
139000	2520	761	263.5	790	289.8	819	317.5	848	346.4	877	376.5	905	407.5	933	439.4	960	471.9	986	505.0	1036	572.5
148000	2684	774	282.3	801	308.8	829	336.4	856	365.2	883	395.2	910	426.4	937	458.7	963	491.8	989	525.6	1040	595.2
157000	2847	788	303.1	814	330.1	840	357.9	866	386.7	892	416.6	917	447.6	943	479.8	969	513.1	994	547.3	1043	618.2
166000	3010	803	325.7	829	353.3	854	381.6	878	410.7	903	440.7	927	471.7	951	503.7	976	536.8	1000	571.1		
175000	3173	820	349.9	844	378.3	868	407.3	892	436.9	915	467.3	939	498.5	962	530.6	985	563.6	1008	597.7		
184000	3336	837	375.6	860	405.1	884	434.9	907	465.3	930	496.2	952	527.9	974	560.2	996	593.4	1018	627.5		
193000	3500	854	402.8	877	433.4	900	464.3	923	495.5	945	527.2	966	559.4	988	592.4	1009	625.9	1030	660.2		
202000	3663	873	431.3	895	463.3	917	495.3	939	527.6	960	560.2	982	593.3	1002	626.8	1023	660.9	1043	695.7		
211000	3826	891	461.1	913	494.6	935	527.9	956	561.4	977	595.1	998	629.1	1018	663.4	1038	698.3				
220000	3989	911	492.3	932	527.2	953	562.0	974	596.8	994	631.7	1014	666.8	1034	702.1						



DESIGN 51 Double Width Airfoil Fans

Size 807

SPEED LIMITATIONS

CLASS I—574 RPM CLASS II—749 RPM CLASS III—943 RPM

OUTLET AREA

67.48 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
34000	504	117	1.7	134	2.4	151	3.2	182	5.2												
51000	756	144	3.2	158	4.2	170	5.2	193	7.3	215	9.7	237	12.3	258	15.2						
68000	1008	175	5.5	186	6.8	197	8.2	216	10.9	235	13.6	252	16.4	269	19.4	301	26.0	333	33.5	363	41.5
85000	1260	207	8.9	217	10.5	227	12.2	244	15.6	260	19.0	275	22.4	290	25.7	317	32.7	344	40.3	370	48.5
102000	1512	241	13.8	250	15.7	258	17.6	274	21.6	288	25.7	302	29.7	315	33.8	340	41.9	364	50.1	386	58.7
119000	1763	276	20.4	284	22.5	291	24.7	305	29.2	318	33.9	331	38.6	343	43.4	366	52.9	388	62.3	408	71.8
137000	2030	314	29.5	320	31.9	327	34.4	339	39.5	351	44.7	363	50.1	374	55.5	395	66.5	415	77.4	435	88.3
155000	2297	352	41.2	358	43.9	363	46.7	375	52.3	385	58.1	396	64.0	406	70.1	426	82.4	445	94.8	463	107.2
173000	2564	391	55.8	396	58.8	401	61.9	411	68.0	421	74.4	430	80.9	440	87.5	458	101.1	476	114.8	493	128.6
191000	2830	429	73.7	434	77.0	438	80.3	448	87.0	457	93.9	465	101.0	474	108.2	491	122.9	508	137.9	524	153.0
209000	3097	468	95.2	472	98.7	476	102.4	485	109.7	493	117.1	501	124.7	509	132.4	525	148.2	541	164.4	556	180.8
227000	3364	507	120.5	511	124.4	515	128.3	522	136.2	530	144.2	538	152.3	545	160.6	560	177.5	575	194.8	589	212.5
245000	3631	546	150.2	549	154.3	553	158.5	560	167.0	567	175.6	575	184.3	582	193.1	595	211.0	609	229.5	623	248.2
263000	3897	585	184.4	588	188.9	592	193.4	598	202.4	605	211.6	612	220.8	618	230.2	631	249.2	644	268.7	657	288.6
281000	4164	624	223.6	627	228.4	630	233.1	637	242.8	643	252.5	649	262.3	655	272.2	668	292.4	680	313.0	692	333.9
299000	4431	663	268.1	666	273.1	669	278.2	675	288.4	681	298.7	687	309.1	693	319.6	704	340.9	716	362.5	727	384.5
317000	4698	702	318.1	705	323.5	708	328.8	714	339.6	719	350.6	725	361.5	730	372.6	741	395.0	752	417.7	763	440.8
335000	4964	742	374.1	744	379.8	747	385.4	752	396.8	758	408.3	763	419.9	768	431.5	779	455.0	789	478.9	799	503.1
353000	5231	781	436.4	783	442.4	786	448.3	791	460.3	796	472.3	801	484.6	806	496.8	816	521.4	826	546.4	836	571.7
371000	5498	820	505.4	823	511.6	825	517.8	830	530.4	835	543.0	840	555.8	844	568.6	854	594.5	863	620.5	872	646.9
389000	5765	859	581.2	862	587.8	864	594.3	869	607.5	873	620.7	878	634.0	883	647.5	892	674.4	901	701.7	910	729.2
407000	6031	899	664.4	901	671.3	903	678.1	908	691.8	912	705.7	917	719.6	921	733.6	930	761.7	938	790.1		
425000	6298	938	755.2	940	762.4	942	769.5														

OUTLET		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		8" SP		9" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
80000	1186	394	55.2	420	64.6	444	74.4														
96000	1423	403	63.7	426	73.4	449	83.7	472	94.5	493	105.7	514	117.3	534	129.0						
112000	1660	419	75.4	440	85.2	460	95.5	480	106.3	500	117.8	519	129.8	539	142.3	557	155.1	594	181.7	628	209.1
128000	1897	440	89.9	459	100.3	477	111.0	495	122.1	512	133.6	530	145.5	547	157.9	564	170.9	599	198.4	632	227.3
144000	2134	463	106.8	481	118.2	497	129.7	514	141.4	530	153.3	546	165.6	562	178.2	577	191.2	608	218.4	639	247.6
160000	2371	488	125.6	504	138.3	520	151.0	536	163.7	551	176.5	566	189.4	581	202.6	595	216.0	624	243.7	652	272.8
176000	2608	514	146.5	530	160.6	545	174.6	560	188.6	574	202.5	588	216.4	602	230.5	616	244.7	642	273.6	668	303.5
192000	2845	541	169.8	556	185.2	571	200.5	585	215.9	598	231.1	612	246.3	625	261.5	638	276.7	663	307.4	688	338.6
208000	3082	569	195.7	583	212.3	597	228.9	611	245.6	624	262.2	637	278.8	649	295.3	662	311.8	686	344.7	710	377.9
224000	3320	598	224.6	611	242.3	625	260.2	638	278.1	650	296.0	663	314.0	675	331.9	687	349.8	716	385.3	733	420.7
240000	3557	627	256.6	640	275.5	653	294.5	665	313.7	677	332.8	689	352.0	701	371.3	713	390.5	735	428.8	757	466.8
256000	3794	656	292.1	669	312.1	681	332.3	693	352.6	705	373.0	717	393.4	728	413.9	739	434.4	761	475.4	782	516.2
272000	4031	687	331.4	699	352.5	710	373.7	722	395.1	733	416.7	745	438.3	756	460.0	766	481.7	787	525.3	808	568.8
289000	4268	719	377.6	731	399.7	742	422.1	753	444.6	764	467.4	775	490.2	785	513.1	796	536.1	816	582.3	836	628.6
306000	4505	752	428.6	763	451.8	774	475.2	785	498.9	795	522.8	806	546.8	816	570.9	826	595.2	846	643.9	865	692.7
323000	4742	786	484.7	796	508.9	806	533.4	817	558.2	827	583.2	837	608.3	847	633.7	856	659.1	876	710.3	894	761.7
340000	5039	819	546.4	829	571.5	839	597.0	849	622.9	859	648.9	868	675.2	878	701.7	887	728.3	906	781.9	924	835.8
357000	5290	853	613.7	863	639.9	872	666.4	882	692.3	891	720.4	901	747.7	910	775.3	919	803.0	937	858.9		
374000	5542	888	687.1	897	714.3	906	741.8	915	769.6	924	797.8	933	826.2	942	854.8						
391000	5794	922	766.7	931	795.0	940	823.6														

OUTLET		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP		20" SP	
CFM	VEL.	RPM	BHP																		
131000	1941	665	261.2	696	292.5	725	324.4														
141000	2090	669	274.3	699	306.5	728	339.6	756	373.5	783	408.0										
151000	2238	674	288.8	703	321.2	731	355.0	759	389.9	786	425.6	812	462.0	837	499.0						
161000	2386	680	305.3	708	337.7	735	371.6	763	407.0	789	443.5	815	481.0	840	519.2	865	558.0	888	597.3		
171000	2534	689	324.2	715	356.4	741	390.2	767	425.7	793	462.5	818	500.5	843	539.6	868	579.4	891	620.0	937	702.9
181000	2682	699	345.3	724	377.7	749	411.5	774	446.7	798	483.4	823	521.6	847	561.0	871	601.5	894	643.0	940	728.1
192000	2845	712	370.6	736	403.6	759	437.6	783	472.9	806	509.5	829	547.4	853	586.9	876	627.6	898	669.5	943	756.2
203000	3008	726	398.2	749	431.9	772	466.6	794	502.2	816	538.9	838	576.8	860	616.0	882	656.5	904	698.5		
214000	3171	741	427.8	763	462.5	785	498.0	806	534.2	827	571.4	848	609.5	869	648.8	890	689.3	911	730.9		
225000	3334	756	459.2	778	495.2	799	531.7	820	568.8	840	606.7	860	645.4	880	685.0	900	725.6	920	767.3		
236000	3497	772	492.4	793	529.8	814	567.6	834	605.8	854	644.5	873	683.9	893	724.2	912	765.3	931	807.3		
247000	3660	789	527.2	809	566.3	829	605.5	849	645.0	868	684.8	887	725.2	906	766.3	925	808.0	943	850.5		
258000	3823	805	563.6	825	604.5	845	645.3	864	686.2	883	727.5	902	769.0	920	811.0	938	853.6				
269000	3986	823	601.6	842	644.3	861	686.9	880	729.5	899	772.1	917	815.1	935	858.3						



DESIGN 51 RA For Low Pressure Applications

The most efficient fan for any selection is Chicago's Design 51. When working with lower pressure, typically below 5" SP, and space and initial cost are primary considerations, the Design 51 RA in smaller sizes may be a better selection. The RA fan was specifically designed for improved efficiency in low pressure, high volume applications. The examples to the right demonstrate that both fans will be able to provide a wide range of selections.

20,000 CFM @ 1.0" SP

FAN SIZE	OV	STATIC EFFICIENCY		MOTOR HP		RELATIVE COST	
		D51	D51 RA	D51	D51 RA	D51	D51 RA
490	884	82%	73%	5	5	100%	98%
445	976	79%	75%	5	5	82%	80%
402	1192	73%	73%	5	5	65%	64%
365	1450	63%	67%	7½	7½	58%	57%
330	1774	54%	60%	7½	7½	55%	54%
300	2148	42%	46%	10	7½	50%	47%

35,000 CFM @ 2.0" SP

FAN SIZE	OV	STATIC EFFICIENCY		MOTOR HP		RELATIVE COST	
		D51	D51 RA	D51	D51 RA	D51	D51 RA
542	1149	82%	73%	15	20	100%	101%
490	1408	79%	75%	15	20	89%	90%
445	1708	72%	72%	20	20	76%	75%
402	2087	64%	67%	20	20	62%	60%
365	2538	52%	59%	25	20	57%	53%
330	3105	43%	49%	30	25	56%	52%

40,000 CFM @ 3.0" SP

FAN SIZE	OV	STATIC EFFICIENCY		MOTOR HP		RELATIVE COST	
		D51	D51 RA	D51	D51 RA	D51	D51 RA
542	1313	82%	72%	25	30	100%	101%
490	1609	80%	75%	25	30	89%	90%
445	1952	75%	74%	30	30	77%	75%
402	2385	67%	69%	30	30	63%	62%
365	2900	56%	61%	40	40	62%	60%
330	3549	46%	53%	50	40	68%	62%

50,000 CFM @ 4.0" SP

FAN SIZE	OV	STATIC EFFICIENCY		MOTOR HP		RELATIVE COST	
		D51	D51 RA	D51	D51 RA	D51	D51 RA
542	1641	82%	74%	40	50	100%	104%
490	2012	78%	75%	50	50	96%	95%
445	2440	72%	72%	50	50	87%	80%
402	2981	63%	66%	60	50	76%	76%
365	3625	52%	58%	75	60	87%	77%

60,000 CFM @ 4.5" SP

FAN SIZE	OV	STATIC EFFICIENCY		MOTOR HP		RELATIVE COST	
		D51	D51 RA	D51	D51 RA	D51	D51 RA
600	1610	82%	72%	60	75	100%	101%
542	1969	80%	75%	60	60	81%	80%
490	2414	75%	74%	60	60	73%	72%
445	2929	67%	69%	75	75	77%	76%
402	3577	57%	62%	100	75	75%	67%



DESIGN 51 Double Width Airfoil Fans

Size 135 RA

SPEED LIMITATIONS

CLASS I—3443 RPM

CLASS II—4489 RPM

OUTLET AREA

1.89 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
1000	529	739	0.06	852	0.08	963	0.11	1068	0.15												
1300	688	831	0.08	926	0.11	1015	0.15	1102	0.18	1188	0.22	1272	0.26	1353	0.31						
1600	847	935	0.11	1021	0.15	1099	0.19	1173	0.23	1245	0.27	1316	0.31	1386	0.36	1524	0.46	1658	0.56	1784	0.68
1900	1005	1047	0.15	1124	0.20	1196	0.24	1264	0.29	1328	0.33	1390	0.38	1451	0.43	1571	0.53	1688	0.64	1804	0.76
2200	1164	1164	0.21	1234	0.25	1300	0.30	1363	0.36	1423	0.41	1480	0.46	1535	0.51	1642	0.63	1746	0.74	1849	0.86
2500	1323	1286	0.27	1349	0.32	1410	0.38	1468	0.44	1524	0.50	1578	0.55	1630	0.61	1729	0.73	1824	0.86	1916	0.99
2800	1481	1410	0.35	1468	0.41	1524	0.47	1578	0.53	1630	0.60	1681	0.66	1730	0.73	1823	0.86	1913	0.99	1998	1.13
3100	1640	1536	0.44	1590	0.51	1642	0.58	1693	0.65	1741	0.72	1789	0.79	1835	0.86	1924	1.00	2008	1.15	2089	1.29
3400	1799	1664	0.55	1714	0.63	1763	0.70	1810	0.77	1856	0.85	1900	0.93	1944	1.00	2028	1.16	2109	1.32	2186	1.48
3800	2011	1837	0.74	1883	0.81	1927	0.89	1970	0.98	2013	1.06	2054	1.14	2094	1.23	2173	1.40	2248	1.58	2321	1.75
4200	2222	2011	0.96	2053	1.04	2094	1.13	2134	1.22	2174	1.31	2212	1.40	2250	1.49	2323	1.68	2394	1.87	2463	2.07
4600	2434	2187	1.22	2226	1.31	2264	1.41	2301	1.50	2338	1.60	2374	1.70	2409	1.80	2478	2.00	2544	2.21	2609	2.42
5000	2646	2364	1.53	2400	1.63	2436	1.73	2470	1.83	2505	1.94	2538	2.05	2571	2.15	2636	2.37	2699	2.59	2760	2.82
5400	2857	2542	1.89	2576	2.00	2609	2.11	2641	2.22	2673	2.33	2705	2.44	2736	2.56	2797	2.79	2857	3.03	2915	3.27
5800	3069	2721	2.31	2752	2.42	2783	2.54	2814	2.66	2844	2.78	2874	2.90	2903	3.02	2961	3.26	3017	3.52	3072	3.77
6200	3280	2900	2.78	2929	2.91	2959	3.03	2988	3.15	3016	3.28	3044	3.41	3072	3.54	3127	3.80	3180	4.06	3233	4.33
6600	3492	3079	3.32	3107	3.45	3135	3.58	3162	3.72	3189	3.85	3216	3.99	3242	4.12	3294	4.40	3345	4.68	3395	4.96
7000	3704	3259	3.93	3286	4.07	3312	4.21	3338	4.35	3364	4.49	3389	4.63	3414	4.77	3463	5.06	3512	5.36	3560	5.65
7400	3915	3440	4.61	3465	4.75	3490	4.90	3514	5.05	3539	5.20	3563	5.35	3587	5.50	3634	5.80	3680	6.11	3726	6.42
7800	4127	3620	5.36	3644	5.51	3668	5.67	3691	5.82	3715	5.98	3738	6.14	3760	6.30	3806	6.61	3850	6.94	3894	7.26
8200	4339	3801	6.19	3824	6.36	3847	6.52	3869	6.68	3891	6.84	3913	7.01	3935	7.17	3978	7.51	4021	7.85	4063	8.19
8600	4550	3982	7.11	4004	7.28	4026	7.45	4047	7.62	4068	7.79	4089	7.97	4110	8.14	4152	8.49	4193	8.84	4233	9.19
9000	4762	4164	8.12	4184	8.30	4205	8.47	4226	8.65	4246	8.83	4266	9.01	4286	9.19	4326	9.55	4366	9.92	4404	10.29

OUTLET		2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1700	899	1906	0.83																		
2000	1058	1926	0.92	2033	1.05	2137	1.19	2235	1.33												
2300	1217	1967	1.03	2064	1.17	2160	1.31	2254	1.46	2347	1.61	2524	1.94								
2600	1376	2031	1.17	2118	1.31	2204	1.46	2290	1.61	2375	1.77	2544	2.10	2707	2.45	2862	2.82				
2900	1534	2109	1.33	2189	1.48	2269	1.63	2347	1.79	2424	1.95	2578	2.29	2731	2.65	2881	3.02	3026	3.42	3165	3.83
3200	1693	2198	1.51	2273	1.67	2347	1.83	2419	1.99	2491	2.16	2632	2.51	2772	2.88	2911	3.26	3049	3.66	3184	4.08
3500	1852	2293	1.71	2364	1.88	2434	2.05	2502	2.22	2569	2.40	2701	2.76	2831	3.14	2960	3.53	3087	3.94	3214	4.36
3800	2011	2392	1.93	2461	2.11	2527	2.29	2592	2.47	2656	2.66	2780	3.04	2902	3.44	3022	3.84	3141	4.26	3259	4.69
4100	2169	2495	2.17	2561	2.36	2625	2.55	2687	2.75	2749	2.95	2867	3.35	2983	3.76	3096	4.18	3208	4.62	3319	5.06
4400	2328	2600	2.44	2664	2.64	2726	2.84	2786	3.05	2845	3.26	2960	3.68	3071	4.11	3178	4.55	3284	5.00	3389	5.46
4800	2540	2746	2.83	2806	3.05	2865	3.27	2923	3.49	2979	3.72	3089	4.16	3195	4.62	3297	5.09	3397	5.56	3496	6.05
5200	2751	2896	3.27	2953	3.51	3009	3.75	3064	3.98	3118	4.22	3223	4.70	3325	5.19	3423	5.68	3519	6.18	3613	6.69
5600	2963	3049	3.76	3103	4.02	3157	4.27	3209	4.53	3261	4.78	3362	5.30	3460	5.81	3555	6.34	3647	6.86	3737	7.40
6000	3175	3205	4.31	3257	4.58	3308	4.85	3359	5.12	3408	5.40	3505	5.94	3599	6.49	3690	7.05	3779	7.61	3866	8.17
6400	3386	3364	4.92	3414	5.20	3463	5.49	3511	5.78	3558	6.07	3651	6.65	3741	7.24	3830	7.82	3916	8.41	4000	9.01
6800	3598	3526	5.59	3573	5.89	3620	6.19	3666	6.49	3711	6.80	3801	7.42	3888	8.04	3973	8.66	4056	9.28	4137	9.91
7200	3810	3689	6.34	3734	6.65	3779	6.96	3824	7.28	3867	7.60	3953	8.25	4037	8.91	4119	9.56	4199	10.22	4278	10.88
7600	4021	3854	7.15	3898	7.48	3941	7.81	3983	8.14	4025	8.48	4108	9.16	4189	9.84	4268	10.53	4346	11.23	4422	11.92
8000	4233	4021	8.05	4063	8.39	4104	8.73	4145	9.08	4185	9.43	4265	10.14	4343	10.85	4420	11.58	4495	12.31	4569	13.04
8400	4444	4189	9.03	4229	9.38	4269	9.74	4308	10.10	4347	10.46	4424	11.20	4499	11.95	4573	12.70				

OUTLET		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3100	1640	3310	4.43	3438	4.87																
3300	1746	3323	4.61	3450	5.06	3573	5.53	3692	6.01												
3500	1852	3339	4.81	3463	5.27	3584	5.74	3703	6.23	3818	6.72	3929	7.23								
3700	1958	3362	5.02	3481	5.48	3599	5.96	3716	6.46	3829	6.96	3940	7.48	4049	8.01	4154	8.54				
3900	2063	3392	5.26	3506	5.72	3620	6.20	3732	6.70	3843	7.21	3953	7.74	4060	8.27	4165	8.82	4268	9.38		
4200	2222	3449	5.65	3556	6.13	3662	6.61	3768	7.11	3873	7.63	3978	8.16	4082	8.70	4184	9.26	4285	9.83	4482	10.99
4500	2381	3516	6.08	3617	6.57	3718	7.06	3817	7.57	3917	8.09	4015	8.63	4114	9.17	4212	9.74	4309	10.31	4501	11.50
4800	2540	3592	6.54	3688	7.05	3784	7.56	3878	8.08	3972	8.61	4066	9.15	4159	9.71	4251	10.27	4344	10.85	4527	12.05
5100	2698	3676	7.04	3767	7.56	3858	8.09	3948	8.63	4037	9.17	4126	9.73	4215	10.29	4303	10.87	4391	11.45	4565	12.66
5400	2857	3764	7.57	3852	8.11	3939	8.66	4025	9.21	4111	9.77	4196	10.35	4280	10.93	4364	11.51	4448	12.11	4614	13.33
5700	3016	3856	8.14	3942	8.69	4026	9.26	4109	9.83	4191	10.41	4272	11.00	4353	11.60	4434	12.20	4514	12.82		
6000	3175	3952	8.74	4035	9.32	4117	9.90	4197	10.49	4276	11.09	4355	11.70	4433	12.31	4510	12.94	4586	13.56		
6300	3333	4049	9.38	4131	9.98	4210	10.58	4289	11.19	4366	11.81	4442	12.44	4517	13.07	4592	13.71				
6600	3492																				



DESIGN 51 Double Width Airfoil Fans

Size 150 RA

SPEED LIMITATIONS

OUTLET AREA

CLASS I—3161 RPM

CLASS II—4121 RPM

2.33 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
1200	515	667	0.07	772	0.10	873	0.14	969	0.18	1080	0.27	1155	0.32	1229	0.37						
1600	687	759	0.10	845	0.14	925	0.18	1003	0.22	1140	0.34	1203	0.39	1265	0.45	1388	0.57	1507	0.70	1621	0.84
2000	858	864	0.14	940	0.19	1010	0.24	1077	0.29	1140	0.34	1203	0.39	1265	0.45	1440	0.67	1543	0.81	1645	0.95
2400	1030	976	0.20	1045	0.26	1108	0.31	1169	0.37	1226	0.42	1281	0.48	1335	0.55	1516	0.80	1608	0.95	1697	1.10
2800	1202	1094	0.27	1156	0.34	1214	0.40	1269	0.46	1322	0.53	1373	0.60	1422	0.66	1519	0.80	1606	0.95	1690	1.11
3200	1373	1216	0.37	1272	0.44	1325	0.51	1376	0.58	1425	0.65	1473	0.73	1519	0.80	1606	0.95	1690	1.11	1771	1.27
3600	1545	1341	0.48	1392	0.56	1441	0.64	1488	0.72	1534	0.80	1578	0.88	1621	0.96	1703	1.13	1782	1.30	1857	1.48
4000	1717	1468	0.62	1515	0.70	1560	0.79	1604	0.88	1646	0.97	1688	1.06	1728	1.15	1806	1.33	1880	1.52	1952	1.71
4400	1888	1596	0.79	1639	0.88	1681	0.97	1722	1.07	1762	1.16	1801	1.26	1839	1.36	1912	1.56	1983	1.77	2051	1.97
4800	2060	1726	0.98	1766	1.08	1805	1.18	1843	1.29	1881	1.39	1917	1.50	1953	1.60	2022	1.82	2089	2.04	2154	2.26
5300	2275	1889	1.28	1926	1.39	1962	1.49	1997	1.61	2032	1.72	2066	1.83	2099	1.95	2164	2.19	2227	2.43	2288	2.67
5800	2489	2054	1.63	2088	1.75	2121	1.86	2154	1.98	2186	2.11	2218	2.23	2249	2.36	2310	2.61	2369	2.87	2427	3.13
6300	2704	2219	2.04	2251	2.17	2282	2.30	2313	2.43	2343	2.56	2372	2.69	2402	2.82	2459	3.10	2515	3.37	2569	3.66
6800	2918	2386	2.52	2415	2.66	2444	2.80	2473	2.93	2501	3.07	2529	3.22	2557	3.36	2610	3.65	2663	3.95	2715	4.25
7300	3133	2553	3.08	2580	3.22	2608	3.37	2635	3.52	2661	3.67	2687	3.82	2713	3.97	2764	4.28	2814	4.59	2863	4.91
7800	3348	2720	3.71	2746	3.87	2772	4.02	2797	4.18	2822	4.34	2847	4.50	2872	4.66	2920	4.98	2967	5.31	3014	5.65
8300	3562	2888	4.43	2912	4.59	2937	4.76	2961	4.92	2984	5.09	3008	5.26	3031	5.43	3077	5.77	3122	6.12	3167	6.48
8800	3777	3056	5.23	3079	5.41	3102	5.58	3125	5.76	3148	5.93	3170	6.11	3192	6.29	3236	6.65	3279	7.02	3321	7.39
9300	3991	3224	6.14	3246	6.32	3268	6.50	3290	6.69	3311	6.87	3333	7.06	3354	7.25	3396	7.63	3437	8.01	3477	8.40
9800	4206	3393	7.14	3414	7.33	3435	7.52	3456	7.72	3476	7.91	3496	8.11	3516	8.31	3556	8.71	3596	9.11	3634	9.52
10300	4421	3562	8.24	3582	8.45	3602	8.65	3622	8.85	3641	9.06	3661	9.26	3680	9.47	3718	9.89	3756	10.31	3793	10.73
10800	4635	3731	9.46	3750	9.67	3769	9.89	3788	10.10	3807	10.31	3825	10.53	3844	10.75	3880	11.18	3917	11.62	3952	12.06
11300	4850	3900	10.80	3919	11.02	3937	11.24	3955	11.46	3973	11.69	3991	11.91	4008	12.14	4044	12.59	4078	13.05	4113	13.51

OUTLET		2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2400	1030	1746	1.10	1843	1.27	1937	1.43	2027	1.61	2130	1.96	2291	2.35								
2800	1202	1786	1.26	1873	1.42	1960	1.59	2046	1.77	2130	1.96	2291	2.35								
3200	1373	1850	1.44	1928	1.61	2006	1.79	2083	1.98	2159	2.17	2311	2.57	2458	3.00	2599	3.45				
3600	1545	1931	1.66	2002	1.84	2073	2.03	2142	2.22	2212	2.42	2349	2.83	2484	3.26	2618	3.73	2749	4.21	2875	4.71
4000	1717	2021	1.90	2088	2.10	2153	2.30	2217	2.50	2281	2.71	2407	3.14	2531	3.58	2654	4.05	2775	4.54	2896	5.05
4500	1931	2141	2.25	2204	2.46	2266	2.68	2326	2.90	2384	3.12	2499	3.58	2612	4.05	2723	4.54	2833	5.04	2943	5.56
5000	2146	2268	2.65	2328	2.88	2386	3.11	2443	3.35	2499	3.59	2606	4.08	2711	4.58	2813	5.09	2914	5.62	3015	6.16
5500	2361	2401	3.10	2458	3.35	2513	3.61	2567	3.86	2620	4.12	2722	4.64	2821	5.17	2918	5.72	3012	6.28	3105	6.84
6000	2575	2538	3.61	2592	3.88	2644	4.16	2696	4.43	2746	4.71	2844	5.27	2939	5.83	3031	6.41	3120	7.00	3208	7.60
6500	2790	2679	4.18	2730	4.47	2780	4.77	2829	5.07	2877	5.36	2971	5.96	3062	6.57	3151	7.18	3236	7.80	3320	8.43
7000	3004	2823	4.81	2872	5.13	2919	5.45	2966	5.77	3012	6.09	3102	6.73	3190	7.37	3275	8.02	3357	8.68	3438	9.34
7500	3219	2970	5.53	3016	5.86	3062	6.20	3107	6.54	3151	6.88	3237	7.56	3321	8.25	3403	8.94	3482	9.63	3560	10.33
8000	3433	3120	6.32	3164	6.67	3207	7.03	3250	7.38	3292	7.75	3375	8.47	3456	9.20	3534	9.94	3611	10.67	3687	11.41
8500	3648	3271	7.20	3313	7.57	3355	7.94	3396	8.32	3436	8.70	3516	9.47	3594	10.24	3669	11.02	3743	11.79	3816	12.57
9000	3863	3424	8.17	3465	8.55	3505	8.95	3544	9.34	3583	9.74	3659	10.55	3734	11.36	3807	12.18	3879	13.00	3949	13.82
9500	4077	3579	9.24	3618	9.64	3656	10.05	3694	10.46	3731	10.88	3805	11.72	3877	12.58	3947	13.44	4017	14.30	4085	15.17
10000	4292	3735	10.41	3773	10.83	3809	11.26	3846	11.69	3882	12.12	3952	13.00	4022	13.89	4090	14.79	4157	15.70	4223	16.61
10500	4506	3893	11.69	3929	12.13	3964	12.57	3999	13.02	4034	13.47	4102	14.38	4169	15.31	4235	16.25				
11000	4721	4051	13.08	4086	13.54	4120	14.00	4153	14.47	4187	14.93										

OUTLET		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3600	1545	2997	5.23																		
3900	1674	3009	5.49																		
4200	1803	3026	5.78																		
4500	1931	3051	6.10																		
4800	2060	3086	6.46																		
5100	2189	3129	6.85																		
5400	2318	3179	7.28																		
5700	2446	3234	7.73																		
6000	2575	3294	8.21																		
6300	2704	3358	8.71																		
6600	2833	3424	9.25																		
6900	2961	3493	9.82																		
7300	3133	3588	10.62																		
7700	3305	3686	11.47																		
8100	3476	3785	12.39																		
8500	3648	3888	13.36																		
8900	3820	3992	14.38																		
9300	3991	4098	15.47																		

Performance shown is for Design 51 RA with outlet duct. BHP does not include V-belt drive loss.



DESIGN 51 Double Width Airfoil Fans

Size 165 RA

SPEED LIMITATIONS

OUTLET AREA

CLASS I—2802 RPM

CLASS II—3653 RPM

2.82 SQ. FT.

OUTLET CFM	VEL.	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
1500	532	603	0.09	696	0.13	786	0.17	872	0.22												
2000	709	688	0.13	765	0.17	836	0.23	905	0.28	974	0.34	1041	0.40	1107	0.47	1230	0.61				
2500	887	784	0.18	852	0.24	915	0.30	974	0.36	1031	0.43	1087	0.49	1142	0.56	1251	0.71	1358	0.87	1460	1.04
3000	1064	887	0.25	948	0.32	1005	0.39	1059	0.46	1110	0.53	1159	0.61	1207	0.68	1301	0.84	1393	1.01	1483	1.19
3500	1241	995	0.35	1050	0.43	1102	0.51	1151	0.59	1198	0.67	1244	0.75	1288	0.83	1372	1.01	1453	1.19	1533	1.38
4000	1418	1107	0.47	1156	0.55	1204	0.64	1249	0.74	1293	0.83	1335	0.92	1376	1.01	1455	1.20	1529	1.40	1601	1.60
4500	1596	1221	0.61	1266	0.71	1309	0.81	1352	0.91	1392	1.01	1432	1.12	1470	1.22	1544	1.43	1614	1.64	1681	1.86
5000	1773	1336	0.79	1378	0.90	1418	1.01	1457	1.12	1495	1.23	1532	1.34	1568	1.46	1637	1.69	1704	1.92	1768	2.15
5600	1986	1477	1.06	1515	1.17	1552	1.29	1588	1.41	1623	1.54	1657	1.66	1690	1.79	1755	2.04	1817	2.30	1878	2.56
6200	2199	1620	1.38	1655	1.50	1688	1.63	1722	1.77	1754	1.90	1786	2.04	1817	2.17	1877	2.45	1936	2.74	1992	3.02
6800	2411	1763	1.76	1796	1.90	1827	2.04	1858	2.18	1888	2.33	1917	2.47	1946	2.62	2003	2.93	2058	3.23	2112	3.54
7400	2624	1908	2.22	1938	2.37	1967	2.52	1996	2.67	2024	2.82	2051	2.98	2079	3.14	2132	3.47	2184	3.80	2235	4.13
8000	2837	2053	2.75	2081	2.91	2108	3.07	2135	3.23	2161	3.40	2187	3.57	2213	3.74	2263	4.08	2312	4.43	2360	4.79
8600	3050	2199	3.36	2225	3.53	2251	3.70	2276	3.88	2301	4.06	2325	4.23	2349	4.42	2397	4.78	2443	5.15	2489	5.53
9200	3262	2345	4.06	2370	4.24	2394	4.43	2418	4.61	2441	4.80	2464	4.99	2487	5.18	2532	5.57	2576	5.96	2620	6.36
9800	3475	2492	4.85	2515	5.05	2538	5.24	2560	5.44	2583	5.64	2605	5.84	2626	6.04	2669	6.45	2711	6.87	2752	7.29
10400	3688	2639	5.75	2661	5.96	2683	6.16	2704	6.37	2725	6.58	2746	6.79	2766	7.01	2807	7.44	2847	7.87	2886	8.32
11000	3901	2787	6.75	2807	6.97	2828	7.19	2848	7.41	2868	7.63	2888	7.85	2907	8.08	2946	8.53	2985	8.99	3022	9.45
11600	4113	2934	7.87	2954	8.10	2973	8.33	2992	8.56	3012	8.79	3031	9.02	3049	9.26	3086	9.73	3123	10.21	3159	10.70
12200	4326	3082	9.10	3101	9.34	3119	9.58	3138	9.83	3156	10.07	3174	10.31	3192	10.56	3227	11.06	3262	11.56	3297	12.07
12800	4539	3230	10.46	3248	10.71	3265	10.97	3283	11.22	3301	11.47	3318	11.73	3335	11.99	3369	12.51	3403	13.03	3436	13.56
13400	4752	3378	11.95	3395	12.22	3412	12.48	3429	12.74	3446	13.01	3462	13.28	3479	13.55	3512	14.09	3544	14.64	3576	15.19
14000	4965	3526	13.58	3543	13.85	3559	14.13	3575	14.41	3591	14.69	3607	14.96	3623	15.24	3654	15.81	3686	16.38	3716	16.95

OUTLET CFM	VEL.	2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	1064	1573	1.38	1661	1.58	1745	1.79	1826	2.00												
3500	1241	1612	1.57	1690	1.78	1767	1.99	1844	2.21	1919	2.45	2063	2.93								
4000	1418	1672	1.81	1742	2.02	1811	2.24	1880	2.47	1948	2.71	2082	3.21	2214	3.74	2340	4.30	2460	4.87		
4500	1596	1747	2.08	1810	2.31	1873	2.54	1935	2.78	1997	3.03	2119	3.54	2240	4.08	2359	4.65	2476	5.25	2590	5.87
5000	1773	1830	2.39	1889	2.64	1948	2.89	2005	3.14	2062	3.40	2174	3.93	2284	4.49	2394	5.07	2502	5.67	2610	6.31
5500	1950	1918	2.74	1975	3.00	2030	3.27	2084	3.54	2137	3.81	2241	4.38	2344	4.96	2445	5.55	2545	6.17	2644	6.82
6000	2128	2010	3.14	2064	3.42	2117	3.70	2169	3.98	2220	4.27	2318	4.87	2414	5.48	2508	6.10	2601	6.74	2693	7.40
6500	2305	2105	3.57	2157	3.87	2208	4.17	2258	4.48	2307	4.78	2401	5.41	2492	6.05	2581	6.70	2668	7.38	2755	8.06
7000	2482	2203	4.05	2253	4.37	2302	4.69	2350	5.02	2397	5.34	2488	6.00	2575	6.67	2660	7.36	2743	8.06	2825	8.78
7600	2695	2325	4.69	2372	5.04	2419	5.38	2464	5.73	2509	6.08	2596	6.79	2680	7.50	2762	8.22	2841	8.96	2918	9.71
8200	2908	2449	5.40	2494	5.77	2539	6.15	2582	6.52	2625	6.89	2708	7.65	2789	8.41	2868	9.18	2944	9.95	3018	10.74
8800	3121	2576	6.19	2619	6.59	2662	6.99	2703	7.39	2744	7.79	2824	8.59	2902	9.40	2977	10.22	3051	11.04	3123	11.87
9400	3333	2705	7.08	2746	7.49	2787	7.92	2827	8.34	2866	8.77	2943	9.63	3017	10.49	3090	11.35	3161	12.22	3231	13.09
10000	3546	2837	8.06	2876	8.50	2915	8.94	2953	9.39	2991	9.84	3064	10.75	3136	11.66	3206	12.58	3275	13.49	3342	14.42
10600	3759	2970	9.14	3007	9.60	3044	10.07	3081	10.54	3117	11.01	3188	11.97	3257	12.93	3325	13.90	3391	14.87	3456	15.84
11200	3972	3104	10.33	3140	10.81	3176	11.30	3211	11.79	3246	12.29	3314	13.29	3381	14.31	3446	15.33	3510	16.35	3573	17.37
11800	4184	3240	11.64	3275	12.14	3309	12.65	3343	13.16	3376	13.68	3442	14.73	3506	15.79	3569	16.86	3631	17.93	3692	19.01
12400	4397	3377	13.07	3410	13.59	3443	14.12	3476	14.66	3508	15.20	3571	16.29	3633	17.39	3695	18.51	3755	19.63		
13000	4610	3515	14.63	3547	15.17	3579	15.72	3610	16.28	3641	16.84	3702	17.97								

OUTLET CFM	VEL.	6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
4600	1631	2702	6.60	2806	7.26																
5000	1773	2716	6.97	2819	7.65	2919	8.35	3016	9.06												
5400	1915	2736	7.37	2835	8.06	2933	8.78	3029	9.51	3123	10.26	3214	11.03	3302	11.81						
5800	2057	2766	7.83	2860	8.53	2953	9.25	3046	9.99	3137	10.76	3226	11.54	3314	12.34	3400	13.16	3484	13.99		
6200	2199	2806	8.35	2894	9.05	2982	9.78	3070	10.53	3157	11.30	3244	12.09	3329	12.91	3414	13.74	3496	14.59	3657	16.33
6600	2340	2853	8.91	2937	9.63	3020	10.37	3103	11.13	3186	11.90	3268	12.70	3350	13.52	3431	14.36	3512	15.22	3670	17.00
7000	2482	2906	9.51	2986	10.25	3066	11.01	3145	11.78	3223	12.57	3301	13.38	3379	14.20	3457	15.05	3534	15.91	3687	17.70
7400	2624	2964	10.15	3041	10.91	3117	11.69	3192	12.48	3267	13.29	3342	14.11	3416	14.95	3490	15.80	3564	16.68	3710	18.48
7800	2766	3026	10.83	3100	11.62	3173	12.42	3245	13.23	3317	14.06	3389	14.90	3460	15.76	3530	16.63	3601	17.51	3741	19.32
8200	2908	3091	11.55	3163	12.36	3233	13.19	3303	14.03	3372	14.88	3441	15.74	3509	16.62	3577	17.50	3644	18.40		
8600	3050	3159	12.31	3228	13.15	3297	14.00	3364	14.87	3431	15.74	3497	16.63	3563	17.53	3628	18.44	3693	19.36		
9000	3191	3228	13.12	3296	13.99	3363	14.86	3428	15.75	3493	16.65	3557	17.56	3621	18.48	3684	19.42	3746	20.35		
9400	3333	3299	13.98	3366	14.87	3431	15.77	3495	16.68	3558	17.61	3620	18.54	3682	19.49	3743	20.45				



DESIGN 51 Double Width Airfoil Fans

Size 182 RA

SPEED LIMITATIONS

OUTLET AREA

CLASS I—2565 RPM

CLASS II—3344 RPM

3.45 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
1800	522	546	0.10	631	0.15	714	0.21	792	0.27	883	0.41	945	0.48	1005	0.56						
2400	696	622	0.15	692	0.21	757	0.27	821	0.34	894	0.51	955	0.59	1035	0.67	1135	0.85	1233	1.05	1326	1.26
3000	870	708	0.22	770	0.29	827	0.36	881	0.43	934	0.51	985	0.59	1061	0.75	1188	1.04	1270	1.24	1351	1.46
3700	1072	816	0.32	871	0.40	922	0.49	971	0.57	1017	0.66	1061	0.75	1104	0.85	1265	1.28	1337	1.50	1408	1.73
4400	1275	930	0.46	979	0.55	1025	0.65	1069	0.75	1111	0.86	1151	0.96	1191	1.06						
5100	1478	1048	0.63	1092	0.74	1133	0.86	1173	0.97	1212	1.09	1249	1.21	1285	1.32	1355	1.56	1421	1.81	1484	2.06
5800	1681	1169	0.86	1208	0.98	1246	1.11	1283	1.24	1318	1.37	1353	1.50	1386	1.64	1451	1.90	1513	2.17	1572	2.45
6500	1884	1292	1.14	1327	1.28	1362	1.42	1396	1.56	1428	1.70	1460	1.85	1492	2.00	1552	2.29	1610	2.59	1666	2.89
7200	2087	1416	1.49	1448	1.64	1480	1.79	1511	1.94	1542	2.10	1572	2.26	1601	2.42	1657	2.75	1712	3.07	1765	3.40
7900	2290	1541	1.90	1571	2.06	1601	2.23	1630	2.39	1658	2.56	1686	2.73	1713	2.91	1766	3.26	1818	3.62	1867	3.98
8600	2493	1667	2.39	1695	2.56	1722	2.74	1749	2.92	1776	3.10	1802	3.28	1827	3.47	1878	3.85	1926	4.24	1973	4.63
9300	2696	1794	2.96	1820	3.14	1845	3.33	1871	3.53	1896	3.72	1920	3.92	1944	4.11	1991	4.52	2037	4.93	2082	5.35
10000	2899	1921	3.62	1945	3.82	1970	4.02	1993	4.22	2017	4.43	2040	4.64	2062	4.85	2107	5.28	2151	5.71	2193	6.16
10700	3101	2049	4.37	2072	4.58	2094	4.80	2117	5.01	2139	5.23	2161	5.45	2182	5.68	2225	6.13	2266	6.59	2306	7.06
11400	3304	2177	5.22	2198	5.45	2220	5.68	2241	5.91	2262	6.14	2283	6.37	2303	6.61	2343	7.09	2383	7.57	2421	8.07
12100	3507	2305	6.18	2326	6.42	2346	6.66	2366	6.91	2386	7.15	2406	7.40	2425	7.65	2463	8.15	2501	8.66	2538	9.18
12800	3710	2434	7.26	2453	7.51	2473	7.77	2492	8.02	2511	8.28	2529	8.54	2548	8.80	2584	9.33	2620	9.87	2656	10.41
13500	3913	2563	8.46	2581	8.72	2600	8.99	2618	9.26	2636	9.53	2654	9.80	2671	10.08	2706	10.63	2741	11.19	2775	11.76
14200	4116	2692	9.78	2710	10.06	2727	10.34	2744	10.63	2762	10.91	2779	11.20	2796	11.48	2829	12.06	2862	12.65	2895	13.24
14900	4319	2821	11.24	2838	11.54	2855	11.83	2871	12.13	2888	12.42	2904	12.72	2920	13.02	2953	13.63	2984	14.24	3015	14.86
15600	4522	2951	12.84	2967	13.15	2983	13.46	2999	13.77	3014	14.08	3030	14.39	3046	14.70	3073	15.33	3107	15.97	3137	16.62
16300	4725	3080	14.59	3096	14.91	3111	15.23	3126	15.56	3141	15.88	3156	16.20	3171	16.53	3201	17.19	3230	17.85	3259	18.52
17000	4928	3210	16.50	3225	16.83	3239	17.16	3254	17.50	3269	17.84	3283	18.17	3298	18.51	3326	19.20	3354	19.89	3382	20.58

OUTLET		2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3600	1043	1428	1.66	1508	1.90	1585	2.15	1658	2.41												
4200	1217	1461	1.88	1533	2.13	1603	2.39	1674	2.66	1742	2.94	1874	3.53								
4800	1391	1514	2.16	1578	2.42	1642	2.69	1704	2.97	1767	3.25	1890	3.86	2010	4.50	2125	5.17				
5500	1594	1593	2.55	1650	2.83	1707	3.11	1763	3.40	1819	3.70	1929	4.32	2038	4.97	2145	5.66	2251	6.39	2354	7.14
6200	1797	1681	2.99	1734	3.29	1787	3.60	1838	3.91	1889	4.23	1989	4.88	2087	5.56	2184	6.26	2281	7.00	2377	7.77
6900	2000	1775	3.50	1825	3.82	1875	4.15	1923	4.49	1970	4.82	2063	5.52	2153	6.24	2242	6.97	2331	7.73	2418	8.52
7600	2203	1873	4.07	1921	4.42	1968	4.78	2014	5.14	2059	5.50	2147	6.24	2231	7.00	2314	7.77	2396	8.57	2476	9.39
8300	2406	1975	4.72	2021	5.10	2066	5.48	2110	5.87	2153	6.25	2236	7.04	2317	7.84	2395	8.66	2472	9.50	2547	10.36
9000	2609	2080	5.44	2124	5.85	2167	6.26	2209	6.67	2250	7.09	2330	7.93	2407	8.78	2482	9.64	2555	10.52	2627	11.42
9700	2812	2188	6.24	2230	6.68	2271	7.12	2311	7.57	2350	8.01	2427	8.90	2502	9.80	2574	10.72	2644	11.64	2713	12.58
10400	3014	2298	7.13	2338	7.60	2377	8.07	2416	8.54	2454	9.02	2527	9.97	2599	10.93	2669	11.89	2737	12.87	2803	13.86
11100	3217	2411	8.11	2449	8.61	2486	9.11	2523	9.61	2559	10.12	2630	11.13	2699	12.15	2766	13.17	2832	14.20	2896	15.24
11800	3420	2525	9.20	2561	9.73	2597	10.25	2632	10.76	2667	11.32	2736	12.39	2802	13.47	2867	14.55	2930	15.64	2992	16.73
12500	3623	2640	10.41	2675	10.95	2710	11.51	2744	12.06	2777	12.62	2843	13.76	2907	14.90	2970	16.04	3031	17.18	3091	18.33
13200	3826	2757	11.73	2791	12.30	2824	12.88	2857	13.46	2889	14.05	2952	15.23	3014	16.43	3075	17.64	3134	18.84	3192	20.05
13900	4029	2876	13.18	2908	13.77	2940	14.38	2971	14.98	3002	15.60	3063	16.83	3123	18.09	3181	19.35	3239	20.62	3295	21.89
14600	4232	2995	14.76	3026	15.38	3056	16.01	3087	16.64	3117	17.27	3175	18.56	3233	19.87	3290	21.19	3345	22.52	3400	23.85
15300	4435	3115	16.48	3145	17.13	3174	17.78	3203	18.43	3232	19.09	3289	20.43	3345	21.79	3400	23.17				
16000	4638	3236	18.35	3265	19.02	3293	19.69	3321	20.37	3349	21.06	3404	22.45								

OUTLET		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
5500	1594	2453	7.92																		
6000	1739	2466	8.38																		
6500	1884	2484	8.88	2574	9.71	2664	10.58	2751	11.46	2836	12.37	2919	13.30	2999	14.25						
7000	2029	2512	9.45	2597	10.29	2682	11.16	2766	12.06	2849	12.99	2931	13.94	3011	14.91	3089	15.89	3165	16.90		
7500	2174	2548	10.09	2629	10.94	2709	11.82	2789	12.73	2868	13.66	2946	14.62	3024	15.61	3101	16.61	3176	17.64	3253	18.72
8000	2319	2592	10.78	2669	11.66	2744	12.55	2820	13.47	2895	14.41	2969	15.38	3044	16.37	3118	17.39	3191	18.43	3265	19.50
8500	2464	2642	11.53	2715	12.44	2787	13.35	2859	14.29	2930	15.25	3001	16.22	3071	17.22	3142	18.25	3212	19.29	3281	20.63
9000	2609	2697	12.33	2766	13.26	2835	14.21	2904	15.17	2972	16.15	3039	17.15	3106	18.16	3173	19.20	3240	20.25	3307	21.43
9500	2754	2755	13.19	2822	14.15	2888	15.12	2954	16.11	3019	17.12	3083	18.14	3148	19.17	3212	20.23	3275	21.30	3340	22.66
10000	2899	2817	14.09	2881	15.08	2945	16.09	3008	17.11	3071	18.14	3133	19.19	3194	20.26	3256	21.33	3317	22.43	3382	23.86
10500	3043	2880	15.06	2943	16.08	3005	17.11	3066	18.16	3127	19.23	3186	20.31	3245	21.40	3304	22.50	3363	23.62		
11000	3188	2945	16.08	3007	17.13	3067	18.20	3127	19.28	3185	20.37	3243	21.48	3300	22.60	3357	23.74	3414	24.89		
11500	3333	3012	17.15	3072	18.24	3132	19.34	3189	20.45	3247	21.58	3303	22.72	3359	23.87						



DESIGN 51 Double Width Airfoil Fans

Size 200 RA

SPEED LIMITATIONS

CLASS I—2291 RPM

CLASS II—2987 RPM

OUTLET AREA

4.14 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
2000	483	479	0.11	563	0.17	642	0.24														
2800	676	550	0.17	615	0.24	676	0.31	736	0.39	795	0.48	852	0.57	907	0.67						
3600	870	634	0.26	691	0.34	743	0.43	793	0.52	840	0.61	887	0.71	934	0.81	1025	1.03	1115	1.27	1199	1.52
4400	1063	725	0.37	776	0.47	823	0.57	867	0.68	909	0.78	950	0.89	990	1.00	1067	1.24	1143	1.48	1218	1.75
5200	1256	822	0.52	866	0.64	909	0.76	949	0.88	988	1.00	1025	1.12	1061	1.24	1130	1.50	1197	1.77	1262	2.05
6000	1449	921	0.72	961	0.85	1000	0.98	1037	1.12	1073	1.25	1107	1.39	1141	1.53	1205	1.82	1265	2.11	1324	2.41
6800	1643	1023	0.96	1059	1.10	1095	1.25	1129	1.41	1162	1.56	1194	1.72	1225	1.87	1285	2.19	1342	2.51	1397	2.83
7600	1836	1126	1.26	1160	1.42	1192	1.58	1223	1.75	1254	1.92	1284	2.09	1313	2.27	1369	2.61	1423	2.96	1475	3.32
8400	2029	1231	1.63	1262	1.80	1292	1.98	1321	2.16	1349	2.34	1377	2.53	1404	2.72	1457	3.10	1508	3.49	1557	3.87
9200	2222	1337	2.06	1365	2.25	1393	2.44	1420	2.64	1447	2.84	1473	3.04	1498	3.24	1548	3.66	1596	4.08	1642	4.50
10000	2415	1443	2.57	1470	2.78	1496	2.98	1521	3.19	1546	3.41	1570	3.62	1594	3.84	1641	4.29	1687	4.74	1731	5.20
10800	2609	1550	3.17	1575	3.39	1599	3.61	1623	3.83	1647	4.06	1670	4.29	1692	4.53	1737	5.00	1780	5.48	1822	5.97
11600	2802	1658	3.86	1681	4.09	1704	4.33	1727	4.57	1749	4.81	1770	5.05	1792	5.30	1834	5.80	1875	6.32	1915	6.84
12400	2995	1766	4.64	1788	4.89	1810	5.14	1831	5.39	1852	5.65	1872	5.91	1892	6.17	1932	6.70	1971	7.24	2009	7.79
13200	3188	1875	5.53	1895	5.79	1916	6.06	1936	6.33	1955	6.60	1975	6.87	1994	7.15	2032	7.71	2069	8.28	2106	8.85
14000	3382	1983	6.53	2003	6.81	2022	7.09	2041	7.37	2060	7.66	2079	7.94	2097	8.23	2133	8.82	2169	9.42	2203	10.03
14800	3575	2092	7.65	2111	7.94	2129	8.23	2147	8.53	2165	8.83	2183	9.13	2200	9.44	2235	10.06	2269	10.68	2302	11.32
15600	3768	2201	8.88	2219	9.19	2237	9.50	2254	9.82	2271	10.13	2288	10.45	2305	10.77	2338	11.41	2370	12.07	2402	12.73
16400	3961	2311	10.26	2328	10.58	2344	10.90	2361	11.23	2377	11.56	2393	11.90	2409	12.23	2441	12.90	2472	13.59	2503	14.28
17300	4179	2434	11.96	2450	12.30	2466	12.65	2482	12.99	2497	13.34	2513	13.69	2528	14.04	2558	14.74	2588	15.46	2617	16.18
18200	4396	2557	13.85	2573	14.21	2588	14.57	2603	14.93	2618	15.29	2632	15.66	2647	16.03	2676	16.77	2705	17.52	2733	18.27
19100	4614	2681	15.93	2695	16.31	2710	16.69	2724	17.06	2738	17.45	2753	17.83	2767	18.21	2794	18.99	2822	19.77	2849	20.56
20000	4831	2804	18.22	2818	18.61	2832	19.00	2846	19.40	2860	19.80	2873	20.20	2887	20.60	2913	21.41	2940	22.22	2966	23.04

OUTLET		2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4300	1039	1290	1.99	1363	2.29	1433	2.59														
5100	1232	1321	2.29	1386	2.59	1451	2.91	1514	3.24	1576	3.58	1695	4.30								
5900	1425	1374	2.67	1431	2.99	1488	3.31	1545	3.65	1601	4.00	1712	4.74	1821	5.52	1924	6.35				
6700	1618	1441	3.11	1493	3.45	1544	3.80	1595	4.15	1645	4.52	1745	5.27	1844	6.07	1942	6.91	2038	7.80	2131	8.72
7500	1812	1515	3.61	1564	3.98	1611	4.35	1658	4.73	1704	5.12	1795	5.91	1885	6.74	1974	7.60	2062	8.49	2149	9.43
8300	2005	1594	4.19	1641	4.58	1686	4.98	1730	5.38	1773	5.79	1857	6.64	1940	7.50	2021	8.40	2102	9.32	2183	10.27
9100	2198	1677	4.84	1721	5.26	1764	5.68	1806	6.11	1847	6.55	1927	7.44	2004	8.36	2080	9.30	2155	10.26	2230	11.25
9900	2391	1763	5.56	1805	6.01	1846	6.47	1886	6.93	1926	7.39	2002	8.34	2076	9.30	2147	10.29	2218	11.30	2287	12.33
10700	2585	1851	6.36	1891	6.85	1931	7.34	1969	7.83	2007	8.33	2081	9.33	2152	10.34	2220	11.38	2287	12.44	2353	13.52
11500	2778	1942	7.24	1981	7.77	2018	8.29	2055	8.82	2091	9.35	2162	10.41	2230	11.49	2297	12.58	2361	13.69	2424	14.81
12300	2971	2035	8.22	2072	8.78	2108	9.34	2143	9.90	2178	10.46	2246	11.59	2312	12.73	2376	13.88	2438	15.04	2499	16.22
13100	3164	2129	9.30	2165	9.89	2199	10.48	2233	11.08	2267	11.68	2332	12.87	2396	14.08	2458	15.29	2518	16.51	2577	17.74
13900	3357	2225	10.49	2259	11.10	2292	11.73	2325	12.36	2357	12.99	2421	14.26	2482	15.53	2542	16.81	2600	18.09	2657	19.39
14700	3551	2323	11.79	2355	12.44	2387	13.09	2419	13.75	2450	14.42	2511	15.75	2570	17.09	2628	18.44	2684	19.79	2740	21.15
15500	3744	2421	13.22	2452	13.89	2483	14.58	2513	15.27	2543	15.96	2602	17.36	2660	18.78	2716	20.19	2770	21.61	2824	23.03
16300	3937	2521	14.77	2551	15.48	2580	16.19	2610	16.91	2638	17.63	2695	19.10	2751	20.58	2805	22.06	2858	23.55	2910	25.04
17200	4155	2634	16.69	2663	17.43	2691	18.17	2719	18.92	2747	19.68	2801	21.21	2855	22.76	2907	24.32	2959	25.89	3009	27.46
18100	4372	2748	18.79	2775	19.56	2803	20.33	2830	21.12	2857	21.90	2909	23.50	2961	25.12	3011	26.75	3061	28.40		
19000	4589	2863	21.09	2889	21.89	2916	22.69	2942	23.51	2967	24.33	3018	25.98	3068	27.67						

OUTLET		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
6500	1570	2217	9.50																		
7000	1691	2225	9.94																		
7500	1812	2236	10.41	2320	11.42	2403	12.46	2482	13.53	2560	14.62										
8000	1932	2251	10.92	2332	11.95	2413	13.00	2491	14.09	2568	15.20	2643	16.34	2716	17.50						
8500	2053	2271	11.50	2349	12.53	2426	13.59	2503	14.69	2578	15.82	2652	16.98	2724	18.16	2795	19.37	2864	20.59		
9000	2174	2298	12.13	2372	13.17	2445	14.24	2518	15.34	2591	16.48	2663	17.65	2734	18.85	2804	20.08	2872	21.33	3005	23.89
9500	2295	2329	12.81	2399	13.86	2469	14.95	2539	16.06	2609	17.21	2678	18.39	2747	19.60	2815	20.84	2882	22.10	3014	24.71
10000	2415	2363	13.53	2431	14.61	2498	15.72	2565	16.85	2632	18.00	2698	19.19	2764	20.40	2830	21.65	2895	22.93	3024	25.56
10600	2560	2410	14.46	2474	15.57	2538	16.71	2602	17.86	2665	19.04	2728	20.24	2791	21.47	2854	22.73	2916	24.01	3040	26.66
11200	2705	2460	15.45	2521	16.60	2583	17.76	2644	18.95	2704	20.16	2765	21.38	2824	22.63	2884	23.91	2943	25.20	3062	27.87
11800	2850	2513	16.50	2572	17.68	2631	18.89	2690	20.11	2748	21.35	2806	22.61	2863	23.88	2920	25.18	2977	26.49		
12400	2995	2568	17.61	2626	18.83	2683	20.07	2739	21.33	2795	22.61	2851	23.90	2906	25.21	2961	26.54	3015	27.88		
13000	3140	2625	18.79	2681	20.05	2737	21.33	2792	22.62	2846	23.94	2899	25.26	2952	26.61	3005	27.96	3058	29.35		
13600	3285																				



DESIGN 51 Double Width Airfoil Fans

Size 222 RA

SPEED LIMITATIONS

OUTLET AREA

CLASS I—2138 RPM

CLASS II—2788 RPM

5.12 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
2500	488	443	0.14	516	0.21	587	0.29														
3500	684	512	0.22	570	0.30	624	0.39	677	0.49	729	0.59	780	0.70	830	0.82						
4500	879	593	0.33	644	0.43	691	0.54	735	0.65	777	0.76	819	0.88	860	1.01	940	1.27	1020	1.56	1096	1.87
5500	1074	681	0.48	725	0.60	767	0.73	807	0.86	845	0.99	881	1.12	917	1.26	985	1.55	1052	1.85	1119	2.16
6500	1270	773	0.68	812	0.82	850	0.97	886	1.12	921	1.27	954	1.42	987	1.57	1048	1.89	1107	2.22	1165	2.56
7500	1465	868	0.93	903	1.09	938	1.26	971	1.43	1002	1.60	1033	1.77	1063	1.95	1121	2.30	1175	2.66	1227	3.03
8500	1660	965	1.26	997	1.44	1028	1.62	1059	1.81	1088	2.00	1116	2.20	1144	2.39	1198	2.78	1249	3.18	1298	3.58
9500	1855	1063	1.66	1093	1.85	1122	2.06	1149	2.26	1177	2.47	1203	2.69	1229	2.90	1279	3.34	1327	3.77	1374	4.21
10500	2051	1163	2.14	1190	2.36	1217	2.58	1242	2.80	1268	3.03	1292	3.26	1317	3.50	1364	3.98	1409	4.45	1453	4.94
11500	2246	1263	2.72	1289	2.96	1313	3.19	1337	3.44	1361	3.68	1384	3.93	1407	4.19	1451	4.70	1494	5.22	1535	5.75
12500	2441	1365	3.41	1388	3.66	1411	3.91	1434	4.17	1456	4.44	1477	4.70	1499	4.98	1540	5.53	1581	6.09	1620	6.66
13500	2637	1467	4.20	1488	4.47	1510	4.74	1531	5.02	1552	5.30	1572	5.59	1592	5.88	1631	6.47	1670	7.06	1707	7.67
14500	2832	1569	5.12	1589	5.40	1610	5.70	1629	5.99	1649	6.29	1668	6.60	1687	6.90	1724	7.52	1761	8.16	1796	8.80
15500	3027	1672	6.16	1691	6.47	1710	6.78	1729	7.09	1747	7.41	1765	7.73	1783	8.06	1819	8.71	1853	9.38	1887	10.07
16500	3223	1775	7.35	1793	7.67	1811	8.00	1828	8.34	1846	8.67	1863	9.01	1880	9.35	1914	10.04	1947	10.75	1979	11.46
17500	3418	1878	8.68	1895	9.02	1912	9.37	1929	9.72	1945	10.08	1962	10.43	1978	10.80	2010	11.52	2042	12.26	2072	13.01
18500	3613	1981	10.17	1998	10.53	2014	10.90	2030	11.27	2046	11.64	2061	12.02	2077	12.40	2107	13.16	2137	13.94	2167	14.72
19500	3809	2085	11.82	2100	12.20	2116	12.59	2131	12.98	2146	13.37	2161	13.76	2176	14.16	2205	14.96	2234	15.77	2262	16.59
20500	4004	2189	13.65	2203	14.05	2218	14.46	2233	14.86	2247	15.27	2261	15.69	2276	16.10	2304	16.94	2331	17.79	2359	18.64
21500	4199	2292	15.66	2307	16.08	2321	16.51	2335	16.93	2349	17.36	2362	17.79	2376	18.23	2403	19.10	2429	19.98	2455	20.88
22500	4395	2397	17.87	2410	18.31	2424	18.75	2437	19.19	2450	19.64	2463	20.09	2476	20.54	2502	21.46	2528	22.38	2553	23.30
23500	4590	2501	20.27	2514	20.73	2527	21.19	2539	21.66	2552	22.12	2565	22.59	2577	23.06	2602	24.01	2627	24.97	2651	25.93
24500	4785	2605	22.89	2617	23.37	2630	23.85	2642	24.33	2654	24.82	2667	25.30	2679	25.79	2703	26.78	2726	27.77	2750	28.77

OUTLET		2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4500	879	1168	2.19																		
5400	1055	1182	2.47																		
6300	1230	1213	2.82	1247	2.82	1310	3.19	1371	3.58												
7200	1406	1260	3.25	1312	3.64	1363	4.03	1414	4.44	1465	4.86	1565	5.74	1663	6.69	1757	7.68	1847	8.71		
8100	1582	1318	3.75	1365	4.16	1412	4.58	1458	5.01	1504	5.44	1594	6.35	1684	7.31	1773	8.32	1860	9.39	1945	10.49
9000	1758	1381	4.31	1426	4.75	1469	5.20	1512	5.65	1554	6.12	1637	7.07	1719	8.06	1800	9.09	1881	10.16	1961	11.29
10000	1953	1456	5.03	1499	5.50	1540	5.98	1580	6.46	1619	6.96	1696	7.97	1771	9.01	1846	10.09	1919	11.19	1992	12.34
11000	2148	1535	5.84	1575	6.35	1614	6.86	1653	7.38	1690	7.90	1763	8.98	1833	10.08	1902	11.21	1970	12.37	2038	13.56
12000	2344	1616	6.74	1655	7.29	1692	7.84	1729	8.40	1765	8.96	1834	10.10	1901	11.26	1966	12.46	2030	13.67	2093	14.92
13000	2539	1701	7.74	1737	8.34	1773	8.93	1808	9.53	1842	10.13	1909	11.34	1973	12.57	2036	13.83	2097	15.11	2156	16.41
14000	2734	1787	8.86	1822	9.49	1856	10.13	1890	10.77	1922	11.41	1987	12.71	2049	14.01	2109	15.33	2167	16.67	2224	18.04
15000	2930	1875	10.09	1909	10.77	1941	11.45	1973	12.13	2005	12.82	2067	14.19	2126	15.58	2184	16.97	2241	18.39	2296	19.82
16000	3125	1965	11.46	1997	12.17	2028	12.89	2059	13.62	2090	14.35	2149	15.81	2206	17.28	2262	18.75	2317	20.24	2371	21.74
17000	3320	2057	12.96	2087	13.72	2117	14.48	2147	15.24	2176	16.02	2233	17.56	2288	19.12	2343	20.67	2396	22.24	2447	23.82
18000	3516	2149	14.62	2179	15.41	2207	16.21	2236	17.02	2264	17.83	2319	19.46	2373	21.10	2425	22.74	2476	24.39	2526	26.05
19000	3711	2243	16.45	2271	17.27	2299	18.10	2326	18.94	2353	19.79	2406	21.51	2458	23.23	2509	24.97	2558	26.70	2607	28.44
20000	3906	2338	18.44	2365	19.30	2391	20.17	2418	21.04	2444	21.93	2495	23.72	2545	25.53	2594	27.35	2642	29.17	2689	31.00
21000	4102	2433	20.62	2459	21.51	2485	22.41	2510	23.33	2535	24.24	2585	26.11	2633	27.99	2681	29.89	2727	31.80	2773	33.72
22000	4297	2530	22.99	2555	23.91	2579	24.85	2604	25.80	2628	26.75	2676	28.68	2723	30.64	2769	32.62	2814	34.61	2858	36.62
23000	4492	2627	25.55	2651	26.51	2675	27.48	2698	28.46	2722	29.45	2768	31.45	2813	33.48	2858	35.54				

OUTLET		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
8200	1602	2028	11.72	2106	12.90																
8900	1738	2038	12.36	2115	13.57																
9600	1875	2053	13.07	2127	14.30	2191	14.82	2264	16.09												
10300	2012	2075	13.88	2146	15.11	2201	15.57	2273	16.87	2343	18.20	2411	19.57	2478	20.96						
11000	2148	2105	14.77	2171	16.03	2216	16.39	2285	17.71	2353	19.07	2421	20.46	2487	21.88	2551	23.33	2614	24.81		
11700	2285	2139	15.75	2202	17.03	2265	18.34	2327	19.68	2390	21.06	2451	22.47	2513	23.93	2574	25.42	2635	26.94	2754	30.09
12400	2422	2178	16.79	2239	18.11	2298	19.45	2358	20.82	2417	22.22	2476	23.65	2534	25.11	2592	26.61	2650	28.14	2766	31.32
13100	2559	2221	17.90	2279	19.26	2336	20.64	2393	22.04	2449	23.47	2505	24.93	2561	26.41	2617	27.92	2672	29.47	2782	32.66
13800	2695	2267	19.08	2322	20.48	2377	21.90	2431	23.34	2486	24.81	2540	26.30	2593	27.81	2646	29.35	2699	30.92	2805	34.13
14500	2832	2315	20.33	2368	21.77	2422	23.24	2474	24.72	2526	26.23	2578	27.75	2629	29.30	2680	30.87	2731	32.46	2832	35.73
15200	2969	2364	21.65	2417	23.14	2468	24.64	2519	26.17	2569	27.72	2619	29.29	2668	30.87	2718	32.49	2767	34.11	2864	37.44
15900	3105	2415	23.05	2467	24.58	2517	26.13	2566	27.70	2615	29.29	2663	30.91	2711	32.53	2759	34.18	2806	35.84		
16600	3242	2468	24.53	2518	26																



DESIGN 51 Double Width Airfoil Fans

Size 245 RA

SPEED LIMITATIONS

CLASS I—1806 RPM

CLASS II—2354 RPM

OUTLET AREA

6.21 SQ. FT.

OUTLET CFM	VEL.	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
3000	483	382	0.16	452	0.25	515	0.35														
4000	644	425	0.23	480	0.33	533	0.43	585	0.55	636	0.68	682	0.82								
5000	805	477	0.32	526	0.44	571	0.56	613	0.68	655	0.81	697	0.96	739	1.11	819	1.44				
6000	966	535	0.44	578	0.57	619	0.71	657	0.86	694	1.00	729	1.15	764	1.30	834	1.64	903	2.01	970	2.41
7000	1127	596	0.59	634	0.74	671	0.89	707	1.06	740	1.23	773	1.39	804	1.56	865	1.91	925	2.28	984	2.68
8000	1288	660	0.79	694	0.95	728	1.11	760	1.29	792	1.48	822	1.67	851	1.86	907	2.24	960	2.63	1013	3.04
9000	1449	725	1.03	757	1.21	787	1.39	817	1.57	846	1.77	874	1.98	902	2.20	954	2.62	1004	3.05	1052	3.49
10000	1610	791	1.31	821	1.52	849	1.71	876	1.92	903	2.12	929	2.34	955	2.57	1005	3.04	1052	3.52	1098	3.99
11000	1771	859	1.65	886	1.88	913	2.10	938	2.32	963	2.54	987	2.77	1011	3.00	1058	3.50	1103	4.02	1146	4.54
12000	1932	927	2.04	953	2.29	977	2.54	1001	2.78	1024	3.02	1047	3.26	1069	3.51	1113	4.03	1156	4.57	1198	5.14
13000	2093	995	2.50	1020	2.77	1043	3.05	1066	3.31	1087	3.57	1109	3.83	1130	4.09	1171	4.63	1211	5.19	1251	5.79
14500	2335	1099	3.31	1121	3.62	1143	3.93	1164	4.23	1184	4.53	1204	4.82	1223	5.11	1261	5.69	1298	6.28	1334	6.91
16000	2576	1204	4.29	1224	4.64	1244	4.99	1264	5.33	1283	5.66	1301	5.99	1319	6.31	1354	6.95	1389	7.59	1422	8.24
17500	2818	1309	5.47	1328	5.85	1347	6.23	1365	6.60	1383	6.98	1400	7.34	1417	7.70	1450	8.41	1482	9.10	1513	9.80
19000	3060	1415	6.84	1433	7.26	1450	7.68	1467	8.09	1484	8.50	1500	8.90	1516	9.30	1547	10.07	1577	10.84	1607	11.59
20500	3301	1521	8.45	1538	8.90	1554	9.35	1570	9.80	1586	10.24	1601	10.68	1616	11.11	1646	11.97	1674	12.80	1702	13.62
22000	3543	1628	10.29	1643	10.78	1659	11.26	1674	11.74	1688	12.22	1703	12.70	1717	13.17	1745	14.10	1773	15.01	1799	15.90
23500	3784	1735	12.40	1749	12.92	1764	13.44	1778	13.95	1792	14.47	1806	14.98	1819	15.48	1846	16.48	1872	17.47	1897	18.44
25000	4026	1842	14.78	1856	15.34	1869	15.89	1883	16.44	1896	16.99	1909	17.53	1922	18.07	1947	19.15	1972	20.21	1996	21.25
26500	4267	1949	17.46	1962	18.05	1975	18.63	1988	19.22	2000	19.80	2013	20.38	2025	20.96	2049	22.10	2073	23.24	2096	24.36
28000	4509	2057	20.45	2069	21.07	2081	21.69	2093	22.31	2105	22.93	2117	23.54	2129	24.15	2152	25.37	2175	26.57	2197	27.77
29500	4750	2164	23.77	2176	24.43	2188	25.08	2199	25.74	2211	26.39	2222	27.03	2233	27.68	2255	28.97	2277	30.24	2299	31.51
31000	4992	2272	27.45	2283	28.13	2294	28.82	2305	29.51	2316	30.19	2327	30.87	2338	31.55	2359	32.91	2380	34.26	2401	35.59

OUTLET CFM	VEL.	2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	966	1031	2.81																		
7000	1127	1044	3.12	1102	3.58	1157	4.05	1208	4.51												
8000	1288	1065	3.47	1118	3.93	1170	4.42	1222	4.94	1272	5.47	1365	6.54								
9000	1449	1099	3.93	1146	4.40	1193	4.88	1239	5.39	1286	5.93	1378	7.08	1465	8.28	1546	9.47				
10000	1610	1141	4.47	1184	4.96	1227	5.46	1269	5.97	1311	6.51	1394	7.64	1478	8.88	1560	10.19	1637	11.52	1710	12.85
11000	1771	1188	5.07	1229	5.59	1268	6.12	1307	6.66	1346	7.21	1422	8.35	1498	9.57	1574	10.88	1650	12.27	1724	13.72
12000	1932	1238	5.71	1276	6.28	1314	6.85	1351	7.42	1387	8.00	1458	9.19	1528	10.42	1598	11.72	1668	13.09	1737	14.55
13000	2093	1289	6.40	1327	7.02	1363	7.64	1398	8.26	1433	8.87	1500	10.12	1566	11.40	1631	12.72	1695	14.10	1759	15.54
14000	2254	1343	7.15	1379	7.81	1414	8.48	1448	9.14	1481	9.81	1545	11.14	1608	12.48	1669	13.85	1730	15.26	1790	16.72
15000	2415	1398	7.99	1432	8.67	1466	9.37	1499	10.08	1531	10.80	1594	12.22	1654	13.65	1712	15.09	1770	16.54	1826	18.04
16000	2576	1455	8.92	1488	9.62	1520	10.35	1552	11.09	1583	11.85	1644	13.37	1702	14.89	1758	16.41	1813	17.94	1867	19.49
17000	2738	1514	9.95	1545	10.67	1576	11.42	1606	12.19	1636	12.97	1695	14.57	1752	16.19	1806	17.81	1860	19.42	1912	21.05
18500	2979	1605	11.71	1634	12.46	1663	13.23	1691	14.03	1720	14.84	1775	16.53	1829	18.27	1882	20.03	1933	21.80	1983	23.55
20000	3221	1698	13.72	1726	14.52	1753	15.32	1779	16.15	1806	16.99	1858	18.73	1910	20.56	1960	22.43	2009	24.32	2057	26.23
21500	3462	1793	15.97	1819	16.83	1845	17.69	1870	18.55	1895	19.43	1945	21.22	1993	23.10	2041	25.05	2089	27.05	2135	29.08
23000	3704	1890	18.50	1914	19.41	1939	20.33	1963	21.25	1987	22.17	2034	24.04	2080	25.96	2125	27.96	2170	30.04	2215	32.16
24500	3945	1987	21.29	2011	22.28	2034	23.26	2057	24.23	2080	25.21	2125	27.17	2169	29.17	2212	31.22	2255	33.34	2297	35.53
26000	4187	2086	24.37	2109	25.43	2131	26.48	2153	27.53	2175	28.56	2218	30.63	2260	32.72	2301	34.84	2342	37.01	2382	39.24
27500	4428	2186	27.75	2208	28.89	2229	30.02	2250	31.13	2271	32.23	2312	34.43	2352	36.62	2392	38.83				
29000	4670	2286	31.45	2307	32.67	2328	33.87	2348	35.06	2368	36.24	2408	38.56								

OUTLET CFM	VEL.	6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
11100	1787	1796	15.28	1863	16.76																
11900	1916	1805	16.00	1873	17.57	1938	19.16	2000	20.75												
12700	2045	1818	16.75	1883	18.35	1948	20.00	2011	21.69	2072	23.38	2130	25.07	2186	26.75						
13500	2174	1836	17.62	1897	19.20	1959	20.85	2021	22.58	2082	24.35	2141	26.14	2198	27.94	2253	29.74	2306	31.53		
14300	2303	1859	18.61	1917	20.19	1976	21.82	2034	23.53	2093	25.31	2151	27.15	2208	29.03	2263	30.93	2318	32.84	2421	36.64
15100	2432	1886	19.72	1942	21.30	1997	22.93	2052	24.63	2108	26.39	2163	28.21	2218	30.11	2273	32.05	2327	34.03		
15900	2560	1917	20.91	1970	22.52	2023	24.17	2075	25.87	2128	27.62	2180	29.43	2233	31.30	2286	33.24	2338	35.24		
16700	2689	1950	22.19	2001	23.83	2052	25.51	2102	27.23	2152	28.99	2202	30.80	2252	32.66	2303	34.57	2353	36.55		
17500	2818	1985	23.53	2035	25.23	2083	26.94	2132	28.69	2180	30.48	2228	32.30	2276	34.17	2324	36.08	2372	38.04		
18300	2947	2022	24.94	2070	26.70	2117	28.46	2164	30.25	2211	32.07	2257	33.92	2303	35.81	2349	37.73	2395	39.70		
19100	3076	2060	26.42	2107	28.23	2153	30.06	2199	31.90	2244	33.76	2288	35.64	2332	37.55	2377	39.51	2421	41.49		
19900	3205	2099	27.94	2145	29.83	2190	31.72	2235	33.62	2278	35.53	2322	37.46	2365	39.42	2407	41.40				
20700	3333	2139	29.51	2184	31.48	2229	33.44	2272	35.41												



DESIGN 51 Double Width Airfoil Fans

Size 270 RA

SPEED LIMITATIONS

OUTLET AREA

CLASS I—1640 RPM

CLASS II—2138 RPM

7.54 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
4000	531	357	0.22	415	0.33	472	0.45														
5500	729	411	0.34	457	0.47	500	0.60	542	0.75	584	0.90	626	1.08	665	1.26						
7000	928	473	0.50	513	0.65	551	0.82	587	0.99	621	1.16	654	1.33	687	1.52	753	1.93	817	2.38	877	2.84
8500	1127	541	0.72	576	0.90	610	1.09	642	1.29	672	1.49	702	1.69	730	1.89	785	2.32	840	2.77	894	3.25
10000	1326	613	1.02	644	1.22	673	1.43	702	1.65	730	1.88	757	2.11	783	2.35	833	2.83	881	3.31	927	3.81
11500	1525	687	1.40	715	1.63	741	1.86	767	2.10	792	2.34	817	2.60	841	2.87	888	3.42	932	3.97	974	4.51
13000	1724	762	1.87	787	2.14	812	2.40	835	2.66	858	2.93	881	3.20	903	3.48	946	4.08	988	4.70	1028	5.32
14500	1923	838	2.45	862	2.76	884	3.05	906	3.34	927	3.63	948	3.92	968	4.22	1008	4.85	1047	5.51	1085	6.20
16000	2122	915	3.14	937	3.48	958	3.82	978	4.14	998	4.46	1017	4.78	1036	5.10	1073	5.76	1109	6.45	1144	7.18
17500	2321	993	3.96	1013	4.34	1033	4.71	1052	5.07	1070	5.43	1088	5.78	1106	6.13	1140	6.83	1174	7.55	1207	8.30
19000	2520	1071	4.92	1090	5.33	1108	5.74	1126	6.14	1144	6.53	1161	6.92	1177	7.30	1210	8.06	1242	8.82	1272	9.60
20500	2719	1150	6.03	1167	6.47	1185	6.92	1202	7.36	1218	7.79	1234	8.21	1250	8.63	1281	9.45	1311	10.27	1340	11.09
22000	2918	1229	7.30	1245	7.78	1262	8.26	1278	8.74	1293	9.20	1309	9.67	1324	10.12	1353	11.02	1381	11.89	1409	12.77
23500	3117	1308	8.75	1324	9.27	1339	9.78	1354	10.29	1369	10.80	1384	11.30	1398	11.79	1426	12.76	1453	13.70	1480	14.64
25000	3316	1388	10.39	1402	10.94	1417	11.49	1431	12.04	1446	12.58	1459	13.11	1473	13.64	1500	14.68	1526	15.70	1551	16.71
26500	3515	1467	12.23	1481	12.82	1495	13.40	1509	13.98	1522	14.55	1536	15.12	1549	15.69	1574	16.81	1599	17.91	1624	18.98
28000	3714	1547	14.28	1561	14.90	1574	15.52	1587	16.13	1600	16.74	1612	17.35	1625	17.95	1650	19.14	1673	20.32	1697	21.47
29500	3912	1627	16.56	1640	17.21	1653	17.86	1665	18.51	1677	19.16	1690	19.80	1702	20.44	1725	21.70	1748	22.95	1771	24.17
31000	4111	1707	19.07	1720	19.76	1732	20.45	1744	21.13	1755	21.81	1767	22.48	1779	23.16	1801	24.49	1823	25.81	1845	27.11
32500	4310	1788	21.84	1799	22.56	1811	23.27	1822	23.99	1834	24.70	1845	25.42	1856	26.12	1878	27.53	1899	28.92	1920	30.30
34000	4509	1868	24.86	1879	25.61	1890	26.36	1901	27.11	1912	27.86	1923	28.61	1934	29.35	1955	30.83	1975	32.29	1996	33.74
35500	4708	1949	28.15	1959	28.94	1970	29.73	1981	30.51	1991	31.29	2002	32.07	2012	32.85	2032	34.40	2052	35.93	2071	37.45
37000	4907	2029	31.73	2040	32.55	2050	33.37	2060	34.19	2070	35.01	2080	35.82	2090	36.63	2109	38.25	2129	39.85	2148	41.45

OUTLET		2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8500	1127	948	3.78	1000	4.34	1050	4.91	1097	5.47												
10000	1326	974	4.34	1020	4.89	1066	5.49	1112	6.12	1157	6.77	1242	8.10								
11500	1525	1016	5.07	1056	5.65	1097	6.24	1137	6.86	1177	7.51	1257	8.90	1335	10.40	1410	11.93	1479	13.45		
13000	1724	1066	5.93	1103	6.56	1140	7.18	1176	7.83	1212	8.49	1283	9.87	1354	11.35	1425	12.95	1494	14.63	1562	16.36
14500	1923	1121	6.89	1156	7.58	1191	8.27	1224	8.96	1257	9.66	1322	11.09	1386	12.59	1449	14.17	1513	15.83	1576	17.60
16000	2122	1179	7.93	1213	8.69	1246	9.45	1277	10.21	1308	10.97	1369	12.50	1428	14.07	1486	15.68	1544	17.36	1602	19.11
17500	2321	1240	9.09	1272	9.91	1303	10.73	1334	11.57	1363	12.40	1421	14.06	1477	15.73	1531	17.42	1585	19.16	1638	20.94
19000	2520	1303	10.42	1333	11.27	1363	12.14	1392	13.03	1421	13.93	1476	15.74	1530	17.54	1581	19.35	1632	21.17	1682	23.03
20500	2719	1369	11.93	1397	12.80	1425	13.71	1453	14.64	1480	15.59	1534	17.52	1585	19.48	1635	21.42	1684	23.37	1731	25.33
22000	2918	1436	13.65	1463	14.56	1490	15.48	1516	16.44	1542	17.42	1593	19.45	1643	21.53	1691	23.63	1738	25.72	1784	27.81
23500	3117	1505	15.58	1531	16.52	1556	17.48	1581	18.46	1606	19.47	1655	21.56	1702	23.73	1749	25.95	1794	28.19	1839	30.43
25000	3316	1576	17.70	1600	18.70	1624	19.70	1648	20.72	1672	21.75	1718	23.89	1764	26.14	1809	28.45	1853	30.81	1896	33.19
26500	3515	1647	20.04	1671	21.10	1694	22.15	1716	23.21	1739	24.29	1783	26.48	1827	28.77	1870	31.16	1912	33.60	1954	36.10
28000	3714	1720	22.60	1742	23.72	1764	24.83	1786	25.95	1808	27.07	1850	29.34	1892	31.68	1933	34.11	1974	36.63	2014	39.21
29500	3912	1793	25.38	1814	26.57	1836	27.75	1857	28.92	1877	30.10	1918	32.46	1958	34.87	1998	37.35	2037	39.92	2076	42.57
31000	4111	1866	28.40	1887	29.66	1908	30.91	1928	32.15	1948	33.38	1988	35.85	2026	38.35	2064	40.89	2102	43.51	2139	46.20
32500	4310	1941	31.66	1961	33.00	1981	34.32	2000	35.63	2020	36.93	2058	39.52	2095	42.11	2132	44.74	2168	47.41	2204	50.16
34000	4509	2015	35.17	2035	36.59	2054	37.99	2073	39.37	2092	40.74	2129	43.46	2165	46.16	2200	48.88				
35500	4708	2091	38.96	2110	40.45	2128	41.93	2147	43.38	2165	44.83	2201	47.68								

OUTLET		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
12900	1711	1624	18.00																		
13800	1830	1633	18.84																		
14700	1950	1641	19.65	1703	21.57	1762	23.53	1819	25.49	1873	27.44										
15600	2069	1653	20.51	1712	22.45	1770	24.47	1827	26.53	1883	28.61	1936	30.69	1987	32.76						
16500	2188	1669	21.51	1724	23.43	1780	25.44	1836	27.53	1891	29.68	1944	31.87	1996	34.07	2047	36.27	2095	38.46		
17400	2308	1688	22.65	1741	24.56	1794	26.54	1847	28.61	1900	30.77	1953	33.00	2005	35.28	2055	37.59	2104	39.92	2198	44.55
18300	2427	1711	23.89	1762	25.81	1812	27.79	1863	29.85	1913	31.98	1963	34.20	2014	36.50	2063	38.86	2113	41.26		
19200	2546	1737	25.23	1786	27.18	1834	29.18	1882	31.24	1930	33.36	1978	35.56	2026	37.83	2074	40.18	2122	42.61		
20100	2666	1765	26.65	1811	28.64	1858	30.67	1904	32.75	1950	34.88	1996	37.08	2041	39.33	2087	41.66	2133	44.07		
21000	2785	1794	28.15	1839	30.19	1884	32.26	1928	34.37	1973	36.53	2017	38.74	2061	40.99	2105	43.32	2148	45.70		
22000	2918	1828	29.90	1872	32.01	1915	34.14	1958	36.30	2001	38.49	2043	40.73	2085	43.01	2127	45.34	2169	47.72		
23000	3050	1864	31.72	1906	33.91	1948	36.11	1990	38.33	2031	40.58	2072	42.86	2112	45.17	2153	47.53	2193	49.94		
24000	3183	1900	33.61	1942	35.89	1983	38.17	2023	40.47	2063	42.78	2103	45.11	2142	47.47	2181	49.87				
2																					



DESIGN 51 Double Width Airfoil Fans

Size 300 RA

SPEED LIMITATIONS

OUTLET AREA

CLASS I—1507 RPM

CLASS II—1965 RPM

9.31 SQ. FT.

OUTLET CFM	VEL.	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
5000	537	327	0.28	378	0.41	429	0.56	475	0.73												
6500	698	367	0.39	410	0.55	450	0.71	489	0.88	528	1.07	566	1.29	602	1.50						
8000	859	413	0.54	451	0.72	486	0.91	520	1.11	552	1.31	584	1.52	615	1.74	679	2.24	738	2.77		
9500	1020	462	0.74	496	0.94	528	1.16	559	1.39	588	1.61	616	1.84	643	2.08	697	2.57	750	3.12	803	3.71
11000	1182	515	1.00	545	1.22	574	1.45	602	1.71	629	1.97	655	2.23	680	2.49	727	3.02	774	3.58	820	4.17
12500	1343	569	1.32	596	1.57	622	1.82	648	2.09	673	2.37	697	2.67	721	2.97	765	3.56	808	4.16	849	4.77
14000	1504	624	1.70	649	1.99	673	2.27	697	2.55	720	2.85	742	3.16	764	3.49	806	4.15	846	4.82	885	5.49
16000	1719	699	2.33	722	2.67	744	2.99	765	3.31	785	3.63	806	3.96	826	4.31	865	5.04	902	5.80	938	6.56
18000	1933	775	3.12	796	3.50	816	3.87	835	4.24	854	4.60	873	4.96	891	5.32	927	6.09	961	6.90	995	7.75
20000	2148	852	4.07	871	4.51	890	4.93	908	5.34	925	5.74	942	6.14	959	6.54	992	7.35	1024	8.20	1056	9.09
22000	2363	929	5.22	947	5.70	964	6.17	981	6.63	998	7.08	1014	7.53	1029	7.97	1060	8.85	1090	9.74	1119	10.66
24000	2578	1007	6.58	1024	7.10	1040	7.62	1056	8.13	1071	8.64	1086	9.13	1101	9.62	1130	10.57	1158	11.53	1185	12.50
26000	2793	1086	8.16	1101	8.73	1116	9.30	1131	9.86	1146	10.41	1160	10.96	1174	11.49	1201	12.54	1227	13.58	1253	14.62
28000	3008	1164	10.00	1179	10.61	1193	11.23	1207	11.83	1221	12.43	1234	13.03	1248	13.62	1273	14.77	1298	15.89	1323	17.01
30000	3222	1244	12.10	1257	12.76	1271	13.42	1284	14.07	1297	14.72	1310	15.37	1322	16.00	1347	17.25	1371	18.48	1394	19.68
32000	3437	1323	14.49	1336	15.20	1349	15.90	1361	16.60	1373	17.30	1385	17.99	1397	18.67	1421	20.02	1444	21.35	1466	22.65
34000	3652	1402	17.19	1415	17.94	1427	18.69	1439	19.43	1450	20.18	1462	20.91	1473	21.65	1495	23.10	1517	24.52	1539	25.92
36000	3867	1482	20.21	1494	21.00	1505	21.80	1516	22.59	1528	23.38	1539	24.16	1549	24.94	1571	26.49	1592	28.01	1612	29.52
38000	4082	1562	23.57	1573	24.42	1584	25.26	1595	26.09	1605	26.93	1616	27.76	1626	28.58	1647	30.23	1667	31.85	1686	33.45
40000	4296	1642	27.30	1652	28.19	1663	29.07	1673	29.96	1683	30.84	1693	31.71	1703	32.59	1723	34.32	1742	36.04	1761	37.74
42000	4511	1722	31.41	1732	32.35	1742	33.28	1752	34.21	1761	35.13	1771	36.05	1781	36.97	1799	38.80	1818	40.62	1836	42.41
44000	4726	1802	35.93	1812	36.91	1821	37.88	1830	38.85	1840	39.83	1849	40.79	1858	41.76	1876	43.68	1894	45.59	1912	47.48
46000	4941	1882	40.86	1891	41.88	1900	42.91	1909	43.92	1918	44.94	1927	45.95	1936	46.97	1954	48.98	1971	50.98	1988	52.97

OUTLET CFM	VEL.	2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	967	850	4.19																		
10500	1128	861	4.64	909	5.33	954	6.02	997	6.72												
12000	1289	881	5.20	923	5.87	965	6.59	1008	7.35	1049	8.14	1126	9.74								
13500	1450	911	5.90	949	6.59	986	7.31	1024	8.06	1061	8.85	1136	10.54	1208	12.33	1276	14.13				
15000	1611	947	6.72	982	7.45	1016	8.19	1050	8.95	1084	9.74	1152	11.41	1219	13.22	1286	15.16	1351	17.16	1411	19.16
16500	1772	986	7.63	1019	8.41	1052	9.20	1083	10.00	1115	10.82	1177	12.51	1238	14.31	1300	16.22	1361	18.27	1422	20.42
18000	1933	1028	8.60	1060	9.46	1091	10.31	1121	11.17	1150	12.03	1208	13.79	1265	15.62	1321	17.54	1378	19.56	1434	21.69
19500	2095	1072	9.65	1102	10.58	1132	11.51	1161	12.43	1189	13.36	1244	15.22	1297	17.12	1350	19.08	1402	21.12	1454	23.24
21000	2256	1117	10.80	1146	11.78	1175	12.77	1203	13.77	1230	14.77	1282	16.76	1333	18.77	1383	20.81	1432	22.89	1481	25.05
23000	2470	1179	12.53	1207	13.56	1234	14.61	1261	15.69	1287	16.78	1337	18.98	1386	21.16	1433	23.34	1479	25.55	1524	27.80
25000	2685	1245	14.55	1270	15.61	1296	16.70	1321	17.83	1346	18.98	1394	21.34	1441	23.72	1486	26.10	1530	28.47	1573	30.86
27000	2900	1312	16.86	1336	17.96	1360	19.09	1384	20.25	1407	21.45	1454	23.92	1498	26.46	1542	29.03	1584	31.60	1626	34.17
29000	3115	1381	19.46	1404	20.62	1427	21.80	1449	22.99	1471	24.22	1515	26.78	1558	29.43	1600	32.16	1641	34.91	1681	37.68
31000	3330	1452	22.36	1474	23.60	1495	24.84	1516	26.09	1537	27.36	1579	29.97	1620	32.71	1660	35.54	1699	38.45	1738	41.39
33000	3545	1523	25.58	1544	26.89	1565	28.21	1585	29.52	1605	30.85	1644	33.55	1683	36.35	1722	39.26	1759	42.27	1797	45.35
35000	3759	1596	29.11	1616	30.51	1635	31.91	1655	33.30	1674	34.70	1712	37.51	1749	40.39	1785	43.36	1822	46.46	1857	49.63
37000	3974	1669	32.97	1688	34.48	1707	35.96	1725	37.44	1744	38.91	1780	41.87	1816	44.85	1851	47.90	1885	51.05	1920	54.30
39000	4189	1742	37.18	1761	38.79	1779	40.37	1797	41.94	1815	43.50	1850	46.61	1884	49.72	1918	52.88	1951	56.10	1984	59.41
41000	4404	1817	41.76	1835	43.47	1852	45.16	1869	46.82	1887	48.48	1920	51.75	1953	55.01	1986	58.30	2018	61.62		
43000	4619	1891	46.72	1909	48.53	1926	50.32	1943	52.09	1959	53.84	1992	57.30	2023	60.73						

OUTLET CFM	VEL.	6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
16000	1719	1476	22.15	1531	24.27																
17000	1826	1483	23.06	1539	25.33	1592	27.59	1643	29.84												
18000	1933	1490	23.95	1546	26.29	1600	28.68	1651	31.09	1701	33.48										
19000	2041	1500	24.92	1553	27.27	1606	29.72	1658	32.22	1708	34.75	1757	37.29	1803	39.81						
20000	2148	1513	26.04	1564	28.36	1615	30.79	1665	33.33	1715	35.94	1764	38.59	1811	41.26	1857	43.93	1900	46.58		
21000	2256	1530	27.28	1578	29.59	1626	32.00	1674	34.52	1723	37.14	1771	39.84	1818	42.60	1864	45.39	1908	48.20	1993	53.79
22000	2363	1548	28.64	1594	30.96	1641	33.37	1687	35.86	1733	38.45	1779	41.15	1825	43.94	1870	46.79	1915	49.70	2001	55.56
23000	2470	1569	30.09	1613	32.45	1658	34.87	1702	37.36	1746	39.94	1790	42.60	1834	45.37	1878	48.23	1922	51.17	2008	57.22
24000	2578	1591	31.64	1634	34.03	1677	36.48	1719	38.99	1762	41.57	1804	44.23	1846	46.97	1889	49.80	1931	52.73	2015	58.84
25500	2739	1628	34.11	1669	36.58	1709	39.09	1750	41.66	1790	44.27	1830	46.95	1869	49.69	1909	52.51	1949	55.40		
27000	2900	1666	36.73	1706	39.31	1745	41.91	1783	44.55	1821	47.23	1859	49.95	1897	52.73	1935	55.56	1973	58.46		
28500	3061	1706	39.49	1745	42.20	1782	44.91	1819	47.65	1856	50.41	1893	53.20	1929	56.04	1965	58.92	2001	61.85		
30000	3222	1																			



DESIGN 51 Double Width Airfoil Fans

Size 330 RA

SPEED LIMITATIONS

OUTLET AREA

CLASS I—1351 RPM

CLASS II—1761 RPM

11.27 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
5500	488	287	0.29	338	0.44	385	0.61														
7500	665	322	0.42	363	0.60	402	0.80	440	1.00	476	1.22	510	1.45	543	1.69						
9500	843	366	0.60	401	0.81	434	1.03	466	1.27	497	1.51	527	1.76	556	2.03	613	2.58	666	3.18	716	3.81
11500	1020	415	0.84	445	1.08	474	1.33	502	1.59	529	1.87	555	2.16	581	2.45	632	3.05	680	3.68	727	4.35
13500	1198	467	1.16	494	1.43	519	1.71	544	2.00	568	2.30	592	2.61	615	2.94	660	3.61	703	4.30	746	5.01
15500	1375	520	1.56	545	1.87	568	2.18	590	2.50	612	2.83	633	3.16	654	3.51	695	4.24	734	5.00	773	5.78
17500	1553	574	2.06	597	2.40	619	2.75	639	3.10	659	3.46	679	3.83	698	4.20	735	4.98	771	5.79	807	6.63
19500	1730	629	2.66	651	3.04	671	3.43	690	3.82	709	4.21	726	4.61	744	5.01	779	5.84	812	6.70	845	7.59
21500	1908	685	3.38	705	3.81	724	4.23	742	4.66	760	5.09	776	5.52	793	5.95	825	6.84	856	7.76	887	8.70
23500	2085	741	4.22	760	4.70	778	5.16	796	5.63	812	6.09	828	6.56	843	7.03	873	7.98	902	8.96	931	9.96
25500	2263	797	5.21	816	5.73	833	6.24	849	6.74	865	7.25	880	7.75	895	8.26	923	9.28	950	10.32	977	11.38
27500	2440	854	6.36	871	6.91	888	7.47	904	8.01	919	8.56	933	9.10	947	9.65	974	10.74	1000	11.85	1025	12.97
29500	2618	911	7.67	927	8.26	943	8.86	958	9.45	973	10.04	987	10.62	1000	11.20	1026	12.37	1051	13.55	1075	14.74
31500	2795	968	9.15	984	9.79	999	10.43	1014	11.06	1028	11.69	1041	12.32	1054	12.94	1079	14.19	1103	15.44	1126	16.70
33500	2972	1025	10.83	1040	11.51	1055	12.19	1069	12.87	1082	13.54	1096	14.21	1108	14.87	1132	16.20	1155	17.53	1177	18.86
35500	3150	1083	12.71	1097	13.44	1111	14.16	1125	14.87	1138	15.59	1150	16.30	1163	17.00	1186	18.41	1208	19.82	1230	21.22
38500	3416	1169	15.94	1183	16.72	1196	17.51	1209	18.29	1221	19.06	1233	19.84	1245	20.61	1267	22.14	1289	23.67	1309	25.19
41500	3682	1256	19.68	1269	20.53	1281	21.38	1294	22.22	1305	23.06	1317	23.90	1328	24.73	1349	26.39	1370	28.05	1390	29.69
44500	3949	1343	24.00	1355	24.90	1367	25.82	1379	26.72	1390	27.62	1401	28.52	1411	29.42	1432	31.21	1452	32.99	1471	34.76
47500	4215	1431	28.91	1442	29.88	1453	30.86	1464	31.83	1475	32.79	1485	33.75	1495	34.71	1515	36.63	1534	38.53	1553	40.43
50500	4481	1518	34.47	1529	35.51	1540	36.54	1550	37.57	1560	38.60	1570	39.63	1580	40.65	1599	42.69	1617	44.72	1635	46.75
53500	4747	1606	40.72	1616	41.82	1626	42.91	1636	44.01	1646	45.10	1655	46.19	1665	47.27	1683	49.44	1701	51.60	1718	53.75
56500	5013	1694	47.70	1703	48.85	1713	50.01	1722	51.16	1732	52.32	1741	53.47	1750	54.62	1767	56.92	1785	59.20	1801	61.47

OUTLET		2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10000	887	765	4.62																		
12000	1065	775	5.22	818	5.96	859	6.74	898	7.55												
14000	1242	793	5.95	832	6.73	871	7.54	909	8.38	945	9.25	1015	11.07								
16000	1420	818	6.81	854	7.64	890	8.49	925	9.37	960	10.27	1027	12.16	1091	14.14	1152	16.22	1210	18.38		
18000	1597	850	7.75	883	8.66	916	9.57	949	10.51	981	11.46	1043	13.42	1104	15.47	1163	17.61	1220	19.85	1275	22.16
20000	1775	887	8.80	918	9.76	948	10.75	978	11.76	1008	12.78	1066	14.85	1123	16.99	1179	19.21	1234	21.51	1287	23.89
22000	1952	927	9.98	956	11.00	984	12.05	1012	13.11	1040	14.20	1094	16.42	1148	18.69	1200	21.00	1252	23.38	1302	25.84
24000	2130	970	11.33	997	12.40	1024	13.49	1050	14.61	1076	15.75	1128	18.11	1178	20.52	1227	22.97	1275	25.46	1323	28.01
26000	2307	1015	12.85	1041	13.97	1066	15.11	1091	16.28	1116	17.47	1164	19.92	1211	22.46	1258	25.06	1304	27.70	1349	30.38
28000	2484	1062	14.55	1087	15.72	1111	16.92	1134	18.14	1158	19.37	1204	21.92	1249	24.57	1293	27.29	1336	30.07	1379	32.89
30000	2662	1111	16.43	1134	17.67	1157	18.92	1179	20.19	1202	21.48	1245	24.13	1288	26.86	1330	29.69	1371	32.58	1412	35.55
32000	2839	1161	18.51	1183	19.81	1205	21.12	1226	22.46	1247	23.80	1289	26.56	1330	29.39	1370	32.30	1409	35.30	1448	38.37
34000	3017	1212	20.79	1233	22.15	1254	23.54	1274	24.93	1294	26.34	1334	29.21	1373	32.14	1412	35.16	1450	38.24	1487	41.41
36000	3194	1264	23.28	1284	24.72	1304	26.17	1323	27.63	1342	29.10	1381	32.09	1418	35.14	1455	38.25	1492	41.44	1527	44.70
38000	3372	1316	26.00	1335	27.51	1355	29.03	1373	30.56	1392	32.10	1429	35.21	1465	38.38	1500	41.61	1535	44.90	1570	48.26
40000	3549	1369	28.95	1388	30.54	1406	32.13	1424	33.73	1442	35.34	1478	38.58	1512	41.88	1546	45.22	1580	48.63	1613	52.09
43000	3815	1449	33.85	1467	35.55	1485	37.26	1502	38.97	1519	40.68	1553	44.13	1585	47.62	1618	51.15	1650	54.73	1681	58.37
46000	4082	1530	39.34	1547	41.16	1564	42.98	1581	44.80	1597	46.63	1629	50.29	1661	53.99	1691	57.71	1721	61.47	1751	65.30
49000	4348	1611	45.45	1628	47.40	1645	49.34	1661	51.28	1677	53.22	1707	57.11	1737	61.01	1767	64.95	1796	68.91	1824	72.91
52000	4614	1693	52.24	1710	54.30	1726	56.37	1741	58.43	1757	60.49	1786	64.60	1815	68.73	1844	72.88				

OUTLET		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
17500	1553	1326	24.14																		
19000	1686	1333	25.43																		
20500	1819	1341	26.84	1391	29.39	1439	32.02	1486	34.72	1532	37.49	1577	40.32								
22000	1952	1352	28.37	1400	30.98	1448	33.66	1494	36.41	1539	39.23	1583	42.11	1626	45.06	1668	48.06				
23500	2085	1365	30.03	1412	32.69	1458	35.42	1503	38.23	1548	41.10	1591	44.03	1633	47.03	1675	50.09	1716	53.21	1794	59.63
25000	2218	1381	31.83	1427	34.55	1471	37.33	1515	40.19	1558	43.10	1600	46.10	1642	49.14	1683	52.26	1723	55.43	1801	61.95
26500	2351	1400	33.75	1444	36.55	1486	39.40	1529	42.30	1570	45.27	1612	48.31	1652	51.41	1692	54.58	1732	57.80	1809	64.42
28000	2484	1421	35.75	1463	38.65	1504	41.58	1545	44.57	1585	47.60	1625	50.69	1665	53.84	1704	57.06	1742	60.33	1818	67.06
29500	2618	1444	37.84	1484	40.85	1524	43.88	1564	46.96	1603	50.07	1641	53.23	1679	56.44	1717	59.71	1755	63.03	1828	69.85
31000	2751	1469	40.01	1508	43.12	1546	46.26	1584	49.45	1622	52.66	1659	55.91	1696	59.20	1733	62.53	1769	65.92	1841	72.84
32500	2884	1496	42.27	1533	45.49	1570	48.74	1607	52.03	1643	55.36	1679	58.70	1715	62.09	1751	65.51	1786	68.96		
34000	3017	1524	44.65	1560	47.95	1596	51.31	1631	54.71	1666	58.14	1701	61.60	1736	65.09	1770	68.60	1805	72.15		
35500	3150																				



DESIGN 51 Double Width Airfoil Fans

Size 365 RA

SPEED LIMITATIONS

CLASS I—1243 RPM

CLASS II—1620 RPM

OUTLET AREA

13.79 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
7000	508	265	0.37	310	0.56	352	0.77	390	0.99												
9000	653	292	0.50	330	0.72	365	0.95	400	1.20	433	1.46	464	1.74	494	2.03						
11000	798	325	0.67	357	0.92	388	1.18	418	1.46	447	1.75	476	2.04	503	2.36	556	3.02	605	3.73		
13000	943	361	0.90	390	1.17	417	1.46	444	1.77	470	2.09	495	2.42	519	2.75	567	3.46	614	4.20	658	4.99
16000	1160	419	1.34	444	1.66	467	2.00	490	2.34	512	2.70	534	3.07	555	3.46	597	4.26	637	5.09	676	5.94
19000	1378	479	1.94	501	2.32	522	2.70	542	3.09	562	3.49	581	3.90	600	4.32	637	5.21	672	6.13	707	7.09
22000	1595	540	2.72	561	3.15	580	3.59	598	4.03	616	4.47	633	4.93	650	5.39	683	6.35	715	7.35	746	8.39
25000	1813	603	3.69	622	4.19	640	4.69	656	5.18	672	5.68	688	6.19	703	6.70	734	7.74	763	8.82	791	9.93
28000	2030	666	4.90	684	5.46	700	6.02	716	6.58	731	7.13	746	7.69	760	8.25	787	9.39	814	10.55	841	11.74
31000	2248	729	6.37	746	7.00	762	7.62	777	8.23	791	8.84	805	9.46	818	10.07	844	11.32	869	12.57	893	13.86
34000	2466	793	8.12	809	8.81	824	9.50	838	10.17	852	10.85	865	11.52	877	12.20	902	13.55	925	14.91	948	16.29
37000	2683	858	10.19	873	10.94	887	11.69	900	12.43	913	13.17	926	13.91	938	14.64	961	16.10	983	17.57	1004	19.06
40000	2901	922	12.60	936	13.42	950	14.23	963	15.03	975	15.83	987	16.63	999	17.43	1021	19.01	1042	20.59	1062	22.18
43000	3118	987	15.38	1001	16.26	1013	17.13	1026	18.00	1038	18.87	1049	19.73	1060	20.58	1082	22.29	1102	23.99	1121	25.70
46000	3336	1052	18.56	1065	19.50	1077	20.43	1089	21.37	1100	22.29	1111	23.22	1122	24.14	1143	25.97	1162	27.80	1181	29.62
49000	3553	1118	22.16	1130	23.16	1141	24.16	1153	25.16	1164	26.15	1174	27.14	1185	28.12	1204	30.08	1223	32.03	1242	33.97
52000	3771	1183	26.22	1195	27.28	1206	28.34	1217	29.40	1227	30.45	1237	31.51	1247	32.55	1266	34.64	1285	36.71	1303	38.78
55000	3988	1249	30.75	1260	31.88	1270	33.00	1281	34.12	1291	35.24	1301	36.36	1310	37.47	1329	39.68	1347	41.88	1364	44.07
58000	4206	1315	35.80	1325	36.98	1335	38.17	1345	39.36	1355	40.54	1364	41.71	1374	42.89	1392	45.23	1409	47.56	1426	49.87
61000	4423	1381	41.38	1391	42.63	1400	43.87	1410	45.13	1419	46.37	1428	47.61	1437	48.85	1455	51.31	1471	53.77	1488	56.21
64000	4641	1447	47.53	1456	48.84	1466	50.14	1475	51.46	1484	52.76	1492	54.07	1501	55.37	1518	57.96	1534	60.54	1550	63.11
67000	4859	1513	54.26	1522	55.64	1531	57.01	1540	58.38	1548	59.75	1557	61.12	1565	62.48	1581	65.20	1597	67.90	1612	70.60
70000	5076	1579	61.62	1588	63.06	1596	64.49	1605	65.92	1613	67.36	1621	68.79	1629	70.21	1645	73.05	1660	75.89	1675	78.71

OUTLET		2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12000	870	696	5.55																		
14000	1015	703	6.13	743	7.03	780	7.96														
16000	1160	715	6.82	752	7.75	788	8.71	823	9.71	857	10.74	921	12.90								
18000	1305	731	7.63	766	8.59	800	9.59	833	10.62	866	11.69	928	13.92	988	16.27	1044	18.73				
20000	1450	752	8.51	784	9.54	816	10.59	847	11.67	878	12.77	938	15.06	996	17.48	1051	20.01	1104	22.64	1154	25.38
22000	1595	777	9.47	807	10.57	837	11.69	866	12.83	895	13.98	951	16.36	1006	18.84	1060	21.44	1111	24.14	1161	26.95
25000	1813	819	11.08	847	12.27	874	13.49	901	14.73	927	15.99	979	18.56	1030	21.19	1079	23.90	1128	26.70	1175	29.60
28000	2030	867	12.97	892	14.23	917	15.52	942	16.85	966	18.20	1013	20.98	1060	23.82	1106	26.71	1151	29.66	1196	32.68
31000	2248	917	15.17	941	16.50	964	17.87	987	19.26	1009	20.69	1054	23.64	1097	26.68	1140	29.79	1182	32.94	1223	36.15
34000	2466	970	17.69	992	19.11	1014	20.56	1035	22.03	1057	23.53	1098	26.61	1139	29.81	1179	33.10	1218	36.47	1257	39.89
37000	2683	1025	20.55	1046	22.07	1066	23.61	1087	25.16	1106	26.74	1146	29.98	1184	33.31	1222	36.75	1259	40.29	1295	43.90
40000	2901	1082	23.79	1102	25.40	1121	27.03	1140	28.68	1159	30.35	1196	33.75	1232	37.24	1268	40.81	1303	44.48	1337	48.26
43000	3118	1140	27.41	1159	29.13	1177	30.86	1195	32.60	1213	34.36	1248	37.94	1282	41.60	1316	45.33	1350	49.15	1382	53.06
46000	3336	1199	31.44	1217	33.27	1235	35.11	1252	36.95	1269	38.81	1302	42.57	1335	46.41	1367	50.31	1399	54.28	1430	58.34
49000	3553	1259	35.91	1276	37.85	1293	39.80	1310	41.75	1326	43.72	1357	47.68	1388	51.69	1419	55.78	1450	59.92	1480	64.13
52000	3771	1320	40.84	1336	42.90	1352	44.96	1368	47.02	1384	49.09	1414	53.26	1444	57.48	1473	61.73	1502	66.07	1531	70.46
55000	3988	1380	46.25	1397	48.43	1412	50.61	1428	52.79	1443	54.97	1472	59.35	1501	63.77	1529	68.24	1556	72.73	1584	77.32
58000	4206	1442	52.18	1457	54.48	1473	56.78	1487	59.07	1502	61.37	1530	65.98	1558	70.61	1585	75.27	1612	79.98	1638	84.72
61000	4423	1503	58.65	1519	61.07	1533	63.49	1548	65.90	1562	68.32	1590	73.15	1616	78.00	1643	82.88	1668	87.79	1694	92.74
64000	4641	1565	65.67	1580	68.22	1595	70.77	1609	73.30	1623	75.84	1649	80.90	1675	85.98						

OUTLET		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
22000	1595	1209	29.84	1256	32.83																
24000	1740	1217	31.64	1263	34.70																
26000	1885	1227	33.61	1272	36.74	1315	39.96	1357	43.26	1399	46.64	1439	50.10	1478	53.63						
28000	2030	1240	35.79	1283	38.98	1325	42.26	1366	45.63	1407	49.08	1446	52.61	1485	56.21	1523	59.89	1560	63.65		
30000	2175	1255	38.15	1297	41.42	1337	44.77	1377	48.21	1417	51.72	1455	55.33	1493	59.00	1531	62.75	1567	66.57	1638	74.42
32000	2321	1274	40.69	1314	44.07	1353	47.50	1391	51.01	1429	54.59	1467	58.26	1504	62.00	1540	65.82	1576	69.71	1646	77.70
34000	2466	1295	43.36	1333	46.87	1371	50.42	1408	54.03	1444	57.70	1480	61.44	1516	65.24	1552	69.12	1587	73.08	1655	81.21
36000	2611	1319	46.15	1355	49.79	1391	53.50	1427	57.23	1462	61.01	1497	64.85	1531	68.74	1566	72.70	1599	76.72	1666	84.98
38000	2756	1344	49.06	1379	52.85	1414	56.70	1448	60.58	1482	64.49	1516	68.45	1549	72.45	1582	76.50	1615	80.61	1679	89.02
40000	2901	1371	52.12	1405	56.04	1438	60.02	1471	64.05	1504	68.10	1536	72.21	1569	76.35	1600	80.52	1632	84.74	1695	93.32
42000	3046	1400	55.36	1433	59.39	1465	63.50	1496	67.66	1528	71.87	1559	76.12	1590	80.40	1621	84.71	1652	89.06		
44000	3191	1430	58.80	1461	62.94	1492	67.15	1523	71.42	1554	75.77	1584	80.15	1614	84.58	1644	89.04	1673	93.54		</



DESIGN 51 Double Width Airfoil Fans

Size 402 RA

SPEED LIMITATIONS

CLASS I—1116 RPM

CLASS II—1455 RPM

OUTLET AREA

16.77 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
8500	507	239	0.5	280	0.7	317	0.9	352	1.2	393	1.9	421	2.2	447	2.6						
11500	686	269	0.7	302	0.9	334	1.2	364	1.5	397	2.3	436	2.7	460	3.1	506	3.9	549	4.8	590	5.7
14500	865	307	0.9	335	1.2	361	1.6	387	1.9	412	2.3	436	2.7	460	3.1	506	3.9	549	4.8	590	5.7
17500	1044	348	1.3	372	1.7	396	2.0	418	2.4	440	2.9	461	3.3	482	3.7	522	4.6	562	5.6	600	6.6
20500	1222	392	1.8	413	2.2	434	2.6	454	3.1	473	3.5	492	4.0	511	4.5	547	5.5	582	6.5	617	7.6
23500	1401	436	2.4	456	2.9	475	3.4	493	3.9	510	4.3	528	4.9	545	5.4	577	6.5	609	7.6	640	8.8
26500	1580	481	3.2	500	3.7	517	4.3	534	4.8	550	5.3	566	5.9	581	6.4	611	7.6	641	8.8	669	10.1
29500	1759	527	4.1	545	4.7	561	5.3	577	5.9	592	6.5	606	7.1	620	7.7	648	8.9	675	10.2	702	11.6
32500	1938	573	5.3	590	5.9	606	6.6	620	7.2	634	7.8	648	8.5	661	9.1	687	10.5	712	11.9	737	13.3
35500	2117	620	6.6	636	7.3	651	8.0	665	8.7	678	9.4	691	10.1	703	10.8	728	12.2	751	13.7	775	15.2
38500	2296	667	8.1	682	8.9	696	9.7	710	10.4	722	11.2	735	11.9	747	12.7	769	14.3	792	15.8	814	17.4
41500	2475	714	9.9	729	10.7	742	11.6	755	12.4	767	13.2	779	14.0	790	14.9	812	16.5	833	18.2	854	19.9
44500	2654	762	11.9	775	12.8	788	13.7	801	14.6	813	15.5	824	16.4	835	17.3	856	19.0	876	20.8	896	22.6
47500	2832	809	14.2	822	15.2	835	16.1	847	17.1	858	18.1	869	19.0	880	19.9	900	21.8	919	23.7	938	25.6
50500	3011	857	16.8	870	17.9	882	18.9	893	19.9	904	20.9	915	21.9	925	22.9	945	24.9	963	26.9	981	28.9
54500	3250	921	20.8	933	21.9	944	23.0	955	24.1	966	25.2	976	26.3	986	27.4	1004	29.5	1022	31.7	1040	33.9
58500	3488	986	25.3	997	26.5	1007	27.7	1018	28.9	1028	30.1	1037	31.3	1047	32.4	1065	34.8	1082	37.1	1099	39.4
62500	3727	1050	30.5	1060	31.8	1070	33.1	1080	34.4	1090	35.6	1099	36.9	1108	38.1	1126	40.6	1143	43.1	1159	45.6
66500	3965	1115	36.4	1124	37.8	1134	39.1	1143	40.5	1153	41.8	1161	43.2	1170	44.5	1187	47.2	1203	49.9	1219	52.5
70500	4204	1179	43.0	1189	44.5	1198	45.9	1207	47.4	1215	48.8	1224	50.2	1232	51.6	1249	54.5	1264	57.3	1279	60.1
74500	4442	1244	50.4	1253	51.9	1262	53.5	1270	55.0	1279	56.5	1287	58.0	1295	59.5	1311	62.5	1326	65.5	1340	68.5
78500	4681	1309	58.6	1317	60.2	1326	61.8	1334	63.5	1342	65.1	1350	66.7	1358	68.2	1373	71.4	1388	74.6	1402	77.7
82500	4919	1374	67.7	1382	69.4	1390	71.1	1398	72.8	1406	74.5	1413	76.1	1421	77.8	1435	81.2	1450	84.5	1463	87.8

OUTLET		2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15000	894	629	6.9																		
18000	1073	638	7.8	673	8.9	707	10.1	739	11.3	770	12.5										
21000	1252	653	8.9	686	10.1	717	11.3	748	12.5	778	13.8	836	16.5	890	19.4						
24000	1431	675	10.2	705	11.5	734	12.7	762	14.0	791	15.4	845	18.2	898	21.1	948	24.2	996	27.4		
27000	1610	702	11.6	729	13.0	756	14.4	783	15.8	809	17.2	860	20.1	909	23.1	958	26.3	1004	29.6	1049	33.1
30000	1789	733	13.2	759	14.7	783	16.2	808	17.7	832	19.2	879	22.3	926	25.5	971	28.7	1016	32.2	1059	35.7
33000	1968	767	15.0	791	16.6	814	18.1	837	19.7	859	21.3	904	24.6	947	28.0	990	31.5	1032	35.0	1073	38.7
36000	2147	803	17.1	826	18.7	847	20.3	869	22.0	890	23.7	932	27.2	972	30.8	1013	34.5	1052	38.2	1091	42.0
39000	2326	841	19.4	862	21.1	883	22.8	903	24.5	923	26.3	963	30.0	1001	33.7	1039	37.6	1076	41.6	1113	45.6
42000	2504	881	22.0	901	23.8	920	25.6	940	27.4	959	29.2	996	33.0	1032	36.9	1068	41.0	1104	45.2	1138	49.4
45000	2683	922	24.9	940	26.7	959	28.6	977	30.5	995	32.4	1031	36.4	1066	40.5	1100	44.7	1134	49.0	1167	53.4
48000	2862	963	28.1	981	30.0	999	32.0	1016	34.0	1034	36.0	1068	40.1	1101	44.3	1134	48.6	1166	53.1	1197	57.7
51000	3041	1006	31.5	1023	33.6	1040	35.7	1057	37.7	1073	39.9	1106	44.1	1137	48.5	1169	53.0	1200	57.6	1230	62.3
54000	3220	1049	35.4	1066	37.5	1082	39.7	1098	41.9	1114	44.1	1145	48.5	1175	53.1	1205	57.7	1235	62.5	1264	67.3
57000	3399	1093	39.5	1109	41.8	1125	44.1	1140	46.3	1155	48.6	1185	53.3	1214	58.0	1243	62.9	1271	67.8	1300	72.8
61000	3637	1152	45.6	1167	48.0	1182	50.5	1197	52.9	1211	55.3	1240	60.3	1267	65.2	1295	70.3	1322	75.4	1349	80.7
65000	3876	1211	52.4	1226	55.0	1241	57.6	1255	60.1	1269	62.7	1296	67.9	1322	73.2	1348	78.5	1374	83.9	1400	89.3
69000	4114	1271	59.9	1286	62.7	1300	65.4	1313	68.1	1327	70.9	1353	76.3	1378	81.9	1403	87.5	1428	93.1	1452	98.8
73000	4353	1332	68.2	1346	71.1	1359	74.0	1373	76.9	1386	79.8	1411	85.6	1435	91.4	1459	97.2	1483	103.1		
77000	4592	1393	77.3	1406	80.3	1419	83.4	1432	86.4	1445	89.5	1469	95.6								

OUTLET		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
27000	1610	1093	36.6	1135	40.3																
29000	1729	1098	38.4	1140	42.2	1180	46.0	1219	49.9												
31000	1849	1105	40.3	1146	44.2	1185	48.1	1224	52.1	1261	56.2	1298	60.4								
33000	1968	1113	42.4	1153	46.3	1192	50.3	1230	54.4	1267	58.6	1303	62.8	1338	67.2	1372	71.7	1406	76.2		
35000	2087	1124	44.7	1162	48.6	1200	52.7	1237	56.8	1273	61.1	1309	65.4	1344	69.9	1378	74.4	1411	79.0	1476	88.5
37000	2206	1136	47.1	1173	51.1	1209	55.2	1245	59.4	1281	63.8	1316	68.2	1350	72.7	1384	77.3	1416	82.0	1481	91.6
39000	2326	1149	49.6	1185	53.8	1221	58.0	1256	62.2	1290	66.6	1324	71.1	1358	75.7	1391	80.4	1423	85.1	1486	94.9
41000	2445	1165	52.3	1199	56.5	1234	60.9	1267	65.2	1301	69.7	1334	74.3	1366	78.9	1399	83.6	1430	88.5		
43000	2564	1181	55.0	1215	59.4	1248	63.9	1281	68.4	1313	73.0	1345	77.6	1377	82.3	1408	87.1	1439	92.0		
45000	2683	1199	57.9	1232	62.4	1264	67.0	1296	71.7	1327	76.3	1358	81.1	1389	85.9	1419	90.8	1450	95.8		
47000	2803	1219	60.8	1250	65.5	1281	70.3	1312	75.0	1342	79.9	1372	84.8	1402	89.7	1432	94.7	1461	99.7		
49000	2922	1239	63.9	1269	68.7	1299	73.6	1329	78.5	1358	83.5	1388	88.5	1417	93.6	1446	98.7	1474	103.9		
51000	3041	1260	67.1	1289	72.1	1319	77.1	1347	82.1	1376	87.3	1405	92.4	1433	97.7	1461	102.9	1489	108.2		
53000	3160	1282	70.5	1310	75.6	1339	80.7	1367	85.9	1395	91.1	1422	96.4	1450	101.8	1477	107.2				
56000	3339	1316	76.0	1343	81.1	1371	86.4	1398	91.8												



DESIGN 51 Double Width Airfoil Fans

Size 445 RA

SPEED LIMITATIONS

CLASS I—1014 RPM

CLASS II—1322 RPM

OUTLET AREA

20.49 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
10000	488	214	0.5	252	0.8	287	1.1	319	1.4												
14000	683	244	0.8	274	1.1	302	1.5	330	1.9	356	2.3	381	2.7	405	3.1						
18000	878	282	1.2	306	1.6	330	2.0	353	2.4	375	2.9	397	3.3	418	3.8	460	4.8	499	5.9	535	7.1
22000	1074	323	1.7	344	2.2	365	2.6	385	3.1	404	3.6	423	4.2	441	4.7	477	5.8	512	7.0	546	8.2
26000	1269	366	2.4	385	2.9	404	3.4	421	4.0	438	4.6	455	5.1	471	5.7	503	7.0	534	8.3	565	9.6
30000	1464	411	3.3	428	3.9	445	4.5	461	5.1	476	5.7	491	6.4	506	7.0	535	8.4	563	9.8	590	11.3
34000	1659	456	4.4	473	5.1	488	5.8	502	6.4	516	7.1	530	7.8	543	8.5	570	10.0	595	11.5	620	13.1
38000	1855	502	5.8	517	6.5	532	7.3	545	8.0	558	8.8	571	9.6	583	10.3	607	11.9	631	13.5	654	15.2
42000	2050	548	7.4	563	8.3	576	9.1	589	9.9	601	10.8	613	11.6	625	12.4	647	14.2	669	15.9	691	17.7
46000	2245	594	9.4	608	10.3	621	11.2	633	12.2	645	13.1	656	14.0	667	14.9	688	16.7	709	18.6	729	20.5
50000	2440	641	11.7	654	12.7	667	13.7	678	14.7	690	15.7	700	16.7	711	17.7	731	19.7	750	21.7	769	23.7
54000	2635	688	14.4	701	15.5	713	16.5	724	17.6	734	18.7	745	19.8	755	20.8	774	23.0	792	25.1	810	27.3
58000	2831	736	17.4	747	18.6	759	19.8	769	20.9	780	22.1	790	23.3	799	24.4	818	26.7	835	29.0	852	31.3
62000	3026	783	20.9	794	22.2	805	23.4	815	24.7	825	25.9	835	27.2	844	28.4	862	30.9	879	33.3	895	35.8
66000	3221	831	24.9	841	26.2	852	27.6	862	28.9	871	30.2	880	31.6	889	32.9	906	35.5	923	38.1	939	40.7
70000	3416	879	29.3	889	30.8	898	32.2	908	33.6	917	35.0	926	36.4	935	37.8	951	40.6	967	43.4	983	46.2
74000	3612	926	34.3	936	35.8	946	37.3	955	38.8	963	40.3	972	41.8	980	43.3	997	46.3	1012	49.2	1027	52.1
78000	3807	974	39.8	984	41.4	993	43.0	1001	44.6	1010	46.2	1018	47.7	1026	49.3	1042	52.4	1057	55.6	1072	58.7
82000	4002	1023	45.9	1031	47.6	1040	49.3	1048	50.9	1057	52.6	1065	54.3	1073	55.9	1088	59.2	1102	62.5	1116	65.8
86000	4197	1071	52.6	1079	54.4	1088	56.1	1096	57.9	1104	59.6	1111	61.4	1119	63.1	1134	66.6	1148	70.0	1162	73.5
90000	4392	1119	59.9	1127	61.8	1135	63.6	1143	65.5	1151	67.3	1158	69.1	1165	70.9	1180	74.6	1194	78.2	1207	81.8
95000	4636	1179	70.0	1187	72.0	1195	73.9	1202	75.9	1210	77.8	1217	79.8	1224	81.7	1238	85.5	1251	89.4	1264	93.2
100000	4880	1240	81.3	1247	83.3	1255	85.3	1262	87.4	1269	89.4	1276	91.5	1282	93.5	1296	97.6	1309	101.6	1321	105.6

OUTLET		2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18000	878	570	8.3																		
22000	1074	579	9.5	610	10.9	641	12.3	670	13.7	698	15.2										
26000	1269	594	11.0	623	12.4	652	13.9	679	15.4	706	17.0	758	20.3	807	23.8						
30000	1464	617	12.8	643	14.3	669	15.9	695	17.5	720	19.1	769	22.6	816	26.2	861	30.0	904	33.9	946	38.0
34000	1659	645	14.7	669	16.4	693	18.1	716	19.9	739	21.6	784	25.2	828	29.0	871	32.9	913	37.0	954	41.2
38000	1855	677	17.0	699	18.7	721	20.6	742	22.5	764	24.4	806	28.2	847	32.2	887	36.3	926	40.5	965	44.9
42000	2050	712	19.5	732	21.4	753	23.3	773	25.3	793	27.4	831	31.5	870	35.8	907	40.1	944	44.5	980	49.0
46000	2245	749	22.5	768	24.4	787	26.5	806	28.5	824	30.7	861	35.1	897	39.6	932	44.2	966	48.9	1000	53.7
50000	2440	787	25.8	806	27.9	824	30.0	841	32.2	859	34.4	893	39.0	927	43.7	960	48.6	992	53.6	1024	58.6
54000	2635	827	29.5	845	31.7	862	34.0	878	36.3	895	38.6	928	43.4	959	48.3	991	53.4	1021	58.6	1052	63.9
58000	2831	869	33.7	885	36.0	901	38.4	917	40.8	933	43.2	964	48.2	994	53.3	1024	58.6	1053	64.0	1082	69.5
62000	3026	911	38.3	926	40.8	942	43.3	957	45.8	972	48.4	1001	53.6	1030	58.9	1059	64.4	1087	69.9	1114	75.7
66000	3221	954	43.4	969	46.0	983	48.6	998	51.3	1012	54.0	1040	59.4	1068	65.0	1095	70.7	1122	76.5	1148	82.4
70000	3416	997	48.9	1012	51.7	1026	54.5	1040	57.3	1053	60.1	1080	65.8	1106	71.7	1132	77.6	1158	83.6	1183	89.7
74000	3612	1041	55.1	1055	58.0	1069	60.9	1082	63.9	1095	66.8	1121	72.8	1146	78.9	1171	85.0	1196	91.3	1220	97.6
78000	3807	1085	61.7	1099	64.8	1112	67.9	1125	71.0	1138	74.1	1163	80.4	1187	86.7	1211	93.1	1234	99.6	1258	106.1
82000	4002	1130	69.0	1143	72.3	1156	75.5	1169	78.7	1181	82.0	1205	88.5	1228	95.1	1251	101.8	1274	108.5	1297	115.3
86000	4197	1175	76.9	1188	80.3	1200	83.7	1212	87.1	1224	90.5	1248	97.3	1270	104.2	1293	111.1	1315	118.1	1336	125.2
90000	4392	1220	85.4	1232	89.0	1245	92.5	1257	96.1	1268	99.7	1291	106.8	1313	114.0	1335	121.2	1356	128.4		
94000	4588	1265	94.6	1277	98.3	1289	102.0	1301	105.8	1312	109.5	1335	116.9	1356	124.4						

OUTLET		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
31000	1513	987	43.0																		
33000	1611	991	44.7	1029	49.2																
35000	1708	995	46.5	1032	51.0	1069	55.7	1104	60.5												
37000	1806	1000	48.4	1037	53.0	1073	57.7	1108	62.6	1142	67.6	1175	72.7								
39000	1903	1005	50.4	1042	55.1	1077	59.9	1112	64.8	1146	69.8	1179	75.0	1211	80.3	1242	85.7				
41000	2001	1012	52.5	1048	57.3	1083	62.2	1117	67.1	1150	72.3	1183	77.5	1214	82.9	1245	88.3				
44000	2147	1024	56.0	1059	60.9	1092	65.8	1125	70.9	1158	76.2	1190	81.5	1221	87.0	1252	92.5	1282	98.2	1340	109.9
47000	2294	1039	59.8	1072	64.8	1104	69.9	1136	75.1	1167	80.4	1198	85.8	1229	91.4	1259	97.1	1289	102.8	1346	114.7
50000	2440	1056	63.7	1088	68.9	1119	74.2	1149	79.5	1179	85.0	1209	90.5	1239	96.2	1268	101.9	1297	107.8	1353	119.9
53000	2587	1075	67.9	1105	73.3	1135	78.7	1164	84.3	1193	89.9	1222	95.5	1251	101.3	1279	107.2	1307	113.2		
56000	2733	1096	72.2	1125	77.8	1153	83.5	1181	89.2	1209	95.0	1237	100.9	1265	106.8	1292	112.8	1319	118.9		
59000	2879	1118	76.7	1146	82.6	1173	88.5	1200	94.4	1227	100.4	1254	106.5	1281	112.6	1307	118.8	1333	125.1		
62000	3026	1141	81.6	1168	87.5	1194	93.6	1221	99.8	1247	106.0	1272	112.3	1298	118.6	1324	125.0	1349	131.5		
65000	3172	1166	86.6	1192	92.8	1217	99.0	1242	105.4	1268	111.8	1293	118.3	1317	124.9	1342	131.5				
68000	3319	1191	92.1	1216	98.4	1241	104.8	1265	111.3	1290	117.9	1314	124.6	1338	131.4						
7100																					



DESIGN 51 Double Width Airfoil Fans

Size 542 RA

SPEED LIMITATIONS

CLASS I—835 RPM

CLASS II—1089 RPM

OUTLET AREA

30.46 SQ. FT.

OUTLET CFM	VEL.	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
15000	492	177	0.8	207	1.2	236	1.7	262	2.2	293	3.4	314	4.0	333	4.7	370	6.1				
21000	689	202	1.2	226	1.7	249	2.2	272	2.8	293	3.4	314	4.0	333	4.7	370	6.1	410	8.9	440	10.6
27000	886	233	1.8	253	2.4	273	3.0	291	3.6	309	4.3	327	5.0	345	5.7	378	7.2	422	10.5	449	12.3
33000	1083	268	2.6	285	3.3	302	3.9	318	4.7	334	5.4	349	6.2	364	7.1	393	8.7	422	10.5	449	12.3
39000	1280	304	3.6	319	4.4	334	5.2	348	6.0	362	6.9	376	7.7	389	8.6	415	10.5	441	12.5	465	14.5
45000	1477	341	5.0	355	5.9	369	6.8	381	7.7	394	8.6	406	9.6	418	10.6	442	12.6	465	14.7	487	16.9
51000	1674	378	6.7	392	7.7	404	8.7	416	9.8	428	10.8	439	11.8	450	12.9	471	15.1	492	17.3	512	19.7
57000	1871	416	8.8	429	10.0	441	11.1	452	12.2	463	13.3	473	14.5	483	15.6	503	18.0	522	20.4	541	22.9
63000	2068	455	11.3	467	12.6	478	13.9	488	15.1	498	16.4	508	17.6	518	18.9	536	21.4	554	24.0	571	26.7
69000	2265	494	14.3	505	15.7	515	17.1	525	18.5	535	19.9	544	21.2	553	22.6	570	25.3	587	28.1	603	31.0
75000	2462	533	17.9	543	19.4	553	20.9	563	22.4	572	23.9	581	25.4	589	26.8	606	29.8	621	32.8	637	35.9
81000	2659	572	22.0	582	23.6	591	25.2	601	26.9	609	28.5	618	30.1	626	31.7	642	34.9	656	38.1	671	41.4
87000	2856	611	26.7	621	28.4	630	30.2	639	31.9	647	33.7	655	35.4	663	37.1	678	40.6	692	44.0	706	47.5
93000	3053	651	32.0	660	33.9	668	35.8	677	37.7	685	39.5	693	41.4	700	43.3	715	47.0	729	50.6	742	54.3
99000	3250	690	38.1	699	40.1	707	42.1	715	44.1	723	46.1	731	48.1	738	50.1	752	54.0	765	57.9	778	61.9
105000	3447	730	44.9	738	47.0	746	49.2	754	51.3	761	53.4	769	55.6	776	57.7	789	61.8	802	66.0	815	70.2
111000	3644	770	52.5	778	54.8	785	57.0	793	59.3	800	61.6	807	63.8	814	66.0	827	70.5	840	74.9	852	79.3
117000	3841	810	61.0	817	63.4	825	65.8	832	68.1	839	70.5	845	72.9	852	75.2	865	79.9	877	84.6	889	89.3
123000	4038	850	70.3	857	72.8	864	75.3	871	77.8	877	80.3	884	82.8	890	85.3	903	90.3	915	95.2	926	100.1
129000	4235	890	80.6	897	83.2	903	85.9	910	88.5	916	91.1	923	93.7	929	96.3	941	101.5	953	106.7	964	111.9
136000	4465	937	93.8	943	96.6	950	99.4	956	102.1	962	104.9	968	107.7	974	110.4	986	115.9	997	121.4	1008	126.9
143000	4695	983	108.4	990	111.3	996	114.3	1002	117.2	1008	120.1	1014	123.0	1020	125.9	1031	131.7	1042	137.5	1052	143.2
150000	4924	1030	124.5	1036	127.6	1042	130.7	1048	133.7	1054	136.8	1059	139.9	1065	142.9	1076	149.0	1086	155.1	1097	161.1

OUTLET CFM	VEL.	2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
27000	886	469	12.4																			
33000	1083	476	14.2	502	16.2	527	18.3	551	20.5	574	22.7											
39000	1280	489	16.5	513	18.6	536	20.8	559	23.1	581	25.4	623	30.3	663	35.5							
45000	1477	509	19.2	530	21.5	551	23.8	572	26.2	592	28.7	632	33.8	671	39.2	708	44.8	743	50.6	777	56.7	
51000	1674	532	22.1	552	24.7	571	27.2	590	29.8	609	32.4	646	37.8	682	43.4	717	49.2	751	55.3	784	61.6	
57000	1871	559	25.5	577	28.2	595	30.9	613	33.7	630	36.6	664	42.4	697	48.3	730	54.4	762	60.7	794	67.1	
63000	2068	588	29.4	605	32.2	622	35.1	638	38.1	654	41.1	686	47.3	717	53.7	748	60.1	778	66.7	807	73.5	
69000	2265	619	33.9	635	36.9	651	39.9	666	43.0	681	46.2	711	52.7	740	59.4	768	66.4	797	73.4	824	80.5	
75000	2462	652	39.0	666	42.1	681	45.3	696	48.5	710	51.9	738	58.7	765	65.7	792	73.0	819	80.4	845	88.0	
81000	2659	685	44.6	699	48.0	713	51.3	727	54.8	740	58.2	767	65.3	793	72.7	818	80.2	843	88.0	868	96.0	
87000	2856	720	51.0	733	54.5	746	58.1	759	61.7	772	65.3	797	72.7	822	80.4	846	88.2	870	96.3	893	104.6	
93000	3053	755	58.0	768	61.8	780	65.5	792	69.3	804	73.1	828	80.9	852	88.9	875	97.0	898	105.4	920	113.9	
99000	3250	791	65.8	803	69.7	815	73.7	826	77.7	838	81.7	861	89.9	883	98.2	905	106.6	927	115.3	949	124.1	
105000	3447	827	74.3	839	78.5	850	82.7	861	86.9	872	91.1	894	99.6	916	108.3	937	117.1	958	126.1	978	135.2	
111000	3644	863	83.7	875	88.1	886	92.5	897	96.9	907	101.3	928	110.3	949	119.3	969	128.5	989	137.8	1009	147.3	
117000	3841	900	93.9	911	98.5	922	103.1	933	107.8	943	112.4	963	121.8	983	131.3	1002	140.8	1022	150.5	1041	160.3	
123000	4038	937	105.0	948	109.9	959	114.7	969	119.6	979	124.5	998	134.3	1018	144.1	1036	154.1	1055	164.1	1073	174.4	
129000	4235	975	117.0	985	122.1	995	127.2	1005	132.3	1015	137.5	1034	147.7	1053	158.0	1071	168.4	1089	178.8		1106	189.4
135000	4432	1012	130.0	1022	135.4	1032	140.7	1042	146.1	1052	151.4	1070	162.1	1088	172.9	1106	183.7					
141000	4629	1050	144.1	1060	149.7	1070	155.3	1079	160.9	1088	166.5	1107	177.6									

OUTLET CFM	VEL.	6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
46000	1510	811	63.8																		
50000	1641	815	67.2	846	73.8	876	80.7														
54000	1773	820	70.9	851	77.6	880	84.6	909	91.8	937	99.2										
58000	1904	826	74.9	856	81.8	885	88.9	914	96.2	941	103.7	968	111.4	995	119.2	1020	127.2				
62000	2035	834	79.2	863	86.3	891	93.5	919	101.0	946	108.6	973	116.4	999	124.4	1024	132.5	1049	140.8		
66000	2167	844	84.0	871	91.2	899	98.6	926	106.2	952	113.9	978	121.9	1004	130.0	1029	138.2	1054	146.7	1102	164.0
70000	2298	855	89.0	881	96.4	908	104.0	934	111.7	960	119.6	985	127.7	1010	135.9	1035	144.3	1059	152.9	1106	170.5
74000	2429	867	94.3	893	102.0	919	109.7	944	117.9	969	125.7	993	133.9	1017	142.3	1041	150.9	1065	159.6	1111	177.4
78000	2561	881	99.8	906	107.8	930	115.8	955	123.9	979	132.2	1003	140.6	1026	149.1	1049	157.8	1072	166.6		
82000	2692	896	105.5	920	113.8	944	122.1	967	130.5	990	139.0	1013	147.7	1036	156.4	1059	165.3	1081	174.2		
86000	2823	912	111.5	935	120.0	958	128.6	981	137.3	1003	146.2	1026	155.0	1048	164.0	1069	173.1	1091	182.3		
90000	2955	929	117.7	951	126.5	974	135.4	995	144.4	1017	153.5	1039	162.7	1060	171.9	1081	181.3	1102	190.7		
94000	3086	947	124.3	969	133.3	990	142.4	1011	151.7	1032	161.1	1053	170.6	1074	180.1	1094	189.8	1115	199.4		
98000	3217	965	131.3	986	140.5	1007	149.8	1028	159.3	1048	169.0	1068	178.7	1088	188.6	1108	198.5				
102000	3349	984	138.7	1005	148.1	1025															



DESIGN 51 Double Width Airfoil Fans

Size 600 RA

SPEED LIMITATIONS

OUTLET AREA

CLASS I—755 RPM

CLASS II—984 RPM

37.26 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
19000	510	161	1.0	189	1.5	214	2.1	237	2.7	265	4.2	284	4.9	302	5.7	335	7.5				
26000	698	183	1.5	205	2.1	226	2.8	246	3.4	280	5.3	296	6.1	311	7.0	342	8.8	371	10.8	398	12.9
33000	886	210	2.2	229	2.9	246	3.6	263	4.4	300	6.6	314	7.6	328	8.6	355	10.6	381	12.7	406	15.0
40000	1074	240	3.1	256	3.9	271	4.8	286	5.7	312	7.2	325	8.2	337	9.3	349	10.4	373	12.6	396	15.0
47000	1261	271	4.3	285	5.3	299	6.2	312	7.2	325	8.2	337	9.3	349	10.4	373	12.6	396	15.0	419	17.4
54000	1449	303	5.9	316	6.9	328	8.0	340	9.1	352	10.2	363	11.4	374	12.6	396	15.0	416	17.6	437	20.3
61000	1637	335	7.8	348	9.0	359	10.2	370	11.4	380	12.7	391	13.9	401	15.2	421	17.8	440	20.6	458	23.4
68000	1825	368	10.1	380	11.5	390	12.8	401	14.2	410	15.5	420	16.9	429	18.3	447	21.1	465	24.0	482	27.1
75000	2013	401	12.9	412	14.4	422	15.9	432	17.4	441	18.9	450	20.4	459	21.9	476	25.0	492	28.1	508	31.3
82000	2201	434	16.3	445	17.9	455	19.6	464	21.2	472	22.8	481	24.4	489	26.1	505	29.3	520	32.7	535	36.1
89000	2389	468	20.1	478	21.9	487	23.7	496	25.5	504	27.3	512	29.0	520	30.8	535	34.3	550	37.9	564	41.5
96000	2576	502	24.6	511	26.6	520	28.5	528	30.4	536	32.4	544	34.3	551	36.2	566	40.0	580	43.8	593	47.7
103000	2764	535	29.8	544	31.9	553	34.0	561	36.1	569	38.1	576	40.2	583	42.2	597	46.3	610	50.4	623	54.5
111000	2979	574	36.6	583	38.8	591	41.1	598	43.3	606	45.5	613	47.8	620	50.0	633	54.4	646	58.8	658	63.2
119000	3194	613	44.3	621	46.8	629	49.2	636	51.6	643	54.0	650	56.4	657	58.8	670	63.5	682	68.2	694	72.9
127000	3408	652	53.2	660	55.8	667	58.4	674	60.9	681	63.5	688	66.0	694	68.6	706	73.7	718	78.7	730	83.7
135000	3623	692	63.1	699	65.9	706	68.7	712	71.4	719	74.1	725	76.9	732	79.6	743	85.0	755	90.4	766	95.7
143000	3838	731	74.3	738	77.3	744	80.2	751	83.1	757	86.0	763	88.9	769	91.8	781	97.5	792	103.2	802	108.9
151000	4053	770	86.8	777	89.9	783	93.0	789	96.1	795	99.1	801	102.2	807	105.2	818	111.3	829	117.4	839	123.4
159000	4267	810	100.6	816	103.9	822	107.2	828	110.4	834	113.6	839	116.9	845	120.1	856	126.5	866	132.9	876	139.2
167000	4482	849	115.9	855	119.3	861	122.7	867	126.2	872	129.6	878	133.0	883	136.3	894	143.1	904	149.8	914	156.5
175000	4697	889	132.7	894	136.2	900	139.8	905	143.4	911	147.0	916	150.6	921	154.1	932	161.2	941	168.3	951	175.3
183000	4911	928	151.0	934	154.8	939	158.5	944	162.2	950	166.0	955	169.7	960	173.4	970	180.9	979	188.3	988	195.6

OUTLET		2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
34000	913	424	15.4																		
41000	1100	431	17.6	454	20.1	477	22.7	498	25.3	519	28.1										
48000	1288	443	20.3	464	22.9	485	25.6	505	28.4	525	31.3	564	37.3	600	43.6						
55000	1476	459	23.5	479	26.3	498	29.1	517	32.1	535	35.1	571	41.3	606	47.9	640	54.8	672	61.9	702	69.3
62000	1664	480	26.9	498	30.0	515	33.1	532	36.2	549	39.4	583	46.0	616	52.8	647	59.9	678	67.3	708	75.0
69000	1852	503	30.8	519	34.0	535	37.4	551	40.8	567	44.2	598	51.3	629	58.5	659	65.9	688	73.5	716	81.4
76000	2040	528	35.3	543	38.7	558	42.2	573	45.8	588	49.4	617	57.0	645	64.7	673	72.5	701	80.5	728	88.7
83000	2228	554	40.4	569	44.0	583	47.6	597	51.4	611	55.2	638	63.2	664	71.3	691	79.7	716	88.2	742	96.8
90000	2415	582	46.1	595	49.9	609	53.8	622	57.7	635	61.7	661	69.9	686	78.5	711	87.3	735	96.3	759	105.4
97000	2603	610	52.5	623	56.5	636	60.6	648	64.7	661	68.9	685	77.5	709	86.4	732	95.6	755	105.0	778	114.6
104000	2791	640	59.7	652	63.9	664	68.2	676	72.5	688	76.9	711	85.9	734	95.1	756	104.6	778	114.3	799	124.3
111000	2979	670	67.6	682	72.1	693	76.6	704	81.1	716	85.7	738	95.1	759	104.7	781	114.5	802	124.6	822	134.9
118000	3167	701	76.3	712	81.0	723	85.8	734	90.5	744	95.4	765	105.2	786	115.1	806	125.3	826	135.7	846	146.4
125000	3355	732	85.9	742	90.8	753	95.8	763	100.8	774	105.9	794	116.1	814	126.5	833	137.1	852	147.9	871	158.9
132000	3543	763	96.3	773	101.5	784	106.8	794	112.0	803	117.3	823	128.0	842	138.9	861	149.9	879	161.0	897	172.4
139000	3731	795	107.6	805	113.1	815	118.7	824	124.2	834	129.7	852	140.9	871	152.2	889	163.6	907	175.2	924	187.0
147000	3945	831	121.8	841	127.6	850	133.4	860	139.3	869	145.1	887	156.8	905	168.7	922	180.6	939	192.7	956	205.0
155000	4160	868	137.3	877	143.5	887	149.6	896	155.7	905	161.9	922	174.2	939	186.6	955	199.1	972	211.7	988	224.4
163000	4375	904	154.2	914	160.7	923	167.1	932	173.6	940	180.0	957	193.0	974	205.9	990	219.0	1006	232.1		
171000	4589	942	172.6	951	179.4	960	186.2	968	192.9	977	199.7	993	213.2	1009	226.8						

OUTLET		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
61000	1637	736	82.0	765	90.2	792	98.6														
66000	1771	741	86.6	769	94.9	796	103.5	822	112.3	847	121.3										
71000	1906	747	91.6	774	100.1	800	108.9	826	117.8	851	127.0	875	136.4	899	145.9	922	155.7				
76000	2040	754	97.1	780	105.8	806	114.6	831	123.8	855	133.1	879	142.7	903	152.4	926	162.4	949	172.6		
81000	2174	763	103.0	788	111.9	813	120.9	837	130.2	861	139.7	885	149.5	908	159.4	930	169.5	953	179.9	996	201.1
86000	2308	773	109.3	797	118.5	821	127.7	845	137.2	868	146.9	891	156.8	913	166.9	936	177.2	957	187.7	1000	209.3
91000	2442	785	116.0	808	125.4	831	135.0	854	144.7	876	154.6	898	164.6	920	174.9	942	185.4	963	196.0	1005	218.0
96000	2576	798	122.9	820	132.7	842	142.6	864	152.6	886	162.7	907	173.0	928	183.5	949	194.1	970	205.0		
101000	2711	812	130.1	833	140.2	855	150.5	876	160.8	897	171.3	917	181.9	938	192.6	958	203.5	978	214.5		
106000	2845	827	137.6	848	148.1	868	158.7	888	169.4	909	180.3	929	191.2	948	202.2	968	213.4	988	224.6		
111000	2979	843	145.5	863	156.2	882	167.2	902	178.3	922	189.5	941	200.8	960	212.2	979	223.6	998	235.2		
116000	3113	859	153.8	878	164.9	898	176.1	917	187.5	936	199.0	954	210.7	973	222.5	991	234.3				
121000	3247	876	162.7	895	173.9	914	185.4	932	197.1	950	209.0	969	221.0	987	233.1	1004	245.3				
126000	3382	894	172.0	912	183.5	930	195.3	948	207.2	966	219.3	984	231.6	1001	244.1						
131000	3516	912	181.9																		



DESIGN 51 Double Width Airfoil Fans

Size 660 RA

SPEED LIMITATIONS

CLASS I—676 RPM

CLASS II—881 RPM

OUTLET AREA

45.08 SQ. FT.

OUTLET CFM	VEL.	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
23000	510	145	1.2	170	1.8	193	2.5	214	3.3												
32000	710	166	1.8	186	2.6	204	3.4	223	4.2	240	5.1	257	6.1	273	7.1	303	9.2				
41000	909	192	2.7	208	3.6	224	4.5	239	5.5	254	6.6	268	7.6	282	8.7	309	11.0	335	13.4	360	16.0
50000	1109	220	4.0	235	5.0	248	6.0	261	7.1	274	8.3	286	9.5	299	10.7	322	13.3	345	15.9	368	18.7
59000	1309	250	5.6	263	6.8	275	8.0	286	9.2	298	10.5	309	11.8	319	13.1	341	16.0	361	18.9	381	21.9
68000	1508	280	7.7	292	9.0	303	10.4	313	11.8	324	13.2	334	14.6	343	16.1	362	19.1	381	22.3	399	25.7
77000	1708	311	10.3	322	11.8	332	13.4	342	14.9	351	16.4	360	18.0	369	19.6	387	22.9	404	26.3	420	29.9
86000	1908	342	13.5	353	15.2	362	16.9	371	18.6	380	20.3	388	22.1	396	23.8	412	27.4	428	31.0	443	34.8
95000	2107	374	17.4	384	19.3	393	21.2	401	23.0	409	24.9	417	26.8	425	28.7	440	32.6	454	36.5	468	40.5
104000	2307	406	21.9	415	24.0	423	26.1	431	28.2	439	30.2	447	32.3	454	34.4	468	38.5	481	42.8	495	47.0
113000	2507	437	27.3	446	29.6	454	31.9	462	34.1	469	36.4	477	38.6	483	40.8	497	45.3	510	49.9	522	54.4
122000	2706	470	33.5	478	36.0	486	38.5	493	40.9	500	43.4	507	45.8	514	48.2	526	53.0	538	57.9	550	62.8
131000	2906	502	40.7	510	43.4	517	46.0	524	48.7	531	51.3	538	53.9	544	56.5	556	61.7	568	66.9	579	72.1
140000	3106	534	48.9	541	51.7	549	54.6	555	57.4	562	60.2	568	63.0	574	65.8	586	71.4	597	76.9	608	82.4
149000	3305	567	58.1	574	61.2	580	64.2	587	67.2	593	70.2	599	73.2	605	76.2	617	82.1	628	88.0	638	93.9
158000	3505	599	68.5	606	71.7	612	74.9	619	78.2	625	81.3	631	84.5	636	87.7	647	94.0	658	100.3	668	106.5
167000	3705	632	80.1	638	83.5	644	86.9	650	90.3	656	93.7	662	97.0	667	100.4	678	107.1	688	113.7	698	120.4
176000	3904	664	92.9	670	96.5	676	100.1	682	103.7	688	107.3	693	110.9	699	114.4	709	121.5	719	128.5	729	135.5
185000	4104	697	107.2	703	110.9	709	114.7	714	118.5	720	122.2	725	126.0	730	129.7	740	137.2	750	144.6	759	152.0
194000	4303	730	122.8	736	126.7	741	130.7	746	134.7	752	138.6	757	142.6	762	146.5	772	154.3	781	162.1	790	169.8
203000	4503	763	139.9	768	144.0	773	148.2	779	152.3	784	156.5	789	160.6	793	164.7	803	172.9	812	181.1	821	189.2
212000	4703	796	158.5	801	162.9	806	167.2	811	171.6	816	175.9	821	180.2	825	184.5	834	193.1	843	201.6	852	210.1
221000	4902	829	178.8	834	183.3	838	187.8	843	192.4	848	196.9	853	201.4	857	205.9	866	214.8	875	223.8	883	232.7

OUTLET CFM	VEL.	2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
41000	909	383	18.7																		
49000	1087	389	21.2	410	24.2	430	27.3	450	30.6	468	33.9										
57000	1264	398	24.2	417	27.3	437	30.6	455	34.0	473	37.5	508	44.8	541	52.5						
65000	1442	411	27.7	429	31.0	447	34.5	464	38.0	481	41.6	514	49.2	546	57.2	577	65.5	606	74.2		
73000	1619	427	31.5	444	35.2	460	38.9	476	42.6	492	46.6	523	54.3	553	62.6	582	71.2	611	80.2	638	89.5
81000	1797	446	35.7	461	39.6	476	43.6	491	47.7	506	51.8	535	60.2	563	68.8	591	77.7	618	86.9	644	96.5
90000	1996	469	41.2	483	45.3	497	49.6	511	53.9	524	58.3	551	67.3	577	76.5	603	85.9	629	95.5	654	105.4
99000	2196	493	47.5	507	51.9	520	56.3	533	60.8	545	65.5	570	75.1	595	84.9	619	95.0	643	105.2	666	115.5
108000	2396	519	54.7	532	59.3	544	64.0	556	68.7	568	73.6	592	83.6	615	94.0	637	104.6	660	115.5	682	126.5
117000	2595	546	62.8	558	67.7	570	72.6	581	77.6	592	82.7	615	93.1	637	103.9	658	115.1	679	126.5	700	138.1
126000	2795	574	71.9	585	77.0	596	82.2	607	87.5	618	92.8	639	103.7	660	114.9	680	126.5	700	138.4	719	150.6
135000	2995	603	82.0	613	87.4	624	92.9	634	98.4	644	104.0	664	115.5	684	127.1	703	139.1	722	151.4	741	164.1
144000	3194	632	93.1	642	98.9	652	104.7	662	110.5	671	116.4	690	128.4	709	140.6	728	153.0	746	165.8	764	178.8
153000	3394	661	105.4	671	111.5	681	117.6	690	123.8	699	130.0	717	142.5	735	155.2	753	168.2	770	181.4	787	194.9
162000	3594	691	118.9	700	125.3	710	131.8	719	138.3	728	144.8	745	157.9	762	171.2	779	184.7	796	198.4	812	212.3
171000	3793	721	133.7	730	140.5	739	147.2	748	154.0	756	160.8	773	174.6	790	188.5	806	202.5	822	216.8	838	231.3
180000	3993	751	149.8	760	156.9	769	164.0	777	171.2	786	178.3	802	192.7	818	207.2	833	221.9	849	236.6	864	251.7
189000	4193	782	167.2	790	174.7	799	182.2	807	189.7	815	197.2	831	212.2	846	227.3	861	242.6	876	258.0	891	273.6
198000	4392	812	186.1	821	194.0	829	201.8	837	209.7	845	217.5	860	233.2	875	249.0	890	264.9				
207000	4592	843	206.6	851	214.8	859	223.0	867	231.2	875	239.4	890	255.8								

OUTLET CFM	VEL.	6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
74000	1642	665	100.0	691	109.9																
80000	1775	669	105.4	694	115.6	718	126.0	742	136.8	765	147.7										
86000	1908	674	111.4	699	121.7	722	132.4	746	143.3	768	154.5	790	166.0	812	177.7						
92000	2041	680	117.8	704	128.4	727	139.3	750	150.4	772	161.8	794	173.5	815	185.4	836	197.6	857	210.0		
98000	2174	688	124.9	711	135.7	733	146.7	755	158.1	777	169.7	799	181.6	819	193.7	840	206.1	860	218.7	899	244.6
104000	2307	697	132.4	719	143.5	740	154.8	762	166.3	783	178.1	804	190.2	824	202.6	845	215.1	864	228.0	903	254.3
110000	2440	707	140.3	728	151.7	749	163.4	770	175.2	790	187.2	810	199.5	830	212.0	850	224.8	869	237.9		
116000	2573	718	148.5	738	160.4	759	172.4	779	184.6	798	196.9	818	209.5	837	222.2	856	235.2	875	248.4		
122000	2706	730	157.1	750	169.4	769	181.9	789	194.4	808	207.1	827	220.0	845	233.1	864	246.3	882	259.7		
128000	2839	743	166.0	762	178.7	781	191.6	799	204.6	818	217.8	836	231.0	854	244.4	872	258.0	890	271.7		
134000	2972	757	175.4	775	188.5	793	201.8	811	215.2	829	228.8	847	242.5	864	256.3	882	270.2	899	284.3		
140000	3106	771	185.3	789	198.7	807	212.3	824	226.2	841	240.2	858	254.3	875	268.6	892	282.9				
146000	3239	786	195.7	804	209.4	821	223.4	838	237.6	854	252.0	871	266.5	887	281.2						
152000	3372	802	206.7	819	220.7	835	235.0	852	249.5	868	264.2	884	279.2	900	294.3						
158000	3505	818	218.4	834	232.7	850	247.2	866	262.0	882											



DESIGN 51 Double Width Airfoil Fans

Size 730 RA

SPEED LIMITATIONS

OUTLET AREA

CLASS I—620 RPM

CLASS II—808 RPM

55.15 SQ. FT.

OUTLET CFM	VEL.	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
28000	508	132	1.5	155	2.2	176	3.1	195	4.0												
39000	707	152	2.2	169	3.2	186	4.1	203	5.2	218	6.2	234	7.4	248	8.6	275	11.2				
50000	907	176	3.3	190	4.4	205	5.5	218	6.7	231	8.0	244	9.3	257	10.6	282	13.4	305	16.3	327	19.5
61000	1106	202	4.9	214	6.1	227	7.4	239	8.7	250	10.1	261	11.6	272	13.1	294	16.2	315	19.4	335	22.7
72000	1306	229	6.9	240	8.3	251	9.8	262	11.3	272	12.8	282	14.4	292	16.0	311	19.5	329	23.1	347	26.8
83000	1505	257	9.5	267	11.1	277	12.8	287	14.4	296	16.1	305	17.9	314	19.7	331	23.4	348	27.3	364	31.3
94000	1704	285	12.7	295	14.6	304	16.4	313	18.3	321	20.2	329	22.1	337	24.0	353	28.0	369	32.2	384	36.5
105000	1904	314	16.6	323	18.7	332	20.8	340	22.9	348	25.0	355	27.1	363	29.2	377	33.5	391	38.0	405	42.6
116000	2103	343	21.4	351	23.7	360	26.1	367	28.3	375	30.6	382	32.9	389	35.3	402	40.0	415	44.7	428	49.6
127000	2303	372	27.1	380	29.6	388	32.2	395	34.7	402	37.2	409	39.7	416	42.3	428	47.3	440	52.5	452	57.7
138000	2502	401	33.7	409	36.5	416	39.3	423	42.0	430	44.8	437	47.5	443	50.3	455	55.7	466	61.3	478	66.8
149000	2702	431	41.4	438	44.5	445	47.5	452	50.5	458	53.4	464	56.4	470	59.3	482	65.2	493	71.2	504	77.1
160000	2901	460	50.3	467	53.6	474	56.8	480	60.0	487	63.2	493	66.4	498	69.6	509	75.9	520	82.3	530	88.6
171000	3101	490	60.4	497	63.9	503	67.4	509	70.8	515	74.3	521	77.7	526	81.1	537	87.9	547	94.7	557	101.4
182000	3300	520	71.8	526	75.6	532	79.3	538	83.0	544	86.6	549	90.3	555	93.9	565	101.2	575	108.4	584	115.6
193000	3500	550	84.7	556	88.6	561	92.6	567	96.5	573	100.4	578	104.3	583	108.2	593	115.9	603	123.5	612	131.2
204000	3699	579	99.0	585	103.2	591	107.4	596	111.5	602	115.7	607	119.8	612	123.9	622	132.1	631	140.2	640	148.3
215000	3898	609	115.0	615	119.4	620	123.8	626	128.1	631	132.5	636	136.9	641	141.2	650	149.8	659	158.4	668	167.0
226000	4098	640	132.6	645	137.2	650	141.8	655	146.4	660	151.0	665	155.6	669	160.2	679	169.3	687	178.3	696	187.3
237000	4297	670	151.9	675	156.8	680	161.6	685	166.5	689	171.3	694	176.1	698	180.9	707	190.5	716	200.0	724	209.5
248000	4497	700	173.1	705	178.2	709	183.2	714	188.3	719	193.4	723	198.4	728	203.4	736	213.5	745	223.5	753	233.4
259000	4696	730	196.2	735	201.5	739	206.8	744	212.1	748	217.4	753	222.7	757	227.9	765	238.4	773	248.9	781	259.3
270000	4896	760	221.3	765	226.8	769	232.4	773	237.9	778	243.4	782	248.9	786	254.4	794	265.4	802	276.3	810	287.2

OUTLET CFM	VEL.	2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
50000	907	348	22.8																		
60000	1088	354	25.9																		
70000	1269	363	29.7																		
80000	1451	375	34.1																		
90000	1632	391	38.9																		
100000	1813	409	44.3																		
110000	2013	431	51.2																		
122000	2212	453	59.1																		
133000	2412	477	68.1																		
144000	2611	502	78.2																		
155000	2811	528	89.5																		
166000	3010	555	102.1																		
177000	3209	581	116.0																		
188000	3409	608	131.4																		
199000	3608	636	148.2																		
210000	3808	663	166.6																		
221000	4007	691	186.6																		
232000	4207	719	208.4																		
243000	4406	747	232.0																		
254000	4606	776	257.4																		

OUTLET CFM	VEL.	6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
90000	1632	605	121.2																		
97000	1759	609	127.6																		
104000	1886	613	134.5																		
111000	2013	618	142.1																		
118000	2140	625	150.2																		
125000	2267	633	158.9																		
132000	2393	641	168.1																		
139000	2520	651	177.6																		
146000	2647	662	187.5																		
153000	2774	673	197.7																		
160000	2901	685	208.5																		
167000	3028	697	219.8																		
175000	3173	712	233.4																		
183000	3318	727	247.9																		
191000	3463	743	263.4																		
199000	3608	759	279.8																		
207000	3753	776	297.2																		
215000	3898	793	315.6																		

Performance shown is for Design 51 RA with outlet duct. BHP does not include V-belt drive loss.



DESIGN 51 Double Width Airfoil Fans

Size 807 RA

SPEED LIMITATIONS

CLASS I—560 RPM

CLASS II—730 RPM

OUTLET AREA

67.48 SQ. FT.

OUTLET		1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
34000	504	119	1.8	140	2.7	159	3.7	176	4.8												
47000	697	136	2.7	152	3.8	168	5.0	183	6.2	197	7.5	211	8.9	224	10.4	249	13.5				
60000	889	157	4.0	170	5.2	183	6.6	196	8.1	208	9.6	220	11.1	231	12.7	254	16.1	275	19.7	296	23.5
73000	1082	179	5.7	191	7.2	202	8.7	213	10.3	224	12.0	234	13.8	244	15.6	264	19.4	283	23.2	302	27.3
86000	1274	203	8.0	214	9.7	223	11.5	233	13.3	243	15.1	252	17.0	261	19.0	278	23.2	295	27.5	312	31.9
99000	1467	227	10.9	237	12.9	246	14.9	255	16.9	263	18.9	271	21.0	280	23.2	296	27.6	311	32.3	326	37.2
112000	1660	252	14.6	261	16.8	269	19.0	277	21.2	285	23.5	293	25.8	300	28.1	315	32.9	329	37.9	343	43.2
125000	1852	277	19.0	285	21.5	293	24.0	301	26.5	308	29.0	315	31.5	322	34.0	335	39.2	348	44.5	361	50.1
138000	2045	302	24.4	310	27.1	318	29.9	325	32.6	332	35.4	338	38.1	344	40.9	357	46.5	369	52.2	381	58.1
151000	2238	327	30.7	335	33.8	342	36.8	349	39.8	355	42.8	362	45.8	368	48.8	379	54.8	391	61.0	402	67.2
164000	2430	353	38.2	360	41.5	367	44.8	374	48.1	380	51.3	386	54.6	391	57.8	402	64.3	413	70.9	423	77.6
177000	2623	379	46.8	385	50.4	392	54.0	398	57.5	404	61.0	410	64.5	415	68.0	426	75.1	436	82.1	446	89.2
191000	2830	406	57.5	413	61.4	419	65.3	425	69.1	431	72.9	436	76.7	441	80.5	452	88.1	461	95.7	471	103.3
205000	3038	434	69.8	440	74.0	446	78.2	452	82.3	457	86.4	463	90.5	468	94.6	478	102.8	487	110.9	496	119.0
219000	3245	462	83.9	468	88.4	474	92.8	479	97.3	484	101.7	489	106.1	494	110.4	504	119.2	513	127.8	521	136.5
233000	3453	490	99.8	496	104.5	501	109.3	506	114.0	511	118.7	516	123.4	521	128.1	530	137.4	539	146.6	547	155.9
247000	3660	519	117.6	524	122.7	529	127.7	534	132.7	539	137.7	543	142.7	548	147.7	557	157.6	565	167.4	573	177.2
261000	3868	547	137.5	552	142.9	557	148.2	561	153.5	566	158.8	571	164.1	575	169.4	584	179.8	592	190.3	600	200.6
275000	4075	575	159.6	580	165.2	584	170.9	589	176.5	594	182.1	598	187.6	602	193.2	610	204.3	618	215.3	626	226.3
289000	4283	603	184.0	608	189.9	612	195.8	617	201.8	621	207.6	625	213.5	629	219.4	637	231.0	645	242.6	653	254.2
303000	4490	632	210.9	636	217.1	640	223.2	645	229.5	649	235.6	653	241.8	657	247.9	665	260.2	672	272.4	679	284.6
317000	4698	660	240.2	664	246.7	668	253.2	672	259.7	676	266.2	680	272.6	684	279.1	692	291.9	699	304.7	706	317.4
331000	4905	688	272.3	692	279.0	696	285.8	700	292.6	704	299.4	708	306.1	712	312.8	719	326.3	726	339.6	733	353.0

OUTLET		2" SP		2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
61000	904	315	27.8																		
74000	1097	320	31.9	337	36.3	354	41.0	370	45.8	386	50.8										
87000	1289	329	36.9	345	41.6	360	46.4	376	51.5	390	56.7	419	67.6	446	79.1						
100000	1482	342	42.7	356	47.8	370	53.0	384	58.3	398	63.7	425	75.1	450	87.0	475	99.5	499	112.4	522	125.9
113000	1675	357	49.1	370	54.6	383	60.3	396	66.1	409	71.9	434	83.8	458	96.2	481	109.1	504	122.6	526	136.5
126000	1867	375	56.4	387	62.3	399	68.4	411	74.6	422	80.9	445	93.7	468	106.8	490	120.3	512	134.1	533	148.5
139000	2060	394	64.8	405	71.0	416	77.4	428	83.9	438	90.6	460	104.4	481	118.4	501	132.7	521	147.3	541	162.2
152000	2253	414	74.4	425	80.9	435	87.6	446	94.5	456	101.5	476	115.9	496	130.8	515	146.1	534	161.6	553	177.3
165000	2445	435	85.2	445	92.2	455	99.2	465	106.4	475	113.7	494	128.7	512	144.3	530	160.4	548	176.8	566	193.5
178000	2638	457	97.4	467	104.7	476	112.2	485	119.7	494	127.3	512	143.0	530	159.2	547	175.9	564	193.1	581	210.6
191000	2830	480	110.9	489	118.7	498	126.5	506	134.5	515	142.5	532	158.8	549	175.7	565	193.0	581	210.8	597	229.0
204000	3023	503	126.0	511	134.1	520	142.4	528	150.7	536	159.2	553	176.3	568	193.8	584	211.8	600	230.2	615	249.0
217000	3216	526	142.5	534	151.2	542	159.9	550	168.6	558	177.5	574	195.4	589	213.7	604	232.3	619	251.4	633	270.8
230000	3408	550	160.7	558	169.8	566	179.0	573	188.2	581	197.4	595	216.2	610	235.3	624	254.4	639	274.4	653	294.5
243000	3601	574	180.5	582	190.1	589	199.8	596	209.5	604	219.2	618	238.8	632	258.7	646	278.9	659	299.4	672	320.2
256000	3794	598	202.2	605	212.3	613	222.4	620	232.6	627	242.8	641	263.3	654	284.0	667	305.0	680	326.3	693	347.9
269000	3986	622	225.7	630	236.3	637	247.0	644	257.6	650	268.3	664	289.8	677	311.4	689	333.2	702	355.2	714	377.7
283000	4194	649	253.2	656	264.4	663	275.6	669	286.8	676	298.0	689	320.5	701	343.1	714	365.9	726	388.9	737	412.0
297000	4401	675	283.1	682	294.9	689	306.7	695	318.4	702	330.2	714	353.7	726	377.3	738	401.1				
311000	4609	702	315.5	708	327.9	715	340.2	721	352.5	728	364.8	740	389.5								

OUTLET		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP	
CFM	VEL.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP												
110000	1630	547	148.2	568	162.9	588	178.1														
119000	1763	550	156.4	571	171.5	591	186.9	610	202.8	629	219.1										
128000	1897	554	165.4	574	180.7	594	196.5	613	212.7	632	229.3	650	246.3	668	263.7						
137000	2030	560	175.2	579	190.8	598	206.9	617	223.4	635	240.3	653	257.6	671	275.3	688	293.3	704	311.7		
146000	2164	566	185.8	585	201.8	603	218.1	621	235.0	639	252.2	657	269.8	674	287.7	691	306.1	707	324.8	740	363.2
155000	2297	574	197.1	592	213.5	609	230.3	627	247.4	644	264.9	661	282.8	678	301.1	695	319.8	711	338.8	743	377.8
164000	2430	582	209.0	600	226.0	617	243.3	634	260.8	650	278.7	667	296.9	683	315.4	699	334.4	715	353.7	746	393.4
173000	2564	592	221.4	608	239.0	625	256.9	641	274.9	657	293.3	673	311.9	689	330.8	705	350.1	720	369.7		
182000	2697	602	234.2	618	252.6	634	271.1	650	289.8	665	308.7	681	327.8	696	347.2	711	366.8	726	386.8		
191000	2830	613	247.7	628	266.6	644	285.8	659	305.1	674	324.7	689	344.4	704	364.3	718	384.5	733	404.9		
200000	2964	624	261.8	639	281.2	654	301.0	669	321.0	683	341.3	698	361.6	712	382.2	726	402.9	740	423.8		
209000	3097	636	276.7	651	296.6	665	316.9	680	337.5	694	358.4	708	379.4	721	400.6	735	422.0	749	443.6		
218000	3231	649	292.5	663	312.9	677	333.6	691	354.7	704	376.1	718	397.8	731	419.7	745	441.7				
227000	3364	662	309.2	676	330.0	689	351.2	703	372.8	716	394.7	729	416.9	742	4						

Bearing Life

Bearing life may be substantially increased or decreased by variations in the operating speed or changes in the V-belt drive. Table 1 lists the design speeds (RPM), motor horsepower, and fan sheave pitch diameters. Table 2 plots the increase or the decrease in bearing life when the RPM or fan sheave pitch diameter is changed from the values in Table 1.

Example

Determine the increased bearing life of a Size 365 Class II fan operating at 1360 RPM. Assume the fan pitch diameter (11.2 inches) listed in Table 1 will be used.

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

$$\frac{1360 \text{ RPM}}{1698 \text{ RPM}} = .801 \times 100 = 80.1\%$$

Use 80%

2. Calculate fan sheave pitch diameter as a percent of the design fan sheave pitch diameter in Table 1.

$$\frac{11.2" \text{ (actual dia.)}}{11.2" \text{ (design dia.)}} = 1.0 \times 100 = 100\%$$

3. Locate intersection of 80% of design RPM and 100% of design fan sheave diameter in Table 2. The increased bearing life is 5 times the design minimum bearing life or 375,000 hours minimum average life.

Table 1:

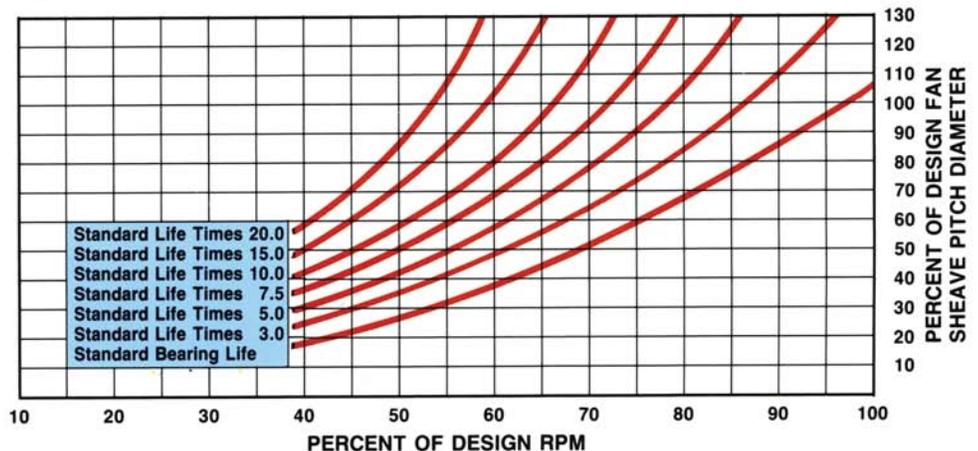
CLASS I			
Fan Size	Fan RPM	Motor Horsepower	Fan Sheave Pitch Dia.
135	3542	7.5	5.4
150	3254	10	5.9
165	2881	10	6.6
182	2639	15	7.2
200	2355	15	8.1
222	2202	20	8.7
245	1862	20	10.3
270	1691	25	11.3
300	1555	40	12.3
330	1416	40	13.5
365	1333	50	14.3
402	1144	60	16.7
445	1040	75	18.4
490	936	75	20.4
542	856	100	22.3
600	774	125	24.7
660	692	150	27.6
730	636	200	30.0
807	570	200	33.3

CLASS II			
Fan Size	Fan RPM	Motor Horsepower	Fan Sheave Pitch Dia.
135	4617*	15	4.1
150	4242*	20	4.5
165	3756*	20	5.1
182	3441	25	5.6
200	3071	30	6.2
222	2870	40	6.7
245	2427	50	7.9
270	2205	60	8.7
300	2028	75	9.4
330	1846	100	10.3
365	1698	100	11.2
402	1491	125	12.8
445	1356	150	14.1
490	1221	200	15.6
542	1109	200	17.2
600	937	200	20.4
660	791	200	24.1
730	675	200	28.3
807	570	200	33.5

CLASS III			
Fan Size	Fan RPM	Motor Horsepower	Fan Sheave Pitch Dia.
135	5828*	30	3.3
150	5354*	40	3.6
165	4741*	50	4.0
182	4342*	50	4.4
200	3876*	60	4.9
222	3622*	100	5.3
245	3061	100	6.2
270	2780	125	6.9
300	2557	150	7.5
330	2328	200	8.2
365	2142	200	8.9
402	1812	200	10.5
445	1538	200	12.4
490	1304	200	14.6
542	1109	200	17.2
600	937	200	20.4
660	791	200	24.1
730	REFER TO CHICAGO BLOWER		
807	REFER TO CHICAGO BLOWER		

*Chicago Blower does not recommend belt driven speeds that exceed 3600 RPM.

Table 2:





Sound Levels

The inlet cones, wheel cones, blades and housing of the Design 51 fan are designed to provide an extremely smooth flow of air into and through the fan. The primary advantages of this design are high efficiency and low sound levels.

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

Example

The estimated dBA of a Size 365 fan operating at 1210 RPM is 73 dBA.

Example

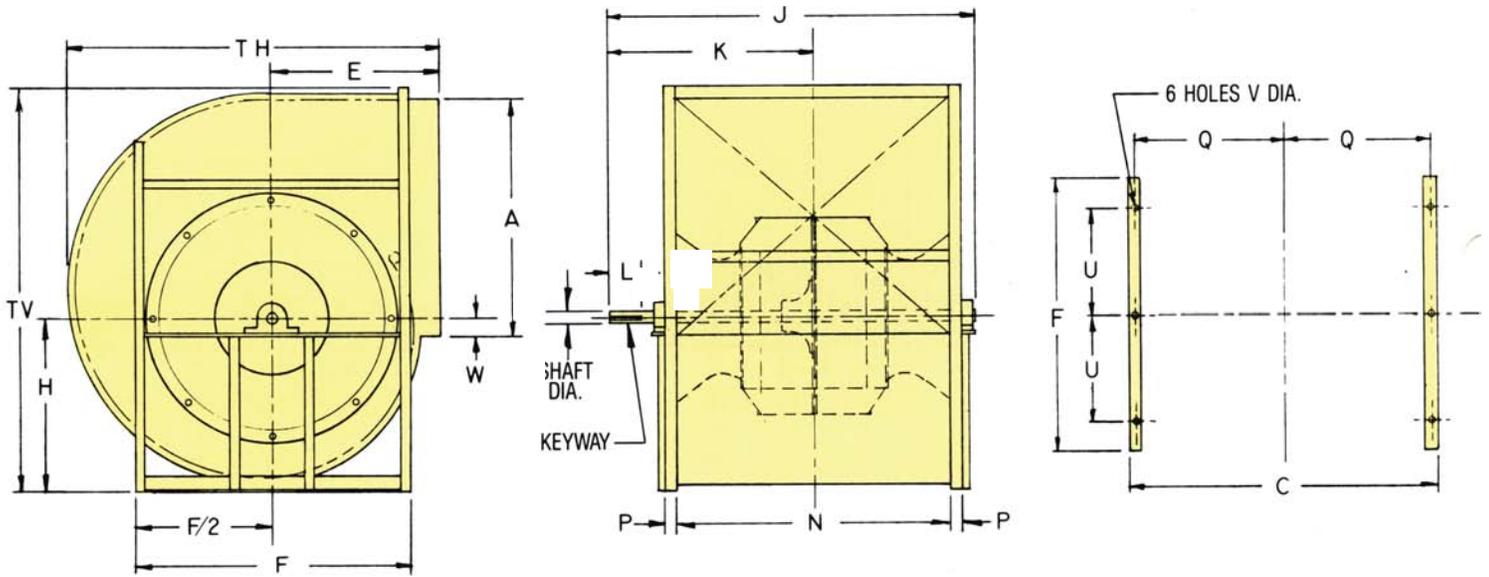
The estimated dBA of the same Size 365 fan operating at 1300 RPM can be calculated as 75 dBA (interpolate between 73 dBA at 1200 RPM and 77 dBA at 1400 RPM).

FAN SIZE	FAN SPEED RPM																	
	400	500	600	700	800	900	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3600
135							41	45	49	53	56	58	60	63	65	67	69	74
150							44	49	52	56	59	61	64	67	69	71	73	77
165						44	47	52	55	59	62	64	67	70	72	74	76	80
182					45	47	50	55	58	62	65	68	71	73	75	77	79	
200					47	50	53	58	62	65	68	71	73	76	78	80	82	
222					51	53	56	61	65	69	72	73	76	79	81	83		
245				45	48	51	54	59	63	67	70	72	75	78				
270			44	48	51	54	57	62	66	70	73	76	79	82				
300		42	47	51	55	58	60	66	69	73	77	80						
330	40	46	51	54	58	61	64	70	74	78	81							
365	43	49	54	58	62	64	67	73	77	81								
402	47	53	58	61	65	68	71	78	80									
445	50	56	61	65	69	72	76	83										
490	53	59	64	68	72	75	79	85										
542	56	62	67	71	76	79	82											
600	59	65	71	75	79	82	85											
660	62	68	73	78	82	85												
730	65	71	77	81	85													
807	68	74	80	84														

Notes:

- (1) Sound levels are based on tests conducted in accordance with AMCA Standard 300, Set Up No.1.
- (2) Sound level computations are based on a distance of 10 feet from the open inlet of the fan in a free field environment.
- (3) Specific octave band sound power levels and sound pressure levels are available on request.
- (4) Sound levels of installed fans can vary greatly from laboratory tests. The dBA ratings above are only to be used as estimates. Any comparisons and all detailed calculations should be based upon sound power levels, which are independent of the installation.
- (5) The AMCA Certified Ratings Seal applies to air performance only.

Dimensions



Clockwise top horizontal discharge shown, counterclockwise opposite hand. Angular discharges are also available.

FAN SIZE	A	C	E	F	H	J		K		N	P	Q	U	V	TH	Shaft at Bearing			Bare Fan Wt
						CL 1	CL 2,3	CL 1	CL 2,3							CL 1	CL 2	CL 3	
135	14-1/8	23-5/16	11-5/16	17-1/8	10-15/16	28-7/8	29-11/16	16-3/4	17-7/16	19-5/16	2	10-9/16	6-5/16	3/8	23-13/16	1-3/16	1-7/16	1-7/16	160
150	15-13/16	25-1/4	12-1/16	18-5/8	12	30-13/16	31-5/8	17-11/16	18-7/16	21-1/4	2	11-1/2	7-1/16	3/8	25-13/16	1-3/16	1-7/16	1-7/16	180
165	17-3/16	27-5/8	12-7/8	20-1/4	13-1/4	35-11/16	35-11/16	19-15/16	19-15/16	23-5/8	2	12-11/16	7-7/8	3/8	28-1/16	1-7/16	1-11/16	1-15/16	225
182	19-1/8	30	13-7/8	22-1/4	14-1/2	36-3/8	37-1/2	20-13/16	21-5/8	26	2	13-7/8	8-7/8	3/8	30-9/16	1-7/16	1-11/16	1-15/16	270
200	20-3/4	32-3/4	15-3/8	25-1/4	16-3/16	39-3/4	40-3/4	22-1/2	23-1/4	28-3/4	2	15-1/4	10-3/8	3/8	34-1/16	1-11/16	1-15/16	1-11/16	360
222	23-7/16	34-7/16	16-5/16	27-1/8	17-5/8	42-7/16	44-7/16	23-13/16	25-5/8	31-7/16	2	16-5/8	11-5/16	3/8	36-3/4	1-11/16	2-3/16	2-3/16	425
245	25-9/16	39	18	33	19-1/2	46-1/2	48	25-7/8	27-7/16	35	2	18-5/8	12-1/2	1/2	40-11/16	1-15/16	2-3/16	2-11/16	525
270	28-3/16	42-1/2	19-1/4	35-1/2	21-3/8	50-1/2	53-1/16	28-1/8	30-1/2	38-1/2	2	20-3/8	13-3/4	1/2	44-1/8	1-15/16	2-7/16	2-15/16	700
300	31-9/16	46-7/16	20-7/8	38-3/4	23-7/16	55-7/16	58-5/16	31-1/8	33-3/16	42-7/16	2	22-3/8	15-3/8	1/2	48-1/4	2-3/16	2-15/16	3-3/16	860
330	34-3/8	51-1/4	20-9/16	41-7/8	25-7/8	60-13/16	64-11/16	33-7/8	36-13/16	47-1/4	2	24-3/4	16-15/16	1/2	52-7/8	2-7/16	2-11/16	3-3/16	1055
365	38-5/16	55-7/8	24-5/8	45-1/4	28-5/16	65-15/16	69-7/8	36-7/16	39-7/16	51-7/8	2	27-1/16	18-5/8	1/2	57-7/8	2-7/16	2-15/16	3-7/16	1230
402	42	63-1/2	27-1/2	50-1/4	31-1/4	73-3/16	76-1/16	40-9/16	42-1/2	57-1/2	3	30-1/2	21-1/8	7/8	64-1/4	2-11/16	3-3/16	3-7/16	1545
445	46-1/2	69-7/16	30-1/16	53-3/4	34-3/8	79-13/16	82-3/4	43-15/16	45-15/16	63-7/16	3	33-1/2	22-7/8	7/8	70-9/16	2-15/16	3-7/16	R.F.	1945
490	51-1/16	76-1/8	32-15/16	58-1/2	37-13/16	87-11/16	91-5/16	47-7/8	50-3/16	70-1/8	3	36-13/16	25-1/4	7/8	77-5/8	3-7/16	3-11/16	R.F.	2390
542	56-13/16	83-1/4	36	63-1/4	41-9/16	95-13/16	95-15/16	52-7/16	52-3/16	77-1/4	3	40-3/8	27-5/8	7/8	85-3/4	3-7/16	3-7/16	R.F.	3040
600	62-13/16	91-3/8	39-9/16	69-1/8	45-7/8	104-1/8	102-13/16	56-5/16	55-3/8	85-3/8	3	44-1/2	30-9/16	7/8	93-13/16	3-7/16	3-7/16	R.F.	3850
660	68-11/16	100-1/2	44-1/16	75-7/8	50-11/16	113-1/4	113-1/4	60-7/8	60-7/8	94-1/2	3	49-1/16	33-15/16	7/8	104-1/8	3-7/16	3-7/16	R.F.	5310
730	76-3/8	110	48-1/8	82	55-5/8	122-11/16	122-11/16	65-9/16	65-9/16	104	3	53-3/4	37	7/8	114-1/8	3-7/16	3-7/16	R.F.	6555
807	84-1/2	123	53-3/8	93-5/8	61-3/8	133-11/16	135-5/8	71-1/16	72-1/16	115	4	60	40-13/16	1-1/8	126-5/16	3-7/16	3-15/16	R.F.	8750

Do not use for construction unless certified by Chicago Blower.



Engineering Specifications

General:

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

Performance:

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

Housing:

Fan housing shall be of welded, heavy gauge construction with seven common discharge positions. Scroll is to be continuously welded. Bearing supports shall be heavy gauge steel bar bolted to fan housing for easy removal of the rotor.

Rotor:

Wheel shall have cast iron or cast steel hub huck bolted to a heavy centerplate. Airfoil blades continuously welded to the centerplate and hyperbolic wheel cone. Wheels to be statically and dynamically balanced to G6.3 standards in accordance with ISO 1940 and ANSI S2.19 specifications. Shaft shall be turned, ground and polished 1045 hot rolled steel straightened to a maximum T.I.R. of .002 inches and mounted using heavy duty ball or roller pillow block bearings. Shaft critical speed shall not be less than 1.25 times maximum RPM.

Mounting:

Housing and base assembly complete with integral mounting angles for connection to foundation.

Factory Mounted Motors and Drives: (Accessory)

If motors and drives are to be factory mounted unit to be tested at running speed for vibration and balance. Filtered vibration readings, taken at fan bearings and motor bearings, are not to exceed 0.15 inches per second.

Inlet Volume Control: (Accessory)

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

Accessories: (Choose from the following)

- Flanged Outlet - Punched Holes
- Companion Flange - Punched or Unpunched
- Spherical Roller or Ball Bearings with L10 life of 100,000 hours
- Split Pillow Block Bearings
- Type "C" AMCA Spark Resistant Construction
- 1-1/2" NPT Housing Drain
- Quick Clamp or Raised Bolted Access Door
- Inlet Screen
- Adjustable Motor Base
- Extended Grease Fittings
- Totally Enclosed Belt Guard with Ventilation Panel
- Constant or Adjustable Speed V-Belt Drives - minimum 1.3 S.F.
- Outlet Damper - Parallel or Opposed Blades. Manual Operation with Locking Quadrant or Automatic Operaton.
- Horizontal Housing Split
- Unitary Base: Heavy channel construction, continuously welded, with fan and adjustable motor base welded, to insure vibration-free service.

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