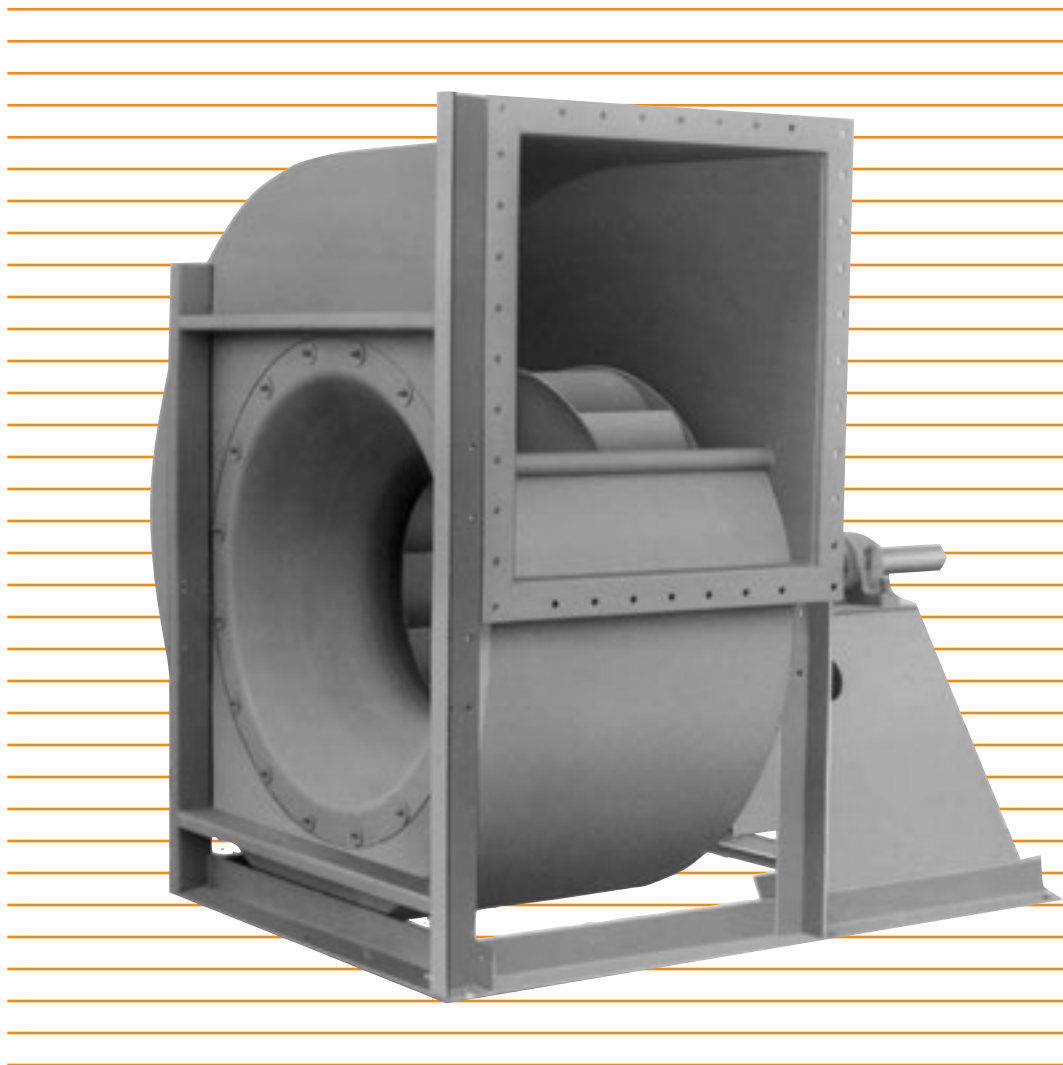


# Series 5000 Centrifugal BI Fans

Design 5020 • Class I, II, & III





## Series 5000 Centrifugal BI Fans

The Design 5020 BI fan is a quiet, highly efficient, and stable operating fan suited for a broad range of industrial and commercial applications.

### Industrial supply and exhaust:

Fume Exhaust  
Light Dust Collection  
Spray Booth Exhaust  
Pulp and Paper Machines  
Heat Applications  
Special Stainless Steel and Aluminum Construction  
Light Moisture Applications

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**Housing & Framing**

Rugged heavy gauge all welded steel housings with substantial framing sections for maximum rigidity.

**BI Wheel**

Heavy gauge, single thickness, backward inclined blades.

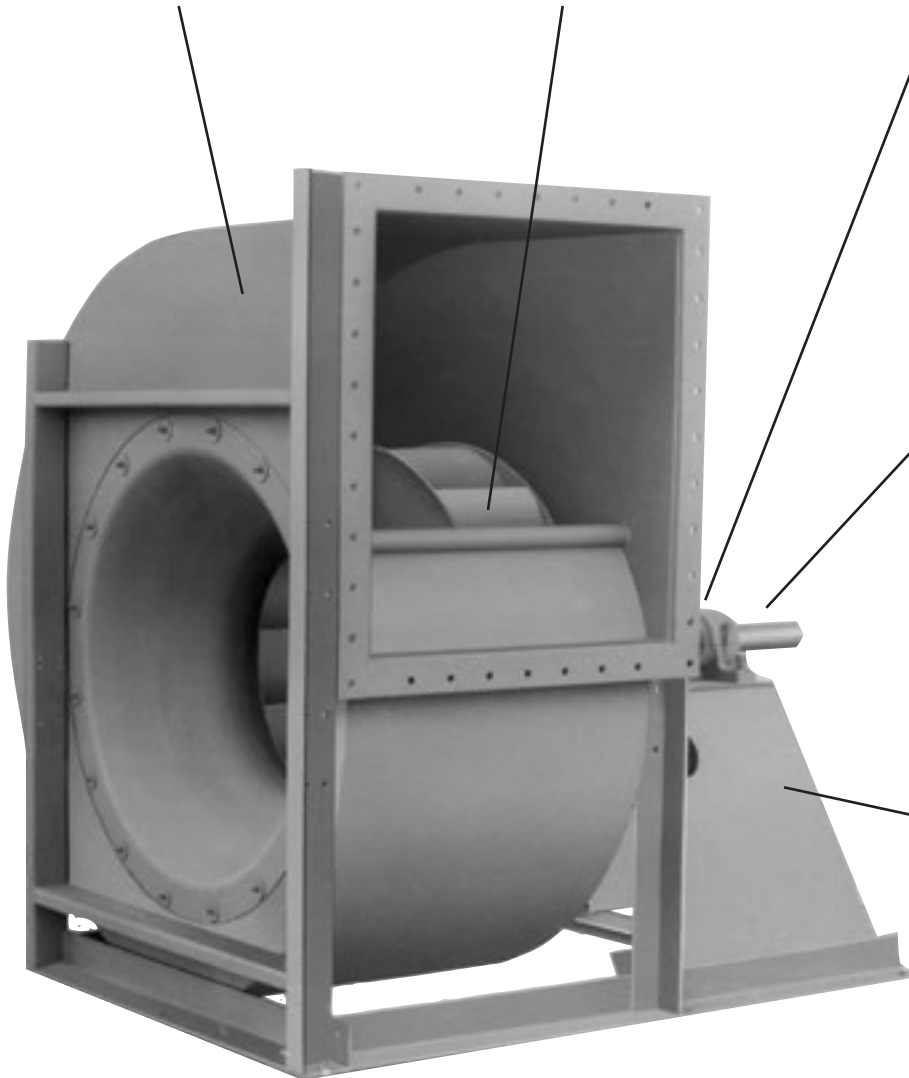
**Bearings**

Heavy duty precision ball or roller bearings sized for generous B-10 life.

**Shafts**

Turned ground and polished or fully machined to close dimensional tolerance.

**Heavy Duty Structural Bearing Pedestal**



**Balancing**

Wheels are dynamically balanced to ISO 1940 specifications for smooth operation.

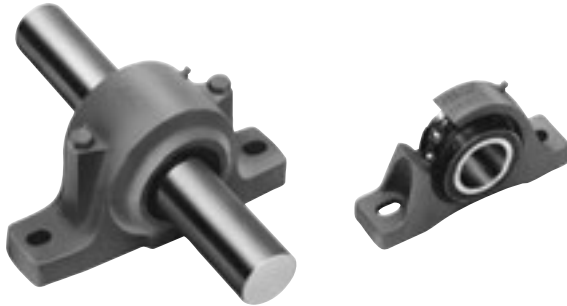
## Shafts and Bearings

### Shafts

Selected to have suitable strength and operate well below the first critical speed for each maximum class condition.

### Bearings

Antifriction, grease lubricated, self aligning ball or roller types, solid or split housing, manufactured to internationally adopted standards by companies having worldwide acceptance and support services. Bearings are selected for continuous belt driven operation with a generous bearing life throughout each full class range.



## Classes of Construction

Arrangement	Fan Size Range	
	Class I & II	Class III
A/1 - SISW	1350 - 8075	2225 - 6600
A/9 - SISW	1350 - 6000	2225 - 6000
A/10 - SISW	1350 - 3650	N.A.

## Capacities

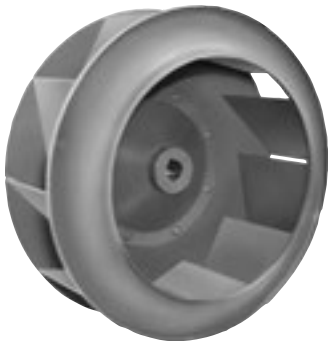
600 CFM to 160,000 CFM

## Pressures

Class I to 7" S.P. (Size 1350 - 8075)  
 Class II to 12" S.P. (Size 1350 - 8075)  
 Class III to 19" S.P. (Size 2225 - 6600)

## Design 5020 Centrifugal BI Wheel

The Northern Blower BI wheel is ruggedly designed for high operating efficiency. The blades are formed from heavy gauge single thickness sheets. Continuously welded steel construction is standard. Available from 13 1/2" to 80 3/4" diameters.



## Temperatures

Operating Temperatures to 800° F  
 See Table 2, Page 6

### Variable Inlet Vanes

Variable Inlet Vanes provide accurate volume control with minimal reduction in performance efficiency. Fan performance remains stable through fully open to fully closed positions. Available for both manual and automatic operation to temperatures of 300° F. Special design available for temperatures to 650° F.



### Outlet Damper

Outlet Dampers are the least expensive air volume control device but are less efficient than Variable Inlet Vanes or Inlet Box with Inlet Damper. Northern Blower Outlet Dampers have punched flanges on both ends to allow for convenient fan and duct connections. Both parallel blade and opposed blade designs are available for operating temperatures to 650° F.



### Inlet Box/ Inlet Box Damper

An Inlet Box provides smooth aerodynamic airflow into the fan inlet. The box is a bolted-on design. Inlet Dampers also are available in conjunction with the Inlet Box for efficient air volume control.



### Raised Access Door

Access door raised 6" beyond scroll surface to provide room for insulation on exterior of fan housing. Insulated door plug surface is flush with inside of housing scroll.



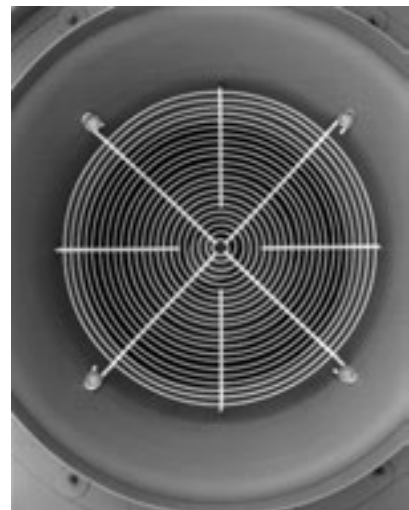
### Flush Access Door

Access door mounted flush to the fan scroll and secured with bolted clips. Quick release handle system also available.



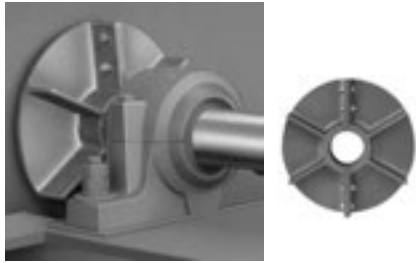
### Inlet Screen

Steel screen mounted to the inlet cone.



### Cooling Wheel

Split aluminum wheel mounted between the inboard bearing and the fan housing. Protects the inboard bearing from shaft conveyed heat and housing radiated heat. Supplied with protective guard as standard. Required for high temperature application; see Table 2 on Page 6.



### Shaft Seal

Used to reduce leakage through the shaft hole in the housing. Seal material of aluminum, brass, or compressed non-asbestos gasket sheet, depending on fan application.



### Belt Guard

Enclosed on all sides for safe operation and vented to prevent overheating. Tachometer holes, hinged cover, and safety colour coatings also available.



### Flanged Outlet/ Flanged Inlet

Punched flanges to facilitate the bolting of duct connections to the fan inlet and outlet. Flanged Outlet needed when the fan is to be fitted with an Outlet Damper.



### Vibration Isolation Base

Rigid steel frame to provide a common mounting platform for fan and motor. May be ordered with spring or rubber-in-shear isolators and motor slide base.



### Additional Accessories

- Spark Resistant Construction
- Shaft and Bearing Guards
- Protective Coatings
- Split Housings
- Special Metals
- Drain Openings
- High Temperature Construction
- Extended Grease Fittings
- Insulation Clips
- Split Block Bearings
- Mounted Drive Package
- Square Flanged Inlet

Due to the wide variety of BI fans available from Northern Blower we are unable to publish all information in one bulletin. Further information on custom fans is available from your Northern Blower sales representative.

# Fan Selection at Elevated Temperature and Altitude

## Fan Selection Tables

Ratings shown in the Performance Tables are based on standard air density of .075 pounds per cubic foot at the fan inlet. Standard air is dry air at 70°F and 29.92" Hg barometric pressure. When air density varies from standard, due to temperature or altitude changes, the Air Density Correction Factor from Table 3 is applied. Refer to the sample selection that follows.

Note that data in the selection tables does not include the effects of accessories such as inlet dampers, outlet dampers, screens, or other components in the air stream.

### High Temperature

Fans selected for high temperature service must fall within the limits for a particular arrangement as shown in Table 2. For selection, both fan performance and physical operating limits must be corrected. Refer to the sample selection on the following page.

Table 1

Wheel & Shaft Maximum Speeds at 70°F (SISW only)						
Size	Class I		Class II		Class III	
	Shaft	Wheel	Shaft	Wheel	Shaft	Wheel
1350	3032	3335	3951	4149		
1500	2719	2855	3542	3613		
1650	2471	2595	3219	3219		
1825	2190	2300	2854	2911		
2000	1996	1996	2600	2652		
2225	1802	1892	2347	2464	2953	3101
2450	1694	1728	2208	2318	2777	2777
2700	1538	1615	2003	2103	2520	2646
3000	1383	1452	1802	1892	2267	2380
3300	1246	1308	1624	1705	2042	2083
3650	1126	1182	1467	1467	1845	1845
4025	1021	1072	1331	1358	1674	1758
4450	922	968	1201	1225	1511	1541
4900	837	879	1090	1145	1371	1398
5425	756	794	986	1035	1240	1265
6000	683	697	890	935	1120	1176
6600	621	652	810	851	1018	1038
7300	562	590	732	732		
8075	508	508	662	662		

Table 2

High Temperature Operating Limits		
Arrangement	Without Cooling Wheel	With Cooling Wheel
1 SW	300°F	650°F *
10 SW	150°F	N/A
9 SW	300°F	650°F

\* 800°F with cooling wheel and shaft seal.

Table 3

Air Density Correction Factor							
Air Temp °F	Elevation (Feet) above Sea Level						
	0	500	1000	2000	3000	4000	5000
-40°	.79	.81	.82	.85	.88	.92	.95
0°	.87	.88	.90	.93	.97	1.00	1.04
40°	.94	.96	.98	1.01	1.05	1.09	1.13
70°	1.00	1.02	1.04	1.08	1.12	1.16	1.20
100°	1.06	1.08	1.10	1.14	1.18	1.22	1.27
140°	1.13	1.15	1.17	1.22	1.26	1.31	1.36
180°	1.21	1.23	1.25	1.30	1.35	1.40	1.45
200°	1.25	1.27	1.29	1.34	1.39	1.44	1.50
250°	1.34	1.36	1.39	1.44	1.49	1.55	1.61
300°	1.43	1.46	1.49	1.54	1.60	1.66	1.72
350°	1.53	1.56	1.58	1.64	1.71	1.77	1.84
400°	1.62	1.65	1.68	1.75	1.81	1.88	1.95
450°	1.72	1.75	1.78	1.85	1.92	1.99	2.06
500°	1.81	1.84	1.88	1.95	2.02	2.10	2.18
600°	2.00	2.04	2.07	2.15	2.23	2.32	2.40
700°	2.19	2.23	2.27	2.35	2.44	2.53	2.63
800°	2.38	2.42	2.46	2.56	2.65	2.75	2.86

Table 4

Safe Speed Deration Factors		
Temp °F	Steel Wheel	Steel Shaft
-50 to 150	1.0	1.0
200	.93	1.0
300	.89	1.0
400	.86	.99
500	.82	.97
600	.79	.96
700	.76	.95
800	.68	.94



**Sample Selection of a Belt Drive Fan**

Select a fan for the operating conditions of 7500 CFM at 2-1/2" SP, 500° F and 0 feet elevation.

- 1) Multiply the Operating SP by the Air Density Correction Factor (Table 3) to obtain Equivalent SP:

$$\begin{aligned} \text{Equivalent SP} &= \text{Operating SP} \times \text{Air Density Corr. Factor} \\ &= 2\text{-}1/2" \times 1.81 = 4\text{-}1/2" \end{aligned}$$

- 2) From the Performance Table, select the fan size. For 7500 CFM at 4-1/2" SP an efficient selection would be a size 2450 fan. Interpolating from the Performance Table given on page 14, the selection fan performance is 1505 RPM and 7.13 BHP at standard temperature and pressure.

- 3) Divide the Equivalent BHP by the Air Density Correction Factor to obtain the Operating BHP:

$$\text{Operating BHP} = \frac{\text{Equivalent BHP}}{\text{Air Density Correction Factor}}$$

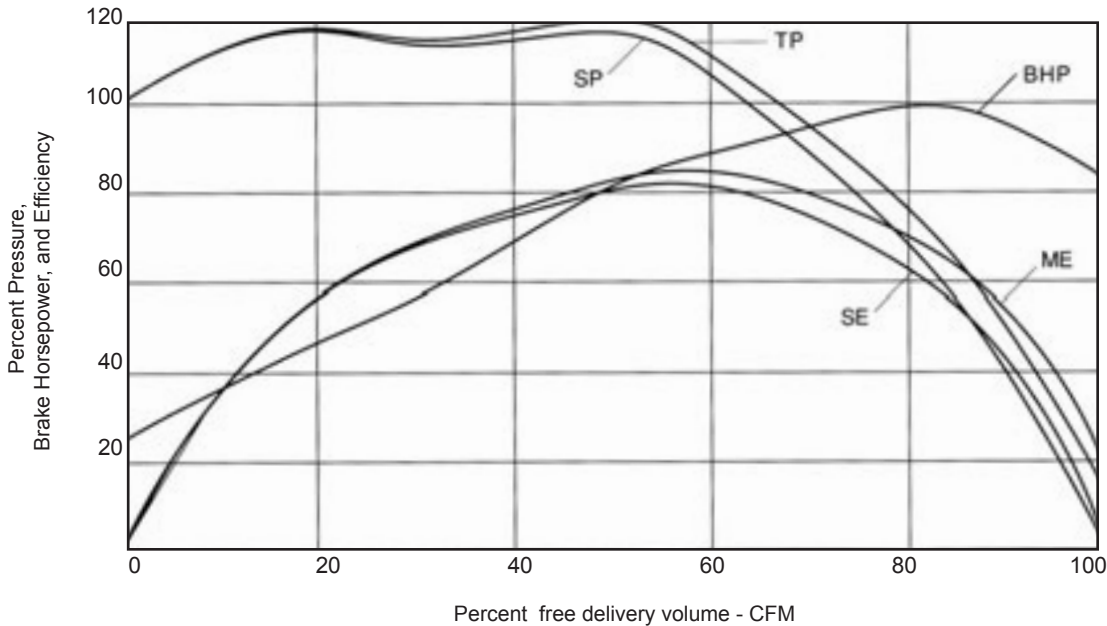
$$= \frac{7.13}{1.81} = 3.94 \text{ BHP}$$

- 4) Multiply the Wheel & Shaft Maximum Speed at 70°F values (Table 1) by the Wheel & Shaft Safe Speed Deration Factors (Table 4). For size 2450, Class II, the maximum speed at 500°F is:

$$\begin{aligned} \text{Wheel} &= 2318 \times 0.82 = 1901 \text{ RPM} \\ \text{Shaft} &= 2208 \times 0.97 = 2142 \text{ RPM} \end{aligned}$$

Since the fan selection speed of 1505 RPM is below both the maximum allowable wheel and shaft speeds, the Class II fan is a suitable selection.

**Design 5020 Performance Curve**



- High Efficiency
- Stable Operation



Wheel Diameter = 15.00 in.

Outlet Area = 1.29 sq. ft. inside

Maximum BHP = .201 x (RPM/1000)<sup>3</sup>

Tip Speed, fpm = 3.93 x RPM

Size

**1500** SISW

Class I RPM 2719

Class II RPM 3542

**Design 5020 Centrifugal BI Fans**

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
600	464	559	0.03	652	0.05	734	0.06														
800	618	625	0.05	702	0.07	778	0.09	847	0.11	912	0.13	973	0.15	1029	0.17						
1000	773	712	0.07	774	0.09	835	0.11	897	0.13	957	0.16	1014	0.19	1068	0.21	1170	0.27	1264	0.33		
1200	927	808	0.10	860	0.13	912	0.15	963	0.17	1014	0.20	1066	0.23	1117	0.26	1213	0.32	1303	0.38	1388	0.45
1400	1082	910	0.15	955	0.17	1000	0.20	1044	0.23	1088	0.25	1132	0.28	1176	0.31	1264	0.38	1350	0.45	1430	0.52
1600	1236	1015	0.20	1055	0.23	1095	0.26	1134	0.29	1173	0.32	1211	0.35	1249	0.38	1326	0.45	1404	0.52	1480	0.60
1800	1391	1123	0.26	1159	0.30	1194	0.33	1229	0.37	1264	0.40	1299	0.44	1333	0.47	1401	0.54	1469	0.61	1538	0.69
2000	1545	1232	0.35	1265	0.38	1297	0.42	1329	0.46	1360	0.50	1392	0.54	1423	0.58	1485	0.65	1546	0.73	1607	0.81
2200	1700	1343	0.44	1373	0.48	1402	0.53	1431	0.57	1460	0.61	1489	0.65	1517	0.69	1574	0.78	1630	0.86	1686	0.95
2400	1854	1455	0.56	1482	0.60	1509	0.65	1536	0.69	1562	0.74	1589	0.78	1615	0.83	1668	0.92	1719	1.02	1771	1.11
2600	2009	1567	0.69	1592	0.74	1617	0.79	1642	0.84	1667	0.89	1691	0.94	1716	0.99	1764	1.09	1812	1.19	1860	1.29
2800	2163	1680	0.85	1704	0.90	1727	0.95	1750	1.00	1773	1.06	1796	1.11	1819	1.16	1864	1.27	1909	1.38	1953	1.49
3000	2318	1794	1.03	1816	1.08	1837	1.14	1859	1.19	1880	1.25	1902	1.31	1923	1.36	1966	1.48	2008	1.59	2049	1.71
3200	2472	1908	1.23	1928	1.29	1949	1.35	1969	1.41	1989	1.47	2009	1.53	2029	1.59	2069	1.71	2109	1.83	2148	1.95
3400	2627	2022	1.46	2042	1.52	2061	1.59	2080	1.65	2099	1.71	2118	1.77	2136	1.84	2174	1.97	2212	2.09	2249	2.22
3600	2782	2137	1.72	2155	1.79	2173	1.85	2191	1.92	2209	1.98	2227	2.05	2245	2.12	2281	2.25	2316	2.39	2351	2.52
3800	2936	2251	2.01	2269	2.08	2286	2.15	2303	2.22	2320	2.28	2337	2.35	2354	2.43	2388	2.57	2421	2.71	2455	2.85
4000	3091	2366	2.33	2383	2.40	2399	2.47	2416	2.54	2432	2.62	2448	2.69	2464	2.76	2496	2.91	2528	3.06	2560	3.21
4200	3245	2481	2.68	2497	2.75	2513	2.83	2528	2.91	2544	2.98	2559	3.06	2574	3.14	2605	3.29	2635	3.45	2666	3.61
4400	3400	2596	3.06	2612	3.14	2627	3.22	2642	3.30	2656	3.38	2671	3.46	2686	3.54	2715	3.70	2744	3.87	2773	4.03
4600	3554	2711	3.48	2726	3.57	2741	3.65	2755	3.73	2769	3.82	2783	3.90	2798	3.99	2825	4.15	2853	4.33	2880	4.49
4800	3709	2827	3.94	2841	4.03	2855	4.12	2869	4.20	2882	4.29	2896	4.38	2910	4.47	2936	4.64	2963	4.82	2989	4.99
5000	3863	2942	4.44	2956	4.53	2970	4.62	2983	4.71	2996	4.80	3009	4.89	3022	4.99	3047	5.17	3073	5.35	3098	5.54
5200	4018	3058	4.98	3071	5.07	3084	5.17	3097	5.26	3110	5.36	3122	5.45	3135	5.54	3160	5.74	3184	5.92	3208	6.12
5400	4172	3173	5.56	3186	5.66	3199	5.76	3211	5.86	3223	5.95	3236	6.05	3248	6.15	3272	6.35	3295	6.54	3318	6.74
5600	4327	3289	6.19	3301	6.29	3313	6.39	3326	6.49	3338	6.59	3349	6.69	3361	6.80	3384	7.00	3407	7.21	3429	7.41
5800	4481	3405	6.86	3417	6.96	3428	7.07	3440	7.17	3452	7.28	3463	7.38	3474	7.49	3497	7.70	3519	7.91	3540	8.12
6000	4636	3521	7.58	3532	7.68																
Volume O.Vel		2"SP		2-1/4"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	927	1467	0.52	1543	0.59																
1400	1082	1508	0.59	1581	0.67	1651	0.75	1784	0.91												
1600	1236	1554	0.68	1624	0.76	1692	0.84	1821	1.02	1943	1.20	2056	1.39								
1800	1391	1606	0.78	1674	0.86	1740	0.96	1864	1.14	1981	1.33	2094	1.53	2199	1.74	2300	1.95				
2000	1545	1669	0.89	1730	0.98	1792	1.08	1912	1.27	2026	1.48	2134	1.69	2238	1.91	2337	2.13	2432	2.36	2524	2.60
2200	1700	1741	1.04	1797	1.13	1853	1.22	1965	1.42	2075	1.64	2180	1.86	2281	2.09	2377	2.32	2470	2.56	2561	2.81
2400	1854	1822	1.20	1873	1.29	1923	1.39	2026	1.59	2129	1.81	2230	2.05	2328	2.29	2422	2.53	2512	2.78	2600	3.04
2600	2009	1908	1.39	1955	1.49	2002	1.59	2096	1.79	2190	2.02	2285	2.25	2379	2.50	2470	2.76	2559	3.02	2644	3.28
2800	2163	1998	1.60	2042	1.71	2086	1.81	2173	2.03	2260	2.25	2347	2.49	2435	2.74	2523	3.00	2610	3.28	2693	3.56
3000	2318	2091	1.82	2133	1.94	2174	2.06	2255	2.29	2337	2.52	2418	2.76	2499	3.01	2581	3.28	2663	3.55	2744	3.84
3200	2472	2187	2.07	2226	2.20	2265	2.32	2342	2.57	2418	2.82	2494	3.06	2570	3.32	2647	3.58	2723	3.87	2800	4.16
3400	2627	2286	2.35	2322	2.48	2359	2.62	2432	2.88	2504	3.14	2576	3.40	2647	3.66	2718	3.93	2790	4.21	2862	4.51
3600	2782	2386	2.66	2421	2.80	2455	2.94	2524	3.21	2593	3.49	2661	3.77	2728	4.04	2796	4.32	2863	4.60	2930	4.90
3800	2936	2488	2.99	2521	3.14	2554	3.28	2619	3.58	2685	3.87	2749	4.17	2813	4.46	2877	4.74	2941	5.03	3005	5.33
4000	3091	2592	3.36	2623	3.51	2654	3.67	2717	3.97	2779	4.28	2840	4.59	2902	4.90	2962	5.20	3023	5.51	3083	5.81
4200	3245	2696	3.76	2726	3.92	2756	4.08	2815	4.40	2874	4.72	2933	5.04	2992	5.37	3050	5.70	3108	6.01	3166	6.33
4400	3400	2801	4.19	2830	4.36	2859	4.53	2916	4.86	2973	5.20	3029	5.53	3084	5.87	3140	6.21	3196	6.56	3251	6.88
4600	3554	2908	4.67	2935	4.84	2963	5.01	3017	5.36	3072	5.70	3126	6.06	3179	6.41	3232	6.76	3285	7.12	3339	7.48
4800	3709	3015	5.17	3042	5.35	3068	5.53	3120	5.89	3173	6.26	3224	6.62	3275	6.98	3327	7.35	3378	7.72	3428	8.09
5000	3863	3123	5.72	3149	5.90	3174	6.09	3225	6.47	3274	6.84	3324	7.22	3374	7.60	3423	7.98	3472	8.36	3521	8.75
5200	4018	3232	6.31	3257	6.50	3281	6.69	3329	7.08	3377	7.47	3425	7.86	3473	8.25	3520	8.65				
5400	4172	3342	6.94	3365	7.14	3388	7.33	3435	7.74	3482	8.14	3527	8.54								
5600	4327	3452	7.61	3474	7.82	3497	8.02	3542	8.44												
Volume O.Vel		6-1/2"SP		7"SP		7-1/2"SP		8"SP		8-1/2"SP		9"SP		9-1/2"SP		10"SP		10-1/2"SP		11"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2200	1700	2647	3.06	2730	3.31	2812	3.58														
2400	1854	2686	3.30	2769	3.57	2848	3.84	2927	4.11	3003	4.40	3077	4.68								
2600	2009	2728	3.56	2809	3.83	2889	4.12	2965	4.40	3040	4.70	3113	4.99	3184	5.29	3255	5.60	3323	5.91		
2800	2163	2774	3.84	2853	4.12	2930	4.41	3007	4.72	3079	5.02	3152	5.32	3223	5.64	3291	5.95	3359	6.27	3424	6.59
3000	2318	2824	4.14	2902	4.44	2977	4.74	3050	5.04	3122	5.36	3193	5.67	3262	5.99	3332	6.33	3397	6.65	3464	6.99
3200	2472	2877	4.46	2952	4.77	3026	5.08	3099	5.40	3169	5.72	3238	6.05	3307	6.39	3372	6.71	3438	7.06	3502	

Wheel Diameter = 16.50 in.  
 Outlet Area = 1.56 sq. ft. inside  
 Maximum BHP = .324 x (RPM/1000)<sup>3</sup>  
 Tip Speed, fpm = 4.32 x RPM

Size

# 1650 sisw

Class I RPM 2471

Class II RPM 3219

## Design 5020 Centrifugal BI Fans

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
800	511	523	0.04	605	0.06	678	0.09	744	0.11												
1000	639	578	0.06	646	0.08	713	0.11	775	0.13	834	0.16	888	0.19	940	0.22						
1200	766	644	0.09	700	0.11	757	0.13	813	0.16	868	0.19	920	0.22	970	0.25	1062	0.32	1148	0.39		
1400	894	715	0.12	764	0.14	813	0.17	861	0.20	910	0.23	958	0.26	1005	0.30	1094	0.37	1177	0.45	1254	0.52
1600	1022	791	0.15	834	0.19	877	0.22	919	0.25	961	0.28	1004	0.31	1046	0.35	1131	0.43	1210	0.51	1284	0.59
1800	1149	869	0.20	908	0.24	946	0.27	984	0.31	1022	0.34	1059	0.38	1097	0.41	1172	0.49	1247	0.58	1320	0.67
2000	1277	949	0.26	984	0.30	1019	0.34	1053	0.38	1087	0.41	1122	0.45	1155	0.49	1223	0.57	1291	0.66	1359	0.75
2200	1405	1030	0.33	1062	0.37	1094	0.41	1126	0.45	1157	0.50	1188	0.54	1219	0.58	1280	0.67	1342	0.76	1403	0.85
2400	1533	1112	0.41	1142	0.45	1171	0.50	1200	0.55	1229	0.59	1258	0.64	1287	0.69	1343	0.78	1399	0.87	1456	0.97
2600	1660	1195	0.50	1222	0.55	1250	0.60	1277	0.65	1304	0.70	1330	0.75	1357	0.80	1410	0.90	1462	1.00	1514	1.10
2800	1788	1279	0.61	1304	0.67	1330	0.72	1355	0.77	1380	0.82	1405	0.88	1430	0.93	1479	1.04	1528	1.15	1576	1.26
3000	1916	1363	0.74	1387	0.79	1411	0.85	1434	0.91	1458	0.96	1481	1.02	1504	1.08	1550	1.19	1596	1.31	1642	1.43
3200	2043	1448	0.88	1470	0.94	1493	1.00	1515	1.06	1537	1.12	1559	1.18	1581	1.24	1624	1.36	1667	1.49	1710	1.61
3400	2171	1533	1.04	1554	1.10	1575	1.16	1596	1.23	1617	1.29	1637	1.35	1658	1.42	1699	1.55	1740	1.68	1780	1.81
3600	2299	1618	1.22	1638	1.28	1658	1.35	1678	1.42	1697	1.48	1717	1.55	1736	1.62	1775	1.75	1814	1.89	1852	2.03
3800	2426	1704	1.41	1723	1.48	1741	1.55	1760	1.62	1779	1.69	1797	1.77	1816	1.84	1853	1.98	1890	2.13	1926	2.27
4000	2554	1790	1.64	1807	1.71	1826	1.78	1843	1.85	1861	1.93	1879	2.00	1896	2.08	1931	2.23	1966	2.38	2001	2.53
4200	2682	1875	1.88	1893	1.95	1910	2.03	1927	2.11	1943	2.18	1960	2.26	1977	2.34	2011	2.50	2044	2.66	2077	2.82
4400	2810	1961	2.14	1978	2.22	1994	2.30	2011	2.38	2027	2.46	2043	2.55	2059	2.63	2091	2.79	2123	2.96	2154	3.12
4600	2937	2047	2.43	2063	2.52	2079	2.60	2095	2.68	2110	2.77	2125	2.85	2141	2.94	2171	3.11	2202	3.28	2232	3.46
4800	3065	2134	2.75	2149	2.84	2164	2.92	2179	3.01	2194	3.10	2209	3.18	2223	3.27	2253	3.45	2282	3.63	2311	3.81
5200	3320	2306	3.46	2321	3.56	2335	3.65	2349	3.74	2363	3.84	2376	3.94	2390	4.03	2417	4.22	2444	4.41	2471	4.61
5600	3576	2480	4.29	2493	4.39	2506	4.49	2519	4.59	2532	4.70	2545	4.80	2558	4.90	2582	5.10	2608	5.32	2632	5.52
6000	3831	2653	5.24	2666	5.35	2678	5.46	2690	5.57	2702	5.68	2714	5.79	2726	5.90	2749	6.12	2773	6.34	2796	6.56
6400	4087	2827	6.33	2838	6.45	2850	6.56	2862	6.68	2873	6.80	2884	6.91	2895	7.03	2918	7.27	2939	7.49	2961	7.73
6800	4342	3001	7.56	3012	7.68	3023	7.81	3034	7.94	3044	8.06	3055	8.18	3066	8.30	3086	8.55	3107	8.80	3127	9.04
7200	4598	3175	8.95	3185	9.07	3195	9.21	3206	9.34	3216	9.47										
Volume O.Vel		2"SP		2-1/4"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1400	894	1327	0.61																		
1600	1022	1356	0.68	1423	0.77	1488	0.86														
1800	1149	1388	0.76	1454	0.86	1517	0.96	1637	1.16	1747	1.37										
2000	1277	1425	0.85	1488	0.95	1549	1.06	1666	1.27	1774	1.49	1877	1.73								
2200	1405	1465	0.95	1526	1.06	1586	1.17	1698	1.39	1805	1.63	1906	1.87	2003	2.12	2094	2.39				
2400	1532	1512	1.07	1568	1.18	1625	1.29	1735	1.53	1838	1.77	1937	2.03	2031	2.29	2121	2.56	2207	2.83	2291	3.12
2600	1660	1565	1.21	1617	1.31	1670	1.43	1774	1.67	1875	1.93	1971	2.19	2062	2.47	2151	2.75	2236	3.03	2318	3.33
2800	1788	1624	1.36	1672	1.47	1720	1.59	1817	1.84	1914	2.10	2007	2.38	2097	2.66	2184	2.95	2267	3.25	2349	3.56
3000	1916	1687	1.54	1732	1.66	1776	1.77	1866	2.02	1956	2.29	2047	2.57	2134	2.87	2219	3.17	2300	3.47	2379	3.79
3200	2043	1752	1.74	1795	1.86	1837	1.98	1920	2.23	2005	2.50	2089	2.79	2174	3.09	2257	3.40	2337	3.72	2414	4.05
3400	2171	1820	1.94	1860	2.08	1900	2.21	1979	2.47	2058	2.74	2137	3.02	2217	3.33	2296	3.65	2374	3.98	2451	4.32
3600	2299	1890	2.17	1928	2.31	1966	2.45	2041	2.73	2115	3.00	2190	3.29	2264	3.60	2340	3.92	2415	4.26	2489	4.60
3800	2426	1962	2.42	1998	2.56	2034	2.71	2105	3.01	2176	3.30	2246	3.59	2317	3.90	2387	4.22	2459	4.56	2530	4.91
4000	2554	2036	2.69	2070	2.84	2104	2.99	2172	3.31	2240	3.61	2306	3.92	2373	4.23	2440	4.55	2507	4.89	2575	5.25
4200	2682	2110	2.97	2143	3.14	2175	3.30	2241	3.63	2305	3.95	2369	4.27	2432	4.59	2496	4.92	2559	5.26	2623	5.62
4400	2810	2186	3.29	2217	3.46	2248	3.63	2310	3.97	2372	4.31	2433	4.65	2494	4.98	2555	5.32	2615	5.66	2676	6.02
4600	2937	2262	3.63	2293	3.80	2322	3.98	2382	4.33	2441	4.69	2500	5.05	2558	5.40	2616	5.74	2674	6.10	2732	6.46
4800	3065	2340	3.99	2369	4.17	2398	4.36	2455	4.72	2512	5.09	2568	5.47	2624	5.84	2680	6.20	2736	6.56	2791	6.93
5200	3320	2497	4.80	2524	5.00	2551	5.19	2604	5.59	2656	5.99	2709	6.39	2761	6.79	2812	7.19	2864	7.59	2915	7.98
5600	3576	2657	5.73	2682	5.94	2707	6.15	2756	6.57	2805	6.99	2854	7.42	2902	7.85	2950	8.28	2999	8.71	3047	9.15
6000	3831	2819	6.78	2842	7.00	2866	7.23	2912	7.68	2957	8.12	3003	8.58	3049	9.04	3093	9.49	3138	9.95	3183	10.42
6400	4087	2983	7.97	3004	8.20	3026	8.44	3069	8.91	3113	9.40	3155	9.87	3198	10.36						
6800	4342	3148	9.29	3168	9.55	3188	9.79														
Volume O.Vel		6-1/2"SP		7"SP		7-1/2"SP		8"SP		8-1/2"SP		9"SP		9-1/2"SP		10"SP		10-1/2"SP		11"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2600	1660	2397	3.63	2475	3.94																
2800	1788	2426	3.87	2501	4.18	2575	4.50	2648	4.84												
3000	1916	2456	4.11	2531	4.44	2604	4.78	2674	5.11	2743	5.46	2810	5.81	2876	6.17						
3200	2043	2490	4.38	2562	4.72	2633	5.06	2704	5.41	2772	5.77	2837	6.12	2904	6.50	2965	6.86	3029	7.25	3088	7.63
3400	2171	2524	4.66	2596	5.01	2666	5.36	2735	5.73	2801	6.09	2867	6.46	2931	6.84	2993	7.22	3055	7.61	3115	8.00
3600	2299	2561	4.96	2632	5.32	2702	5.69	2768	6.05	2833	6.43	2899	6.82	2961	7.20	3024	7.60	3084	7.99	3144	8.40
3800	2427	2600	5.28	2670	5.65	2737	6.02	2803	6.40	2868	6.79	2931	7.18	2993	7.58	3055	7.99	3114	8.39	3174	8.81
4000	2554	2643	5.62	2709	5.99	2775	6.38	2840	6.77	2905	7.18	2966	7.57	3027	7.98	3087					

Wheel Diameter = 18.25 in.  
 Outlet Area = 1.91 sq. ft. inside  
 Maximum BHP = .546 x (RPM/1000)<sup>3</sup>  
 Tip Speed, fpm = 4.78 x RPM

Size

**1825** SISW

Class I RPM 2190  
 Class II RPM 2854

**Design 5020 Centrifugal BI Fans**

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1000	523	471	0.05	542	0.08	605	0.10														
1200	628	510	0.07	573	0.10	632	0.12	687	0.15	739	0.18	788	0.22								
1400	732	555	0.09	610	0.12	664	0.15	716	0.18	764	0.21	810	0.25	855	0.29						
1600	837	605	0.12	653	0.15	701	0.18	748	0.22	795	0.25	838	0.29	880	0.33	959	0.41	1034	0.50		
1800	942	657	0.15	701	0.19	743	0.22	786	0.26	828	0.30	870	0.34	910	0.38	986	0.46	1057	0.55	1124	0.65
2000	1046	712	0.19	751	0.23	790	0.27	828	0.31	867	0.35	905	0.39	942	0.43	1015	0.52	1083	0.61	1148	0.71
2200	1151	769	0.23	804	0.28	839	0.32	874	0.36	909	0.41	944	0.45	979	0.50	1047	0.59	1113	0.69	1176	0.79
2400	1256	827	0.29	859	0.33	891	0.38	923	0.43	956	0.47	987	0.52	1019	0.57	1083	0.67	1145	0.77	1206	0.88
2600	1360	886	0.35	915	0.40	944	0.45	974	0.50	1004	0.55	1034	0.60	1063	0.65	1122	0.76	1181	0.87	1238	0.98
2800	1465	945	0.42	972	0.47	999	0.52	1027	0.58	1055	0.63	1082	0.69	1110	0.74	1165	0.85	1219	0.97	1274	1.09
3000	1570	1005	0.50	1030	0.56	1056	0.61	1081	0.67	1107	0.72	1133	0.78	1159	0.84	1210	0.96	1261	1.08	1312	1.20
3200	1674	1066	0.60	1089	0.65	1113	0.71	1137	0.77	1161	0.83	1185	0.89	1209	0.95	1257	1.08	1306	1.21	1353	1.34
3400	1779	1127	0.70	1149	0.76	1171	0.82	1193	0.88	1216	0.94	1238	1.01	1261	1.07	1306	1.21	1352	1.34	1397	1.48
3600	1884	1189	0.82	1209	0.88	1229	0.94	1250	1.01	1272	1.07	1293	1.14	1314	1.21	1357	1.35	1400	1.49	1443	1.63
3800	1988	1250	0.95	1269	1.01	1289	1.08	1308	1.14	1328	1.21	1349	1.28	1369	1.35	1409	1.50	1450	1.65	1490	1.80
4000	2093	1312	1.09	1330	1.16	1349	1.23	1367	1.29	1386	1.37	1405	1.44	1424	1.51	1462	1.66	1501	1.82	1540	1.98
4400	2302	1437	1.43	1453	1.50	1469	1.57	1486	1.64	1503	1.72	1520	1.80	1537	1.88	1572	2.04	1607	2.20	1642	2.37
4800	2511	1562	1.82	1576	1.90	1591	1.98	1606	2.06	1622	2.14	1637	2.22	1653	2.30	1684	2.48	1716	2.65	1748	2.84
5200	2721	1687	2.29	1701	2.37	1714	2.45	1728	2.54	1742	2.62	1756	2.71	1770	2.80	1799	2.99	1828	3.17	1857	3.37
5600	2930	1812	2.83	1825	2.92	1838	3.01	1851	3.10	1864	3.19	1877	3.28	1890	3.38	1916	3.57	1943	3.77	1970	3.97
6000	3139	1938	3.45	1950	3.55	1962	3.64	1974	3.74	1986	3.84	1998	3.93	2010	4.03	2034	4.24	2059	4.44	2084	4.66
6400	3349	2064	4.16	2076	4.26	2087	4.36	2098	4.47	2109	4.57	2120	4.67	2131	4.78	2154	4.99	2177	5.21	2200	5.43
6800	3558	2190	4.96	2201	5.07	2212	5.18	2223	5.29	2233	5.39	2243	5.50	2254	5.62	2275	5.84	2296	6.07	2318	6.30
7200	3767	2317	5.86	2327	5.98	2337	6.09	2347	6.21	2357	6.32	2367	6.43	2377	6.55	2396	6.79	2416	7.02	2437	7.27
7600	3976	2443	6.87	2453	6.99	2463	7.11	2472	7.23	2482	7.35	2491	7.47	2500	7.59	2519	7.84	2537	8.09	2556	8.34
8000	4186	2570	7.98	2579	8.11	2588	8.24	2597	8.36	2607	8.49	2615	8.62	2624	8.74	2642	9.00	2659	9.26	2677	9.52
8400	4395	2697	9.22	2705	9.35	2714	9.48	2723	9.61	2732	9.75	2740	9.88	2749	10.01	2765	10.28	2782	10.55	2799	10.83
8800	4604	2824	10.57	2832	10.71	2840	10.84	2848	10.98												
Volume O.Vel		2"SP		2-1/4"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	942	1190	0.75																		
2000	1046	1210	0.82	1270	0.93																
2200	1151	1235	0.90	1293	1.01	1349	1.13	1456	1.38												
2400	1256	1264	0.99	1320	1.10	1373	1.22	1476	1.48	1574	1.75										
2600	1360	1295	1.09	1348	1.21	1400	1.33	1500	1.59	1595	1.87	1685	2.15								
2800	1465	1327	1.20	1379	1.33	1430	1.45	1527	1.72	1618	2.00	1707	2.29	1791	2.60						
3000	1570	1362	1.33	1412	1.46	1462	1.59	1556	1.86	1646	2.14	1730	2.44	1813	2.76	1893	3.09	1971	3.43		
3200	1674	1401	1.47	1448	1.60	1495	1.74	1587	2.01	1674	2.30	1758	2.61	1837	2.93	1915	3.26	1990	3.61	2063	3.97
3400	1779	1442	1.62	1487	1.75	1531	1.90	1619	2.18	1705	2.48	1786	2.79	1865	3.12	1940	3.46	2013	3.81	2085	4.17
3600	1884	1485	1.78	1528	1.92	1570	2.07	1654	2.37	1737	2.68	1816	2.99	1893	3.32	1968	3.67	2039	4.03	2108	4.40
3800	1988	1531	1.95	1571	2.10	1611	2.25	1691	2.57	1771	2.89	1848	3.21	1923	3.55	1996	3.90	2066	4.26	2134	4.63
4000	2093	1578	2.13	1617	2.29	1655	2.45	1731	2.78	1806	3.11	1881	3.45	1955	3.79	2026	4.14	2095	4.51	2162	4.89
4400	2302	1677	2.55	1712	2.72	1747	2.90	1816	3.25	1885	3.60	1954	3.96	2022	4.33	2090	4.70	2156	5.08	2221	5.47
4800	2511	1780	3.02	1812	3.21	1844	3.40	1908	3.78	1972	4.16	2035	4.55	2098	4.94	2161	5.33	2223	5.73	2285	6.14
5200	2721	1887	3.56	1916	3.76	1946	3.96	2005	4.37	2064	4.78	2123	5.20	2181	5.61	2239	6.04	2297	6.46	2355	6.89
5600	2930	1997	4.18	2024	4.39	2051	4.60	2106	5.03	2161	5.47	2215	5.92	2270	6.36	2324	6.81	2378	7.26	2432	7.71
6000	3139	2109	4.87	2134	5.10	2160	5.32	2210	5.78	2261	6.24	2312	6.71	2363	7.18	2414	7.66	2465	8.13	2515	8.62
6400	3349	2223	5.66	2247	5.89	2271	6.13	2318	6.61	2366	7.10	2413	7.59	2461	8.09	2508	8.59	2556	9.10	2604	9.61
6800	3558	2339	6.54	2361	6.78	2383	7.02	2428	7.52	2472	8.03	2517	8.56	2562	9.08	2606	9.61	2651	10.14	2696	10.68
7200	3767	2457	7.51	2477	7.77	2498	8.02	2540	8.54	2581	9.07	2623	9.61	2665	10.17	2708	10.72	2750	11.28	2792	11.85
7600	3977	2576	8.60	2595	8.86	2614	9.12	2653	9.66	2692	10.22	2732	10.78	2771	11.35	2812	11.94	2851	12.52		
8000	4186	2695	9.79	2713	10.07	2731	10.34	2768	10.90	2805	11.47	2842	12.05								
8400	4395	2815	11.10	2833	11.38	2850	11.67														
Volume O.Vel		6-1/2"SP		7"SP		7-1/2"SP		8"SP		8-1/2"SP		9"SP		9-1/2"SP		10"SP		10-1/2"SP		11"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3400	1779	2155	4.55	2223	4.93																
3600	1884	2176	4.77	2242	5.16	2308	5.56	2373	5.98												
3800	1988	2200	5.02	2265	5.41	2329	5.82	2391	6.24	2452	6.66										
4000	2093	2226	5.28	2290	5.68	2353	6.10	2413	6.52	2473	6.95	2533	7.40	2590	7.84						
4400	2302	2284	5.87	2345	6.28	2406	6.71	2463	7.14	2520	7.58	2578	8.04	2632	8.49	2687	8.97	2741	9.44	2795	9.94
4800	2511	2345	6.55	2405	6.98	2463	7.41	2520	7.85	2575	8.30	2630	8.77	2683	9.24	2735	9.72	2787	10.21	2838	10.71
5200	2721	2412	7.32	2469	7.76	2525	8.21	2581	8.66	2634	9.12	2687	9.59	2740	10.08	2790	10.57	2841	11.07		
5600	2930	2485	8.17	2539	8.64	2592	9.10	2645	9.57	2697	10.05	2748	10.53	2799	11.02	2849	11.53				
6000																					

Wheel Diameter = 20.00 in.  
 Outlet Area = 2.29 sq. ft. inside  
 Maximum BHP = .863 x (RPM/1000)<sup>3</sup>  
 Tip Speed, fpm = 5.24 x RPM

Size

# 2000 sisw

Class I RPM 1996

Class II RPM 2600

## Design 5020 Centrifugal BI Fans

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1600	697	492	0.10	544	0.13	596	0.17	644	0.21	689	0.24	732	0.29	773	0.33						
1800	784	529	0.13	576	0.16	622	0.20	667	0.24	711	0.28	752	0.32	791	0.37	865	0.46				
2000	871	567	0.15	610	0.19	652	0.24	694	0.28	735	0.32	774	0.36	812	0.41	883	0.51	949	0.62	1014	0.73
2200	958	608	0.19	646	0.23	685	0.28	723	0.32	761	0.37	798	0.41	835	0.46	903	0.56	968	0.67	1029	0.79
2400	1046	650	0.23	685	0.27	720	0.32	756	0.37	790	0.42	825	0.47	860	0.52	926	0.62	988	0.74	1047	0.86
2600	1133	692	0.27	725	0.32	758	0.37	790	0.42	823	0.48	855	0.53	887	0.58	950	0.69	1011	0.81	1068	0.93
2800	1220	736	0.32	766	0.37	796	0.43	827	0.48	857	0.54	887	0.60	917	0.65	976	0.77	1035	0.89	1091	1.02
3000	1307	781	0.38	808	0.44	837	0.49	865	0.55	893	0.61	921	0.67	949	0.73	1005	0.85	1060	0.98	1115	1.11
3200	1394	826	0.45	851	0.50	878	0.56	904	0.63	931	0.69	957	0.75	984	0.82	1036	0.95	1088	1.08	1140	1.21
3400	1481	871	0.52	895	0.58	920	0.64	945	0.71	970	0.77	995	0.84	1020	0.91	1069	1.05	1118	1.18	1167	1.32
3600	1568	917	0.60	939	0.67	963	0.73	986	0.80	1009	0.87	1033	0.94	1057	1.01	1104	1.15	1150	1.30	1197	1.45
3800	1656	963	0.70	984	0.76	1006	0.83	1028	0.90	1050	0.97	1073	1.04	1095	1.12	1139	1.27	1184	1.42	1228	1.57
4000	1743	1009	0.80	1029	0.87	1050	0.94	1071	1.01	1092	1.08	1113	1.16	1134	1.24	1177	1.39	1219	1.55	1261	1.71
4400	1917	1102	1.03	1121	1.10	1139	1.18	1158	1.26	1177	1.34	1196	1.42	1215	1.50	1253	1.67	1292	1.85	1331	2.02
4800	2091	1196	1.31	1213	1.39	1230	1.47	1247	1.55	1264	1.64	1281	1.72	1299	1.81	1334	1.99	1369	2.18	1404	2.37
5200	2265	1291	1.64	1306	1.72	1321	1.81	1337	1.90	1353	1.98	1368	2.08	1384	2.17	1416	2.36	1449	2.56	1481	2.76
5600	2440	1386	2.02	1400	2.11	1414	2.20	1428	2.29	1443	2.39	1457	2.48	1472	2.58	1501	2.79	1531	2.99	1561	3.21
6000	2614	1481	2.45	1494	2.55	1507	2.64	1520	2.74	1533	2.84	1547	2.95	1561	3.05	1588	3.26	1616	3.48	1644	3.71
6400	2788	1576	2.95	1589	3.05	1601	3.15	1613	3.26	1625	3.36	1638	3.47	1651	3.58	1676	3.80	1702	4.03	1728	4.27
6800	2963	1672	3.51	1683	3.62	1695	3.72	1706	3.83	1718	3.95	1729	4.06	1741	4.17	1765	4.41	1789	4.65	1813	4.89
7200	3137	1767	4.13	1778	4.25	1789	4.36	1800	4.48	1811	4.60	1822	4.71	1833	4.83	1855	5.08	1878	5.33	1900	5.58
7600	3311	1863	4.83	1873	4.96	1884	5.08	1894	5.20	1904	5.32	1915	5.44	1925	5.57	1946	5.82	1967	6.08	1989	6.35
8000	3485	1959	5.61	1969	5.74	1979	5.87	1989	5.99	1998	6.12	2008	6.25	2018	6.38	2037	6.64	2057	6.92	2078	7.19
8500	3703	2079	6.70	2088	6.83	2098	6.97	2107	7.10	2116	7.24	2125	7.37	2134	7.51	2153	7.79	2171	8.07	2190	8.36
9000	3921	2199	7.92	2208	8.06	2217	8.20	2226	8.35	2234	8.49	2243	8.63	2251	8.77	2269	9.07	2286	9.36	2304	9.66
9500	4139	2319	9.28	2328	9.42	2336	9.58	2345	9.73	2353	9.88	2361	10.03	2369	10.18	2385	10.48	2402	10.80	2418	11.11
10000	4357	2440	10.79	2448	10.94	2456	11.10	2464	11.26	2472	11.42	2480	11.58	2487	11.74	2502	12.05	2518	12.38	2533	12.70
10500	4575	2560	12.45	2568	12.62	2575	12.78	2583	12.95	2590	13.12	2598	13.29								
Volume O.Vel		2"SP		2-1/4"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2400	1046	1104	0.98	1159	1.12																
2600	1133	1123	1.06	1176	1.20	1227	1.34														
2800	1220	1144	1.15	1195	1.28	1245	1.43	1340	1.73												
3000	1307	1167	1.24	1217	1.38	1265	1.53	1357	1.84	1445	2.17										
3200	1394	1190	1.35	1239	1.49	1287	1.64	1377	1.96	1461	2.29	1544	2.64								
3400	1481	1216	1.47	1263	1.61	1309	1.77	1397	2.08	1481	2.42	1560	2.78	1638	3.15						
3600	1568	1243	1.60	1289	1.75	1333	1.90	1420	2.23	1502	2.57	1579	2.93	1654	3.31	1727	3.70	1798	4.11		
3800	1656	1272	1.73	1315	1.89	1359	2.05	1443	2.38	1523	2.73	1599	3.10	1672	3.48	1743	3.88	1812	4.29	1880	4.72
4000	1743	1303	1.88	1344	2.04	1386	2.21	1468	2.55	1546	2.90	1621	3.27	1692	3.66	1762	4.07	1829	4.49	1895	4.92
4400	1917	1369	2.20	1407	2.38	1445	2.55	1520	2.92	1594	3.29	1667	3.68	1736	4.07	1803	4.49	1868	4.92	1931	5.36
4800	2091	1439	2.56	1474	2.75	1509	2.94	1579	3.33	1648	3.73	1716	4.13	1783	4.55	1848	4.97	1911	5.41	1972	5.87
5200	2266	1514	2.97	1546	3.17	1579	3.38	1643	3.80	1707	4.22	1771	4.65	1834	5.08	1897	5.53	1958	5.98	2017	6.44
5600	2440	1591	3.42	1622	3.64	1652	3.87	1712	4.31	1771	4.76	1831	5.21	1890	5.67	1949	6.14	2007	6.61	2064	7.09
6000	2614	1671	3.93	1700	4.17	1728	4.41	1784	4.88	1840	5.35	1895	5.83	1951	6.32	2006	6.81	2061	7.30	2115	7.80
6400	2788	1754	4.51	1780	4.75	1806	5.00	1859	5.50	1911	6.00	1964	6.51	2016	7.02	2067	7.53	2119	8.05	2171	8.58
6800	2963	1838	5.14	1862	5.40	1887	5.65	1936	6.18	1986	6.71	2035	7.25	2084	7.78	2133	8.33	2182	8.87	2230	9.42
7200	3137	1923	5.84	1946	6.11	1969	6.38	2016	6.93	2062	7.49	2109	8.05	2155	8.62	2202	9.18	2248	9.76	2294	10.34
7600	3311	2010	6.62	2032	6.90	2054	7.17	2097	7.74	2141	8.33	2186	8.92	2229	9.52	2273	10.11	2317	10.71	2361	11.31
8000	3485	2098	7.47	2118	7.76	2139	8.05	2180	8.64	2222	9.24	2263	9.86	2305	10.48	2347	11.11	2389	11.73	2430	12.36
8500	3703	2209	8.65	2228	8.95	2247	9.25	2286	9.88	2325	10.50	2364	11.14	2403	11.80	2442	12.46	2481	13.12	2521	13.78
9000	3921	2321	9.97	2339	10.28	2357	10.60	2393	11.23	2430	11.89	2466	12.57	2503	13.24	2540	13.93	2577	14.63		
9500	4139	2435	11.43	2451	11.75	2468	12.07	2502	12.75	2537	13.43	2571	14.12								
10000	4357	2549	13.03	2565	13.37	2581	13.71														
Volume O.Vel		6-1/2"SP		7"SP		7-1/2"SP		8"SP		8-1/2"SP		9"SP		9-1/2"SP		10"SP		10-1/2"SP		11"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4000	1743	1959	5.37																		
4400	1917	1992	5.82	2053	6.30	2112	6.78	2169	7.27												
4800	2091	2031	6.34	2089	6.82	2146	7.32	2201	7.82	2256	8.34	2311	8.88	2363	9.41						
5200	2265	2075	6.92	2131	7.41	2185	7.92	2240	8.44	2292	8.97	2343	9.51	2395	10.06	2445	10.62	2495	11.20	2543	11.77
5600	2440	2121	7.58	2176	8.09	2229	8.60	2281	9.12	2333	9.67	2382	10.22	2432	10.78	2480	11.36	2528	11.93	2576	12.53
6000	2614	2169	8.31	2222	8.82	2275	9.35	2326	9.90	2376	10.44	2425	11.00	2473	11.58	2520	12.16	2567	12.76		
6400	2788	2222	9.11	2273	9.65	2324	10.19	2373	10.74	2422	11.30	2470	11.87	2516	12.45	2564	13.06				



Performance Data

Wheel Diameter = 22.25 in.

Outlet Area = 2.85 sq. ft. inside

Maximum BHP = 1.48 x (RPM/1000)<sup>3</sup>

Tip Speed, fpm = 5.83 x RPM

Size

**2225** SISW

**Design 5020 Centrifugal BI Fans**

Class I RPM 1802

Class II RPM 2347

Class III RPM 2953

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	634	420	0.11	472	0.15	520	0.19	565	0.23	607	0.28	647	0.33								
2000	704	445	0.13	492	0.17	537	0.21	580	0.26	621	0.31	659	0.36	696	0.41						
2400	845	499	0.18	539	0.23	577	0.28	616	0.33	654	0.38	689	0.43	724	0.49	788	0.61	849	0.75		
2800	986	558	0.25	592	0.30	625	0.36	659	0.41	692	0.47	725	0.53	757	0.59	818	0.72	876	0.86	930	1.00
3200	1126	620	0.33	649	0.39	679	0.46	708	0.52	737	0.58	766	0.65	795	0.72	853	0.85	907	0.99	959	1.15
3600	1267	683	0.44	709	0.50	735	0.57	762	0.64	788	0.72	814	0.79	840	0.86	891	1.01	942	1.16	992	1.32
4000	1408	749	0.57	772	0.64	795	0.71	819	0.79	842	0.87	866	0.95	889	1.03	936	1.19	982	1.35	1028	1.52
4500	1584	831	0.77	852	0.85	872	0.93	893	1.01	914	1.10	935	1.18	956	1.27	998	1.45	1039	1.63	1080	1.82
5000	1760	915	1.01	933	1.10	952	1.19	970	1.28	989	1.37	1008	1.46	1026	1.56	1064	1.76	1102	1.96	1139	2.16
5500	1936	1000	1.31	1016	1.40	1033	1.50	1049	1.59	1066	1.69	1083	1.80	1100	1.90	1134	2.11	1169	2.33	1203	2.55
6000	2112	1086	1.67	1100	1.77	1115	1.86	1130	1.97	1146	2.08	1161	2.18	1176	2.29	1208	2.52	1239	2.75	1270	2.99
6500	2288	1171	2.08	1185	2.19	1198	2.29	1212	2.41	1226	2.52	1240	2.63	1254	2.75	1283	2.99	1312	3.24	1341	3.49
7000	2464	1258	2.57	1270	2.68	1283	2.79	1295	2.91	1308	3.03	1321	3.15	1334	3.27	1360	3.53	1387	3.79	1414	4.05
7500	2640	1344	3.12	1356	3.24	1367	3.36	1379	3.48	1391	3.61	1403	3.74	1415	3.87	1439	4.13	1464	4.41	1489	4.69
8000	2816	1430	3.75	1441	3.88	1452	4.01	1463	4.14	1474	4.27	1485	4.40	1497	4.54	1519	4.82	1542	5.11	1565	5.40
8500	2992	1517	4.47	1528	4.60	1538	4.74	1548	4.87	1558	5.01	1569	5.15	1579	5.30	1600	5.59	1622	5.89	1643	6.19
9000	3168	1604	5.27	1614	5.41	1624	5.55	1633	5.70	1643	5.84	1653	5.99	1662	6.14	1682	6.45	1702	6.75	1722	7.08
9500	3344	1691	6.16	1700	6.31	1710	6.46	1719	6.61	1728	6.76	1737	6.92	1746	7.08	1765	7.39	1784	7.72	1803	8.05
10000	3520	1778	7.15	1787	7.31	1796	7.47	1805	7.63	1813	7.79	1822	7.95	1830	8.11	1848	8.44	1866	8.78	1884	9.12
10500	3696	1865	8.24	1874	8.41	1882	8.58	1891	8.75	1899	8.91	1907	9.08	1915	9.25	1932	9.59	1948	9.94	1965	10.30
11000	3872	1952	9.44	1960	9.62	1969	9.79	1977	9.97	1985	10.14	1992	10.32	2000	10.49	2016	10.85	2032	11.21	2048	11.58
11500	4048	2040	10.76	2047	10.94	2055	11.12	2063	11.31	2071	11.49	2078	11.67	2085	11.85	2100	12.22	2115	12.60	2131	12.98
12000	4224	2127	12.19	2134	12.38	2142	12.57	2149	12.76	2157	12.95	2164	13.14	2171	13.33	2185	13.71	2200	14.11	2214	14.50
13000	4576	2302	15.43	2309	15.63	2316	15.83	2322	16.04	2329	16.25	2336	16.46	2343	16.67	2356	17.07	2369	17.49	2382	17.92
14000	4928	2477	19.20	2483	19.42	2490	19.63	2496	19.86	2502	20.08	2509	20.31	2515	20.54	2527	20.97	2539	21.41	2551	21.86
Volume O.Vel		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP		6-1/2"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2800	986	982	1.16																		
3200	1126	1008	1.31	1102	1.64																
3600	1267	1039	1.48	1129	1.84	1213	2.21	1292	2.61												
4000	1408	1074	1.69	1160	2.06	1240	2.44	1316	2.86	1390	3.29										
4500	1584	1122	2.00	1203	2.39	1280	2.79	1353	3.22	1422	3.66	1489	4.13	1554	4.62	1618	5.13				
5000	1760	1176	2.36	1251	2.77	1323	3.20	1394	3.64	1461	4.10	1525	4.58	1587	5.08	1647	5.60	1706	6.14	1764	6.70
5500	1936	1237	2.77	1305	3.21	1372	3.67	1438	4.13	1503	4.61	1565	5.10	1625	5.62	1683	6.15	1739	6.70	1795	7.28
6000	2112	1302	3.23	1364	3.70	1426	4.19	1487	4.69	1549	5.19	1608	5.70	1666	6.23	1723	6.78	1777	7.34	1830	7.93
6500	2288	1370	3.74	1428	4.26	1485	4.78	1542	5.31	1598	5.84	1655	6.38	1711	6.93	1765	7.49	1818	8.07	1870	8.66
7000	2464	1440	4.32	1494	4.87	1548	5.43	1601	5.99	1654	6.55	1706	7.13	1759	7.71	1811	8.30	1862	8.89	1912	9.50
7500	2640	1513	4.97	1564	5.56	1613	6.15	1663	6.74	1713	7.34	1762	7.94	1811	8.55	1860	9.17	1909	9.79	1957	10.43
8000	2816	1588	5.70	1635	6.31	1682	6.93	1729	7.56	1775	8.20	1821	8.83	1868	9.48	1914	10.13	1959	10.78	2005	11.45
8500	2992	1665	6.51	1709	7.14	1752	7.80	1796	8.46	1840	9.13	1884	9.80	1928	10.48	1971	11.16	2015	11.85	2058	12.54
9000	3168	1743	7.40	1784	8.06	1825	8.75	1866	9.44	1908	10.15	1949	10.86	1991	11.57	2032	12.28	2073	13.01	2113	13.72
9500	3344	1822	8.39	1860	9.08	1899	9.79	1938	10.52	1978	11.25	2017	11.99	2056	12.74	2095	13.49	2134	14.25	2172	15.00
10000	3520	1902	9.47	1938	10.19	1975	10.92	2012	11.68	2049	12.45	2086	13.23	2123	14.00	2160	14.79	2197	15.58	2234	16.37
10500	3696	1982	10.66	2017	11.40	2052	12.17	2087	12.95	2122	13.74	2157	14.54	2193	15.37	2228	16.18	2263	17.00	2298	17.84
11000	3872	2064	11.96	2097	12.73	2129	13.51	2163	14.32	2196	15.14	2230	15.97	2263	16.81	2297	17.68	2331	18.53	2364	19.39
11500	4048	2146	13.37	2177	14.16	2208	14.97	2240	15.81	2272	16.65	2304	17.51	2336	18.39	2368	19.26	2400	20.17	2432	21.05
12000	4224	2229	14.90	2258	15.71	2288	16.56	2318	17.41	2348	18.28	2379	19.17	2409	20.07	2440	20.99	2470	21.90	2501	22.84
13000	4576	2395	18.33	2422	19.20	2449	20.09	2477	21.00	2504	21.91	2532	22.86	2560	23.80	2588	24.78	2616	25.74	2644	26.74
14000	4928	2564	22.32	2588	23.22	2613	24.17	2638	25.11	2663	26.09	2689	27.07	2714	28.08	2740	29.09	2766	30.12	2792	31.17
Volume O.Vel		7"SP		8"SP		9"SP		10"SP		11"SP		12"SP		14"SP		16"SP		18"SP		19"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5500	1936	1849	7.87	1953	9.07																
6000	2112	1883	8.53	1982	9.77	2080	11.07	2175	12.43												
6500	2288	1920	9.28	2018	10.55	2111	11.88	2201	13.26	2290	14.69										
7000	2464	1961	10.12	2056	11.42	2146	12.77	2234	14.18	2319	15.64	2402	17.15								
7500	2640	2004	11.07	2097	12.39	2186	13.78	2271	15.21	2353	16.69	2434	18.24	2589	21.44						
8000	2816	2051	12.11	2140	13.47	2226	14.87	2310	16.33	2391	17.85	2469	19.41	2619	22.67	2764	26.11				
8500	2992	2100	13.24	2186	14.66	2270	16.09	2351	17.58	2430	19.11	2507	20.70	2654	24.03	2794	27.50	2930	31.16		
9000	3168	2154	14.45	2235	15.93	2316	17.43	2395	18.95	2472	20.51	2547	22.12	2691	25.49	2828	29.01				
9500	3344	2211	15.75	2288	17.29	2365	18.85	2441	20.43	2516	22.04	2590	23.68	2730	27.07	2865	30.66				
10000	3520	2271	17.15	2344	18.75	2417	20.38	2490	22												

Wheel Diameter = 24.50 in.  
 Outlet Area = 3.45 sq. ft. inside  
 Maximum BHP = 2.24 x (RPM/1000)<sup>3</sup>  
 Tip Speed, fpm = 6.41 x RPM

Size

# 2450 sisw

Class I RPM 1694  
 Class II RPM 2208  
 Class III RPM 2777

## Design 5020 Centrifugal BI Fans

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2500	725	421	0.17	464	0.21	503	0.27	538	0.32	572	0.38	605	0.43	636	0.50						
3000	870	478	0.24	509	0.29	545	0.35	579	0.41	611	0.47	640	0.54	669	0.61	723	0.75	776	0.89		
3500	1015	538	0.33	565	0.39	592	0.46	621	0.53	653	0.59	681	0.67	708	0.74	758	0.89	806	1.05	852	1.22
4000	1160	600	0.45	624	0.52	648	0.59	671	0.67	696	0.74	723	0.82	750	0.90	798	1.06	843	1.24	887	1.42
4500	1305	663	0.59	685	0.67	706	0.75	727	0.84	748	0.92	769	1.01	792	1.10	841	1.27	885	1.45	925	1.64
5000	1450	728	0.77	747	0.86	767	0.95	786	1.04	805	1.13	823	1.23	842	1.32	883	1.51	927	1.71	967	1.91
5500	1595	793	0.99	811	1.08	828	1.18	846	1.28	863	1.38	881	1.48	898	1.58	932	1.79	969	2.00	1009	2.22
6000	1740	859	1.24	875	1.35	892	1.45	908	1.56	924	1.66	939	1.77	955	1.88	986	2.11	1018	2.34	1052	2.57
6500	1885	925	1.54	940	1.65	955	1.76	970	1.88	985	1.99	1000	2.11	1015	2.23	1044	2.47	1072	2.71	1101	2.96
7000	2030	992	1.88	1006	2.00	1020	2.13	1034	2.25	1048	2.37	1061	2.50	1075	2.62	1102	2.88	1129	3.13	1156	3.40
7500	2175	1059	2.28	1072	2.41	1085	2.54	1098	2.67	1111	2.80	1124	2.93	1137	3.06	1162	3.33	1187	3.61	1212	3.89
8000	2320	1126	2.73	1138	2.87	1151	3.00	1163	3.14	1175	3.28	1187	3.42	1199	3.56	1223	3.85	1247	4.14	1270	4.43
8500	2465	1193	3.24	1205	3.38	1217	3.53	1228	3.67	1240	3.82	1251	3.97	1262	4.12	1285	4.42	1307	4.72	1330	5.03
9000	2610	1260	3.81	1272	3.96	1283	4.11	1294	4.27	1305	4.42	1316	4.58	1326	4.73	1348	5.05	1369	5.37	1390	5.69
9500	2755	1328	4.44	1339	4.60	1349	4.76	1360	4.93	1370	5.09	1380	5.25	1391	5.42	1411	5.75	1431	6.08	1451	6.43
10000	2900	1396	5.14	1406	5.31	1416	5.48	1426	5.65	1436	5.82	1445	5.99	1455	6.17	1474	6.51	1494	6.87	1513	7.22
11000	3190	1531	6.76	1541	6.95	1550	7.14	1559	7.32	1568	7.51	1577	7.70	1586	7.88	1604	8.27	1621	8.65	1638	9.04
12000	3480	1667	8.70	1676	8.90	1684	9.11	1693	9.31	1701	9.51	1709	9.72	1718	9.93	1734	10.33	1750	10.75	1766	11.16
13000	3771	1803	10.98	1811	11.20	1819	11.43	1827	11.65	1835	11.87	1842	12.09	1850	12.31	1865	12.76	1880	13.19	1895	13.65
14000	4061	1939	13.64	1947	13.88	1954	14.12	1962	14.36	1969	14.60	1976	14.83	1983	15.07	1997	15.55	2011	16.02	2025	16.49
15000	4351	2076	16.71	2083	16.96	2090	17.21	2097	17.47	2104	17.74	2111	17.98	2117	18.23	2130	18.74	2143	19.26	2156	19.76
16000	4641	2212	20.20	2219	20.47	2225	20.74	2232	21.01	2239	21.29	2245	21.57	2251	21.83	2264	22.37	2276	22.91	2288	23.47
17000	4931	2349	24.16	2355	24.44	2361	24.73	2368	25.02	2374	25.31	2380	25.61	2386	25.90	2398	26.46	2409	27.03	2421	27.61
18000	5221	2486	28.61	2492	28.91	2497	29.21	2503	29.51	2509	29.82	2515	30.13	2521	30.44	2532	31.05	2543	31.65	2554	32.25
19000	5511	2623	33.58	2628	33.89	2634	34.21	2639	34.53	2645	34.85	2650	35.17	2656	35.50	2667	36.16	2677	36.79	2688	37.42
20000	5801	2760	39.09	2765	39.42	2770	39.75	2775	40.09												
Volume O.Vel		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP		6-1/2"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4000	1160	928	1.60	1008	1.98																
4500	1305	965	1.84	1039	2.25	1110	2.67	1180	3.12												
5000	1450	1005	2.12	1076	2.55	1143	3.01	1207	3.47	1271	3.95										
5500	1595	1047	2.44	1115	2.89	1180	3.37	1241	3.87	1301	4.38	1358	4.89	1415	5.43						
6000	1740	1088	2.80	1157	3.28	1219	3.78	1279	4.30	1335	4.84	1390	5.38	1443	5.94	1496	6.51	1548	7.10		
6500	1885	1133	3.21	1199	3.71	1261	4.24	1318	4.78	1373	5.34	1426	5.92	1477	6.51	1527	7.11	1576	7.71	1624	8.33
7000	2030	1183	3.66	1242	4.20	1303	4.75	1360	5.31	1413	5.90	1464	6.50	1513	7.11	1562	7.74	1609	8.38	1655	9.03
7500	2175	1237	4.17	1288	4.74	1345	5.31	1402	5.90	1455	6.51	1505	7.13	1553	7.77	1599	8.43	1645	9.09	1689	9.76
8000	2320	1294	4.72	1340	5.33	1390	5.94	1444	6.56	1497	7.18	1546	7.82	1593	8.49	1639	9.16	1683	9.85	1726	10.56
8500	2465	1352	5.34	1396	5.97	1440	6.62	1488	7.27	1539	7.92	1588	8.58	1635	9.27	1680	9.97	1723	10.68	1765	11.41
9000	2610	1411	6.02	1452	6.68	1494	7.35	1536	8.04	1582	8.73	1630	9.42	1677	10.12	1722	10.84	1764	11.58	1805	12.33
9500	2755	1471	6.76	1510	7.46	1550	8.16	1589	8.88	1629	9.60	1673	10.32	1719	11.05	1764	11.79	1807	12.55	1847	13.32
10000	2900	1532	7.58	1569	8.30	1607	9.03	1644	9.77	1681	10.53	1720	11.29	1762	12.05	1805	12.82	1849	13.60	1889	14.39
11000	3190	1655	9.42	1690	10.20	1724	11.00	1758	11.81	1792	12.62	1825	13.44	1859	14.26	1895	15.10	1933	15.94	1972	16.78
12000	3480	1782	11.58	1813	12.43	1844	13.28	1876	14.15	1907	15.02	1937	15.90	1968	16.79	1999	17.69	2030	18.59	2063	19.50
13000	3771	1909	14.09	1939	15.01	1967	15.91	1996	16.84	2025	17.78	2053	18.71	2082	19.66	2110	20.62	2138	21.58	2167	22.56
14000	4061	2039	16.98	2066	17.94	2093	18.93	2119	19.91	2146	20.90	2172	21.90	2199	22.90	2225	23.93	2251	24.94	2278	25.99
15000	4351	2169	20.26	2194	21.31	2219	22.33	2244	23.38	2269	24.43	2294	25.50	2318	26.56	2343	27.64	2367	28.71	2392	29.81
16000	4641	2300	24.00	2324	25.08	2347	26.18	2371	27.29	2394	28.40	2417	29.51	2440	30.66	2463	31.77	2486	32.93	2509	34.05
17000	4931	2432	28.20	2454	29.33	2477	30.50	2498	31.65	2520	32.83	2542	34.01	2564	35.18	2586	36.40	2607	37.57	2628	38.78
18000	5221	2565	32.87	2586	34.08	2607	35.29	2628	36.54	2648	37.74	2669	38.99	2689	40.24	2709	41.47	2730	42.75	2750	44.00
19000	5511	2698	38.06	2718	39.36	2738	40.61	2757	41.90	2777	43.21										
Volume O.Vel		7"SP		8"SP		9"SP		10"SP		11"SP		12"SP		14"SP		16"SP		18"SP		19"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6500	1885	1672	8.97																		
7000	2030	1700	9.68	1789	11.03																
7500	2175	1732	10.45	1818	11.85	1901	13.29														
8000	2320	1768	11.28	1850	12.72	1929	14.20	2008	15.73	2085	17.31										
8500	2465	1806	12.15	1885	13.66	1962	15.19	2037	16.76	2111	18.37	2184	20.02								
9000	2610	1845	13.09	1923	14.66	1997	16.25	2069	17.87	2140	19.52	2210	21.22	2348	24.74						
9500	2755	1886	14.10	1962	15.72	2034	17.36	2105	19.04	2174	20.75	2241	22.50	2373	26.07						
10000	2900	1927	15.19	2002	16.85	2073	18.54	2142	20.28	2209	22.05	2275	23.85	2402	27.50	2526	31.31				
11000	3190	2011	17.62	2086	19.37	2155	21.14	2221	22.97	2285	24.84	2348	26.75	2468	30.63	2584	34.63	2698	38.69	2755	40.82
12000	3481	2097	20.41	2169	22.24	2238	24.10	230													



Wheel Diameter = 27.00 in.

Outlet Area = 4.19 sq. ft. inside

Maximum BHP = 3.64 x (RPM/1000)<sup>3</sup>

Tip Speed, fpm = 7.07 x RPM

Size

**2700** SISW

**Design 5020 Centrifugal BI Fans**

Class I RPM 1538

Class II RPM 2003

Class III RPM 2520

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	716	379	0.20	418	0.25	454	0.32	486	0.38	517	0.45	547	0.52	576	0.59						
3500	836	421	0.26	451	0.33	485	0.40	517	0.47	545	0.55	573	0.62	599	0.70	650	0.87				
4000	955	465	0.35	491	0.42	518	0.50	548	0.58	576	0.66	602	0.74	627	0.83	674	1.01	719	1.19	763	1.39
4500	1075	511	0.45	534	0.54	557	0.62	581	0.71	608	0.79	634	0.88	658	0.97	703	1.17	745	1.37	785	1.57
5000	1194	558	0.58	579	0.67	600	0.76	620	0.86	642	0.95	665	1.05	689	1.15	734	1.35	774	1.56	812	1.78
5500	1313	605	0.73	625	0.83	644	0.93	663	1.03	682	1.13	701	1.24	721	1.34	765	1.56	805	1.78	842	2.01
6000	1433	653	0.91	671	1.01	689	1.12	706	1.23	724	1.34	741	1.45	758	1.57	796	1.80	836	2.03	873	2.28
6500	1552	702	1.12	719	1.23	735	1.34	751	1.46	767	1.58	783	1.70	799	1.82	832	2.07	868	2.32	904	2.58
7000	1672	751	1.35	767	1.48	782	1.60	797	1.73	812	1.85	827	1.98	842	2.11	871	2.37	902	2.64	936	2.91
7500	1791	800	1.63	815	1.76	829	1.89	843	2.02	858	2.16	872	2.29	885	2.43	913	2.71	941	2.99	970	3.28
8000	1911	850	1.94	864	2.08	877	2.22	891	2.36	904	2.50	917	2.64	930	2.79	956	3.08	982	3.38	1008	3.68
8500	2030	900	2.29	913	2.43	925	2.58	938	2.73	951	2.88	963	3.03	975	3.18	1000	3.49	1024	3.81	1049	4.12
9000	2149	950	2.68	962	2.83	974	2.99	986	3.14	998	3.30	1010	3.46	1021	3.62	1045	3.95	1068	4.28	1091	4.61
9500	2269	1000	3.11	1011	3.27	1023	3.44	1034	3.60	1046	3.77	1057	3.94	1068	4.10	1090	4.44	1112	4.79	1134	5.14
10000	2388	1050	3.59	1061	3.76	1072	3.94	1083	4.11	1094	4.28	1104	4.46	1115	4.63	1136	4.99	1157	5.35	1178	5.71
11000	2627	1151	4.71	1161	4.89	1171	5.08	1181	5.27	1191	5.46	1200	5.65	1210	5.84	1229	6.23	1248	6.62	1267	7.01
12000	2866	1252	6.03	1261	6.23	1270	6.44	1280	6.64	1289	6.85	1297	7.05	1306	7.26	1324	7.68	1342	8.10	1359	8.53
13000	3105	1353	7.59	1362	7.81	1370	8.03	1379	8.25	1387	8.48	1396	8.70	1404	8.92	1420	9.37	1436	9.82	1453	10.28
14000	3343	1454	9.40	1463	9.64	1471	9.88	1479	10.12	1486	10.35	1494	10.60	1502	10.83	1517	11.31	1532	11.80	1547	12.28
15000	3582	1556	11.49	1564	11.74	1571	12.01	1579	12.26	1586	12.51	1593	12.76	1601	13.02	1615	13.53	1629	14.05	1643	14.57
16000	3821	1658	13.87	1665	14.14	1672	14.42	1679	14.69	1686	14.96	1693	15.23	1700	15.50	1713	16.05	1727	16.59	1740	17.14
17000	4060	1759	16.56	1766	16.85	1773	17.14	1780	17.44	1786	17.72	1793	18.00	1799	18.29	1812	18.87	1825	19.45	1837	20.02
18000	4299	1861	19.59	1868	19.89	1874	20.20	1881	20.51	1887	20.82	1893	21.12	1899	21.42	1911	22.03	1924	22.65	1935	23.25
19000	4537	1963	22.96	1969	23.28	1976	23.60	1982	23.93	1988	24.26	1994	24.59	2000	24.90	2011	25.54	2022	26.18	2034	26.84
20000	4776	2066	26.71	2071	27.05	2077	27.38	2083	27.72	2089	28.07	2094	28.42	2100	28.76	2111	29.42	2122	30.09	2133	30.78
Volume O.Vel		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP		6-1/2"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BH
4500	1075	825	1.79																		
5000	1194	849	2.01	921	2.48	990	2.97														
5500	1314	877	2.26	945	2.75	1009	3.27	1072	3.81												
6000	1433	907	2.53	972	3.05	1033	3.60	1092	4.16	1150	4.74										
6500	1552	938	2.84	1001	3.39	1060	3.96	1117	4.55	1171	5.15	1225	5.78	1278	6.43						
7000	1672	970	3.18	1032	3.75	1089	4.35	1144	4.97	1196	5.61	1247	6.25	1297	6.91	1346	7.60				
7500	1791	1001	3.57	1064	4.16	1120	4.78	1173	5.42	1223	6.08	1272	6.76	1320	7.46	1367	8.16	1413	8.88	1459	9.62
8000	1911	1035	3.99	1095	4.61	1151	5.25	1203	5.92	1252	6.60	1300	7.30	1346	8.02	1391	8.76	1435	9.50	1478	10.26
8500	2030	1073	4.45	1126	5.10	1183	5.76	1234	6.45	1282	7.16	1329	7.89	1373	8.63	1417	9.40	1460	10.17	1502	10.96
9000	2149	1114	4.95	1161	5.63	1214	6.33	1265	7.03	1314	7.77	1359	8.52	1402	9.29	1445	10.08	1486	10.89	1527	11.70
9500	2269	1156	5.49	1199	6.21	1246	6.94	1297	7.67	1345	8.42	1390	9.20	1433	9.99	1474	10.81	1515	11.64	1554	12.47
10000	2388	1198	6.08	1239	6.83	1282	7.59	1328	8.35	1376	9.13	1422	9.93	1464	10.75	1505	11.58	1544	12.43	1582	13.30
11000	2627	1286	7.41	1324	8.22	1361	9.04	1399	9.87	1440	10.72	1484	11.56	1526	12.42	1567	13.30	1605	14.20	1642	15.11
12000	2866	1377	8.96	1411	9.82	1445	10.71	1479	11.60	1514	12.51	1550	13.42	1589	14.34	1629	15.26	1668	16.20	1705	17.16
13000	3105	1469	10.74	1501	11.67	1532	12.61	1564	13.56	1595	14.53	1627	15.51	1659	16.50	1694	17.48	1730	18.47	1767	19.47
14000	3343	1562	12.78	1592	13.77	1622	14.77	1651	15.78	1680	16.81	1709	17.85	1738	18.89	1768	19.94	1799	21.01	1832	22.08
15000	3582	1657	15.08	1685	16.14	1713	17.21	1740	18.28	1767	19.36	1795	20.46	1822	21.57	1849	22.67	1876	23.81	1904	24.93
16000	3821	1753	17.70	1779	18.81	1805	19.93	1831	21.07	1856	22.22	1882	23.36	1907	24.54	1933	25.70	1958	26.89	1983	28.08
17000	4060	1850	20.62	1874	21.78	1899	22.98	1923	24.17	1947	25.37	1971	26.59	1995	27.81	2019	29.06	2042	30.28	2066	31.55
18000	4299	1947	23.86	1970	25.11	1993	26.34	2016	27.60	2039	28.87	2061	30.14	2084	31.43	2107	32.71	2129	34.02	2152	35.32
19000	4538	2045	27.47	2067	28.77	2089	30.07	2110	31.40	2132	32.71	2153	34.05	2175	35.39	2196	36.74	2217	38.10	2239	39.46
20000	4776	2143	31.46	2164	32.80	2185	34.19	2205	35.54	2226	36.96	2246	38.32	2267	39.74	2287	41.14	2307	42.55	2327	44.00
21000	5015	2242	35.83	2262	37.23	2282	38.67	2301	40.10	2321	41.54	2340	43.02	2359	44.45	2379	45.93	2398	47.41	2417	48.87
Volume O.Vel		7"SP		8"SP		9"SP		10"SP		11"SP		12"SP		14"SP		16"SP		18"SP		19"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8000	1911	1522	11.04																		
8500	2030	1543	11.76	1624	13.39																
9000	2149	1566	12.52	1645	14.21	1721	15.94														
9500	2269	1592	13.32	1668	15.07	1741	16.85	1813	18.68												
10000	2388	1620	14.17	1693	15.98	1764	17.81	1834	19.68	1902	21.61	1971	23.61								
11000	2627	1678	16.03	1749	17.94	1816	19.89	1882	21.87	1946	23.89	2009	25.95	2133	30.21						
12000	2866	1740	18.13	1808	20.12	1873	22.16	1935	24.25	1996	26.38	2056	28.55	2173	33.00	2286	37.56				
13000	3105	1803	20.49	1870	22.56	1933	24.70	1994	26.89	2052	29.12	2110	31.39	2221	36.04	2328	40.80	2434	45.74	2485	48.21
14000	3343	1865	23.13	1933	25.30	1995	27.51	2055	29.79	2112	32.11	2167	34.49	227							

Wheel Diameter = 30.00 in.  
 Outlet Area = 5.17 sq. ft. inside  
 Maximum BHP = 6.16 x (RPM/1000)<sup>3</sup>  
 Tip Speed, fpm = 7.85 x RPM

Size

# 3000 sisw

## Design 5020 Centrifugal BI Fans

Class I RPM 1383  
 Class II RPM 1802  
 Class III RPM 2267

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3500	677	330	0.22	367	0.29	400	0.36	430	0.44	458	0.52	486	0.61								
4000	774	359	0.28	390	0.36	422	0.44	451	0.52	477	0.61	503	0.70	527	0.79	576	0.99				
4500	870	390	0.35	416	0.44	445	0.53	473	0.62	499	0.71	523	0.81	546	0.91	591	1.12	634	1.34		
5000	967	423	0.44	446	0.54	470	0.63	496	0.73	522	0.83	545	0.93	567	1.04	609	1.26	649	1.49	688	1.73
5500	1064	456	0.55	477	0.65	498	0.75	520	0.86	544	0.96	568	1.07	590	1.18	630	1.42	668	1.67	705	1.92
6000	1161	490	0.67	510	0.78	529	0.89	548	1.00	569	1.12	591	1.23	612	1.35	652	1.60	689	1.86	724	2.13
6500	1257	525	0.81	543	0.93	561	1.04	578	1.17	596	1.29	615	1.41	635	1.54	675	1.80	711	2.07	745	2.35
7000	1354	559	0.97	576	1.10	593	1.22	610	1.35	626	1.48	643	1.62	660	1.75	698	2.02	734	2.30	767	2.59
7500	1451	595	1.16	611	1.29	626	1.42	642	1.56	657	1.70	673	1.84	688	1.98	721	2.27	757	2.56	790	2.86
8000	1548	630	1.37	645	1.51	660	1.65	674	1.79	689	1.94	703	2.09	718	2.24	747	2.54	780	2.85	813	3.16
8500	1644	666	1.60	680	1.75	694	1.90	708	2.05	722	2.21	735	2.36	749	2.52	776	2.84	804	3.16	836	3.49
9000	1741	702	1.86	715	2.02	728	2.18	741	2.34	754	2.50	767	2.66	780	2.83	806	3.16	832	3.50	859	3.85
9500	1838	738	2.15	751	2.32	763	2.48	776	2.65	788	2.82	800	2.99	812	3.17	837	3.52	861	3.87	886	4.24
10000	1934	774	2.47	786	2.65	798	2.82	810	3.00	822	3.17	833	3.35	845	3.53	868	3.90	891	4.28	914	4.65
11000	2128	847	3.21	858	3.41	869	3.59	880	3.79	890	3.98	901	4.17	912	4.37	933	4.77	954	5.17	975	5.58
12000	2321	920	4.10	930	4.30	940	4.51	950	4.71	960	4.92	970	5.13	980	5.35	999	5.78	1019	6.21	1038	6.65
13000	2515	993	5.13	1003	5.35	1012	5.58	1021	5.80	1030	6.02	1040	6.25	1049	6.48	1067	6.94	1085	7.40	1102	7.87
14000	2708	1066	6.33	1075	6.57	1084	6.81	1093	7.05	1101	7.29	1110	7.53	1118	7.78	1135	8.27	1152	8.76	1169	9.26
15000	2902	1140	7.71	1149	7.97	1157	8.22	1165	8.48	1173	8.74	1181	8.99	1189	9.25	1205	9.77	1220	10.31	1236	10.83
16000	3095	1214	9.29	1222	9.56	1230	9.83	1237	10.10	1245	10.38	1252	10.65	1260	10.92	1275	11.48	1289	12.03	1304	12.60
17000	3288	1288	11.06	1295	11.36	1303	11.64	1310	11.93	1317	12.22	1324	12.52	1331	12.80	1345	13.39	1359	13.98	1373	14.57
18000	3482	1362	13.06	1369	13.37	1376	13.68	1383	13.98	1390	14.28	1396	14.59	1403	14.91	1416	15.51	1430	16.14	1443	16.75
19000	3675	1436	15.29	1443	15.61	1450	15.94	1456	16.26	1463	16.58	1469	16.90	1475	17.22	1488	17.87	1500	18.52	1513	19.19
20000	3869	1510	17.76	1517	18.09	1523	18.44	1529	18.78	1536	19.12	1542	19.45	1548	19.79	1560	20.49	1571	21.15	1583	21.84
22000	4256	1659	23.48	1655	23.85	1670	24.22	1676	24.60	1682	24.98	1688	25.35	1693	25.72	1704	26.46	1715	27.23	1726	27.95
24000	4643	1808	30.33	1813	30.73	1818	31.14	1824	31.55	1829	31.96	1834	32.38	1839	32.78	1850	33.58	1859	34.39	1870	35.22
Volume O.Vel	2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP		6-1/2"SP		
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5500	1064	741	2.18																		
6000	1161	758	2.40	823	2.97																
6500	1257	777	2.64	840	3.24	900	3.86														
7000	1354	798	2.90	858	3.52	915	4.17	971	4.85												
7500	1451	821	3.18	879	3.83	934	4.51	986	5.20	1038	5.93										
8000	1548	843	3.49	900	4.16	953	4.87	1004	5.60	1053	6.34	1102	7.11	1150	7.91						
8500	1644	866	3.83	922	4.52	974	5.25	1024	6.01	1071	6.78	1117	7.58	1163	8.39	1208	9.23				
9000	1741	889	4.20	945	4.92	996	5.67	1044	6.45	1091	7.26	1135	8.07	1179	8.91	1222	9.77	1264	10.65		
9500	1838	913	4.60	968	5.34	1019	6.12	1066	6.92	1111	7.76	1154	8.60	1197	9.47	1238	10.35	1279	11.25	1319	12.18
10000	1934	938	5.03	991	5.80	1042	6.60	1088	7.43	1132	8.29	1175	9.16	1216	10.05	1256	10.96	1296	11.89	1335	12.84
11000	2128	996	5.99	1039	6.83	1087	7.68	1134	8.55	1177	9.45	1218	10.37	1257	11.32	1296	12.28	1333	13.27	1370	14.28
12000	2321	1057	7.09	1095	8.00	1135	8.91	1180	9.84	1223	10.77	1263	11.74	1301	12.73	1338	13.75	1374	14.78	1409	15.84
13000	2515	1120	8.34	1155	9.31	1191	10.29	1228	11.28	1268	12.28	1309	13.29	1347	14.33	1384	15.39	1418	16.47	1452	17.56
14000	2708	1185	9.77	1218	10.80	1250	11.83	1283	12.89	1318	13.95	1355	15.02	1393	16.10	1429	17.20	1464	18.32	1497	19.48
15000	2902	1251	11.37	1282	12.45	1312	13.55	1343	14.67	1373	15.80	1405	16.94	1439	18.09	1475	19.24	1510	20.41	1543	21.59
16000	3095	1318	13.16	1347	14.31	1376	15.47	1404	16.64	1433	17.83	1461	19.04	1491	20.26	1522	21.47	1555	22.69	1588	23.92
17000	3288	1387	15.17	1414	16.38	1441	17.60	1468	18.83	1494	20.07	1521	21.34	1548	22.63	1575	23.90	1604	25.18	1634	26.48
18000	3482	1455	17.39	1481	18.65	1507	19.93	1532	21.24	1558	22.54	1583	23.86	1608	25.19	1633	26.55	1658	27.89	1685	29.26
19000	3675	1525	19.83	1549	21.17	1574	22.52	1598	23.86	1622	25.23	1646	26.62	1669	28.00	1693	29.42	1717	30.83	1741	32.25
20000	3869	1595	22.54	1618	23.92	1641	25.32	1664	26.75	1687	28.17	1710	29.61	1732	31.08	1755	32.52	1777	34.01	1799	35.48
22000	4256	1736	28.70	1757	30.22	1778	31.75	1799	33.28	1820	34.84	1840	36.38	1861	37.97	1882	39.53	1902	41.15	1922	42.73
24000	4643	1879	36.02	1898	37.65	1918	39.30	1937	40.95	1956	42.63	1975	44.29	1994	46.01	2012	47.68	2031	49.42	2050	51.11
Volume O.Vel	7"SP		8"SP		9"SP		10"SP		11"SP		12"SP		14"SP		16"SP		18"SP		19"SP		
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10000	1934	1373	13.80																		
11000	2128	1406	15.29																		
12000	2321	1444	16.92	1476	17.34	1546	19.48														
13000	2515	1485	18.68	1511	19.08	1576	21.31	1640	23.60	1703	25.97										
14000	2708	1529	20.65	1550	20.97	1612	23.33	1672	25.70	1732	28.13	1791	30.64								
15000	2902	1574	22.79	1591	23.02	1651	25.46	1709	27.96	1766	30.50	1822	33.08	1931	38.42						
16000	3095	1620	25.17	1635	25.28	1694	27.82	1750	30.42	1804	33.08	1858	35.78	1961	41.26	2063	46.97				
17000	3288	1666	27.79	1680	27.72	1737	30.36	1792	33.06	1845	35.82	1897	38.61	1997	44.33	2094	50.21	2189	56.29	2235	59.34
18000	3482	1713	30.63	1726	30.41	1783	33.13	1836	35.91	1888	38.76	1938	41.65	2036	47.63	2128	53.68	2219	59.91	2264	63.08
19000	3675	1765	33.70	1772	33.37	1828	36.15	1882	39.02	1932	41.95	1981	44.94	2076	51.11	2166	57.39	2254	63.81		
20000	3869	1818	36.57	181																	

Wheel Diameter = 33.00 in.  
 Outlet Area = 6.26 sq. ft. inside  
 Maximum BHP = 10.2 x (RPM/1000)<sup>3</sup>  
 Tip Speed, fpm = 8.64 x RPM

Size

**3300** SISW

**Design 5020 Centrifugal BI Fans**

Class I RPM 1246  
 Class II RPM 1624  
 Class III RPM 2042

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5000	799	330	0.36	356	0.45	383	0.55	408	0.65	433	0.76	456	0.88	480	1.00	524	1.25				
5500	879	354	0.44	377	0.54	401	0.64	425	0.75	448	0.86	470	0.98	492	1.11	534	1.37	574	1.65	621	2.10
6000	959	378	0.53	399	0.64	420	0.75	442	0.86	464	0.98	486	1.10	506	1.23	546	1.51	584	1.80	631	2.27
6500	1038	403	0.64	422	0.75	442	0.87	462	0.99	482	1.11	502	1.24	522	1.37	560	1.65	596	1.96	644	2.46
7000	1118	428	0.76	446	0.88	464	1.00	482	1.13	501	1.26	520	1.39	539	1.53	575	1.82	610	2.13	657	2.66
7500	1198	454	0.90	471	1.03	487	1.15	504	1.29	521	1.43	539	1.57	556	1.71	591	2.01	624	2.32	671	2.88
8000	1278	479	1.05	496	1.19	511	1.33	527	1.46	542	1.61	559	1.76	575	1.91	608	2.21	640	2.53	687	3.12
8500	1358	505	1.22	521	1.37	536	1.52	550	1.66	565	1.81	580	1.96	595	2.12	626	2.44	657	2.77	703	3.39
9000	1438	531	1.41	546	1.57	560	1.73	574	1.88	588	2.03	602	2.19	616	2.36	645	2.69	674	3.03	720	3.68
9500	1518	557	1.62	572	1.79	585	1.96	599	2.12	612	2.28	625	2.44	638	2.61	665	2.96	693	3.32	738	4.00
10000	1598	583	1.84	597	2.03	611	2.21	623	2.38	636	2.55	648	2.72	660	2.89	686	3.26	712	3.63	777	4.72
11000	1757	635	2.37	649	2.57	662	2.78	674	2.97	685	3.16	696	3.34	708	3.53	730	3.91	753	4.31	818	5.53
12000	1917	688	2.99	701	3.21	713	3.43	724	3.65	735	3.87	746	4.07	756	4.27	777	4.68	797	5.10	863	6.46
13000	2077	742	3.72	753	3.96	765	4.20	775	4.44	786	4.67	796	4.90	806	5.12	825	5.56	844	6.00	909	7.51
14000	2237	795	4.56	806	4.82	817	5.08	827	5.34	837	5.60	847	5.85	856	6.09	874	6.57	892	7.04	957	8.71
15000	2396	849	5.52	859	5.80	869	6.08	879	6.36	888	6.64	898	6.92	907	7.18	924	7.70	941	8.22	1006	10.06
16000	2556	903	6.62	913	6.92	922	7.22	931	7.51	940	7.82	949	8.11	958	8.40	975	8.96	991	9.51	1056	11.54
17000	2716	958	7.86	966	8.17	975	8.50	984	8.81	992	9.13	1001	9.45	1009	9.75	1025	10.37	1041	10.97	1106	13.19
18000	2876	1012	9.25	1020	9.58	1029	9.92	1037	10.26	1045	10.59	1053	10.93	1061	11.26	1076	11.92	1091	12.55	1156	14.97
19000	3036	1066	10.79	1074	11.15	1082	11.50	1090	11.86	1098	12.21	1105	12.56	1113	12.92	1128	13.61	1142	14.31	1207	16.93
20000	3195	1121	12.51	1128	12.89	1136	13.25	1143	13.63	1151	14.01	1158	14.37	1165	14.74	1180	15.49	1193	16.21	1239	18.24
22000	3515	1230	16.48	1237	16.89	1244	17.30	1250	17.71	1257	18.12	1264	18.54	1271	18.94	1284	19.75	1297	20.57	1340	21.36
24000	3834	1339	21.22	1346	21.67	1352	22.13	1358	22.57	1364	23.01	1371	23.46	1377	23.91	1389	24.80	1401	25.68	1446	26.58
26000	4154	1449	26.81	1455	27.30	1461	27.79	1467	28.29	1472	28.76	1478	29.23	1484	29.72	1495	30.71	1506	31.65	1551	32.61
28000	4473	1558	33.33	1564	33.84	1569	34.37	1575	34.90	1580	35.43	1586	35.94	1591	36.45	1602	37.50	1612	38.56	1622	39.56
30000	4793	1668	40.83	1673	41.38	1678	41.94	1684	42.50	1689	43.08	1694	43.64	1699	44.18	1709	45.29	1719	46.41	1728	47.54
Volume O.Vel		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP		6-1/2"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6500	1039	666	2.60																		
7000	1118	676	2.79																		
7500	1198	688	3.01	749	3.74																
8000	1278	701	3.23	760	3.99	816	4.79														
8500	1358	716	3.49	772	4.26	826	5.08	878	5.94												
9000	1438	731	3.76	785	4.55	838	5.39	888	6.28	937	7.19										
9500	1518	748	4.06	800	4.87	850	5.73	899	6.63	946	7.56	993	8.54								
10000	1598	765	4.39	815	5.21	864	6.09	912	7.01	958	7.97	1002	8.95	1046	9.98						
11000	1757	801	5.13	848	5.98	894	6.89	939	7.84	982	8.84	1025	9.87	1066	10.94	1106	12.03	1146	13.16		
12000	1917	840	5.98	884	6.87	927	7.81	970	8.79	1010	9.82	1051	10.89	1090	12.00	1128	13.14	1166	14.31	1203	15.50
13000	2077	882	6.93	922	7.89	963	8.87	1003	9.88	1042	10.93	1080	12.04	1117	13.19	1154	14.37	1190	15.58	1225	16.81
14000	2237	927	8.00	963	9.03	1000	10.06	1038	11.11	1075	12.20	1111	13.33	1147	14.50	1182	15.71	1216	16.95	1250	18.24
15000	2397	973	9.22	1007	10.28	1041	11.38	1076	12.49	1111	13.62	1145	14.78	1179	15.98	1213	17.22	1245	18.49	1278	19.80
16000	2556	1021	10.59	1052	11.69	1083	12.83	1115	14.01	1148	15.19	1181	16.39	1213	17.62	1245	18.88	1277	20.18	1308	21.52
17000	2716	1070	12.11	1099	13.25	1128	14.44	1157	15.66	1188	16.92	1218	18.17	1249	19.44	1280	20.74	1310	22.07	1340	23.44
18000	2876	1120	13.79	1147	14.99	1174	16.21	1201	17.48	1229	18.79	1258	20.11	1287	21.44	1316	22.78	1345	24.14	1374	25.55
19000	3036	1170	15.63	1196	16.91	1221	18.18	1247	19.48	1273	20.83	1300	22.21	1327	23.60	1354	25.00	1382	26.41	1409	27.85
20000	3195	1220	17.63	1245	18.98	1270	20.32	1294	21.66	1318	23.05	1343	24.48	1368	25.93	1394	27.39	1420	28.86	1446	30.35
22000	3515	1322	22.17	1346	23.71	1368	25.18	1390	26.64	1412	28.13	1434	29.61	1456	31.13	1479	32.72	1502	34.30	1525	35.91
24000	3834	1424	27.44	1447	29.16	1469	30.85	1489	32.44	1510	34.05	1529	35.64	1549	37.24	1569	38.88	1590	40.54	1610	42.27
26000	4154	1528	33.59	1549	35.45	1570	37.29	1590	39.12	1609	40.84	1628	42.61	1646	44.28	1664	46.04	1682	47.75	1701	49.55
28000	4474	1632	40.59	1652	42.65	1672	44.68	1691	46.63	1709	48.59	1727	50.45	1744	52.32	1761	54.17	1778	56.00	1795	57.88
30000	4793	1738	48.62	1756	50.84	1775	52.99	1793	55.18	1810	57.25	1828	59.33	1844	61.36	1860	63.33	1877	65.37	1892	67.28
Volume O.Vel		7"SP		8"SP		9"SP		10"SP		11"SP		12"SP		14"SP		16"SP		18"SP		19"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12000	1917	1239	16.72																		
13000	2077	1259	18.07	1327	20.68																
14000	2237	1283	19.55	1348	22.22	1411	25.00														
15000	2397	1309	21.14	1372	23.93	1433	26.77	1492	29.71	1550	32.75										
16000	2556	1338	22.90	1398	25.73	1457	28.69	1514	31.74	1570	34.84	1624	38.05								
17000	2716	1369	24.84	1427	27.73	1483	30.74	1538	33.86	1592	37.06	1644	40.33	1747	47.10						
18000	2876	1402	26.96	1457	29.92	1511	32.98	1564	36.16	1616	39.44	1667	42.80	1767	49.75	1863	56.97				
19000	3036	1436	29.29	1490	32.31	1542	35.42	1593	38.66	1643	42.00	1693	45.45	1789	52.60	1882	59.91	1973	67.60		
20000	3195	1472	31.83	1524	34.91	1574	38.08	1623	41.36	1672	44.77	1720	48.28	1813	55.56	1903	63.07	1991	70.85	2034	74.87
22000	3515	1549	37.54	1596	40.76	1643	44.06	1689	47.45</												



Wheel Diameter = 40.25 in.  
 Outlet Area = 9.31 sq. ft. inside  
 Maximum BHP = 27.5 x (RPM/1000)<sup>3</sup>  
 Tip Speed, fpm = 10.5 x RPM

Size

**4025** SISW

**Design 5020 Centrifugal BI Fans**

Class I RPM 1021  
 Class II RPM 1331  
 Class III RPM 1674

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7000	752	260	0.5	283	0.6	305	0.7	327	0.9	348	1.1	368	1.2	388	1.4						
8000	859	285	0.6	305	0.8	325	0.9	345	1.1	364	1.2	383	1.4	401	1.6	436	2.0				
9000	967	312	0.8	329	1.0	346	1.1	364	1.3	382	1.5	399	1.7	416	1.9	449	2.3	480	2.7	510	3.1
10000	1074	340	1.0	355	1.2	370	1.4	386	1.6	402	1.7	418	1.9	434	2.1	464	2.6	494	3.0	522	3.5
11000	1181	367	1.3	382	1.5	395	1.7	409	1.9	424	2.1	438	2.3	453	2.5	482	2.9	509	3.4	536	3.9
12000	1289	396	1.6	409	1.8	422	2.0	434	2.2	447	2.4	460	2.7	474	2.9	500	3.3	527	3.8	552	4.3
13000	1396	424	1.9	437	2.2	449	2.4	460	2.6	472	2.8	484	3.1	496	3.3	521	3.8	545	4.3	569	4.8
14000	1504	453	2.3	465	2.6	476	2.8	487	3.1	498	3.3	509	3.6	520	3.8	542	4.3	565	4.9	588	5.4
15000	1611	481	2.8	493	3.1	504	3.3	514	3.6	525	3.9	535	4.1	545	4.4	565	4.9	587	5.5	608	6.0
16000	1718	510	3.3	521	3.6	532	3.9	542	4.2	552	4.5	561	4.7	570	5.0	589	5.6	609	6.2	629	6.7
17000	1826	540	3.9	550	4.2	560	4.5	570	4.8	579	5.1	588	5.4	597	5.7	615	6.3	633	6.9	651	7.5
18000	1933	569	4.5	579	4.9	588	5.2	598	5.5	607	5.9	616	6.2	624	6.5	641	7.1	657	7.7	675	8.4
19000	2040	598	5.3	608	5.6	617	6.0	626	6.3	635	6.7	643	7.0	651	7.3	667	8.0	683	8.6	699	9.3
20000	2148	628	6.1	637	6.4	646	6.8	654	7.2	663	7.5	671	7.9	679	8.2	694	8.9	709	9.6	724	10.3
21000	2255	657	6.9	666	7.3	674	7.7	683	8.1	691	8.5	699	8.9	707	9.2	721	10.0	736	10.7	750	11.4
22000	2363	687	7.9	695	8.3	703	8.7	712	9.1	719	9.5	727	9.9	735	10.3	749	11.1	763	11.8	776	12.6
24000	2577	747	10.1	754	10.5	762	11.0	769	11.4	777	11.9	784	12.3	791	12.8	804	13.6	818	14.4	830	15.2
26000	2792	806	12.7	813	13.1	820	13.6	827	14.1	834	14.6	841	15.1	848	15.5	861	16.5	873	17.4	885	18.3
28000	3007	866	15.6	873	16.2	879	16.7	886	17.2	892	17.7	898	18.2	905	18.8	917	19.8	929	20.8	941	21.8
30000	3222	926	19.1	933	19.6	939	20.2	945	20.7	951	21.3	957	21.9	962	22.4	974	23.5	985	24.6	997	25.7
32000	3437	986	23.0	992	23.6	998	24.2	1004	24.8	1009	25.4	1015	26.0	1020	26.5	1031	27.7	1042	28.9	1053	30.1
34000	3651	1047	27.4	1052	28.0	1058	28.7	1063	29.3	1068	29.9	1074	30.6	1079	31.2	1089	32.4	1100	33.7	1110	34.9
36000	3866	1107	32.3	1112	33.0	1117	33.7	1122	34.4	1127	35.0	1133	35.7	1138	36.4	1147	37.7	1157	39.0	1167	40.4
38000	4081	1167	37.9	1172	38.6	1177	39.3	1182	40.0	1187	40.7	1192	41.4	1196	42.1	1206	43.6	1215	44.9	1224	46.4
40000	4296	1228	44.0	1232	44.8	1237	45.5	1242	46.3	1246	47.0	1251	47.7	1255	48.5	1264	50.0	1273	51.5	1282	52.9
44000	4725	1349	58.2	1353	59.1	1357	59.9	1361	60.7	1366	61.6	1370	62.4	1374	63.2	1382	64.8	1390	66.4	1398	68.1
Volume O.Vel		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP		6-1/2"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10000	1074	549	4.0																		
11000	1181	562	4.4	612	5.5																
12000	1289	577	4.9	624	6.0	670	7.2														
13000	1396	593	5.4	638	6.5	682	7.8	724	9.1												
14000	1504	610	6.0	654	7.2	695	8.4	736	9.8	774	11.1	813	12.6								
15000	1611	629	6.6	671	7.8	711	9.2	749	10.5	787	12.0	823	13.4	859	15.0						
16000	1718	649	7.3	689	8.6	727	9.9	764	11.3	800	12.8	835	14.4	870	15.9	903	17.5				
17000	1826	670	8.1	708	9.4	745	10.8	780	12.2	815	13.7	849	15.3	882	16.9	914	18.6	946	20.3	977	22.0
18000	1933	692	9.0	728	10.4	763	11.8	797	13.2	831	14.8	864	16.4	896	18.0	927	19.7	958	21.5	988	23.2
19000	2041	715	10.0	749	11.4	783	12.8	816	14.3	848	15.9	880	17.5	910	19.2	941	20.9	971	22.7	1000	24.5
20000	2148	739	11.0	771	12.5	803	14.0	835	15.5	866	17.1	897	18.7	926	20.5	956	22.2	985	24.1	1013	25.9
21000	2255	764	12.1	794	13.6	824	15.2	854	16.8	885	18.4	914	20.1	943	21.8	972	23.6	1000	25.5	1027	27.4
22000	2363	790	13.3	818	14.9	846	16.5	875	18.1	904	19.8	933	21.5	961	23.3	989	25.1	1016	27.0	1043	29.0
24000	2577	843	16.0	867	17.7	893	19.4	919	21.2	945	22.9	972	24.7	998	26.6	1025	28.4	1050	30.4	1076	32.4
26000	2792	897	19.2	920	20.9	943	22.7	966	24.6	990	26.5	1014	28.4	1039	30.3	1063	32.3	1088	34.3	1111	36.3
28000	3007	952	22.7	973	24.6	994	26.5	1016	28.4	1037	30.4	1059	32.5	1082	34.5	1105	36.6	1127	38.7	1150	40.8
30000	3222	1007	26.7	1028	28.8	1048	30.8	1067	32.8	1087	34.9	1107	37.0	1128	39.2	1149	41.4	1170	43.6	1191	45.8
32000	3437	1063	31.2	1083	33.5	1102	35.6	1120	37.7	1139	39.9	1157	42.1	1176	44.3	1195	46.6	1214	49.0	1234	51.3
34000	3651	1120	36.2	1129	38.6	1157	40.9	1175	43.2	1192	45.4	1209	47.7	1226	50.0	1244	52.4	1262	54.8	1280	57.3
36000	3866	1176	41.7	1195	44.3	1212	46.8	1229	49.2	1246	51.6	1262	54.0	1278	56.4	1294	58.8	1311	61.3	1328	63.9
38000	4081	1233	47.8	1251	50.5	1268	53.2	1285	55.8	1300	58.3	1316	60.9	1331	63.4	1346	65.9	1362	68.5	1377	71.1
40000	4296	1291	54.4	1308	57.3	1324	60.2	1340	63.0	1355	65.7	1370	68.4	1385	71.0	1399	73.6	1414	76.3	1428	79.0
44000	4725	1406	69.7	1422	73.0	1437	76.1	1452	79.3	1467	82.3	1481	85.4	1495	88.3	1508	91.2	1521	94.1	1534	97.0
Volume O.Vel		7"SP		8"SP		9"SP		10"SP		11"SP		12"SP		14"SP		16"SP		18"SP		19"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18000	1933	1018	25.1																		
19000	2040	1029	26.4																		
20000	2148	1041	27.8	1085	30.2																
21000	2255	1055	29.3	1095	31.7	1149	35.8														
22000	2363	1069	30.9	1107	33.3	1159	37.5	1209	41.8												
				1120	35.0	1171	39.2	1219	43.6	1268	48.1										
24000	2577	1101	34.5	1149	38.7	1197	43.1	1244	47.6	1289	52.3	1334	57.0								
26000	2792	1135	38.4	1181	42.8	1227	47.3	1271	52.0	1315	56.8	1357	61.8	1440	71.9						
28000	3007	1172	42.9	1217	47.4	1259	52.0	1302	56.8	1343	61.8	1384	66.9	1463	77.4	1540	88.3				
30000	3222	1212	48.0	1254	52.6	1295	57.3	1335	62.3	1375	67.3	1414	72.6	1490	83.4	1564	94.7	1635	106.2	1671	112.3
32000	3437	1254	53.6	1293	58.4	1332	63.2	1371	68.2	1409	73.4	1446	78.8	1519	89.9	1590	101.4	1659	113.5		
34000	3651	1298	59.8	1335	64.7	1372	69.8	1409	74.9	1445	80.2	1481	85.6	1551	97.0	1619	108.8				
36000	3866	1344	66.4	1379	71.7	1414	76.9														



Wheel Diameter = 44.50 in.  
 Outlet Area = 11.37 sq. ft. inside  
 Maximum BHP = 45.1 x (RPM/1000)<sup>3</sup>  
 Tip Speed, fpm = 11.7 x RPM

Size

# 4450 sisw

## Design 5020 Centrifugal BI Fans

Class I RPM 922  
 Class II RPM 1201  
 Class III RPM 1511

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8000	704	226	0.5	249	0.7	270	0.8	290	1.0	309	1.2	327	1.3	345	1.5						
9000	792	244	0.6	264	0.8	284	1.0	302	1.1	320	1.3	338	1.5	354	1.7	386	2.2				
10000	879	263	0.8	281	1.0	299	1.2	316	1.3	333	1.5	349	1.7	365	2.0	395	2.4	424	2.9		
11000	967	282	1.0	298	1.2	315	1.4	331	1.6	347	1.8	362	2.0	377	2.2	406	2.7	434	3.2	460	3.7
12000	1055	302	1.2	317	1.4	332	1.6	347	1.9	362	2.1	376	2.3	391	2.5	418	3.0	444	3.5	470	4.1
13000	1143	322	1.4	336	1.6	350	1.9	364	2.2	378	2.4	391	2.6	405	2.8	431	3.3	456	3.9	480	4.4
14000	1231	343	1.7	356	1.9	369	2.2	382	2.5	395	2.7	407	3.0	420	3.2	445	3.7	469	4.3	492	4.9
15000	1319	364	2.0	376	2.2	388	2.5	400	2.8	412	3.1	424	3.4	436	3.7	460	4.2	483	4.8	505	5.3
16000	1407	385	2.3	396	2.6	407	2.9	419	3.2	430	3.5	441	3.8	453	4.1	475	4.7	497	5.3	518	5.9
17000	1495	406	2.7	417	3.0	427	3.3	438	3.6	449	4.0	459	4.3	470	4.6	491	5.3	512	5.8	533	6.5
18000	1583	427	3.1	437	3.4	448	3.8	458	4.1	468	4.4	478	4.8	488	5.1	508	5.9	528	6.5	547	7.1
20000	1759	471	4.1	480	4.4	489	4.8	498	5.2	507	5.5	516	5.9	525	6.3	543	7.1	561	7.9	579	8.6
22000	1935	514	5.3	522	5.7	531	6.1	539	6.5	547	6.9	555	7.3	564	7.7	580	8.5	596	9.4	613	10.3
24000	2111	558	6.7	566	7.1	573	7.6	581	8.0	588	8.4	596	8.8	603	9.3	618	10.2	633	11.1	648	12.1
26000	2287	602	8.4	609	8.8	616	9.3	623	9.7	630	10.2	637	10.7	644	11.1	658	12.1	672	13.1	686	14.1
28000	2463	646	10.4	653	10.8	659	11.3	666	11.8	672	12.3	679	12.8	685	13.3	698	14.3	711	15.3	724	16.4
30000	2638	691	12.6	697	13.1	703	13.6	709	14.1	715	14.6	721	15.1	727	15.7	739	16.8	751	17.9	763	19.0
32000	2814	735	15.1	741	15.7	747	16.2	752	16.7	758	17.3	763	17.8	769	18.4	780	19.5	791	20.7	803	21.9
34000	2990	780	18.0	785	18.6	790	19.1	796	19.7	801	20.3	806	20.9	811	21.4	822	22.6	833	23.9	843	25.1
36000	3166	824	21.2	830	21.8	835	22.4	840	23.0	844	23.6	849	24.2	854	24.8	864	26.1	874	27.4	884	28.7
38000	3342	869	24.8	874	25.5	879	26.1	883	26.7	888	27.3	893	28.0	898	28.6	907	29.9	916	31.3	926	32.6
40000	3518	914	28.8	918	29.5	923	30.2	928	30.8	932	31.5	936	32.1	941	32.8	950	34.2	959	35.6	968	37.0
44000	3870	1003	38.1	1008	38.8	1012	39.5	1016	40.3	1020	41.0	1024	41.7	1028	42.4	1036	43.9	1044	45.4	1052	46.9
48000	4222	1093	49.2	1097	49.9	1101	50.7	1105	51.5	1109	52.3	1112	53.1	1116	53.9	1123	55.5	1131	57.1	1138	58.7
52000	4573	1183	62.2	1187	63.0	1190	63.9	1194	64.7	1197	65.6	1201	66.5	1204	67.3	1211	69.0	1218	70.7	1225	72.5
56000	4925	1273	77.4	1276	78.3	1280	79.2	1283	80.1	1286	81.1	1290	82.0	1293	82.9	1299	84.7	1305	86.5	1312	88.4
Volume O.Vel		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP		6-1/2"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12000	1055	493	4.6																		
13000	1143	504	5.0	548	6.2																
14000	1231	515	5.5	557	6.7	597	8.0														
15000	1319	526	6.0	568	7.3	607	8.6	644	10.1												
16000	1407	539	6.5	579	7.9	617	9.3	653	10.7	688	12.3										
17000	1495	552	7.1	591	8.5	628	9.9	664	11.5	697	13.0	730	14.6								
18000	1583	567	7.8	604	9.2	640	10.7	674	12.2	707	13.9	739	15.5	770	17.2						
20000	1759	597	9.3	631	10.7	665	12.3	698	13.9	729	15.6	760	17.4	789	19.2	818	21.1	845	22.9	873	24.9
22000	1935	629	11.1	661	12.6	693	14.2	724	15.9	753	17.7	782	19.5	811	21.4	838	23.4	865	25.4	891	27.4
24000	2111	663	13.0	693	14.8	723	16.5	752	18.2	780	20.0	807	21.9	834	23.9	861	25.9	886	28.0	912	30.1
26000	2287	699	15.1	727	17.2	754	19.1	781	20.8	808	22.7	834	24.7	860	26.7	885	28.8	910	30.9	934	33.1
28000	2463	737	17.5	762	19.7	788	21.9	813	23.9	838	25.8	863	27.7	888	29.8	912	32.0	935	34.2	958	36.4
30000	2638	775	20.1	799	22.4	823	24.9	847	27.2	870	29.3	894	31.3	917	33.4	940	35.6	962	37.8	984	40.2
32000	2814	814	23.1	836	25.5	859	28.0	881	30.6	904	33.1	926	35.3	948	37.5	969	39.6	991	41.9	1012	44.3
34000	2990	854	26.4	875	28.9	896	31.5	917	34.2	938	36.9	959	39.6	980	42.0	1000	44.3	1021	46.5	1041	48.9
36000	3166	894	30.0	914	32.7	934	35.4	954	38.2	974	41.0	994	43.9	1013	46.7	1033	49.2	1052	51.7	1072	54.1
38000	3342	935	34.0	954	36.8	973	39.6	992	42.5	1010	45.5	1029	48.5	1048	51.5	1067	54.4	1085	57.2	1104	59.8
40000	3518	976	38.4	994	41.3	1012	44.2	1030	47.3	1048	50.4	1066	53.4	1083	56.6	1101	59.8	1119	62.9	1136	65.8
44000	3870	1060	48.4	1076	51.6	1093	54.8	1109	58.0	1125	61.3	1141	64.6	1157	68.0	1173	71.4	1189	74.9	1206	78.4
48000	4222	1145	60.3	1160	63.7	1175	67.1	1189	70.5	1204	74.1	1219	77.6	1234	81.3	1248	84.9	1263	88.6	1278	92.3
52000	4573	1231	74.2	1245	77.8	1258	81.4	1272	85.1	1285	88.8	1299	92.6	1312	96.4	1326	100.3	1339	104.2	1353	108.2
56000	4925	1318	90.3	1330	94.0	1343	97.9	1355	101.8	1368	105.7	1380	109.7	1392	113.8	1405	117.9	1417	122.0	1430	126.2
Volume O.Vel		7"SP		8"SP		9"SP		10"SP		11"SP		12"SP		14"SP		16"SP		18"SP		19"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
22000	1935	917	29.4																		
24000	2111	936	32.3	983	36.7	1030	41.2														
26000	2287	958	35.4	1004	40.0	1048	44.7	1091	49.5	1133	54.5										
28000	2463	981	38.8	1026	43.5	1069	48.5	1110	53.5	1150	58.7	1189	63.9								
30000	2638	1006	42.5	1049	47.4	1091	52.6	1131	57.8	1170	63.2	1208	68.6	1281	79.8						
32000	2814	1033	46.7	1074	51.7	1114	57.0	1153	62.4	1192	68.0	1229	73.6	1299	85.1	1368	97.1				
34000	2990	1062	51.4	1101	56.5	1139	61.8	1177	67.3	1214	73.0	1250	78.9	1320	90.9	1386	103.2	1450	115.9		
36000	3166	1091	56.5	1129	61.7	1166	67.2	1202	72.8	1238	78.6	1273	84.6	1341	97.1	1406	109.7	1468	122.7	1498	129.3
38000	3342	1122	62.4	1158	67.5	1194	73.0	1229	78.8	1264	84.7	1297	90.8	1363	103.4	1427	116.6	1487	130.0		
40000	3518	1154	68.6	1189	74.0	1223	79.4	1257	85.2	1290	91.3	1323	97.5	1387	110.3	1449	123.7	1508	137.6		
44000	3870	1221	81.8	1253	88.2	1285	94.2	1316	100.1	1347	106.1	1378	112.5	1438	125.9	1496	139.7				
48000	4222	1292	96.1	1322	103.6	1351	110.9	1380	117.7	1409	124.0	1437	130.3	1494	143.7						
52000	4573	1366	112.1	1393	120.3	1420	128.4	1447	136.3	1473	143										

Wheel Diameter = 49.00 in.  
 Outlet Area = 13.78 sq. ft. inside  
 Maximum BHP = 73.1 x (RPM/1000)<sup>3</sup>  
 Tip Speed, fpm = 12.8 x RPM

Size

**4900** SISW

**Design 5020 Centrifugal BI Fans**

Class I RPM 837  
 Class II RPM 1090  
 Class III RPM 1371

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10000	725	209	0.7	229	0.8	248	1.0	266	1.2	283	1.5	299	1.7	315	1.9						
11000	798	223	0.8	241	1.0	259	1.2	275	1.4	292	1.6	307	1.9	322	2.1	351	2.6				
12000	870	237	0.9	253	1.2	270	1.4	286	1.6	301	1.8	316	2.1	331	2.3	358	2.9	384	3.5		
13000	943	251	1.1	266	1.4	282	1.6	297	1.8	311	2.1	326	2.3	339	2.6	366	3.2	391	3.8	415	4.4
14000	1016	266	1.3	280	1.6	294	1.8	308	2.1	322	2.3	336	2.6	349	2.9	375	3.5	399	4.1	422	4.7
15000	1088	281	1.5	294	1.8	308	2.1	321	2.4	334	2.6	347	2.9	359	3.2	384	3.8	407	4.4	430	5.1
16000	1161	296	1.8	309	2.1	321	2.4	334	2.7	346	3.0	358	3.3	370	3.5	394	4.1	416	4.8	438	5.5
18000	1306	327	2.3	338	2.6	349	3.0	361	3.3	372	3.7	383	4.1	394	4.4	415	5.0	436	5.7	457	6.4
20000	1451	359	3.0	369	3.4	379	3.7	389	4.1	399	4.5	409	4.9	419	5.3	438	6.0	458	6.7	477	7.5
22000	1596	391	3.8	400	4.2	409	4.6	418	5.0	427	5.5	436	5.9	445	6.3	463	7.2	481	8.0	499	8.7
24000	1741	423	4.8	432	5.3	440	5.7	448	6.1	457	6.6	465	7.0	473	7.5	490	8.5	506	9.4	523	10.3
26000	1886	456	6.0	464	6.4	471	6.9	479	7.4	487	7.9	494	8.3	502	8.8	517	9.8	533	10.9	548	11.9
28000	2031	489	7.3	496	7.8	503	8.3	510	8.8	517	9.3	524	9.8	531	10.3	546	11.4	560	12.5	574	13.6
30000	2176	522	8.9	528	9.4	535	9.9	542	10.4	548	11.0	555	11.5	561	12.1	575	13.2	588	14.3	601	15.5
32000	2321	555	10.6	561	11.2	567	11.7	573	12.3	579	12.8	586	13.4	592	14.0	604	15.2	617	16.4	629	17.6
34000	2466	588	12.6	594	13.2	600	13.8	605	14.3	611	14.9	617	15.5	623	16.1	635	17.4	646	18.6	658	19.9
36000	2611	621	14.8	627	15.4	632	16.0	638	16.6	643	17.3	649	17.9	654	18.5	665	19.8	676	21.2	687	22.5
38000	2756	654	17.3	660	17.9	665	18.6	670	19.2	675	19.8	680	20.5	686	21.2	696	22.5	706	23.9	717	25.3
40000	2901	688	20.0	693	20.7	698	21.4	703	22.0	708	22.7	712	23.4	717	24.1	727	25.5	737	26.9	747	28.4
44000	3192	755	26.4	759	27.1	764	27.8	768	28.5	773	29.3	777	30.0	782	30.8	791	32.3	799	33.8	808	35.4
48000	3482	822	33.9	826	34.7	830	35.5	834	36.3	838	37.1	842	37.9	846	38.7	854	40.3	863	42.0	871	43.7
52000	3772	889	42.8	893	43.7	897	44.6	900	45.4	904	46.3	908	47.1	912	48.0	919	49.7	927	51.5	934	53.3
56000	4062	956	53.2	959	54.1	963	55.1	967	56.0	970	56.9	974	57.8	977	58.7	984	60.6	991	62.5	998	64.4
60000	4352	1023	65.2	1027	66.2	1030	67.1	1033	68.1	1037	69.1	1040	70.1	1043	71.1	1050	73.0	1056	75.1	1063	77.1
64000	4642	1091	78.8	1094	79.9	1097	80.9	1100	81.9	1103	83.0	1106	84.1	1109	85.1	1116	87.2	1121	89.3	1128	91.5
68000	4933	1158	94.3	1161	95.4	1164	96.5	1167	97.6	1170	98.7	1173	99.8	1176	101.0	1182	103.2	1187	105.4	1193	107.6
Volume O.Vel		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP		6-1/2"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14000	1016	444	5.3																		
15000	1088	451	5.7	492	7.2																
16000	1161	459	6.2	499	7.6																
18000	1306	476	7.1	514	8.7	550	10.3	584	12.0												
20000	1451	496	8.2	531	9.8	566	11.6	598	13.4	629	15.3										
22000	1596	517	9.5	550	11.2	583	13.0	614	14.9	644	16.9	672	18.9	700	21.0						
24000	1741	539	11.0	571	12.8	602	14.6	631	16.6	660	18.7	688	20.8	715	23.0	741	25.2	766	27.5		
26000	1886	563	12.8	593	14.6	622	16.5	650	18.5	678	20.7	705	22.9	731	25.2	756	27.5	781	29.9	804	32.3
28000	2031	588	14.7	616	16.7	644	18.6	671	20.7	697	22.9	723	25.2	748	27.5	772	29.9	796	32.4	819	35.0
30000	2176	614	16.7	641	19.0	667	21.1	692	23.1	718	25.4	742	27.7	766	30.1	790	32.6	813	35.2	835	37.8
32000	2321	642	18.8	666	21.4	691	23.8	715	25.9	739	28.1	763	30.5	786	33.0	808	35.6	830	38.2	852	40.8
34000	2466	670	21.2	693	23.9	716	26.6	739	29.0	762	31.3	784	33.7	807	36.2	828	38.8	850	41.5	871	44.2
36000	2611	698	23.8	720	26.6	742	29.5	764	32.3	786	34.8	807	37.2	828	39.7	849	42.4	870	45.1	890	48.0
38000	2756	727	26.7	748	29.6	769	32.6	790	35.6	810	38.5	831	41.1	851	43.7	871	46.3	891	49.1	911	52.0
40000	2901	757	29.8	777	32.9	797	36.0	816	39.2	836	42.3	855	45.3	875	48.0	894	50.7	913	53.5	932	56.3
44000	3192	817	37.0	835	40.2	853	43.6	871	47.1	889	50.5	907	54.0	925	57.4	942	60.5	960	63.6	978	66.5
48000	3482	879	45.4	895	48.9	912	52.4	928	56.0	945	59.8	961	63.5	977	67.3	994	71.1	1010	74.8	1026	78.2
52000	3772	942	55.1	957	58.8	972	62.6	987	66.4	1002	70.4	1017	74.3	1032	78.3	1047	82.5	1062	86.6	1077	90.6
56000	4062	1005	66.3	1019	70.2	1033	74.2	1047	78.3	1061	82.4	1075	86.7	1089	90.9	1103	95.2	1116	99.5	1130	104.0
60000	4352	1069	79.0	1082	83.2	1095	87.4	1108	91.8	1121	96.1	1134	100.7	1147	105.2	1160	109.7	1173	114.3	1185	118.9
64000	4642	1133	93.6	1145	98.0	1158	105.5	1170	107.0	1182	111.6	1194	116.2	1206	121.0	1218	125.7	1230	130.6	1242	135.3
68000	4933	1198	10.0	1210	114.5	1221	119.2	1232	123.9	1243	128.8	1255	133.6	1266	138.5	1278	143.6	1289	148.5	1300	153.7
Volume O.Vel		7"SP		8"SP		9"SP		10"SP		11"SP		12"SP		14"SP		16"SP		18"SP		19"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
26000	1886	827	34.7																		
28000	2031	842	37.6	886	42.7																
30000	2176	857	40.5	900	46.0	941	51.5														
32000	2321	874	43.7	915	49.3	955	55.1	994	61.0	1032	67.1										
34000	2466	891	47.1	932	52.9	971	58.9	1009	65.0	1045	71.2	1080	77.6								
36000	2611	910	50.8	949	56.8	987	62.9	1024	69.3	1060	75.7	1094	82.2	1162	95.8						
38000	2756	930	54.9	968	61.0	1005	67.2	1041	73.7	1076	80.4	1109	87.2	1175	101.1						
40000	2901	951	59.4	988	65.6	1023	71.9	1058	78.5	1092	85.4	1125	92.4	1189	106.7	1250	121.3				
44000	3192	995	69.5	1029	75.8	1063	82.4	1095	89.3	1128	96.3	1159	103.6	1221	118.7	1279	134.2	1335	150.0	1363	158.2
48000	3482	1042	81.6	1074	88.0	1105	94.6	1136	101.6	1167	109.0	1197	116.4	1255	132.0	1311	148.2	1366	164.9		
52000	3772	1092	94.7	1122	102.1	1151	109.0	1180	116.0	1209	123.4	1237	131.1	1292	147.1	1346	163.7				
56000	4062	1144	108.4	1172	117.1	1199	125.1	1226	132.6	1253	140.1	1280	147.7	1333	164.1						
60000	4352	1198	123.4	1224	132.8	1250	142.1	1275	150.8	1301	159.1	1326	167.1								

Wheel Diameter = 54.25 in.  
 Outlet Area = 16.91 sq. ft. inside  
 Maximum BHP = 122. x (RPM/1000)<sup>3</sup>  
 Tip Speed, fpm = 14.2 x RPM

Size

# 5425 sisw

## Design 5020 Centrifugal BI Fans

- Class I RPM 756
- Class II RPM 986
- Class III RPM 1240

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12000	710	187	0.8	205	1.0	222	1.2	238	1.5	254	1.7	269	2.0	283	2.3						
14000	828	207	1.0	222	1.3	238	1.6	253	1.8	267	2.1	281	2.4	294	2.7	320	3.4				
16000	947	228	1.4	241	1.7	255	2.0	269	2.3	282	2.6	295	2.9	307	3.2	331	3.9	354	4.6	375	5.4
18000	1065	249	1.8	262	2.1	274	2.5	286	2.8	298	3.1	310	3.4	322	3.8	344	4.5	365	5.3	386	6.1
20000	1184	272	2.2	283	2.6	294	3.0	305	3.4	316	3.8	327	4.1	338	4.5	359	5.2	379	6.0	398	6.9
22000	1302	295	2.8	305	3.2	315	3.6	325	4.1	335	4.5	345	4.9	355	5.3	374	6.1	394	6.9	412	7.8
24000	1420	318	3.5	327	3.9	337	4.4	346	4.8	355	5.3	364	5.8	373	6.3	392	7.1	409	7.9	427	8.9
26000	1539	342	4.3	350	4.8	359	5.2	367	5.7	376	6.2	384	6.7	393	7.3	410	8.3	426	9.2	443	10.1
28000	1657	365	5.2	373	5.7	381	6.2	389	6.7	397	7.3	405	7.8	413	8.3	429	9.5	444	10.5	460	11.5
30000	1775	389	6.3	397	6.8	404	7.3	411	7.9	419	8.4	426	9.0	434	9.6	448	10.7	463	11.9	477	13.0
32000	1894	413	7.4	420	8.0	427	8.5	434	9.1	441	9.7	448	10.3	455	10.9	469	12.2	482	13.4	496	14.7
34000	2012	438	8.8	444	9.3	450	9.9	457	10.5	463	11.2	470	11.8	476	12.4	489	13.7	502	15.1	515	16.4
36000	2130	462	10.3	468	10.9	474	11.5	480	12.1	486	12.8	492	13.4	499	14.1	511	15.5	523	16.9	535	18.3
38000	2249	486	11.9	492	12.6	498	13.2	503	13.9	509	14.5	515	15.2	521	15.9	532	17.4	544	18.8	556	20.3
40000	2367	511	13.8	516	14.4	521	15.1	527	15.8	532	16.5	538	17.2	543	18.0	555	19.4	566	20.9	577	22.5
44000	2604	559	18.0	564	18.8	569	19.5	574	20.2	579	21.0	584	21.8	589	22.5	599	24.1	609	25.8	619	27.4
48000	2841	609	23.1	613	23.9	618	24.7	622	25.5	627	26.3	631	27.1	636	28.0	645	29.7	654	31.4	663	33.2
52000	3077	658	29.1	662	30.0	666	30.8	670	31.7	675	32.5	679	33.4	683	34.3	691	36.1	700	38.0	708	39.9
56000	3314	707	36.0	711	37.0	715	37.9	719	38.8	723	39.7	727	40.7	731	41.6	738	43.5	746	45.5	754	47.5
60000	3551	756	44.0	760	45.0	764	46.0	768	47.0	771	48.0	775	49.0	778	50.0	786	52.0	793	54.1	800	56.2
64000	3787	806	53.2	809	54.2	813	55.3	816	56.3	820	57.4	823	58.4	827	59.5	833	61.6	840	63.8	847	66.0
68000	4024	855	63.5	859	64.6	862	65.7	865	66.8	869	67.9	872	69.0	875	70.2	881	72.4	888	74.7	894	77.0
72000	4261	905	75.1	908	76.2	911	77.4	914	78.6	918	79.8	921	81.0	923	82.1	929	84.5	935	86.9	941	89.3
76000	4497	955	88.0	958	89.2	960	90.5	963	91.7	966	93.0	969	94.2	972	95.5	978	97.9	983	100.5	989	103.0
80000	4734	1004	102.4	1007	103.7	1010	104.9	1013	106.3	1015	107.6	1018	108.9	1021	110.2	1026	112.8	1032	115.4	1037	118.1
Volume O.Vel	2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP		6-1/2"SP		
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18000	1065	406	6.9																		
20000	1184	417	7.8	453	9.6																
22000	1302	430	8.7	464	10.7	496	12.7	527	14.8												
24000	1420	444	9.8	476	11.8	508	13.9	537	16.1	565	18.4										
26000	1539	459	11.0	490	13.1	520	15.3	549	17.6	576	20.0	602	22.4	628	24.9						
28000	1657	475	12.4	505	14.6	533	16.8	561	19.2	588	21.7	613	24.2	638	26.8	662	29.4				
30000	1775	492	14.1	520	16.2	548	18.5	574	21.0	600	23.5	625	26.2	649	28.9	672	31.6	695	34.4	717	37.3
32000	1894	510	15.9	537	18.1	563	20.4	588	22.9	613	25.5	637	28.2	661	31.1	684	33.9	706	36.8	727	39.8
34000	2012	528	17.8	554	20.2	579	22.5	603	25.1	627	27.7	650	30.5	673	33.4	695	36.3	717	39.4	738	42.4
36000	2130	547	19.7	572	22.4	596	24.9	619	27.4	642	30.2	665	33.0	686	35.9	708	38.9	729	42.1	750	45.3
38000	2249	567	21.8	590	24.8	613	27.5	636	30.1	658	32.8	680	35.7	701	38.7	722	41.8	742	45.0	762	48.2
40000	2367	588	24.0	609	27.2	631	30.2	653	33.0	674	35.7	695	38.6	716	41.7	736	44.9	756	48.1	775	51.4
44000	2604	629	29.1	649	32.5	669	36.1	689	39.4	708	42.5	728	45.4	747	48.5	766	51.7	785	55.1	803	58.6
48000	2840	672	35.0	691	38.6	709	42.4	727	46.2	745	50.0	763	53.4	781	56.7	799	59.9	816	63.2	834	66.8
52000	3077	717	41.8	734	45.7	750	49.6	767	53.7	784	57.8	800	61.9	817	65.7	834	69.4	850	72.9	866	76.4
56000	3314	762	49.5	777	53.7	793	57.9	808	62.1	824	66.5	839	70.9	855	75.3	870	79.7	886	83.6	901	87.5
60000	3551	807	58.3	822	62.7	836	67.1	851	71.6	865	76.2	880	80.9	894	85.6	909	90.4	923	95.0	937	99.5
64000	3787	854	68.3	867	72.9	881	77.5	894	82.2	908	87.1	921	91.9	935	96.9	948	101.9	962	106.9	975	112.0
68000	4024	900	79.4	913	84.2	926	89.1	938	94.1	951	99.1	964	104.2	976	109.3	989	114.6	1002	119.9	1014	125.2
72000	4261	947	91.8	959	96.8	971	101.9	983	107.1	995	112.4	1007	117.7	1019	123.2	1031	128.5	1043	134.1	1055	139.6
76000	4497	995	105.6	1006	110.8	1017	116.1	1029	121.6	1040	127.0	1051	132.7	1062	138.2	1074	144.0	1085	149.6	1096	155.5
80000	4734	1042	120.8	1053	126.2	1064	131.8	1074	137.4	1085	143.1	1096	148.9	1106	154.8	1117	160.6	1128	166.6	1138	172.5
85000	5030	1102	141.9	1112	147.6	1122	153.4	1132	159.3	1142	165.3	1152	171.4	1162	177.4	1172	183.7	1182	189.9	1192	196.1
Volume O.Vel	7"SP		8"SP		9"SP		10"SP		11"SP		12"SP		14"SP		16"SP		18"SP		19"SP		
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
32000	1894	748	42.8																		
34000	2012	759	45.6	798	51.9																
36000	2130	770	48.5	809	55.0	846	61.8														
38000	2249	782	51.6	820	58.4	856	65.3	892	72.4												
40000	2367	794	54.8	832	61.8	867	69.0	902	76.3	935	83.7										
44000	2604	821	62.1	857	69.3	891	76.9	924	84.6	956	92.5	988	100.5	1049	117.1						
48000	2840	851	70.5	884	77.9	917	85.7	949	93.7	980	102.1	1010	110.5	1068	127.8	1124	145.6				
52000	3077	882	80.0	914	87.7	946	95.8	976	104.1	1006	112.6	1035	121.4	1091	139.5	1145	158.2	1196	177.1	1222	186.9
56000	3314	916	91.3	946	98.9	976	107.0	1005	115.6	1033	124.3	1061	133.3	1115	152.2	1167	171.5	1218	191.4		
60000	3551	952	103.7	980	111.8	1008	119.9	1036	128.5	1063	137.6	1090	146.9	1141	165.9	1192	186.1				
64000	3787	989	116.9	1015	126.1	1042	134.7	1068	143.2	1094	152.2	1119	161.6	1169	181.3	1218	201.7				
68000	4024	1027	130.7	1052	141.1	1077	150.8	1102	159.8	1127	168.8	1151	178.2	1199	198.3						
72000	4261	1067	145.3	1091	156.7	1114	167														



Wheel Diameter = 60.00 in.  
 Outlet Area = 20.66 sq. ft. inside  
 Maximum BHP = 201. X (RPM/1000)<sup>3</sup>  
 Tip Speed, fpm = 15.7 x RPM

Size

**6000** SISW

**Design 5020 Centrifugal BI Fans**

Class I RPM 683  
 Class II RPM 890  
 Class III RPM 1120

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
16000	774	178	1.1	193	1.4	208	1.7	222	2.0	236	2.4	249	2.7	261	3.1	285	3.8				
18000	871	193	1.4	207	1.8	220	2.1	233	2.4	246	2.8	258	3.1	270	3.5	292	4.3	314	5.2		
20000	968	209	1.8	221	2.1	234	2.5	246	2.9	257	3.2	269	3.6	280	4.0	301	4.9	322	5.8	341	6.7
22000	1064	225	2.2	237	2.6	248	3.0	259	3.4	270	3.8	280	4.2	291	4.6	311	5.5	330	6.5	349	7.4
24000	1161	242	2.6	252	3.1	262	3.5	273	4.0	283	4.5	293	4.9	302	5.3	322	6.2	340	7.2	358	8.2
26000	1258	259	3.2	268	3.7	278	4.2	287	4.7	296	5.2	306	5.7	315	6.1	333	7.0	351	8.1	368	9.1
28000	1355	276	3.8	285	4.3	293	4.8	302	5.4	311	5.9	320	6.5	328	7.0	345	8.0	362	9.0	378	10.1
30000	1451	293	4.5	301	5.1	310	5.6	318	6.2	326	6.8	334	7.4	342	8.0	358	9.1	374	10.1	390	11.2
32000	1548	311	5.3	318	5.9	326	6.5	334	7.1	341	7.7	349	8.3	356	9.0	372	10.2	387	11.3	401	12.4
36000	1742	346	7.3	353	7.9	359	8.5	366	9.2	373	9.9	380	10.6	387	11.3	400	12.7	414	14.1	427	15.4
40000	1935	381	9.6	387	10.3	394	11.0	400	11.7	406	12.5	412	13.2	418	14.0	430	15.5	442	17.1	455	18.7
44000	2129	417	12.5	423	13.3	428	14.0	434	14.8	439	15.6	445	16.4	450	17.2	462	18.9	473	20.6	484	22.3
48000	2322	453	16.0	458	16.8	463	17.6	468	18.4	473	19.3	479	20.1	484	21.0	494	22.8	504	24.6	514	26.5
52000	2516	489	20.0	494	20.9	499	21.7	503	22.6	508	23.5	513	24.4	517	25.4	527	27.3	536	29.2	545	31.2
56000	2709	526	24.7	530	25.6	534	26.5	539	27.5	543	28.4	547	29.4	552	30.4	560	32.4	569	34.5	578	36.6
60000	2903	562	30.1	566	31.1	570	32.1	574	33.1	578	34.1	582	35.1	586	36.1	594	38.3	602	40.4	610	42.6
64000	3096	598	36.2	602	37.3	606	38.3	610	39.4	613	40.5	617	41.5	621	42.6	629	44.9	636	47.1	644	49.5
68000	3290	635	43.2	638	44.3	642	45.4	646	46.5	649	47.6	653	48.8	656	49.9	663	52.3	670	54.7	677	57.1
72000	3483	671	50.9	675	52.1	678	53.3	682	54.5	685	55.7	688	56.9	691	58.1	698	60.5	705	63.0	711	65.6
76000	3677	708	59.6	711	60.9	714	62.1	718	63.4	721	64.6	724	65.9	727	67.1	733	69.7	740	72.3	746	75.0
80000	3870	744	69.3	747	70.6	751	71.9	754	73.2	757	74.5	760	75.8	763	77.1	769	79.9	775	82.5	780	85.3
85000	4112	790	82.7	793	84.1	796	85.5	799	86.9	802	88.3	805	89.7	807	91.1	813	93.9	819	96.8	824	99.6
90000	4354	836	97.9	839	99.3	841	100.8	844	102.3	847	103.8	850	105.2	852	106.7	858	109.6	863	112.7	868	115.7
95000	4596	882	114.7	884	116.3	887	117.8	890	119.4	892	121.0	895	122.6	897	124.1	902	127.2	907	130.3	912	133.5
100000	4838	928	133.5	930	135.1	933	136.7	935	138.3	938	140.0	940	141.7	943	143.3	947	146.6	952	149.8	957	153.1
Volume O.Vel		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP		6-1/2"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
22000	1064	367	8.5																		
24000	1161	375	9.3	408	11.5																
26000	1258	384	10.2	416	12.5	445	15.0														
28000	1355	394	11.2	424	13.6	453	16.2	480	18.8												
30000	1451	405	12.4	434	14.8	462	17.5	488	20.2	514	23.0										
32000	1548	416	13.6	444	16.2	471	18.9	497	21.7	522	24.6	545	27.6	569	30.6						
36000	1742	440	16.6	466	19.2	491	22.0	516	25.0	539	28.1	562	31.3	584	34.6	605	37.9	626	41.3		
40000	1935	467	20.2	490	23.0	514	25.8	537	28.9	559	32.1	580	35.5	601	38.9	622	42.5	641	46.1	661	49.8
44000	2129	495	24.1	517	27.4	538	30.4	560	33.5	580	36.9	601	40.3	621	43.9	640	47.6	659	51.4	678	55.3
48000	2322	524	28.3	544	32.1	564	35.7	584	39.0	604	42.3	623	45.9	642	49.6	660	53.4	678	57.3	696	61.3
52000	2516	555	33.2	573	37.3	592	41.4	610	45.2	629	48.8	647	52.3	665	56.1	682	60.1	700	64.1	716	68.2
56000	2709	586	38.7	604	43.0	621	47.4	638	51.8	655	55.9	672	59.8	689	63.6	706	67.5	722	71.6	738	75.9
60000	2903	618	44.9	635	49.4	651	54.1	667	58.8	683	63.5	699	68.0	715	72.1	730	76.2	746	80.3	761	84.6
64000	3096	651	51.8	666	56.6	681	61.5	697	66.5	712	71.5	727	76.5	741	81.3	756	85.9	771	90.2	786	94.5
68000	3290	684	59.6	699	64.6	713	69.7	727	74.9	741	80.2	755	85.6	769	90.9	784	96.1	797	101.0	811	105.5
72000	3483	718	68.1	732	73.4	745	78.7	758	84.2	772	89.7	785	95.3	798	101.0	812	106.7	825	112.3	838	117.4
76000	3677	752	77.6	765	83.1	778	88.7	790	94.4	803	100.1	815	106.0	828	111.9	841	117.9	853	123.9	866	129.7
80000	3870	786	88.1	798	93.8	810	99.6	822	105.5	834	111.5	846	117.5	858	123.7	870	129.9	882	136.2	894	142.6
85000	4112	830	102.6	841	108.5	852	114.7	863	120.8	875	127.1	886	133.5	897	139.8	908	146.4	920	152.9	931	159.6
90000	4354	873	118.7	884	125.0	894	131.3	905	137.8	916	144.3	926	151.0	937	157.7	947	164.4	958	171.3	968	178.2
95000	4596	917	136.7	927	143.2	937	149.8	947	156.5	957	163.3	967	170.3	977	177.2	987	184.3	997	191.4	1007	198.6
100000	4838	961	156.5	971	163.2	980	170.2	990	177.1	999	184.3	1008	191.4	1018	198.7	1027	206.0	1037	213.4	1046	220.9
105000	5080	1006	178.3	1015	185.2	1023	192.4	1032	199.7	1041	207.0	1050	214.6	1059	222.0	1068	229.7	1077	237.3	1086	245.0
Volume O.Vel		7"SP		8"SP		9"SP		10"SP		11"SP		12"SP		14"SP		16"SP		18"SP		19"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40000	1935	680	53.5																		
44000	2129	696	59.3	731	67.2	765	75.5														
48000	2322	714	65.5	748	74.0	780	82.7	812	91.5	843	100.6										
52000	2516	733	72.4	766	81.3	798	90.4	828	99.6	857	109.1	886	118.7								
56000	2709	754	80.4	785	89.3	816	98.6	845	108.4	874	118.3	902	128.3	956	148.8						
60000	2903	777	89.0	807	98.4	836	107.9	864	117.8	892	128.1	919	138.6	971	160.1	1021	182.0				
64000	3096	800	98.9	829	108.3	857	118.2	884	128.4	911	138.8	937	149.6	988	171.8	1037	194.8				
68000	3290	825	110.1	852	119.4	879	129.4	906	139.9	931	150.6	957	161.5	1006	184.4	1053	208.1	1083	218.1	1106	229.9
72000	3483	851	122.4	877	132.0	903	141.9	928	152.5	953	163.5	977	174.7	1025	198.0	1071	222.3	1099	232.4		
76000	3677	878	135.3	903	145.8	927	156.0	952	166.4	976	177.5	999	189.0	1045	212.8	1090	237.5	1116	247.4		
80000	3870	906	148.7	930	160.4	953	171.4	976	182.0	999	193.0	1022	204.5	1067	228.9	1110	254.0				
85000	4112	942	166.2	964	179.4	986	191.8	1008	203.5	1030	214.7	1052	226.2	1094	250.6						
90000																					

Wheel Diameter = 66.00 in.  
 Outlet Area = 25.01 sq. ft. inside  
 Maximum BHP = 324. x (RPM/1000)<sup>3</sup>  
 Tip Speed, fpm = 17.3 x RPM

Size

# 6600 sisw

## Design 5020 Centrifugal BI Fans

Class I RPM 621  
 Class II RPM 810  
 Class III RPM 1018

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18000	720	155	1.2	169	1.5	184	1.9	197	2.2	210	2.6	222	3.0	233	3.5						
20000	800	166	1.4	179	1.8	192	2.2	205	2.6	217	3.0	228	3.4	240	3.9	261	4.8				
22000	880	177	1.7	189	2.2	201	2.6	213	3.0	225	3.4	236	3.8	246	4.3	267	5.3	286	6.3		
24000	960	189	2.1	200	2.6	211	3.0	222	3.4	233	3.9	244	4.3	254	4.8	273	5.9	292	6.9	309	8.1
26000	1040	201	2.5	211	3.0	222	3.5	232	4.0	242	4.4	252	4.9	262	5.4	280	6.5	298	7.6	315	8.8
28000	1119	213	2.9	223	3.5	233	4.0	242	4.6	252	5.1	261	5.5	270	6.0	288	7.1	305	8.3	322	9.5
32000	1279	239	4.0	247	4.6	256	5.2	264	5.8	272	6.5	281	7.1	289	7.6	305	8.8	321	10.0	336	11.3
36000	1439	265	5.4	272	6.0	280	6.7	287	7.4	295	8.1	302	8.8	309	9.5	324	10.8	339	12.0	353	13.4
40000	1599	291	7.0	298	7.7	304	8.5	311	9.2	318	10.0	324	10.7	331	11.5	345	13.1	358	14.6	371	15.9
45000	1799	324	9.6	330	10.4	336	11.2	342	12.0	348	12.8	354	13.7	360	14.5	372	16.3	384	18.1	395	19.8
50000	1999	357	12.8	363	13.6	368	14.5	374	15.4	379	16.3	384	17.2	390	18.1	400	20.1	411	22.0	422	24.0
55000	2199	391	16.6	396	17.5	401	18.5	406	19.4	411	20.4	416	21.4	420	22.4	430	24.5	440	26.6	450	28.7
60000	2399	425	21.2	429	22.2	434	23.2	438	24.2	443	25.3	447	26.3	452	27.4	461	29.6	470	31.9	479	34.2
65000	2599	459	26.6	463	27.6	467	28.7	471	29.8	475	30.9	480	32.1	484	33.2	492	35.6	500	38.0	508	40.4
70000	2799	493	32.8	497	33.9	501	35.1	505	36.3	508	37.5	512	38.7	516	39.9	524	42.4	531	44.9	539	47.6
75000	2999	527	40.0	531	41.2	534	42.4	538	43.7	541	45.0	545	46.2	548	47.5	556	50.1	563	52.8	570	55.6
80000	3199	561	48.1	565	49.5	568	50.8	571	52.1	575	53.4	578	54.8	581	56.1	588	58.9	595	61.7	601	64.6
85000	3398	596	57.4	599	58.8	602	60.2	605	61.6	608	63.0	611	64.4	615	65.8	621	68.7	627	71.7	633	74.7
90000	3598	630	67.8	633	69.2	636	70.7	639	72.2	642	73.7	645	75.2	648	76.7	654	79.7	659	82.8	665	86.0
95000	3798	664	79.3	667	80.9	670	82.5	673	84.0	676	85.6	678	87.1	681	88.7	687	91.9	692	95.1	698	98.4
100000	3998	699	92.2	701	93.8	704	95.5	707	97.1	710	98.8	712	100.4	715	102.0	720	105.4	725	108.7	730	112.1
105000	4198	733	106.4	736	108.1	738	109.8	741	111.5	744	113.3	746	115.0	749	116.7	753	120.1	758	123.7	763	127.2
110000	4398	768	122.0	770	123.7	772	125.5	775	127.3	777	129.2	780	131.0	782	132.8	787	136.3	792	140.0	796	143.7
115000	4598	802	139.0	804	140.9	807	142.7	809	144.6	811	146.5	814	148.5	816	150.3	821	154.0	825	157.8	830	161.7
120000	4798	836	157.6	839	159.5	841	161.5	843	163.4	846	165.4	848	167.4	850	169.4	854	173.3	859	177.2	863	181.2
125000	4998	871	177.8	873	179.8	875	181.8	877	183.9	880	185.9	882	188.0	884	190.1	888	194.2	892	198.2	896	202.3
Volume O.Vel		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP		6-1/2"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
28000	1119	338	10.8	367	13.4																
32000	1279	351	12.6	380	15.5	406	18.4														
36000	1439	367	14.8	393	17.8	419	20.9	443	24.2	466	27.6										
40000	1599	384	17.4	409	20.5	433	23.8	456	27.2	478	30.9	499	34.5	520	38.2						
45000	1799	407	21.3	430	24.5	453	28.0	474	31.6	495	35.4	516	39.3	535	43.4	555	47.5	573	51.7	591	55.9
50000	1999	433	26.0	454	29.5	474	33.0	495	36.7	514	40.7	533	44.8	552	49.0	571	53.4	588	57.9	606	62.4
55000	2199	459	30.9	479	35.2	498	39.0	517	42.8	535	46.9	553	51.1	571	55.5	588	60.0	605	64.7	622	69.5
60000	2399	487	36.5	505	41.3	523	45.9	540	50.0	558	54.1	575	58.5	592	63.0	608	67.7	624	72.5	640	77.4
65000	2599	517	42.9	533	48.0	549	53.2	566	58.1	582	62.6	598	67.0	614	71.6	629	76.4	645	81.3	660	86.5
70000	2799	546	50.1	562	55.5	577	61.0	592	66.6	607	71.9	622	76.9	637	81.6	652	86.4	666	91.3	681	96.6
75000	2999	577	58.4	591	64.0	605	69.8	620	75.7	634	81.6	648	87.5	662	92.8	676	97.8	689	102.9	703	108.1
80000	3199	608	67.5	621	73.4	635	79.5	648	85.7	661	92.0	674	98.4	687	104.6	700	110.3	714	115.9	727	121.3
85000	3398	639	77.8	652	84.0	664	90.3	677	96.8	689	103.4	702	110.1	714	116.9	726	123.4	739	129.7	751	135.8
90000	3598	671	89.1	683	95.6	695	102.3	707	109.1	718	115.9	730	122.8	742	130.0	753	137.1	765	144.0	777	151.0
95000	3798	703	101.7	714	108.6	726	115.5	737	122.5	748	129.7	759	136.9	770	144.2	781	151.7	792	159.1	803	166.6
100000	3998	736	115.6	746	122.7	757	129.9	767	137.3	778	144.6	788	152.2	799	159.7	809	167.4	820	175.3	830	183.1
105000	4198	768	130.8	778	138.1	788	145.7	798	153.2	808	161.0	818	168.7	828	176.6	838	184.6	848	192.7	858	200.9
110000	4398	801	147.4	811	155.1	820	162.8	830	170.7	839	178.7	849	186.8	858	194.9	868	203.2	877	211.5	887	220.0
115000	4598	834	165.5	843	173.4	852	181.4	861	189.6	870	197.8	879	206.2	888	214.7	898	223.2	907	231.8	916	240.5
120000	4798	867	185.2	876	193.3	885	201.7	893	210.0	902	218.7	910	227.2	919	236.0	928	244.7	937	253.7	945	262.6
125000	4998	901	206.5	909	214.8	917	223.4	925	232.1	934	240.9	942	249.9	950	258.8	959	268.1	967	277.1	975	286.3
Volume O.Vel		7"SP		8"SP		9"SP		10"SP		11"SP		12"SP		14"SP		16"SP		18"SP		19"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
50000	1999	622	66.9	655	76.3																
55000	2199	638	74.4	670	84.3	700	94.5	730	104.9												
60000	2399	656	82.4	686	93.0	716	103.7	744	114.5	771	125.6	798	137.1								
65000	2599	675	91.6	704	102.3	732	113.5	759	125.0	786	136.6	811	148.5	862	173.0						
70000	2799	695	101.9	723	113.0	750	124.4	776	136.4	802	148.6	827	161.1	875	186.2	922	212.6				
75000	2999	717	113.5	743	124.8	769	136.6	794	148.7	819	161.2	844	174.1	891	200.7	935	227.6	978	255.6		
80000	3199	739	126.6	765	138.0	790	150.1	814	162.5	838	175.3	861	188.5	907	215.9	950	244.1	992	272.7	1013	287.6
85000	3398	763	141.4	787	152.9	811	165.0	835	177.8	858	190.9	880	204.3	924	232.1	967	261.5	1007	291.4		
90000	3598	788	157.3	811	169.6	834	181.6	857	194.4	879	207.8	900	221.5	943	250.0	984	279.7				
95000	3798	814	173.9	836	187.6	858	200.3	879	213.0	900	226.3	921	240.3	962	269.5	1002	299.6				
100000	3998	841	191.2	862	206.5	882	220.6	903	233.8	923	247.0	943	260.9	983	290.6						
105000	4198	868	209.1	888	225.5	908	241.3	927	256.1	947	269.9	966	283.8	1004	313.3						
110000	4398	896																			

Wheel Diameter = 73.00 in.

Outlet Area = 30.61 sq. ft. inside

Maximum BHP = 534. x (RPM/1000)<sup>3</sup>

Tip Speed, fpm = 19.1 x RPM

Size

**7300** SISW

Class I RPM 562

Class II RPM 732

**Design 5020 Centrifugal BI Fans**

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
22000	719	140	1.5	153	1.8	166	2.3	178	2.7	190	3.2	201	3.7	211	4.2						
24000	784	148	1.7	160	2.2	172	2.6	184	3.1	195	3.6	205	4.1	215	4.6	235	5.8				
26000	850	156	2.0	168	2.5	179	2.9	190	3.4	200	4.0	210	4.5	220	5.1	239	6.3	257	7.5		
28000	915	165	2.3	175	2.9	186	3.4	196	3.9	206	4.4	216	5.0	226	5.5	244	6.8	261	8.1	277	9.4
30000	980	174	2.7	184	3.3	193	3.8	203	4.4	213	4.9	222	5.5	231	6.1	249	7.4	265	8.7	281	10.1
32000	1046	183	3.1	192	3.7	201	4.3	210	4.9	220	5.5	229	6.0	237	6.7	254	8.0	270	9.4	285	10.8
34000	1111	192	3.5	201	4.2	209	4.8	218	5.5	227	6.1	235	6.7	244	7.3	260	8.6	275	10.1	290	11.6
36000	1177	201	4.0	209	4.7	218	5.4	226	6.1	234	6.8	242	7.4	250	8.0	266	9.4	281	10.8	295	12.4
38000	1242	210	4.6	218	5.3	226	6.0	234	6.7	242	7.5	250	8.2	257	8.8	272	10.2	287	11.7	301	13.3
40000	1307	220	5.2	227	5.9	235	6.7	242	7.4	250	8.2	257	9.0	264	9.7	279	11.1	293	12.6	307	14.2
45000	1471	244	6.9	250	7.7	257	8.6	264	9.4	270	10.3	277	11.2	284	12.1	297	13.7	309	15.3	322	16.9
50000	1634	268	9.1	274	10.0	280	10.9	286	11.8	292	12.8	298	13.7	304	14.7	316	16.7	327	18.6	339	20.3
55000	1798	293	11.7	298	12.6	303	13.6	309	14.6	314	15.7	320	16.7	325	17.8	336	19.9	347	22.1	357	24.2
60000	1961	317	14.8	322	15.8	327	16.9	332	17.9	337	19.0	342	20.2	347	21.3	357	23.6	367	26.0	377	28.4
65000	2124	342	18.5	347	19.6	351	20.7	356	21.8	360	23.0	365	24.2	370	25.4	379	27.9	388	30.4	397	32.9
70000	2288	367	22.7	371	23.8	376	25.0	380	26.2	384	27.5	388	28.7	393	30.0	401	32.6	410	35.3	418	38.0
75000	2451	392	27.5	396	28.8	400	30.0	404	31.3	408	32.6	412	33.9	416	35.3	424	38.0	432	40.8	440	43.7
80000	2615	417	33.0	421	34.4	425	35.7	428	37.0	432	38.4	436	39.8	440	41.2	447	44.1	454	47.1	462	50.1
85000	2778	443	39.3	446	40.7	450	42.1	453	43.5	456	44.9	460	46.4	463	47.9	470	50.9	477	54.0	484	57.2
90000	2941	468	46.2	471	47.7	474	49.2	478	50.7	481	52.2	484	53.8	487	55.3	494	58.5	501	61.8	507	65.0
95000	3105	493	54.0	496	55.6	499	57.2	502	58.7	506	60.3	509	61.9	512	63.5	518	66.9	524	70.2	530	73.7
100000	3268	518	62.7	521	64.3	524	66.0	527	67.6	530	69.3	533	71.0	536	72.6	542	76.1	548	79.6	554	83.2
105000	3432	544	72.2	547	73.9	549	75.7	552	77.4	555	79.1	558	80.9	561	82.7	566	86.2	572	89.9	577	93.6
110000	3595	569	82.7	572	84.5	575	86.3	577	88.1	580	89.9	583	91.7	585	93.6	590	97.3	596	101.1	601	104.9
115000	3758	594	94.1	597	96.0	600	97.9	602	99.8	605	101.7	607	103.5	610	105.5	615	109.3	620	113.2	625	117.3
120000	3922	620	106.6	622	108.5	625	110.5	627	112.5	630	114.5	632	116.4	635	118.4	640	122.4	644	126.5	649	130.6
125000	4085	645	120.1	648	122.1	650	124.2	653	126.3	655	128.3	657	130.4	660	132.4	664	136.6	669	140.8	673	145.0
130000	4249	671	134.8	673	136.9	675	139.0	678	141.2	680	143.4	682	145.4	684	147.5	689	151.8	693	156.2	698	160.6
Volume O.Vel		2"SP		2-1/4"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
32000	1046	300	12.3	314	13.8																
34000	1111	305	13.1	318	14.7	332	16.3														
36000	1177	309	14.0	323	15.6	336	17.3														
38000	1242	315	14.9	328	16.6	340	18.3	365	21.8												
40000	1307	320	15.9	333	17.6	345	19.4	369	23.0	392	26.8										
45000	1471	334	18.7	346	20.5	358	22.3	381	26.3	403	30.3	423	34.5	444	38.8						
50000	1634	351	22.0	362	23.9	373	25.8	394	29.9	415	34.2	435	38.6	454	43.2	473	47.9	491	52.7		
55000	1798	368	26.1	378	28.0	389	29.9	409	34.2	429	38.6	448	43.2	466	48.1	484	53.0	501	58.1	518	63.1
60000	1961	387	30.7	396	32.8	406	34.8	425	39.1	443	43.7	462	48.4	479	53.4	496	58.6	513	63.9	529	69.3
65000	2124	406	35.5	415	38.1	424	40.4	442	44.8	460	49.4	477	54.4	493	59.5	510	64.8	526	70.3	541	75.9
70000	2288	427	40.8	435	43.6	443	46.3	460	51.4	476	56.1	493	61.1	509	66.4	524	71.9	540	77.5	555	83.2
75000	2451	448	46.6	455	49.6	463	52.5	479	58.5	494	63.8	510	68.8	525	74.1	540	79.6	555	85.4	569	91.4
80000	2615	469	53.1	477	56.2	484	59.4	499	65.8	513	71.9	528	77.5	542	82.9	556	88.5	570	94.3	584	100.4
85000	2778	491	60.4	498	63.6	505	66.9	519	73.6	533	80.3	546	86.8	560	92.7	574	98.5	587	104.3	600	110.4
90000	2941	514	68.4	520	71.8	527	75.2	540	82.1	553	89.2	566	96.3	579	103.1	592	109.5	605	115.6	617	121.6
95000	3105	536	77.2	543	80.7	549	84.3	561	91.5	574	98.9	586	106.4	598	113.9	610	121.0	623	127.8	635	134.2
100000	3268	560	86.8	565	90.5	571	94.2	583	101.8	595	109.5	607	117.3	618	125.2	630	133.0	641	140.5	653	147.7
105000	3432	583	97.4	588	101.2	594	105.0	605	112.8	616	120.8	628	128.9	639	137.2	650	145.5	661	153.6	672	161.6
110000	3595	606	108.8	612	112.8	617	116.8	628	124.9	638	133.2	649	141.5	660	150.0	670	158.7	681	167.4	691	175.9
115000	3758	630	121.3	635	125.4	640	129.6	650	137.9	661	146.4	671	155.1	681	163.9	691	172.8	701	181.9	711	191.0
120000	3922	654	134.8	659	139.0	664	143.3	673	151.9	683	160.8	693	169.7	703	178.8	712	188.1	722	197.2	732	206.7
125000	4085	678	149.3	683	153.7	687	158.1	697	167.1	706	176.2	715	185.4	725	194.9						
130000	4249	702	165.0	707	169.6	711	174.1	720	183.3	729	192.7										
Volume O.Vel		6-1/2"SP		7"SP		7-1/2"SP		8"SP		8-1/2"SP		9"SP		9-1/2"SP		10"SP		10-1/2"SP		11"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
60000	1961	545	74.8	560	80.3	575	85.9	590	91.7												
65000	2124	557	81.7	572	87.6	586	93.4	600	99.3	615	105.4	628	111.5	642	117.8						
70000	2288	569	89.1	584	95.2	598	101.4	612	107.8	626	114.0	639	120.4	652	126.8	665	133.3	678	140.0	691	146.7
75000	2451	583	97.4	597	103.7	611	110.0	624	116.5	638	123.2	651	129.8	663	136.6	676	143.4	688	150.2	700	157.1
80000	2615	598	106.7	611	113.0	624	119.5	638	126.2	650	132.9	663	139.9	676	147.0	688	154.0	700	161.3	712	168.3
85000	2778	613	116.8	626	123.3	639	130.0	652	136.8	664	143.7	676	150.8	688	157.9	700	165.3	712	172.6	724	180.2
90000	2941	630	128.0	642	134.6	655	141.5	666	148.4	678	155.5	690	162.7	702	169.9	714	177.5	725	184.9		
95000	3105	647	140.5	659	147.1	671	154.0	682	161.0	694	168.3	705</									

Wheel Diameter = 80.75 in.  
 Outlet Area = 37.46 sq. ft. inside  
 Maximum BHP = 885. x (RPM/1000)<sup>3</sup>  
 Tip Speed, fpm = 21.1 x RPM

Size

# 8075 sisw

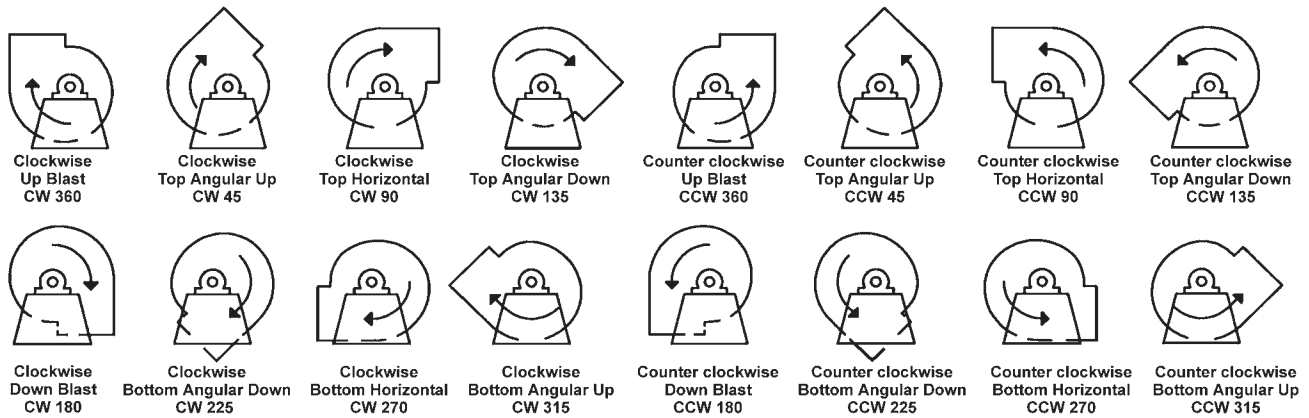
Class I RPM 508

Class II RPM 662

## Design 5020 Centrifugal BI Fans

Volume O.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	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
24000	641	118	1.4	131	1.9	144	2.4	155	2.9	166	3.5										
26000	694	124	1.7	136	2.1	148	2.6	159	3.2	170	3.8	180	4.4	189	5.0						
28000	748	130	1.9	141	2.4	152	2.9	163	3.5	173	4.1	183	4.7	192	5.4						
32000	855	142	2.5	152	3.1	162	3.6	172	4.2	181	4.9	191	5.5	199	6.2	216	7.7	232	9.2		
36000	962	155	3.1	164	3.8	173	4.5	182	5.2	191	5.8	199	6.5	207	7.2	223	8.8	239	10.4	253	12.1
40000	1068	168	3.9	176	4.7	184	5.5	193	6.3	201	6.9	209	7.7	216	8.4	231	10.0	246	11.7	260	13.5
45000	1202	185	5.2	192	6.0	200	6.9	207	7.8	214	8.6	221	9.4	229	10.2	243	11.9	256	13.7	269	15.5
50000	1335	202	6.7	209	7.6	216	8.5	222	9.5	229	10.5	235	11.5	242	12.4	255	14.1	267	15.9	280	17.9
55000	1469	220	8.4	226	9.4	232	10.5	238	11.5	244	12.6	250	13.7	256	14.8	268	16.8	280	18.7	291	20.7
60000	1603	238	10.6	244	11.6	249	12.7	255	13.8	260	15.0	266	16.1	271	17.3	282	19.7	293	21.9	303	23.9
65000	1736	256	13.1	261	14.2	266	15.3	271	16.5	276	17.7	282	19.0	287	20.3	297	22.8	307	25.4	317	27.7
70000	1870	274	15.9	279	17.1	284	18.3	289	19.6	293	20.9	298	22.2	303	23.6	312	26.3	321	29.1	331	31.9
75000	2003	293	19.2	297	20.5	301	21.8	306	23.1	310	24.5	315	25.9	319	27.3	328	30.2	337	33.1	345	36.1
80000	2137	311	22.9	315	24.3	319	25.7	323	27.1	327	28.5	332	30.0	336	31.5	344	34.5	352	37.6	360	40.7
85000	2270	330	27.2	333	28.6	337	30.0	341	31.5	345	33.0	349	34.5	353	36.1	360	39.3	368	42.5	376	45.8
90000	2404	348	31.9	352	33.4	355	34.9	359	36.4	363	38.0	366	39.6	370	41.3	377	44.6	384	47.9	392	51.4
95000	2537	367	37.1	370	38.7	373	40.3	377	41.9	380	43.5	384	45.2	387	46.9	394	50.4	401	53.9	408	57.5
100000	2671	385	43.0	388	44.6	392	46.3	395	48.0	398	49.7	402	51.4	405	53.2	411	56.8	418	60.5	424	64.2
105000	2805	404	49.4	407	51.1	410	52.8	413	54.6	416	56.4	419	58.2	422	60.1	429	63.8	435	67.6	441	71.5
110000	2938	422	56.4	425	58.2	428	60.0	431	61.9	434	63.7	437	65.6	440	67.5	446	71.4	452	75.4	458	79.4
115000	3072	441	64.1	444	66.0	447	67.9	450	69.8	452	71.7	455	73.7	458	75.6	464	79.7	469	83.8	475	87.9
120000	3205	460	72.5	463	74.5	465	76.4	468	78.4	471	80.4	473	82.5	476	84.5	481	88.6	487	92.9	492	97.2
125000	3339	478	81.6	481	83.6	484	85.7	486	87.7	489	89.8	492	91.9	494	94.0	499	98.3	505	102.7	510	107.1
130000	3472	497	91.4	500	93.6	502	95.7	505	97.8	507	100.0	510	102.1	512	104.4	517	108.7	522	113.3	527	117.8
135000	3606	516	102.0	518	104.2	521	106.5	523	108.7	526	110.9	528	113.1	530	115.4	535	120.0	540	124.6	545	129.3
140000	3739	535	113.5	537	115.7	539	118.1	542	120.4	544	122.6	546	124.9	549	127.3	553	132.0	558	136.7	563	141.7
150000	4006	572	138.8	574	141.3	577	143.7	579	146.3	581	148.7	583	151.1	585	153.6	590	158.6	594	163.6	598	168.7
160000	4274	610	167.8	612	170.4	614	173.0	616	175.6	618	178.3	620	180.9	622	183.5	626	188.7	630	194.2	634	199.5
Volume O.Vel	2"SP		2-1/4"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		4-1/2"SP		5"SP		5-1/2"SP		6"SP		
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40000	1068	273	15.4	285	17.3																
45000	1202	282	17.5	294	19.6	305	21.6	328	25.9												
50000	1335	291	20.0	303	22.1	314	24.3	336	28.9	356	33.5										
55000	1469	302	22.8	313	25.0	324	27.3	344	32.1	364	37.0	383	42.2	401	47.4						
60000	1603	314	26.1	324	28.4	334	30.8	354	35.7	373	40.9	391	46.3	408	51.8	425	57.4				
65000	1736	327	29.9	336	32.2	346	34.6	365	39.7	383	45.1	400	50.7	417	56.5	433	62.4	449	68.4	465	74.5
70000	1870	340	34.3	349	36.7	358	39.1	376	44.3	393	49.9	410	55.6	426	61.6	442	67.8	458	74.1	473	80.5
75000	2003	354	39.1	363	41.8	371	44.3	388	49.5	405	55.2	421	61.1	436	67.2	452	73.5	467	80.1	481	86.8
80000	2137	369	43.9	377	47.0	385	49.9	401	55.4	417	61.1	432	67.1	447	73.4	462	79.9	476	86.6	490	93.5
85000	2270	384	49.2	391	52.6	399	55.9	414	62.0	429	67.7	444	73.8	458	80.3	473	87.0	487	93.8	500	100.9
90000	2404	399	54.9	406	58.5	414	62.1	428	68.9	442	75.2	456	81.3	470	87.8	484	94.6	497	101.7	511	108.8
95000	2537	415	61.1	422	64.8	429	68.6	442	76.1	456	83.2	469	89.7	483	96.2	496	103.0	509	110.2	522	117.5
100000	2671	431	68.0	438	71.8	444	75.7	457	83.7	470	91.5	483	98.8	496	105.5	508	112.3	521	119.5	533	126.9
105000	2805	447	75.4	454	79.4	460	83.4	472	91.7	485	100.1	497	108.1	509	115.6	521	122.7	533	129.7	545	137.2
110000	2938	464	83.5	470	87.6	476	91.8	488	100.3	499	109.0	511	117.6	523	125.9	535	133.7	546	141.1	558	148.5
115000	3072	481	92.2	486	96.4	492	100.8	503	109.6	515	118.6	526	127.7	537	136.6	548	145.1	559	153.2	571	161.0
120000	3205	498	101.5	503	106.0	509	110.4	519	119.5	530	128.8	541	138.3	552	147.9	563	157.1	573	165.8	584	174.1
125000	3339	515	111.7	520	116.2	525	120.9	536	130.3	546	139.8	556	149.5	567	159.3	577	169.3	587	178.9	598	187.8
130000	3472	532	122.5	537	127.2	542	132.0	552	141.6	562	151.4	572	161.5	582	171.7	592	181.9	602	192.1	612	202.3
135000	3606	550	134.1	554	139.0	559	143.9	569	153.9	578	164.0	588	174.2	598	184.6	607	195.3	617	205.9	626	216.4
140000	3739	567	146.5	572	151.5	576	156.6	586	166.9	595	177.2	604	187.8	613	198.6	622	209.3	632	220.4	641	231.5
150000	4006	602	174.0	607	179.2	611	184.5	620	195.3	628	206.4	637	217.4	645	228.8	654	240.1				
160000	4274	638	204.9	642	210.5	646	216.1	654	227.5												
Volume O.Vel	6-1/2"SP		7"SP		7-1/2"SP		8"SP		8-1/2"SP		9"SP		9-1/2"SP		10"SP		10-1/2"SP		11"SP		
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
75000	2003	495	93.6	509	100.4	523	107.5	536	114.5												
80000	2137	504	100.6	518	107.8	531	115.0	544	122.3	556	129.8	569	137.2	581	145.0						
85000	2270	514	108.1	527	115.5	540	123.0	552	130.8	564	138.3	577	146.1	589	154.0	600	161.9	612	170.1		
90000	2404	523	116.2	536	123.7	549	131.5	561	139.4	573	147.4	585	155.5	597	163.6	608	171.8	619	180.1	630	188.4
95000	2537	534	125.0	545	132.7	559	140.7	571	148.7	582	156.9	594	165.4	605	173.7	617	182.3	628	190.7	639	199.5
100000	2671	545	134.6	557	142.5	569	150.6	581	158.7	592	167.1	603	175.6	614	184.2	626	193.2	636	201.9	647	211.1
105000	2805	557	145.0	569	153.1	580	161.4	591	169.6	602	178.1	613	186.7	624	195.5	635	204.6	645	213.6	656	223.0
110000	2938	569	156.3	580	164.4	591	17														

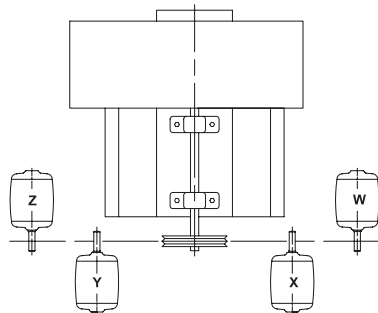
## Designations for Rotation and Discharge of Centrifugal Fans



**Notes:**

- 1) Direction of rotation is determined from the drive side of the fan.
- 2) On single inlet fans, the drive side is always considered as the side opposite the fan inlet.
- 3) On double inlet fans with drives on both sides, the drive side is that with the higher powered drive unit.
- 4) Direction of discharge is determined in accordance with the diagrams. Angle of discharge is referred to the vertical axis of the fan and designated in degrees from such standard reference axis. Angle of discharge may be any intermediate angle as required.
- 5) For a fan inverted for ceiling suspension, or side wall mounting, the direction of rotation and discharge is determined when the fan is resting on the floor.

## Standard Motor Position for Centrifugal Fans



- 1) Motor positions for a centrifugal fan have been given letter designations as shown.
- 2) These letter designations generally are used only when the motor is mounted separate from the fan proper (i.e. on the ground or on a common fan and motor integral base).

## Sound Data

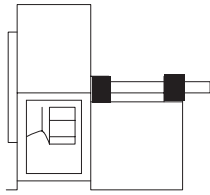
Northern Blower Inc. certifies that the product shown herein is licensed to bear the AMCA Seal. Fan Sound Ratings are based on tests and procedures in accordance with AMCA Publication 211 and AMCA Publication 311, and comply with the requirements of the AMCA Certified Ratings Program.

Fan sound data testing was conducted according to AMCA Standard 300 in an AMCA Registered Laboratory. The Certified Sound Ratings Seal provides increased assurance that the published sound ratings are both reliable and accurate.

Sound data was obtained in accordance with AMCA Standard 300, Reverberant Room Method of Sound Testing of Fans, published in accordance with AMCA Standard 301, Methods for Calculating Fan Sound Ratings from Laboratory Test data. Upon request Northern Blower will provide Sound Level Ratings for any fan selection from this catalogue. Refer also to the Northern Blower Sound Bulletin.

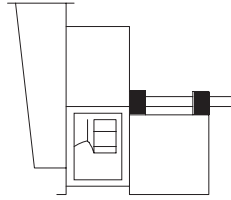
SW - Single Width  
SI - Single Inlet

DW - Double Width  
DI - Double Inlet



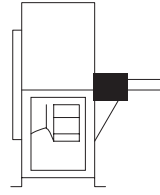
1 SWSI

For belt drive or direct connection. Impeller overhung. Two bearings on base.



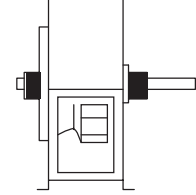
1 SWSI c/w BOX

For belt drive or direct connection. Impeller overhung. Two bearings on base. Inlet box may be self-supporting.



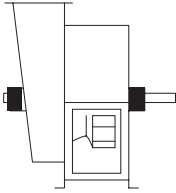
2 SWSI

For belt drive or direct connection. Impeller overhung. Bearings in bracket supported by fan housing.



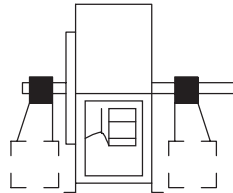
3 SWSI

For belt drive or direct connection. One bearing on each side and supported by fan housing.



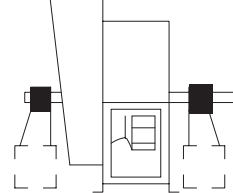
3 SWSI c/w BOX

For belt drive or direct connection. One bearing on each side and supported by fan housing and inlet box. Shaft extending through inlet box.



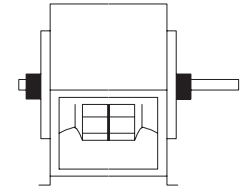
3 SWSI c/w IND. PED.

For belt drive or direct connection. Housing is self-supporting. One bearing on each side supported by independent pedestals.



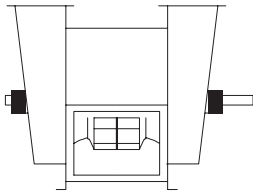
3 SWSI c/w BOX & IND. PED.

For belt drive or direct connection. Housing is self-supporting. One bearing on each side supported by independent pedestals with shaft extending through inlet box.



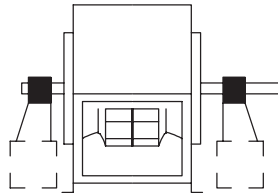
3 DWDI

For belt drive or direct connection. One bearing on each side and supported by fan housing.



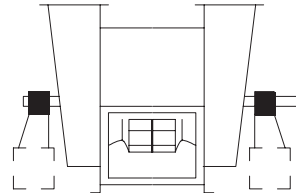
3 DWDI c/w BOXES

For belt drive or direct connection. One bearing on each side and supported by inlet boxes. Shaft extending through inlet boxes.



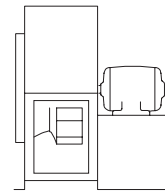
3 DWDI c/w IND. PED.

For belt drive or direct connection. Housing is self-supporting. One bearing on each side and supported by independent pedestals.



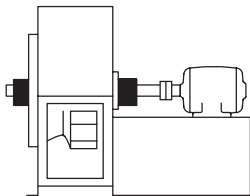
3 DWDI c/w BOXES & IND. PED.

For belt drive or direct connection. Housing is self-supporting. One bearing on each side supported by independent pedestals with shaft extending through inlet box.



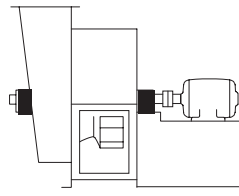
4 SWSI

For direct drive. Impeller overhung on prime mover shaft. No bearings on fan. Prime mover base mounted or integrally directly connected.



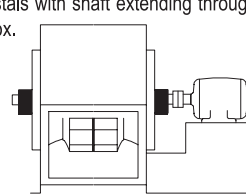
7 SWSI

For belt drive or direct connection. Arrangement 3 plus base for prime mover.



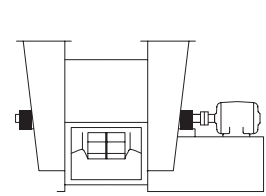
7 SWSI c/w BOX

For belt drive or direct connection. Arrangement 3 plus base for prime mover. Shaft extending through inlet box.



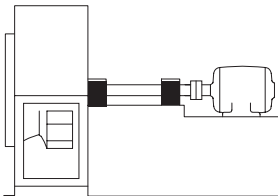
7 DWDI

For belt drive or direct connection. Arrangement 3 plus base for prime mover.



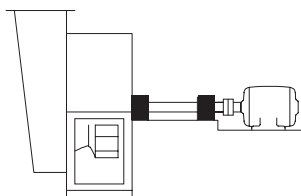
7 DWDI c/w BOXES

For belt drive or direct connection. Arrangement 3 plus base for prime mover. Shaft extending through inlet box.



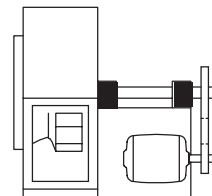
8 SWSI

For belt drive or direct connection. Arrangement 1 plus extended base for prime mover.



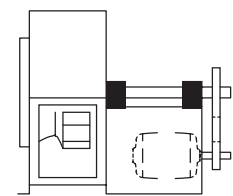
8 SWSI c/w BOX

For belt drive or direct connection. Arrangement 1 plus extended base for prime mover.



9 SWSI

For belt drive. Impeller overhung, two bearings, with prime mover outside base.



10 SWSI

For belt drive. Impeller overhung, two bearings, with prime mover inside base.







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