

**AIR CHEM
SYSTEMS, INC.**

INLINE FANS



AIR CHEM SYSTEMS, INC. manufactures an extensive line of air pollution control equipment for the electronic, metal finishing, plating, sewage treatment, and other industries that generate nonflammable corrosive fumes and odors.

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ACSI Inline Fan Design

AIR CHEM SYSTEMS **Inline (ACSI) Fans** are self-contained ventilation units available in varying sizes for exhaust service applications in the industrial, chemical processing field. These fans are sized to provide the required air flow against the resistance of the collection system and fume control equipment.

ACSI fan wheels and housing are fabricated from corrosion resistant, fiberglass reinforced plastic (FRP) to provide superior performance for exhausting highly corrosive fumes.

The turned, ground and polished (TG&P) shaft has an FRP sleeve so that no metal is exposed to the corrosives in the air stream.

All **ACSI** fans are clockwise (CW) rotation when viewed from the outlet or drive end.

ACSI fan wheels are constructed and bonded utilizing a premium grade vinyl ester resin for maximum secondary bonding characteristics. No epoxy is used in the fabrication of ACSI fan wheels. All wheels are dynamically balanced for smooth, quiet operation and maximum dependability.

ACSI fan wheels are of the flat-bladed, backward incline, centrifugal type for low pressure with non-overloading characteristics up to 6 inches of static pressure.

The inlet of the **ACSI** fan is flanged for direct attachment to equipment or duct.

The outlet of the **ACSI** fan is flanged for connecting stacks or additional duct.

All **ACSI** fans are Arrangement 9 where the fan motor is mounted to the side of the housing. A motor cover and belt guard are standard on all **ACSI** fans.



TEMPERATURE AND ALTITUDE

The following fan curve tables are based on standard air at 70° F., 29.92 inches barometric pressure and weighing .075 pounds per cubic foot. When air temperatures other than 70° F and/or altitudes other than sea level are involved, it is necessary to correct for the new fan requirements.

Table 1 indicates the correction factor for the temperature and altitude the fan will be operating at.

How to use Table 1:

Example: 10,000 CFM @ 2 1/2" S.P.W.C. @ 150° F at an altitude of 7000 feet. In this example the factor will be 1.50 from Table 1 below.

STEP 1: Multiply the static pressure by the factor ($2.5 \times 1.5 = 3.75$ " S.P.W.C. [use 4"]).

STEP 2: Select a fan from the following fan charts for the new condition of 10,000 CFM @ 4" S.P.W.C.

In this case an ACSC 300 fan at 10,349 CFM at 4" S.P.W.C. has a 1217 RPM @ 9.93 BHP.

STEP 3: Correct the horsepower and static pressure in Step 2 to non-standard performance by dividing the factor. (1) 4" S.P. $\div 1.5 = 2.67$ S.P. (2) 9.93 BHP $\div 1.5 = 6.62$ BHP

STEP 4: Check for maximum safe speed from Table 2. At 150° the safe speed factor from Table is .98. The maximum safe speed for the ACSC 300 fan, Class I is 1355 RPM $\times .98=1328$ RPM. Our RPM selected above is 1217 therefore satisfactory.

Final performance is: 10,000 CFM @ 2.67 S.P.W.C. turning at 1217 RPM using 6.62 BHP operating at 150° F at 7000 ft. elevation. Use special high altitude motor if altitude exceeds 3300 feet.

TABLE 1

TEMP. (°F)	ALTITUDE												
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10,000	11,000	12,000
1.00	1.04	1.08	1.12	1.16	1.20	1.25	1.30	1.35	1.40	1.46	1.51	1.57	
-50	0.77	0.80	0.83	0.86	0.89	0.92	0.96	1.00	1.04	1.08	1.12	1.16	1.21
-25	0.82	0.89	0.89	0.92	0.95	0.98	1.03	1.07	1.11	1.15	1.20	1.24	1.29
0	0.87	0.90	0.94	1.08	1.01	1.04	1.09	1.13	1.17	1.22	1.27	1.31	1.37
25	0.91	0.95	0.98	1.02	1.06	1.09	1.14	1.18	1.23	1.27	1.33	1.37	1.43
50	0.96	1.00	1.04	1.08	1.11	1.15	1.20	1.25	1.30	1.34	1.40	1.45	1.51
70	1.00	1.04	1.08	1.12	1.16	1.20	1.25	1.30	1.35	1.40	1.46	1.51	1.57
100	1.06	1.10	1.14	1.19	1.23	1.27	1.33	1.38	1.43	1.48	1.55	1.60	1.66
125	1.10	1.14	1.19	1.23	1.28	1.32	1.38	1.43	1.49	1.54	1.61	1.66	1.73
150	1.15	1.20	1.24	1.29	1.33	1.38	1.44	1.50	1.55	1.61	1.68	1.74	1.81
175	1.20	1.25	1.30	1.34	1.39	1.44	1.50	1.56	1.62	1.68	1.75	1.81	1.88
200	1.25	1.30	1.35	1.40	1.45	1.50	1.56	1.63	1.69	1.75	1.83	1.89	1.96

TABLE 2 MAXIMUM SAFE SPEED CORRECTION FACTOR

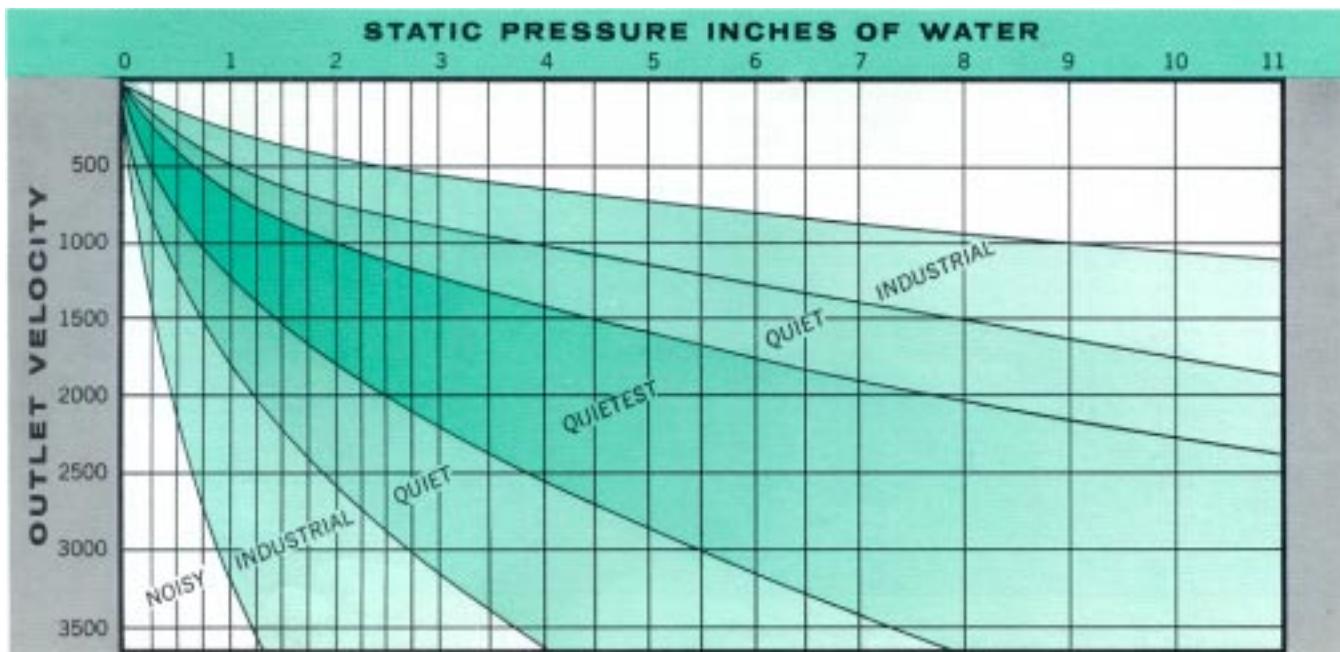
TEMP.	0	70	100	150	175	200
RPM	1.00	1.00	1.00	0.98	0.945	0.91



ACSI FAN SELECTION

The performance tables for each fan in this catalog represent the various curves extrapolated into numerical form. On each table there is a series of underlined numbers indicating RPM and BPH in each Static Pressure column. These numbers indicate the most efficient point of operation for a given CFM at that Static Pressure. For cost considerations, select a fan where the CFM and Static Pressure required intersects at or below the underlined print, but should be no lower than 2800 FPM OV. If your selection falls above the underlined print, consider a smaller fan.

Fan noise is also an important consideration, particularly when the fan is located close to occupied space and operating against a Static Pressure of 1" or greater. The following table provides a quick method of considering the degree of quietness when selecting a fan.



DEFINITIONS:

CFMCubic Feet Per Minute

SCFM.....Standard CFM based on standard air of .075 lbs. @ 70 degrees F.

ACFMActual CFM or condition at the site

FPMFeet Per Minute

BHPBrake Horse Power

OVOutlet Velocity in FPM

RPMRevolution Per Minute

SPWCStatic Pressure in inches of Water Column

SPHGStatic Pressure in inches of Mercury



FAN LAWS FOR AIR MOVING EQUIPMENT

The performance of all fans is governed by certain rules of physics known as fan laws. CFM, RPM, SP and HP are all related to each other in a known manner and when one changes, all others change. The CFM variable is the most commonly changed measurement in an air moving system therefore the following example of Fan Law application is based on a change from an existing CFM to a new CFM.

1. To determine performance at a new CFM, first calculate the ratio of the new CFM₂ to the existing CFM₁ (new CFM divided by existing CFM):

$$\frac{\text{CFM}_2}{\text{CFM}_1} = \text{RATIO (R)}$$

2. To determine new RPM₂, multiply Ratio (R) times existing RPM₁:

$$R \times \text{RPM}_1 = \text{RPM}_2$$

3. To determine new SP₂, multiply Ratio (R) times itself, and then times the existing SP₁:

$$R^2 \times \text{SP}_1 = \text{SP}_2$$

4. To determine new HP₂ required, multiply Ratio (R) times itself twice and then times the existing HP₁:

$$R^3 \times \text{HP}_1 = \text{HP}_2$$

EXAMPLE:

A fan is delivering 13,000 CFM @ 2" SP, running 745 RPM using 6.37 BHP (7 1/2 HP motor). To increase the speed of this fan to 15,000 CFM the Ratio is:

$$\frac{15000}{13000} = 1.154$$

The new RPM is 1.154 X 748 = 863

The new Static Pressure is 1.154² X 2 = 2.66

The new BHP is 1.154³ X 6.37 = 9.79 (15 HP motor).

New drives and a 15 HP motor will be required for this fan to deliver 15,000 CFM @ 2.66 SPWC.



ACSI 200 Single Width

Wheel Dia. = 20", Tip Speed = 5.2 x RPM, Inlet Area = ft², Outlet Area = 4.28 ft²

CFM	OV	1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3208	800	1126	0.67	1188	0.83	1249	0.99	1374	1.38	1496	1.81	1610	2.27	1716	2.73
3609	900	1219	0.83	1280	1.01	1340	1.19	1447	1.57	1560	2.03	1669	2.52	1772	3.02
4010	1000	1314	1.01	1373	1.22	1432	1.42	1527	1.81	1630	2.27	1733	2.78	1831	3.32
4411	1100	1410	1.23	1467	1.46	1524	1.68	1617	2.10	1706	2.55	1801	3.08	1895	3.64
4812	1200	1509	1.48	1563	1.73	1617	1.97	1709	2.44	1789	2.89	1875	3.41	1962	3.99
5213	1300	1609	1.78	1660	2.04	1710	2.29	1802	2.81	1881	3.30	1955	3.80	2035	4.38
5614	1400	1712	2.12	1759	2.39	1805	2.65	1895	3.21	1973	3.75	2042	4.26	2114	4.83
6015	1500	1871	2.52	1886	2.78	1900	3.04	1988	3.65	2066	4.24	2134	4.80	2198	5.35
6416	1600	1923	2.98	1960	3.24	1997	3.49	2081	4.13	2158	4.77	2227	5.38	2290	5.97
6817	1700	2031	3.49	2063	3.74	2095	3.99	2175	4.65	2251	5.34	320	6.00	2382	6.63
7218	1800	2138	4.06	2167	4.30	2195	4.54	2270	5.22	2344	5.95	2413	6.66	2475	7.35
7619	1900	2245	4.69	2271	4.93	2296	5.16	2366	5.85	2438	6.61	2505	7.37	2567	8.11
8020	2000	2451	6.04	2478	6.33	2504	6.61	2562	7.29	2627	8.09	2692	8.93	2753	9.77
8822	2200	2666	7.74	2691	8.06	2716	8.38	2762	9.01	2820	9.83	2880	10.70	2939	11.60
9624	2400	2881	9.73	2906	10.07	2931	10.40	2968	11.00	3017	11.80	3072	12.70	3128	13.70
10426	2600	3095	12.00	3120	12.40	3145	12.80	3178	13.40	3219	14.20	3267	15.10	3319	16.10
11228	2800	3310	14.60	3332	15.05	3354	15.50	3391	16.20	3424	16.90	3466	17.80	3513	18.90

CFM	OV	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3208	800	1816	3.19	1909	3.66	1998	4.12	2082	4.58	2162	5.03	2241	5.48	2321	5.93
3609	900	1869	3.53	1961	4.05	2048	4.56	2131	5.08	2210	5.55	2288	6.10	2367	6.48
4010	1000	1925	3.87	2015	4.43	2101	5.00	2183	5.57	2260	6.14	2337	6.70	2414	7.27
4411	1100	1985	4.23	2072	4.83	2156	5.44	2236	6.05	2312	6.67	2388	7.29	2464	7.91
4812	1200	2049	4.60	2133	5.24	2214	5.88	2293	6.54	2368	7.21	2442	7.87	2517	8.54
5213	1300	2117	5.01	2197	5.67	2276	6.35	2352	7.04	2425	7.75	2498	8.46	2571	9.17
5614	1400	2189	5.46	2265	6.14	2340	6.84	2414	7.57	2485	8.31	2556	9.05	2627	9.79
6015	1500	2267	5.97	2338	6.65	2409	7.37	2480	8.12	2549	8.90	2617	9.67	2686	10.45
6416	1600	2350	6.56	2415	7.23	2482	7.96	2549	8.72	2615	9.51	2681	10.30	2747	11.09
6817	1700	2439	7.24	2469	7.89	2559	8.61	2622	9.38	2686	10.19	2749	11.00	2813	11.81
7218	1800	2531	8.00	2585	8.65	2641	9.34	2699	10.10	2759	10.90	2819	11.70	2879	12.50
7619	1900	2624	8.82	2679	9.53	2728	10.10	2781	10.90	2837	11.70	2893	12.50	2949	13.30
8020	2000	2810	10.50	2863	11.30	2913	12.10	2961	12.90	3008	13.65	3054	14.40	3101	15.15
8822	2200	2995	12.50	3049	13.40	3099	14.30	3146	15.10	3190	15.95	3234	16.80	3278	17.65
9624	2400	3182	14.70	3234	15.70	3284	16.70	3331	17.60	3375	18.55	3419	19.50	3463	20.45
10426	2600	3370	17.20	3421	18.30	3470	19.30	3517	20.40	3561	21.40	3605	22.40	3649	23.40
11228	2800	3561	20.00	3609	21.10	3657	22.30	3703	23.40	3747	24.55	3790	25.70	3834	26.85

The **Bold/Underlined** numbers indicate the maximum efficiency of this fan
 Figures above the shaded section denote Class I, Max. RPM=2120. Figures in the shaded section
 denote Class II, Max. RPM=2766.



ACSI 222 Single Width

Wheel Dia. = 22 1/4", Tip Speed = 5.8 x RPM, Inlet Area = 3.14 ft², Outlet Area = 5.59 ft²

CFM	OV	1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3970	800	1012	0.83	1067	1.03	1122	1.22	1235	1.70	1345	2.24	1447	2.80	1543	3.40
4466	900	1096	1.02	1150	1.25	1204	1.47	1300	1.94	1403	2.51	1500	3.11	1593	3.70
4963	1000	1181	1.25	1234	1.51	1287	1.76	1373	2.23	1465	2.81	1557	3.44	1646	4.10
5459	1100	1267	1.52	1319	1.80	1370	2.08	1453	2.60	1533	3.16	1619	3.81	1703	4.50
5955	1200	1356	1.83	1405	2.14	1454	2.44	1537	3.02	1608	3.57	1685	4.22	1764	4.90
6451	1300	1447	2.20	1492	2.52	1537	2.83	1620	3.48	1691	4.09	1757	4.70	1829	5.40
6948	1400	1539	2.63	1581	2.95	1622	3.27	1703	3.98	1773	4.64	1835	5.27	1900	6.00
7444	1500	1633	3.12	1671	3.45	1708	3.77	1787	4.52	1857	5.25	1918	5.94	1976	6.60
7940	1600	1729	3.68	1762	4.00	1795	4.32	1871	5.11	1940	5.90	2002	6.66	2058	7.40
8437	1700	1825	4.32	1854	4.63	1883	4.93	1955	5.76	2023	6.61	2085	7.43	2141	8.20
8933	1800	1922	5.03	1948	5.33	1973	5.62	2041	6.47	2107	7.36	2169	8.24	2224	9.10
9429	1900	2018	5.80	2041	6.10	2064	6.39	2127	7.24	2191	8.18	2252	9.12	2308	10.00
9926	2000	2204	7.48	2227	7.84	2250	8.19	2303	9.02	2361	10.00	2420	11.00	2474	12.00
10918	2200	2396	9.58	2419	9.94	2441	10.30	2483	11.10	2535	12.10	2589	13.20	2642	14.40
11911	2400	2589	12.00	2612	12.45	2634	12.90	2668	13.60	2712	14.60	2761	15.80	2811	17.00
12903	2600	2782	14.80	2805	15.35	2827	15.90	2856	16.60	2893	17.60	2937	18.70	2983	20.00
13896	2800	2975	18.10	2995	18.65	3015	19.20	3048	20.10	3078	21.00	3116	22.10	3158	23.40

CFM	OV	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3970	800	1632	3.95	1716	4.52	1796	5.10	1872	5.70	1943	6.24	2014	6.78	2085	7.32
4466	900	1680	4.37	1762	5.01	1841	5.65	1916	6.30	1987	6.93	2057	7.55	2128	8.18
4963	1000	1731	4.79	1811	5.49	1888	6.19	1962	6.90	2032	7.60	2101	8.30	2171	9.00
5459	1100	1785	5.23	1863	5.98	1938	6.73	2010	7.50	2079	8.26	2147	9.02	2216	9.78
5955	1200	1842	5.70	1917	6.48	1990	7.28	2016	8.10	2128	8.92	2195	9.74	2262	10.56
6451	1300	1903	6.20	1975	7.02	2046	7.86	2114	8.70	2180	9.55	2245	10.40	2311	11.25
6948	1400	1968	6.76	2036	7.60	2104	8.47	2170	9.40	2234	10.30	2298	11.20	2362	12.10
7444	1500	2037	7.39	2101	8.23	2165	9.13	2229	10.00	2291	10.95	2353	11.90	2415	12.85
7940	1600	2112	8.12	2171	8.95	2231	9.85	2291	10.70	2351	11.70	2410	12.70	2470	13.70
8437	1700	2192	8.96	2245	9.76	2300	10.60	2357	11.60	2414	12.60	2471	13.60	2528	14.60
8933	1800	2275	9.90	2324	10.70	23747	11.50	2426	12.50	2480	13.50	2534	14.50	2588	15.50
9429	1900	2359	10.90	2409	11.70	2452	12.60	2500	13.50	2551	14.50	2601	15.50	2652	16.50
9926	2000	2526	13.10	2574	14.00	2618	15.00	2661	15.90	2703	16.85	2745	17.80	2787	18.75
10918	2200	2693	15.50	2740	16.60	2785	17.70	2828	18.70	2868	19.75	2907	20.80	2947	21.85
11911	2400	2860	18.20	2907	19.40	2952	20.70	2994	21.80	3034	22.95	3073	24.10	3113	25.25
12903	2600	3030	21.30	3075	22.60	3119	23.90	3161	25.20	3201	26.50	3240	27.80	3280	29.10
13896	2800	3201	24.70	3244	26.10	3287	27.60	3328	29.00	3368	30.40	3407	31.80	3447	33.20

The **Bold/Underlined** numbers indicate the maximum efficiency of this fan

Figures above the shaded section denote Class I, Max. RPM=1755. Figures in the shaded section denote Class II, Max. RPM=2288.



ACSI 245 Single Width

Wheel Dis. = 24 1/2", Tip Speed = 6.4 x RPM, Inlet Area = 4.28 ft², Outlet Area = 6.31 ft²

CFM	OV	1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4814	800	919	1.00	969	1.24	1019	1.48	1122	2.06	1222	2.72	1314	3.40	1401	4.10
5415	900	995	1.24	1045	1.52	1094	1.79	1181	2.36	1274	3.04	1363	3.77	1446	4.50
6017	1000	1072	1.52	1121	1.83	1169	2.13	1247	2.71	1330	3.41	1414	4.18	1495	5.00
6619	1100	1151	1.84	1198	2.18	1244	2.52	1320	3.15	1392	3.83	1470	4.62	1547	5.50
7221	1200	1231	2.22	1276	2.59	1320	2.95	1395	3.66	1460	4.33	1530	5.12	1602	6.00
7822	1300	1314	2.67	1355	3.05	1396	3.43	1471	4.22	1535	4.95	1596	5.70	1661	6.60
8424	1400	1398	3.19	1436	3.58	1473	3.97	1547	4.82	1611	5.63	1667	6.40	1725	7.30
9026	1500	1483	3.78	1517	4.18	1551	4.57	1623	5.48	1686	6.37	1742	7.20	1794	8.00
9628	1600	1570	4.47	1600	4.86	1630	5.24	1699	6.20	1762	7.16	1818	8.07	1869	9.00
10229	1700	1658	5.24	1684	5.61	1710	5.98	1776	6.98	1838	8.01	1894	9.00	1944	10.00
10831	1800	1746	6.10	1769	6.46	1792	6.82	1853	7.84	1914	8.93	1969	10.00	2020	11.00
11433	1900	1833	7.03	1854	7.39	1875	7.75	1932	8.78	1990	9.92	2045	11.00	2096	12.10
12035	2000	2001	9.07	2003	9.50	2004	9.93	2091	10.90	2145	12.10	2197	13.40	2247	14.60
13238	2200	2176	11.60	2197	12.05	2217	12.50	2255	13.50	2302	14.70	2351	16.00	2399	17.40
14442	2400	2352	14.50	2372	15.10	2392	15.70	2423	16.50	2463	17.80	2508	19.10	2553	20.60
15645	2600	2527	18.00	2547	18.65	2567	19.30	2594	20.20	2627	21.30	2667	22.70	2709	24.20
16849	2800	2702	22.00	2720	22.65	2738	23.30	2768	24.40	2795	25.50	2830	26.80	2868	28.40

CFM	OV	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4814	800	1482	4.79	1559	5.49	1631	6.18	1700	6.87	1765	7.55	1829	8.22	1894	8.90
5415	900	1526	5.30	1601	6.07	1672	6.85	1740	7.62	1804	8.39	1868	9.16	1932	9.93
6017	1000	1572	5.81	1645	6.66	1715	7.50	1782	8.36	1845	9.18	1908	10.00	1971	10.82
6619	1100	1621	6.34	1692	7.25	1760	8.16	1826	9.08	1888	9.99	1950	10.90	2012	11.81
7221	1200	1673	6.91	1741	7.86	1808	8.83	1872	9.82	1933	10.81	1993	11.80	2054	12.79
7822	1300	1728	7.52	1794	8.51	1858	9.53	1920	10.50	1980	11.55	2039	12.60	2099	13.65
8424	1400	1787	8.20	1849	9.21	1911	10.20	1971	11.30	2029	12.40	2087	13.50	2145	14.60
9026	1500	1850	8.96	1908	9.98	1967	11.00	2024	12.10	2081	13.30	2137	14.50	2194	15.70
9628	1600	1918	9.84	1971	10.80	2026	11.90	2081	13.00	2135	14.20	2189	15.40	2243	16.60
10229	1700	1991	10.80	2038	11.80	2089	12.90	2140	14.00	2192	15.25	2244	16.50	2296	17.75
10831	1800	2066	12.00	2110	12.90	2156	14.00	2203	15.10	2252	16.35	2301	17.60	2350	18.85
11433	1900	2145	13.20	2187	14.30	2227	15.20	2270	16.30	2316	17.55	2362	18.80	2408	20.05
12035	2000	2294	15.80	2337	17.00	2378	18.20	2417	19.30	2455	20.45	2493	21.60	2531	22.75
13238	2200	2445	18.80	2489	20.10	2529	21.40	2568	22.70	2604	23.95	2640	25.20	2676	26.45
14442	2400	2598	22.10	2640	23.60	2681	25.00	2719	26.50	2755	27.85	2791	29.20	2827	30.55
15645	2600	2751	25.80	2793	27.40	2832	29.00	2871	30.60	2907	32.15	2942	33.70	2978	35.25
16849	2800	2907	30.00	2946	31.70	2985	33.40	3023	35.10	3059	36.80	3094	38.50	3130	40.20

The **Bold/Underlined** numbers indicate the maximum efficiency of this fan

Figures above the shaded section denote Class I, Max. RPM=1731. Figures in the shaded section denote Class II, Max. RPM=3352.



ACSI 270 Single Width

Wheel Dia = 27", Tip Speed = 7.1 x RPM, Inlet Area = 4.91 ft², Outlet Area = 7.88 ft²

CFM.	O.V.	1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3658	500	575	0.51	632	0.70	683	0.90	797	1.37						
4389	600	634	0.65	684	0.87	733	1.10	822	1.56	921	2.13				
5121	700	693	0.82	743	1.07	785	1.31	868	1.83	946	2.38	1032	3.02		
5852	800	754	1.02	802	1.30	844	1.59	921	2.16	990	2.72	1060	3.34	1135	4.05
6584	900	816	1.24	861	1.56	902	1.88	974	2.49	1042	3.15	1104	3.78	1167	4.46
7316	1000	879	1.51	922	1.86	962	2.21	1032	2.90	1095	3.59	1156	4.30	1211	4.99
8049	1100	944	1.83	983	2.19	1022	2.58	1091	3.34	1151	4.08	1209	4.85	1263	5.62
8779	1200	1011	2.20	1046	2.58	1082	2.99	1150	3.82	1209	4.64	1262	5.43	1317	6.28
9510	1300	1078	2.63	1111	3.02	1144	3.45	1209	4.34	1268	5.24	1321	6.11	1369	6.94
10242	1400	1146	3.12	1176	3.52	1208	3.97	1269	4.91	1327	5.88	1379	6.83	1427	7.75
10974	1500	1215	3.68	1243	4.09	1272	4.55	1331	5.54	1386	6.57	1438	7.59	1486	8.59
11705	1600	1284	4.30	1310	4.74	1337	5.20	1393	6.32	1446	7.31	1497	8.41	1544	9.49
12437	1700	1352	4.98	1378	5.45	1403	5.93	1455	6.99	1507	8.12	1557	9.28	1603	10.40
13168	1800	1420	5.72	1447	6.25	1473	6.74	1519	7.82	1569	9.00	1617	10.20	1662	11.40
13900	1900	1488	6.52	1516	7.12	1538	7.63	1584	8.74	1631	9.95	1678	11.20	1722	12.50
14632	2000	1623	8.31	1653	9.10	1675	9.69	1716	10.80	1758	12.10	1801	13.40	1843	14.80
16095	2200	1758	10.40	1789	11.30	1812	12.10	1850	13.30	1888	14.60	1928	16.00	1967	17.50
17558	2400	1901	13.10	1924	13.90	1950	14.80	1987	16.20	2021	17.60	2057	19.00	2093	20.60
19021	2600	2047	16.40	2058	16.80	2085	17.90	2124	19.60	2156	21.00	2188	22.50	2222	24.10
20484	2800	2188	19.90	2195	20.20	2220	21.40	2261	23.40	2292	26.50	2322	26.50	2353	28.10

CFM	O.V.	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5852	800	1217	4.85												
6584	900	1233	5.22	1304	6.06	652	3.03								
7316	1000	1268	5.73	1327	6.54	1392	7.47	1456	8.39	728	4.20				
8049	1100	1314	6.37	1366	7.16	1421	8.05	1475	8.94	1535	9.97	1594	11.00	1654	12.03
8779	1200	1367	7.11	1414	7.92	1462	8.79	1510	9.66	1561	10.63	1612	11.60	1663	12.57
9510	1300	1420	7.89	1467	8.77	1511	9.60	1554	10.50	1599	11.45	1644	12.40	1689	13.35
10242	1400	1471	8.64	1520	9.66	1563	10.58	1605	11.50	1646	12.45	1687	13.40	1728	14.35
10974	1500	1530	9.57	1571	10.50	1615	11.55	1659	12.60	1698	13.60	1736	14.60	1775	15.60
11705	1600	1588	10.50	1629	11.50	1671	12.60	1712	13.70	1750	14.80	1788	15.90	1826	17.00
12437	1700	1647	11.50	1688	12.60	1726	13.70	1763	14.80	1803	16.00	1842	17.20	1882	18.40
13168	1800	1706	12.60	1763	13.80	1792	14.95	1821	16.10	1858	17.30	1894	18.50	1931	19.70
13900	1900	1764	13.70	1805	15.00	1843	16.25	1880	17.50	1914	18.70	1948	19.90	1982	21.10
14632	2000	1884	16.20	1923	17.60	1960	19.00	1997	20.40	2031	21.80	2064	23.20	2098	24.60
16095	2200	2005	19.00	2043	20.60	2079	22.15	2115	23.70	2149	25.20	2182	26.70	2216	28.20
17558	2400	2129	22.20	2165	23.90	2200	25.55	2234	27.20	2267	28.85	2299	30.50	2332	32.15
19021	2600	2255	25.80	2289	27.50	2322	29.30	2355	31.10	2387	32.90	2418	34.70	2450	36.50
20484	2800	2384	29.90	2415	31.70	2447	33.55	2478	35.40	2509	37.35	2539	39.30	2570	41.25

The **Bold/Underlined** numbers indicate the maximum efficiency of this fan

Figures above the shaded section denote Class I, Max. RPM=1419. Figures in the shaded section denote Class II, Max. RPM=3352.



ACSI 300 Single Width

Wheel Dia. = 30", Tip Speed = 7.9 x RPM, Inlet Area = 6.31 ft², Outlet Area = 9.62 ft²

CFM	OV	1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4516	500	518	0.63	569	0.87	615	1.11	717	1.70						
5419	600	571	0.81	616	1.07	660	1.35	740	1.93	829	2.63				
6322	700	624	1.01	669	1.33	707	1.62	781	2.26	852	2.93	929	3.73		
7225	800	678	1.25	721	1.61	760	1.96	829	2.66	891	3.36	954	4.13	1022	5.00
8128	900	734	1.54	775	1.93	812	2.32	876	3.08	938	3.88	993	4.66	1050	5.50
9032	1000	791	1.87	829	2.29	865	2.73	929	3.58	986	4.43	1040	5.31	1090	6.16
9935	1100	850	2.26	885	2.71	919	3.18	982	4.13	1036	5.04	1088	5.99	1137	6.93
10838	1200	909	2.72	942	3.19	974	3.69	1035	4.72	1088	5.73	1136	6.70	1185	7.76
11741	1300	970	3.25	1000	3.73	1030	4.26	1088	5.36	1141	6.47	1189	7.54	1232	8.57
12644	1400	1032	3.86	1059	4.35	1087	4.90	1143	6.07	1194	7.26	1241	8.43	1285	9.57
13548	1500	1093	4.54	1119	5.05	1145	5.62	1198	6.84	1248	8.11	1294	9.37	1337	10.60
14451	1600	1155	5.31	1179	5.85	1203	6.42	1253	7.69	1302	9.03	1347	10.30	1390	11.70
15354	1700	1217	6.15	1241	6.73	1263	7.32	1310	8.62	1357	10.00	1401	11.40	1443	12.80
16257	1800	1278	7.06	1302	7.71	1323	8.32	1367	9.65	1412	11.10	1455	12.60	1496	14.10
17160	1900	1339	8.05	1364	8.79	1384	9.42	1426	10.70	1468	12.20	1510	13.80	1550	15.40
18064	2000	1460	10.20	1488	11.20	1507	11.90	1544	13.30	1582	14.90	1621	16.60	1659	18.30
19870	2200	1582	12.80	1610	14.00	1631	14.90	1665	16.40	1699	18.00	1735	19.80	1770	21.60
21677	2400	1711	16.20	1732	17.20	1755	18.30	1788	20.00	1819	21.70	1851	23.50	1884	25.40
23483	2600	1842	20.20	1852	20.80	1877	22.10	1912	24.20	1940	26.00	1969	27.80	1999	29.80
25289	2800	1970	24.60	1976	25.00	1998	24.60	2035	28.90	2063	30.80	2090	32.70	2117	34.80

CFM	OV	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7225	800	1095	5.99												
8128	900	1110	6.44	1174	7.49	587	3.75								
9032	1000	1141	7.07	1195	8.08	1253	9.19	1310	10.30	655	5.15				
9935	1100	1183	7.86	1229	8.84	1279	9.92	1328	11.00	1382	12.25	1435	13.50	1489	14.75
10838	1200	1230	8.77	1272	9.78	1316	10.84	1359	11.90	1405	13.10	1451	14.30	1497	15.50
11741	1300	1278	9.74	1320	10.80	1360	11.90	1399	13.00	1440	14.20	1480	15.40	1521	16.60
12644	1400	1324	10.60	1368	11.90	1406	13.05	1444	14.20	1481	15.40	1518	16.60	1555	17.80
13548	1500	1377	11.80	1414	12.90	1454	14.25	1493	15.60	1528	16.80	1562	18.00	1597	19.20
14451	1600	1429	13.00	1466	14.20	1503	15.55	1540	16.90	1575	18.25	1610	19.60	1645	20.95
15354	1700	1482	14.20	1519	15.60	1553	16.95	1587	18.30	1623	19.80	1658	21.30	1694	22.80
16257	1800	1535	15.60	1572	17.10	1606	18.50	1639	19.90	1695	21.40	1750	22.90	1806	24.40
17160	1900	1588	17.00	1624	18.60	1658	20.10	1692	21.60	1723	23.10	1753	24.60	1784	26.10
18064	2000	1696	20.00	1731	21.80	1764	23.55	1797	25.30	1828	26.95	1858	28.60	1889	30.25
19870	2200	1805	23.50	1839	25.40	1871	27.35	1903	29.30	1933	31.15	1963	33.00	1993	34.85
21677	2400	1916	27.40	1948	29.50	1980	31.55	2011	33.60	2040	35.65	2069	37.70	2098	39.75
23483	2600	2030	31.90	2060	34.00	2090	36.20	2120	38.40	2149	40.65	2177	42.90	2206	45.15
25289	2800	2145	36.90	2174	39.10	2202	41.40	2230	43.70	2258	46.10	2285	48.50	2313	50.90

The **Bold/Underlined** numbers indicate the maximum efficiency of this fan

Figures above the shaded section denote Class I, Max. RPM=1355. Figures in the shaded section

denote Class II, Max. RPM=1767.



ACSI 330 Single Width

Wheel Dia. = 33", Tip Speed = 8.6 x RPM, Inlet Area = 7.07 ft², Outlet Area = 11.54 ft²

CFM	OV	1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5464	500	471	0.76	517	1.05	559	1.34	652	2.05						
6557	600	519	0.98	560	1.30	600	1.64	673	2.33	754	3.18				
7650	700	567	1.23	608	1.60	643	1.96	710	2.73	774	3.55	845	4.51		
8743	800	617	1.52	656	1.95	690	2.37	754	3.22	810	4.07	867	4.99	929	6.05
9835	900	667	1.86	704	2.34	738	2.81	797	3.73	853	4.70	903	5.64	954	6.66
10928	1000	719	2.26	754	2.78	787	3.30	845	4.34	896	5.36	946	6.42	991	7.45
12021	1100	772	2.74	805	3.28	836	3.85	892	5.00	942	6.10	989	7.25	1034	8.39
13114	1200	827	3.29	856	3.85	886	4.46	941	5.71	989	6.93	1033	8.11	1078	9.39
14207	1300	882	3.93	909	4.51	936	5.15	989	6.49	1037	7.82	1081	9.12	1120	10.30
15300	1400	938	4.67	962	5.26	988	5.92	1039	7.34	1086	8.78	1129	10.20	1168	11.50
16393	1500	994	5.50	1017	6.12	1041	6.79	1089	8.27	1134	9.81	1177	11.30	1216	12.80
17486	1600	1050	6.42	1071	7.07	1094	7.77	1139	9.30	1183	10.90	1225	12.50	1264	14.10
18579	1700	1106	7.44	1128	8.15	1148	8.86	1191	10.40	1233	12.10	1274	13.80	1312	15.50
19671	1800	1162	8.54	1184	9.33	1203	10.00	1243	11.60	1284	13.40	1323	15.20	1360	17.00
20764	1900	1218	9.74	1240	10.60	1258	11.40	1296	13.00	1335	14.80	1373	16.70	1409	18.60
21857	2000	1328	12.40	1352	13.50	1370	14.40	1404	16.10	1439	18.00	1474	20.10	1508	22.20
24043	2200	1438	15.50	1464	16.90	1483	18.00	1514	19.90	1545	21.80	1577	24.00	1609	26.20
26229	2400	1556	19.60	1574	20.80	1595	22.20	1625	24.20	1654	26.30	1683	28.50	1712	30.80
28414	2600	1675	24.40	1684	25.10	1706	26.80	1738	29.30	1764	31.40	1689	33.70	1818	36.10
30600	2800	1791	29.80	1796	30.20	1816	31.90	1850	35.00	1876	37.30	1900	39.60	1925	42.10

CFM	OV	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8743	800	962	6.65	995	7.24	498	3.62								
9835	900	982	7.23	1009	7.80	1038	8.43	1067	9.06	534	4.53				
10928	1000	1014	8.01	1037	8.56	1062	9.17	1086	9.77	1139	11.14	1191	12.50	1244	13.87
12021	1100	1055	8.95	1075	9.51	1097	10.11	1118	10.70	1163	12.00	1207	13.30	1252	14.60
13114	1200	1098	10.00	1118	10.60	1138	11.20	1157	11.80	1196	13.10	1235	14.40	1274	15.70
14207	1300	1141	11.00	1162	11.70	1181	12.40	1200	13.10	1236	14.40	1272	15.70	1308	17.00
15300	1400	1186	12.20	1204	12.90	1224	13.65	1244	14.40	1279	15.80	1313	17.20	1348	18.60
16393	1500	1234	13.55	1252	14.30	1269	15.00	1285	15.70	1321	17.25	1357	18.80	1393	20.35
17486	1600	1282	14.90	1300	15.70	1317	16.50	1333	17.30	1367	18.90	1400	20.50	1434	22.10
18579	1700	1330	16.35	1347	17.20	1364	18.05	1381	18.90	1412	20.50	1442	22.10	1473	23.70
19671	1800	1378	17.95	1395	18.90	1412	19.75	1429	20.60	1460	22.35	1490	24.10	1521	25.85
20764	1900	1427	19.60	1444	20.60	1461	21.55	1477	22.50	1508	24.35	1538	26.20	1569	28.05
21857	2000	1525	23.25	1541	24.30	1557	25.35	1573	26.40	1604	28.50	1634	30.60	1665	32.70
24043	2200	1625	27.35	1641	28.50	1657	29.65	1672	30.80	1701	33.10	1730	35.40	1759	37.70
26229	2400	1727	32.00	1742	33.20	1757	34.45	1771	35.70	1800	38.15	1828	40.60	1857	43.05
28414	2600	1832	37.30	1845	38.50	1859	39.85	1873	41.20	1900	43.85	1927	46.50	1954	49.15
30600	2800	1938	43.40	1950	44.70	1963	46.05	1976	47.40	2002	50.15	2027	52.90	2053	55.65

The **Bold/Underlined** numbers indicate the maximum efficiency of this fan

Figures above the shaded section denote Class I, Max. RPM=1161. Figures in the shaded section denote Class II, Max. RPM=1514.



ACSI 365 Single Width

Wheel Dia. = 36 1/2", Tip Speed = 9.6 x RPM, Inlet Area = 8.73 ft², Outlet Area = 13.64 ft²

CFM	OV	1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6685	500	426	0.93	467	1.28	505	1.64	590	2.51						
8022	600	469	1.20	506	1.59	542	2.00	608	2.85	681	3.89				
9359	700	513	1.50	550	1.96	581	2.40	642	3.35	700	4.34	764	5.52		
10696	800	557	1.86	593	2.38	624	2.90	681	3.94	732	4.98	784	6.11	840	7.40
12033	900	603	2.27	637	2.86	668	3.44	720	4.56	771	5.75	817	6.90	863	8.15
13370	1000	650	2.77	682	3.39	711	4.04	764	5.31	810	6.55	855	7.85	896	9.12
14707	1100	698	3.35	727	4.01	756	4.71	807	6.11	851	7.46	894	8.87	935	10.20
16044	1200	748	4.03	774	4.72	801	5.46	850	6.99	895	8.48	934	9.92	974	11.40
17381	1300	797	4.81	822	5.52	847	6.30	894	7.94	938	9.57	977	11.10	1013	12.60
18718	1400	848	5.71	870	6.44	893	7.25	939	8.98	982	10.70	1020	12.40	1056	14.10
20055	1500	899	6.72	919	7.48	941	8.31	984	10.10	1026	12.00	1064	13.80	1099	15.70
21392	1600	950	7.85	969	8.66	989	9.50	1030	11.30	1070	13.30	1107	15.30	1142	17.30
22729	1700	1000	9.10	1020	9.97	1038	10.80	1077	12.70	1115	14.80	1151	16.90	1186	19.00
24066	1800	1051	10.40	1070	11.40	1088	12.30	1124	14.20	1160	16.40	1196	18.60	1230	20.90
25403	1900	1101	11.90	1121	13.00	1138	13.90	1172	15.90	1207	18.10	1241	20.50	1274	22.80
26740	2000	1200	15.10	1223	16.60	1239	17.70	1269	19.80	1301	22.10	1332	24.60	1363	27.10
29414	2200	1300	19.00	1324	20.70	1341	22.10	1369	24.30	1397	26.70	1426	29.30	1455	32.00
32088	2400	1406	24.00	1423	25.40	1442	27.10	1470	29.70	1495	32.20	1521	34.80	1548	37.70
34762	2600	1514	29.90	1523	30.70	1543	32.80	1571	35.80	1595	38.40	1319	41.20	1643	44.10
37436	2800	1619	36.40	1624	37.00	1642	39.10	1673	42.80	1696	45.60	1718	48.50	1740	51.50

CFM	OV	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10696	800	900	8.86												
12033	900	912	9.54	965	11.00	483	5.50								
13370	1000	938	10.40	982	11.90	1030	13.60	1077	15.30	539	7.65				
14707	1100	972	11.60	1010	13.00	1051	14.65	1091	16.30	1135	18.20	1179	20.10	1223	22.00
16044	1200	1011	12.90	1046	14.40	1082	16.00	1117	17.60	1155	19.40	1192	21.20	1230	23.00
17381	1300	1051	14.40	1085	16.00	1118	17.60	1150	19.20	1183	21.00	1216	22.80	1249	24.60
18718	1400	1088	15.70	1125	17.60	1156	19.35	1187	21.10	1218	22.85	1248	24.60	1279	26.35
20055	1500	1132	17.40	1162	19.20	1195	25.65	1227	23.10	1256	29.40	1284	26.70	1313	24.00
21392	1600	1175	19.20	1205	21.10	1236	23.10	1266	25.10	1295	27.10	1323	29.10	1352	31.10
22729	1700	1218	21.10	1249	23.10	1277	25.10	1304	27.10	1334	29.30	1363	31.50	1393	33.70
24066	1800	1262	23.10	1292	25.30	1320	27.40	1347	29.50	1374	31.70	1401	33.90	1428	36.10
25403	1900	1305	25.20	1335	27.50	1363	29.75	1390	32.00	1416	34.20	1441	36.40	1467	38.60
26740	2000	1394	29.70	1423	32.30	1450	34.85	1477	37.40	1502	39.90	1527	42.40	1552	44.90
29414	2200	1483	34.80	1511	37.60	1538	40.45	1564	43.30	1589	46.10	1614	48.90	1639	51.70
32088	2400	1575	40.60	1601	43.60	1627	46.65	1653	49.70	1677	52.75	1701	55.80	1725	58.85
34762	2600	1668	47.20	1693	50.40	1718	53.65	1742	56.90	1766	60.20	1789	63.50	1813	66.80
37436	2800	1763	54.60	1787	57.90	1810	61.35	1833	64.80	1856	68.30	1878	71.80	1901	75.30

The **Bold/Underlined** numbers indicate the maximum efficiency of this fan
 Figures above the shaded section denote Class I, Max. RPM=1113. Figures in the shaded section denote Class II, Max. RPM=1451.



ACSI 402 Single Width

Wheel Dia. = 40 1/4", Tip Speed = 10.5 x RPM, Inlet Area = 10.56 ft², Outlet Area = 17.10 ft²

CFM	OV	1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1829	500	386	1.13	424	1.56	458	1.99	535	3.06						
9755	600	425	1.45	459	1.93	492	2.44	551	3.47	618	4.73				
11380	700	465	1.82	498	2.39	527	2.92	582	4.07	635	5.28	692	6.71		
13006	800	506	2.26	538	2.90	566	3.52	618	4.79	664	6.05	711	7.43	762	9.00
14632	900	547	2.76	578	3.47	605	4.18	653	5.54	699	6.99	740	8.39	783	9.91
16258	1000	590	3.36	618	4.13	645	4.91	692	6.45	735	7.97	775	9.55	813	11.00
17884	1100	633	4.07	660	4.88	685	5.73	732	7.43	772	9.07	811	10.70	848	12.40
19510	1200	678	4.90	702	5.73	726	6.64	771	8.49	811	10.30	847	12.00	883	13.90
21135	1300	723	5.85	745	6.71	768	7.66	811	9.65	851	11.60	886	13.50	918	15.40
22761	1400	769	6.94	789	7.83	810	8.81	852	10.90	890	13.00	925	15.10	957	17.20
24387	1500	815	8.18	834	9.10	853	10.10	893	12.30	930	14.50	965	16.80	997	19.10
26013	1600	861	9.55	879	10.50	897	11.50	934	13.80	970	16.20	1004	18.60	1036	21.00
27639	1700	907	11.00	925	12.10	941	13.10	976	15.50	1011	18.00	1044	20.60	1075	23.10
29265	1800	953	12.70	971	13.80	986	14.90	1019	17.30	1052	20.00	1085	22.70	1115	25.40
30890	1900	998	14.40	1017	15.80	1032	16.90	1063	19.40	1094	22.10	1125	24.90	1155	27.70
32516	2000	1088	18.40	1109	20.20	1124	21.50	1151	24.00	1179	26.90	1208	29.90	1236	33.00
35768	2200	1179	23.10	1200	25.20	1216	26.80	1241	29.60	1267	32.50	1293	35.70	1319	39.00
39020	2400	1275	29.20	1291	30.90	1308	33.00	1333	36.10	1367	39.10	1380	42.40	1404	45.80
42271	2600	1373	37.40	1381	37.40	1399	39.90	1425	43.60	1446	46.80	1468	50.10	1490	53.70
45523	2800	1468	44.30	1473	45.00	1489	47.60	1517	52.00	1538	55.50	1558	59.00	1578	62.60

CFM	OV	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13006	800	816	10.70												
14632	900	827	11.60	875	13.40	915	15.25								
16258	1000	851	12.70	890	14.50	934	16.55	977	18.60	1013	20.60				
17884	1100	882	14.10	916	15.90	953	17.85	990	19.80	1030	22.10	1069	24.40	1109	26.70
19510	1200	917	15.70	948	17.60	981	19.50	1013	21.40	1047	23.60	1081	25.80	1115	28.00
21135	1300	953	17.50	984	19.50	1013	21.45	1042	23.40	1073	25.55	1103	27.70	1134	29.85
22761	1400	987	19.20	1020	21.40	1049	23.50	1077	25.60	1104	27.75	1131	29.90	1158	32.05
24387	1500	1026	21.20	1054	23.30	1084	25.70	1113	28.10	1139	30.30	1164	32.50	1190	34.70
26013	1600	1065	23.40	1093	25.70	1121	28.10	1148	30.50	1174	32.90	1200	35.30	1226	37.70
27639	1700	1105	25.70	1132	28.10	1158	30.50	1183	32.90	1210	35.60	1236	38.30	1263	41.00
29265	1800	1140	28.10	1171	30.70	1197	33.30	1222	35.90	1247	38.55	1271	41.20	1296	43.85
30890	1900	1184	30.60	1211	33.40	1236	36.20	1261	39.00	1284	41.65	1307	44.30	1330	46.95
32516	2000	1264	36.10	1290	39.30	1315	42.40	1339	45.50	1362	48.55	1385	51.60	1408	54.60
35768	2200	1345	42.40	1370	45.80	1395	49.20	1419	52.60	1441	56.00	1463	59.40	1485	62.80
39020	2400	1428	49.40	1452	53.10	1476	56.80	1499	60.50	1521	64.20	1542	67.90	1564	71.60
42271	2600	1513	57.40	1535	61.30	1558	65.25	1580	69.20	1601	73.20	1622	77.20	1643	81.20
45523	2800	1599	66.50	1620	70.50	1641	74.65	1662	78.80	1683	83.05	1703	87.30	1724	91.55

The **Bold/Underlined** numbers indicate the maximum efficiency of this fan
 Figures above the shaded section denote Class I, Max. RPM=952. Figures in the shaded section denote Class II, Max. RPM=1241.



ACSI 445 Single Width

Wheel Dia. = 44 1/2", Tip Speed = 11.7 x RPM, Inlet Area = 13.64 ft², Outlet Area = 20.97 ft²

CFM	OV	1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9936	500	349	1.39	383	1.91	414	2.43	484	3.73						
11923	600	385	1.78	415	2.36	445	2.98	499	4.24	559	5.79				
13911	700	421	2.23	451	2.92	477	3.57	527	4.97	574	6.46	626	8.21		
15898	800	457	2.76	486	3.54	512	4.31	559	5.86	601	7.40	643	9.08	689	11.00
17885	900	495	3.38	522	4.25	548	5.11	591	6.78	633	8.55	670	10.20	708	12.10
19873	1000	533	4.11	559	5.05	583	6.01	626	7.89	664	9.74	701	11.60	735	13.50
21860	1100	573	4.98	597	5.96	620	7.00	662	9.09	698	11.00	734	13.10	767	15.20
23847	1200	613	5.98	635	7.01	657	8.11	698	10.30	734	12.60	766	14.70	779	17.00
25835	1300	654	7.15	674	8.21	694	9.37	734	11.80	769	14.20	801	16.50	831	18.80
27822	1400	695	8.49	714	9.57	733	10.70	770	13.30	805	15.90	837	18.50	866	21.00
29809	1500	737	9.99	754	11.10	772	12.30	807	15.00	841	17.80	872	20.60	901	23.30
31797	1600	779	11.60	795	12.80	811	14.10	845	16.90	878	19.80	908	22.80	937	25.70
33784	1700	820	13.50	836	14.80	851	16.10	883	18.90	915	22.00	944	25.20	973	28.30
35771	1800	862	15.50	878	16.90	892	18.30	922	21.20	952	24.40	981	27.70	1009	31.00
37758	1900	903	17.70	920	19.30	933	20.70	961	23.70	990	27.00	1018	30.40	1045	33.90
39746	2000	984	22.50	1003	24.70	1016	26.30	1041	29.40	1067	32.90	1093	36.50	1118	40.30
43720	2200	1067	28.30	1086	30.80	1100	32.80	1123	36.20	1146	39.80	1169	43.60	1193	47.60
47695	2400	1154	35.70	1167	37.80	1183	40.30	1205	44.10	1226	47.80	1248	51.80	1270	56.00
51670	2600	1242	44.50	1249	45.70	1265	48.80	1289	53.30	1308	57.20	1328	61.30	1348	65.60
55644	2800	1328	54.10	1332	55.00	1347	58.10	1372	63.60	1391	67.80	1409	72.10	1427	76.50

CFM	OV	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP								
15898	800	738	13.10			776	18.60			915	25.10				
17885	900	748	14.10	791	16.40			833	22.70						
19873	1000	769	15.50	805	17.70	819	20.20								
21860	1100	797	17.30	829	19.40	862	21.80	895	24.20	931	27.00	967	29.80	1003	32.60
23847	1200	829	19.30	858	21.50	887	23.85	916	26.20	947	28.90	978	31.60	1009	34.30
25835	1300	862	21.40	890	23.80	917	26.20	943	28.60	971	31.25	998	33.90	1026	36.55
27822	1400	893	23.40	922	26.20	948	28.75	974	31.30	999	33.95	1023	36.60	1048	39.25
29809	1500	928	26.00	953	28.50	980	31.40	1006	34.30	1030	37.00	1053	39.70	1077	42.40
31797	1600	964	28.60	989	31.40	1014	34.35	1038	37.30	1062	40.25	1085	43.20	1109	46.15
33784	1700	999	31.40	1024	34.40	1047	37.35	1070	40.30	1094	43.55	1118	46.80	1142	50.05
35771	1800	1035	34.30	1060	37.60	1083	40.75	1105	43.90	1127	47.15	1149	50.40	1171	53.65
37758	1900	1071	37.40	1095	40.90	1118	44.25	1141	47.60	1162	50.90	1182	54.20	1203	57.50
39746	2000	1143	44.20	1167	48.00	1190	51.80	1212	55.60	1233	59.35	1253	63.10	1274	66.85
43720	2200	1217	51.80	1240	56.00	1262	60.20	1283	64.40	1304	68.50	1324	72.60	1345	76.70
47695	2400	1292	56.00	1282	60.40	1298	62.65	1314	64.90	1335	69.40	1355	73.90	1376	78.40
51670	2600	1368	70.20	1389	74.90	1409	79.75	1429	84.60	1448	89.45	1467	94.30	1486	99.15
55644	2800	1446	81.20	1465	86.10	1484	91.20	1503	96.30	1522	101.15	1540	106.00	1559	110.85

The **Bold/Underlined** numbers indicate the maximum efficiency of this fan

Figures above the shaded section denote Class I, Max. RPM=913. Figures in the shaded section denote Class II, Max. RPM=1190.



ACSI 490 Single Width

Wheel Dia. = 49", Tip Speed = 12.8 x RPM, Inlet Area = 15.90 ft², Outlet Area = 23.76ft²

CFM	OV	1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12047	500	317	1.68	348	2.31	376	2.95	439	4.53						
14457	600	349	2.16	377	2.86	404	3.61	453	5.14	508	7.02				
16866	700	382	2.70	409	3.54	433	4.33	478	6.03	521	7.83	569	9.95		
19276	800	415	3.34	442	4.30	465	5.22	508	7.11	546	8.97	584	11.00	626	13.30
21686	900	449	4.10	474	5.15	496	6.20	537	8.22	574	10.30	608	12.40	643	14.60
24095	1000	484	4.99	508	6.12	530	7.28	569	9.56	603	11.80	637	14.10	668	16.40
26505	1100	520	6.03	542	7.23	563	8.49	601	11.00	634	13.40	666	15.90	696	18.50
28914	1200	557	7.26	577	8.50	596	9.84	633	12.50	666	15.20	696	17.80	726	20.60
31324	1300	594	8.67	612	9.95	6 31	11.30	666	14.30	699	17.20	728	20.10	754	22.80
33733	1400	632	10.20	648	11.60	665	13.00	699	16.10	731	19.30	760	22.40	786	25.50
36143	1500	669	12.10	685	13.40	701	14.90	733	18.20	764	21.60	792	25.00	819	28.30
38553	1600	707	14.10	722	15.60	736	17.10	767	20.50	797	24.00	825	27.60	851	31.20
40962	1700	745	16.30	760	17.90	773	19.50	802	23.00	831	26.70	858	30.50	883	34.30
43372	1800	783	18.80	797	20.50	810	22.10	837	25.70	864	29.60	891	33.60	916	37.60
45781	1900	820	21.40	835	23.40	848	25.10	873	28.70	899	32.70	924	36.90	949	41.10
48191	2000	894	27.30	911	29.90	923	31.90	945	35.70	969	39.80	992	44.30	1016	48.90
53010	2200	969	34.30	986	37.40	999	39.80	1020	43.90	1040	48.20	1062	52.90	1084	57.80
57829	2400	1048	43.20	1060	45.90	1074	48.90	1095	53.50	1114	58.00	1133	62.80	1153	67.90
62648	2600	1128	54.00	1134	55.40	1149	59.10	1170	64.60	1188	69.30	1206	74.30	1224	79.60
67467	2800	1206	65.70	1210	66.70	1223	70.50	1246	77.10	1263	82.30	1280	87.40	1296	92.80

CFM	OV	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2"" SP	
		RPM	BHP												
19276	800	670	15.90												
21686	900	679	17.10	718	19.90	753	22.50								
24095	1000	699	18.80	731	21.50	767	24.55	802	27.60	832	30.55				
26505	1100	724	20.90	753	23.60	783	26.50	813	29.40	846	32.80	878	36.20	911	39.60
28914	1200	753	23.40	779	26.00	806	28.90	832	31.80	860	35.05	888	38.30	916	41.55
31324	1300	783	25.90	808	28.90	832	31.80	856	34.70	881	38.05	906	41.40	931	44.75
33733	1400	811	28.40	838	31.80	861	34.90	884	38.00	907	41.20	929	44.40	952	47.60
36143	1500	843	31.50	866	34.60	890	38.10	914	41.60	935	44.90	956	48.20	977	51.50
38553	1600	875	34.70	898	38.10	921	41.95	943	45.80	964	49.10	985	52.40	1006	55.70
40962	1700	907	38.10	930	41.70	951	45.25	971	48.80	993	52.80	1015	56.80	1037	60.80
43372	1800	940	41.60	962	45.60	983	49.40	1004	53.20	1024	57.15	1044	61.10	1064	65.05
45781	1900	972	45.40	995	49.60	1016	53.70	1036	57.80	1055	61.75	1073	65.70	1092	69.65
48191	2000	1038	53.60	1060	58.20	1080	62.85	1100	67.50	1119	72.00	1138	76.50	1157	81.00
53010	2200	1105	62.80	1126	67.90	1146	72.95	1165	78.00	1184	83.05	1202	88.10	1221	93.15
57829	2400	1173	73.20	1193	78.70	1212	84.20	1231	89.70	1249	94.85	1267	100.00	1285	105.15
62648	2600	1243	85.10	1261	90.80	1330	96.40	1398	102.00	1366	108.00	1333	114.00	1301	120.00
67467	2800	1314	98.50	1331	104.11	1348	110.06	1365	116.00	1382	122.50	1399	129.00	1416	135.50

The **Bold/Underlined** numbers indicate the maximum efficiency of this fan

Figures above the shaded section denote Class I, Max. RPM=782. Figures in the shaded section denote Class II, Max. RPM=1020.



ACSI 542 Single Width

Wheel Dia. = 54 1/4", Tip Speed = 14.2 x RPM, Inlet Area = 19.64 ft², Outlet Area = 29.87 ft²

CFM	OV	1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14767	500	286	2.06	314	2.83	340	3.62	397	5.55	458	8.60				
17721	600	316	2.64	341	3.50	365	4.43	409	6.30	519	12.70	528	13.40	565	16.30
20674	700	345	3.31	370	4.34	391	5.31	432	7.39	471	9.50	514	12.20	581	18.00
23628	800	375	4.10	399	5.26	420	6.40	458	8.71	493	10.90	549	15.20	595	20.10
26582	900	406	5.02	429	6.31	449	7.60	485	10.00	519	12.70	575	17.30	603	
29535	1000	438	6.11	459	7.50	479	8.93	514	11.70	545	14.40	628	21.90	655	25.30
32489	1100	470	7.39	489	8.86	508	10.40	543	13.50	573	16.40	602	19.50	629	22.60
35442	1200	503	8.89	521	10.40	539	12.00	572	15.40	602	18.70	628	21.90	655	
38396	1300	536	10.60	553	12.20	570	13.90	602	17.50	631	21.10	657	24.60	681	28.00
41349	1400	570	12.60	585	14.20	601	16.00	632	19.80	660	23.70	686	27.50	710	31.20
44303	1500	605	14.80	619	16.40	633	18.30	662	22.30	690	26.50	716	30.60	739	34.70
47256	1600	639	17.30	652	19.10	666	21.00	693	25.10	720	29.50	745	33.90	769	38.30
50210	1700	673	20.10	686	22.00	698	23.90	724	28.20	750	32.70	775	37.40	798	42.10
53164	1800	707	23.00	720	25.20	732	27.20	756	31.50	781	36.30	805	41.20	827	46.10
56117	1900	741	26.30	754	28.70	766	30.80	788	35.20	812	40.10	835	45.20	856	50.40
59171	2000	808	33.50	823	36.70	834	39.10	854	43.70	875	48.80	896	54.30	917	60.00
64978	2200	875	42.00	890	45.90	902	48.80	921	53.80	940	59.10	959	64.80	979	70.80
70885	2400	946	53.00	958	56.20	970	60.00	989	65.60	1006	71.10	1024	77.00	1042	83.30
76792	2600	1019	66.10	1024	68.00	1038	72.50	1057	79.20	1073	85.00	1089	91.10	1106	97.50
82699	2800	1089	80.50	1293	81.70	1105	87.40	1126	94.50	1141	100.00	1156	107.00	1171	131.00

CFM	OV	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP												
23628	800	605	19.50			649	24.40	679	27.70	725	33.80	751	37.00		
26582	900	614	21.00	661	26.40			693	30.10						
29535	1000	631	23.10												
32489	1100	654	25.70	680	28.90	707	32.50	734	36.10	764	40.25	793	44.40	823	48.55
35442	1200	680	28.60	704	31.90	728	35.45	751	39.00	777	43.00	802	47.00	828	51.00
38396	1300	707	31.80	730	35.40	752	38.95	773	42.50	796	46.40	818	50.30	841	54.20
41349	1400	732	34.80	757	39.00	778	42.80	799	46.60	819	50.50	839	54.40	859	58.30
44303	1500	761	38.60	782	42.40	804	46.75	825	51.10	845	55.10	864	59.10	884	63.10
47256	1600	790	42.50	811	46.70	832	51.10	852	55.50	871	59.85	890	64.20	909	68.55
50210	1700	820	46.70	840	51.20	859	55.55	877	59.90	897	64.75	917	69.60	937	74.45
53164	1800	849	51.00	869	55.90	888	55.05	906	54.20	925	64.55	943	74.90	962	85.25
56117	1900	878	55.60	898	60.80	917	65.80	936	70.80	953	75.65	969	80.50	986	85.35
59171	2000	938	65.70	957	71.40	976	77.05	994	82.70	1011	88.20	1027	93.70	1044	99.20
64978	2200	998	77.00	1017	83.20	1035	89.45	1052	95.70	1069	101.85	1086	108.00	1103	114.15
70885	2400	1060	89.80	1077	96.40	1095	102.70	1112	109.00	1128	116.00	1144	123.00	1160	130.00
76792	2600	1122	104.00	1139	111.00	1156	118.00	1172	125.00	1188	132.50	1204	140.00	1220	147.50
82699	2800	1186	129.50	1202	128.00	1218	135.50	1233	143.00	1249	150.50	1264	158.00	1280	165.50

The **Bold/Underlined** numbers indicate the maximum efficiency of this fan
 Figures above the shaded section denote Class I, Max. RPM=749. Figures in the shaded section denote Class II, Max. RPM=977.



ACSI 600 Single Width

Wheel Dia. = 60", Tip Speed = 15.7 x RPM, Inlet Area = 23.76 ft², Outlet Area = 36.67 ft²

CFM	OV	1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18064	500	259	2.52	284	3.47	307	4.42	350	6.79						
21677	600	285	3.23	308	4.29	330	5.42	370	7.70	415	10.50				
25289	700	312	4.05	334	5.3	353	6.49	391	9.04	426	11.70	465	14.90		
28902	800	339	5.01	361	6.44	380	7.83	414	10.60	446	13.40	477	16.50	511	20.00
32515	900	467	6.14	387	7.72	406	9.30	438	12.30	469	15.50	497	18.60	525	22.00
36128	1000	396	7.48	415	9.17	433	10.90	465	14.30	493	17.70	520	21.20	545	24.60
39741	1100	425	9.04	443	10.80	460	12.70	491	16.50	518	20.10	544	23.90	569	27.70
43354	1200	455	10.80	471	12.70	487	14.70	517	18.80	544	22.90	568	26.80	493	31.00
46966	1300	485	13.00	500	14.90	515	17.00	544	21.40	571	25.80	594	30.10	616	34.20
50579	1400	516	15.40	529	17.40	543	19.50	571	24.20	597	29.00	621	33.70	642	38.20
54192	1500	547	18.10	559	20.20	572	22.40	599	27.30	624	32.40	647	37.40	669	42.40
57805	1600	578	21.20	590	23.30	602	25.60	627	30.70	651	36.10	674	41.50	695	46.80
61418	1700	609	24.50	620	26.90	632	29.20	655	34.50	678	40.10	700	45.80	721	51.50
65031	1800	639	28.20	651	30.80	662	33.20	684	38.60	706	44.40	728	50.40	748	56.40
68643	1900	670	32.10	682	35.10	692	37.60	713	43.10	734	49.10	755	55.40	775	61.70
72256	2000	730	41.00	744	44.90	754	47.80	772	53.50	791	59.80	811	66.40	829	73.30
79482	2200	791	51.40	805	56.10	816	59.70	833	65.80	850	72.30	867	79.30	885	86.60
86708	2400	856	64.90	866	68.80	877	73.40	894	80.30	909	87.00	925	94.20	942	101.00
93933	2600	921	80.90	926	83.20	938	88.70	956	96.90	970	104.00	985	111.00	1000	119.00
101159	2800	985	98.50	988	100.00	999	105.00	1018	115.00	1032	123.00	1045	131.00	1059	139.00

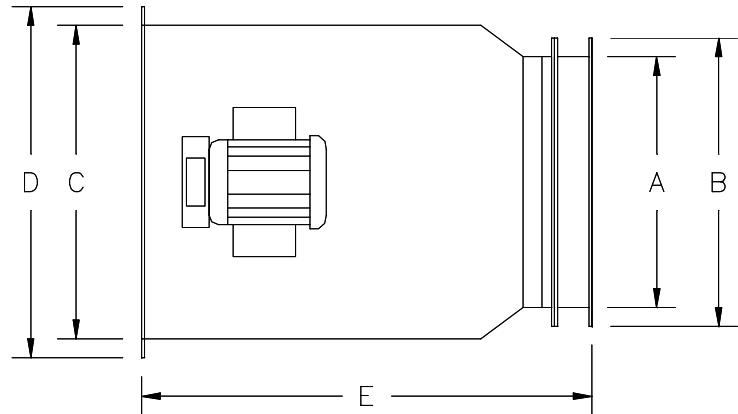
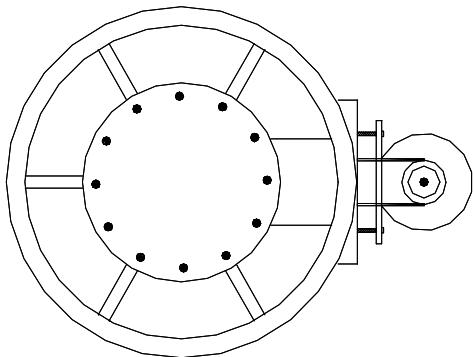
CFM	OV	3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
28902	800	547	23.90												
32515	900	555	25.70	587	29.90	612	34.00								
36128	1000	571	28.30	597	32.30	626	36.85	655	41.40	680	45.80				
39741	1100	591	31.40	615	35.30	640	39.70	664	44.10	691	49.20	717	54.30	744	59.40
43354	1200	615	35.10	636	39.10	658	43.40	679	47.70	702	52.60	725	57.50	748	62.40
46966	1300	639	38.90	660	43.30	680	47.65	699	52.00	720	56.80	740	61.60	761	66.40
50579	1400	662	42.60	684	47.70	703	52.35	722	57.00	741	61.75	759	66.50	778	71.25
54192	1500	688	47.20	707	51.90	727	57.15	746	62.40	764	67.35	781	72.30	799	77.25
57805	1600	715	52.00	633	57.10	702	62.50	770	67.90	788	73.25	805	78.60	823	83.95
61418	1700	741	57.10	760	62.60	777	67.90	793	73.20	811	79.20	829	85.20	847	91.20
65031	1800	767	62.40	786	68.30	803	74.50	820	79.80	836	85.70	852	91.60	868	97.50
68643	1900	794	68.10	812	74.30	829	80.45	846	86.60	861	92.55	876	98.50	891	104.45
72256	2000	848	80.30	865	87.30	882	94.15	899	101.00	914	107.50	929	114.00	944	120.50
79482	2200	902	94.20	919	101.00	936	109.00	952	117.00	967	124.50	982	132.00	997	139.50
86708	2400	958	109.00	974	118.00	990	126.00	1005	134.00	1020	142.50	1035	151.00	1050	159.50
93933	2600	1015	127.00	1030	136.00	1045	144.50	1060	153.00	1074	162.00	1088	171.00	1102	180.00
101159	2800	1073	147.00	1087	156.00	1101	165.50	1115	175.00	1129	184.50	1143	194.00	1157	203.50

The **Bold/Underlined** numbers indicate the maximum efficiency of this fan

Figures above the shaded section denote Class I, Max. RPM=638. Figures in the shaded section denote Class II, Max. RPM=832.



Inline Fan Dimension Data



CLOCKWISE ROTATION, ARRANGEMENT 9

MODEL SIZE	WHEEL DIA.	A	B	C	D	E
200	20"	22	26	28	32	42
222	22 1/4"	24	29	32	37	46
245	1/2"	28	33	34	39	50
270	27"	30	35	38	43	56
300	30"	34	40	42	48	62
330	33"	36	42	46	52	66
365	36 1/2"	40	46	50	56	72
402	40 1/4"	44	50	56	62	80
445	44 1/2"	50	56	62	68	88
490	49"	54	60	66	72	96
542	54 1/4"	60	66	74	80	106
600	60"	66	72	82	88	118

NOTE: Dimensions given are guide ONLY = not for construction.



ACS Inline Fan Options

FO1—ROLLER BEARINGS:

Provides longer life, particularly on larger fan housings and heavier loads. Standard on fan sizes 36" and above.

FO2—STAINLESS STEEL SHAFT:

More rust resistant and provides additional level of corrosion resistance from fugitive fumes.

FO3—ACCESS DOOR:

Provides access to fan wheel for inspection, maintenance and cleaning.

FO4—DISCHARGE GRILL:

Prevents injury to personnel from falling or sticking their hands into the fan.

Recommended on small fans with no stack, where the discharge is below head height, or where there is a possibility of falling into the discharge opening.

FO5—STACK:

Adds additional height to the discharge.

FO6— SPECIAL MOTORS:

Other than TEFC (230/460/60/3).

FO7—FLOOR STANDS:

For horizontal floor mounting installation.



Hoods

Duct & Fittings

Radial Fans

Special Systems

Inline Fans

Odor Control

Chrome Systems

NOx Systems

Scrubbers

Air Strippers

Centrifugal Fans

Process Tanks

Storage Tanks

Ventilation Systems

SOx Systems

Custom Fabrication



Air Chem Systems, Inc.

Manufacturer of Fiberglass Air Pollution
Control & Industrial Equipment

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