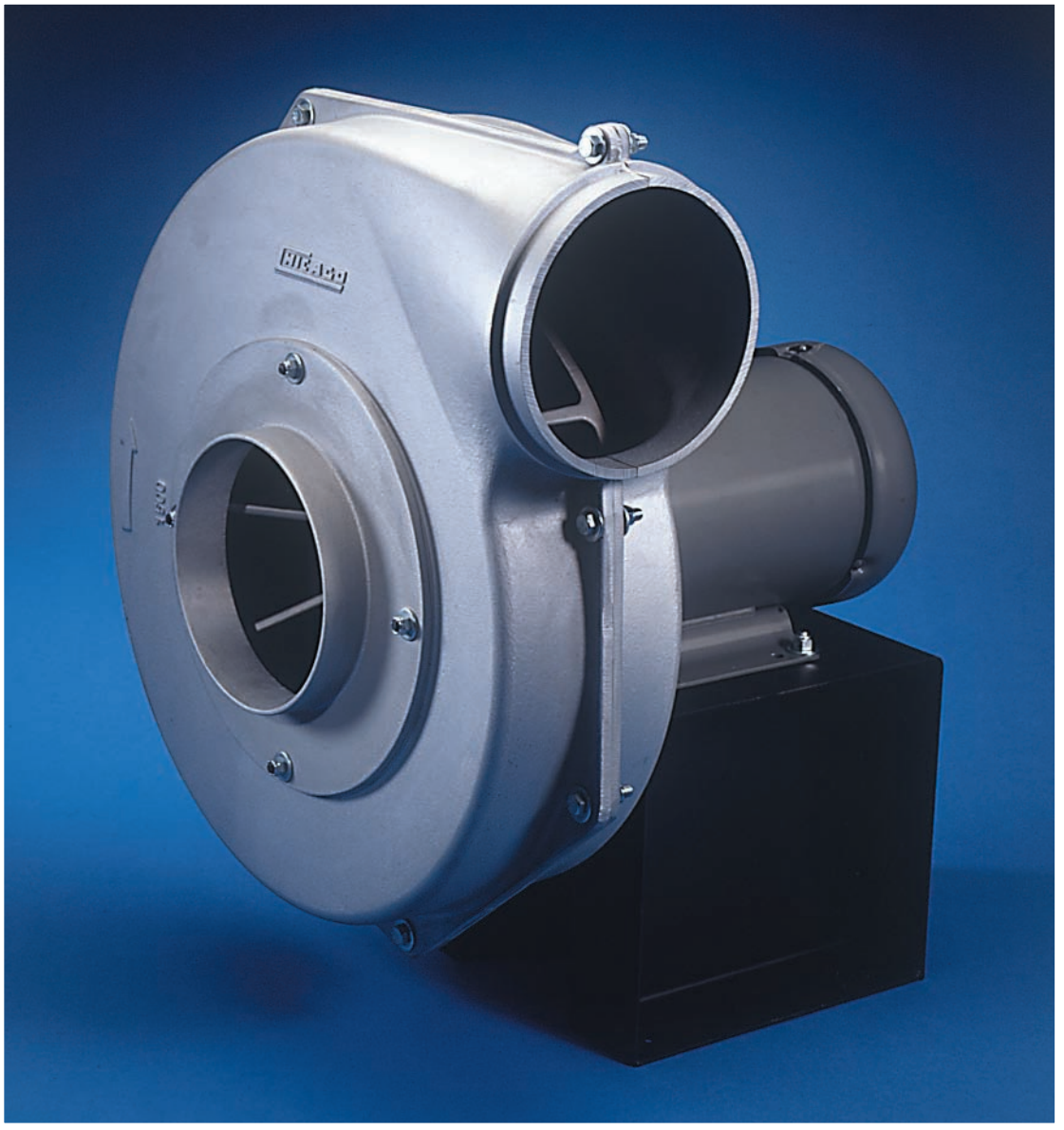
DESIGN 38-CPB

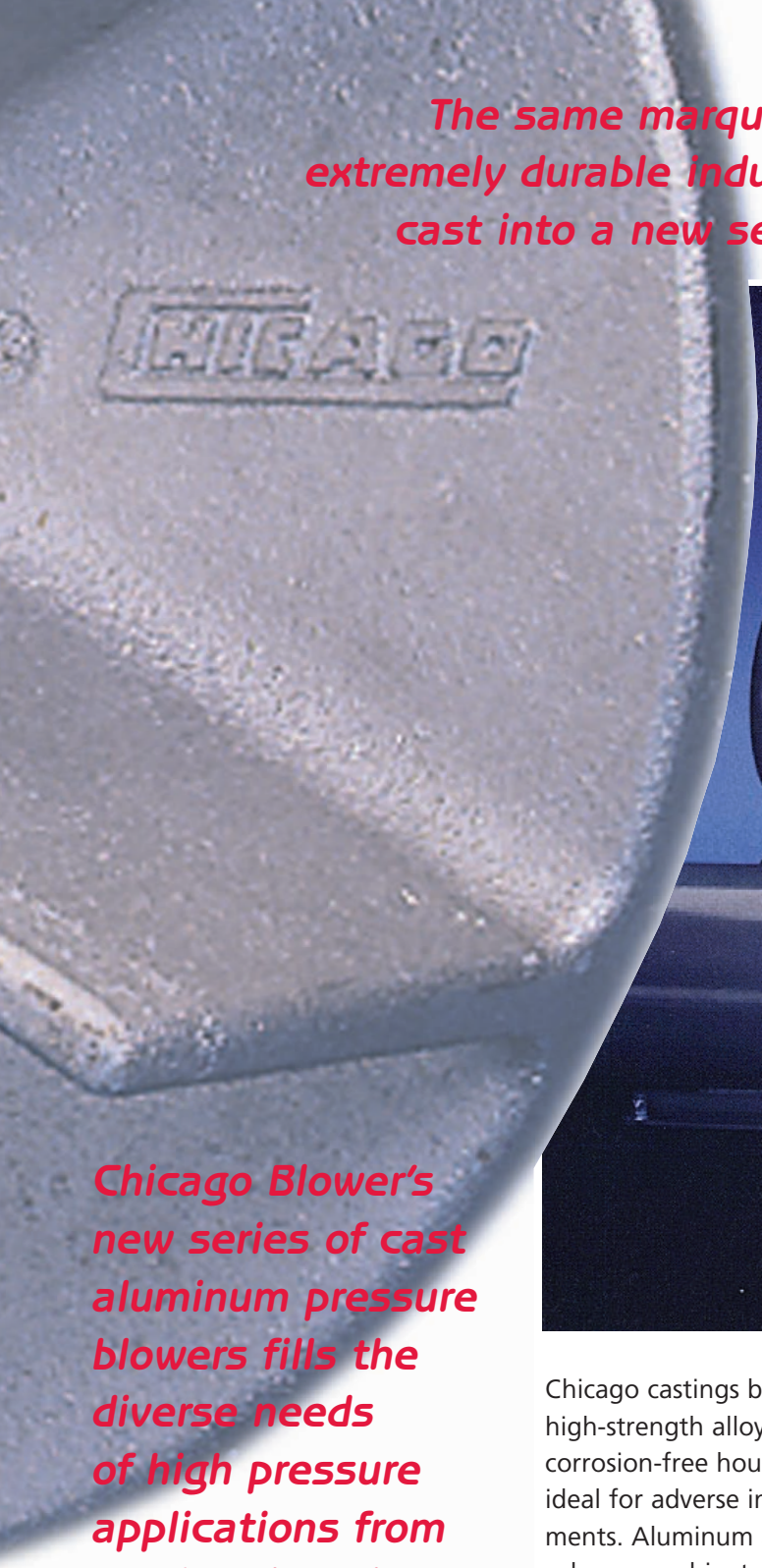
BULLETIN CAPB-101



CAST ALUMINUM PRESSURE BLOWER

CHICAGO

CHICAGO BLOWER CORPORATION



The same marque that has identified higher quality, extremely durable industrial fans for over 50 years is now cast into a new series of aluminum pressure blowers.

Chicago Blower's new series of cast aluminum pressure blowers fills the diverse needs of high pressure applications from combustion air to fume and dust control to food processing.

Chicago castings blend aluminum with high-strength alloys to create strong, corrosion-free housings and wheels ideal for adverse industrial environments. Aluminum also stands up to sub-zero ambients without material deterioration. Since aluminum is non-magnetic and non-toxic, Chicago's pressure blowers are recommended for both electronic and food related applications. The non-sparking properties qualify Chicago's pressure blowers for AMCA Type B spark resistant rating.

"Industrial Quality" has long described Chicago's rugged construction and guarantees exceptional performance and reliability. Our fan's most important feature is the reliability we are able to add to your product. If you are unsure of a fan selection for a specific application, your Chicago representative will help provide recommendations. Chicago Blower offices are located throughout North America and around the world.

CHICAGO

Blower size 1000 is available with five wheels of differing widths and diameters.

Each of the eight pressure blower housings can be fitted with multiple wheel/inlet configurations to match the volume required for the application. Depending on any one size there is up to 24 combinations available.

With all these possible selections, the user gains the efficiency and maintenance-free advantages of direct drive with the performance versatility of belt drive. Even if performance needs should change in the future, an alternate wheel can be easily fitted to meet the new requirement. No wasted motion. The housing and motor will usually remain unchanged.

Chicago's Design 38 cast aluminum pressure blowers are offered in eight sizes from 8" to 18-1/2" in combination with 64 unique wheels, all stocked for quick assembly. They produce flows to 5000 CFM and static pressures to 20" wg. and have been performance verified in an AMCA certified lab.

Chicago's Wheel Designs Meet Your Precise Performance Requirement with Direct Drive Reliability

Six-bladed radial wheel

Eight-bladed radial wheel

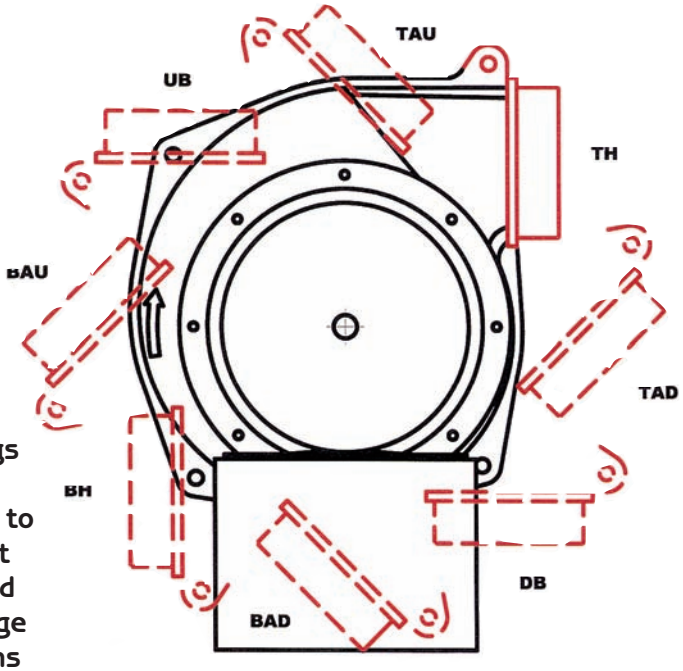
Back-ward curved wheel

WHEELS

Chicago offers two basic types of cast aluminum wheels. Radial blades are the most commonly used and provide the best overall performance. They consist of either six or eight blades depending on wheel diameter. Backward curved blades have inherently different performance characteristics, are somewhat quieter, but are not self-cleaning.

Wheels with tip speeds to 13,000 fpm are cast of 319 aluminum while higher speed wheels are 356 aluminum and heat treated. All wheels utilize an integral straight bore hub and are statically and dynamically balanced.

Quality Features from the Quality Company

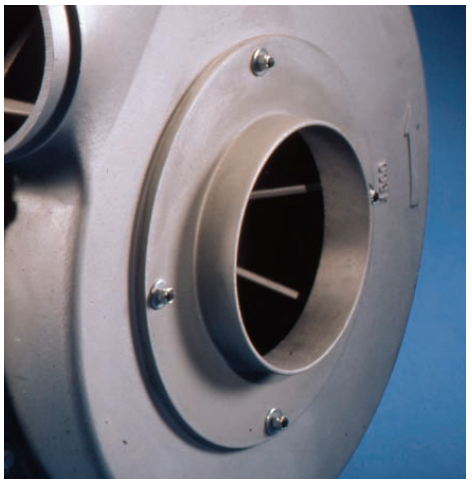


Housings can be rotated to all eight standard discharge positions

HOUSINGS

Chicago's Design 38 pressure blowers have housings cast of 319 aluminum. Their unique split housing design with both inlet and drive side cover plates provide more installation and application versatility.

With bolted cover plates, the blower's flow is *reversable* for either clockwise or counterclockwise rotation. In addition, the housings are *rotatable* to eight standard discharge positions. Bolted construction facilitates field changeover and also simplifies periodic cleanout.



SHAFT SEAL

A virgin teflon sheet is bolted to the drive side of the housing. The seal is designed to reduce airstream leakage and contamination through the blower shaft opening in the housing.

RUGGED MOTOR BASE

A heavy gauge steel pedestal holds the motor firmly in place. The flanged and welded construction provides exceptional rigidly.

Motors from recognized manufacturers are factory mounted and tested at running speed for vibration and balance.

INLETS/OUTLETS

The basic slip fit inlet is standard on Chicago's pressure blowers and is cast into the inlet coverplate. Diameters are available from 4" to 10" for convenient fit of ductwork. The variety of inlet sizes helps fine tune performance for direct drive blowers.

The outlet is cast into each housing half in 4" to 8" diameters for a slip fit duct connection.

BLOWER ARRANGEMENTS

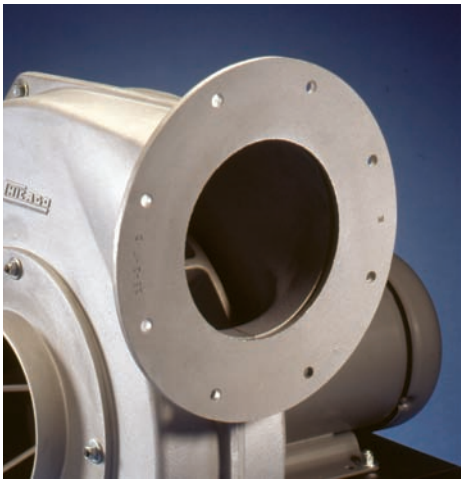
DIRECT DRIVE

- Arrangement 4, with c-face flange and/or foot mounted motor.
- Arrangement 4V, vertical mount with c-face flange mounted motor. Includes flanged inlet.

BELT DRIVE

- Arrangement 1 includes heavy steel bearing pedestal.
- Arrangement 9 as above except includes motor slide base. Motor and drives are factory mounted.

OPTIONAL ACCESSORIES



FLANGED INLETS/OUTLETS

Cast aluminum flanges mount to either inlet or outlet. Inlet flange holes are on centerline. Outlet flange holes straddle centerline.

HOUSING DRAIN

To facilitate cleanout, a 1/2" drain with plug is located in the lowest point of the housing.

VIBRATION ISOLATORS

Rubber-In-Shear (RIS) isolators with steel mounting plate molded in are available for vibration sensitive installations. They provide 1/4" static deflection.

SLIDE GATE DAMPERS

Dampers allow manual adjust of air volume to suit the application. Housings are cast aluminum with a galvanized steel gate and screwlock to hold gate firmly in place. Dampers are available for inlet or outlet in either full cutoff style mounted on the housing, or half cutoff style that mounts to ductwork.

INLET/OUTLET SCREENS

Spiral welded steel screen with zinc, clear chromate finish mounts over the standard slip fit inlet or outlet. Screens are strongly recommended for installations with unducted inlets or outlets.

INLET FILTER

Efficient inlet filters are available as either a disposable paper type or as a cleanable, reusable wire mesh. The cannister has a flanged base for mounting to a flanged inlet.

Half cut-off slide gate damper on a Series 1400 blower with bottom angular up discharge. Ductwork not shown.

PRESSURE BLOWER SELECTION

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

EXAMPLE:

Select a pressure blower to handle 1000 CFM at 2.75" SP, 100°F and at 1000 feet above sea level.

Refer to the Temperature/Altitude table. At 1000 feet and 100°F, the correction factor is 1.10.

Corrected SP is 1.10 X 2.75" SP = 3.025" SP at 70°F and sea level. To simplify, use 3.00"SP.

FOR DIRECT DRIVE

Using the Direct Drive Performance tables, enter the tables at the required Static Pressure, 3.00" SP. Reading down the column, find the CFM rating(s) that meet the required 1000 CFM. Several blowers meet this requirement, one of which is a Model 1400 with a 12-1/4" x 2-7/8" wheel and 6" inlet. The blower will run at 3450 RPM and require 2.46 BHP at 70°F and sea level.

Correct the BHP. Divide 2.46 by the correction factor (1.10). 2.46 ÷ 1.10 = 2.24 BHP at 100°F and 1000' altitude.

FOR BELT DRIVE

Using the Belt Drive Performance tables, one selection for 1000 CFM at 3" SP would also be a Model 1400. The blower will run at 2470 RPM and require 1.45 BHP at 70°F and sea level. (Actual RPM and BHP was calculated by interpolating between the 1050 and 900 CFM in the tables.)

Correct the BHP. Divide 1.45 by the correction factor (1.10). 1.45 ÷ 1.10 = 1.32 BHP at 100°F and 1000' altitude.

NOTE:

When several ratings meet the requirements, usually the lowest brake horsepower requirement will provide the most efficient and quietest selection.

Temperature and Altitude Correction

AIR TEMP (F°)	ALTITUDE (feet) with BAROMETRIC PRESSURE (HG)							
	0´ 29.92	500´ 29.38	1000´ 28.86	1500´ 28.33	2000´ 27.82	2500´ 27.31	3000´ 26.82	3500´ 26.32
-15	.79	.81	.82	.84	.85	.87	.88	.90
0	.87	.88	.90	.92	.93	.95	.97	.99
70	1.00	1.02	1.04	1.06	1.08	1.10	1.12	1.14
100	1.06	1.08	1.10	1.12	1.14	1.16	1.18	1.20
150	1.15	1.17	1.19	1.22	1.24	1.26	1.28	1.31
200	1.25	1.27	1.29	1.32	1.34	1.36	1.39	1.42

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

Identical performances can be achieved by different blower sizes by varying the wheel widths and diameters. Often installation requirements will determine the blower size.

Refer to Chicago Blower's Selection program, fan.net, for performance, fan curves and sound data. Contact your local Chicago Blower sales engineer for software and assistance.

Model	Wheel	Inlet	1 " SP		2 " SP		3 " SP		4 " SP		6 " SP		8 " SP	
			CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
800	8 x 2 1/4	4	269	0.43	238	0.39	157	0.34						
800	8 x 2 3/4	4	276	0.57	246	0.53	170	0.45						
900	8 x 2 3/4	5	353	0.41	294	0.32	237	0.28	144	0.21				
900	8 1/2 x 2 3/4	5	392	0.49	344	0.45	293	0.40	225	0.33				
900	9 x 2 7/8	5	436	0.59	393	0.55	342	0.48	290	0.43				
900	9 3/4 x 2 7/8	5	491	0.73	452	0.69	413	0.64	369	0.57	219	0.38		
900	10 5/8 x 2 7/8	5	557	0.99	521	0.93	487	0.87	454	0.81	366	0.66		
1000	9 x 2 7/8	6	594	0.95	528	0.85	440	0.73	343	0.50				
1000	9 3/4 x 2 7/8	6	685	1.18	625	1.10	558	1.00	469	0.90	205	0.58		
1000	10 5/8 x 2 7/8	6	787	1.43	730	1.36	665	1.27	601	1.20	456	0.98		
1000	11 x 2 3/4	6	811	1.57	753	1.47	690	1.39	625	1.32	489	1.16		
1000	11 1/2 x 2 7/8	6	857	1.94	798	1.85	741	1.72	681	1.63	551	1.40	368	1.03
1200	10 5/8 x 2 7/8	7	964	1.82	892	1.72	815	1.61	726	1.47	473	1.10		
1200	11 x 2 3/4	7	1063	2.14	1008	2.03	929	1.90	772	1.71	529	1.26		
1200	11 1/2 x 2 7/8	7	1131	2.57	1075	2.39	1005	2.22	896	2.05	639	1.67	392	1.24
1200	12 x 2 7/8	7	1198	2.89	1152	2.73	1100	2.54	1029	2.38	759	2.01	552	1.60
1200	12 1/4 x 2 7/8	7	1226	3.00	1180	2.83	1128	2.64	1061	2.49	821	2.10	613	1.73
1200	13 x 3 1/4	7	1342	3.71	1289	3.50	1242	3.31	1202	3.15	1125	2.82	870	2.50
1400	12 1/4 x 2 7/8	6	1087	2.70	1050	2.59	1006	2.46	933	2.36	702	2.00	527	1.65
1400	14 x 3 1/4 BC	6	1155	3.17	1114	3.10	1069	3.02	1018	2.95	892	2.75	755	2.44
1400	13 x 3 1/4	6	1203	3.20	1173	3.08	1139	2.94	1085	2.77	878	2.45	737	2.14
1400	14 x 3 1/4	6	1329	4.19	1298	4.06	1264	3.91	1223	3.76	1078	3.46	932	3.09
1400	14 x 3 1/4 BC	7	1346	3.61	1304	3.53	1257	3.43	1194	3.33	1008	3.06	843	2.76
1400	12 1/4 x 2 7/8	7	1387	3.26	1318	3.05	1241	2.83	1144	2.58	816	2.09	580	1.65
1400	12 1/4 x 2 7/8	8	1439	3.37	1356	3.18	1264	2.98	1148	2.75	807	2.21	480	1.68
1400	14 x 3 1/4 BC	8	1446	3.74	1388	3.58	1338	3.44	1291	3.30	1178	2.97	877	2.61
1400	13 x 3 1/4	7	1525	4.00	1452	3.76	1385	3.54	1324	3.32	1188	2.87	862	2.37
1400	13 x 3 1/4	8	1639	4.29	1557	4.05	1462	3.77	1368	3.48	1205	3.07	833	2.53
1400	14 x 3 1/4	7	1727	5.20	1678	4.99	1626	4.77	1568	4.53	1414	4.01	1259	3.49
1400	14 x 3 1/4	8	1820	5.36	1752	5.15	1679	4.92	1596	4.67	1437	4.12	1277	3.53
1500	14 x 3 1/4 BC	6	1333	3.46	1287	3.39	1233	3.30	1155	3.23	971	3.01	788	2.69
1500	14 x 3 1/4	6	1477	4.46	1436	4.28	1392	4.09	1343	3.90	1202	3.70	994	3.39
1500	15 1/2 x 5 BC	6	1582	5.15	1552	5.14	1517	5.11	1482	5.03	1413	4.76	1333	4.41
1500	16 1/2 x 4 3/8 BC	6	1708	6.37	1685	6.30	1660	6.22	1635	6.14	1577	5.95	1492	5.71
1500	16 1/2 x 5 BC	6	1713	6.28	1705	6.21	1697	6.14	1689	6.06	1646	5.89	1552	5.71
1500	15 1/2 x 5	6	1753	6.66	1721	6.54	1688	6.43	1655	6.31	1584	6.05	1504	5.62
1500	14 x 3 1/4 BC	8	1857	4.59	1769	4.39	1671	4.18	1569	3.97	1388	3.53	989	3.02
1500	16 1/2 x 4 3/8	6	1901	8.35	1878	8.21	1856	8.07	1832	7.92	1779	7.59	1711	7.21
1500	16 1/2 x 5	6	1902	8.60	1877	8.44	1852	8.28	1827	8.11	1773	7.77	1712	7.37
1500	14 x 3 1/4 BC	10	2101	5.20	1992	4.95	1874	4.66	1742	4.33	1462	3.75	1083	3.13
1500	14 x 3 1/4	8	2155	6.18	2066	6.02	1984	5.87	1908	5.58	1746	4.92	1483	4.01
1500	15 1/2 x 5 BC	8	2355	7.77	2326	7.49	2270	7.26	2201	7.03	2042	6.58	1874	6.12
1500	16 1/2 x 4 3/8 BC	8	2514	8.94	2459	8.76	2403	8.59	2345	8.40	2220	7.99	2076	7.52
1500	14 x 3 1/4	10	2532	7.22	2416	6.84	2294	6.48	2170	6.19	1943	5.46	1679	4.38
1500	16 1/2 x 5 BC	8	2609	9.05	2577	8.84	2536	8.57	2457	8.47	2269	8.03	2085	7.67
1500	15 1/2 x 5	8	2612	10.10	2558	9.80	2501	9.50	2442	9.18	2304	8.57	2142	7.91
1500	16 1/2 x 4 3/8	8	2795	11.67	2742	11.45	2687	11.22	2631	10.98	2510	10.48	2376	9.92
1500	15 1/2 x 5 BC	10	2804	9.51	2732	9.05	2623	8.63	2498	8.24	2257	7.57	2081	7.03
1500	16 1/2 x 5	8	2831	11.92	2774	11.69	2717	11.45	2658	11.20	2535	10.68	2399	10.07
1500	16 1/2 x 4 3/8 BC	10	2940	10.23	2873	10.06	2802	9.89	2727	9.70	2547	9.22	2332	8.62
1500	16 1/2 x 5 BC	10	3009	10.95	2941	10.45	2858	10.12	2763	9.74	2575	9.23	2414	8.81
1500	15 1/2 x 5	10	3167	12.13	3086	11.68	3001	11.21	2910	10.70	2692	10.05	2465	9.24
1500	16 1/2 x 4 3/8	10	3410	14.66	3336	14.22	3260	13.77	3179	13.28	2985	12.30	2742	11.33
1500	16 1/2 x 5	10	3445	14.27	3370	13.90	3293	13.53	3213	13.14	3039	12.33	2839	11.45
1800	14 x 3 1/4 BC	6	1150	3.28	1113	3.18	1071	3.06	1017	2.99	880	2.78	748	2.51
1800	14 x 3 1/4	6	1308	4.22	1261	4.07	1213	3.92	1164	3.76	1054	3.40	919	2.71
1800	14 x 3 1/4 BC	8	1429	3.76	1372	3.65	1322	3.56	1279	3.42	1184	3.09	864	2.72
1800	14 x 3 1/4 BC	10	1500	3.89	1437	3.75	1381	3.62	1328	3.48	1147	3.16	832	2.77
1800	16 1/2 x 4 3/8 BC	6	1530	6.06	1510	5.96	1490	5.86	1470	5.76	1426	5.55	1378	5.31
1800	14 x 3 1/4	8	1656	5.28	1595	5.00	1539	4.73	1487	4.51	1387	4.10	1235	3.63
1800	16 1/2 x 4 3/8	6	1673	8.03	1653	7.88	1633	7.72	1612	7.56	1568	7.24	1520	6.89
1800	14 x 3 1/4	10	1779	5.96	1713	5.63	1645	5.30	1575	5.06	1434	4.58	1294	3.91
1800	18 x 4 3/8	6	1857	10.86	1842	10.70	1828	10.53	1813	10.37	1782	10.02	1749	9.64
1800	16 1/2 x 4 3/8 BC	8	2038	7.84	2000	7.69	1963	7.53	1925	7.37	1847	7.05	1767	6.70
1800	16 1/2 x 4 3/8	8	2214	9.92	2171	9.70	2129	9.48	2088	9.27	2011	8.85	1938	8.42
1800	16 1/2 x 4 3/8 BC	10	2221	8.35	2163	8.17	2108	8.00	2057	7.84	1965	7.51	1880	7.10
1800	16 1/2 x 4 3/8	10	2414	10.52	2353	10.18	2295	9.85	2242	9.55	2148	9.05	2061	8.59
1800	18 x 4 3/8	8	2461	13.46	2417	13.23	2374	13.01	2333	12.80	2255	12.40	2184	11.93
1800	18 x 4 3/8	10	2682	13.86	2631	13.61	2580	13.36	2531	13.12	2439	12.66	2353	12.14
1829	15 1/2 x 5 BC	8	2392	8.20	2354	7.86	2284	7.57	2197	7.29	2011	6.78	1845	6.31
1829	16 1/2 x 5 BC	8	2587	9.57	2565	9.24	2530	9.12	2430	8.77	2250	8.39	2077	8.02
1829	15 1/2 x 5	8	2620	10.74	2563	10.34	2505	9.93	2442	9.49	2297	8.94	2130	8.33
1829	16 1/2 x 5	8	2823	12.78	2772	12.50	2719	12.22	2665	11.94	2549	11.32	2419	10.62
1829	15 1/2 x 5 BC	10	2895	10.12	2813	9.67	2685	9.26	2543	8.83	2293	8.03	2115	7.32
1829	17 x 6	8	2939	13.63	2890	13.44	2840	13.25	2789	13.05	2682	12.63	2565	12.01
1829	16 1/2 x 5 BC	10	3146	12.23	3086	11.61	2997	11.23	2851	10.62	2587	9.81	2385	9.21
1829	15 1/2 x 5	10	3238	12.67	3147	12.31	3053	11.94	2952	11.55	2720	10.63	2471	9.59
1829	18 1/2 x 6	8	3250	18.49	3203	18.21	3156	17.93	3108	17.64	3011	17.06	2910	16.47
1829	16 1/2 x 5	10	3542	15.65	3462	15.16	3379	14.64	3290	14.10	3078	13.17	2840	12.26
1829	17 x 6	10	3674	16.64	3604	16.33	3533	16.01	3459	15.69	3298	14.98	3107	14.30
1829	18 1/2 x 6	10	4107	21.79	4070	21.51	4032	21.24	3993	20.95	3910	20.34	3813	19.64

Performance shown is for installation type B: Free inlet, Ducted outlet. Maximum temperature 150°F.

Performance ratings do not include the effects of appurtenances in the air stream.

DESIGN 38-CPB

PERFORMANCE
Direct Drive
3450 RPM

Model	Wheel	Inlet O.D.	10 " SP		12 " SP		14 " SP		16 " SP		18 " SP		20 " SP	
			CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
800	8 x 2 1/4	4												
800	8 x 2 3/4	4												
900	8 x 2 3/4	5												
900	8 1/2 x 2 3/4	5												
900	9 x 2 7/8	5												
900	9 3/4 x 2 7/8	5												
900	10 5/8 x 2 7/8	5												
1000	9 x 2 7/8	6												
1000	9 3/4 x 2 7/8	6												
1000	10 5/8 x 2 7/8	6												
1000	11 x 2 3/4	6												
1000	11 1/2 x 2 7/8	6												
1200	10 5/8 x 2 7/8	7												
1200	11 x 2 3/4	7												
1200	11 1/2 x 2 7/8	7												
1200	12 x 2 7/8	7												
1200	12 1/4 x 2 7/8	7												
1200	13 x 3 1/4	7	663	2.13										
1400	12 1/4 x 2 7/8	6												
1400	14 x 3 1/4 BC	6	605	2.08	327	1.44								
1400	13 x 3 1/4	6	569	1.73										
1400	14 x 3 1/4	6	783	2.66	578	2.05								
1400	14 x 3 1/4 BC	7	661	2.32	362	1.60								
1400	12 1/4 x 2 7/8	7												
1400	12 1/4 x 2 7/8	8												
1400	14 x 3 1/4 BC	8	683	2.19	289	1.40								
1400	13 x 3 1/4	7	635	1.86										
1400	13 x 3 1/4	8	542	2.01										
1400	14 x 3 1/4	7	1051	3.01	660	2.22								
1400	14 x 3 1/4	8	982	3.03	633	2.30								
1500	14 x 3 1/4 BC	6	597	2.23	257	1.59								
1500	14 x 3 1/4	6	803	2.83	531	2.00								
1500	15 1/2 x 5 BC	6	1210	4.05	1012	3.71	728	3.22	395	2.29				
1500	16 1/2 x 4 3/8 BC	6	1361	5.35	1252	4.99	894	4.45	725	3.90	249	2.60		
1500	16 1/2 x 5 BC	6	1401	5.53	1197	5.28	958	4.79	700	3.92	419	2.75		
1500	15 1/2 x 5	6	1411	5.11	1296	4.52	1105	4.11	594	2.85				
1500	14 x 3 1/4 BC	8	700	2.50										
1500	16 1/2 x 4 3/8	6	1591	6.75	1465	6.16	1358	5.60	1185	5.07	679	3.31		
1500	16 1/2 x 5	6	1634	6.94	1512	6.47	1372	5.79	1181	5.11	708	3.75		
1500	14 x 3 1/4 BC	10	652	2.60										
1500	14 x 3 1/4	8	1230	3.40	643	2.37								
1500	15 1/2 x 5 BC	8	1704	5.60	1516	5.00	1257	4.19	802	2.89				
1500	16 1/2 x 4 3/8 BC	8	1924	7.01	1761	6.47	1513	5.72	1254	4.73				
1500	14 x 3 1/4	10	1155	3.28	628	2.20								
1500	16 1/2 x 5 BC	8	1929	7.26	1785	6.72	1596	5.96	1251	4.82	468	3.03		
1500	15 1/2 x 5	8	1982	7.24	1802	6.48	1499	5.52	1201	4.26				
1500	16 1/2 x 4 3/8	8	2232	9.32	2083	8.61	1906	7.75	1597	6.51	1309	5.24		
1500	15 1/2 x 5 BC	10	1951	6.50	1751	5.74	1356	4.63						
1500	16 1/2 x 5	8	2259	9.42	2119	8.71	1956	7.89	1680	6.82	1374	5.36		
1500	16 1/2 x 4 3/8 BC	10	2150	7.96	1970	7.30	1733	6.53	1078	5.15	260	3.26		
1500	16 1/2 x 5 BC	10	2266	8.35	2058	7.57	1734	6.47	1233	5.03	322	1.83		
1500	15 1/2 x 5	10	2252	8.24	2012	7.24	1704	6.13	1193	4.76				
1500	16 1/2 x 4 3/8	10	2528	10.39	2329	9.50	2111	8.48	1825	7.31	1294	5.73		
1500	16 1/2 x 5	10	2626	10.52	2408	9.56	2185	8.62	1921	7.55	1487	6.05		
1800	14 x 3 1/4 BC	6	591	2.14	334	1.60								
1800	14 x 3 1/4	6	761	2.25	552	1.61								
1800	14 x 3 1/4 BC	8	664	2.30	213	1.54								
1800	14 x 3 1/4 BC	10	609	2.36										
1800	16 1/2 x 4 3/8 BC	6	1316	5.04	1203	4.64	893	4.15	737	3.63	499	2.79		
1800	14 x 3 1/4	8	887	2.75	642	2.04								
1800	16 1/2 x 4 3/8	6	1463	6.52	1393	6.06	1282	5.62	941	4.83	724	3.68		
1800	14 x 3 1/4	10	1016	3.38	598	2.59								
1800	18 x 4 3/8	6	1711	9.21	1660	8.76	1570	8.27	1440	7.51	1357	6.86	1264	6.35
1800	16 1/2 x 4 3/8 BC	8	1675	6.30	1538	5.80	1342	5.12	1143	4.41	605	3.07		
1800	16 1/2 x 4 3/8	8	1863	7.96	1774	7.43	1606	6.59	1399	5.66	1190	4.89		
1800	16 1/2 x 4 3/8 BC	10	1781	6.64	1611	6.16	1422	5.44	952	4.47	519	3.06		
1800	16 1/2 x 4 3/8	10	1973	8.12	1873	7.65	1747	7.10	1544	6.29	1107	5.04		
1800	18 x 4 3/8	8	2116	11.41	2048	10.89	1974	10.33	1883	9.66	1756	8.73	1561	7.74
1800	18 x 4 3/8	10	2269	11.63	2181	11.11	2085	10.53	1972	9.85	1827	9.00	1613	7.93
1829	15 1/2 x 5 BC	8	1695	5.85	1513	5.27	1205	4.42	656	3.13				
1829	16 1/2 x 5 BC	8	1929	7.62	1782	7.10	1576	6.34	1201	5.23	415	3.83		
1829	15 1/2 x 5	8	1960	7.63	1738	6.81	1458	5.82	963	4.63				
1829	16 1/2 x 5	8	2272	9.83	2105	9.28	1890	8.52	1614	7.42	1286	6.07		
1829	15 1/2 x 5 BC	10	1935	6.61	1614	5.69	1110	4.53	542	3.40				
1829	17 x 6	8	2434	11.31	2290	10.56	2130	9.80	1952	8.94	1738	7.87	1168	6.01
1829	16 1/2 x 5 BC	10	2247	8.73	2082	8.07	1784	7.09	1240	5.81	283	4.22		
1829	15 1/2 x 5	10	2241	8.54	1983	7.52	1341	5.91	888	4.68				
1829	18 1/2 x 6	8	2805	15.85	2694	15.20	2573	14.50	2438	13.71	2283	12.81	2102	11.75
1829	16 1/2 x 5	10	2633	11.37	2431	10.47	2183	9.40	1891	8.07	1415	6.21		
1829	17 x 6	10	2898	13.53	2695	12.56	2479	11.53	2224	10.33	1947	9.06	1495	7.08
1829	18 1/2 x 6	10	3676	18.69	3179	17.47	2995	16.50	2843	15.70	2667	14.76	2406	13.32

Performance shown is for installation type B: Free inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances in the air stream.
Maximum temperature 150°F.

800

Wheel Diameter 8" | Inlet O.D. 4" | Outlet Area 0.072 sq. ft.

Maximum BHP = 0.016 (RPM / 1000)^3

Tip Speed (FPM) = 2.094 x RPM

CFM	OV FPM	1/4 " SP		1/2 " SP		3/4 " SP		1 " SP		1 1/4 " SP		1 1/2 " SP		2 " SP		2 1/2 " SP		3 " SP		3 1/2 " SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
50	694	999	0.01	1316	0.02	1574	0.04	1798	0.06												
90	1250	1247	0.03	1463	0.04	1743	0.06	1950	0.08	2127	0.10	2293	0.12	2595	0.17	2869	0.23	3122	0.29		
130	1806	1642	0.06	1789	0.07	1926	0.09	2082	0.11	2279	0.14	2474	0.17	2772	0.23	3021	0.29	3254	0.36	3472	0.43
170	2361	2045	0.12	2183	0.14	2296	0.16	2400	0.18	2505	0.20	2616	0.22	2894	0.28	3199	0.37	3447	0.45		
210	2917	2452	0.21	2585	0.24	2692	0.27	2785	0.29	2871	0.31	2956	0.33	3126	0.38	3317	0.44	3549	0.52		
250	3472	2864	0.34	2990	0.38	3094	0.41	3184	0.44	3264	0.47	3340	0.50	3483	0.55						
290	4028	3278	0.52	3397	0.57	3498	0.61	3586	0.65												

900

Wheel Diameter 9" | Inlet O.D. 5" | Outlet Area 0.072 sq. ft.

Maximum BHP = 0.016 (RPM / 1000)^3

Tip Speed (FPM) = 2.356 x RPM

CFM	OV FPM	1/2 " SP		1 " SP		1 1/2 " SP		2 " SP		2 1/2 " SP		3 " SP		3 1/2 " SP		4 " SP		4 1/2 " SP		5 " SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70	972	1101	0.01																		
110	1528	1255	0.02	1589	0.03	1880	0.05	2137	0.06												
150	2083	1466	0.04	1749	0.06	1998	0.08	2230	0.09	2445	0.11	2646	0.13	2835	0.14						
190	2639	1689	0.06	1952	0.09	2171	0.11	2374	0.13	2566	0.16	2750	0.18	2926	0.20	3093	0.22	3254	0.24	3409	0.26
230	3194	1927	0.10	2172	0.13	2376	0.15	2560	0.18	2731	0.21	2896	0.24	3056	0.27	3210	0.30	3360	0.32	3505	0.35
270	3750	2184	0.15	2395	0.18	2595	0.22	2767	0.25	2927	0.28	3077	0.31	3222	0.35	3362	0.38	3500	0.42		
310	4306	2449	0.21	2631	0.25	2818	0.29	2986	0.33	3138	0.36	3280	0.40	3415	0.44	3545	0.48				
350	4861	2719	0.30	2882	0.33	3044	0.38	3209	0.43	3358	0.47	3494	0.51								
390	5417	2992	0.40	3142	0.44	3285	0.49	3434	0.54	3581	0.59										
430	5972	3268	0.52	3408	0.57	3539	0.62														

1000

Wheel Diameter 10 5/8" | Inlet O.D. 6" | Outlet Area 0.117 sq. ft.

Maximum BHP = 0.043 (RPM / 1000)^3

Tip Speed (FPM) = 2.782 x RPM

CFM	OV FPM	1 " SP		1 1/2 " SP		2 " SP		2 1/2 " SP		3 " SP		3 1/2 " SP		4 " SP		5 " SP		6 " SP		7 " SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
170	1453	1375	0.06	1621	0.09	1841	0.12														
230	1966	1517	0.09	1730	0.12	1926	0.16	2108	0.20	2280	0.23	2441	0.27								
290	2479	1692	0.14	1880	0.18	2054	0.22	2218	0.26	2374	0.30	2523	0.35	2665	0.39	2934	0.49	3184	0.60		
350	2991	1883	0.20	2057	0.25	2213	0.30	2362	0.34	2503	0.39	2639	0.44	2771	0.49	3021	0.60	3257	0.71	3480	0.83
410	3504	2077	0.28	2246	0.34	2393	0.40	2529	0.45	2658	0.51	2783	0.56	2905	0.62	3136	0.73	3357	0.85	3567	0.98
470	4017	2278	0.38	2440	0.45	2583	0.51	2712	0.58	2832	0.65	2948	0.71	3060	0.77	3276	0.89	3482	1.02		
530	4530	2488	0.51	2636	0.58	2776	0.65	2902	0.73	3018	0.81	3127	0.88	3232	0.95	3434	1.09				
590	5043	2707	0.67	2839	0.75	2971	0.83	3096	0.91	3210	0.99	3315	1.07	3416	1.16						
650	5556	2929	0.86	3051	0.94	3171	1.03	3290	1.12	3403	1.21	3508	1.30								
800	6838	3497	1.49																		

1200

Wheel Diameter 12 1/4" | Inlet O.D. 7" | Outlet Area 0.173 sq. ft.

Maximum BHP = 0.107 (RPM / 1000)^3

Tip Speed (FPM) = 3.207 x RPM

CFM	OV FPM	1 " SP		1 1/2 " SP		2 " SP		3 " SP		4 " SP		5 " SP		6 " SP		7 " SP		8 " SP		9 " SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
320	1850	1384	0.13	1579	0.18	1745	0.23	2039	0.33	2302	0.44	2541	0.55	2761	0.66	2965	0.79	3157	0.92	3339	1.06
410	2370	1517	0.19	1724	0.26	1890	0.32	2165	0.44	2406	0.57	2628	0.71	2837	0.84	3033	0.98	3218	1.12	3394	1.27
500	2890	1667	0.27	1854	0.35	2030	0.44	2311	0.59	2542	0.73	2750	0.89	2944	1.05	3128	1.21	3304	1.37	3472	1.54
590	3410	1852	0.39	2001	0.46	2160	0.56	2453	0.76	2689	0.94	2892	1.11	3078	1.28	3252	1.47	3417	1.66	3576	1.85
680	3931	2058	0.56	2176	0.63	2308	0.71	2583	0.94	2830	1.17	3039	1.37	3224	1.57	3393	1.77	3552	1.97		
770	4451	2276	0.79	2374	0.85	2481	0.92	2719	1.14	2961	1.40	3179	1.66	3369	1.90	3540	2.13				
860	4971	2500	1.07	2585	1.13	2676	1.20	2876	1.39	3094	1.65	3309	1.95	3507	2.25						
950	5491	2728	1.42	2804	1.48	2883	1.55	3053	1.72	3243	1.97	3441	2.27								
1040	6012	2959	1.84	3028	1.90	3099	1.97	3247	2.13	3411	2.36	3588	2.64								
1130	6532	3192	2.34	3255	2.40	3320	2.47	3452	2.63	3595	2.84										

1400

Wheel Diameter 14" | Inlet O.D. 7" | Outlet Area 0.165 sq. ft.

Maximum BHP = 0.134 (RPM / 1000)^3

Tip Speed (FPM) = 3.665 x RPM

CFM	OV FPM	1 " SP		2 " SP		3 " SP		4 " SP		5 " SP		6 " SP		7 " SP		8 " SP		10 " SP		12 " SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
450	2727	1227	0.16	1529	0.26	1816	0.40	2050	0.53	2247	0.64	2426	0.75	2594	0.86	2754	0.98	3053	1.24	3328	1.53
600	3636	1441	0.30	1684	0.39	1909	0.51	2140	0.69	2355	0.89	2546	1.08	2716	1.25	2869	1.40	3148	1.68	3404	1.98
750	4545	1668	0.50	1898	0.64	2084	0.75	2260	0.88	2444	1.06	2630	1.29	2807	1.53	2974	1.78	3270	2.24	3527	2.64
900	5455	1921	0.81	2112	0.96	2298	1.12	2453	1.26	2599	1.40	2748	1.57	2902	1.79	3057	2.05	3357	2.62		
1050	6364	2187	1.24	2342	1.39	2511	1.58	2669	1.77	2805	1.93	2932	2.08	3057	2.25	3184	2.46	3449	2.98		
1200	7273	2460	1.81	2592	1.96	2733	2.15	2882	2.38	3022	2.60	3145	2.79	3259	2.96	3369	3.14	3589	3.56		
1350	8182	2737	2.53	2853	2.70	2973	2.89	3102	3.12	3234	3.37	3360	3.62	3475	3.85	3580	4.05				
1500	9091	3017	3.42	3120	3.61	3226	3.81	3337	4.03	3454	4.29	3573	4.57								
1650	10000	3299	4.52	3393	4.72	3488	4.92	3586	5.15												
1800	10909	3583	5.83																		

Performance shown is for installation type B: Free inlet, Ducted outlet.
Power ratings (BHp) do not include drive losses.

Performance ratings do not include the effects of appurtenances in the air stream.
Maximum temperature 200°F.

Inlet O.D. 5" Maximum BHP = 0.257 (RPM / 1000)^3

Wheel Diameter 15.5" Outlet Area 0.307 sq. ft. Tip Speed (FPM) = 4.058 x RPM

1500

	OV	1 " SP		2 " SP		3 " SP		4 " SP		6 " SP		8 " SP		10 " SP		12 " SP		14 " SP		16 " SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
600	1954	1065	0.21	1323	0.32	1539	0.43	1725	0.53	2066	0.76	2371	1.03	2646	1.34	2897	1.68	3128	2.05	3344	2.44
700	2280	1163	0.29	1383	0.40	1601	0.56	1781	0.68	2097	0.90	2387	1.18	2654	1.49	2901	1.84	3130	2.21	3345	2.61
800	2606	1263	0.40	1462	0.52	1657	0.67	1843	0.84	2147	1.11	2418	1.37	2674	1.68	2913	2.03	3138	2.40	3349	2.81
900	2932	1366	0.52	1556	0.67	1724	0.81	1900	1.00	2208	1.35	2465	1.63	2706	1.93	2935	2.28	3153	2.65	3360	3.06
1000	3257	1473	0.68	1654	0.85	1809	0.99	1962	1.16	2269	1.59	2525	1.94	2753	2.26	2970	2.59	3179	2.96	3379	3.36
1100	3583	1585	0.87	1754	1.05	1903	1.22	2040	1.38	2326	1.82	2588	2.28	2812	2.64	3018	2.99	3217	3.35	3408	3.75
1200	3909	1700	1.09	1856	1.29	2002	1.49	2131	1.66	2386	2.07	2646	2.60	2875	3.06	3077	3.45	3267	3.82	3450	4.21
1300	4235	1818	1.36	1960	1.56	2101	1.78	2227	1.98	2460	2.37	2703	2.90	2935	3.47	3140	3.95	3326	4.37	3502	4.77
1400	4560	1937	1.67	2068	1.87	2202	2.11	2326	2.34	2545	2.75	2765	3.24	2991	3.85	3201	4.44	3389	4.95	3562	5.40
1500	4886	2058	2.02	2179	2.23	2304	2.48	2425	2.74	2638	3.19	2839	3.65	3049	4.24	3258	4.91	3450	5.53		
1600	5212	2180	2.43	2292	2.64	2409	2.89	2525	3.17	2735	3.68	2924	4.14	3116	4.69	3315	5.37	3508	6.07		
1700	5537	2303	2.88	2408	3.10	2517	3.36	2627	3.65	2834	4.22	3016	4.71	3193	5.23	3377	5.87	3564	6.61		
1800	5863	2427	3.40	2525	3.62	2627	3.88	2732	4.18	2933	4.80	3112	5.35	3279	5.87	3448	6.46				
1900	6189	2551	3.97	2644	4.20	2739	4.47	2838	4.77	3033	5.43	3210	6.04	3371	6.58	3529	7.15				
2000	6515	2676	4.61	2764	4.85	2854	5.11	2947	5.42	3134	6.11	3309	6.78	3467	7.37						
2100	6840	2801	5.31	2885	5.56	2970	5.83	3057	6.14	3236	6.85	3408	7.57	3565	8.22						
2200	7166	2927	6.08	3007	6.34	3087	6.62	3170	6.93	3341	7.65	3508	8.42								
2400	7818	3179	7.84	3252	8.12	3326	8.41	3400	8.73	3555	9.46										

Inlet O.D. 8" Maximum BHP = 0.333 (RPM / 1000)^3

Wheel Diameter 18" Outlet Area 0.150 sq. ft. Tip Speed (FPM) = 4.712 x RPM

1800

	OV	2 " SP		4 " SP		6 " SP		8 " SP		10 " SP		12 " SP		14 " SP		16 " SP		18 " SP		20 " SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
500	3333	1094	0.25	1465	0.51	1771	0.82	2034	1.13	2268	1.43	2480	1.73	2676	2.03	2859	2.35				
600	4000	1161	0.34	1497	0.58	1791	0.93	2049	1.30	2280	1.68	2490	2.04	2684	2.40	2866	2.76	3036	3.12	3198	3.48
700	4667	1254	0.48	1544	0.68	1821	1.03	2070	1.44	2296	1.87	2504	2.31	2696	2.75	2876	3.18	3046	3.60	3207	4.01
800	5333	1365	0.67	1606	0.85	1862	1.16	2100	1.57	2319	2.03	2522	2.52	2712	3.02	2890	3.53	3058	4.03	3218	4.52
900	6000	1485	0.90	1686	1.08	1915	1.35	2139	1.74	2350	2.21	2547	2.72	2732	3.26	2908	3.82	3074	4.38	3232	4.95
1000	6667	1609	1.18	1784	1.38	1981	1.62	2188	1.96	2389	2.42	2579	2.93	2759	3.50	2930	4.09	3094	4.69	3250	5.32
1100	7333	1735	1.52	1895	1.75	2063	1.98	2249	2.28	2437	2.68	2619	3.19	2793	3.75	2959	4.36	3119	4.99	3272	5.65
1200	8000	1862	1.92	2012	2.19	2159	2.42	2322	2.69	2495	3.05	2667	3.51	2834	4.06	2995	4.66	3150	5.31	3299	5.99
1300	8667	1989	2.38	2134	2.69	2267	2.95	2409	3.21	2564	3.53	2724	3.94	2883	4.44	3037	5.02	3187	5.67	3333	6.35
1400	9333	2118	2.91	2258	3.26	2382	3.55	2508	3.82	2645	4.13	2791	4.49	2940	4.94	3087	5.48	3231	6.09	3372	6.77
1500	10000	2246	3.51	2383	3.91	2501	4.23	2616	4.53	2738	4.83	2869	5.17	3006	5.57	3145	6.05	3283	6.62	3418	7.27
1600	10667	2376	4.19	2509	4.65	2623	5.00	2731	5.32	2841	5.64	2958	5.97	3082	6.34	3211	6.78	3342	7.29	3471	7.88
1700	11333	2506	4.95	2636	5.46	2747	5.86	2849	6.21	2951	6.54	3057	6.88	3169	7.25	3287	7.65	3408	8.11	3531	8.65
1800	12000	2637	5.80	2764	6.37	2872	6.81	2971	7.20	3066	7.56	3163	7.91	3265	8.27	3372	8.66	3484	9.10	3598	9.58
1900	12667	2768	6.75	2892	7.37	2998	7.86	3094	8.29	3185	8.67	3276	9.04	3368	9.42	3466	9.81	3568	10.23		
2000	13333	2900	7.79	3020	8.46	3125	9.01	3218	9.48	3306	9.90	3392	10.30	3479	10.69	3567	11.08				
2150	14333	3098	9.55	3214	10.31	3315	10.94	3406	11.47	3491	11.95	3572	12.40								
2300	15333	3297	11.57	3409	12.40	3507	13.11	3596	13.73												

Inlet O.D. 10" Maximum BHP = 0.536 (RPM / 1000)^3

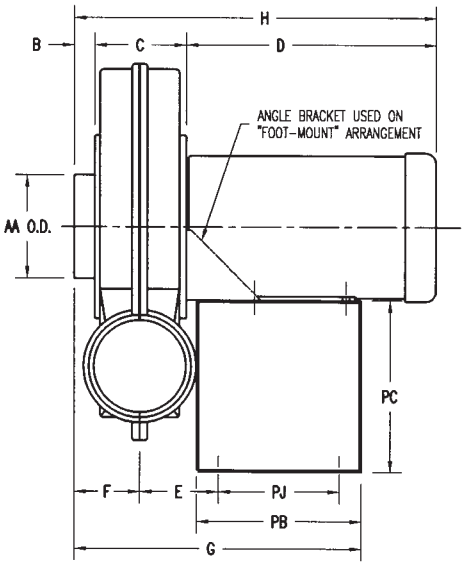
Wheel Diameter 18.5" Outlet Area 0.307 sq. ft. Tip Speed (FPM) = 4.843 x RPM

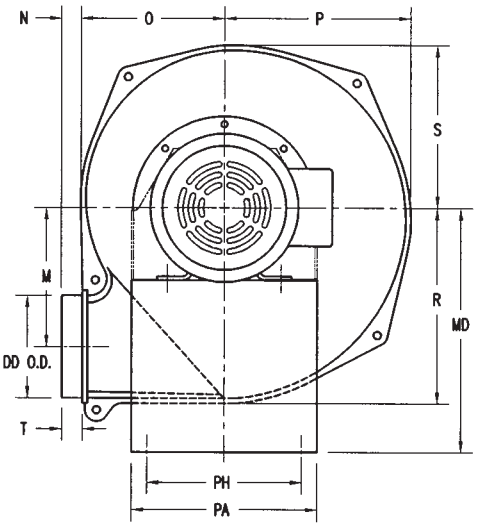
1829

	OV	2 " SP		4 " SP		6 " SP		8 " SP		10 " SP		12 " SP		14 " SP		16 " SP		18 " SP		20 " SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
600	2091	1023	0.30	1393	0.56																
800	2787	1107	0.45	1429	0.77	1711	1.11	1968	1.51												
1000	3484	1216	0.69	1511	1.06	1757	1.46	1986	1.87	2206	2.32	2411									
1200	4181	1348	1.02	1598	1.42	1840	1.89	2046	2.37	2239	2.85	2428	3.36	2611	3.89	2786	4.47	2953	5.09		
1400	4878	1455	1.35	1711	1.91	1925	2.40	2131	2.96	2311	3.51	2479	4.07	2644	4.64	2806	5.23	2965	5.84	3118	6.49
1600	5575	1518	1.58	1843	2.55	2025	3.05	2215	3.64	2397	4.28	2560	4.91	2711	5.54	2857	6.18	3001	6.83	3144	7.50
1800	6272	1645	2.07	1971	3.26	2151	3.89	2312	4.47	2481	5.14	2646	5.85	2796	6.57	2936	7.28	3068	7.99	3198	8.71
2000	6969	1790	2.74	2064	3.86	2284	4.89	2433	5.52	2578	6.17	2731	6.91	2881	7.70	3022	8.50	3153	9.29	3277	10.08
2200	7666	1942	3.56	2119	4.26	2411	5.96	2565	6.78	2697	7.46	2829	8.18	2968	8.98	3106	9.84	3239	10.72	3363	11.60
2400	8362	2098	4.56	2229	5.08	2512	6.92	2696	8.16	2828	8.98	2948	9.72	3069	10.50	3195	11.36	3323	12.28	3448	13.23
2600	9059	2255	5.73	2365	6.19	2563	7.48	2819	9.59	2961	10.67	3078	11.53	3189	12.33	3300	13.16	3416	14.07	3533	15.04
2800	9756	2415	7.10	2510	7.53	2647	8.40	2910	10.79	3088	12.46	3211	13.53	3319	14.43	3422	15.30	3525	16.18		
3000	10453	2575	8.68	2661	9.10	2769	9.79	2959	11.51	3200	14.18	3341	15.65	3452	16.75	3553	17.72				
3200	11150	2736	10.48	2815	10.90	2908	11.52	3039	12.67	3273	15.43	3461	17.78	3583	19.21						
3400	11847	2898	12.52	2971	12.95	3053	13.52	3156	14.42	3321	16.33	3555	19.61								
3600	12544	3061	14.82	3129	15.25	3203	15.80	3290	16.58	3409	17.92										
3800	13240	3224	17.38	3287	17.82	3356	18.37	3433	19.08	3528	20.13										
4000	13937	3387	20.23	3447	20.68	3510	21.22	3580	21.89												

Performance shown is for installation type B: Free inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances in the air stream.
Power ratings (BHp) do not include drive losses. Maximum temperature 200°F.

DIMENSIONS
Direct Drive

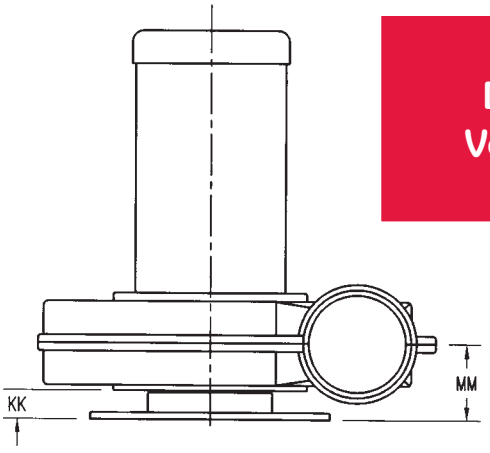




MODEL	MOTOR FRAME	GENERAL ASSEMBLY DIMENSIONS								BLOWER HOUSING DIMENSIONS								
		AA	B	C	D	E	F	G	H	M	N	O	P	R	S	T	DD	MD
800	56	4	1	4	9-3/8	3-3/16	2-15/16	12-3/16	14-1/4	4-3/8	1-1/8	4-5/8	5-5/8	6-1/2	4-7/8	1-1/8	4	8-9/16
900	56 143T–145T	5 5	1 1	4-3/8 4-3/8	9-3/8 11-1/4	3-3/8 4-3/16	3-1/8 3-1/8	13-5/16 13-13/16	14-5/8 16-1/2	5-3/4 5-3/4	1-3/16 1-3/16	6-1/8 6-1/8	7-3/8 7-3/8	7-7/8 7-7/8	6-5/8 6-5/8	1	4 4	10-7/16 11-7/8
1000	56 143T–145T	6 6	1 1	4-1/2 4-1/2	9-3/8 11-1/4	3-7/16 4-1/4	3-3/16 3-3/16	13-7/16 13-15/16	14-3/4 16-5/8	6-3/4 6-3/4	1 1	6-7/8 6-7/8	9 9	9-7/16 9-7/16	7-13/16 7-13/16		5 5	10-7/16 11-7/8
1200	56 143T–145T 182T–184T	7 7 7	1-3/8	5-3/16 5-3/16 5-5/16	9-3/8 11-1/4 13-15/16	4-1/4 4-9/16 5	3-15/16 3-15/16 3-15/16	14-11/16 15 19-3/16	15-13/16 17-11/16 20-3/8	7-5/16 7-5/16 7-5/16	7/8 7/8 7/8	8 8 8	9-5/8 9-5/8 9-5/8	10-1/2 10-1/2 10-1/2	9-7/16 9-7/16 9-7/16		6 6 6	11-7/8 11-7/8 11-7/8
1400	56 143T–145T 182T–184T	6, 7, 8 6, 7, 8 6, 7, 8		6-5/16 6-5/16 6-7/16	9-3/8 11-1/4 13-15/16	5-1/2 5-1/2 5-1/2	4-1/2 4-1/2 4-1/2	20-1/4 20-1/4 20-1/4	16-15/16 18-13/16 21-1/2	8-1/16 8-1/16 8-1/16	1-1/8 1-1/8 1-1/8	8-11/16 8-11/16 8-11/16	10-1/4 10-1/4 10-1/4	11-5/16 11-5/16 11-5/16	10-1/4 10-1/4 10-1/4		6 6 6	15-3/16
1500	182T–184T 213T–215T 254T–256T	6, 8, 10 6, 8, 10 6, 8, 10		7-5/16 7-5/16 7-5/16	13-15/16 15-9/16 19-19/32	5-15/16 6-1/8 6-1/8	4-15/16 4-15/16 4-15/16	21-1/8 21-5/16 25-9/16	22-3/8 24 28-1/32	8-5/8 8-5/8 8-5/8	1 1 1	9-13/16 9-13/16 9-13/16	11-3/8 11-3/8 11-3/8	12-7/8 12-7/8 12-7/8	10-13/16 10-13/16 10-13/16		8 8 8	
1800	182T–184T 213T–215T 254T–256T	6, 8, 10 6, 8, 10 6, 8, 10		6-5/16 6-5/16 6-5/16	13-15/16 15-9/16 19-19/32	5-7/16 5-5/8 5-5/8	4-7/16 4-7/16 4-7/16	20-1/8 20-5/16 24-9/16	21-3/8 23 27-1/32	10-1/2 10-1/2 10-1/2	15/16 15/16 15/16	10-1/2 10-1/2 10-1/2	12-11/16 12-11/16 12-11/16	13-3/4 13-3/4 13-3/4	11-3/8 11-3/8 11-3/8		6 6 6	15-3/16
1829	182T–184T 213T–215T 254T–256T 284T–286T	8, 10 8, 10 8, 10 8, 10	1-3/8	8-1/8 8-1/8 8-1/8 8-1/8	13-15/16 15-9/16 19-19/32 21-13/16	6-1/2 6-1/2 6-1/2 6-1/2	5-11/32 5-11/32 5-11/32 5-11/32	24-3/32 24-3/32 29-3/32 29-3/32	23-3/16 24-13/16 28-27/32 31-1/16	9-27/32 9-27/32 9-27/32 9-27/32	7/8 7/8 7/8 7/8	11 11 11 11	12-7/8 12-7/8 12-7/8 12-7/8	14-3/32 14-3/32 14-3/32 14-3/32	11-13/16 11-13/16 11-13/16 11-13/16	1	8 8 8 8	18 18 18 18

MODEL	PEDESTAL DIMENSIONS					APPROX SHIP WEIGHT	VERTICAL	
	PA	PB	PC	PH	PJ		KK	MM
800	7	7-1/8	5-1/16	5-1/2	5	20	1-5/16	3-1/4
900	7 9	7-7/8 8	6-15/16 8-3/8	5-1/2 7-1/2	5-3/4 5	25 30	1-5/16 1-5/16	3-7/16 3-7/16
1000	7 9	7-7/8 8	6-15/16 8-3/8	5-1/2 7-1/2	5-3/4 5	32 35	1-5/16 1-5/16	3-1/2 3-1/2
1200	9 9 12	8 8 11-3/4	8-3/8 8-3/8 7-3/8	7-1/2 7-1/2 9-7/8	5 5 8-3/4	45 45 56	1-11/16	4-1/4 4-1/4 4-1/4
1400	12 12 12	11-3/4 11-3/4 11-3/4	11-11/16 11-11/16 10-11/16		8-3/4 8-3/4 8-3/4	75 75 75		4-13/16 4-13/16 4-13/16
1500	12 12 16-1/2	11-3/4 11-3/4 16	10-11/16 9-15/16 8-15/16		8-3/4 8-3/4 13	85 92 105		5-1/4 5-1/4 5-1/4
1800	12 12 16-1/2	11-3/4 11-3/4 16	10-11/16 9-15/16 8-15/16	9-7/8	8-3/4 8-3/4 13	90 95 110		4-3/4 4-3/4 4-3/4
1829	16-1/2 16-1/2 16-1/2 16-1/2	13-3/4 13-3/4 18-3/4 18-3/4	13-1/2 12-3/4 11-3/4 11	12-1/2 12-1/2 12-1/2 12-1/2	10-3/4 10-3/4 15-3/4 15-3/4	130 130 135 130	1-11/16	5-21/32 5-21/32 5-21/32 5-21/32

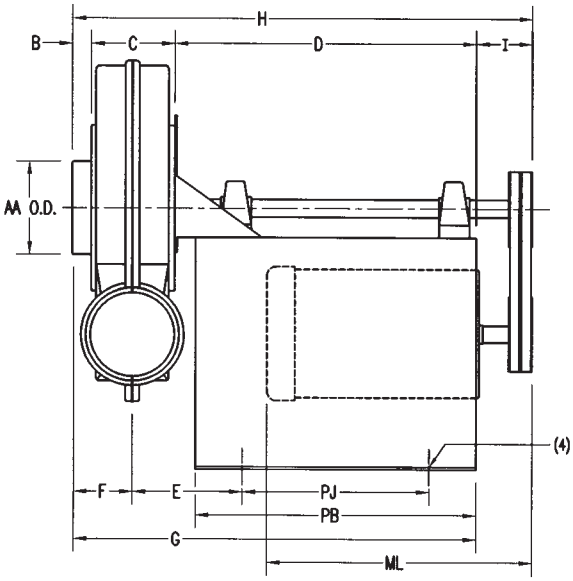
NOTES:
All motors available with C-face flange.
Shipping weights based on heaviest combination in series.
Dimensions are shown in inches.
Do not use for construction unless certified.
Dimensions shown are for BH discharge only and may vary for other discharges
Maximum speed is 3600 RPM.

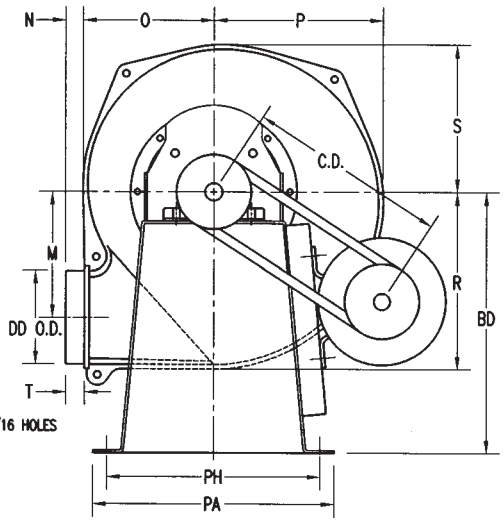


DIMENSIONS
Vertical Mount

DESIGN 38-CPB

DIMENSIONS
Belt Drive





MODEL	MOTOR FRAME	GENERAL ASSEMBLY DIMENSIONS									
		AA	B	C	D	E	F	G	H	I	ML
800	56	4	1	3-15/16	16-1/8	5-3/8	2-15/16	21-1/16	23-3/16	2-1/8	15
900	56	5	1	4-5/16	16-1/8	5-13/16	3-1/8	21-7/16	23-9/16	2-1/8	15
1000	56	6	1	4-7/16	16-1/8	5-7/8	3-3/16	21-9/16	23-11/16	2-1/8	15
	143T–145T	6	1	4-7/16	16-1/4	5-7/8	3-3/16	21-9/16	24-1/16	2-1/8	15
1200	56	7	1-3/8	5-1/4	16-1/16	6-1/4	3-15/16	22-11/16	24-13/16	2-1/8	15
	143T–145T	7	▲	5-1/4	16-1/16	6-1/4	3-15/16	22-11/16	25-3/16	2-1/2	15
	182T–184T	7	▲	5-1/4	16-1/16	6-1/4	3-15/16	25-11/16	28-11/16	3	19
1400	56	6, 7, 8	▲	6-3/8	16	6-3/4	4-1/2	23-3/4	25-7/8	2-1/8	19
	143T–145T	6, 7, 8	▲	6-3/8	16	6-3/4	4-1/2	23-3/4	26-1/4	2-1/2	19
	182T–184T	6, 7, 8	▲	6-3/8	19	6-3/4	4-1/2	26-3/4	29-3/4	3	19
	213T–215T	6, 7, 8	▲	6-3/8	19	6-3/4	4-1/2	26-3/4	30-3/8	3-5/8	19
1500	182T–184T	6, 8, 10	▲	7-1/4	19	7-3/8	4-15/16	27-5/8	30-5/8	3	19
	213T–215T	6, 8, 10	▲	7-1/4	19	7-3/8	4-15/16	27-5/8	31-1/4	3-5/8	19
	254T–256T	6, 8, 10	▲	7-1/4	25-1/2	7-3/8	4-15/16	34-1/8	38-3/8	4-1/4	26
1800	182T–184T	6, 8, 10	▲	6-1/4	19-3/16	6-7/8	4-7/16	26-13/16	29-13/16	3	19
	213T–215T	6, 8, 10	▲	6-1/4	19-3/16	6-7/8	4-7/16	26-13/16	30-7/16	3-5/8	19
	254T–256T	6, 8, 10	▲	6-1/4	25-11/16	6-7/8	4-7/16	33-5/16	37-9/16	4-1/4	26
1829	182T–184T	8, 10	▼	8-1/16	19-5/32	7-3/4	5-11/32	28-19/32	31-19/32	3	19
	213T–215T	8, 10	▼	8-1/16	19-5/32	7-3/4	5-11/32	28-19/32	31-7/32	3-5/8	19
	254T–256T	8, 10	1-3/8	8-1/16	25-21/32	7-3/4	5-11/32	35-3/32	39-11/32	4-1/4	26

NOTES:

Shipping weights (less motor)based on heaviest combination in series.

Unit shown is right side mount. Left side mount available.

(ML) Max. motor length.

Dimensions are shown in inches.

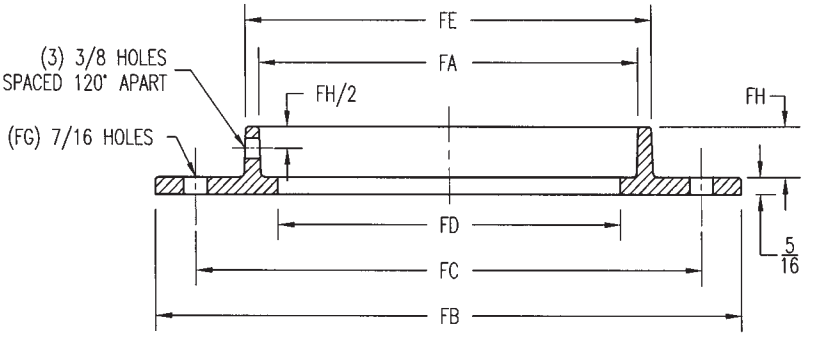
Do not use for construction unless certified.

Dimensions shown are for BH discharge only and may vary for other discharges.

Maximum speed is 3600 RPM.

MODEL	MOTOR FRAME	GENERAL ASSEMBLY DIMENSIONS											PEDESTAL DIMENSIONS				APPROX. SHIP WEIGHT
		M	N	O	P	R	S	T	DD	BD	CD	+/– CD	PA	PB	PH	PJ	
800	56	4-3/8	1-1/8	4-5/8	5-5/8	6-1/2	4-7/8	1-1/8	4	14	11-1/2	1-1/16	13-3/8	15	11-3/8	10	65
900	56	5-3/4	1-3/16	6-1/8	7-3/8	7-7/8	6-5/8	1	4	14	11-1/2	1-1/16	13-3/8	15	11-3/8	10	70
1000	56	6-3/4	1	6-1/8	9	9-7/16	7-13/16	▲	5	14	11-1/2	1-1/16	13-3/8	15	11-3/8	10	75
	143T–145T	6-3/4	1	6-7/8	9	9-7/16	7-13/16	▲	5	14	11-1/2	1-1/16	13-3/8	15	11-3/8	10	80
1200	56	7-5/16	7/8	8	9-5/8	10-1/2	9-7/16	▲	6	14	11-7/8	1-1/32	13-3/8	15	11-3/8	10	95
	143T–145T	7-5/16	7/8	8	9-5/8	10-1/2	9-7/16	▲	6	14	11-7/8	1-1/32	13-3/8	15	11-3/8	10	95
	182T–184T	7-5/16	7/8	8	9-5/8	10-1/2	9-7/16	▲	6	18	14-1/2	1-7/32	18	18	16	13	125
1400	56	8-1/16	1-1/8	8-11/16	10-1/4	11-5/16	10-1/4	▲	6	18	11-7/8	1-1/32	18	18	16	13	105
	143T–145T	8-1/16	1-1/8	8-11/16	10-1/4	11-5/16	10-1/4	▲	6	18	11-7/8	1-1/32	18	18	16	13	105
	182T–184T	8-1/16	1-1/8	8-11/16	10-1/4	11-5/16	10-1/4	▲	6	18	14-1/2	1-1/8	18	18	16	13	135
	213T–215T	8-1/16	1-1/8	8-11/16	10-1/4	11-5/16	10-1/4	▲	6	18	15-1/4	1-7/32	18	18	16	13	135
1500	182T–184T	8-5/8	1	9-13/16	11-3/8	12-7/8	10-13/16	▲	8	18	14-9/16	1-7/32	18	18	16	13	155
	213T–215T	8-5/8	1	9-13/16	11-3/8	12-7/8	10-13/16	▲	8	18	15-1/4	1-1/4	18	18	16	13	155
	254T–256T	8-5/8	1	9-13/16	11-3/8	12-7/8	10-13/16	▲	8	23	17-15/16	1-7/16	19-1/4	24-1/2	17-1/4	19-1/2	200
1800	182T–184T	10-1/2	15/16	10-1/2	12-11/16	13-3/4	11-3/8	▲	6	18	14-15/16	1-1/16	18	18	16	13	165
	213T–215T	10-1/2	15/16	10-1/2	12-11/16	13-3/4	11-3/8	▲	6	18	15-5/8	1-1/4	18	18	16	13	165
	254T–256T	10-1/2	15/16	10-1/2	12-11/16	13-3/4	11-3/8	▲	6	23	18-15/16	1-7/16	19-1/4	24-1/2	17-1/4	19-1/2	215
1829	182T–184T	9-27/32	7/8	11	12-7/8	14-3/32	11-13/16	▼	8	18	14-15/16	1-1/16	18	18	16	13	175
	213T–215T	9-27/32	7/8	11	12-7/8	14-3/32	11-13/16	▼	8	18	15-5/8	1-3/16	18	18	16	13	180
	254T–256T	9-27/32	7/8	11	12-7/8	14-3/32	11-13/16	1	8	23	18-5/16	1-7/16	19-1/4	24-1/2	17-1/4	19-1/2	225

DIMENSIONS
Inlet/Outlet Flange

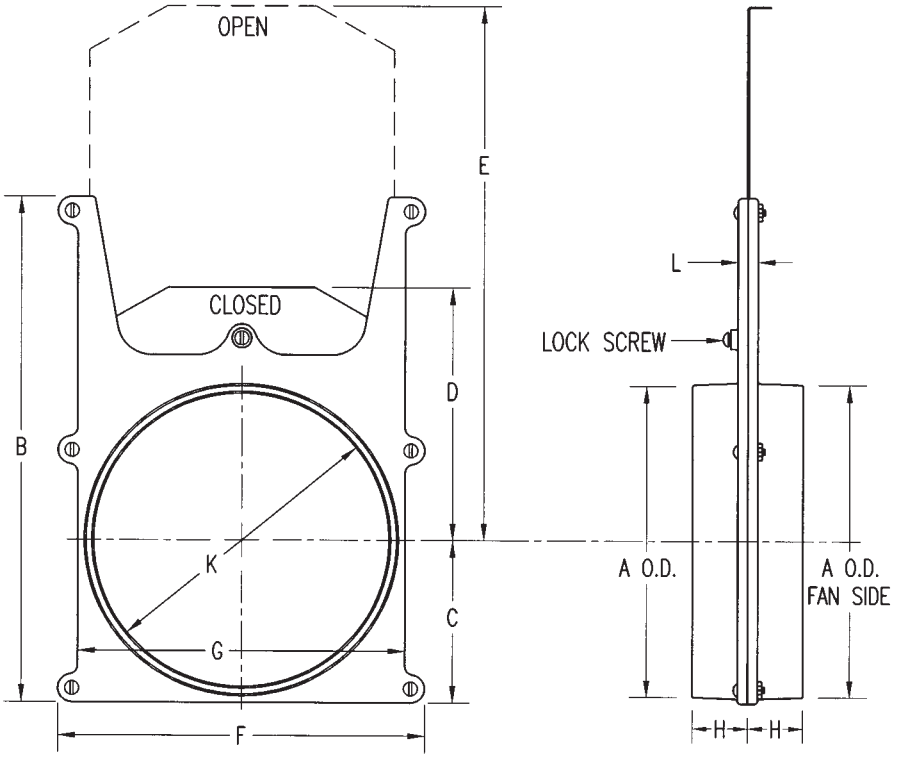


AA or DD	FA	FB*	FC*	FD	FE	NO. of FG HOLES	FH
4	4-1/16	9	7-1/2	3-11/16	4-9/16	4	15/16
5	5-1/16	11	8-1/2	4-9/16	5-9/16	4	15/16
6	6-1/16	11	9-1/2	5-1/2	6-9/16	4	1-1/16
7	7-1/16	11	9-1/2	6-7/16	7-5/8	8	15/16
8	8-1/16	13-1/2	11-3/4	7-1/2	8-5/8	8	1
10	10-1/16	16	14-1/4	9-11/16	10-9/16	8	1

NOTES:
* Meets ANSI-125 lb. flange dimensions. FA fits over the Inlet (AA) or Discharge (DD)

Dimensions are shown in inches.
Do not use for construction unless certified.

DIMENSIONS
Full Cut-Off Damper



SIZE	A	B	C	D	E	F	G	H	K	L	WGT.
4	3-7/8	6-3/4	2-1/4	3-1/2	6-3/4	5	4-1/8	1-1/8	3-1/4	5/16	1
5	4-15/16	8-5/8	2-3/4	5	9-1/4	6	5-3/8	1-1/8	4-5/8	3/8	1-3/4
6	5-15/16	10-1/4	3-1/4	5-1/4	10	7-1/4	6-1/2	1-1/2	5-3/8	3/8	2-1/4
7	6-7/8	11-1/4	3-3/4	5-3/4	11-3/4	8	7-1/4	1-1/4	6-3/4	3/8	2-1/2
8	7-15/16	12-5/8	4-1/4	6-3/4	14	9-5/8	8-5/8	1-3/4	7-1/2	7-1/6	3-3/4
10	9-15/16	17-7/8	5-3/4	7-5/8	17	11-3/4	10-1/2	2-1/8	9-1/2	9/16	7-3/4

Dimensions are shown in inches. Do not use for construction unless certified.

ENGINEERING SPECIFICATIONS

Centrifugal CPB Fans

GENERAL:

Provide a high performance, low maintenance, centrifugal fan with radial wheel. Fan shall be air performance tested based on tests and procedures in accordance with AMCA 211. Fans must be manufactured and assembled in the U.S.A.
Acceptable vendors: Chicago Blower Corporation

PERFORMANCE:

Performance shall include steep pressure and overloading horsepower characteristics. Mechanical efficiency shall be no less than 60%. System static pressure changes of 30% shall result in no more than 10% CFM reduction.

HOUSING:

Housing shall be cast with 319 cast aluminum, having a 3/16" minimum wall thickness. Housing should consist of two halves which are bolted and sealed. Inlets and outlets shall be round of nominal diameters for slip fit of ductwork, flexible connector, or hose. Housings include a Teflon shaft seal. **All housing sizes shall be reversible for clockwise or counterclockwise and capable of being rotated to all eight standard discharge positions.**

WHEEL:

Wheels with tip speeds to 13,000 feet per minute shall be 319 cast aluminum. Wheels with tip speeds over 13,000 feet per minute shall be 356 cast aluminum with T6 heat treatment. All wheels shall have an integral straight bore hub keyed with set screws for mounting. Wheels to be statically and dynamically balanced to G 6.3 standards in accordance with ISO 1940 and ANSI S2.19 specifications. The addition of weights is not allowed, thus balancing shall be accomplished by material removal only.

MOUNTING:

Motorbase-Fan shall be mounted with heavy gauge steel pedestal.

FACTORY MOUNTED MOTORS:

Motors to be factory mounted. Unit to be tested at running speed for vibration and balance. Filtered vibration readings, taken at bearings, not to exceed .22 inches per second.

ACCESSORIES:

- Flanged Inlet/Outlet – 319 Cast Aluminum with Punched Holes
- 1/2" NPT Housing Drain with Plug
- Inlet/Outlet Screen
- RIS Isolators
- Inlet Filter
- Slide Gate Damper
- Belt Guard
- Shaft and Bearing Guard

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