

Bulletin 8410-1
March 1997

Series 8400 Centrifugal Airfoil Plug Fan

Design 8410 • Pedestal Base



**NORTHERN
BLOWER®**

HIGH TEMPERATURE AND ALTITUDE SELECTION

Performances (Pages 3 - 11) are with housing and inlet cone and are obtained in accordance with AMCA Standard 210.

TABLE 1

AIR DENSITY CORRECTION TABLE							
AIR TEMP°F	ELEVATION (Ft) above Sea Level						
	0	500	1000	2000	3000	4000	5000
0	,87	,88	,90	,93	,97	1,00	1,04
70	1,00	1,02	1,04	1,08	1,12	1,16	1,20
100	1,06	1,08	1,10	1,14	1,18	1,22	1,27
200	1,25	1,27	1,29	1,34	1,39	1,44	1,50
300	1,43	1,46	1,49	1,54	1,60	1,66	1,72
400	1,62	1,65	1,68	1,75	1,81	1,88	1,95
500	1,81	1,84	1,88	1,95	2,02	2,10	2,18
600	2,00	2,04	2,07	2,15	2,23	2,32	2,40
700	2,19	2,23	2,27	2,35	2,44	2,53	2,63
800	2,38	2,42	2,46	2,56	2,65	2,75	2,86

EXAMPLE SELECTION:

Select a fan for 6000 CFM at 2-1/2" SP, 500°F, 0' Altitude, with a 4" plug gap.

The SP must be corrected to Standard Conditions as in the performance tables. From TABLE 1 the Density Correction Factor is 1,81. The Selection SP is 2-1/2 X 1,81 = 4-1/2.

For 6000 CFM at 4-1/2" SP an efficient selection is a SIZE 2450 at 1504 RPM and 5,25 BHP (see P,11).

Correcting the BHP to operating conditions using the Density Correction Factor 5,25 / 1,81 = 2,90.

The Wheel and Shaft must now be checked for suitable Class of Construction and allowable RPM at the operating conditions.

The MAXIMUM WHEEL SPEED at 70°F obtained from TABLE 2 for a SIZE 2450 is 2562. The SAFE SPEED DERATION FACTOR at 500°F from TABLE 3 is ,82. Therefore the Maximum Safe Wheel Speed is 2562 X ,82 = 2101 which is satisfactory for the application.

To select the correct class of SHAFT and BEARINGS the minimum required CHECK SPEED at operating temperature is determined. Using the SAFE SPEED DERATION FACTOR at 500°F for STEEL SHAFTS from TABLE 3 of ,97 and the operating RPM of 1509 the CORRECTED SPEED is 1509 / ,97 =1556.

In TABLE 4 the minimum shaft required for a 3-4" gap is a CL II with a maximum speed of 1826. Correcting for 500°F using the SAFE SPEED DERATION FACTOR the Maximum Shaft Speed is 1826 X ,97 = 1771

The selection is a Size 2450 Class II pedestal base operating at 1509 RPM with a Maximum Operating RPM of 1771 at 500°F.

TABLE 2

WHEEL MAXIMUM SPEEDS-70°F	
SIZE	RPM
2450	2562
2700	2239
3000	2143
3300	1857
3650	1782
4025	1575
4450	1352
4900	1308
5425	1123

TABLE 3

SAFE SPEED DERATION FACTORS		
TEMP°F	STEEL WHEEL	STEEL SHAFT
	-50 to 150	1,0
200	,93	1,0
300	,89	1,0
400	,86	,99
500	,82	,97
600	,79	,96
700	,76	,95
800	,68	,94

TABLE 4

MAXIMUM SHAFT SPEEDS AT 70°F DERATED FOR OVERHANG PEDESTAL BASE												
SIZE	0" GAP			1-2" GAP			3-4" GAP			5-6" GAP		
	I	II	IIx	I	II	IIx	I	II	IIx	I	II	IIx
2450	1864	2428	2428	1662	2185	2428	1389	1826	2317	1185	1559	1979
2700	1691	2203	2203	1494	1964	2203	1254	1649	2093	1074	1413	1794
3000	1521	1982	1982	1430	1816	1982	1211	1539	1913	1044	1328	1650
3300	1358	1769	1769	1289	1594	1769	1097	1362	1686	949	1183	1465
3650	1227	1598	1598	1078	1368	1598	923	1171	1451	802	1019	1263
4025	1134	1450	1450	1134	1450	1450	1022	1266	1450	894	1108	1343
4450	1019	1305	1305	936	1166	1305	812	1011	1220	714	889	1073
4900	925	1184	1184	925	1172	1184	834	1024	1184	738	906	1091
5425	836	1071	1071	821	1017	1071	722	893	1067	642	794	948

O.A. 3.45 sq.ft.

Wheel Diameter 24.50"

SIZE 2450

Tip Speed=6.41xRPM fpm

MAXIMUM SPEED CL I 1864

MAXIMUM SPEED CL II 2428

Volume 0, Vel. CFM FPM		STATIC PRESSURE ("W.G.)									
		1/2	1	1-1/2	2	2-1/2	3	3-1/2	4	4-1/2	
		RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
2000	580	502 0,20									
2500	725	547 0,26	680 0,48								
3000	870	598 0,34	725 0,59	827 0,85							
3500	1015	655 0,44	769 0,71	873 1,03	958 1,33						
4000	1160	715 0,56	819 0,86	917 1,20	1004 1,56	1079 1,91	1147 2,25				
4500	1305	778 0,70	874 1,05	962 1,40	1048 1,79	1125 2,19	1194 2,59	1254 2,97			
5000	1450	843 0,88	932 1,26	1014 1,63	1092 2,04	1169 2,49	1238 2,93	1302 3,38	1358 3,80	1412 4,22	
5500	1595	909 1,08	992 1,50	1069 1,91	1141 2,33	1212 2,79	1282 3,28	1346 3,77	1405 4,26	1460 4,74	
6000	1740	976 1,31	1054 1,77	1126 2,22	1195 2,68	1261 3,15	1325 3,65	1390 4,19	1448 4,72	1504 5,25	
6500	1885	1044 1,58	1118 2,08	1186 2,57	1251 3,06	1313 3,55	1373 4,07	1433 4,61	1493 5,20	1548 5,77	
7000	2030	1112 1,89	1182 2,42	1247 2,96	1308 3,49	1368 4,01	1425 4,54	1481 5,10	1536 5,68	1591 6,31	
7500	2175	1182 2,24	1248 2,81	1310 3,38	1368 3,95	1424 4,52	1479 5,08	1532 5,65	1584 6,25	1636 6,87	
8000	2320	1251 2,63	1315 3,25	1373 3,86	1429 4,46	1483 5,07	1535 5,66	1586 6,26	1636 6,88	1684 7,51	
8500	2465	1321 3,07	1382 3,72	1438 4,37	1492 5,02	1543 5,66	1593 6,30	1642 6,94	1689 7,58	1736 8,23	
9000	2610	1392 3,56	1449 4,25	1503 4,94	1555 5,62	1604 6,31	1652 6,99	1699 7,66	1745 8,33	1789 9,01	
9500	2755	1463 4,11	1518 4,84	1569 5,56	1619 6,28	1667 7,01	1713 7,73	1758 8,44	1801 9,15	1845 9,85	
10000	2900	1534 4,71	1586 5,47	1637 6,24	1684 7,00	1730 7,75	1774 8,51	1817 9,27	1860 10,02	1901 10,76	
10500	3045	1605 5,37	1656 6,17	1704 6,97	1750 7,77	1794 8,57	1837 9,37	1879 10,16	1919 10,95	1959 11,73	
11000	3190	1676 6,09	1725 6,94	1772 7,77	1816 8,60	1858 9,44	1900 10,27	1940 11,11	1980 11,95	2019 12,78	
11500	3335	1748 6,88	1795 7,76	1840 8,64	1883 9,51	1924 10,38	1964 11,25	2003 12,12	2041 12,99	2079 13,86	
12000	3480	1820 7,73	1865 8,65	1908 9,56	1950 10,47	1990 11,38	2029 12,29	2067 13,20	2104 14,12	2140 15,02	
13000	3771	1964 9,66	2006 10,65	2047 11,65	2086 12,64	2123 13,62	2160 14,59	2195 15,57	2231 16,57	2265 17,54	
14000	4061	2109 11,90	2149 12,97	2186 14,03	2223 15,09	2258 16,15	2293 17,22	2326 18,26	2359 19,31	2392 20,39	
15000	4351	2254 14,45	2291 15,60	2326 16,74	2361 17,89	2395 19,02	2427 20,14				
16000	4641	2399 17,36									

Volume 0, Vel. CFM FPM		STATIC PRESSURE ("W.G.)									
		5	5-1/2	6	7	8	9	10	11	12	
		RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	
5500	1595	1509 5,19	1558 5,67								
6000	1740	1557 5,78	1604 6,29	1649 6,79							
6500	1885	1600 6,35	1651 6,93	1699 7,51	1782 8,58						
7000	2030	1644 6,93	1694 7,55	1741 8,17	1833 9,43	1909 10,57	1986 11,77				
7500	2175	1687 7,52	1738 8,20	1785 8,87	1875 10,19	1959 11,53	2031 12,76	2102 14,02			
8000	2320	1733 8,18	1780 8,86	1829 9,59	1918 10,99	2001 12,40	2080 13,83	2149 15,14	2215 16,46		
8500	2465	1782 8,89	1827 9,59	1872 10,31	1962 11,83	2045 13,31	2123 14,81	2197 16,32	2263 17,73	2326 19,13	
9000	2610	1833 9,70	1876 10,40	1919 11,12	2005 12,66	2089 14,27	2166 15,84	2240 17,42	2310 19,01	2375 20,54	
9500	2755	1887 10,57	1928 11,29	1969 12,02	2051 13,58	2131 15,21	2210 16,91	2283 18,56	2353 20,23	2420 21,91	
10000	2900	1942 11,51	1982 12,26	2022 13,01	2100 14,58	2176 16,23	2253 17,97	2327 19,75	2396 21,49		
10500	3045	1999 12,51	2038 13,29	2076 14,07	2151 15,68	2224 17,34	2297 19,08	2370 20,93			
11000	3190	2057 13,58	2094 14,39	2131 15,22	2203 16,86	2274 18,55	2344 20,32	2413 22,15			
11500	3335	2116 14,74	2152 15,57	2188 16,42	2258 18,12	2326 19,86	2394 21,65				
12000	3480	2176 15,92	2211 16,83	2246 17,70	2314 19,48	2380 21,27					
13000	3771	2298 18,52	2332 19,52	2364 20,48							
14000	4061	2424 21,42									

Does not include belt drive loss,

Performance shown is for fan with outlet duct. 3

Design 8410 Pedestal Plug - Performance for Fan with Housing and Inlet Cone

SIZE 2700

Wheel Diameter 27.00"

O.A. 4.19 sq. ft.

MAXIMUM SPEED CL I 1691
 MAXIMUM SPEED CL II 2203

Tip Speed=7.07×RPM fpm

Volume Q, Vel. CFM FPM		STATIC PRESSURE ("W.G.)																	
		1/2		1		1-1/2		2		2-1/2		3		3-1/2		4		4-1/2	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2500	597	461	0,25																
3000	716	493	0,31	615	0,57														
3500	836	531	0,38	649	0,68	741	0,99												
4000	955	572	0,48	682	0,80	776	1,16	852	1,50										
4500	1075	616	0,59	716	0,94	808	1,33	888	1,73	954	2,11								
5000	1194	662	0,72	755	1,10	841	1,51	921	1,96	990	2,40	1050	2,82						
5500	1313	709	0,87	796	1,28	876	1,71	953	2,20	1023	2,68	1086	3,17	1140	3,63				
6000	1433	758	1,04	839	1,49	914	1,95	986	2,44	1056	2,98	1118	3,51	1177	4,05	1227	4,54	1277	5,06
6500	1552	807	1,23	884	1,73	955	2,22	1022	2,72	1088	3,28	1152	3,86	1209	4,43	1263	5,02	1311	5,56
7000	1672	857	1,45	930	1,99	997	2,52	1061	3,05	1123	3,61	1184	4,22	1242	4,85	1295	5,46	1346	6,09
7500	1791	907	1,70	977	2,28	1041	2,85	1102	3,41	1160	3,98	1217	4,60	1274	5,26	1329	5,94	1379	6,60
8000	1911	958	1,98	1024	2,59	1086	3,20	1144	3,80	1200	4,41	1254	5,03	1307	5,70	1361	6,41	1412	7,12
8500	2030	1009	2,29	1073	2,94	1131	3,59	1187	4,23	1241	4,87	1293	5,52	1343	6,19	1393	6,90	1444	7,66
9000	2149	1061	2,64	1122	3,33	1178	4,02	1232	4,70	1283	5,37	1333	6,05	1382	6,74	1429	7,46	1476	8,21
9500	2269	1113	3,02	1171	3,75	1225	4,47	1277	5,20	1327	5,91	1375	6,62	1421	7,33	1467	8,07	1512	8,83
10000	2388	1165	3,44	1221	4,21	1273	4,97	1323	5,73	1371	6,49	1417	7,23	1462	7,98	1506	8,73	1550	9,51
10500	2508	1218	3,90	1271	4,70	1322	5,50	1370	6,30	1416	7,10	1461	7,89	1504	8,67	1547	9,45	1589	10,25
11000	2627	1270	4,40	1322	5,24	1371	6,08	1417	6,92	1462	7,75	1505	8,59	1548	9,41	1589	10,23	1629	11,05
11500	2746	1323	4,95	1373	5,83	1420	6,70	1465	7,58	1509	8,46	1551	9,33	1591	10,19	1631	11,04	1671	11,90
12000	2866	1376	5,54	1425	6,46	1470	7,38	1514	8,28	1556	9,19	1596	10,11	1636	11,01	1675	11,91	1713	12,79
13000	3105	1483	6,87	1528	7,87	1571	8,85	1612	9,84	1652	10,83	1690	11,81	1727	12,80	1764	13,78	1800	14,76
14000	3343	1590	8,40	1632	9,48	1673	10,55	1712	11,62	1749	12,68	1785	13,73	1821	14,79	1855	15,85	1889	16,91
15000	3582	1697	10,17	1737	11,32	1775	12,46	1812	13,60	1848	14,73	1882	15,87	1916	17,01	1949	18,14	1981	19,27
16000	3821	1805	12,18	1843	13,40	1879	14,63	1914	15,84	1948	17,04	1981	18,25	2013	19,46	2044	20,68	2075	21,87
18000	4299	2022	16,97	2056	18,34	2088	19,71	2120	21,08	2151	22,45	2180	23,79						

Volume Q, Vel. CFM FPM		STATIC PRESSURE ("W.G.)																	
		5		5-1/2		6		7		8		9		10		11		12	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6500	1552	1356	6,11																
7000	1672	1392	6,69	1435	7,27	1478	7,87												
7500	1791	1427	7,26	1473	7,94	1512	8,54	1591	9,82										
8000	1911	1459	7,83	1504	8,54	1548	9,25	1625	10,59	1699	11,96								
8500	2030	1492	8,42	1537	9,16	1580	9,91	1663	11,45	1732	12,83	1802	14,29						
9000	2149	1524	9,01	1570	9,82	1613	10,61	1694	12,21	1770	13,79	1835	15,26	1901	16,80				
9500	2269	1557	9,63	1602	10,47	1646	11,33	1727	13,00	1803	14,69	1872	16,33	1934	17,89	1997	19,51		
10000	2388	1592	10,32	1635	11,16	1677	12,03	1759	13,82	1835	15,58	1906	17,35	1971	19,07	2030	20,71	2089	22,39
10500	2508	1630	11,07	1670	11,92	1711	12,80	1792	14,67	1867	16,51	1938	18,35	2005	20,20	2067	22,02	2124	23,74
11000	2627	1669	11,89	1708	12,74	1747	13,63	1823	15,49	1900	17,47	1970	19,38	2037	21,31	2101	23,26	2161	25,17
11500	2746	1709	12,77	1747	13,64	1784	14,53	1858	16,42	1931	18,40	2003	20,45	2069	22,46	2133	24,48	2194	26,50
12000	2866	1750	13,69	1787	14,60	1823	15,51	1894	17,40	1964	19,40	2035	21,53	2102	23,65	2165	25,74		
13000	3105	1835	15,72	1870	16,68	1904	17,64	1971	19,62	2037	21,65	2102	23,79	2166	26,01				
14000	3343	1923	17,98	1956	18,99	1988	20,02	2051	22,09	2114	24,21	2174	26,38						
15000	3582	2013	20,42	2044	21,53	2075	22,65	2135	24,85	2194	27,06								
16000	3821	2105	23,08	2135	24,30	2164	25,49												

4 The performance shown is for fan with outlet duct.

Does not include belt drive loss.

Design 8410 Pedestal Plug - Performance for Fan with Housing and Inlet Cone

O.A. 5.17 sq.ft.

Wheel Diameter 30.00"

SIZE 3000

Tip Speed=7.85×RPM fpm

MAXIMUM SPEED CL I 1521

MAXIMUM SPEED CL II 1982

Volume Q, Vel, CFM FPM		STATIC PRESSURE ("W.G.)																	
		1/2		1		1-1/2		2		2-1/2		3		3-1/2		4		4-1/2	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	580	410	0,29																
4000	774	460	0,42	569	0,77														
5000	967	519	0,60	616	1,01	701	1,45	770	1,88										
6000	1161	584	0,84	669	1,29	749	1,81	820	2,34	881	2,86	937	3,38						
7000	1354	653	1,14	729	1,67	800	2,21	868	2,81	931	3,43	987	4,06	1037	4,65	1085	5,25		
8000	1548	724	1,51	794	2,12	858	2,72	919	3,35	978	4,03	1035	4,75	1087	5,45	1136	6,17	1178	6,84
9000	1741	797	1,97	861	2,66	920	3,34	976	4,02	1030	4,72	1082	5,47	1135	6,28	1183	7,07	1228	7,87
10000	1934	871	2,52	931	3,29	985	4,05	1037	4,80	1087	5,55	1135	6,33	1183	7,15	1230	8,03	1276	8,92
11000	2128	946	3,18	1002	4,02	1053	4,86	1101	5,70	1148	6,51	1193	7,35	1237	8,19	1280	9,08	1323	10,01
12000	2321	1022	3,95	1074	4,87	1122	5,79	1168	6,70	1211	7,61	1254	8,50	1295	9,40	1336	10,32	1376	11,27
13000	2515	1099	4,85	1147	5,84	1192	6,83	1236	7,82	1277	8,82	1317	9,79	1356	10,75	1395	11,73	1432	12,71
14000	2708	1176	5,89	1221	6,96	1264	8,02	1305	9,09	1344	10,15	1382	11,21	1419	12,26	1456	13,30	1491	14,34
15000	2902	1253	7,07	1296	8,21	1337	9,36	1376	10,50	1413	11,64	1449	12,77	1485	13,91	1519	15,03	1553	16,14
16000	3095	1331	8,41	1372	9,64	1410	10,85	1447	12,06	1483	13,28	1518	14,49	1551	15,71	1584	16,92	1617	18,11
17000	3288	1409	9,92	1448	11,22	1485	12,53	1520	13,81	1554	15,10	1587	16,39	1619	17,68	1651	18,96	1682	20,24
18000	3482	1487	11,60	1524	12,98	1559	14,35	1593	15,72	1625	17,08	1657	18,44	1688	19,81	1719	21,19	1748	22,54
19000	3675	1566	13,48	1601	14,94	1634	16,38	1667	17,83	1698	19,28	1729	20,71	1758	22,14	1787	23,57	1816	25,02
20000	3869	1644	15,57	1678	17,10	1710	18,63	1741	20,14	1771	21,64	1800	23,15	1829	24,67	1857	26,18	1884	27,68
21000	4062	1723	17,86	1755	19,47	1786	21,06	1816	22,64	1845	24,24	1873	25,84	1901	27,40	1928	28,99	1954	30,59
22000	4256	1802	20,36	1833	22,04	1862	23,71	1891	25,38	1919	27,07	1946	28,70	1973	30,37				
23000	4449	1881	23,09	1911	24,85	1939	26,60	1967	28,37										
24000	4643	1960	26,07																

Volume Q, Vel, CFM FPM		STATIC PRESSURE ("W.G.)																	
		5		5-1/2		6		7		8		9		10		11		12	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8000	1548	1220	7,51																
9000	1741	1272	8,68	1310	9,43	1347	10,18												
10000	1934	1319	9,80	1360	10,69	1399	11,58	1469	13,27	1535	14,97								
11000	2128	1367	11,00	1407	11,97	1446	12,94	1520	14,90	1586	16,80	1646	18,60	1706	20,52				
12000	2321	1415	12,27	1454	13,29	1494	14,38	1567	16,48	1635	18,60	1699	20,74	1755	22,71	1809	24,69		
13000	2515	1469	13,73	1505	14,77	1542	15,86	1615	18,17	1682	20,46	1746	22,73	1806	25,03	1863	27,29	1913	29,40
14000	2708	1526	15,40	1561	16,48	1595	17,58	1662	19,89	1729	22,36	1793	24,84	1853	27,29	1910	29,75	1965	32,21
15000	2902	1586	17,26	1619	18,39	1651	19,52	1715	21,88	1777	24,34	1840	26,96	1901	29,63	1957	32,24		
16000	3095	1648	19,30	1680	20,49	1710	21,67	1771	24,10	1830	26,61	1889	29,24	1947	31,99				
17000	3288	1712	21,52	1742	22,78	1771	24,02	1830	26,55	1886	29,15	1942	31,80						
18000	3482	1777	23,89	1806	25,25	1834	26,56	1890	29,23	1944	31,91								
19000	3675	1844	26,45	1871	27,87	1899	29,32	1952	32,11										
20000	3869	1912	29,21	1938	30,70	1964	32,21												
21000	4062	1980	32,15																

Does not include belt drive loss,

Performance shown is for fan with outlet duct, 5

Design 8410 Pedestal Plug - Performance for Fan with Housing and Inlet Cone

SIZE 3300

Wheel Diameter 33.00"

O.A. 6.26 sq. ft.

MAXIMUM SPEED CL I 1358

MAXIMUM SPEED CL II 1769

Tip Speed=8.64×RPM fpm

Volume 0, Vel. CFM FPM		STATIC PRESSURE ("W.G.)									
		1/2	1	1-1/2	2	2-1/2	3	3-1/2	4	4-1/2	
		RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP
4000	639	376 0,39									
5000	799	415 0,53	510 0,95								
6000	959	462 0,72	545 1,19	620 1,70							
7000	1118	510 0,95	584 1,48	654 2,05	718 2,65						
8000	1278	560 1,23	630 1,84	692 2,46	752 3,11	808 3,80	860 4,51				
9000	1438	610 1,56	677 2,27	734 2,93	789 3,65	842 4,38	893 5,15	940 5,94			
10000	1598	662 1,95	726 2,75	781 3,51	830 4,25	880 5,05	928 5,87	974 6,71	1018 7,58	1059 8,47	
11000	1757	716 2,42	776 3,30	828 4,15	875 4,96	920 5,79	965 6,67	1009 7,57	1052 8,49	1092 9,42	
12000	1917	770 2,97	826 3,91	876 4,86	923 5,78	964 6,64	1005 7,57	1047 8,52	1087 9,49	1126 10,48	
13000	2077	824 3,60	877 4,61	926 5,65	970 6,66	1012 7,65	1049 8,57	1087 9,57	1125 10,61	1163 11,66	
14000	2237	880 4,33	929 5,40	976 6,52	1019 7,62	1059 8,70	1096 9,74	1130 10,74	1166 11,81	1202 12,92	
15000	2397	936 5,16	982 6,30	1026 7,48	1068 8,68	1107 9,86	1144 10,99	1177 12,08	1210 13,16	1243 14,31	
16000	2556	992 6,11	1036 7,30	1078 8,56	1118 9,83	1156 11,10	1191 12,32	1225 13,53	1257 14,69	1287 15,84	
17000	2716	1049 7,17	1090 8,43	1130 9,74	1168 11,09	1205 12,44	1240 13,77	1273 15,07	1304 16,35	1334 17,58	
18000	2876	1106 8,36	1144 9,67	1183 11,05	1219 12,46	1255 13,90	1289 15,32	1321 16,72	1352 18,09	1382 19,44	
19000	3036	1163 9,67	1200 11,05	1236 12,48	1271 13,97	1305 15,48	1339 17,01	1370 18,49	1400 19,96	1429 21,39	
20000	3195	1220 11,13	1255 12,57	1290 14,07	1323 15,61	1356 17,17	1388 18,77	1419 20,36	1449 21,92	1477 23,47	
21000	3355	1278 12,73	1311 14,23	1344 15,79	1376 17,40	1408 19,04	1439 20,70	1469 22,38	1498 24,02	1526 25,65	
22000	3515	1335 14,50	1367 16,04	1399 17,66	1430 19,33	1460 21,03	1490 22,76	1519 24,51	1548 26,29	1575 27,99	
23000	3675	1393 16,42	1424 18,03	1454 19,70	1484 21,44	1513 23,21	1542 25,01	1570 26,80	1597 28,63	1624 30,47	
24000	3834	1451 18,51	1480 20,18	1509 21,92	1538 23,70	1566 25,53	1594 27,38	1621 29,26	1648 31,18	1674 33,08	
25000	3994	1509 20,78	1537 22,50	1565 24,29	1592 26,14	1620 28,03	1646 29,96	1673 31,91	1698 33,85	1724 35,84	
26000	4154	1567 23,23	1594 25,01	1621 26,86	1647 28,76	1674 30,73	1700 32,71	1725 34,71	1750 36,75		
27000	4314	1626 25,87	1651 27,71	1677 29,62	1703 31,59	1728 33,60	1753 35,63				
28000	4473	1684 28,70	1709 30,61	1734 32,58	1758 34,61						

Volume 0, Vel. CFM FPM		STATIC PRESSURE ("W.G.)									
		5	5-1/2	6	7	8	9	10	11	12	
		RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	RPM BHP	
11000	1757	1131 10,38	1168 11,37								
12000	1917	1165 11,49	1201 12,52	1236 13,57	1304 15,75						
13000	2077	1200 12,71	1236 13,80	1270 14,90	1336 17,14	1398 19,47					
14000	2237	1237 14,04	1271 15,17	1304 16,32	1370 18,70	1431 21,11	1489 23,59				
15000	2397	1276 15,48	1309 16,68	1341 17,90	1404 20,34	1465 22,88	1522 25,47	1577 28,11	1630 30,83		
16000	2556	1318 17,06	1349 18,31	1380 19,57	1440 22,14	1499 24,75	1556 27,45	1610 30,19	1661 32,98	1711 35,83	
17000	2716	1362 18,78	1391 20,09	1420 21,38	1478 24,07	1535 26,79	1590 29,57	1643 32,42	1694 35,31	1743 38,25	
18000	2876	1409 20,74	1436 22,01	1463 23,35	1518 26,14	1572 28,98	1626 31,86	1677 34,79	1728 37,80		
19000	3036	1457 22,81	1484 24,19	1508 25,51	1560 28,36	1612 31,30	1663 34,31	1713 37,35	1763 40,43		
20000	3195	1505 24,97	1531 26,47	1557 27,95	1604 30,75	1653 33,78	1702 36,89	1751 40,06			
21000	3355	1553 27,28	1579 28,85	1604 30,42	1651 33,42	1697 36,46	1743 39,65				
22000	3515	1601 29,68	1627 31,38	1651 33,03	1699 36,34	1742 39,37					
23000	3675	1650 32,27	1675 34,02	1699 35,80	1746 39,24						
24000	3834	1699 34,97	1724 36,86	1748 38,67							

6 The performance shown is for fan with outlet duct,

Does not include belt drive loss.

O.A. 7.65 sq.ft.

Wheel Diameter 36.50"

SIZE 3650

Tip Speed=9.56xRPM fpm

MAXIMUM SPEED CL I 1227

MAXIMUM SPEED CL II 1598

Volume 0, Vel. CFM FPM	STATIC PRESSURE ("W.G.)									
	1/2 RPM BHP	1 RPM BHP	1-1/2 RPM BHP	2 RPM BHP	2-1/2 RPM BHP	3 RPM BHP	3-1/2 RPM BHP	4 RPM BHP	4-1/2 RPM BHP	
5000	653	343 0.49								
6000	784	372 0.63	458 1.14							
7000	914	406 0.81	483 1.37	552 1.98						
8000	1045	441 1.03	511 1.64	577 2.30	635 3.01					
9000	1175	477 1.28	542 1.96	603 2.68	660 3.44	711 4.24				
10000	1306	514 1.57	577 2.35	632 3.10	686 3.92	736 4.77	783 5.65			
11000	1437	551 1.90	612 2.77	663 3.58	713 4.45	761 5.35	807 6.29	850 7.26		
12000	1567	590 2.29	648 3.25	697 4.15	743 5.05	789 6.01	833 7.00	875 8.03	914 9.07	952 10.14
13000	1698	629 2.74	684 3.77	733 4.78	775 5.72	818 6.73	860 7.79	900 8.85	939 9.95	976 11.09
14000	1828	669 3.25	721 4.35	768 5.45	810 6.50	849 7.54	888 8.63	927 9.77	965 10.91	1001 12.09
15000	1959	709 3.82	758 5.00	804 6.19	845 7.34	882 8.43	919 9.56	956 10.75	992 11.97	1027 13.18
16000	2090	749 4.47	796 5.72	841 6.99	881 8.23	918 9.46	951 10.58	986 11.81	1020 13.08	1054 14.38
17000	2220	790 5.20	835 6.50	877 7.86	916 9.20	953 10.51	986 11.75	1018 12.98	1050 14.29	1083 15.64
18000	2351	832 6.01	874 7.38	915 8.81	953 10.24	988 11.63	1022 12.99	1052 14.28	1082 15.61	1113 17.00
19000	2481	873 6.91	913 8.34	952 9.83	990 11.36	1024 12.84	1057 14.30	1088 15.74	1116 17.06	1144 18.48
20000	2612	915 7.91	953 9.40	991 10.96	1026 12.54	1060 14.13	1092 15.69	1123 17.20	1152 18.70	1178 20.09
22000	2873	999 10.20	1034 11.80	1068 13.49	1101 15.21	1134 16.97	1165 18.71	1194 20.42	1222 22.09	1248 23.74
24000	3134	1083 12.91	1116 14.65	1147 16.45	1178 18.30	1208 20.19	1238 22.12	1266 24.01	1293 25.87	1319 27.71
26000	3395	1168 16.11	1198 17.95	1228 19.87	1257 21.86	1285 23.89	1312 25.94	1339 28.01	1365 30.06	1390 32.09
28000	3657	1254 19.81	1281 21.77	1309 23.81	1336 25.92	1363 28.08	1389 30.28	1414 32.47	1439 34.70	1463 36.92
30000	3918	1340 24.07	1365 26.15	1391 28.30	1416 30.53	1441 32.80	1466 35.12	1490 37.48	1514 39.82	1537 42.20
32000	4179	1425 28.91	1450 31.10	1473 33.37	1497 35.72	1521 38.14	1544 40.56	1567 43.02	1590 45.55	
34000	4440	1511 34.37	1534 36.69	1557 39.08	1579 41.56					
36000	4701	1598 40.50								

Volume 0, Vel. CFM FPM	STATIC PRESSURE ("W.G.)									
	5 RPM BHP	5-1/2 RPM BHP	6 RPM BHP	7 RPM BHP	8 RPM BHP	9 RPM BHP	10 RPM BHP	11 RPM BHP	12 RPM BHP	
13000	1698	1012 12.24	1046 13.42							
14000	1828	1036 13.29	1069 14.51	1101 15.77						
15000	1959	1061 14.44	1094 15.72	1126 17.03	1186 19.68					
16000	2090	1087 15.68	1119 17.01	1151 18.36	1210 21.12	1266 23.97				
17000	2220	1114 17.01	1146 18.38	1176 19.78	1236 22.67	1290 25.60	1343 28.63			
18000	2351	1143 18.42	1173 19.86	1203 21.31	1261 24.30	1315 27.34	1367 30.46	1417 33.66		
19000	2481	1173 19.94	1202 21.44	1231 22.95	1287 26.04	1340 29.19	1392 32.41	1441 35.69	1488 39.07	
20000	2612	1205 21.59	1232 23.12	1260 24.69	1314 27.90	1366 31.14	1417 34.46	1466 37.86	1512 41.31	1557 44.86
22000	2873	1273 25.33	1297 26.88	1322 28.53	1372 31.93	1421 35.40	1469 38.93	1516 42.52	1562 46.19	
24000	3134	1344 29.54	1368 31.33	1390 33.01	1435 36.47	1480 40.15	1526 43.92	1570 47.75		
26000	3395	1415 34.11	1438 36.05	1461 38.01	1504 41.77	1544 45.46	1586 49.40			
28000	3657	1487 39.13	1509 41.24	1531 43.40	1574 47.59					
30000	3918	1560 44.63	1582 46.93							

Does not include belt drive loss,

Performance shown is for fan with outlet duct, 7

Design 8410 Pedestal Plug - Performance for Fan with Housing and Inlet Cone

SIZE 4025

Wheel Diameter 40,25"

O.A. 9,31 sq. ft.

MAXIMUM SPEED CL I 1134

MAXIMUM SPEED CL II 1450

Tip Speed=10,5xRPM fpm

Volume 0, Vel. CFM FPM		STATIC PRESSURE ("W.G.)																	
		1/2		1		1-1/2		2		2-1/2		3		3-1/2		4		4-1/2	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7000	752	330	0,72	410	1,32														
8000	859	354	0,89	428	1,54														
9000	967	381	1,09	448	1,79	510	2,56												
10000	1074	407	1,32	469	2,08	528	2,90	581	3,78										
11000	1181	434	1,57	493	2,40	548	3,28	600	4,21	646	5,18								
12000	1289	461	1,86	519	2,78	569	3,70	618	4,68	664	5,71	707	6,77						
13000	1396	489	2,18	545	3,20	592	4,17	639	5,21	683	6,29	725	7,40	764	8,56				
14000	1504	518	2,55	572	3,66	617	4,69	660	5,78	703	6,91	744	8,08	782	9,30	818	10,54		
15000	1611	547	2,96	598	4,16	644	5,31	683	6,41	724	7,60	763	8,83	801	10,08	836	11,38	871	12,72
16000	1718	576	3,42	626	4,69	670	5,94	708	7,10	746	8,34	784	9,62	820	10,93	855	12,28	889	13,66
17000	1826	606	3,93	653	5,28	696	6,62	734	7,89	769	9,15	805	10,47	840	11,85	874	13,24	907	14,67
18000	1933	636	4,50	681	5,92	723	7,34	760	8,72	794	10,02	828	11,39	862	12,83	894	14,28	926	15,75
19000	2041	666	5,13	709	6,61	750	8,13	787	9,59	820	11,01	851	12,39	884	13,87	915	15,38	946	16,92
20000	2148	696	5,82	738	7,37	777	8,97	813	10,54	846	12,05	877	13,48	907	14,99	937	16,55	967	18,15
22000	2363	757	7,41	796	9,08	832	10,82	867	12,57	899	14,28	929	15,94	957	17,52	984	19,14	1012	20,83
24000	2577	820	9,29	855	11,08	889	12,96	922	14,86	953	16,78	982	18,62	1010	20,43	1036	22,19	1060	23,89
26000	2792	882	11,49	915	13,39	947	15,39	978	17,44	1008	19,55	1036	21,57	1062	23,57	1088	25,55	1113	27,51
28000	3007	945	14,02	975	16,05	1005	18,17	1035	20,37	1063	22,59	1090	24,83	1116	27,01	1141	29,18	1165	31,30
30000	3222	1008	16,94	1037	19,09	1065	21,34	1092	23,64	1119	26,00	1145	28,38	1170	30,78	1194	33,13	1218	35,45
32000	3437	1072	20,25	1098	22,51	1125	24,88	1151	27,32	1176	29,80	1201	32,32	1225	34,87	1249	37,42	1271	39,93
34000	3651	1135	23,99	1161	26,37	1185	28,85	1210	31,42	1234	34,04	1258	36,71	1281	39,37	1304	42,07	1326	44,77
36000	3866	1199	28,19	1223	30,69	1247	33,29	1270	35,96	1293	38,69	1315	41,47	1337	44,30	1359	47,15	1380	50,00
38000	4081	1263	32,86	1286	35,47	1308	38,18	1330	40,97	1352	43,84	1374	46,78	1395	49,69	1415	52,66	1436	55,70
40000	4296	1327	38,02	1349	40,76	1370	43,58	1391	46,51	1412	49,49	1432	52,51						
42000	4511	1392	43,72	1412	46,58	1432	49,53												

Volume 0, Vel. CFM FPM		STATIC PRESSURE ("W.G.)																	
		5		5-1/2		6		7		8		9		10		11		12	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15000	1611	903	14,09																
16000	1718	921	15,07	951	16,51														
17000	1826	939	16,13	969	17,62	998	19,14												
18000	1933	958	17,27	988	18,81	1016	20,38	1071	23,61										
19000	2041	977	18,47	1006	20,07	1035	21,70	1089	25,01	1141	28,48								
20000	2148	997	19,76	1025	21,40	1054	23,09	1107	26,50	1159	30,05								
22000	2363	1039	22,56	1066	24,32	1093	26,10	1145	29,73	1195	33,46	1242	37,25	1287	41,15				
24000	2577	1085	25,72	1110	27,57	1135	29,45	1185	33,32	1233	37,21	1279	41,23	1323	45,33	1365	49,50	1406	53,76
26000	2792	1135	29,29	1158	31,19	1181	33,18	1227	37,23	1273	41,41	1318	45,62	1361	49,92	1403	54,33	1443	58,76
28000	3007	1188	33,39	1209	35,38	1230	37,35	1273	41,57	1316	45,92	1358	50,37	1399	54,86	1440	59,43		
30000	3222	1240	37,69	1262	39,95	1283	42,22	1321	46,38	1361	50,91	1401	55,55	1441	60,29				
32000	3437	1293	42,38	1314	44,79	1335	47,24	1374	51,92	1410	56,39	1447	61,22						
34000	3651	1347	47,46	1367	50,02	1387	52,63	1426	57,72										
36000	3866	1401	52,87	1421	55,68	1441	58,41												

8 The performance shown is for fan with outlet duct,

Does not include belt drive loss,

Design 8410 Pedestal Plug - Performance for Fan with Housing and Inlet Cone

O.A. 11.37 sq.ft.

Wheel Diameter 44.50"

SIZE 4450

Tip Speed=11.7xRPM fpm

MAXIMUM SPEED CL I 1019

MAXIMUM SPEED CL II 1305

Volume Q, Vel. CFM FPM		STATIC PRESSURE ("W.G.)																	
		1/2		1		1-1/2		2		2-1/2		3		3-1/2		4		4-1/2	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	792	306	0,93	377	1,68														
10000	879	323	1,10	391	1,90	448	2,75												
11000	967	342	1,29	405	2,15	461	3,07												
12000	1055	361	1,50	420	2,43	475	3,41	523	4,42										
13000	1143	380	1,74	437	2,73	489	3,77	536	4,86	579	5,95								
14000	1231	401	2,01	454	3,06	504	4,16	550	5,31	592	6,49	631	7,67						
15000	1319	422	2,31	472	3,42	520	4,59	564	5,79	606	7,04	644	8,32	680	9,58				
16000	1407	443	2,64	491	3,82	536	5,05	579	6,32	620	7,62	658	8,96	693	10,32	726	11,67		
17000	1495	464	3,01	510	4,25	554	5,54	595	6,87	634	8,24	671	9,64	707	11,08	739	12,50	770	13,95
18000	1583	486	3,42	530	4,72	572	6,07	611	7,47	649	8,90	685	10,35	720	11,86	753	13,37	783	14,88
19000	1671	508	3,87	550	5,23	590	6,65	628	8,10	664	9,59	700	11,12	734	12,67	766	14,26	797	15,86
20000	1759	530	4,36	571	5,79	609	7,26	646	8,78	681	10,33	715	11,92	748	13,53	780	15,18	810	16,85
22000	1935	574	5,48	612	7,03	648	8,64	682	10,27	715	11,95	747	13,66	778	15,41	808	17,17	838	18,94
24000	2111	620	6,79	655	8,48	689	10,21	721	11,97	751	13,76	782	15,61	811	17,46	839	19,35	867	21,26
26000	2287	665	8,32	699	10,14	730	12,00	760	13,88	789	15,80	817	17,74	845	19,75	872	21,76	898	23,79
28000	2463	711	10,08	743	12,03	772	14,01	801	16,02	828	18,07	855	20,13	881	22,24	907	24,38	932	26,54
30000	2638	757	12,10	787	14,18	815	16,27	842	18,43	868	20,58	894	22,78	919	25,00	943	27,25	967	29,54
32000	2814	804	14,38	832	16,58	859	18,83	884	21,08	909	23,37	933	25,70	957	28,05	980	30,41	1003	32,80
34000	2990	850	16,94	877	19,28	903	21,64	927	24,04	951	26,46	974	28,91	997	31,38	1019	33,87	1040	36,38
36000	3166	897	19,81	923	22,29	947	24,78	970	27,29	993	29,84	1015	32,41	1037	35,01	1058	37,65	1079	40,27
38000	3342	944	23,00	969	25,60	992	28,23	1014	30,87	1036	33,54	1057	36,23	1078	38,95	1098	41,69	1118	44,48
40000	3518	992	26,53	1015	29,26	1037	32,01	1058	34,79	1079	37,59	1100	40,42	1120	43,27	1139	46,11	1158	48,99
44000	3870	1086	34,71	1107	37,71	1128	40,71	1148	43,72	1167	46,76	1186	49,84	1204	52,96	1222	56,03	1240	59,17
48000	4222	1181	44,43	1201	47,67	1219	50,93	1238	54,23	1256	57,55	1273	60,84	1291	64,20				
52000	4573	1276	55,85	1294	59,37														

Volume Q, Vel. CFM FPM		STATIC PRESSURE ("W.G.)																	
		5		5-1/2		6		7		8		9		10		11		12	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18000	1583	812	16,41																
19000	1671	826	17,45	853	19,05														
20000	1759	839	18,53	867	20,21	893	21,88												
22000	1935	866	20,76	894	22,60	920	24,46	969	28,11										
24000	2111	894	23,18	921	25,13	947	27,12	996	31,17	1042	35,15	1086	39,23						
26000	2287	924	25,85	950	27,94	975	30,02	1023	34,27	1069	38,63	1113	43,04	1152	47,27				
28000	2463	956	28,72	981	30,92	1004	33,14	1052	37,65	1096	42,21	1139	46,86	1180	51,55	1218	56,15	1255	60,88
30000	2638	990	31,84	1013	34,17	1036	36,53	1081	41,27	1124	46,08	1166	50,97	1206	55,94	1245	60,95	1282	66,02
32000	2814	1025	35,23	1048	37,69	1070	40,19	1112	45,14	1153	50,22	1194	55,32	1234	60,53	1272	65,81		
34000	2990	1062	38,91	1083	41,49	1104	44,11	1145	49,32	1184	54,62	1224	60,00	1262	65,39	1299	70,86		
36000	3166	1099	42,91	1120	45,59	1140	48,33	1179	53,79	1217	59,33	1255	64,94	1291	70,62				
38000	3342	1138	47,25	1157	50,03	1177	52,87	1214	58,56	1251	64,36	1287	70,21						
40000	3518	1177	51,92	1196	54,83	1214	57,76	1250	63,69	1286	69,73								
44000	3870	1258	62,34	1275	65,47	1292	68,71												

Does not include belt drive loss.

Performance shown is for fan with outlet duct. 9

Design 8410 Pedestal Plug - Performance for Fan with Housing and Inlet Cone

SIZE 4900

Wheel Diameter 49.00"

O.A. 13.78 sq. ft.

MAXIMUM SPEED CL I 925

MAXIMUM SPEED CL II 1184

Tip Speed=12.8xRPM fpm

Volume Q, Vel. CFM FPM		STATIC PRESSURE ("W.G.)																			
		1/2		1		1-1/2		2		2-1/2		3		3-1/2		4		4-1/2			
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11000	798	279	1,15	343	2,05																
12000	870	292	1,31	353	2,28	405	3,29														
13000	943	305	1,49	364	2,52	415	3,61														
14000	1016	320	1,70	375	2,79	426	3,94	469	5,12												
15000	1088	334	1,92	387	3,08	436	4,29	479	5,56	519	6,86										
16000	1161	349	2,17	400	3,38	446	4,66	489	5,99	528	7,34										
17000	1233	364	2,44	413	3,72	458	5,06	500	6,45	538	7,88	573	9,32								
18000	1306	380	2,74	426	4,08	470	5,48	510	6,93	548	8,43	583	9,96	616	11,50						
19000	1378	396	3,06	440	4,47	482	5,93	521	7,45	558	9,00	593	10,61	625	12,19	656	13,88				
20000	1451	412	3,42	455	4,88	495	6,41	533	7,99	569	9,60	603	11,28	635	12,96	665	14,63				
22000	1596	444	4,22	484	5,81	522	7,46	557	9,16	591	10,91	624	12,68	655	14,51	685	16,38	713	18,22		
24000	1741	477	5,16	515	6,87	550	8,64	583	10,47	615	12,34	646	14,25	677	16,19	705	18,16	733	20,17		
26000	1886	510	6,24	546	8,09	579	9,98	610	11,92	641	13,92	670	15,96	699	18,02	727	20,11	754	22,24		
28000	2031	544	7,48	577	9,46	609	11,47	638	13,54	667	15,66	695	17,81	723	20,02	749	22,23	775	24,47		
30000	2176	578	8,90	610	10,99	639	13,14	668	15,33	695	17,58	722	19,84	748	22,16	773	24,53	798	26,90		
32000	2321	612	10,48	642	12,72	671	15,00	697	17,31	724	19,68	749	22,06	774	24,50	798	26,98	822	29,48		
34000	2466	647	12,27	675	14,63	702	17,04	728	19,48	753	21,97	777	24,48	801	27,03	824	29,63	847	32,25		
36000	2611	681	14,27	709	16,77	734	19,29	759	21,87	783	24,46	806	27,11	829	29,78	851	32,49	873	35,24		
38000	2756	716	16,49	742	19,10	767	21,77	790	24,45	813	27,19	836	29,97	858	32,78	879	35,60	900	38,45		
40000	2901	751	18,93	776	21,68	800	24,47	822	27,31	844	30,15	866	33,03	887	35,96	907	38,91	928	41,89		
44000	3192	821	24,55	844	27,58	866	30,63	887	33,70	908	36,81	928	39,95	947	43,13	966	46,32	985	49,53		
48000	3482	892	31,26	913	34,53	933	37,83	953	41,16	972	44,52	991	47,92	1009	51,36	1027	54,78	1044	58,23		
52000	3772	963	39,14	982	42,68	1001	46,26	1020	49,83	1037	53,43	1055	57,05	1072	60,73	1089	64,44	1105	68,11		
56000	4062	1034	48,28	1052	52,07	1070	55,87	1087	59,71	1104	63,61	1120	67,50	1136	71,38	1152	75,35	1168	79,28		
60000	4352	1105	58,76	1122	62,81	1139	66,89	1155	71,04	1171	75,11										

Volume Q, Vel. CFM FPM		STATIC PRESSURE ("W.G.)																				
		5		5-1/2		6		7		8		9		10		11		12				
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
22000	1596	739	20,06																			
24000	1741	760	22,19	784	24,19	809	26,23															
26000	1886	780	24,42	805	26,60	829	28,79	874	33,13													
28000	2031	800	26,73	825	29,05	849	31,40	894	36,13	935	40,77											
30000	2176	822	29,30	846	31,71	869	34,17	914	39,14	956	44,20	994	49,14									
32000	2321	845	32,01	868	34,56	891	37,10	934	42,34	976	47,65	1015	53,03	1051	58,28	1088	63,83					
34000	2466	869	34,90	891	37,57	913	40,27	956	45,74	996	51,27	1035	56,92	1072	62,61	1106	68,21	1140	73,93			
36000	2611	895	38,01	916	40,80	936	43,62	977	49,36	1017	55,10	1055	60,99	1092	66,96	1127	72,97	1160	78,98			
38000	2756	921	41,34	941	44,25	961	47,19	1000	53,17	1039	59,23	1076	65,26	1112	71,48	1147	77,78	1180	84,14			
40000	2901	948	44,91	967	47,94	987	50,99	1024	57,22	1061	63,52	1098	69,85	1133	76,22	1167	82,77					
44000	3192	1003	52,76	1022	56,05	1040	59,36	1075	66,05	1110	72,80	1144	79,64	1177	86,57							
48000	3482	1062	61,74	1079	65,28	1096	68,77	1129	75,92	1161	83,21											
52000	3772	1122	71,87	1138	75,64	1154	79,39															
56000	4062	1183	83,25																			

10 The performance shown is for fan with outlet duct,

Does not include belt drive loss,

O.A. 16.91 sq.ft.

Wheel Diameter 54.25"

SIZE 5425

Tip Speed=14.2xRPM fpm

MAXIMUM SPEED CL I 836

MAXIMUM SPEED CL II 1071

Volume Q, Vel.		STATIC PRESSURE ("W.G.)																	
		1/2		1		1-1/2		2		2-1/2		3		3-1/2		4		4-1/2	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12000	710	239	1,19	299	2,20														
14000	828	257	1,49	314	2,63														
16000	947	277	1,84	329	3,11	376	4,45												
18000	1065	298	2,26	346	3,65	391	5,12	430	6,65										
20000	1184	320	2,76	365	4,27	406	5,86	445	7,52	480	9,21								
22000	1302	342	3,34	385	4,97	424	6,69	460	8,46	495	10,30	526	12,16	556	14,06				
24000	1420	366	4,00	405	5,76	442	7,61	477	9,51	510	11,45	541	13,46	570	15,52	597	17,52		
26000	1539	389	4,77	427	6,65	461	8,61	494	10,65	526	12,73	556	14,85	585	17,02	612	19,22	637	21,38
28000	1657	414	5,64	449	7,65	482	9,73	513	11,88	543	14,09	572	16,33	600	18,64	627	20,97	652	23,33
30000	1775	438	6,62	471	8,76	503	10,97	532	13,24	561	15,57	589	17,96	616	20,35	642	22,82	667	25,33
32000	1894	463	7,73	494	10,00	524	12,33	552	14,71	580	17,17	606	19,68	632	22,21	657	24,78	682	27,40
34000	2012	487	8,96	518	11,36	546	13,81	573	16,33	600	18,90	625	21,53	650	24,20	674	26,89	697	29,62
36000	2130	512	10,33	541	12,86	569	15,45	595	18,08	620	20,77	644	23,52	668	26,32	691	29,13	714	32,00
38000	2249	538	11,85	565	14,51	591	17,22	617	19,99	641	22,79	664	25,67	687	28,58	709	31,52	731	34,50
40000	2367	563	13,52	589	16,31	615	19,14	639	22,03	662	24,98	685	27,96	707	30,98	728	34,06	749	37,17
44000	2604	614	17,36	638	20,41	662	23,49	684	26,64	706	29,82	727	33,06	747	36,33	768	39,65	787	43,01
48000	2840	665	21,91	688	25,21	710	28,58	731	31,96	751	35,39	771	38,86	790	42,38	809	45,93	827	49,51
52000	3077	717	27,22	738	30,82	758	34,40	778	38,05	797	41,73	816	45,46	834	49,22	852	53,02	869	56,87
56000	3314	768	33,39	788	37,22	808	41,10	826	45,01	844	48,95	862	52,91	879	56,91	896	60,95	912	65,05
60000	3551	821	40,47	839	44,56	857	48,68	875	52,84	892	57,04	909	61,30	925	65,53	941	69,80	956	74,13
65000	3847	886	50,71	903	55,14	920	59,58	936	64,03	952	68,53	968	73,07	983	77,70	998	82,24	1013	86,86
70000	4142	951	62,56	968	67,29	983	72,05	999	76,86	1014	81,74	1028	86,53	1043	91,41	1057	96,38		
75000	4438	1017	76,17	1032	81,23	1047	86,35	1062	91,51										

Volume Q, Vel.		STATIC PRESSURE ("W.G.)																	
		5		5-1/2		6		7		8		9		10		11		12	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
26000	1539	662	23,72																
28000	1657	675	25,66	698	28,06														
30000	1775	690	27,85	713	30,40	734	32,85												
32000	1894	705	30,08	728	32,76	749	35,44	790	40,79										
34000	2012	720	32,38	743	35,21	764	38,05	805	43,84	843	49,46								
36000	2130	736	34,88	758	37,79	779	40,77	820	46,82	857	52,85	893	58,86						
38000	2249	753	37,53	774	40,57	795	43,63	835	49,93	872	56,30	907	62,61	941	68,98				
40000	2367	770	40,31	790	43,49	811	46,70	850	53,17	887	59,83	922	66,49	955	73,13	987	79,82		
44000	2604	807	46,39	826	49,80	845	53,25	882	60,28	917	67,28	952	74,48	985	81,79	1017	89,14	1047	96,45
48000	2840	846	53,15	864	56,85	881	60,54	916	68,00	950	75,57	983	83,20	1015	90,96	1046	98,85		
52000	3077	886	60,76	903	64,62	920	68,54	953	76,54	985	84,66	1016	92,79						
56000	3314	928	69,19	944	73,27	960	77,44	991	85,87	1022	94,43								
60000	3551	972	78,54	987	82,85	1002	87,27	1031	96,13										
65000	3847	1027	91,59	1042	96,19														

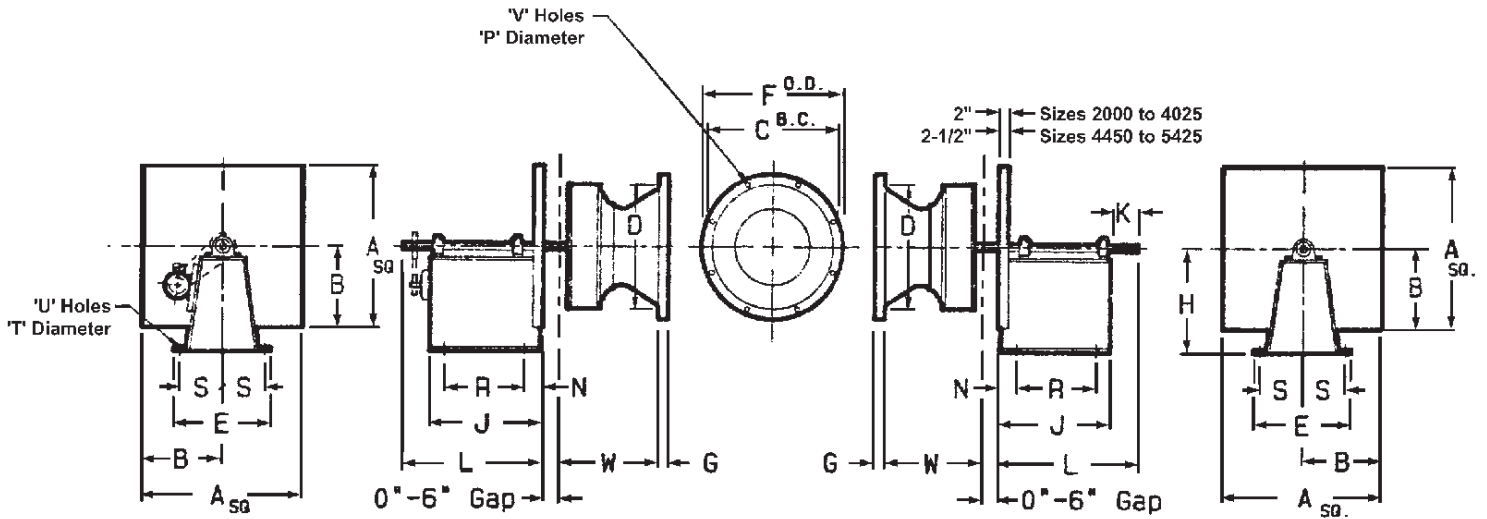
Does not include belt drive loss.

Performance shown is for fan with outlet duct, 11

Design 8410 Pedestal Plug - Performance for Fan with Housing and Inlet Cone

SIZE
2450 Through 5425
Pedestal Style

DIMENSIONS
Arrangement 1 & 9
Class I, II, IIX SISW



STANDARD CENTRIFUGAL AIRFOIL PLUG WITH ADJ. MOTOR BASE

STANDARD CENTRIFUGAL AIRFOIL PLUG FAN

FAN SIZE	SHAFT DIAMETER			KEYWAY SIZE			A	B	C	D	E	F	G	H	J	K
	CLASS I	CLASS II	CLASS IIX	CLASS I	CLASS II	CLASS IIX										
2450	1-11/16	1-15/16	2-3/16	3/8 X 3/16	1/2 X 1/4	1/2 X 1/4	31	15 1/2	27	25-1/8	32	28-5/8	2	26	28	5
2700	1-11/16	1-15/16	2-3/16	3/8 X 3/16	1/2 X 1/4	1/2 X 1/4	31	15 1/2	29-1/2	27-5/8	32	31-1/8	2	26	28	5
3000	1-15/16	2-3/16	2-7/16	1/2 X 1/4	1/2 X 1/4	5/8 X 5/16	46	23	33	30-5/8	36	34-5/8	2-1/2	32	31	6
3300	1-15/16	2-3/16	2-7/16	1/2 X 1/4	1/2 X 1/4	5/8 X 5/16	46	23	36	33-5/8	36	37-5/8	2-1/2	32	31	6
3650	1-15/16	2-3/16	2-7/16	1/2 X 1/4	1/2 X 1/4	5/8 X 5/16	46	23	39-1/2	37-1/8	40	41-1/8	2-1/2	35	33-3/4	7
4025	1-15/16	2-3/16	2-7/16	1/2 X 1/4	1/2 X 1/4	5/8 X 5/16	46	23	43-1/4	40-7/8	40	45-1/2	----	35	33-3/4	7
4450	2-3/16	2-7/16	2-11/16	1/2 X 1/4	5/8 X 5/16	5/8 X 5/16	60	30	47-1/2	45-1/8	50	49-3/4	----	38	33-3/4	7
4900	2-3/16	2-7/16	2-11/16	1/2 X 1/4	5/8 X 5/16	5/8 X 5/16	60	30	52	49-5/8	50	54-1/4	----	40	33-3/4	7
5425	2-7/16	2-11/16	2-15/16	5/8 X 5/16	5/8 X 5/16	3/4 X 3/8	60	30	57-3/8	55	50	59-5/8	----	43	33-3/4	7

FAN SIZE	L	N	P	R	S	T	U	V	W	MAX MOTOR	
										T FRAME	U FRAME
2450	34	2	3/4	24	15-1/8	4	5/8	16	19-1/2	285	326
2700	34	2	3/4	24	15-1/8	4	5/8	16	21-1/2	285	326
3000	37-3/4	2-1/2	3/4	26	16-7/8	4	3/4	16	23-7/8	326	365
3300	37-3/4	2-1/2	3/4	26	16-7/8	4	3/4	16	26-1/4	326	365
3650	41-3/4	3	3/4	27-3/4	18-3/4	4	7/8	16	29-1/8	365	405
4025	41-3/4	3	1-1/16	27-3/4	18-3/4	4	7/8	16	32-1/8	405	405
4450	41-3/4	3	1-1/16	27-3/4	23-3/4	4	7/8	16	35-7/16	405	405
4900	41-3/4	3	1-1/16	27-3/4	23-3/4	4	7/8	24	39	405	405
5425	41-3/4	3	1-1/16	27-3/4	23-3/4	4	7/8	24	43-1/4	405	405

DO NOT USE FOR CONSTRUCTION UNLESS CERTIFIED