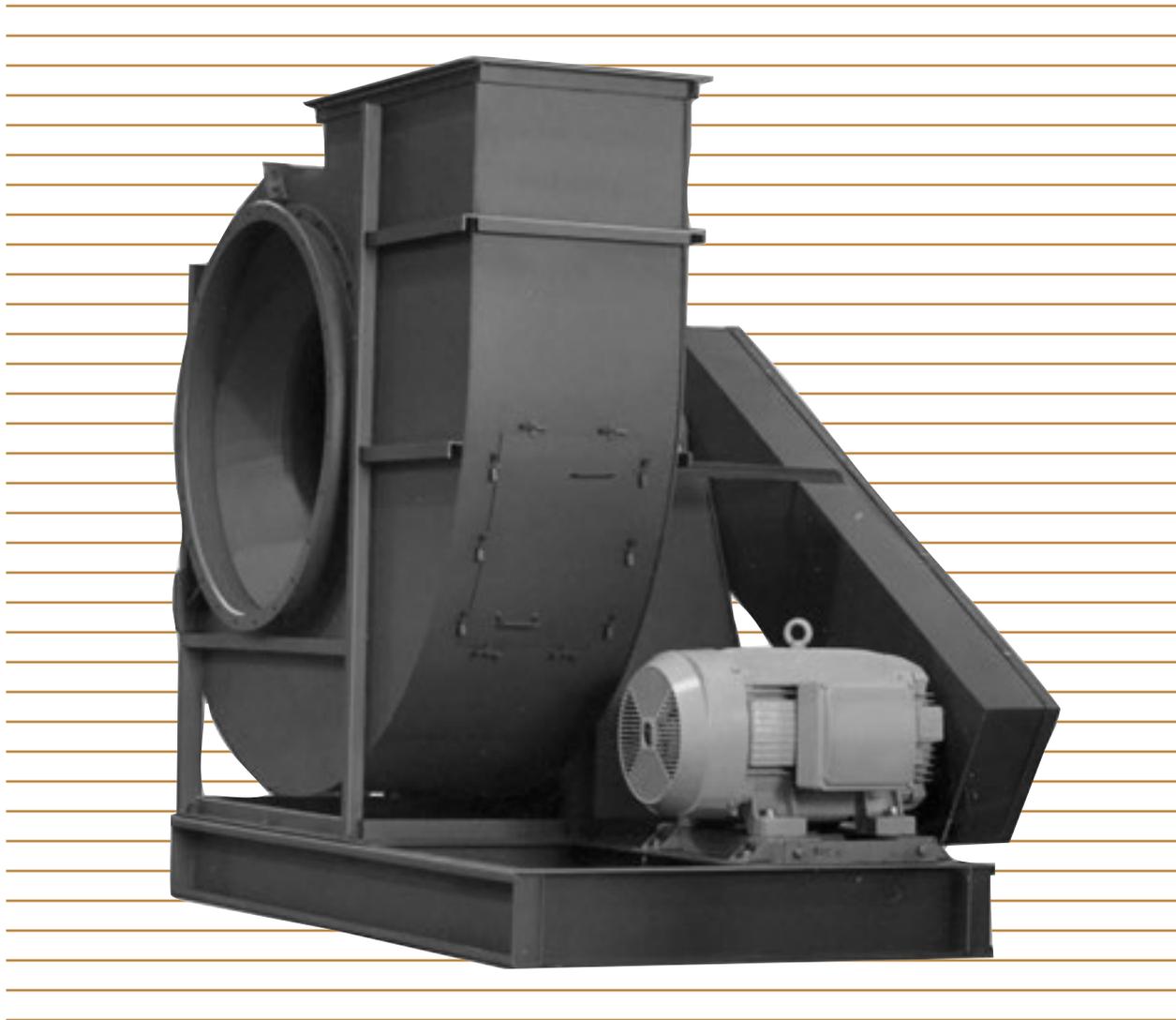


# Series 8800 Radial Tip Fans

## Design 8812



## Series 8800 Radial Tip Fans

The Design 8812 Radial Tip fan is a reliable, highly efficient, heavy duty, rugged fan suitable for a wide range of industrial applications. The Northern Blower Radial Tip is capable of moving large volumes at moderate to high static pressures. It is designed to handle clean or dirty airstreams including hot gasses and fumes, process exhaust, induced draft, and light concentrations of particle matter. This bulletin contains information on the most basic Radial Tip fans offered by Northern Blower. Consult your Northern Blower sales representative for assistance with custom Radial Tip fan selections.

### Industrial supply and exhaust applications

Induced Draft	Baghouses
Boilers	Cyclones
Incinerators	Precipitators
Kilns	Scrubbers
Furnaces	Dryers
Ovens	

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The ratings shown for the Series 8800, Design 8812 Radial Tip Fan are based on tests and procedures performed in accordance with AMCA publication 210.

**Flanged Outlet**

Punched flange to facilitate the bolting of duct connections to the fan outlet.

**Radial Tip Wheel**

Superior combination of efficient operation and rugged, dependable service.

**Bearings**

Heavy duty split pillow-block spherical roller bearings sized for generous B-10 life.

**Shaft**

Turned ground and polished or fully machined to close tolerance for smooth operation.

**Shaft Seal**

Used to reduce leakage through the shaft hole in the housing.

**Heavy Duty Structural Bearing Pedestal**

**Housing**

Rugged heavy gauge all welded steel housing with substantial framing sections for maximum rigidity. Standard features include flanged outlet, housing drain, shaft seal and gasketed housing split for wheel removal.

**Balancing**

Wheel and shaft assemblies are interference fit and dynamically balanced to ISO 1940 specifications for smooth operation.



## Shafts and Bearings

### Shafts

Selected to have suitable strength and operate well below the first critical speed for each operating condition. Wheels are interference fit on the shaft to ensure that solid contact is maintained at elevated temperatures.

### Bearings

Anti-friction, grease lubricated, roller type split housing, manufactured to internationally adopted standards by companies having worldwide acceptance and support services. Bearings are selected for continuous operation with a generous bearing life.



## Capacities

Catalogued up to 100,000 CFM. Available to 250,000 CFM.

## Pressures

Catalogued up to 30" WG. Available to 35" WG.

## Temperatures

The high temperature operating limit is 300°F without a cooling wheel, and 800°F with a cooling wheel and standard shaft seal.

## Arrangements and Configurations

This catalogue primarily refers to arrangement 1 fans (see page 19 for AMCA fan arrangements). Northern Blower Radial Tip fans are also available in arrangements 3, 7, and 8 as well as double inlet double width configurations.

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## Design 8812 Radial Tip Wheel

The Northern Blower Radial Tip wheel is designed for high operating efficiency. Blades are formed from heavy gauge high strength low alloy steel. Continuously welded steel construction is standard. Catalogued from 27" to 60" diameters. Available in larger sizes for custom applications.



### Vibration Isolation Base

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



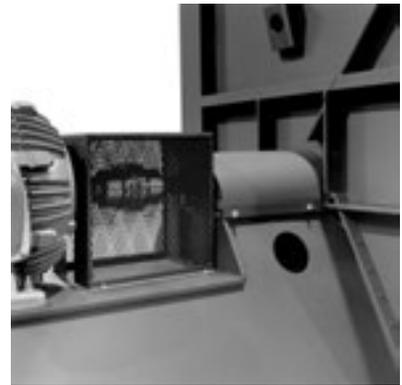
### Inlet Box/ Inlet Box Damper

An Inlet Box provides smooth aerodynamic airflow into the fan inlet. The Inlet Box is designed as a bolt-on accessory to the fan. Inlet Dampers also are available in conjunction with the Inlet Box for efficient air volume control.



### Coupling/ Shaft and Bearing Guard

The coupling guard encloses the coupling from the face of the motor to the outboard bearing. The shaft and bearing guard encloses the shaft and bearings from the inboard bearing to just beyond the outboard bearing.



### Raised Access Door

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



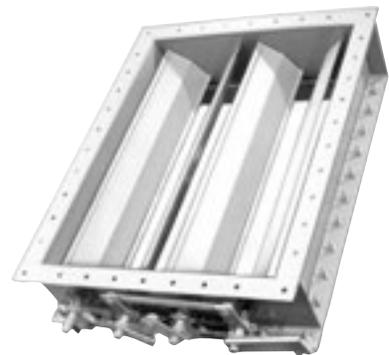
### Quick Release Access Door

Access door mounted flush to the fan scroll and secured with quick release handles. Hinged door available as option.



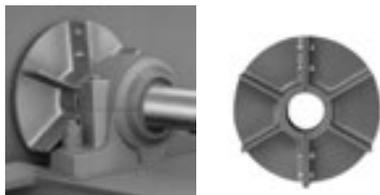
### Outlet Damper

Outlet Dampers are the least expensive air volume control device but are less efficient than an Inlet Box with an Inlet Damper. Northern Blower Outlet Dampers have punched flanges on both ends to allow for convenient fan and duct connections. Opposed blade designs are available for operating temperatures to 800°F.



### Cooling Wheel

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



### Belt Guard

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



### Additional Accessories

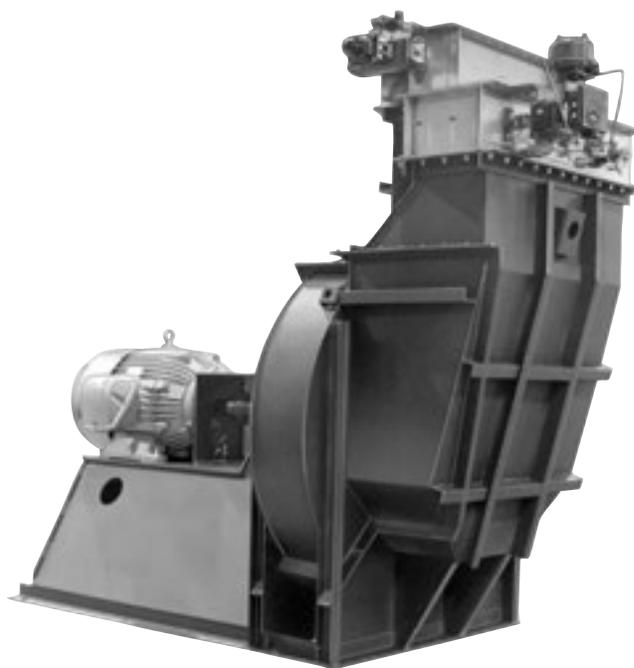
- Protective Coatings
- Special Metals
- High Temperature Construction
- Extended Grease Fittings
- Insulation Clips
- Mounted Drive Package
- Blade and Housing Liners
- Abrasion Resistant

### Series 8800

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

Series 8800 design numbers designate the use of evasés and inlet boxes.

Series 8800 Designs		
Design	Evasé	Inlet Box
8810	No	No
8811	No	Yes
8812	Yes	No
8813	Yes	Yes



# Fan Selection at Elevated Temperature and Altitude

## Fan Selection Table

Ratings shown in the Performance Tables are based on standard air density of .075 pounds per cubic foot at the fan Inlet. Standard air is dry air at 70°F and 29.92" Hg barometric pressure. When air density varies from standard, due to temperature or altitude changes, the Air Density Correction Factor from Table 2 is applied. Refer to the sample selection that follows.

Note that data in the selection tables is based on a fan with evasé and does not include the effects of accessories such as inlet dampers, inlet boxes, outlet dampers, or other components in the air stream.

## High Temperature

High temperature operating limits are 300°F without a cooling wheel and 800°F with a cooling wheel and shaft seal. For selection, both fan performance and physical operating limits must be corrected. Refer to the sample selection on the following page.

Table 2

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

Table 1

Wheel & Shaft Maximum Speeds at 70°F		
Size	Shaft	Wheel
2700	2971	3336
3000	2674	2968
3300	2431	2671
3650	2198	2395
4025	1993	2148
4450	1803	2003
4900	1637	1733
5425	1479	1547
5712	1404	1461
6000	1337	1384

Table 3

Safe Speed Deration Factors		
Temp °F	Alloy Steel Wheel	Steel Shaft
-50 to 150	1.0	1.0
200	.97	1.0
300	.96	1.0
400	.95	.99
500	.94	.97
600	.92	.96
700	.87	.95
800	.68	.94

**Sample Selection of a Belt Drive Fan**

Select a fan for the operating conditions of 20,000 CFM at 10" SP, 500°F and 1000 feet elevation.

- 1) Multiply the Operating SP by the Air Density Correction Factor (Table 2) to obtain Equivalent SP:

$$\text{Equivalent SP} = \text{Operating SP} \times \text{Air Density Corr. Factor} = 10" \times 1.88 = 18.8"$$

- 2) From the Performance Tables, select the fan size. For 20,000 CFM at 18.8" SP an efficient selection would be a size 3300 fan. Interpolating from the Performance Table given on page 10, the selected fan performance is 2006 RPM and 77.9 BHP at standard temperature and pressure.

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

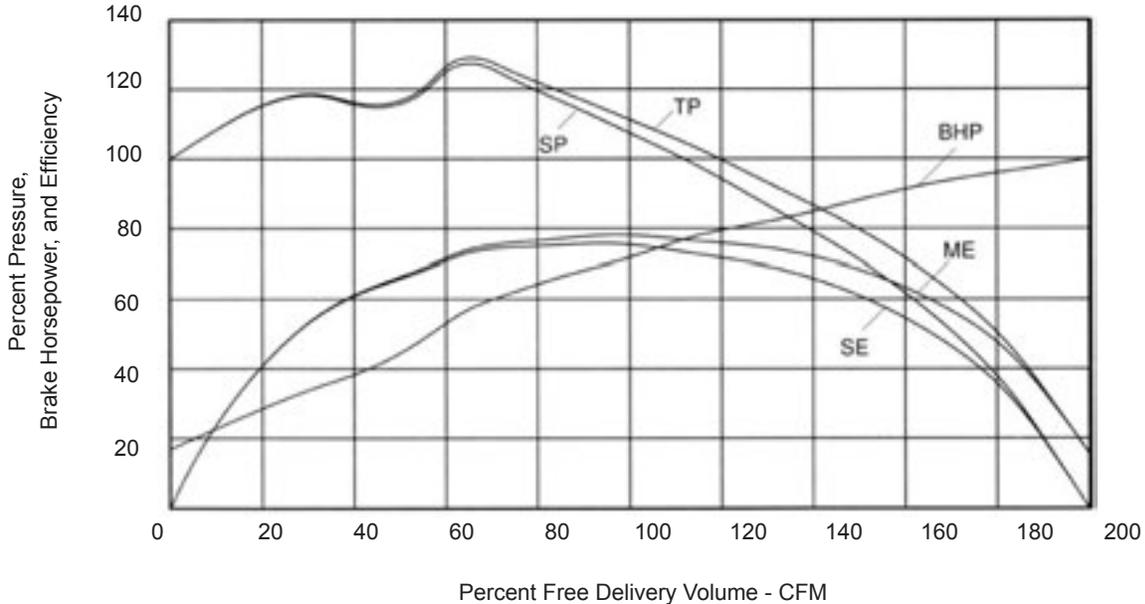
$$\begin{aligned} \text{Operating BHP} &= \frac{\text{Equivalent BHP}}{\text{Air Density Correction Factor}} \\ &= \frac{77.9}{1.88} = 41.4 \text{ BHP} \end{aligned}$$

- 4) Multiply the Wheel & Shaft Maximum Speed at 70°F values (Table 1) by the Wheel & Shaft Safe Speed Deration Factors (Table 3). Fan size 3300, the maximum speed at 500°F is:

$$\begin{aligned} \text{Wheel} &= 2671 \times 0.94 = 2511 \text{ RPM} \\ \text{Shaft} &= 2431 \times 0.97 = 2358 \text{ RPM} \end{aligned}$$

Since the fan selection speed of 2006 RPM is below **both** the maximum allowable wheel and shaft speeds, the fan is a suitable selection.

**Design 8812 Performance Curve**









Wheel Diameter = 36.50 in.  
 Outlet Area = 7.70 sq. ft. inside  
 Maximum Speed = 2198 RPM  
 Tip Speed, fpm = 9.56 x RPM

Size

**3650** SISW

**Design 8812 Radial Tip Fans**

Volume O.Vel		11"SP		12"SP		13"SP		14"SP		15"SP		16"SP		17"SP		18"SP		19"SP		20"SP		
CFM	FPM	RPM	BHP																			
16000	2078	1351	36.9	1399	40.2																	
16500	2143	1358	37.9	1407	41.5	1454	45.0															
17000	2208	1366	39.0	1414	42.6	1461	46.2															
17500	2273	1374	40.1	1422	43.8	1469	47.5	1543	51.2													
18000	2338	1382	41.2	1429	45.0	1476	48.8	1522	52.7	1564	56.4											
18500	2402	1389	42.4	1438	46.2	1484	50.1	1528	54.0	1572	58.0	1613	61.8									
19000	2467	1397	43.6	1445	47.4	1491	51.3	1537	55.4	1579	59.4	1621	63.5	1661	67.5							
19500	2532	1405	44.9	1454	48.7	1500	52.7	1543	56.7	1587	60.9	1628	65.0	1669	69.1	1708	73.3					
20000	2597	1414	46.2	1461	50.0	1507	54.0	1552	58.2	1594	62.3	1636	66.5	1676	70.8	1715	75.0	1754	79.3			
21000	2727	1430	48.9	1477	52.9	1523	56.9	1568	61.1	1610	65.4	1651	69.7	1692	74.2	1730	78.5	1769	83.1	1805	87.4	
22000	2857	1446	51.7	1494	55.9	1539	60.0	1583	64.2	1626	68.6	1667	73.0	1707	77.5	1745	82.1	1784	86.7	1820	91.3	
23000	2987	1464	54.7	1510	59.0	1555	63.2	1599	67.6	1642	72.0	1683	76.5	1722	81.0	1761	85.7	1798	90.4	1835	95.3	
24000	3117	1482	57.5	1528	62.2	1572	66.6	1615	71.1	1658	75.6	1699	80.2	1738	84.8	1777	89.6	1814	94.3	1851	99.3	
25000	3247	1500	60.4	1545	65.3	1590	70.1	1632	74.7	1674	79.4	1715	84.1	1754	88.8	1793	93.6	1830	98.5	1866	103.4	
26000	3376	1519	63.4	1564	68.4	1607	73.4	1650	78.4	1691	83.2	1731	88.1	1771	93.0	1808	97.8	1847	102.9	1882	107.8	
27000	3506	1539	66.5	1583	71.7	1626	76.9	1667	82.1	1708	87.2	1748	92.2	1787	97.3	1825	102.3	1862	107.4	1898	112.5	
28000	3636	1559	69.8	1603	75.1	1645	80.4	1686	85.7	1726	91.2	1765	96.5	1803	101.7	1842	107.0	1878	112.1	1914	117.4	
29000	3766	1578	73.2	1622	78.6	1665	84.1	1705	89.5	1744	95.1	1783	100.7	1821	106.1	1858	111.6	1895	117.0	1930	122.3	
30000	3896	1598	76.7	1642	82.2	1684	87.8	1724	93.5	1763	99.2	1801	104.9	1839	110.7	1875	116.3	1912	122.0	1947	127.5	
31000	4026	1619	80.5	1662	86.0	1703	91.7	1744	97.4	1783	103.3	1820	109.2	1857	115.1	1894	121.1	1929	126.8	1965	132.8	
32000	4156	1639	84.4	1682	90.1	1724	95.8	1763	101.6	1802	107.6	1840	113.7	1876	119.7	1912	125.8	1948	131.9	1982	137.9	
33000	4285	1660	88.6	1702	94.2	1743	100.1	1784	106.0	1822	112.0	1859	118.1	1896	124.4	1931	130.6	1966	136.9	2000	143.2	
34000	4415	1681	92.9	1723	98.7	1763	104.5	1803	110.5	1842	116.7	1879	122.9	1915	129.2	1951	135.7	1985	142.0	2019	148.5	
35000	4545	1703	97.4	1744	103.3	1784	109.3	1823	115.4	1861	121.5	1899	127.8	1935	134.3	1970	140.7	2005	147.4	2037	153.9	
36000	4675	1725	102.2	1765	108.1	1805	114.2	1844	120.3	1882	126.7	1919	133.0	1954	139.4	1990	146.1	2023	152.7	2057	159.6	
37000	4805	1748	107.2	1787	113.2	1826	119.3	1864	125.5	1902	131.9	1939	138.4	1974	144.9	2009	151.5	2044	158.4	2076	165.1	
38000	4935	1771	112.4	1810	118.4	1848	124.6	1886	131.0	1923	137.4	1959	143.9	1994	150.6	2029	157.3	2063	164.1	2096	171.1	
39000	5065	1795	117.8	1833	124.0	1870	130.3	1907	136.6	1943	143.1	1980	149.8	2014	156.4	2049	163.2	2083	170.2	2115	177.1	
40000	5194	1820	123.3	1880	135.7	1916	142.1	1951	148.6	1987	155.3	2022	162.1	2056	168.9	2090	175.9	2123	182.9	2155	190.0	
42000	5454	1870	135.4	1905	141.8	1940	148.4	1974	155.1	2009	161.8	2043	168.6	2077	175.6	2110	182.6	2143	189.7	2175	196.9	
43000	5584	1895	141.7	1930	148.3	1964	155.0	1998	161.6	2031	168.5	2065	175.5	2098	182.4	2131	189.5	2164	196.7	2195	204.0	
44000	5714	1922	148.4	1955	155.0	1988	161.7	2022	168.5	2055	175.5	2087	182.4	2120	189.5	2153	196.7	2184	204.0			
45000	5844	1948	155.2	1981	161.9	2013	168.8	2046	175.7	2078	182.6	2111	189.8	2142	196.9	2174	204.1					
46000	5974	1975	162.3	2007	169.2	2039	176.1	2071	183.0	2103	190.2	2134	197.3	2165	204.5	2197	211.9					
47000	6104	2002	169.7	2033	176.6	2064	183.6	2096	190.8	2127	197.9	2158	205.1	2189	212.5							
48000	6233	2029	177.3	2060	184.3	2091	191.5	2121	198.6	2152	205.9	2182	213.3									
49000	6363	2057	185.2	2087	192.4	2117	199.6	2147	206.8	2177	214.3											
50000	6493	2085	193.5	2115	200.7	2144	207.9	2173	215.4													
51000	6623	2114	202.1	2142	209.3	2171	216.7															
52000	6753	2142	210.9	2170	218.2																	
53000	6883	2171	220.0																			
Volume O.Vel	21"SP		22"SP		23"SP		24"SP		25"SP		26"SP		27"SP		28"SP		29"SP		30"SP			
CFM	FPM	RPM	BHP																			
20000	2597	1827	87.7	1864	92.2																	
21000	2727	1842	91.9	1877	96.3	1911	100.7	1946	105.3	1978	109.6											
22000	2857	1857	96.1	1891	100.5	1926	105.3	1960	109.9	1992	114.4	2025	119.2	2057	123.9							
23000	2987	1871	100.0	1906	104.9	1941	109.9	1974	114.5	2007	119.4	2040	124.3	2070	129.0	2102	133.9	2134	139.0	2161	143.5	
24000	3117	1886	104.1	1922	109.3	1955	114.2	1988	119.2	2022	124.4	2053	129.2	2085	134.3	2118	139.6	2146	144.3	2176	149.3	
25000	3247	1902	108.4	1937	113.6	1970	118.6	2005	124.1	2036	129.1	2068	134.3	2101	139.8	2130	144.7	2161	150.0	2192	155.5	
26000	3376	1919	113.0	1952	118.0	1986	123.4	2019	128.6	2051	133.9	2084	139.6	2114	144.7	2145	150.2	2177	155.9			
27000	3506	1933	117.6	1968	122.8	2002	128.2	2034	133.5	2068	139.1	2098	144.5	2129	150.0	2161	155.9	2190	161.2			
28000	3636	1949	122.5	1984	128.0	2017	133.2	2051	138.7	2082	144.2	2114	149.7	2146	155.6	2175	161.1					
29000	3766	1966	127.8	1999	133.1	2033	138.6	2066	144.1	2098	149.6	2131	155.5	2160	161.0	2191	166.8					
30000	3896	1982	133.1	2016	138.6	2050	144.2	2082	149.7	2115	155.5	2145	161.1	2176	166.8							
31000	4026	1998	138.4	2033	144.3	2065	149.9	2099	155.8	2130	161.4	2161	167.2	2193	173.1							
32000	4156	2016	144.0	2049	149.9	2082	155.9	2114	161.7	2146	167.6	2178	173.6									
33000	4285	2033	149.4	2066	155.6	2099	161.8	2131	167.8	2163	174.1	2193	179.9									
34000	4415	2052	154.9	2084	161.4	2116	167.7	2148	174.2	2179	180.3											
35000	4545	2071	160.6	2102	167.1	2135	173.9	2165	180.3	2197	187.0											
36000	4675	2089	166.2	2122	173.2	2152	179.8	2184	186.7													
37000	4805	2109	172.2	2140	178.9	2172	186.1															
38000	4935	2128	178.0	2160	185.2	2190	192.2															
39000	5065	2148	184.3	2179	191.4																	
40000	5194	2167	190.6																			
41000	5324	2187	197.3																			

Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream. Performance shown is for installation type B-Free inlet, Ducted outlet.



Wheel Diameter = 44.50 in  
 Outlet Area = 11.45 sq. ft. inside  
 Maximum Speed = 1803 RPM  
 Tip Speed, fpm = 11.7 x RPM

Size

**4450** SISW

**Design 8812 Radial Tip Fans**

Volume		O.Vel		11"SP		12"SP		13"SP		14"SP		15"SP		16"SP		17"SP		18"SP		19"SP		20"SP	
CFM	FPM	RPM	BHP	RPM	BHP																		
23000	2009	1101	53.0																				
24000	2097	1110	55.2	1149	60.3																		
25000	2184	1119	57.5	1158	62.7	1196	68.0																
26000	2272	1127	59.6	1167	65.1	1204	70.6	1241	76.1														
27000	2359	1135	61.8	1175	67.4	1213	73.2	1250	78.9	1285	84.6												
28000	2446	1144	64.3	1183	69.9	1221	75.7	1258	81.7	1293	87.6	1327	93.5	1361	99.5								
29000	2534	1153	66.7	1193	72.5	1230	78.4	1266	84.3	1302	90.5	1336	96.6	1369	102.8	1401	109.0						
30000	2621	1162	69.3	1201	75.1	1239	81.1	1275	87.3	1310	93.4	1344	99.8	1377	106.1	1409	112.5	1440	118.8				
31000	2708	1171	72.1	1210	78.0	1247	84.0	1284	90.2	1319	96.6	1352	102.9	1386	109.5	1417	115.9	1449	122.7	1479	129.0		
32000	2796	1180	74.9	1219	80.9	1257	87.1	1292	93.2	1327	99.6	1362	106.3	1394	112.8	1426	119.7	1456	126.2	1488	133.2		
33000	2883	1189	77.7	1228	83.9	1265	90.1	1302	96.5	1336	102.9	1370	109.5	1403	116.4	1434	123.0	1466	130.2	1495	136.8		
34000	2970	1199	80.7	1237	87.1	1274	93.4	1310	99.8	1345	106.4	1379	113.0	1411	119.7	1443	126.8	1473	133.7	1504	140.9		
35000	3058	1208	83.5	1246	90.1	1283	96.8	1319	103.4	1354	109.9	1387	116.6	1420	123.5	1451	130.4	1483	137.7	1512	144.7		
36000	3145	1219	86.5	1256	93.3	1292	100.1	1328	106.8	1363	113.7	1396	120.4	1429	127.3	1461	134.4	1491	141.5	1521	148.9		
37000	3233	1229	89.3	1266	96.5	1302	103.6	1337	110.5	1371	117.4	1405	124.4	1438	131.3	1469	138.4	1500	145.7	1529	153.0		
38000	3320	1239	92.4	1276	99.6	1312	106.9	1347	114.1	1381	121.4	1414	128.3	1446	135.5	1478	142.7	1508	149.9	1539	157.4		
39000	3407	1250	95.4	1286	102.9	1322	110.5	1356	117.8	1390	125.1	1423	132.5	1455	139.7	1486	147.0	1517	154.4	1547	161.8		
40000	3495	1261	98.5	1297	106.1	1332	113.8	1366	121.5	1400	129.2	1432	136.5	1464	144.0	1496	151.5	1526	158.9	1556	166.6		
41000	3582	1272	101.7	1308	109.5	1343	117.4	1376	125.2	1409	133.0	1442	140.8	1473	148.4	1504	156.0	1535	163.8	1564	171.3		
42000	3669	1282	105.0	1318	112.8	1353	120.8	1387	128.9	1420	137.1	1451	144.9	1483	152.9	1514	160.7	1544	168.4	1574	176.4		
43000	3757	1293	108.4	1329	116.4	1364	124.6	1397	132.7	1430	140.9	1462	149.2	1493	157.3	1523	165.3	1553	173.5	1582	181.3		
44000	3844	1304	111.9	1340	120.0	1374	128.2	1408	136.5	1440	145.1	1472	153.4	1502	161.7	1533	170.2	1562	178.2	1592	186.7		
45000	3932	1315	115.5	1351	123.7	1386	132.1	1419	140.5	1450	149.0	1482	157.7	1513	166.3	1542	174.7	1572	183.5	1601	191.6		
46000	4019	1327	119.4	1362	127.6	1396	135.9	1429	144.5	1461	153.3	1492	162.0	1523	170.7	1553	179.7	1581	188.2	1611	197.0		
47000	4106	1338	123.2	1373	131.5	1407	140.0	1441	148.8	1472	157.5	1503	166.3	1534	175.5	1562	184.2	1592	193.3	1620	202.0		
48000	4194	1350	127.3	1385	135.7	1418	144.2	1451	152.9	1483	161.8	1514	170.9	1543	179.9	1573	189.1	1602	198.2	1630	207.3		
49000	4281	1361	131.4	1395	139.9	1429	148.5	1462	157.4	1494	166.3	1524	175.4	1555	184.7	1583	193.9	1612	203.2	1640	212.6		
50000	4368	1373	135.8	1407	144.3	1441	153.0	1473	161.8	1505	170.9	1536	180.2	1565	189.5	1594	198.9	1623	208.5	1650	217.8		
51000	4456	1384	140.2	1418	148.8	1452	157.5	1484	166.5	1516	175.7	1546	184.9	1576	194.4	1605	204.0	1633	213.5	1661	223.4		
52000	4543	1396	144.7	1430	153.4	1463	162.3	1495	171.4	1527	180.5	1557	189.9	1587	199.5	1615	209.0	1644	219.0	1671	228.6		
53000	4630	1409	149.5	1442	158.3	1474	167.2	1506	176.2	1538	185.6	1568	195.0	1597	204.5	1627	214.4	1654	224.2	1682	234.2		
54000	4718	1421	154.3	1454	163.1	1486	172.2	1518	181.4	1549	190.7	1579	200.2	1609	210.0	1637	219.7	1665	229.7	1692	239.8		
55000	4805	1434	159.3	1466	168.3	1498	177.4	1529	186.6	1560	196.0	1590	205.7	1619	215.4	1648	225.2	1676	235.4	1703	245.4		
56000	4893	1447	164.5	1478	173.5	1510	182.6	1541	192.0	1572	201.6	1601	211.2	1630	221.0	1659	231.1	1687	241.0	1714	251.5		
57000	4980	1460	169.7	1491	178.8	1522	188.2	1553	197.6	1583	207.1	1612	216.9	1642	226.9	1670	236.8	1698	247.0	1725	257.3		
58000	5067	1473	175.2	1504	184.5	1534	193.8	1564	203.2	1594	212.9	1624	222.8	1653	232.7	1681	242.8	1709	253.1	1735	263.4		
59000	5155	1486	180.9	1517	190.1	1547	199.5	1577	209.1	1606	219.0	1635	228.7	1664	238.8	1692	249.0	1719	259.3	1747	270.0		
60000	5242	1500	186.6	1530	195.9	1559	205.5	1589	215.2	1618	224.9	1647	234.9	1676	245.1	1703	255.3	1731	265.8	1757	276.2		
61000	5329	1514	192.5	1543	202.0	1572	211.6	1601	221.3	1630	231.2	1659	241.4	1687	251.4	1715	261.8	1742	272.3	1768	282.9		
Volume	O.Vel	21"SP		22"SP		23"SP		24"SP		25"SP		26"SP		27"SP		28"SP		29"SP		30"SP			
CFM	FPM	RPM	BHP	RPM	BHP																		
32000	2796	1516	139.7	1546	146.6																		
33000	2883	1525	144.0	1554	150.8	1582	157.7																
34000	2970	1533	147.9	1562	155.1	1590	162.4	1617	169.3														
35000	3058	1542	152.1	1570	159.4	1598	166.7	1627	174.4	1652	181.3	1679	188.8										
36000	3145	1550	156.2	1578	163.7	1607	171.3	1633	178.6	1661	186.5	1687	193.8	1713	201.3								
37000	3233	1559	160.5	1587	168.0	1615	175.7	1643	183.6	1669	191.0	1695	198.9	1722	206.8	1746	214.2	1771	222.1				
38000	3320	1567	164.8	1596	172.6	1624	180.3	1650	188.0	1678	196.2	1703	203.9	1729	211.7	1755	220.1	1779	227.7				
39000	3407	1576	169.5	1604	177.1	1632	185.0	1660	193.0	1685	200.8	1712	209.1	1738	217.1	1762	225.0	1788	233.4				
40000	3495	1585	174.1	1613	182.0	1641	189.8	1667	197.8	1695	206.2	1720	214.0	1746	222.3	1771	230.9	1795	238.8				
41000	3582	1594	179.2	1622	186.9	1649	194.8	1677	202.9	1703	211.0	1729	219.5	1754	227.6	1779	236.0						
42000	3669	1602	184.1	1631	192.1	1658	200.0	1685	208.1	1712	216.5	1737	224.6	1763	233.2	1788	241.7						
43000	3757	1612	189.5	1639	197.3	1667	205.5	1694	213.6	1720	221.8	1747	230.4	1771	238.6	1796	247.3						
44000	3844	1620	194.5	1649	202.9	1675	210.9	1703	219.2	1729	227.5	1754	235.9	1781	244.7								
45000	3932	1630	200.2	1657	208.2	1685	216.8	1711	224.9	1738	233.4	1764	241.9	1788	250.4								
46000	4019	1638	205.3	1667	214.1	1693	222.3	1721	231.1	1746	239.4	1772	248.0	1798	256.8								
47000	4106	1648	210.9	1675	219.5	1703	228.4	1729	236.8	1756	245.8	1781	254.2										
48000	4194	1657	216.3	1685	225.3	1712	234.1	1738	243.2	1764	251.8	1790	260.8										
49000	4281	1667	221.8	1694	231.1	1721	240.2	1															

Size

# 4900 sisw

## Design 8812 Radial Tip Fans

Wheel Diameter = 49.00 in.  
 Outlet Area = 13.88 sq. ft. inside  
 Maximum Speed = 1637 RPM  
 Tip Speed, fpm = 12.8 x RPM

Volume		11"SP		12"SP		13"SP		14"SP		15"SP		16"SP		17"SP		18"SP		19"SP		20"SP	
CFM	FPM	RPM	BHP																		
28000	2018	1001	64.5																		
29000	2090	1007	66.7	1043	72.9																
30000	2162	1013	68.9	1050	75.4	1084	81.7														
31000	2234	1020	71.0	1056	77.6	1091	84.3	1124	90.9												
32000	2306	1027	73.4	1062	80.0	1097	86.7	1130	93.7	1163	100.5										
33000	2378	1033	75.6	1069	82.4	1104	89.5	1136	96.3	1169	103.4	1200	110.5								
34000	2450	1040	78.0	1075	84.9	1109	91.9	1143	99.2	1175	106.3	1206	113.5	1236	120.8						
35000	2522	1046	80.5	1082	87.4	1116	94.7	1149	101.8	1181	109.3	1212	116.7	1242	124.1	1272	131.6				
36000	2594	1053	83.1	1088	90.1	1122	97.3	1156	104.8	1187	112.2	1218	119.8	1248	127.5	1277	135.0	1306	142.8		
37000	2666	1059	85.8	1095	92.9	1129	100.2	1162	107.6	1194	115.2	1225	123.0	1254	130.7	1284	138.7	1312	146.4	1340	154.3
38000	2738	1066	88.5	1101	95.7	1136	103.0	1169	110.6	1200	118.3	1231	126.1	1261	134.2	1289	142.0	1318	150.3	1346	158.1
39000	2810	1073	91.4	1108	98.8	1143	106.2	1175	113.7	1207	121.5	1238	129.5	1267	137.4	1297	145.8	1324	153.7	1352	162.2
40000	2882	1080	94.2	1115	101.7	1149	109.3	1182	117.0	1213	124.8	1244	132.7	1274	141.1	1302	149.1	1331	157.8	1358	165.9
41000	2954	1087	97.1	1122	104.9	1156	112.6	1188	120.3	1220	128.1	1251	136.3	1280	144.4	1309	153.0	1337	161.2	1365	170.1
42000	3026	1094	100.0	1129	107.9	1162	115.8	1195	123.8	1227	131.7	1257	139.8	1287	148.2	1315	156.5	1344	165.2	1370	173.7
43000	3098	1102	102.9	1136	111.1	1170	119.3	1202	127.2	1233	135.3	1264	143.6	1293	151.8	1322	160.4	1350	169.0	1377	177.9
44000	3171	1109	105.8	1143	114.2	1176	122.5	1208	130.8	1240	139.2	1270	147.3	1300	155.8	1328	164.3	1356	173.0	1383	181.9
45000	3243	1117	108.7	1151	117.4	1184	126.1	1215	134.5	1246	142.8	1277	151.4	1306	159.8	1335	168.4	1363	177.2	1390	186.1
46000	3315	1125	111.8	1158	120.6	1191	129.3	1222	138.1	1254	146.9	1284	155.3	1313	163.9	1342	172.7	1369	181.4	1397	190.5
47000	3387	1133	114.7	1166	123.8	1198	132.9	1230	141.9	1260	150.6	1290	159.4	1320	168.2	1348	176.9	1377	186.1	1403	194.9
48000	3459	1141	117.9	1174	127.1	1206	136.3	1237	145.4	1268	154.6	1297	163.6	1326	172.4	1355	181.6	1382	190.4	1410	199.7
49000	3531	1149	121.0	1182	130.3	1214	139.7	1245	149.3	1275	158.5	1304	167.6	1334	177.0	1361	185.9	1389	195.1	1416	204.3
50000	3603	1157	124.2	1190	133.8	1222	143.3	1252	152.8	1282	162.4	1312	172.1	1340	181.2	1368	190.6	1396	199.9	1423	209.2
51000	3675	1165	127.5	1198	137.1	1229	146.8	1260	156.6	1290	166.5	1319	176.0	1347	185.7	1375	195.2	1402	204.6	1430	214.2
52000	3747	1173	130.9	1206	140.6	1238	150.5	1268	160.4	1297	170.3	1326	180.3	1355	190.2	1382	199.8	1410	209.8	1436	219.1
53000	3819	1182	134.5	1214	144.2	1245	154.1	1276	164.2	1305	174.4	1334	184.5	1362	194.5	1390	204.8	1416	214.4	1443	224.4
54000	3891	1190	138.0	1222	147.8	1254	157.9	1284	168.2	1313	178.4	1341	188.7	1370	199.2	1397	209.2	1424	219.4	1450	229.4
55000	3963	1198	141.8	1231	151.7	1262	161.9	1292	172.1	1321	182.5	1349	193.1	1377	203.5	1404	214.0	1431	224.4	1457	234.6
56000	4035	1207	145.6	1239	155.5	1270	165.7	1300	176.1	1329	186.8	1357	197.4	1385	208.0	1412	218.9	1438	229.2	1464	240.1
57000	4107	1215	149.4	1247	159.5	1278	169.8	1308	180.4	1337	191.0	1365	201.7	1393	212.8	1419	223.4	1446	234.4	1471	245.0
58000	4179	1224	153.5	1256	163.7	1287	174.0	1316	184.5	1345	195.3	1374	206.4	1400	217.2	1427	228.3	1453	239.3	1479	250.3
60000	4323	1241	161.8	1272	172.2	1303	182.7	1333	193.4	1361	204.3	1389	215.4	1417	226.8	1443	238.0	1469	249.6	1494	260.8
62000	4468	1259	170.7	1289	181.1	1320	191.8	1349	202.7	1378	213.8	1405	225.0	1432	236.5	1459	248.2	1484	259.7	1510	271.7
64000	4612	1277	180.0	1307	190.6	1337	201.4	1366	212.4	1394	223.6	1422	235.2	1449	246.6	1475	258.5	1500	270.4	1525	282.4
66000	4756	1295	189.7	1325	200.5	1354	211.5	1383	222.7	1411	234.0	1438	245.6	1465	257.5	1491	269.3	1517	281.5	1541	293.7
68000	4900	1315	200.0	1344	210.9	1372	222.0	1400	233.4	1428	245.0	1455	256.6	1482	268.5	1508	280.7	1533	292.8	1558	305.5
Volume	O.Vel	21"SP		22"SP		23"SP		24"SP		25"SP		26"SP		27"SP		28"SP		29"SP		30"SP	
CFM	FPM	RPM	BHP																		
36000	2594	1360	157.9	1388	165.9			1443	185.5												
37000	2666	1367	162.1	1393	169.8	1420	178.0	1443	185.5												
38000	2738	1373	166.2	1399	174.3	1424	182.1	1450	190.4	1474	198.4										
39000	2810	1379	170.3	1405	178.5	1431	187.0	1455	194.9	1480	203.3										
40000	2882	1385	174.5	1411	182.8	1437	191.2	1463	200.0	1486	208.0	1505	211.6	1535	225.4	1556	233.3				
41000	2954	1391	178.4	1417	187.2	1443	195.7	1467	204.3	1493	213.4	1516	221.6	1540	230.1	1564	239.1	1586	247.5		
42000	3026	1398	182.8	1423	191.3	1449	200.3	1474	209.1	1498	217.7	1523	226.9	1546	235.5	1569	244.1	1592	253.2	1614	262.2
43000	3098	1403	186.6	1430	195.9	1455	204.6	1480	213.7	1505	222.8	1528	231.6	1552	240.9	1575	250.0	1597	258.6	1620	267.7
44000	3171	1410	190.9	1436	199.9	1462	209.5	1486	218.2	1510	227.6	1535	237.0	1557	245.9	1581	255.2	1604	264.8	1626	273.5
45000	3243	1416	195.2	1442	204.4	1467	213.6	1493	223.4	1516	232.3	1540	241.8	1565	251.6	1587	260.5	1609	270.0	1633	280.0
46000	3315	1423	199.5	1449	208.9	1474	218.3	1498	227.6	1524	237.6	1546	246.8	1570	256.4	1594	266.6	1615	275.6		
47000	3387	1430	204.3	1455	213.4	1480	223.0	1505	232.5	1529	242.1	1553	252.2	1576	261.6	1599	271.4	1622	281.6		
48000	3459	1436	208.7	1462	218.4	1486	227.6	1512	237.5	1535	247.2	1559	256.9	1583	267.2	1605	276.9	1627	286.7		
49000	3531	1443	213.7	1468	223.0	1494	232.8	1518	242.3	1542	252.3	1566	262.2	1588	272.1	1612	282.5	1634	292.6		
50000	3603	1449	218.6	1475	228.1	1500	237.7	1525	247.7	1548	257.3	1572	267.6	1595	277.7	1617	287.7				
51000	3675	1455	223.6	1481	233.3	1506	242.9	1531	252.7	1555	262.9	1578	272.7	1602	283.2	1624	293.5				
52000	3747	1463	229.1	1488	238.5	1513	248.4	1537	258.2	1561	268.2	1585	278.5	1607	288.6	1631	299.2				
53000	3819	1469	234.0	1495	244.1	1519	253.7	1544	264.0	1568	273.8	1591	284.1	1615	294.6	1637	304.8				
54000	3891	1476	239.5	1501	249.4	1526	259.5	1550	269.4	1575	279.9	1598	289.9	1621	300.3						
55000	3963	1483	245.0	1508	255.0	1533	265.2	1557	275.4	1581	285.5	1605	296.2	1627	306.3						
56000	4035	1489	250.2	1515	260.9	1539	270.9	1564	281.4	1587	291.6	1613	302.0								
57000	4107	1497	255.8	1521	266.2	1547	277.0	1570	287.2	1595	298.1	1617	308.3								
58000	4179	1504	261.3	1529	272.0	1553	282.7	1577	293.5	1601	304.0	1625	315.1								

Wheel Diameter = 54.25 in.  
 Outlet Area = 17.01 sq ft. inside  
 Maximum Speed = 1479 RPM  
 Tip Speed, fpm = 14.2 x RPM

Size

**5425** SISW

**Design 8812 Radial Tip Fans**

Volume		11"SP		12"SP		13"SP		14"SP		15"SP		16"SP		17"SP		18"SP		19"SP		20"SP	
CFM	FPM	RPM	BHP																		
34000	1999	902	78.4																		
35000	2057	908	80.7	940	88.1																
36000	2116	912	82.7	944	90.4																
37000	2175	917	85.0	949	92.9	980	100.7														
38000	2234	921	87.1	953	95.1	985	103.4	1015	111.4												
39000	2293	926	89.4	959	97.6	989	105.8	1020	114.1												
40000	2351	931	91.6	963	99.9	994	108.4	1025	116.9	1053	125.3										
41000	2410	936	94.0	968	102.5	999	110.9	1029	119.6	1059	128.6	1086	137.0								
42000	2469	940	96.4	972	104.8	1004	113.5	1034	122.6	1062	131.2	1091	140.3	1118	149.1						
43000	2528	945	98.9	978	107.5	1009	116.3	1038	125.1	1067	134.2	1095	143.3	1122	152.4	1149	161.6				
44000	2587	950	101.5	982	110.1	1013	118.9	1043	128.0	1072	137.2	1100	146.4	1127	155.9	1153	165.0				
45000	2645	955	104.1	987	112.8	1019	121.8	1048	130.8	1076	140.1	1105	149.8	1131	159.0	1158	168.9	1183	178.1		
46000	2704	960	107.0	992	115.7	1023	124.6	1053	133.8	1082	143.4	1109	152.7	1136	162.5	1162	172.1	1188	182.1	1213	191.5
47000	2763	965	109.7	997	118.6	1028	127.6	1058	136.9	1086	146.3	1114	156.0	1141	165.8	1167	175.6	1192	185.6	1217	195.6
48000	2822	970	112.6	1002	121.7	1033	130.7	1062	139.9	1091	149.5	1119	159.3	1145	169.1	1172	179.3	1197	189.2	1222	199.5
49000	2880	975	115.4	1007	124.6	1037	133.8	1067	143.3	1096	152.8	1123	162.6	1151	172.8	1176	182.7	1202	193.3	1226	203.2
50000	2939	980	118.3	1012	127.7	1043	137.2	1072	146.6	1100	156.2	1129	166.2	1155	176.1	1181	186.5	1206	196.7	1231	207.4
51000	2998	986	121.2	1017	130.8	1047	140.3	1077	150.0	1106	159.8	1133	169.6	1160	179.7	1186	190.1	1211	200.5	1236	211.1
52000	3057	991	124.0	1022	133.9	1053	143.7	1082	153.6	1110	163.3	1138	173.3	1165	183.5	1190	193.8	1216	204.6	1240	215.0
53000	3116	997	127.0	1028	137.2	1058	147.1	1087	157.0	1115	167.0	1143	177.1	1169	187.2	1196	197.8	1220	208.3	1246	219.4
54000	3174	1002	129.9	1033	140.2	1063	150.4	1092	160.6	1120	170.8	1147	180.8	1174	191.3	1200	201.7	1225	212.4	1250	223.2
55000	3233	1008	132.8	1038	143.4	1068	154.0	1097	164.3	1125	174.4	1153	184.9	1179	195.2	1205	205.7	1230	216.6	1254	227.4
56000	3292	1014	135.9	1044	146.7	1073	157.3	1102	167.8	1130	178.4	1158	188.9	1184	199.3	1210	210.2	1235	220.7	1260	232.0
57000	3351	1020	138.8	1050	149.7	1079	160.7	1108	171.6	1135	182.3	1162	192.8	1189	203.7	1215	214.2	1240	225.2	1264	236.1
58000	3410	1025	141.8	1055	153.0	1085	164.3	1113	175.2	1140	186.1	1168	197.1	1194	207.8	1219	218.6	1245	229.7	1269	240.7
59000	3468	1032	145.0	1061	156.3	1090	167.6	1118	178.8	1146	190.2	1173	201.1	1199	212.1	1225	223.3	1249	234.1	1274	245.6
60000	3527	1037	148.1	1067	159.5	1096	171.0	1124	182.7	1151	194.0	1178	205.2	1204	216.7	1229	227.6	1254	238.9	1279	250.1
61000	3586	1043	151.3	1073	162.9	1102	174.7	1129	186.3	1156	197.9	1183	209.6	1209	220.9	1234	232.2	1260	243.7	1283	254.9
62000	3645	1050	154.7	1079	166.3	1107	178.1	1135	190.0	1162	202.0	1188	213.7	1214	225.2	1240	237.1	1264	248.3	1289	260.1
63000	3703	1055	157.9	1085	169.7	1113	181.7	1141	193.9	1168	205.9	1194	217.8	1220	229.9	1245	241.5	1269	253.3	1293	264.9
64000	3762	1062	161.4	1091	173.3	1120	185.5	1147	197.6	1173	209.8	1199	222.2	1225	234.2	1250	246.2	1275	258.3	1298	269.9
65000	3821	1068	165.0	1097	176.9	1125	189.0	1152	201.4	1179	213.9	1205	226.3	1230	238.6	1255	251.2	1279	263.0	1304	275.3
66000	3880	1074	168.5	1103	180.5	1131	192.8	1159	205.4	1185	218.0	1210	230.5	1236	243.2	1260	256.6	1285	268.0	1309	280.3
68000	3997	1086	176.0	1115	188.2	1143	200.6	1170	213.3	1197	226.2	1222	239.3	1247	252.0	1272	265.2	1295	277.9	1319	290.7
70000	4115	1098	183.7	1127	196.1	1155	208.7	1183	221.7	1208	234.6	1234	247.9	1259	261.4	1282	274.5	1307	288.1	1329	301.0
72000	4233	1111	191.9	1140	204.4	1167	217.1	1194	230.1	1221	243.6	1246	256.9	1270	270.5	1294	284.4	1317	297.8	1341	311.9
74000	4350	1124	200.4	1152	213.1	1180	226.1	1206	239.1	1232	252.5	1258	266.3	1282	280.1	1306	294.0	1329	308.3	1352	322.0
76000	4468	1137	209.2	1165	222.0	1192	235.1	1219	248.4	1245	262.1	1269	275.8	1294	289.9	1318	304.2	1340	318.4	1364	333.1
78000	4585	1150	218.5	1178	231.5	1205	244.7	1231	258.1	1257	271.8	1282	285.9	1306	300.0	1329	314.4	1353	329.2	1375	343.7
Volume	O.Vel	21"SP		22"SP		23"SP		24"SP		25"SP		26"SP		27"SP		28"SP		29"SP		30"SP	
CFM	FPM	RPM	BHP																		
45000	2645	1233	197.1	1257	206.7	1280	216.5														
46000	2704	1238	201.7	1261	211.0	1284	220.8	1308	230.8												
47000	2763	1241	205.3	1266	215.8	1288	225.2	1311	235.2	1334	245.5										
48000	2822	1246	209.6	1270	219.6	1294	230.2	1316	239.8	1338	250.0	1360	260.6	1380	270.1						
49000	2880	1251	213.8	1274	223.9	1297	234.2	1321	245.0	1342	254.8	1364	265.2	1386	276.1	1406	285.8				
50000	2939	1255	217.6	1279	228.6	1302	238.7	1325	249.3	1348	260.2	1368	270.2	1390	280.8	1412	292.0	1431	301.8		
51000	2998	1260	221.9	1283	232.4	1307	243.7	1329	253.9	1351	264.7	1374	275.8	1394	286.0	1415	296.7	1436	308.1	1455	318.2
52000	3057	1265	226.0	1288	236.8	1311	247.6	1334	259.0	1355	269.4	1377	280.5	1399	291.8	1419	302.1	1440	313.0	1461	324.6
53000	3116	1269	229.9	1293	241.3	1315	252.1	1338	263.2	1361	274.8	1381	285.4	1403	296.6	1425	308.2	1444	318.7	1464	329.8
54000	3174	1274	234.4	1297	245.3	1321	257.1	1342	267.8	1364	279.2	1387	290.9	1407	301.7	1428	313.2	1450	325.1	1469	335.7
55000	3233	1279	238.6	1302	249.8	1325	261.1	1348	272.9	1369	283.9	1391	295.6	1412	307.4	1432	318.5	1453	330.1	1474	342.3
56000	3292	1283	242.8	1307	254.5	1329	265.7	1352	277.3	1374	289.2	1395	300.5	1416	312.4	1437	324.4	1457	335.6	1477	347.4
57000	3351	1288	247.5	1311	258.7	1335	270.7	1356	281.9	1378	293.9	1400	305.9	1420	317.4	1442	329.6	1462	341.7		
58000	3410	1293	252.1	1316	263.4	1339	275.1	1362	287.1	1383	298.6	1404	310.9	1425	322.9	1446	334.7	1466	347.1		
59000	3468	1298	256.6	1322	268.4	1343	279.8	1366	291.8	1388	303.9	1409	315.7	1430	328.3	1451	340.4	1470	352.4		
60000	3527	1303	261.6	1326	273.0	1349	285.0	1370	296.6	1393	309.0	1414	321.1	1434	333.2	1456	346.0	1475	358.2		
61000	3586	1308	266.6	1330	278.1	1353	289.9	1376	302.0	1397	313.9	1419	326.6	1439	338.7	1459	351.1				
62000	3645	1312	271.4	1336	283.5	1358	295.0	1380	307.2	1402	319.3	1423	331.6	1445	344.6	1464	356.7				
63000	3703	1317	276.7	1340	288.4	1363	300.5	1385	312.3	1407	324.9	1428	337.0	1449	349.6	1470	362.8				
64000	3762	1322	282.0	1345	293.7	1368	305.9	1390	317.9	1411	330.2	1433	343.								

Size

# 5712 sisw

## Design 8812 Radial Tip Fans

Wheel Diameter = 57.125 in.  
 Outlet Area = 18.86 sq. ft. inside  
 Maximum Speed = 1401 RPM  
 Tip Speed, fpm = 15.0 x RPM

Volume		11"SP		12"SP		13"SP		14"SP		15"SP		16"SP		17"SP		18"SP		19"SP		20"SP	
CFM	FPM	RPM	BHP																		
38000	2015	858	87.6																		
39000	2068	863	89.9	894	98.1																
40000	2121	866	91.9																		
41000	2174	871	94.2	901	102.9	931	111.5														
42000	2227	874	96.3	905	105.1	935	114.2	964	123.2												
43000	2280	878	98.5	910	107.7	939	116.7	967	125.8												
44000	2333	883	100.8	913	109.9	943	119.2	972	128.9	999	137.9										
45000	2386	886	103.0	917	112.4	947	121.9	975	131.3	1003	141.0	1030	150.5								
46000	2439	891	105.6	922	114.9	951	124.3	979	134.1	1007	143.9	1033	153.6								
47000	2492	895	107.9	925	117.3	955	127.1	983	136.9	1011	146.7	1038	157.1	1063	166.7						
48000	2545	899	110.5	930	120.1	959	129.7	987	139.6	1015	149.9	1041	159.9	1067	170.2	1092	180.2				
49000	2598	903	113.1	934	122.6	963	132.4	992	142.6	1019	152.7	1045	163.0	1071	173.5	1096	183.8	1121	194.3		
50000	2651	907	115.8	938	125.4	968	135.4	996	145.4	1023	155.7	1050	166.4	1075	176.6	1101	187.6	1124	197.8		
51000	2704	912	118.6	942	128.3	971	138.1	1000	148.3	1027	159.0	1053	169.3	1079	180.2	1104	190.8	1129	201.8	1152	212.3
52000	2757	916	121.3	946	131.1	976	141.2	1004	151.5	1031	161.8	1057	172.6	1083	183.4	1108	194.3	1132	205.4	1156	216.4
53000	2810	920	124.2	951	134.2	980	144.3	1008	154.5	1035	165.1	1062	175.9	1087	186.7	1112	198.1	1136	208.9	1160	220.4
54000	2863	925	127.0	955	137.1	984	147.3	1012	157.7	1040	168.4	1065	179.1	1091	190.4	1116	201.4	1140	212.9	1163	224.0
55000	2916	929	129.8	959	140.2	988	150.6	1017	161.1	1043	171.6	1070	182.6	1095	193.7	1120	205.0	1144	216.5	1167	228.0
56000	2969	934	132.8	964	143.5	993	153.9	1020	164.4	1048	175.2	1074	186.2	1099	197.2	1124	208.9	1148	220.2	1172	232.2
57000	3022	938	135.7	968	146.4	997	157.1	1025	167.9	1052	178.8	1078	189.6	1104	201.1	1128	212.4	1152	224.2	1175	235.8
58000	3076	943	138.5	972	149.6	1001	160.6	1029	171.4	1056	182.3	1082	193.5	1108	204.7	1132	216.2	1156	228.0	1179	239.8
59000	3129	948	141.6	977	152.9	1006	163.9	1033	174.9	1060	186.0	1086	197.2	1112	208.5	1137	220.3	1160	231.8	1184	244.2
60000	3182	953	144.4	982	155.8	1010	167.2	1038	178.6	1065	189.8	1090	201.0	1116	212.6	1140	224.1	1164	236.0	1187	248.0
61000	3235	957	147.3	986	159.1	1015	170.8	1042	182.2	1069	193.5	1095	205.0	1120	216.5	1144	228.2	1169	240.2	1192	252.2
62000	3288	963	150.4	991	162.4	1019	174.1	1046	185.7	1073	197.4	1099	209.1	1124	220.6	1149	232.6	1172	244.3	1196	256.8
63000	3341	967	153.3	996	165.4	1024	177.5	1051	189.5	1078	201.4	1103	213.0	1129	224.9	1153	236.7	1177	248.7	1200	261.0
64000	3394	972	156.3	1001	168.6	1029	181.1	1056	193.2	1082	205.1	1108	217.2	1133	229.1	1157	241.0	1181	253.4	1204	265.4
65000	3447	978	159.5	1006	172.0	1033	184.4	1060	196.7	1086	209.1	1112	221.4	1137	233.3	1161	245.7	1185	257.7	1208	270.2
66000	3500	983	162.6	1011	175.1	1038	187.8	1065	200.5	1091	213.2	1116	225.4	1141	237.8	1166	250.1	1189	262.3	1213	274.9
68000	3606	993	169.0	1021	182.0	1048	194.9	1074	207.9	1120	220.9	1126	234.1	1150	246.5	1174	259.2	1198	271.8	1221	284.5
70000	3712	1003	175.6	1031	188.7	1058	202.0	1085	215.6	1110	228.8	1134	242.1	1159	255.7	1183	268.4	1206	281.6	1229	294.4
72000	3818	1014	182.7	1042	195.9	1068	209.4	1094	223.0	1120	236.9	1144	250.7	1168	264.2	1192	278.1	1215	291.2	1238	304.8
74000	3924	1024	189.8	1052	203.2	1079	217.0	1105	231.0	1129	244.9	1154	259.1	1178	273.4	1201	287.2	1224	301.5	1246	314.9
76000	4030	1035	197.4	1062	211.0	1089	224.8	1115	238.9	1140	253.5	1164	267.8	1187	282.2	1211	297.0	1233	311.0	1266	325.7
78000	4136	1045	205.3	1073	219.0	1100	233.1	1125	247.4	1150	261.8	1174	276.6	1197	291.5	1220	306.2	1243	315.5	1264	335.7
80000	4242	1056	213.5	1083	227.3	1110	241.4	1135	255.9	1160	270.9	1184	285.6	1207	300.7	1230	316.1	1252	331.1	1274	346.7
82000	4348	1067	222.0	1094	236.0	1121	250.4	1146	264.9	1170	279.7	1194	295.0	1217	310.4	1240	325.7	1262	341.6	1284	356.8
84000	4454	1078	230.8	1105	245.0	1131	259.4	1156	274.2	1181	289.4	1204	304.5	1227	320.1	1250	336.0	1272	351.6	1294	368.0
86000	4560	1090	240.0	1116	254.4	1142	269.1	1167	283.9	1191	299.0	1215	314.5	1238	330.3	1260	346.1	1282	362.6	1303	378.4
Volume	O.Vel	21"SP		22"SP		23"SP		24"SP		25"SP		26"SP		27"SP		28"SP		29"SP		30"SP	
CFM	FPM	RPM	BHP																		
50000	2651	1171	219.1	1194	229.6	1217	240.7														
51000	2704	1176	223.6	1198	233.9	1220	244.7	1242	255.9												
52000	2757	1179	227.2	1202	238.7	1223	249.1	1245	260.3	1267	271.6										
53000	2810	1183	231.4	1205	242.6	1228	254.1	1249	264.8	1270	276.2	1291	287.6								
54000	2863	1187	235.9	1209	246.8	1231	258.4	1253	269.9	1273	280.8	1295	292.5	1315	304.1						
55000	2916	1190	239.5	1213	251.5	1235	262.6	1257	274.5	1278	286.1	1298	297.3	1319	309.2	1338	320.9				
56000	2969	1194	243.6	1217	255.5	1239	267.4	1260	278.9	1282	291.1	1302	302.7	1322	314.1	1342	326.3	1362	338.2		
57000	3023	1199	248.1	1220	259.6	1243	271.9	1264	283.8	1285	295.5	1306	308.1	1326	319.6	1345	331.4	1365	343.7	1385	355.8
58000	3076	1202	251.9	1225	264.2	1246	276.0	1268	288.7	1289	300.5	1309	312.6	1330	325.4	1349	337.0	1368	349.0	1388	361.5
59000	3129	1206	256.0	1229	268.5	1250	280.6	1271	292.9	1293	306.0	1313	317.7	1333	330.0	1354	343.1	1373	354.8	1391	366.9
60000	3182	1211	260.4	1232	272.5	1255	285.5	1275	297.6	1296	310.2	1318	323.3	1337	335.2	1357	347.9	1377	361.2	1395	373.0
61000	3235	1215	264.7	1237	277.1	1258	289.6	1280	302.7	1300	314.9	1321	327.9	1341	341.0	1360	353.2	1380	366.1	1400	379.6
62000	3288	1218	268.8	1241	281.8	1262	294.1	1283	307.1	1305	320.2	1324	332.7	1345	346.0	1365	359.1	1384	371.5		
63000	3341	1223	273.4	1245	286.0	1267	299.1	1287	311.6	1308	325.0	1329	338.0	1348	350.9	1369	364.5	1388	377.6		
64000	3394	1227	278.2	1249	290.6	1270	303.6	1292	316.7	1312	329.6	1333	343.3	1352	356.3	1372	369.4	1392	383.3		
65000	3447	1231	282.6	1253	295.6	1274	308.2	1296	321.7	1316	334.7	1336	348.0	1357	362.1	1376	374.9	1395	388.4		
66000	3500	1235	287.4	1257	300.3	1279	313.2	1299	326.3	1321	340.2	1340	353.1	1360	366.8	1381	381.0	1399	394.0		
68000	3606	1243	293.3	1265	310.2	1287	323.2	1308	336.9	1328	350.0	1349	363.8	1369	377.7	1388	391.2				
70000	3712	1252	307.6	1273	320.5	1295	334.0	1316	347.1	1337	361.0	1357	374.6	1376	388.4	1397	403.1				
72000	3818	1260	317.9	1282	331.6	1303	344.7	1325	358.6	1345	371.9	1365	385.9	1385	400.2						
74000	3924	1269	329.0	1290	342.3	131															

Wheel Diameter = 60.00 in.  
 Outlet Area = 20.81 sq. ft. inside  
 Maximum Speed = 1337 RPM  
 Tip Speed, fpm = 15.7 x RPM

Size

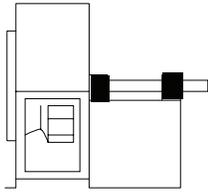
**6000** SISW

**Design 8812 Radial Tip Fans**

Volume		11"SP		12"SP		13"SP		14"SP		15"SP		16"SP		17"SP		18"SP		19"SP		20"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP														
41000	1970	814	94.7																		
42000	2018	817	96.8																		
43000	2066	821	99.2	851	108.2																
44000	2115	824	101.1	854	110.5																
45000	2163	828	103.4	858	113.1	886	122.5														
46000	2211	831	105.5	860	115.2	889	125.1														
47000	2259	834	107.6	864	117.7	893	127.8	920	137.6												
48000	2307	839	110.1	868	120.0	896	130.1	923	140.5	950	150.7										
49000	2355	842	112.2	871	122.3	899	132.8	927	143.2	953	153.5										
50000	2403	845	114.6	875	124.9	903	135.3	930	145.8	956	156.7	981	167.1								
51000	2451	849	117.0	878	127.3	906	137.8	933	148.8	959	159.5	985	170.3	1010	181.2						
52000	2499	852	119.4	882	129.8	910	140.6	937	151.4	963	162.3	989	173.7	1013	184.4						
53000	2547	856	122.0	886	132.6	913	143.2	940	154.1	967	165.5	991	176.5	1016	187.9	1040	199.0				
54000	2595	860	124.6	889	135.1	917	145.9	944	157.2	970	168.3	995	179.7	1020	191.2	1043	202.5	1067	214.1		
55000	2643	863	127.3	892	137.9	921	148.9	947	159.9	973	171.2	999	183.1	1023	194.3	1047	206.5	1070	217.6		
56000	2691	867	130.1	896	140.8	924	151.6	951	162.8	977	174.5	1002	185.9	1026	197.8	1050	209.6	1073	221.6	1096	233.2
57000	2739	871	132.8	900	143.6	927	154.6	955	166.0	980	177.4	1005	189.1	1030	201.3	1053	213.0	1077	225.4	1099	237.2
58000	2787	874	135.6	903	146.6	931	157.8	958	169.0	984	180.5	1009	192.7	1033	204.4	1057	216.8	1080	228.8	1103	241.5
59000	2835	878	138.6	907	149.7	935	160.7	961	172.1	988	183.9	1012	195.7	1037	207.9	1060	220.2	1083	232.6	1106	245.0
60000	2883	882	141.3	910	152.6	938	163.9	965	175.5	991	187.1	1016	199.1	1041	211.6	1063	223.7	1087	236.6	1109	248.8
61000	2932	886	144.2	914	155.7	942	167.3	969	178.8	994	190.5	1020	202.7	1044	214.8	1067	227.4	1090	240.0	1113	253.0
62000	2980	890	147.2	918	158.9	946	170.4	972	182.1	998	194.1	1023	206.1	1047	218.4	107	1231.2	1093	243.7	1116	256.9
64000	3076	898	152.8	926	165.1	953	177.2	980	189.2	1005	201.1	1030	213.5	1054	225.9	1078	238.6	1101	251.6	1123	264.7
66000	3172	906	158.7	934	171.3	961	183.8	987	196.3	1013	208.7	1037	221.0	1062	233.7	1085	246.5	1108	259.6	1130	272.8
68000	3268	915	164.7	942	177.9	969	190.8	995	203.5	1020	216.2	1045	229.2	1069	241.7	1092	254.8	1115	267.8	1137	281.4
70000	3364	923	170.6	950	184.0	977	197.5	1003	211.0	1028	224.0	1052	237.0	1076	250.4	1099	263.2	1122	276.7	1144	290.1
72000	3460	932	176.9	959	190.7	985	204.4	1010	218.1	1035	231.9	1060	245.4	1083	258.6	1107	272.4	1129	285.6	1152	299.5
74000	3556	941	183.1	967	197.2	993	211.4	1019	225.7	1043	239.6	1067	253.6	1091	267.6	1114	281.1	1137	295.3	1158	308.8
76000	3652	950	189.7	976	204.0	1002	218.4	1027	233.0	1052	247.8	1075	262.0	1098	276.2	1122	290.7	1144	304.5	1166	319.0
78000	3749	958	196.4	985	210.9	1011	225.8	1036	240.7	1060	255.5	1083	270.5	1106	285.3	1129	299.7	1152	314.6	1173	328.7
80000	3845	968	203.5	994	218.1	1019	233.1	1044	248.3	1068	263.8	1091	278.8	1114	294.1	1137	309.4	1159	324.1	1181	339.4
82000	3941	976	210.8	1003	225.6	1029	240.9	1053	256.2	1077	271.7	1100	287.5	1123	303.2	1145	318.5	1167	334.4	1188	349.3
84000	4037	986	218.4	1012	233.3	1037	248.6	1062	264.2	1086	280.3	1108	296.1	1131	312.1	1153	328.3	1174	343.9	1196	360.2
86000	4133	995	226.2	1021	241.4	1046	256.9	1071	272.7	1094	288.6	1117	304.9	1140	321.4	1161	337.6	1183	354.4	1204	370.1
88000	4229	1004	234.4	1030	249.7	1055	265.2	1079	281.2	1103	297.6	1126	314.0	1148	330.5	1170	347.6	1191	363.9	1212	381.1
90000	4325	1014	242.8	1039	258.3	1064	274.1	1089	290.2	1112	306.5	1135	323.2	1157	340.3	1178	357.0	1200	374.4	1220	391.2
92000	4421	1023	251.7	1049	267.2	1073	283.1	1097	299.3	1121	315.9	1144	332.8	1165	349.7	1187	367.3	1208	384.4	1229	402.1
94000	4517	1033	260.6	1058	276.4	1083	292.5	1107	309.0	1130	325.5	1152	342.5	1175	360.0	1196	377.2	1217	395.1	1237	412.7
96000	4614	1043	270.1	1068	286.0	1092	302.2	1116	318.6	1139	335.5	1162	352.8	1183	370.0	1205	387.8	1225	405.7	1246	423.7
Volume	O.Vel	21"SP		22"SP		23"SP		24"SP		25"SP		26"SP		27"SP		28"SP		29"SP		30"SP	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP														
54000	2595	1111	236.8	1134	248.8																
55000	2643	1114	241.0	1136	252.7	1157	264.7														
56000	2691	1119	245.6	1139	256.9	1160	268.9	1181	280.9												
57000	2739	1121	249.3	1143	261.5	1163	273.2	1184	285.6	1204	297.5										
58000	2787	1124	253.2	1146	265.8	1167	277.9	1187	289.9	1208	302.8	1227	314.6								
59000	2835	1128	257.6	1149	269.8	1171	282.8	1190	294.7	1210	307.1	1231	320.3	1249	332.0						
60000	2883	1131	261.8	1152	274.2	1173	286.8	1195	300.0	1214	312.0	1233	324.7	1254	338.1	1271	349.9				
61000	2932	1134	265.5	1156	279.0	1176	291.2	1197	304.2	1218	317.4	1237	329.6	1256	342.7	1276	356.1	1293	368.2		
62000	2980	1138	269.7	1159	282.7	1180	296.1	1200	308.7	1221	322.1	1240	335.1	1259	347.7	1278	361.0	1297	374.5	1314	386.8
63000	3028	1142	274.3	1162	286.9	1183	300.4	1204	313.6	1223	326.6	1244	340.4	1263	353.3	1281	366.2	1300	379.8	1319	393.4
64000	3076	1144	277.9	1166	291.5	1186	304.6	1207	318.6	1227	331.6	1246	344.9	1267	359.1	1285	371.9	1303	385.1	1322	398.9
65000	3124	1148	282.0	1169	295.8	1190	309.2	1210	322.7	1231	337.1	1250	350.0	1269	363.7	1289	378.1	1306	390.9	1324	404.3
66000	3172	1152	286.4	1172	299.8	1194	314.2	1213	327.3	1234	341.3	1253	355.5	1272	368.8	1291	382.8	1310	397.3	1328	410.3
68000	3268	1158	294.9	1180	309.1	1200	322.6	1221	337.1	1240	351.0	1259	365.0	1279	379.9	1298	393.7	1316	407.6	1335	422.3
70000	3364	1166	304.1	1186	317.7	1208	332.4	1227	346.2	1247	360.7	1267	375.7	1285	389.7	1304	404.5	1323	419.7		
72000	3460	1173	313.1	1194	327.6	1214	341.4	1235	356.2	1254	370.8	1273	385.3	1293	400.8	1311	415.3	1329	430.1		
74000	3556	1180	323.2	1201	337.0	1222	351.7	1241	366.0	1261	380.9	1281	396.2	1299	410.8	1318	426.2	1336	442.0		
76000	3652	1187	332.8	1208	347.6	1228	361.7	1249	376.6	1268	391.5	1287	406.4	1307	422.2	1325	437.3				
78000	3749	1195	343.6	1215	357.7	1236	372.7	1255	387.3	1275	402.3	1295	417.8	1313	432.8	1332	448.7				
80000	3845	1201	353.7	1223	369.0	1243	383.4	1263	398.6	1282	413.7	1301	428.9								
82000	3941	1209	365.0	1230	379.6	1250	395.1	1270	410.0	1289	425.4	1309	441.1	1327	456.4						
84000	4037	1216	375.3	1238	391.4	1257	406.4	1277	422.2	1296	437.5	1316	453.1	1335							

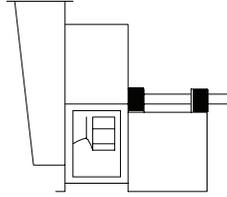
SW - Single Width  
SI - Single Inlet

DW - Double Width  
DI - Double Inlet



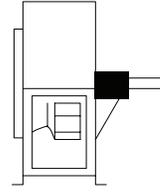
1 SWSI

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



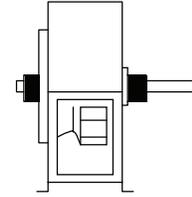
1 SWSI c/w BOX

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



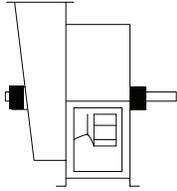
2 SWSI

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



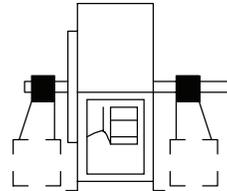
3 SWSI

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



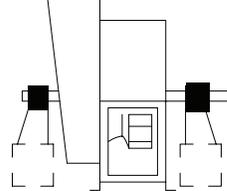
3 SWSI c/w BOX

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



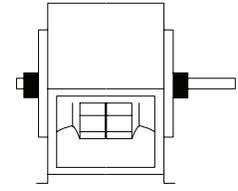
3 SWSI c/w IND. PED.

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



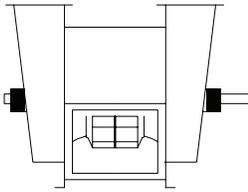
3 SWSI c/w BOX & IND. PED.

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



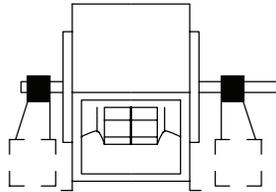
3 DWDI

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



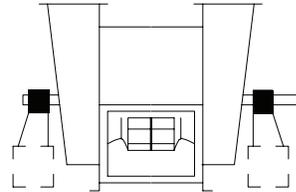
3 DWDI c/w BOXES

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



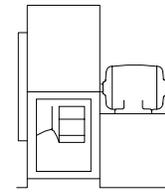
3 DWDI c/w IND. PED.

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



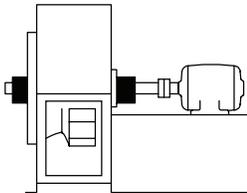
3 DWDI c/w BOXES & IND. PED

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



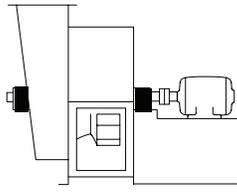
4 SWSI

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



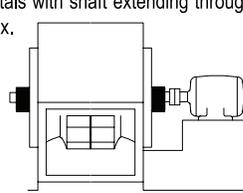
7 SWSI

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



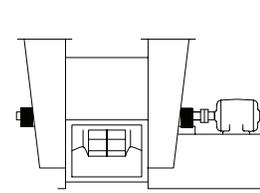
7 SWSI c/w BOX

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



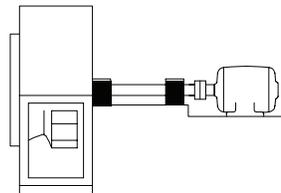
7 DWDI

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



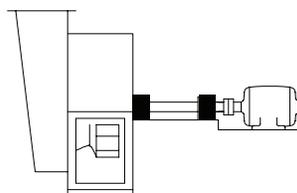
7 DWDI c/w BOXES

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



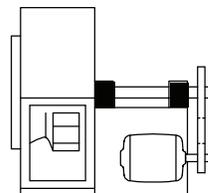
8 SWSI

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



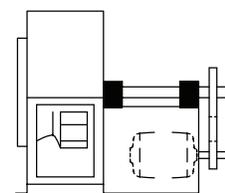
8 SWSI c/w BOX

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



9 SWSI

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



10 SWSI

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







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