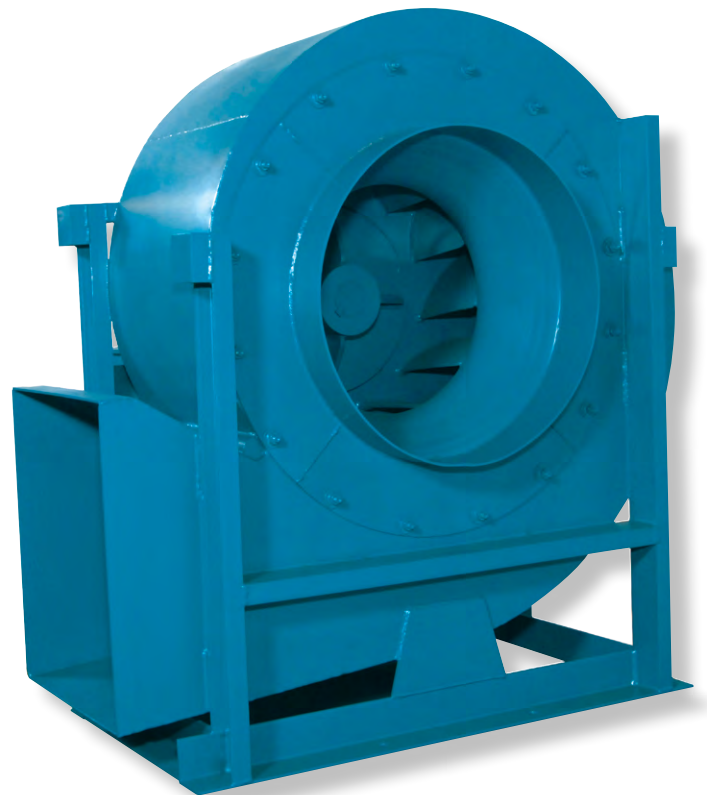




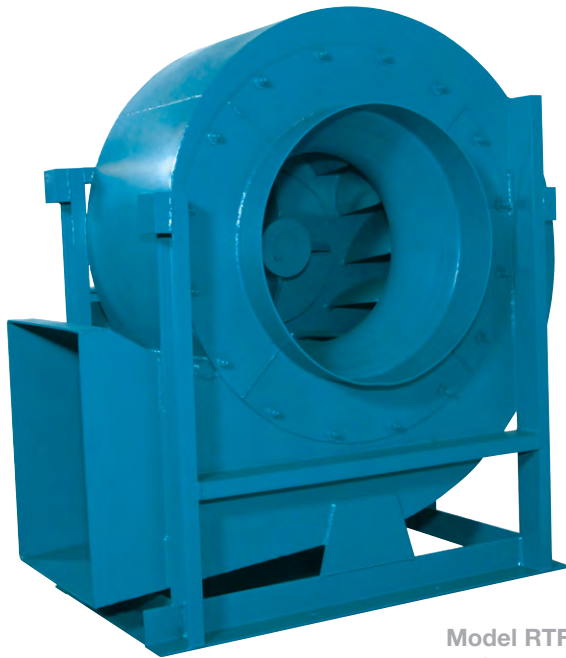
INDUSTRIAL PROCESS AND
COMMERCIAL VENTILATION SYSTEMS

RADIAL TIP FANS

MODEL RTF



RADIAL TIP FANS



Model RTF
Arr. 1

Model RTF

Model RTF radial tip fans are of a heavy duty, rugged design, suitable for applications involving large volumes of gas streams at moderate to high pressure. Designed to handle clean or dirty airstreams, they are widely used to exhaust gases from bag-type collectors, precipitators, scrubbers, cyclones, and other industrial applications. This type of fan is also used for induced draft on boilers, incinerators, and kiln exhaust. Steel, air pollution, dryer, petrochemical, cement, furnaces and ovens, solvent recovery, sewage sludge and solid waste incineration industries have found the Model RTF radial tip design particularly suitable for their applications.

Capabilities

- Heavy-duty construction with choice of speed range:

Class 18 — Suitable to 18,000 FPM tip speed
Pressures to 24" w.g.

Class 23 — Suitable to 23,000 FPM tip speed
Pressures to 36" w.g.

Class 23 wheels are equipped with wear pads on the blades. Consult factory for higher tip speed designs.

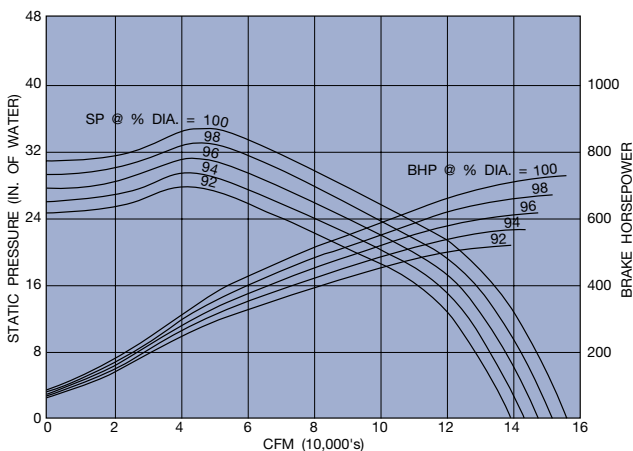
- Volume to 223,800 CFM.
- Standard fan suitable to 300°F.

Features

- High efficiency, lower first and operating costs.
- AMCA licensed air performance on sizes 270 through 800, pages 8 to 12.
- Self-cleaning wheel design.
- Statically and dynamically balanced rotor assembly.
- Heavy duty, self-aligning, grease lubricated, anti-friction, pillow block bearings.
- Heavy-gauge reinforced housing and bearings pedestal for vibration-free service.

Typical Performance Curve with Various Diameter Fan Wheels

Size: 600 RPM: 1175 Density: 0.075 lb/ft³



Twin City Fan & Blower certifies that the RTF Radial Tip Fans Sizes 270 through 800 shown on pages 8 to 12 are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.



Inlet Boxes

Integral or detached type, generously designed to minimize pressure drop. Specify inlet box position to AMCA Standard 2405-66 shown on page 4. Detached inlet boxes include support legs and flanges on both inlet and outlet. Free-standing designs are also available to allow a flex connector between box and fan. Standard detached inlet box will not support stack weight. All inlet box designs include drain and access door.

Inlet Box Dampers

Pre-spin design, heavy duty construction. The damper will spin the air in the direction of wheel rotation resulting in a savings in horsepower at reduced loads.

Outlet Dampers

Double surface airfoil blades are available in either parallel or opposed blade design.

Abrasion and Corrosion Resistant Alloys and Coatings

Optional construction includes an abrasion resistant steel blade, backplate, scroll and side or cheek liners. Construction materials include Corten, stainless steel, Monel, aluminum, Hastelloy, and other alloys. Construction from heavier than standard gauges is available. Special corrosion resistant coatings of various types are available.

Temperature and Vibration Detectors

Thermocouples or RTDs can be installed on the bearings. Various types of vibration switches are available.

Evasé

Usually fabricated by customer as a part of the ductwork. Fan outlet must be expanded to equal evasé area shown in the catalog to obtain rated performance. Construction is of the same gauge as fan housing when purchased from the factory.

High Temperature Construction

301 to 500°F: Requires addition of shaft cooler and high temperature grease bearings.

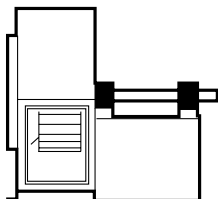
501 to 600°F: Above modifications plus high temperature aluminum paint.

601 to 800°F: Above modifications plus modified pedestal design.

ARRANGEMENTS

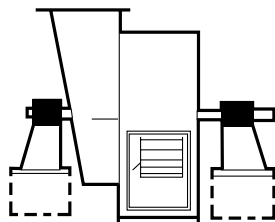
Arrangement 1

The usual choice for many V-belt drive applications. Wheel is overhung. Steel bearing pedestal to size 730. Size 800 requires concrete pedestal. Consult factory for V-belt drive applications larger than 250 HP.



Arrangement 3SI

SWSI fan with integral inlet box and independent bearing pedestals. The wheel is supported between two bearings.

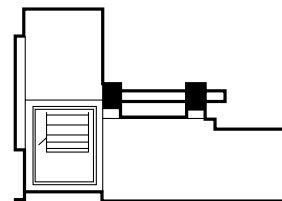


Arrangement 7SI

Direct coupled with a flexible coupling. A single-width, single-inlet fan with an integral inlet box and independent bearing pedestal and bearing/motor pedestal installed on a common base. The wheel is supported between two bearings.

Arrangement 8

Direct coupled with a flexible coupling. The motor pedestal can be custom fabricated out of steel for up to 300 HP. On larger HP units, use of standard Arr. 1 fan with a concrete pedestal for the motor is advisable.

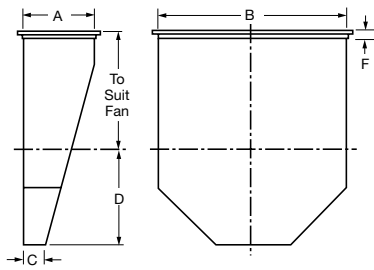


Arrangement 9F

Floor mount. Similar to Arrangement #1 with the fan base extended to mount motor in a horizontal position.

INLET BOXES

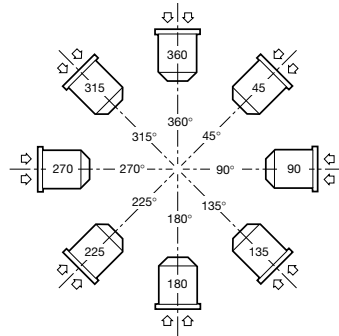
Typical Inlet Box Dimensions



FAN SIZE	A	B	C	D	INLET AREA (FT ²)	F
180	9.75	28.75	3.19	10.00	1.85	1.5 x 1.5
200	10.63	31.50	3.19	11.00	2.22	1.5 x 1.5
220	11.75	35.00	3.19	12.00	2.81	1.5 x 1.5
240	13.00	38.50	3.19	12.50	3.34	1.5 x 1.5
270	14.38	42.50	3.19	14.00	4.10	1.5 x 1.5
300	15.88	46.88	3.19	15.00	5.00	1.5 x 1.5
330	17.88	52.13	3.19	16.50	6.11	2.0 x 2.0
360	19.38	57.38	3.19	20.06	7.52	2.0 x 2.0
400	21.38	63.38	3.19	21.88	9.20	2.5 x 2.5
450	23.38	69.38	4.19	24.50	11.00	2.5 x 2.5
490	25.88	76.88	4.19	26.69	13.60	2.5 x 2.5
540	28.50	84.50	5.25	28.75	16.30	2.5 x 2.5
600	31.50	93.50	5.25	30.88	20.00	3.0 x 3.0
660	34.88	103.50	5.25	33.44	24.60	3.0 x 3.0
730	38.50	114.50	6.25	37.00	30.00	3.5 x 3.5
800	42.50	126.50	6.25	40.38	36.00	3.5 x 3.5

Dimensions are not to be used for construction.
Dimensions are in inches unless otherwise noted.

Inlet Box Positions for Centrifugal Fans



INLET BOX POSITIONS AND DESCRIPTIONS
45 — Angular Down Intake
90 — Horizontal Right Intake
135 — Angular Up Intake
180 — Bottom Up Intake
225 — Angular Up Intake
270 — Horizontal Left Intake
315 — Angular Down Intake
360 — Top Down Intake

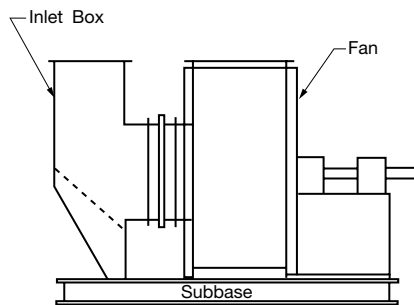
Reference line is the Top Vertical Axis through center of fan shaft.

Position of inlet box and air entry to inlet box is determined from drive side of fan.

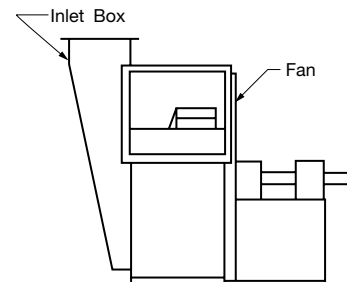
Position of inlet box is designated in degrees clockwise from Top Vertical Axis as shown.

Positions 135° to 225° in some cases interfere seriously with floor structure.

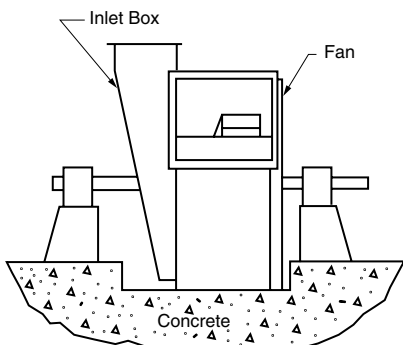
Arrangement 1 fan with detached inlet box. Can be supplied in Arrangement 8.



Arrangement 1 fan with attached or integral inlet box. Can be supplied in Arrangement 8.



Arrangement 3SI fan with integral inlet box, centrally supported wheel, independent bearings pedestals to be installed on concrete pedestals.



Arrangement 7SI — Similar to Arrangement 3SI except bearings pedestals and motor installed on a steel common base.

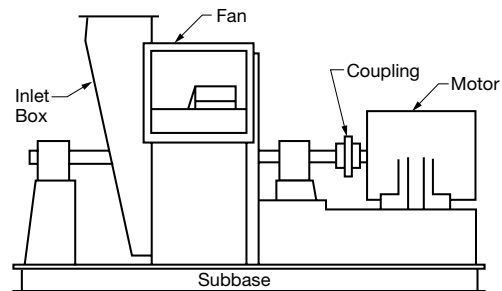


Table 1. Material and Mechanical Specifications

FAN SIZE	DESIGN RTF	SHAFT DIA.	MAX. HP V-BELT DRIVE	MIN. SHEAVE DIA. ¹	MAX. HP DIRECT DRIVE	MAX. RPM ²	WHEEL WT. (LB)	WHEEL			WR ² (LB-FT ²)	HOUSING	ARR. 1 FAN WT. (LB)
								BACK PLATE	BLADES	SHROUD			
180	18	2.188	30	5.7	40	3342	59	0.25	10 GA.	10 GA.	21	7 GA.	745
	23	2.188	60	5.4	75	3971	70	0.31	10 GA.	10 GA.	22	7 GA.	760
200	18	2.188	40	6.6	75	3026	71	0.25	10 GA.	10 GA.	31	7 GA.	825
	23	2.438	75	5.9	100	3800	84	0.31	10 GA.	10 GA.	36	7 GA.	850
220	18	2.188	50	7.5	60	2723	87	0.25	10 GA.	10 GA.	46	7 GA.	875
	23	2.438	100	6.6	125	3484	103	0.31	10 GA.	10 GA.	55	7 GA.	930
240	18	2.188	60	8.4	75	2476	105	0.25	10 GA.	10 GA.	68	7 GA.	920
	23	2.688	125	7.2	150	3167	125	0.31	10 GA.	10 GA.	81	7 GA.	1000
270	18	2.438	75	9.5	100	2264	128	0.31	10 GA.	10 GA.	90	7 GA.	1100
	23	2.688	150	7.9	150	2892	153	0.31	10 GA.	10 GA.	112	7 GA.	1160
300	18	2.688	100	11.1	150	2052	149	0.31	10 GA.	10 GA.	131	7 GA.	1300
	23	2.938	200	8.7	200	2622	178	0.31	10 GA.	10 GA.	164	7 GA.	1350
330	18	2.688	100	11.4	150	1858	196	0.31	10 GA.	10 GA.	196	7 GA.	1530
	23	2.938	200	9.7	250	2374	231	0.31	10 GA.	10 GA.	243	7 GA.	1580
360	18	2.938	150	12.6	150	1676	248	0.31	10 GA.	10 GA.	326	7 GA.	1950
	23	3.438	250	11.4	300	2143	270	0.31	10 GA.	10 GA.	364	0.25	2330
400	18	3.438	200	12.1	200	1519	352	0.31	10 GA.	7 GA.	532	7 GA.	2450
	23	3.938	250	13.5	400	1942	405	0.38	10 GA.	7 GA.	639	0.25	2870
450	18	3.438	200	14.7	250	1375	408	0.31	10 GA.	7 GA.	781	7 GA.	2980
	23	3.938	250	11.5	500	1757	510	0.38	10 GA.	7 GA.	1042	0.25	3540
490	18	3.938	250	14.2	300	1247	537	0.38	7 GA.	7 GA.	1343	7 GA.	3790
	23	4.438	400	14.1	600	1573	667	0.50	7 GA.	7 GA.	1741	0.25	4370
540	18	3.938	250	17.2	400	1127	756	0.38	7 GA.	0.25	2140	7 GA.	4660
	23	4.438	400	17.4	700	1440	890	0.50	7 GA.	0.25	2694	0.25	5480
600	18	4.438	300	17.7	400	1019	1041	0.50	0.25	0.25	3942	0.25	6360
	23	4.938	400	15.6	800	1302	1108	0.50	0.25	0.25	4276	0.25	6520
660	18	4.438	300	21.0	500	926	1222	0.50	0.25	0.25	5717	0.25	7280
	23	4.938	400	18.6	1000	1183	1522	0.63	0.25	0.25	7333	0.25	7710
730	18	4.438	300	24.6	600	838	1484	0.50	0.25	0.25	8483	0.25	8840
	23	4.938	400	21.6	1200	1071	1847	0.63	0.25	0.25	11020	0.25	9350
800 ³	18	4.938	400	25.7	700	758	1769	0.50	0.25	0.25	12645	0.25	8660
	23	5.438	400	19.6	1400	968	2216	0.63	0.25	0.25	16426	0.25	9370

¹ Minimum fan diameter when using maximum HP motor. Check with the factory on applications over 300 HP.

² Maximum RPM shown are for 70°F. For higher temperatures use Table 2 on page 6 to derate RPM.

³ Size 800 RTF is not supplied with conventional bearings pedestal. Instead we supply channel subbases. The subbase is to be mounted on concrete pedestal with steel sole plate in the field. Fan weights include weight of channel subbase.

Dimensions are in inches unless otherwise noted.



Derating Factors For High Temperature

When elevated temperatures are encountered, the maximum RPM allowable as shown in Table 1 on page 5 must be derated according to the derating factors from Table 2. Standard steel construction is suitable for use in gas temperatures to 800°F. Aluminum wheels are suitable for temperatures to 250°F only.

Table 2. Temperature Derating Factors

TEMP. (°F)	DERATING FACTOR	
	STANDARD STEEL	STAINLESS STEEL
70	1.000	1.000
200	0.990	0.950
300	0.975	0.916
400	0.955	0.877
500	0.930	0.841
600	0.904	0.809
700	0.880	0.777
800	0.837	0.754

Performance Correction for Temperature and Altitude

The performance tables in this catalog are based on fans handling standard air at a density of 0.075 pounds per cubic foot. This is equivalent to 70°F at sea level (29.92 Hg barometric pressure). When specified performance is at a density different than standard, it must be converted to the equivalent standard conditions before entering the performance tables. The equivalent conditions can be calculated by using the “Temperature and Altitude Density Ratios” table below.

Table 3. Temperature and Altitude Density Ratios

AIR TEMP °F	ALTITUDE IN FEET ABOVE SEA LEVEL												
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	15000	20000
	BAROMETRIC PRESSURE IN INCHES OF MERCURY												
	29.92	28.86	27.82	26.82	25.84	24.90	23.98	23.09	22.22	21.39	20.58	16.89	13.75
70	1.000	0.964	0.930	0.896	0.864	0.832	0.801	0.772	0.743	0.714	0.688	0.564	0.460
100	0.946	0.912	0.880	0.848	0.818	0.787	0.758	0.730	0.703	0.676	0.651	0.534	0.435
150	0.869	0.838	0.808	0.770	0.751	0.723	0.696	0.671	0.646	0.620	0.598	0.490	0.400
200	0.803	0.774	0.747	0.720	0.694	0.668	0.643	0.620	0.596	0.573	0.552	0.453	0.360
250	0.747	0.720	0.694	0.669	0.645	0.622	0.598	0.576	0.555	0.533	0.514	0.421	0.344
300	0.697	0.672	0.648	0.624	0.604	0.580	0.558	0.538	0.518	0.498	0.480	0.393	0.321
350	0.654	0.631	0.608	0.586	0.565	0.544	0.524	0.505	0.486	0.467	0.450	0.369	0.301
400	0.616	0.594	0.573	0.552	0.532	0.513	0.493	0.476	0.458	0.440	0.424	0.347	0.283
450	0.582	0.561	0.542	0.522	0.503	0.484	0.466	0.449	0.433	0.416	0.401	0.328	0.268
500	0.552	0.532	0.513	0.495	0.477	0.459	0.442	0.426	0.410	0.394	0.380	0.311	0.254
550	0.525	0.506	0.488	0.470	0.454	0.437	0.421	0.405	0.390	0.375	0.361	0.296	0.242
600	0.500	0.482	0.469	0.448	0.432	0.416	0.400	0.386	0.372	0.352	0.344	0.282	0.230
650	0.477	0.460	0.444	0.427	0.412	0.397	0.382	0.368	0.354	0.341	0.328	0.269	0.219
700	0.457	0.441	0.425	0.410	0.395	0.380	0.366	0.353	0.340	0.326	0.315	0.258	0.210
800	0.420	0.404	0.389	0.375	0.362	0.350	0.336	0.323	0.311	0.300	0.290	0.237	0.193



RTF 330

Fan Efficiency Grade = FEG80

Wheel Dia.: 37" Inlet Area: 4.31 ft² Outlet Area: 3.79 ft² Outlet Evasé: 6.42 ft² Tip Speed: 9.69 x RPM

CFM	OV	4" SP		8" SP		12" SP		16" SP		20" SP		24" SP		28" SP		32" SP		36" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8988	1400	795	7.69	<u>1057</u>	<u>15.12</u>	<u>1272</u>	<u>23.11</u>												
11556	1800	851	10.67	1100	19.46	<u>1299</u>	<u>28.94</u>	1476	38.94	1636	49.21								
14124	2200	912	14.32	1152	24.73	<u>1344</u>	<u>35.55</u>	<u>1510</u>	<u>47.01</u>	<u>1661</u>	<u>58.82</u>	1801	70.95	<u>1933</u>	<u>83.41</u>	<u>2059</u>	<u>96.12</u>		
16692	2600	983	18.91	1208	30.92	<u>1396</u>	<u>43.35</u>	<u>1557</u>	<u>56.05</u>	<u>1700</u>	<u>69.18</u>	<u>1833</u>	<u>82.85</u>	<u>1958</u>	<u>96.69</u>	<u>2077</u>	<u>110.92</u>	<u>2189</u>	<u>125.16</u>
19260	3000	1069	24.93	1269	38.14	1451	52.18	1608	66.38	1749	80.93	<u>1877</u>	<u>95.78</u>	<u>1996</u>	<u>111.06</u>	<u>2109</u>	<u>126.70</u>	<u>2217</u>	<u>142.47</u>
21828	3400	1163	32.50	1336	46.57	1508	62.14	1663	78.04	1800	93.96	1926	110.22	2043	126.78	<u>2152</u>	<u>143.69</u>	<u>2255</u>	<u>160.85</u>
24396	3800	1264	42.01	1412	56.58	1571	73.49	1719	90.91	1855	108.56	1979	126.42	2093	144.25	2200	162.31	2301	180.69
26964	4200	1369	53.59	1499	68.81	1639	86.43	1780	105.38	1911	124.53	2034	144.07	2146	163.41	2251	182.91	2350	202.51
28248	4400	1422	60.15	1544	75.62	1675	93.49	1812	113.16	1940	133.09	2061	153.29	2173	173.53	2277	193.73		
29532	4600	1476	67.34	1591	83.10	1715	101.41	1845	121.43	1971	142.25	2089	163.04	2201	184.21	2304	205.11		
30816	4800	1531	75.21	1639	91.17	1757	109.93	1879	130.14	2003	151.80	2118	173.28	2228	195.04	2332	217.08		
32100	5000	1586	83.67	1689	100.05	1800	118.98	1915	139.47	2035	161.68	2148	183.97	2256	206.45	2359	229.17		
33384	5200	1641	92.73	1739	109.45	1844	128.59	1953	149.43	2068	172.10	2180	195.35	2285	218.40				
34668	5400	1697	102.60	1790	119.59	1890	139.06	1994	160.33	2102	183.02	2212	207.04	2315	230.85				
35952	5600	1753	113.14	1842	130.53	1937	150.22	2036	171.80	2138	194.68	2244	219.10	2347	244.10				
37236	5800	1810	124.57	<u>1895</u>	<u>142.32</u>	<u>1985</u>	<u>162.15</u>	<u>2079</u>	<u>183.90</u>	<u>2176</u>	<u>207.11</u>	<u>2278</u>	<u>232.04</u>						

Unshaded Area = Class 18 (Max. RPM 1858) Shaded Area = Class 23 (Max. RPM 2374) Underlined numbers = maximum static efficiency.

RTF 360

Fan Efficiency Grade = FEG80

Wheel Dia.: 41" Inlet Area: 5.33 ft² Outlet Area: 4.65 ft² Outlet Evasé: 7.89 ft² Tip Speed: 10.73 x RPM

CFM	OV	4" SP		8" SP		12" SP		16" SP		20" SP		24" SP		28" SP		32" SP		36" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11046	1400	724	9.65	<u>963</u>	<u>18.86</u>	<u>1153</u>	<u>28.68</u>												
14202	1800	769	13.01	1002	24.44	<u>1184</u>	<u>36.15</u>	<u>1341</u>	<u>48.38</u>	1484	61.21								
17358	2200	819	17.22	1046	30.66	1225	44.71	<u>1376</u>	<u>58.76</u>	<u>1513</u>	<u>73.36</u>	1637	88.26	<u>1754</u>	<u>103.69</u>				
20514	2600	875	22.43	1092	37.72	1268	53.86	1418	70.35	<u>1550</u>	<u>86.81</u>	1671	103.56	<u>1784</u>	<u>120.69</u>	<u>1889</u>	<u>138.09</u>	<u>1988</u>	<u>155.64</u>
23670	3000	950	29.56	1141	45.93	1314	64.05	1462	82.72	1593	101.61	<u>1711</u>	<u>120.35</u>	<u>1820</u>	<u>139.22</u>	<u>1922</u>	<u>158.20</u>	<u>2020</u>	<u>177.77</u>
26826	3400	1034	38.72	1193	55.49	1360	75.32	1507	96.00	1636	116.92	1754	138.29	1862	159.43	1962	180.47	2056	201.53
29982	3800	1124	50.24	1257	67.24	1411	88.39	1553	110.72	1681	133.53	1797	156.76	1904	180.28	2004	203.83	2097	227.06
33138	4200	1218	64.38	1332	81.56	1462	102.73	1602	127.19	1727	151.81	1842	176.86	1948	202.31	2047	228.13	2139	253.63
34716	4400	1266	72.49	1372	89.73	1492	111.01	1627	136.01	1750	161.41	1865	187.64	1970	213.78	2068	240.37		
36294	4600	1315	81.43	1414	98.77	1526	120.27	1652	145.28	1775	171.86	1888	198.81	1993	226.02	2090	253.26		
37872	4800	1364	91.06	1457	108.56	1562	130.23	1678	155.07	1800	182.59	1911	210.29	2015	238.34	2113	266.94		
39450	5000	1413	101.40	1501	119.17	1600	141.06	1707	165.79	1825	193.85	1935	222.41	2038	251.40	2135	280.72		
41028	5200	1463	112.72	1546	130.67	1639	152.59	1739	177.46	1850	205.54	1961	235.52	2062	265.18				
42606	5400	1513	124.84	1592	143.13	1679	164.90	1774	190.20	1877	218.13	1986	248.79	2086	279.31				
44184	5600	1563	137.79	1639	156.61	1721	178.39	1810	203.58	1906	231.53	2010	262.24	2111	294.15				
45762	5800	1614	151.87	<u>1686</u>	<u>170.88</u>	<u>1764</u>	<u>192.84</u>	<u>1848</u>	<u>218.07</u>	<u>1937</u>	<u>245.71</u>	<u>2036</u>	<u>276.81</u>	<u>2136</u>	<u>309.48</u>				

Unshaded Area = Class 18 (Max. RPM 1676) Shaded Area = Class 23 (Max. RPM 2143) Underlined numbers = maximum static efficiency.

RTF 400

Fan Efficiency Grade = FEG80

Wheel Dia.: 45.25" Inlet Area: 6.49 ft² Outlet Area: 5.66 ft² Outlet Evasé: 9.61 ft² Tip Speed: 11.85 x RPM

CFM	OV	4" SP		8" SP		12" SP		16" SP		20" SP		24" SP		28" SP		32" SP		36" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13454	1400	656	11.76	<u>872</u>	<u>22.93</u>	1045	34.96												
17298	1800	697	15.86	908	29.78	<u>1073</u>	<u>44.06</u>	<u>1215</u>	<u>58.92</u>	1345	74.62								
21142	2200	742	20.97	948	37.38	1110	54.47	<u>1247</u>	<u>71.61</u>	<u>1371</u>	<u>89.38</u>	1483	107.45	1589	126.24				
24986	2600	793	27.34	990	46.03	1149	65.61	1285	85.73	<u>1404</u>	<u>105.64</u>	<u>1514</u>	<u>126.12</u>	<u>1616</u>	<u>146.89</u>	<u>1711</u>	<u>168.02</u>	<u>1802</u>	<u>189.80</u>
28830	3000	861	36.04	1034	55.97	1190	77.90	1324	100.60	1443	123.66	1550	146.50	<u>1649</u>	<u>169.56</u>	<u>1742</u>	<u>192.86</u>	<u>1830</u>	<u>216.43</u>
32674	3400	937	47.18	1081	67.60	1233	91.90	1365	116.81	1482	142.31	1589	168.36	1687	194.15	<u>1777</u>	<u>219.55</u>	<u>1863</u>	<u>245.52</u>
36518	3800	1018	61.12	1139	81.91	1278	107.54	1407	134.83	1523	162.61	1628	190.87	1725	219.51	1816	248.36	1900	276.54
40362	4200	1104	78.51	1207	99.37	1325	125.22	1451	154.75	1565	184.98	1669	215.42	1765	246.40	1854	277.53	1939	309.36
42284	4400	1147	88.28	1243	109.26	1352	135.26	1474	165.60	1586	196.74	1690	228.62	1785	260.41	1874	292.89		
44206	4600	1191	99.06	1281	120.26	1383	146.60	1497	177.02	1608	209.22	1710	241.86	1806	275.39	1894	308.62		
46128	4800	1236	110.94	1320	132.19	1415	158.53	1520	188.74	1631	222.42	1732	256.36	1826	290.43	1914	324.86		
48050	5000	1280	123.43	1360	145.15	1450	171.91	1547	202.07	1654	236.28	1754	271.25	1847	306.41	1935	342.20		
49972	5200	1326	137.42	1401	159.23	1485	185.84	1576	216.29	1676	250.24	1776	286.48	1868	322.82				
51894	5400	1371	152.09	1443	174.53	<u>1522</u>	<u>201.13</u>	1607	231.51	1700	265.36	1799	302.79	1890	340.16				
53816	5600	1416	167.76	1485	190.73	1559	217.14	1640	247.97	1726	281.53	1821	319.30	1913	358.43				
55738	5800	1462	184.84	<u>1528</u>	<u>208.28</u>	<u>1598</u>	<u>234.75</u>	<u>1675</u>	<u>265.89</u>	<u>1755</u>	<u>299.25</u>	<u>1844</u>	<u>336.75</u>	<u>1936</u>	<u>377.32</u>				

Unshaded Area = Class 18 (Max. RPM 1519) Shaded Area = Class 23 (Max. RPM 1942) Underlined numbers = maximum static efficiency.

Performance certified is for installation Type B & D: Free or ducted inlet, ducted outlet.
 Power rating (bhp) does not include transmission losses.
 Performance ratings include the effects of an outlet evasé in the airstream.

RTF 450

Fan Efficiency Grade = FEG80

Wheel Dia.: 50" Inlet Area: 7.92 ft² Outlet Area: 6.92 ft² Outlet Evasé: 11.70 ft² Tip Speed: 13.09 x RPM

CFM	OV	4" SP		8" SP		12" SP		16" SP		20" SP		24" SP		28" SP		32" SP		36" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
16380	1400	593	14.29	789	27.93	946	42.64												
21060	1800	630	19.27	822	36.34	971	53.69	1100	71.90	1217	90.88								
25740	2200	671	25.51	857	45.43	1004	66.30	1128	87.17	1240	108.74	1342	130.94	1438	153.83				
30420	2600	717	33.26	895	55.94	1039	79.81	1162	104.27	1270	128.60	1369	153.34	1462	178.87	1548	204.63	1630	230.98
35100	3000	778	43.78	935	68.09	1076	94.73	1198	122.59	1305	150.45	1402	178.31	1491	206.13	1576	234.86	1656	263.74
39780	3400	846	57.19	977	82.11	1115	111.80	1234	141.98	1341	173.45	1437	204.82	1526	236.36	1608	267.56	1685	298.75
44460	3800	920	74.30	1029	99.42	1156	130.93	1272	163.88	1377	197.71	1473	232.57	1560	267.07	1642	301.98	1719	336.85
49140	4200	997	95.23	1090	120.50	1198	152.29	1312	188.21	1415	224.92	1509	261.91	1596	299.70	1677	337.88	1753	376.03
51480	4400	1036	107.14	1123	132.68	1222	164.36	1333	201.49	1434	239.24	1528	277.97	1614	316.69	1695	356.52		
53820	4600	1076	120.31	1157	145.91	1249	177.75	1353	215.00	1454	254.47	1547	294.59	1633	334.91	1713	375.62		
56160	4800	1116	134.50	1192	160.30	1279	192.74	1374	229.37	1475	270.65	1566	311.72	1651	353.14	1731	395.31		
58500	5000	1156	149.75	1228	175.97	1310	208.72	1398	245.40	1495	287.04	1586	329.90	1670	372.59	1750	416.41		
60840	5200	1197	166.50	1265	193.04	1341	225.33	1424	262.61	1516	304.69	1606	348.52	1689	392.57				
63180	5400	1237	184.00	1303	211.62	1374	243.67	1452	281.12	1537	322.68	1627	368.47	1709	413.74				
65520	5600	1279	203.62	1341	231.31	1408	263.40	1482	301.25	1560	342.06	1647	388.64	1729	435.38				
67860	5800	1320	224.07	1379	252.14	1443	284.64	1513	322.64	1586	363.51	1667	409.31	1750	458.45				

Unshaded Area = Class 18 (Max. RPM 1375) Shaded Area = Class 23 (Max. RPM 1757) Underlined numbers = maximum static efficiency.

RTF 490

Fan Efficiency Grade = FEG80

Wheel Dia.: 55.125" Inlet Area: 9.68 ft² Outlet Area: 8.41 ft² Outlet Evasé: 14.25 ft² Tip Speed: 14.43 x RPM

CFM	OV	4" SP		8" SP		12" SP		16" SP		20" SP		24" SP		28" SP		32" SP		36" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
19950	1400	538	17.40	716	34.04	858	51.89												
25650	1800	572	23.52	745	44.12	881	65.40	998	87.57	1104	110.66								
31350	2200	609	31.10	778	55.41	911	80.76	1023	106.04	1125	132.43	1217	159.26	1304	187.09				
37050	2600	651	40.58	812	68.12	943	97.29	1055	127.24	1153	156.92	1242	186.73	1326	217.64	1405	249.51	1479	281.42
42750	3000	706	53.30	849	83.10	977	115.62	1087	149.31	1184	183.21	1272	217.15	1353	251.18	1429	285.52	1502	320.92
48450	3400	768	69.70	887	100.17	1012	136.29	1120	173.07	1217	211.37	1304	249.56	1384	287.51	1459	325.91	1529	364.01
54150	3800	835	90.50	934	121.16	1049	159.51	1155	200.04	1250	241.14	1336	282.92	1416	325.66	1490	367.92	1560	410.52
59850	4200	905	116.03	990	147.11	1087	185.45	1191	229.53	1284	274.00	1370	319.56	1448	364.91	1522	411.83		
62700	4400	941	130.79	1020	161.98	1110	200.79	1210	245.70	1302	291.95	1387	338.97	1465	386.12	1538	434.24		
65550	4600	977	146.72	1051	178.19	1135	217.38	1228	262.08	1320	310.42	1404	359.05	1482	408.14	1554	457.21		
68400	4800	1014	164.36	1083	195.87	1161	234.92	1248	280.20	1339	330.10	1421	379.72	1499	430.94	1571	481.82		
71250	5000	1050	182.80	1116	215.19	1189	254.30	1269	299.18	1357	349.98	1439	401.74	1516	454.44				
74100	5200	1087	203.12	1149	235.67	1218	275.10	1293	320.42	1376	371.44	1458	425.14	1533	478.56				
76950	5400	1124	224.87	1183	258.01	1248	297.50	1319	343.41	1395	393.29	1476	448.53	1551	504.22				
79800	5600	1162	248.75	1218	282.36	1279	321.67	1346	367.78	1417	417.86	1495	473.89	1570	531.44				
82650	5800	1199	273.55	1253	308.15	1311	347.78	1374	393.74	1440	443.44								

Unshaded Area = Class 18 (Max. RPM 1247) Shaded Area = Class 23 (Max. RPM 1573) Underlined numbers = maximum static efficiency.

RTF 540

Fan Efficiency Grade = FEG80

Wheel Dia.: 61" Inlet Area: 11.86 ft² Outlet Area: 10.35 ft² Outlet Evasé: 17.50 ft² Tip Speed: 15.97 x RPM

CFM	OV	4" SP		8" SP		12" SP		16" SP		20" SP		24" SP		28" SP		32" SP		36" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
24500	1400	487	21.44	647	41.75	775	63.57												
31500	1800	517	28.85	674	54.28	796	80.18	902	107.45	997	135.50								
38500	2200	551	38.27	704	68.21	824	99.31	925	130.28	1017	162.61	1101	195.99	1179	229.88				
45500	2600	589	49.91	735	83.93	853	119.64	954	156.34	1042	192.48	1123	229.42	1199	267.43	1270	306.28	1337	345.57
52500	3000	639	65.60	768	102.20	883	141.82	983	183.47	1071	225.33	1150	266.67	1223	308.31	1292	350.72	1358	394.21
59500	3400	696	86.10	802	123.00	915	167.36	1013	212.76	1100	259.33	1179	306.48	1252	353.69	1319	400.17	1382	446.70
66500	3800	757	111.91	846	149.50	949	196.22	1044	245.45	1130	295.98	1208	347.48	1280	399.67	1348	452.71	1410	503.72
73500	4200	820	143.24	896	181.04	984	228.52	1077	281.97	1161	336.55	1239	392.74	1310	448.94	1376	505.62	1439	563.52
77000	4400	853	161.67	924	199.87	1004	246.76	1094	301.70	1177	358.34	1254	416.23	1325	474.63	1391	533.75		
80500	4600	885	180.97	952	219.80	1027	267.40	1111	322.44	1194	381.68	1269	440.50	1340	501.28	1406	562.62		
84000	4800	918	202.38	981	241.62	1051	289.33	1129	344.61	1211	405.69	1285	466.53	1355	528.84	1421	592.42		
87500	5000	952	226.09	1011	265.52	1077	313.74	1148	367.89	1228	430.91	1302	494.39	1371	558.45	1436	623.26		
91000	5200	985	250.80	1041	290.87	1103	339.13	1170	394.22	1244	455.99	1319	522.93	1387	588.89				
94500	5400	1019	278.04	1072	318.62	1130	366.57	1194	422.96	1262	483.70	1336	552.63	1403	620.05				
98000	5600	1053	307.16	1103	348.01	1158	396.26	1218	452.43	1282	513.96	1352	582.32	1420	653.24				
101500	5800	1087	338.23	1135	380.08	1187	428.43	1244	485.09	1303	545.57	1369	614.00	1437	687.57				

Unshaded Area = Class 18 (Max. RPM 1127) Shaded Area = Class 23 (Max. RPM 1440) Underlined numbers = maximum static efficiency.

Performance certified is for installation Type B & D: Free or ducted inlet, ducted outlet.
 Power rating (bhp) does not include transmission losses.
 Performance ratings include the effects of an outlet evasé in the airstream.

RTF 600

Fan Efficiency Grade = FEG80

Wheel Dia.: 67.5" Inlet Area: 14.47 ft² Outlet Area: 12.58 ft² Outlet Evasé: 21.30 ft² Tip Speed: 17.67 x RPM

CFM	OV	4" SP		8" SP		12" SP		16" SP		20" SP		24" SP		28" SP		32" SP		36" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
29820	1400	439	<u>25.98</u>	<u>584</u>	<u>50.76</u>	700	77.40												
38340	1800	467	35.18	608	65.91	719	<u>97.69</u>	<u>814</u>	<u>130.55</u>	901	165.24								
46860	2200	497	46.47	635	82.82	744	120.91	835	<u>158.46</u>	918	197.72	994	238.42	1065	280.00				
55380	2600	531	60.57	663	101.92	770	145.59	861	190.09	941	234.42	1014	279.22	1083	325.82	1147	373.02	1207	420.24
63900	3000	576	79.65	692	123.71	797	172.53	887	223.01	967	274.33	1038	324.30	1104	374.99	1167	427.31	1226	479.56
72420	3400	626	103.88	723	149.15	825	202.97	914	258.55	993	315.63	1064	372.62	1130	430.09	1191	487.20	1248	<u>543.95</u>
80940	3800	681	135.11	762	180.99	856	238.25	942	298.31	1020	360.15	1091	423.52	1156	487.05	1216	549.65	1273	613.08
89460	4200	738	173.18	807	219.24	887	277.05	972	343.00	1048	409.53	1118	477.37	1182	545.63	1242	615.13	1298	684.11
93720	4400	767	194.94	831	241.03	905	299.26	987	366.57	1062	435.52	1131	505.20	1195	576.07	1255	648.57		
97980	4600	796	218.40	857	265.85	925	323.67	1002	391.39	1077	463.50	1145	535.33	1209	609.10	1268	682.79		
102240	4800	826	244.53	883	292.15	947	350.73	1018	418.11	1092	492.21	1159	566.35	1223	643.33	1282	719.73		
106500	5000	855	271.67	909	320.01	969	378.71	1035	446.35	1107	522.29	1174	599.70	1237	678.63	1296	758.00		
110760	5200	886	302.76	936	350.61	993	410.17	1054	477.35	1122	553.59	1189	633.87	1251	714.90				
115020	5400	916	335.01	964	384.22	1017	443.00	1075	511.42	1138	587.01	1205	670.90	1265	752.02				
119280	5600	946	369.44	992	419.84	1042	478.65	1097	547.75	1155	622.26	1219	706.20	1281	793.59				
123540	5800	977	407.38	1021	458.85	1068	517.41	1120	586.74	1174	660.91	1235	745.95	1296	834.56				

Unshaded Area = Class 18 (Max. RPM 1019)

Shaded Area = Class 23 (Max. RPM 1302)

Underlined numbers = maximum static efficiency.

RTF 660

Fan Efficiency Grade = FEG80

Wheel Dia.: 74.25" Inlet Area: 17.57 ft² Outlet Area: 15.28 ft² Outlet Evasé: 25.80 ft² Tip Speed: 19.44 x RPM

CFM	OV	4" SP		8" SP		12" SP		16" SP		20" SP		24" SP		28" SP		32" SP		36" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
36120	1400	400	31.67	<u>531</u>	<u>61.49</u>	637	94.01												
46440	1800	424	42.42	553	79.91	654	118.47	740	158.07	819	200.02								
56760	2200	452	56.32	577	100.12	676	146.14	760	192.53	835	239.78	904	289.03	968	338.85				
67080	2600	483	73.43	603	123.55	700	176.26	783	230.38	855	283.36	922	338.27	985	395.03	1043	451.98	1098	509.85
77400	3000	524	96.59	630	150.41	725	209.26	807	270.61	879	332.01	944	393.08	1004	454.50	1061	517.49	1115	581.34
87720	3400	570	126.31	658	181.14	751	246.69	831	313.11	903	382.45	968	452.13	1027	520.28	1083	590.29	1135	659.34
98040	3800	619	163.42	693	219.31	778	288.22	857	361.94	927	435.60	992	512.99	1051	589.78	1106	666.41	1157	741.70
108360	4200	671	209.64	734	265.72	807	336.16	884	415.73	953	496.21	1016	577.28	1075	661.37	1129	744.52	1181	830.31
113520	4400	697	235.61	756	292.32	823	362.59	898	444.84	966	528.12	1029	613.06	1087	698.60	1141	785.33		
118680	4600	724	264.68	779	321.60	841	391.87	911	473.95	979	560.94	1041	648.23	1100	739.20	1153	827.17		
123840	4800	751	296.00	803	353.90	861	424.61	926	507.03	993	596.35	1054	686.32	1112	779.19	1166	872.50		
129000	5000	778	329.65	827	388.15	882	460.03	941	540.44	1007	633.48	1068	727.47	1125	822.54	1178	917.20		
134160	5200	806	367.09	852	425.92	903	496.84	959	579.25	1021	672.13	1082	769.65	1138	867.10				
139320	5400	833	405.77	877	465.96	926	538.65	978	620.35	1035	711.53	1095	811.16	1151	912.74				
144480	5600	861	448.60	903	510.04	948	580.58	998	664.37	1051	755.36	1109	856.81	1165	961.80				
149640	5800	889	494.31	929	556.71	972	628.26	1019	711.79	1068	801.58	1123	903.65	1179	1012.38				

Unshaded Area = Class 18 (Max. RPM 926)

Shaded Area = Class 23 (Max. RPM 1183)

Underlined numbers = maximum static efficiency.

RTF 730

Fan Efficiency Grade = FEG80

Wheel Dia.: 82" Inlet Area: 21.48 ft² Outlet Area: 18.63 ft² Outlet Evasé: 31.50 ft² Tip Speed: 21.47 x RPM

CFM	OV	4" SP		8" SP		12" SP		16" SP		20" SP		24" SP		28" SP		32" SP		36" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
44100	1400	362	38.58	481	<u>75.13</u>	577	114.86												
56700	1800	384	51.80	501	97.67	<u>592</u>	<u>144.44</u>	671	193.72	742	244.53								
69300	2200	409	68.58	523	122.54	612	178.25	688	234.79	756	292.53	818	352.00	877	414.25				
81900	2600	437	89.37	546	150.76	634	215.24	709	281.14	775	346.88	835	413.02	892	482.25	944	550.86	994	621.81
94500	3000	474	117.47	570	183.09	657	255.96	730	329.23	796	405.27	855	480.06	909	554.46	961	632.09	1010	710.28
107100	3400	516	153.95	596	221.24	680	301.00	753	382.89	818	467.26	876	550.75	930	635.05	980	718.93	1027	<u>802.93</u>
119700	3800	561	199.87	628	268.18	705	352.49	776	441.65	840	532.71	898	625.46	952	720.43	1002	814.52	1048	906.03
132300	4200	608	256.24	665	324.68	731	410.63	800	506.43	863	605.65	921	706.79	973	806.04	1023	910.36	1069	1012.15
138600	4400	632	288.58	685	357.28	746	443.78	813	542.55	875	645.10	932	748.71	985	854.37	1034	960.62		
144900	4600	656	323.46	706	393.33	762	478.98	825	578.54	887	685.68	943	791.98	996	901.92	1045	1012.16		
151200	4800	681	362.59	728	433.28	780	518.74	838	617.59	900	729.74	955	839.10	1007	951.08	1056	1065.27		
157500	5000	705	402.99	750	475.66	799	561.93	853	661.57	912	773.44	967	887.51	1019	1004.67	1067	1120.28		
163800	5200	730	448.07	772	520.57	818	606.83	869	708.24	924	818.80	980	939.90	1030	1056.70				
170100	5400	755	496.35	795	570.27	839	658.27	886	757.90	938	870.47	992	991.27	1042	1113.07				
176400	5600	780	547.94	818	622.90	859	709.67	904	811.33	952	922.59	1005	1048.05	1055	1173.98				
182700	5800	806	605.20	842	680.99	881	768.59	923	869.16	968	980.80	1017	1103.10	1068	1236.83				

Unshaded Area = Class 18 (Max. RPM 838)

Shaded Area = Class 23 (Max. RPM 1071)

Underlined numbers = maximum static efficiency.

Performance certified is for installation Type B & D: Free or ducted inlet, ducted outlet.

Power rating (bhp) does not include transmission losses.

Performance ratings include the effects of an outlet evasé in the airstream.

RTF 800

Fan Efficiency Grade = FEG80

Wheel Dia.: 90.75" Inlet Area: 26.35 ft² Outlet Area: 22.84 ft² Outlet Evasé: 38.60 ft² Tip Speed: 23.76 x RPM

CFM	OV	4" SP		8" SP		12" SP		16" SP		20" SP		24" SP		28" SP		32" SP		36" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
54040	1400	327	47.22	<u>435</u>	<u>92.28</u>	521	140.43												
69480	1800	347	63.47	453	119.90	<u>535</u>	<u>177.05</u>	606	236.98	670	298.98								
84920	2200	370	84.32	473	150.53	553	218.38	<u>622</u>	<u>288.12</u>	683	<u>358.23</u>	739	431.03	792	506.69				
100360	2600	395	109.59	493	184.29	573	263.86	641	345.00	700	<u>424.47</u>	755	<u>507.05</u>	806	<u>590.83</u>	853	<u>674.93</u>	898	761.44
115800	3000	429	144.60	515	224.24	593	312.54	660	404.03	719	495.99	773	589.13	<u>822</u>	<u>680.89</u>	<u>868</u>	<u>773.50</u>	<u>912</u>	<u>868.44</u>
131240	3400	467	189.49	538	270.22	614	367.96	680	468.26	739	572.13	792	675.91	841	779.85	<u>886</u>	<u>882.25</u>	<u>929</u>	<u>986.95</u>
146680	3800	507	244.94	567	327.73	637	431.78	701	540.64	759	652.59	812	767.89	860	881.96	905	996.60	947	1110.15
162120	4200	550	314.92	601	397.93	660	501.84	723	620.74	780	742.56	832	865.26	880	990.19	924	1113.97	966	1240.27
169840	4400	571	353.34	619	437.73	674	543.46	735	665.72	790	788.39	842	916.76	890	1046.60	934	1175.71		
177560	4600	593	396.69	638	481.95	689	587.93	746	710.30	802	841.65	853	973.40	900	1105.03	944	1239.00		
185280	4800	615	443.38	658	531.17	705	635.97	758	758.97	813	893.24	863	1028.27	910	1165.54	954	1304.33		
193000	5000	638	495.86	678	583.42	722	688.43	771	811.18	824	947.27	874	1088.14	921	1231.80	964	1371.90		
200720	5200	660	549.77	698	638.82	740	745.94	785	866.87	835	1003.42	885	1149.44	931	1295.84				
208440	5400	683	610.07	719	700.40	758	805.96	801	929.86	847	1064.25	897	1217.02	942	1365.59				
216160	5600	705	671.72	740	765.66	777	872.02	817	994.42	860	1129.33	908	1283.49	953	1436.91				
223880	5800	728	740.39	<u>761</u>	<u>834.71</u>	796	941.23	834	1064.62	875	1202.82	919	1351.60	965	1515.12				

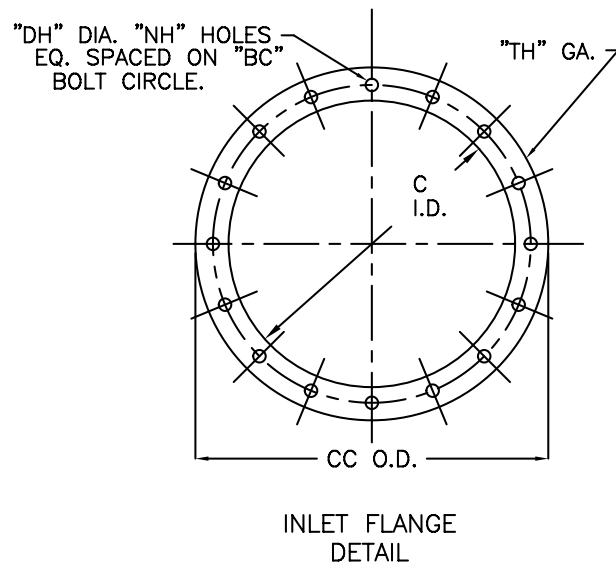
Unshaded Area = Class 18 (Max. RPM 758) **Shaded Area** = Class 23 (Max. RPM 968) Underlined numbers = maximum static efficiency.

Performance certified is for installation Type B & D: Free or ducted inlet, ducted outlet.
Power rating (bhp) does not include transmission losses.
Performance ratings include the effects of an outlet evasé in the airstream.

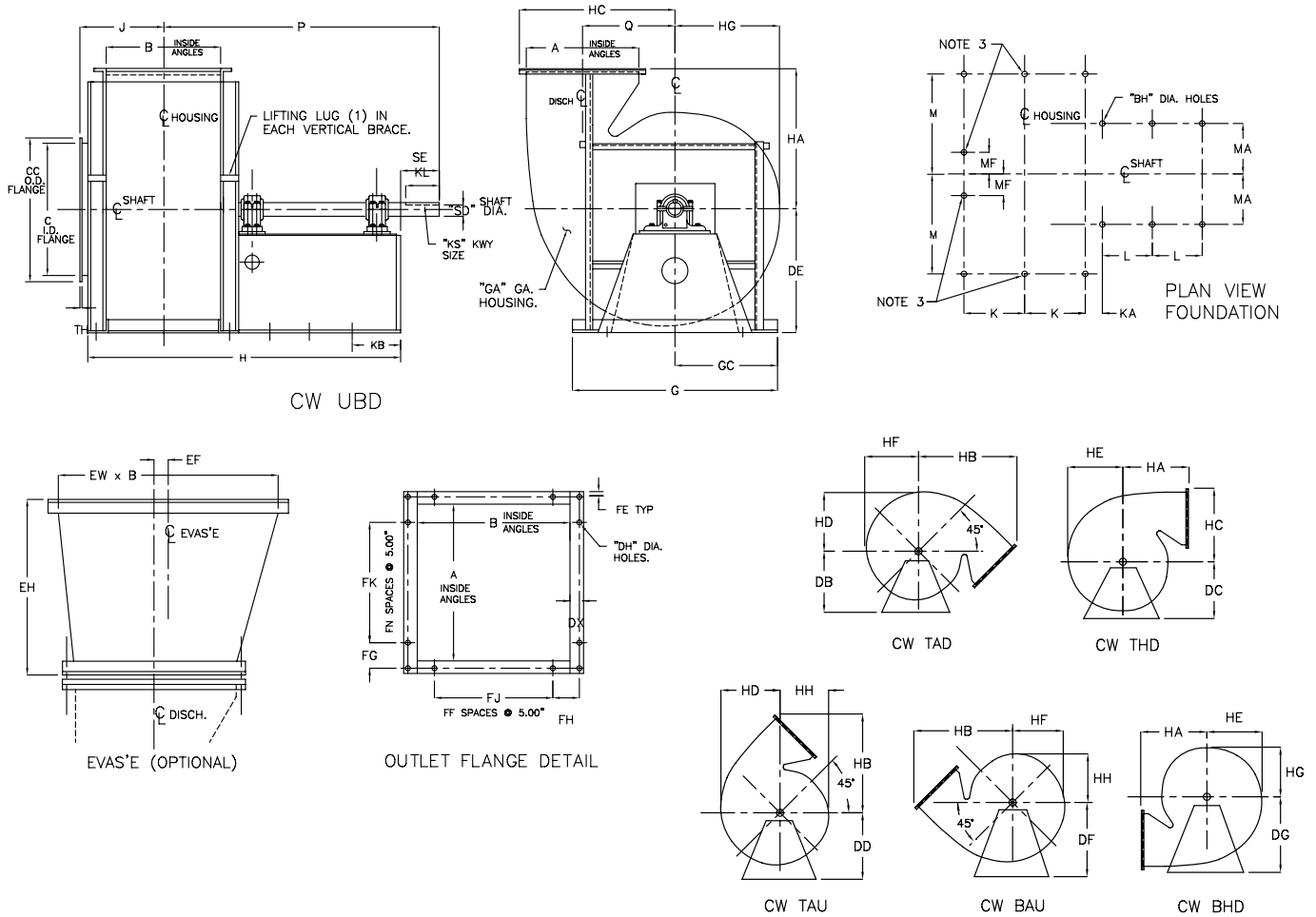
DIMENSIONAL DATA

FAN SIZE	BC	C	CC	DH	NH	TH
180	18.00	15.75	19.75	0.56	12	0.19
200	19.75	17.50	21.50	0.56	12	0.19
220	21.50	19.25	23.25	0.56	12	0.19
240	23.25	21.00	25.00	0.56	16	0.19
270	25.75	23.50	27.50	0.56	16	0.19
300	28.00	25.75	29.75	0.56	16	0.19
330	30.75	28.50	32.50	0.56	16	0.19
360	33.75	31.63	35.63	0.56	24	0.19
400	37.00	34.88	38.88	0.56	32	0.19
450	40.63	38.50	42.50	0.56	32	0.19
490	46.00	42.50	48.50	0.69	40	0.25
540	50.50	47.00	53.00	0.69	40	0.25
600	55.50	52.00	58.00	0.69	40	0.25
660	60.75	57.25	63.25	0.69	40	0.25
730	67.75	63.25	71.25	0.69	48	0.31
800	74.50	70.00	78.00	0.69	48	0.31

Inlet Flange



Arrangement 1, SWSI



FAN SIZE	A	B	BH	DB DC	DD DE	DF DG	DX	EF	EH	EW	FE	FF	FG	FH	FJ	FK	FN	G	GA	GC	H	HA	HB
180	14.81	12.00	0.81	15.00	17.25	20.75	1.50	3.28	18.00	23.75	0.63	2	3.28	1.88	10.00	10.00	2	31.13	7	15.56	39.00	17.81	26.63
200	16.19	13.13	0.81	17.00	18.75	22.50	1.50	3.66	19.50	26.00	0.63	2	3.97	2.44	10.00	10.00	2	33.50	7	16.75	41.13	19.50	29.13
220	17.94	14.56	0.81	18.50	20.75	24.75	1.50	4.16	21.75	29.25	0.63	2	4.84	3.16	10.00	10.00	2	36.00	7	18.00	44.13	21.63	32.19
240	19.69	16.00	0.81	20.25	22.50	27.00	1.50	4.66	24.00	32.25	0.63	2	5.72	3.88	10.00	10.00	2	38.38	7	19.19	46.50	23.69	35.25
270	21.75	17.63	0.81	22.50	25.00	31.25	1.50	5.28	26.25	35.69	0.63	2	4.25	4.69	10.00	15.00	3	42.75	7	21.38	49.38	26.13	38.81
300	23.94	19.38	0.81	24.75	27.50	34.00	1.50	5.81	29.00	39.31	0.63	3	5.34	3.06	15.00	15.00	3	47.25	7	23.63	52.38	28.75	42.63
330	26.38	21.38	0.81	27.00	30.00	37.50	2.00	6.41	32.00	43.44	0.88	3	4.31	4.31	15.00	20.00	4	50.75	7	25.38	55.38	31.75	47.31

FAN SIZE	HC	HD	HE	HF	HG	HH	J	K	KA	KB	KL	KS		L	M	MA	MF	P	Q	SD		SE
												CL 18	CL 24							CL 18	CL 24	
180	19.94	16.31	15.50	14.63	13.81	12.94	10.19	7.63	3.38	2.00	6.00	0.50 x 0.25	0.50 x 0.25	8.50	14.19	8.50	—	37.00	11.06	2.19	2.19	7.00
200	21.75	17.88	16.94	16.00	15.13	14.19	10.75	8.19	3.38	2.00	6.50	0.50 x 0.25	0.63 x 0.31	9.00	15.38	9.50	—	39.06	12.19	2.19	2.44	7.50
220	23.94	19.81	18.81	17.75	16.75	15.75	11.50	8.94	4.38	2.00	7.00	0.50 x 0.25	0.63 x 0.31	9.25	16.63	11.00	—	41.81	13.50	2.19	2.44	8.00
240	26.19	21.81	20.69	19.56	18.44	17.31	12.19	9.63	4.38	2.00	7.00	0.50 x 0.25	0.63 x 0.31	9.75	17.81	12.00	—	43.50	14.88	2.19	2.69	8.00
270	28.75	24.06	22.81	21.63	20.31	19.13	13.00	10.44	5.13	2.00	7.50	0.63 x 0.31	0.63 x 0.31	10.00	20.00	14.00	6.50	45.81	16.38	2.44	2.69	8.25
300	31.56	26.56	25.19	23.81	22.44	21.13	13.88	11.31	6.38	2.00	8.00	0.63 x 0.31	0.75 x 0.38	10.00	22.25	14.50	7.38	48.44	18.13	2.69	2.94	8.75
330	35.13	29.31	27.81	26.31	24.81	23.31	14.88	12.31	7.38	2.00	8.25	0.63 x 0.31	0.75 x 0.38	10.00	24.00	15.00	8.00	50.69	19.94	2.69	2.94	9.00

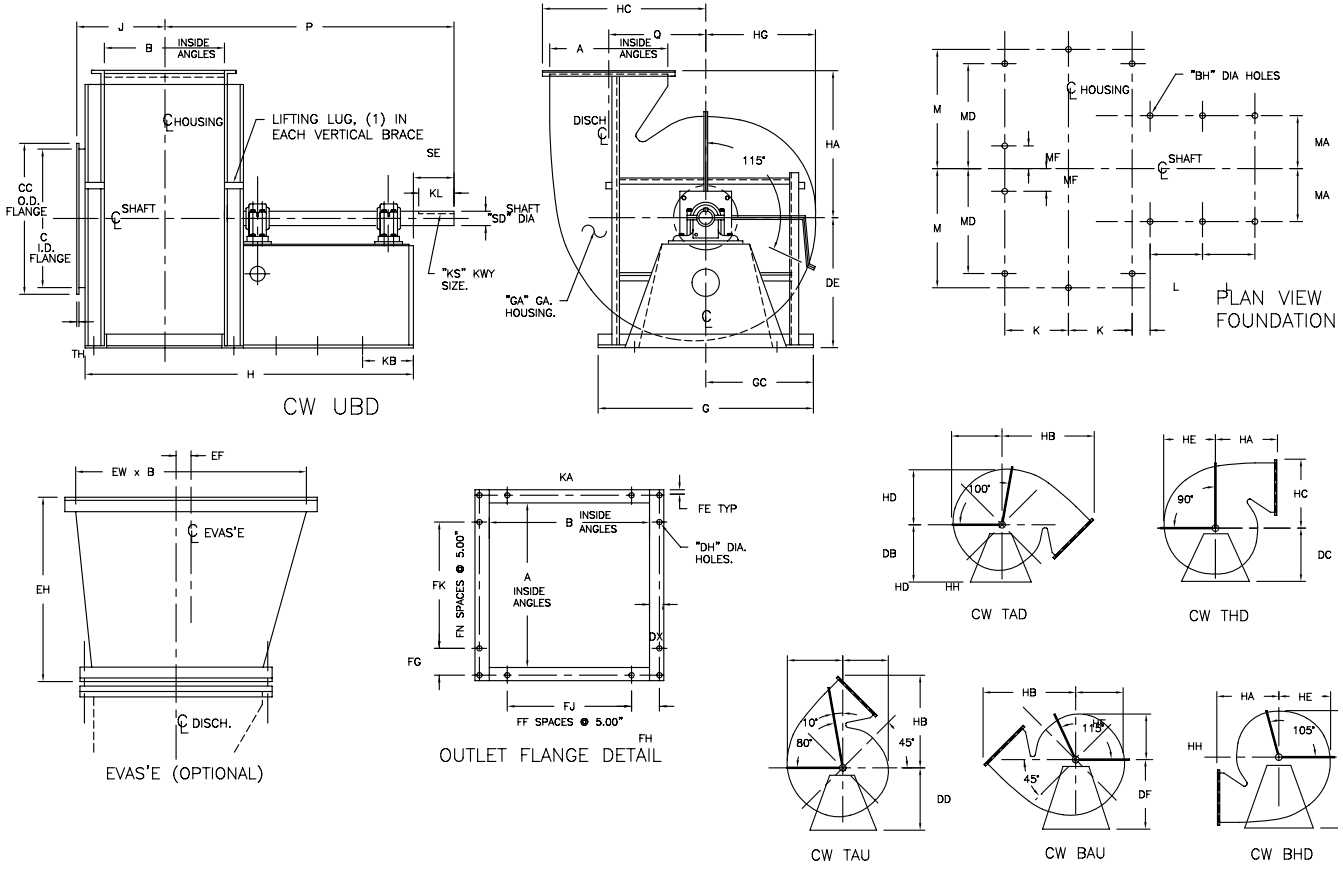
NOTES:

1. CW rotation shown, CCW rotation is similar but opposite.
2. Standard accessories: bolted access door, housing drain, shaft seal, punched inlet & outlet flanges.
3. These holes are in Size 270, 300 & 330 Only.

BC9987D

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.

Arrangement 1, SWSI



FAN SIZE	A	B	BH	DB DC	DD DE	DF DG	DX	EF	EH	EW	FE	FF	FG	FH	FJ	FK	FN	G	SD		GC	H	HA	HB
																			CL 18	CL 24				
360	29.19	23.63	1.06	29.00	33.00	41.50	2.00	6.97	35.75	48.25	0.88	4	3.22	2.94	20.00	25.00	5	57.00	7	0.25	28.50	60.63	35.13	52.25
400	32.19	26.00	1.06	32.00	36.25	46.00	2.50	7.72	40.00	53.25	1.13	4	4.97	4.38	20.00	25.00	5	61.00	7	0.25	30.50	63.00	38.75	57.81
450	35.50	28.75	1.06	35.00	40.00	50.50	2.50	8.56	43.75	58.88	1.13	5	4.13	3.25	25.00	30.00	6	65.00	7	0.25	32.50	68.75	42.75	63.63
490	39.13	31.63	1.06	39.00	44.00	55.00	2.50	9.44	47.75	64.75	1.13	5	3.44	4.69	25.00	35.00	7	70.00	7	0.25	35.00	75.13	47.00	69.88
540	43.25	35.13	1.06	42.75	48.25	59.25	2.50	10.44	52.38	71.63	1.13	6	3.00	3.94	30.00	40.00	8	76.00	7	0.25	38.00	79.63	52.00	77.13
600	47.88	38.75	1.06	47.00	53.00	66.00	3.00	11.56	58.38	79.25	1.38	7	5.56	3.50	35.00	40.00	8	80.00	0.25	0.25	40.00	84.75	57.50	85.50
660	52.75	42.63	1.06	51.50	57.00	72.00	3.00	12.75	63.63	87.25	1.38	7	5.50	5.44	35.00	45.00	9	85.00	0.25	0.25	42.50	89.63	63.25	93.81
730	58.19	47.00	1.06	57.00	63.50	79.00	3.50	14.03	70.63	96.38	1.63	8	5.97	5.38	40.00	50.00	10	92.00	0.25	0.25	46.00	97.00	69.75	103.69
800	64.38	52.00	1.06	63.00	70.00	87.00	3.50	15.63	77.50	106.63	1.63	9	6.56	5.38	45.00	55.00	11	97.00	0.25	0.25	48.50	106.00	77.13	114.44

FAN SIZE	HC	HD	HE	HF	HG	HH	J	K	KA	KB	KL	KS			L	M	MA	MD	MF	P	Q	SD		SE	
													CL 18	CL 24							CL 18	CL 24			
360	38.75	32.44	30.75	29.06	27.38	25.69	17.00	13.81	7.00	4.00	8.25	0.75 x 0.38	0.88 x 0.44	10.00	26.50	16.00	23.00	6.50	53.81	22.19	2.94	3.44			9.00
400	43.00	35.75	33.94	32.06	30.25	28.38	18.19	15.00	6.00	3.00	9.00	0.88 x 0.44	1.00 x 0.50	11.00	28.50	18.00	25.00	7.50	56.00	24.44	3.44	3.94			10.00
450	47.25	39.50	37.50	35.44	33.44	31.38	19.56	16.38	6.88	3.88	9.00	0.88 x 0.44	1.00 x 0.50	11.63	30.50	20.00	25.00	8.50	60.38	27.00	3.44	3.94			10.00
490	51.81	43.50	41.25	39.00	36.75	34.50	21.06	17.81	6.75	4.75	10.00	1.00 x 0.50	1.00 x 0.50	13.00	33.00	22.00	27.50	9.50	66.31	29.75	3.94	4.44			11.00
540	57.06	48.19	45.69	43.19	40.69	38.19	23.81	19.56	5.88	5.63	10.00	1.00 x 0.50	1.00 x 0.50	13.00	35.00	24.00	29.50	10.50	68.06	32.94	3.94	4.44			11.00
600	63.38	53.25	50.50	47.75	45.00	42.25	25.63	21.38	6.13	5.38	10.75	1.00 x 0.50	1.25 x 0.63	13.75	37.00	26.00	31.50	11.50	72.13	36.44	4.44	4.94			11.75
660	69.44	58.63	55.63	52.56	49.56	46.50	27.56	23.31	6.88	5.13	11.00	1.00 x 0.50	1.25 x 0.63	14.00	39.50	28.00	34.00	12.50	75.31	40.06	4.44	4.94			12.00
730	76.88	64.38	61.38	58.06	54.69	51.38	30.81	25.50	6.50	5.50	11.00	1.00 x 0.50	1.25 x 0.63	15.00	42.00	30.00	36.50	13.50	79.50	44.31	4.44	4.94			12.00
800	84.69	71.56	67.88	64.19	60.50	56.81	33.31	28.00	8.00	6.00	11.75	1.25 x 0.63	1.25 x 0.63	16.00	44.50	32.00	39.00	14.50	86.75	49.00	4.94	5.44			12.75

NOTES:

1. CW rotation shown, CCW rotation is similar but opposite.
2. Size 800 will be supplied with channel subbase to be mounted on concrete pedestal in the field.
3. Standard accessories: bolted access door, housing drain, pie split housing, shaft seal, punched inlet & outlet flanges.

BC9986G

DIMENSIONS ARE NOT TO BE USED FOR CONSTRUCTION. CERTIFIED DRAWINGS AVAILABLE UPON REQUEST.

Model RTF

Fans shall be Model RTF Radial Tip Fans as manufactured by Twin City Fan & Blower, Minneapolis, Minnesota.

PERFORMANCE — Performance ratings shall conform to AMCA Standard 205 (fan efficiency grade) and 211 (air performance). Fans shall be tested in accordance with ANSI/AMCA Standard 210 (air performance) and 300 (sound performance) in an AMCA accredited laboratory. Fans shall be licensed to bear the AMCA certified ratings seal for air and fan efficiency grade (FEG).

HOUSING — Housings shall be made of heavy-gauge steel with continuously welded construction and braced with structural shapes to eliminate any resonant vibration and to provide smooth operation. Size 360 and larger housings shall have a pie-shaped split for easy wheel and shaft removal without disturbing inlet and outlet ductwork. The housing split must be fully gasketed and bolted together to prevent any leaks. Flanged inlet and outlet, inspection door, shaft seal and drain shall be provided as standard equipment. Bearing support members shall be fabricated of heavy steel shapes or made of concrete to insure maximum rigidity.

WHEEL — Blade design shall be curved forward at the entering edge to meet air at the correct angle of entry for high efficiency and radial at the tip of the leaving edge to provide a self-cleaning characteristic. Blades shall be formed from high strength low alloy material for strength and accuracy of contour and continuously welded to the inlet shroud and backplate. A heavy fabricated steel hub shall be provided. Wheels shall be shrunk fit on the shafts and hubs must include puller holes for use in event of wheel removal. All wheels shall be statically and dynamically balanced on precision electronic machines, as well as trim balanced during the factory test run.

SHAFT — Shafts shall be AISI 1040 or 1045 hot rolled steel, accurately turned, ground, polished, and ring gauged for accuracy. Shafts shall be sized for the first critical speed of at least 1.43 times the maximum speed.

BEARINGS — Fans shall be supplied with heavy duty, self-aligning, grease lubricated, anti-friction, pillow block type bearings selected for a minimum average bearing life (AFBMA L-50) in excess of 200,000 hours at the maximum fan RPM. Bearings may be ball or roller with non-split pillow block or spherical roller bearings with split pillow block housing (bearing races not split). Where required, sleeve bearings may be used with appropriate cooling method for high carrying loads.

DRIVE — Motor sheaves shall be cast iron, variable pitch on applications 20 HP and smaller, and fixed pitch on 25 HP and larger. Drives and belts shall be located external to the fan casing and rated for 150% of the required motor HP.

FINISH AND COATING — The entire fan assembly, excluding the shaft, shall be thoroughly degreased and deburred before application of a rust-preventative primer. After the fan is completely assembled, a finish coat of paint shall be applied to the entire assembly. The fan shaft shall be coated with a petroleum-based rust protectant. Aluminum components shall be unpainted.

ACCESSORIES — When specified, accessories shall be provided by Twin City Fan & Blower to maintain one source responsibility.

FACTORY RUN TEST — All fans prior to shipment shall be completely assembled and test run as a unit at the specified operating speed or maximum RPM allowed for the particular construction type. Each wheel shall be statically and dynamically balanced in accordance with ANSI/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balance Quality Grade G6.3. Balance readings shall be taken by electronic type equipment in the axial, vertical, and horizontal directions on each of the bearings. Records shall be maintained and a written copy shall be available upon request.

GUARANTEE — The manufacturer shall guarantee the workmanship and materials for at least one (1) year from startup or eighteen (18) months from shipment, whichever occurs first.

INDUSTRIAL PROCESS AND COMMERCIAL VENTILATION SYSTEMS

CENTRIFUGAL FANS | UTILITY SETS | PLENUM & PLUG FANS | INLINE CENTRIFUGAL FANS
MIXED FLOW FANS | TUBEAXIAL & VANEAXIAL FANS | PROPELLER WALL FANS | PROPELLER ROOF VENTILATORS
CENTRIFUGAL ROOF & WALL EXHAUSTERS | CEILING VENTILATORS | GRAVITY VENTILATORS | DUCT BLOWERS
RADIAL BLADED FANS | RADIAL TIP FANS | HIGH EFFICIENCY INDUSTRIAL FANS | PRESSURE BLOWERS
LABORATORY EXHAUST FANS | FILTERED SUPPLY FANS | MANCOOLERS | FIBERGLASS FANS | CUSTOM FANS



TWIN CITY FAN & BLOWER
WWW.TCF.COM

5959 TRENTON LANE N | MINNEAPOLIS, MN 55442 | PHONE: 763-551-7600 | FAX: 763-551-7601

©2018 Twin City Fan Companies, Ltd., Minneapolis, MN. All rights reserved. Catalog illustrations cover the general appearance of Twin City Fan & Blower products at the time of publication and we reserve the right to make changes in design and construction at any time without notice.