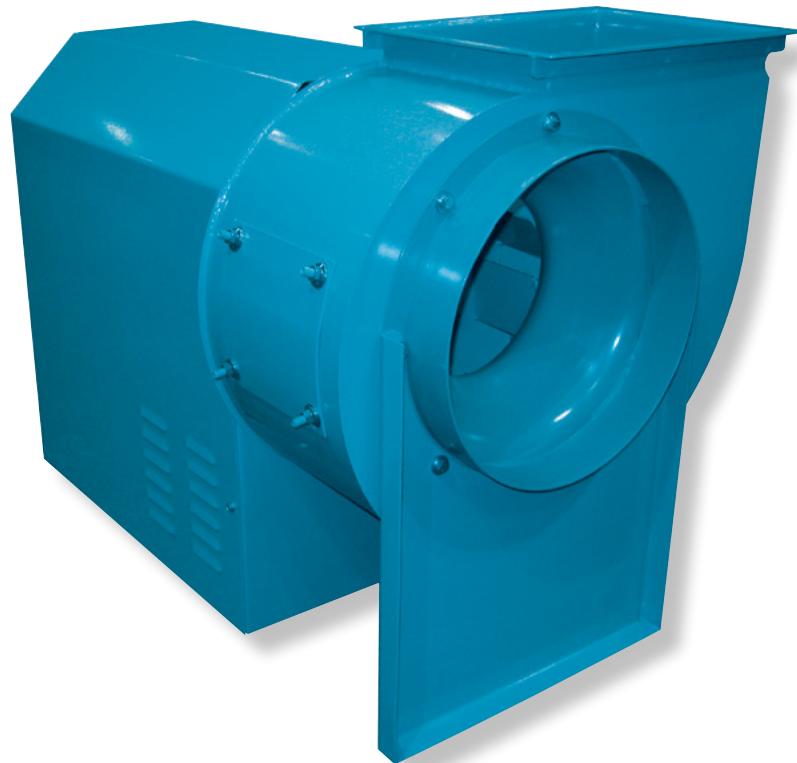


Fans & Blowers

Twin City

Defining Innovation.



VENTILATING SETS

TYPE BCV | TYPE BCVU5 | TYPE BCVU2 | TYPE BCVSH | TYPE BAV | TYPE FCV

Ventilating Sets

Twin City Fan's line of utility ventilating sets is one of the most comprehensive in the industry. The belt driven arrangement 10 utility sets are available in twelve sizes ranging from 12.25" to 36.5" diameter wheels. Utility sets are designed to meet AMCA requirements for Class I and Class II construction with both aluminum and steel wheels. Fan housings are coated with an epoxy powder-coat as standard.

Ventilating sets are an excellent choice for general exhaust and supply requirements of commercial and light industrial applications. They are suitable for indoor usage and outdoor usage, with the addition of a weather cover to enclose the motor and drives. Continuously welded housings are rotatable to the eight standard discharge positions. Adjustable motor plates are included inside the bearing pedestal. The fans are also more compact and have a smaller footprint than arrangement 9 fans.

Models

Type BCV

Belt driven model featuring a flat bladed backward inclined wheel. Utilized in applications requiring high CFM at low to medium pressures. Model BCV can handle clean air or corrosive airstreams. Airflow capacity from 690 to 21,900 CFM and static pressures to 8" w.g.

Type BAV

Belt driven model featuring a backward inclined airfoil wheel. Slightly higher efficiencies than the BCV, but recommended for clear air applications only. Airflow capacity from 690 to 32,100 CFM and static pressures to 8" w.g.

Type FCV

Belt driven model featuring a forward curved wheel. Ideal for high volume, low pressure applications. Also suitable for certain high temperature requirements. Airflow capacity from 690 to 21,900 CFM and static pressures to 5" w.g.



BCV, Size 165



Twin City Fan & Blower certifies that the type BCV, BCVU5, BCVU2, BCVSH and BAV fans shown on pages 8 through 13 are licensed to bear the AMCA Seal for Sound and Air. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Refer to Bulletin 306 for sound power levels.



Twin City Fan & Blower certifies that the type FCV fans shown on pages 14 through 16 are licensed to bear the AMCA Seal for Air. 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.



Most BCV fans are available for listing under UL 705, UL 762 and UL Emergency Smoke Control Systems.



Twin City Fan & Blower is a registered member of the USGBC, a non-profit community of leaders working to make green buildings available to everyone within a generation.

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Bulletin 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.

UL Listed Ventilating Sets

The model BCV utility set is available with three separate UL listing options. Model BCVU5 is UL 705 listed for electrical, model BCVU2 is UL 762 listed for the removal of grease-laden air and model BCVSH is UL listed for Emergency Smoke Control Systems.

MODEL	UL LISTING	TEMPERATURE RATING	WHEEL MATERIAL
BCVU5	UL 705 (File E158680)	Up to 250°F (Aluminum Wheels)	Aluminum - through Size 270, Class I
		Up to 300°F (Steel Wheels)	Steel - Size 300- 365, Class I & All Class II Sizes
BCVU2	UL 762 (File MH25478)	Up to 300°F	Steel
BCVSH	UL Smoke & Heat (File MH29313)	500°F for 4 Hours 1000°F for 1 Hour	Steel

Type BCVU5

BCVU5 packages come complete with V-belt drives, motor, UL weather cover, UL labels and nameplate.

Type BCVU2

BCVU2 packages include V-belt drives, motor, UL weather cover, bolted access door, drain connection, backplate fins, UL 762 labels and nameplate. For UL 762, grease pans, disconnect switches, stacks or fan platforms are not included. Fans must be installed per local codes and NFPA 96.

Type BCVSH

BCVSH fans come standard with V-belt drives with a minimum of two belts, motor, UL weather cover, backplate fins, shaft seal, shaft cooler, high temperature grease, insulated drive stand and UL Emergency Smoke Control Systems labels and nameplate. Fans must be installed per local codes and NFPA 96.



Standard Construction Features – Class I and II

Standard design features common to all Class I and Class II fans:

Shaft

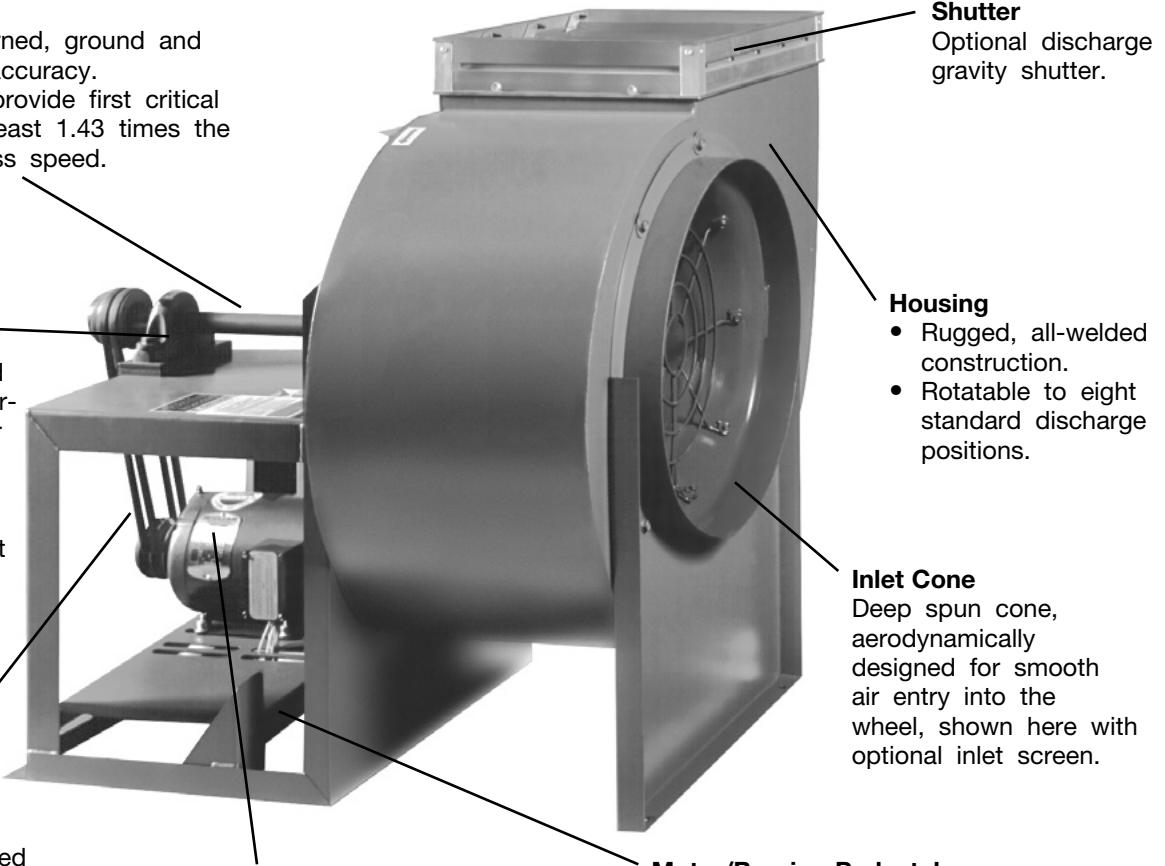
- AISI 1045, turned, ground and polished for accuracy.
- Designed to provide first critical speed of at least 1.43 times the maximum class speed.

Bearings

Heavy duty grease lubricated pillow block bearings selected for minimum average life (AFBMA L-50) of at least 200,000 hours at maximum class speed.

Drive

Adjustable or fixed pitch, 1.2 or 1.5 service factor V-belt drives with cast iron sheaves, and V-belts designed to be oil and heat resistant, and to dissipate static electricity.



Shutter

Optional discharge gravity shutter.

Housing

- Rugged, all-welded construction.
- Rotatable to eight standard discharge positions.

Inlet Cone

Deep spun cone, aerodynamically designed for smooth air entry into the wheel, shown here with optional inlet screen.

Motor/Bearing Pedestal (Class I Shown)

Large open motor compartment allows complete access to motor and motor base for quick and easy servicing and belt tension adjustment.

Construction Features

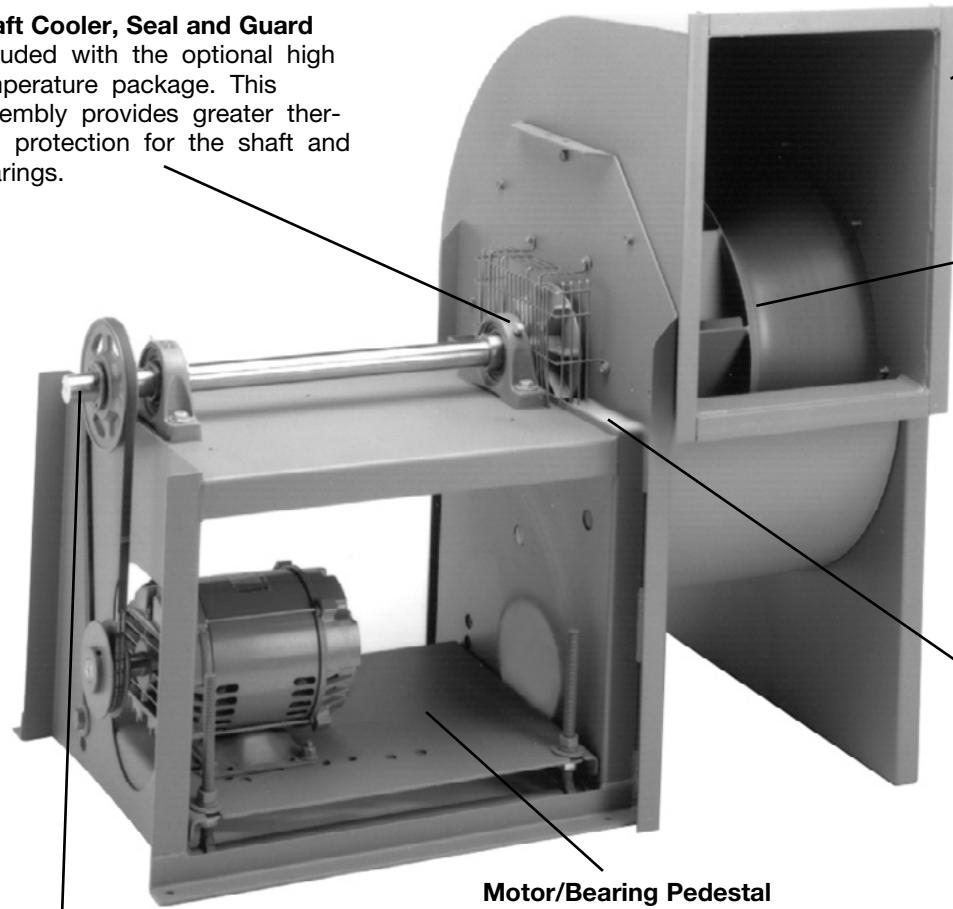
MODEL	CLASS I			CLASS II			
	BCV	BAV	FCV	BCV	BAV	FCV	
Static Pressure	5"	8"	3.5"	8"	8"	5"	
Capacities	27,500	29,000	27,500	29,100	32,100	29,100	
Wheel Diameters	12.25" to 36.5"			12.25" to 36.5"			
Max. Motor Frame	256T (20 HP)			326T (50 HP)			
Temperatures	to 500°F			to 600°F			
Rotatable	to size 365			to size 365			
Full AMCA Class Rated Performance	Yes			Yes			

Class II Construction Features

In addition to standard design features, Class II vent sets are also equipped with the following features:

Shaft Cooler, Seal and Guard

Included with the optional high temperature package. This assembly provides greater thermal protection for the shaft and bearings.



Shaft and Bearings

Heavy duty Class II shaft and bearings.

Motor/Bearing Pedestal

Extra-large motor/bearing pedestal compartment accommodates all motor sizes required for full Class II performance.

Outlet Flange

Standard on sizes 222 and larger.

Class II Rated Wheel

Constructed of all welded steel for heavy duty applications.

Heat Gap

Separation between the fan housing and motor/bearing pedestal. For operating temperatures above 300°F, this gap is insulated to provide additional protection to the motor, bearings and V-belt.

Wheel Selection



ALUMINUM BCV

Wheels for BCV Class I sizes 122 through 270 are constructed of riveted aluminum. For operating temperatures over 250°F, a welded steel wheel is provided.



STEEL BCV

Wheels for BCV Class I sizes 300 through 365, as well as all BCV Class II sizes, are constructed of welded steel.



BAV

Wheels for BAV sizes 245 and smaller are constructed of aluminum using extruded aluminum blades. For sizes 270 and larger, a welded steel wheel is provided.



FCV

All FCV fans are equipped with riveted steel wheels.

Accessories

Weather Cover

An easily removable weather cover is available for either Class I or Class II fans. The weather cover provides complete protection for the motor, fan bearings, and V-belt drive. If an OSHA-style belt guard is specified on vent sets, a weather cover will be supplied.



Outlet Shutters

Interconnected blade-style shutters, of either gravity or motor operated type. Fabricated with die-formed and felted edges, they are noiseless in operation and completely weatherproof. For volume control, heavy duty center-pivoted dampers can be installed at the discharge of these ventilating sets.



Access Doors

Two types of access doors are available: bolted or quick-opening. Access doors are specified where examination and cleaning of the fan interior is required.



Belt Guard

Standard belt guards are of the open back style, and are readily removable for belt or pulley adjustments. For OSHA-style belt guards, see notes on weather cover.

Variable Inlet

Vanes

Variable inlet vanes provide economical, stable and efficient air volume control for manual or motorized operation. Low maintenance, easy assembly and disassembly, and long life are prime features of this vane design. Blades are supported by needle roller bearings riding on fatigue resistant steel shafts, hardened to minimize wear. Bearings are lubricated for life with high grade moisture-resistant grease and protected with quality seals. The vane bearing housings are welded in position and stiffened with a welded support ring. The welded structure eliminates flutter and vibration while still utilizing the efficiency of a cantilevered design.



Two types of inlet vanes are offered, depending on fan size. Inlet vanes for sizes 122, 135, and 150 are external type, bolted to the fan inlet flange. Inlet vanes for sizes 165 and larger are supplied as nested type, with the inlet vane blades nested within the inlet cone and all linkages internal to the fan. (Nested style inlet vanes shown.)

Inlet and Outlet Screens

Safety screens are available for mounting in the fan inlet or outlet in non-ducted applications.



Additional Accessories

- Inlet flange
- Outlet flange
- Drain connection
- Disconnect switch
- Vibration isolation pads
- Rails and hangers

Optional Construction

High Temperature Construction

Standard fan design options are available to handle airstream temperatures to 600°F. Consult your Twin City Fan & Blower representative for applications over 600°F.

High temperature operating limits and necessary modifications are shown in Table 1.

Table 1. High Temperature Construction Requirements

TEMPERATURE (°F)	WHEEL MATERIAL	BEARING LUBRICATION	OTHER REQUIREMENTS
-20 TO 250°F	Riveted Aluminum on 122-270 BCV Class I. All Others Steel.	Grease	Standard Fan
251 TO 300°F	Steel	Grease	Standard Fan
301 TO 500°F	Steel	High Temperature Grease	Shaft Cooler, Shaft Seal, Expansion & Non-Expansion Bearings; Class II: Insulated Heat Gap
501 TO 600°F CLASS II ONLY	Steel	High Temperature Grease	Shaft Cooler, Shaft Seal, Expansion & Non-Expansion Bearings; High Temperature Aluminum Paint, Insulated Heat Gap

When selecting the performances at elevated temperatures and altitudes, refer to the method used in Bulletin 300.

Spark Resistant Construction

AMCA TYPE	FAN CONSTRUCTION
A	All Airstream Parts are Aluminum (Wheel, Housing, and Shaft Seal). Limited to 250°F.
B	Aluminum Wheel and Rubbing Plate. Limited to 250°F.
C	To 250°F — 122 To 270 BCV Class I: Aluminum Wheel and Rubbing Plate 251 To 500°F — 122 To 270 BCV Class I & II: Steel Wheel, Aluminum Inlet Cone and Rubbing Plate. All Other To 500°F — Aluminum Inlet Cone and Rubbing Plate.

NOTES:

1. Bearings shall be placed outside the airstream.
2. The user shall electrically ground all fan parts.
3. The use of the above standard in no way implies a guarantee of safety for any level of spark resistance. "Spark resistant construction also does not protect against ignition of explosive gases caused by catastrophic failure or from any airstream material that may be present in the system."

Engineering Data

Derating Factors For High Temperature

Fan operation at high temperature adversely affects the strength of fan wheels. As a result, the maximum safe speed (RPM) of the fan from Table 3 must be derated by the temperature factor from Table 2.

Example: Maximum safe speed at 400°F for a size 245 BCV Class II steel wheel = $0.95 \times 2033 = 1931$ RPM (2033 RPM is maximum RPM at 70°F).

Table 2. Derating Factors for High Temperature

TEMPERATURE (°F)	ALUMINUM	STANDARD STEEL	STAINLESS STEEL
70	1.00	1.000	1.00
200	1.00	0.980	0.95
250	1.00	0.970	0.93
300	—	0.960	0.91
400	—	0.950	0.88
500	—	0.900	0.84
600	—	0.860	0.81

Table 3. Maximum RPM at 70°F

SIZE	BCV		FCV	
	CLASS I	CLASS II	CLASS I	CLASS II
122	3167	4119	1559	1871
135	2874	3738	1415	1698
150	2587	3364	1273	1528
165	2352	3058	1157	1389
182	2118	2729	1046	1256
200	1932	2490	955	1146
222	1737	2238	858	1030
245	1577	2033	780	935
270	1397	1803	707	849
300	1257	1623	637	764
330	1143	1475	579	694
365	995	1283	523	628

Table 4. Bare Fan Weights (lb)

SIZE	CLASS I	CLASS II
122	121	133
135	139	153
150	162	178
165	198	218
182	220	242
200	287	316
222	348	383
245	453	498
270	507	559
300	662	728
330	758	834
365	940	1034

Performance Data – BCV / BCVU5 / BCVU2 / BCVSH

122 BCV

Outlet Area - 0.86 ft²

Wheel Dia. - 12.25 inches

Max. BHP = 0.076 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
688 800	869	0.05	1044	0.08	1335	0.17																
860 1000	994	0.07	1152	0.12	1413	0.21	1642	0.31	1720	0.37	1911	0.49										
1032 1200	1123	0.11	1271	0.16	1512	0.26	1790	0.43	1988	0.60	2154	0.76	2305	0.93	2578	1.27	2827	1.65	3059	2.05	3283	2.48
1204 1400	1256	0.15	1397	0.21	1622	0.32	1816	0.45	1992	0.58	2317	0.87										
1376 1600	1396	0.20	1525	0.27	1738	0.40	1922	0.54	2088	0.68	2390	0.98	2671	1.33								
1548 1800	1539	0.27	1655	0.34	1861	0.49	2035	0.64	2193	0.79	2480	1.12	2741	1.48	2989	1.87						
1720 2000	1685	0.36	1790	0.43	1988	0.60	2154	0.76	2305	0.93	2578	1.27	2827	1.65	3059	2.05	3283	2.48	3500	2.94		
1892 2200	1834	0.46	1929	0.54	2116	0.72	2277	0.90	2421	1.08	2683	1.45	2922	1.84	3144	2.26	3355	2.71	3559	3.18	3758	3.67
2236 2600	2135	0.72	2216	0.81	2377	1.01	2531	1.23	2667	1.44	2909	1.87	3131	2.31	3337	2.77	3533	3.25	3719	3.75	3898	4.27
2580 3000	2439	1.07	2511	1.17	2650	1.40	2789	1.64	2921	1.89	3151	2.38	3358	2.88	3552	3.39	3735	3.90	3910	4.44	4079	5.00
2924 3400	2746	1.52	2810	1.64	2934	1.89	3057	2.15	3179	2.43	3402	2.99	3599	3.55	3781	4.11	3955	4.69				
3268 3800	3055	2.09	3112	2.22	3224	2.49	3334	2.78	3444	3.08	3658	3.71	3849	4.34	4023	4.96						

MAXIMUM RPM: Class I — 3167 Class II — 4119

Selections above 4000 RPM not recommended. Consult factory.

135 BCV

Outlet Area - 1.05 ft²

Wheel Dia. - 13.50 inches

Max. BHP = 0.124 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
840 800	791	0.06	949	0.10	1213	0.20																
1050 1000	905	0.09	1048	0.14	1285	0.25	1491	0.38														
1260 1200	1022	0.13	1157	0.19	1375	0.32	1563	0.45	1736	0.60												
1470 1400	1144	0.18	1272	0.25	1475	0.40	1651	0.54	1811	0.70	2105	1.06										
1680 1600	1272	0.25	1388	0.33	1582	0.49	1748	0.65	1899	0.83	2172	1.20	2426	1.62								
1890 1800	1403	0.33	1508	0.42	1695	0.60	1851	0.78	1995	0.97	2254	1.37	2490	1.80								
2100 2000	1537	0.44	1631	0.53	1810	0.73	1960	0.93	2097	1.14	2344	1.56	2570	2.02	2780	2.50	2982	3.03	3178	3.58		
2310 2200	1672	0.56	1758	0.66	1927	0.88	2073	1.10	2203	1.32	2441	1.78	2657	2.26	2858	2.77	3048	3.30	3233	3.87	3413	4.48
2730 2600	1946	0.88	2020	1.00	2165	1.24	2304	1.51	2428	1.77	2647	2.29	2848	2.83	3035	3.39	3212	3.97	3380	4.57	3542	5.21
3150 3000	2224	1.32	2289	1.45	2415	1.72	2541	2.02	2660	2.32	2868	2.92	3056	3.53	3231	4.14	3397	4.78	3555	5.42	3708	6.10
3570 3400	2505	1.88	2562	2.02	2674	2.32	2785	2.64	2895	2.98	3098	3.68	3276	4.35	3441	5.04	3598	5.74				
3990 3800	2787	2.58	2838	2.74	2939	3.07	3038	3.41	3138	3.78	3331	4.56	3504	5.32	3661	6.08						

MAXIMUM RPM: Class I — 2874 Class II — 3738

150 BCV

Outlet Area - 1.29 ft²

Wheel Dia. - 15.00 inches

Max. BHP = 0.211 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1032 800	710	0.08	853	0.13	1091	1.00																
1290 1000	812	0.11	941	0.17	1154	0.31	1341	0.47														
1548 1200	917	0.16	1038	0.23	1235	0.39	1405	0.56	1561	0.74												
1806 1400	1026	0.22	1141	0.31	1325	0.49	1483	0.67	1627	0.86	1893	1.31										
2064 1600	1140	0.31	1245	0.40	1420	0.60	1570	0.80	1706	1.01	1952	1.48										
2322 1800	1257	0.41	1352	0.51	1521	0.74	1662	0.96	1791	1.19	2026	1.68	2238	2.21								
2580 2000	1377	0.53	1462	0.65	1624	0.90	1759	1.14	1882	1.39	2106	1.91	2309	2.47	2499	3.08	2682	3.72	2858	4.41		
2838 2200	1498	0.69	1576	0.81	1728	1.08	1860	1.35	1978	1.62	2192	2.18	2387	2.77	2568	3.40	2740	4.06	2907	4.76	3070	5.51
3354 2600	1744	1.08	1811	1.22	1942	1.52	2067	1.85	2178	2.17	2376	2.81	2557	3.47	2726	4.15	2886	4.87	3037	5.62	3183	6.39
3870 3000	1993	1.60	2051	1.76	2165	2.10	2279	2.46	2386	2.84	2574	3.58	2743	4.32	2902	5.08	3051	5.86	3194	6.66	3331	7.49
4386 3400	2244	2.29	2295	2.46	2397	2.83	2497	3.22	2597	3.65	2779	4.49	2940	5.33	3089	6.17	3231	7.03				
4902 3800	2496	3.14	2543	3.34	2634	3.74	2724	4.17	2814	4.62	2988	5.57	3144	6.51	3286	7.44						

MAXIMUM RPM: Class I — 2587 Class II — 3364

165 BCV

Outlet Area - 1.57 ft²

Wheel Dia. - 16.50 inches

Max. BHP = 0.339 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM																			

Performance Data – BCV / BCVU5 / BCVU2 / BCVSH

182 BCV

Outlet Area - 1.92 ft²

Wheel Dia. - 18.25 inches

$$\text{Max. BHP} = 0.552 \left(\frac{\text{RPM}}{1000} \right)^3$$

CFM	OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1536	800	569	0.10	695	0.17																		
1920	1000	651	0.15	757	0.24	951	0.42	1126	0.64														
2304	1200	741	0.22	831	0.32	1002	0.53	1160	0.76	1306	1.02												
2688	1400	835	0.31	914	0.42	1066	0.66	1208	0.91	1342	1.19												
3072	1600	933	0.43	1003	0.55	1138	0.81	1267	1.09	1391	1.39	1621	2.03										
3456	1800	1032	0.57	1096	0.71	1217	1.00	1335	1.30	1449	1.62	1663	2.30	1864	3.06								
3840	2000	1133	0.75	1191	0.91	1302	1.22	1409	1.55	1514	1.88	1714	2.61	1903	3.40	2081	4.24	2252	5.15				
4224	2200	1235	0.96	1288	1.13	1391	1.48	1489	1.83	1586	2.20	1773	2.96	1950	3.78	2120	4.67	2282	5.60	2437	6.58		
4992	2600	1441	1.51	1487	1.71	1576	2.12	1661	2.53	1744	2.94	1908	3.81	2066	4.71	2218	5.66	2365	6.67	2507	7.72	2645	8.81
5760	3000	1650	2.25	1689	2.47	1768	2.94	1843	3.41	1917	3.88	2061	4.86	2202	5.85	2340	6.89	2473	7.97	2604	9.09		
6528	3400	1859	3.19	1895	3.46	1964	3.98	2032	4.50	2099	5.04	2227	6.12	2354	7.23	2479	8.36	2601	9.53	2720	10.73		
7296	3800	2070	4.39	2102	4.68	2165	5.26	2226	5.85	2287	6.45	2404	7.64	2518	8.85	2631	10.09						

MAXIMUM RPM: Class I — 2118 Class II — 2729

200 BCV

Outlet Area - 2.30 ft²

Wheel Dia. - 20.00 inches

$$\text{Max. BHP} = 0.872 (\text{RPM} \div 1000)^3$$

CFM	OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
1840	800	519	0.12	634	0.21																			
2300	1000	593	0.18	690	0.28	868	0.51	1027	0.77															
2760	1200	675	0.27	758	0.38	914	0.63	1058	0.91	1191	1.22													
3220	1400	761	0.37	833	0.51	971	0.78	1102	1.09	1224	1.42													
3680	1600	849	0.51	914	0.66	1037	0.97	1155	1.30	1268	1.66	1479	2.44											
4140	1800	940	0.68	998	0.85	1109	1.20	1217	1.56	1321	1.94	1517	2.76	1700	3.66									
4600	2000	1031	0.89	1085	1.08	1186	1.46	1284	1.85	1380	2.25	1563	3.12	1735	4.07	1899	5.09	2054	6.17					
5060	2200	1124	1.15	1173	1.35	1267	1.77	1357	2.19	1445	2.62	1616	3.54	1778	4.53	1933	5.59	2081	6.71	2223	7.89			
5980	2600	1312	1.80	1354	2.04	1435	2.53	1513	3.02	1589	3.52	1739	4.55	1883	5.64	2022	6.78	2157	7.99	2287	9.25	2413	10.56	
6900	3000	1502	2.68	1538	2.95	1610	3.51	1679	4.07	1746	4.64	1878	5.81	2007	7.00	2133	8.25	2255	9.54	2374	10.88	2490	12.28	
7820	3400	1692	3.81	1725	4.12	1789	4.75	1851	5.38	1911	6.02	2029	7.31	2145	8.65	2259	10.00	2371	11.40	2480	12.84			
8740	3800	1884	5.23	1913	5.58	1971	6.28	2027	6.98	2082	7.69	2189	9.12	2294	10.58	2398	12.08							

MAXIMUM RPM: Class I = 1932 Class II = 2490

222 BCV

Outlet Area = 2.85 ft²

Wheel Dia - 22 25 inches

Max BHP = 1.49 (BPM ÷ 1000)³

MAXIMUM BPM: Class I = 1737 Class II = 2238

245 BCV

Outlet Area - 3.45 ft²

Wheel Dia. - 24.50 inches

Max BHP = 2.40 (RPM ÷ 1000)³

MAXIMUM RPM: Class I — 1577 Class II — 2033

Performance is for installation Type B & D: Free or ducted inlet, ducted outlet.
Power rating (bhp) does not include transmission losses.

Class I fans are shown in regular face type.
Class II fans are shown in **bold** face type.

Performance Data – BCV / BCVU5 / BCVU2 / BCVSH

270 BCV

Outlet Area - 4.19 ft²

Wheel Dia. - 27.00 inches

Max. BHP = 4.05 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3352 800	380	0.22	457	0.36	592	0.72																
4190 1000	437	0.33	504	0.50	621	0.89	726	1.33														
5028 1200	498	0.48	557	0.69	661	1.11	755	1.59	843	2.12												
5866 1400	561	0.68	614	0.91	709	1.40	795	1.92	875	2.48	1026	3.75										
6704 1600	627	0.93	674	1.20	761	1.75	840	2.32	914	2.91	1051	4.21	1184	5.74								
7542 1800	693	1.24	736	1.54	816	2.15	890	2.78	959	3.43	1088	4.82	1206	6.32	1324	8.05	1449	10.16				
8380 2000	761	1.63	800	1.96	874	2.63	943	3.33	1007	4.02	1128	5.49	1241	7.08	1346	8.77	1452	10.68	1564	12.93		
9218 2200	829	2.08	865	2.45	934	3.19	998	3.94	1059	4.70	1174	6.30	1280	7.95	1381	9.72	1476	11.58	1572	13.64	1672	15.99
10894 2600	968	3.28	999	3.71	1058	4.57	1115	5.45	1169	6.33	1272	8.14	1369	10.02	1461	11.95	1549	13.97	1633	16.07	1714	18.25
12570 3000	1108	4.87	1135	5.36	1187	6.36	1238	7.37	1287	8.38	1380	10.42	1469	12.53	1553	14.68	1634	16.88	1712	19.14	1788	21.49
14246 3400	1248	6.91	1272	7.47	1320	8.62	1365	9.75	1409	10.88	1495	13.19	1576	15.53	1654	17.90	1729	20.32	1802	22.81		
15922 3800	1390	9.51	1412	10.14	1454	11.39	1495	12.65	1536	13.94	1614	16.48	1689	19.05	1762	21.70						

MAXIMUM RPM: Class I — 1397 Class II — 1803

300 BCV

Outlet Area - 5.17 ft²

Wheel Dia. - 30.00 inches

Max. BHP = 6.86 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4136 800	342	0.27	411	0.45	533	0.89																
5170 1000	393	0.41	453	0.62	558	1.09	653	1.64														
6204 1200	448	0.59	501	0.84	595	1.38	680	1.96	758	2.61												
7238 1400	505	0.84	552	1.12	638	1.73	715	2.36	787	3.05	923	4.63										
8272 1600	564	1.15	606	1.47	684	2.15	756	2.86	823	3.60	946	5.20	1065	7.08								
9306 1800	624	1.53	662	1.90	734	2.65	801	3.44	863	4.24	979	5.94	1085	7.79	1192	9.95	1304	12.53				
10340 2000	685	2.01	720	2.42	786	3.24	848	4.09	906	4.96	1015	6.78	1117	8.75	1212	10.84	1307	13.18	1408	15.98		
11374 2200	746	2.57	778	3.02	840	3.93	898	4.86	953	5.80	1056	7.76	1152	9.81	1242	11.98	1329	14.31	1415	16.84	1505	19.75
13442 2600	871	4.04	898	4.56	952	5.64	1003	6.71	1052	7.81	1145	10.05	1232	12.36	1314	14.73	1394	17.24	1470	19.85	1543	22.55
15510 3000	996	5.99	1021	6.61	1068	7.84	1114	9.09	1158	10.33	1242	12.87	1321	15.43	1397	18.09	1470	20.82	1540	23.59	1609	26.51
17578 3400	1123	8.53	1145	9.23	1187	10.62	1228	12.02	1268	13.43	1345	16.27	1418	19.15	1488	22.08	1556	25.08	1621	28.12		
19646 3800	1250	11.71	1270	12.50	1308	14.05	1345	15.60	1382	17.20	1452	20.32	1520	23.52	1585	26.75						

MAXIMUM RPM: Class I — 1257 Class II — 1623

330 BCV

Outlet Area - 6.26 ft²

Wheel Dia. - 33.00 inches

Max. BHP = 11.05 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5008 800	311	0.33	374	0.54	484	1.07																
6260 1000	357	0.49	412	0.75	508	1.33	594	1.99														
7512 1200	407	0.72	455	1.02	541	1.67	618	2.37	690	3.17												
8764 1400	459	1.01	502	1.36	580	2.09	650	2.86	716	3.70	839	5.60										
10016 1600	513	1.39	551	1.78	622	2.60	688	3.47	748	4.35	860	6.30	968	8.56								
11268 1800	567	1.85	602	2.30	668	3.22	728	4.16	785	5.14	890	7.19	987	9.45	1083	12.02	1186	15.19				
12520 2000	623	2.43	655	2.93	715	3.93	771	4.96	824	6.01	923	8.21	1015	10.57	1102	13.13	1188	15.95	1280	19.34		
13772 2200	679	3.12	708	3.66	764	4.77	817	5.89	867	7.04	960	9.39	1047	11.86	1130	14.53	1208	17.31	1286	20.37	1368	23.89
16276 2600	792	4.89	817	5.53	866	6.84	912	8.13	957	9.47	1041	12.17	1120	14.96	1195	17.84	1267	20.85	1336	24.00	1403	27.31
18780 3000	906	7.26	929	8.02	972	9.52	1013	11.01	1053	12.51	1129	15.56	1202	18.73	1271	21.95	1337	25.23	1401	28.61	1463	32.10
21284 3400	1022	10.36	1041	11.17	1080	12.88	1117	14.57	1153	16.26	1223	19.70	1290	23.22	1353	26.73	1415	30.38	1474	34.05		
23788 3800	1137	14.19	1155	15.14	1190	17.04	1224	18.94	1257	20.84	1321	24.65	1382	28.47	1441	32.37						

MAXIMUM RPM: Class I — 1143 Class II — 1475

365 BCV

Outlet Area - 7.66 ft²

Wheel Dia. - 36.50 inches

Max. BHP = 19.42 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6128 800	271	0.38	326	0.65	430	1.27	</															

Performance Data – BAV

122 BAV

Outlet Area - 0.86 ft²

Wheel Dia. - 12.25 inches

Max. BHP = 0.045 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
688 800	1070	0.05	1242	0.09	1510	0.16	1738	0.24	1952	0.33	2398	0.61	2731	0.86	3069	1.25	3386	1.71	3627	2.05	3861	2.41
860 1000	1251	0.08	1402	0.12	1656	0.20	1864	0.29	2051	0.39	2497	0.70	2786	0.96	3069	1.25						
1032 1200	1441	0.11	1574	0.16	1810	0.26	2010	0.37	2185	0.47	2625	0.82	2892	1.09	3142	1.39	3386	1.71	3627	2.05	3861	2.41
1204 1400	1637	0.16	1756	0.22	1970	0.33	2163	0.45	2331	0.57												
1376 1600	1837	0.22	1945	0.28	2140	0.41	2320	0.54	2484	0.68	2770	0.96	3020	1.25	3255	1.55	3476	1.89	3691	2.24	3904	2.61
1548 1800	2040	0.30	2138	0.37	2318	0.50	2484	0.65	2641	0.80	2920	1.12	3164	1.43	3384	1.75	3595	2.10	3795	2.46	3989	2.84
1720 2000	2245	0.39	2335	0.47	2502	0.62	2656	0.77	2803	0.94	3074	1.29	3312	1.63	3528	1.98	3727	2.34	3917	2.71	4102	3.11
1892 2200	2452	0.51	2535	0.59	2690	0.76	2835	0.92	2972	1.09	3231	1.47	3465	1.86	3676	2.23	3872	2.62	4055	3.02	4228	3.42
2236 2600	2869	0.79	2941	0.89	3077	1.09	3206	1.29	3327	1.48	3559	1.89	3779	2.34	3983	2.80	4171	3.25	4347	3.70	4514	4.15
2580 3000	3289	1.18	3352	1.30	3473	1.53	3589	1.76	3699	1.98	3908	2.43	4108	2.91	4300	3.42	4482	3.95	4653	4.48	4814	5.00
2924 3400	3712	1.68	3768	1.81	3876	2.08	3981	2.34	4082	2.60	4274	3.10	4456	3.61	4631	4.15	4802	4.73	4967	5.33	5125	5.93
3268 3800	4136	2.31	4186	2.46	4285	2.75	4380	3.05	4473	3.34	4650	3.92	4819	4.48	4981	5.05	5138	5.64				

MAXIMUM RPM: Class I — 3990 Class II — 5206

Selections above 4000 RPM not recommended. Consult factory.

135 BAV

Outlet Area - 1.05 ft²

Wheel Dia. - 13.50 inches

Max. BHP = 0.081 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP																		
840 800	886	0.05	1050	0.09	1327	0.19																
1050 1000	1024	0.08	1171	0.13	1410	0.23	1628	0.34														
1260 1200	1173	0.11	1298	0.17	1526	0.29	1713	0.41	1891	0.54												
1470 1400	1326	0.16	1438	0.22	1648	0.36	1827	0.49	1986	0.64	2300	0.97										
1680 1600	1482	0.22	1586	0.29	1773	0.44	1948	0.59	2100	0.75	2370	1.08	2653	1.48								
1890 1800	1641	0.29	1737	0.37	1906	0.53	2071	0.70	2221	0.88	2479	1.24	2713	1.61	2968	2.07						
2100 2000	1802	0.37	1891	0.46	2048	0.64	2197	0.83	2343	1.02	2596	1.42	2819	1.82	3027	2.24						
2310 2200	1964	0.48	2047	0.57	2195	0.77	2332	0.97	2467	1.18	2717	1.61	2933	2.05	3132	2.50	3321	2.96	3525	3.50	3745	4.13
2730 2600	2291	0.74	2364	0.85	2498	1.08	2619	1.32	2734	1.55	2962	2.05	3174	2.57	3362	3.08	3537	3.60	3705	4.13	3864	4.67
3150 3000	2622	1.10	2687	1.23	2808	1.49	2919	1.75	3022	2.02	3221	2.57	3419	3.16	3605	3.75	3775	4.34	3932	4.93	4083	5.53
3570 3400	2955	1.55	3013	1.70	3123	2.00	3226	2.30	3322	2.60	3501	3.21	3677	3.84	3851	4.50	4019	5.18	4175	5.85		
3990 3800	3290	2.13	3342	2.29	3442	2.62	3537	2.96	3628	3.29	3795	3.97	3953	4.65	4110	5.37						

MAXIMUM RPM: Class I — 3265 Class II — 4260

150 BAV

Outlet Area - 1.29 ft²

Wheel Dia. - 15.00 inches

Max. BHP = 0.125 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP																				
1032 800	874	0.08	1015	0.13	1233	0.23	1420	0.35	1594	0.49												
1290 1000	1022	0.12	1145	0.18	1353	0.31	1522	0.44	1675	0.58	1958	0.91	2231	1.29								
1548 1200	1177	0.17	1285	0.24	1479	0.39	1642	0.55	1784	0.71	2040	1.05	2275	1.44	2506	1.87						
1806 1400	1337	0.24	1434	0.32	1610	0.49	1766	0.67	1904	0.85	2144	1.23	2362	1.63	2566	2.08	2765	2.56	2962	3.08	3153	3.62
2064 1600	1501	0.34	1589	0.43	1748	0.61	1895	0.81	2029	1.02	2263	1.44	2467	1.87	2658	2.33	2839	2.83	3015	3.36	3189	3.92
2322 1800	1667	0.45	1747	0.55	1893	0.75	2029	0.97	2158	1.21	2385	1.67	2584	2.14	2764	2.63	2936	3.14	3100	3.69	3258	4.27
2580 2000	1834	0.59	1908	0.71	2044	0.93	2170	1.16	2290	1.41	2511	1.93	2705	2.45	2882	2.97	3044	3.51	3200	4.07	3351	4.67
2838 2200	2003	0.76	2071	0.89	2198	1.14	2316	1.38	2427	1.64	2640	2.21	2830	2.78	3003	3.35	3163	3.93	3312	4.52	3453	5.12
3354 2600	2344	1.19	2402	1.34	2514	1.64	2619	1.94	2718	2.22	2907	2.83	3087	3.51	3253	4.20	3407	4.87	3551	5.55	3687	6.22
3870 3000	2687	1.77	2739	1.95	2838	2.30	2932	2.64	3022	2.98	3193	3.65	3355	4.36	3512	5.13	3661	5.93	3800	6.72	3932	7.49
4386 3400	3033	2.52	3078	2.72	3167	3.12	3252	3.51	3335	3.90	3491	4.66	3640	5.42	3783	6.23	3923	7.10	4058	8.00	4186	8.90
4902 3800	3379	3.47	3420	3.69	3500	4.13	3578	4.57	3654	5.01	3799	5.88	3936	6.71	4069	7.57	4197	8.47				

MAXIMUM RPM: Class I — 3260 Class II — 4253

165 BAV

Outlet Area - 1.57 ft²

Wheel Dia. - 16.50 inches

Max. BHP = 0.222 (RPM÷1000)³

CFM OV	0.25"		0.5"</	

Performance Data – BAV

182 BAV

Outlet Area - 1.92 ft²

Wheel Dia. - 18.25 inches

Max. BHP = 0.44 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP														
1536 800	601	0.09	713	0.16																		
1920 1000	692	0.13	794	0.22	964	0.39	1151	0.62	1175	0.70	1333	0.98										
2304 1200	789	0.19	881	0.29	1036	0.49	1217	0.70	1241	0.84	1360	1.09										
2688 1400	892	0.27	973	0.38	1117	0.61	1241	0.84	1360	1.09												
3072 1600	998	0.36	1068	0.48	1202	0.74	1321	1.01	1426	1.27	1644	1.89										
3456 1800	1105	0.48	1168	0.61	1292	0.90	1403	1.20	1506	1.50	1690	2.11	1893	2.86								
3840 2000	1215	0.62	1272	0.77	1385	1.08	1490	1.41	1588	1.74	1763	2.41	1929	3.12	2116	3.99	2302	4.97				
4224 2200	1325	0.79	1377	0.95	1480	1.29	1581	1.65	1673	2.01	1843	2.75	1994	3.48	2147	4.29	2318	5.26	2490	6.33		
4992 2600	1549	1.23	1593	1.42	1680	1.81	1768	2.22	1852	2.64	2008	3.50	2152	4.37	2283	5.23	2408	6.11	2540	7.10	2684	8.22
5760 3000	1774	1.82	1813	2.04	1889	2.48	1964	2.93	2040	3.41	2185	4.39	2318	5.38	2443	6.38	2561	7.39	2671	8.37	2780	9.40
6528 3400	2001	2.59	2035	2.83	2102	3.32	2169	3.82	2236	4.35	2369	5.44	2494	6.55	2611	7.67	2723	8.81	2831	9.96		
7296 3800	2229	3.55	2260	3.82	2320	4.36	2380	4.91	2439	5.48	2559	6.67	2676	7.90	2787	9.14						

MAXIMUM RPM: Class I — 2207 Class II — 2879

200 BAV

Outlet Area - 2.30 ft²

Wheel Dia. - 20.00 inches

Max. BHP = 0.695 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP														
1840 800	548	0.11	650	0.19																		
2300 1000	631	0.16	723	0.26	879	0.47	1050	0.75														
2760 1200	719	0.23	802	0.34	944	0.58	1071	0.84	1216	1.17												
3220 1400	812	0.32	886	0.45	1018	0.73	1131	1.01	1240	1.31												
3680 1600	908	0.43	973	0.58	1096	0.89	1204	1.21	1300	1.53	1500	2.27										
4140 1800	1006	0.57	1064	0.73	1177	1.08	1279	1.43	1373	1.80	1541	2.52	1727	3.44								
4600 2000	1106	0.74	1158	0.92	1262	1.29	1358	1.69	1447	2.09	1607	2.88	1759	3.74	1930	4.78	2100	5.96				
5060 2200	1207	0.95	1254	1.14	1348	1.54	1440	1.97	1524	2.40	1679	3.29	1817	4.16	1958	5.14	2115	6.30	2272	7.60		
5980 2600	1410	1.47	1450	1.69	1530	2.16	1610	2.65	1688	3.16	1830	4.18	1961	5.23	2081	6.26	2196	7.32	2316	8.50	2448	9.86
6900 3000	1615	2.18	1650	2.43	1720	2.96	1789	3.50	1858	4.07	1990	5.24	2112	6.43	2227	7.64	2334	8.84	2435	10.03	2535	11.26
7820 3400	1822	3.09	1853	3.38	1914	3.96	1975	4.56	2036	5.19	2158	6.50	2272	7.83	2379	9.17	2482	10.55	2580	11.92		
8740 3800	2029	4.23	2057	4.55	2112	5.20	2167	5.87	2221	6.54	2331	7.97	2438	9.45	2540	10.94						

MAXIMUM RPM: Class I — 2014 Class II — 2627

222 BAV

Outlet Area - 2.85 ft²

Wheel Dia. - 22.25 inches

Max. BHP = 1.19 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP										
2280 800	492	0.14	582	0.23	750	0.46																
2850 1000	569	0.21	649	0.32	784	0.57	920	0.86														
3420 1200	651	0.30	721	0.43	846	0.72	955	1.02	1068	1.37												
3990 1400	737	0.42	799	0.57	913	0.90	1013	1.24	1106	1.59	1300	2.42										
4560 1600	825	0.58	880	0.75	984	1.12	1079	1.50	1165	1.88	1329	2.71	1500	3.70								
5130 1800	915	0.77	964	0.96	1060	1.37	1148	1.79	1230	2.22	1377	3.09	1525	4.07	1678	5.19						
5700 2000	1006	1.01	1051	1.22	1138	1.66	1220	2.12	1298	2.59	1439	3.55	1569	4.54	1703	5.65	1841	6.90				
6270 2200	1098	1.30	1139	1.52	1219	2.00	1296	2.50	1369	3.01	1505	4.07	1627	5.12	1745	6.23	1867	7.46	1992	8.80		
7410 2600	1284	2.05	1319	2.31	1387	2.84	1454	3.41	1519	4.01	1643	5.23	1758	6.48	1864	7.72	1964	8.98	2064	10.31	2167	11.75
8550 3000	1472	3.06	1502	3.35	1562	3.95	1620	4.58	1678	5.24	1790	6.63	1896	8.04	1996	9.47	2092	10.93	2181	12.36	2267	13.81
9690 3400	1660	4.35	1687	4.68	1740	5.36	1792	6.05	1844	6.78	1945	8.30	2043	9.89	2136	11.48	2226	13.10	2312	14.74		
10830 3800	1849	5.99	1873	6.35	1921	7.10	1968	7.86	2015	8.65	2107	10.31	2197	12.05	2283	13.80	2367	15.59				

MAXIMUM RPM: Class I — 1814 Class II — 2367

245 BAV

Outlet Area - 3.45 ft²

Wheel Dia. - 24.50 inches

Max. BHP = 1.93 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2760 800	446	0.17</td																				

Performance Data – BAV

270 BAV

Outlet Area - 4.19 ft²

Wheel Dia. - 27.00 inches

Max. BHP = 3.07 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"			
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
3352 800	401	0.19	479	0.34	618	0.67	759	1.25	863	1.71	1055	3.08	1219	4.79										
4190 1000	462	0.28	529	0.45	649	0.82	936	2.49	1005	3.12	1138	4.46	1263	5.92	1383	7.51	1499	9.15	1611	10.86				
5028 1200	528	0.40	588	0.60	693	1.02	790	1.48	882	1.98	1055	3.08	1230	5.72	1339	7.32	1445	9.05	1518	9.98	1623	11.79	1726	13.67
5866 1400	597	0.55	649	0.78	744	1.26	832	1.76	915	2.30	1072	3.50					1546	10.86	1645	12.78	1741	14.76		
6704 1600	667	0.74	714	1.00	802	1.54	881	2.10	957	2.68	1101	3.95	1236	5.35	1365	6.81								
7542 1800	739	0.99	781	1.26	862	1.87	994	2.92	1058	3.61	1181	5.05	1298	6.58	1410	8.23	1545	11.15	1629	13.25	1712	15.42	1792	17.61
8380 2000	812	1.28	851	1.59	925	2.24	1055	3.42	1115	4.16	1230	5.72	1339	7.32	1445	9.05	1546	10.86	1645	12.78	1741	14.76		
9218 2200	886	1.64	921	1.97	989	2.67																		
10894 2600	1036	2.57	1065	2.94	1124	3.74	1181	4.59	1236	5.47	1339	7.26	1435	9.07	1529	10.96	1620	12.90	1709	14.96	1795	17.09		
12570 3000	1186	3.80	1212	4.23	1263	5.12	1314	6.07	1363	7.06	1458	9.11	1545	11.15	1629	13.25	1712	15.42	1792	17.61	1871	19.88		
14246 3400	1338	5.40	1361	5.88	1406	6.87	1451	7.91	1495	8.99	1582	11.28	1664	13.60	1741	15.92	1815	18.26	1889	20.71				
15922 3800	1490	7.40	1511	7.94	1552	9.05	1592	10.18	1632	11.35	1710	13.81	1787	16.40	1860	18.99								

MAXIMUM RPM: Class I — 1474 Class II — 1923

300 BAV

Outlet Area - 5.17 ft²

Wheel Dia. - 30.00 inches

Max. BHP = 5.21 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4136 800	361	0.24	431	0.41	556	0.82	584	1.01	683	1.54	777	2.11	950	3.81	1097	5.91						
5170 1000	416	0.35	476	0.56	623	1.26	711	1.82	794	2.45	950	3.81										
6204 1200	475	0.49	529	0.74	670	1.55	749	2.18	824	2.84	965	4.32	1097	5.91								
7238 1400	537	0.68	584	0.96																		
8272 1600	600	0.92	643	1.23	721	1.90	793	2.59	861	3.31	990	4.86	1112	6.59	1229	8.41						
9306 1800	665	1.22	703	1.56	776	2.31	842	3.07	904	3.84	1024	5.50	1137	7.32	1244	9.25	1349	11.29	1450	13.41		
10340 2000	731	1.59	765	1.96	832	2.76	894	3.60	952	4.45	1063	6.23	1168	8.11	1269	10.16	1366	12.31	1461	14.56	1553	16.86
11374 2200	797	2.03	829	2.43	890	3.29	949	4.22	1004	5.15	1107	7.06	1205	9.04	1300	11.15	1392	13.42	1480	15.76	1567	18.22
13442 2600	932	3.17	958	3.63	1011	4.61	1062	5.65	1112	6.75	1205	8.96	1292	11.22	1376	13.53	1458	15.93	1538	18.46	1616	21.12
15510 3000	1067	4.68	1090	5.21	1137	6.33	1182	7.49	1226	8.70	1311	11.22	1390	13.75	1466	16.35	1540	19.01	1612	21.70	1683	24.50
17578 3400	1203	6.64	1224	7.25	1265	8.48	1305	9.75	1345	11.09	1423	13.90	1497	16.77	1566	19.62	1633	22.53	1699	25.52		
19646 3800	1340	9.11	1359	9.79	1396	11.15	1432	12.55	1468	14.00	1539	17.05	1607	20.20	1673	23.41						

MAXIMUM RPM: Class I — 1327 Class II — 1731

CFM OV	0.25"		0.5"		1"		1.5"		2"		3"		4"		5"		6"		7"		8"	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP														
5008 800	328	0.29	392	0.50	506	1.00	721	3.14	783	4.01	901	5.90	1011	7.98	1117	10.18						
6260 1000	378	0.42	433	0.67	531	1.23	621	1.86	722	2.97	864	4.62	987	7.17								
7512 1200	432	0.59	481	0.90	567	1.53	647	2.21	722	2.97	864	4.62	987	7.17								
8764 1400	488	0.82	531	1.16	609	1.88	681	2.64	749	3.44	877	5.23	998	7.17								
10016 1600	546	1.11	584	1.49	656	2.30	721	3.14	783	4.01	901	5.90	1011	7.98	1117	10.18						
11268 1800	605	1.48	639	1.89	706	2.80	766	3.72	822	4.66	931	6.66	1034	8.87	1131	11.20	1226	13.66	1318	16.23		
12520 2000	665	1.92	696	2.37	757	3.35	813	4.36	866	5.40	967	7.56	1062	9.82	1154	12.31	1242	14.91	1328	17.62	1412	20.41
13772 2200	725	2.46	754	2.95	810	4.00	863	5.11	913	6.24	1006	8.53	1096	10.95	1182	13.50	1265	16.23	1346	19.10	1424	22.03
16276 2600	847	3.83	872	4.40	920	5.59	966	6.85	1012	8.19	1095	10.82	1175	13.59	1251	16.37	1326	19.30	1398	22.34	1469	25.56
18780 3000	971	5.68	992	6.32	1034	7.67	1075	9.07	1115	10.54	1193	13.61	1264	16.65	1333	19.80	1401	23.05	1466	26.29	1531	29.71
21284 3400	1095	8.07	1114	8.80	1151	10.28	1187	11.82	1223	13.42	1294	16.83	1361	20.29	1424	23.75	1485	27.28	1545	30.90		
23788 3800	1219	11.05	1236	11.86	1270	13.52	1303	15.22	1335	16.95	1399	20.62	1462	24.49	1522	28.38						

MAXIMUM RPM: Class I — 1206 Class II — 1573

365 BAV

Outlet Area - 7.66 ft²

Wheel Dia. - 36.50 inches

Max. BHP = 14.05 (RPM÷1000)³

CFM OV	0.25"		0.5"		1"		1.5"	
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Performance Data – FCV

122 FCV

Outlet Area - 0.86 ft²

Wheel Dia. - 12.25 inches

Tip Speed - 3.21 x RPM

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP																
688	800	435	0.05																				
860	1000	461	0.08	604	0.13																		
1032	1200	492	0.11	623	0.17																		
1204	1400	530	0.15	649	0.21	853	0.36																
1376	1600	572	0.21	680	0.28	871	0.43	1041	0.60														
1548	1800	620	0.28	714	0.35	894	0.52	1050	0.70														
1720	2000	673	0.37	753	0.44	921	0.62	1071	0.81	1207	1.02												
1892	2200	728	0.47	795	0.55	952	0.74	1095	0.95	1224	1.16	1348	1.40										
2236	2600	842	0.76	891	0.83	1020	1.04	1151	1.27	1271	1.51	1384	1.77	1490	2.03	1595	2.31	1700	2.61				
2580	3000	958	1.14	998	1.21	1100	1.42	1216	1.69	1328	1.95	1434	2.23	1534	2.52	1629	2.82	1720	3.12	1811	3.44		
2924	3400	1076	1.63	1111	1.72	1190	1.91	1292	2.20	1393	2.50	1492	2.80	1586	3.11	1677	3.44	1764	3.77	1847	4.10		
3268	3800	1196	2.27	1226	2.35	1292	2.55	1374	2.83	1466	3.15	1557	3.49	1647	3.83	1732	4.17	1814	4.53				

MAXIMUM RPM: Class I — 1559 Class II — 1871

135 FCV

Outlet Area - 1.05 ft²

Wheel Dia. - 13.50 inches

Tip Speed - 3.53 x RPM

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
840	800	406	0.07																				
1050	1000	433	0.10	561	0.16																		
1260	1200	467	0.15	582	0.22																		
1470	1400	507	0.21	610	0.28	792	0.46																
1680	1600	549	0.28	644	0.37	811	0.56																
1890	1800	592	0.37	681	0.47	837	0.68	977	0.90														
2100	2000	636	0.48	721	0.59	866	0.82	998	1.06	1122	1.31												
2310	2200	682	0.62	763	0.74	899	0.98	1024	1.24	1140	1.51	1252	1.79										
2730	2600	777	0.96	849	1.11	973	1.39	1085	1.69	1191	2.00	1291	2.31	1387	2.63	1481	2.96						
3150	3000	877	1.43	939	1.59	1055	1.92	1156	2.25	1253	2.60	1345	2.95	1433	3.31	1519	3.68	1602	4.05	1683	4.42		
3570	3400	978	2.03	1033	2.21	1141	2.59	1235	2.96	1323	3.33	1408	3.72	1491	4.13	1570	4.53	1647	4.94				
3990	3800	1080	2.78	1130	2.98	1228	3.40	1319	3.82	1401	4.24	1479	4.65	1556	5.09	1630	5.54						

MAXIMUM RPM: Class I = 1415 Class II = 1698

150 FCV

Outlet Area - 1.29 ft²

Wheel Dia. - 15.00 inches

Tip Speed - 3.93 x RPM

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1032	800	355	0.08																				
1290	1000	376	0.12	493	0.19																		
1548	1200	402	0.17	509	0.25																		
1806	1400	433	0.23	530	0.32	696	0.53																
2064	1600	467	0.31	555	0.41	711	0.64	850	0.90														
2322	1800	506	0.41	583	0.53	730	0.77	858	1.05														
2580	2000	550	0.55	615	0.66	752	0.93	874	1.22	986	1.53												
2838	2200	595	0.71	649	0.82	777	1.11	894	1.42	1000	1.75	1101	2.09										
3354	2600	688	1.14	728	1.24	833	1.56	940	1.91	1038	2.27	1131	2.66	1217	3.04	1302	3.46	1388	3.91				
3870	3000	783	1.71	816	1.82	899	2.14	993	2.53	1085	2.93	1171	3.35	1253	3.79	1331	4.23	1405	4.68	1479	5.16		
4386	3400	879	2.45	907	2.57	972	2.87	1055	3.30	1138	3.75	1219	4.20	1296	4.68	1370	5.17	1441	5.66	1509	6.16		
4902	3800	977	3.40	1001	3.52	1055	3.82	1122	4.24	1198	4.74	1272	5.23	1345	5.74	1415	6.27	1482	6.80				

MAXIMUM BPM: Class I = 1273 Class II = 1528

165 FCV

Outlet Area = 1.57 ft²

Wheel Dia - 16.50 inches

Tip Speed = 4.32 x RPM

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
1256	800	324	0.10																					
1570	1000	343	0.14	448	0.23																			
1884	1200	366	0.20	464	0.31																			
2198	1400	395	0.28	483	0.39	634	0.65																	
2512	1600	426	0.38	506	0.51	647	0.79	773	1.10															
2826	1800	462	0.51	532	0.65	665	0.95	780	1.27															
3140	2000	502	0.67	561	0.81	685	1.14	796	1.49	897	1.86													
3454	2200	543	0.87	592	1.01	708	1.36	814	1.74	910	2.13	1001	2.55											
4082	2600	628	1.39	664	1.52	760	1.91	856	2.33	946	2.78	1029	3.24	1107	3.71	1184	4.21	1262	4.76					
4710	3000	715	2.10	745	2.24	820	2.62	905	3.09	988	3.58	1066	4.09	1141	4.63	1211	5.16	1279	5.72	1345	6.29			
5338	3400	804	3.02	829	3.17	887	3.52	962	4.05	1037	4.59	1110	5.14	1180	5.71	1247	6.31	1312	6.92	1373	7.52			
5966	3800	893	4.18	915	4.34	964	4.70	1024	5.20	1092	5.80	1159	6.41	1225	7.02	1288	7.65	1349	8.30					

MAXIMUM BPM: Class I — 1157 Class II — 1389

Performance is for installation Type B & D: Free or ducted inlet, ducted outlet.
Power rating (bhp) does not include transmission losses.

Class I fans are shown in regular face type.
Class II fans are shown in **bold** face type.

Performance Data – FCV

182 FCV

Outlet Area - 1.92 ft²

Wheel Dia. - 18.25 inches

Tip Speed - 4.78 x RPM

CFM OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1536 800	293	0.11																				
1920 1000	313	0.16	406	0.26																		
2304 1200	339	0.23	421	0.34	566	0.60																
2688 1400	368	0.33	441	0.44	574	0.73																
3072 1600	399	0.46	466	0.58	587	0.88	697	1.22														
3456 1800	432	0.62	494	0.76	605	1.06	708	1.43	804	1.82												
3840 2000	466	0.81	524	0.97	626	1.28	722	1.66	812	2.08	898	2.52										
4224 2200	501	1.04	555	1.22	651	1.56	740	1.93	825	2.37	906	2.84	984	3.33								
4992 2600	572	1.63	620	1.84	706	2.24	785	2.65	861	3.10	934	3.61	1004	4.15	1072	4.71	1138	5.27	1203	5.87		
5760 3000	646	2.43	689	2.68	767	3.15	838	3.60	906	4.07	972	4.58	1036	5.14	1099	5.76	1159	6.38	1219	7.04		
6528 3400	721	3.46	760	3.75	831	4.28	897	4.80	959	5.32	1019	5.86	1078	6.44	1135	7.04	1191	7.69	1246	8.39		
7296 3800	797	4.76	832	5.07	898	5.68	959	6.27	1017	6.85	1072	7.43	1126	8.03	1179	8.66	1230	9.30				

MAXIMUM RPM: Class I — 1046 Class II — 1256

200 FCV

Outlet Area - 2.30 ft²

Wheel Dia. - 20.00 inches

Tip Speed - 5.24 x RPM

CFM OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1840 800	268	0.13																				
2300 1000	286	0.19	371	0.31																		
2760 1200	309	0.28	384	0.41	517	0.72																
3220 1400	335	0.40	402	0.53	523	0.87																
3680 1600	364	0.55	425	0.70	535	1.05	636	1.46														
4140 1800	394	0.74	450	0.90	551	1.26	645	1.70	733	2.18												
4600 2000	424	0.96	477	1.15	571	1.53	659	1.99	741	2.49	819	3.02										
5060 2200	456	1.24	505	1.45	593	1.86	675	2.31	753	2.85	827	3.41	898	3.99								
5980 2600	521	1.95	565	2.20	643	2.67	716	3.17	785	3.71	852	4.32	916	4.97	978	5.64	1038	6.31	1097	7.02		
6900 3000	588	2.90	627	3.19	699	3.76	764	4.30	826	4.87	886	5.48	945	6.15	1002	6.88	1057	7.63	1112	8.42		
7820 3400	656	4.12	692	4.47	757	5.11	817	5.72	874	6.35	929	7.00	982	7.67	1035	8.42	1086	9.19	1136	10.02		
8740 3800	725	5.66	758	6.06	818	6.78	874	7.49	926	8.16	977	8.87	1026	9.59	1074	10.33	1122	11.14				

MAXIMUM RPM: Class I — 955 Class II — 1146

222 FCV

Outlet Area - 2.85 ft²

Wheel Dia. - 22.25 inches

Tip Speed - 5.83 x RPM

CFM OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2280 800	241	0.16																				
2850 1000	257	0.24	333	0.39																		
3420 1200	278	0.35	345	0.50	465	0.89																
3990 1400	302	0.50	362	0.66	470	1.07																
4560 1600	327	0.68	382	0.86	481	1.30	572	1.81														
5130 1800	354	0.91	405	1.12	496	1.57	580	2.11	659	2.70												
5700 2000	382	1.20	429	1.43	513	1.90	592	2.46	666	3.09	736	3.73										
6270 2200	410	1.54	455	1.80	533	2.30	607	2.87	677	3.53	743	4.22	807	4.94								
7410 2600	469	2.43	508	2.73	579	3.33	644	3.94	706	4.60	766	5.35	823	6.15	879	6.98	934	7.84	986	8.69		
8550 3000	529	3.60	564	3.96	629	4.67	687	5.33	743	6.05	797	6.80	850	7.64	901	8.53	951	9.48	999	10.42		
9690 3400	591	5.14	622	5.53	681	6.34	735	7.11	786	7.88	835	8.68	883	9.52	930	10.41	976	11.38	1021	12.41		
10830 3800	653	7.05	682	7.52	736	8.42	786	9.29	833	10.13	878	10.98	923	11.91	966	12.82	1009	13.81				

MAXIMUM RPM: Class I — 858 Class II — 1030

245 FCV

Outlet Area - 3.45 ft²

Wheel Dia. - 24.50 inches

Tip Speed - 6.41 x RPM

CFM OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2760 800	218	0.20																				
3450 1000	233	0.29	302	0.47																		
4140 1200	252	0.42	313	0.61	422	1.08																
4830 1400	274	0.60	328	0.79	427	1.30																
5520 1600	297	0.82	347	1.05	437	1.57	519	2.19														
6210 1800	321	1.10	367	1.35	450	1.89	527	2.56	598	3.26												
6900 2000	346	1.45	389	1.72	466	2.30	538	2.9														

Performance Data – FCV

270 FCV

Outlet Area - 4.19 ft²

Wheel Dia. - 27.00 inches

Tip Speed - 7.07 x RPM

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3352	800	191	0.23																				
4190	1000	203	0.33	265	0.54																		
5028	1200	219	0.47	273	0.70																		
5866	1400	237	0.66	286	0.91	375	1.51																
6704	1600	257	0.90	301	1.18	382	1.81	456	2.52														
7542	1800	278	1.20	318	1.50	392	2.17	462	2.96	525	3.75												
8380	2000	301	1.59	337	1.91	406	2.63	470	3.44	531	4.32	587	5.21										
9218	2200	324	2.04	357	2.38	421	3.16	480	3.98	538	4.93	593	5.92	643	6.87								
10894	2600	371	3.21	400	3.61	455	4.46	508	5.40	558	6.38	607	7.45	655	8.60	701	9.77	744	10.91				
12570	3000	419	4.77	445	5.24	493	6.16	541	7.22	587	8.33	630	9.43	673	10.63	715	11.90	756	13.21	796	14.55	834	15.87
14246	3400	469	6.83	492	7.34	535	8.36	577	9.46	620	10.74	660	11.97	698	13.19	736	14.50	773	15.85	810	17.29	847	18.82
15922	3800	519	9.39	539	9.92	579	11.10	617	12.29	655	13.58	693	14.99	729	16.37	763	17.70	797	19.12	831	20.61		

MAXIMUM RPM: Class I — 707 Class II — 849

300 FCV

Outlet Area - 5.17 ft²

Wheel Dia. - 30.00 inches

Tip Speed - 7.85 x RPM

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4136	800	172	0.28																				
5170	1000	183	0.41	239	0.67																		
6204	1200	197	0.58	246	0.86																		
7238	1400	213	0.81	257	1.12	337	1.85																
8272	1600	231	1.11	271	1.46	344	2.24	410	3.11														
9306	1800	250	1.48	286	1.85	353	2.69	416	3.65	473	4.64												
10340	2000	271	1.96	303	2.34	365	3.24	423	4.24	478	5.33	528	6.41										
11374	2200	291	2.51	321	2.93	379	3.90	432	4.91	484	6.07	533	7.27	579	8.49								
13442	2600	334	3.97	359	4.42	410	5.53	457	6.66	502	7.87	546	9.18	589	10.58	631	12.06	670	13.48				
15510	3000	377	5.88	400	6.44	444	7.62	487	8.92	528	10.27	567	11.64	605	13.07	643	14.65	681	16.35	717	18.00	751	19.62
17578	3400	422	8.42	442	9.01	481	10.29	519	11.66	557	13.18	594	14.77	628	16.26	662	17.86	696	19.58	729	21.34	762	23.20
19646	3800	467	11.58	485	12.24	521	13.69	555	15.14	589	16.72	623	18.44	656	20.19	687	21.87	717	23.56	748	25.45		

MAXIMUM RPM: Class I = 637 Class II = 764

330 FCV

Outlet Area - 6.26 ft²

Wheel Dia. - 33.00 inches

Tip Speed - 8.64 x RPM

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5008	800	156	0.34																				
6260	1000	166	0.49	217	0.80																		
7512	1200	179	0.70	224	1.05																		
8764	1400	194	0.99	234	1.36	307	2.25																
10016	1600	210	1.34	247	1.78	312	2.69	373	3.77														
11268	1800	228	1.81	261	2.27	321	3.25	378	4.42	430	5.62												
12520	2000	246	2.36	276	2.86	332	3.93	384	5.11	434	6.43	480	7.76										
13772	2200	265	3.05	292	3.56	345	4.74	393	5.96	440	7.35	485	8.83	526	10.26								
16276	2600	304	4.82	327	5.38	372	6.65	416	8.10	457	9.56	497	11.15	536	12.85	574	14.63	609	16.32				
18780	3000	343	7.13	364	7.81	403	9.18	443	10.82	480	12.43	515	14.05	550	15.83	585	17.78	619	19.78	652	21.81	683	23.78
21284	3400	384	10.22	402	10.92	438	12.52	472	14.13	507	16.02	540	17.88	571	19.69	602	21.64	633	23.74	663	25.87	693	28.12
23788	3800	425	14.06	441	14.82	474	16.60	505	18.38	536	20.30	567	22.40	596	24.40	625	26.54	652	28.55	680	30.81		

MAXIMUM BPM: Class I = 579 Class II = 694

365 FCV

Outlet Area = 7.66 ft²

Wheel Dia. - 36.50 inches

Tip Speed = 9.56 x RPM

CFM	OV	0.25" SP		0.5" SP		1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6128	800	141	0.41																				
7660	1000	150	0.60	196	0.98																		
9192	1200	162	0.86	202	1.28																		
10724	1400	175	1.20	211	1.66	277	2.74																
12256	1600	190	1.65	223	2.16	283	3.33	337	4.60														
13788	1800	206	2.21	236	2.78	290	3.97	342	5.42	389	6.89												
15320	2000	223	2.92	249	3.47	300	4.80	347	6.25	393	7.91	434	9.50										
16852	2200	240	3.75	264	4.35	312	5.81	355	7.28	398	9.01	438	10.77	476	12.59								
19916	2600	275	5.90	296	6.61	337	8.19	376	9.90	413	11.69	449	13.62	484	15.67	519	17.90	550	19.91				
22980	3000	310	8.72	329	9.55	365	11.29	400	13.18	434	15.21	466	17.24	498	19.46	529	21.76	559	24.12	589	26.63	617	29.03
26044	3400	347	12.48	364	13.42	396	15.32	427	17.32	458	19.55	488	21.85	516	24.06	544	26.44	572	29.00	600	31.74	627	34.49
29108	3800	384	17.17	399	18.17	428	20.24	456	22.40	484	24.75	512	27.30	539	29.88	565	32.46	590	35.02	615	37.73		

MAXIMUM BPM: Class I = 523 Class II = 628

Performance is for installation Type B & D: Free or ducted inlet, ducted outlet. Power rating (bhp) does not include transmission losses.

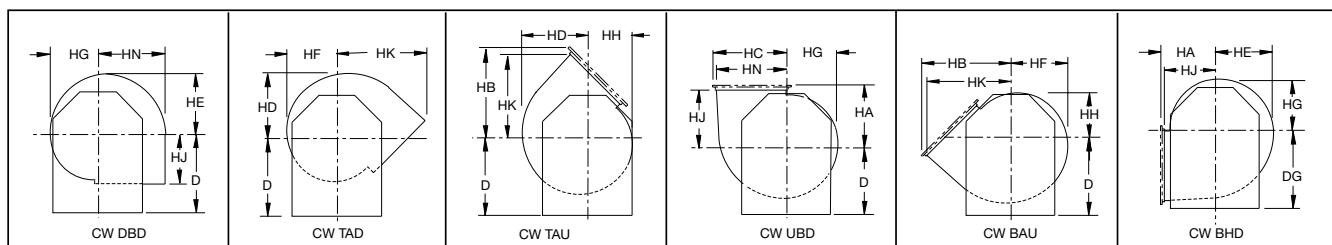
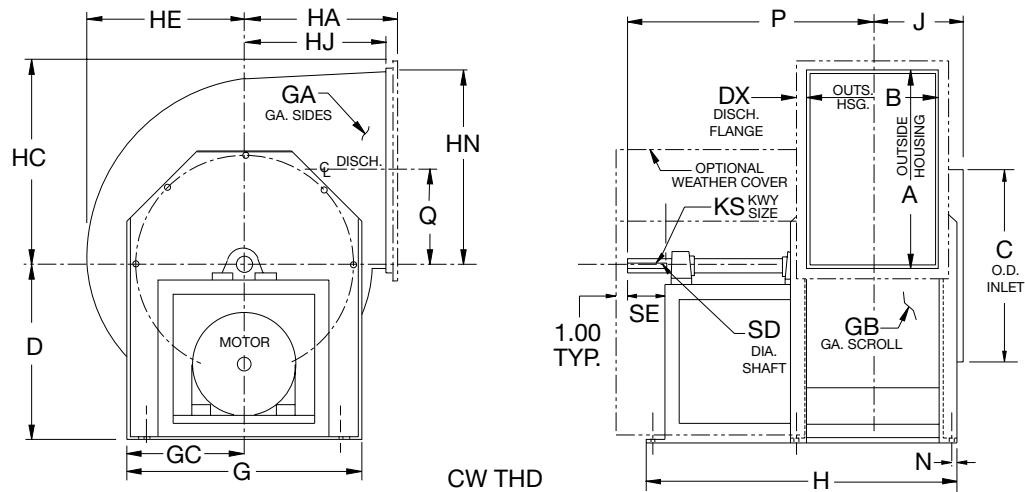
Performance ratings do not include the effects of appurtenances (accessories).

Class I fans are shown in regular face type

Class I fans are shown in regular face type
Class II fans are shown in **bold** face type

Underlined figures indicate maximum static efficiencies.

Dimensional Data



NOTES:

1. FLANGED OUTLET IS OPTIONAL ON SIZES 122-200. FLANGED OUTLET IS STANDARD ON SIZES 222-365 (EXCEPT ON TAD & DBD).

2. "CW" ROTATION IS SHOWN. "CCW" ROTATION IS SIMILAR BUT OPPOSITE.

*3. SHAFT DIAMETER IS INCREASED TO 1.187 ON HI-TEMP. FANS WHICH REQUIRE SHAFT COOLERS.

4. ALL UNITS ARE ROTATABLE TO ALL POSITIONS (EXCEPT SIZES 300-365 WITH "D" CENTERLINE HEIGHT ARE NOT ROTATABLE TO BHD).

SIZE	A	B	C	D		DG		DX	G	GA	GB	GC	H		HA	HB	HC	HD	HE	HF
				CL I	CL II	CL I	CL II						CL I	CL II						
122	13.00	9.75	13.25	14.50	17.63	14.50	17.63	1.00	16.00	14	14	8.00	24.50	32.00	9.75	16.75	13.94	11.19	10.56	9.94
135	14.31	10.81	14.56	15.75	19.13	15.75	19.13	1.00	17.50	14	14	8.75	25.63	34.81	10.75	18.38	15.25	12.31	11.63	10.94
150	15.88	11.94	16.19	17.75	19.38	17.75	19.38	1.00	19.00	14	14	9.50	28.75	36.00	11.94	20.31	16.81	13.75	12.88	12.13
165	17.44	13.19	17.75	19.00	19.38	19.00	19.38	1.00	20.50	14	14	10.25	30.13	37.31	13.13	22.25	18.38	15.06	14.13	13.31
182	19.38	14.56	19.50	21.00	21.88	21.00	21.88	1.25	22.50	12	14	11.25	34.38	43.44	14.50	24.81	20.56	16.69	15.69	14.75
200	21.19	15.94	21.38	22.75	22.75	22.75	22.75	1.25	25.00	12	14	12.50	35.75	44.81	15.81	27.00	22.38	18.38	17.31	16.25
222	23.56	17.69	23.75	25.50	25.50	25.50	25.50	1.25	27.25	12	14	13.63	40.75	47.13	17.69	30.00	24.75	20.44	19.06	17.94
245	25.94	19.44	26.06	28.00	28.00	28.00	28.00	1.25	29.75	12	14	14.88	43.50	48.81	19.50	33.00	27.13	22.38	21.00	19.75
270	28.63	21.38	28.50	30.50	30.50	30.50	30.50	1.50	33.00	12	14	16.50	47.38	53.00	21.44	36.44	30.06	24.69	23.19	21.81
300	31.81	23.81	31.63	27.50	27.50	34.25	34.25	1.50	36.13	10	12	18.06	52.88	56.00	23.81	40.31	33.25	27.44	25.75	24.25
330	35.13	26.06	34.75	30.00	30.00	37.25	37.25	1.50	38.88	10	12	19.44	56.13	61.75	26.25	44.44	36.56	30.13	28.38	26.69
365	38.75	28.88	38.50	33.50	33.50	41.00	41.00	1.50	43.75	10	12	21.88	64.56	64.56	29.00	48.88	40.13	33.50	31.50	29.63

SIZE	HG	HH	HJ	HK	HN	J	KS		L		N	P		Q	SD		SE		MAX. MTR.	
							CL I	CL II	CL	CL II		CL I	CL II		CL I	CL II	CL I	CL II	CL I	CL II
122	9.31	8.69	9.25	15.69	12.94	7.44	.25x.13	.25x.13	12.00	18.50	0.50	19.75	26.50	6.44	1.000	1.187	2.75	2.75	145T	184T
135	10.25	9.56	10.25	17.31	14.25	8.00	.25x.13	.25x.13	12.00	20.25	0.50	20.31	29.56	7.13	1.000	1.187	2.75	3.38	145T	215T
150	11.38	10.63	11.44	19.25	15.81	9.06	.25x.13	.25x.13	13.88	20.25	0.50	23.13	30.13	7.88	1.000	1.187	3.25	3.38	184T	215T
165	12.50	11.69	12.63	21.19	17.38	9.69	.25x.13	.25x.13	13.88	20.00	0.63	23.75	30.75	8.69	1.000*	1.187	3.25	3.38	184T	215T
182	13.81	12.88	14.00	23.56	19.31	10.88	.25x.13	.38x.19	16.75	24.75	0.63	27.94	36.81	9.63	1.187	1.437	3.75	4.00	215T	256T
200	15.19	14.13	15.31	25.75	21.13	11.56	.38x.19	.38x.19	16.75	24.63	0.63	28.63	37.50	10.56	1.437	1.437	3.75	4.00	215T	256T
222	16.81	15.69	17.19	28.75	23.50	12.44	.38x.19	.38x.19	19.00	23.88	0.88	27.63	38.38	11.75	1.437	1.437	3.75	4.00	215T	256T
245	18.50	17.25	19.00	31.75	25.88	13.31	.38x.19	.38x.19	20.00	23.88	0.88	29.00	39.25	12.94	1.437	1.687	3.75	4.00	215T	256T
270	20.44	19.06	20.94	35.00	28.56	14.25	.38x.19	.38x.19	22.00	26.13	0.88	31.69	43.13	14.25	1.437	1.687	4.00	4.63	215T	286T
300	22.75	21.25	23.31	38.94	31.75	15.50	.50x.25	.50x.25	24.00	25.38	1.13	40.38	44.44	15.81	1.937	1.937	3.75	4.63	215T	286T
330	25.00	23.31	25.75	43.00	35.06	16.63	.50x.25	.50x.25	25.00	28.88	1.13	42.50	49.69	17.50	1.937	2.187	3.75	5.25	256T	326T
365	27.75	25.88	28.50	47.44	39.63	18.00	.50x.25	.63x.31	28.88	28.88	1.13	50.56	51.06	19.25	1.937	2.437	4.75	5.25	286T	326T

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

Typical Specifications – BCV / BAV / FCV

Fans shall be Type BCV Backward Inclined, Type BAV Backward Inclined Airfoil or Type FCV Forward Curved Ventilating Sets, as manufactured by Twin City Fan & Blower, Minneapolis, Minnesota.

PERFORMANCE — Fans shall be tested in accordance with AMCA 211 and AMCA 311 test codes for air moving devices and shall be guaranteed by the manufacturer to deliver rated published performance levels. BCV and BAV fans shall be licensed to bear the AMCA certified ratings seal for both sound and air. FCV fans shall be licensed to bear the AMCA certified ratings seal for air.

HOUSING — Fan housings shall be heavy gauge, continuously welded construction. Housings with lock seams or partially welded construction are not acceptable. Housings shall be suitably braced to prevent vibration or pulsation. Housings shall have tapered spun, aerodynamically designed inlet cones or shrouds providing stable flow and high rigidity. Housings shall be of the rotatable design, convertible to eight standard discharge configurations.

WHEELS — BCV backward inclined wheels shall be single thickness plate type designed for maximum efficiency and quiet operation and shall be of the non-overloading type. Class I wheels, sizes 122 through 270, shall be constructed of aluminum, with blades riveted and welded to the spun wheel cone and backplate. Class I wheels, sizes 300 through 365, and all Class II wheels shall be constructed of heavy gauge steel with welded (not riveted) blades.

BAV backward inclined airfoil wheels shall be of the non-overloading type and include die-formed, airfoil type blades, continuously welded to the wheel cone and backplate. Partial welding will not be acceptable on airfoil blades. Size 245 and smaller use extruded aluminum blades. Sizes 270 and larger shall have die-formed airfoil steel blades.

FCV forward curved wheels shall be constructed of heavy gauge steel and solidly riveted to a steel shroud and backplate.

All wheels shall be statically and dynamically balanced.

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 — Bearings shall be heavy duty, grease lubricated, anti-friction ball, self-aligning, pillow block type and selected for a minimum average bearing life (AFBMA L-50) in excess of 200,000 hours at the maximum fan RPM.

DRIVE — Motor sheaves shall be cast iron, and supplied as either variable pitch or fixed pitch. Drives and belts shall be rated for a minimum of 120% 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 such as belt guards, weather covers, access doors, variable inlet vanes, outlet shutters, inlet screens, etc., 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 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 its BCV, BAV and FCV Ventilating Sets for at least one (1) year from startup or eighteen (18) months from shipment, whichever occurs first.

Typical Specifications – BCVU5 / BCVU2 / BCVSH

Fans shall be Type BCVU5 (UL 705), BCVU2 (UL 762) or BCVSH (UL Smoke & Heat) Backward Inclined Ventilating Sets, as manufactured by Twin City Fan & Blower, Minneapolis, Minnesota.

PERFORMANCE — Fans shall be tested in accordance with AMCA 211 and AMCA 311 test codes for air moving devices and shall be guaranteed by the manufacturer to deliver rated published performance levels. BCVU5, BCVU2 and BCVSH fans shall be licensed to bear the AMCA certified ratings seal for both sound and air.

HOUSING — Fan housings shall be heavy gauge, continuously welded construction. Housings with lock seams or partially welded construction are not acceptable. Housings shall be suitably braced to prevent vibration or pulsation. Housings shall have tapered spun, aerodynamically designed inlet cones or shrouds providing stable flow and high rigidity. Housings shall be of the rotatable design, convertible to eight standard discharge configurations.

WHEELS — BCV backward inclined wheels shall be single thickness plate type designed for maximum efficiency and quiet operation and shall be of the non-overloading type. BCVU5 and BCVU2 Class I wheels, sizes 122 through 270, shall be constructed of aluminum, with blades riveted and welded to the spun wheel cone and backplate. Class I wheels, sizes 300 through 365, and all Class II wheels shall be constructed of heavy gauge steel with welded (not riveted) blades. BCVSH fans shall have steel wheels on all fans sizes.

All wheels shall be statically and dynamically balanced.

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 — Bearings shall be heavy duty, grease lubricated, anti-friction ball, self-aligning, pillow block type and selected for a minimum average bearing life (AFBMA L-50) in excess of 200,000 hours at the maximum fan RPM.

DRIVE — Motor sheaves shall be cast iron, and supplied as either variable pitch or fixed pitch. BCVU5 and BCVU2 drives and belts shall be rated for a minimum of 120% of the required motor HP. BCVSH fans shall have drives and belts rated for 150% of the required motor HP with a minimum of two belts.

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 and dependent upon the fan type, accessories such as belt guards, weather covers, access doors, outlet shutters, inlet screens, etc., 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 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 its BCVU5, BCVU2 and BCVSH fans for at least one (1) year from startup or eighteen (18) months from shipment, whichever occurs first.

INDUSTRIAL & COMMERCIAL FANS

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

Fans & Blowers



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