

5BDD Series

Belt Drive Downblast Roof Ventilators

Application

Roof mounted belt drive downblast ventilators are designed to exhaust air out of commercial and industrial buildings. These models are for roof mounting only.

Design

Welded curb cap corners eliminate water entry into ducts or building. Ball bearing motors and variable pitch drives are packed separately when ordered with ventilators. Motor and wheel are easily detachable without removing ventilator from curb. Permanently lubricated ball bearings (5BDD 10 - 5BDD 13) and regreasable pillow block bearings (5BDD 15 - 5BDD 24).

Certification

All models are UL 705 listed.



Fantech, Inc. certifies that the models shown are licensed to bear the AMCA Seal. The ratings are based on the tests and procedures performed in accordance with AMCA Publication 211 and Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type A- Free inlet, Free outlet. Performance ratings include the effects of the bird screen.



- Airflow up to 18,850 cfm
- Externally cooled motor compartment
- Equipped with a built-in bird screen
- Air stream temperatures up to 170 °F



Specification data

Model	Rated power	Voltage	RPM	0.0" P _s	0.25" P _s	0.375" P _s	0.50" P _s	0.625" P _s	0.75" P _s	1.0" P _s	Shipping weight lbs	Shipping class	Item #
	HP	V / ~	min ⁻¹	cfm									
				Sones † BHP ‡									
5BDD 10BB-A	1/4	120/230	1819	1197	1104	1055	1004	950	884	723	110	2	46900
				14.2 0.22	14.3 0.23	13.9 0.24	13.4 0.24	13.4 0.25	12.7 0.25	12.1 0.25			
5BDD 12CB-A	1/3	120/230	1566	1611	1481	1414	1339	1260	1169	966	124	2	46902
				13.1 0.29	12.7 0.31	12.7 0.32	12.3 0.32	11.7 0.33	11.0 0.33	10.3 0.33			
5BDD 13DB-A	1/2	120/230	1528	2106	1969	1901	1820	1735	1645	1446	137	2	46905
				18.5 0.41	16.8 0.44	15.9 0.45	14.9 0.46	14.7 0.47	14.2 0.47	13.3 0.48			
5BDD 15DB-A	1/2	120/230	1301	2587	2402	2308	2190	2072	1939	1633	143	2	46909
				15.4 0.44	15.0 0.48	15.0 0.48	14.0 0.49	14.2 0.50	14.0 0.50	13.0 0.49			
5BDD 16EB-A	3/4	120/208-230	1261	3235	3036	2936	2817	2698	2579	2269	154	2	46918
				17.9 0.63	16.8 0.67	16.3 0.68	16.3 0.70	15.4 0.71	15.2 0.72	14.5 0.72			
5BDD 18FB-A	1	120/208-230	1169	4324	4075	3951	3815	3667	3520	3179	201	2	46927
				17.5 0.86	16.7 0.91	16.5 0.93	15.9 0.96	15.5 0.97	15.4 0.99	14.5 1.00			
5BDD 20GB-A	1-1/2	120/208-230	1154	5506	5222	5080	4938	4787	4636	4308	233	2	46939
5BDD 24GB-A	1-1/2	120/208-230	832	7121	6659	6429	6148	5868	5554	4823	254	2	46949
				19.8 1.35	19.6 1.43	19.0 1.46	18.8 1.49	18.7 1.51	18.4 1.52	17.8 1.51			
5BDD 24HX-A (*)	2	208-230/460	916	7839	7421	7209	6984	6730	6476	5889	310	2	46951
				22 1.80	22 1.89	22 1.93	22 1.97	21 2.00	21 2.02				

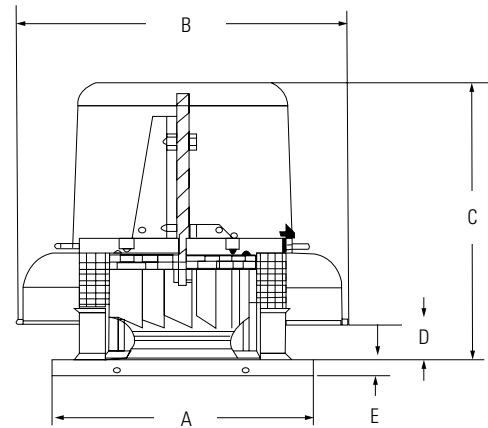
Performance certified for installation type A: free inlet, free outlet. Performance rating includes the effect of bird screen. ‡ Power rating (BHP) does not include transmission losses. (*) - 3 phase motor

† The sound ratings shown are loudness values in hemispherical sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

Dimensions

Model	A	B	C	D	E
5BDD 10	19	25 3/4	22 7/8	3	1 1/2
5BDD 12	22	28	23 3/8	3	1 1/2
5BDD 13	22	29 3/4	24 5/8	3 1/4	1 1/2
5BDD 15	26	31 11/16	27 3/8	3 3/4	1 1/2
5BDD 16	26	33 11/16	27 3/4	4 3/16	1 1/2
5BDD 18	30	36	29 5/8	4 3/4	1 1/2
5BDD 20	30	38 1/4	30 1/4	5 1/4	1 1/2
5BDD 24	34	44 1/4	33	6 11/16	1 1/2
5BDD 30	42	51 7/16	37 1/2	8 13/32	1 1/2
5BDD 36	46	60	41 5/16	10 1/2	1 1/2

Dimensional information is in inches.



FULLY ASSEMBLED PRVs

Downblast and Upblast fans with a “-A” designation indicate fans available as fully assembled. For models with a complete range motor and shell configurations, refer to pages 198-199 (Downblast) and 186-187 (Upblast). These fans are shipped unassembled as Shell, Motor, and Drive Pack separately. Shell comes complete with blower wheel, shaft assembly and motor mount installed.

Installation of the motor utilizing drive pack components ranges from 5-10 minutes depending on the skill range of the installer.

Accessories



5ACC.. FS
Non-ventilated Curb



5ACC.. FT
Non-ventilated Curb



5ACC.. RD
Roof Damper



5ACC.. MS
Motor Disconnect

5BDD Series

Belt Drive Downblast Roof Ventilators



Fantech, Inc. certifies that the models shown are licensed to bear the AMCA Seal. The ratings are based on the tests and procedures performed in accordance with AMCA Publication 211 and Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type A- Free inlet, Free outlet. Performance ratings include the effects of the bird screen.



In order to offer the 5BDD series with quick-ship availability, Fantech offers the complete range as 3 easily assembled components. The fans come with a Shell featuring a fully welded windband, heavy duty motor supports and machine balanced and mounted blower wheel. Factory pressed bearings complete the shaft and motor mount assembly. Choosing the right motor is as easy as finding

your desired airflow and matching that performance with the corresponding motor size and drive pack. **Not all available motor combinations are shown in the specification data table below.** Please refer to our online PRV selection tool for a complete listing of Fan combinations and performance data at fantech.net/products/select/prv-fan-select/

Specification data

Model	Rated power	Voltage	RPM	0.0" P _s	0.125" P _s	0.25" P _s	0.375" P _s	0.50" P _s	0.625" P _s	0.75" P _s	0.875" P _s	1.00" P _s	1.25" P _s
	HP	V	min ⁻¹	cfm									
	Sones † BHP ‡												
5BDD 12	1/4	120/230	1423	1464	1392	1321	1242	1158	1058	950	813	-	-
				12.5 0.22	12.3 0.23	11.7 0.24	11.4 0.24	10.9 0.25	10.3 0.25	10.0 0.25	9.2 0.25	-	-
5BDD 13	1/4	120/230	1213	1672	1586	1500	1393	1279	1154	1009	-	-	-
				14.0 0.21	13.4 0.22	12.3 0.23	11.1 0.23	10.0 0.24	9.3 0.24	9.3 0.24	-	-	-
	1/3	120/230	1335	1840	1762	1684	1595	1498	1390	1277	1145	638	-
				15.7 0.28	15.2 0.29	14.6 0.30	13.8 0.31	12.5 0.31	11.3 0.32	10.8 0.32	10.7 0.32	9.9 0.24	-
5BDD 15	1/4	120/230	1033	2054	1937	1816	1668	1503	1306	518	-	-	-
				11.8 0.22	11.5 0.23	11.2 0.24	10.9 0.25	10.7 0.25	9.9 0.25	8.6 0.15	-	-	-
	1/3	120/230	1136	2259	2153	2047	1919	1782	1628	1446	1183	-	-
				13.1 0.29	12.9 0.30	12.5 0.32	12.3 0.33	12.1 0.33	11.4 0.33	11.1 0.33	10.5 0.32	-	-
1/2	120/230 208-230/460	1301	2587	2494	2402	2308	2190	2072	1939	1804	1633	-	
				15.4 0.44	15.4 0.45	15.2 0.47	15.0 0.48	14.0 0.49	14.2 0.50	14.0 0.50	13.2 0.50	13.0 0.49	-
5BDD 16	1/3	120 / 230	962	2468	2338	2201	2044	1865	1648	1351	-	-	-
				11.8 0.28	11.3 0.29	10.8 0.31	9.9 0.32	9.5 0.32	8.9 0.32	8.5 0.31	-	-	-
	1/2	120/230 208-230/460	1100	2825	2711	2597	2467	2330	2177	1999	1790	1491	-
				14.1 0.42	13.6 0.43	13.4 0.45	12.8 0.46	12.2 0.47	11.7 0.48	11.2 0.48	11.0 0.48	10.2 0.46	-
	3/4	120/230 208-230/460	1261	3235	3136	3036	2936	2817	2698	2579	2425	2269	1877
				17.9 0.63	16.9 0.65	16.8 0.67	16.3 0.68	16.3 0.70	15.4 0.71	15.2 0.72	14.5 0.72	14.5 0.72	13.2 0.70
5BDD 18	1/3	120 / 230	811	2999	2821	2631	2418	2168	1821	-	-	-	-
				10.3 0.29	9.4 0.30	9.2 0.32	8.7 0.33	8.4 0.33	8.4 0.33	-	-	-	-
	1/2	120/230 208-230/460	928	3432	3276	3120	2939	2754	2533	2264	-	-	-
				13.4 0.43	11.3 0.45	11.0 0.47	10.8 0.48	10.4 0.49	9.9 0.50	9.5 0.50	-	-	-
3/4	120/208-230 208-230/460	1062	3928	3791	3655	3514	3352	3190	3004	2811	2549	-	
				14.7 0.64	13.9 0.67	13.7 0.69	13.4 0.71	13.3 0.73	12.7 0.74	12.6 0.75	12.0 0.75	11.3 0.74	-
5BDD 20	1/3	120 / 230	699	3335	3101	2858	2588	2241	-	-	-	-	-
				12.5 0.28	10.0 0.31	9.3 0.32	8.8 0.33	8.3 0.33	-	-	-	-	-
	1/2	120/208-230 208-230/460	800	3817	3612	3406	3188	2942	2653	2220	-	-	-
				14.7 0.42	11.3 0.45	11.2 0.47	10.6 0.49	10.0 0.50	9.8 0.50	9.4 0.48	-	-	-
	3/4	120/208-230 208-230/460	916	4371	4192	4013	3828	3638	3429	3181	2895	2335	-
				15.6 0.64	14.8 0.67	14.2 0.69	13.5 0.72	12.9 0.75	12.6 0.75	12.0 0.75	11.9 0.75	11.7 0.69	-
	1	120/208-230 208-230/460	1008	4810	4647	4484	4322	4149	3976	3786	3560	3325	1186
				18.7 0.85	17.7 0.88	17.1 0.91	16.4 0.94	16.0 0.96	15.4 0.98	14.6 1.00	14.5 1.00	14.4 1.00	13.3 0.57

Performance certified for installation type A: free inlet, free outlet. Performance rating includes the effect of bird screen. # Power rating (BHP) does not include transmission losses.

† The sound ratings shown are loudness values in hemispherical sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

5BDD Series

Belt Drive Downblast Roof Ventilators



Fantech, Inc. certifies that the models shown are licensed to bear the AMCA Seal. The ratings are based on the tests and procedures performed in accordance with AMCA Publication 211 and Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type A- Free inlet, Free outlet. Performance ratings include the effects of the bird screen.



Specification data (cont.)

Model	Rated power	Voltage	RPM	0.0" P _s	0.125" P _s	0.25" P _s	0.375" P _s	0.50" P _s	0.625" P _s	0.75" P _s	1.00" P _s	1.25" P _s	1.50" P _s
	HP	V	min ⁻¹	cfm									
	Sones † BHP ‡												
5BDD 24	1/3	120 / 230	504	4313	3931	3478	2877	-	-	-	-	-	-
				9.6 0.30	9.5 0.32	9.0 0.34	8.5 0.34	-	-	-	-	-	-
	1/2	120/230 208-230/460	577	4938	4605	4233	3795	3253	-	-	-	-	-
				11.8 0.45	11.7 0.48	11.7 0.50	11.0 0.51	10.2 0.50	-	-	-	-	-
5BDD 24	3/4	120/208-230 208-230/460	660	5649	5358	5059	4707	4309	3844	2837	-	-	-
				15.1 0.67	15.1 0.71	14.9 0.73	14.9 0.75	14.2 0.76	13.3 0.76	12.3 0.68	-	-	-
5BDD 24	1	120/208-230 208-230/460	727	6222	5959	5692	5389	5069	4689	4266	-	-	-
				18.0 0.90	18.0 0.97	18.0 0.97	17.9 1.00	17.4 1.01	17.0 1.02	16.0 1.01	-	-	-
5BDD 30	1/2	120/208-230 208-230/460	412	6470	5866	5234	4371	-	-	-	-	-	-
				10.7 0.44	10.8 0.47	10.5 0.50	10.0 0.50	-	-	-	-	-	-
	3/4	120/208-230 208-230/460	471	7396	6869	6326	5732	4906	-	-	-	-	-
				12.5 0.66	12.1 0.70	11.8 0.73	11.5 0.75	11.0 0.74	-	-	-	-	-
	1	120/208-230 208-230/460	519	8150	7672	7188	6681	6084	5257	-	-	-	-
				13.5 0.89	13.5 0.92	13.0 0.96	12.7 1.00	12.3 1.01	11.6 0.98	-	-	-	-
	1-1/2	120/208-230 208-230/460	594	9227	8910	8490	8058	7619	7099	6515	-	-	-
				16.1 1.33	15.8 1.37	15.6 1.41	15.0 1.46	14.8 1.49	12.9 1.51	13.9 1.50	-	-	-
	2	208-230/460	653	10254	9875	9493	9111	8708	8305	7826	6545	-	-
				17.8 1.76	17.8 1.81	17.5 1.86	16.9 1.91	16.7 1.96	16.3 1.99	15.3 2.00	15.1 1.95	-	-
	3	208-230/460	748	11746	11416	11082	10749	10414	10062	9711	8907	7855	-
				21 2.65	21 2.71	21 2.76	20 2.82	19.9 2.87	19.7 2.92	19.2 2.97	18.1 3.01	17.8 2.96	-
5	208-230/460	887	13928	13651	13370	13089	12808	12526	12238	11546	11037	10278	
			30 4.42	29 4.49	30 4.55	30 4.62	29 4.68	28 4.74	28 4.81	27 4.87	25 5.01	24 5.02	
5BDD 36	3/4	120/208-230 208-230/460	339	10032	9207	8221	6803	-	-	-	-	-	-
				11.9 0.74	10.3 0.78	9.4 0.81	8.5 0.79	-	-	-	-	-	-
	1	120/208-230 208-230/460	373	11038	10288	9435	8397	6687	-	-	-	-	-
				13.6 0.98	12.0 1.03	11.0 1.07	10.3 1.07	10.0 1.00	-	-	-	-	-
	1-1/2	120/208-230 208-230/460	427	12636	11981	11302	10495	9541	8114	-	-	-	-
				16.7 1.48	14.9 1.53	14.1 1.58	13.7 1.61	12.9 1.61	12.8 1.55	-	-	-	-
	2	208-230/460	470	13908	13313	12718	12017	11284	10357	9030	-	-	-
				19.5 1.97	18.2 2.03	17.8 2.09	16.8 2.13	16.1 2.15	15.0 2.14	14.9 2.07	-	-	-
	3	208-230/460	538	15921	15401	14881	14352	13712	13071	12310	11486	-	-
				24.0 2.96	23.0 3.03	23 3.10	22.0 3.15	21 3.20	20 3.22	19.2 3.22	18.0 3.19	-	-
	5	208-230/460	637	18850	18411	17972	17533	17094	16563	16023	14861	-	-
				28.0 4.90	28.0 4.99	29.0 5.08	28.0 5.15	27.0 5.22	27.0 5.28	25 5.32	23.0 5.35	-	-

Performance certified for installation type A: free inlet, free outlet. Performance rating includes the effect of bird screen. ‡ Power rating (BHP) does not include transmission losses.

† The sound ratings shown are loudness values in hemispherical sonas at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sones levels.