



The Industrial Choice.



**Model BSD53
Direct Drive**

**LOW PROFILE UPBLAST
PROPELLER ROOF VENTILATORS**

Models BSD53 / BSB53

Roof Ventilators

Models

BSD53 | **BSB53**



Model BSD53



Model BSB53

Aerovent's line of Low Profile Upblast Propeller Roof Ventilators provide general exhaust of commercial and light industrial buildings while offering a pleasing low profile design that minimizes extension above the roof line. The upblast design discharges air and contaminants up and away from the building. These ventilators exhaust large volumes of air at low to medium static pressures. Typical applications for upblast propeller roof ventilators include warehouses, shopping centers and manufacturing facilities.

A wide array of adjustable pitch, cast aluminum propellers are available to meet specific performances and application requirements. The cost effective design is available in both belt and direct drive configurations. Application flexibility, cost competitiveness and robust design all combine to make Aerovent's BSD53 and BSB53 Low Profile Upblast Propeller Roof Ventilators an industry leader.

Models

Model BSD53

Upblast direct drive model BSD53 is available for general-purpose exhaust. Direct drive fans are an ideal choice for installations where service and maintenance are made difficult due to limited access. The BSD53 can save on service costs incurred through sheave, belt and bearing maintenance.

Model BSB53

Standard duty upblast belt driven model BSB53 is available for use in clean air applications requiring the adjustable performance of a belt drive fan. Motor and drives are located below the fan, inside the roof curb for access from inside the building.

Sizes

Direct Drive sizes: 14 to 48 inch wheel diameters

Belt driven sizes: 21 to 54 inch wheel diameters

Performance

Airflow to 47,400 CFM

Static pressure to 1 inch w.g.



Models BSD53 and BSB53 are UL/cUL 705 listed, for electrical, File No. E158680.

Construction Features

Propellers

Cast aluminum blades and hubs. Propellers on belt driven units shall be secured to the fan shaft with a taperlock bushing. Propellers on direct drive units shall be mounted directly on the motor shaft with a taperlock bushing.

Butterfly Dampers

Blades constructed of steel as standard, unless the outlet velocity of the fan is below the minimum required to open steel damper blades, then aluminum blades shall be provided. Butterfly dampers provide weather protection when the fan is not in operation. A rain channel provides for run off of precipitation.

Windband

Constructed of heavy gauge galvanized steel with bolted seams. Reinforcing flange provides rigidity, strength and safe handling. The windband is removable with four bolts, allowing access to the fan through the damper blades.

Bearings (BSB53 only)

Cast iron pillow block bearings selected for L-50 average life of 200,000 hours at maximum cataloged operating speeds.

Curb Base

Heavy gauge galvanized or finish painted steel curb bases are provided with prepunched mounting holes. Curb base includes venturi inlet for efficient airflow.

Motor and Drive Frame

Support assemblies are constructed of heavy gauge galvanized or finish painted steel.

Shaft (BSB53 only)

Shaft diameters are sized to have a first critical speed of at least 125% of the fan's maximum operating speed.

Motors

ODP, TEFC and Explosion proof, single and three phase motors are carefully matched to the fan load.

Drives (BSB53 only)

Drive sheaves shall be of cast iron and supplied as variable pitch as standard. Drives and belts shall be rated for 150% of the required motor HP.

Lifting Lugs

The windband brackets also double as lifting points for the unit.

Mechanical Run Test & Final Vibration Check

All fans are assembled for a mechanical run test and final balance prior to shipment. Vibration readings are taken on both fan bearings in the axial, horizontal and vertical directions at the specified speed. Fans are balanced to 0.15 in./sec. peak or less.



Propeller



Butterfly Damper



Pillow Block Bearing



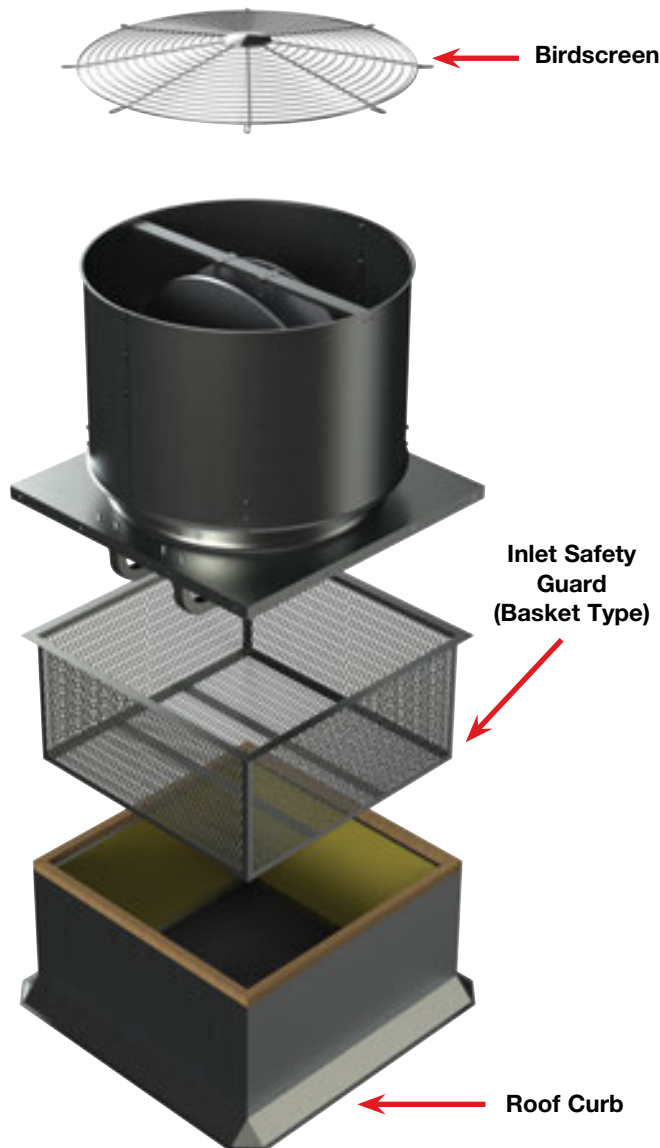
Curb Base



Motor & Drive Frame



Accessories



Inlet Safety Guard

A basket style guard shall be offered to accommodate motors and drives extending down into the roof curb. Aerovent recommends the use of an inlet safety screen on all non-ducted installations.

Screens

A zinc plated steel birdscreen protects the fan discharge from birds and other types of debris.

Fusible Link Assembly

Allows the damper blades to open when the link melts at 165°F. This accessory is optional on models BSD53 and BSB53.

Magnetic Damper Latches

Used to hold butterfly dampers closed when fan is not in operation. Damper blades must be steel with magnetic damper latches.

Hinged Base

Allows access to propeller, motor and drives from the roof. Only available through size 36.

Tie Down Brackets

Quantity of four brackets to allow for unit to be anchored to the roof. Cables by others.

Extended Lube Lines

Allow for easy lubrication of bearings on belt driven units without disassembly by extending polyethylene lines from fan bearings to exterior of base.

Aluminum Construction

Stack cap assembly is constructed out of aluminum in lieu of standard galvanized. Orifice panel is not constructed of aluminum.

Roof Curbs and Extensions

Prefabricated roof curbs are available in heavy duty galvanized steel or aluminum in heights of 8", 12" or 18". Both types, canted and self-flashing, are provided with 1½" of insulation and feature continuously welded seams for added rigidity and moisture protection.

Extensions work to extend the height of the roof curb. Standard curb extension is galvanized steel, 13" high and has an 8" removable panel.

Disconnect Switches

A NEMA 3R, 4 or 7/9 disconnect switch is available for positive electrical shutoff of the fan and the protection of service personnel. NEMA 1 disconnect switches are not available on models BSB53 and BSD53.

Special Coatings

A wide variety of special coatings are available for both decorative or corrosion resistant requirements.



Material Specifications - Direct Drive, BSD53

FAN SIZE	GAUGE OF MATERIAL				PROPELLERS
	WIND BAND	FAN PANEL	DRIVE FRAME		
14	20	16	14	DIE CAST ALUM.	
16	20	16	14		
18	20	16	14		
21	20	16	14		
24	20	16	12		
30	20	16	12		
36	20	16	12		
42	20	14	10		
48	20	14	10		

* All gauges are minimums.

Shipping Weights

FAN SIZE	BSD53	BSB53
14	85	---
16	96	---
18	108	---
21	133	148
24	161	175
30	213	242
36	290	321
42	370	438
48	416	519
54	---	594

* Weights are only approximate and do not include accessories. Consult Fan Selector Program for actual shipping weights.

Material Specifications - Belt Driven, BSB53

FAN SIZE	GAUGE OF MATERIAL				SHAFT SIZE (IN.)
	WIND BAND	FAN PANEL	DRIVE FRAME	PROPELLERS	
21	20	16	14	DIE CAST ALUM.	1
24	20	16	14		1
30	20	16	12		1
36	20	16	12		1
42	20	14	12		1 ³ / ₁₆
48	20	14	12		1 ⁷ / ₁₆
54	18	14	10		1 ⁷ / ₁₆

* All gauges are minimums.

CFM Required to Open Damper Blades

DAMPER MATERIAL		14	16	18	21	24	30	36	42	48	54
	STEEL	MIN.	1955	2516	3179	4284	5627	8704	12444	16949	22032
MAX.		2413	3519	4805	6363	8259	16223	24544	29853	41165	52321
ALUM	MIN.	1380	1776	2244	3024	3972	6144	8784	11964	15552	19980
	MAX.	2413	3519	4805	6363	8259	16223	24544	29853	41165	52321

The terminal velocity of rain is approximately 2000 feet per minute. Selections below this point are not recommended if rain entry into the building is a concern.



Direct Drive

BSD53 | Size 14

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)											
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000
14B105	10	1/4	1750	0.10	13.5	943	859	840	821	781	733	682	614	469	378	296	
	15		1750	0.14	15.1	1267	1189	1169	1149	1108	1063	1005	910	785			
	20		1750	0.19	16.3	1561	1481	1459	1438	1394	1347	1290	1173	1030			
	25		1750	0.25	17.1	1824	1735	1711	1687	1636	1581	1513	1381	1223			
	30	1/3	1750	0.31	17.9	2047	1941	1911	1881	1816	1743	1655	1525	1325			

BSD53 | Size16

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)											
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000
16B105	10	1/4	1750	0.16	16.6	1384	1283	1259	1235	1188	1137	1079	990	848	667	558	
	15		1750	0.25	18.9	1862	1767	1743	1719	1671	1621	1567	1462	1287	1132		
	20	1/3	1750	0.34	21	2294	2198	2173	2147	2096	2043	1986	1881	1663	1506		
	25	1/2	1750	0.43	22	2678	2571	2543	2514	2456	2394	2328	2205	1964	1771		
	30		1750	0.54	23	3001	2876	2842	2807	2734	2657	2570	2417	2166	1924		

BSD53 | Size 18

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)											
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000
18B105	10	1/3	1750	0.25	21	1937	1816	1787	1759	1703	1646	1584	1480	1310	1114	912	663
	15		1750	0.40	23	2613	2501	2472	2443	2386	2329	2269	2169	1945	1760	1564	
	20	1/2	1750	0.54	25	3220	3106	3076	3046	2985	2923	2859	2755	2514	2281	2083	
	25	3/4	1750	0.70	26	3752	3628	3595	3561	3493	3423	3350	3229	2960	2700	2465	
	30		1750	0.87	27	4200	4052	4013	3973	3891	3806	3715	3561	3262	2971	2678	

BSD53 | Size 21

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)											
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000
21B105	10	1/2	1750	0.44	26	3003	2851	2814	2776	2703	2630	2556	2435	2212	1995	1736	1267
	15		3/4	1750	0.69	29	4064	3921	3885	3848	3774	3701	3627	3511	3277	2994	2757
	20	1	1750	0.99	31	5005	4861	4823	4785	4707	4629	4550	4427	4192	3875	3586	3046
	25	1 1/2	1750	1.28	33	5822	5668	5627	5585	5500	5414	5325	5185	4917	4574	4248	3627
	30		2	1750	1.56	35	6505	6323	6275	6226	6127	6024	5917	5747	5424	5059	4685

BSD53 | Size 24

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)											
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000
24B105	10	3/4	1750	0.69	36	4377	4189	4142	4094	4000	3907	3812	3665	3395	3111	2825	2120
	15		1	1750	1.13	35	5941	5764	5718	5671	5577	5484	5389	5244	4979	4649	4312
	20	1 1/2	1750	1.57	34	7317	7136	7088	7040	6942	6844	6745	6593	6320	5987	5597	4906
	25		2	1750	2.06	35	8496	8303	8251	8199	8094	7987	7879	7711	7406	7043	6628
	30	3	1750	2.60	37	9476	9239	9179	9120	8999	8877	8752	8558	8202	7801	7362	6355

NOTES:

- Performance certified is for installation type A: Free inlet, free outlet.
- Performance ratings do not include the effects of appurtenances (accessories).
- The sound ratings shown are loudness values in fan sone at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values are for installation Type A: Free inlet hemispherical sone levels.

Direct Drive

BSD53 | Size 30

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)											
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000
30B105	10	1/2	1160	0.41	24	5465	5011	4888	4761	4503	4238	3954	3472	2526	1519		
	15	3/4	1160	0.66	25	7451	6998	6879	6759	6510	6242	5949	5482	4637	3408		
	20	1	1160	0.96	25	9156	8694	8574	8452	8200	7931	7637	7154	6264	5191		
	25	1 1/2	1160	1.31	25	10599	10112	9986	9857	9591	9308	9006	8513	7521	6170		
	30	2	1160	1.73	27	11760	11243	11107	10968	10678	10360	10015	9532	8472			

BSD53 | Size 36

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)											
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000
36B206	10	1	1160	0.96	36	8851	8323	8184	8043	7755	7451	7121	6582	5621	4498	3296	
	15	1 1/2	1160	1.47	39	11955	11468	11335	11199	10921	10631	10325	9820	8847	7844	6451	2800
	20	2	1160	2.12	40	14762	14268	14131	13993	13709	13414	13105	12610	11655	10582	9324	4592
	25	3	1160	2.96	42	17258	16719	16573	16426	16124	15811	15485	14969	14017	12873	11352	
	30	5	1160	3.97	44	19394	18783	18625	18464	18135	17794	17441	16856	15847	14555	12511	

BSD53 | Size 42

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)											
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000
42B304	10	1	860	0.78	24	11354	10482	10256	10026	9540	9001	8418	7480	5641	3496		
	15	1 1/2	860	1.23	26	14616	13711	13462	13207	12680	12131	11554	10671	9130	6550		
	20	2	860	1.76	27	17387	16428	16162	15889	15330	14760	14168	13255	11707	9626		
	25	3	860	2.40	28	19688	18643	18363	18077	17495	16900	16284	15318	13595			
	30	3	860	3.15	29	21470	20374	20086	19793	19182	18512	17849	16831	14704			

BSD53 | Size 48

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)											
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000
48B304	10	1 1/2	860	1.14	29	16339	15137	14823	14501	13814	13029	12187	10913	8459	5037		
	15	2	860	1.83	31	21073	19834	19491	19138	18413	17660	16869	15684	13740	10909		
	20	3	860	2.69	32	25038	23713	23352	22984	22235	21473	20682	19469	17476	14885		
	25	5	860	3.71	33	28205	26810	26446	26077	25318	24500	23659	22429	20129			
	30	5	860	4.91	35	30613	29230	28860	28479	27666	26755	25875	24508	21303			

NOTES:

1. Performance certified is for installation type A: Free inlet, free outlet.
2. Performance ratings do not include the effects of appurtenances (accessories).
3. The sound ratings shown are loudness values in fan sone at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values are for installation Type A: Free inlet hemispherical sone levels.



Belt Driven

BSB53 | Size 21

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)												
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000	
21B105	20	1/4	1142	0.27	16.6	3266	3036	2976	2914	2777	2595	2403	2164					
	25		1048	0.27	15.2	3487	3212	3136	3054	2854	2623	2418	2029					
	30		977	0.27	13.9	3632	3278	3174	3057	2797	2525	2245						
	20	1/3	1252	0.36	18.9	3581	3373	3318	3263	3148	3017	2846	2592	2218				
	25		1150	0.36	17.6	3826	3579	3512	3442	3288	3092	2882	2602					
	30		1072	0.36	17	3985	3669	3580	3484	3265	3025	2776						
	20	1/2	1438	0.54	24	4113	3934	3887	3840	3744	3645	3537	3336	2963	2642			
	25		1320	0.54	22	4392	4180	4123	4066	3945	3813	3656	3378	2967				
	30		1231	0.54	21	4576	4307	4234	4157	3994	3805	3598	3279					
	20	3/4	1646	0.80	29	4708	4554	4513	4472	4389	4306	4221	4084	3794	3460	3184		
	25		1511	0.82	26	5027	4845	4796	4747	4647	4542	4431	4239	3840	3482	3119		
	30		1409	0.82	25	5237	5006	4945	4881	4749	4607	4450	4184	3719	3232			

BSB53 | Size 24

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)											
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000
24B105	20	1/3	1067	0.36	15.6	4461	4150	4068	3984	3797	3561	3311	2976				
	25		977	0.36	13.7	4743	4373	4271	4162	3902	3605	3322	2840				
	30		908	0.36	12.7	4917	4445	4311	4163	3833	3455	3052					
	20	1/2	1226	0.54	19.3	5126	4858	4788	4718	4571	4412	4223	3891	3400			
	25		1122	0.54	17.2	5447	5130	5046	4958	4771	4550	4293	3918				
	30		1043	0.55	15.8	5648	5244	5137	5023	4771	4486	4174	3657				
	20	3/4	1403	0.83	24	5866	5635	5574	5513	5390	5263	5128	4896	4420	3994	3524	
	25		1285	0.83	21	6239	5966	5894	5820	5669	5506	5325	5001	4452	3892		
	30		1194	0.82	19.9	6466	6116	6026	5933	5737	5518	5277	4882	4140			
	20	1	1544	1.07	28	6455	6248	6193	6137	6026	5914	5798	5613	5236	4802	4417	
	25		1414	1.10	25	6865	6619	6554	6489	6355	6215	6067	5817	5313	4822	4311	
	30		1314	1.10	23	7115	6798	6718	6636	6466	6284	6084	5754	5130	4443		

NOTES:

1. Performance certified is for installation type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values are for installation Type A: Free inlet hemispherical sone levels.

Belt Driven

BSB53 | Size 30

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)											
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000
30B105	20	1/2	964	0.55	19	7609	7045	6896	6740	6399	6017	5608	4928				
	25		869	0.55	16.2	7940	7273	7090	6896	6473	5986	5393					
	30		793	0.55	14.6	8039	7242	7000	6752	6238							
	20	3/4	1104	0.83	23	8714	8227	8100	7971	7700	7406	7082	6558	5575			
	25		995	0.83	20	9091	8517	8365	8208	7873	7506	7102	6375				
	30		908	0.83	17.9	9205	8526	8340	8137	7704	7271	6720					
	20	1	1215	1.10	27	9590	9150	9036	8921	8684	8435	8166	7723	6907	5986		
	25		1095	1.10	23	10005	9487	9352	9214	8925	8614	8280	7724	6560			
	30		999	1.10	21	10128	9519	9354	9184	8805	8418	8025	7238				
	20	1 1/2	1390	1.65	34	10971	10590	10491	10392	10191	9984	9770	9427	8785	8078	7299	
	25		1253	1.65	29	11449	11000	10884	10767	10526	10274	10009	9582	8775	7765	6236	
	30		1143	1.65	26	11588	11063	10924	10782	10486	10157	9808	9317	8146			
	20	2	1530	2.20	40	12076	11732	11643	11553	11373	11189	11001	10708	10174	9574	8931	7480
	25		1379	2.20	33	12600	12194	12090	11984	11770	11550	11321	10957	10293	9529	8602	
	30		1258	2.20	30	12754	12280	12156	12030	11770	11498	11197	10725	9920			
	20	3	1752	3.29	50	13829	13531	13454	13376	13219	13062	12902	12658	12233	11770	11263	10149
	25		1579	3.30	42	14427	14074	13984	13894	13710	13524	13333	13037	12510	11934	11300	9734
	30		1440	3.30	38	14599	14189	14083	13975	13755	13529	13295	12916	12232	11556	10694	

BSB53 | Size 36

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)											
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000
36B206	20	3/4	845	0.83	23	10753	10035	9834	9626	9176	8662	8088	7141	4152			
	25		758	0.82	20	11278	10397	10150	9891	9325	8669	7821	5907				
	30		688	0.83	18.6	11503	10411	10094	9740	9061	7707						
	20	1	930	1.09	27	11835	11194	11016	10834	10450	10032	9561	8777	7171	4043		
	25		835	1.10	24	12423	11637	11421	11197	10718	10192	9594	8420				
	30		757	1.10	21	12656	11681	11412	11123	10491	9837	8546					
	20	1 1/2	1064	1.64	35	13540	12993	12842	12689	12371	12037	11682	11090	9955	8632	6406	
	25		955	1.65	30	14208	13535	13353	13166	12775	12359	11913	11165	9479			
	30		866	1.65	26	14479	13641	13416	13185	12684	12124	11608	10212				
	20	2	1171	2.20	41	14902	14413	14278	14142	13861	13569	13265	12779	11844	10787	9580	4931
	25		1051	2.20	35	15637	15033	14870	14704	14362	14003	13624	13012	11812	10148		
	30		953	2.20	31	15933	15179	14980	14776	14351	13880	13369	12652	10369			
	20	3	1340	3.27	54	17053	16635	16521	16404	16165	15920	15669	15276	14570	13761	12859	10779
	25		1204	3.30	44	17913	17396	17256	17115	16827	16528	16220	15733	14847	13822	12506	
	30		1091	3.30	40	18240	17589	17419	17246	16890	16521	16128	15464	14399	12284		
	20	5	1589	5.46	76	20222	19876	19785	19691	19496	19296	19092	18780	18238	17660	17035	15588
	25		1427	5.51	63	21231	20805	20690	20573	20337	20095	19848	19467	18797	18075	17287	15349
	30		1294	5.51	55	21634	21090	20950	20808	20519	20223	19919	19445	18550	17659	16597	

NOTES:

1. Performance certified is for installation type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values are for installation Type A: Free inlet hemispherical sone levels.



Belt Driven

BSB53 | Size 42

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)												
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000	
42B304	20	1	735	1.10	21	14860	13702	13379	13050	12376	11671	10957	9853					
	25		664	1.10	18.3	15201	13798	13420	13033	12224	11370	10460						
	30		606	1.10	16.9	15129	13504	13027	12558	11556	10313							
	20	1 1/2	842	1.65	26	17024	16040	15766	15486	14914	14328	13718	12784	11177	8795			
	25		760	1.65	23	17399	16197	15872	15542	14869	14166	13430	12268					
	30		694	1.65	21	17326	15938	15562	15155	14330	13472	12453						
	20	2	926	2.20	29	18722	17843	17600	17351	16839	16317	15783	14950	13535	12025	9815		
	25		836	2.20	26	19139	18060	17770	17474	16873	16256	15615	14609	12790				
	30		764	2.21	25	19073	17827	17495	17153	16404	15666	14883	13477					
	20	3	1060	3.29	36	21431	20682	20475	20265	19832	19385	18930	18238	17029	15792	14532	10862	
	25		957	3.30	32	21909	20981	20734	20482	19968	19443	18910	18081	16620	15051			
	30		874	3.30	30	21819	20742	20460	20172	19577	18923	18264	17286	15250				
	20	5	1257	5.47	50	25414	24801	24632	24461	24109	23748	23377	22809	21843	20839	19802	17710	
	25		1135	5.51	43	25984	25215	25012	24807	24386	23955	23517	22851	21704	20497	19234	16479	
	30		1037	5.52	40	25889	24991	24759	24524	24044	23549	23031	22191	20835	19245	17364		

BSB53 | Size 48

PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)												
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000	
48B304	20	1 1/2	731	1.65	25	21282	19682	19245	18802	17894	16948	16002	14583	10971				
	25		657	1.65	21	21548	19677	19171	18626	17545	16408	15165						
	30		598	1.65	19.8	21286	19154	18495	17872	16426	14505							
	20	2	805	2.20	29	23437	22007	21616	21218	20413	19578	18719	17434	15158				
	25		723	2.21	25	23712	22029	21583	21123	20128	19156	18116	16404					
	30		659	2.21	23	23458	21579	21024	20425	19293	17870	16097						
	20	3	921	3.30	35	26814	25590	25257	24918	24225	23522	22802	21683	19812	17881	15132		
	25		827	3.30	31	27123	25668	25288	24901	24099	23228	22370	21050	18560				
	30		754	3.31	29	26839	25236	24797	24330	23294	22310	21193	18973					
	20	5	1092	5.50	47	31792	30784	30513	30236	29670	29089	28500	27607	26055	24462	22905	19058	
	25		981	5.51	41	32174	30959	30646	30329	29683	29019	28319	27211	25402	23397	21147		
	30		894	5.52	38	31823	30498	30146	29784	29025	28171	27296	26052	23222				
	20	7 1/2	1250	8.25	61	36392	35527	35295	35059	34577	34083	33580	32810	31510	30157	28769	26030	
	25		1123	8.26	52	36831	35776	35506	35234	34681	34118	33543	32647	31040	29476	27772	23923	
	30		1023	8.27	47	36415	35270	34971	34665	34036	33377	32656	31500	29671	27248	24472		

NOTES:

1. Performance certified is for installation type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values are for installation Type A: Free inlet hemispherical sone levels.

Belt Driven

BSB53 | Size 54

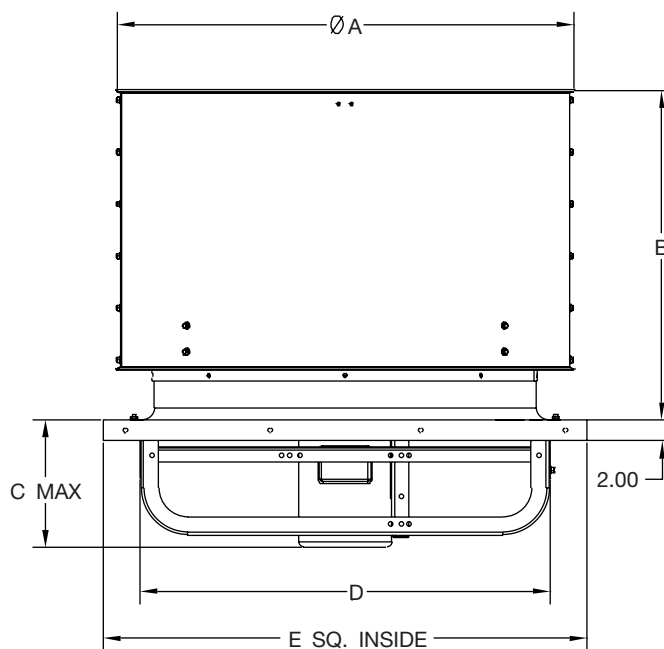
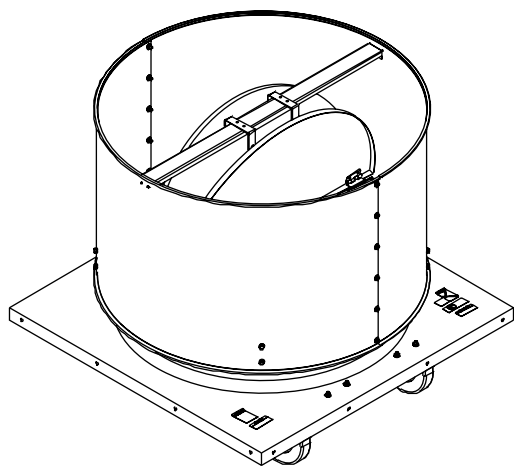
PROPELLER	BLADE ANGLE	MOTOR HP	FAN RPM	MAX BHP	SONES @ 0" SP	CFM / STATIC PRESSURE (IN. W.G.)											
						0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	1.000
54B406	20	1 1/2	556	1.66	26	24411	22429	21893	21354	20281	19161	17899	15676				
	25		498	1.65	23	25133	22806	22158	21431	20000	18351	16447					
	30		452	1.65	22	25193	22427	21353	20442								
	20	2	612	2.21	30	26869	25094	24613	24126	23149	22172	21153	19415	15666			
	25		549	2.21	28	27707	25626	25062	24474	23151	21862	20354	17771				
	30		498	2.21	26	27757	25383	24575	23588	20319							
	20	3	700	3.30	40	30733	29209	28799	28381	27531	26676	25825	24514	21998	18889		
	25		628	3.31	35	31694	29901	29426	28938	27915	26754	25627	23770	20017			
	30		570	3.31	32	31770	29781	29199	28556	26890	25304						
	20	5	830	5.50	58	36440	35184	34847	34505	33806	33093	32373	31293	29477	27488	25173	18231
	25		744	5.50	49	37548	36055	35666	35271	34459	33615	32706	31226	28756	25733		
	30		675	5.51	44	37622	35999	35551	35080	34057	32712	31374					
	20	7 1/2	950	8.26	72	41709	40630	40341	40048	39451	38841	38222	37280	35708	34128	32461	28508
	25		852	8.26	64	42999	41704	41371	41033	40345	39638	38910	37760	35622	33515	31008	
	30		773	8.27	56	43085	41694	41320	40934	40118	39233	38174	36311				
	20	10	1046	11.02	84	45924	44957	44697	44434	43900	43355	42801	41956	40527	39102	37666	34541
	25		938	11.03	74	47339	46168	45868	45565	44950	44321	43678	42684	40875	38934	37025	32306
	30		851	11.04	68	47432	46181	45850	45510	44801	44049	43242	41768	39125			

NOTES:

1. Performance certified is for installation type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values are for installation Type A: Free inlet hemispherical sone levels.



Model BSD53

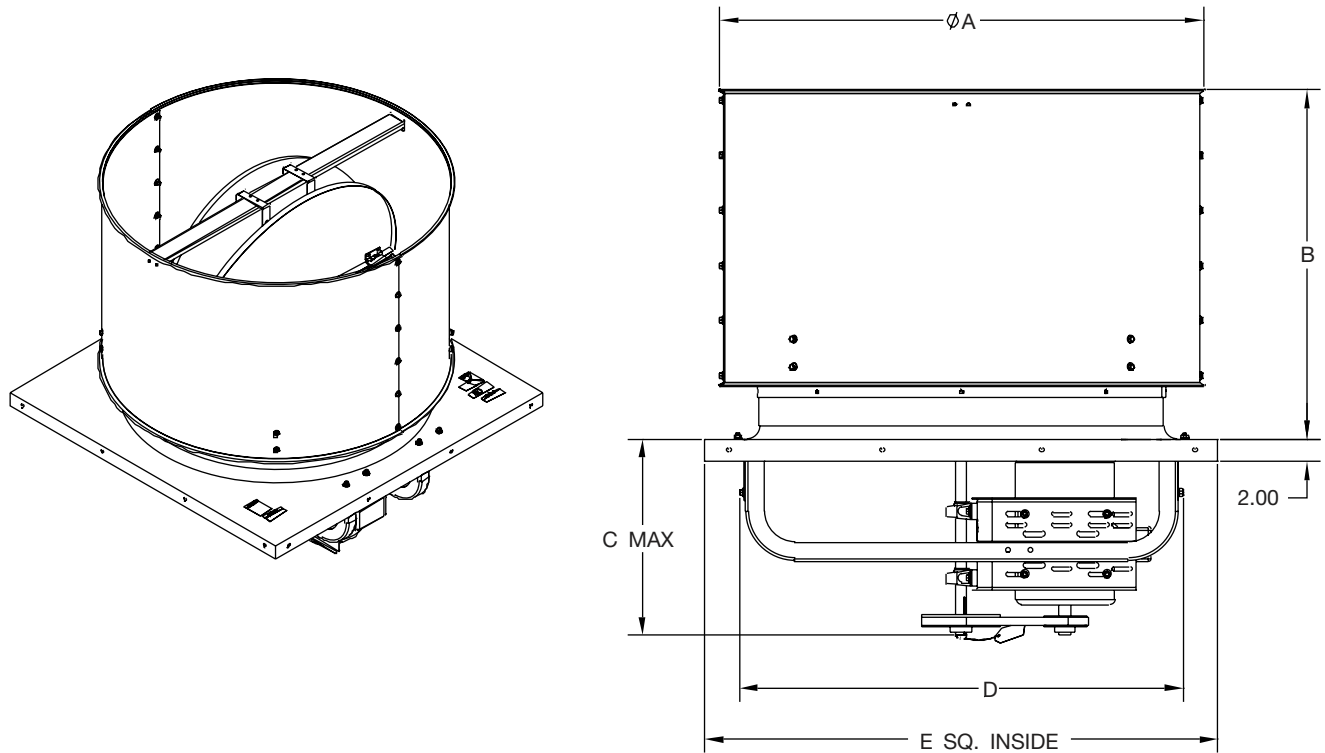


SIZE	A	B	C MAX	D	E	CANTED CURB DIMENSIONS	SELF-FLASHING CURB DIMENSIONS
14	21.13	19.20	11.19	15.25	21.50	20 x 20	20.50 x 20.50
16	23.13	20.20	11.19	18.25	24.50	23 x 23	23.50 x 23.50
18	25.13	21.20	11.19	20.25	26.50	25 x 25	25.50 x 25.50
21	28.44	22.70	14.41	23.25	29.50	28 x 28	28.50 x 28.50
24	31.88	24.44	14.55	26.25	32.50	31 x 31	31.50 x 31.50
30	37.88	27.94	14.74	34.25	40.50	39 x 39	39.50 x 39.50
36	43.88	31.94	15.67	40.25	46.50	45 x 45	45.50 x 45.50
42	49.88	34.92	23.59	45.00	52.50	51 x 51	51.50 x 51.50
48	55.88	37.92	23.59	51.00	58.50	57 x 57	57.50 x 57.50

NOTE:

1. Dimensions are not to be used for construction.

Model BSB53



SIZE	A	B	C MAX	D	E	CANTED CURB DIMENSIONS	SELF-FLASHING CURB DIMENSIONS
21	28.44	22.70	17.25	23.30	29.50	28 x 28	28.50 x 28.50
24	31.88	24.44	17.25	26.30	32.50	31 x 31	31.50 x 31.50
30	37.88	27.94	18.31	34.30	40.50	39 x 39	39.50 x 39.50
36	43.88	31.94	18.31	40.30	46.50	45 x 45	45.50 x 45.50
42	49.88	34.92	21.31	45.55	52.50	51 x 51	51.50 x 51.50
48	55.88	37.92	21.31	51.55	58.50	57 x 57	57.50 x 57.50
54	61.88	40.92	26.13	56.88	64.50	63 x 63	63.50 x 63.50

NOTE:

1. Dimensions are not to be used for construction.



Model BSD53

Low Profile Upblast Propeller Roof Ventilators, shall be Model BSD53 direct drive as manufactured by Aerovent, Minneapolis, Minnesota.

PERFORMANCE — Fans shall be tested in accordance with AMCA test codes for air moving devices and shall be guaranteed by the manufacturer to deliver rated published performance levels.

CONSTRUCTION — Fan curb caps shall be constructed of heavy gauge galvanized or painted steel for durability and appearance. Curb caps shall have a deep formed inlet venturi for efficient airflow and pre-punched holes for easy mounting to the roof curb. Discharge cap with butterfly dampers shall contain a rain channel to protect against rain entry. Butterfly damper blades constructed of steel as standard, unless the outlet velocity of the fan is below the minimum required to open steel damper blades, then aluminum blades shall be provided. Discharge caps and motor mount assemblies shall be constructed of heavy gauge galvanized steel.

PROPELLERS — Propellers shall be constructed of cast aluminum blades and hubs. Propellers shall be secured to the motor shaft with a taperlock bushing.

MOTORS — All motors shall be single phase or three phase induction, permanently lubricated, heavy-duty, ball bearing type, closely matched to the fan load and provided at the voltage, phase, hertz, and enclosure as provided on the fan schedule.

FINISH AND COATING — Fans shall have galvanized steel or finish painted curb caps, motor supports and windbands.

ACCESSORIES — When specified, accessories such as inlet safety guards, fusible link assemblies, magnetic damper latches, hinged bases, roof curbs and disconnect switches shall be provided by Aerovent 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 propeller 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. Records shall be maintained and a written copy shall be available upon request.

GUARANTEE — The manufacturer shall guarantee the workmanship and materials for its Model BSD53 for at least one (1) year from startup or eighteen (18) months from shipment, whichever occurs first.

Model BSB53

Low Profile Upblast Propeller Roof Ventilators, shall be Model BSB53 belt driven as manufactured by Aerovent, Minneapolis, Minnesota.

PERFORMANCE — Fans shall be tested in accordance with AMCA test codes for air moving devices and shall be guaranteed by the manufacturer to deliver rated published performance levels.

CONSTRUCTION — Fan curb caps shall be constructed of heavy gauge galvanized steel or painted steel for durability and appearance. Curb caps shall have a deep formed inlet venturi for efficient airflow and pre-punched holes for easy mounting to the roof curb. Discharge cap with butterfly dampers shall contain a rain channel to protect against rain entry. Butterfly damper blades constructed of steel as standard, unless the outlet velocity of the fan is below the minimum required to open steel damper blades, then aluminum blades shall be provided. Discharge caps and motor mount assemblies shall be constructed of heavy gauge galvanized steel.

PROPELLERS — Propellers shall be constructed of cast aluminum blades and hubs. Propellers on belt driven units shall be secured to the fan shaft with a taperlock bushing.

SHAFTS — Shafts shall be AISI 1045 cold 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 are to be pillow block, heavy-duty, anti-friction, self-aligning, grease lubricated, ball type. Each fan's bearings are sized with a minimum average life, per AFBMA, in excess of 200,000 hours when operating at the maximum RPM of the fan size.

DRIVES — Motor sheaves shall be cast iron, and supplied as variable pitch standard. Drives and belts shall be rated for a minimum of 150% of the required motor HP.

MOTORS — All motors shall be single phase or three phase induction, permanently lubricated, heavy-duty, ball bearing type, closely matched to the fan load and provided at the voltage, phase, hertz, and enclosure as provided on the fan schedule.

FINISH AND COATING — Fans shall have galvanized steel or finish painted curb caps, motor supports and windbands.

ACCESSORIES — When specified, accessories such as inlet safety guards, fusible link assemblies, magnetic damper latches, hinged bases, extended lube lines, roof curbs and disconnect switches shall be provided by Aerovent 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 propeller 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 Model BSB53 for at least one (1) year from startup or eighteen (18) months from shipment, whichever occurs first.



©2013 Twin City Fan Companies, Ltd. All rights reserved throughout the world.

Catalog illustrations cover the general appearance of Aerovent products at the time of publication and we reserve the right to make changes in design and construction at any time without notice.

**PROPELLER FANS | TUBEAXIAL & VANEAXIAL FANS | CENTRIFUGAL FANS & BLOWERS | ROOF VENTILATORS
INDUSTRIAL AIR HANDLERS | AIR MAKE-UP | FIBERGLASS FANS | CUSTOM FANS**



WWW.AEROVENT.COM



AEROVENT
A Twin City Fan Company

5959 Trenton Lane N | Minneapolis, MN 55442 | Phone: 763-551-7500 | Fax: 763-551-7501