SPB series

CENTRIFUGAL BLOWER

engineering data
and specifications



CINCINNATI FAN

Since the founding of Cincinnati Fan in 1956, the company's mission has been to provide quality products at competitive prices, backed by depend-able service.

This mission is carried out by specializing in the market for industrial air handling products up to 125 hp. But specialization does not mean the product line is small. Cincinnati Fan offers a wide variety of standard and customized products, production flexibility, and customer responsiveness.

CINCINNATI FAN PROVIDES

- Technical evaluation for correct performance conditions
- Review of air stream and ambient conditions that require special attention
- Selection of proper components to meet required design specifications
- Selection of proper accessories
- System analysis for proper fan design

Cincinnati Fan operates in a modern facility specifically designed for world class manufacturing enabling us to build standard products to order, including accessories, and ship within 5 to 10 working days.

With support like this, you can be sure your Cincinnati Fan product will be well-built and will provide maximum dependability and longevity.

Cincinnati Fan has over 170 experienced sales engineers across the US and Canada ready to serve your air handling needs.

SPB SERIES SPECIFICATIONS

Fabricated mild steel pressure blowers shall be Cincinnati Fan SPB Series Model _____, Arrangement _____.

Capacity: _____CFM,_____ Static Pressure inches WG at standard conditions.

Operating conditions: _____°F, _____ feet altitude

Wheels shall be 319 or 356T6 cast aluminum with integral cast hub and blades. Blower housing shall be 14 gauge stamped steel with round inlet and discharge for connection to hose or duct without using a transition piece. Blower housing to have a baked, powder coat finish inside and out.

Fan motor and fan bearing vibration levels shall not exceed 1.5 mils displacement at 3450 RPM. Shafts shall be turned, ground and polished steel (or stainless steel). All fan shafts shall receive a rust preventive coating prior to shipment.

Fan bearings shall be grease lubricated, heavy duty, self-aligning ball bearings mounted in cast iron pillow blocks. V-belt drives shall be selected for a minimum of 1.3 times nominal horsepower.

Fan construction shall be AMCA Type B spark-resistant if an aluminum ring is added around the fan/motor shaft.

The following accessories shall be included: (See page 4 for available accessories).

NINE STANDARD ARRANGEMENTS



Arrangement 4

- Foot and flange motor



Arrangement 4

- Flange mounted footless motor



Arrangement 4

- Foot mounted motor



Arrangement 4HM

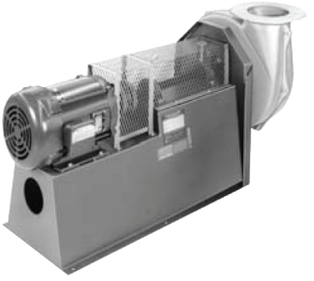
- Horizontal mount



Arrangement 1

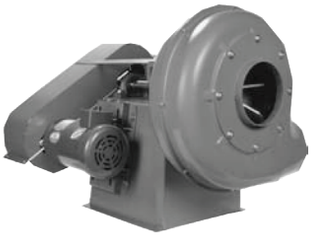


Arrangement 2



Arrangement 8

- PB series model shown



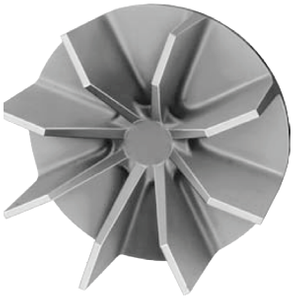
Arrangement 9



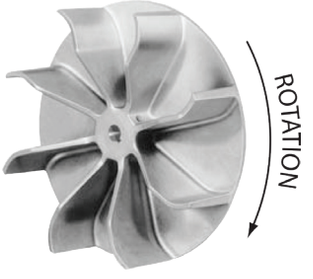
Arrangement 4D

- Double blower

BLOWER WHEELS



Cast Aluminum Radial Wheel



Cast Aluminum B.C Wheel

- Backward Curve (B.C)



Steel - Stainless Steel Wheel Option

- Not available in B.C

All wheels have two set screws, 90˚-120˚ apart, with one being over keyway. Up to 13" diameter wheels are statically balanced. Wheels over 13" in diameter are dynamically balanced. Use steel wheel for high abrasion. Stainless steel or coated wheels should be used in corrosive environments.

SPB FEATURES

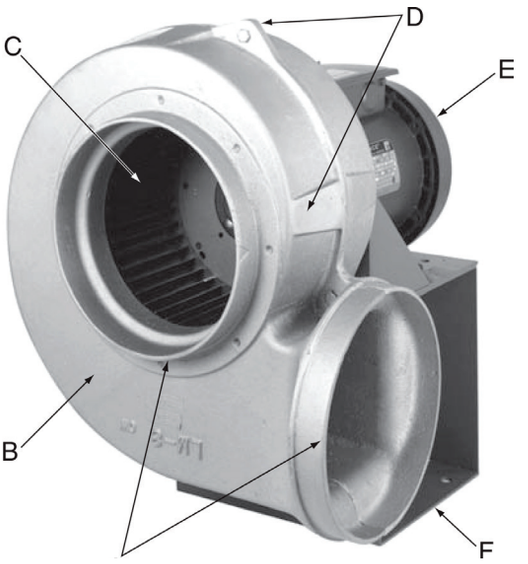
A - Stamped housing design gives round outlet for easy flange, pipe or hose connection.

B - Cast aluminum wheels are standard. By adding aluminum rubbing ring to motor side of housing, blower will be AMCA Type B spark-resistant.

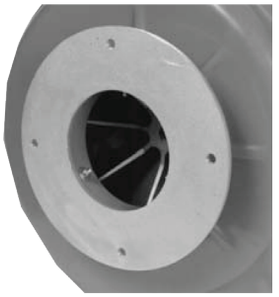
C - Different size inlet collars available.

D - Heavy duty 14 gauge steel housing with baked powder coated, high gloss, black enamel finish inside and out.

E - Available in direct or belt driven arrangements 1, 2, 4, 4HM, 8 and 9.



OPTIONS



Inlet/Outlet Flange

Cast aluminum drilled to ANSI-125 lb flange bolt circle dimensions if requested. SPB-15 inlet flange is 10 gauge steel. Not available on some discharge positions. See page 15.



Drain Connection

1/2" pipe coupling with plug welded to lowest point of housing. Not required for BH discharge position.



Inlet Filter

Many layered fine wire mesh. Pleated paper media available on some models.



Slide Gate Damper

Available for 4, 5, 6, 7, 8 and 10 inch inlets or outlets. Cast aluminum frame, galvanized steel gate. Suitable for duct work. Add inlet/outlet guard if not ducted. Not available on some discharge positions. See page 15.



Teflon Shaft Seal

1/8" thick Teflon shaft seal good to 400˚F.



Belt Guard

Bearing side is enclosed. Not available unless Cincinnati Fan mounts the motor. Standard on Arrangement 9. Painted safety yellow.



Inlet/Outlet Guard

Spiral guard with nickel/chrome/ lacquer finish. OSHA type. Available on 4, 5, 6, 7, 8 and 10 inch inlets or outlets. Required by OSHA on non-ducted inlet and/or discharge.



Shaft and/or Heat Slinger Guard

Available on Arrangements 1 and 9. Covers bearings and shaft between housing and belt guard. Has extended lube lines. Meets OSHA standards. Painted safety yellow.

SPARK-RESISTANT CONSTRUCTION

AMCA Type A: All parts in contact with airstream are of nonferrous material (See PB series catalog).

AMCA Type B: Cast aluminum wheel and aluminum rubbing ring to drive side of housing, the SPB Series is AMCA B spark-resistant. Maximum Temperature 400°F.

⚠ WARNING

The use of aluminum or aluminum alloys in the presence of steel which has been allowed to rust requires special consideration. Research by the U.S. Bureau of Mines and others has shown that aluminum impellers rubbing on rusty steel may cause high intensity sparking.
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 a system.

HIGH TEMPERATURE CONSTRUCTION

Arrangement 2, 4 and 4HM

Up to 150°F: **Standard fan construction.**

151°F - 400°F: Standard fan with heat slinger, slinger guard and Teflon shaft seal. External hub on wheel or a shaft extension may be required (except on Arrangement 2). Wheel is either high temperature cast aluminum or fabricated steel. **If wheel is fabricated steel, BC type wheels are not available.**

Arrangement 1, 8 and 9:

Up to 200°F: **Standard fan construction.**

201° - 300°F: Standard fan with either high temperature cast aluminum wheel or fabricated steel wheel. **If wheel is fabricated steel, BC type wheels are not available.**

301° - 400°F: Standard fan with heat slinger and slinger guard. Wheel is either high temperature cast aluminum or fabricated steel. I**f wheel is fabricated steel, BC type wheels are not available.**

401° - 750°F: See PBS series catalog.

TEMPERATURE - ALTITUDE CONVERSION

Fan performance tables are developed using standard air which is 70°F, 29.92" barometric pressure and .075 lb/ft^2 per cubic foot. Density changes resulting from temperature or barometric pressure variations (such as higher altitudes) must be corrected to standard conditions before selecting a fan based on standard performance data.

Temperature and/or altitude conversion factors are used in making corrections to standard conditions.

Air Temperature °F	Altitude - Feet Above Sea Level										
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
0°	0.87	0.91	0.94	0.98	1.01	1.05	1.09	1.13	1.17	1.22	1.26
40°	0.94	0.98	1.02	1.06	1.10	1.14	1.19	1 23	1.28	1.32	1.36
70°	1.00	1.04	1.08	1.12	1.16	1.20	1.25	1.30	1.35	1.40	1.45
80°	1.02	1.06	1.10	1.14	1.19	1.23	1.28	1.33	1.38	1.43	1.48
100°	1.06	1.10	1.14	1.19	1.23	1.28	1.33	1.38	1.43	1.48	1.54
120°	1.09	1.14	1.18	1.23	1.28	1.32	1.38	1.43	1.48	1.53	1.58
140°	1.13	1.18	1.22	1.27	1.32	1.37	1.42	1.48	1.54	1.58	1.65
160°	1.17	1.22	1.26	1.31	1.36	1.42	1.47	1.53	1.59	1.64	1.70
180°	1.21	1.26	1.30	1.36	1.41	1.46	1.52	1.58	1.64	1.70	1.75
200°	1.25	1.29	1.34	1.40	1.45	1.51	1.57	1.63	1.69	1.75	1.81
250°	1.34	1.39	1.45	1.50	1.56	1.62	1.68	1.74	1.82	1.88	1.94
300°	1.43	1.49	1.55	1.61	1.67	1.74	1.80	1.87	1.94	2.00	2.08
350°	1.53	1.59	1.65	1.72	1.78	1.85	1.92	2.00	2.07	2.14	2.22
400°	1.62	1.69	1.75	1.82	1.89	1.96	2.04	2.12	2.20	2.27	2.35

Temperature Limit

All SPB fans are limited to a maximum air temperature of 400°F (204°C)

EXAMPLE: Required fan performance is 2600 CFM at 5" SP at 160°F, and 8000' altitude.

Step 1 - From the table, conversion factor is 1.59.

Step 2 - Correct static pressure is:

1.59 x 5" SP = 7.95" SP at standard conditions.

Step 3 - Make fan selection from table on page 6. We select an **SPB-15** with 15" x 7" wheel and 8" inlet to deliver 2627 CFM at 8" SP.

Step 4 - Correct the bhp for the lighter air:

8.41 bhp ÷ 1.59 = 5.29 bhp.

A 7½ hp motor will suffice at 160°F and 8000' altitude but not at standard conditions. Special motor insulation may be required above 3500' altitude. Also, bhp correction might need to be modified if blower will be subject to "cold starts," i.e starting at 70°F at 8000' altitude.

DIRECT DRIVE RATINGS TABLES at 3450 RPM

CFM and bhp at Static Pressure Shown – Ratings at 70°F – .075" Density – Sea Level

Model	Wheel Diameter and Width	Inlet Diameter	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP	
			CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
SPB-9	8 x 2.75	4"	294	0.29	254	0.25	203	0.23										
	8.5 x 2.75	4"	324	0.37	279	0.35	231	0.33	167	0.29								
	9 x 2.875	4"	335	0.42	297	0.39	253	0.36	196	0.32								
	8 x 2.75	5"	363	0.31	303	0.29	236	0.26	124	0.21								
	8.5 x 2.75	5"	406	0.43	349	0.39	264	0.35	190	0.31								
	9.75 x 2.875	4"	401	0.57	371	0.54	334	0.50	289	0.46	232	0.40	128	0.32				
	9 x 2.8758	5"	428	0.46	376	0.44	316	0.41	242	0.36	122	0.28						
	10.625 x 2.625	4"	442	0.75	420	0.71	392	0.66	356	0.61	310	0.55	249	0.49	160	0.42		
	9.75 x 2.875	5"	499	0.65	452	0.60	402	0.56	348	0.51	282	0.46	177	0.38				
	10.625 x 2.625	5"	552	0.79	510	0.75	468	0.70	422	0.65	369	0.60	300	0.52	175	0.39		
SPB-12	11 x 3 BC	5"	661	0.80	606	0.76	550	0.72	487	0.68	411	0.62	303	0.56	111	0.46		
	11 x 2.75	5"	756	1.21	697	1.16	640	1.10	579	1.04	511	0.97	427	0.89	315	0.79	140	0.64
	10.625 x 2.625	5"	777	1.18	725	1.13	667	1.06	597	0.98	514	0.88	412	0.76	281	0.62		
	11 x 3 BC	6"	818	0.98	749	0.90	681	0.83	606	0.77	515	0.71	381	0.63				
	10.625 x 2.625	6"	873	1.23	798	1.15	721	1.08	634	1.00	524	0.91	340	0.78				
	11 x 3 BC	7"	915	1.21	827	1.14	735	1.06	640	0.97	540	0.88	424	0.80	232	0.75		
	12 x 2.875	5"	872	1.62	818	1.52	769	1.46	719	1.41	665	1.35	606	1.28	535	1.19	439	1.05
	11 x 2.75	6"	922	1.56	854	1.50	782	1.43	705	1.34	620	1.24	518	1.10	365	0.91		
	12.25 x 2.875	5"	902	1.81	850	1.69	800	1.61	752	1.54	701	1.48	647	1.43	587	1.37	515	1.29
	13 x 3.25 BC	5"	919	1.88	872	1.83	825	1.78	779	1.72	731	1.66	680	1.59	625	1.52	563	1.44
	10.625 x 2.625	7"	1010	1.51	933	1.38	846	1.28	743	1.19	615	1.09	440	0.95				
	13 x 3.25	5"	1020	2.32	967	2.21	916	2.10	867	1.98	818	1.87	767	1.76	715	1.65	659	1.53
	11 x 2.75	7"	1108	2.01	1027	1.86	951	1.70	873	1.54	786	1.38	679	1.23	509	1.09	101	0.93
	12 x 2.875	6"	1108	2.01	1049	1.85	991	1.74	929	1.66	860	1.59	773	1.50	642	1.37	379	1.08
	13 x 3.25 BC	6"	1118	2.04	1062	1.96	1008	1.90	955	1.85	901	1.80	843	1.75	780	1.70	706	1.65
	12.25 x 2.875	6"	1145	2.28	1086	2.21	1028	2.13	968	2.04	905	1.94	836	1.84	759	1.72	665	1.58
	12 x 2.875	7"	1264	2.68	1171	2.50	1073	2.36	978	2.23	886	2.10	796	1.98	701	1.84	593	1.69
	13 x 3.25	6"	1242	2.71	1192	2.61	1141	2.52	1086	2.42	1026	2.32	960	2.22	883	2.12	786	2.00
	12.25 x 2.875	7"	1300	2.90	1234	2.75	1163	2.62	1087	2.50	1007	2.38	921	2.24	826	2.09	717	1.90
	13 x 3.25 BC	7"	1355	2.82	1297	2.73	1232	2.62	1160	2.49	1080	2.35	991	2.21	891	2.08	778	1.96
	13 x 3.25	7"	1471	3.63	1395	3.49	1325	3.35	1257	3.19	1187	3.04	1114	2.88	1035	2.72	944	2.56
SPB-15 use 182T frame min	14 x 3.25 BC	6"	1893	3.68	1782	3.49	1666	3.29	1543	3.09	1409	2.89	1265	2.68	1109	2.48	942	2.27
	14 x 3.25 BC	8"	2289	4.38	2155	4.11	1989	3.79	1791	3.44	1574	3.10	1361	2.80	1161	2.55	970	2.31
	14 x 3.25 BC	10"	2501	4.53	2265	4.16	2022	3.78	1793	3.41	1579	3.07	1372	2.76	1164	2.49	941	2.26
	15.5 x 5 BC	6"	2259	5.43	2159	5.25	2058	5.07	1957	4.88	1855	4.71	1753	4.54	1649	4.37	1541	4.21
	14 x 31.25	6"	2378	6.34	2282	6.14	2182	5.90	2076	5.62	1962	5.31	1838	4.98	1702	4.63	1547	4.26
	16.5 x 4.375 BC	6"	2398	6.14	2320	6.03	2239	5.90	2156	5.77	2070	5.63	1980	5.48	1886	5.33	1786	5.16
	14.25 x 6.125	6"	2496	7.16	2394	6.83	2293	6.51	2191	6.20	2086	5.88	1974	5.57	1855	5.25	1726	4.93
	15 x 7	6"	2597	7.96	2511	7.69	2424	7.43	2335	7.16	2244	6.90	2150	6.64	2052	6.38	1950	6.12
	14.75 x 4	6"	2655	7.72	2551	7.45	2450	7.21	2349	6.96	2245	6.72	2137	6.47	2024	6.20	1902	5.90
	15.5 x 5	6"	2732	8.86	2631	8.57	2535	8.32	2442	8.08	2349	7.84	2254	7.60	2157	7.36	2055	7.10
	15.5 x 5 BC	8"	2825	7.21	2730	6.90	2623	6.58	2502	6.25	2365	5.91	2213	5.56	2045	5.22	1867	4.88
	14 x 3.25	8"	2941	7.58	2841	7.34	2725	7.07	2588	6.75	2423	6.38	2221	5.92	1981	5.37	1713	4.74
	14 x 3.25	10"	3019	7.44	2924	7.23	2807	6.98	2657	6.64	2460	6.18	2220	5.60	1964	4.98	1715	4.39
	15.5 x 5 BC	10"	3106	7.09	2911	6.71	2721	6.36	2539	6.02	2361	5.70	2189	5.38	2018	5.07	1846	4.77
	16.5 x 4.375 BC	8"	3102	7.85	2966	7.58	2829	7.90	2690	7.02	2548	6.74	2402	6.46	2252	6.19	2098	5.92
	16.5 x 4.375	6"	3058	11.83	2959	11.43	2864	11.08	2771	10.77	2678	10.48	2584	10.19	2489	9.91	2389	9.62
	16.5 x 4.375 BC	10"	3260	7.95	3109	7.69	2951	7.42	2789	7.14	2625	6.85	2461	6.56	2298	6.27	2135	5.98
	14.75 x 4	8"	3404	9.97	3265	9.60	3122	9.21	2973	8.79	2818	8.35	2655	7.90	2481	7.44	2296	6.95
	14.25 x 6.125	8"	3427	9.58	3278	9.26	3124	8.91	2962	8.51	2790	8.06	2604	7.56	2402	7.01	2183	6.41
	14.25 x 6.125	10"	3788	11.10	3588	10.61	3353	10.00	3097	9.29	2845	8.54	2606	7.79	2381	7.08	2163	6.39
	14.75 x 4	10"	3774	11.03	3562	10.26	3358	9.63	3158	9.07	2959	8.55	2758	8.05	2555	7.55	2347	7.04
	15 x 7	8"	3661	11.79	3521	11.29	3381	10.80	3240	10.33	3095	9.85	2946	9.38	2790	8.90	2627	8.41
	15.5 x 5	8"	3803	13.27	3663	12.67	3521	12.09	3375	11.52	3224	10.97	3068	10.42	2904	9.87	2732	9.32
	15 x 7	10"	4050	12.71	3858	12.05	3672	11.47	3488	10.93	3305	10.41	3120	9.89	2932	9.35	2740	8.80
	16.5 x 4.375	8"	4081	15.70	3956	15.18	3823	14.65	3684	14.08	3539	13.51	3389	12.92	3234	12.34	3076	11.75
	15.5 x 5	10"	4365	14.45	4156	13.82	3929	13.12	3692	12.38	3457	11.63	3228	10.90	3007	10.19	2793	9.51
	16.5 x 4.375	10"	4580	16.67	4445	16.27	4289	15.80	4112	15.23	3914	14.58	3701	13.86	3481	13.11	3263	12.36

DIRECT DRIVE RATINGS TABLES at 3450 RPM

CFM and bhp at Static Pressure Shown – Ratings at 70°F – .075" Density – Sea Level

Model	Wheel Diameter and Width	Inlet Diameter	9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP	
			CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
SPB-12	12 x 2.875	6"	173	0.91														
	12 x 2.875	5"	286	0.86														
	12.25 x 2.875	5"	420	1.17	262	0.95												
	12 x 2.875	7"	440	1.50														
	13 x 3.25 BC	5"	489	1.34	387	1.23												
	12.25 x 2.875	6"	543	1.40	337	1.12												
	12.25 x 2.875	7"	573	1.64	162	0.95												
	13 x 3.25	5"	596	1.41	519	1.27	407	1.10	212	0.86								
	13 x 3.25 BC	6"	613	1.57	473	1.43	137	0.94										
	13 x 3.25	6"	652	1.85	436	1.56	163	1.03										
	13 x 3.25 BC	7"	643	1.84	465	1.69	173	1.36										
	13 x 3.25	7"	832	2.38	674	2.16	343	1.74										
SPB-15 use 182T frame min	14 x 3.25 BC	10"	679	2.07	307	1.89												
	14 x 3.254 BC	6"	767	2.05	585	1.79	391	1.50										
	14 x 3.25 BC	8"	781	2.06	583	1.80	347	1.49										
	14 x 3.25	6"	1368	3.86	1152	3.40	883	2.81	547	2.00	182	1.19						
	14 x 3.25	8"	1439	4.07	1167	3.41	889	2.75	570	2.06								
	14 x 3.25	10"	1470	3.86	1213	3.35	894	2.81										
	15.5 x 5 BC	6"	1429	4.05	1308	3.87	1176	3.68	1022	3.44	829	3.11	549	2.56	200	1.83		
	14.25 x 6.125	6"	1582	4.59	1421	4.24	1238	3.86	1034	3.43	814	2.96	586	2.45	349	1.94		
	15.5 x 5 BC	10"	1671	4.47	1488	4.17	1291	3.88	1072	3.58	808	3.27	438	2.88				
	15.5 x 5 BC	8"	1682	4.56	1494	4.24	1303	3.92	1108	3.61	903	3.27	676	2.90	396	2.44		
	14.75 x 4	6"	1768	5.57	1619	5.19	1448	4.76	1247	4.24	1009	3.64	728	2.96	399	2.20		
	16.5 x 4.875 BC	6"	1681	4.98	1570	4.79	1451	4.60	1324	4.38	1188	4.16	1041	3.91	881	3.64	699	3.33
	15 x 7	6"	1842	5.86	1726	5.59	1601	5.29	1462	4.97	1304	4.59	1119	4.13	889	3.51	597	2.69
	16.5 x 4.325 BC	8"	1940	5.65	1778	5.38	1614	5.10	1447	4.81	1277	4.51	1103	4.18	920	3.82	720	3.42
	16.5 x 4.325 BC	10"	1973	5.68	1809	5.39	1641	5.09	1466	4.80	1280	4.50	1074	4.18	831	3.85	489	3.41
	14.25 x .125	8"	1947	5.77	1696	5.10	1436	4.43	1168	3.76	887	3.11	562	2.43				
	14.25 x 6.125	10"	1947	5.74	1723	5.11	1480	4.49	1192	3.88	755	3.13						
	15.5 x 5	6"	1947	6.82	1831	6.50	1703	6.15	1559	5.74	1394	5.27	1202	4.72	978	4.10	726	3.43
	14.75 x 4	8"	2097	6.44	1881	5.90	1646	5.31	1387	4.65	1094	3.88	741	2.96				
	14.75 x 4	10"	2131	6.51	1904	5.96	1661	5.37	1392	4.74	1074	4.04	584	3.12				
	16.5 x 4.375	6"	2286	9.31	2177	8.98	2060	8.62	1934	8.21	1796	7.75	1643	7.22	1474	6.62	1283	5.94
	15 x 7	8"	2455	7.91	2271	7.38	2072	6.81	1855	6.20	1615	5.54	1344	4.80	1026	3.95	608	2.92
	15 x 7	10"	2541	8.22	2334	7.60	2115	6.95	1879	6.27	1619	5.55	1317	4.79	921	3.93	340	2.95
	15.5 x 5	8"	2550	8.76	2357	8.18	2149	7.57	1925	6.92	1682	6.21	1414	5.42	1114	4.55	760	3.55
	15.5 x 5	10"	2582	8.84	2373	8.19	2160	7.55	1938	6.90	1700	6.24	1431	5.53	1090	4.71		
	16.5 x 4.325	8"	2915	11.17	2749	10.59	2579	10.01	2403	9.43	2219	8.83	2023	8.20	1811	7.53	1571	6.78
	16.5 x 4.325	10"	3049	11.63	2841	10.91	2637	10.21	2435	9.51	2232	8.80	2021	8.07	1797	7.29	1546	6.44

Model	Wheel Diameter and Width	Inlet Diameter	17" SP		18" SP		19" SP	
			CFM	bhp	CFM	bhp	CFM	bhp
SPB-15 use 182T frame min	15.5 x 5	8"	256	2.38				
	15 x 7	6"	271	1.89				
	16.5 x 4.325 BC	8"	471	2.95				
	16.5 x 4.325 BC	6"	477	2.95				
	15.5 x 5	6"	459	2.78	175	2.12		
	16.5 x 4.325	6"	1070	5.19	831	4.39	546	3.52
	16.5 x 4.325	8"	1282	5.89	881	4.66		
	16.5 x 4.3258	10"	1237	5.43	698	3.90	402	3.31

Belt Drive Ratings Table — at 70°F | .075 density | sea level

SPB-9

Outlet Area .087 sq ft — Wheel Size: 9" x 2.875" Inlet: 5"

Volume	1" SP		1.5" SP		2" SP		2.5" SP		3" SP		3.5" SP		4" SP		4.5" SP		5" SP		6" SP	
CFM	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
50	1536	0.02	1867	0.04	2149	0.06	2398	0.08	2625	0.11	2833	0.14	3028	0.16	3211	0.19	3384	0.23		
100	1653	0.04	1960	0.06	2226	0.08	2464	0.11	2681	0.13	2883	0.16	3071	0.19	3249	0.22	***3418***	***0.26***	3734	0.33
150	1841	0.06	2119	0.08	2365	0.11	2589	0.14	2795	0.17	2987	0.20	3168	0.24	3339	0.27	***3502***	***0.31***	3808	0.39
200	2079	0.09	2328	0.12	2553	0.15	2760	0.19	2953	0.22	3134	0.26	3306	0.29	***3469***	***0.33***	3626	0.37	3920	0.46
250	2350	0.14	2572	0.17	2777	0.21	2968	0.25	3147	0.29	3317	0.33	***3479***	***0.37***	3634	0.41	3783	0.46		
300	2643	0.20	2843	0.24	3029	0.28	3205	0.33	3371	0.37	***3530***	***0.42***	3683	0.47	3829	0.52	3970	0.56		
350	2951	0.28	3132	0.33	3303	0.38	***3465***	***0.43***	3619	0.48	3767	0.53	3910	0.58						
400	3269	0.39	***3435***	***0.44***	3592	0.50	3742	0.56	3886	0.61										
450	3596	0.52	3748	0.58	3894	0.64														
500	3929	0.68																		

SPB-12

Outlet Area .196 sq ft — Wheel Size: 12.25" x 2.875" Inlet: 7"

Volume	2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP		10" SP		12" SP	
CFM	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
100	1548	0.09	1892	0.16	2181	0.24	2436	0.32	2666	0.42	2877	0.52	3074	0.62	3258	0.73	***3432***	***0.85***	3756	1.10
200	1576	0.13	1912	0.21	2199	0.31	2454	0.41	2685	0.51	2898	0.63	3095	0.75	3281	0.88	***3457***	***1.01***	3784	1.29
300	1656	0.19	1966	0.29	2239	0.39	2485	0.51	2710	0.63	2919	0.76	3115	0.89	3299	1.03	***3474***	***1.18***	3800	1.49
400	1782	0.28	2065	0.39	2317	0.51	2548	0.64	2763	0.77	2963	0.91	3153	1.06	3332	1.22	3503	1.38	3824	1.71
500	1938	0.39	2197	0.52	2431	0.66	2647	0.80	2848	0.95	3038	1.11	3219	1.27	3391	1.44	3556	1.61	3867	1.98
600	2114	0.54	2353	0.69	2571	0.85	2772	1.01	2962	1.18	3141	1.35	3312	1.53	***3476***	***1.72***	3633	1.90	3932	2.30
700	2303	0.73	2526	0.90	2729	1.08	2919	1.27	3097	1.45	3267	1.65	***3429***	***1.84***	3585	2.04	3735	2.25		
800	2503	0.96	2710	1.16	2902	1.36	3080	1.57	3249	1.78	***3410***	***1.99***	3564	2.21	3713	2.43	3856	2.65		
900	2711	1.26	2905	1.48	3085	1.70	3254	1.93	***3414***	***2.16***	3568	2.39	3714	2.63	3856	2.87	3993	3.11		
1000	2927	1.62	3107	1.85	3277	2.10	***3437***	***2.35***	3590	2.60	3736	2.85	3876	3.11						
1100	3148	2.05	3316	2.30	***3476***	***2.57***	3628	2.84	3774	3.11	3913	3.39								
1200	3373	2.56	3531	2.83	3681	3.11	3826	3.40	3965	3.70										
1300	3602	3.16	3750	3.45	3892	3.74														
1400	3835	3.86	3973	4.15																

SPB-15

Outlet Area .349 sq ft — Wheel Size: 15.5" x 5" Inlet: 8"

Volume	2" SP		4" SP		6" SP		8" SP		10" SP		12" SP		14" SP		16" SP		18" SP	
CFM	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
200	1203	0.13	1685	0.31	2057	0.54	2370	0.79	2647	1.08	2897	1.39	3127	1.73	3341	2.08	3542	2.46
400	1258	0.22	1730	0.46	2097	0.74	2407	1.04	2681	1.37	2929	1.73	3158	2.11	3371	2.51	3571	2.93
600	1329	0.33	1790	0.65	2150	1.00	2456	1.36	2727	1.75	2973	2.16	3200	2.60	3411	3.05		
800	1415	0.48	1861	0.88	2214	1.30	2515	1.74	2783	2.20	3026	2.68	3251	3.17	***3460***	***3.69***		
1000	1514	0.67	1942	1.16	2287	1.66	2583	2.18	2847	2.71	3087	3.26						
1200	1625	0.91	2033	1.48	2368	2.07	2658	2.67	2918	3.29	3155	3.92						
1400	1746	1.22	2134	1.87	2457	2.54	2741	3.23	2995	3.93	3228	4.64						
1600	1876	1.61	2243	2.33	2554	3.09	2830	3.86	3079	4.64	3308	5.44	3521	6.25				
1800	2012	2.08	2359	2.88	2659	3.72	2926	4.57	3169	5.44	3394	6.32						
2000	2154	2.65	2482	3.53	2769	4.44	3028	5.38	3265	6.33	***3485***	***7.30***						
2200	2300	3.33	2611	4.28	2886	5.27	3136	6.29	3367	7.32	3581	8.37						
2400	2450	4.13	2745	5.16	3009	6.22	3250	7.32	***3474***	***8.43***								
2600	2603	5.06	2883	6.17	3136	7.31	3369	8.48	3586	9.67								
2800	2758	6.14	3025	7.32	3268	8.53	***3492***	***9.78***										
3000	2916	7.37	3171	8.62	3403	9.91												

Minimum motor frame size is 182T even though the bhp might be available in a smaller frame size

Note—Drive losses are not included in bhp.
Consult Cincinnati Fan for speeds higher than shown in tables.

RPM and bhp in ***bold italic***, direct drive °blowers should be considered

DIRECT DRIVE RATINGS TABLES at 2850 RPM — 50 cycle motors only

CFM and bhp at Static Pressure Shown – Ratings at 70ºF – .075" Density – Sea Level

Model	Nominal Wheel Diameter and Width*	Nominal Inlet Diameter	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP	
			CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
SPB-9	8 x 2.75	4"	228	0.15	171	0.13												
	8.5 x 2.75	4"	250	0.20	194	0.19	99	0.15										
	9 x 2.875	4"	263	0.23	212	0.20	134	0.16										
	8 x 2.75	5"	277	0.17	199	0.15												
	8.5 x 2.75	5"	314	0.23	238	0.20	93	0.15										
	9 x 2.875	5"	334	0.25	265	0.23	169	0.19										
	9.75 x 2.875	4"	320	0.32	278	0.29	222	0.25	125	0.19								
	10.625 x 25/8	4"	357	0.41	326	0.37	280	0.33	213	0.28	87	0.21						
	9.75 x 2.875	5"	395	0.35	335	0.32	267	0.28	164	0.22								
	10.625 x 2.625	5"	440	0.43	389	0.40	332	0.36	257	0.30								
SPB-12	11 x 3 BC	5"	525	0.44	457	0.41	379	0.37	265	0.32								
	11 x 2.75	5"	601	0.67	532	0.62	457	0.57	363	0.51	222	0.42						
	10.625 x 2.625	5"	623	0.65	554	0.60	468	0.53	353	0.44	186	0.32						
	11 x 3 BC	6"	649	0.53	567	0.47	473	0.42	334	0.36								
	10.625 x 2.625	6"	692	0.67	600	0.61	491	0.55	311	0.45								
	11 x 3 BC	7"	723	0.67	612	0.60	497	0.53	365	0.46								
	11 x 2.75	6"	736	0.87	650	0.81	556	0.73	441	0.63	222	0.45						
	12 x 2.875	5"	699	0.88	638	0.83	577	0.78	508	0.73	419	0.65	268	0.51				
	12.25 x 2.875	5"	725	0.99	664	0.91	605	0.86	541	0.81	467	0.76	366	0.68	159	0.48		
	10.625 x 2.625	7"	806	0.82	704	0.73	575	0.65	388	0.55								
	13 x 3.25 BC	5"	741	1.05	684	1.01	628	0.96	568	0.90	501	0.84	418	0.77	290	0.67		
	11 x 2.75	7"	883	1.09	790	0.96	694	0.83	575	0.70	335	0.59						
	13 x 3.25	5"	822	1.28	760	1.19	700	1.09	640	1.00	576	0.91	503	0.81	409	0.70	175	0.48
	12 x 2.875	6"	892	1.08	822	0.98	746	0.92	650	0.86	474	0.73	172	0.53				
	13 x 3.25 BC	6"	901	1.13	836	1.07	772	1.03	703	0.99	625	0.95	524	0.90	345	0.77		
	12.25 x 2.875	6"	923	1.27	852	1.20	779	1.13	699	1.04	604	0.94	473	0.81	196	0.56		
	12 x 2.875	7"	1010	1.46	892	1.33	777	1.23	668	1.12	552	1.01	397	0.87				
	12.25 x 2.875	7"	1049	1.59	965	1.48	872	1.38	771	1.28	655	1.15	502	0.96				
	13 x 3.25	6"	1007	1.50	945	1.42	878	1.34	801	1.26	705	1.17	566	1.06	302	0.81		
	13 x 3.25 BC	7"	1098	1.57	1022	1.48	933	1.37	829	1.26	707	1.15	556	1.05	334	0.92		
	13 x 3.25	7"	1185	2.01	1099	1.89	1016	1.77	929	1.64	831	1.50	709	1.36	509	1.18		
	13.6875 x 3.1875	5"	1247	2.28	1162	2.16	1070	2.03	970	1.87	869	1.72	768	1.57	671	1.43	542	1.22
	13.6875 x 3.1875	6"	1365	2.54	1280	2.36	1195	2.18	1061	1.99	936	1.80	811	1.61	707	1.47	568	1.26
	13.6875 x 3.1875	7"	1434	2.67	1342	2.48	1242	2.28	1119	2.06	989	1.87	854	1.70	724	1.53	594	1.33
SPB-15- use 182T frame min	14 x 3.25 BC	6"	1521	2.03	1383	1.86	1232	1.70	1062	1.53	872	1.36	664	1.18	443	0.97	190	0.70
	14 x 3.25 BC	8"	1842	2.40	1654	2.15	1409	1.86	1148	1.60	907	1.39	678	1.19	436	0.97		
	14 x 3.25 BC	10"	1978	2.46	1684	2.15	1410	1.84	1157	1.58	903	1.36	610	1.19	136	1.01		
	15.5 x 5 BC	6"	1828	3.01	1706	2.86	1583	2.71	1460	2.57	1333	2.43	1200	2.30	1054	2.16	882	1.98
	14 x 3.25	6"	1928	3.53	1808	3.33	1678	3.10	1533	2.83	1366	2.54	1163	2.23	899	1.84	534	1.26
	16.5 x 4.375 BC	6"	1951	3.43	1855	3.33	1753	3.22	1646	3.10	1531	2.97	1407	2.83	1272	2.67	1124	2.51
	14.25 x 6.1258	6"	2022	3.95	1900	3.68	1776	3.42	1644	3.16	1499	2.90	1333	2.63	1137	2.34	902	2.00
	15 x 7	6"	2112	4.42	2007	4.20	1899	3.98	1787	3.77	1668	3.55	1540	3.33	1400	3.11	1241	2.85
	14.75 x 4	6"	2153	4.28	2030	4.07	1906	3.87	1778	3.67	1640	3.44	1485	3.18	1303	2.87	1079	2.48
	15.5 x 5 BC	8"	2298	3.98	2173	3.72	2024	3.45	1846	3.16	1642	2.88	1422	2.61	1194	2.34	960	2.08
	15.5 x 5	6"	2217	4.92	2100	4.70	1987	4.50	1873	4.31	1755	4.10	1628	3.88	1486	3.62	1322	3.30
	14 x 3.25	8"	2393	4.21	2259	4.00	2087	3.73	1860	3.38	1566	2.91	1236	2.37	906	1.83	551	1.27
	14 x 3.25	10"	2459	4.14	2326	3.95	2135	3.65	1863	3.20	1554	2.70	1257	2.24	942	1.81	356	1.24
	15.5 x 5 BC	10"	2490	3.90	2259	3.60	2039	3.32	1828	3.06	1620	2.80	1411	2.56	1188	2.31	938	2.06
	16.5 x 4.375 BC	8"	2510	4.36	2345	4.13	2176	3.90	2001	3.66	1819	3.44	1630	3.21	1434	2.99	1234	2.76
	16.5 x 4.375 BC	10"	2636	4.41	2447	4.19	2250	3.96	2052	3.72	1854	3.48	1658	3.24	1459	3.00	1252	2.75
	16.5 x 4.375	6"	2487	6.56	2371	6.26	2259	6.00	2146	5.77	2029	5.53	1906	5.29	1774	5.01	1627	4.70
	14.75 x 4	8"	2759	5.52	2587	5.21	2406	4.86	2212	4.49	2001	4.10	1767	3.69	1506	3.24	1207	2.73
	14.25 x 6.1258	8"	2774	5.32	2590	5.04	2392	4.70	2173	4.30	1927	3.85	1650	3.33	1347	2.78	1027	2.22
	14.25 x 6.1258	10"	3056	6.14	2784	5.66	2475	5.07	2179	4.45	1907	3.86	1645	3.31	1374	2.79	1057	2.28
	14.75 x 4	10"	3035	6.00	2786	5.45	2543	5.00	2302	4.58	2055	4.16	1798	3.73	1523	3.27	1215	2.77
	15 x 7	8"	2971	6.51	2801	6.11	2629	5.72	2451	5.33	2262	4.93	2058	4.52	1835	4.08	1584	3.60
	15.5 x 5	8"	3088	7.32	2917	6.84	2739	6.37	2552	5.92	2354	5.46	2139	5.01	1904	4.53	1643	4.01
	15 x 7	10"	3271	6.98	3044	6.49	2822	6.04	2599	5.62	2371	5.17	2134	4.70	1882	4.19	1608	3.64
	15.5 x 5	10"	3528	7.98	3259	7.42	2973	6.81	2693	6.20	2426	5.62	2169	5.06	1915	4.53	1653	3.99
	16.5 x 4.375	8"	3324	8.72	3166	8.28	2996	7.81	2817	7.33	2629	6.85	2436	6.36	2235	5.89	2026	5.41
	16.5 x 4.375	10"	3734	9.30	3553	8.93	3334	8.45	3082	7.87	2817	7.25	2555	6.64	2303	6.05	2058	5.47

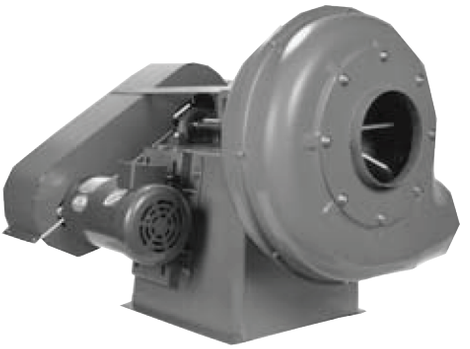
DIRECT DRIVE RATINGS TABLES at 2850 RPM — 50 cycle motors only

CFM and bhp at Static Pressure Shown – Ratings at 70°F – .075" Density – Sea Level

Model	Nominal Wheel Diameter and Width*	Nominal Inlet Diameter	9" SP		10" SP		11" SP		12" SP		13" SP	
			CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
SPB-12	13.6875 x 3.1875	5"	111	0.48								
	13.6875 x 3.1875	6"	262	0.72								
	13.6875 x 3.1875	7"	274	0.72								
SPB-15 use 182T frame min	14 x 3.25	6"	96	0.62								
	14.25 x 6.125	10"	501	1.64								
	15.5 x 5 BC	10"	619	1.81								
	15.5 x 5 BC	6"	649	1.71	255	1.16						
	14.25 x 6.125	6"	637	1.61	358	1.19						
	14.25 x 6.125	8"	686	1.68	177	1.05						
	15.5 x 5 BC	8"	712	1.81	416	1.48						
	14.75 x 4	6"	792	1.98	430	1.40						
	14.75 x 4	10"	829	2.20	254	1.51						
	14.754 x 4	8"	854	2.10	344	1.24						
	16.5 x 4.3758 BC	10"	1027	2.50	761	2.24	355	1.88				
	16.5 x 4.375 BC	6"	960	2.32	775	2.11	558	1.86	236	1.47		
	15 x 7	6"	1050	2.54	805	2.11	461	1.46				
	16.5 x 4.375 BC	8"	1028	2.51	814	2.23	573	1.90	163	1.43		
	15.5 x 5	6"	1124	2.92	875	2.43	574	1.89	245	1.35		
	15 x 7	10"	1293	3.05	890	2.39	281	1.66				
	15 x 7	8"	1294	3.05	944	2.40	448	1.56				
	15.5 x 5	10"	1365	3.44	1009	2.82	206	1.73				
	15.5 x 5	8"	1349	3.42	1010	2.74	588	1.93				
	16.5 x 4.375	6"	1461	4.32	1268	3.85	1040	3.30	772	2.66	438	1.96
	16.5 x 4.375	10"	1811	4.88	1550	4.27	1250	3.57	817	2.64	332	1.87
	16.5 x 4.375	8"	1803	4.91	1558	4.38	1272	3.77	884	2.95		

⚠ **Caution**—All fans and blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from rotating equipment unless it is disconnected from its power source. Read and understand operating instructions.

Metric Conversion Factors		
Power	1 hp = .7457 kW	hp = horsepower
	1 kW = 1.34 hp	kW = kilowatts
Volume Flow	1 cfm = .00047 m^3/s	cfm = cubic feet per minute
	1 m^3/s = .2118.88 cfm	m^3/s = cubic meters per second
Pressure	1 in wg = 248.36 Pa	in wg = inches water gauge
	1 Pa = .004 in wg	Pa = pascals
Density	1 lb/ft^3 = 16.02 kg/m^3	lb/ft^3 = pound per cubic foot
	1 kg/m^3 = .0625 lb/ft^3	kg/m^3 = kilograms per cubic meter
Temperature	°C = (°F-32) x .5556	C = centigrade
	°F = (°C x 1.8) + 32	F = Fahrenheit
Dimension	1 in = 25.4 mm	in = inch
	1 mm = .03937 in	mm = millimeter
Weight	1 lb = .4536 kg	lb = pound
	1 kg = 2.205 lb	kg = kilogram



SELECTING A CINCINNATI SPB BLOWER

Cincinnati Fan offers three sizes of SPB blower housings, 22 wheel sizes and two or three inlet sizes. By combining these different housings, wheels and inlet sizes, we offer more standard direct drive pressure blower performance ratings than any other fan company. By offering so many direct drive ratings, chances are very good that we can meet your performance requirements with a compact, cost efficient, direct drive SPB blower instead of a heavier, larger and more expensive V-belt driven blower. Our Cincinnati Fan Sales Engineer for your area is a ratings expert who is ready to help you select precisely the right SPB blower for your application.

HOW TO USE THE SPB SERIES DIRECT-DRIVE RATING TABLES

If you know the static pressure and CFM required for your blower application, you can determine which SPB blower you should consider by referring to the tables on Pages 6 and 7 of this catalog. If you will be using a 50 cycle motor, refer to the tables on pages 9 and 10. To use the tables, follow these simple directions:

1 Reading to the right, find the column heading which displays the static pressure (SP) you require.

2 Reading down that column, find the line(s) displaying the CFM rating(s) which will satisfy your requirement.

3 Follow the line(s) to the left side of the table, where you will identify the wheel(s) and the blower housing model(s) used to achieve the CFM rating(s)

You may find that several ratings come close to meeting your requirements. Generally, the rating with the lowest brake horsepower requirement (bhp) is the best selection (highest efficiency, least noise). In some situations, other requirements, such as blower dimensions and/or specific inlet/outlet sizes, may override the lower horsepower rule-of-thumb. **A Cincinnati Fan Sales Engineer is available to assist you with selection and pricing information.**

Some DOs and DON'Ts

DO...consider that radial blades are self-cleaning in most applications. Backward curved (BC) blades are not self-cleaning and may collect dust which can cause balance problems.

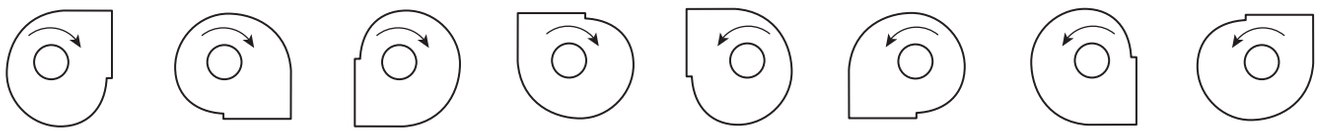
DO...specify heat-resistant construction (steel wheel) for use with airstreams having temperatures exceeding 200˚F (93˚C). BC wheels are not available in steel.

DO NOT...use a steel wheel and a steel blower housing in any type of environment where sparks could cause an explosion and/or fire. See WARNING on Page 5.

DO NOT...use any blower with an unducted inlet and/or outlet without an inlet and/or outlet guard. Severe personal injury could result. See Page 4 for guard accessory.

Eight Standard Discharge Positions Available. 45° Discharge Positions Not Shown*

Discharges shown are determined by viewing fan from motor or drive side



CW-TH Clockwise Top Horizontal Discharge

CW-DB Clockwise Down Blast Discharge

CW-BH Clockwise Bottom Horizontal Discharge

CW-UB Clockwise Up Blast Discharge

CCW-TH Counter Clockwise Top Horizontal Discharge

CW-DB Counter Clockwise Down Blast Discharge

CW-BH Counter Clockwise Bottom Horizontal Discharge

CW-UB Counter Clockwise Up Blast Discharge

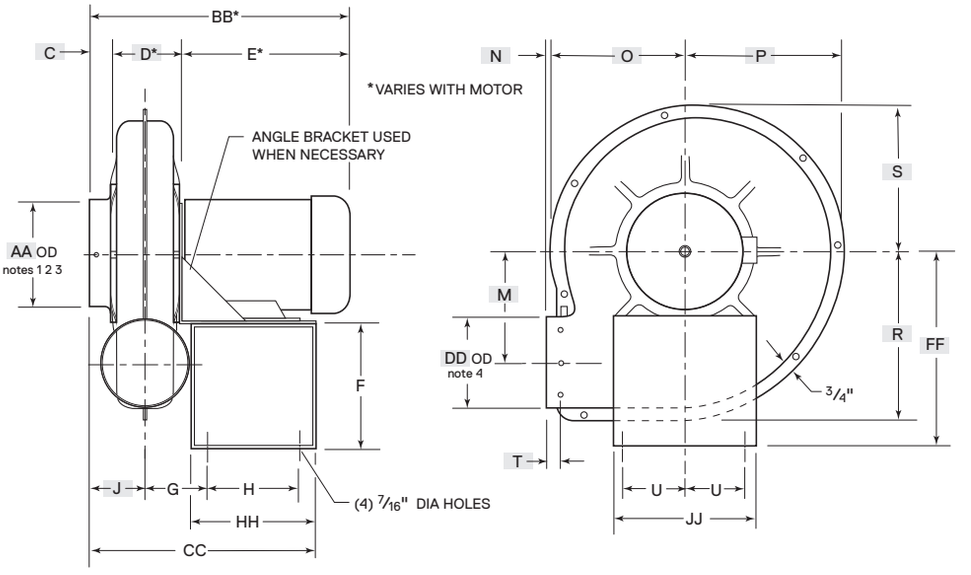
***** Discharge flange or slide gate damper not available on some discharge positions. See page 15.

Note – The table below contains blower housing dimensions common to all arrangements on pages 12, 13 and 14.

Model	C	D	J	M	N	O	P	R	S	T	AA note 1 2 3	DD note 4
SPB-9	1 ½"	3 ¾"	3 ⅜"	5 ⅝"	9/16"	6 ¾"	8"	8 11/32"	7 ¼"	⅞"	5"	3 15/16"
SPB-12	1 ½"	3 ⅝"	3 ⅝"	7 9/32"	⅜"	8 ½"	10 ¼"	11"	9 ¼"	⅞"	7"	5 15/16"
SPB-15	1 ¼"	8 ¾"	5 ⅝"	8 11/32"	5 ⅝"	10 3/32"	11 15/16"	13 3/32"	10 29/32"	1 1/16"	8"	7 15/16"

1 SPB-9 also available with 4" OD inlet.
2 SPB-12 also available with 5" and 6" inlets.
3 SPB-15 also available with 6" and 10" inlets.
4 Discharge flange or slide gate damper not available on some discharge positions. See page 15 for limitations.

ARRANGEMENT 4 — DIRECT DRIVE



Model	Motor Frame	E*	F	G	H	U	BB*	CC	FF	HH	JJ	KK note 5	MM note 5
SPB-9	56	12 ½"	6 ⅞"	3 3/16"	5 ¾"	2 ¾"	17 ¾"	13 ⅜"	10 7/16"	7 ⅞"	7"	1 13/16"	3 11/16"
	143T-145T	12"	8 ¼"	4"	5"	3 ¾"	17 ¼"	13 ⅞"	11 ⅞"	8"	9"	1 13/16"	3 11/16"
SPB-12	56	12 ½"	8 ¼"	3 ⅞"	5"	3 ¾"	18 ¼"	14"	11 ⅞"	8"	9"	1 13/16"	3 15/16"
	143T-145T	12"	8 ¼"	4 ¼"	5"	3 ¾"	17 ¾"	14 ⅜"	11 ⅞"	8"	9"	1 13/16"	3 15/16"
	182T-184T	15 ½"	6 7/16"	4 ⅝"	8 ¾"	4 15/16"	21 ¼"	18 ½"	11 ⅞"	11 ¾"	12"	1 13/16"	3 15/16"
SPB-15	182T-215T	15 ¼"	9 15/16"	6 ⅞"	8 ¾"	4 15/16"	25 ¼"	23 ¾"	15 3/16"	13 ¾"	12"	1 9/16"	5 15/16"
	254T-256T	20 ¼"	8 15/16"	6 ⅞"	13"	4 15/16"	30 ¼"	28"	15 3/16"	18"	16 ½"	1 9/16"	5 15/16"

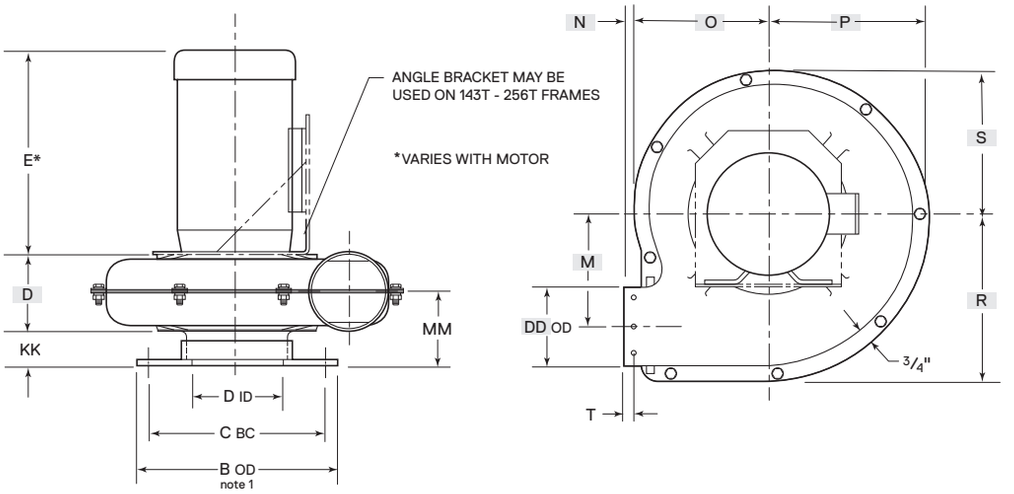
1 SPB-9 also available with 4" OD inlet.
2 SPB-12 also available with 5" and 6" inlets.
3 SPB-15 also available with 6" and 10" inlets.
4 Discharge flange or slide gate damper not available on some discharge positions. See page 15 for limitations.
5 KK and MM dimensions pertain to Arrangement 4HM.

Approximate Shipping Weight* lb

Model	Motor Frame	Arrangement 1 no motor	Arrangement 2 no motor	Arrangement 4	Arrangement 4HM	Arrangement 9	Nominal Motor hp - weight
SPB-9	56-145T	59	278	48	42	87	½ - 22
SPB-12	56-145T	66	53	77	68	107	2 - 41
	182T-184T	111	53	116	103	187	5 - 76
SPB-15	182T-215T	125	84	176	166	201	5 - 76
	254T-256T	170	84	180	212	292	10 - 122

* Arrangement 4, 4HM Wand 9 weights include nominal hp and corresponding motor weight indicated in column eight, make corrections as necessary by deducting nominal weight and adding weight of actual motor to be used.

ARRANGEMENT 4HM — DIRECT DRIVE

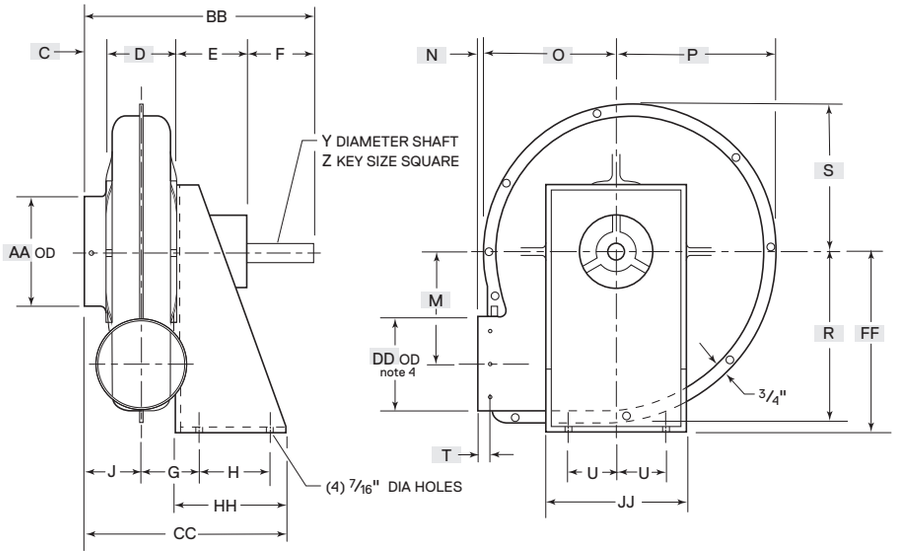


Maximum Motor Frame Size	
Model	Frame
SPB-9	145T
SPB-12	182T
SPB-15	256T

Note: For common boxed blower housing dimensions see page 12.

1 For inlet flange dimensions B, C and D above, see flange dimension table on page 15 for corresponding A dimension. For KK and MM dimensions, see page 12.

ARRANGEMENT 2 — BELT DRIVE

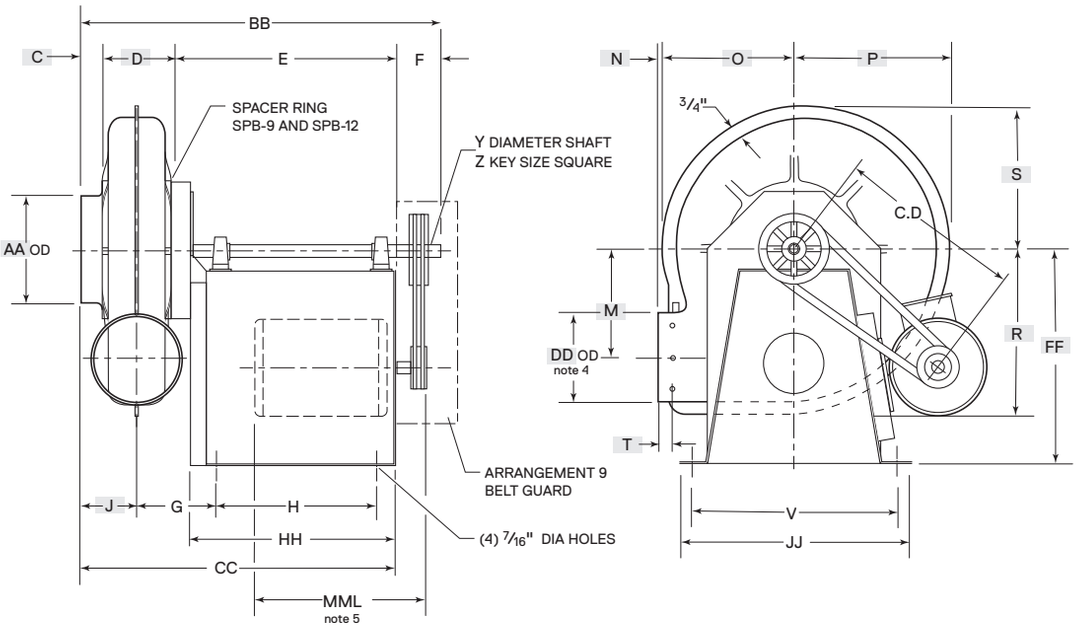


Model	E	F	G	H	U	Y	Z	BB	CC	FF	HH	JJ
SPB-9	3 11/16"	3"	2 7/8"	4 1/4"	2 7/8"	3/4"	3/16"	11 15/16"	11"	9 7/8"	6"	7 3/4"
SPB-12	5 1/2"	4"	3 5/8"	4 1/2"	2 7/8"	1"	1/4"	15 1/4"	11 3/4"	11 1/2"	7"	9"
SPB-15	5 3/16"	4"	5 7/8"	5 1/2"	3 3/4"	1 7/16"	3/8"	19 3/16"	18"	15"	8"	10 1/4"

Note: For common boxed blower housing dimensions see page 12.

1 Discharge flange or slide gate damper not available on some discharge positions. See page 15 for limitations.

ARRANGEMENT 1 AND 9 — BELT DRIVE note 6



Model	Motor Frame	E	F	G	H	V	Y	Z	BB	CC	FF	HH	JJ	MML note 5
SPB-9	56-145T	16 1/4"	3"	5 5/8"	10"	11 3/8"	3/4"	3/16"	24 1/2"	21 1/2"	14"	15"	12 7/8"	15"
SPB-12*	56-145T	16 1/4"	4"	5 7/8"	10"	11 3/8"	1"	1/4"	26"	22"	14"	15"	12 7/8"	15"
	182T-215T	19 1/4"	4"	5 7/8"	13"	16"	1"	1/4"	29"	25"	18"	18"	17 1/2"	19"
SPB-15*	182T-215T	18"	4"	6 7/8"	13"	16"	1 7/16"	3/8"	32"	28"	18"	18"	17 1/2"	19"
	254T-256T	24 1/2"	4"	6 7/8"	19 1/2"	17 1/4"	1 11/16"	3/8"	38 1/2"	34 1/2"	23"	24 1/2"	19"	26"

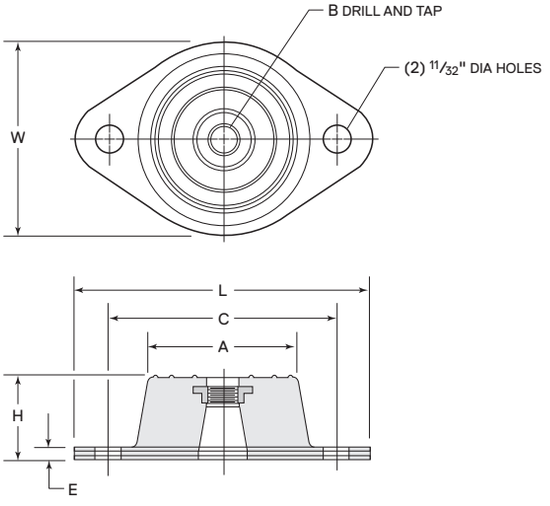
***** All Arrangement 1 units use small base dimensions.
Note: For common boxed blower housing dimensions see page 14.

4 Discharge flange not available for some discharge positions. See page 19.
5 MML is the maximum motor length on customer-supplied motor. Motor manufacturer's C dimension cannot exceed MML.
6 Arrangement 9 dimensions are the same as Arrangement 1 with the exception of dimensions C.D and MML which are for Arrangement 9 only

C.D. Belt Center Distance

Model	56		143T-145T		182T-184T		213T-215T		254T-256T	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
SPB-9	9 1/2"	11 1/2"	9 1/2"	11 1/2"						
SPB-12	9 1/2"	11 1/2"	9 1/2"	11 1/2"	13 1/4"	15"	13 1/4"	15"		
SPB-15					13 5/8"	15 1/8"	14 3/8"	16"	16 3/4"	18 7/8"

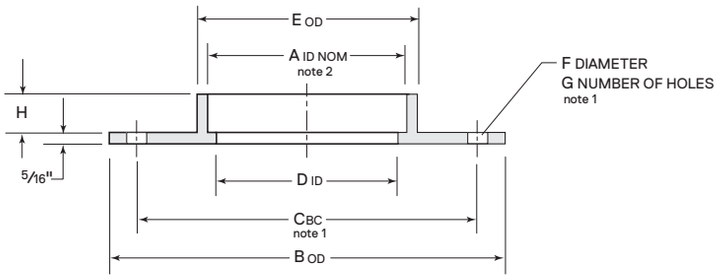
RIS (RUBBER-IN-SHEAR) VIBRATION ISOLATOR



Type R Neoprene In Shear Mountings

Type		Max Load Each lb	Deflection	L	W	H	A	B	C	E
R1	Blue	35	.020"	3 1/8"	1 3/4"	1"	1 1/4"	5/16" - 18NC	2 3/8"	3/16"
	Black	45								
	Red	70								
	Green	120								
R2	Blue	135	.025"	3 7/8"	2 3/8"	1 1/4"	1 3/4"	3/8" - 16NC	3"	7/32"
	Black	170								
	Red	240								

INLET AND DISCHARGE FLANGE



A note 2	B note 3	C note 3	D	E	F	G	H
4 1/16"	9"	7 1/2"	3 11/16"	4 9/16"	7/16"	4	15/16"
5 1/16"	11"	8 1/2"	4 9/16"	5 9/16"	7/16"	4	15/16"
6 1/16"	11"	9 1/2"	5 1/2"	6 9/16"	7/16"	4	1 1/16"
7 1/16"	11"	9"	6 1/16"	7 11/16"	7/16"	8	15/16"
8 1/16"	13 1/2"	11 3/4"	7 1/2"	8 5/8"	7/16"	8	1"
9 1/16"	16"	14 1/4"	9 11/16"	10 9/16"	7/16"	8	1"

1 Holes will not be drilled unless customer specifies. If drilled per our standard, holes will be drilled on centerlines unless specified otherwise on order. Dimensions C, F and G can be made to customer specifications at an additional charge.

2 Dimension A fits over inlet or outlet of blower AA or DD dimension.

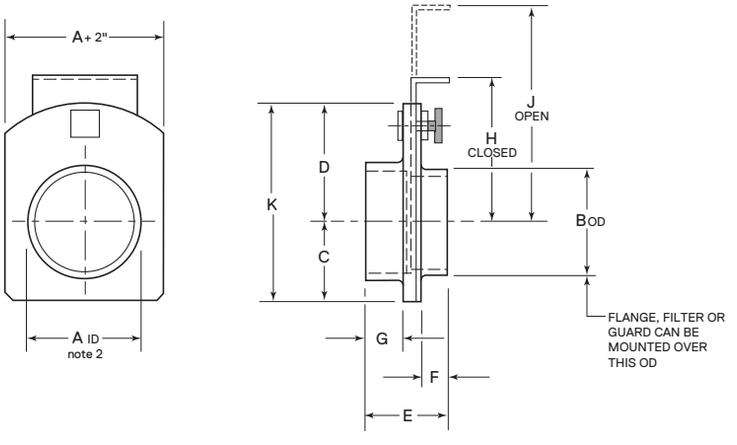
3 Meet ANSI-125 lb flange dimensions.

4 All dimensions are ±1/8" except C and F.

5 All flanges are 319 cast aluminum

Note: Discharge flanges not available on downblast or bottom angular down discharge positions.

INLET AND DISCHARGE SLIDE GATE



1 Gate halves are 319 cast aluminum. Slide gate is 12 gauge galvanized steel. Aluminum slide gate available at additional charge.

2 Dimension A fits over inlet or outlet of blower AA or DD dimension.

Note: Not available on downblast or bottom angular down discharge positions.

Model	A note 2	B	C	D	E	F	G	H	J	K
FG-4	4 1/16"	3 15/16"	3 1/4"	4 1/2"	2 11/16"	1"	1 1/16"	5 5/8"	9"	7 3/4"
FG-5	5 1/16"	4 15/16"	3 1/2"	5 1/2"	2 9/16"	1 1/8"	7/8"	6 1/8"	10 1/2"	9"
FG-6	6 1/16"	5 15/16"	4"	5 1/2"	2 11/16"	1 1/16"	1"	6 1/4"	11 1/2"	9 1/2"
FG-7	7 1/16"	6 15/16"	4 1/2"	5 1/2"	2 7/8"	1 1/8"	1 1/8"	6 1/4"	12 1/2"	10"
FG-8	8 1/16"	7 15/16"	5"	6 3/4"	2 13/16"	1"	1 3/16"	7 3/4"	15"	11 3/4"
FG-10	10 1/16"	9 15/16"	6"	8"	3 1/16"	1 5/16"	1"	9"	18 1/2"	14"

SPB series

ENGINEERING DATA

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MASON, OH 45040 USA
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