

# Centrifugal Cabinet Fans Model BCF

Belt Drive Low-Profile



BUILDING VALUE IN AIR.

 **GREENHECK**  
Building Value in Air.

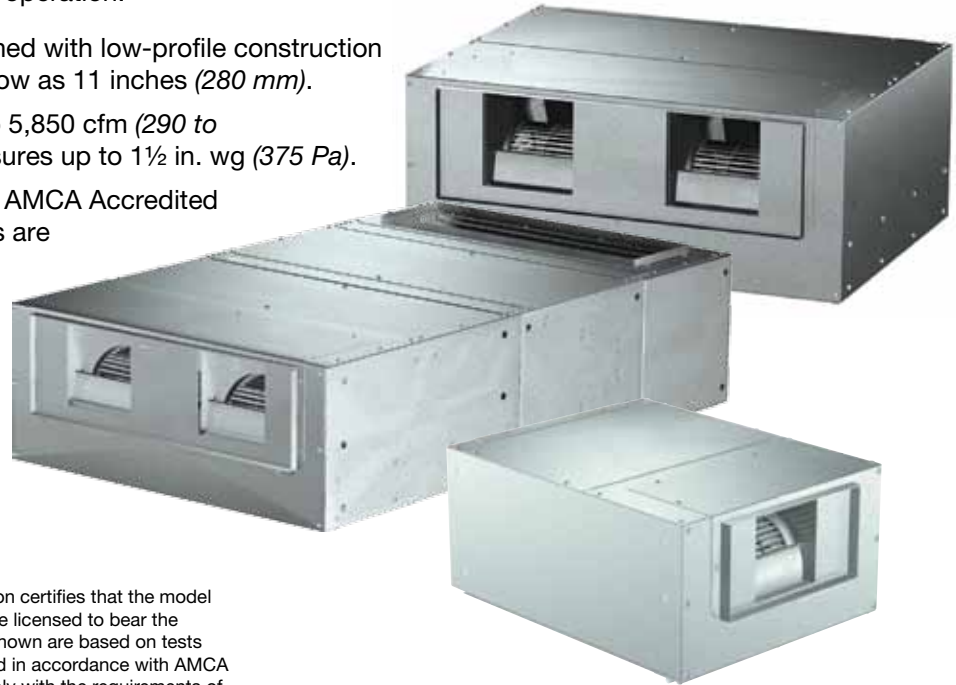
May  
2007

## BCF Belt Drive Cabinet Fans

Greenheck belt drive low-profile cabinet fans, Model BCF, are designed for efficiency and reliability in supply, exhaust or ducted return applications. Featuring a compact, rectangular cabinet design, they mount easily in standard duct passages. Horizontal mounting with either top horizontal or upblast discharge allows the BCF to be applied in a wide range of air handling applications.

BCF cabinet fans are available in single and double fan models. Both feature the combination of a quiet running, forward curved wheel and a well proportioned fan housing efficiency. In double fan models, each wheel is housed separately, but both are driven by a single motor and shaft. Fan wheels are statically and dynamically balanced to assure vibration free operation.

- Every model has been designed with low-profile construction to fit within tight spaces, as low as 11 inches (280 mm).
- Capacities range from 170 to 5,850 cfm (290 to 9950 m<sup>3</sup>/hr.) with static pressures up to 1½ in. wg (375 Pa).
- All fan sizes are tested in our AMCA Accredited Laboratory, and all BCF sizes are licensed to bear the AMCA certified rating seal for air performance.
- Greenheck subjects these products to extensive life testing assuring you that the fans will provide years of reliable performance.



Greenheck Fan Corporation certifies that the model BCF fans shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program. The certified ratings for Model BCF are shown on pages 6 to 15.

## Quick Delivery and Quick Build Programs



All BCF sizes are available through our five and ten day Quick Build (QB) program. This allows the flexibility of knowing that your fan can be made to order and shipped in as little as five days.

Many products are available from our Quick Delivery (QD) program. The QD program provides same day shipment of Greenheck product from our strategically located warehouses throughout the world. These stock products can be ordered over the internet by visiting [www.greenheck.com/quick](http://www.greenheck.com/quick)

## Leading Edge Technical Support



When product and IOM (Installation, Operation and Maintenance Manual) information is needed, our products are supported by the industry's best product literature, electronic media, and Computer Aided Product Selection (CAPS) program. You'll also find this information on our website at [www.greenheck.com](http://www.greenheck.com)

Our national and international representative organization provides outstanding personal service and expertise. To locate your nearest Greenheck representative, call 715-359-6171 or visit our website at [www.greenheck.com](http://www.greenheck.com)

# Standard Construction Features

**Vibration Isolation** - Internal true vibration isolators support the entire drive assembly, wheel, and scroll without steel to steel contact. This provides long life and quiet operation.

**Housing** - The fan cabinet is constructed of galvanized steel for corrosion resistance and maintenance free operation.

**Access Panel** - Hinged or removable panels allow for easy access to all internal components. Hinged panels are on fan sizes 106, 107, 206 and 207 and are removable on the larger sizes in both single and double fans.

**Bearings** - Permanently sealed, pillow block ball bearings are selected for a minimum L10 life in excess of 100,000 hours (L50 average life of 500,000 hours) at maximum catalogued operating conditions.

**Wheel** - Forward curved, centrifugal, galvanized steel wheel is utilized to generate high efficiency and minimal sound. Each wheel is statically and dynamically balanced for long life and quiet operation.

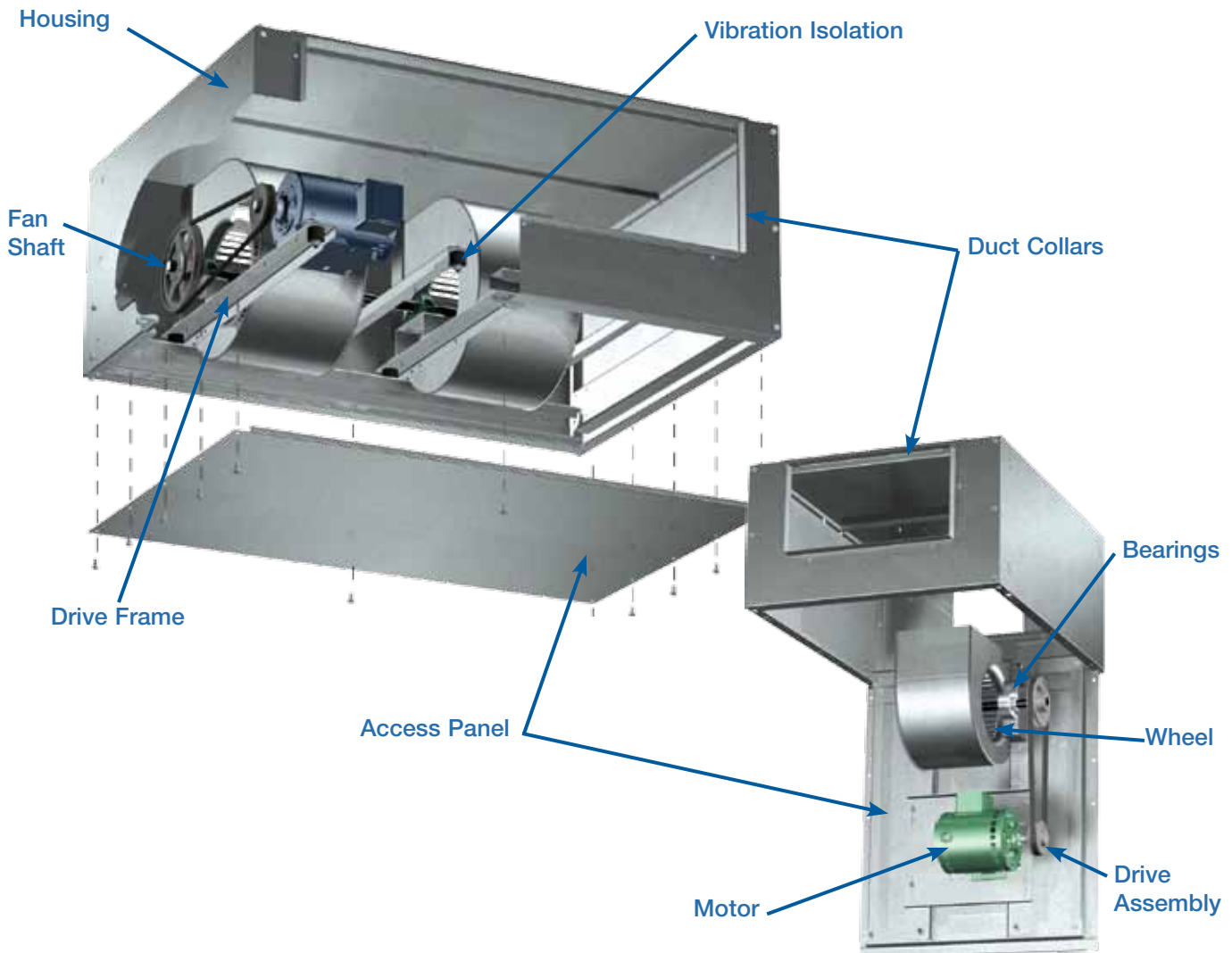
**Motor** - Ball bearing motors are carefully matched to the fan load. Open drip proof and totally enclosed enclosures are available.

**Drive Frame** - Constructed from heavy gauge steel and designed with belt adjustment to eliminate scroll damage. Adjustment is accomplished by loosening fasteners, sliding motor plate, and retightening.

**Drive Assembly** - Belts, pulleys and keys are sized for a minimum of 150% of driven horsepower. Machined cast iron pulleys are factory set to the required RPM and adjustable for final system balancing. Belts are static free and oil resistant.

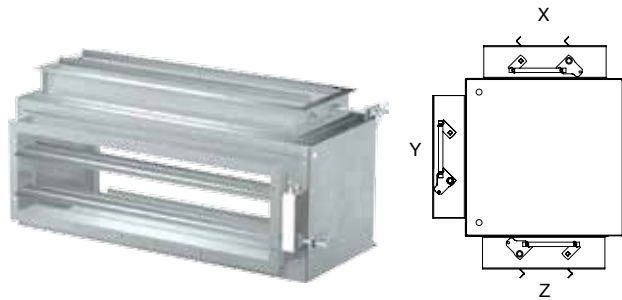
**Fan Shaft** - Precisely sized, ground, and polished so the first critical speed is at least 25% over the maximum operating speed. With the shaft making contact with bearings, close tolerances result in longer bearing life.

**Duct Collars** - Inlet and outlet duct collars are provided for easy duct connections.



# Options and Accessories

**Mixing Boxes** - Constructed of galvanized steel and available with or without dampers. Inlet position must be specified. Any two of the three positions shown (X, Y or Z) may be selected.



**Filter Boxes** - Constructed of galvanized steel. Available with either a sloped filter arrangement or vertical slide-out. Smaller fan sizes (106, 107, 206 and 207) have a sloped single angled filter. The double-vee configuration is used with all larger sloped sizes. Filters are available in 1 or 2-inch disposable media or permanent, washable aluminum mesh. Filter boxes with slide-out have 2-inch washable aluminum filters.

*Sloped, Single Angled Filter - Sizes 106, 107, 206 and 207*



*Sloped, Double-Vee Filter - Sizes 108, 110, 112, 208, 210 and 212*



*Slide-Out, Aluminum Filter - Sizes 106 thru 212*



**Side Access Doors** - For installations where normal access is restricted, removable side access doors are available for ease of inspecting and servicing fan wheels, motors, belts and drives. Door locations must be specified left or right as viewed from the discharge end of the fan. Surrounding ductwork or other equipment should be considered when selecting the access door location.

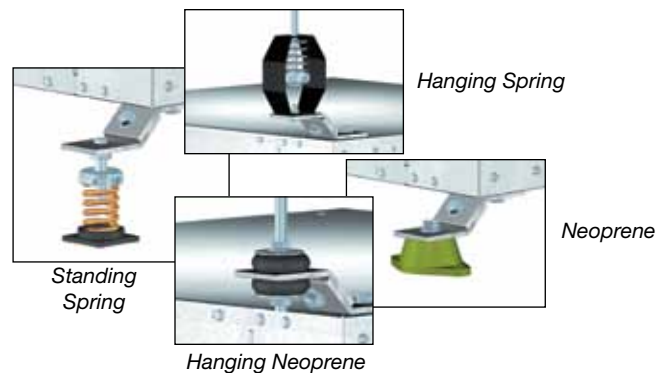


**Insulated Housing** - For noise reduction and condensation control, the interior of fan housings, mixing box and filter box can be lined with a fiberglass duct liner (1/2 or 1-inch insulation are available).

**Disconnect Switches** - A wide selection of NEMA rated switches are available for positive electrical shutoff and safety. This includes general, dust-tight, rainproof, and corrosion-resistant.



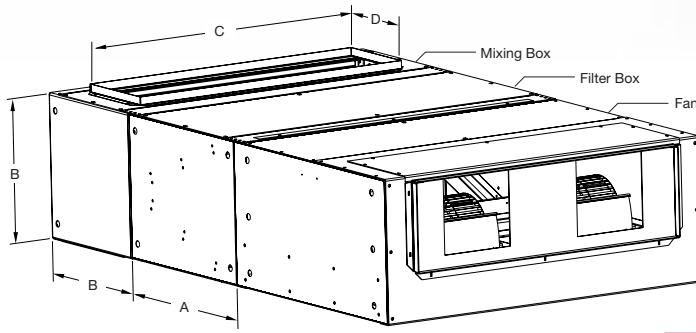
**Vibration Isolators** - Base and hanging isolator kits are available with either neoprene or spring isolators. Kits range in size to support either the weight of the fan alone or the weight of the fan with filter and mixing box combinations. Kits are for horizontal mounting and include mounting brackets and hardware. Knockouts are provided in the fan cabinet for ease of installation. (Hanging rods supplied by others.)



**Wiring Pigtail** - Allows direct hook-up to the power supply externally (eliminating field wiring at the fan).

**Coatings** - A wide variety of protective or decorative coatings are available. Consult Greenheck's Performance Coatings for Commercial & Industrial Fans brochure and our Product Application Guide FA/110-04R, Performance Coatings for Ventilation Products, for in-depth information.

# Filter and Mixing Box Data



NOTE: Kilogram weights have been corrected use this posted copy for corrected weights. Printed edition is incorrect. (R.7-13-10)

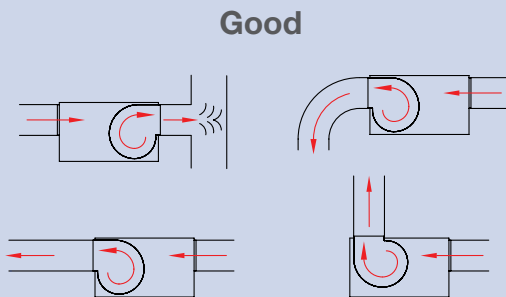
All dimensions in inches (millimeters). Weight in pounds (kilograms).

BCF Size	A		B	C	D	Filter Box Weight lb. (kg)		Filter Size				Mixing Box Weight lb. (kg)	
	Slide-Out	Sloped				Slide-Out	Sloped	Slide-Out	Qty.	Sloped	Qty.	Without Damper	With Damper
106	6 (152)	22 (559)	11 (279)	12 (305)	6 (152)	9 (4.1)	24 (10.9)	19½ x 10¼ (495 x 260)	1	16 x 20 (406 x 508)	1	14 (6.4)	29 (13.2)
107	6 (152)	23 (584)	13 (330)	15 (381)	8 (203)	10 (4.5)	26 (11.8)	22⅞ x 12¼ (581 x 311)	1	16 x 20 (406 x 508)	1	17 (7.7)	36 (16.3)
108	6 (152)	24 (610)	16 (406)	18 (457)	10 (254)	12 (5.4)	39 (17.7)	25⅞ x 15½ (657 x 394)	1	16 x 20 (406 x 508)	2	23 (10.4)	45 (20.4)
110	7 (178)	25 (635)	19 (483)	24 (610)	12 (305)	20 (9.1)	64 (29)	31⅞ x 18½ (810 x 470)	1	20 x 20 (508 x 508)	2	40 (18.1)	69 (31.3)
112	7 (178)	27 (686)	23 (584)	28 (711)	14 (356)	28 (12.7)	86 (39)	35⅞ x 22⅞ (911 x 568)	1	16 x 20 (406 x 508)	4	64 (29)	100 (45.4)
206	6 (152)	22 (559)	11 (279)	26 (660)	6 (152)	12 (5.4)	35 (15.9)	33⅞ x 10¼ (860 x 260)	1	20 x 20 (508 x 508)	1	19 (8.6)	42 (19.1)
207	6 (152)	23 (584)	13 (330)	30 (762)	8 (203)	14 (6.4)	36 (16.3)	37⅞ x 12¼ (962 x 311)	1	16 x 20 (406 x 508)	2	23 (10.4)	52 (23.6)
208	6 (152)	24 (610)	16 (406)	36 (914)	10 (254)	17 (7.7)	50 (22.7)	43⅞ x 15½ (1114 x 394)	1	16 x 20 (406 x 508)	4	31 (14.1)	67 (30.4)
210	7 (178)	25 (635)	19 (483)	40 (1016)	12 (305)	26 (11.8)	79 (35.8)	47⅞ x 18½ (1216 x 470)	1	20 x 20 (508 x 508)	4	51 (23.1)	93 (42.2)
212	7 (178)	27 (686)	23 (584)	50 (1270)	14 (356)	38 (17.2)	119 (54)	57⅞ x 22½ (1470 x 572)	1	20 x 25 (508 x 635)	4	86 (39)	142 (64.4)

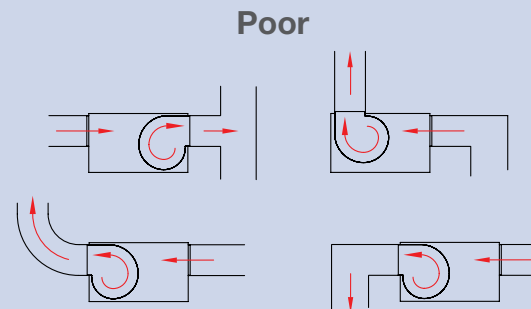
## Typical Installations

Model BCF fans are available with either top horizontal or upblast discharge positions. To select the most effective fan position and discharge, it is necessary to consider the direction of air entering the fan and the direction of exhausted air. All of the accessories shown on page four can be used with the installations shown.

In order to assure proper fan performance, caution must be exercised in fan placement and connection. Obstructions, transitions, poorly designed elbows, etc., can cause reduced performance, excessive noise, and increase mechanical stress. For performance to be as published, the system must provide uniform and stable airflow into the fan.

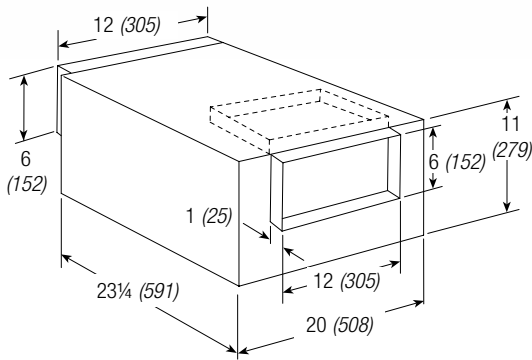


Airflow should discharge in the same direction as the wheel rotation. Provide uniform airflow to the fan inlet. Use turning vanes in elbows to reduce adverse effects where needed.



Do not install fans with ductwork directing airflow in the opposite direction of wheel rotations. Avoid sharp turns, poorly designed elbows, and transitions which cause uneven airflow.

# BCF-106 - Belt Drive



^Approximate Unit Weight = 80 lb. (36 kg)

All dimensions in inches (millimeters).

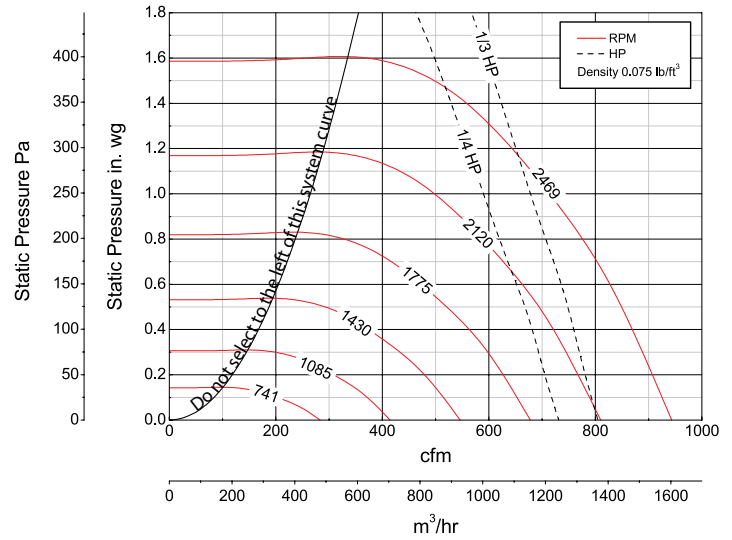
^Weight shown is largest cataloged Open Drip Proof motor.

Maximum RPM = 2468

Tip Speed (ft/min.) = RPM x 1.505

Maximum Motor Frame Size = 56

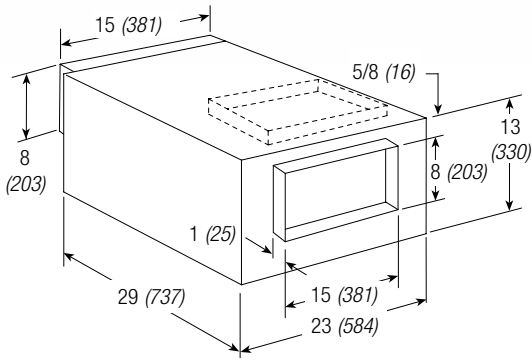
Average Outlet Velocity (FPM) = CFM/0.5 ft<sup>2</sup>



Model Number	Fan CFM		Static Pressure in Inches wg																	
			0.125	0.25	0.375	0.5	0.625	0.75	0.875	1	1.25	1.5								
BCF-106	170	RPM	743	987	1195															
		BHP	0.01	0.01	0.02															
		Sones	4.0	4.9	4.9															
	230	RPM	834	1036	1219	1392	1547	1687												
		BHP	0.01	0.02	0.03	0.03	0.04	0.05												
		Sones	3.9	4.9	5.5	6.0	6.7	7.3												
	290	RPM	944	1121	1280	1432	1569	1708	1837	1956										
		BHP	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09										
		Sones	4.3	5.3	5.7	6.4	7.1	7.6	7.7	7.9										
	350	RPM	1068	1223	1365	1499	1625	1748	1861	1978	2197	2395								
		BHP	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.13	0.16								
		Sones	5.1	5.6	6.2	6.8	7.4	7.8	8.0	8.1	9.0	10.1								
	410	RPM	1202	1335	1465	1586	1701	1811	1919	2024	2219	2416								
		BHP	0.05	0.06	0.07	0.09	0.10	0.11	0.12	0.13	0.16	0.19								
		Sones	5.8	6.2	6.8	7.4	7.8	7.9	8.2	8.5	9.3	10.4								
	470	RPM	1344	1458	1573	1685	1792	1893	1992	2086	2274	2448								
		BHP	0.08	0.09	0.10	0.11	0.13	0.14	0.15	0.16	0.19	0.22								
		Sones	6.4	6.9	7.5	8.1	8.3	8.4	8.7	9.1	9.9	10.8								
	530	RPM	1488	1585	1691	1793	1892	1987	2078	2168	2338									
		BHP	0.11	0.12	0.13	0.15	0.16	0.18	0.19	0.20	0.23									
		Sones	7.2	7.7	8.2	8.5	8.7	9.0	9.3	9.8	10.8									
	590	RPM	1635	1724	1815	1908	2000	2089	2175	2259	2420									
		BHP	0.14	0.16	0.17	0.19	0.20	0.22	0.23	0.25	0.28									
		Sones	8.1	8.4	8.7	9.0	9.2	9.7	10.1	10.6	11.7									
	650	RPM	1784	1865	1943	2031	2114	2197	2279	2357										
		BHP	0.19	0.20	0.22	0.24	0.25	0.27	0.29	0.31										
		Sones	8.8	9.1	9.3	9.8	10.2	10.7	11.2	11.7										
	710	RPM	1935	2009	2082	2156	2236	2311	2388											
		BHP	0.25	0.26	0.28	0.29	0.31	0.33	0.35											
		Sones	9.5	9.9	10.5	11.0	11.6	12.0	12.5											
	770	RPM	2086	2153	2223															
		BHP	0.31	0.33	0.34															
		Sones	10.6	11.1	12.0															

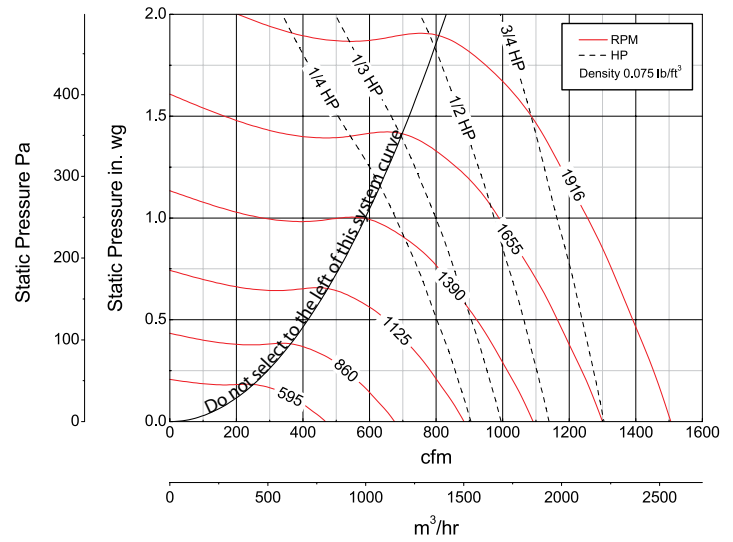
Performance certified is for installation type D: Ducted inlet, Ducted outlet. Power rating (bhp/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.

# BCF-107 - Belt Drive



^Approximate Unit Weight = 100 lb. (45 kg)  
 All dimensions in inches (millimeters).  
 ^Weight shown is largest cataloged Open Drip Proof motor.

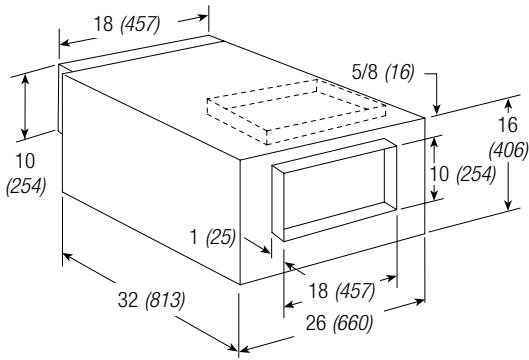
Maximum RPM = 1915  
 Tip Speed (ft./min.) = RPM x 1.955  
 Maximum Motor Frame Size = 56  
 Average Outlet Velocity (FPM) = CFM/0.83 ft<sup>2</sup>



Model Number	Fan CFM		Static Pressure in Inches wg																	
			0.125	0.25	0.375	0.5	0.625	0.75	0.875	1	1.25	1.5								
BCF-107	360	RPM	596	726	851															
		BHP	0.02	0.03	0.05															
		Sones	4.2	5.0	6.1															
450	450	RPM	685	789	893	1000														
		BHP	0.04	0.05	0.07	0.08														
		Sones	4.6	5.3	6.2	7.1														
540	540	RPM	781	872	958	1046	1135	1219												
		BHP	0.07	0.08	0.09	0.11	0.13	0.14												
		Sones	5.2	5.9	6.6	7.3	7.8	8.4												
630	630	RPM	882	962	1038	1111	1188	1260	1338	1411										
		BHP	0.10	0.11	0.13	0.15	0.17	0.18	0.20	0.22										
		Sones	6.2	6.8	7.3	7.7	8.2	8.7	9.1	9.7										
720	720	RPM	987	1055	1125	1191	1253	1323	1387	1452	1585	1704								
		BHP	0.14	0.16	0.18	0.20	0.21	0.24	0.26	0.28	0.32	0.37	0.45							
		Sones	7.3	7.7	7.9	8.3	8.8	9.3	9.7	10.1	10.4	11.4	13.0							
810	810	RPM	1093	1156	1217	1278	1337	1392	1452	1512	1626	1745								
		BHP	0.20	0.22	0.23	0.26	0.28	0.30	0.32	0.34	0.39	0.45								
		Sones	8.0	8.5	8.8	9.1	9.5	10.0	10.5	11.1	12.1	13.5								
900	900	RPM	1201	1258	1313	1369	1423	1476	1526	1577	1686	1787								
		BHP	0.27	0.29	0.31	0.33	0.35	0.38	0.40	0.42	0.48	0.53								
		Sones	8.8	9.2	9.5	9.9	10.3	10.8	11.4	11.9	13.2	14.4								
990	990	RPM	1310	1362	1413	1462	1514	1563	1612	1658	1752	1850								
		BHP	0.35	0.37	0.39	0.42	0.44	0.47	0.49	0.52	0.57	0.63								
		Sones	9.6	10.0	10.4	10.8	11.3	11.9	12.4	13.0	14.3	15.7								
1080	1080	RPM	1419	1468	1516	1561	1607	1654	1699	1744	1828	1915								
		BHP	0.45	0.47	0.50	0.52	0.55	0.58	0.60	0.63	0.69	0.75								
		Sones	10.6	11	11.5	11.9	12.5	13.1	13.7	14.3	15.6	17.0								
1170	1170	RPM	1531	1575	1619	1662	1703	1747	1790	1832										
		BHP	0.57	0.59	0.62	0.64	0.67	0.70	0.73	0.76										
		Sones	11.8	12.3	12.8	13.3	13.8	14.5	15.1	15.7										
1260	1260	RPM	1642	1683	1724															
		BHP	0.70	0.73	0.76															
		Sones	13.3	13.8	14.3															

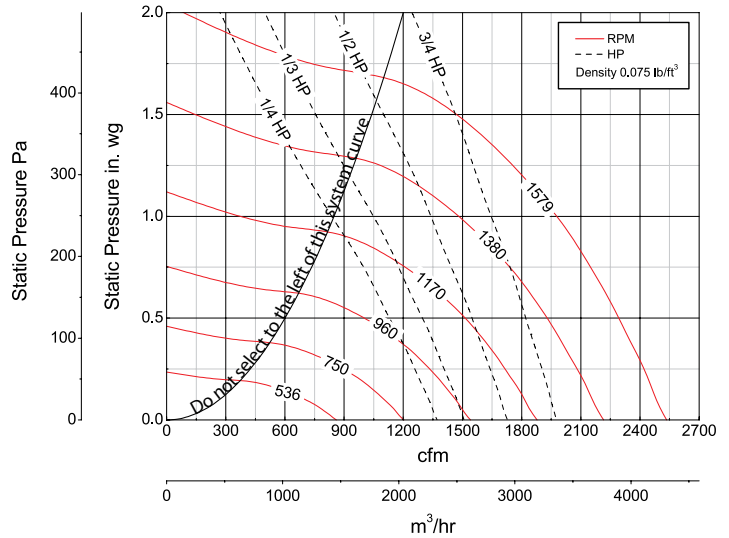
Performance certified is for installation type D: Ducted inlet, Ducted outlet. Power rating (bhp/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.

# BCF-108 - Belt Drive



^Approximate Unit Weight = 120 lb. (54 kg)  
 All dimensions in inches (millimeters).  
 ^Weight shown is largest cataloged Open Drip Proof motor.

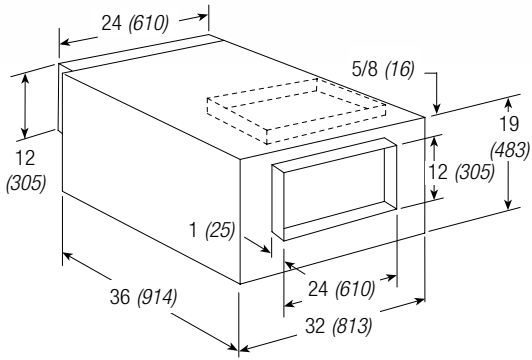
Maximum RPM = 1578  
 Tip Speed (ft/min.) = RPM x 2.235  
 Maximum Motor Frame Size = 56  
 Average Outlet Velocity (FPM) = CFM/1.25 ft<sup>2</sup>



Model Number	Fan CFM		Static Pressure in Inches wg												
			0.125	0.25	0.375	0.5	0.625	0.75	0.875	1	1.25	1.5			
BCF-108	650	RPM	537	660	771	867									
		BHP	0.04	0.06	0.08	0.10									
		Sones	4.5	4.6	5.0	5.4									
	770	RPM	591	701	800	895	979	1059							
		BHP	0.06	0.08	0.10	0.13	0.15	0.18							
		Sones	4.6	4.9	5.2	5.6	6.1	6.7							
	890	RPM	651	748	840	924	1008	1084	1153	1223					
		BHP	0.09	0.11	0.13	0.16	0.19	0.21	0.24	0.27					
		Sones	4.9	5.2	5.5	5.9	6.4	7.0	7.4	7.8					
	1010	RPM	715	800	884	964	1038	1112	1182	1247	1369				
		BHP	0.12	0.15	0.17	0.20	0.23	0.26	0.29	0.32	0.38				
		Sones	5.4	5.6	6.0	6.4	6.8	7.3	7.7	8.1	9.0				
	1130	RPM	780	856	932	1007	1078	1144	1211	1276	1395	1502			
		BHP	0.16	0.19	0.22	0.25	0.28	0.31	0.34	0.38	0.45	0.52			
		Sones	5.9	6.1	6.5	6.9	7.3	7.6	8.0	8.4	9.3	10.1			
	1250	RPM	848	916	985	1054	1121	1185	1246	1305	1423	1531			
		BHP	0.22	0.25	0.28	0.31	0.34	0.38	0.41	0.44	0.52	0.60			
		Sones	6.6	6.8	7.1	7.5	7.9	8.2	8.4	8.8	9.7	10.6			
	1370	RPM	917	980	1042	1105	1168	1228	1286	1343	1452	1559			
		BHP	0.28	0.31	0.34	0.38	0.41	0.45	0.49	0.52	0.60	0.69			
		Sones	7.3	7.5	7.8	8.2	8.5	8.8	9.1	9.4	10.1	11.1			
	1490	RPM	987	1044	1101	1159	1217	1275	1330	1384	1488				
		BHP	0.35	0.39	0.42	0.46	0.49	0.53	0.58	0.62	0.69				
		Sones	8.0	8.3	8.7	8.9	9.2	9.5	9.8	10.1	10.9				
	1610	RPM	1057	1110	1164	1217	1270	1324	1377	1429					
		BHP	0.44	0.48	0.51	0.55	0.59	0.63	0.67	0.72					
		Sones	9.0	9.3	9.5	9.7	10.0	10.3	10.7	11.0					
	1730	RPM	1128	1178	1228	1277	1326	1377							
		BHP	0.54	0.58	0.62	0.66	0.70	0.74							
		Sones	9.9	10.1	10.4	10.6	10.9	11.2							
	1850	RPM	1200	1247	1292	1339									
		BHP	0.65	0.69	0.74	0.78									
		Sones	10.8	11.0	11.3	11.6									

Performance certified is for installation type D: Ducted inlet, Ducted outlet. Power rating (bhp/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.

# BCF-110 - Belt Drive



^Approximate Unit Weight = 265 lb. (120 kg)

All dimensions in inches (millimeters).

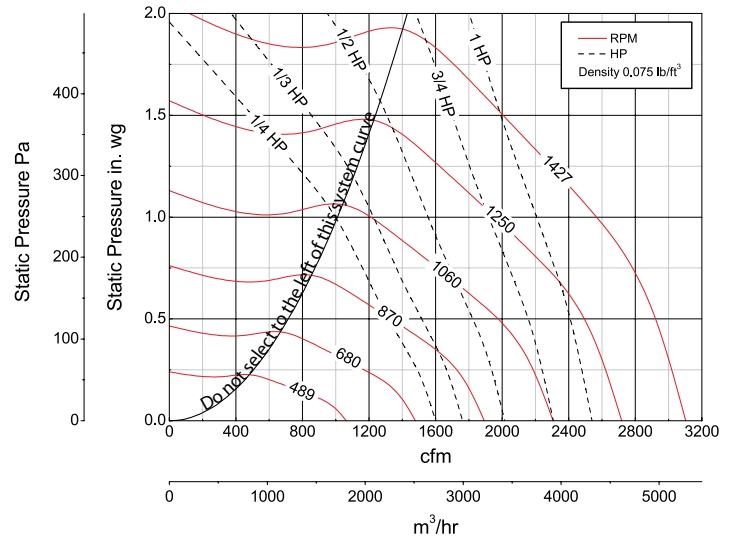
^Weight shown is largest cataloged Open Drip Proof motor.

Maximum RPM = 1426

Tip Speed (ft/min.) = RPM x 2.589

Maximum Motor Frame Size = 143T

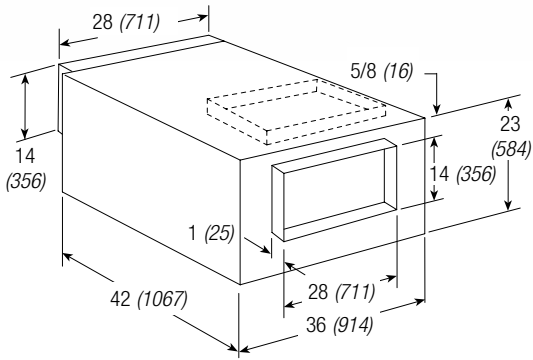
Average Outlet Velocity (FPM) = CFM/2.0 ft<sup>2</sup>



Model Number	Fan CFM		Static Pressure in Inches wg																	
			0.125	0.25	0.375	0.5	0.625	0.75	0.875	1	1.25	1.5								
BCF-110	860	RPM	490	593	677	755	824													
		BHP	0.05	0.08	0.10	0.12	0.14													
		Sones	5.1	5.7	6.2	6.9	7.1													
	1000	RPM	535	631	713	784	851	914	971											
		BHP	0.08	0.10	0.13	0.15	0.17	0.20	0.23											
		Sones	5.4	6.0	6.6	7.1	7.4	7.6	8.0											
	1140	RPM	586	671	750	819	882	941	999	1053	1151									
		BHP	0.11	0.13	0.16	0.19	0.22	0.24	0.27	0.30	0.36									
		Sones	5.8	6.4	7.1	7.4	7.7	7.9	8.4	8.8	9.6									
	1280	RPM	641	713	788	856	917	974	1026	1080	1178	1267								
		BHP	0.15	0.17	0.20	0.24	0.27	0.30	0.33	0.36	0.43	0.49								
		Sones	6.4	7.0	7.5	7.7	8.0	8.3	8.7	9.2	9.9	10.6								
	1420	RPM	698	758	829	894	954	1010	1061	1110	1205	1294								
		BHP	0.20	0.22	0.26	0.29	0.33	0.36	0.39	0.43	0.50	0.57								
		Sones	7.2	7.7	7.8	8.1	8.5	8.9	9.2	9.6	10.2	11.0								
	1560	RPM	756	808	871	934	992	1046	1097	1145	1234	1321								
		BHP	0.25	0.28	0.32	0.35	0.39	0.43	0.47	0.51	0.58	0.66								
		Sones	8.2	8.2	8.3	8.7	9.1	9.5	9.8	10.1	10.6	11.4								
	1700	RPM	817	863	916	975	1031	1084	1134	1181	1269	1349								
		BHP	0.32	0.35	0.39	0.43	0.47	0.51	0.55	0.59	0.67	0.75								
		Sones	8.7	8.8	9.0	9.3	9.7	10.1	10.4	10.7	11.3	11.9								
	1840	RPM	879	919	962	1018	1072	1123	1172	1219	1305	1385								
		BHP	0.41	0.44	0.47	0.51	0.56	0.60	0.65	0.69	0.78	0.87								
		Sones	9.4	9.6	9.8	10.1	10.4	10.8	11.2	11.5	12.1	12.7								
	1980	RPM	941	976	1017	1063	1113	1164	1211	1257	1342	1420								
		BHP	0.50	0.53	0.57	0.61	0.65	0.70	0.75	0.80	0.90	0.99								
		Sones	10.2	10.4	10.6	11.0	11.3	11.6	11.9	12.3	13.0	13.6								
	2120	RPM	1004	1033	1072	1110	1158	1205	1251	1296	1380									
		BHP	0.61	0.64	0.68	0.72	0.77	0.82	0.87	0.92	1.02									
		Sones	11.2	11.3	11.6	11.9	12.2	12.5	12.9	13.2	13.9									
	2260	RPM	1066	1092	1128	1163	1204	1248	1292											
		BHP	0.74	0.77	0.81	0.85	0.89	0.95	1.00											
		Sones	12.3	12.5	12.7	12.9	13.2	13.5	13.8											

Performance certified is for installation type D: Ducted inlet, Ducted outlet. Power rating (bhp/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.

# BCF-112 - Belt Drive



^Approximate Unit Weight = 340 lb. (157 kg)

All dimensions in inches (millimeters).

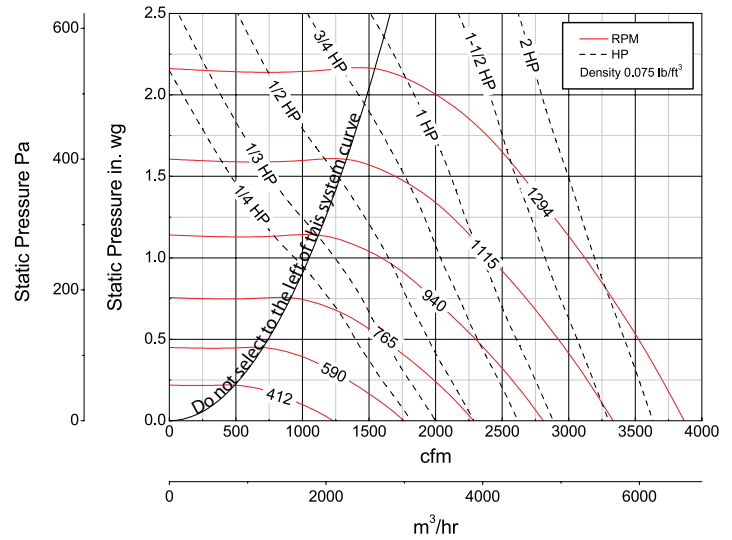
^Weight shown is largest cataloged Open Drip Proof motor.

Maximum RPM = 1294

Tip Speed (ft/min.) = RPM x 3.045

Maximum Motor Frame Size = 182T

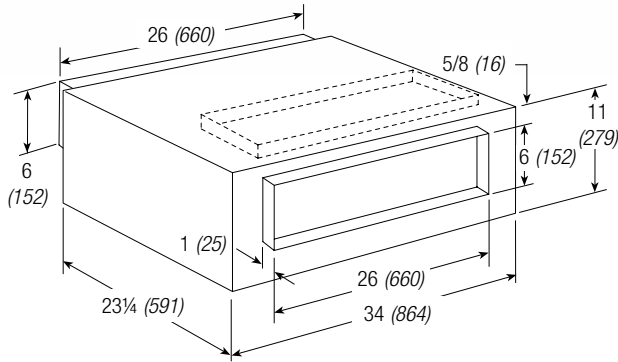
Average Outlet Velocity (FPM) = CFM/2.72 ft<sup>2</sup>



Model Number	Fan CFM		Static Pressure in Inches wg													
			0.125	0.25	0.375	0.5	0.625	0.75	0.875	1	1.25	1.5				
BCF-112	930	RPM	413	495	570	638	704	763								
		BHP	0.06	0.08	0.10	0.13	0.16	0.18								
		Sones	7.6	8.5	8.5	8.6	8.8	9.0								
1170	930	RPM	476	549	613	674	732	784	839	890						
		BHP	0.10	0.12	0.15	0.18	0.21	0.24	0.28	0.31						
		Sones	8.6	9.0	9.3	9.5	9.6	9.8	10.0	10.5						
1410	930	RPM	543	608	667	720	770	821	870	915	1004	1088				
		BHP	0.15	0.19	0.22	0.25	0.29	0.32	0.36	0.40	0.48	0.56				
		Sones	9.4	9.9	10.2	10.4	10.6	10.8	11.1	11.6	12.6	13.6				
1650	930	RPM	614	671	726	775	821	866	908	952	1034	1109				
		BHP	0.23	0.27	0.31	0.35	0.39	0.43	0.46	0.51	0.59	0.68				
		Sones	10.4	10.9	11.3	11.5	11.7	12.1	12.5	13.0	13.9	14.9				
1890	930	RPM	686	738	787	834	878	919	958	996	1071	1145				
		BHP	0.33	0.38	0.42	0.47	0.51	0.56	0.60	0.65	0.74	0.84				
		Sones	11.6	12.2	12.7	13.0	13.3	13.7	14.0	14.5	15.4	16.5				
2130	930	RPM	760	808	852	895	937	976	1013	1049	1118	1183				
		BHP	0.45	0.51	0.56	0.62	0.67	0.72	0.77	0.82	0.92	1.01				
		Sones	13.1	13.7	14.2	14.7	15.0	15.4	15.9	16.3	17.3	18.3				
2370	930	RPM	836	879	919	960	998	1035	1071	1105	1170	1232				
		BHP	0.61	0.67	0.73	0.79	0.85	0.91	0.96	1.02	1.14	1.25				
		Sones	14.8	15.3	15.8	16.4	16.9	17.4	17.8	18.3	19.3	20				
2610	930	RPM	913	951	990	1026	1062	1096	1131	1164	1226	1285				
		BHP	0.81	0.87	0.94	1.00	1.07	1.13	1.20	1.26	1.38	1.51				
		Sones	16.7	17.2	17.8	18.4	18.9	19.5	20	20	22	23				
2850	930	RPM	990	1025	1061	1095	1128	1161	1192	1224	1284					
		BHP	1.04	1.10	1.18	1.25	1.32	1.39	1.47	1.53	1.66					
		Sones	18.8	19.4	19.9	21	21	22	22	23	24					
3090	930	RPM	1068	1100	1133	1165	1196	1227	1257	1286						
		BHP	1.31	1.38	1.46	1.54	1.61	1.69	1.77	1.85						
		Sones	21	22	22	23	24	24	25	26						
3330	930	RPM	1146	1176	1206	1237	1266									
		BHP	1.62	1.70	1.78	1.87	1.95									
		Sones	24	24	25	26	26									

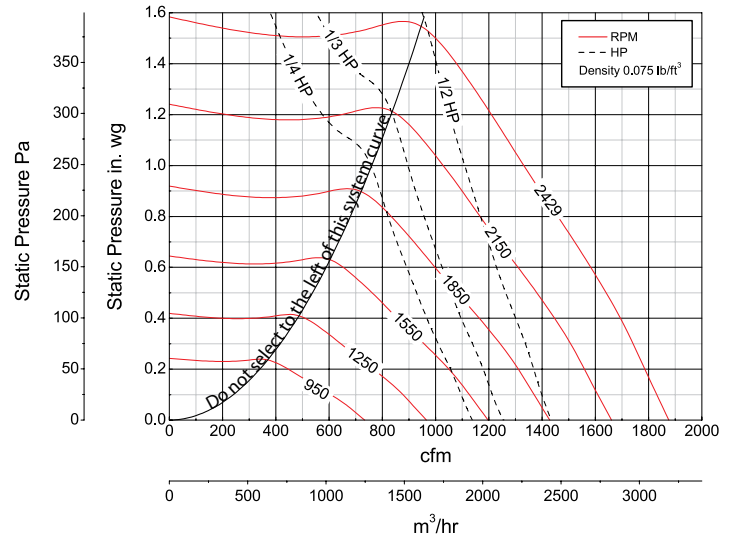
Performance certified is for installation type D: Ducted inlet, Ducted outlet. Power rating (bhp/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.

# BCF-206 - Belt Drive



^Approximate Unit Weight = 145 lb. (66 kg)  
 All dimensions in inches (millimeters).  
 ^Weight shown is largest cataloged Open Drip Proof motor.

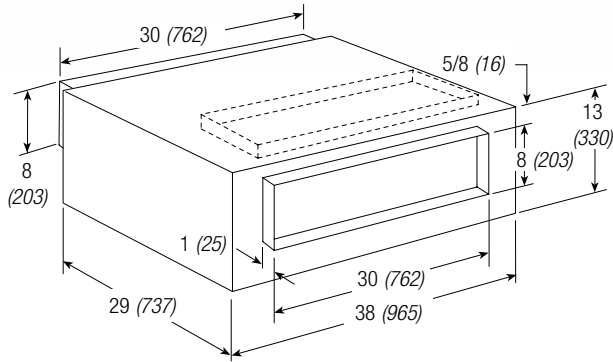
Maximum RPM = 2427  
 Tip Speed (ft/min.) = RPM x 1.505  
 Maximum Motor Frame Size = 56  
 Average Outlet Velocity (FPM) = CFM/1.08 ft<sup>2</sup>



Model Number	Fan CFM		Static Pressure in Inches wg																		
			0.125	0.25	0.375	0.5	0.625	0.75	0.875	1	1.25	1.5									
BCF-206	600	RPM	983	1152	1292	1424															
		BHP	0.06	0.07	0.09	0.11															
		Sones	5.8	7.4	8.4	8.9															
670	RPM	1055	1218	1353	1472	1591	1700														
		BHP	0.07	0.09	0.11	0.13	0.15	0.17													
		Sones	6.3	7.8	8.5	9.1	9.6	10.1													
740	RPM	1128	1285	1416	1533	1639	1747	1847													
		BHP	0.09	0.11	0.14	0.16	0.18	0.20	0.22												
		Sones	6.8	8.0	8.6	9.2	9.7	10.4	11.3												
810	RPM	1204	1353	1482	1594	1698	1794	1894	1988												
		BHP	0.11	0.14	0.17	0.19	0.21	0.23	0.26	0.28											
		Sones	7.5	8.1	8.7	9.4	10.1	10.8	11.7	12.5											
880	RPM	1283	1422	1549	1659	1760	1854	1942	2034	2205											
		BHP	0.14	0.17	0.20	0.22	0.25	0.27	0.30	0.32	0.37										
		Sones	7.9	8.4	9.1	9.7	10.4	11.3	12.1	13.1	14.9										
950	RPM	1362	1494	1616	1725	1823	1915	2002	2084	2252	2407										
		BHP	0.17	0.20	0.23	0.26	0.29	0.32	0.35	0.37	0.43	0.48									
		Sones	8.3	8.8	9.4	10.1	11.0	11.8	12.8	13.7	15.5	17.2									
1020	RPM	1444	1567	1684	1792	1889	1978	2063	2144	2299											
		BHP	0.21	0.24	0.28	0.31	0.34	0.37	0.40	0.43	0.48										
		Sones	8.8	9.3	9.8	10.6	11.5	12.4	13.4	14.4	16.2										
1090	RPM	1528	1641	1754	1859	1956	2043	2126	2205												
		BHP	0.25	0.29	0.32	0.36	0.39	0.42	0.45	0.48											
		Sones	9.4	9.8	10.3	11.2	12.0	13.0	14.0	15.0											
1160	RPM	1612	1719	1826	1927	2023	2110	2191													
		BHP	0.30	0.33	0.37	0.41	0.45	0.48	0.51												
		Sones	10.0	10.4	11.0	11.7	12.6	13.6	14.6												
1230	RPM	1697	1797	1899	1997	2090															
		BHP	0.35	0.39	0.43	0.47	0.51														
		Sones	10.7	11.1	11.6	12.3	13.3														
1300	RPM	1783	1877	1972																	
		BHP	0.41	0.45	0.49																
		Sones	11.4	11.8	12.3																

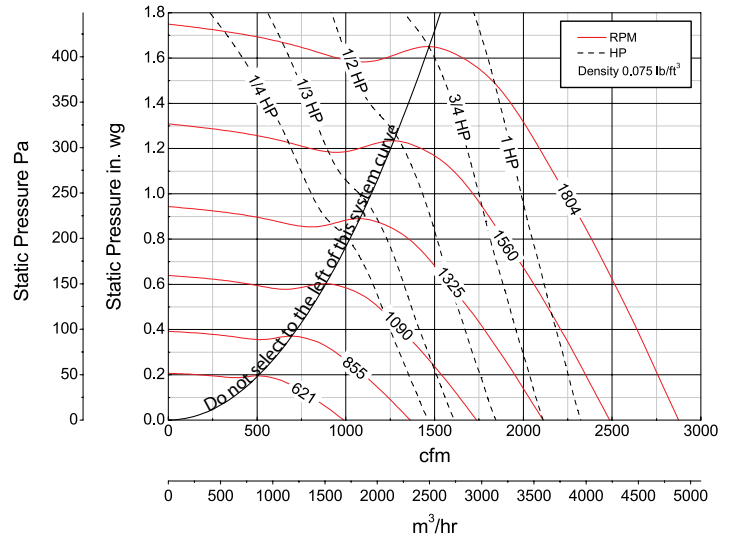
Performance certified is for installation type D: Ducted inlet, Ducted outlet. Power rating (bhp/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.

# BCF-207 - Belt Drive



^Approximate Unit Weight = 185 lb. (84 kg)  
 All dimensions in inches (millimeters).  
 ^Weight shown is largest cataloged Open Drip Proof motor.

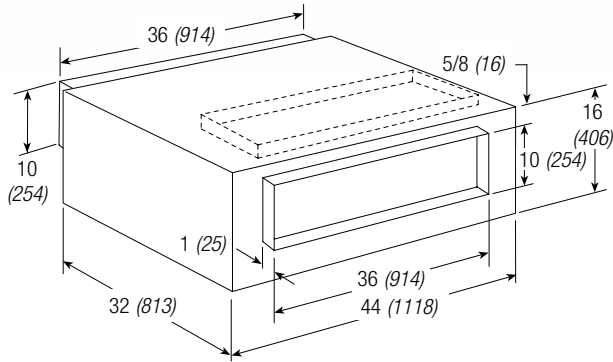
Maximum RPM = 1803  
 Tip Speed (ft/min.) = RPM x 1.955  
 Maximum Motor Frame Size = 143T  
 Average Outlet Velocity (FPM) = CFM/1.67 ft<sup>2</sup>



Model Number	Fan CFM		Static Pressure in Inches wg																			
			0.125	0.25	0.375	0.5	0.625	0.75	0.875	1	1.25	1.5										
BCF-207	760	RPM	623	742	867																	
		BHP	0.05	0.07	0.09																	
		Sones	5.4	6.2	7.2																	
910	910	RPM	696	803	903	1005	1110															
		BHP	0.08	0.10	0.12	0.15	0.18															
		Sones	6.1	6.9	7.5	8.0	8.6															
1060	1060	RPM	776	873	961	1046	1135	1224														
		BHP	0.12	0.15	0.17	0.19	0.22	0.25														
		Sones	6.9	7.7	8.1	8.4	8.8	9.4														
1210	1210	RPM	858	946	1028	1103	1176	1257	1331	1411												
		BHP	0.17	0.20	0.23	0.25	0.28	0.31	0.34	0.38												
		Sones	7.9	8.5	8.9	9.2	9.6	9.8	10.3	10.8												
1360	1360	RPM	942	1023	1099	1170	1237	1301	1372	1441	1580											
		BHP	0.23	0.27	0.30	0.33	0.36	0.39	0.42	0.46	0.54											
		Sones	8.8	9.4	9.9	10.2	10.6	10.9	11.0	11.2	12.1											
1510	1510	RPM	1028	1103	1173	1240	1303	1363	1422	1482	1608	1733										
		BHP	0.31	0.35	0.38	0.42	0.45	0.49	0.52	0.55	0.63	0.72										
		Sones	9.9	10.4	10.9	11.4	11.8	11.9	11.9	12.0	12.5	13.5										
1660	1660	RPM	1116	1185	1250	1313	1373	1430	1485	1539	1649	1763										
		BHP	0.41	0.45	0.48	0.52	0.56	0.60	0.63	0.67	0.75	0.84										
		Sones	11.1	11.6	12.1	12.5	12.7	12.8	12.9	13.0	13.3	14.0										
1810	1810	RPM	1205	1269	1330	1387	1446	1500	1552	1602	1701	1804										
		BHP	0.52	0.56	0.6	0.64	0.69	0.73	0.77	0.81	0.89	0.98										
		Sones	12.4	12.9	13.3	13.4	13.6	13.7	13.9	14.0	14.3	14.8										
1960	1960	RPM	1294	1353	1411	1466	1519	1573	1623	1671												
		BHP	0.65	0.70	0.74	0.79	0.83	0.88	0.93	0.97												
		Sones	14.1	14.2	14.3	14.5	14.7	14.9	15.1	15.2												
2110	2110	RPM	1384	1439	1494	1546	1596															
		BHP	0.80	0.85	0.90	0.95	1.00															
		Sones	15.3	15.4	15.5	15.8	16.0															
2260	2260	RPM	1474	1527																		
		BHP	0.98	1.03																		
		Sones	16.6	16.7																		

Performance certified is for installation type D: Ducted inlet, Ducted outlet. Power rating (bhp/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.

# BCF-208 - Belt Drive



^Approximate Unit Weight = 220 lb. (100 kg)

All dimensions in inches (millimeters).

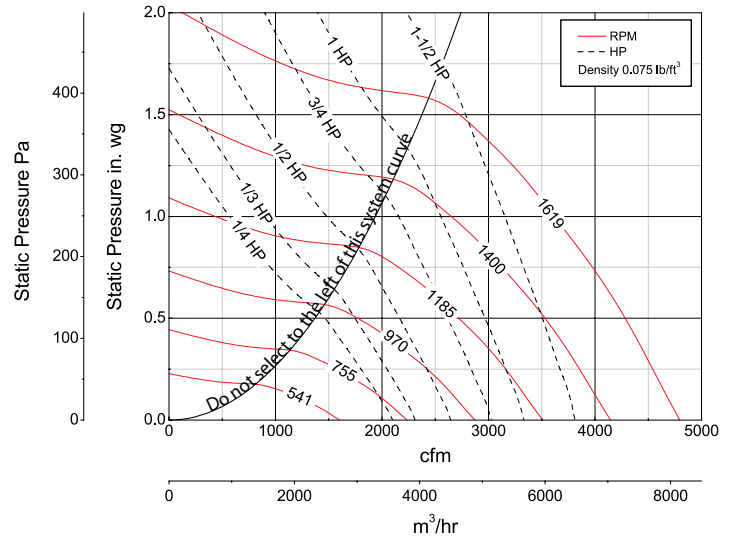
^Weight shown is largest cataloged Open Drip Proof motor.

Maximum RPM = 1619

Tip Speed (ft/min.) = RPM x 2.235

Maximum Motor Frame Size = 145T

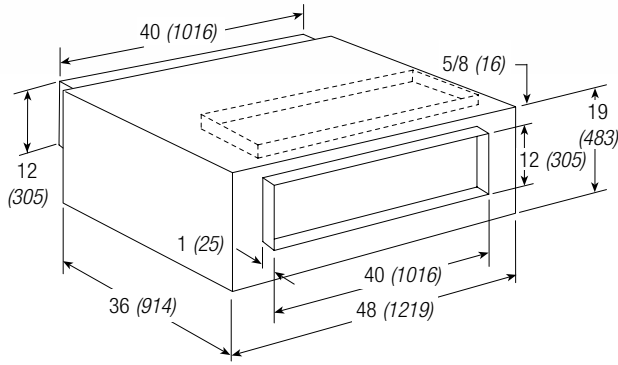
Average Outlet Velocity = CFM/2.5 ft<sup>2</sup>



Model Number	Fan CFM		Static Pressure in Inches wg																		
			0.125	0.25	0.375	0.5	0.625	0.75	0.875	1	1.25	1.5									
BCF-208	1150	RPM	541	669																	
		BHP	0.07	0.10																	
		Sones	3.6	6.0																	
	1380	RPM	598	712	814	914															
		BHP	0.11	0.14	0.19	0.23															
		Sones	4.6	7.2	9.3	9.6															
	1610	RPM	658	762	855	943	1026														
		BHP	0.15	0.20	0.24	0.29	0.34														
		Sones	6.0	8.8	9.5	9.8	10.0														
	1840	RPM	721	817	903	984	1061	1132	1210												
		BHP	0.21	0.26	0.31	0.37	0.42	0.48	0.55												
		Sones	7.9	9.7	9.9	10.2	10.5	10.9	11.7												
	2070	RPM	789	875	956	1031	1102	1172	1238	1300											
		BHP	0.29	0.34	0.40	0.46	0.52	0.58	0.64	0.71											
		Sones	10.1	10.1	10.4	10.7	11.1	11.7	12.4	13.1											
	2300	RPM	858	936	1012	1083	1149	1214	1277	1338	1453										
		BHP	0.38	0.44	0.50	0.57	0.63	0.70	0.77	0.84	0.98										
		Sones	10.8	10.7	11.0	11.4	11.9	12.5	13.3	14.0	15.5										
	2530	RPM	929	1000	1071	1138	1201	1261	1321	1377	1489	1592									
		BHP	0.49	0.56	0.63	0.70	0.77	0.84	0.91	0.99	1.14	1.30									
		Sones	11.4	11.5	11.7	12.2	12.8	13.5	14.2	14.9	16.5	18.2									
	2760	RPM	1001	1066	1131	1195	1256	1313	1368	1423	1528										
		BHP	0.63	0.70	0.77	0.85	0.92	1.00	1.08	1.16	1.32										
		Sones	12.3	12.5	12.7	13.1	13.8	14.4	15.1	15.9	17.6										
	2990	RPM	1074	1134	1194	1254	1312	1368	1420	1471	1572										
		BHP	0.79	0.86	0.94	1.02	1.10	1.18	1.27	1.35	1.52										
		Sones	13.4	13.6	13.9	14.2	14.8	15.5	16.2	17.0	18.7										
	3220	RPM	1148	1204	1259	1315	1370	1424	1475												
		BHP	0.97	1.05	1.13	1.22	1.30	1.39	1.48												
		Sones	14.5	14.8	15.1	15.4	15.9	16.6	17.4												
	3450	RPM	1222	1274	1326	1379	1430														
		BHP	1.18	1.27	1.35	1.44	1.53														
		Sones	15.8	16.1	16.4	16.8	17.2														

Performance certified is for installation type D: Ducted inlet, Ducted outlet. Power rating (bhp/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.

# BCF-210 - Belt Drive



^Approximate Unit Weight = 345 lb. (156 kg)

All dimensions in inches (millimeters).

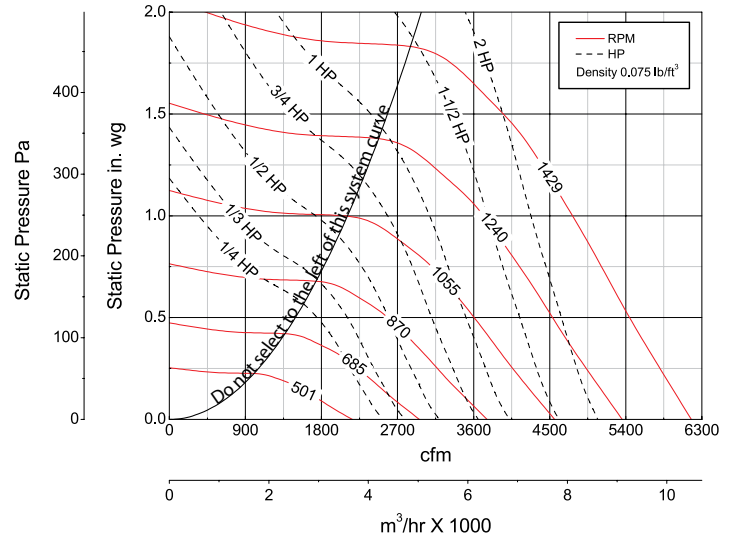
^Weight shown is largest cataloged Open Drip Proof motor.

Maximum RPM = 1429

Tip Speed (ft/min.) = RPM x 2.589

Maximum Motor Frame Size = 182T

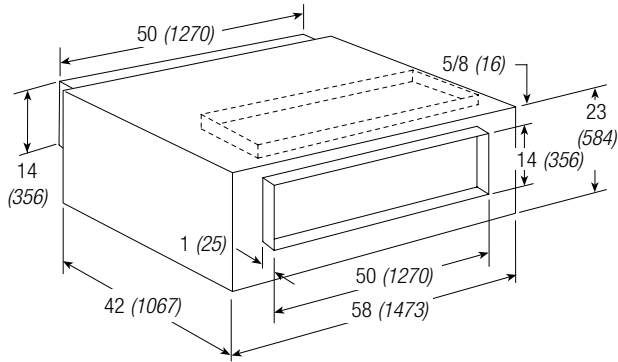
Average Outlet Velocity = CFM/3.33



Model Number	Fan CFM		Static Pressure in Inches wg												
			0.125	0.25	0.375	0.5	0.625	0.75	0.875	1	1.25	1.5			
BCF-210	1660	RPM	501	590	676	755									
		BHP	0.11	0.14	0.19	0.23									
		Sones	4.3	6.1	8.5	11.5									
	1935	RPM	553	634	710	783	848	921							
		BHP	0.16	0.20	0.24	0.29	0.34	0.41							
		Sones	5.4	7.3	9.7	11.5	11.6	11.7							
	2210	RPM	608	682	749	816	881	939	999	1062					
		BHP	0.22	0.27	0.32	0.36	0.42	0.48	0.55	0.62					
		Sones	6.9	9.0	11.6	11.7	11.8	12.0	12.2	12.6					
	2485	RPM	665	734	796	854	915	972	1027	1077	1188				
		BHP	0.30	0.35	0.41	0.46	0.52	0.58	0.65	0.71	0.87				
		Sones	8.8	11.1	11.9	12.0	12.2	12.4	12.7	13.2	14.8				
	2760	RPM	722	787	845	901	952	1007	1059	1110	1202	1303			
		BHP	0.40	0.46	0.52	0.58	0.63	0.70	0.76	0.84	0.99	1.17			
		Sones	11.2	12.2	12.3	12.5	12.7	13.0	13.4	14.1	15.4	17.2			
	3035	RPM	780	842	897	948	998	1045	1095	1142	1235	1319			
		BHP	0.51	0.58	0.65	0.71	0.78	0.84	0.91	0.98	1.14	1.31			
		Sones	12.9	12.8	12.8	13.0	13.4	13.7	14.3	14.9	16.4	17.9			
	3310	RPM	839	898	950	999	1046	1091	1134	1179	1267	1351			
		BHP	0.65	0.73	0.80	0.87	0.94	1.01	1.08	1.15	1.31	1.49			
		Sones	13.5	13.4	13.5	13.8	14.1	14.6	15.2	15.9	17.4	19.0			
	3585	RPM	898	955	1005	1051	1096	1138	1180	1220	1303	1383			
		BHP	0.81	0.89	0.97	1.05	1.13	1.21	1.28	1.35	1.51	1.69			
		Sones	14.2	14.3	14.4	14.6	15.1	15.6	16.3	17.0	18.4	20			
	3860	RPM	957	1012	1060	1104	1147	1188	1227	1266	1340	1418			
		BHP	1.00	1.09	1.17	1.26	1.34	1.43	1.51	1.59	1.75	1.93			
		Sones	15.1	15.3	15.4	15.7	16.2	16.8	17.4	18.1	19.5	21			
	4135	RPM	1017	1070	1117	1159	1200	1239	1276	1314	1385				
		BHP	1.21	1.31	1.40	1.49	1.58	1.68	1.77	1.85	2.02				
		Sones	16.2	16.4	16.7	17.0	17.4	18.0	18.6	19.3	21				
	4410	RPM	1078	1128	1174	1215	1253	1291	1328						
		BHP	1.45	1.56	1.66	1.76	1.86	1.95	2.05						
		Sones	17.5	17.7	18.1	18.4	18.7	19.2	19.9						

Performance certified is for installation type D: Ducted inlet, Ducted outlet. Power rating (bhp/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.

# BCF-212 - Belt Drive



^Approximate Unit Weight = 515 lb. (234 kg)

All dimensions in inches (millimeters).

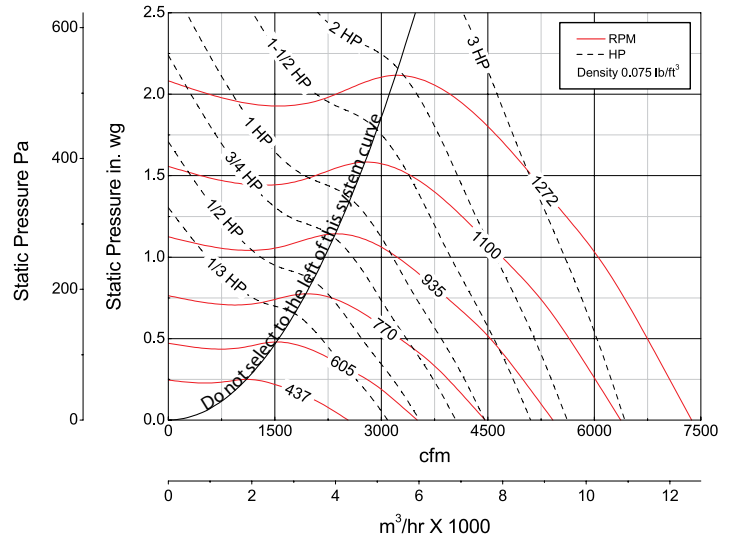
^Weight shown is largest cataloged Open Drip Proof motor.

Maximum RPM = 1271

Tip Speed (ft/min.) = RPM x 3.045

Maximum Motor Frame Size = 184T

Average Discharge Velocity (FPM) = CFM/4.56



Model Number	Fan CFM		Static Pressure in Inches wg												
			0.125	0.25	0.375	0.5	0.625	0.75	0.875	1	1.25	1.5			
BCF-212	2050	RPM	438	515	581	641	705	764							
		BHP	0.14	0.20	0.25	0.31	0.38	0.45							
		Sones	6.4	6.7	7.3	8.1	9.1	10.0							
2430	2430	RPM	492	560	621	678	729	781	835	885					
		BHP	0.22	0.28	0.34	0.41	0.47	0.55	0.63	0.71					
		Sones	7.0	7.3	8.0	8.8	9.5	10.5	11.5	12.2					
2810	2810	RPM	549	608	665	718	767	813	857	902	994	1077			
		BHP	0.31	0.38	0.46	0.53	0.61	0.68	0.76	0.84	1.03	1.22			
		Sones	7.8	8.2	8.9	9.6	10.4	11.2	12.1	12.6	14.0	15.4			
3190	3190	RPM	607	659	713	762	808	851	894	934	1011	1094			
		BHP	0.44	0.51	0.59	0.68	0.76	0.85	0.93	1.02	1.20	1.41			
		Sones	9.0	9.3	9.9	10.7	11.5	12.3	12.8	13.3	14.4	15.8			
3570	3570	RPM	667	715	761	808	852	894	933	971	1045	1111			
		BHP	0.59	0.67	0.76	0.85	0.95	1.04	1.14	1.24	1.43	1.62			
		Sones	10.2	10.7	11.1	11.9	12.8	13.2	13.7	14.2	15.1	16.2			
3950	3950	RPM	729	773	814	857	899	938	976	1012	1082	1148			
		BHP	0.78	0.87	0.96	1.07	1.17	1.27	1.38	1.48	1.70	1.91			
		Sones	11.7	12.2	12.7	13.3	13.8	14.3	14.8	15.2	16.1	17.0			
4330	4330	RPM	791	831	870	907	947	985	1021	1056	1122	1186			
		BHP	1.01	1.11	1.21	1.31	1.43	1.54	1.65	1.77	2.00	2.23			
		Sones	13.4	14.0	14.3	14.6	14.9	15.4	15.9	16.4	17.4	18.5			
4710	4710	RPM	853	890	927	961	996	1033	1068	1101	1166	1225			
		BHP	1.28	1.38	1.50	1.61	1.72	1.85	1.97	2.09	2.34	2.59			
		Sones	15.4	15.6	15.8	16.1	16.5	16.9	17.5	18.0	19.1	20			
5090	5090	RPM	916	950	985	1018	1049	1082	1116	1148	1210	1269			
		BHP	1.60	1.71	1.83	1.95	2.06	2.19	2.33	2.46	2.73	3.00			
		Sones	17.1	17.3	17.6	17.9	18.3	18.7	19.2	19.8	21	22			
5470	5470	RPM	979	1012	1044	1075	1105	1134	1165	1197					
		BHP	1.97	2.08	2.20	2.34	2.46	2.59	2.73	2.88					
		Sones	18.9	19.1	19.5	19.8	20	21	21	22					
5850	5850	RPM	1043	1073	1103	1133	1162	1189							
		BHP	2.39	2.51	2.63	2.78	2.92	3.05							
		Sones	21	21	21	22	22	23							

Performance certified is for installation type D: Ducted inlet, Ducted outlet. Power rating (bhp/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance ratings only.

# Specifications

## Fan Type

Duct mounted supply, exhaust or return fans shall be of the centrifugal, belt driven, inline type. The fan housing shall be of the rectangular design constructed of heavy gauge galvanized steel and shall include rectangular duct mounting collars.

## Hinged Panel

A hinged or removable panel shall be provided in the fan cabinet of sufficient size to permit access for service to all of the fan's internal components without dismantling the cabinet.

## Fan Wheel

The fan wheel shall be of the galvanized steel, forward curved, centrifugal type. Wheels shall be dynamically and statically balanced.

## Motors

Motors shall be of the heavy duty type with permanently sealed ball bearings. The wheel shaft shall be ground and polished steel mounted in permanently sealed pillow block bearings. Drives shall be sized for a minimum of 150% of driven horsepower. Pulleys shall be of the machined cast iron type, keyed and securely attached to the wheel and motor shafts. The motor pulleys shall be adjustable for final system balancing.

## AMCA

All fans shall bear the AMCA Certified Ratings Seal for air performance.

## Manufacturing

Fans shall be Greenheck Model BCF, manufactured by Greenheck Fan Corporation in Schofield, Wisconsin.



## Building Value in Air

Greenheck delivers value to mechanical engineers by helping them solve virtually any air quality challenges their clients face with a comprehensive selection of

top quality, innovative air-related equipment. We offer extra value to contractors by providing easy-to-install, competitively priced, reliable products that arrive on time.

And building owners and occupants value the energy efficiency, low maintenance and quiet dependable operation they experience long after the construction project ends.

## Our Warranty

Greenheck warrants this equipment to be free from defects in material and workmanship for a period of one year from the purchase date. Any units or parts which prove defective during the warranty period will be replaced at our option when returned to our factory, transportation prepaid. Motors are warranted by the motor manufacturer for a period of one year. Should motors furnished by Greenheck prove defective during this period, they should be returned to the nearest authorized motor service station. Greenheck will not be responsible for any removal or installation costs.

*As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.*



Prepared to Support  
Green Building Efforts