

Cincinnati fan

OEM and Industrial Air Handling Specialist



SERIES CPF

CENTRIFUGAL PLUG FANS

CLASS II CLASS III

**Total Air/Energy
SOLUTIONS**
Technology • Efficiency • Performance



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Supersedes CPF-603



cincinnati fan

A Company That Stands Behind Its Product

Since the founding of **Cincinnati Fan** in 1956, the company's mission has been to provide quality products at competitive prices, backed by dependable 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 has over 170 experienced sales engineers across the U.S. and Canada ready to serve your air handling needs.

Cincinnati Fan can provide:

- 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.

Visit us at www.cincinnati-fan.com for more information.

SPECIFICATIONS FOR CPF SERIES

Centrifugal plug fans shall be Cincinnati CPF Series, Size _____, Arrangement _____ Class _____.
Capacity: _____ CFM, _____ Static Pressure at standard conditions.
Operating conditions: _____ °F, _____ Ft. Altitude.

Backward inclined wheels shall have welded blades and are designed to meet AMCA Class _____ conditions. Construction gauges shall be: _____ gauge shroud, _____ gauge backplate, _____ gauge blades (see page 20 for correct gauges for each class). Wheels shall be dynamically balanced to assure smooth operation. Shafts shall be turned, ground and polished steel (or stainless steel). All fans shall be test run at the factory before shipping.

All bearings shall be grease-lubricated, heavy-duty, self-aligning ball bearings in cast iron pillow blocks. Bearings shall be selected for optimal performance depending on fan size and class with an L10 life of 30,000 hours minimum. V-belt drive shall be selected for a minimum of 1.3 times nominal horsepower.

(All parts in contact with airstream shall be standard steel or stainless steel as specified.)

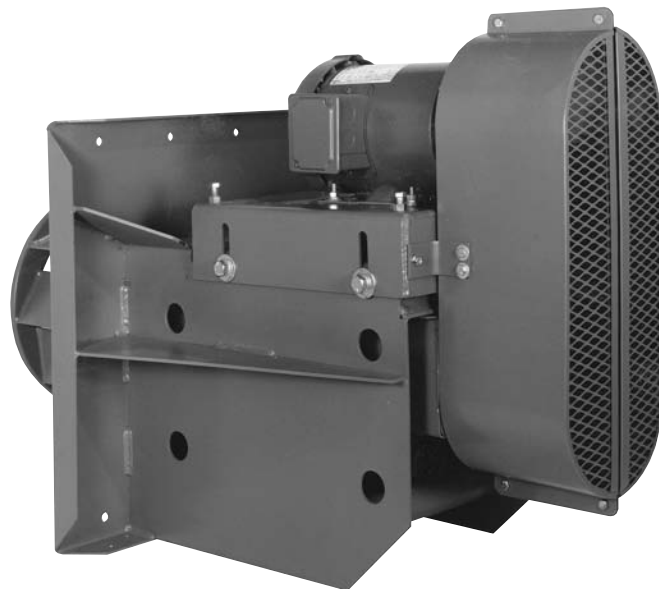
Before painting, all steel shall be cleaned by detergent wash, phosphatized and painted with machine gray enamel.

TWO STANDARD ARRANGEMENTS



ARRANGEMENT 4 (DIRECT DRIVE)

- Motor mounted on motor base.
- Wheel mounted on motor shaft.
- Maximum temperature 200°F.
See other arrangements for higher temperatures.



ARRANGEMENT 9 (V-BELT DRIVE)

- Motor mounted on adjustable base over the fan shaft.
- Wheel mounted on fan shaft with two pillow block bearings.
- Maximum temperature of standard design is 300°F.
High temperature fans available up to 800°F.
- Shown with belt guard.



STANDARD INLET BELL

Designed for smooth air entrance into the wheel for maximum efficiency.



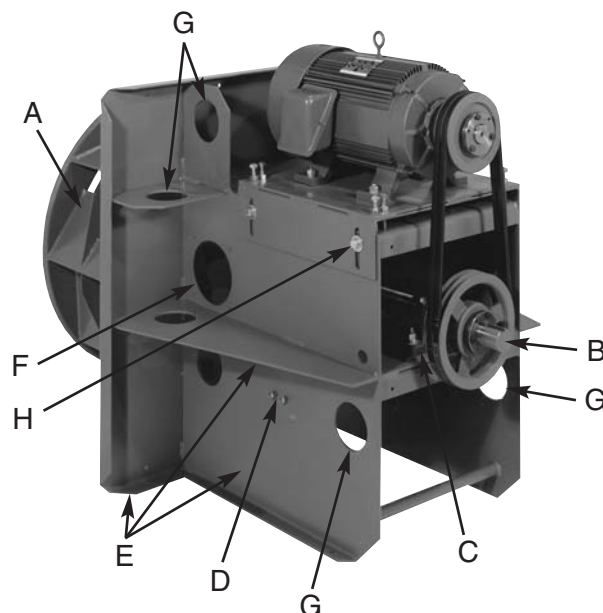
OPTIONAL INSULATION PLUG BOX

Required for 451°F. to 800°F. arrangement 9 only.
May be furnished by customer.
Box available in 2", 3", 4", 5" or 6" depths.

CPF SERIES FEATURES

- A) Backward inclined blades are fabricated of heavy gauge, high-strength steel to assure long lasting, efficient operation.
- B) Turned, ground and polished shafting assures smooth operation.
- C) Heavy-duty, self-aligning, relubricatable ball bearings in cast-iron pillow blocks. Bearings are selected for optimal performance depending on fan size and class with an L10 life of 30,000 hours minimum.
- D) Extended grease fittings for easy lubrication of fan bearings.
- E) Panel and base construction with internal and external supports to maximize rigidity and assure long equipment life.
- F) Inboard bearing access hole.
- G) Multiple lifting points for easy installation of fan onto customer's equipment.
- H) Heavy duty motor support base with four point adjustability for proper belt tension and alignment.

Arrangement 9 shown with belt guard removed.



SPARK-RESISTANT CONSTRUCTION

Type A: NOT AVAILABLE

Type B: Fabricated aluminum wheel and aluminum rubbing ring on motor shaft or fan shaft. **Maximum temperature 200°F.**

Type C: Consists of aluminum inlet bell and aluminum plate on drive side of the fan. **Maximum temperature 800°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.

Maximum RPM for Aluminum Wheels*	
Size	Max.RPM
120	5400
130	4999
150	4712
160	4285
180	3885
200	3574
220	3550
240	2837
270	2476
300	2300

* At 70°F. Consult your local Cincinnati Fan sales representative for higher temperatures.

HIGH TEMPERATURE CONSTRUCTION

Standard Construction: Arrangement 4 is suitable to 200°F. See page 20. Arrangement 9 is suitable to 300°F. See page 21.

301°- 450°F. Construction: Standard fan with heat slinger, teflon shaft seal and high temperature aluminum paint. Arrangement 9 only. See page 21.

451°- 800°F Construction: Standard fan with heat slinger, high temperature shaft seal, high temperature bearings and high temperature aluminum paint. Insulation material is required and may be provided by the customer or, as an option, by Cincinnati Fan. Arrangement 9 only. See page 22.

WARNING: See speed reduction chart for plug thickness on page 5.

Temperature Range	Maximum RPM Reduction Factor †
Up to 175°F.	0%
176°-200°	2%
201°-300°	4%
301°-400°	7%
401°-500°	11%
501°-600°	15%
601°-700°	20%
701°-800°	30%

† Steel wheels only.

DESIGN SPECIFICATIONS

Maximum Shaft and Bearing Speeds for Belt Driven Fans Maximum Wheel Speeds and WR^2 (Lb.-Ft.²) for Direct Driven Fans

FAN SIZE	Maximum Shaft and Bearing Speeds for Standard "G" Overhang of 2" ①		Maximum Safe Shaft Speed with Extended Shaft Overhang of "R" ① ②					HDBI Type Steel Wheel Max RPM③			SQBI Type Steel Wheel Max RPM③		Aluminum Wheel Max. RPM ④
								Class			Class		
	Class II	Class III	R=2"	R=3"	R=4"	R=5"	R=6"	II	III	IV	II	III	
120	4189	4985	4700	4330	3820	3750	3300	4380	5400	—	4065	5000	5400
130	3834	4738	4500	4280	3910	3580	3230	3900	—	4999	3750	4700	4999
150	3513	4357	4220	3910	3790	3340	3000	3513	—	4712	3050	4117	4712
160	3195	3961	3700	3420	3050	2800	2600	3195	—	4285	3042	3724	4285
180	2903	3591	3720	3430	3120	2880	2680	2903	—	3885	2593	3600	3885
200	2661	3285	3400	3190	2800	2600	2400	2661	—	3574	2380	3550	3574
220	2304	2824	3200	2970	2660	2400	2200	2304	—	3550	2115	3160	3550
240	2132	2565	2600	2550	2450	2300	2150	2132	—	2837	—	2740	2837
270	1854	2262	2300	2200	2130	2050	1930	—	—	2476	—	2493	2476
300	1680	2075	2000	2000	1950	1780	1600	—	—	2300	—	2243	2300

NOTE: "G" and "R" in the above table refer to dimensions shown on catalog pages 21 and 22.

- ① All maximum safe shaft speeds are independent of temperature.
- ② All plug fans with overhung shafts ("R" dimension) include the highest class wheel construction for each fan size.
- ③ For steel wheels up to 175°F. (80°C.). At elevated temperatures, the maximum wheel speed must be derated per the high temperature deration factors on page 4. In some cases, the derated maximum wheel speed may be lower than the maximum safe shaft speed for shaft overhang "R". In those cases, the lower of the two speeds prevails.
- ④ For aluminum wheels up to 200°F. (93°C.). All aluminum wheels are HDBI type, Class IV construction.

TEMPERATURE - ALTITUDE CONVERSIONS

AIR TEMP. °F	ALTITUDE IN FEET ABOVE SEA LEVEL										
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
0°	.87	.91	.94	.98	1.01	1.05	1.09	1.13	1.17	1.22	1.26
40°	.94	.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
450°	1.72	1.79	1.86	1.93	2.00	2.08	2.16	2.24	2.33	2.41	2.50
500°	1.81	1.88	1.96	2.03	2.11	2.19	2.28	2.36	2.46	2.54	2.62
550°	1.91	1.98	2.06	2.14	2.22	2.30	2.40	2.49	2.58	2.68	2.77
600°	2.00	2.08	2.16	2.24	2.33	2.42	2.50	2.61	2.71	2.80	2.90
650°	2.10	2.18	2.26	2.35	2.44	2.54	2.63	2.74	2.84	2.94	3.04
700°	2.19	2.27	2.36	2.46	2.55	2.65	2.75	2.86	2.97	3.06	3.18
750°	2.28	2.37	2.47	2.56	2.66	2.76	2.87	2.98	3.10	3.19	3.31
800°	2.38	2.48	2.57	2.66	2.76	2.86	2.98	3.10	3.21	3.33	3.45

Fan performance tables are developed using standard air which is 70°F., 29.92" barometric pressure and .075 lbs. 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.

EXAMPLE:

Select a belt driven CPF-150 to deliver 4500 CFM at .50" SP at 200°F., and 7000' altitude.

STEP 1. From the table, conversion factor is 1.63.

STEP 2. Correct static pressure is:
1.63 x .50" SP = .81" SP at standard conditions.

STEP 3. Check CPF catalog for 4500 CFM at .81" SP. We select a belt driven CPF-150 and interpolation gives 2650 RPM and 3.15 BHP.

STEP 4. Correct the BHP for the lighter air:
 $3.15 \div 1.63 = 1.93$ BHP. A 2 HP motor will suffice at 200°F., and 7000' but not at standard conditions. Special motor insulation may be required due to altitude.

DIRECT DRIVE RATING TABLES

CFM and BHP at Static Pressure Shown • Ratings at 70°F., .075 Density, Sea Level

MODEL NUMBER	RPM	WHEEL TYPE	FAN WIDTH	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP	
				CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
CPF-120 †	1750	HDBI	FULL	1288	.38										
	1750	SQBI	FULL	1542	.51	1049	.49								
	3500	HDBI	1/2	1615	1.35	1514	1.44	1407	1.50	1288	1.53	1146	1.52	947	1.45
	3500	SQBI	1/2	1784	1.81	1708	1.90	1628	1.97	1542	2.03	1448	2.07	1342	2.07
	3500	HDBI	3/4	2422	2.02	2271	2.16	2110	2.25	1932	2.29	1719	2.28	1421	2.17
	3500	SQBI	3/4	2675	2.71	2563	2.84	2443	2.96	2313	3.04	2172	3.10	2013	3.11
	3500	HDBI	FULL	3229	2.70	3028	2.88	2814	3.00	2576	3.05	2292	3.04	1895	2.89
CPF-130 †	3500	SQBI	FULL	3567	3.61	3417	3.79	3257	3.94	3.85	4.06	2896	4.13	2683	4.15
	1750	SQBI	1/2	1071	.40	849	.41								
	1750	SQBI	3/4	1607	.60	1273	.62								
	1750	HDBI	FULL	1708	.60	826	.52								
	1750	SQBI	FULL	2143	.81	1697	.83								
	3500	HDBI	1/2	2145	2.25	2016	2.33	1868	2.38	1708	2.41	1541	2.41	1364	2.38
	3500	SQBI	1/2	2401	2.91	2319	3.03	2233	3.14	2143	3.22	2046	3.29	1942	3.32
	3500	HDBI	3/4	3218	3.38	3024	3.49	2801	3.57	2561	3.61	2311	3.62	2046	3.57
	3500	SQBI	3/4	3601	4.36	3478	4.55	3350	4.71	3214	4.84	3069	4.93	2913	4.99
	3500	HDBI	FULL	4290	4.50	4032	4.65	3735	4.76	3415	4.82	3082	4.82	2729	4.76
	3500	SQBI	FULL	4801	5.81	4638	6.07	4466	6.28	4285	6.45	4092	6.57	3884	6.65
CPF-150 †	1750	SQBI	1/2	1496	.66	1284	.70	967	.68						
	1750	HDBI	3/4	1975	.72	1480	.74								
	1750	SQBI	3/4	2244	.99	1925	1.06	1451	1.02						
	1750	HDBI	FULL	2634	.96	1973	.99								
	1750	SQBI	FULL	2993	1.32	2567	1.41	1935	1.37						
	3500	HDBI	1/2	3021	3.45	2901	3.61	2771	3.74	2634	3.85	2487	3.92	2331	3.97
	3500	SQBI	1/2	3284	4.81	3187	4.99	3090	5.14	2993	5.28	2893	5.40	2790	5.50
	3500	HDBI	3/4	4531	5.18	4351	5.42	4157	5.62	3951	5.77	3731	5.88	3497	5.95
	3500	SQBI	3/4	4926	7.22	4780	7.48	4635	7.72	4489	7.92	4340	8.10	4185	8.24
	3500	HDBI	FULL	6042	6.91	5801	7.22	5543	7.49	5267	7.69	4975	7.84	4662	7.94
	3500	SQBI	FULL	6568	9.62	6374	9.98	6180	10.29	5985	10.56	5786	10.79	5580	10.99
CPF-160 †	1750	SQBI	1/2	2041	1.05	1818	1.12	1545	1.14	1008	1.01				
	1750	HDBI	3/4	2725	1.14	2226	1.20	1432	1.11						
	1750	SQBI	3/4	3062	1.57	2727	1.68	2317	1.71	1513	1.51				
	1750	HDBI	FULL	3634	1.52	2968	1.60	1909	1.48						
	1750	SQBI	FULL	4082	2.10	3635	2.24	3090	2.29	2017	2.01				
	3500	HDBI	1/2	4047	5.51	3917	5.73	3780	5.92	3634	6.09	3480	6.22	3319	6.31
	3500	SQBI	1/2	4403	7.72	4295	7.96	4189	8.18	4082	8.38	3975	8.56	3865	8.72
	3500	HDBI	3/4	6071	8.27	5876	8.60	5669	8.89	5451	9.13	5220	9.32	4978	9.47
	3500	SQBI	3/4	6604	11.58	6443	11.94	6283	12.27	6123	12.57	5962	12.84	5797	13.07
	3500	HDBI	FULL	8094	11.02	7835	11.47	7559	11.85	7268	12.17	6961	12.43	6638	12.63
	3500	SQBI	FULL	8805	15.44	8591	15.93	8378	16.37	8165	16.76	7949	17.12	7730	17.43
CPF-180 †	1750	HDBI	1/2	2594	1.28	2258	1.36	1851	1.38						
	1750	SQBI	1/2	2871	1.76	2637	1.88	2378	1.95	2057	1.95	1489	1.78		
	1750	HDBI	3/4	3892	1.92	3386	2.05	2776	2.07						
	1750	SQBI	3/4	4307	2.64	3955	2.82	3567	2.92	3086	2.93	2233	2.66		
	1750	HDBI	FULL	5189	2.56	4515	2.73	3701	2.76						
	1750	SQBI	FULL	5743	3.52	5273	3.76	4756	3.90	4114	3.91	2978	3.55		
	3500	HDBI	1/2	5623	9.41	5485	9.72	5340	10.00	5189	10.25	5030	10.47	4865	10.65
	3500	SQBI	1/2	6091	13.14	5974	13.48	5858	13.80	5743	14.09	5627	14.35	5511	14.60
	3500	HDBI	3/4	8434	14.11	8228	14.58	8011	15.00	7783	15.38	7545	15.70	7298	15.98
	3500	SQBI	3/4	9136	19.71	8961	20.22	8787	20.70	8614	21.13	8441	21.53	8267	21.90
	3500	HDBI	FULL	11245	18.82	10970	19.44	10681	20.01	10377	20.50	10061	20.94	9731	21.30
	3500	SQBI	FULL	12181	26.28	11947	26.97	11716	27.60	11486	28.18	11255	28.71	11022	29.20
CPF-200	1750	HDBI	1/2	3482	1.99	3128	2.12	2721	2.18	2214	2.15				
	1750	SQBI	1/2	3928	2.94	3660	3.12	3379	3.25	3056	3.30	2635	3.22	1740	2.62
	1750	HDBI	3/4	5223	2.99	4691	3.19	4081	3.27	3322	3.23				
	1750	SQBI	3/4	5891	4.41	5491	4.68	5068	4.87	4584	4.95	3952	4.83	2610	3.93
	1750	HDBI	FULL	6963	3.99	6255	4.25	5442	4.37	4429	4.30				
	1750	SQBI	FULL	7855	5.88	7321	6.24	6758	6.50	6113	6.61	5270	6.43	3480	5.24
	3500	HDBI	1/2	7429	14.79	7281	15.21	7125	15.59	6963	15.95	6796	16.26	6621	16.54
	3500	SQBI	1/2	8263	22.23	8125	22.68	7989	23.11	7855	23.52	7722	23.92	7589	24.29
	3500	HDBI	3/4	11144	22.18	10921	22.81	10688	23.39	10445	23.92	10193	24.40	9932	24.82
	3500	SQBI	3/4	12395	33.35	12187	34.02	11984	34.67	11783	35.29	11583	35.88	11383	36.43
	3500	HDBI	FULL	14859	29.57	14561	30.41	14250	31.19	13927	31.89	13591	32.53	13243	33.09
	3500	SQBI	FULL	16527	44.46	16250	45.36	15978	46.22	15710	47.05	15444	47.83	15178	48.58

All performance shown is without housing. For performance with housing, see HDBI catalog.

	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP	
	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
	1216	2.05	1049	1.96												
	1824	3.07	1574	2.93			† Requires a 143T frame or larger motor even though some BHPs are available in a 56 frame. See page 20.									
	2432	4.09	2099	3.91												
	1161	2.30	826	2.07												
	1827	3.33	1697	3.31	1541	3.24	1330	3.08								
	1741	3.45	1239	3.10												
	2741	5.00	2546	4.96	2312	4.86	1996	4.62								
	2321	4.61	1652	4.13												
	3655	6.67	3394	6.62	3083	6.48	2661	6.16								
	2162	3.99	1973	3.96	1745	3.89	1391	3.65								
	2682	5.57	2567	5.63	2442	5.66	2302	5.65	2140	5.60	1935	5.46	1619	5.13		
	3243	5.98	2960	5.95	2618	5.83	2087	5.48								
	4023	8.36	3851	8.44	3663	8.49	2454	8.48	3209	8.40	2902	8.19	2429	7.69		
	4325	7.97	3947	7.93	3491	7.77	2782	7.30								
	5364	11.15	5134	11.26	4884	11.31	4605	11.30	4279	11.20	3869	10.92	3239	10.25		
											See additional CPF-160 ratings at bottom of page 8.					
	3149	6.38	2968	6.41	2772	6.41	2553	6.36	2291	6.24	1909	5.94				
	3752	8.85	3635	8.97	3513	9.06	3383	9.12	3243	9.15	3090	9.15	2916	9.09	2712	8.95
	4723	9.57	4452	9.62	4158	9.62	3829	9.55	3436	9.36	2864	8.91				
	5628	13.28	5453	13.45	5269	13.58	5075	13.68	4865	13.73	4635	13.72	4375	13.63	4068	13.43
	6297	12.76	5935	12.83	5544	12.82	5106	12.73	4582	12.48	3819	11.87				
	7504	17.70	7271	17.93	7026	18.11	6766	18.24	6486	18.30	6179	18.29	5833	18.17	5424	17.90
											See additional CPF-180 ratings at bottom of page 8.					
	4694	10.80	4515	10.92	4329	11.00	4133	11.05	3925	11.06	3701	11.03	3453	10.93	3162	10.76
	5393	14.82	5273	15.02	5150	15.20	5024	15.35	4893	15.48	4756	15.58	4612	15.65	4459	15.69
	7040	16.20	6773	16.38	6493	16.50	6199	16.57	5888	16.59	5552	16.54	5179	16.40	4743	16.13
	8090	22.23	7910	22.53	7726	22.80	7536	23.03	7339	23.22	7134	23.37	6918	23.48	6689	23.54
	9387	21.60	9030	21.84	8657	22.00	8266	22.10	7851	22.12	7403	22.05	6905	21.87	6324	21.51
	10786	29.64	10547	30.04	10301	30.40	10048	30.70	9786	30.96	9512	31.17	9224	31.31	8918	31.38
											See additional CPF-200 ratings at bottom of page 8.					
	6441	16.79	6255	17.00	6063	17.17	5864	17.31	5657	17.40	5442	17.46	5216	17.48	4976	17.45
	7456	24.64	7321	24.97	7185	25.27	7046	25.54	6904	25.79	6758	26.00	6607	26.17	6450	26.31
	9662	25.18	9383	25.50	9094	25.75	8796	25.96	8486	26.11	8163	26.20	7824	26.22	7464	26.18
	11183	36.96	10981	37.45	10777	37.90	10569	38.32	10356	38.68	10137	39.00	9910	39.26	9675	39.46
	12883	33.58	12510	34.00	12126	34.34	11727	34.61	11314	34.81	10884	34.93	10432	34.96	9952	34.91
	14911	49.28	14642	49.93	14369	50.54	14091	51.09	13807	51.58	13515	52.00	13214	52.35	12900	52.61

DIRECT DRIVE RATING TABLES (Cont'd)

CFM and BHP at Static Pressure Shown • Ratings at 70°F., .075 Density, Sea Level

MODEL NUMBER	RPM	WHEEL TYPE	FAN WIDTH	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP	
				CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
CPF-220	1750	HDBI	1/2	4946	3.31	4634	3.55	4304	3.74	3925	3.85	3423	3.84	2177	3.26
	1750	SQBI	1/2	5378	4.57	5095	4.80	4794	5.00	4466	5.15	4100	5.25	3671	5.26
	1750	HDBI	3/4	7418	4.96	6951	5.33	6456	5.61	5887	5.77	5134	5.76	3266	4.90
	1750	SQBI	3/4	8067	6.85	7643	7.20	7190	7.50	6699	7.73	6151	7.87	5506	7.89
	1750	HDBI	FULL	9891	6.62	9269	7.11	8608	7.48	7850	7.70	6846	7.68	4354	6.53
	1750	SQBI	FULL	10756	9.13	10191	9.60	9587	10.00	8932	10.31	8201	10.50	7341	10.52
CPF-240	1750	HDBI	1/2	6676	5.27	6335	5.62	5984	5.91	5605	6.12	5169	6.25	4611	6.23
	1750	SQBI	1/2	7255	7.35	6948	7.67	6626	7.95	6284	8.20	5916	8.39	5512	8.51
	1750	HDBI	3/4	10014	7.91	9503	8.43	8976	8.86	8408	9.17	7754	9.36	6917	9.34
	1750	SQBI	3/4	10882	11.02	10423	11.50	9939	11.93	9426	12.29	8874	12.58	8268	12.76
	1750	HDBI	FULL	13352	10.54	12670	11.25	11968	11.81	11210	12.23	10339	12.48	9223	12.45
	1750	SQBI	FULL	14510	14.69	13897	15.34	13252	15.91	12568	16.39	11832	16.77	11024	17.02
CPF-270	1750	HDBI	1/2	9433	9.07	9075	9.57	8711	9.99	8328	10.35	7908	10.62	7422	10.79
	1750	SQBI	1/2	9772	11.83	9439	12.27	9092	12.67	8729	13.03	8347	13.34	7941	13.60
	1750	HDBI	3/4	14150	13.61	13613	14.36	13067	14.99	12492	15.52	11863	15.93	11133	16.18
	1750	SQBI	3/4	14659	17.74	14159	18.40	13638	19.01	13094	19.55	12521	20.02	11911	20.39
	1750	HDBI	FULL	18866	18.15	18150	19.14	17423	19.99	16657	20.70	15817	21.24	14844	21.57
	1750	SQBI	FULL	19545	23.65	18878	24.54	18184	25.35	17458	26.07	16694	26.69	15881	27.19
CPF-300	1750	HDBI	1/2	13035	15.19	12637	15.90	12238	16.53	11829	17.08	11399	17.55	10935	17.93
	1750	SQBI	1/2	13507	19.94	13140	20.58	12762	21.16	12371	21.69	11965	22.16	11542	22.58
	1750	HDBI	3/4	19552	22.79	18955	23.85	18357	24.79	17743	25.62	17098	26.32	16402	26.89
	1750	SQBI	3/4	20261	29.91	19711	30.87	19143	31.74	18557	32.54	17947	33.25	17312	33.87
	1750	HDBI	FULL	26069	30.38	25274	31.80	24476	33.06	23657	34.16	22797	35.10	21869	35.86
	1750	SQBI	FULL	27014	39.89	26281	41.16	25525	42.32	24742	43.38	23930	44.33	23083	45.15

MODEL NUMBER	RPM	WHEEL TYPE	FAN WIDTH	15" SP		16" SP		17" SP		18" SP		19" SP		20" SP	
				CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
CPF-160	3500	SQBI	1/2	2449	8.68	2017	8.05								
	3500	SQBI	3/4	3673	13.03	3025	12.08								
	3500	SQBI	FULL	4898	17.37	4034	16.10								
CPF-180	3500	HDBI	1/2	2779	10.40										
	3500	SQBI	1/2	4295	15.69	4114	15.63	3912	15.51	3678	15.29	3389	14.91	2978	14.21
	3500	HDBI	3/4	4168	15.60										
	3500	SQBI	3/4	6442	23.53	6171	23.45	5869	23.26	5517	22.93	5083	22.37	4466	21.31
	3500	HDBI	FULL	5557	20.80										
	3500	SQBI	FULL	8589	31.37	8229	31.26	7825	31.02	7356	30.58	6778	29.83	5955	28.42
CPF-200	3500	HDBI	1/2	4716	17.37	4429	17.21	4095	16.94	3665	16.45				
	3500	SQBI	1/2	6286	26.39	6113	26.42	5928	26.39	5730	26.28	5512	26.07	5270	25.74
	3500	HDBI	3/4	7075	26.05	6643	25.81	6142	25.41	5497	24.67				
	3500	SQBI	3/4	9429	39.59	9169	39.63	8892	39.58	8594	39.42	8268	39.10	7905	38.60
	3500	HDBI	FULL	9433	34.74	8858	34.42	8189	33.87	7330	32.90				
	3500	SQBI	FULL	12572	52.78	12225	52.85	11856	52.78	11459	52.55	11025	52.14	10540	51.47

All performance shown is without housing. For performance with housing, see HDBI catalog.

NOTE

Partial width wheels are available in 5% increments from 50% widths to 100% widths. This allows for more direct drive ratings than shown in this catalog. Direct driven fans are less expensive to purchase and less maintenance. Contact your local Cincinnati Fan sales office for more selections.

	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP	
	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
	3099	5.11														
	4649	7.67														
	6198	10.23														
	3556	5.76														
	5052	8.55	4493	8.44	3673	8.03										
	5334	8.64														
	7579	12.82	6740	12.67	5510	12.04										
	7112	11.53														
	10105	17.09	8986	16.89	7346	16.05										
	6802	10.78														
	7502	13.78	7020	13.87	6468	13.84	5796	13.61	4813	12.95						
	10202	16.17														
	11254	20.66	10529	20.80	9702	20.76	8694	20.42	7220	19.42						
	13603	21.56														
	15005	27.55	14039	27.74	12937	27.68	11592	27.23	9627	25.89						
	10416	18.20	9807	18.31	9015	18.16										
	11097	22.92	10627	23.20	10123	23.38	9575	23.47	8963	23.43	8252	23.19	7350	22.62	5818	21.00
	15625	27.30	14710	27.47	13522	27.23										
	16646	34.38	15940	34.79	15185	35.08	14363	35.21	13445	35.14	12377	34.78	11025	33.92	8727	31.51
	20833	36.40	19613	36.62	18029	36.31										
	22194	45.85	21253	46.39	20246	46.77	19150	46.94	17927	46.85	16503	46.38	14700	45.23	11636	42.01

	21" SP		22" SP		23" SP		24" SP		25" SP	
	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
	4991	25.23	4656	24.48	4215	23.28	3480	20.96		
	7487	37.85	6984	36.71	6323	34.92	5220	31.44		
	9982	50.46	9312	48.95	8430	46.56	6960	41.92		

All performance shown is without housing. For performance with housing, see HDBI catalog.



DANGER

All fans & 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 operating instructions.

Wheel Diameter: 12.25"

SEE PAGE 5 FOR MAX. WHEEL RPM, SHAFT SPEEDS & WR².

All are type HDBI wheels.
Class II = light face
Class III = bold face

VOLUME CFM	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
650	664	.02	880	.05	1062	.08	1229	.12	1385	.17	1667	.27		
800	817	.03	1000	.07	1157	.11	1303	.15	1441	.20	1697	.31	1932	.44
950	971	.05	1129	.10	1268	.14	1396	.19	1519	.25	1751	.36	1968	.49
1100	1124	.08	1264	.14	1388	.19	1504	.24	1614	.30	1825	.42	2023	.56
1250	1277	.12	1403	.18	1515	.24	1621	.30	1721	.36	1913	.50	2096	.64
1400	1430	.17	1544	.24	1647	.30	1744	.37	1837	.44	2014	.58	2182	.73
1550	1584	.23	1688	.30	1783	.38	1872	.45	1958	.53	2123	.68	2279	.84
1700	1737	.30	1833	.38	1921	.47	2005	.55	2085	.63	2238	.80	2385	.97
1850	1890	.38	1979	.48	2061	.57	2139	.66	2215	.75	2359	.92	2497	1.11
2000	2043	.49	2126	.59	2203	.69	2277	.78	2348	.88	2484	1.07	2614	1.26
2150	2197	.60	2274	.71	2346	.82	2416	.92	2483	1.03	2612	1.23	2735	1.44
2300	2350	.74	2422	.86	2491	.97	2557	1.08	2620	1.19	2743	1.41	2860	1.63
2450	2503	.89	2571	1.02	2636	1.14	2699	1.26	2759	1.38	2876	1.61	2988	1.85
2600	2656	1.07	2721	1.20	2782	1.33	2842	1.46	2900	1.59	3011	1.83	3118	2.08
2750	2810	1.26	2871	1.41	2929	1.54	2986	1.68	3041	1.81	3148	2.08	3250	2.34
2900	2963	1.48	3021	1.63	3077	1.78	3131	1.92	3184	2.06	3286	2.34	3384	2.62

VOLUME CFM	2 1/2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
950	2171	.63	2362	.79										
1100	2212	.71	2392	.87	2727	1.21								
1250	2271	.79	2439	.96	2757	1.32	3052	1.71						
1400	2345	.90	2502	1.07	2801	1.44	3083	1.85	3349	2.28	3601	2.75		
1550	2431	1.01	2577	1.19	2859	1.58	3126	1.99	3381	2.44	3624	2.92	3856	3.43
1700	2526	1.15	2664	1.33	2929	1.73	3183	2.16	3426	2.63	3659	3.11	3883	3.63
1850	2630	1.30	2759	1.49	3010	1.91	3250	2.35	3481	2.83	3705	3.33	3920	3.86
2000	2739	1.47	2862	1.67	3099	2.10	3327	2.56	3547	3.05	3761	3.57	3968	4.11
2150	2854	1.65	2970	1.87	3195	2.32	3412	2.80	3623	3.30	3827	3.83	4026	4.38
2300	2973	1.86	3084	2.09	3298	2.56	3505	3.05	3706	3.57	3901	4.11	4092	4.68
2450	3096	2.08	3201	2.32	3406	2.82	3604	3.33	3796	3.87	3983	4.42	4166	5.00
2600	3221	2.33	3322	2.59	3518	3.10	3707	3.63	3892	4.19	4071	4.76	4247	5.36
2750	3350	2.60	3446	2.87	3634	3.41	3816	3.96	3993	4.53	4165	5.13	4334	5.74
2900	3480	2.90	3573	3.18	3754	3.74	3928	4.32	4098	4.91	4265	5.52	4427	6.15
3050	3612	3.22	3702	3.51	3876	4.10	4044	4.70	4208	5.31	4368	5.94	4525	6.59
3200	3746	3.56	3832	3.87	4000	4.48	4163	5.11	4321	5.74	4476	6.39	4627	7.06
3350	3881	3.93	3965	4.25	4127	4.89	4284	5.54	4437	6.20	4586	6.88	4733	7.56
3500	4018	4.33	4098	4.66	4255	5.33	4407	6.01	4556	6.69	4700	7.39	4843	8.10
3650	4155	4.76	4234	5.11	4386	5.80	4533	6.51	4677	7.21	4817	7.93	4955	8.66
3800	4294	5.21	4370	5.58	4518	6.31	4661	7.03	4800	7.77	4936	8.51		
3950	4434	5.70	4507	6.08	4651	6.84	4790	7.60	4925	8.36				
4100	4574	6.23	4646	6.62	4785	7.41	4920	8.19						
4250	4716	6.78	4785	7.19	4921	8.01								
4400	4858	7.37	4925	7.80										

VOLUME CFM	9" SP		10" SP		11" SP		12" SP		13" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1700	4099	4.17	4307	4.73						
1850	4129	4.41	4331	4.98	4527	5.58	4717	6.20		
2000	4169	4.67	4365	5.26	4555	5.87	4740	6.50	4920	7.15
2150	4219	4.95	4408	5.55	4592	6.18	4771	6.82	4946	7.48
2300	4278	5.27	4460	5.88	4638	6.51	4812	7.17	4982	7.84
2450	4345	5.61	4520	6.23	4692	6.88	4860	7.54		
2600	4419	5.97	4588	6.61	4754	7.27	4917	7.95		
2750	4500	6.37	4663	7.02	4823	7.70	4981	8.39		
2900	4587	6.80	4744	7.46	4899	8.15				
3050	4680	7.26	4831	7.94	4981	8.64				
3200	4776	7.74	4923	8.44						
3350	4878	8.27								
3500	4982	8.82								

BHP shown does not include drive losses. All performance shown is without housing. For performance with housing, see HDBI catalog.

★ Check direct drive tables on pages 6 and 7. Arrangement 4 would be more compact, less expensive and require less maintenance.

Wheel Diameter: 13.50"

SEE PAGE 5 FOR MAX. WHEEL RPM, SHAFT SPEEDS & WR².

All are type HDBI wheels.
Class II = light face
Class III = bold face

VOLUME CFM	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1100	854	.06	1024	.12	1176	.18	1306	.25	1422	.32	1630	.47	1819	.63
1300	1010	.10	1153	.17	1292	.24	1414	.32	1524	.40	1719	.56	1895	.74
1500	1165	.16	1288	.23	1413	.31	1528	.40	1632	.49	1818	.67	1985	.86
1700	1320	.23	1428	.31	1540	.40	1647	.50	1746	★.60	1924	.80	2083	1.01
1900	1476	.32	1571	.41	1672	.51	1770	★.62	1864	.72	2034	.95	2187	1.18
2100	1631	.44	1717	.53	1808	.64	1898	.75	1986	.87	2148	1.11	2296	1.36
2300	1786	★.58	1864	.68	1946	.79	2030	.91	2111	1.04	2266	1.30	2409	1.57
2500	1942	.74	2013	.85	2088	.97	2165	1.10	2241	1.24	2387	1.52	2524	1.81
2700	2097	.93	2163	1.05	2232	1.18	2302	1.31	2373	1.46	2512	1.76	2643	2.07
2900	2252	1.15	2313	1.28	2377	1.42	2442	1.56	2508	1.71	2639	2.03	2765	2.36
3100	2408	1.41	2465	1.54	2524	1.69	2584	1.84	2646	2.00	2769	2.33	2889	2.68
3300	2563	1.70	2616	1.84	2672	1.99	2728	2.15	2786	2.32	2902	2.67	3016	3.03
3500	2718	2.03	2768	2.18	2820	2.34	2873	2.50	2928	2.68	3037	3.04	3146	3.42
3700	2874	2.40	2921	2.55	2970	2.72	3020	2.89	3071	3.07	3174	3.45	3277	3.85
3900	3029	2.81	3074	2.97	3120	3.15	3167	3.33	3215	3.52	3313	3.91	3411	★4.32
4100	3185	3.26	3227	3.43	3271	3.62	3315	3.81	3361	4.00	3453	★4.41	3547	★4.84
4300	3340	3.76	3380	3.94	3422	★4.13	3464	★4.33	3507	★4.53	3595	4.95	3684	5.40
4500	3495	★4.31	3534	4.50	3573	4.70	3614	4.90	3655	5.11	3738	5.55	3823	6.01
4700	3651	4.91	3687	5.11	3725	5.32	3764	5.53	3803	5.74	3882	6.20	3963	6.67
4900	3806	5.57	3841	5.77	3877	5.99	3914	6.21	3951	6.43	4027	6.90	4105	7.38
5100	3961	6.28	3995	6.49	4030	6.71	4065	6.94	4101	7.17	4173	7.65	4247	8.15

VOLUME CFM	2 1/2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1100	1994	.81	2159	1.00	2466	1.42	2747	1.88						
1300	2058	.92	2212	1.12	2500	1.56	2766	2.04	3015	2.56	3250	3.11		
1500	2139	1.06	2284	1.28	2554	1.73	2806	2.22	3043	2.76	3268	3.33	3482	★3.93
1700	2230	1.23	2368	1.45	2624	1.93	2863	2.44	3088	2.99	3303	3.58	3508	★4.20
1900	2328	1.41	2461	1.65	2706	2.16	2934	2.70	3149	3.27	3353	3.87	3550	4.51
2100	2432	1.62	2560	1.88	2797	2.41	3015	2.98	3221	3.57	3417	★4.20	3606	4.85
2300	2541	1.85	2664	2.12	2893	2.70	3104	3.29	3303	3.92	3492	★4.56	3673	5.24
2500	2652	2.10	2772	2.40	2995	3.01	3199	3.64	3392	4.29	3574	4.97	3749	5.67
2700	2767	2.38	2884	2.70	3100	3.35	3299	4.01	3486	★4.70	3663	5.41	3833	6.14
2900	2884	2.69	2998	3.03	3209	3.72	3403	4.42	3585	5.14	3758	5.88	3922	6.64
3100	3004	3.03	3114	3.39	3320	4.12	3510	★4.86	3688	5.62	3856	6.40	4017	7.19
3300	3127	3.40	3233	3.78	3433	★4.55	3619	5.34	3793	6.13	3958	6.94	4115	7.77
3500	3252	3.81	3355	4.21	3549	5.02	3731	5.85	3901	6.68	4063	7.53	4217	8.39
3700	3379	4.26	3478	★4.68	3667	5.53	3845	6.39	4012	7.27	4170	8.16	4321	9.06
3900	3508	★4.75	3604	5.18	3787	6.07	3961	6.98	4124	7.90	4280	8.82	4428	9.76
4100	3640	5.28	3731	5.73	3909	6.66	4078	7.60	4239	8.56	4391	9.53	4537	10.51
4300	3773	5.85	3861	6.32	4033	7.29	4198	8.27	4355	9.27	4505	10.28	4648	11.30
4500	3908	6.48	3993	6.97	4159	7.97	4319	8.99	4473	10.03	4620	11.08		
4700	4045	7.16	4126	7.66	4287	8.69	4442	9.75	4592	10.83	4736	11.93		
4900	4183	7.89	4261	8.40	4416	9.47	4567	10.57	4714	11.69				
5100	4322	8.67	4397	9.20	4547	10.30	4694	11.44						

VOLUME CFM	9" SP		10" SP		11" SP		12" SP		13" SP		14" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	3687	4.57	3883	5.24								
1700	3705	4.85	3895	5.53	4078	6.24	4255	6.98				
1900	3739	5.17	3922	5.87	4099	6.59	4270	7.34	4437	8.12	4600	8.93
2100	3787	5.54	3963	6.25	4133	6.99	4299	7.75	4461	8.54	4618	9.36
2300	3847	5.94	4017	6.67	4181	7.43	4341	8.21	4497	9.02	4650	9.85
2500	3918	6.39	4081	7.14	4240	7.92	4394	8.72	4545	9.54	4693	10.39
2700	3996	6.89	4154	7.66	4308	8.46	4457	9.28	4603	10.12		
2900	4081	7.42	4235	8.22	4384	9.04	4529	9.89	4670	10.75		
3100	4171	8.00	4321	8.83	4466	9.67	4607	10.54				
3300	4266	8.61	4412	9.47	4554	10.35	4691	11.25				
3500	4365	9.27	4507	10.16	4646	11.07						
3700	4466	9.97	4606	10.90								
3900	4571	10.72	4708	11.68								
4100	4677	11.50										

BHP shown does not include drive losses. All performance shown is without housing. For performance with housing, see HDBI catalog.

★ Check direct drive tables on pages 6 and 7. Arrangement 4 would be more compact, less expensive and require less maintenance.

Wheel Diameter: 15.00"

All are type HDBI wheels.
Class II = light face
Class III = bold face

SEE PAGE 5 FOR MAX. WHEEL RPM, SHAFT SPEEDS & WR².

VOLUME CFM	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1750	978	.14	1085	.22	1186	.30	1280	.39	1367	.47	1529	.66	1680	.87	1821	1.09
2000	1118	.21	1211	.30	1302	.39	1388	.49	1469	.59	1619	.79	1759★	1.01	1891	1.24
2250	1257	.30	1341	.40	1423	.50	1501	.61	1576	.72	1717★	.94	1848	1.17	1971	1.42
2500	1397	.42	1472	.52	1546	.64	1619	.75	1688	.87	1820	1.11	1944	1.36	2060	1.63
2750	1537	.55	1605	.67	1673	.79	1740★	0.92	1804	1.05	1928	1.31	2045	1.58	2155	1.86
3000	1676	.72	1739★	.85	1801★	.98	1863	1.12	1923	1.25	2040	1.54	2150	1.83	2255	2.12
3250	1816	.91	1874	1.05	1931	1.20	1989	1.34	2045	1.49	2155	1.79	2259	2.10	2359	2.42
3500	1956	1.14	2009	1.29	2063	1.44	2116	1.60	2169	1.76	2272	2.08	2372	2.41	2467	2.75
3750	2095	1.40	2145	1.56	2195	1.73	2245	1.89	2295	2.06	2392	2.41	2487	2.76	2578	3.11
4000	2235	1.70	2282	1.87	2329	2.05	2376	2.22	2422	2.40	2514	2.77	2604	3.14	2691	3.52
4250	2375	2.04	2419	2.22	2463	2.41	2507	2.59	2551	2.78	2638	3.17	2724	3.56	2807	3.96
4500	2515	2.42	2556	2.62	2598	2.81	2640	3.01	2681	3.21	2764	3.61	2845	4.03	2925	4.44
4750	2654	2.85	2694	3.05	2733	3.26	2773	3.47	2812	3.68	2891	4.10	2968	4.53	3044	4.97
5000	2794	3.33	2831	3.54	2869	3.75	2906	3.97	2944	4.19	3019	4.64	3093	5.09	3166	5.55
5250	2934	3.85	2969	4.07	3005	4.30	3041	4.53	3077	4.76	3148	5.22	3219	5.70	3289	6.18
5500	3073	4.43	3107	4.66	3141	4.90	3176	5.13	3210	5.38	3278	5.86	3346	6.36	3413★	6.86
5750	3213	5.06	3245	5.30	3278	5.55	3311	5.80	3343	6.05	3409★	6.56	3474★	7.07	3538	7.59
6000	3353	5.75	3384	6.00	3415★	6.26	3446	6.52	3478★	6.78	3540	7.31	3603	7.84	3665	8.38
6250	3492★	6.49	3522	6.76	3552★	7.03	3582	7.30	3612	7.57	3672	8.12	3732	8.67	3792	9.24
6500	3632	7.31	3661	7.58	3690	7.86	3718	8.14	3747	8.42	3805	8.99	3863	9.57	3920	10.15

VOLUME CFM	3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP		10" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1750	1957	1.32	2212	1.84	2452	2.42										
2000	2017	1.49	2255	2.02	2480	2.61	2693	3.25								
2250	2089	1.68	2313	2.23	2524	2.84	2725	3.49	2918	4.19	3104	4.93				
2500	2172	1.90	2383	2.48	2582	3.10	2772	3.77	2955	4.48	3132	5.24	3303	6.04	3469★	6.87
2750	2261	2.15	2461	2.76	2651	3.40	2831	4.09	3005	4.82	3174	5.59	3337	6.40	3496	7.25
3000	2356	2.43	2547	3.07	2728	3.74	2900	4.45	3066	5.20	3226	5.99	3382	6.82	3534	7.68
3250	2456	2.74	2639	3.41	2811	4.12	2976	4.86	3135	5.63	3289	6.44	3438★	7.28	3584	8.16
3500	2559	3.09	2735	3.80	2900	4.53	3059	5.30	3211	6.10	3359	6.93	3503★	7.79	3642	8.69
3750	2666	3.48	2835	4.22	2994	4.99	3147	5.79	3294	6.61	3436★	7.47	3574	8.36	3709	9.28
4000	2776	3.90	2938	4.68	3092	5.49	3239	6.32	3381	7.17	3518	8.06	3651	8.97	3781	9.91
4250	2888	4.36	3044	5.18	3192	6.02	3335	6.89	3472★	7.78	3605	8.70	3734	9.64	3860	10.60
4500	3002	4.87	3153	5.73	3296	6.61	3434★	7.51	3567	8.43	3696	9.38	3821	10.35	3943	11.35
4750	3119	5.42	3264	6.32	3402	7.24	3536	8.18	3665	9.14	3790	10.12	3911	11.12	4030	12.15
5000	3237	6.01	3377	6.96	3511★	7.92	3641	8.89	3766	9.89	3887	10.91	4005	11.94	4120	13.00
5250	3357	6.66	3492★	7.64	3622	8.64	3747	9.66	3869	10.70	3987	11.75	4102	12.82	4214	13.91
5500	3479	7.36	3609	8.39	3734	9.43	3856	10.48	3974	11.56	4089	12.65	4201	13.75	4310	14.88
5750	3602	8.12	3727	9.18	3849	10.26	3967	11.36	4082	12.47	4194	13.60	4303	14.74		
6000	3726	8.93	3847	10.04	3965	11.16	4079	12.29	4191	13.45	4300	14.61				
6250	3851	9.80	3968	10.95	4082	12.11	4194	13.29	4302	14.48						
6500	3978	10.74	4090	11.92	4201	13.13	4309	14.35								

VOLUME CFM	11" SP		12" SP		13" SP		14" SP		15" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2750	3650	8.13	3801	9.05						
3000	3683	8.57	3828	9.50	3969	10.47	4108	11.46		
3250	3726	9.07	3865	10.01	4002	10.99	4136	12.00	4267	13.04
3500	3779	9.62	3913	10.58	4044	11.57	4173	12.59	4300	13.64
3750	3840	10.22	3969	11.20	4096	12.21	4220	13.25	4343	14.31
4000	3909	10.88	4033	11.88	4155	12.91	4275	13.96		
4250	3983	11.60	4103	12.62	4221	13.67	4338	14.74		
4500	4062	12.37	4179	13.42	4293	14.49				
4750	4145	13.20	4259	14.27						
5000	4233	14.08								

BHP shown does not include drive losses. All performance shown is without housing. For performance with housing, see HDBI catalog.

★ Check direct drive tables on pages 6 and 7. Arrangement 4 would be more compact, less expensive and require less maintenance.

Wheel Diameter: 16.50"

All are type HDBI wheels.
Class II = light face
Class III = bold face

SEE PAGE 5 FOR MAX. WHEEL RPM, SHAFT SPEEDS & WR².

VOLUME CFM	0" SP		1/2" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP		4" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2100	882	.17	1072	.36	1238	.57	1386	.79	1523	1.04	1652	1.30	1776 ★	1.59	2009	2.22
2400	1008	.25	1177	.47	1329	.70	1467	.94	1594	1.21	1714 ★	1.49	1829	1.78	2047	2.43
2700	1134	.36	1285	.60	1426	.85	1554	1.12	1674	1.40	1786 ★	1.70	1894	2.01	2098	2.68
3000	1260	.49	1396	.76	1526	1.04	1647	1.33	1759 ★	1.63	1866	1.94	1968	2.27	2160	2.97
3300	1385	.65	1510	.94	1631	1.25	1744 ★	1.56	1850	1.89	1951	2.22	2048	2.57	2231	3.30
3600	1511	.85	1626	1.16	1738 ★	1.49	1844	1.83	1945	2.18	2041	2.54	2133	2.90	2308	3.67
3900	1637	1.08	1743 ★	1.42	1847	1.77	1947	2.14	2043	2.51	2135	2.89	2223	3.28	2390	4.09
4200	1763 ★	1.35	1862	1.71	1959	2.09	2053	2.48	2144	2.87	2231	3.28	2316	3.69	2476	4.54
4500	1889	1.66	1981	2.04	2072	2.45	2161	2.86	2248	3.28	2331	3.71	2412	4.15	2565	5.04
4800	2015	2.01	2101	2.42	2187	2.85	2271	3.29	2353	3.73	2433	4.19	2510	4.65	2658	5.59
5100	2141	2.41	2222	2.85	2303	3.30	2383	3.76	2461	4.23	2537	4.71	2611	5.20	2754	6.18
5400	2267	2.86	2343	3.32	2420	3.80	2496	4.29	2570	4.78	2643	5.29	2714	5.79	2851	6.83
5700	2393	3.36	2465	3.85	2538	4.36	2610	4.87	2681	5.39	2751	5.91	2819	6.45	2951	7.53
6000	2519	3.92	2588	4.44	2657	4.96	2725	5.50	2793	6.05	2860	6.60	2925	7.15	3053	8.29
6300	2645	4.54	2710	5.08	2776	5.63	2841	6.19	2906	6.76	2970	7.34	3033	7.92	3156	9.10
6600	2771	5.22	2833	5.79	2896	6.36	2958	6.95	3021	7.54	3082	8.14	3143	8.75	3261	9.98
6900	2897	5.97	2957	6.56	3016	7.16	3076	7.77	3136	8.39	3195	9.01	3253	9.64	3368	10.92
7200	3023	6.78	3080	7.40	3137	8.02	3195	8.66	3252	9.30	3309	9.95	3365	10.60	3476	11.93
7500	3149	7.66	3204	8.30	3259	8.95	3314	9.61	3369	10.28	3423	10.96	3478	11.64	3585	13.01

VOLUME CFM	5" SP		6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2400	2252	3.14	2447	3.91			2820	5.94								
2700	2291	3.41	2475	4.20	2651	5.04	2845	6.31								
3000	2342	3.72	2516	4.53	2683	5.39			3001	7.27	3152	8.28				
3300	2404	4.08	2569	4.91	2728	5.79	2881	6.72	3030	7.70	3175	8.72	3316	9.79	3454 ★	10.90
3600	2472	4.48	2630	5.34	2781	6.25	2928	7.20	3070	8.19	3209	9.23	3345	10.32	3477	11.44
3900	2547	4.93	2698	5.82	2843	6.75	2983	7.73	3120	8.74	3253	9.80	3383	10.90	3510	12.04
4200	2627	5.43	2772	6.35	2911	7.31	3046	8.31	3177	9.36	3305	10.44	3430 ★	11.56	3552	12.72
4500	2711	5.97	2851	6.93	2985	7.92	3114	8.96	3241	10.03	3364	11.13	3484 ★	12.27	3602	13.45
4800	2799	6.56	2933	7.56	3063	8.59	3188	9.65	3310	10.75	3429 ★	11.89	3545	13.06	3658	14.26
5100	2889	7.20	3019	8.24	3145	9.31	3266	10.41	3384	11.54	3499 ★	12.71	3611	13.91		
5400	2982	7.89	3108	8.97	3230	10.08	3347	11.23	3461 ★	12.39	3573	13.59	3682	14.82		
5700	3078	8.64	3200	9.76	3318	10.92	3432 ★	12.10	3543	13.31	3651	14.54				
6000	3176	9.44	3294	10.62	3408 ★	11.81	3519	13.04	3627	14.28						
6300	3275	10.30	3390	11.53	3501 ★	12.77	3609	14.04								
6600	3376	11.23	3488 ★	12.50	3596	13.79										
6900	3479 ★	12.22	3587	13.54	3692	14.88										
7200	3583	13.28	3688	14.65												
7500	3689	14.41														

VOLUME CFM	13" SP		14" SP	
	RPM	BHP	RPM	BHP
3600	3606	12.61	3733	13.81
3900	3634	13.22	3756	14.44
4200	3672	13.91		
4500	3717	14.67		

BHP shown does not include drive losses. All performance shown is without housing. For performance with housing, see HDBI catalog.

★ Check direct drive tables on pages 6, 7 and 8. Arrangement 4 would be more compact, less expensive and require less maintenance.

Wheel Diameter: 18.25"

SEE PAGE 5 FOR MAX. WHEEL RPM, SHAFT SPEEDS & WR².

All are type HDBI wheels.
Class II = light face
Class III = bold face

VOLUME CFM	0" SP		1/2" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP		4" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2000	608	.10	816	.28	985	.49	1136	.73	1275	1.00	1406	1.30	1530	1.63		
2400	730	.16	909	.38	1062	.61	1198	.88	1324	1.17	1443	1.48	1557	1.81	1771 ★	2.56
2800	852	.26	1008	.51	1147	.78	1273	1.06	1389	1.37	1498	1.70	1603	2.05	1800	2.81
3200	973	.39	1112	.67	1239	.97	1355	1.28	1463	1.61	1565	1.96	1662	2.33	1846	3.13
3600	1095	.56	1219	.87	1336	1.20	1444	1.54	1545	1.90	1640	2.27	1731 ★	2.66	1904	3.49
4000	1217	.76	1328	1.11	1436	1.47	1537	1.84	1632	2.23	1722 ★	2.63	1808	3.05	1971	3.92
4400	1338	1.01	1440	1.39	1539	1.79	1634	2.19	1723 ★	2.61	1808	3.04	1890	3.48	2045	4.40
4800	1460	1.32	1553	1.73	1645	2.15	1733 ★	2.59	1818	3.04	1899	3.50	1976	3.97	2124	4.94
5200	1582	1.67	1668	2.12	1753 ★	2.58	1836	3.05	1916	3.53	1993	4.02	2067	4.52	2208	5.55
5600	1703	2.09	1783 ★	2.57	1863	3.06	1941	3.56	2016	4.07	2089	4.60	2160	5.13	2295	6.21
6000	1825	2.57	1900	3.08	1974	3.60	2047	4.14	2119	4.68	2188	5.24	2256	5.80	2385	6.95
6400	1947	3.12	2017	3.66	2087	4.22	2156	4.79	2223	5.36	2290	5.95	2354	6.54	2478	7.75
6800	2068	3.74	2134	4.32	2200	4.90	2265	5.50	2330	6.11	2393	6.73	2454	7.36	2574	8.63
7200	2190	4.44	2252	5.05	2314	5.67	2376	6.30	2437	6.94	2498	7.59	2557	8.25	2671	9.59
7600	2312	5.23	2371	5.87	2429	6.52	2488	7.18	2546	7.86	2604	8.54	2660	9.23	2771	10.63
8000	2433	6.10	2489	6.77	2545	7.45	2601	8.15	2657	8.86	2712	9.57	2766	10.29	2872	11.76
8400	2555	7.06	2608	7.76	2662	8.48	2715	9.21	2768	9.95	2820	10.69	2872	11.45	2974	12.98
8800	2677	8.11	2727	8.85	2778	9.60	2829	10.36	2880	11.13	2930	11.91	2980	12.70	3078	14.29
9200	2798	9.27	2847	10.04	2896	10.82	2944	11.62	2993	12.42	3041	13.23	3089	14.05	3184	15.71

VOLUME CFM	5" SP		6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2800	1986	3.66														
3200	2020	4.00	2185	4.94	2344	5.95										
3600	2067	4.39	2223	5.36	2372	6.39	2517	7.48	2656	8.63						
4000	2125	4.85	2272	5.85	2413	6.90	2550	8.02	2683	9.19	2812	10.41	2938	11.69	3060	13.02
4400	2191	5.38	2330	6.41	2465	7.49	2595	8.63	2721	9.83	2844	11.07	2964	12.37	3082	13.72
4800	2263	5.96	2396	7.03	2525	8.16	2649	9.33	2769	10.55	2887	11.82	3001	13.15	3114	14.52
5200	2341	6.62	2468	7.73	2591	8.89	2710	10.10	2825	11.36	2938	12.66	3048	14.01	3155	15.41
5600	2423	7.34	2545	8.50	2663	9.71	2777	10.96	2888	12.25	2996	13.59	3102	14.97	3205	16.39
6000	2508	8.13	2626	9.35	2740	10.60	2849	11.89	2956	13.23	3060	14.60	3162	16.02	3262	17.48
6400	2597	8.99	2711	10.26	2820	11.57	2926	12.91	3029	14.29	3130	15.71	3228	17.16	3324	18.66
6800	2688	9.93	2798	11.26	2904	12.62	3006	14.02	3106	15.44	3203	16.91	3298	18.40	3391	19.94
7200	2781	10.95	2887	12.34	2990	13.76	3089	15.21	3186	16.68	3280	18.20	3372	19.74	3462 ★	21.31
7600	2877	12.05	2980	13.50	3079	14.98	3175	16.49	3269	18.02	3360	19.58	3450 ★	21.17	3537 ★	22.79
8000	2974	13.25	3074	14.76	3170	16.29	3263	17.86	3355	19.44	3443 ★	21.06	3530 ★	22.70		
8400	3073	14.53	3170	16.10	3263	17.70	3354	19.32	3442 ★	20.97	3529 ★	22.64				
8800	3174	15.91	3267	17.55	3358	19.21	3446 ★	20.89	3532 ★	22.59						
9200	3276	17.39	3366	19.09	3454 ★	20.81	3540	22.56								

VOLUME CFM	13" SP		14" SP		15" SP		16" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4400	3196	15.12	3309	16.57				
4800	3224	15.93	3332	17.40	3438 ★	18.91	3542	20.46
5200	3261	16.85	3365	18.33	3467 ★	19.86	3567	21.43
5600	3307	17.86	3406	19.37	3504 ★	20.92		
6000	3359	18.97	3455 ★	20.51	3550	22.09		
6400	3418	20.19	3511	21.76				
6800	3482 ★	21.50	3572	23.11				
7200	3551	22.92						

BHP shown does not include drive losses. All performance shown is without housing. For performance with housing, see HDBI catalog.

★ Check direct drive tables on pages 6, 7 and 8. Arrangement 4 would be more compact, less expensive and require less maintenance.

Wheel Diameter: 20.00"

 All are type HDBI wheels.
 Class II = light face
Class III = bold face
SEE PAGE 5 FOR MAX. WHEEL RPM, SHAFT SPEEDS & WR².

VOLUME CFM	0" SP		1/2" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP		4" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4000	924	.53	1046	.88	1159	1.25	1262	1.64	1359	2.04	1450	2.47	1536	2.92	1701	3.89
4400	1017	.70	1128	1.09	1233	1.49	1331	1.91	1422	2.34	1508	2.80	1590	3.27	1746 ★	4.27
4800	1109	.91	1211	1.33	1309	1.76	1402	2.21	1488	2.68	1570	3.16	1649	3.65	1798	4.70
5200	1202	1.16	1296	1.61	1388	2.07	1475	2.56	1557	3.05	1636	3.56	1711 ★	4.08	1853	5.18
5600	1294	1.45	1382	1.93	1468	2.43	1550	2.94	1629	3.47	1704	4.01	1776 ★	4.56	1913	5.71
6000	1387	1.78	1468	2.29	1549	2.83	1627	3.37	1702	3.93	1774 ★	4.50	1843	5.08	1975	6.28
6400	1479	2.16	1556	2.71	1632	3.27	1706	3.85	1777 ★	4.44	1846	5.04	1913	5.65	2040	6.91
6800	1572	2.60	1644	3.17	1716 ★	3.77	1786 ★	4.38	1854	5.00	1920	5.63	1984	6.28	2107	7.59
7200	1664	3.08	1732 ★	3.69	1800	4.32	1867	4.96	1932	5.62	1996	6.28	2057	6.95	2176	8.33
7600	1757 ★	3.62	1821	4.27	1885	4.93	1949	5.60	2012	6.29	2072	6.98	2132	7.69	2246	9.13
8000	1849	4.23	1910	4.90	1972	5.59	2032	6.30	2092	7.02	2151	7.75	2208	8.49	2318	9.99
8400	1941	4.89	2000	5.60	2058	6.33	2116	7.06	2173	7.82	2230	8.58	2285	9.35	2392	10.91
8800	2034	5.63	2089	6.37	2145	7.12	2201	7.89	2256	8.68	2310	9.47	2363	10.27	2466	11.90
9200	2126	6.43	2179	7.20	2233	7.99	2286	8.79	2339	9.61	2391	10.44	2442	11.27	2542	12.96
9600	2219	7.30	2270	8.11	2321	8.93	2372	9.77	2423	10.61	2473	11.47	2522	12.34	2619	14.10
10000	2311	8.26	2360	9.09	2409	9.95	2458	10.82	2507	11.70	2555	12.59	2603	13.48	2697	15.31
10400	2404	9.29	2451	10.16	2498	11.04	2545	11.94	2592	12.86	2639	13.78	2685	14.71	2776	16.59
10800	2496	10.40	2541	11.30	2587	12.22	2632	13.16	2678	14.10	2723	15.05	2767	16.02	2855	17.97
11200	2589	11.60	2632	12.54	2676	13.49	2720	14.45	2764	15.43	2807	16.41	2850	17.41	2936	19.42

VOLUME CFM	5" SP		6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4000	1856	4.95	2004	6.08	2146	7.30	2282	8.60								
4400	1894	5.36	2035	6.52	2170	7.76	2301	9.08	2427	10.47	2549	11.92				
4800	1938	5.82	2073	7.02	2202	8.28	2327	9.62	2448	11.03	2566	12.50	2680	14.04	2792	15.64
5200	1988	6.34	2116	7.57	2240	8.87	2360	10.23	2476	11.66	2589	13.15	2700	14.71	2808	16.33
5600	2042	6.91	2165	8.18	2284	9.51	2399	10.90	2511	12.36	2620	13.88	2726	15.46	2830	17.09
6000	2099	7.54	2218	8.85	2333	10.22	2443	11.65	2551	13.13	2656	14.68	2759	16.28	2859	17.94
6400	2160	8.22	2275	9.57	2385	10.99	2492	12.45	2596	13.97	2697	15.55	2796	17.18	2893	18.87
6800	2223	8.95	2334	10.36	2441	11.82	2544	13.33	2645	14.89	2743	16.50	2838	18.16	2932	19.88
7200	2288	9.75	2395	11.21	2499	12.72	2599	14.27	2697	15.87	2792	17.52	2885	19.22	2976	20.97
7600	2355	10.60	2459	12.12	2560	13.68	2657	15.28	2752	16.93	2844	18.62	2934	20.36	3022	22.14
8000	2424	11.52	2525	13.10	2623	14.71	2717	16.36	2809	18.05	2899	19.79	2987	21.57	3073	23.39
8400	2494	12.51	2592	14.14	2687	15.81	2780	17.51	2869	19.26	2956	21.04	3042	22.86	3125	24.73
8800	2566	13.56	2661	15.25	2754	16.98	2844	18.74	2931	20.53	3016	22.37	3099	24.24	3181	26.15
9200	2638	14.68	2732	16.44	2822	18.22	2909	20.04	2995	21.89	3078	23.77	3159	25.69	3238	27.65
9600	2713	15.88	2803	17.70	2891	19.54	2976	21.41	3060	23.32	3141	25.26	3220	27.23		
10000	2788	17.15	2876	19.03	2962	20.94	3045	22.87	3126	24.83	3206	26.83	3283	28.85		
10400	2864	18.51	2950	20.45	3033	22.42	3115	24.41	3194	26.43	3272	28.48				
10800	2941	19.94	3025	21.95	3106	23.98	3186	26.03	3263	28.12						
11200	3019	21.47	3100	23.53	3180	25.63	3258	27.74								

VOLUME CFM	13" SP		14" SP		15" SP		16" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5200	2913	18.00	3016	19.73				
5600	2932	18.79	3032	20.54	3130	22.34	3226	24.20
6000	2957	19.66	3054	21.43	3149	23.25	3242	25.12
6400	2988	20.61	3082	22.40	3174	24.24	3264	26.14
6800	3024	21.64	3115	23.46	3204	25.33		
7200	3065	22.77	3152	24.61	3239	26.51		
7600	3109	23.97	3194	25.85	3278	27.77		
8000	3157	25.26	3240	27.17				
8400	3208	26.64						
8800	3261	28.10						

NOTE: See pages 21 or 22 for the minimum motor frame sizes regardless of BHP.

BHP shown does not include drive losses. All performance shown is without housing. For performance with housing, see HDBI catalog.

★ Check direct drive tables on pages 6, 7, 8 and 9. Arrangement 4 would be more compact, less expensive and require less maintenance.

Wheel Diameter: 22.25"

SEE PAGE 5 FOR MAX. WHEEL RPM, SHAFT SPEEDS & WR².

All are type HDBI wheels.
Class II = light face
Class III = bold face

VOLUME CFM	0" SP		1/2" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP		4" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4600	765	0.50	870	.87	961	1.25	1047	1.65	1132	2.09	1217	2.57	1300	3.08	1463	4.21
5200	865	0.72	960	1.15	1042	1.57	1120	2.00	1196	2.47	1272	2.96	1346	3.49	1494	4.65
5800	965	1.00	1051	1.48	1127	1.94	1199	2.42	1268	2.92	1336	3.44	1404	3.99	1537	5.18
6400	1064	1.34	1144	1.88	1215	2.39	1281	2.91	1344	3.44	1407	3.99	1469	4.57	1591	5.80
7000	1164	1.76	1238	2.34	1304	2.91	1366	3.47	1425	4.04	1483	4.63	1540	5.23	1653	6.51
7600	1264	2.25	1333	2.89	1395	3.50	1453	4.11	1508	4.72	1562	5.35	1616	5.99	1720	7.33
8200	1364	2.83	1428	3.52	1487	4.18	1541	4.84	1594	5.50	1645	6.16	1695	6.84	1793	8.24
8800	1463	3.49	1524	4.24	1579	4.95	1631	5.66	1681	6.36	1729	7.07	1776	7.79	1869	9.27
9400	1563	4.26	1621	5.06	1673	5.83	1722	6.58	1770	7.33	1815	8.08	1860	8.84	1948	10.40
10000	1663	5.13	1717	5.98	1767	6.80	1814	7.61	1859	8.40	1903	9.20	1946	10.01	2029	11.64
10600	1763	6.11	1814	7.01	1862	7.89	1907	8.74	1950	9.59	1992	10.44	2033	11.29	2112	13.00
11200	1863	7.20	1911	8.16	1957	9.09	2000	10.00	2042	10.90	2082	11.79	2121	12.69	2197	14.49
11800	1962	8.42	2009	9.44	2053	10.42	2094	11.38	2134	12.33	2172	13.27	2210	14.22	2283	16.11
12400	2062	9.78	2107	10.84	2148	11.88	2188	12.89	2227	13.89	2264	14.89	2300	15.88	2371	17.86
13000	2162	11.26	2204	12.39	2245	13.47	2283	14.54	2320	15.59	2356	16.64	2391	17.68	2459	19.75
13600	2262	12.90	2303	14.07	2341	15.21	2378	16.33	2414	17.44	2449	18.53	2482	19.62	2548	21.80

VOLUME CFM	5" SP		6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4600	1619	5.48	1768	6.86	1909	8.35	2043	9.94								
5200	1638	5.93	1777	7.34	1912	8.85	2041	10.46	2165	12.16	2284	13.95				
5800	1669	6.48	1799	7.90	1925	9.44	2048	11.07	2167	12.79	2282	14.61	2393	16.50	2501	18.46
6400	1712	7.13	1831	8.58	1949	10.13	2065	11.78	2177	13.52	2288	15.35	2395	17.27	2500	19.27
7000	1764	7.89	1875	9.36	1984	10.93	2092	12.60	2198	14.36	2303	16.21	2405	18.15	2506	20.17
7600	1824	8.75	1926	10.26	2028	11.86	2129	13.55	2229	15.33	2327	17.20	2425	19.16	2520	21.19
8200	1889	9.72	1985	11.27	2080	12.91	2174	14.63	2268	16.44	2360	18.33	2452	20.30	2543	22.35
8800	1959	10.80	2049	12.41	2138	14.09	2226	15.85	2314	17.68	2402	19.60	2489	21.59	2575	23.66
9400	2033	12.00	2118	13.66	2202	15.39	2285	17.19	2368	19.07	2450	21.02	2532	23.04	2614	25.13
10000	2110	13.31	2190	15.04	2270	16.83	2348	18.68	2426	20.60	2504	22.58	2582	24.64	2659	26.76
10600	2190	14.75	2266	16.55	2341	18.40	2416	20.30	2490	22.27	2564	24.30	2637	26.39	2711	28.55
11200	2271	16.32	2344	18.19	2416	20.11	2487	22.07	2557	24.09	2628	26.17	2697	28.31		
11800	2354	18.02	2424	19.97	2493	21.95	2561	23.98	2628	26.06	2695	28.20				
12400	2439	19.86	2506	21.89	2572	23.95	2637	26.05	2701	28.19						
13000	2525	21.84	2589	23.95	2653	26.09	2715	28.26								
13600	2612	23.97	2674	26.17	2735	28.39										

VOLUME CFM	13" SP		14" SP		15" SP	
	RPM	BHP	RPM	BHP	RPM	BHP
6400	2601	21.33	2700	23.47	2797	25.67
7000	2604	22.26	2700	24.42	2794	26.65
7600	2615	23.30	2707	25.49	2798	27.74
8200	2633	24.48	2722	26.68	2809	28.96
8800	2660	25.81	2745	28.03		
9400	2695	27.30	2775	29.54		
10000	2736	28.95				

NOTE: See pages 21 or 22 for the minimum motor frame sizes regardless of BHP.

BHP shown does not include drive losses. All performance shown is without housing. For performance with housing, see HDBI catalog.

★ Check direct drive tables on pages 8 and 9. Arrangement 4 would be more compact, less expensive and require less maintenance.

Wheel Diameter: 24.50"

All are type HDBI wheels.
Class II = light face
Class III = bold face
SEE PAGE 5 FOR MAX. WHEEL RPM, SHAFT SPEEDS & WR².

VOLUME CFM	0" SP		1/2" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP		4" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5000	623	.44	727	.84	817	1.26	904	1.72	989	2.23	1073	2.79	1156	3.40	1315	4.76
5600	698	.61	792	1.07	874	1.53	953	2.02	1030	2.55	1106	3.13	1182	3.75	1329	5.12
6200	772	.83	860	1.34	935	1.84	1007	2.36	1078	2.92	1147	3.52	1216	4.16	1352	5.55
6800	847	1.10	928	1.66	999	2.20	1065	2.76	1130	3.35	1194	3.97	1257	4.63	1383	6.06
7400	922	1.41	997	2.02	1063	2.62	1126	3.22	1186	3.84	1245	4.49	1304	5.18	1420	6.64
8000	996	1.79	1067	2.45	1130	3.09	1188	3.73	1245	4.40	1300	5.08	1355	5.79	1463	7.30
8600	1071	2.22	1138	2.94	1197	3.62	1252	4.31	1306	5.02	1358	5.74	1409	6.48	1510	8.04
9200	1146	2.72	1209	3.49	1265	4.23	1317	4.96	1368	5.70	1417	6.46	1466	7.24	1561	8.86
9800	1221	3.28	1280	4.11	1334	4.90	1384	5.68	1432	6.47	1479	7.26	1525	8.08	1615	9.77
10400	1295	3.92	1352	4.80	1403	5.64	1451	6.47	1497	7.30	1542	8.15	1585	9.00	1671	10.76
11000	1370	4.64	1424	5.57	1473	6.47	1519	7.35	1563	8.22	1606	9.11	1647	10.00	1729 ★	11.83
11600	1445	5.45	1496	6.43	1543	7.37	1587	8.30	1629	9.23	1670	10.16	1711	11.09	1789 ★	13.00
12200	1520	6.34	1569	7.37	1613	8.37	1656	9.35	1697	10.32	1736 ★	11.30	1775 ★	12.28	1850	14.27
12800	1594	7.32	1641	8.41	1684	9.46	1725 ★	10.49	1765 ★	11.51	1803	12.53	1840	13.56	1913	15.63
13400	1669	8.39	1714 ★	9.54	1756 ★	10.64	1795	11.72	1833	12.80	1870	13.87	1906	14.94	1976	17.10
14000	1744 ★	9.57	1787 ★	10.77	1827	11.92	1865	13.06	1902	14.18	1938	15.30	1972	16.42	2040	18.67
14600	1819	10.86	1860	12.11	1899	13.32	1936	14.50	1971	15.68	2006	16.84	2040	18.01	2105	20.35
15200	1893	12.25	1933	13.55	1971	14.82	2007	16.06	2041	17.28	2075	18.50	2107	19.71	2171	22.14
15800	1968	13.76	2007	15.12	2043	16.43	2078	17.72	2111	19.00	2144	20.27	2175	21.53	2237	24.05
16400	2043	15.39	2080	16.80	2115	18.17	2149	19.51	2181	20.84	2213	22.16	2244	23.47	2304	26.09

VOLUME CFM	5" SP		6" SP		7" SP		8" SP		9" SP		10" SP		11" SP		12" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5000	1465	6.28	1606	7.93												
5600	1471	6.66	1606	8.34	1734	10.14	1855	12.06								
6200	1484	7.11	1612	8.81	1735	10.64	1853	12.58	1966	14.64						
6800	1506	7.63	1626	9.35	1743 ★	11.20	1856	13.17	1966	15.25	2072	17.44	2174	19.72		
7400	1535	8.24	1647	9.98	1758 ★	11.85	1866	13.84	1971	15.94	2074	18.15	2173	20.46	2270	22.86
8000	1570	8.94	1675	10.70	1780	12.59	1882	14.59	1983	16.71	2081	18.94	2177	21.27	2271	23.70
8600	1610	9.72	1709	11.51	1807	13.42	1904	15.45	2000	17.59	2094	19.83	2187	22.18	2277	24.63
9200	1655	10.59	1748 ★	12.42	1841	14.36	1933	16.41	2023	18.57	2113	20.83	2201	23.20	2289	25.66
9800	1704	11.54	1792	13.42	1879	15.40	1966	17.48	2052	19.66	2137	21.95	2222	24.33	2305	26.81
10400	1755 ★	12.59	1839	14.52	1922	16.54	2004	18.65	2086	20.86	2167	23.18	2247	25.58	2327	28.08
11000	1810	13.74	1889	15.72	1967	17.78	2046	19.94	2123	22.19	2201	24.52	2277	26.96	2354	29.48
11600	1866	14.97	1941	17.01	2016	19.13	2091	21.34	2165	23.62	2238	26.00	2312	28.46		
12200	1924	16.31	1996	18.42	2068	20.59	2139	22.85	2210	25.18	2280	27.59				
12800	1983	17.75	2053	19.92	2121	22.16	2189	24.47	2257	26.85	2324	29.31				
13400	2044	19.29	2111	21.54	2177	23.84	2242	26.21	2307	28.65						
14000	2106	20.94	2170	23.27	2234	25.64	2297	28.07								
14600	2169	22.71	2231	25.11	2292	27.56										
15200	2232	24.59	2293	27.07	2352	29.59										
15800	2297	26.59	2355	29.15												
16400	2362	28.71														

VOLUME CFM	13" SP		14" SP	
	RPM	BHP	RPM	BHP
7400	2363	25.34	2454	27.91
8000	2362	26.21	2452	28.81
8600	2366	27.17	2453	29.79
9200	2374	28.22		
9800	2388	29.39		

NOTE: See pages 21 or 22 for the minimum motor frame sizes regardless of BHP.

BHP shown does not include drive losses. All performance shown is without housing. For performance with housing, see HDBI catalog.

★ Check direct drive tables on pages 8 and 9. Arrangement 4 would be more compact, less expensive and require less maintenance.

WheelDiameter: 27.00"

All are type HDBI wheels.
Class II = light face
Class III = bold face

SEE PAGE 5 FOR MAX. WHEEL RPM, SHAFT SPEEDS & WR².

VOLUME CFM	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6400	571	.59	617	.84	658	1.08	697	1.34	736	1.60	815	2.18	896	2.84
7200	643	.84	684	1.12	721	1.40	757	1.67	792	1.96	861	2.57	932	3.25
8000	714	1.16	752	1.47	786	1.77	819	2.08	850	2.39	913	3.04	976	3.75
8800	786	1.54	821	1.89	852	2.22	882	2.56	911	2.89	968	3.59	1025	4.33
9600	857	2.00	889	2.38	919	2.75	947	3.11	974	3.47	1027	4.22	1079	5.00
10400	929	2.54	959	2.95	986	3.35	1012	3.75	1038	4.14	1087	4.94	1135	5.76
11200	1000	3.17	1028	3.62	1054	4.05	1079	4.48	1103	4.90	1149	5.76	1194	6.63
12000	1071	3.90	1098	4.38	1122	4.85	1146	5.31	1168	5.76	1212	6.67	1254	7.60
12800	1143	4.73	1168	5.25	1191	5.75	1213	6.24	1235	6.72	1276	7.69	1316	8.67
13600	1214	5.68	1238	6.22	1260	6.76	1281	7.28	1301	7.80	1341	8.83	1379	9.86
14400	1286	6.74	1308	7.32	1329	7.89	1349	8.44	1369	8.99	1406	10.08	1443	11.18
15200	1357	7.92	1378	8.54	1398	9.14	1418	9.73	1436	10.31	1472	11.47	1507	12.62
16000	1429	9.24	1449	9.89	1468	10.52	1486	11.15	1504	11.76	1539	12.98	1572	14.19
16800	1500	10.70	1519	11.38	1538	12.05	1555	12.70	1573	13.35	1606	14.63	1638	15.91
17600	1571	12.30	1590	13.02	1607	13.72	1625	14.41	1641	15.09	1673	16.43	1704	17.77
18400	1643	14.06	1660	14.80	1677	15.54	1694	16.26	1710 ★	16.98	1741 ★	18.39	1771 ★	19.79
19200	1714 ★	15.97	1731 ★	16.75	1747 ★	17.52	1763 ★	18.27	1779 ★	19.02	1809	20.50	1838	21.96
20000	1786 ★	18.05	1802	18.86	1818	19.67	1833	20.46	1848	21.24	1877	22.78	1905	24.31
20800	1857	20.30	1873	21.15	1888	21.99	1903	22.81	1917	23.62	1945	25.23	1972	26.83
21600	1929	22.74	1944	23.62	1958	24.49	1973	25.34	1987	26.19	2014	27.87	2040	29.53
22400	2000	25.36	2015	26.27	2029	27.17	2043	28.06	2056	28.95	2082	30.69	2108	32.41

VOLUME CFM	2 1/2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7200	1004	4.00												
8000	1039	4.51	1104	5.34										
8800	1082	5.12	1140	5.96	1258	7.82								
9600	1131	5.82	1183	6.69	1290	8.57	1399	10.68						
10400	1183	6.62	1231	7.52	1329	9.45	1428	11.57	1528	13.89				
11200	1239	7.53	1283	8.46	1373	10.44	1464	12.60	1557	14.94	1650	17.46		
12000	1296	8.54	1338	9.52	1421	11.56	1506	13.76	1591	16.13	1678	18.67	1765 ★	21.38
12800	1356	9.67	1395	10.69	1473	12.81	1551	15.06	1631	17.47	1711	20.03	1792 ★	22.75
13600	1416	10.91	1454	11.98	1527	14.18	1601	16.50	1675	18.96	1750 ★	21.55	1826	24.30
14400	1478	12.28	1514	13.40	1583	15.69	1653	18.08	1722 ★	20.60	1793 ★	23.24	1864	26.02
15200	1541	13.78	1575	14.94	1641	17.33	1707	19.81	1773 ★	22.39	1839	25.09	1906	27.91
16000	1605	15.41	1637	16.63	1700	19.12	1763 ★	21.68	1825	24.34	1888	27.10	1951	29.97
16800	1670	17.18	1700	18.46	1761 ★	21.05	1821	23.71	1880	26.45	1940	29.28	1999	32.21
17600	1735 ★	19.10	1764 ★	20.44	1822	23.14	1880	25.89	1936	28.72	1993	31.62	2050	34.62
18400	1800	21.18	1829	22.58	1885	25.39	1940	28.24	1994	31.15	2048	34.14	2103	37.22
19200	1866	23.42	1894	24.87	1948	27.80	2001	30.76	2053	33.77	2105	36.84	2157	40.00
20000	1932	25.83	1959	27.34	2011	30.38	2062	33.44	2113	36.56	2163	39.72		
20800	1999	28.41	2025	29.98	2075	33.14	2125	36.32	2174	39.53				
21600	2066	31.17	2091	32.81	2140	36.08	2188	39.37						
22400	2133	34.12	2158	35.82	2205	39.22								

VOLUME CFM	9" SP		10" SP		11" SP	
	RPM	BHP	RPM	BHP	RPM	BHP
12800	1874	25.64				
13600	1902	27.20	1979	30.25		
14400	1935	28.94	2007	32.00	2080	35.21
15200	1973	30.86	2041	33.95	2109	37.17
16000	2015	32.96	2079	36.08	2143	39.33
16800	2060	35.25	2120	38.41		
17600	2107	37.72				

NOTE: See pages 21 or 22 for the minimum motor frame sizes regardless of BHP.

BHP shown does not include drive losses. All performance shown is without housing. For performance with housing, see HDBI catalog.

★ Check direct drive tables on pages 8 and 9. Arrangement 4 would be more compact, less expensive and require less maintenance.

Wheel Diameter: 30.00"

All are type HDBI wheels.
Class II = light face
Class III = bold face

SEE PAGE 5 FOR MAX. WHEEL RPM, SHAFT SPEEDS & WR².

VOLUME CFM	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1 1/2" SP		2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12000	781	2.56	810	3.03	836	3.49	861	3.95	885	4.40	932	5.33	978	6.30
13000	846	3.25	873	3.77	897	4.27	921	4.76	943	5.26	987	6.25	1030	7.28
14000	911	4.06	936	4.62	959	5.16	981	5.70	1003	6.23	1044	7.29	1084	8.38
15000	976	5.00	1000	5.60	1022	6.18	1042	6.75	1062	7.32	1101	8.46	1139	9.61
16000	1041	6.06	1063	6.71	1084	7.33	1104	7.94	1123	8.55	1160	9.76	1196	10.98
17000	1107	7.27	1127	7.96	1147	8.62	1166	9.28	1184	9.92	1219	11.21	1253	12.50
18000	1172	8.63	1191	9.36	1210	10.07	1228	10.76	1245	11.45	1279	12.81	1311	14.18
19000	1237	10.15	1255	10.92	1273	11.67	1290	12.41	1307	13.13	1339	14.58	1370	16.02
20000	1302	11.84	1320	12.65	1337	13.44	1353	14.22	1369	14.99	1400	16.51	1430	18.03
21000	1367	13.71	1384	14.56	1400	15.39	1416	16.21	1431	17.02	1461	18.62	1490	20.22
22000	1432	15.76	1448	16.66	1464	17.53	1479	18.39	1494	19.24	1522	20.92	1550	22.59
23000	1497	18.01	1513	18.95	1528	19.86	1542	20.76	1557	21.66	1584	23.42	1611	25.17
24000	1562	20.47	1577	21.44	1592	22.40	1606	23.34	1619	24.27	1646	26.12	1672	27.95
25000	1627	23.13	1642	24.15	1656	25.15	1669	26.13	1682	27.11	1708	29.04	1733 ★	30.94
26000	1692	26.02	1706	27.08	1720 ★	28.12	1733 ★	29.15	1746 ★	30.16	1771 ★	32.17	1795 ★	34.16
27000	1757 ★	29.14	1771 ★	30.24	1784 ★	31.32	1796 ★	32.39	1809	33.45	1833	35.54	1857	37.61
28000	1823	32.50	1835	33.64	1848	34.76	1860	35.87	1872	36.97	1896	39.15		
29000	1888	36.11	1900	37.29	1912	38.45	1924	39.61						
30000	1953	39.97												

VOLUME CFM	2 1/2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12000	1025	7.32	1071	8.40	1166	10.74	1262	13.34						
13000	1073	8.35	1116	9.46	1202	11.85	1290	14.48	1379	17.35				
14000	1124	9.5	1163	10.66	1243	13.12	1324	15.79	1406	18.69	1489	21.81		
15000	1176	10.79	1213	12.00	1288	14.55	1363	17.28	1438	20.21	1515	23.35	1592	26.70
16000	1231	12.23	1266	13.50	1335	16.14	1405	18.94	1475	21.92	1547	25.09	1619	28.46
17000	1286	13.81	1319	15.14	1385	17.89	1450	20.77	1516	23.82	1583	27.03	1650	30.43
18000	1343	15.55	1374	16.95	1436	19.80	1498	22.78	1560	25.91	1622	29.18	1685	32.63
19000	1401	17.46	1431	18.92	1489	21.90	1548	24.98	1606	28.19	1665	31.54	1725 ★	35.04
20000	1459	19.54	1487	21.07	1544	24.17	1599	27.37	1655	30.67	1711	34.10	1767 ★	37.67
21000	1518	21.81	1545	23.40	1599	26.64	1652	29.95	1705	33.35	1758 ★	36.87		
22000	1577	24.26	1603	25.93	1655	29.30	1706	32.73	1757 ★	36.25	1807	39.86		
23000	1637	26.91	1662	28.65	1712 ★	32.16	1761 ★	35.72	1810	39.35				
24000	1697	29.77	1722 ★	31.58	1770 ★	35.23	1817	38.92						
25000	1758 ★	32.84	1781 ★	34.73	1828	38.53								
26000	1818	36.14	1841	38.11										
27000	1879	39.67												

VOLUME CFM	9" SP		10" SP	
	RPM	BHP	RPM	BHP
16000	1691	32.02		
17000	1718	34.02	1786 ★	37.79
18000	1749 ★	36.24		
19000	1784 ★	38.69		

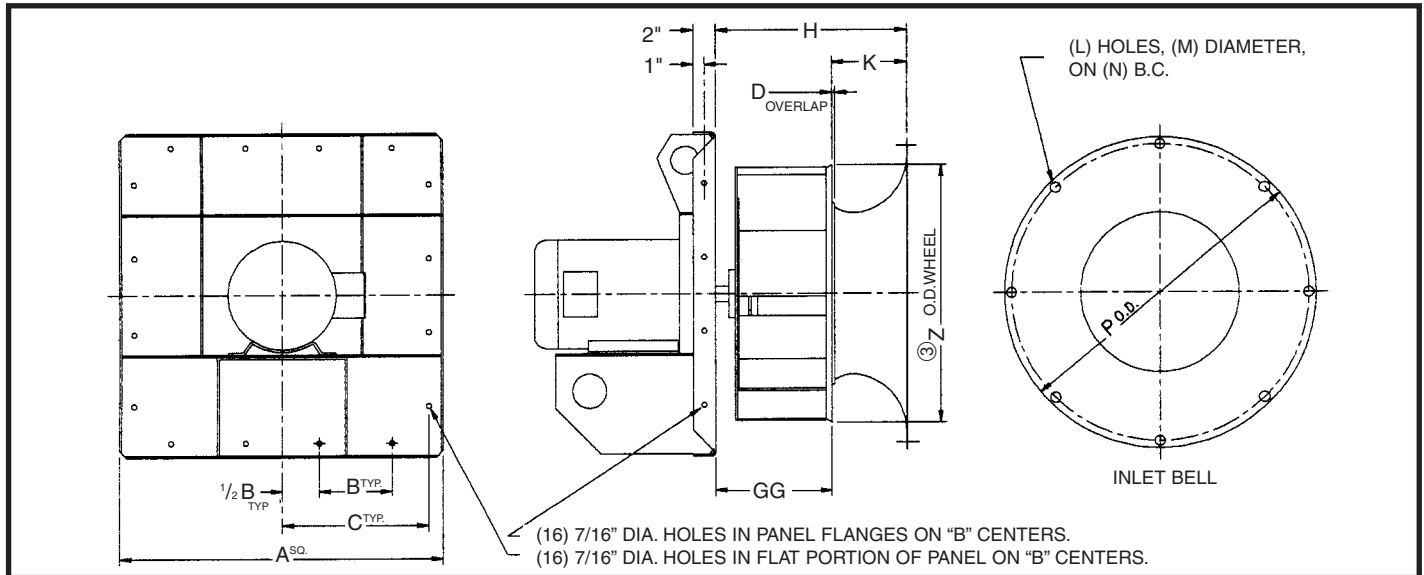
BHP shown does not include drive losses. All performance shown is without housing. For performance with housing, see HDBI catalog.

★ Check direct drive tables on pages 8 and 9. Arrangement 4 would be more compact, less expensive and require less maintenance.



DIMENSIONS and SPECIFICATIONS

Arrangement #4, Direct Drive ①



① **MAXIMUM OPERATING TEMPERATURE IS 200°F.**

② Standard machine tool gray paint.

③ Customer installation of fan assembly requires an opening larger than the wheel shroud O.D., reference dimension "Z".

DIMENSIONS IN INCHES ± 1/8"

MODEL	MOTOR FRAME	A	TYP. B	TYP. C	D	GG	H	K	L	M	N	P	Z
CPF-120	143T-184T	22	5	9 ³ / ₄	1/8	5 ¹¹ / ₁₆	9 ³ / ₈	3 ¹¹ / ₁₆	8	1 ¹ / ₁₆	14 ³ / ₈	15 ³ / ₈	12 ⁵ / ₈
CPF-130	143T-215T	22	5	9 ³ / ₄	1/8	6 ¹¹ / ₃₂	10 ³ / ₈	4 ¹ / ₃₂	8	1 ¹ / ₁₆	15 ¹⁵ / ₁₆	17	13 ⁷ / ₈
CPF-150	143T-215T	22	5	9 ³ / ₄	5/16	7 ¹ / ₃₂	11 ³ / ₈	4 ¹⁵ / ₃₂	8	3/4	17 ¹ / ₂	18 ⁵ / ₈	15 ³ / ₈
CPF-160	143T-256T	22	5	9 ³ / ₄	5/16	7 ¹¹ / ₁₆	12 ¹ / ₂	4 ¹⁵ / ₁₆	8	3/4	19 ³ / ₈	20 ¹ / ₂	16 ⁷ / ₈
CPF-180	143T-324T	28 ¹ / ₂	6 ¹ / ₂	13	5/16	8 ¹⁷ / ₃₂	13 ⁷ / ₈	5 ¹⁵ / ₃₂	8	3/4	21 ¹ / ₂	22 ⁵ / ₈	18 ¹¹ / ₁₆
CPF-200	182T-364TS	28 ¹ / ₂	6 ¹ / ₂	13	5/16	9 ⁹ / ₃₂	15 ¹ / ₄	6 ¹ / ₃₂	8	7/8	23 ¹ / ₂	24 ³ / ₄	20 ¹ / ₂
CPF-220	182T-324T	28 ¹ / ₂	6 ¹ / ₂	13	5/16	10 ¹ / ₄	16 ⁷ / ₈	6 ¹¹ / ₁₆	8	7/8	26 ¹ / ₈	27 ³ / ₈	22 ¹³ / ₁₆
CPF-240	213T-286T	38	9	17 ³ / ₄	3/8	11 ⁹ / ₃₂	18 ⁹ / ₁₆	7 ¹¹ / ₃₂	16	7/8	28 ³ / ₄	30	25
CPF-270	213T-286T	38	9	17 ³ / ₄	7/16	12 ¹³ / ₃₂	20 ⁷ / ₁₆	8 ³ / ₃₂	16	1	31 ⁵ / ₈	33	27 ⁵ / ₈
CPF-300	213T-324T	38	9	17 ³ / ₄	1/2	13 ⁷ / ₈	22 ³ / ₄	9	16	1	35 ¹ / ₄	36 ⁵ / ₈	30 ³ / ₄

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.

CONSTRUCTION GAUGES

Size	Panel and Base	Inlet Bell	WHEEL			
			Shroud	Blades	Back Plate	Reinf. Plate
120	7	16	12	10	7	10
130	7	16	12	10	7	10
150	7	16	12	10	7	10
160	7	16	12	10	7	10
180	7	16	12	7 or 10	7	10
200	7	16	12	7	7	10
220	7	16	12	7	7	10
240	7	14	11	7	7	10
270	7	14	11	7	1/4"	1/4"
300	7*	14	11	7	1/4"	1/4"

* 1/4" for 324T frame motors.

APPROXIMATE SHIPPING WEIGHTS LESS MOTOR

Size	Arrangement #4		Arrangement #9		Standard Insulation Plug Box▲
	Class II	Class III	Class II	Class III	
120	106	106	289	289	31
130	111	111	293	298	31
150	117	117	299	303	31
160	124	128	302	308	31
180	172	177	450	466	44
200	182	188	462	469	44
220	198	205	475	481	44
240	337	344	601	607	70
270	351	394	621	652	70
300	389	416	656	672	70

▲ Insulation material not included.

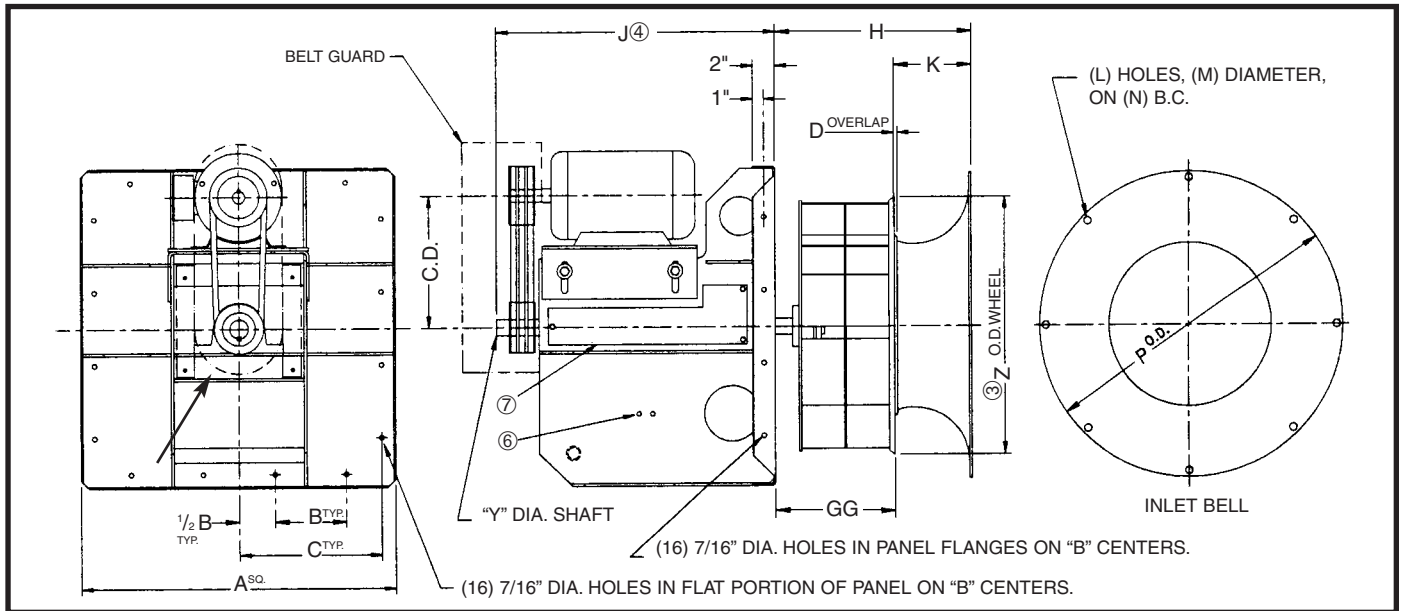
NOTE: There are construction classes for standard plug fans without extended shafts (i.e., Class II and III). There are no construction classes for plug fans with extended shafts.



DIMENSIONS and SPECIFICATIONS

Arrangement #9, Belt Drive For: Standard construction or 301°- 450° F.

construction, both without extended shaft. ①



- ① Maximum temperature for standard construction is 300°F. For 301° to 450°F. construction, see Note ⑤.
- ② Standard machine tool gray paint, see Note ⑤.
- ③ Customer installation of fan assembly requires an opening larger than the wheel shroud O.D., reference dimension "Z".

- ④ "J" dimension shown is for 56 to 215T frame motors. Add: 6" for 254T to 286T frame motors. 8" for 324T frame motors.

- ⑤ Includes heat slinger, teflon shaft seal and high temperature aluminum paint on 301°-450°F. construction only.

- ⑥ Extended lube lines.

- ⑦ Bearing access cover (Expanded metal construction).

DIMENSIONS IN INCHES ± 1/8"

MODEL	MOTOR FRAME	A	TYP. B	TYP. C	D	GG	H	J	Y		Z
									CL.II	CL.III	
CPF-120	56-215T	22	5	9 ³ / ₄	1/8	5 ¹¹ / ₁₆	9 ³ / ₈	25	1 ³ / ₁₆	1 ³ / ₁₆	12 ⁵ / ₈
CPF-130	56-215T	22	5	9 ³ / ₄	1/8	6 ¹¹ / ₃₂	10 ³ / ₈	25	1 ³ / ₁₆	1 ⁷ / ₁₆	13 ⁷ / ₈
CPF-150	56-215T	22	5	9 ³ / ₄	5/16	7 ¹ / ₃₂	11 ³ / ₈	25	1 ⁷ / ₁₆	1 ¹¹ / ₁₆	15 ³ / ₈
CPF-160	56-215T	22	5	9 ³ / ₄	5/16	7 ¹¹ / ₁₆	12 ¹ / ₂	25	1 ⁷ / ₁₆	1 ¹¹ / ₁₆	16 ⁷ / ₈
CPF-180	56-286T	28 ¹ / ₂	6 ¹ / ₂	13	5/16	8 ¹⁷ / ₃₂	13 ⁷ / ₈	25	1 ⁷ / ₁₆	1 ¹¹ / ₁₆	18 ¹¹ / ₁₆
CPF-200	143T-286T	28 ¹ / ₂	6 ¹ / ₂	13	5/16	9 ⁹ / ₃₂	15 ¹ / ₄	25	1 ⁷ / ₁₆	1 ¹⁵ / ₁₆	20 ¹ / ₂
CPF-220	143T-286T	28 ¹ / ₂	6 ¹ / ₂	13	5/16	10 ¹ / ₄	16 ⁷ / ₈	26	1 ⁷ / ₁₆	1 ¹⁵ / ₁₆	22 ¹³ / ₁₆
CPF-240	143T-286T	38	9	17 ³ / ₄	3/8	11 ⁹ / ₃₂	18 ⁹ / ₁₆	27	1 ¹¹ / ₁₆	2 ³ / ₁₆	25
CPF-270	143T-324T	38	9	17 ³ / ₄	7/16	12 ¹³ / ₃₂	20 ⁷ / ₁₆	27	1 ¹¹ / ₁₆	2 ³ / ₁₆	27 ⁵ / ₈
CPF-300	143T-324T	38	9	17 ³ / ₄	1/2	13 ⁷ / ₈	22 ³ / ₄	27	1 ¹⁵ / ₁₆	2 ⁷ / ₁₆	30 ³ / ₄

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.

MODEL	K	L	M	N	P
CPF-120	3 ¹¹ / ₁₆	8	1 ¹ / ₁₆	14 ³ / ₈	15 ³ / ₈
CPF-130	4 ¹ / ₃₂	8	1 ¹ / ₁₆	15 ¹⁵ / ₁₆	17
CPF-150	4 ¹⁵ / ₃₂	8	3/4	17 ¹ / ₂	18 ⁵ / ₈
CPF-160	4 ¹⁵ / ₁₆	8	3/4	19 ³ / ₈	20 ¹ / ₂
CPF-180	5 ¹⁵ / ₃₂	8	3/4	21 ¹ / ₂	22 ⁵ / ₈
CPF-200	6 ¹ / ₃₂	8	7/8	23 ¹ / ₂	24 ³ / ₄
CPF-220	6 ¹¹ / ₁₆	8	7/8	26 ¹ / ₈	27 ³ / ₈
CPF-240	7 ¹¹ / ₃₂	16	7/8	28 ³ / ₄	30
CPF-270	8 ³ / ₃₂	16	1	31 ⁵ / ₈	33
CPF-300	9	16	1	35 ¹ / ₄	36 ⁵ / ₈

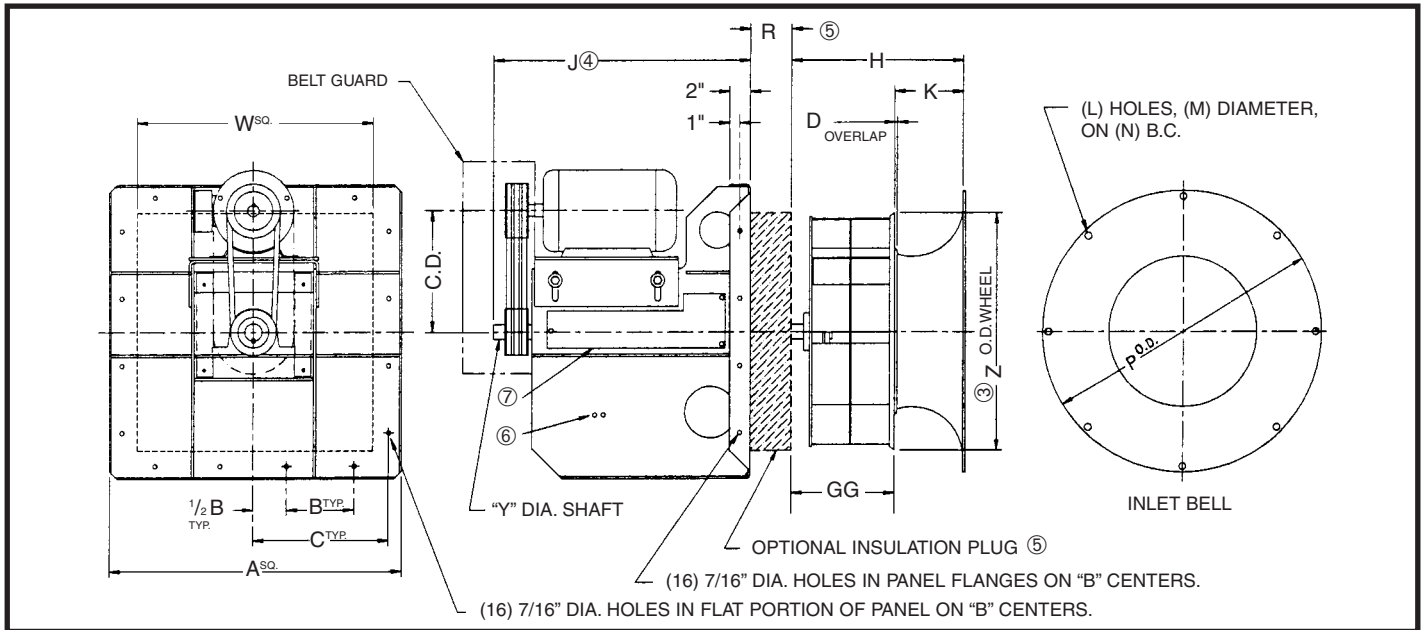
MOTOR FRAME	Center Distance	
	Min.	Max.
56 to 145T	10 ³ / ₄	12 ¹ / ₄
182T 184T	11 ³ / ₄	13 ¹ / ₄
213T 215T	12 ¹ / ₂	14
254T 256T	16 ¹ / ₂	18 ⁵ / ₈
284T 286T	17 ¹ / ₄	19 ³ / ₈
324T	18 ¹ / ₄	20



DIMENSIONS and SPECIFICATIONS

Arrangement #9, Belt Drive For: (A) 451° - 800° F. construction. ①

(B) Standard temperature or 301° - 450° construction, both with extended shaft. ②



- ① Temperature range 451° to 800°F. includes heat slinger, ceramic fiber shaft seal, high temperature aluminum paint and high temperature bearings.
- ② Standard construction up to 300°F. is painted machine tool gray. 301°F. to 450°F. construction includes heat slinger, teflon shaft seal and high temperature aluminum paint.
- ③ Installation of fan assembly requires an opening larger than the wheel shroud O.D., reference dimension "Z".

- ④ "J" dimension shown is for 56 to 215T frame motors. Add: 6" for 254T to 286T frame motors. 8" for 324T frame motors.
- ⑤ Optional **additional** shaft length "R":
☐ 2" ☐ 3" ☐ 4" ☐ 5" ☐ 6"
☐ With plug and insulation by CFV
- ⑥ Extended lube lines.
- ⑦ Bearing access cover (Expanded metal construction).

DIMENSIONS IN INCHES ± 1/8"

MODEL	MOTOR FRAME	A	TYP. B	TYP. C	D	GG	H	J	Y	Z
CPF-120	56-215T	22	5	9 ³ / ₄	1 ¹ / ₈	5 ¹¹ / ₁₆	9 ³ / ₈	25	1 ¹⁵ / ₁₆	12 ⁵ / ₈
CPF-130	56-215T	22	5	9 ³ / ₄	1 ¹ / ₈	6 ¹¹ / ₃₂	10 ³ / ₈	25		13 ⁷ / ₈
CPF-150	56-215T	22	5	9 ³ / ₄	5 ¹ / ₁₆	7 ¹ / ₃₂	11 ³ / ₈	25		15 ³ / ₈
CPF-160	56-215T	22	5	9 ³ / ₄	5 ¹ / ₁₆	7 ¹¹ / ₁₆	12 ¹ / ₂	25		16 ⁷ / ₈
CPF-180	56-286T	28 ¹ / ₂	6 ¹ / ₂	13	5 ¹ / ₁₆	8 ¹⁷ / ₃₂	13 ⁷ / ₈	25④	2 ³ / ₁₆	18 ¹¹ / ₁₆
CPF-200	143T-286T	28 ¹ / ₂	6 ¹ / ₂	13	5 ¹ / ₁₆	9 ⁹ / ₃₂	15 ¹ / ₄	25④		20 ¹ / ₂
CPF-220	143T-286T	28 ¹ / ₂	6 ¹ / ₂	13	5 ¹ / ₁₆	10 ¹ / ₄	16 ⁷ / ₈	26④		22 ¹³ / ₁₆
CPF-240	143T-286T	38	9	17 ³ / ₄	3 ³ / ₈	11 ⁹ / ₃₂	18 ⁹ / ₁₆	27④	2 ⁷ / ₁₆	25
CPF-270	143T-324T	38	9	17 ³ / ₄	7 ¹ / ₁₆	12 ¹³ / ₃₂	20 ⁷ / ₁₆	27④		27 ⁵ / ₈
CPF-300	143T-324T	38	9	17 ³ / ₄	1 ¹ / ₂	13 ⁷ / ₈	22 ³ / ₄	27④		30 ³ / ₄

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.

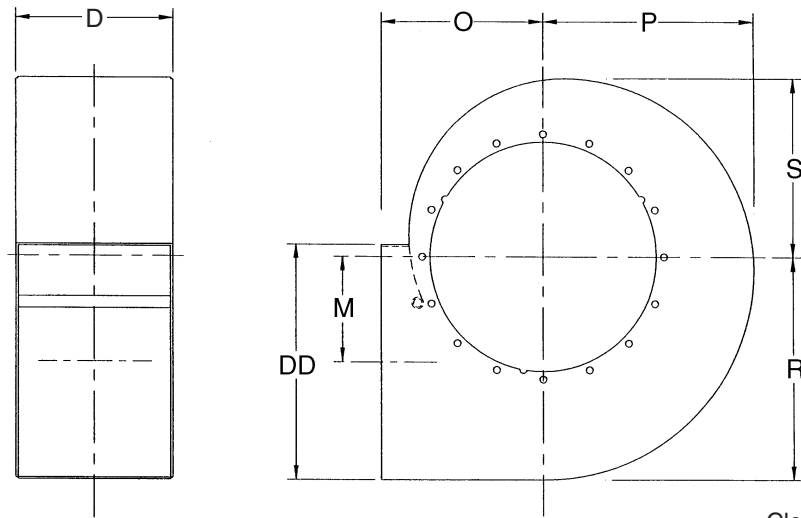
MODEL	K	L	M	N	P	W
CPF-120	3 ¹¹ / ₁₆	8	1 ¹ / ₁₆	14 ³ / ₈	15 ³ / ₈	17
CPF-130	4 ¹ / ₃₂	8	1 ¹ / ₁₆	15 ¹⁵ / ₁₆	17	
CPF-150	4 ¹⁵ / ₃₂	8	3 ³ / ₄	17 ¹ / ₂	18 ⁵ / ₈	
CPF-160	4 ¹⁵ / ₁₆	8	3 ³ / ₄	19 ³ / ₈	20 ¹ / ₂	
CPF-180	5 ¹⁵ / ₃₂	8	3 ³ / ₄	21 ¹ / ₂	22 ⁵ / ₈	23
CPF-200	6 ¹ / ₃₂	8	7 ⁷ / ₈	23 ¹ / ₂	24 ³ / ₄	
CPF-220	6 ¹¹ / ₁₆	8	7 ⁷ / ₈	26 ¹ / ₈	27 ³ / ₈	
CPF-240	7 ¹¹ / ₃₂	16	7 ⁷ / ₈	28 ³ / ₄	30	
CPF-270	8 ³ / ₃₂	16	1	31 ⁵ / ₈	33	32
CPF-300	9	16	1	35 ¹ / ₄	36 ⁵ / ₈	

MOTOR FRAME	Center Distance	
	Min.	Max.
56 to 145T	10 ³ / ₄	12 ¹ / ₄
182T 184T	11 ³ / ₄	13 ¹ / ₄
213T 215T	12 ¹ / ₂	14
254T 256T	16 ¹ / ₂	18 ⁵ / ₈
284T 286T	17 ¹ / ₄	19 ³ / ₈
324T	18 ¹ / ₄	20



DIMENSIONS and SPECIFICATIONS

Optional Housing Dimensions



DRIVE SIDE

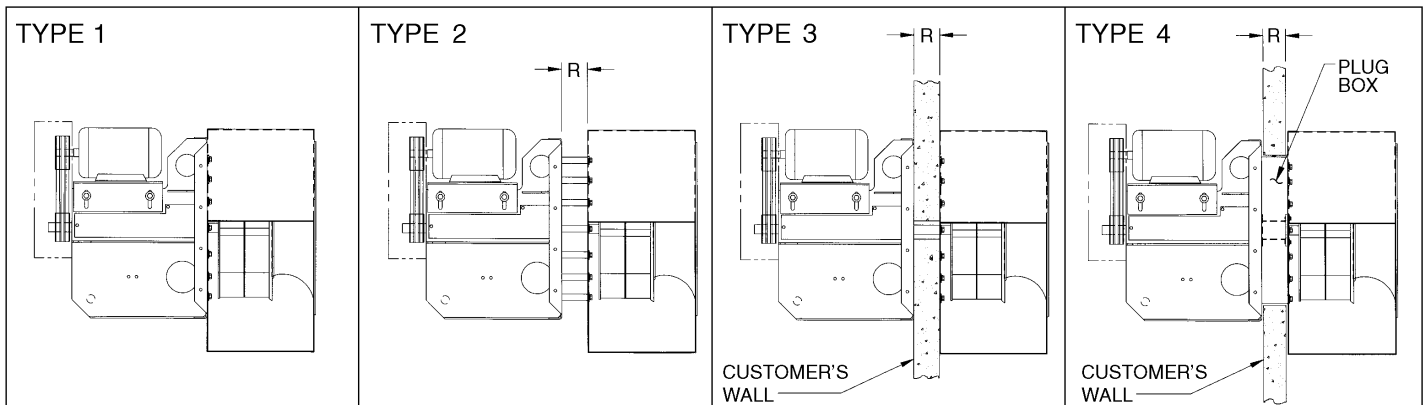
Clockwise rotation shown.
Counterclockwise is opposite

DIMENSIONS IN INCHES± 1/8"

MODEL	D	M	O	P	R	S	DD
CPF-120	9 ^{3/8}	6 ^{3/16}	9 ^{15/16}	12 ^{3/8}	13	10 ^{3/8}	13 ^{3/4}
CPF-130	10 ^{3/8}	6 ^{13/16}	10 ^{13/16}	13 ^{3/4}	14 ^{7/16}	11 ^{9/16}	15 ^{1/4}
CPF-150	11 ^{3/8}	7 ^{9/16}	11 ^{3/4}	15 ^{3/16}	15 ^{15/16}	12 ^{3/4}	16 ^{13/16}
CPF-160	12 ^{1/2}	8 ^{5/16}	12 ^{11/16}	16 ^{11/16}	17 ^{1/2}	14	18 ^{7/16}
CPF-180	13 ^{7/8}	9 ^{1/4}	13 ^{13/16}	18 ^{7/16}	19 ^{7/16}	15 ^{1/2}	20 ^{3/8}
CPF-200	15 ^{1/4}	10 ^{1/16}	14 ^{15/16}	20 ^{1/4}	21 ^{1/4}	17	22 ^{3/8}
CPF-220	16 ^{7/8}	11 ^{3/16}	16 ^{3/8}	22 ^{1/2}	23 ^{5/8}	18 ^{7/8}	24 ^{7/8}
CPF-240	18 ^{9/16}	12 ^{5/16}	18 ^{13/16}	24 ^{3/4}	26	20 ^{3/4}	27 ^{3/8}
CPF-270	20 ^{7/16}	13 ^{9/16}	20 ^{7/16}	27 ^{1/4}	28 ^{5/8}	22 ^{7/8}	30 ^{1/16}
CPF-300	22 ^{3/4}	15 ^{1/8}	22 ^{7/16}	30 ^{3/8}	31 ^{7/8}	25 ^{1/2}	33 ^{9/16}

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.

Housing Mounting Types



TYPE 1: Housing bolts directly to plug fan front plate. Hardware supplied by CF.

Arrangement 4 or 9.

TYPE 2: Housing bolts through spacers to plug fan front plate. Specify the "R" dimension for the spacers on your order per note 5 on page 22. Hardware supplied by CF.

Arrangement 9 only.

TYPE 3: Housing bolts through customer's wall into plug fan front plate. Specify "R" dimension for customer's wall, on your order, per note 5 on page 22. Hardware supplied by customer.

Arrangement 9 only.

TYPE 4: Housing bolts to front of plug box. Specify "R" dimension for plug box, on your order, per note 5 on page 22. Hardware supplied by CF.

Arrangement 9 only.