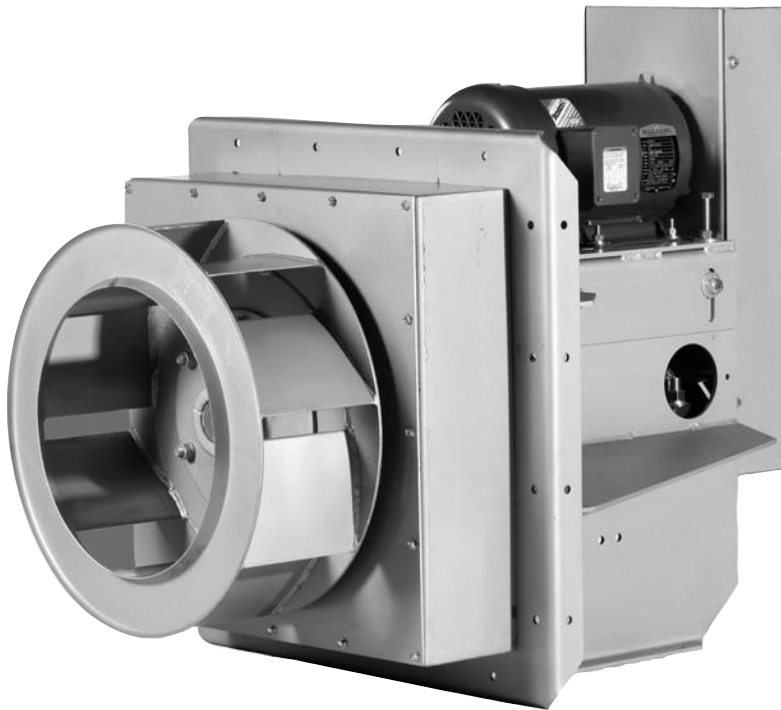


cincinnati fan

OEM and Industrial Air Handling Specialist



SERIES
CPAF

**CENTRIFUGAL
PLUG
FANS**

**CLASS II
CLASS IIP
CLASS III**

7697 Snider Road, Mason, OH 45040-9135

Telephone: 513-573-0600

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

Cat. No. CPAF-508
Supersedes CPAF-305



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.

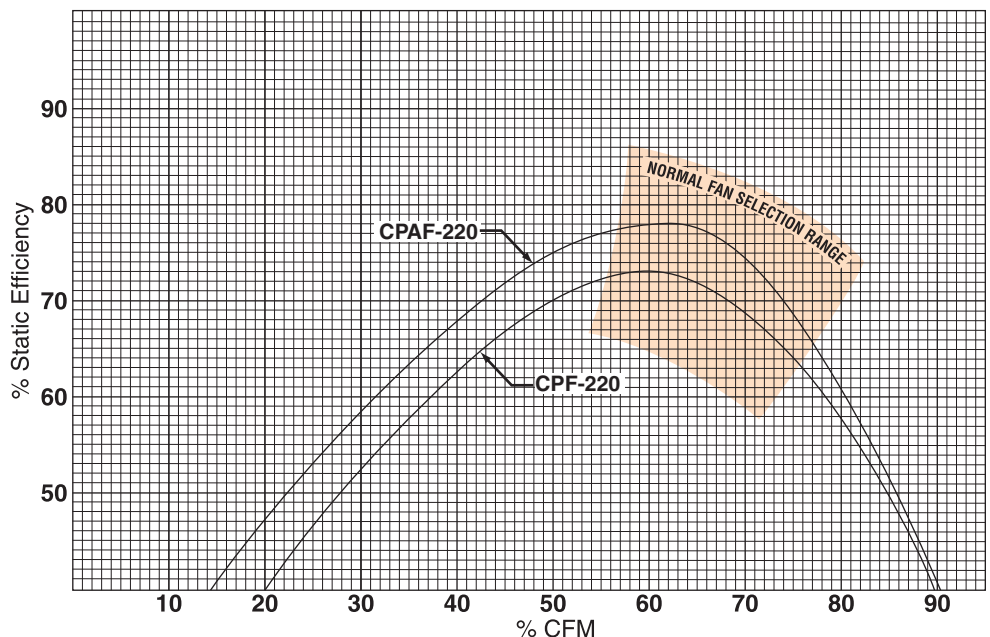
Cincinnati Fan operates in a modern facility specifically designed for world class manufacturing enabling us to build standard products to order, including accessories, and ship within 5 to 10 working days.

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.com for more information.

EFFICIENCY OF AIRFOIL WHEEL vs. BACKWARD INCLINED WHEEL

Airfoil wheels provide the highest efficiency of all centrifugal fan designs. The curve overlays at right comparing a CPAF-220 and a CPF-220 illustrates a 10% increase in static efficiency for the airfoil design versus the backward inclined design in the normal selection range. This benefit results in lower brake horsepower consumption and a reduction in sound levels of 2-6 dBA.

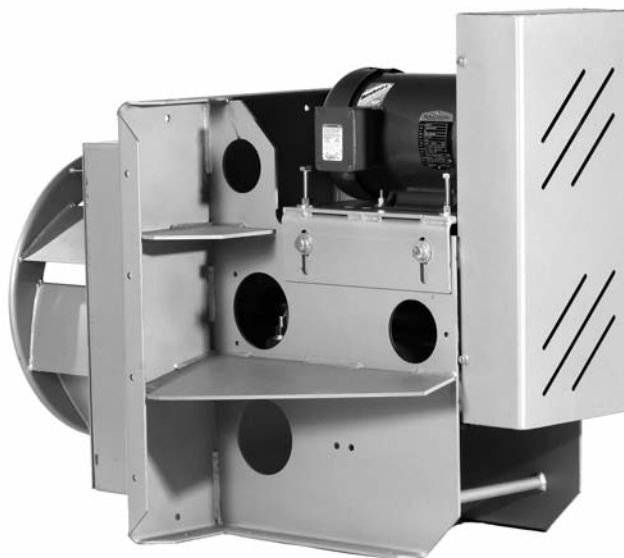


TWO STANDARD ARRANGEMENTS



ARRANGEMENT 4 (DIRECT DRIVE)

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



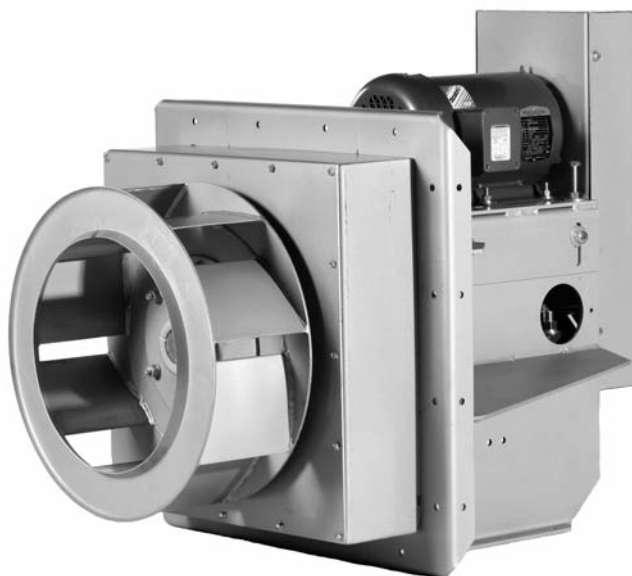
ARRANGEMENT 9 (V-BELT DRIVE)

- 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 and optional plug box.



STANDARD INLET BELL

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

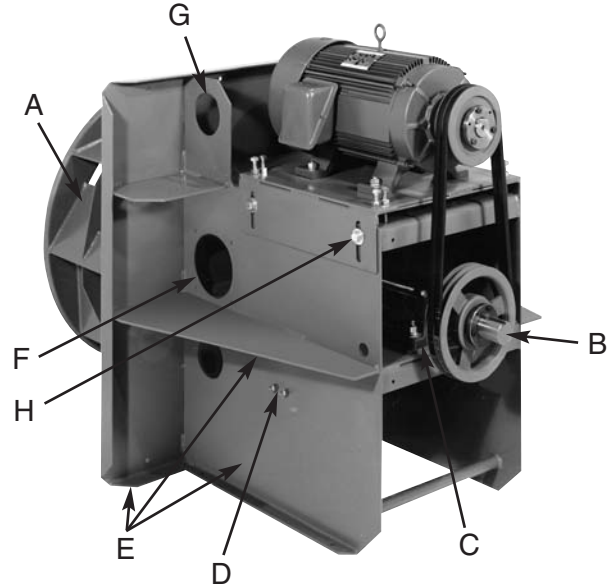


OPTIONAL INSULATION PLUG BOX

Required for 450°F. to 800°F. arrangement 9 only.
May be furnished by customer.
Plug box is available in 2", 3", 4", 5" or 6" depths.

CPAF SERIES FEATURES

- A) Airfoil blades are fabricated of 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.
- 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.

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.

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 CPAF fan to deliver 6300 CFM at 8" 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 8" SP = 13.04" SP at standard conditions.

STEP 3. Check CPAF catalog for 6300 CFM at 13" SP. We select a belt driven CPAF-200. Class IIP at 3126 RPM and 15.89 BHP.

STEP 4. Correct the BHP for the lighter air: 15.89 ÷ 1.63 = 9.75 BHP. A 10 HP motor will suffice at 200°F., and 7000' but not at standard conditions. Special motor insulation may be required due to altitude.

SPARK-RESISTANT CONSTRUCTION

For AMCA Type A or B spark resistant construction, please contact your local Cincinnati Fan sales representative.

Type C: Consists of aluminum inlet bell and aluminum plate on drive side of the fan. Maximum Temperature is the same as for high temperature construction below for each arrangement.

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.

DESIGN SPECIFICATIONS

MAXIMUM SHAFT & BEARING SPEEDS FOR BELT DRIVEN FANS WR² (Lb.-Ft²) & MAXIMUM WHEEL SPEEDS FOR ALL FANS

SIZE	CLASS	WR ² and MAX. WHEEL SPEED @ 70°F. ①		MAX. SAFE SHAFT SPEED FOR STD. OVERHANG "GG" ②	MAX. SAFE SHAFT SPEED WITH EXTENDED SHAFT "R" ②③				
		WR ²	MAX. RPM		R=2"	R=3"	R=4"	R=5"	R=6"
120	II	2.9	5000	4189	4700	4330	3820	3750	3300
130	II	4.1	4600	3834	4500	4280	3910	3580	3230
150	II	5.6	4130	3513	4220	3910	3790	3340	3000
160	II	7.7	3900	3195	3700	3420	3050	2800	2600
180	II	12.9	—	3142	—	—	—	—	—
	IIP	12.9	3810	3810	3720	3430	3120	2880	2680
200	II	17.9	—	2885	—	—	—	—	—
	IIP	17.9	3550	3550	3400	3190	2800	2600	2400
220	II	25.3	—	2668	—	—	—	—	—
	IIP	25.3	3200	3200	3200	2970	2660	2400	2200
240	II	54.7	—	2427	—	—	—	—	—
	IIP	54.7	2900	2900	2600	2550	2450	2300	2150
270	II	81.2	—	1967	—	—	—	—	—
	III	81.2	2550	2478	2300	2200	2130	2050	1930
300	II	117.2	—	1777	—	—	—	—	—
	III	117.2	2310	2239	2000	2000	1950	1780	1600

NOTE: "GG" in above table refers to dimensions shown on pages 20, 21 and 22. "R" dimension refers to dimensions shown on page 22.

- ① At elevated temperatures, the maximum wheel speed must be derated per the high temperature deration factors listed on page 4. In some cases, the derated maximum wheel speed may be lower than the maximum shaft speed with extended shaft "R" (shown above). **The lower of the two speeds prevails.**
- ② All maximum shaft speeds are independent of temperature.
- ③ All plug fans with extended shafts ("R" dimension on page 22) include the highest class of wheel construction for each size.

DANGER

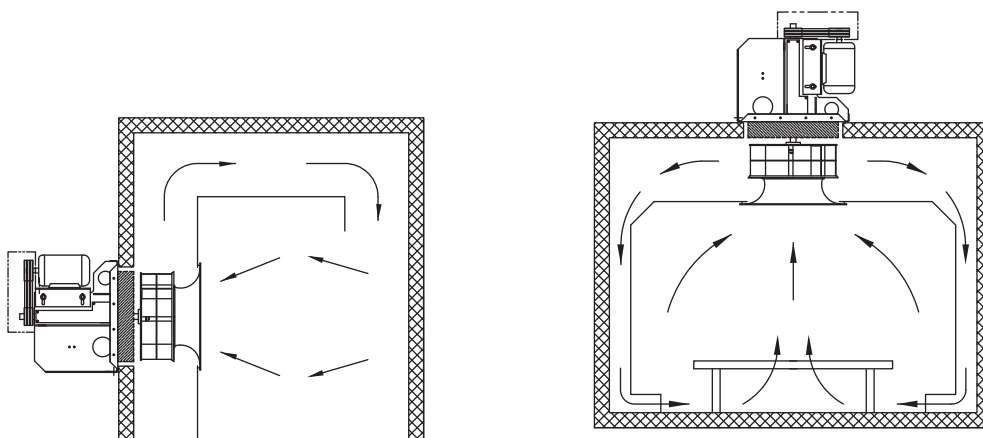
All fans & blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from rotating equipment unless it is disconnected from its power source.

Read operating instructions.

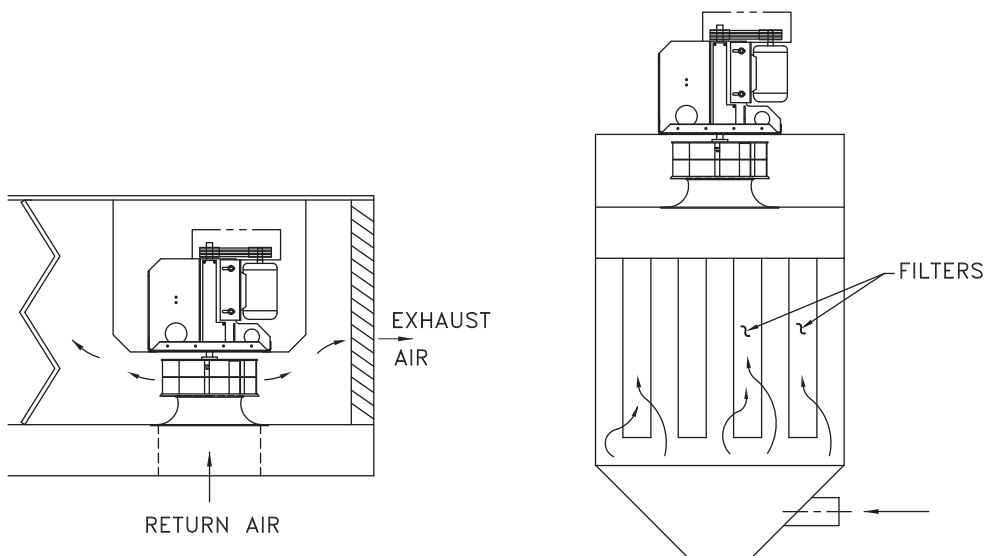
TYPICAL APPLICATIONS

Typical applications for plug fans include ovens, kilns and dryers, where the plug fan circulates the air inside the equipment to maintain even temperatures. In clean rooms, dust collectors and air handling units, they provide the air flow required to move air through the system.

They are used in any system or equipment where a plenum, or a space between two walls, act as the fan housing. Plug fans can also be used with an actual fan housing inside the plenum.



TYPICAL OVEN APPLICATION



AIR HANDLER APPLICATION

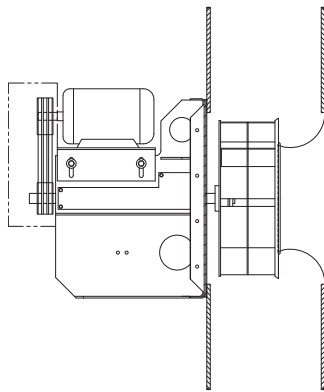
DUST COLLECTOR APPLICATION

TYPICAL MOUNTING CONFIGURATIONS

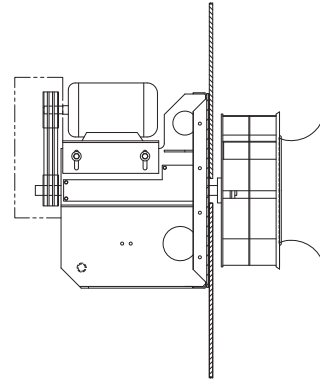
Plug fans can be mounted to the side wall or ceiling of a plenum. A hole, slightly larger than the plug fan wheel diameter, must be provided in the plenum. When the plug fan is installed, the hole will be covered by the plug fan panel. If the plenum wall or ceiling is insulated, as in an oven or kiln, the plug fan can be provided with an insulated plug box having the same thickness, up to 6 inches, as the plenum wall or ceiling. In this case, the hole in the plenum walls would need to be just large enough to clear the dimensions of the insulated plug box. These two methods allow for the use of a completely assembled fan from Cincinnati Fan.

An alternate mounting method is to provide a hole in the plenum wall slightly larger than the shaft diameter of the plug fan. The plug fan panel is mounted to the outside of the plenum and the fan wheel is then mounted onto the fan shaft from the inside of the plenum.

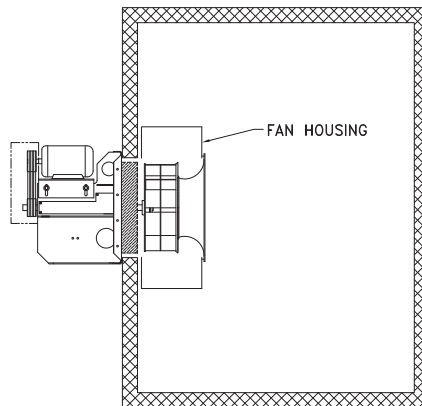
In all mounting methods, the inlet bell for the plug fan wheel is mounted last to maintain the proper bell to wheel clearance. Mounting of a fan housing is sometimes also necessary. See optional housing mounting types shown on page 23.



TYPICAL INSTALLATION
CLEARANCE HOLE FOR
WHEEL IN WALL



TYPICAL INSTALLATION
CLEARANCE HOLE FOR
SHAFT IN WALL



HOUSED INSTALLATION

DIRECT DRIVE RATING TABLES

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

All performance shown is with HDAF wheels and without housings. For performance with housing, see the HDAF catalog.

MODEL NUMBER	RPM	FAN WIDTH	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP	
			CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
CPAF-120 †	1750	FULL	932	.24												
	3500	1/2	1416	.94	1267	.99	1110	.99	932	.96	683	.87				
	3500	3/4	2124	1.42	1901	1.48	1665	1.49	1397	1.44	1025	1.30				
	3500	FULL	2832	1.89	2534	1.98	2221	1.99	1863	1.92	1367	1.73				
CPAF-130 †	1750	FULL	1420	.40												
	3500	1/2	1930	1.54	1767	1.59	1599	1.61	1420	1.61	1215	1.56	941	1.42		
	3500	3/4	2895	2.30	2650	2.38	2399	2.42	2130	2.41	1823	2.34	1411	2.14		
	3500	FULL	3860	3.07	3534	3.17	3199	3.22	2840	3.21	2430	3.12	1882	2.85		
CPAF-150 †	1750	3/4	1693	.51	937	.46										
	1750	FULL	2258	.68	1250	.62										
	3500	1/2	2698	2.40	2557	2.53	2412	2.64	2258	2.72	2088	2.77	1891	2.78	1643	2.72
	3500	3/4	4047	3.60	3836	3.80	3618	3.95	3387	4.07	3132	4.15	2837	4.16	2464	4.07
	3500	FULL	5396	4.80	5115	5.06	4824	5.27	4516	5.43	4176	5.53	3783	5.55	3286	5.43
CPAF-160 †	1750	1/2	1575	.54	1164	.55										
	1750	3/4	2362	.81	1745	.82										
	1750	FULL	3150	1.08	2327	1.10										
	3500	1/2	3624	3.84	3469	4.03	3312	4.18	3150	4.30	2977	4.39	2789	4.44	2578	4.44
	3500	3/4	5435	5.76	5204	6.04	4968	6.27	4724	6.45	4465	6.58	4184	6.67	3867	6.67
CPAF-180 †	1750	1/2	2255	.84	1980	.92	1602	.93								
	1750	3/4	3383	1.27	2970	1.38	2402	1.39								
	1750	FULL	4511	1.69	3959	1.84	3203	1.86								
	3500	1/2	4901	5.97	4769	6.27	4640	6.53	4511	6.75	4380	6.95	4246	7.11	4106	7.26
	3500	3/4	7351	8.96	7154	9.40	6960	9.79	6766	10.13	6570	10.42	6369	10.67	6160	10.88
CPAF-200	1750	1/2	3025	1.30	2734	1.42	2389	1.48	1834	1.41						
	1750	3/4	4538	1.96	4101	2.14	3584	2.22	2752	2.12						
	1750	FULL	6051	2.61	5468	2.85	4778	2.97	3669	2.83						
	3500	1/2	6479	9.36	6334	9.76	6192	10.12	6051	10.44	5909	10.72	5765	10.98	5619	11.20
	3500	3/4	9719	14.04	9501	14.64	9288	15.18	9076	15.65	88.63	16.08	8648	16.47	8428	16.80
CPAF-220	1750	1/2	4161	2.07	3830	2.33	3470	2.49	3002	2.54						
	1750	3/4	6242	3.11	5745	3.49	5205	3.74	4502	3.81						
	1750	FULL	8323	4.15	7659	4.66	6939	4.99	6003	5.09						
	3500	1/2	9719	14.04	9501	14.64	9288	15.18	9076	15.65	88.63	16.08	8648	16.47	8428	16.80
	3500	FULL	12959	18.72	12668	19.52	12384	20.23	12101	20.87	11818	21.44	11531	21.95	11238	22.41
CPAF-240	1750	1/2	5634	3.27	5269	3.64	4894	3.91	4469	4.08	3906	4.10				
	1750	3/4	8452	4.90	7903	5.46	7341	5.87	6703	6.13	5860	6.16				
	1750	FULL	11269	6.53	10538	7.28	9788	7.83	8937	8.17	7813	8.21				
CPAF-270	1750	1/2	8567	7.37	8244	7.85	7903	8.24	7529	8.53	7101	8.71	6570	8.74	5775	8.47
	1750	3/4	12850	11.05	12366	11.78	11854	12.36	11294	12.79	10652	13.06	9855	13.10	8662	12.70
	1750	FULL	17134	14.73	16487	15.71	15805	16.48	15059	17.06	14203	17.41	13140	17.47	11550	16.94
CPAF-300	1750	1/2	11834	12.29	11479	13.01	11111	13.60	10722	14.09	10301	14.46	9830	14.72	9276	14.81
	1750	3/4	17751	18.44	17218	19.51	16666	20.41	16083	21.14	15451	21.70	14744	22.07	13913	22.22
	1750	FULL	23668	24.59	22957	26.02	22222	27.21	21444	28.18	20602	28.93	19659	29.43	18551	29.63

† These model require a 143T frame or larger motor even though some BHP's are available in a 56 frame. See page 20.

NOTE

Partial width wheels are available in 5% increments, from 50% 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.

DIRECT DRIVE RATING TABLES (cont'd)

CFM and BHP at Static Pressure Shown • Ratings at 70°F., .075 Density, Sea Level
All performance shown is with HDAF wheels and without housings. For performance with housing, see the HDAF catalog.

8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP	
CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
1250	2.46																
1875	3.70																
2500	4.93																
2327	4.39	1999	4.25	1412	3.80												
3491	6.59	2998	6.37	2118	5.69												
4655	8.79	3997	8.49	2824	7.59												
3959	7.37	3802	7.45	3629	7.50	3434	7.50	3203	7.44	2908	7.26	2445	6.79				
5939	11.06	5702	11.18	5443	11.25	5150	11.25	4805	11.16	4362	10.89	3667	10.19				
7919	14.74	7603	14.91	7257	15.00	6867	15.01	6406	14.88	5816	14.52	4890	13.59				
5468	11.40	5311	11.57	5145	11.70	4969	11.80	4778	11.86	4567	11.87	4327	11.81	4041	11.65	3669	11.32
8202	17.10	7966	17.35	7718	17.55	7453	17.70	7167	17.79	6851	17.81	6490	17.72	6061	17.48	5503	16.97
10936	22.80	10621	23.13	10291	23.40	9938	23.60	9556	23.72	9134	23.74	8654	23.62	8081	23.31	7338	22.63
8564	14.67	7404	13.96														
12846	22.01	11105	20.94														
17129	29.35	14807	27.92														

DANGER

All fans & blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from all 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 wheels are Class II, HDAF type.

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	728	.02	1018	.05	1231	.08	1416	.12	1583	.16	1879	.26	2141	.36
800	896	.03	1149★	.07	1342	.11	1511	.15	1664	.20	1940	.30	2188	.41
950	1064	.05	1288	.10	1466	.15	1621	.20	1763★	.25	2020	.36	2253	.48
1100	1232	.07	1433	.13	1597	.19	1741★	.25	1874	.30	2115	.42	2335	.55
1250	1399	.11	1582	.18	1734★	.24	1870	.30	1994	.37	2222	.50	2429	.64
1400	1567	.15	1734★	.23	1876	.30	2003	.37	2121	.44	2336	.59	2534	.74
1550	1735★	.20	1888	.29	2021	.38	2142	.45	2253	.53	2458	.69	2646	.85
1700	1903	.27	2044	.37	2169	.46	2283	.55	2390	.63	2585	.80	2765	.98
1850	2071	.35	2202	.45	2320	.56	2428	.65	2529	.75	2716	.93	2889	1.12
2000	2239	.44	2361	.56	2472	.67	2575	.77	2672	.87	2851	1.08	3017	1.28
2150	2407	.54	2522	.67	2627	.79	2725	.91	2817	1.02	2989	1.24	3149	1.45
2300	2575	.66	2683	.80	2782	.93	2876	1.06	2965	1.18	3130	1.41	3284	1.64
2450	2743	.80	2845	.95	2939	1.09	3029	1.22	3114	1.35	3273	1.61	3422★	1.85
2600	2911	.96	3007	1.12	3097	1.27	3183	1.41	3264	1.55	3418★	1.82	3562	2.08
2750	3079	1.13	3170	1.30	3256	1.46	3338	1.61	3417★	1.76	3565	2.05	3704	2.33
2900	3247	1.33	3333	1.51	3416★	1.68	3494★	1.84	3570	2.00	3713	2.30	3848	2.60
3050	3415★	1.55	3497	1.73	3576	1.91	3652	2.08	3725	2.25	3863	2.58	3993	2.90
3200	3583	1.79	3662	1.98	3737	2.17	3810	2.35	3880	2.53	4014	2.88	4140	3.21
3350	3751	2.05	3826	2.25	3899	2.45	3969	2.65	4036	2.83	4166	3.20		
3500	3919	2.34	3991	2.55	4061	2.76	4128	2.96						
3650	4086	2.65	4156	2.87										

VOLUME CFM	2 1/2" SP		3" SP		4" SP		5" SP		6" SP		7" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
650	2378	.47	2596	.59	2988	.84	3337	1.13	3654	1.43		
800	2414	.53	2624	.66	3005	.93	3347	1.23	3660	1.55	3949	1.89
950	2468	.60	2668	.74	3036	1.03	3369	1.35	3676	1.69	3961	2.04
1100	2538	.69	2729	.83	3082	1.14	3405	1.47	3703	1.83	3982	2.20
1250	2622	.78	2804	.94	3143	1.26	3453★	1.61	3743	1.99	4015	2.37
1400	2717	.89	2891	1.05	3215	1.40	3515	1.77	3795	2.16	4059	2.57
1550	2822	1.02	2988	1.19	3298	1.55	3587	1.94	3857	2.34	4113	2.77
1700	2933	1.15	3092	1.34	3391	1.72	3669	2.12	3930	2.55	4178	2.99
1850	3050	1.31	3203	1.50	3491★	1.91	3759	2.33	4012	2.77		
2000	3173	1.48	3320	1.69	3598	2.11	3856	2.55	4101	3.02		
2150	3299	1.67	3442★	1.89	3710	2.34	3960	2.80				
2300	3429★	1.87	3567	2.11	3826	2.58	4069	3.07				
2450	3562	2.10	3695	2.35	3947	2.84	4183	3.36				
2600	3698	2.34	3827	2.61	4072	3.13						
2750	3836	2.61	3961	2.89								
2900	3976	2.90	4098	3.19								
3050	4118	3.21										

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: 13.50"

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

All wheels are Class II, HDAF type.

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	920	.05	1131★	.11	1296	.16	1440	.22	1572	.28	1810	.41	2025	.56
1300	1087	.09	1274	.15	1425	.22	1558	.28	1680	.35	1902	.50	2103	.65
1500	1255	.14	1422	.21	1561	.28	1685	.36	1798★	.44	2006	.60	2195	.77
1700	1422	.20	1573	.28	1702★	.37	1818	.45	1924	.54	2120	.71	2299	.90
1900	1589	.27	1727★	.37	1847	.46	1956	.56	2056	.65	2241	.85	2411	1.05
2100	1757★	.37	1883	.48	1995	.58	2097	.68	2193	.79	2369	1.00	2530	1.22
2300	1924	.49	2040	.60	2145	.72	2242	.83	2333	.95	2500	1.17	2655	1.41
2500	2091	.62	2199	.75	2298	.88	2390	1.00	2476	1.12	2636	1.37	2784	1.62
2700	2259	.79	2359	.92	2452	1.06	2539	1.19	2621	1.33	2775	1.59	2917	1.86
2900	2426	.97	2520	1.12	2608	1.27	2691	1.41	2769	1.55	2916	1.84	3053	2.13
3100	2593	1.19	2682	1.35	2765	1.50	2844	1.66	2919	1.81	3060	2.12	3192	2.43
3300	2760	1.43	2844	1.60	2923	1.77	2998	1.93	3070	2.10	3206	2.42	3333	2.75
3500	2928	1.71	3007	1.89	3082	2.07	3154	2.24	3223	2.42	3353	2.76	3476★	3.11
3700	3095	2.02	3170	2.21	3242	2.40	3310	2.58	3376	2.77	3502★	3.13	3621	3.50
3900	3262	2.37	3334	2.57	3402★	2.76	3468★	2.96	3531	3.15	3653	3.54	3767	3.93
4100	3430★	2.75	3498★	2.96	3563	3.17	3626	3.37	3687	3.58	3804	3.99		
4300	3597	3.17	3662	3.39	3725	3.61	3785	3.83						
4500	3764	3.64	3826	3.87										

VOLUME CFM	2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		6" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1100	2223	.71	2408	.87	2581	1.04	2745	1.21	2901	1.40	3050	1.59	3330	2.00
1300	2290	.82	2465	.99	2630	1.17	2788	1.36	2938	1.55	3082	1.76	3354	2.18
1500	2371	.94	2537	1.13	2695	1.32	2846	1.52	2990	1.73	3129	1.94	3392	2.39
1700	2466	1.09	2623	1.29	2774	1.49	2917	1.70	3056	1.92	3189	2.15	3443★	2.62
1900	2570	1.25	2720	1.46	2863	1.68	3001	1.91	3133	2.14	3261	2.38	3506	2.87
2100	2682	1.44	2825	1.67	2962	1.90	3094	2.14	3221	2.38	3344	2.64	3580	3.16
2300	2800	1.65	2937	1.89	3069	2.14	3195	2.39	3318	2.65	3436★	2.92	3663	3.46
2500	2923	1.88	3055	2.14	3182	2.40	3304	2.67	3421★	2.95	3535	3.23	3755	3.80
2700	3051	2.14	3178	2.41	3300	2.69	3417★	2.98	3531	3.27	3641	3.56		
2900	3182	2.42	3305	2.72	3422★	3.01	3536	3.32	3646	3.62	3752	3.93		
3100	3316	2.74	3435★	3.05	3549	3.36	3659	3.68	3765	4.00				
3300	3453★	3.08	3568	3.41	3678	3.74	3785	4.08						
3500	3592	3.46	3703	3.81	3810	4.16								
3700	3733	3.87												

VOLUME CFM	7" SP		8" SP	
	RPM	BHP	RPM	BHP
1100	3590	2.43	3834	2.88
1300	3609	2.63		
1500	3640	2.86		
1700	3683	3.11		
1900	3738	3.39		
2100	3804	3.70		

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: 15.00"

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

All wheels are Class II, HDAF type.

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
1750	1079	.13	1205	.21	1315	.28	1416	.36	1513	.45	1697	.63	1869	.83
2000	1233	.20	1346	.28	1445	.37	1538	.46	1626	.55	1793★	.75	1952	.96
2250	1387	.28	1489	.38	1580	.48	1665	.57	1746★	.68	1900	.89	2047	1.11
2500	1541	.38	1634	.49	1718★	.60	1797★	.71	1872	.82	2015	1.05	2151	1.29
2750	1695	.51	1780★	.63	1858	.75	1932	.87	2002	.99	2136	1.23	2263	1.49
3000	1849	.66	1928	.79	2001	.92	2070	1.05	2135	1.18	2261	1.45	2381	1.72
3250	2003	.84	2077	.99	2145	1.13	2210	1.27	2272	1.41	2390	1.69	2503	1.98
3500	2157	1.05	2226	1.21	2290	1.36	2351	1.51	2410	1.66	2522	1.96	2629	2.27
3750	2312	1.29	2376	1.46	2436	1.62	2494	1.79	2550	1.95	2656	2.27	2758	2.60
4000	2466	1.57	2526	1.75	2583	1.92	2638	2.10	2691	2.27	2793	2.61	2890	2.96
4250	2620	1.88	2677	2.07	2731	2.26	2783	2.44	2834	2.63	2931	2.99	3024	3.36
4500	2774	2.23	2828	2.43	2880	2.63	2929	2.83	2978	3.02	3071	3.41	3160	3.80
4750	2928	2.63	2979	2.84	3029	3.05	3076	3.26	3122	3.46	3212	3.87	3297	4.28
5000	3082	3.06	3131	3.29	3178	3.51	3224	3.73	3268	3.94	3354	4.37	3436★	4.81
5250	3236	3.55	3283	3.78	3328	4.01	3372	4.24	3414★	4.47	3497★	4.93		
5500	3390	4.08	3435★	4.32	3478★	4.57								

VOLUME CFM	2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		6" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1750	2031	1.04	2186	1.26	2332	1.49	2472	1.73	2606	1.98	2734	2.24	2976	2.77
2000	2103	1.18	2247	1.42	2386	1.66	2519	1.92	2647	2.18	2771	2.46	3006	3.03
2250	2187	1.35	2322	1.60	2453	1.86	2579	2.13	2701	2.41	2820	2.70	3046	3.30
2500	2282	1.54	2409	1.80	2531	2.08	2651	2.36	2767	2.66	2879	2.96	3096	3.59
2750	2386	1.76	2505	2.04	2620	2.32	2733	2.62	2843	2.93	2950	3.25	3157	3.90
3000	2496	2.00	2608	2.30	2717	2.60	2824	2.91	2928	3.23	3030	3.56	3228	4.25
3250	2612	2.28	2718	2.59	2821	2.91	2922	3.23	3021	3.57	3118	3.91	3307	4.63
3500	2732	2.59	2833	2.92	2931	3.25	3027	3.59	3121	3.94	3213	4.30	3394	5.04
3750	2857	2.93	2952	3.28	3046	3.63	3137	3.98	3227	4.35	3315	4.72	3487★	5.49
4000	2984	3.31	3075	3.67	3164	4.04	3252	4.41	3338	4.79	3422★	5.18		
4250	3114	3.73	3201	4.11	3287	4.49	3370	4.88	3453★	5.28				
4500	3246	4.19	3330	4.59	3412★	4.99	3492★	5.40						
4750	3380	4.69	3461★	5.11										

VOLUME CFM	7" SP		8" SP	
	RPM	BHP	RPM	BHP
1750	3202	3.33	3414	3.92
2000	3226	3.62	3435★	4.24
2250	3260	3.92	3463★	4.58
2500	3303	4.25	3500	4.93
2750	3356	4.59		
3000	3418★	4.97		
3250	3489★	5.37		

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: 16.50"

All wheels are Class II, HDAF type.

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
2100	973	.16	1088	.25	1188★	.34	1282	.43	1370	.53	1538	.75	1695	.98
2400	1111	.23	1215	.34	1306	.44	1390	.55	1471	.66	1624	.89	1769★	1.14
2700	1250	.33	1344	.45	1427	.57	1505	.69	1579	.81	1720★	1.05	1854	1.32
3000	1389	.45	1474	.59	1551	.72	1623	.85	1692	.98	1823	1.25	1948	1.53
3300	1528	.60	1606	.75	1678	.89	1745★	1.04	1809★	1.18	1931	1.47	2048	1.78
3600	1667★	.78	1739★	.94	1806★	1.10	1869	1.26	1929	1.41	2044	1.73	2153	2.05
3900	1806	.99	1873	1.17	1936	1.34	1995	1.51	2052	1.68	2160	2.02	2263	2.36
4200	1945	1.24	2008	1.43	2067	1.62	2122	1.80	2176	1.98	2279	2.35	2377	2.71
4500	2084	1.52	2143	1.73	2198	1.93	2251	2.13	2302	2.32	2400	2.71	2493	3.10
4800	2223	1.85	2278	2.07	2331	2.28	2381	2.49	2429	2.70	2522	3.12	2611	3.54
5100	2362	2.21	2414	2.45	2464	2.68	2512	2.91	2558	3.13	2647	3.57	2732	4.01
5400	2501	2.63	2550	2.88	2598	3.12	2643	3.36	2687	3.60	2773	4.07	2854	4.54
5700	2640	3.09	2687	3.36	2732	3.61	2776	3.87	2818	4.12	2899	4.62	2978	5.11
6000	2779	3.61	2823	3.88	2867	4.16	2908	4.43	2949	4.69	3027	5.22	3103	5.74
6300	2918	4.17	2960	4.47	3002	4.75	3042	5.04	3081	5.32	3156	5.87		
6600	3057	4.80	3097	5.11	3137	5.41	3175	5.71						

VOLUME CFM	2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2100	1843	1.24	1984	1.51	2118	1.80	2245	2.11	2367	2.43	2484	2.76	2596	3.10
2400	1907	1.41	2039	1.69	2165	1.99	2287	2.31	2404	2.64	2517	2.99	2625	3.34
2700	1982	1.60	2106	1.90	2225	2.22	2340	2.55	2452	2.89	2560	3.25	2664	3.61
3000	2067	1.83	2183	2.14	2295	2.47	2404	2.81	2510	3.17	2613	3.54	2713	3.92
3300	2160	2.09	2269	2.42	2374	2.76	2477	3.12	2577	3.49	2675	3.87	2771	4.26
3600	2259	2.39	2361	2.73	2461	3.09	2558	3.46	2654	3.84	2747	4.24	2838	4.64
3900	2363	2.72	2460	3.08	2554	3.46	2647	3.84	2737	4.24	2826	4.65	2913	5.07
4200	2471	3.09	2563	3.47	2653	3.87	2740	4.27	2826	4.68	2911	5.11	2994	5.54
4500	2583	3.50	2670	3.91	2756	4.32	2839	4.74	2921	5.17	3002	5.61	3081	6.06
4800	2697	3.96	2781	4.38	2862	4.82	2942	5.26	3021	5.71	3098	6.16	3174	6.63
5100	2814	4.46	2894	4.91	2972	5.36	3049	5.82	3124	6.29				
5400	2933	5.01	3010	5.48	3085	5.95	3158	6.44						
5700	3054	5.61	3127	6.10										
6000	3176	6.26												

VOLUME CFM	6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2100	2704	3.46	2809	3.82	2910	4.20	3008	4.58	3103	4.98
2400	2731	3.71	2833	4.09	2931	4.48	3028	4.88	3121	5.29
2700	2766	4.00	2865	4.39	2961	4.79	3055	5.21	3146	5.63
3000	2811	4.31	2906	4.72	2999	5.13	3090	5.56	3179	6.00
3300	2865	4.67	2956	5.08	3046	5.51	3134	5.95		
3600	2927	5.06	3015	5.49	3101	5.93	3186	6.38		
3900	2998	5.50	3082	5.94	3165	6.40				
4200	3076	5.99	3156	6.44						
4500	3159	6.52								

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.

CPAF-180

WHEEL
Dia. - 18.25"

BELT DRIVE RATING TABLES

Ratings at 70°F., .075 Density, Sea Level

Class II = light face above Class IIP
Class IIP = bold face

SEE PAGE 12 FOR MAX. WHEEL RPM & WR².

VOLUME CFM	0" SP		1/2" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP		3 1/2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	521	.04	754	.15	955	.29										
1800	625	.06	827	.20	1001	.35	1166	★ .52								
2100	730	.10	908	.26	1062	.42	1208	.61	1349	.81	1482	1.04				
2400	834	.15	995	.33	1133	★ .51	1264	.70	1391	.92	1514	1.16	1633	1.41	1746	★ 1.68
2700	938	.22	1085	.42	1210	.61	1329	.82	1445	1.05	1558	1.30	1668	1.56	1775	★ 1.84
3000	1042	.30	1178	★ .52	1293	.74	1402	.96	1508	1.20	1612	1.46	1714	1.73	1813	2.02
3300	1146	★ .40	1272	.64	1380	.88	1481	1.12	1578	1.38	1674	1.64	1769	★ 1.93	1861	2.22
3600	1251	.51	1368	.79	1469	1.04	1563	1.30	1654	1.57	1743	★ 1.85	1831	2.15	1917	2.46
3900	1355	.65	1465	.95	1560	1.23	1648	1.51	1734	★ 1.80	1817	2.09	1899	2.40	1980	2.72
4200	1459	.82	1563	1.14	1653	1.44	1736	★ 1.74	1817	2.04	1895	2.36	1972	2.68	2048	3.01
4500	1563	1.00	1661	1.35	1747	★ 1.68	1826	2.00	1903	2.32	1977	2.65	2050	2.99	2121	3.33
4800	1668	1.22	1760	★ 1.59	1842	1.94	1918	2.28	1990	2.63	2061	2.97	2130	3.33	2198	3.69
5100	1772	★ 1.46	1860	1.86	1938	2.24	2010	2.60	2080	2.96	2147	3.33	2213	3.70	2278	4.08
5400	1876	1.73	1960	2.16	2034	2.56	2104	2.95	2171	3.33	2235	3.72	2298	4.10	2360	4.50
5700	1980	2.04	2060	2.49	2132	2.92	2199	3.33	2263	3.73	2325	4.14	2385	4.55	2444	4.96
6000	2085	2.38	2161	2.86	2230	3.31	2294	3.74	2356	4.17	2415	4.60	2474	5.02	2530	5.45
6300	2189	2.75	2262	3.26	2328	3.73	2390	4.19	2450	4.64	2507	5.09	2563	5.54	2618	5.99
6600	2293	3.17	2363	3.70	2427	4.20	2487	4.68	2545	5.15	2600	5.62	2654	6.09	2707	6.56
6900	2397	3.62	2465	4.17	2526	4.70	2585	5.21	2640	5.70	2694	6.20	2746	6.69	2797	7.18
7200	2501	4.11	2566	4.69	2626	5.24	2682	5.78	2736	6.30	2788	6.81	2839	7.33	2889	7.84
7500	2606	4.65	2668	5.25	2726	5.83	2781	6.39	2833	6.93	2883	7.47	2933	8.01	2981	8.54
7800	2710	5.23	2770	5.86	2826	6.46	2879	7.05	2930	7.62	2979	8.18	3027	8.74	3074	9.29
8100	2814	5.85	2872	6.51	2927	7.14	2978	7.75	3027	8.34	3075	8.93	3122	9.51	3167	10.09
8400	2918	6.53	2975	7.21	3027	7.87	3077	8.50	3125	9.12	3172	9.73	3217	10.34	3262	10.94
8700	3023	7.25	3077	7.96	3128	8.64	3177	9.30	3224	9.95	3269	10.58	3313	11.21	3356	11.83
9000	3127	8.03	3179	8.77	3229	9.47	3277	10.16	3322	10.83	3367	11.49	3410	★ 12.14	3452	★ 12.79
9300	3231	8.86	3282	9.62	3330	10.35	3377	11.06	3421	★ 11.76	3464	★ 12.44	3507	★ 13.12	3548	13.79
9600	3335	9.75	3385	10.53	3432	★ 11.29	3477	★ 12.03	3520	12.75	3563	13.46				

VOLUME CFM	4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2700	1878	2.13														
3000	1911	2.32														
3300	1953	2.53	2006	2.63	2098	2.96										
3600	2003	2.78	2042	2.86	2130	3.19	2216	3.54	2300	3.90	2382	4.27				
			2087	3.11	2170	3.46	2251	3.81	2331	4.18	2410	4.56	2488	4.95	2564	5.35
3900	2060	3.05	2139	3.39	2217	3.75	2294	4.12	2370	4.50	2445	4.89	2519	5.28	2592	5.69
4200	2124	3.35	2198	3.71	2272	4.07	2344	4.45	2417	4.84	2488	5.24	2559	5.65	2628	6.07
4500	2192	3.69	2262	4.06	2332	4.43	2401	4.82	2469	5.22	2537	5.63	2604	6.05	2671	6.48
4800	2265	4.06	2332	4.44	2397	4.83	2463	5.23	2528	5.64	2592	6.06	2656	6.48	2719	6.92
5100	2341	4.46	2405	4.85	2467	5.26	2529	5.67	2591	6.09	2652	6.52	2713	6.96	2774	7.41
5400	2421	4.90	2481	5.31	2541	5.72	2600	6.15	2659	6.58	2717	7.03	2775	7.48	2833	7.94
5700	2503	5.38	2560	5.80	2617	6.23	2674	6.67	2730	7.12	2786	7.57	2841	8.03	2896	8.51
6000	2586	5.89	2642	6.33	2696	6.78	2751	7.23	2805	7.69	2858	8.16	2911	8.64	2964	9.12
6300	2672	6.44	2725	6.90	2778	7.36	2830	7.83	2882	8.31	2933	8.79	2984	9.28	3035	9.78
6600	2759	7.04	2811	7.51	2861	7.99	2911	8.48	2961	8.97	3011	9.47	3060	9.97	3108	10.48
6900	2848	7.67	2897	8.17	2946	8.67	2995	9.17	3043	9.68	3090	10.19	3138	10.71	3185	11.24
7200	2937	8.35	2985	8.87	3033	9.38	3080	9.90	3126	10.43	3172	10.96	3218	11.49	3263	12.04
7500	3028	9.08	3075	9.61	3120	10.15	3166	10.69	3211	11.23	3255	11.78	3299	12.33	3343	12.89
7800	3120	9.85	3165	10.40	3209	10.96	3253	11.52	3297	12.08	3340	12.64	3383	13.21	3425	★ 13.79
8100	3212	10.67	3256	11.24	3299	11.82	3342	12.40	3384	12.98	3426	★ 13.56	3468	★ 14.15	3509	★ 14.74

VOLUME CFM	8" SP		8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3900	2664	6.11	2735	6.54	2805	6.98										
4200	2697	6.50	2765	6.94	2832	7.38	2964	8.30								
4500	2737	6.92	2802	7.36	2866	7.82	2993	8.76	3117	9.73	3238	10.74				
4800	2782	7.37	2845	7.83	2906	8.30	3028	9.26	3148	10.25	3265	11.27	3380	12.33	3493	★ 13.41
5100	2834	7.87	2893	8.34	2953	8.81	3070	9.79	3185	10.81	3298	11.85	3409	12.92	3519	14.03
5400	2890	8.41	2947	8.88	3004	9.37	3116	10.37	3227	11.40	3336	12.47	3444	★ 13.56	3550	14.68
5700	2951	8.99	3006	9.48	3060	9.97	3168	10.99	3274	12.04	3379	13.13	3483	★ 14.24	3586	15.38
6000	3016	9.61	3069	10.11	3121	10.62	3224	11.66	3326	12.73	3428	★ 13.84	3528	14.97		
6300	3085	10.28	3135	10.80	3185	11.32	3284	12.38	3383	13.47	3480	★ 14.59	3577	15.75		
6600	3157	11.00	3205	11.53	3253	12.06	3349	13.14	3443	★ 14.26	3537	15.40				
6900	3231	11.77	3278	12.31	3324	12.85	3416	13.96	3507	★ 15.10						
7200	3308	12.58	3353	13.13	3398	13.69	3486	★ 14.83	3574	15.99						

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.

CPAF-220

WHEEL
Dia. - 22.25"

BELT DRIVE RATING TABLES

Ratings at 70°F., .075 Density, Sea Level

Class II = light face above Class IIP
Class IIP = bold face

SEE PAGE 12 FOR MAX. WHEEL RPM & WR².

VOLUME CFM	0" SP		1/2" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP		3 1/2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2500	483	.07	666	.28	826	.52	978	.81								
3000	580	.12	740	.37	875	.64	1007	.94	1134	★ 1.28						
3500	677	.20	820	.49	938	.78	1052	1.10	1165	★ 1.46	1275	1.85	1381	2.27		
4000	773	.29	904	.63	1009	.96	1111	1.30	1211	1.68	1310	2.08	1407	2.52	1502	2.98
4500	870	.42	990	.81	1087	1.17	1178	★ 1.54	1268	1.94	1357	2.36	1445	2.81	1532	3.29
5000	967	.57	1079	1.01	1168	★ 1.41	1251	1.82	1333	2.24	1413	2.68	1494	3.15	1573	3.65
5500	1063	.76	1168	★ 1.25	1252	1.70	1329	2.14	1404	2.59	1478	3.06	1551	3.55	1624	4.06
6000	1160	★ .98	1258	1.53	1337	2.02	1410	2.50	1480	2.98	1548	3.48	1616	4.00	1683	4.53
6500	1257	1.25	1349	1.85	1424	2.39	1493	2.91	1559	3.43	1622	3.96	1685	4.50	1748	★ 5.06
7000	1353	1.56	1441	2.22	1513	2.80	1578	3.36	1640	3.92	1700	4.49	1759	★ 5.06	1817	5.64
7500	1450	1.92	1533	2.63	1602	3.27	1664	3.87	1723	★ 4.47	1780	★ 5.07	1836	5.68	1891	6.29
8000	1547	2.33	1626	3.10	1692	3.78	1751	★ 4.44	1808	5.07	1862	5.71	1915	6.35	1967	7.00
8500	1643	2.79	1719	★ 3.62	1782	★ 4.36	1840	5.05	1894	5.74	1946	6.41	1996	7.09	2046	7.77
9000	1740	★ 3.32	1812	4.20	1873	4.99	1929	5.73	1981	6.46	2031	7.18	2079	7.90	2127	8.62
9500	1837	3.90	1906	4.84	1965	5.68	2018	6.48	2069	7.25	2117	8.01	2163	8.77	2209	9.53
10000	1933	4.55	2000	5.54	2057	6.44	2108	7.29	2157	8.11	2204	8.91	2249	9.71	2293	10.51
10500	2030	5.27	2094	6.32	2149	7.27	2199	8.17	2246	9.03	2291	9.89	2335	10.73	2377	11.56
11000	2127	6.05	2188	7.16	2241	8.17	2290	9.12	2336	10.03	2380	10.93	2422	11.82	2463	12.70
11500	2223	6.92	2282	8.08	2334	9.14	2381	10.14	2426	11.11	2469	12.06	2510	12.99	2550	13.91
12000	2320	7.86	2377	9.08	2427	10.20	2473	11.25	2517	12.27	2558	13.26	2598	14.24	2637	15.21
12500	2417	8.89	2472	10.16	2520	11.33	2565	12.44	2608	13.51	2648	14.55	2687	15.58	2725	16.59
13000	2513	9.99	2566	11.33	2614	12.55	2658	13.72	2699	14.84	2738	15.93	2776	17.01	2813	18.06
13500	2610	11.19	2661	12.58	2707	13.86	2750	15.08								
14000	2707	12.48	2756	13.93												
14500	2803	13.87														

VOLUME CFM	4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4500	1617	3.79	1701	4.32	1783	★ 4.87										
5000	1652	4.16	1730	★ 4.71	1806	5.27	1882	5.86	1955	6.47						
5500	1696	4.59	1768	★ 5.15	1840	5.73	1910	6.33	1980	6.95	2049	7.60	2116	8.26	2183	8.93
6000	1750	★ 5.08	1816	5.66	1882	6.25	1948	6.87	2013	7.50	2078	8.16	2142	8.84	2205	9.53
6500	1810	5.63	1871	6.23	1933	6.84	1994	7.47	2055	8.12	2116	8.79	2176	9.48	2236	10.19
7000	1875	6.24	1933	6.86	1990	7.49	2048	8.14	2105	8.81	2161	9.50	2218	10.20	2274	10.93
7500	1945	6.92	1999	7.56	2053	8.22	2107	8.89	2160	9.58	2214	10.28	2267	11.00	2320	11.74
8000	2019	7.66	2070	8.33	2121	9.01	2171	9.71	2221	10.42	2272	11.14	2322	11.88	2372	12.64
8500	2095	8.46	2143	9.16	2192	9.87	2239	10.60	2287	11.33	2334	12.08	2382	12.84	2429	13.62
9000	2174	9.34	2220	10.07	2265	10.81	2311	11.56	2356	12.32	2401	13.09	2446	13.88	2491	14.68
9500	2254	10.29	2298	11.05	2342	11.82	2385	12.60	2428	13.39	2471	14.19	2514	15.00	2556	15.83
10000	2336	11.31	2378	12.11	2420	12.91	2462	13.72	2503	14.54	2544	15.37	2585	16.21	2625	17.06
10500	2419	12.40	2460	13.24	2500	14.08	2540	14.93	2580	15.78	2619	16.64	2658	17.51	2697	18.38
11000	2503	13.57	2543	14.45	2582	15.33	2620	16.21	2658	17.10	2696	17.99	2734	18.89	2771	19.79
11500	2589	14.83	2627	15.75	2665	16.66	2702	17.58	2739	18.50	2775	19.43	2811	20.36		
12000	2675	16.17	2712	17.13	2748	18.08	2784	19.04	2820	20.00						
12500	2761	17.60	2798	18.59												

VOLUME CFM	8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP		12" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	2268	10.24	2329	10.97										
6500	2295	10.92	2354	11.66	2412	12.42	2469	13.19	2526	13.98				
7000	2330	11.67	2386	12.42	2441	13.20	2496	13.99	2550	14.79	2658	16.45	2763	18.16
7500	2373	12.50	2425	13.27	2478	14.06	2530	14.86	2582	15.68	2684	17.36	2785	19.11
8000	2422	13.41	2471	14.20	2521	15.00	2570	15.82	2619	16.65	2717	18.37	2814	20.14
8500	2476	14.41	2523	15.21	2570	16.03	2617	16.87	2663	17.72	2756	19.46		
9000	2535	15.49	2580	16.32	2624	17.15	2669	18.01	2713	18.87	2801	20.65		
9500	2599	16.66	2641	17.51	2684	18.37	2726	19.24	2768	20.13				
10000	2666	17.92	2706	18.79	2747	19.67	2787	20.57						
10500	2736	19.27	2774	20.17	2813	21.07								
11000	2808	20.71												

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

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

CPAF-240

WHEEL
Dia. - 24.50"

BELT DRIVE RATING TABLES

Ratings at 70°F., .075 Density, Sea Level

Class II = light face above Class IIP

Class IIP = bold face

SEE PAGE 12 FOR MAX. WHEEL RPM & WR².

VOLUME CFM	0" SP		1/2" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP		3 1/2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	434	.08	602	.33	748	.63										
3600	521	.14	668	.44	791	.76	912	1.13	1028	1.54						
4200	608	.23	739	.58	847	.93	952	1.32	1056	1.75	1156★	2.22				
4800	695	.34	815	.75	911	1.14	1004	1.56	1096	2.01	1186	2.50	1275	3.03	1362	3.59
5400	782	.49	892	.96	980	1.39	1064	1.84	1146★	2.32	1228	2.83	1308	3.37	1388	3.95
6000	869	.67	971	1.20	1053	1.68	1129★	2.17	1204	2.68	1278	3.21	1351	3.78	1424	4.37
6600	956	.89	1051	1.49	1128★	2.02	1199★	2.54	1268	3.09	1335	3.65	1402	4.24	1469	4.86
7200	1043	1.15	1133★	1.82	1205	2.40	1271	2.97	1335	3.56	1398	4.15	1460	4.77	1521	5.42
7800	1129★	1.47	1214	2.19	1283	2.83	1346	3.46	1406	4.08	1464	4.72	1522	5.37	1579	6.04
8400	1216	1.83	1297	2.63	1362	3.32	1422	4.00	1479	4.67	1534	5.34	1588	6.03	1641	6.74
9000	1303	2.26	1380	3.11	1442	3.87	1499	4.60	1553	5.31	1605	6.03	1656	6.76	1707	7.50
9600	1390	2.74	1463	3.66	1523	4.48	1578	5.26	1629	6.03	1679	6.79	1727★	7.56	1775★	8.34
10200	1477	3.28	1546	4.27	1604	5.16	1657	5.99	1706★	6.81	1754★	7.62	1800★	8.44	1846	9.26
10800	1564	3.90	1630	4.96	1686	5.90	1737★	6.79	1784★	7.67	1830	8.53	1874	9.39	1918	10.25
11400	1651	4.58	1714	5.71	1768★	6.72	1817	7.67	1863	8.60	1907	9.51	1950	10.42	1992	11.33
12000	1738★	5.35	1798★	6.54	1850	7.61	1898	8.63	1942	9.61	1985	10.58	2026	11.53	2066	12.49
12600	1825	6.19	1883	7.45	1933	8.59	1979	9.66	2022	10.70	2064	11.72	2104	12.73	2142	13.74
13200	1911	7.12	1968	8.44	2016	9.65	2061	10.79	2103	11.88	2143	12.96	2182	14.02	2219	15.08
13800	1998	8.13	2052	9.53	2100	10.80	2143	12.00	2184	13.16	2223	14.29	2260	15.41	2297	16.51
14400	2085	9.24	2137	10.70	2183	12.04	2225	13.30	2265	14.52	2303	15.71	2340	16.88	2375	18.04
15000	2172	10.44	2222	11.97	2267	13.38	2308	14.70	2347	15.99	2384	17.24	2419	18.46	2454	19.68
15600	2259	11.75	2308	13.34	2351	14.81	2391	16.21	2429	17.55	2465	18.86	2499	20.15	2533	21.41
16200	2346	13.15	2393	14.82	2435	16.36	2474	17.82	2511	19.22	2546	20.59				
16800	2433	14.67	2478	16.40	2519	18.01	2558	19.53								
17400	2520	16.30	2564	18.10												

VOLUME CFM	4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5400	1466	4.56	1543	5.20												
6000	1496	5.00	1568	5.66	1638	6.34	1707	7.05								
6600	1536	5.51	1602	6.18	1667	6.88	1731★	7.61	1795★	8.36	1858	9.14	1920	9.94		
7200	1583	6.09	1644	6.78	1704	7.50	1765★	8.24	1824	9.01	1884	9.81	1942	10.62	2000	11.46
7800	1636	6.74	1693	7.45	1749★	8.19	1805	8.96	1861	9.74	1917	10.55	1972	11.39	2027	12.24
8400	1694	7.46	1747★	8.20	1800★	8.97	1852	9.75	1905	10.56	1957	11.39	2008	12.24	2060	13.11
9000	1757★	8.26	1806	9.03	1856	9.82	1905	10.63	1954	11.46	2003	12.31	2051	13.19	2100	14.08
9600	1822	9.13	1869	9.94	1916	10.76	1962	11.60	2008	12.45	2054	13.33	2100	14.22	2146	15.14
10200	1890	10.09	1935	10.93	1979	11.78	2023	12.65	2066	13.54	2110	14.44	2153	15.36	2196	16.29
10800	1961	11.12	2003	12.00	2045	12.89	2086	13.79	2128	14.71	2169	15.64	2210	16.59	2251	17.55
11400	2033	12.24	2073	13.16	2113	14.09	2153	15.03	2192	15.98	2232	16.94	2271	17.92	2310	18.91
12000	2106	13.45	2145	14.41	2183	15.37	2221	16.35	2259	17.34	2297	18.34	2334	19.35	2371	20.37
12600	2180	14.74	2218	15.75	2255	16.76	2291	17.77	2328	18.80	2364	19.83	2400	20.88	2435	21.93
13200	2256	16.13	2292	17.18	2328	18.23	2363	19.29	2398	20.36	2433	21.43	2467	22.51	2501	23.60
13800	2332	17.61	2367	18.71	2402	19.81	2436	20.91	2470	22.02	2503	23.13	2536	24.25		
14400	2410	19.19	2444	20.34	2477	21.49	2510	22.64	2543	23.79						
15000	2488	20.88	2521	22.08	2553	23.27										

VOLUME CFM	8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP		12" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7200	2057	12.32												
7800	2081	13.12	2134	14.02	2188	14.94	2240	15.88						
8400	2111	14.01	2162	14.92	2213	15.86	2263	16.81	2313	17.79	2411	19.79		
9000	2148	14.99	2197	15.92	2245	16.88	2292	17.85	2340	18.84	2433	20.88	2526	22.99
9600	2191	16.07	2237	17.02	2282	17.99	2328	18.98	2373	19.99	2462	22.06	2551	24.21
10200	2240	17.25	2283	18.22	2326	19.21	2369	20.22	2411	21.25	2497	23.36		
10800	2292	18.53	2333	19.53	2374	20.54	2415	21.57	2455	22.62	2536	24.76		
11400	2349	19.91	2388	20.94	2426	21.97	2465	23.03	2504	24.10				
12000	2408	21.40	2445	22.45	2482	23.52	2519	24.60	2556	25.69				
12600	2471	23.00	2506	24.08	2541	25.17								
13200	2535	24.70												

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.

CPAF-270

WHEEL
Dia. - 27.00"

BELT DRIVE RATING TABLES

Ratings at 70°F., .075 Density, Sea Level

Class II = light face above Class III
Class III = italic face

SEE PAGE 12 FOR MAX. WHEEL RPM & WR².

VOLUME CFM	0" SP		1/2" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP		3 1/2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2500	246	.04														
3250	320	.08	475	.34												
4000	394	.15	519	.46	648	.84										
4750	468	.26	573	.61	679	1.01	790	1.50								
5500	542	.40	633	.80	723	1.23	817	1.73	912	2.31						
6250	616	.59	697	1.05	775	1.51	856	2.03	939	2.62	1023	3.28				
7000	690	.83	763	1.34	832	1.86	903	2.40	976	3.01	1050	3.67	1125 ★	4.40	1200 ★	5.18
7750	763	1.12	830	1.70	893	2.26	956	2.84	1021	3.47	1087	4.15	1154 ★	4.88	1221	5.67
8500	837	1.48	898	2.11	956	2.73	1014	3.35	1072	4.01	1131 ★	4.71	1191	5.46	1252	6.26
9250	911	1.91	968	2.60	1021	3.27	1074	3.94	1127	4.64	1180 ★	5.37	1235	6.14	1290	6.95
10000	985	2.41	1038	3.16	1088	3.89	1136 ★	4.61	1185 ★	5.35	1234	6.11	1284	6.91	1334	7.74
10750	1059	2.99	1108	3.81	1155 ★	4.59	1200 ★	5.36	1246	6.15	1291	6.95	1337	7.78	1383	8.64
11500	1133 ★	3.67	1179 ★	4.54	1223	5.38	1266	6.20	1308	7.04	1351	7.88	1393	8.75	1436	9.64
12250	1207	4.43	1250	5.36	1292	6.26	1332	7.14	1372	8.03	1412	8.92	1452	9.83	1492	10.76
13000	1281	5.30	1322	6.29	1361	7.24	1399	8.18	1437	9.12	1475	10.06	1512	11.01	1550	11.98
13750	1354	6.27	1393	7.32	1431	8.33	1467	9.33	1503	10.32	1539	11.31	1574	12.31	1610	13.32
14500	1428	7.35	1465	8.46	1501	9.53	1536	10.59	1570	11.63	1604	12.68	1637	13.73	1671	14.78
15250	1502	8.55	1538	9.72	1572	10.85	1605	11.97	1637	13.07	1670	14.16	1702	15.26	1734 ★	16.37
16000	1576	9.87	1610	11.10	1642	12.30	1674	13.47	1706	14.63	1736 ★	15.78	1767 ★	16.93	1798 ★	18.09
16750	1650	11.33	1682	12.62	1714 ★	13.87	1744 ★	15.10	1774 ★	16.32	1804 ★	17.52	1833	18.73	1862	19.94
17500	1724 ★	12.92	1755 ★	14.27	1785 ★	15.58	1814	16.87	1843	18.14	1871	19.41	1900	20.67	1928	21.93
18250	1798 ★	14.65	1827	16.06	1856	17.44	1885	18.78	1912	20.12	1940	21.44	1967	22.75	1994	24.06
19000	1872	16.53	1900	18.00	1928	19.44	1955	20.85	1982	22.24	2008	23.61	2035	24.98	2061	26.35
19750	1945	18.57	1973	20.10	2000	21.59	2026	23.06	2052	24.51	2078	25.95	2103	27.37	2128	28.80
20500	2019	20.77	2046	22.36	2072	23.91	2097	25.44	2122	26.95	2147	28.44	2171	29.93	2196	31.40
21250	2093	23.13	2119	24.78	2144	26.39	2169	27.98	2193	29.55	2217	31.10	2240	32.64		
22000	2167	25.67	2192	27.38	2216	29.05	2240	30.70								
22750	2241	28.38														

VOLUME CFM	4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7750	1289	6.52														
8500	1314	7.11	1376	8.01	1437	8.96										
9250	1346	7.81	1403	8.72	1459	9.67	1516	10.67	1573	11.71						
10000	1385	8.62	1437	9.54	1489	10.50	1542	11.51	1594	12.55	1647	13.64	1699	14.77		
10750	1430	9.54	1478	10.47	1526	11.45	1574	12.46	1623	13.52	1671	14.61	1720 ★	15.75	1769 ★	16.92
11500	1479	10.57	1523	11.53	1567	12.52	1612	13.55	1657	14.61	1702	15.72	1748 ★	16.86	1794 ★	18.04
12250	1532	11.71	1573	12.70	1614	13.71	1655	14.76	1697	15.84	1739 ★	16.96	1781 ★	18.11	1824	19.29
13000	1587	12.97	1625	13.99	1664	15.03	1702	16.10	1741 ★	17.20	1781 ★	18.34	1820	19.50	1860	20.70
13750	1645	14.35	1681	15.40	1717	16.48	1753 ★	17.58	1789 ★	18.70	1826	19.86	1863	21.04	1900	22.25
14500	1705	15.86	1738 ★	16.95	1772 ★	18.06	1806	19.19	1841	20.34	1875	21.52	1910	22.73	1945	23.96
15250	1766 ★	17.49	1798 ★	18.62	1830	19.77	1862	20.93	1894	22.12	1927	23.33	1960	24.56	1993	25.82
16000	1828	19.25	1858	20.43	1889	21.61	1920	22.82	1950	24.04	1981	25.28	2012	26.55	2043	27.83
16750	1891	21.15	1920	22.37	1950	23.60	1979	24.85	2008	26.11	2037	27.39	2067	28.68	2096	30.00
17500	1956	23.19	1983	24.46	2011	25.74	2039	27.03	2067	28.33	2095	29.65	2123	30.98	2151	32.33
18250	2021	25.38	2047	26.70	2074	28.02	2101	29.36	2128	30.70	2154	32.06	2181	33.43	2208	34.82
19000	2086	27.72	2112	29.09	2138	30.46	2164	31.85	2189	33.24	2215	34.64	2240	36.05		
19750	2153	30.22	2178	31.64	2202	33.06	2227	34.49	2252	35.93						
20500	2220	32.88	2244	34.35	2268	35.83										

VOLUME CFM	8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP		12" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10750	1818	18.13	1866	19.37										
11500	1839	19.25	1885	20.50	1931	21.79	1976	23.10						
12250	1867	20.52	1910	21.78	1953	23.07	1996	24.39	2038	25.75	2123	28.55		
13000	1900	21.93	1940	23.20	1980	24.50	2021	25.83	2061	27.19	2142	30.01	2222	32.95
13750	1938	23.50	1975	24.78	2013	26.08	2051	27.42	2089	28.80	2166	31.63	2242	34.59
14500	1980	25.22	2015	26.51	2051	27.83	2087	29.18	2122	30.56	2195	33.42		
15250	2026	27.10	2059	28.41	2092	29.75	2126	31.11	2160	32.51	2228	35.38		
16000	2074	29.14	2106	30.47	2138	31.83	2169	33.21	2201	34.62				
16750	2126	31.34	2156	32.69	2186	34.08	2216	35.48	2246	36.91				
17500	2179	33.70	2208	35.08	2236	36.49								
18250	2235	36.22												

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

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

CPAF-300

WHEEL
Dia. - 30.00"

BELT DRIVE RATING TABLES

Ratings at 70°F., .075 Density, Sea Level

SEE PAGE 12 FOR MAX. WHEEL RPM & WR².

Class II = light face above Class III
Class III = italic face

VOLUME CFM	0" SP		1/2" SP		1" SP		1 1/2" SP		2" SP		2 1/2" SP		3" SP		3 1/2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4600	330	.15	451	.51												
5400	388	.25	490	.65	596	1.13										
6200	445	.38	535	.83	625	1.34	718	1.95								
7000	503	.54	583	1.06	661	1.60	742	2.22	825	2.93						
7800	560	.75	632	1.32	702	1.91	774	2.55	847	3.28	922	4.09				
8600	618	1.01	684	1.64	747	2.27	811	2.95	876	3.69	944	4.51	1012	5.40		
9400	675	1.31	736	2.01	794	2.69	852	3.41	911	4.17	971	5.01	1033	5.91	1095	6.88
10200	732	1.68	789	2.44	842	3.17	896	3.93	950	4.73	1004	5.59	1060	6.50	1117	7.49
11000	790	2.11	843	2.93	893	3.72	942	4.53	991	5.36	1042	6.25	1093	7.18	1145★	8.18
11800	847	2.60	897	3.48	944	4.34	989	5.19	1035	6.07	1082	6.99	1129★	7.95	1177★	8.97
12600	905	3.16	951	4.11	995	5.02	1038	5.93	1081	6.86	1125★	7.82	1168★	8.81	1213	9.85
13400	962	3.81	1006	4.82	1048	5.79	1089	6.76	1129★	7.73	1169★	8.73	1210	9.76	1251	10.83
14200	1020	4.53	1061	5.61	1101	6.64	1139★	7.66	1178★	8.69	1216	9.74	1254	10.81	1293	11.91
15000	1077	5.34	1117	6.48	1154★	7.58	1191★	8.66	1227	9.74	1263	10.83	1299	11.95	1336	13.09
15800	1135★	6.24	1172★	7.44	1208	8.60	1243	9.74	1278	10.88	1312	12.03	1346	13.19	1381	14.37
16600	1192★	7.23	1228	8.50	1262	9.73	1296	10.93	1329	12.12	1361	13.32	1394	14.53	1427	15.76
17400	1249	8.33	1284	9.66	1317	10.95	1349	12.21	1380	13.47	1412	14.72	1443	15.98	1474	17.26
18200	1307	9.53	1340	10.93	1371	12.28	1402	13.60	1433	14.92	1463	16.23	1492	17.54	1522	18.87
19000	1364	10.85	1396	12.31	1426	13.72	1456	15.11	1485	16.48	1514	17.85	1543	19.22	1571	20.59
19800	1422	12.28	1452	13.80	1481	15.28	1510	16.73	1538	18.16	1566	19.59	1593	21.01	1621	22.44
20600	1479	13.83	1508	15.41	1537	16.95	1564	18.47	1591	19.96	1618	21.45	1645	22.93	1671	24.41
21400	1537	15.50	1565	17.15	1592	18.76	1619	20.33	1645	21.89	1671	23.43	1696	24.97	1722★	26.51
22200	1594	17.30	1621	19.02	1648	20.69	1673	22.33	1699	23.95	1724★	25.55	1749★	27.15	1773★	28.75
23000	1652	19.24	1678	21.02	1703	22.76	1728★	24.46	1753★	26.14	1777★	27.80	1801★	29.46	1825	31.12
23800	1709	21.32	1734★	23.16	1759★	24.96	1783★	26.73	1807	28.47	1831	30.20	1854	31.92	1877	33.63
24600	1767★	23.55	1791★	25.45	1815	27.31	1839	29.14	1862	30.95	1884	32.74	1907	34.52	1929	36.29
25400	1824	25.92	1848	27.89	1871	29.81	1894	31.71	1916	33.58	1938	35.43	1960	37.27	1982	39.10
26200	1881	28.44	1905	30.48	1927	32.47	1949	34.43	1971	36.36	1993	38.27				
27000	1939	31.13	1961	33.23	1983	35.28	2005	37.30	2026	39.30						
27800	1996	33.98	2018	36.14	2040	38.26										
28600	2054	37.00														

VOLUME CFM	4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9400	1157★	7.92														
10200	1174	8.53	1232	9.64												
11000	1197	9.24	1250	10.35	1304	11.53	1356	12.75								
11800	1225	10.04	1274	11.16	1324	12.34	1373	13.58	1423	14.87	1472	16.20				
12600	1258	10.94	1303	12.08	1349	13.27	1395	14.51	1441	15.81	1488	17.16	1534	18.55		
13400	1293	11.94	1335	13.10	1378	14.31	1421	15.56	1464	16.87	1508	18.22	1551	19.62	1595	21.07
14200	1332	13.05	1371	14.23	1411	15.46	1451	16.73	1491	18.04	1532	19.41	1573	20.82	1614	22.27
15000	1372	14.26	1409	15.47	1447	16.72	1484	18.01	1522	19.34	1560	20.72	1599	22.14	1638	23.60
15800	1415	15.58	1450	16.83	1485	18.10	1520	19.42	1556	20.77	1592	22.16	1628	23.59	1665	25.07
16600	1459	17.01	1492	18.29	1525	19.60	1559	20.94	1593	22.32	1626	23.73	1661	25.18	1695	26.67
17400	1505	18.55	1536	19.87	1568	21.22	1599	22.59	1631	23.99	1663	25.43	1696	26.91	1728★	28.42
18200	1552	20.21	1582	21.57	1612	22.95	1642	24.36	1672	25.80	1702	27.27	1733★	28.77	1764★	30.30
19000	1600	21.98	1628	23.39	1657	24.82	1685	26.26	1714★	27.74	1743★	29.24	1772★	30.76	1802★	32.32
19800	1648	23.88	1675	25.33	1703	26.80	1730★	28.29	1758★	29.81	1785★	31.34	1813	32.90	1841	34.49
20600	1697	25.90	1724★	27.41	1750★	28.92	1776★	30.46	1803★	32.01	1829	33.58	1856	35.18	1882	36.80
21400	1747★	28.06	1773★	29.61	1798★	31.18	1823	32.76	1848	34.35	1874	35.97	1899	37.60	1925	39.26
22200	1798★	30.35	1822	31.95	1846	33.57	1871	35.19	1895	36.84	1920	38.49				
23000	1849	32.77	1872	34.43	1896	36.10	1919	37.78	1943	39.47						
23800	1900	35.34	1923	37.06	1946	38.78										
24600	1952	38.06	1974	39.83												

VOLUME CFM	8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		10 1/2" SP		11" SP		11 1/2" SP	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13400	1638	22.56														
14200	1655	23.77														
15000	1677	25.11	1697	25.32	1738★	26.90	1754★	28.26	1793★	29.89	1832	31.56	1871	33.27		
15800	1701	26.59	1715★	26.66	1755★	29.75	1775★	31.39	1812	33.07	1849	33.07	1886	34.79	1923	36.55
16600	1730★	28.20	1764★	29.77	1799★	31.38	1834	33.03	1870	34.72	1905	36.45	1940	38.22	1960	38.34
17400	1761★	29.96	1794★	31.55	1827	33.17	1860	34.83	1894	36.53	1927	38.26				
18200	1795★	31.86	1826	33.47	1857	35.10	1889	36.77	1921	38.48						
19000	1831	33.91	1861	35.53	1891	37.19	1921	38.88								
19800	1869	36.11	1897	37.75	1926	39.43										
20600	1909	38.45														

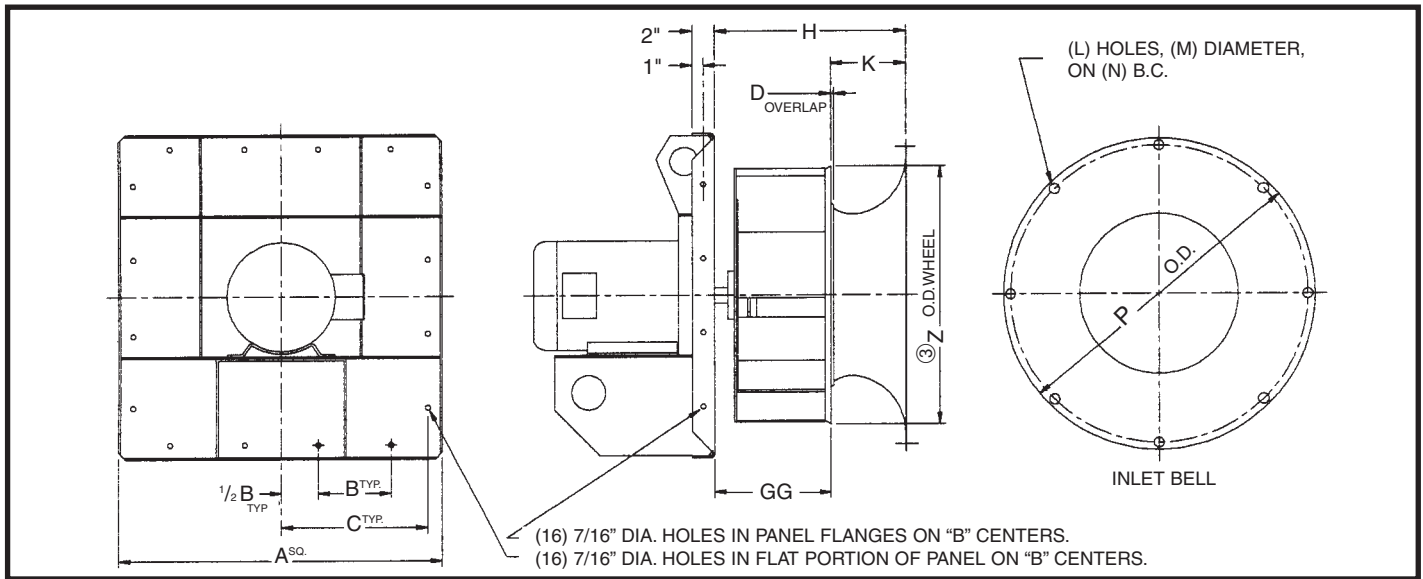
BHP shown does not include drive losses. All performance shown is without housing. For performance with housing, see HDBI catalog.

★ 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



DIMENSIONS IN INCHES ± 1/8"

MODEL	MOTOR FRAME	A	TYP. B	TYP. C	D	GG	H	K	L	M	N	P	Z
CPAF-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
CPAF-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
CPAF-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
CPAF-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
CPAF-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
CPAF-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
CPAF-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
CPAF-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
CPAF-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
CPAF-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

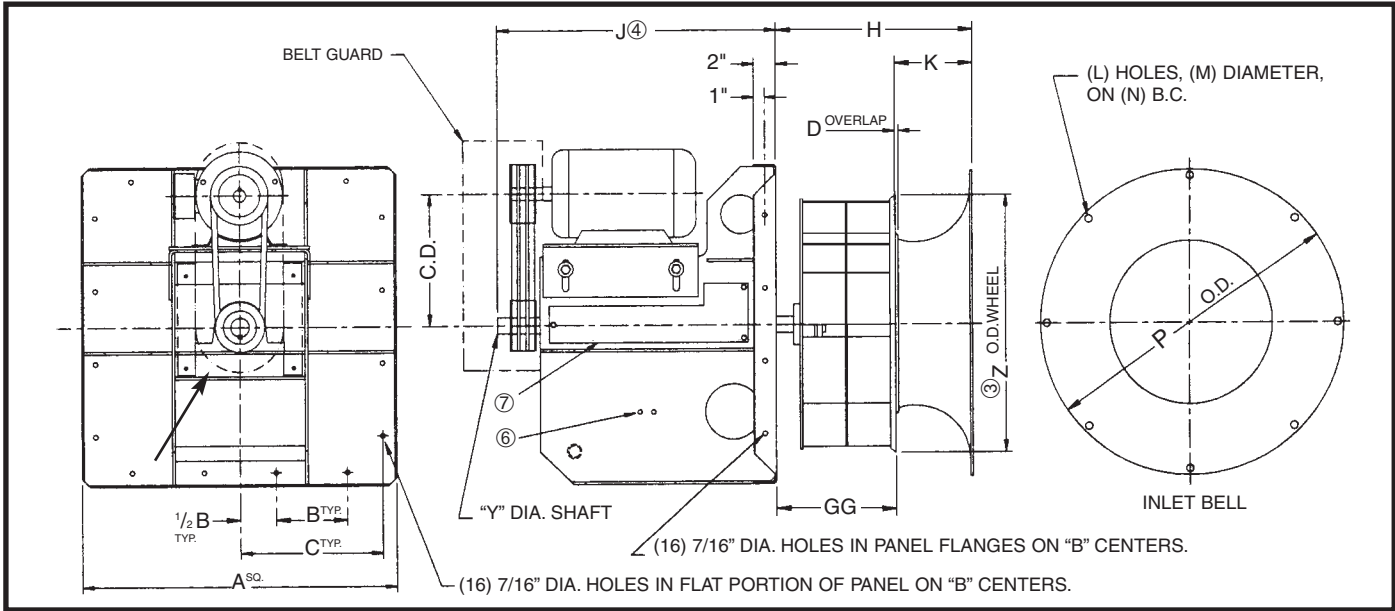
[▲] Insulation material not included.

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	
CPAF-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}
CPAF-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}
CPAF-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}
CPAF-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}
CPAF-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}
CPAF-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}
CPAF-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}
CPAF-240	143T-286T	38	9	17 ^{3/4}	3/8	11 ^{9/32}	18 ^{9/16}	27	1 ^{11/16}	2 ^{3/16}	25
CPAF-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}
CPAF-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
CPAF-120	3 ^{11/16}	8	1 ^{1/16}	14 ^{3/8}	15 ^{3/8}
CPAF-130	4 ^{1/32}	8	1 ^{1/16}	15 ^{15/16}	17
CPAF-150	4 ^{15/32}	8	3/4	17 ^{1/2}	18 ^{5/8}
CPAF-160	4 ^{15/16}	8	3/4	19 ^{3/8}	20 ^{1/2}
CPAF-180	5 ^{15/32}	8	3/4	21 ^{1/2}	22 ^{5/8}
CPAF-200	6 ^{1/32}	8	7/8	23 ^{1/2}	24 ^{3/4}
CPAF-220	6 ^{11/16}	8	7/8	26 ^{1/8}	27 ^{3/8}
CPAF-240	7 ^{11/32}	16	7/8	28 ^{3/4}	30
CPAF-270	8 ^{3/32}	16	1	31 ^{5/8}	33
CPAF-300	9	16	1	35 ^{1/4}	36 ^{5/8}

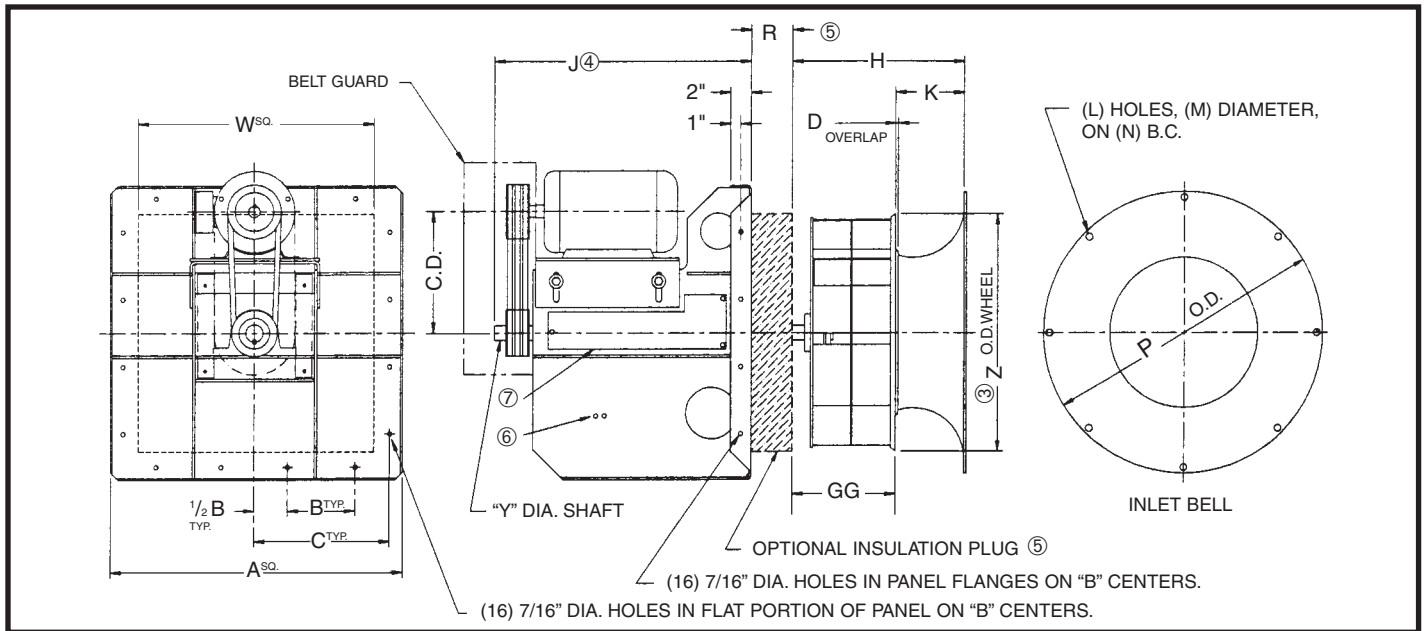
MOTOR FRAME	Center Distance	
	Min.	Max.
56 to 145T	10 ^{3/4}	12 ^{1/4}
182T 184T	11 ^{3/4}	13 ^{1/4}
213T 215T	12 ^{1/2}	14
254T 256T	16 ^{1/2}	18 ^{5/8}
284T 286T	17 ^{1/4}	19 ^{3/8}
324T	18 ^{1/4}	20



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).

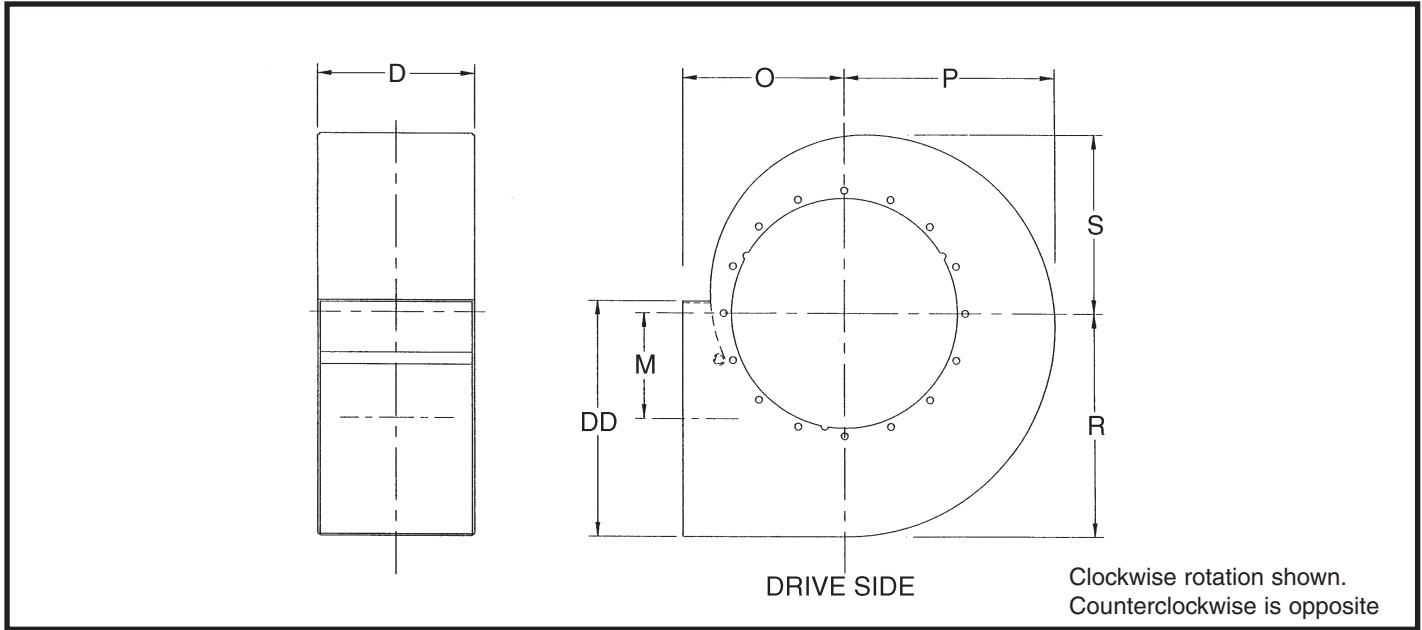
MODEL	D	M	O	P	R	S	DD
CPAF-120	9 ^{3/8}	6 ^{3/16}	9 ^{15/16}	12 ^{3/8}	13	10 ^{3/8}	13 ^{3/4}
CPAF-130	10 ^{3/8}	6 ^{13/16}	10 ^{13/16}	13 ^{3/4}	14 ^{7/16}	11 ^{9/16}	15 ^{1/4}
CPAF-150	11 ^{3/8}	7 ^{9/16}	11 ^{3/4}	15 ^{3/16}	15 ^{15/16}	12 ^{3/4}	16 ^{13/16}
CPAF-160	12 ^{1/2}	8 ^{5/16}	12 ^{11/16}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



DIMENSIONS and SPECIFICATIONS

Optional Housing Dimensions

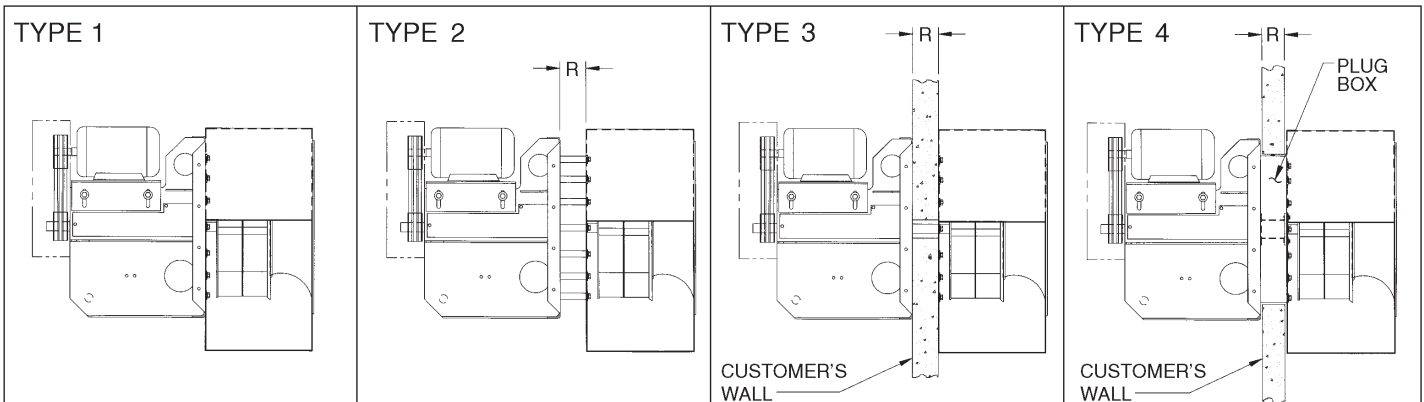


DIMENSIONS IN INCHES ± 1/8"

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