

HEE-Dual

A CECO Environmental Brand

AIR POLLUTION CONTROL PRODUCTS HPC SERIES



FRP Centrifugal Fans



AMCA Seal
Met-Pro Technologies, d/b/a HEE Enviro. Eng. & Duall Air & Water Technologies certifies that the HPC series FRP Centrifugal Fans shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA PUBLICATION 211 and comply with the requirements of the AMCA Certified Ratings Program.

All Wheels are statically and dynamically balanced on electronically controlled balancing machines. The necessary weight adjustments are made by removing excess materials, or by permanently bonding fiberglass materials to the wheel. After assembly, the fans are test run at the customers operating speed to locate and correct any minor misalignments that may have occurred during assembly. They are checked for proper bearing operation.

The performance tables shown in this brochure are based on unobstructed air flow into the inlet of the fan. During installation, the fan inlet conditions should be designed to allow the air to enter the housing resembling a fan with an unobstructed inlet. The fan performance can be adversely affected by poor inlet conditions creating uncontrolled spin, unequal air loading or imbalance. Elbows located directly at the inlet should be avoided and properly sized inlet boxes or straightening vanes should be utilized. It is good practice to include the equivalent of two duct diameters prior to the fan inlet.

The addition of the short outlet stack will improve the overall performance of the fan. Testing has shown up to a 7% improvement in performance by the addition of an outlet stack.

The BI wheel provides non-overloading performance. This allows the brake horsepower to level off at a point where motors can be economically selected so they will not overload if the system pressure drops.

The brake horsepower shown in the performance tables does not include the drive losses. Normally, the belt drive losses vary from 5% to 20% of the motor horsepower output.

The chemical and structural properties of fiberglass are excellent. FRP fans moving air at higher temperatures will usually affect the chemical resistance. In addition, the maximum safe operating speed should be de-rated using the following table:

MAXIMUM SAFE SPEED CORRECTION FACTORS

Temp (F)	70	100	150	175	200
Factor	1	1	0.95	0.93	0.91

To obtain the new maximum safe speed when temperature is involved, multiply the maximum safe speed as listed for each fan sized by correction factor.

Each of the following capacity tables include a CFM, Static Pressure, outlet velocity, and the corresponding RPM and BHP. If capacities are not at standard conditions (0.75 lbs/ft³), correction factors must be applied to the static pressure and BHP.

Temp (F)	70	100	150	175	200
Factor	1	1.06	1.15	1.2	1.25

Altitude	0	1000	2000	3000	4000
Factor	1	1.04	1.08	1.12	1.16

Altitude	5000	6000	7000	8000	9000
Factor	1.2	1.25	1.3	1.35	1.4

To correct for temperature and elevation multiply the static pressure at standard conditions by the factors above. Then make the selection as usually. The BHP can be calculated at actual conditions by dividing the tabulated value by the temperature/elevation correction factor.

EXAMPLE:

1500 CFM at 3" WC Corrected for 100F and 3000' Altitude.
 $3" \times 1.06 \times 1.12 = 3.56" \text{ WC}$
 FROM TABLES

HPC 1225
 RPM = 3236, BHP = 1.79

BHP correction: $1.79 / 1.06 / 1.12 = 1.51 \text{ BHP}$

Final Selection:

RPM = 3172
 BHP = 1.15

AIR POLLUTION CONTROL

Fan Performance Data

SWSI BI FB

Fiberglass Centrifugal Fan

Wheel - 10.5" Diameter Wheel Circumference - 2.75 Ft.

HPC 1050

CLASSES I, II

Backward Inclined - Flat Blade

Inlet: 10.5" Dia I.D. (0.60 Sq Ft) Outlet: 8" x 11.75" (0.65 Sq Ft)

Maximum RPM Speed for Class I and II 3,637 RPM Class I 5,093 RPM Class II

		Static Pressure - Inches W.C.																	
VOL CFM	OV FPM	1.0		2.0		3.0		4.0		5.0		6.0		7.0		8.0		10.0	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
125	191	1644	0.07	2228	0.17	2782	0.3	3199	0.45	3566	0.61	3897	0.79	4202	0.98	4486	1.19	5004	1.67
250	383	1730	0.09	2375	0.22	2870	0.37	3288	0.53	3655	0.72	3987	0.92	4293	1.13	4577	1.36		
500	766	1923	0.16	2551	0.34	3043	0.53	3460	0.74	3827	0.97	4160	1.21	4466	1.47	4750	1.74		
800	1,226	2239	0.30	2805	0.53	3274	0.79	3679	1.06	4041	1.34	4370	1.64	4674	1.96	4958	2.28		
1,000	1,532	2501	0.43	3013	0.71	3455	1.00	3846	1.32	4199	1.64	4522	1.98	4822	2.33				
1,200	1,838	2794	0.62	3252	0.93	3663	1.26	4034	1.62	4374	1.99	4689	2.37	4982	2.76				
1,400	2,145	3108	0.85	3518	1.21	3896	1.58	4245	1.97	4570	2.38	4873	2.8						
1,500	2,298	3271	1.00	3659	1.37	4021	1.76	4359	2.18	4675	2.61	4971	3.05						
1,600	2,451	3437	1.16	3805	1.55	4152	1.96	4478	2.4	4785	2.84	5075	3.31						
1,800	2,757	3776	1.53	4110	1.97	4428	2.42	4732	2.89	5021	3.38								
2,000	3,064	4124	2.00	4427	2.47	4721	2.96	5003	3.47										
2,200	3,370	4478	2.55	4782	3.06	5026	3.59												

SWSI BI FB

Fiberglass Centrifugal Fan

Wheel - 12.25" Diameter Wheel Circumference - 3.21 Ft.

HPC 1225

CLASSES I, II

Backward Inclined - Flat Blade

Inlet: 13" Dia I.D. (0.92 Sq Ft) Outlet: 9.5" x 12.5" (0.83 Sq Ft)

Maximum RPM Speed for Class I and II 3,115 RPM Class I 4,361 RPM Class II

		Static Pressure - Inches W.C.																	
VOL CFM	OV FPM	1.0		2.0		3.0		4.0		5.0		6.0		7.0		8.0		9.0	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
250	301	1548	0.11	2124	0.27	2569	0.46	2945	0.67	3277	0.9	3577	1.15	3853	1.42	4110	1.71	4351	2.01
500	602	1682	0.18	2281	0.4	2724	0.64	3096	0.91	3423	1.19	3720	1.5	3993	1.82	4248	2.16		
1000	1,205	2006	0.4	2544	0.72	2974	1.06	3365	1.45	3714	1.86	4024	2.29	4304	2.74				
1200	1,446	2161	0.52	2684	0.91	3098	1.3	3459	1.7	3796	2.14	4111	2.62						
1400	1,687	2314	0.68	2826	1.11	3239	1.57	3588	2.02	3902	2.49	4199	2.98						
1500	1,807	2388	0.76	2901	1.23	3308	1.71	3658	2.2	3967	2.68	4254	3.19						
1600	1,928	2464	0.85	2979	1.35	3379	1.86	3728	2.38	4035	2.9	4317	3.42						
1800	2,169	2632	1.07	3136	1.63	3525	2.19	3868	2.77	4176	3.35								
2000	2,410	2819	1.33	3288	1.94	3681	2.57	4012	3.19	4316	3.84								
2200	2,651	3017	1.64	3437	2.29	3838	2.99	4164	3.67										
2400	2,892	3223	2.02	3596	2.69	3990	3.45	4321	4.2										
2600	3,133	3434	2.45	3772	3.15	4138	3.95												
2800	3,373	3650	2.95	3959	3.68	4291	4.51												
3000	3,614	3868	3.52	4155	4.28														
3200	3,855	4089	4.16	4357	4.97														
3400	4,096	4311	4.88																

SWSI BI FB

Fiberglass Centrifugal Fan

Wheel - 15" Diameter Wheel Circumference - 3.93 Ft.

HPC 1500

CLASSES I, II

Backward Inclined - Flat Blade

Inlet: 16" Dia I.D. (1.40 Sq Ft) Outlet: 12" x 15.75" (1.31 Sq Ft)

Maximum RPM Speed for Class I and II 2,544 RPM Class I 3,562 RPM Class II

		Static Pressure - Inches W.C.																	
VOL CFM	OV FPM	1.0		2.0		3.0		4.0		5.0		6.0		7.0		8.0		9.0	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1000	725	1239	0.3	1682	0.62	2028	0.98	2320	1.36	2575	1.76	2804	2.19	3014	2.64	3209	3.11	3391	3.59
1200	870	1281	0.36	1714	0.72	2056	1.12	2348	1.54	2606	1.99	2837	2.46	3049	2.95	3246	3.46	3430	3.98
1400	1,014	1334	0.43	1750	0.83	2087	1.27	2376	1.74	2634	2.23	2866	2.74	3080	3.27	3278	3.82	3464	4.38
1600	1,159	1392	0.5	1790	0.95	2122	1.44	2407	1.94	2662	2.47	2894	3.03	3108	3.6	3308	4.19	3494	4.79
1800	1,304	1446	0.58	1837	1.08	2159	1.61	2441	2.16	2693	2.73	2923	3.32	3136	3.94	3335	4.57	3523	5.21
2000	1,449	1497	0.68	1892	1.22	2201	1.79	2478	2.38	2727	3	2955	3.64	3166	4.29	3364	4.96	3550	5.65
2200	1,594	1557	0.79	1950	1.37	2248	1.98	2518	2.62	2764	3.28	2989	3.96	3198	4.66	3394	5.37		
2400	1,739	1626	0.92	2007	1.53	2303	2.19	2562	2.87	2803	3.57	3026	4.3	3233	5.04	3427	5.79		
2600	1,884	1701	1.06	2058	1.7	2361	2.41	2612	3.13	2845	3.87	3064	4.64	3270	5.43	3462	6.23		
2800	2,029	1779	1.23	2109	1.88	2419	2.64	2667	3.41	2893	4.19	3106	5	3308	5.83	3499	6.68		
3000	2,174	1860	1.42	2166	2.09	2474	2.89	2726	3.7	2945	4.53	3152	5.38	3350	6.25	3538	7.14		
3200	2,319	1942	1.63	2231	2.33	2525	3.14	2784	4.01	3002	4.89	3203	5.78	3395	6.69				
3400	2,464	2026	1.85	2302	2.6	2576	3.42	2840	4.34	3061	5.26	3259	6.19	3445	7.15				
3600	2,609	2111	2.1	2376	2.89	2631	3.72	2891	4.68	3119	5.65	3317	6.63	3499	7.63				
3800	2,754	2198	2.38	2453	3.21	2693	4.06	2941	5.03	3174	6.06	3375	7.09	3556	8.13				
4000	2,899	2286	2.67	2532	3.56	2760	4.44	2994	5.41	3226	6.48	3433	7.57						

SWSI BI FB

Fiberglass Centrifugal Fan

Wheel - 18.25" Diameter Wheel Circumference - 4.78 Ft.

HPC 1825

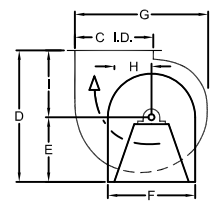
CLASSES I, II

Backward Inclined - Flat Blade

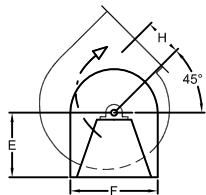
Inlet: 20" Dia I.D. (2.18 Sq Ft) Outlet: 14" x 19" (1.85 Sq Ft)

Maximum RPM Speed for Class I and II 2,092 RPM Class I 2,929 RPM Class II

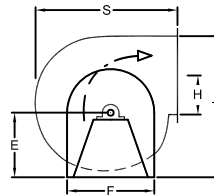
		Static Pressure - Inches W.C.																	
VOL CFM	OV FPM	1.0		2.0		3.0		4.0		5.0		6.0		7.0		8.0		9.0	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1,600	866	1,122	0.53	1,481	1.07	1,763	1.67	2,002	2.33	2,214	3.03	2,405	3.78	2,581	4.57	2,745	5.40	2,898	6.25
2,000	1,083	1,197	0.69	1,542	1.31	1,820	2	2,057	2.73	2,267	3.51	2,458	4.33	2,633	5.20	2,797	6.09		
2,400	1,299	1,248	0.90	1,611	1.60	1,881	2.36	2,114	3.18	2,323	4.04	2,512	4.94	2,687	5.88	2,850	6.85		
2,800	1,516	1,382	1.15	1,688	1.93	1,948	2.78	2,176	3.68	2,382	4.62	2,569	5.6	2,743	6.61	2,905	7.66		
3,200	1,732	1,487	1.46	1,773	2.32	2,022	3.25	2,244	4.23	2,445	5.25	2,629	6.31	2,801	7.41				
3,600	1,949	1,600	1.83	1,865	2.77	2,102	3.78	2,316	4.85	2,512	5.95	2,693	7.09	2,863	8.27				
4,000	2,165	1,718	2.28	1,964	3.30	2,189	4.39	2,395	5.54	2,585	6.72	2,762	7.95	2,928	9.21				
4,400	2,382	1,841	2.81	2,069	3.91	2,282	5.08	2,479	6.3	2,663	7.57	2,835	8.88						
4,800	2,598	1,966	3.44	2,180	4.61	2,381	5.86	2,569	7.16	2,746	8.51	2,913	9.21						
5,200	2,815	2,095	4.16	2,295	5.41	2,484	6.74	2,664	8.12	2,834	9.55								
5,600	3,032	2,226	4.99	2,413	6.32	2,592	7.72	2,763	9.18	2,927	10.69								
6,000	3,248	2,359	5.93	2,534	7.34	2,704	8.82	2,867	10.36										
6,500	3,519	2,527	7.28	2,690	8.79	2,849	10.37												
7,000	3,789	2,696	8.84	2,849	10.45														
7,500	4,060	2,868	10.62																



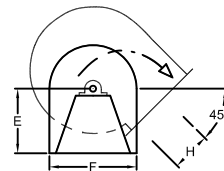
☐ CLOCKWISE
UP BLAST
CW 360



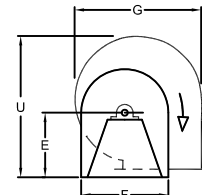
☐ CLOCKWISE
TOP ANGULAR UP
CW 45



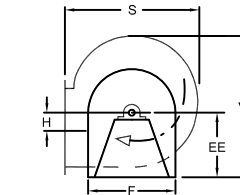
☐ CLOCKWISE
TOP HORIZONTAL
CW 90



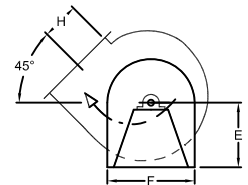
☐ CLOCKWISE
TOP ANGULAR DOWN
CW 135



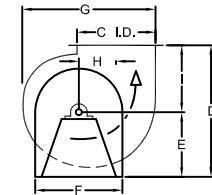
☐ CLOCKWISE
DOWN BLAST
CW 180



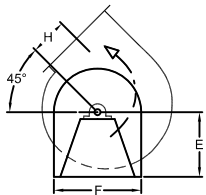
☐ CLOCKWISE
BOTTOM HORIZONTAL
CW 270



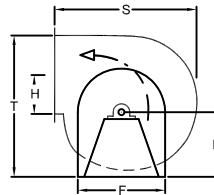
☐ CLOCKWISE
BOTTOM ANGULAR UP
CW 315



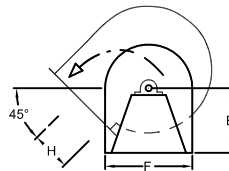
☐ COUNTER CLOCKWISE
UP BLAST
CCW 360



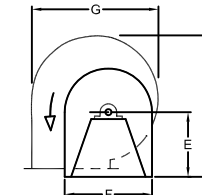
☐ COUNTER CLOCKWISE
TOP ANGULAR UP
CCW 45



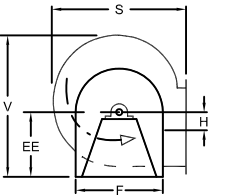
☐ COUNTER CLOCKWISE
TOP HORIZONTAL
CCW 90



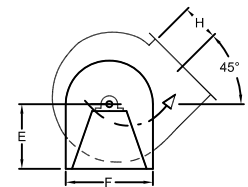
☐ COUNTER CLOCKWISE
TOP ANGULAR DOWN
CCW 135



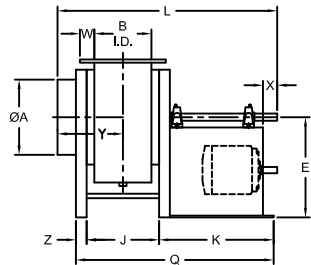
☐ COUNTER CLOCKWISE
DOWN BLAST
CCW 180



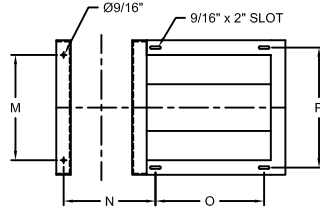
☐ COUNTER CLOCKWISE
BOTTOM HORIZONTAL
CCW 270



☐ COUNTER CLOCKWISE
BOTTOM ANGULAR UP
CCW 315

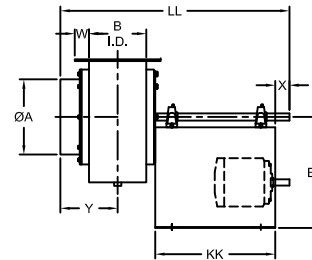


ELEVATION VIEW

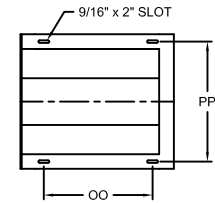


MOUNTING HOLE LOCATIONS

☐ **HEAVY DUTY FRAME**
ARRANGEMENT 1 & 9



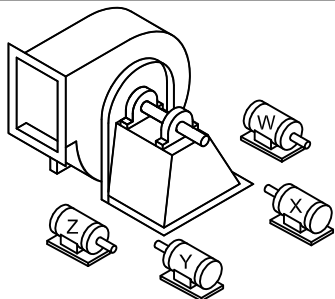
ELEVATION VIEW



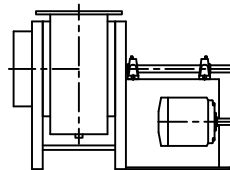
MOUNTING HOLE LOCATIONS

☐ **STANDARD DUTY FRAME**
ARRANGEMENT 9 & 10

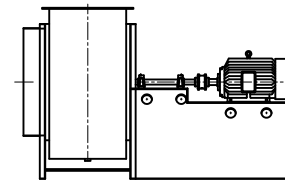
HPC	A		O.D.	B	C	D	E/EE	F	G	H	I	J	K	KK	L	LL	M	N	O	OO	P	PP	Q	S	T	U	V	W	X	Y	Z	FAN WGT.	SHAFT SIZE CLASS I	SHAFT SIZE CLASS II
1050	10 5/8	10 7/8	8	11 3/4	22 1/16	14 15 1/2"	13 1/4	19 1/8	5 3/8	8 1/16	10 1/8	16	16 3/4	30 5/8	32	9 1/4	13 1/2	10	13	11 3/4	14 3/4	27 5/8	17 3/16	25 1/4	23 1/8	23 7/8	2	2	9 1/8	1 1/2	155	1"	1 7/16"	
1225	13	13 1/4	9 1/2	12 1/2	23 7/8	13 3/4 15 3/4"	16 1/2	22 1/4	5 3/4	10 1/8	11 5/8	17 1/2	16 3/4	34 7/16	34 1/8	12 1/2	15	11 1/2	13	15	14 3/4	30 5/8	20 3/8	25 3/4	24	25 3/4	2	2 3/4	9 7/8	1 1/2	185	1 3/16"	1 7/16"	
1500	16	16 1/4	12	15 3/4	29 3/8	17 3/8	20 1/4	26 1/4	7 1/8	12	14 1/8	18 1/2	18	38 11/16	38 7/8	16 1/4	17 1/2	12 1/2	14	18 3/4	19 1/2	34 1/8	25 1/4	32 5/8	30 5/8	31	2	3 1/2	11 1/8	1 1/2	245	1 3/16"	1 11/16"	
1825	20 1/8	20 3/8	14	19	34 3/8	20 1/2	24	32	8 1/4	13 7/8	16 3/8	20 3/4	19	44 3/16	44 5/8	19 7/8	20	14 1/2	15	22 1/2	22 3/4	38 5/8	29 5/8	38 1/2	36 1/4	37	2	3 1/2	13 1/4	1 1/2	350	1 7/16"	1 11/16"	



☐ ARRANGEMENT 1 FAN



☐ ARRANGEMENT 9 FAN



CONSULT FACTORY FOR DIMENSIONS

☐ ARRANGEMENT 8 FAN

HEE-Dual

A CECO Environmental Brand

4222 E. LA PALMA AVE. - ANAHEIM, CALIFORNIA 92807
PHONE: (844) 287-4044 - FAX: (780) 530-1419
www.cecenvironmental.com/hee-dual

HPC SERIES FRP FAN

PROJ.: DWG: SHT OF