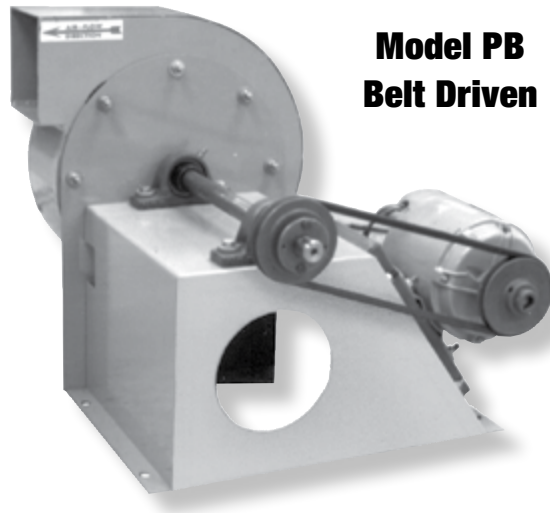
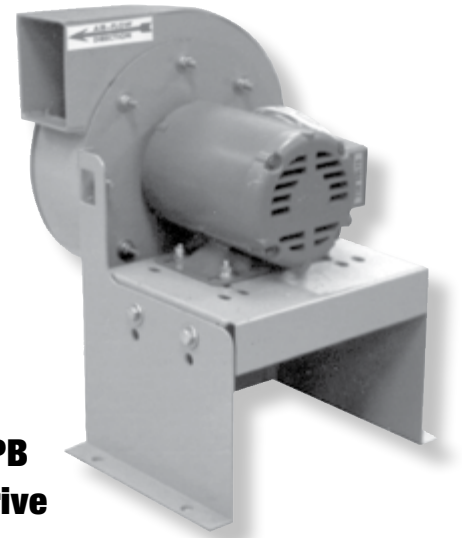


# Aerovent<sup>®</sup>

The Industrial Choice.



**Model PB  
Belt Driven**



**Model PB  
Direct Drive**

**PRESSURE BLOWER**

**Model PB**

# Model PB Pressure Blowers

Pressure blowers provide medium pressure air for cooling, ventilating and exhaust systems handling dust, materials or corrosive fumes.

## Features

- Direct drive or belt driven
- Wheel diameters from 8" through 12"
- Flow capacities to 1275 CFM
- Static pressure to 10" w.g.
- Temperature to 600°F (with modifications)

## Wheel

Cast aluminum wheel furnished as standard. Suitable for air, light dust, and mild chemicals in acidic pH range. For resistance to more severe abrasion, chemicals and high temperatures, specify an aluminum-bronze "Dura" alloy wheel. Fabricated steel and stainless steel wheels are available upon request.



## Accessories

### Weather Cover and Belt Guard

The weather cover protects the motor, drives, and bearings from the elements. Available on Arr. 9 fans with fractional horsepower motors only.

The belt guard is available for all belt driven arrangements and sizes. Complete mounting details are required for Arrangement 1 fans.

### Motor Cover

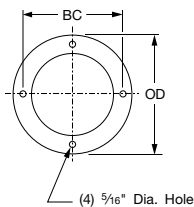
The motor cover protects the motor from the elements. Available on Arr. 4 fans only.

### Drain

1" standard drain welded to housing at lowest point.

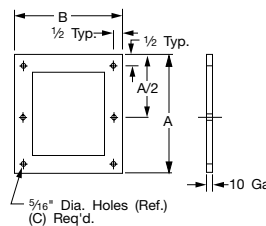
### Flanged Inlet and Outlet

The **flanged inlet** is a circular plate welded flush with standard slip inlet. Holes are provided.



SIZE	OD	BC
8A	8	7
10 AB	9	8
12 AB	9	8

The **flanged outlet** is welded flush to the outlet. Holes are provided for matching the duct flange.



SIZE	A	B	C
8A	6 <sup>5</sup> / <sub>8</sub>	5 <sup>5</sup> / <sub>8</sub>	4
10A	7 <sup>5</sup> / <sub>8</sub>	5 <sup>5</sup> / <sub>8</sub>	4
10B	7 <sup>5</sup> / <sub>8</sub>	7 <sup>5</sup> / <sub>8</sub>	4
12A	9	5 <sup>5</sup> / <sub>8</sub>	6
12B	9	7 <sup>5</sup> / <sub>8</sub>	6

### Shaft Seals (belt driven units only)

**Elastomeric rotary seal** — Rides against a heavy Teflon wear plate. A spare seal is provided as standard. This seal is suitable for operation up to 300°F.

**Ceramic felt** — Elements are encased between housing drive side and metal retaining plate. Ceramic felt inserts may easily split for field installation and maintenance. This seal is best suited for 301°F to 600°F operation. These seals minimize leakage around shaft opening but are not gas tight.

### Heat Fan

**Belt driven heat fan (Arr. 1 & 9)** includes aluminum-bronze "Dura" wheel and A240 aluminum two-piece heat slinger. Arrangement 9 includes a motor heat shield. Suitable for temperatures to 600°F.

**Direct drive heat fan (Arr. 8)** — Consult factory. Includes aluminum-bronze "Dura" wheel and A240 aluminum two-piece heat slinger. Suitable for temperatures to 600°F.

### Special Alloys

- Stainless steel fan housing and wheel
- Aluminum fan housing and wheel
- "Dura" aluminum-bronze alloy wheel

### Spark resistant construction

To reduce danger of explosion.

Type A — All aluminum fan housing and wheel Arrangements 1, 8 and 9

Type B — Aluminum wheel and nonferrous closure plate around the shaft opening

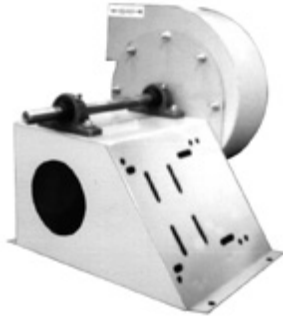
### Coatings

Special corrosion resistant coatings available upon request.

# Drive Arrangements

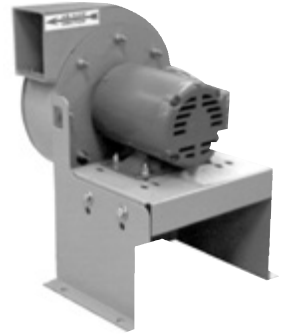
## Arrangement 1

Versatile and rugged V-belt drive arrangement with the motor mounted separate from the fan base. Maximum temperature of standard fan is 300°F. Maximum temperature of heat fan is 600°F\*. Specify AMCA motor position designation (see below) and fan RPM when ordering fan complete with drives and motor.



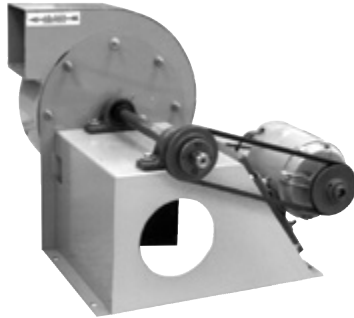
## Arrangement 4

The most compact and least expensive direct drive arrangement with the wheel mounted directly on the motor shaft. Arrangement 4 fans are available in a limited number of models. Minimum motor frame size is 48 for the 8" and 56 for the 10" and 12". Maximum temperature of standard arrangement 4 fan is 180°F. For direct drive heat fans (Arrangement 8 only), please consult the factory.



## Arrangement 9

Compact V-belt drive arrangement with the motor mounted on the fan support base. This arrangement will accept a full range of motor frame sizes through 184T. Maximum temperature of standard fan is 300°F. Maximum temperature of heat fan is 600°F\*.

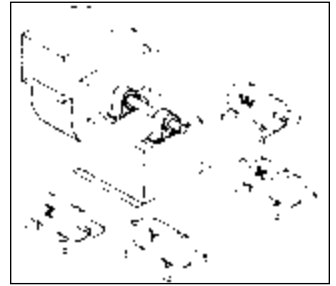


Standard construction is with the motor on the right when facing the end of the shaft. Indicate motor and mounting description (right or left) when ordering.

\* Heat fan includes an aluminum-bronze "Dura" alloy wheel, A240 aluminum two-piece heat slinger, and heat shield. The heat slinger protects against transfer of heat through the shaft to the bearings.

## Motor Positions

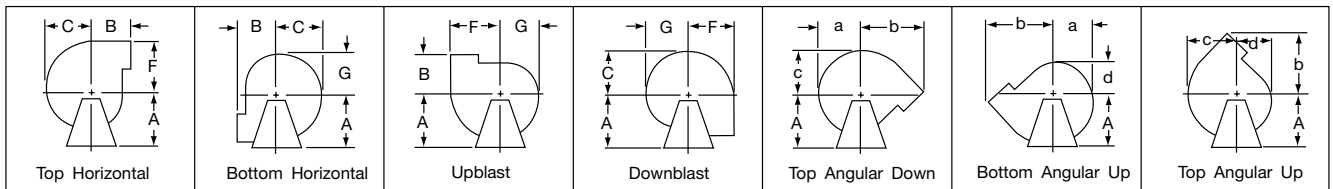
The drawing at right illustrates the AMCA motor position standards for Arrangement 1 fans. The location of the motor is determined by facing the drive side of the fan and designating the motor position by letters W, X, Y, or Z.



Illustrations reprinted from AMCA Publication 99 Standards Handbook, with the express written permission from the Air Movement & Control Association International, Inc., 30 West University Drive, Arlington Heights, IL 60004-1893.

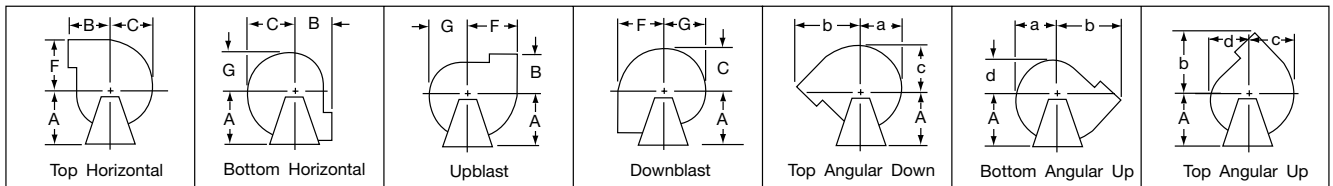
# Discharge Arrangements

### Clockwise



### Angular Discharges at 45 Degrees

### Counterclockwise



### Angular Discharges at 45 Degrees

\*In "BH" position, Size 12A and 12B with flanged outlet, flange will extend below baseline.

\*\*"DH" position with flanged outlet requires special construction. Contact factory for details.

See dimensions on page 7.

# Performance Data

## Arrangement 4 – Direct Drive

FAN SIZE	MOTOR		½" SP		¾" SP		1" SP		1½" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP	
	HP	RPM	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
PB 8A-14	¼	1725	157	0.03	96	0.02																		
PB 8A-13	½	3450	471	0.39	447	0.37	423	0.36	372	0.32	315	0.27	191	0.17										
PB 10A-12	½	1725	329	0.13	276	0.11	222	0.09																
PB 10A-1	1	3450			775	1.25	753	1.15	707	1.08	659	1.01	552	0.85	444	0.73	334	0.62						
PB 10A-112	1½	3500	808	1.29	788	1.71	767	1.21	722	1.13	674	1.06	570	0.91	463	0.77	357	0.66						
PB 10B-12	½	1725	537	0.29	454	0.17	375	0.15	148	0.08														
PB 10B-1	1	3450															583	0.98	297	0.64				
PB 10B-112	1½	3500									1098	1.60	936	1.44	778	1.29	620	1.07	385	0.75				
PB 12A-12	½	1725	573	0.29	529	0.27	485	0.25	370	0.20	190	0.13												
PB 12A-2	2	3500													995	2.11	892	1.92	771	1.72	636	1.47	447	1.18
PB 12A-3	3	3500	1307	2.62	1283	2.59	1259	2.57	1212	2.51	1168	2.45	1081	2.31										
PB 12B-12	½	1725	866	0.40	802	0.38	734	0.36	576	0.29	353	0.22												
PB 12B-3	3	3500											1639	3.20	1506	3.00	1361	2.78	1197	2.50	1033	2.32	791	1.97

## Arrangement 1 & 9 – Belt Driven

### PB8A

Inlet: 6" O.D. Outlet: 0.103 Sq. Ft. Based on air density of 0.075 lbs. per cu. ft.

CFM	OV	½" SP		¾" SP		1½" SP		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	RPM	BHP	RPM	BHP	RPM	BHP		
41	400	1318	0.01	1849	0.02																		
62	600	1358	0.01	1868	0.02	2273	0.03	2617	0.05														
82	800	1422	0.01	1906	0.02	2297	0.04	2635	0.05	3210	0.09	3697	0.13										
103	1000	1499	0.02	1966	0.03	2340	0.05	2667	0.06	3230	0.10	3713	0.14	4142	0.19	4530	0.24	4888	0.30				
124	1200	1580	0.02	2040	0.04	2401	0.06	2715	0.07	3262	0.11	3737	0.15	4160	0.20	4546	0.25	4902	0.31				
144	1400	1665	0.03	2114	0.05	2470	0.07	2775	0.09	3305	0.13	3769	0.17	4185	0.22	4566	0.27	4920	0.33				
165	1600	1759	0.04	2194	0.06	2548	0.08	2848	0.10	3363	0.15	3813	0.19	4221	0.24	4596	0.29	4944	0.35				
185	1800	1850	0.05	2274	0.07	2622	0.09	2921	0.12	3428	0.17	3867	0.22	4265	0.27	4633	0.32	4976	0.38				
206	2000	1950	0.06	2365	0.08	2702	0.11	2999	0.14	3502	0.19	3932	0.25	4321	0.30	4680	0.36						
227	2200	2055	0.07	2460	0.10	2787	0.13	3078	0.16	3579	0.22	4005	0.28	4386	0.34	4737	0.40						
247	2400	2158	0.08	2550	0.12	2873	0.15	3156	0.18	3653	0.25	4077	0.31	4453	0.38	4799	0.44						
268	2600	2269	0.10	2646	0.13	2968	0.17	3242	0.20	3731	0.28	4155	0.35	4529	0.42	4870	0.49						
288	2800	2378	0.12	2741	0.15	3057	0.19	3330	0.23	3808	0.31	4229	0.39	4602	0.46	4941	0.54						
309	3000	2494	0.14	2845	0.18	3152	0.22	3425	0.26	3892	0.34	4307	0.42	4680	0.51								
330	3200	2614	0.16	2951	0.20	3249	0.25	3519	0.29	3978	0.38	4387	0.47	4757	0.56								
350	3400	2729	0.18	3055	0.23	3344	0.28	3609	0.33	4066	0.42	4466	0.51	4833	0.60								
371	3600	2851	0.21	3166	0.26	3447	0.31	3705	0.36	4161	0.46	4552	0.55	4913	0.65								
391	3800	2969	0.24	3273	0.30	3548	0.35	3799	0.40	4251	0.51	4637	0.60	4992	0.71								
412	4000	3094	0.28	3388	0.33	3655	0.39	3900	0.45	4345	0.56	4731	0.66										
433	4200	3220	0.31	3505	0.38	3764	0.44	4004	0.49	4440	0.61	4826	0.73										
453	4400	3341	0.35	3618	0.42	3870	0.48	4104	0.54	4531	0.67	4915	0.79										
474	4600	3469	0.40	3738	0.47	3983	0.53	4211	0.60	4629	0.73												
494	4800	3592	0.44	3853	0.52	4092	0.59	4315	0.65	4725	0.79												
515	5000	3721	0.49	3976	0.57	4207	0.64	4426	0.72	4827	0.86												

Performance shown for direct drive and belt driven fans is with inlet and outlet ducts. BHP does not include transmission losses.

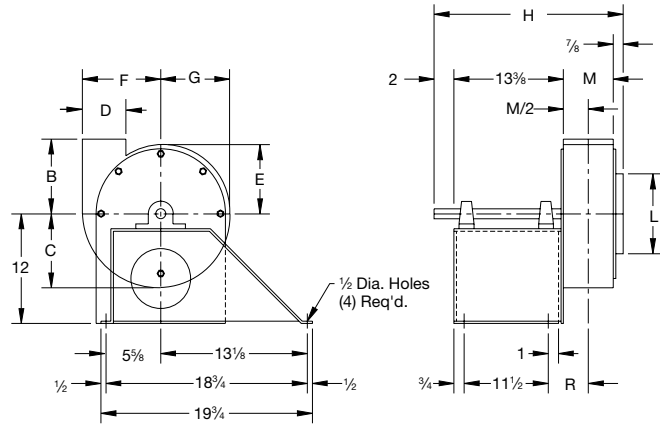




# Dimensional Data

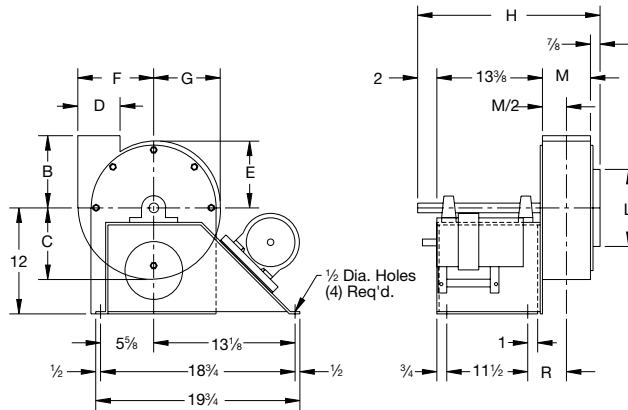
## Arrangement 1

L, M, and D are outside dimensions.



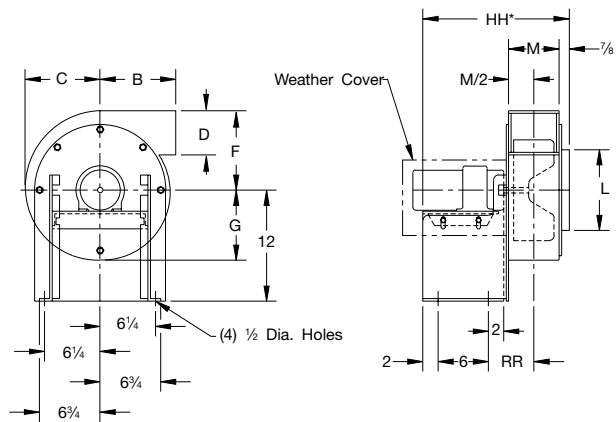
## Arrangement 9

L, M, and D are outside dimensions.



## Arrangement 4

\*Maximum motor overhang for any size motor up to frame 182T is 3". Weather cover extends 3 3/4" (increases HH dimensions by 3 3/4").



## Dimensions (in.) Tolerance: $\pm 1/8$ "

SIZE & WHEEL DIA.	B	C	D	E	F	G	H	L	M	R	HH*	RR	a**	b**	c**	d**	SHAFT DIA.†	KEYWAY †	BASE HOLES
8A	6	6 5/8	4 5/8	5 5/8	6 7/8	5 7/8	19 7/8	6	3 5/8	2 13/16	14 1/2	3 13/16	6 1/4	9 5/8	6 5/8	5 5/8	1	1/4 x 1/8 x 2 1/8	1/2
10A	7 1/2	7 7/8	5 5/8	6 5/8	8 1/2	7 1/4	19 7/8	7	3 5/8	2 13/16	14 1/2	3 13/16	7 3/4	11 1/4	8	6 3/4	1	1/4 x 1/8 x 2 1/8	1/2
10B	7 1/2	7 7/8	5 5/8	6 5/8	8 1/2	7 1/4	21 7/8	7	5 5/8	3 13/16	16 1/2	4 13/16	7 3/4	11 1/4	8	6 3/4	1	1/4 x 1/8 x 2 1/8	1/2
12A	8 1/2	10	7	7 1/2	11 1/4	8 3/4	19 7/8	7	3 5/8	2 13/16	14 1/2	3 13/16	9 5/8	13 7/8	10 5/8	8 1/8	1	1/4 x 1/8 x 2 1/8	1/2
12B	8 1/2	10	7	7 1/2	11 1/4	8 3/4	21 7/8	7	5 5/8	3 13/16	16 1/2	4 13/16	9 5/8	13 7/8	10 5/8	8 1/8	1	1/4 x 1/8 x 2 1/8	1/2

Dimensions should not be used for construction unless certified.

\*\*See Discharge Arrangements, page 3.

†Arrangements 1 & 9

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