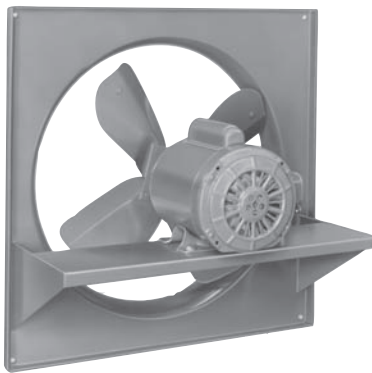


# **cincinnati fan**

**OEM and Industrial Air Handling Specialist**



**GENERAL  
VENTILATION  
PRODUCTS**



**7697 Snider Road, Mason, OH 45040-9135**

**Telephone: 513-573-0600**

Visit us at [www.cincinnati-fan.com](http://www.cincinnati-fan.com) for more information.

**Cat. No. GV-1208  
Supersedes GV1204**

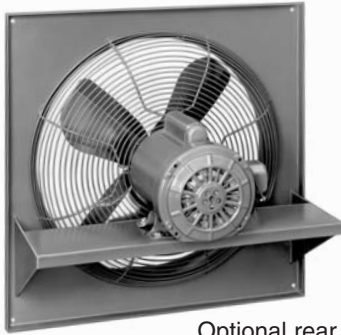


# MODEL PF PROPELLER FANS

## with Steel Propeller

### FEATURES:

- All sizes available with steel or aluminum propellers.
- Available with any type of motor enclosure.
- Aluminum props must be used with EXP motors.
- Rolled inlet venturi for efficient air flow.
- Low noise levels.
- Highest CFM per dollar.
- 12"-20" fans have 16 gauge panels, 24"-30" fans have 14 gauge panels, 36"-48" fans have 12 gauge panels.



**Model PF-12 to PF-20**

Optional rear guard for 12"-30" diameter fans only.



**Model PF-24 to PF-48**



Optional rear guard, all sizes.

Fan Size	Prop No.	Square Panel Dimensions	Motor		dBA @ 10 Ft. ■	CFM vs. Static Pressure Shown					Approx. Ship Weight Less Motor
			HP	RPM		0" SP	1/8" SP	1/4" SP	1/2" SP	3/4" SP	
12"	S12-11HD	16"	1/4	1150	64	910	725	420			55
	S12-11HD	16"	1/3	1750	71	1385	1285	1165	700	495	55
16"	MS16-11HD	22"	1/4	1150	75	2000	1685	1085	490		65
	MS16-11HD	22"	1/3	1750	80	3040	2885	2660	1875	1365	65
18"	MS18-11HD	24"	1/4	1150	76	2955	2570	1795	847	200	70
	MS18-11HD	24"	3/4	1750	80	4570	4400	4080	3520	2170	70
20"	MS20-11HD	24"	1/3	1150	77	3875	3535	3055	1615	860	75
	MS20-9HD	24"	1	1750	81	5465	5240	5010	4465	3355	75
24"	X24-11HD	30"	3/4	1150	82	6550	6019	5525	3455	2225	80
	X24-5HD	30"	1	1750	94	6860	6555	6235	5425	4460	80
	X24-11HD	30"	3	1750	94	10050	9705	9360	8755	7785	95
30"	X30-10HD	36"	1 1/2	1150	85	11600	10925	10195	7505	5175	93
	X30-10HD	36"	5	1750	97	17805	17365	16925	16035	14895	125
36"	X36-11HD	42"	2	850	83	16400	15200	13900	9500	6200	250
	X36-11HD	42"	5	1150	91	21880	20990	20100	18110	14260	250
42"	X42-11HD	48"	5	850	86	24785	23490	22270	19110	13100	410
	X42-6XHD	48"	5	1150	93	23210	22620	21960	19925	17520	420
48"	X48-11HD	54"	7 1/2	850	89	35665	33410	31855	28020	22625	550
	X48-6XHD	54"	7 1/2	1150	95	32560	31675	30685	28560	25795	500

## with Aluminum Propeller

Fan Size	Prop No.	Square Panel Dimensions	Motor		dBA @ 10 Ft. ■	CFM @ Static Pressure					Approx. Ship Weight Less Motor
			HP	RPM		0" SP	1/8" SP	1/4" SP	1/2" SP	3/4" SP	
12"	12-6-24	16"	1/4	1150	76	710	450				55
	12-6-24	16"	1/3	1750	80	1080	965	800			55
16"	16-6-36	22"	1/3	1750	78	3175	2915	2580			65
	18-6-35	24"	1/4	1150	73	2790	2310	850			70
18-6-35		24"	1/2	1750	79	4250	3965	3645	1760		70
18-6-43	24"	1	1750	82	5205	5030	4775	3940			76
	20-6-42	24"	1/3	1150	75	4050	3625	2970			70
20-6-34		24"	1/2	1750	82	4970	4490	3960	1240		70
20-6-42	24"	1 1/2	1750	86	6165	5875	5610	4860	2485		70
	24-4-20A	30"	1/4	1150	78	4810	4040	2975			82
24-6-41		30"	3/4	1150	80	6900	6240	5400			82
24-4-20A	30"	1	1750	83	7320	6795	6315	5120	1930		82
	24-6-41	30"	3	1750	88	10450	10100	9650	8600	6900	97
30"	30-6-22	36"	3/4	1150	81	9690	8730	7640	4005		92
	X30-11A ●	36"	1	850	84	9410	8555	6680	3585		90
X30-11A ●	36"	2	1150	87	12470	11865	11100	8135	5540	90	
30-6-22	36"	3	1750	89	14745	14115	13485	12145	10195	100	
X30-9A ●	36"	7 1/2	1750	92	16830	15560	15130	14195	13240	113	
36"	X36-5A ●	42"	2	1150	85	15165	14340	13520	11330	8530	240
	36-6-26	42"	3	1150	88	20630	19755	18820	16985	14570	250
42"	42-6-19	48"	3	1150	87	22755	21000	19575	16035	10435	395
	X42-7A ●	48"	5	1150	88	24690	24075	23430	21445	19025	405
X42-9A ●	48"	7 1/2	1150	89	28875	27825	26840	24890	22520	410	
X42-11A ●	48"	7 1/2	850	93	24785	23490	22270	19110	13110	450	
48"	48-6-19	54"	2	850	91	25080	22850	20105	13170		505
	X48-4A ●	54"	5	1150	91	28915	27900	26840	24360	21170	458
X48-8A ●	54"	5	850	93	29160	27765	26205	22605	17510	440	
X48-8A ●	54"	10	1150	96	38650	37600	36550	34155	31535	505	
X48-11A ●	54"	7 1/2	850	89	35665	33410	31855	28020	22625	450	

■ This is an average of 4 readings taken 10 feet from the fan, in our factory, with free inlet and discharge and at 0" SP. Actual dBA will vary under any other conditions.

● Fabricated aluminum propeller. All others are cast aluminum.



# MODEL AC AIR CIRCULATORS

## FEATURES:

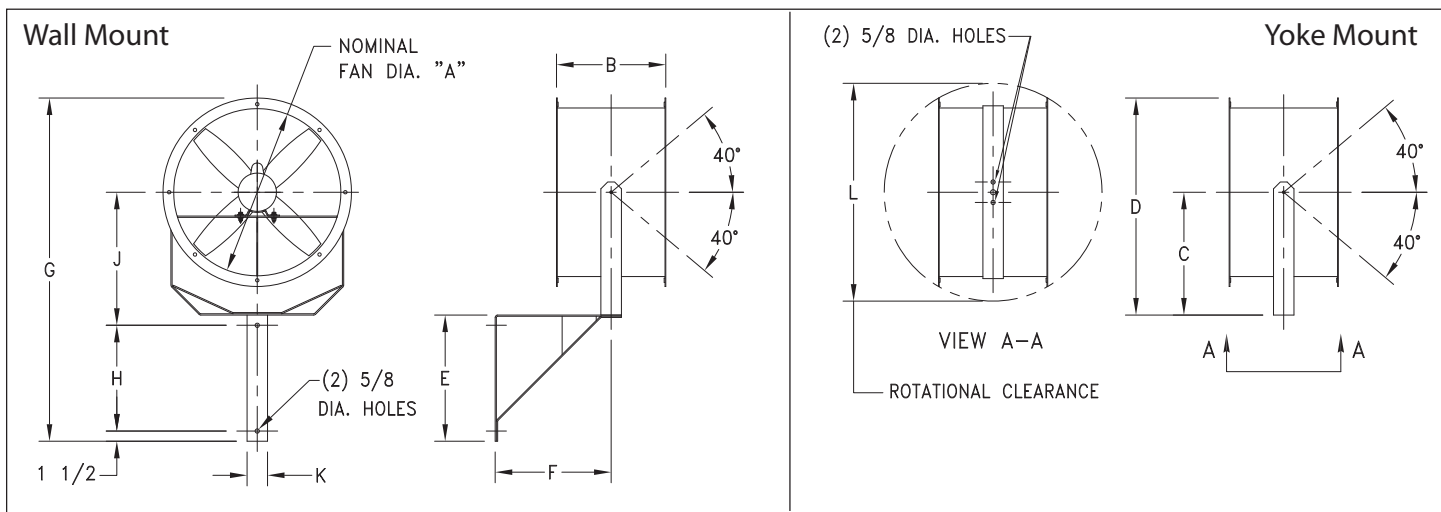
- Spark resistant cast aluminum propellers.
- Heavy duty 12 gauge steel drums on sizes 15-30. 10 gauge drum on size 36.
- Yoke mount or wall-column mount on sizes 15-30. Yoke mount only on size 36.
- Heavy duty, plated, spiral guards on inlet and outlet meet OSHA standards.
- Open Drip Proof, continuous duty, ball bearing motors. Totally Enclosed motors are available.
- 115 Volt, 1 Phase, 60 Cycle ODP motors (1/3 to 1 HP) have a 9 foot cord and grounded plug.
- Fan drum can swivel 360° and can tilt up or down 40° from center.
- Force air, heat cured, gray enamel paint finish.

## SPECIFICATIONS

Fan Size	Fan			Motor		
	CFM	Velocity	dBA@5 Ft.	HP	RPM	Frame
15	2900	2461	77	1/3	1750	56
18	4300	2441	77	1/3	1750	56
24	5750	1969	80	1/2	1750	56
30	11200	2480	79	1	1150	145T
36	21300	3012	79	3	1150	213T



Yoke mount with wall bracket shown.



## DIMENSIONS IN INCHES

Fan Size	A	B	C	D	E	F	G	H	J	K	L	Approx. Ship Wt.
15	15	16	12 <sup>1</sup> / <sub>2</sub>	21 <sup>1</sup> / <sub>4</sub>	14	12 <sup>1</sup> / <sub>2</sub>	35 <sup>1</sup> / <sub>4</sub>	11	14	3	24	105
18	18	16	14	24 <sup>1</sup> / <sub>4</sub>	15 <sup>1</sup> / <sub>2</sub>	14	39 <sup>3</sup> / <sub>4</sub>	12 <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>	3	26	130
24	24	16	18	31 <sup>7</sup> / <sub>8</sub>	18 <sup>1</sup> / <sub>2</sub>	17	50 <sup>1</sup> / <sub>4</sub>	15 <sup>1</sup> / <sub>2</sub>	19 <sup>1</sup> / <sub>2</sub>	3	32	165
30	30	16	21	37 <sup>7</sup> / <sub>8</sub>	21 <sup>1</sup> / <sub>2</sub>	20	59 <sup>1</sup> / <sub>4</sub>	18 <sup>1</sup> / <sub>2</sub>	22 <sup>1</sup> / <sub>2</sub>	4	37 <sup>1</sup> / <sub>4</sub>	190
36	36	20	22 <sup>7</sup> / <sub>8</sub>	42 <sup>1</sup> / <sub>2</sub>	—	—	—	—	—	—	44 <sup>1</sup> / <sub>4</sub>	300

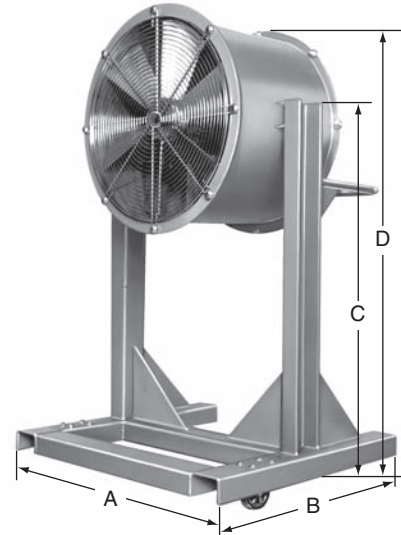
Dimensions subject to change without notice.



# HEAVY DUTY PERSONNEL COOLERS

## FEATURES:

- Spark resistant cast aluminum propellers.
- CIM models can be rotated 180° on a horizontal axis.
- Wire inlet and outlet guards meet OSHA standards.
- Rugged construction includes heavy gauge steel drums.
- Ideal construction for dependable service in severe operating conditions such as foundries and steel mills.
- Coatings available for weather and corrosion protection.
- Totally enclosed, continuous duty, ball bearing motors are standard. EXP motors available.
- Safe, no exposed moving parts.
- Yoke available for mounting PMC units to wall or ceiling on all sizes except 42".
- Fused manual starters available.

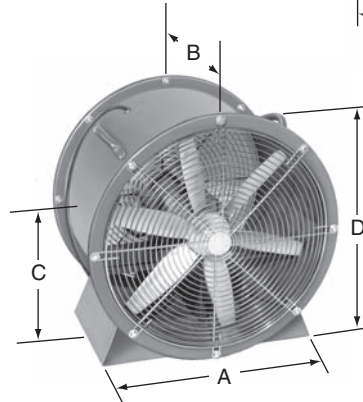


**Model CIM**  
(18"-42")



**Optional Mounting Yoke**  
(12"-36")

**For Yoke  
Mounting  
dimensions,  
consult  
factory.**



**Model PMC Low Stand**  
(12"-42")

## SPECIFICATIONS:

Fan Size	Prop No.	Motor H.P.	Motor RPM	CFM	dBA @ 10 FT. ●	Approx. Start AMPS ■		Approx. Ship Weight ▲	
						230V-1PH	460V-3PH	PMC	CIM
12"	12624	1/3	1750	1000	74	15	4	50	—
	12624	1/2	3450	1870	87	23	6	52	—
15"	15636	1/3	1750	2520	77	15	4	72	—
	15643	1/2	1750	3050	77	23	6	81	—
18"	18635	1/2	1750	4000	78	23	6	85	160
	18643	1	1750	5140	79	41	10	97	180
24"	24631	1/3	1150	4500	75	15	4	125	240
	24641	1	1150	6900	78	35	8	150	280
	24631	1	1750	7890	83	41	10	130	270
	24641	3	1750	10800	88	90	32	170	300
30"	30622	3/4	1150	8400	82	31	9	150	300
	30441	2	1150	13000	84	63	19	190	340
36"	36625	1 1/2	1150	13200	84	49	11	185	440
	36626	3	1150	18900	86	90	21	270	500
42"	42630	3	1150	21800	87	90	21	295	570
	42626	5	1150	28490	89	148	45	345	615

● Estimated - depends on environment    ■ Running amps are approximately 1/6 of starting amps.    ▲ Less motor.

## DIMENSIONS IN INCHES ± 1/8"

Fan Size	Model PMC				Model CIM			
	A	B	C	D	A	B	C	D
12"	12	20	9 1/2	16 3/4	—	—	—	—
15"	15	20	9 3/8	18 1/8	—	—	—	—
18"	18	20	10 3/4	20 7/8	29 3/4	32 1/2	44	54
24"	24	21	14	27 1/2	35 3/4	32 1/2	44	57 1/2
30"	30	22	16 3/4	33 1/4	41 3/4	32 1/2	44	60 1/2
36"	36	28	20	39 1/2	47 3/4	32 1/2	44	63 1/2
42"	42	29	22 3/4	45 1/4	53 3/4	32 1/2	44	66 1/2

Dimensions subject to change without notice.

**For proper sizing,  
see Page 5.**

**Order must specify actual  
motor operating voltage.**



## AVERAGE AIR CHANGES REQUIRED FOR GOOD VENTILATION

Type	Minutes Per Change	Type	Minutes Per Change	Type	Minutes Per Change
Assembly Halls	.2-10	Engine Rooms	.1-3	Laboratories	.1-5
Auditoriums	.2-10	Factories	.2-5	Laundries	.1-3
Bakeries	.2-3	Forge Shops	.2-5	Offices	.2-10
Boiler Rooms	.1-5	Foundries	.1-5	Packing Houses	.2-5
Bowling Alleys	.2-10	Garages	.2-10	Plating Rooms	.1-5
Churches	.5-15	Generator Rooms	.2-5	Toilets	.2-5
Dairies	.2-5	Gymnasiums	.2-10	Transformer Rooms	.1-5
Dance Halls	.2-10	Kitchens - Hospital	.2-5	Warehouses	.2-10
Dry Cleaners	.1-5	Kitchens - Restaurant	.1-3		

Note: The above chart is a general guideline only.

$$\text{Formula to determine CFM Required} = \frac{\text{Volume of space (WxLxH)}}{\text{No. of minutes per air change}}$$



## GUIDELINE FOR DETERMINING SPREAD & THROW OF A PERSONNEL COOLER

These calculations are for determining the velocity from a fan and also the width of the air stream at a specific distance. While these values are influenced greatly by the presence or absence of walls, floors and obstructions, the following formulae will give a good approximation for most cases.

SPREAD:  

$$W = .36L + \frac{d}{12}$$

W = Maximum width, in feet, of airstream perpendicular to axis of rotation of the fan.

L = Distance from fan, in feet.

d = Fan diameter, in inches.

VELOCITY (Not less than 10 feet from fan):

$$(1) k = 5 \left( \frac{2.5 \times \text{CFM}}{d} \right)^2$$

$$(2) v_{La} = 1.15 \sqrt{\frac{k}{L}}$$

$$(3) v_{\max} = \left( \frac{d}{73} + 1 \right) v_{La}$$

k = Fan constant.

$v_{La}$  = Average velocity across the width of the spread. L feet from the fan (Feet per minute).

$v_{\max}$  = Maximum velocity. L feet from the fan (Feet per minute).

CFM = Free air delivery of fan.



## AUTOMATIC SHUTTERS

### FEATURES:

- Frame and blades are corrosion resistant extruded aluminum.
- Vinyl weather strips on edges of blades for better seal and quiet operation.
- Self-lubricating, nylon bearings.
- Plated steel pivot rods.
- Three frame types available.
- For vertical mount, horizontal air flow only.
- Available with manual chain operator or motor operated.
- Maximum face velocity: 2400 FPM.
- Maximum differential pressure: 4" WG.
- Maximum temperature: 200°F. without electric motor.  
130°F. with electric motor.

### SPECIFICATIONS

Model	Square opening size in inches	Square outside frame in inches	Frame Depth	Max. depth with shutter open
AS-12	12	15	1 <sup>3</sup> / <sub>4</sub> "	5 <sup>3</sup> / <sub>4</sub> "
AS-16	16	19		
AS-18	18	21		
AS-20	20	23		
AS-24	24	27		
AS-30	30	33		
AS-36	36	39		
AS-42 ☆	42	45		
AS-48 ☆	48	51		
AS-54 ☆	54	57		



For complete dimensions, request a factory drawing.

**Standard frame or optional frame must be specified.**

☆ These shutter models are shipped in 2 or 4 sections for assembly by the customer. Assembly hardware is included.