

# Blowers and Fans

## General Selection Considerations

### General Specifications

All Hammond blowers and filter fans are engineered for performance and built for reliability. This versatile line includes a blower, fan tray and filter fans.

Blowers and fans use forced convection cooling, which means ambient air flows through a filter into the enclosure to cool heated components. Both blowers and fans are sized in CFM (cubic feet per minute).

It is recommended that an exhaust filter be used in combination with the blower or filter fan to act both as an exhaust point for the hot internal air plus aid in the pressurization of the enclosure, reducing the chance of unfiltered air entering the enclosure. Whenever possible, the blower or filter fan should be located in the bottom third of the enclosure and the filtered exhaust grill placed as high as possible on the opposing side. Performance levels can be further increased by adding a second exhaust filter.

### Sizing Blowers and Fans

To determine the CFM (cubic feet per minute) required in any standard situation, use the following calculation, (non-standard situations would consist of high air density - significantly more than 0.075 lbs per cubic foot.)

$$\text{CFM} = \frac{\text{Power to be dissipated (Watts)} \times 3.17}{\text{Maximum Allowable Internal Temperature (}^\circ\text{F)} - \text{Maximum Ambient Temperature (}^\circ\text{F)}}$$

Note - The calculation above is exact, but adding an additional 25% to the CFM level is a standard safety factor.

If the air density is high (significantly more than 0.075 lbs per cubic foot), use the number calculated above in the following formula:

$$\frac{\text{CFM} \times (0.075)}{\text{Non-standard Air Density (lbs per cubic foot)}}$$

Note: Ambient Temperature must be lower than maximum internal temperature for fan/blower to be effective.

## Filtered Fan Boxes and Filter Grills



Filtered Fan Box



Filter Grill

Climate Control

### Description

- In a typical cooling arrangement, the filtered fan box pulls air into the enclosures and the filter grill is used as an air outlet.
- The washable aluminum filter grill and the air filter are easily accessible and can be removed for cleaning.
- The filtered fan boxes are available in either 115 VAC or 230 VAC, 50/60 Hz.
- Filtered passive ventilation can be provided by an exhaust filter for either convection cooling or in combination with a fan in forced air cooling.

### Standards

- UR/CUR/CE approved fan motors.
- CSA listed on fan only.

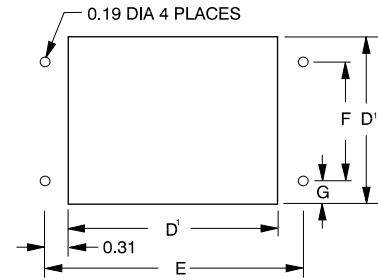
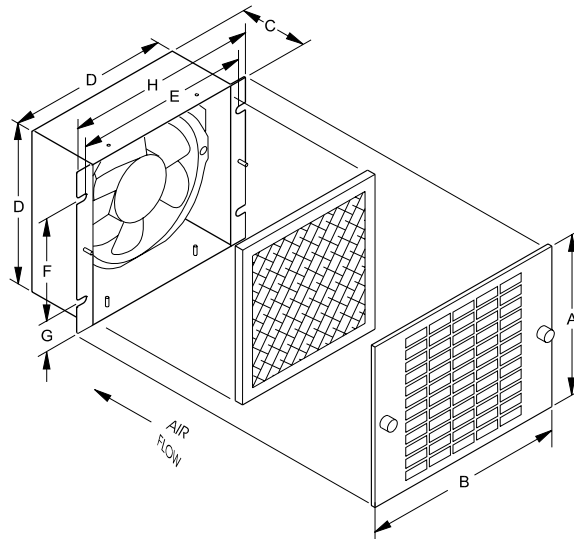
### Features

- 115 VAC or 230 VAC, 50/60 Hz.
- 12" lead wires.
- Exceptionally quiet operation.
- Versatile mounting and adaptability.
- Heavy-gauge steel construction.
- Attractive stainless steel grills.
- Shipped with air flow to pressurize. Can be user modified to exhaust.
- Aluminum filter is coated with adhesive baffle surfaces for dust and dirt collection. Can be recoated after cleaning for optimum performance.
- Drilling template included.
- NOTE: One grill and filter are included with each fan package. Normally, an additional exhaust grill and filter are required for each installation and must be ordered separately.

### Accessories

- Filter coat
- Replacement Filter

# Filtered Fan Boxes and Filter Grills



**Cutout Detail**

Climate Control

## Filtered Fan Boxes

Part No.	Free Flow Air Delivery		RPM	Running Amps	Watts	A	B	C	D	D'	E	F	G	H	Ship Wt. lbs
	CFM	Volts													
XF4115	105	115	3000	0.18	15	6.13	7.38	2.38	5.63	5.75	6.38	4.13	0.78	7.0	5
XF4230	105	230	3000	0.09	15	6.13	7.38	2.38	5.63	5.75	6.38	4.13	0.78	7.0	5
XF6115	220	115	3300	0.29	33	7.63	8.88	3.00	7.13	7.25	7.88	4.50	1.34	8.5	6
XF6230	220	230	3300	0.15	33	7.63	8.88	3.00	7.13	7.25	7.88	4.50	1.34	8.5	6
XF10115	560	115	1600	0.87	60	11.63	13.00	4.56	11.13	11.25	11.88	6.88	2.16	12.5	12
XF10230	560	230	1600	0.45	60	11.63	13.00	4.56	11.13	11.25	11.88	6.88	2.16	12.5	12

## Exhaust Grill and Filters

Part No	A	B	D	E <sup>1</sup>	F <sup>1</sup>	H <sup>1</sup>
XFG4	6.13	7.38	5.63	6.38	4.13	7.00
XFG6	7.63	8.88	7.13	7.88	4.50	8.50
XFG10	11.63	13.00	11.13	11.88	6.88	12.50

## Replacement Filters

Part No	Pkg. Qty.
XFF4	3
XFF6	3
XFF10	3

<sup>1</sup> Dimension for mounting and cabinet cutout. Secure sheet metal with #8 hardware.



## Filter Coat

- Provides a filter adhesive with a grease-like consistency which absorbs and traps dust particles.
- 10 oz. bottle with environmentally friendly trigger spray.

Part No. **1475Q**