

ENERVEX® EFV 450 EXHAUST FAN

020.1234.0524 August 2024

Product Information

Use

The EFV exhaust fan is designed to provide movement of air in exhaust systems. Suitable applications include exhaust in kitchens/bathrooms/laundries in multi-story, multi-family buildings. The fan is designed to exhaust lint-laden air from single or multiple Type I and Type II residential and commercial clothes dryers. It is for outdoor insulation use only.

Description

The fan housing is hinged and the top can be opened for easy service and access to the duct. The fan ensures a negative pressure in the entire duct system. The fan is installed at the duct termination point and can be mounted vertically or side-wall vented. Discharge is vertical (horizontal, if side-wall vented). The EFV fan is for use in systems where exhaust temperatures do not exceed 350°F (177°C).

Material

The fan housing is 3/16" cast aluminum. One coat of black hammer paint is applied for added corrosion resistance.

The backwards curved impeller is made of aluminum. The impeller is dynamically and statically balanced with permanently attached zinc balancing weights.

Motor

The IE5 rated motor is a TEFC, maintenance-free variable speed permanent magnet motor with pre-lubricated and sealed ball bearings and a Class H temperature rating. The motor with controller is rated at 92% efficiency and able to operate as low as 50 RPM. It has integrated protection against overloading, blocking over and under voltage and over-heating. The motor shaft is internally isolated to eliminate the need for external shaft grounding. It is rated for outdoor installation.

Standard Equipment

- 2"x4" or 4"x4" junction box with cover and conduit
- Bird Screen
- EDrive motor controller

Optional Equipment

- MEC 24 Modulating Exhaust Control

Listings



ENERVEX certifies that the EFV shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.



The EFV 450 Exhaust Fan is ETL Listed in the U.S. and Canada under file no. 514733:

- UL 705 Standard for Power Ventilators
- CSA-CAN-B255-M81 Mechanical Flue Gas Exhausters

Complies with and meets Type B, Spark Resistant Construction per AMCA Standard 99-0401 Classifications of Spark Resistant Construction.

Warranty

- 2-Year Factory Warranty on entire fan
- 10-Year Warranty Against Corrosion Perforation

Complete warranty conditions are available from ENERVEX Inc.

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ENERVEX®
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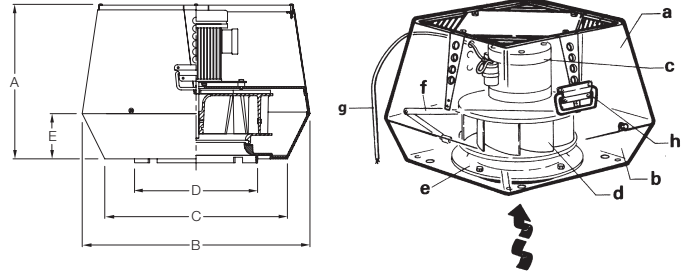
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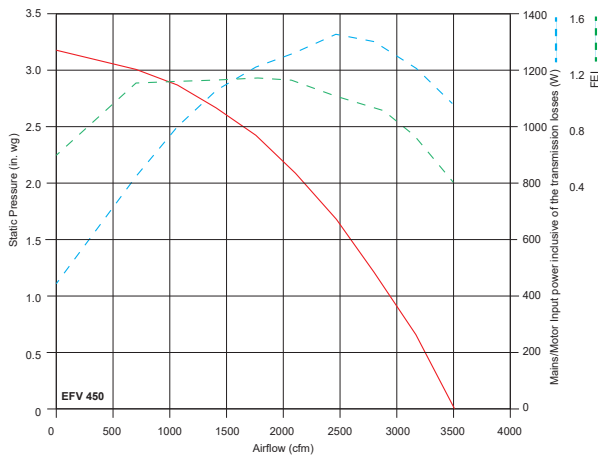
Specifications

Model	EFV 450	
Fan Type	Centrifugal Impeller (BC-Wheel)	
Motor Type	ECM, Permanent Magnet	
Voltage Configuration	3x208-240 VAC	3x380-480 VAC
Edrive Model	321.2312.2200	321.2312.4200
Edrive Ratings		
NEMA / IP Rating	4X / IP66	
Supply Voltage - VAC	3 x 208-240	3 x 380-480
Power - kW	2,2	
Max Input Current - Amp	12,1	7,5
Max Output Current - Amp	10,5	5,8
Min Operating Temp. - °F / °C	-4 / -20	
Max Operating Temp. - °F / °C	104 / 40	
Motor Rating		
Motor Efficiency Class	I E 5	
Temperature Class	H	
NEMA / IP Rating	3S / IP54	
Max Current - Amp	6,5	3,7
Max Speed - RPM	3000	
Power - kW / HP	1.5/2	
Torque - Nm	5,7	
Motor Operating Settings		
Fan Speed - RPM	1720	
Max Power - kW / HP	1.32/1.77	
Max Torque - Nm	7,33	
Weight		
EFV - lbs / kg	118/54	
EDrive - lbs /kg	7.7/3.5	5.5/2.5



- a Top Section
- b Bottom Section
- c Motor
- d Centrifugal Impeller
- e Inlet for Impeller
- f Locking Hinge
- g Bird Screen
- h Carrying Handle
- i Wiring Conduit

Capacity



Performance certified is for Installation Type D - ducted inlet, ducted outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).

Sound Diagram

SP	Sound Power re 10 ⁻¹² Watts								Sones	L _{wc} A
	Octave Bands									
	1	2	3	4	5	6	7	8		
0.147	78	78	92	82	85	84	77	67	28.0	90
1.327	75	77	91	80	83	79	73	66	24.0	88
2.610	80	82	90	78	79	75	69	64	22.0	84
3.024	79	84	88	78	77	74	69	64	21.0	83

Values shown are for outlet L_{wc}A sound power levels for Installation Type C: ducted inlet, free outlet. The sound power level ratings shown are in decibels, referred to 10⁻¹² watts, calculated per AMCA International Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. The sound ratings shown are loudness values in fan sones at a distance of 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for free outlet hemispherical sone levels. dBA levels are not licensed by AMCA International.

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