

ENERVEX®

TDF 685 POWER VENTER

020.1098.0621 07.23

Product Information

Use

The TDF Power Venter is a true in-line power venter. It is specifically designed for applications where reliable and efficient operation, low noise level, low energy consumption, variable speed and compact design are of utmost importance.

Typical applications are: mechanical venting of gas-fired or oil-fired boilers and water heaters. For indoor or outdoor installation.

Description

The TDF Power Venter is an efficient, high-temperature ventilator with backward-inclined impeller. It can be installed horizontally or vertically in a chimney system.

The fan housing is made of stainless steel and equipped with an energy-efficient, totally enclosed, variable speed motor, which is mounted outside the air stream.

The complete drive unit (motor, impeller and mounting plates) can be removed from the fan without the need for removing the housing from the stack system.

The TDF is for use with condensing and non-condensing appliances operating where flue gas temperatures do not exceed 1400°F (760°C).

The TDF model is a component in the CASI, Chimney Automation System.

Material

The housing is made of 316L stainless steel and has flanged connection. The impeller is of the backward inclined type made of 316L stainless steel.

Motor

The motor is a TEFC air cooled, 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.

The included EDrive motor control (NEMA4X) is factory programmed by ENERVEX for optimal operation of the ventilator.

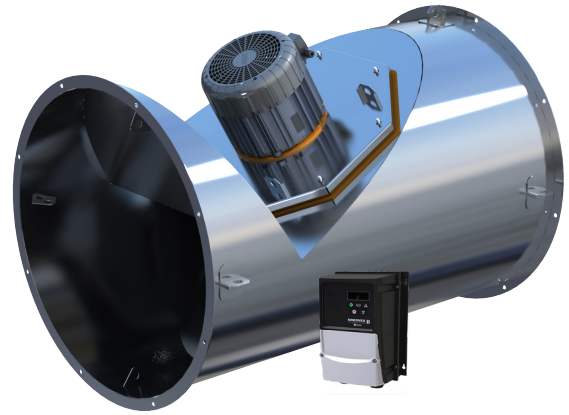
Standard Equipment

- EDrive Motor Control
- V-Bands (where used)



UL File E467733

Specifications are subject to change without notice.



Optional Accessories

- EBC 30/31 Modulating Pressure Controller
- EBC 35 Modulating Pressure Controller
- EBC 24 Modulating Pressure Controller
- BDC 8 Modulating Pressure Controller
- Adapter Transitions

Listings

UL Listing under Category MCQX and ZACT under File No. E467733 and reference to the following standards:

- UL 378 Standard for Draft Equipment Edition 4
- UL 705 Standard for Power Ventilators Edition 6
- CSA C22.2 No. 113-12 Fans and Ventilators Edition 9
- ULC/ORD-C378-75 Guide for the Investigation of Draft Equipment Edition 1

Warranty

- 2-Year Factory Warranty
- 10-Year Warranty Against Corrosion Perforation

Complete warranty conditions are available from ENERVEX Inc.

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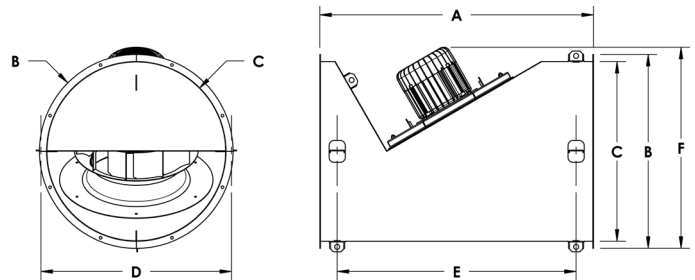
Product Information

Specifications

Model	TDF 685
Fan Type	Centrifugal Impeller (B-Wheel)
Motor Type	ECM, Permanent Magnet
Voltage Configuration	3 x 380-480 VAC
EDrive Model	321.0921.4200
EDrive Ratings:	
NEMA / IP Rating	4X / IP66
Supply Voltage - VAC	3 x 380-480
Power - kW	22.0
Max Input Current - Amp	51.9
Max Output Current - Amp	46.0
Max Over-Current - %	175
Min Operating Temp. - °F / °C	-4 / -20
Max Operating Temp. - °F / °C	104 / 40
Motor Ratings:	
Motor Efficiency Class	IE5
Temperature Class	H
NEMA / IP Rating	3S / IP55
Max Current - Amp	38
Max Speed - RPM	1750
Power - kW / HP	22.2 / 29.8
Torque - Nm	145
Motor Operating Settings:	
Fan Speed - RPM	1740
Max Power - kW / ~ HP	Not Available
Max Torque - Nm	Not Available
Weight:	
TDF - lbs / kg	682 / 310
EDrive - lbs / kg	20.9 / 9.5

Note: Use EDrive Ratings Data for Circuit Sizing

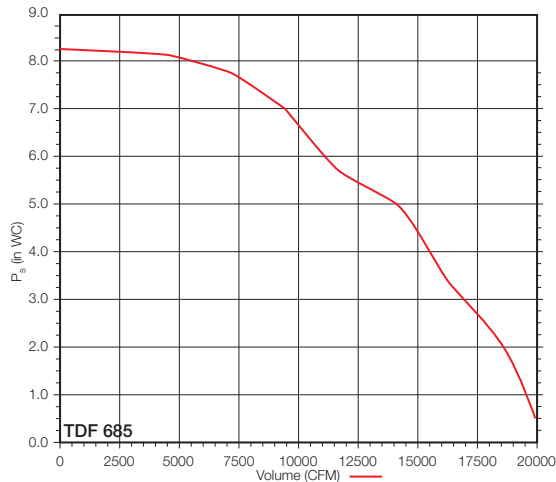
Dimensions



Model	TDF 685	
Duct Connection	1 1/2" flange w 16-holes	
Dimensions	A in / mm	62.3 / 1582
	B in / mm	45.0 / 1143
	C in / mm	42.0 / 1067
	D in / mm	44.4 / 1128
	E in / mm	55.3 / 1404
	F in / mm	54.3 / 1379
Flange Bolt Center Diameter	in / mm	43.7 / 1110
Temp Rating *	°F / °C	1400 / 760

* Maximum Intermittent Temperature Rating

Capacity



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