

# ENERVEX®

## TDF 300-900 VP POWER EXHAUSTER

3902028 08.18

Product Information

### Use

The TDF-VP Velocity Plume Power Venter is an innovative plume dilution fan that not only delivers a powerful vertical plume but also dilutes the flue gas exhaust. This means dilution of exhaust condensate, less visible smoke, lower exhaust temperatures etc.

Typical applications are any kind of gas-fired and oil-fired boilers and water heaters as well as other applications with high-temperature exhaust air such as generators, solid-fuel-fired ovens, and more.

### Description

The TDF-VP Velocity Plume Power Venter is an efficient, high-temperature ventilator with backward-inclined impeller. It is typically installed vertically at the termination of a chimney system.

The fan housing is equipped with a Nozzle and Nose Cone, which increases discharge velocity and provides more than 100% dilution. This can eliminate the need for tall chimneys, prevent re-entrainment and comply with architectural and aesthetic ordinances.

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-VP is for use with condensing and non-condensing appliances operating where the exhaust temperature does not exceed 1400°F (760°C).

The TDF-VP model can be used as 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 an air cooled, maintenance-free variable speed permanent magnet motor with pre-lubricated and sealed ball bearings. 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 is factory programmed by ENERVEX for optimal operation of the ventilator.



### Standard Equipment

- EDrive Motor Control
- Nozzle and Nose Cone
- V-Bands (where used)

### Optional Equipment

- Bypass Air Plenum
- EBC 31 Modulating Pressure Controller
- EBC 35 Modulating Pressure Controller
- EBC 24 Modulating Pressure Controller

### 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 - Revision Date 2013/09/17
- UL 705 Standard for Power Ventilators Edition 6 - Revision Date 2013/12/17
- CSA C22.2 No. 113-12 Fans and Ventilators Edition 9 - Revision Date 2012/10/01
- CSA3-B255-M81 Standard for Mechanical Flue Gas Exhauster

### Warranty

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

Complete warranty conditions are available from ENERVEX Inc.



Specifications are subject to change without notice.

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VENTING DESIGN SOLUTIONS

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## Specifications

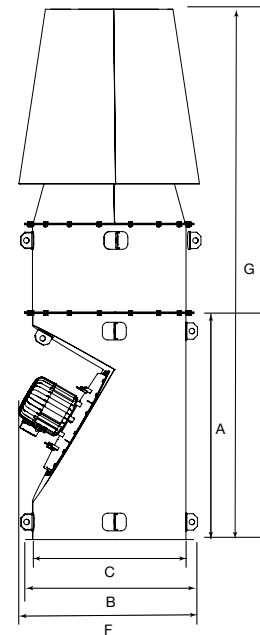
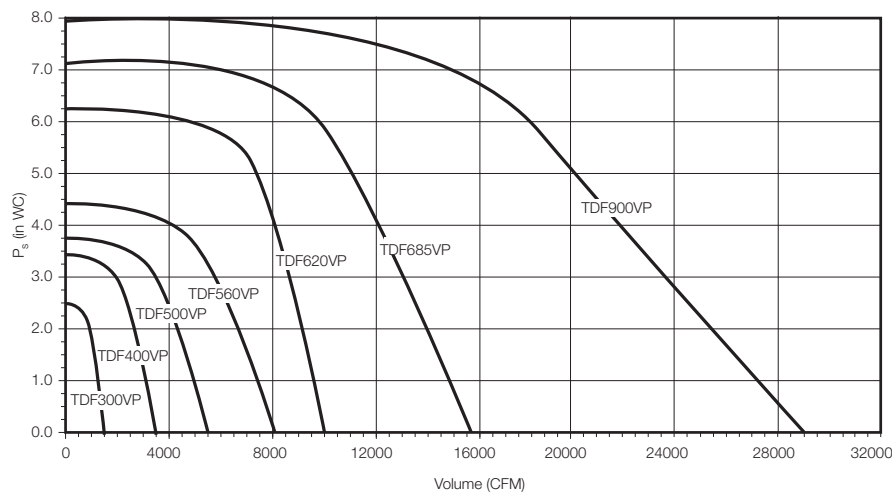
NOTE: All published voltages relate to power supplied to the EDrive and NOT the motor.

Model	TDF 300-VP	TDF 400-VP	TDF 500-VP	TDF 560-VP	TDF 620-VP	TDF 685-VP	TDF 900-VP
Fan Type	Centrifugal Impeller (B-Wheel)						
Motor Type	ECM, Permanent Magnet						
Voltage EDrive VAC	3x230 / 3x460						3x460
Max. Amperage -EDrive A	4.3 / 2.3	10.5 / 5.8	10.5 / 5.8	18.0 / 9.5	36.0 / 18.0	48.0 / 24.0	46.0
Motor Output	HP	1	3	5	5	10	30
	KW	0.75	2.25	3.75	3.75	7.46	22.37
RPM (see note below)	2000	2000	2000	1740	1740	1740	1400
Weight lbs / kg	96 / 44	150 / 68	215 / 98	240 / 109	288 / 131	331 / 150	331 / 150
Duct Connection	1/2" flange	1/2" flange	1/2" flange	1 1/2" flange w 16-holes			
Dimensions	A in / mm	27.0 / 686	35.0 / 889	42.0 / 1067	48.0 / 1219	55.1 / 1401	62.3 / 1582
	B in / mm	18.7 / 474	24.6 / 624	31.0 / 787	35.0 / 889	39.0 / 991	45.0 / 1143
	C in / mm	17.7 / 450	23.6 / 600	28.0 / 711	32.0 / 813	36.0 / 914	42.0 / 1067
	F in / mm	20.0 / 508	26.2 / 665	30.4 / 772	43.4 / 1103	40.5 / 1027	54.5 / 1383
	G in / mm	Depends on application and final configuration					
Temp Rating °F / °C	1400 / 760						
Dilution %	Depends on application and final configuration						
Exit Velocity FPM / ms	Depends on application and final configuration						

<sup>1</sup> NOTE: Adapter transitions available - Please contact factory

NOTE: Our ECM motor is a synchronous motor that is UL-listed to operate at speeds up to 4000RPM. The shown RPM and motor output data is the standard setup based on the standard control selection. RPM can be increased to provide higher performance, but a different EDrive model may be required. Please contact ENERVEX for assistance.

## Capacity



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