



# Vortron Industrial Data Sheet

## Centrifugal Blowers, Dryers, Aerators, Forced-Air Cleaners

### Vortron's AIRPOWER™ Series Of Industrial Blowers

# Z40

The flagship of Vortron's AIRPOWER™ series. Where flows of 600 to 1600 SCFM at pressures at or above 70 in-H<sub>2</sub>O are required, the Z40 surpasses all others! This model exhibits an extraordinarily flat flow/pressure characteristic that is notably absent of the typical "drooping" curve. In some cases, this enables a single Z40 to do the work of multiple units. 77% peak efficiency is attained. Ideal for ultra high-performance air knives, high volume blow-off, and de-watering applications typical with canning, beverage, and electronic industries. Also, air evacuation, aeration, large fluidized beds; air or non-corrosive process gas.

#### MODEL DESIGNATION: Z40

<b>DESCRIPTION:</b>	Single-stage centrifugal compressor, belt driven, permanently-lubed high-speed spindle.
<b>DRIVE SYSTEM:</b>	Micro-groove multi-ribbed belt with dual-bearing backside automatic tensioner. Integral Fresh-Aire™ cooling system for belt, tensioner/idler, spindle assembly longevity.
<b>SPINDLE ASSEMBLY:</b>	<b>Standard:</b> ABEC 9 precision bearings, permanently lubricated. <b>Optional:</b> (1) Re-circulating oil lubricated bearing system.
<b>SEALS:</b>	<b>Standard:</b> High Performance PTFE Lip <b>Optional:</b> (1) Controlled-Gap Labyrinth Seal. (2) Spring-Energized Carbon Face Seal.

#### MATERIALS of CONSTRUCTION:

<b>Housing, Volute, Mounting Plate:</b>	A356-T6 Aluminum
<b>Impeller:</b>	Investment Cast Aluminum
<b>Shaft:</b>	<b>Standard:</b> Alloy Steel, Heat-treated <b>Optional:</b> Stainless Steel
<b>Main Drive Pulley:</b>	A356-T6, Hard Anodized
<b>Compressor Pulleys:</b>	Stainless Steel
<b>Cover:</b>	High-Impact Cross-Linked PE
<b>OPERATING SPEED:</b>	14,000 to 28,400 RPM
<b>PERFORMANCE:</b>	See Compressor Map For Actual Performance At Specific Operating Point:
<b>Max. Flow (SCFM):</b>	1600
<b>Max. Pressure (in-H<sub>2</sub>O):</b>	200+
<b>Peak Isentropic Effy (%):</b>	77
<b>Ratings:</b>	To 40 HP

#### PEAK TEMPERATURE:

<b>Inlet (°F):</b>	120° minimum; max. not to exceed 200° at discharge
<b>Discharge (°F):</b>	To 200°

**LAYOUT:** NEMA C-Face Mount (180 - 320 Series Frame)  
Vertical or Horizontal Orientation

#### Connections (Tubular O.D.):

<b>Inlet:</b>	5.0 in.
<b>Discharge:</b>	3.5 in.; Full 360° Discharge Orientation
<b>Rotation:</b>	Clockwise (as viewed from inlet)
<b>Dimensions:</b>	Refer to installation drawing

#### SYSTEM OPTIONS:

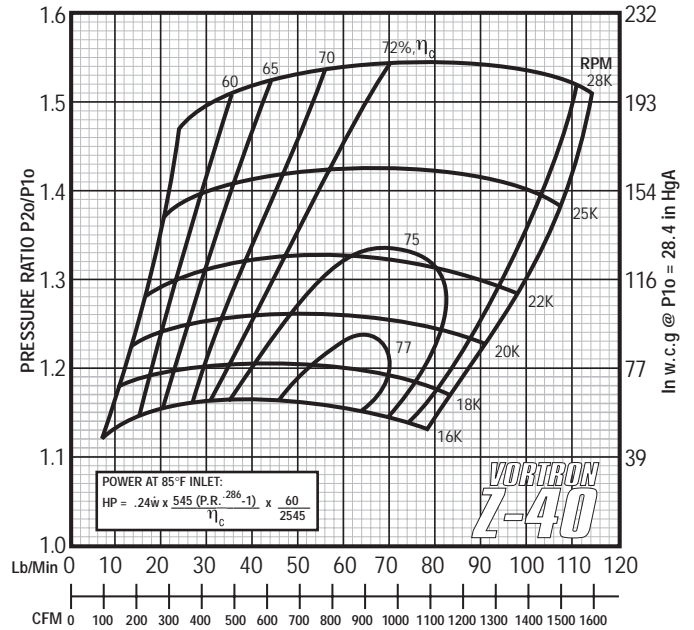
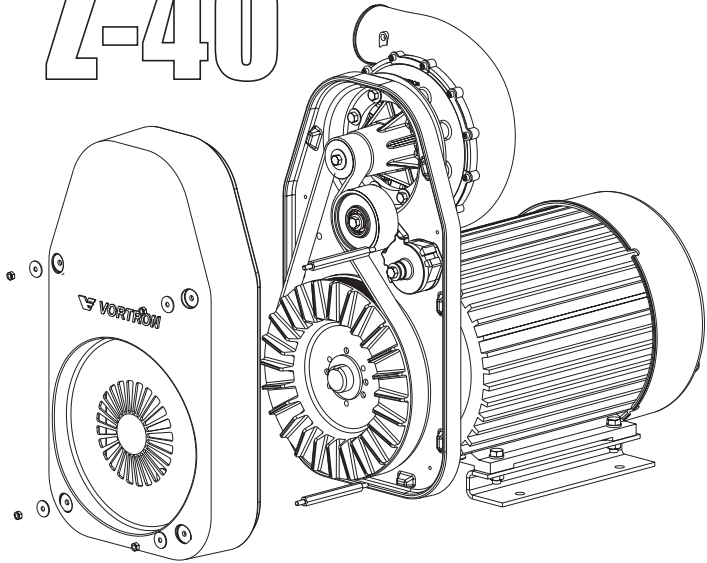
<b>Suction Filters:</b>	(1) High-Performance washable element or HEPA. (2) Integrated filter/silencer.
<b>Mounts:</b>	(1) Rigid steel rails (2) Compliant vibration isolation mounts.
<b>Motors:</b>	Inverter duty, premium efficient, washdown, explosion proof



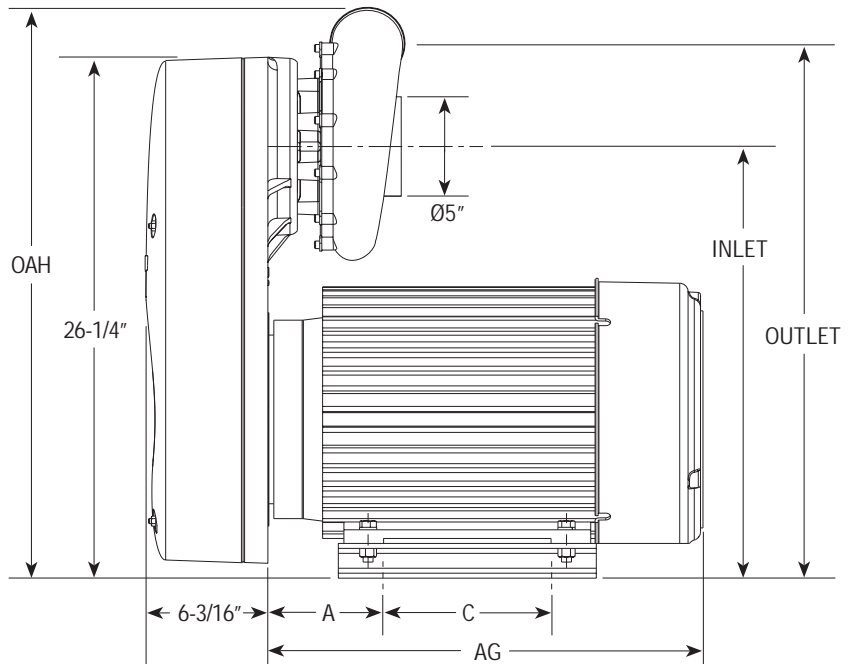
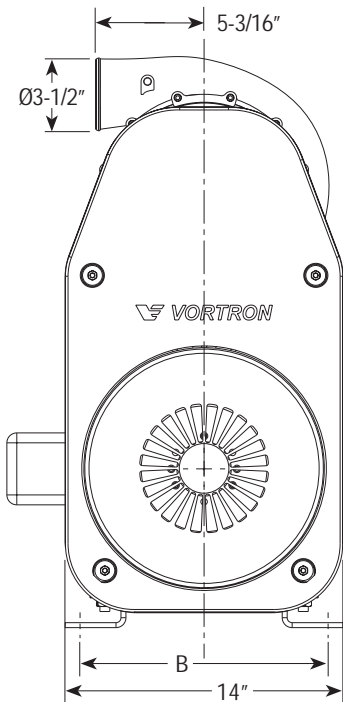
**IMPELLER:**  
Optimized inducer  
blading with  
splitter, radial  
discharge

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## Z-40



MOTOR SERIES	STANDARD MOUNTS			ISOLATION MOUNTS			AG	A	B	C	Wt(lbs)
	OAH	INLET	OUTLET	OAH	INLET	OUTLET					
182TC, 182TCH	28-3/4	21-3/4	26-7/8	28-3/4	21-3/4	26-7/8	13-1/2	3	10	8-1/2	120
184TC, B184TC, 184TCH, B184TCH	28-3/4	21-3/4	26-7/8	28-3/4	21-3/4	26-7/8	13-1/2	3-1/2	10	8-1/2	130
213TC	28-3/4	21-3/4	26-7/8	28-3/4	21-3/4	26-7/8	15-1/2	3-1/2	11	8-1/2	165
215TC	28-3/4	21-3/4	26-7/8	28-3/4	21-3/4	26-7/8	17	4-1/4	11	8-1/2	185
254TC	28-3/4	21-3/4	26-7/8	29-1/4	22-5/16	27-3/8	20-1/8	4-7/8	12-1/2	8-1/2	255
256TC, B256TC	28-3/4	21-3/4	26-7/8	29-1/4	22-5/16	27-3/8	21-7/8	5-3/4	12-1/2	8-1/2	275



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