

250Z Series

THOMAS
by Gardner Denver

FEATURES

- > Pressure or vacuum capability
- > Oil-less operation
- > Efficient brushless DC motor
- > Variable speed output
- > Proven WOB-L piston technology
- > High performance piston seal
- > Die-cast aluminium and Magnesium components
- > Thin wall, hard coated aluminum piston cylinder
- > Epoxy coated wetted parts
- > Designed and tested per Agency standards
- > RoHS and REACH compliant

TYPICAL APPLICATIONS

- > Portable Oxygen Concentrator
- > Small Analytical Equipment
- > Fuel Atomization
- > Ambient Scenting
- > Lab Automation

CUSTOMER REQUIREMENTS

- > Supplemental cooling air flow to compressor to be integrated into thermal management system to ensure that proper installation and operating environment is maintained in keeping with the product specifications
- > BLDC motor requires a motor controller - optional Thomas controller, SKCNTLR, available in sample quantities

BASE MODEL

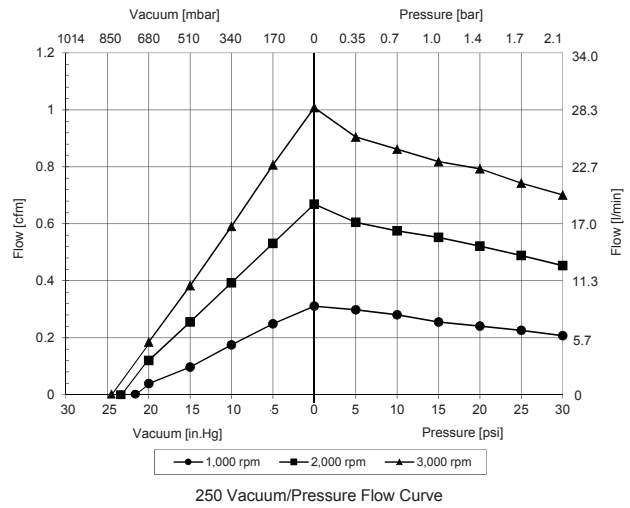
250ZC35/24



WOB-L

250Z Series

Flow	1.00 cfm (28.3 l/min)
Max. pressure	30 psi (2.1 bar)
Max. vacuum	82% local barometer



PERFORMANCE DATA

T16-0381, T17-0200

Model number	250ZC35/24		
Head configuration	Pressure/Vacuum		
Stroke	0.35 in. (8.9 mm)		
Nominal voltage input	24V DC	24V DC	24V DC
Variable output speed	1,000 rpm	2,000 rpm	3,000 rpm
Max. open air flow	0.31 cfm (8.7 l/min)	0.67 cfm (19.0 l/min)	1.00 cfm (28.3 l/min)
Max. rated pressure	30 psi (2.1 bar)	30 psi (2.1 bar)	30 psi (2.1 bar)
Current at rated pressure	1.3A	2.3A	3.5A
Power at rated pressure	31W	55W	83W
Max. pressure restart	30 psi (2.1 bar)	30 psi (2.1 bar)	30 psi (2.1 bar)
Max. vacuum	73% local barometer	80% local barometer	82% local barometer
Max. vacuum restart	73% local barometer	80% local barometer	82% local barometer

ELECTRICAL DATA

Motor type	10 pole brushless DC, 3 phase		
Motor insulation class	F		
Motor protection	Thermally protected via customer hook-up of thermistor leads Optional SKCNTLR Thomas controller disables motor for stall, amps		
Power lead wire color, gauge	Green (phase A), black(phase B), red (phase C), 18 AWG		
Hall sensor wire color, gauge	Yellow (Hall+), brown (HS1), orange (HS2), blue (HS3), gray (Hall -), 22 AWG		
Thermistor wire color, gauge	Violet (Thermistor), 22 AWG		

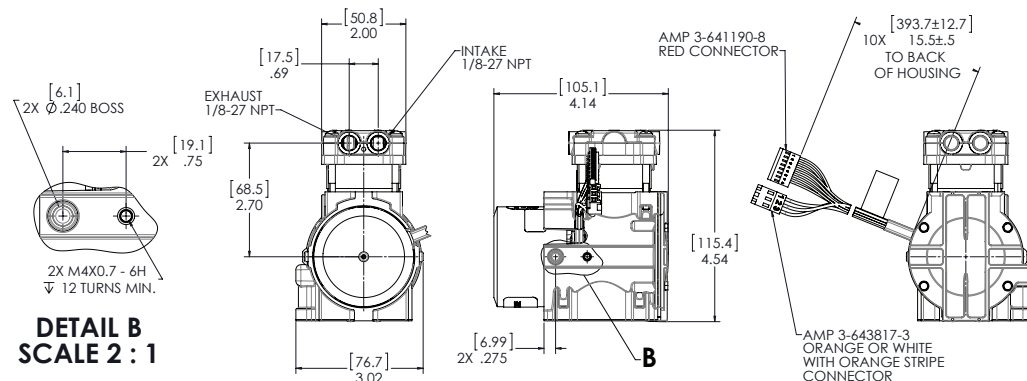
GENERAL DATA

Operating ambient temperature	50° TO 104° F (10° to 40 °C)*
Safety certification	Consult factory
Net weight	2.40 lbs (1.08 kg)

*Broader ambient operating ranges may be possible depending on your specific application. Please consult factory regarding your particular system needs.

PRODUCT DIMENSIONS

250ZC35/24
Dimensions in inches [mm]



UNIT REQUIRES SUPPLEMENTAL COOLING AIR FLOW.
BRUSHLESS DC TECHNOLOGY REQUIRES MOTOR CONTROLLER TO OPERATE.

LEAD CONFIGURATION:
LINE:
POSITION 1 - GREEN (PHASE A)
POSITION 2 - BLACK (PHASE B)
POSITION 3 - RED (PHASE C)

HALL SENSOR:
POSITION 1 - VIOLET (THERMISTOR)
POSITION 2 - YELLOW (HALL +)
POSITION 3 - BROWN (H1)
POSITION 4 - ORANGE (H2)
POSITION 5 - BLUE (H3)
POSITION 6 - GRAY (HALL -)
POSITION 7 - VIOLET (THERMISTOR)
POSITION 8 - EMPTY

PUMP AND COMPRESSOR SOLUTIONS FOR OEMS WORLDWIDE

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