

415Z1 SERIES

THOMAS
An Ingersoll Rand Business

FEATURES

- > Easy to use BLDC technology/operation
- > On-board, integrated brushless DC motor controller
- > Seven convenient fixed speed output selections
- > Variable speed PWM input signal for full range flexibility
- > Closed loop speed operation for consistent performance
- > Pressure or vacuum capability
- > Proven WOB-L piston technology
- > Integrated cooling fan for simple thermal management
- > Durable die-cast aluminium components
- > Wetted parts treated for corrosion resistance
- > Field serviceable

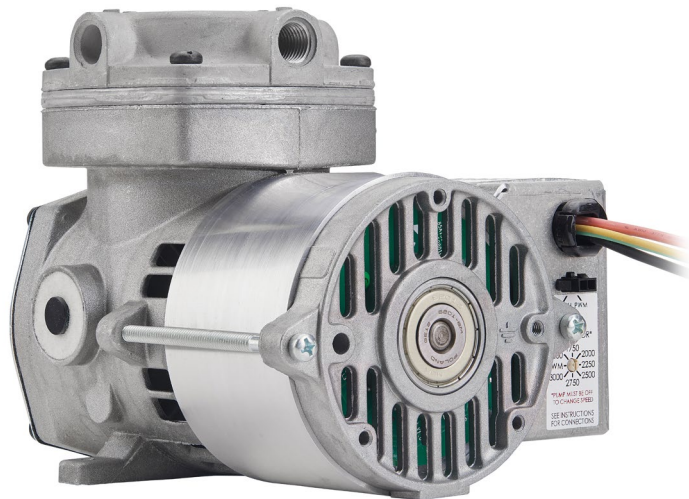
TYPICAL APPLICATIONS

- > In-Vitro Diagnostics
- > Dental Equipment
- > Spray Atomization
- > Pond Aeration



BASE MODEL

415Z1C3624 (Pressure/Vacuum, 24Vdc)



WOB-L

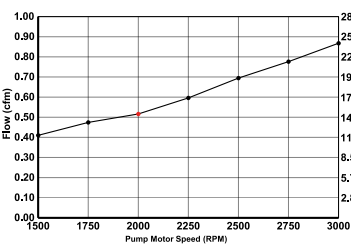
415Z1 Series

Flow	0.87 cfm (24.6 l/min)
Max. pressure	100 psi (6.9 bar)
Max. vacuum	83% local barometer

Pump Open Flow at Each Pump Speed Selection

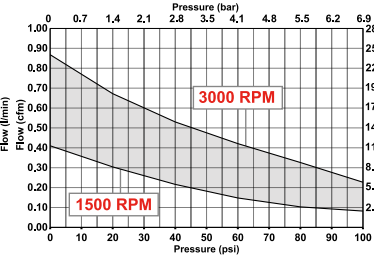


On board - Integrated fixed or variable PWM speed control



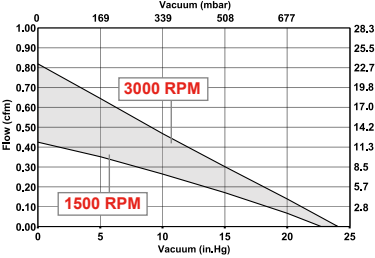
Factory set at the 2000 RPM setting

Pump Flow and Pressure at Min. / Max. Speed Setting



Pressure performance

Pump Flow and Vacuum at Min. / Max. Speed Setting



Vacuum performance

NOTE: All test values are nominal and for reference only. They are not guaranteed maximum or minimum limits, nor do they imply mean or median.

PERFORMANCE DATA		Shaded column indicates factory pre-set speed selection						
Pump Configuration	Parallel Flow Pressure (Vacuum capable)							Note: pump is capable of continuous pressure and/or light duty vacuum.
Model Number - 24VDC Nominal Voltage	415Z1C3624							
Speed Setting	1500 RPM	1750 RPM	2000 RPM	2250 RPM	2500 RPM	2750 RPM	3000 RPM	
Open Air Flow - cfm (l/min)	0.41 (11.6)	0.47 (13.4)	0.52 (14.6)	0.60 (16.9)	0.69 (19.7)	0.78 (22.0)	0.87 (24.6)	
Max. rated pressure - psi (bar)	60 (4.1)	100 (6.9)	100 (6.9)	100 (6.9)	100 (6.9)	100 (6.9)	100 (6.9)	
Flow at max. rated pressure - cfm (l/min)	0.15 (4.2)	0.08 (2.2)	0.10 (2.8)	0.12 (3.5)	0.16 (4.6)	0.20 (5.7)	0.23 (6.4)	
Current at max. rated pressure - Amps at 24Vdc	3.2	4.4	3.9	3.8	3.8	4.1	4.4	
Power at max. rated pressure - Watts at 24Vdc	78	105	93	91	92	98	105	

ELECTRICAL DATA	
Motor type	24Vdc BLDC
Motor insulation class	F
Motor protection	BLDC controller self-protection temperature limit: 75° C (power off/on to reset)
Power lead wire color, gauge	Black, 16 AWG Green w/yellow, 18 AWG Red, 16 AWG
Power lead wire color function/pin ID	Black: 0 VDC/Pin 1 Green w/yellow: Ground/Pin 2 Red: +Vdc/Pin 3
I/O lead wire color function/pin ID	White: PWM/Pin 1 Blue: Tach out/Pin 2 (See Speed Selection Instructions included with pump), I/O harness not included with pump.

GENERAL DATA	
Operating ambient temperature	50° to 104°F (10°C TO 40°C)*
Pump functionality	Pump pre-set to 2000 RPM. 7 fixed speeds or PWM (1500 - 3000 RPM) may be selected
Net weight	4.59 lbs. (2.08 kg)

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

PRODUCT DIMENSIONS	
POWER CONNECTOR: TE P/N: 350766-1 3X TERMINAL: TE P/N: 350218-3	INTAKE 1/4-18 NPT EXHAUST 1/4-18 NPT
LEAD LENGTH (FROM GROMMET TO BACK OF CONNECTOR): 304.8±25.4 12.0±1.0	
PUMP SPEED I/O, PWM & TACH CONNECTOR: MOLEX P/N: 436400200 2X TERMINAL: MOLEX P/N: 430310001	3X 8-32 UNC - 2B

GENERAL CONTACT

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THOMAS is a leading manufacturer of systems, compressors, vacuum, and liquid pumps for Original Equipment Manufacturers (OEMs) in the medical, laboratory, environmental and industrial sector.

With its experienced Engineering, Technical, and Operations staff and capabilities, Thomas designs and manufactures customized pressure and vacuum solutions that meet the precise needs of its customers. Backed by over 60 years of engineering excellence and innovation, and a global manufacturing network, Thomas stands out as the reliable choice for OEMs worldwide.

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