

# 907Z1 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
- > Robust diaphragm pump technology
- > Integrated cooling fan for simple thermal management
- > Durable die-cast aluminum components
- > Epoxy coated wetted parts for corrosion resistance

## TYPICAL APPLICATIONS

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



## BASE MODEL

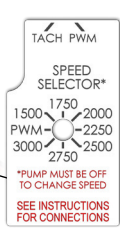
907Z1C1824 (Pressure/Vacuum, 24Vdc)



**DIAPHRAGM**

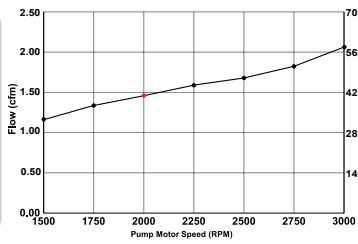
# 907Z1 Series

Flow	2.06 cfm (58.5 l/min)
Max. pressure	25 psi (1.7 bar)
Max. vacuum	72% local barometer



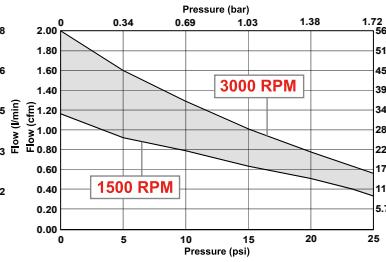
On board - Integrated fixed or variable PWM speed control

Pump Open Flow at Each Pump Speed Selection



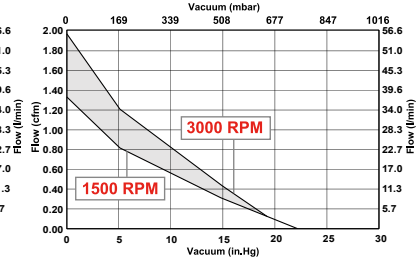
Factory set at the 2000 RPM setting

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



Pressure performance

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



Vacuum performance

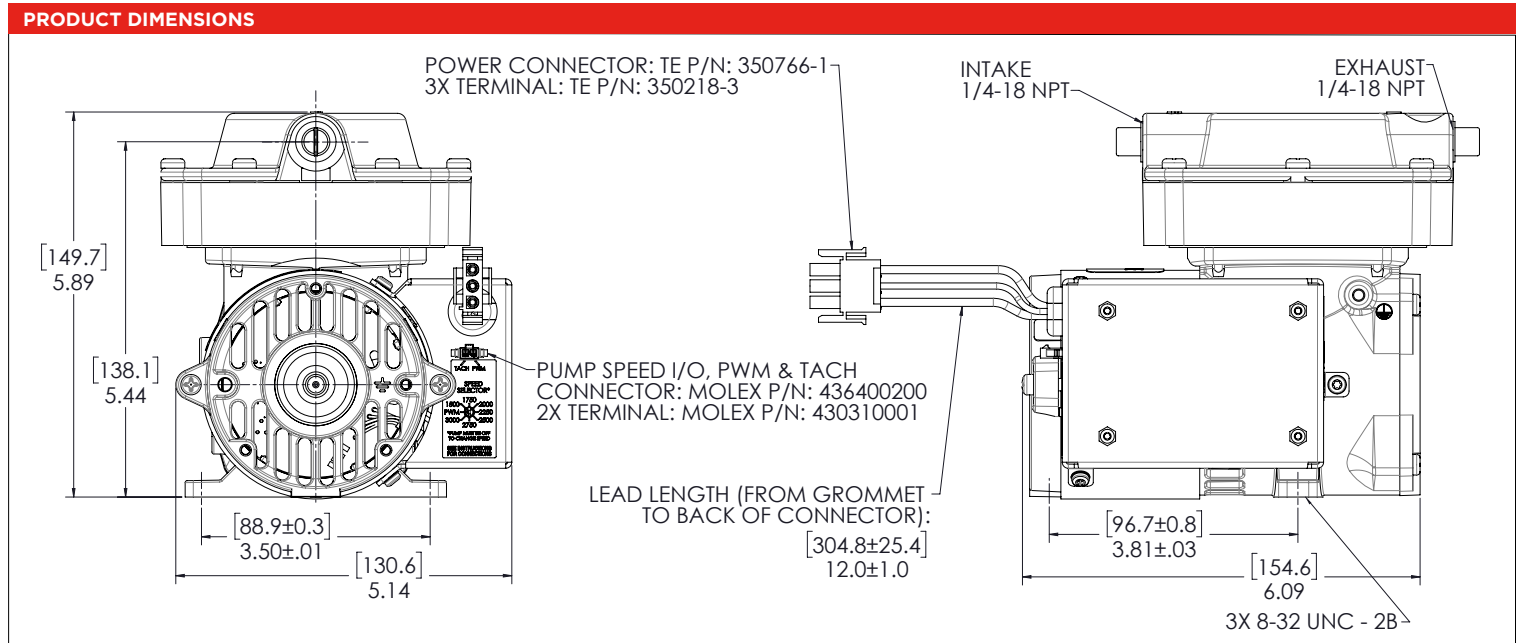
NOTE: All test values are nominal and for reference only. They are not guaranteed maximum or minimum limits, nor do they imply mean or median.

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	907Z1C1824							
<b>Speed Setting</b>	1500 RPM	1750 RPM	2000 RPM	2250 RPM	2500 RPM	2750 RPM	3000 RPM	
Open Air Flow - cfm (l/min)	1.16 (32.8)	1.33 (37.7)	1.45 (41.2)	1.59 (45.0)	1.67 (47.3)	1.82 (51.5)	2.06 (58.5)	
Max. operating pressure - psi (bar)	25 (1.72)	25 (1.72)	25 (1.72)	25 (1.72)	25 (1.72)	25 (1.72)	25 (1.72)	25 (1.72)
Flow at max. rated pressure - cfm (l/min)	0.30 (8.5)	0.35 (10.0)	0.43 (12.0)	0.50 (14.1)	0.54 (15.3)	0.51 (14.5)	0.43 (12.2)	
Current at max. rated pressure - Amps at 24Vdc	4.1	3.6	3.5	3.6	3.9	4.1	4.3	
Power at max. rated pressure - Watts at 24Vdc	99	87	85	88	94	100	103	

ELECTRICAL DATA		Test Reference: T22-0191
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	5.75 lbs. (2.61 kg)

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



## GENERAL CONTACT

### EMEA

#### Gardner Denver Thomas GmbH

Livry-Gargan-Str. 10  
82256 Fuerstenfeldbruck  
Germany

Tel: +49 8141 2280 0  
Fax: +49 8141 8892136  
thomas.de@irco.com

### AMERICAS

#### Gardner Denver Thomas, Inc.

1419 Illinois Avenue  
Sheboygan, WI 53081  
USA

Tel: +1 920 457 4891  
Fax: +1 920 451 4276  
td.usa@irco.com

### ASIA PACIFIC

#### Gardner Denver Thomas Pneumatic Systems (Wuxi) Co., Ltd.

No. 1 New Dong An Road  
Shuofang Town  
Wuxi, Xinwu District  
Jiangsu 214142  
China

Tel: 400-012-1268  
QQ 800 180 724  
thomas.cn@irco.com

**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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