

## Z-Series Pumps

### FEATURES

- > Electronic air displacement pipetting modules
- > Exceptional precision and accuracy
- > Can be configured for mounting to a robotic arm
- > Interfaces with the M-Series motion controllers

### CUSTOMER REQUIREMENTS

- > Drive Recommendations      Pump should typically be driven with a 24 VDC bipolar chopper drive, ½ step, at rated current. Higher voltage may be required at higher step rates.

### CONFIGURED OPTIONS

- > Available in 200 µL, 1000 µL, 2000 µL and 5000 µL

### BASE MODEL

- 200 µL
- 1000 µL
- 2000 µL
- 5000 µL



(Shown with optional  
Tip Adapter and Tip)

## SPECIFICATIONS

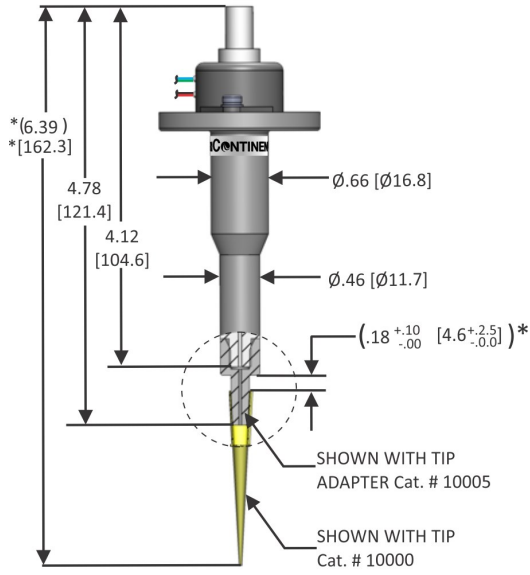
	<b>200 µL Cat. # 0948</b>	<b>1000 µL Cat. # 0949</b>	<b>2000 µL Cat. # 0950</b>	<b>5000 µL Cat. # 0951</b>
Tip Adapter Cat. #	10005	10006	10007	10008
Disposable Tip Cat. #	10000 (96/rack)	10001 (100/rack)	10002 (60/rack)	10003 (24/rack)
Step Resolution Per Full Step Per Half Step	0.381 µL 0.191 µL	1.527 µL 0.763 µL	3.808 µL 1.904 µL	7.616 µL 3.808 µL
Weight Z-Pump without Tip Adapter Z-Pump with Tip Adapter Z-Pump with Tip Adapter and Tip	2.17 oz [61.6 gm] 2.49 oz [70.6 gm] 2.50 oz [70.9 gm]	2.65 oz [75.0 gm] 3.06 oz [86.7 gm] 3.09 oz [87.6 gm]	2.74 oz [77.8 gm] 3.12 oz [88.6 gm] 3.17 oz [90.0 gm]	3.13 oz [88.7 gm] 4.25 oz [120.5 gm] 4.33 oz [122.7 gm]
Syringe Data Bore Stroke	0.1721 in. [4.37 mm] 0.709 in. [18.00 mm]	0.3441 in. [8.74 mm] 0.709 in. [18.00 mm]	0.5441 in. [13.82 mm] 0.709 in. [18.00 mm]	0.7694 in. [19.54 mm] 0.709 in. [18.00 mm]
Fluid Contact Materials (in case of accidental fluid aspiration)	Acetal, PTFE, Silicone Lubricant, Buna N, Neoprene, Borosilicate Glass and Stainless Steel			

## FUNCTIONAL PARAMETERS

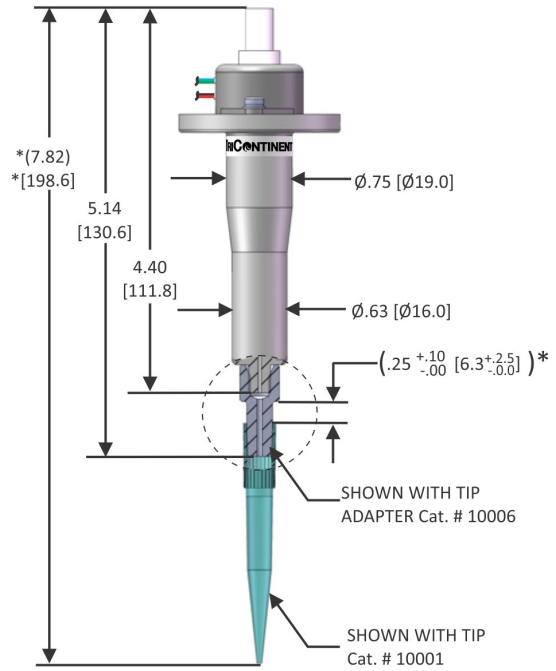
Performance (at full volume) with tip adapter and tip noted above	
Accuracy within	± 3%
Precision within	1%
Motor/Leadscrew Data	
Travel/Full Step	0.001 in. [0.0254 mm]
Travel/Half Step	0.0005 in. [0.0127 mm]
Resistance/Phase	14.7 Ω
Inductance/Phase	8.5 mH
Rated Current	0.34 A
Rated Voltage	5.0 V

Z-SERIES PUMPS ENVELOPE DRAWING

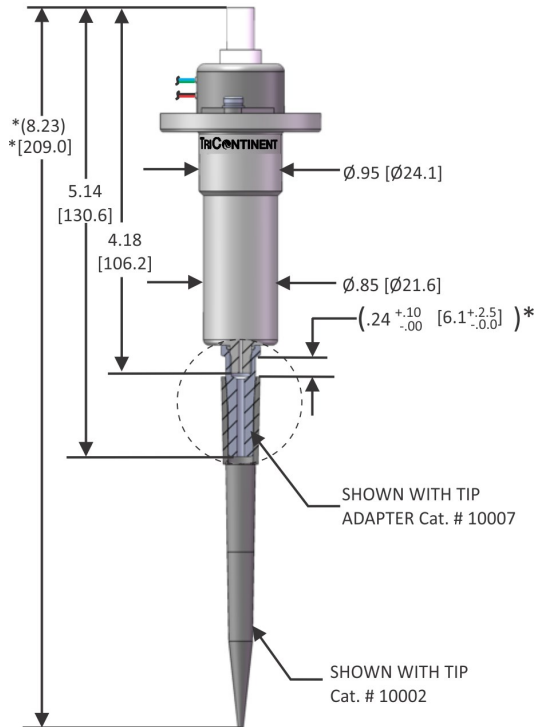
200  $\mu$ L, Cat. # 0948



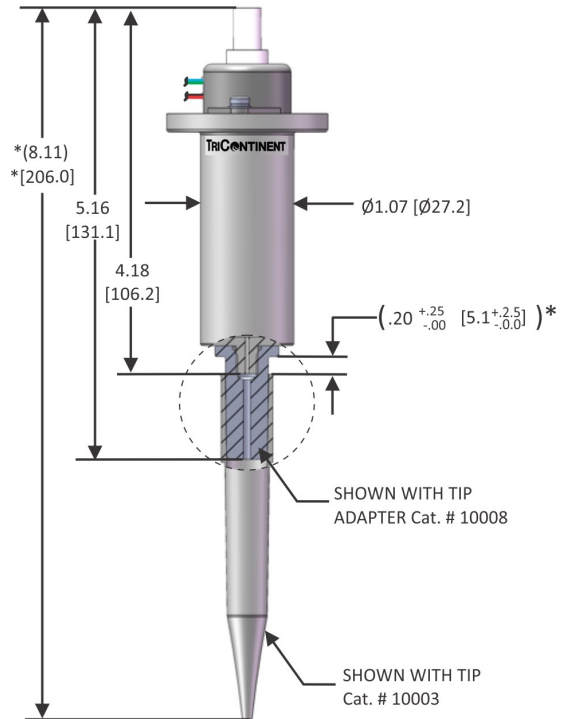
1000  $\mu$ L, Cat. # 0949



2000  $\mu$ L, Cat. # 0950



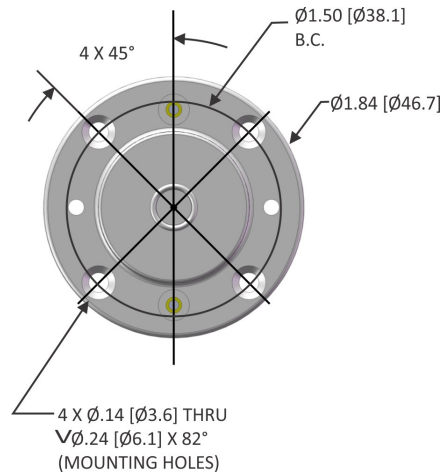
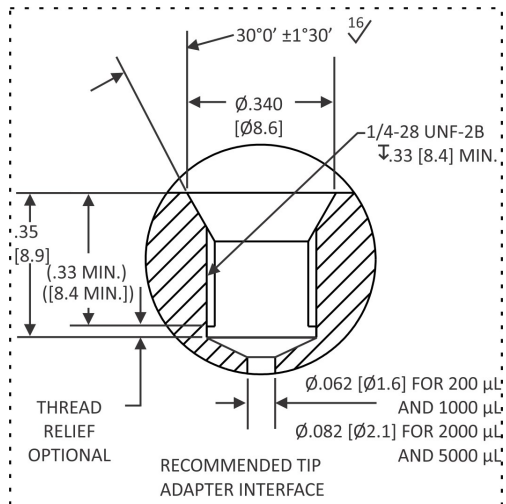
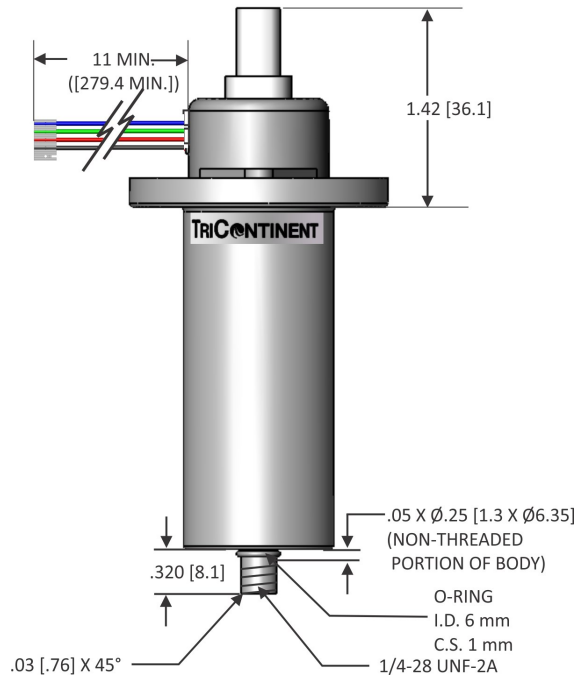
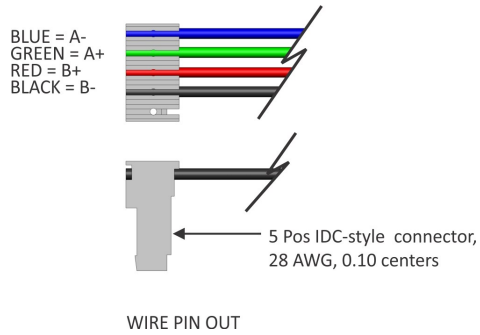
5000  $\mu$ L, Cat. # 0951



\*Note: Each tip is designed to seal within the reference gap dimension shown. Customers should perform their own testing to determine optimum force/location for sealing and tip stripping.

## Z-SERIES PUMP INTERFACE DETAILS

Dimensions/Features noted are typical for any size, Z-Series Pump (5000 µL shown)



Note: Dimensions in inches [mm] unless otherwise specified.

### PRECISION MANUAL SYRINGE PUMPS

[tricontinent.com](http://tricontinent.com)



**TriContinent by Gardner Denver**  
12555 Loma Rica Drive  
Grass Valley, CA 95945  
USA  
Tel: 800-937-4738  
Fax: 530-273-2586  
[liquidhandling.tcs@gardnerdenver.com](mailto:liquidhandling.tcs@gardnerdenver.com)

**Gardner Denver Thomas GmbH**  
Livry-Gargan-Str. 10  
82256 Fürstentfeldbruck  
Germany  
Tel: +49 8141 2280 0  
Fax: +49 8141 8892136  
[thomas.de@gardnerdenver.com](mailto:thomas.de@gardnerdenver.com)

**Gardner Denver Hong Kong, Limited**  
Unit 1317-1318 Delta House, 3 On Yiu Street  
Siu Lek Yuen, Shatin, New Territories  
Hong Kong  
Tel: +852 26903502  
Fax: +852 27924598  
[thomas.hk@gardnerdenver.com](mailto:thomas.hk@gardnerdenver.com)

**TRICONTINENT**  
by Gardner Denver

The information presented in this material is based on technical data and test results of nominal units. It is believed to be accurate and reliable and is offered as an aid to help in the selection of TriContinent products. It is the responsibility of the user to determine the suitability of the product for the intended use and the user assumes all risk and liability in connection there with. TriContinent does not warrant, guarantee or assume any obligation or liability in connection with this information.

Photos of products pictured in this catalog do not necessarily represent a specific model number. To obtain further information for custom options, contact your local TriContinent office.

Printed in USA Form No. MKT90024 L © Gardner Denver TriContinent. All rights reserved.