# <u>geotech</u>

# Peristaltic Sampling Pumps

# **Geopump<sup>™</sup> Peristaltic Pumps**

The Geotech Geopump<sup>™</sup> Series I and II Peristaltic Pumps are designed for single and multi-stage pressure or vacuum pumping of liquids. They operate by mechanical peristalsis, so the sample only comes in contact with the tubing. This allows for consistent sample integrity as well as easy cleaning and replacement. The Geopump is ideally suited for field sampling of shallow wells, surface water, and for laboratory use.

### **FEATURES**

- Exceptional field durability
- Operate to a depth up to 29 feet (8.8 meters)
- Variable speed control
- Designed for low-flow, purge and sample, descrete, and filtration
- AC only, DC only, or AC/DC combination
- Two pumping stations available, which can be piggybacked for multi-station pumping
- Reversible flow feature for back-flushing
- Disposable and dedicated tubing means controlled costs and no decontamination issues

### **OPERATION**

The Geotech Peristaltic Pumps operate by mechanical peristalsis, so the sample only comes in contact with the tubing. This allows for sample integrity as well as easy cleaning and replacement. With the optional stainless steel tubing weight, tubing can be lowered to a specific depth without curling or floating on the surface of the water. Geopumps operate from any external 12V DC or 120V AC power source.

**SERIES I Geopump™** Peristaltic Pumps are available in AC only, DC only, or AC/DC combination. These units have one pumping station which can be piggybacked for multi-station pumping. They have variable speeds ranging from 60 RPM to 350 RPM.

**SERIES II Geopump™** Peristaltic Pumps are available in AC only, DC only, or AC/DC combination. They have two pumping stations which can also be piggy-backed for multi-station pumping. The first pumping station has a variable speed of 30 to 300 RPM and the second station 60 to 600 RPM.

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### CALL GEOTECH TODAY (800) 833-7958

#### Geotech Environmental Equipment, Inc.

2650 East 40th Avenue • Denver, Colorado 80205 (303) 320-4764 • FAX (303) 322-7242 email: sales@geotechenv.com • website: www.geotechenv.com



Geopump<sup>™</sup> Peristaltic Pump Series II Kit with optional easy-load II<sup>®</sup> pump head, modular battery, 5 ft. (1.5 m) tubing, carrying case and power cord



Sample collection with the Geopump<sup>™</sup> Peristaltic Pump Series II with optional easy-load II<sup>®</sup> pump head (dispos-a-filter<sup>™</sup> capsule sold separately)



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Peristaltic Sampling Pumps

# Geopump<sup>™</sup> Peristaltic Pumps

### **SPECIFICATIONS**

<b>Operating Range</b>	Suction from 29 feet (8.8 meters) at sea level					
Principle of Operation	Mechanical peristalsis					
Dimensions	3.5 x 8 x 8 in. (9 x 20 x 20 cm)					
Power Source	Any external 12-18V DC @ 70 watts 90-260V AC 47-65 Hz					
Power Cord Length:	AC Cord 8 feet (2.4 meters) DC Cord 15 feet (4.6 meters)					
<b>Range of Speed:</b> Series I Series II	60 to 350 rpm First pumping station 30 to 300 rpm Second pumping station 60 to 600 rpm					
Speed Control	Stepless variable speed control					
<b>Pumping Options</b>	Pressure or vacuum (reversible flow)					
Pump Head Rotor	Cold rolled steel					
Warranty	1 year					



easy-load II<sup>®</sup> Pump Heads



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### **GEOPUMP KIT BUILD GUIDE**

Thank you for your interest in adding a Geopump peristaltic pump to your equipment fleet! To ensure the sampling needs of each user are met, there are several different Geopump kit configurations available. Please follow the steps of this guide when selecting a Geotech Geopump system.

Select an option from each group to configure your Geopump kit.

#### **Basic Unit**

- 0 DC only, with hardwired DC power cord3 AC/DC, with interchangeable DC power cord
  - 1 AC/DC, with interchangeable AC power cord
  - 2 AC/DC, with interchangeable AC and DC power cords





\*Includes 5 feet of Silicone Tube, Size 15

### **EXTRA ACCESSORIES**

• 77050000	Silicone Tube Size 15, 50 feet**			
• 77050501	Polyethylene Tube, ¼" OD, 500 feet**			
• 87050023	3.5 oz. SS Tube Weight, 3/8" with Clamp (adapts to Size 15 or Size 24 tubing)			
• 87050024	4.8 oz. SS Tube Weight, ½" with Clamp (adapts to Size 36 tubing)			
• 87050026	5.4 oz. SS Tube Weight, Snap-In (adapts to ¼" OD tubing)			
• 87050027	7.0 oz. SS Tube Weight, Snap-In (adapts to ¾" OD tubing)			
• 77250000	Portable Battery & Charger			
**Other materials and sizes available				



Geopump<sup>™</sup> 12V Portable Battery and Charger





#15/24

Peristaltic

Tubing



#36 Peristaltic Tubing

**Tubing Weights** 

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Peristaltic Sampling Pumps Peristaltic Pump Tubing

## HIGH-PERFORMANCE PRECISION TUBING SPECIFICATIONS

GEOTECH ENVIRONMENTA
Geotech Silicone
6409-36 TYGON® Mf
Trans @ (lala)
Tygon® (lab)
Tygon® (fuel)
C-Flex™
MASTERFLEX 64
Viton <sup>®</sup> *

Tubing Cross Sections	0	0	0	Ο	
Tubing Size	L/S 15	L/S 24	L/S 35	L/S 36	
Inside Diameter**	0.19" (4.8mm) 0.25" (6.4mm) 0.31" (7.9		0.31" (7.9mm)	0.38" (9.7mm)	
Hose Barb Size**	³⁄16" (4.8mm)	¼" (6.4mm)	³‰" (9.5mm)	³‰" (9.5mm)	
Flow Range – mL per Rev	1.7	2.8	3.8	4.8	
Maximum Pressure, Continuous***	25 psig (1.7 bar)		20 psig (1.4 bar)	15 psig (1.0 bar)	
Maximum Pressure, Intermittent***	40 psig	(2.7 bar)	35 psig (2.4 bar)	20 psig (1.4 bar)	
Maximum Vacuum***	26" Hg (660mm Hg)			24" Hg (610mm Hg)	
Suction Lift at Sea Level	29 ft. H <sub>2</sub> O (8.8m H <sub>2</sub> O)			27 ft. H <sub>2</sub> 0 (8.3m H <sub>2</sub> 0)	
**Nominal size					

\* Only available in sizes 15, 18, 25, & 36

### **SUCTION LIFT LOSS**

Calculate actual peristaltic pump suction lift based on elevation.

Note: Suction lift is the total vertical distance from static water level to peristaltic pump head.

Suction lift  $H_2O$  ft. at sea level – (Elevation in ft. x .00115) = actual  $H_2O$  suction lift at elevation.

**Example:** Size 15 silicone tubing has suction lift of 29 feet at sea level. Used with a Geopump at 5280 feet elevation, calculation shown here. 29 – (5280\*.00115) = 22.9' actual suction lift.

\*\*\*Actual performance may vary depending on tubing formulation.

### PRECISION TUBING SPECIFICATIONS

Tubing Cross Sections	0	0	0	0	0	Ο
Tubing Size	L/S 13	L/S 14	L/S 16	L/S 25	L/S 17	L/S 18
Inside Diameter**	0.03" (0.8mm)	0.06" (1.6mm)	0.12" (3.1mm)	0.19" (4.8mm)	0.25" (6.4mm)	0.31" (7.9mm)
Hose Barb Size**	¼₀" (1.6mm)	⅓₁₀" (1.6mm)	%" (3.2mm)	³⁄16" (4.8mm)	¼" (6.4mm)	³∕a" (9.5mm)
Flow Range – mL per Rev	0.06	0.21	0.8	1.7	2.8	3.8
Maximum Pressure, Continuous***	25 psig (1.7 bar)			20 psig (1.4 bar)	15 psig (1.0 bar)	10 psig (0.7 bar)
Maximum Pressure, Intermittent***	40 psig (2.7 bar)			35 psig (2.4 bar)	20 psig (1.4 bar)	15 psig (1.0 bar)
Maximum Vacuum***	26" Hg (660 mm Hg)			20" Hg (510 mm Hg)		
Suction Lift at Sea Level	29 ft. H <sub>2</sub> 0 (8.8 m H <sub>2</sub> 0)			22 ft. H <sub>2</sub> 0 (6.7 m H <sub>2</sub> 0)		

\*\*Nominal size

\*\*\*Actual performance may vary depending on tubing formulation.

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