

UNO**Boxer 6000 Series Peristaltic Pumps***2-12 Channels, DC Powered, Gear or Stepper Motor Driven***DESCRIPTION**

6000 series peristaltic pumps are built on the unique operational principle of balancing the load on the motor and gearbox shafts. The peristaltic tubes are positioned in pairs on both sides of the rollers.

The pumps are supplied with a standard of 8 or 4 rollers per channel. The 8 rollers enhance dispense accuracy and reduce pulsation. As the 8 rollers are step offset between the stages, a link between channels in two adjacent stages will further reduce pump pulsation.

The pumps have 4 channels/tubes per stage (except for 3 mm ID tube, which has 2 tubes per stage and can be supplied in up to 3 stages).

With large supporting bearings on the front and back of the rollers, the construction is ideal for long life and maintenance free operation.

Tubing can be specified from a wide range of diameters. The color coded tube clips are manufactured to match the various tube diameters and thus eliminate the need for any adjustments.



Tube Sizes and Flow Rates						
Flow Rate Based on Virgin Pharmed Tube						
Water Flow @ 20°C With No Pressure						
Part No.	Tube Material	Tube ID (mm)	8-Roller System		4-Roller System	
			Full Speed (ml/min)	Half Speed (ml/min)	Full Speed (ml/min)	Half Speed (ml/min)
6000.507	Pharmed	0.25	1.40	0.67	1.67	0.79
6000.506	Pharmed	0.51	5.40	2.60	6.30	3.00
6000.501	Pharmed	1.03	14.00	6.50	16.60	7.80
6000.502	Pharmed	1.52	30.50	14.40	38.50	18.40
6000.503	Pharmed	2.06	43.46	20.40	60.40	27.50
6000.505	Pharmed	2.54	58.20	29.00	88.10	43.20
6000.504*	Norprene	3.00	72.60	35.20	93.60	50.30
6000.508**	Pharmed	3.20	-	-	149.00	68.60
6000.513**	Pharmed	4.80	-	-	330.00	150.00

*1.0 mm tube wall, requires special clip.
**1.6 mm tube wall, requires special clip for a max two channels per pump

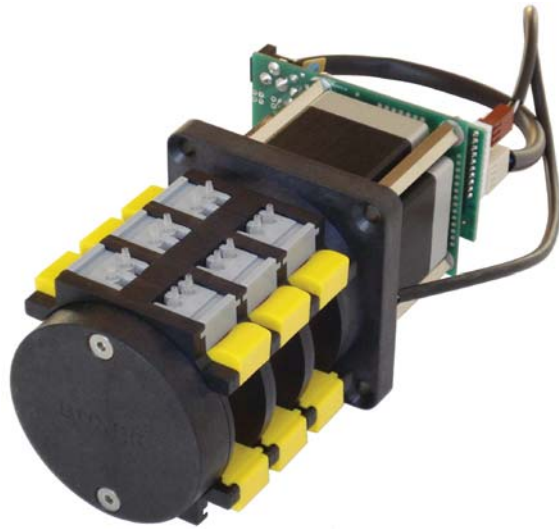
PUMP SPECIFICATION

Motor: 12 or 24 VDC or NEMA 23, 24V Stepper
 Rotor Speed at 12V/24V: 430 rpm
 Tube Length Per Channel: 58 mm
 Max. Suction Height: 8 meters W.C.
 Max. Pressure: 8 meters W.C.
 Max. Ambient Temp.: 40°C
 Max. Media Temp.: 50°C
 Tube Clips: Acetal
 Pump Body: PPO (Polyphenylene Oxide)
 Tube Connectors: Polypropylene
 Options: Rotational encoder mounted on motor

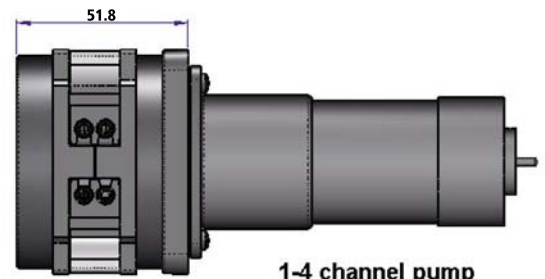


The pump head has a unique operating principle whereby the tubes are engaged with the rollers over a section of 95° only. This arrangement allows the installation of two tubes on both sides of the roller wheel with the advantage of 50% space saving, a balanced and much reduced motor load and less wear in the tubes

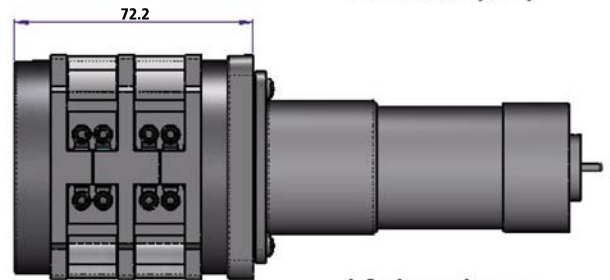
DIMENSIONS



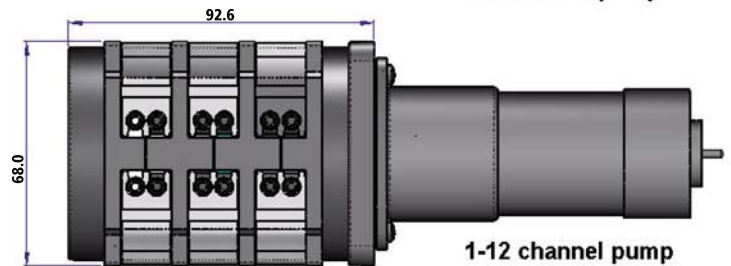
Stepper Motor Controlled Universion



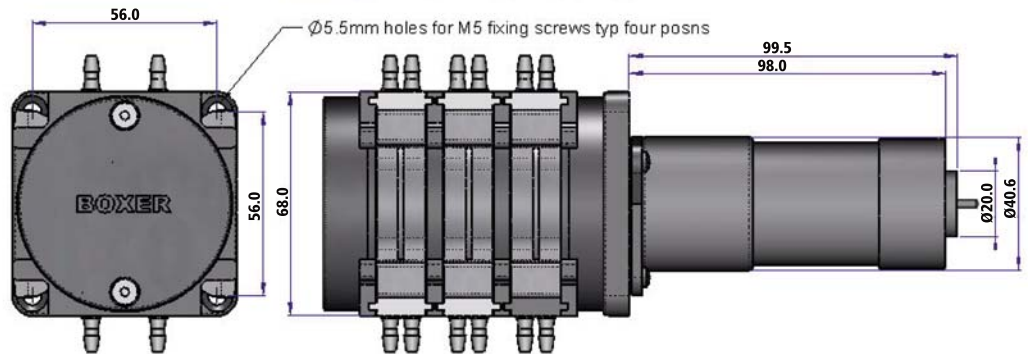
1-4 channel pump



1-8 channel pump



1-12 channel pump

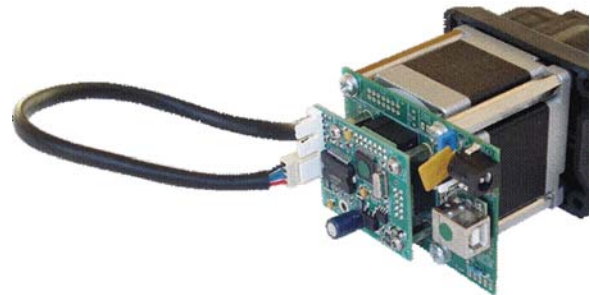
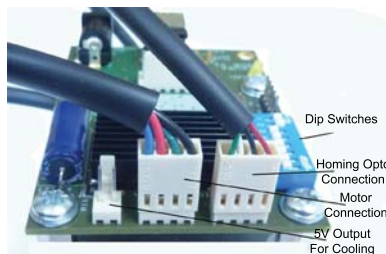


Model 6900.001 Stepper Motor Control Board

The optional CSD board (Controlled Stepper Drive) is a flexible and powerful controller for accurate dispensing. It installs directly to the back of the stepper motor or remotely.

USB interface and intuitive menu driven programming software allow for easy programming of up to 10 operating pump protocols to characterize the movement of the pump including:

- Direction
- Acceleration
- Hold Current
- Run Current
- Initial Speed
- Back Steps
- Repeat
- Stepping
- Decelerate
- Count
- Hold Current
- Final Speed
- End of cycle delay



Protocols can be chained together and repeated up to 1000 times.

One CSD board is required for each pump. The programming software can control up to 8 pumps.

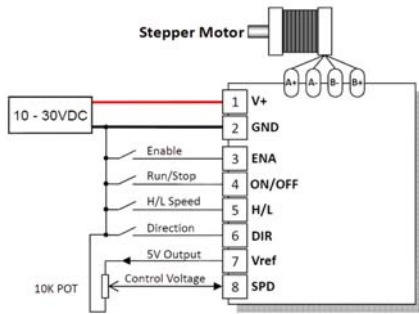
Required for installation but not supplied:

- 1) Power Supply, 24V, 2.5A +
- 2) USB Cable A to B
- 3) PC with Windows XP, Vista or Windows 7 installed, .NET platform 2.0 min.

Model 6900.002 Basic Stepper Control Board
installed to back of motor with brackets or mounted remotely

Control Terminals For:

- Stop
- High and Low Speed
- Change of Direction
- Remote Speed Control Using 5-10K Pot



ORDERING INFORMATION

- 1) Select pump model
- 2) Select tubing model
- 3) Select any additional accessories

Model	Number of Channels/Rollers	Power
Pump Head, DC Motor & Gearbox		
6001	4/8	12V
6021	4/8	24V
6401	4/4	12V
6421	4/4	24V
6002	8/8	12V
6022	8/8	24V
6402	8/4	12V
6422	8/4	24V
6003	12/8	12V
6023	12/8	24V
6403	12/4	12V
6423	12/4	24V
Pump Head & Stepper Motor		
6131	4/8	24V
6141	4/4	24V
6132	8/8	24V
6142	8/4	24V

Model	Tubing/Accessories
6000.501	Pharmed tubing, 1.03 mm I.D., set of 4 with connectors
6000.502	Pharmed tubing, 1.52 mm I.D., set of 4 with connectors
6000.503	Pharmed tubing, 2.06 mm I.D., set of 4 with connectors
6000.504	Neoprene tubing, 3.0 mm I.D., set of 4 with connectors
6000.505	Pharmed tubing, 2.54 mm I.D., set of 4 with connectors
6000.506	Pharmed tubing, 0.51 mm I.D., set of 4 with connectors
6000.507	Neoprene tubing, 3.2 mm I.D., set of 4 with connectors
6000.508	Pharmed tubing, 3.2 mm I.D., set of 4 with connectors
6000.513	Pharmed tubing, 4.8 mm I.D., set of 2 with connectors
6000.550	Motor encoder for 6000, two channels, 7 positions, supplied on motor
6900.001	Basic Stepper Motor Control Board
6900.002	Stepper Motor Control Board, USB Interface