

PneuWave Microfluidic Pump

- Precise, accurate flow rate control with nanoliter resolution
- Pulse-free
- Superior performance to syringe pumps and traditional peristaltic pumps
- Accommodates from small to large pressurized fluid vessels
- 1 to 8 channels can be operated through either the front display or PC software (stand-alone and LabVIEW)
- Can operate in either flow rate or pressure controlled mode
- Low dead-volume fluid path
- Pump contains a built-in, quiet compressor, no external compressor



PneuWave Pump Configurations

Channel Number:

- 1 Channel
- 2 Channels
- 4 Channels
- 8 Channels

Pressure Model:

- Low 0–1 bar (0-14.5 psi)
- High 0–4 bar (0-58 psi)

Flow Model*:

- Nano 90–7000 nL/min
- Micro 1–80 µL/min
- Milli 30–1000 µL/min
- Milli +5 0.2–5.0 mL/min

*Models can operate outside the calibrated ranges provided. However flow rate measurement will be most accurate when operated within the corresponding ranges for each model.

Flow Specifications

	Nano	Micro	Milli	Milli +5
Flow Rate Range	0–8000 nL/min	0–120 µL/min	0–1100 µL/min	0–5.0 mL/min
Standard Calibrated Flow Rate Range	90–7000 nL/min	1–80 µL/min	30–1000 µL/min	0.2–5.0 mL/min
Accuracy below full scale (% of full scale)*	0.3%	0.15%	0.2%	0.2%
Repeatability below full scale	0.05%	0.01%	0.02%	0.02%
Flow Detection Response Time	40 msec			
Flow Rate Stability	Down to 0.1% CV**			
Operating Temperature	10 to 50°C (50 to 122°F)			
Fluid Connector Type	UNF Taper 6-40	UNF ¼-28 Flat Bottom	UNF ¼-28 Flat Bottom	UNF ¼-28 Flat Bottom
Flow Sensor Materials	Quartz Glass, PEEK™, Teflon®, Tefzel®		Borosilicate Glass, PEEK™, Teflon®, Tefzel®	
Flow Sensor Inner Diameter	150 µm (0.006 in)	430 µm (0.017 in)	1.0 mm (0.04 in)	1.8 mm (0.07 in)
Flow Sensor Internal Volume	1.5 µL	5.1 µL	< 30 µL	< 90 µL

* % of scale, or 5% of measured value (which ever value is larger)

**Relative to fluid type, tubing and system set-up

Pressure Specifications

	Low	High
Pressure Range with Internal Compressor	0–1 bar (0-14.5 psi)	0–2 bar (0-29.0 psi)
Pressure Range with External Pressure Source*	0–1 bar (0-14.5 psi)	0–4 bar (0-58.0 psi)
Response Time	Down to 20 msec	

*Relative to fluid type, tubing and system set-up

Dimensions

Width	18.4 cm (7.2 in)
Height	12.7 cm (5.0 in)
Depth	25.4 cm (10.0 in)