

Precision Auger Pump

for MicroVolume & Abrasive Liquid Dispensing

Applications: Solder Paste, Abrasive Thermal Gel, Conductive Adhesive, Dam and Fill, Gasketing, and more

Auger pump technology is excellent for mid-to-high viscosity and abrasive fluids. The GPD Global Precision Auger pump offers a full range of dispense quantity and capability from one pump.

Common Interface

The Precision Auger pump uses a common interface to accommodate all of our auger diameters: from 062 to 186. This interchange capability allows a single pump to meet a wide range of process needs. Dispenses as small as 0.5 nl and as large as area encapsulation as possible using the same pump body. All GPD augers are machined from carbide for long life and wear resistance. The auger can be modified to accommodate fluids with highly abrasive properties.



Real-Time Process Control with FPC Compatibility

The Precision Auger pump is compatible with our patented *FPC (Fluid Pressure Control) System*. FPC enhances pump performance by continuously monitoring the pressure of fluid entering the pump and making real-time adjustments to maintain a consistent feed pressure, regardless of fluid level in the reservoir.



Motion:

- Precision Auger pump motion derives from a high resolution, high torque servo motor.
- All aspects of motor control – acceleration, deceleration, and constant pump speed – are available and controlled with the software.

Temperature

- For fluids affected by temperature, a body heater is available.
- The body heater makes a fluid more dispensable by reducing its viscosity.
- Alternatively, for factories with daily temperature swings, the closed-loop heater can be used to stabilize fluid performance.



Meet a wide range of process needs with a single pump!

Needles:

- The GPD Global Precision Auger pump is compatible with our precision needles, as well as luer needles with the use of an optional adapter.
- Precision needles are machined from a single piece of steel and offer exceptional performance when dispensing small quantities of solder paste or conductive adhesives.

Cleaning:

- Cleaning the Precision Auger pump is very easy. The auger and cartridge assembly is removed by loosening a single thumb screw.
- Once removed from the pump body, the auger and cartridge assembly is easily cleaned with common cleaning items or by placing them in an ultra-sonic cleaner.



GPD Global
Precision Dispensing Systems

www.gpd-global.com • request@gpd-global.com

Precision Auger Pump

Pump Control Technology

Pump motion controlled via FLOWare® software

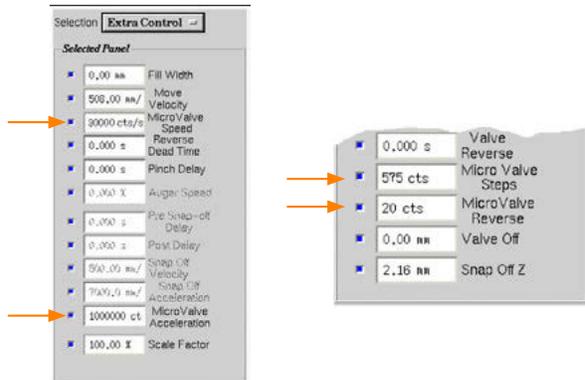
- Pump is equipped with an 8,000 count rotational encoder
- Allows for accurately controlled rotational movement of the auger screw



8,000 Counts per Revolution

FLOWare® software controls all aspects of pump motion

- Acceleration and deceleration
- Rotational speed via counts/second



Precision Needles

Many needle sizes and types are available for specific dispense requirements

- Precision taper tips for low material-to-needle surface tension
- Slim cut tips allow positioning close to a wall or device
- Needles feature a large, constant diameter material path for enhanced dispense capability

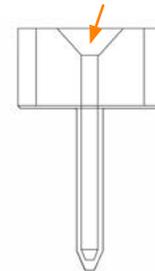


Precision Needles

Standard Precision Needles									
MATERIAL*	LENGTH*	GAUGE	TAPER		O.D.		I.D.		PART NO.
			mm	inch	mm	inch	mm	inch	
Stainless Steel	0.250" (6.35 mm)	11G Precision Needle	‡	‡	‡	‡	‡	‡	221BL11E01A
		12G Precision Needle			‡	‡	‡	‡	221BL12E01A
		14G Precision Needle			‡	‡	‡	‡	221BL14E01A
		15G Precision Needle			1.68	0.066	1.43	0.056	221BL15E01A
		16G Precision Needle			1.12	0.044	1.25	0.049	221BL16E01A
		17G Precision Needle			‡	‡	‡	‡	221BL17E01A
		18G Precision Needle			1.25	0.049	0.92	0.036	221BL18007A
		20G Precision Needle	1.16	0.046	0.61	0.024	221BL20003A		
		21G Precision Needle	1.19	0.047	1.12	0.044	0.52	0.020	221BL21006A
		22G Precision Needle					0.42	0.016	221BL22005A
		23G Precision Needle					0.34	0.013	221BL23006A
		25G Precision Needle					0.26	0.010	221BL25007A
		27G Precision Needle					0.21	0.008	221BL27005A
		28G Precision Needle					0.18	0.007	221BL28004A
		30G Precision Needle					0.15	0.006	221BL30001A
		31G Precision Needle					0.13	0.005	221BL31001A
		32G Precision Needle					0.101	0.004	221BL32018A

*Contact GPD Global for optional sizes, lengths, & materials. Ceramic needles & additional standard (.250, .350, .50) configurations available.
‡Contact GPD Global.

High Flow Material Pathway



Final Dispense Diameter only at tip



www.gpd-global.com • request@gpd-global.com

Headquarters 611 Hollingsworth Street, Grand Junction, CO 81505 USA • T: +1.970.245.0408 • F: +1.970.245.9674
GPD Global (Asia Pacific) Bayan Lepas, Penang, 11900 Malaysia • T: +60.12.555.0909

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