

Precision Auger for Retrofit/Integration

Precision Auger Pump for MicroVolume & Abrasive Liquid Dispensing

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

Upgrade your existing dispense robot with an advanced Precision Auger Pump. The Precision Auger Pump provides excellent dispense control and repeatability and is suitable for a wide range of applications and fluids.



Precision Auger Pump

The heart of the pump is an auger/cartridge assembly available in three sizes: 062, 105 and 186. These geometries offer a wide range of dispense rates and quantities. With wetted parts machined from carbide and stainless steel, the pump can withstand abrasive and heavily filled fluids.

A servo motor and high-resolution precision encoder control the pump. The closed-loop motion control system ensures repeatable operation and uniform speed when fluid viscosity changes. An optional body heater and syringe heater are available to assist with stabilizing fluid viscosity. Pump body heating is available up to 130° C. For additional details about the Precision Auger Pump, refer to [Precision Auger Pump](#) on our web site.

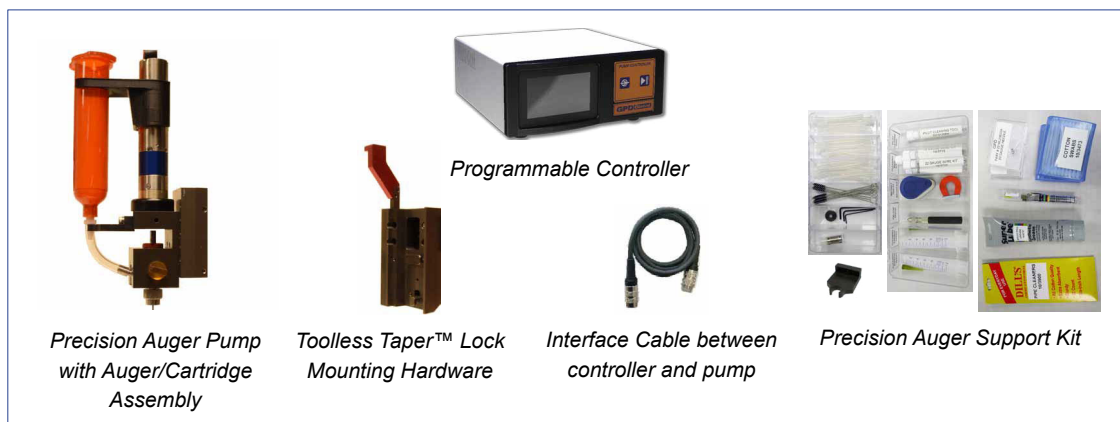
Precision Auger Pump Integration

Easily interface a Precision Auger Pump with your existing robot or control systems using the Precision Auger Integration Kit (Figure 1). This kit includes the Auger/Cartridge Assembly, a Precision Auger Pump, Toolless Taper-Lock™ Mounting Hardware, a Programmable Controller, a 2 meter interface cable between the controller and pump, and a Support Kit.

(3D models of pump, controller, and mounting hardware are available for design purposes.)

Complete your integration by coupling the Precision Auger Pump with our patented Real Time Process Control System (FPC) to raise your pump performance to the next level. Real Time Process Control is a breakthrough in uniform fluid dispensing. It ensures a constant supply of fluid is available to the pump regardless of reservoir size or fluid level. FPC monitors the pressure of fluid entering the dispense pump and makes adjustments to the reservoir feed pressure, resulting in a consistent feed to the dispense pump. For additional details, refer to [Real Time Process Control System \(FPC\)](#) on our web site.

Figure 1: Precision Auger Integration Kit



Precision Auger Pump with Auger/Cartridge Assembly

Toolless Taper™ Lock Mounting Hardware

Programmable Controller

Interface Cable between controller and pump

Precision Auger Support Kit

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Precision Auger Pump Integration

The programmable controller is a full featured controller (Figure 2). It controls all motion aspects of the Precision Auger Pump for dot and continuous dispense. Programming is done using an intuitive touch screen that uses no text - just symbols. The controller can control up to 2 heaters - syringe heater and pump body heater - ideal for hot melt applications.

Figure 2: Front and Rear View of Programmable Controller



Pump Parameters available to the operator are acceleration, deceleration, speed, and in the case of dots, an exact amount of rotation. The touch screen interface is intuitive and is programmed for universal recognition with symbols and numbers. The programmable controller can also be connected to a computer for remote programming, making this a comprehensive controller for all Precision Auger pump needs. The operator may set up separate program profiles that can be referenced by inputs from your system. Figure 3 illustrates how an Auger pump integrates into a third party dispensing system.

Pump Mounting:

- Tool-less Taper-Lock™ Mounting interface - single push button allows operator to mount or remove the pump.

Cabling:

- Standard 2 m high flex cable between controller & pump.
- Optional cable lengths: 1 m, 3 m, or 5 m

Control Signal:

- Through a user-supplied cable, a 24V signal or dry contact from the robot initiates the pump start/stop or executes the currently displayed program.
- Pump ready signal from controller may also be monitored by the robot.
- Programming via RS232 or Ethernet is available.

Syringe Feed Pressure:

- On/Off control of a regulated air source.
- Incoming air line requires a regulated source.

Auger/Cartridge Assembly:

- User selects the auger/cartridge assembly appropriate for the volume of fluid to be dispensed.

| | Auger Diameter | | |
|--|----------------|-----|-----|
| | 062 | 105 | 186 |
| Small Dispense – 0.010" down to 0.005" | | | |
| Mid Dispense – 0.050" down to 0.012" | | | |
| Large Volume – Encapsulations greater than 0.5"² | | | |




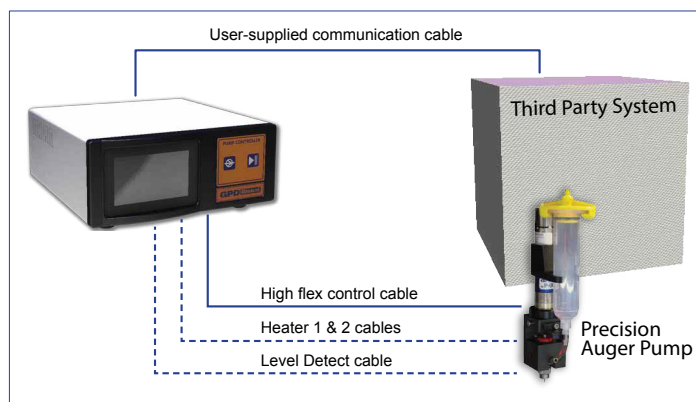
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| 062 | 105 | 186 | |

Figure 3: Precision Auger Integration into Third Party Machine



Specifications

| PRECISION AUGER PUMP | |
|---|--|
| Dimensions*, approx. (W x D x H) | 57.15 mm x 76.2 mm x 190.5 mm (2.25" x 3" x 7.5") |
| Cable Length | 279.4 mm (11") |
| * Contact GPD Global for 3D models for integration layout purposes. | |

| PROGRAMMABLE CONTROLLER | |
|---------------------------|---|
| Dimensions (W x D x H) | 247.65 mm x 279.4 mm x 101.6 mm (9.75" x 11" x 4") |
| Trigger Signal | 24V / Dry Contact |
| Input Air Pressure (max) | 100 psi |
| Output Air Pressure (max) | |
| User Interface | HMI or Computer |
| Cable (standard) to Pump | 2 meter, high flex. Other lengths available. |

Integration Requirements

| THIRD PARTY DISPENSE SYSTEM | |
|-----------------------------|---|
| System Type (Manufacturer): | This is the information we need from you for successful pump integration. |
| System Model: | |
| Control Type: | |



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