

SmartStream[®] Non-Contact Dispense Pump

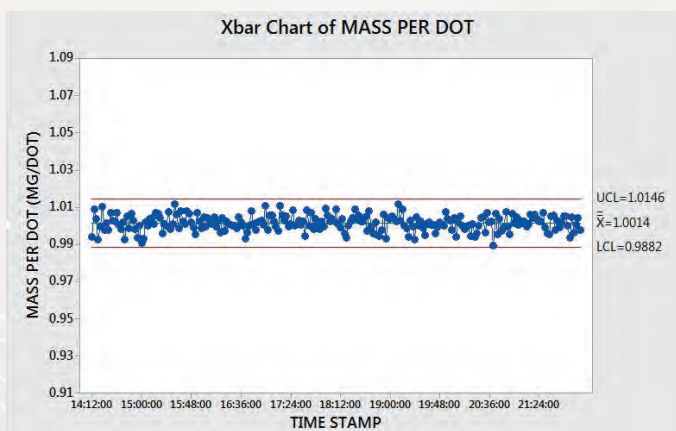
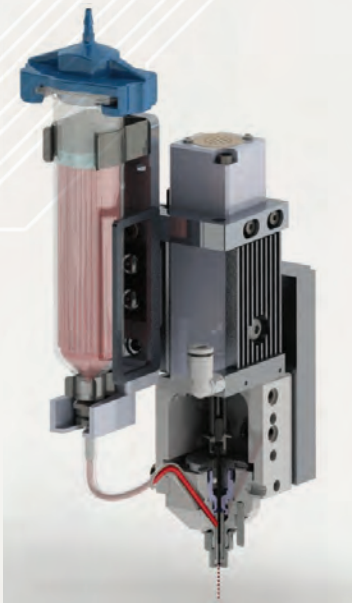
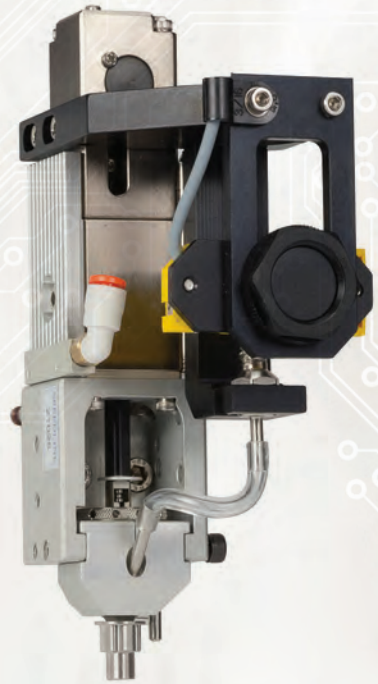
SmartStream eliminates use of a needle and incorporates positive displacement of the dispensed material with a piston and barrel combination. Controlling the piston with a closed-loop servo drive achieves a high degree of accuracy and repeatability for consistent process results.

Camalot's SmartStream non-contact dispense pump technology offers a cost-effective, accurate and easily-maintained alternative to jetting-based designs. This new and innovative system features patent-pending technology known as "Streaming," in which material is dispensed in a narrow column, rather than a single sphere.

- Speeds up to 100 Hz
- Dot sizes < 500 microns
- Auto-tune for closed-loop calibration
- Quick change fluidics
- Low cost of ownership
- Maintenance time < 2 minutes with additional fluidic module

Durability, ease of maintenance and low cost of ownership were key design drivers for SmartStream as well. Unlike competitive systems, SmartStream does not strike the nozzle/seat with the piston, wear on internal parts is greatly reduced. Wetted parts are manufactured with materials designed to resist abrasion from fillers contained in most underfills. The piston and chamber are carbide and the nozzle uses an industrial sapphire insert. The fluidic module is separate from the pump, so it can be easily removed for maintenance without special tools.

SmartStream is compatible with all currently available Camalot system options and may be retrofitted in the field. This new technology provides an accurate, repeatable and cost-effective dispense method that is well-suited to many applications.



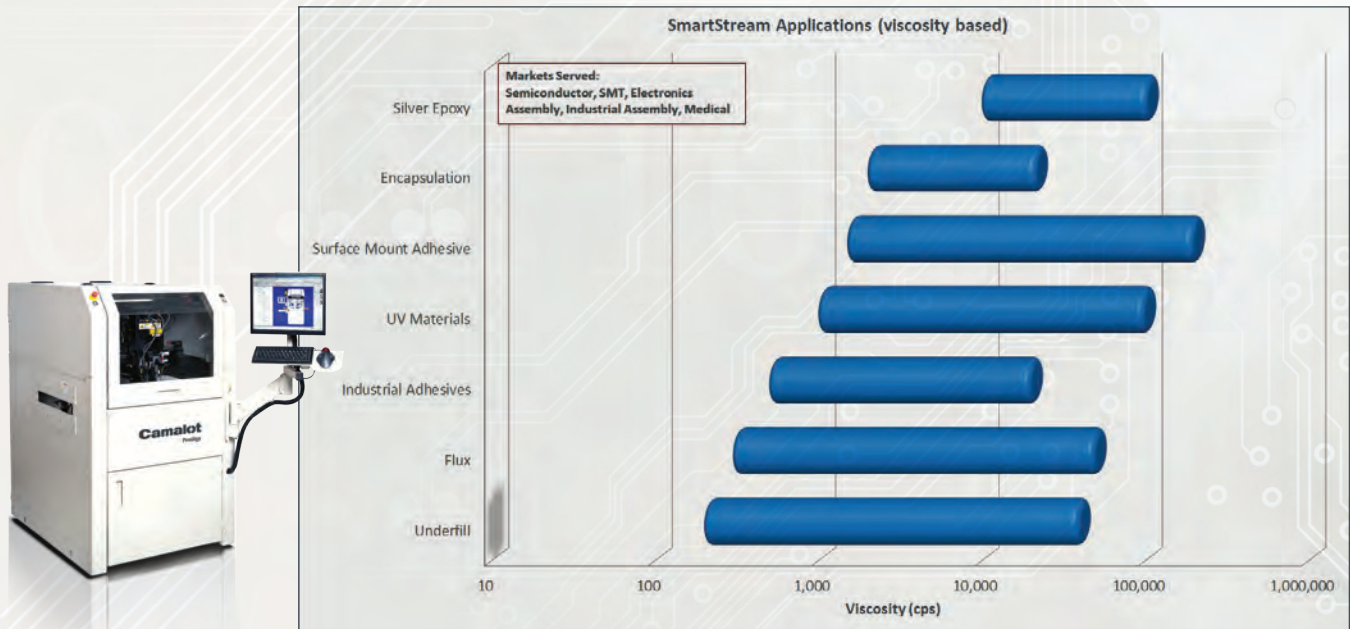
Typical UF materials used in the trials



Removable Fluidic Module

SmartStream[®] Non-Contact Dispense Pump

Material Compatibility



SMARTSTREAM SPECIFICATIONS

Voltage	110 - 240 VAC
Air Supply	0 - 60 PSI
Dimensions	85 mm x 75 mm x 160 mm
Weight	0.53 kg
Control	Closed-loop, linear DC servo
Encoder	Linear glass scale
Piston/Barrel Material	Carbide
Nozzle Heat	Up to 70°C
Material Level Sensor	Included as Standard
Nozzle Material	Steel with Sapphire inserts
Nozzle Diameters	100 - 250uM
Maintenance Time	<10 mins
Direct Mount Syringe Sizes	10cc, 30cc, & 55cc cartridges

ITW EAE is a division of Illinois Tool Works, Inc. It is a consolidation of all of its Electronic Assembly Equipment and Thermal Processing Technology. The group includes world-class products from MPM, Camalot, Electrovert (Speedline), Vitronics Soltec and Despatch.

Camalot

Electronic Assembly Dispensers

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