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 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 - 250µM
Maintenance Time: <10 mins
Direct Mount Syringe Sizes: 10cc, 30cc, & 55cc cartridges