

Precision Dispensing

For Medical Device Assembly



**BOOTH
#4271**

Superior Jet Valve



- Highly precise non-contact jetting up to 2,000 Hz
- Regulated closed-loop opening stroke control within $\pm 2\mu\text{m}$
- Regulated & adjustable closing force
- Sealing-seat position detection
- Modular design facilitates for easy assembly and reconfiguration of parts
- Dispenses a wide variety of fluid, from low viscosity materials to high viscosity pastes

Applications

- Bonding: UV-cure adhesive, Silicone & PUR Hot-melt Adhesives
- Circuit Board Assembly: Solder Paste, Silver Epoxy, Flux, Underfill Epoxy, Conformal Coatings, Encapsulants
- Medical Reagent Dispensing

Step Dot Dispensing



- Pushmembrane component for continuous fluid supply
- Combined advantages of jetting & needle dispensing
- Solder Paste, Silver-filled Epoxy, and other media
- Smaller dot sizes than jet printing
- 15X faster than needle dispensing: 100 dots per second
- Dot on demand for optimal dot size selection in one step (BGA)
- Elimination of satellites associated with jet printing

Advantages

- High-precision nano- & picoliter dosing
- Regulated valve stroke control for dosing repeatability within $\pm 1\%$ of target
- Customizable valve opening and closing profiles
- Real-time process monitoring and controls
- Bubble & void-free dispensing

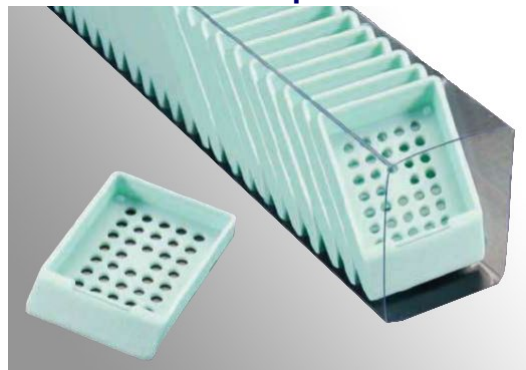
Hypodermic Needle



APPLICATION	Hypodermic Needle Assembly
DISPENSE TYPE	Jetting
FLUID TYPE	UV-cure adhesive
SPECIFICATIONS	Dose Weight: 1.7 mg ± 2% 8 valve configuration

APPLICATION	Plastic Bonding for Insulin Pen Housing
DISPENSE TYPE	Jetting
FLUID TYPE	UV-cure adhesive
ENHANCEMENT OF EXISTING SYSTEM	convert to modular valve improve stroke loss reduce cleaning time improve control range

Medical Test Strip/Cassette



APPLICATION	Medical Test Strip
DISPENSE TYPE	Jetting
FLUID TYPE	Medical Reagent
SPECIFICATIONS	10 - 20 nl / cavity 100 dots / second (100 Hz)

APPLICATION	Medical Test Strip
DISPENSE TYPE	Jetting
FLUID TYPE	Medical Reagent Viscosity < 100 centipoise
SPECIFICATIONS	Dose Volume: 0.1 - 1.0 µl Material Waste: < 5 µl

Ultrasonic Instrument



APPLICATION	Ultrasonic Instrument
DISPENSE TYPE	Jetting
FLUID TYPE	2 Component Epoxy
SPECIFICATIONS	Line width < 800µm Dose Volume: ± 2% Multi-axis requirement

APPLICATION	Device Assembly
DISPENSE TYPE	Jetting
FLUID TYPE	Acrylic
SPECIFICATIONS	210µm line*

*Capability ≤ 180 µm

Cardiac Management Device



APPLICATION	Cardiac Management Device
DISPENSE TYPE	Potting/Encapsulation
FLUID TYPE	2 component Silicone
SPECIFICATIONS	Static & Dynamic Mixing +/- 1% volumetric accuracy

APPLICATION	Circuit Board
DISPENSE TYPE	Step Dot
FLUID TYPE	Solder Paste
SPECIFICATIONS	Dot diameter: 250-300µm* 20µm diameter accuracy

*Capability ≤ 150 µm