

# PRODUCT INFORMATION: DISPENSEJET® DJ-9000 JET

## DISPENSEJET® DJ-9000 JET

### HIGH-SPEED JET DISPENSING

Jetting is the best way to dispense many fluids quickly and accurately. With Asymtek's new DispenseJet DJ-9000, jetting is faster and simpler than ever. Based on the award-winning DJ-2100 series, the DJ-9000 has a high shot-generation rate, can be cleaned in a few minutes, and has fast changeover of wetted parts.

Jetting offers many advantages over traditional needle dispensing to deliver speed, quality, and low cost of ownership.

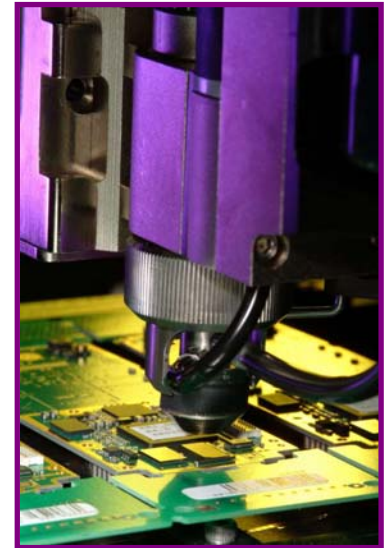
- Speed: high flow rate up to 400 mg/second; high shot rate up to 200 dots per second; no Z-axis motion; jets "on the fly" – no stopping between dots required; less height sensing required; no needle backtracking to prevent fluid stringing.
- Quality: High wet-dispense accuracy; smaller wet-out areas; round, uniform dots; improved line quality with no "dog-bones" and improved line knit.
- Avoid common problems: No bent needles; no chipped die; no dripping; reduced part interference; no effects from warpage; no corner build-up.
- Low Cost of Ownership: Easy and quick to clean in 10 minutes; less waste of fluid due to small wetted path; consummable parts are lower cost; no under-board support required.

You'll benefit from capabilities beyond traditional needle dispensing:

- Jets in tight spaces as small as 175 micrometers
- Small fillet sizes as small as 300 micrometers
- Dot diameter as small as 0.20 mm
- Shot volumes as small as 1.0 nanoliter
- Jet stream size as small as 50 micrometers
- Slim design increases dispense area.

In operation, the jet "flies" over the part or substrate, and using a patented high-speed mechanism, shoots precise volumes of fluid in dots, lines and patterns. Jetting multiple shots in the same location creates larger dots. Lines and complex shapes are constructed from adjacent dots. Dispensing consistency is improved with active temperature controls.

With the Calibrated Process Jetting (CPJ) feature, volumetric repeatability can be maintained during long production runs to improve process capability (Cpk). Dispense patterns are programmed with a specified weight. CPJ periodically samples the dispense weight per shot, then computes the number of shots for each pattern. With this information, CPJ optimizes line speed based on maximum specified shot interval.



#### Features & Benefits:

- Jets a wide range of fluids including underfill, SMA, encapsulants, conformal coating, UV adhesives and silver epoxy
- Fast – jetting eliminates z-axis motion
- Accurate – jetting is highly repeatable
- Easy to use and maintain
- Small wetted path so less fluid is wasted
- One model handles multiple applications
- Dot diameter as small as 0.20 mm (0.008 in.), compatible with typical 0402 components

# DJ-9000 SPECIFICATIONS:

## TYPICAL APPLICATIONS:

- Underfill encapsulant
- No-flow underfill
- Die attach materials
- Conductive adhesives & epoxies
- Thermal interfaces
- Stacked die adhesives
- UV-cure adhesives
- Conformal coating
- High-speed dispensable surface mount adhesives (SMA)
- Flat Panel Displays
- Many fluids from 1 to 250,000 mPa (cps)

Contact Asymtek for the latest list of jettable fluids.

## JET:

Weight: 400 g (without syringe)

Syringe: 5, 10 or 30 cc

Compatibility: Millennium® M-2000 Series, Axiom™ X-1000 Series, and Spectrum™ Series systems by Asymtek

## VALVE PRESSURE:

Air Solenoid Pressure: Minimum: 6.0 Bar (80 psi)

## FLUID PRESSURE:

Fluid Pressure: 0.3-2 Bar (5-30 psi)

## NOZZLE:

Orifice Diameter: 0.050 to 1.00 mm (0.002 to 0.039 in.)

Shot Size: 0.0010 µl (1.0 nl)

## SERVICE:

Offline Cleaning: Takes about 10 minutes. (A training DVD is available for customers.)

Cleaning fluids: Use only solvents compatible with the fluids being dispensed, as specified by the material supplier.

Valve comes with protective case, cleaning kit, and spare seals, nozzles, seat, needle, and fluid feed tube.

## CONSUMMABLE PARTS:

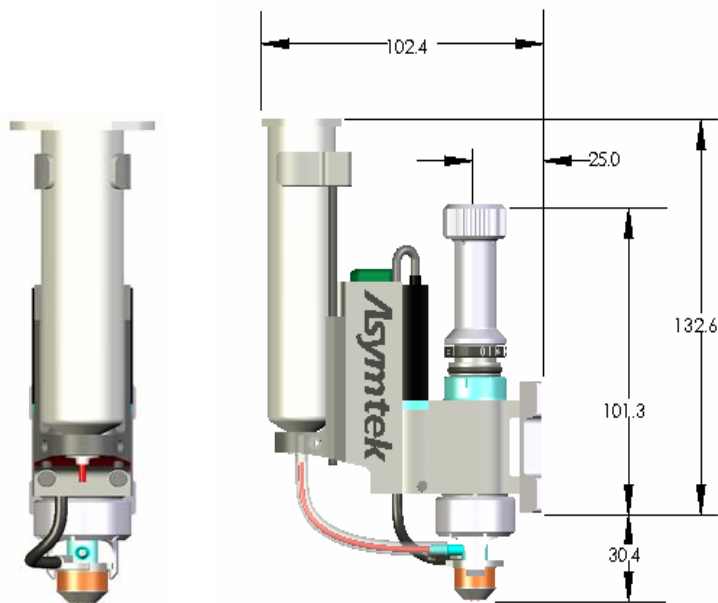
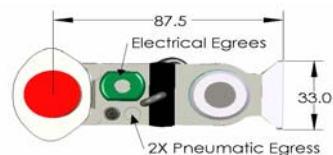
Includes: Seals, nozzles, seat, needle, and fluid feed tube

Asymtek reserves the right to make design changes to products to improve their function. These changes may occur between publishing

Contact Asymtek for your specific application requirements.

**Asymtek is ISO 9001:2000 Certified  
Intel's 2003 & 2004 SCQI award winner**

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