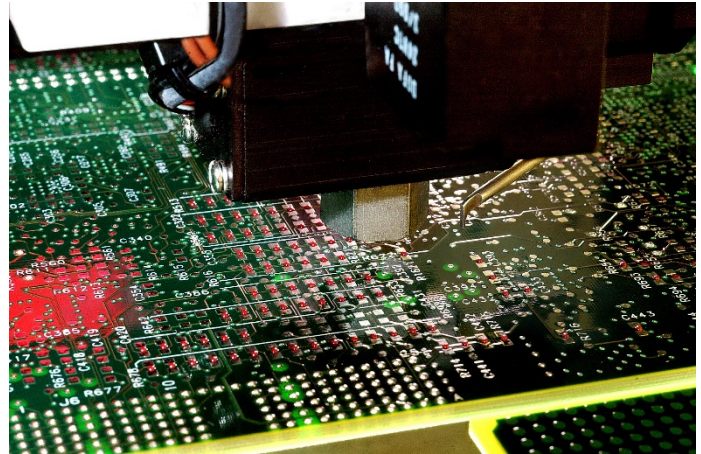


DispenseJet® DJ-2100 Jet

Non-Contact Jetting Technology for Surface Mount Adhesive Applications

Features and Benefits

- Accurately jets surface mount adhesive dots for a wide range of component sizes
- Eliminates z-axis motion during dispensing and virtually eliminates height sensing
- Tolerates greater variations in PCB planarity
- Provides threefold improvement in consistency over needle-based systems
- Adaptable for use from prototype to high-volume, in-line production
- Dot diameter down to 0.33 mm (0.013 in.) for 0402 components



Nordson ASYMTEK's DispenseJet DJ-2100 jet is a non-contact, drop-on-demand valve providing fast fluid dispensing. The jet can deliver up to 100 dots per second. In actual use, the jet delivers more than 30,000 dots per hour of industry-standard surface mount adhesive when mounted on the Spectrum™ II and Quantum® fluid dispensing systems. For electronics assembly requiring speed, dot consistency, and tight process control, the jet is ideal.

The DJ-2100 jet has been adapted from applications with 0402 components and electrically and thermally conductive adhesives.

How it works: Fluid is fed into a chamber where it is heated and temperature controlled to achieve optimal and consistent viscosity. Using a ball and seat design, fluid fills the void left by the ball as it retracts from the seat. As the ball returns, the force due to acceleration breaks the stream of fluid, which is jetted through the nozzle. The broken stream of fluid strikes the substrate and forms a dot.

Non-contact jetting eliminates z-axis motion between dots, significantly increasing speed. Jetting eliminates the need for a mechanical needle standoff (foot). Problems disappear: no expensive needles that wear out, no worrying about touching the board with a footed needle, no change to dot size due to variations on PCBs, and no expense and problems associated with underboard support. Cost of ownership is reduced.

The jet “flies” over the substrate at dispense gaps between 0.5 and 3.5 mm (0.02 and 0.14 in.). Using a patented high-speed mechanism, the jet shoots precise volumes of fluid. Dispense cycles of 12 to 15 milliseconds per dot offer improved throughputs over systems that have longer valve-on times and z-axis motion. The jet goes faster and provides better shot size accuracy.

Different sized dots are applied by jetting multiple shots in the same location. Lines and complex shapes are constructed from adjacent dots. Dispensing consistency is improved due to built-in heater controls.

Specifications: DispenseJet® DJ-2100 Jet

Service

Offline cleaning: 60 minutes every 1 to 2 weeks

Cleaning fluids for SMA:

Acetone or MEK-based solvent recommended

Do not use alcohol, water, or water-based solvents

Valve

Operating voltage: 24 VDC

Weight: 380 g (without syringe)

Syringe: 5, 10 or 30 cc

Compatibility:

All Nordson ASYMTEK dispensing platforms

Electrical

Solenoid: 24 VDC, 5.4 Watts

Heater: 8.5 Watts

Pressures

Air solenoid pressure:

6.5 Bar (100 psi) max.

4.8 Bar (70 psi) min.

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

Nozzle

Orifice diameter:

0.102-0.406 mm (0.004-0.016 in.)

Fluids

Fluid typically used in jetting applications:

High-speed dispensable surface mount adhesives (SMA)

Model Number	Component Size	Seat Size	Nozzle Selection (Typical)
DJ-2111	0402 (1005) or larger	0.4 mm (0.015 in.)	0.102 and 0.127 mm (0.004 and 0.005 in.)
DJ-2112	0603 (1608) or larger	0.75 mm (0.030 in.)	0.127 and 1.152 mm (0.005 and 0.006 in.)
DJ-2114	0805 (2012) or larger	1.5 mm (0.060 in.)	0.152, 0.200, 0.254, 0.330, 0.406 mm (0.006, 0.008, 0.010, 0.013, 0.016 in.)

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