

ASYMTEK Spectrum II S2-900 Series

Scalable solutions for high-volume manufacturing and assembly

Features and Benefits

- Scalable design meets current *and* future requirements for maximum return on investment
- High precision X-Y-Z motion system
- Total system wet dispense accuracy for dots and lines
- Patented, closed-loop process controls for consistent dispense weight over long production runs
- Optional independent X-Y-Z dual-simultaneous valve dispensing for increased productivity
- Integrated vision system with on- or off-axis lighting
- Optional integrated substrate heating for up to 6 stations
- Optional programmable dual-axis tilt



The scalable Spectrum II series is ideal for high-volume production of advanced dispensing processes, including underfill, cavity fill, die attach, and encapsulation.

Scalability. With its flexible, scalable configuration, the Spectrum II can be configured with single or dual lanes, and up to six heat stations with the dual-lane configuration. The platform is easily upgraded in the field when process needs change.

At only 600mm wide without optional pre- and post-heating stations, the Spectrum II maximizes use of precious production floor space.

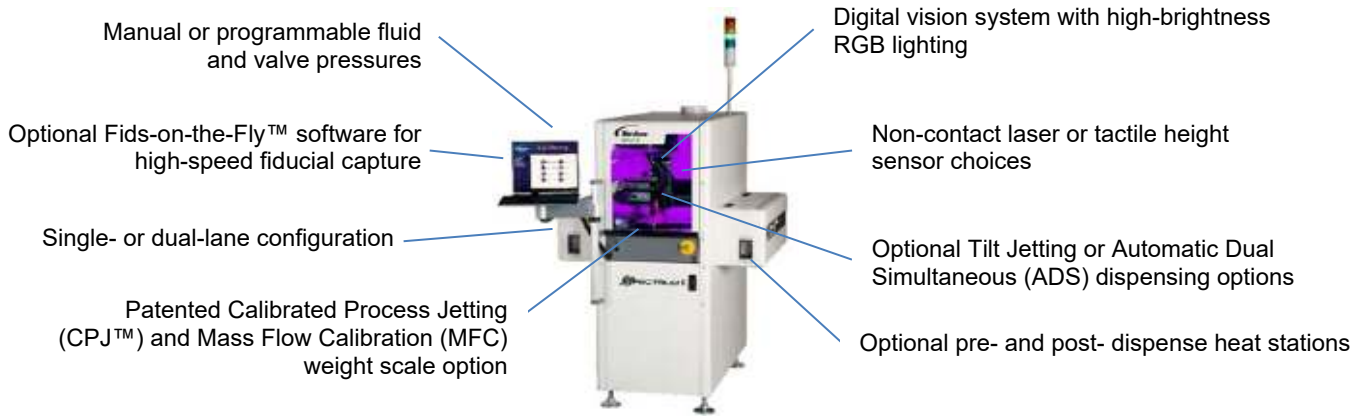
Advanced Process Control. The Spectrum II reduces process variation, increases yield, and reduces cost. Software-managed temperature, fluid and air pressure provide closed-loop control that eliminates the need for operator adjustment. Calibrated Process Jetting (CPJ™) automatically maintains volumetric repeatability during long production runs. Controlled Process Heat (CpH™) adds recipe-controlled heat management for improved thermal efficiency.

The Spectrum II's standard digital vision system's high-brightness LEDs with RGB three-color control provides good image contrast and detection capabilities for more accurate and consistent pattern recognition. For the most challenging vision applications, the Monocle™ Vision Package (MVP) enhances contrast and field of view size and resolution even further.

Jet and Valve Technologies. You can customize the Spectrum II to meet your specific process requirements with industry-leading ASYMTEK jets and valves. A range of options are available, from our popular jets to time-pressure valves to the latest progressive cavity pumps.

Expert Value and Support. With nearly 40 years of precision fluid dispensing experience and a reputation for the best closed-loop process controls, Nordson provides customers a reliable partner for fluid dispensing development and production. From initial process development through full-scale production, you are supported by our experienced worldwide engineering, applications development, and technical service network.

ASYMTEK Spectrum® II S2-900 Series System



Motion System

Z repeatability ⁽¹⁾ :	±15 µm (0.0006 in.), 3 sigma
X-Y repeatability ⁽¹⁾ :	±15 µm (0.0006 in.), 3 sigma
X-Y acceleration:	1 g peak
X-Y velocity:	1 m/s peak (40 in./s)
X-Y-Z encoder resolution:	1 µm

Wet Dispensing Accuracy & Repeatability

Single Applicator:

$C_p \geq 1.0$:	±35 µm (0.0016 in.)
$C_{pk} \geq 1.0$ ⁽¹⁾ :	±40 µm (0.0016 in.)

Z-Gap Performance

Z-Gap Repeatability ⁽²⁾ :	±15 µm (0.0006 in.), 3 sigma
Minimum Z-Gap Capability:	50 µm (0.002 in.)

Dispense Area (X-Y)

339 x 410 mm (13.3 x 16.1 in.)

Conveyor

Min. board/carrier width ⁽³⁾ :	34 mm (1.3 in.)
Max. board/carrier thickness:	12 mm (0.5 in.)
Max. board/carrier length:	One station: 340 mm (13.4 in.) Three stations: 320 mm (12.6 in.)
Min. board/carrier length:	25 mm (1.0 in.)
Max. board/carrier width:	Single lane: 535 mm (21.1 in.) Dual lane: up to 228 mm (9.0 in.) (configuration dependent)
Conveyor overboard clearance:	30mm (1.2 in.) standard

Additional Optional Features and Configurations

- CpH™ - Controlled Process Substrate Heat
- Dual-action dispensing (two applicators operate independently)
- Exterior bulk fluid reservoir: 600 cc (20 oz), includes remote feed and fluid level sensor
- Hot plate, process development (batch processing)
Low fluid sensor, magnetic or capacitive
- Monocle™ Vision Package (MVP) for increased contrast, field of view, and vision resolution
- SECS/GEM interface
- Ventilation interlocking for volatile organic compound (VOC) dispensing, e.g., flux or primer

Facilities Requirements

System footprint:

Single heat station: 600mm wide x 1321mm deep (23.6x52.0 in.)

Two heat stations: 850 x 1321 mm (33.5x52.0 in.)

Three heat stations: 1100 x 1321 mm (43.3x52.0 in.)

Air supply: Two air supplies: one with 3 CFM @ 100 psi for contact tooling, a second one with 1 CFM @ 100 psi for the rest of the system (100 psi = 689 kPa, 6.8 atm)

Power (mains): Power supply accommodates 200-240 VAC, 47-63 Hz single phase, 30 A

Note: System can run on 10A, 120 VAC without heater option installed.

Ventilation: Downdraft or updraft

System weight ⁽⁴⁾: 377-422 kg (830-930 lbs.)

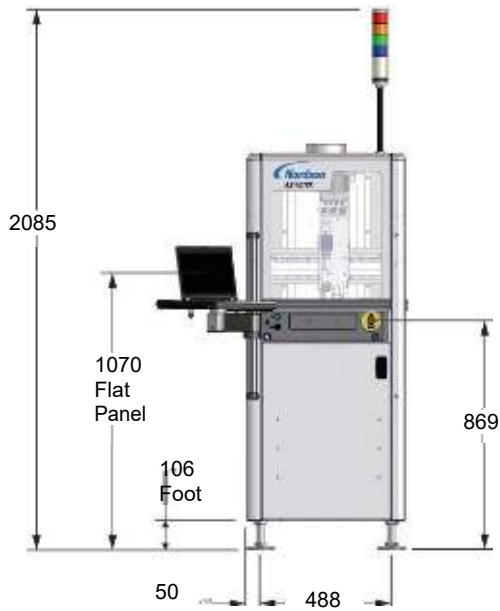
- (1) Wet dispense C_{pk} is tested against ASYMTEK standard sealant line path accuracy test method
- (2) Z-gap repeatability is tested with ASYMTEK standard white ceramic, performance with other substrates may vary
- (3) Contact factory regarding smaller boards or carriers
- (4) System weight varies depending on configuration

Standards Compliance

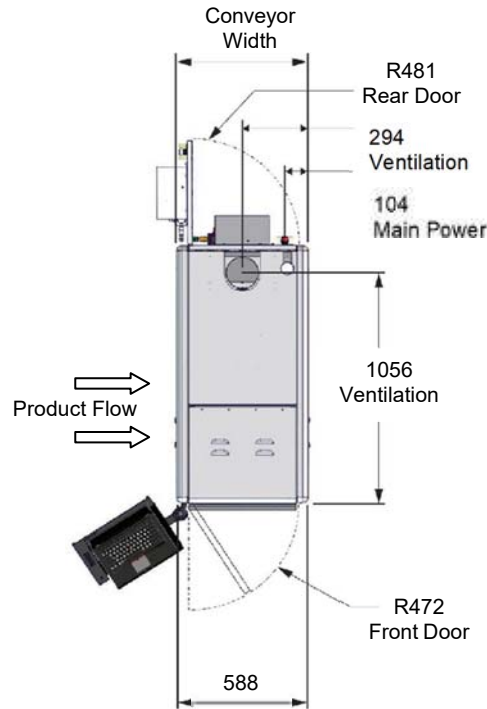
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SMEMA

ASYMTEK Spectrum® II S2-900 Series System Dimensions

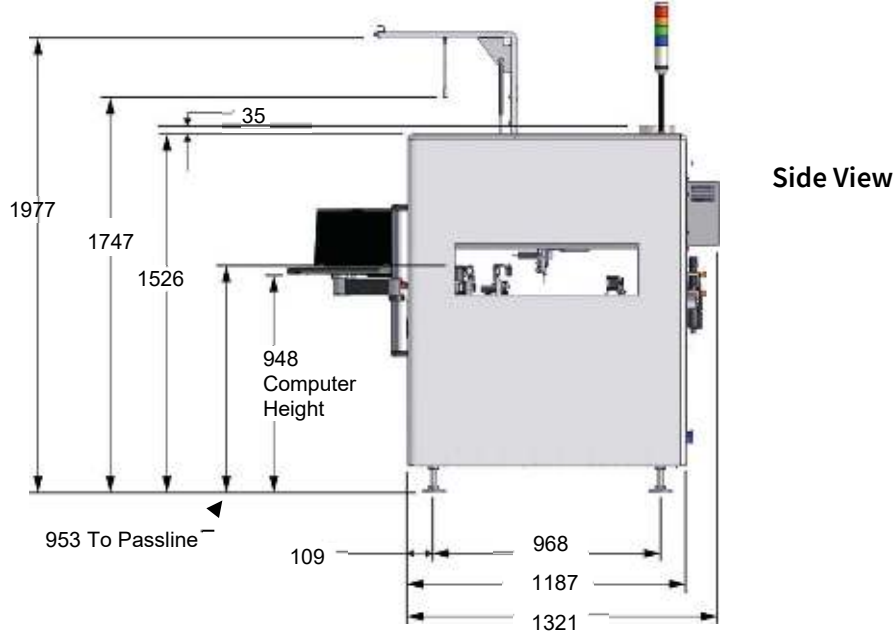
Dimensions are in millimeters



Front View



Top View



Side View

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Published December 2021