

Spectrum™ II S2-900 Series

Scalable solutions for high-volume manufacturing and assembly

Features and Benefits

- The Spectrum II series leverages over 30 years of Nordson ASYMTEK's automated fluid dispensing and jetting technology
- Scalable design matches current *and* future requirements for maximum return on investment
- The Spectrum II series continues Nordson ASYMTEK's market leadership with:
 - High precision X-Y-Z motion system
 - Total system wet dispense accuracy performance for dots and lines
 - Patented, closed-loop process controls for consistent dispense weight over long production runs
 - Independent X, Y, Z dual simultaneous valve dispensing option for increased productivity
 - Integrated vision system with on and off axis lighting options
 - Integrated substrate heating options for up to 6 stations
 - Programmable dual-axis tilt option

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.

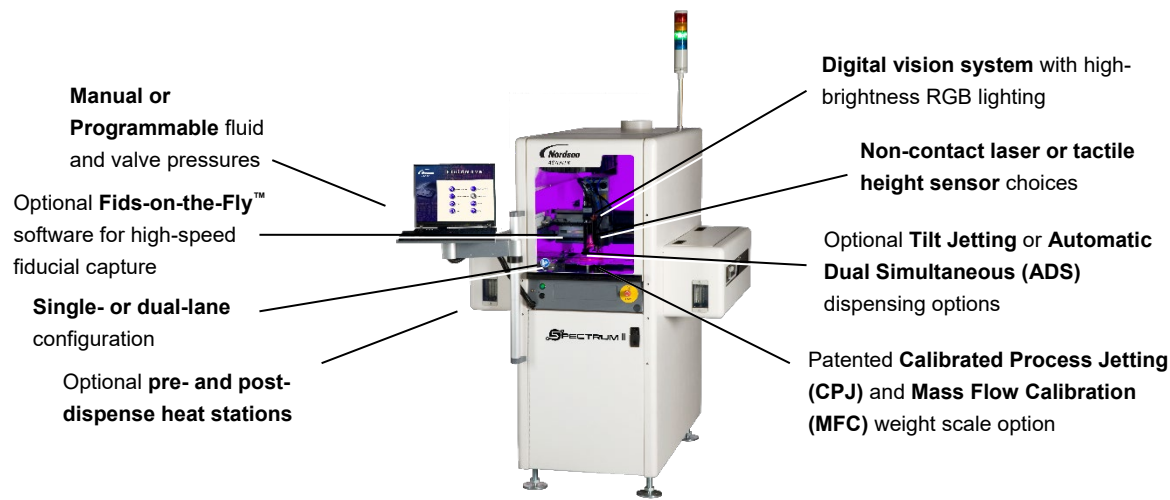
Advanced Process Control. The Spectrum II reduces process variation, increases yield, and reduces cost. Software-managed temperature, fluid and air pressure provide closed-loop control that eliminates the need for operator adjustment. Calibrated Process Jetting (CPJ) automatically maintains volumetric 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 Technology. Patented non-contact jetting offers many advantages over traditional needle dispensing. The NexJet® 8 system shoots “on the fly” using a patented high-speed actuator, jetting precise volumes of fluid in dots, lines and patterns with flow rates up to 500 mg/second and 300 dots/second.

Expertise at Creating Value. With over 30 years of precision fluid dispensing experience and a reputation for the best closed-loop process controls, Nordson ASYMTEK 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.





Spectrum™ II S2-900 Series Features and Configurations

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

Cleanroom compatibility

Monocle™ Vision Package (MVP) for increased contrast, field of view, and vision resolution

SECS/GEM interface

Ventilation Interlocking for Volatile Organic Compound dispensing (e.g. flux or primer)

Spectrum™ II S2-900 Series Key System Specifications

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)

Facilities Requirements

System footprint:	Single heat station: 600 mm wide x 1321 mm deep (23.6 x 52.0 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 Nordson ASYMTEK standard sealant line path accuracy test method

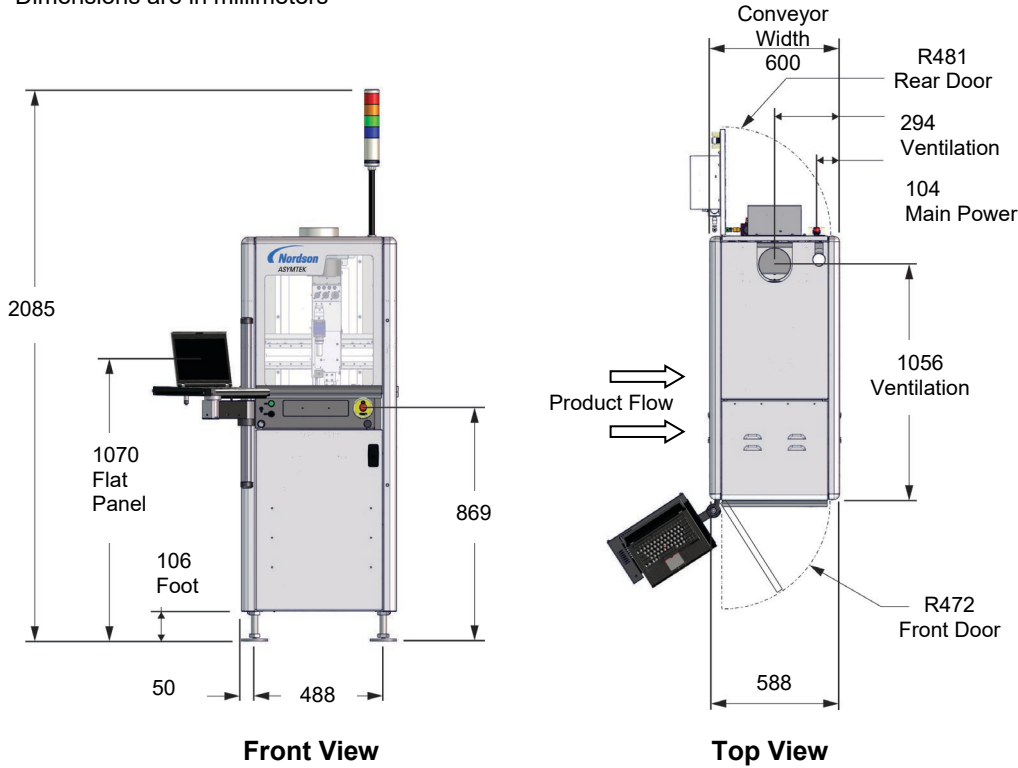
(2) Z-gap repeatability is tested with Nordson ASYMTEK standard white ceramic, performance with other substrates may vary

(3) Contact factory regarding smaller boards/carriers

(4) System weight varies depending on configuration

Spectrum™ II S2-900 Series System Dimensions

Dimensions are in millimeters



For more information, visit our website to locate your local representative or contact your regional office:

nordsonasymtek.com
info@nordsonasymtek.com

North America

Headquarters
 Carlsbad, CA

China

Shanghai
 Beijing
 Guangzhou
 Taipei

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Deurne, Netherlands

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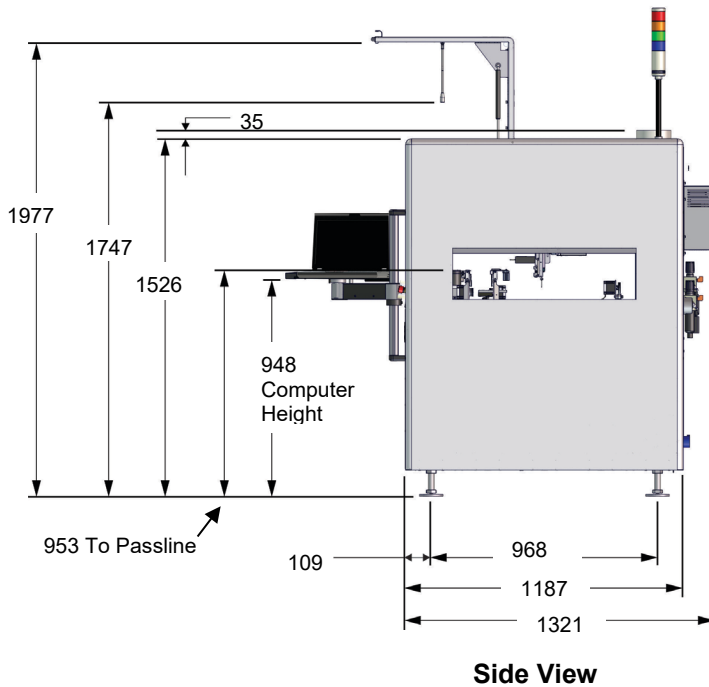
Seoul

Japan

Tokyo

India

Chennai



Nordson ASYMTEK

+1.760.431.1919

2747 Loker Avenue West

Carlsbad, CA USA 92010-6603

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