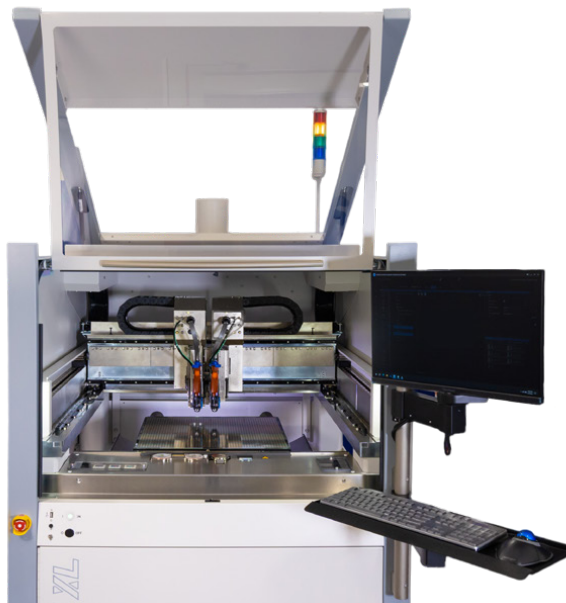




ASYMTEK Vantage XL

Large-Format Panel-Level Dispensing for Advanced Semiconductor Packaging

Panel-level packaging (PLP) enables higher throughput and lower manufacturing costs for advanced semiconductor packaging. However, scaling to large-format panels introduces significant challenges, including warpage control, thermal management, and dispensing accuracy, all of which demand specialized process solutions.

The Vantage® XL is purpose-built to overcome these challenges.

Its integrated thermal management system rapidly preheats panels and maintains exceptional temperature uniformity across the substrate, reducing cycle times, minimizing warpage, and optimizing fluid flow throughout the dispensing process.

Combined with a rigid machine architecture, dual independent IntelliJet® valves, and real-time compensation for substrate skew and height variation, the Vantage XL delivers high-speed, high-precision dispensing across large panel formats. When paired with the IntelliJet® Jetting System and Readiset® Jet Cartridge, the platform enables precision micro-dot jetting at frequencies up to 1,000 Hz, delivering outstanding throughput, repeatability, and process control.

*Nordson US Patents 9,707,584; 10,150,131; 10,737,286 and other patents pending.

Features and Benefits

- **Expanded Dispense Area** – Supports large-format panels for maximum throughput.
- **Uniform Heating** – Minimizes warpage and optimizes fluid flow.
- **Canvas® Software** – Simplifies programming and enhances process control.
- **Confocal Height Sensing** – Measures reflective and transparent glass panels for reliable, void-free bonding.
- **High Speed, High Accuracy** – Stable platform enables faster dispensing without sacrificing precision.
- **Dual-Valve Jetting** – Increases throughput with patented* real-time correction for substrate skew and placement accuracy.

Specifications

Motion System	X-Y acceleration	1.5 g peak
	X-Y velocity	1.5 m/s (59 in/s) max.
	Minimum Z dispense gap	50 µm (0.002 in.)
Compatible Valves	IntelliJet® Jetting System with Readiset® Jet Cartridge NexJet® 8 Jetting System with Readiset® Jet Cartridge DispenseJet® DJ-9500 high-speed jet DV-7000 Heli-Flow® auger pump DV-8000C Heli-Flow® auger pump	
Dispense Area	X-Y dual valve — dispense area ⁽¹⁾ 616 x 610 mm (24.3 x 24 in.) The camera and both valves provide full coverage.	
Computer and Software	PC with Windows® operating system and Canvas® fluid dispensing software	
Wet Dispense X-Y Placement Accuracy ⁽²⁾ and Repeatability ⁽³⁾	Dual valve ≥ 45,000 DPH ⁽⁴⁾ per valve	$C_p \geq 1.0^{(3)} \text{ — } \pm 35 \mu\text{m} (0.0014 \text{ in.})$ $C_p \geq 1.33 \text{ — } \pm 47 \mu\text{m} (0.0019 \text{ in.})$ $C_p \geq 1.67 \text{ — } \pm 59 \mu\text{m} (0.0023 \text{ in.})$ $C_{pk} \geq 1.0^{(2)} \text{ — } \pm 45 \mu\text{m} (0.0018 \text{ in.})$ $C_{pk} \geq 1.33 \text{ — } \pm 60 \mu\text{m} (0.0023 \text{ in.})$ $C_{pk} \geq 1.67 \text{ — } \pm 75 \mu\text{m} (0.0030 \text{ in.})$
Conveyance	Transport height	Conforms to SMEMA standard for transfer height Minimum adjustable height: 925 to 1000 mm (36.4 to 39.4 in.) from the floor to the pass line (bottom of the transported part).
	Operation modes	Automatic (SMEMA), manual and pass-through.
Facilities Requirements	System footprint	1120 x 1825 mm (44 x 71.8 in.) all doors closed. See System Dimensions.
	Power (mains)	200-240 VAC, 3 wire, single phase, 30A, 50/60 Hz, <10% THD, connected through 3 meter cord with male locking plug, NEMA L6-30 [Europe only: male IEC 309 connector].
	Main breaker AIC rating	5 KVA (CB Type K for facility)
	Facility circuit requirement	30A
	Air supply	Two air supplies: one with 1 CFM @ 100 psi for the system (“MAIN1”), a second one with 3 CFM @ 100 psi for contact tooling and service station (“MAIN2”). To run the machine both Main 1 and Main 2 shall be connected. If no contact tooling is required, Main 2 can be with 1 CFM @ 100 psi. (100 psi = 689 kPa, 6.8 atm).
	Rear pneumatic fitting	¼ male NPT x ¼ male quick disconnect, ¼” Industrial Interchange nipple, ref MIL-C4109
	Customer pneumatic fitting mate	¼ female NPT x ¼ male quick disconnect, ¼” Industrial Interchange nipple, ref MIL-C4109
	System noise	<75 dBA @ 1 m
	Environmental	Shipping: 0-55 °C, 5-90% RH Operating: 5-40 °C, 5-90% RH
	Ventilation	.05m3/s @ 25 mm (100 SCFM @ 1.0 in.) water column; 147.6mm (5.8 in.) duct
	Weight	3283 lbs.
	Standards compliance	SEMI-S2 SEMI-S8 CE SMEMA SECS/GEM interface NFPA 79 EN ISO 13849-1 Category 3
	Cleanroom	Class 1000

(1) Dispense area dimensions are defined in X-Y coordinates, with X aligned to the conveyor travel direction and Y measured from the front conveyor rail to the back of the system. The specified area accounts for the installed camera and laser height sensor.

(2) The placement accuracy achievable using local fiducials. Wet dispense accuracy is verified using the ASYMTEK 722-dot grid method.

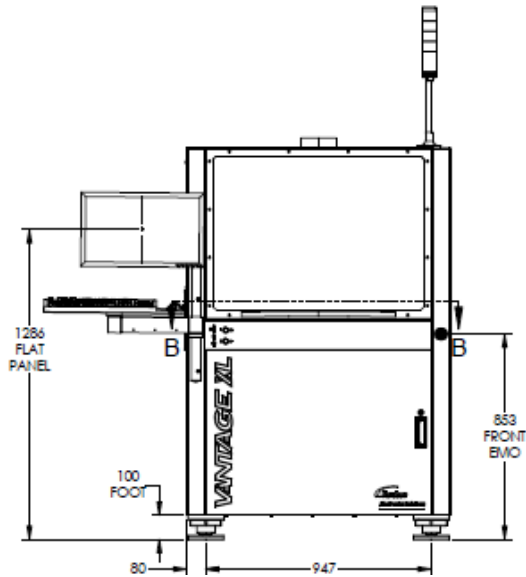
(3) Wet dispense repeatability is verified using the ASYMTEK 722-dot grid method.

(4) DPH: Dots Per Hour.

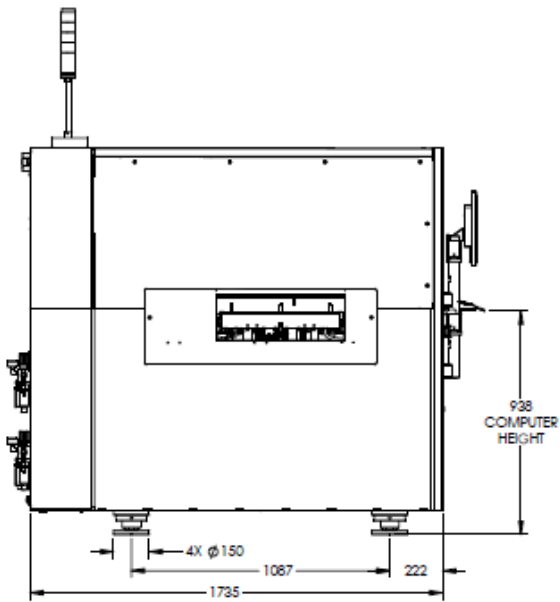
Vantage XL

System Dimensions

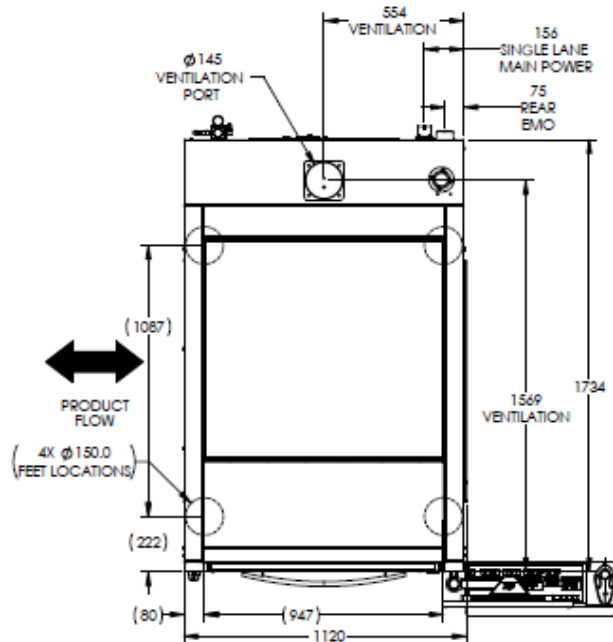
Front View



Side View



Top View



For more information, visit our website to find your local regional office or representative.

We have several global locations to serve you.

North America
Asia Pacific
EMEA

www.nordson.com/electronics
info-electronics@nordson.com

North America Headquarters
2762 Loker Avenue West
Carlsbad, CA 92010-6603, USA

+1.760.431.1919

July 2026

Nordson Electronics Solutions