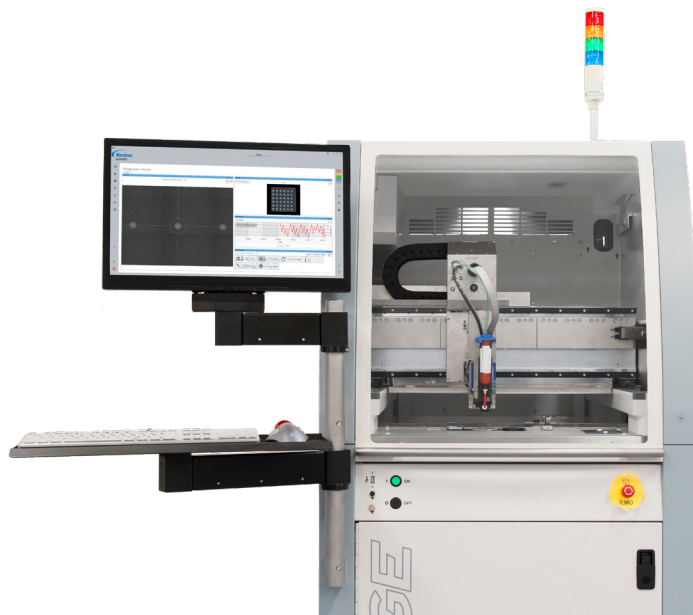




ASYMTEK Vantage Series

Cutting-Edge Fluid Dispensing for Advanced Semiconductor Packaging



To improve differentiation and profitability, semiconductor designers and manufacturers must deliver reliable, best-in-class devices while meeting or exceeding power, performance, area, and cost (PPAC) goals.

The Vantage® Series helps achieve these demanding goals through industry-leading capabilities designed for advanced packaging applications.

Vantage fluid dispensing solutions are ideal for high-speed and precise small-volume dispensing, high part densities, substrate handling, warpage compensation, tight keep-out zones, and thin and accurate line dispensing.

Combined with the IntelliJet® Jetting System with Readiset® Jet Cartridge, the Vantage Series delivers exceptional UPH and cutting-edge reliability with micro-dot jetting up to 1,000 Hz frequency.

Features and Benefits

- **Remarkable speed and accuracy without compromise** – the highly stable frame makes it possible to dispense with one or two IntelliJet Jetting Systems at significantly accelerated speeds without sacrificing dispense accuracy.
- **Expanded dispense area** – accommodates larger workpieces while retaining a compact footprint to maximize space efficiency.
- **Canvas® dispensing software** – simplifies your programming tasks and gives you powerful insight and control over your process.
- **Higher throughput and accuracy** with simultaneous dual-valve jetting and patented* real-time correction for x and y-axis substrate skew.
- **Automated material handling integration** for advanced UPH.

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

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	Single lane system	X-Y single valve — dispense area ⁽¹⁾ 470 x 475 mm (18.5 x 18.7 in.)
		X-Y dual valve — dispense area ⁽¹⁾ 346 x 475 mm (13.6 x 18.7 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⁾	Single valve 49,000 DPH ⁽⁴⁾	Cp ≥ 1.0 ⁽³⁾ — ± 25 µm (0.0010 in.) Cp ≥ 1.33 — ± 33 µm (0.0013 in.) Cp ≥ 1.67 — ± 42 µm (0.0017 in.) Cpk ≥ 1.0 ⁽²⁾ — ± 35 µm (0.0014 in.) Cpk ≥ 1.33 — ± 47 µm (0.0019 in.) Cpk ≥ 1.67 — ± 59 µm (0.0023 in.)
	Dual valve ≥ 45,000 DPH ⁽⁴⁾ per valve	Cp ≥ 1.0 ⁽³⁾ — ± 35 µm (0.0014 in.) Cp ≥ 1.33 — ± 47 µm (0.0019 in.) Cp ≥ 1.67 — ± 59 µm (0.0023 in.) Cpk ≥ 1.0 ⁽²⁾ — ± 45 µm (0.0018 in.) Cpk ≥ 1.33 — ± 60 µm (0.0023 in.) Cpk ≥ 1.67 — ± 75 µm (0.0030 in.)
Conveyance	Transport height	Conforms to SMEMA standard for conveyor height; Minimum Adjustable from 939.8-965.2 mm (37.0 to 38.0 inches) from the floor to the pass line (bottom of the transported part)
	Flow direction	Standard left-to-right flow with fixed front rail. Right-to-left.
	Operation modes	Automatic (SMEMA), manual and pass-through.
Single Lane Conveyor	Rail lengths	1 station: 818 mm (32.2 in.) 2 stations: 1068 mm (42.0 in.) 3 stations: 1318 mm (51.9 in.)
	Conveyor edge clearance ⁽⁵⁾	5 to 6 mm (0.2-0.24 in.)
	Conveyor overboard clearance	40 mm (1.5 in.) standard
	Conveyor underboard clearance	4.5 mm @ 4 to 5.75 mm from edge; 55 mm beyond 5.75 mm from edge
	Board/carrier size with lift table (LxW)	Max. 1 station: 500 x 535 mm (19.6 x 21.0 in.) Max. 3 stations: 320 x 535 mm (12.6 x 21.0 in.) Minimum: 25 x 34 mm (1.0 x 1.3 in.)
	Carrier thickness	Max: 12.5 mm (0.5 in.)
	Maximum capacity ⁽⁶⁾	4-mm flat belt — 1 kg (2.2 lb.) 6-mm flat belt — 2 kg (4.4 lb.)
	Belt temperature	4-mm flat belt — continuous: 100 °C (212 °F); Max: 140 °C (284 °F) 6-mm flat belt — continuous: 100 °C (212 °F); Max: 140 °C (284 °F)

(1) The dispense area dimensions are given in X-Y format: X is the direction of conveyor motion; Y is measured from the front conveyor rail to the back of the system. The indicated area includes mounted camera and laser height sensor.

(2) The precision to which a dot can be placed with local fids. Wet dispense accuracy is verified using ASYMTEK method on a 722-dot grid.

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

(4) DPH: Dots Per Hour.

(5) 5 mm edge clearance is standard, 6 mm includes rail clamp thickness.

(6) Total weight of all parts on conveyor at any one time.

Specifications

Dual Lane Conveyor	Adjustable rail pitch (between fixed rails 1-3)	Max. 300 mm (11.8 in.) Min. 200 mm (4.1 in.)
	Board width at maximum pitch (rails 1-3 = 300 mm)	Max. 220 mm (7.9 in.) Min. 25 mm (1.3 in.)
	Board width at minimum pitch (rails 1-3 = 200 mm)	Max. 120 mm (4.1 in.) Min. 25 mm (1.3 in.)
	Board length at any pitch (x-axis)	1 station: 500 mm (13.4 in.) 3 stations: 320 mm (12.6 in.)
Facilities Requirements	System footprint	808 (818 conveyor rail end-to-end) x 1677 mm (31.8 [32.2 conveyor rail end-to-end] x 66.0 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]. Note: The dual-lane conveyor configuration requires two cords.
	Main breaker AIC rating	5 KVA (CB Type K for facility)
	Facility circuit requirement	30A (for single-lane conveyor); 30A and 20A (for dual-lane conveyor)
	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	1161 to 1190 kg (2560 to 2625 lbs.) depending on base system configuration
	Standards compliance	SEMI-S2 SEMI-S8 CE SMEMA SECS/GEM interface SEMI E78-0912

Vantage Series

System Solutions

Nordson Electronics Solutions builds the future of electronics reliability all across the globe. We're proud of the decades of service and solutions we've provided to enhance semiconductor reliability. No matter where you are, you've likely manufactured or purchased a product made reliable with our equipment. The Vantage® Series is our most advanced fluid dispensing system, designed to last and provide cutting-edge capabilities continuing a time-honored tradition.

Explore the Vantage Series solutions. Continue to see how we support the future.

For more information, contact us at info-electronics@nordson.com.

Essential	Single valve essential dispensing.	An indispensable system that can easily tackle small-volume dispensing, tight keep-out zones, and thin and accurate lines.
High Yield	Single valve control and high yield.	The addition of a precision scale makes this system an excellent choice for maximum volume control, keep-out zone avoidance, and yield enhancement with a single valve.
Productivity	Dual valve throughput and yield.	Accelerate throughput and yield with dual valves mounted on independent heads for maximum maneuverability. Dispense to two parts at once with this dual-valve configuration equipped with patented* real-time correction to automatically adjust for skewed parts and component height variation in the x and y-axis.
Productivity Plus	Dual valve throughput, control, and yield.	Designed from the ground up for high-demand applications. Productivity Plus includes a precision scale for maximum volume control and keep-out-zone avoidance. Dual independent valves accelerate throughput and support patented* real-time correction for enhanced yield.

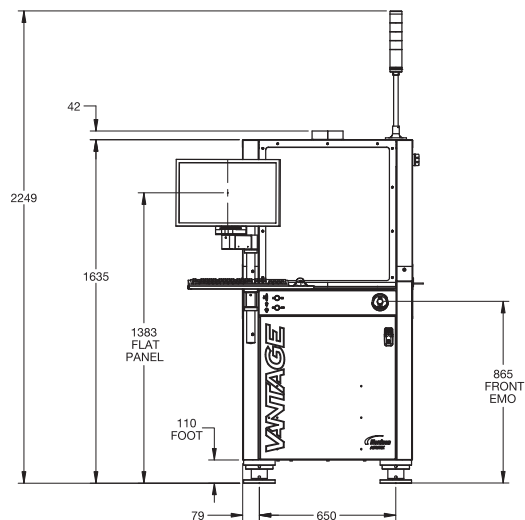
Recommended Valves

Jet	IntelliJet® Jetting System with Readiset® Jet Cartridge
Auger Pump	DV-8000C Heli-Flow® auger pump

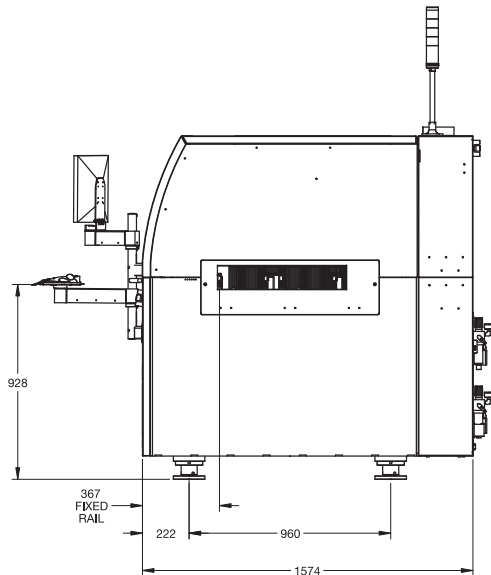
Vantage Series

System Dimensions

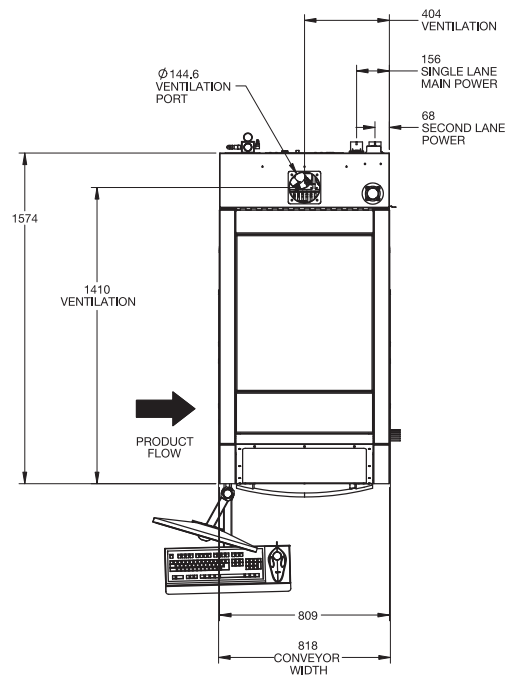
Front View



Side View



Top View



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ELECTRONICS SOLUTIONS