

Vantage™ Series

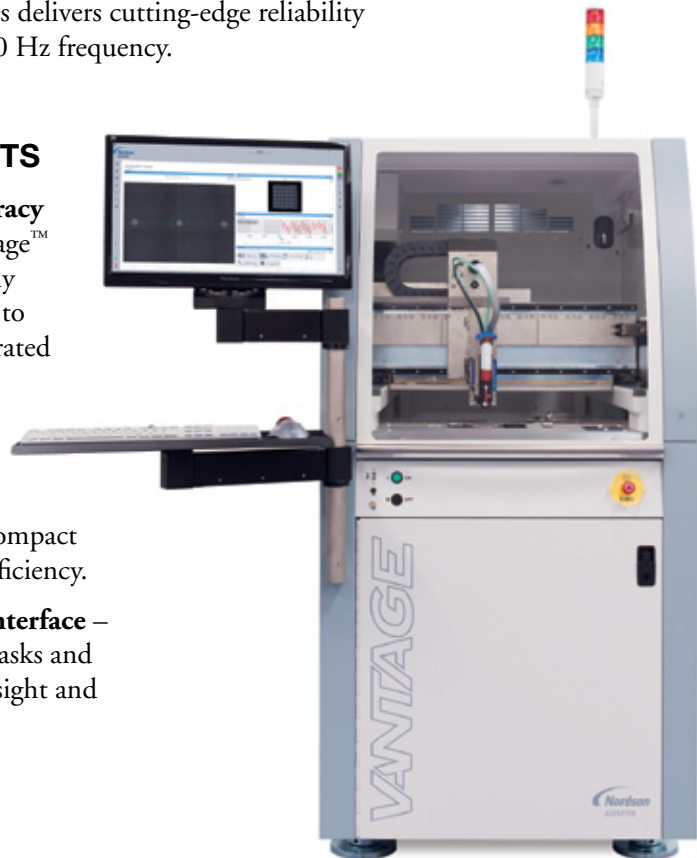
Advanced Dispensing for Precision Packaging and Assembly

The Vantage™ Series is specifically designed for advanced semiconductor package, electromechanical, and printed circuit board assembly. This new, advanced platform is ideal for applications that involve high-speed or small-volume dispensing, tight keep out zones, or dispensing of thin and accurate lines.

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

FEATURES AND BENEFITS

- **Remarkable Speed and Accuracy without Compromise** – Vantage™ Series delivers both. The highly stable design makes it possible to dispense at significantly accelerated speeds without sacrificing dispense accuracy.
- **An Expanded Dispense Area** – accommodates larger workpieces while retaining a compact footprint to maximize space efficiency.
- **A completely new software interface** – simplifies your programming tasks and provides you with powerful insight and control over your process.



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ASYMTEK

System Features

● Standard ○ Option

Roadmap – planned features and options

Part Conveyance	
Single, standalone/in-line conveyor	●
One-station lift table (dispense) with edge clamps	●
Stations per lane: 1 (pre- and post-queue stations are optional)	●
On-rail edge clamps	○
Dual lane conveyor	○
	Roadmap
Conveyor	
Multimove conveyor with recipe-based auto-width adjustment capability	●
3-mm O-ring (ESD)	●
6-mm flat belt (ESD)	○
4-mm flat belt (ESD)	○
Computer and Software	
PC with Windows® operating system	●
Canvas™ dispensing software (Canvas™) for Windows® software	●
Vision & Lighting	
Monocle™ Vision: auto pattern recognition/digital camera	●
Part illumination: on- and off-axis white lights	●
Fiducial-find: stop-and-capture	●
Fiducial-find: Fids-on-the-Fly™	●
Dispense Tip Position & Maintenance	
Service station: dispense tile, tactile Z sensor, purge station	●
Laser height sensor	●
Mass Flow Calibration (MFC) for needle dispensing (with weigh scale)	●
	Roadmap
Calibrated Process Jetting (CPJ) for jet dispensing (with weigh scale)	●

Heater Options and Control	
Conveyor heat with cabling for one station	●
Programmable nozzle heater control	●
Heaters: One- to three-station substrate heaters, contact or impingement (up to 6 with dual lane)	○
Valve/Pump Options	
Single-valve/jet capable	●
IntelliJet®, DJ-9500 or DJ-2100 valve support	●
NexJet® 8 or DV-7000/8000C valve support	●
	Roadmap
Sensors and Alarms	
Low pressure sensor (main air pressure)	●
Light beacon (tower)	●
Low fluid sensor	○
	Roadmap
Other Features/Options	
Programmable Fluid & Valve Pressure	●
Precision Scale (replaces standard scale)	○
Pre- and/or post-queue stations	○
SECS/GEM interface	○
	Roadmap
Dual Valve Jetting/Dispensing	○
	Roadmap

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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.)

Wet Dispense X-Y Placement Accuracy and Repeatability

Single Applicator	$C_p \geq 1.0$ ⁽¹⁾	$\pm 25 \mu\text{m}$ (0.001 in.), 3σ , >45,000 DPH ⁽³⁾
	$C_{pk} \geq 1.0$ ⁽²⁾	$\pm 35 \mu\text{m}$ (0.0014 in.), 3σ , >45,000 DPH

¹ Wet dispense repeatability is verified using Nordson ASYMTEK method on a 722-dot grid.

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

³ DPH: Dots Per Hour.

Dispense Area

Single Lane System

X-Y Single Valve	Maximum Dispense Area ⁽¹⁾ 470 x 500 mm (18.5 x 19.6 in.)
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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. Indicated area includes mounted camera and laser height sensor

Conveyor

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 upon request
Operation Modes	Automatic (SMEMA), manual and pass-through

Single Lane Conveyor Specification

	3-mm O-ring	6-mm Flat Belt	4-mm Flat Belt
Typical Applications	Thin, low weight substrates such as lead-frames with no heat or low heat	Heavy Auer boats (or similar) with heat	Thin substrates such as lead-frames with heat
Maximum Capacity ⁽¹⁾	1 kg (2.2 lb.)	2 kg (4.4 lb.)	1 kg (2.2 lb.)
Belt Temperature	Continuous: 50 °C (122 °F) Max: 80 °C (176 °F)	Continuous: 100 °C (212 °F) Max: 140 °C (284 °F)	Continuous: 100 °C (212 °F) Max: 140 °C (284 °F)
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 ⁽²⁾	5 to 6 mm (0.2-0.24 in.)		
Conveyor Overboard Clearance	40 mm (1.5 in.) standard		
Conveyor Under-board 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.)		

¹ Total weight of all parts on conveyor at any one time.

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

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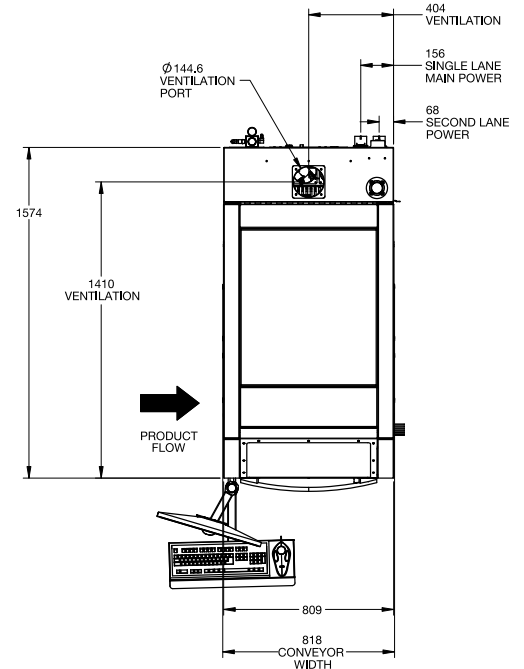
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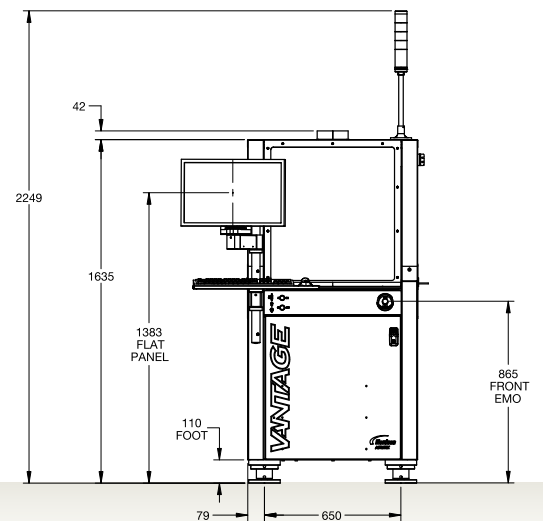
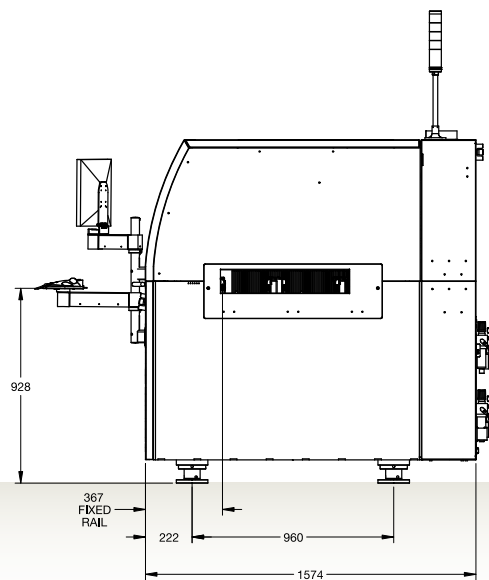


Facilities Requirements

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]
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).
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)
System Noise	<75 dBA @ 1 m
Environmental	Shipping: 0-55 °C, 5-90% RH Operating: 5-40 °C, 5-90% RH
Ventilation	0.28m³/s @ 25 mm (600 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
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
Standards Compliance	SEMI-S2; SEMI-S8; CE; SMEMA



System Dimensions



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