

Unity™ Pro Series

Automated Dispensing Systems

A complete vision-guided automated solution

Nordson's vision-guided Unity™ Pro Series semi-automated systems are specifically designed and configured for precise hot melt dispensing using Nordson Unity dispensing systems.

Specialized UNITYMotion™ software and integrated vision and laser height sensing capabilities make Unity automated systems quick to set up and easy to program. True three-dimensional motion control allows easy programming of dots, lines, circles, arcs, and compound arcs.

Additionally, linear encoders provide precise bead placement while the smart CCD camera and optional laser height sensing systems that automatically adjust programs to compensate for both surface height changes and variations in product orientation.



Features

- UNITYMotion icon-based software simplifies setup and programming with advanced vision features
- On-screen preview of the dispensing path, which facilitates programming
- Closed-loop feedback with precision laser non-contact sensing
- Vision-based bead compensation adjusts for changing viscosity materials
- Reinforced X axis increases system rigidity and improved accuracy
- Fully mapped work area with correction table, which increases fluid placement accuracy
- Easy-to-use .dxf file conversion to program path
- Closed loop stepping motor with an absolute encoder for 3XP PLUS, 4XP PLUS and 6XP PLUS

Benefits

- Easily integrated into manufacturing operations
- Easy-to-use visual programming resulting in a quicker learning process for operators
- Increased production; thus, reduces process time
- Higher yields and production quality which lead to reduced production cost, material waste and cost of ownership
- Better dispensing due to precise control over tip-to-substrate gap with laser height sensing capabilities



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Specifications

Item	Unity U3XP PLUS	Unity 4XP	Unity U4XP PLUS	Unity U6XP PLUS
Number of Axes	3 axes			
Maximum Working Area (X/Y/Z)	250/300/100 mm (10/12/4 in.)	350/400/100 mm (14/16/4 in.)	350/400/100 mm (14/16/4 in.)	570/500/100 mm (22/20/4 in.)
Workpiece Payload	25 kg (55 lb)	10 kg (22 lb)	25 kg (55 lb)	25 kg (55 lb)
Tool Payload	8 kg (18 lb)			
Maximum Speed (per second)	500/300 mm/sec (20/12 in.)	500/250 mm/sec (20/10 in.)	500/250mm/sec (20/10 in.)	500/250mm/sec (20/10 in.)
Unit Weight	55.5 kg (122 lb)	61 kg (134 lb)	66 kg (145 lb)	68 kg (150 lb)
Dimensions (WxHxD)	720x552x737.5 mm (28x22x29 in.)	820x652x737.5 mm (32x26x29 in.)	820x652x737.5 mm (32x26x29 in.)	860x752x737.5 mm (34x30x29 in.)
Drive System	Closed Loop Stepping Motor and Driver Package with Absolute Encoder	5-Phase Micro Stepping Motor with Linear Encoder	Closed Loop Stepping Motor and Driver Package with Absolute Encoder	Closed Loop Stepping Motor and Driver Package with Absolute Encoder
Memory Capacity	PC Storage			
Data Storage	PC Storage			
General Purpose I/O	8 inputs/8 outputs (16/16 optional)			
Drive Method	PTP and CP			
Power Supply	Auto-switching, AC100–240 VAC, 380 W			
Interpolation	3 axes (3D space)			
Repeatability	±0.01 mm			
Working Temperature	10–40 °C (50–104 °F)			
Closed-loop Motor System	Included			
Tip Detection System	Included			
High-precision Vision	Included			
Laser Height Detection	Optional			
Simple Vision System	N/A			

Available Options

- Laser Kits featuring clear and opaque surface reflective
- Laser height detection

Unavailable Options

- Teach Pendant
- Simple Vision System



Optional Laser Kit A

Note

- The travel speed will be changed for different dispensing paths and loading.
- The robot loading will be changed according to the dispensing path and travel speed.
- The weight and dimension of the controller and light is included.

For more information, speak with your Nordson representative or contact your Nordson regional office.

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