

# RV Series Automated Dispensing Systems

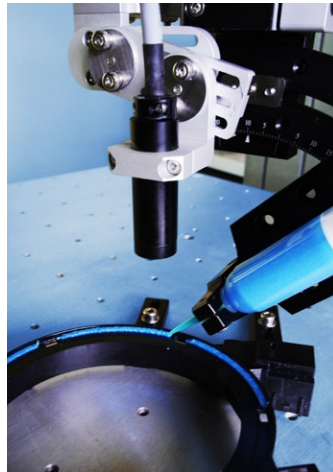
Easy 4-axis automation for precise fluid application with smart vision



RV Series makes 4-axis dispensing automation more intuitive with proprietary DispenseMotion software.



Smart vision CCD camera verifies workpiece presence and orientation.



Rotating-mount camera allows multiple substrate viewing orientations.

Nordson EFD's RV Series 4-axis automated systems are configured for precise fluid dispensing using EFD syringe barrel and valve systems.

Specialized vision-guided DispenseMotion™ software and an integrated CCD smart vision camera make the RV quick to set up and easy to program. True three-dimensional motion control provides easy programming of dots, lines, circles, arcs, compound arcs, and patterns on different planes. The fourth axis allows for dispensing at any angle along the 360° rotation plane.

In addition to its standard fixed-mount CCD camera, the RV Series has an optional rotating-mount camera that mounts onto the R-axis of the robot. This allows multiple substrate viewing orientations at 0° or 90° angles. It also allows multi-focus on multiple substrate heights.

Other standard features include single point needle adjustment and best-in-class dispense repeatability at +/- 8 µm. Platforms range from 300 x 300 mm to 620 x 500 mm, making them an ideal solution for batching or critical dispensing applications.

The RV Series can work as a standalone system or as a key part of an automated solution. It is easy to integrate into inline transfer systems, rotary tables, and pallet assembly lines.

## Features

- Simplified setup and programming with EFD's advanced vision-guided DispenseMotion software
- On-screen preview of the dispensing path facilitates programming
- Software wizard simplifies tip-to-camera and tip-to-workpiece offsets
- Dispense tip alignment capability
- Easy USB file upload and download
- 360° rotation for ID and OD dispensing
- Simultaneous X and Y movement during R (rotation) for true point programming

## Benefits

- Market-leading dimensional positioning accuracy and deposit placement repeatability
- Faster cycle and batch times
- Easier to set up and program quickly
- Seamless integration into any manufacturing operation
- Reduced production, material, and ownership costs



more info



## RV Series Specifications

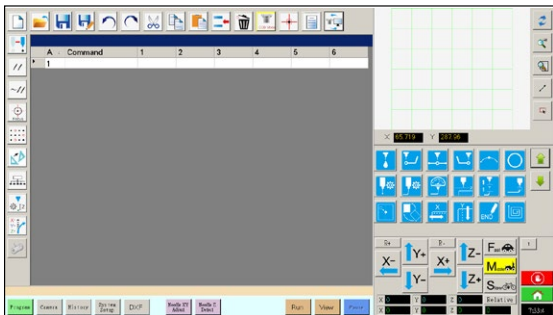
Item / Model	R3V	R4V	R6V
Part # (robot w/ fixed-mount camera)	7363556	7363557	7363558
Part # (robot w/ rotating-mount camera) Order all part #s listed. Vision kit includes camera, PC, monitor, keyboard, and mouse.	7363673 (base robot, no vision) 7364066 (vision kit)	7363675 (base robot, no vision) 7364066 (vision kit)	7363677 (base robot, no vision) 7364066 (vision kit)
Part # Europe (robot w/ fixed-mount camera)	7363572	7363573	7363574
Part # Europe (robot w/ rotating-mount camera) Order all part #s listed. Vision kit includes camera, PC, and monitor.	7363674 (base robot, no vision) 7364067 (vision kit) 7727235 (keyboard and mouse)	7363676 (base robot, no vision) 7364067 (vision kit) 7727235 (keyboard and mouse)	7363678 (base robot, no vision) 7364067 (vision kit) 7727235 (keyboard and mouse)
Number of axes	4	4	4
Maximum working area (X / Y / Z / R°)	300 / 300 / 150 mm / ±999° (12 / 12 / 6" / ±999°)	400 / 400 / 150 mm / ±999° (16 / 16 / 6" / ±999°)	620 x 500 x 150 mm / ±999° (24 / 20 / 6" / ±999°)
Workpiece payload	10.0 kg (22.0 lb)	10.0 kg (22.0 lb)	10.0 kg (22.0 lb)
Tool payload	3.0 kg (6.6 lb)	3.0 kg (6.6 lb)	3.0 kg (6.6 lb)
Maximum speed (XY / Z)	← 800 / 320 mm/s (31 / 13"/s) →		
Maximum speed (R)	720°/s	720°/s	720°/s
Weight	50.0 kg (110.2 lb)	55.0 kg (121.3 lb)	61.0 kg (134.5 lb)
Dimensions	645 <sub>w</sub> x 914 <sub>H</sub> x 552 <sub>D</sub> mm (25 <sub>w</sub> x 36 <sub>H</sub> x 22 <sub>D</sub> " )	745 <sub>w</sub> x 914 <sub>H</sub> x 652 <sub>D</sub> mm (29 <sub>w</sub> x 36 <sub>H</sub> x 26 <sub>D</sub> " )	965 <sub>w</sub> x 914 <sub>H</sub> x 752 <sub>D</sub> mm (38 <sub>w</sub> x 36 <sub>H</sub> x 30 <sub>D</sub> " )
Drive system	3-phase micro-stepping motor	3-phase micro-stepping motor	3-phase micro-stepping motor
Memory capacity	PC storage	PC storage	PC storage
General purpose I/O	← 8 inputs / 8 outputs (16 / 16 optional) →		
Input AC (to power supply)	100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 320 W	100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 320 W	100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 320 W
Repeatability (XY / Z)*	±0.008 mm/axis	±0.008 mm/axis	±0.008 mm/axis
Repeatability (R°)*	±0.005°	±0.005°	±0.005°
Vision	← CCD smart camera / optional Rotating-mount camera →		
DispenseMotion software	Included	Included	Included
Tip detection / alignment system	Optional	Optional	Optional
Warranty	1 year, limited	1 year, limited	1 year, limited
Approvals	CE, RoHS, WEEE, China RoHS		

\*Repeatability results may vary depending on the method of measurement.

## Smart Vision

- Precise repeatability with powerful CCD camera
- Higher product quality and throughput

All RV Series systems include a CCD camera that converts pixels to digital values to deliver precise, high-quality images. The software confirms workpiece presence and placement and automatically adjusts as in-process variations occur.



Vision-guided DispenseMotion software makes programming easy.

## Free Process Evaluation

Contact Nordson EFD to configure an automated dispensing system that meets your specific needs, with:

- A complimentary process evaluation by experienced fluid dispensing experts
- Samples processed for customer evaluation and approval prior to purchase



For Nordson EFD sales and service in over 40 countries, contact Nordson EFD or go to [www.nordsonefd.com](http://www.nordsonefd.com).

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