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
RV Series Specifications

<table>
<thead>
<tr>
<th>Item / Model</th>
<th>R3V</th>
<th>R4V</th>
<th>R6V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part # (robot w/ fixed-mount camera)</td>
<td>7363556</td>
<td>7363557</td>
<td>7363558</td>
</tr>
<tr>
<td>Part # (robot w/ rotating-mount camera)</td>
<td>7363673 (base robot, no vision)</td>
<td>7363675 (base robot, no vision)</td>
<td>7363677 (base robot, no vision)</td>
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<tr>
<td>Order all part #s listed. Vision kit includes camera, PC, monitor, keyboard, and mouse.</td>
<td>7364066 (vision kit)</td>
<td>7364066 (vision kit)</td>
<td>7364066 (vision kit)</td>
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<tr>
<td>Part # Europe (robot w/ fixed-mount camera)</td>
<td>7363572</td>
<td>7363573</td>
<td>7363574</td>
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<tr>
<td>Part # Europe (robot w/ rotating-mount camera)</td>
<td>7363674 (base robot, no vision)</td>
<td>7363676 (base robot, no vision)</td>
<td>7363678 (base robot, no vision)</td>
</tr>
<tr>
<td>Order all part #s listed. Vision kit includes camera, PC, and monitor.</td>
<td>7364067 (vision kit)</td>
<td>7364067 (vision kit)</td>
<td>7364067 (vision kit)</td>
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<tr>
<td>Number of axes</td>
<td>4</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Maximum working area (X / Y / Z / R°)</td>
<td>300 / 300 / 150 mm / ±999° (12 / 12 / 6&quot; / ±999°)</td>
<td>400 / 400 / 150 mm / ±999° (16 / 16 / 6&quot; / ±999°)</td>
<td>620 x 500 x 150 mm / ±999° (24 / 20 / 6&quot; / ±999°)</td>
</tr>
<tr>
<td>Workpiece payload</td>
<td>10.0 kg (22.0 lb)</td>
<td>10.0 kg (22.0 lb)</td>
<td>10.0 kg (22.0 lb)</td>
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<tr>
<td>Tool payload</td>
<td>3.0 kg (6.6 lb)</td>
<td>3.0 kg (6.6 lb)</td>
<td>3.0 kg (6.6 lb)</td>
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<tr>
<td>Maximum speed (XY / Z)</td>
<td>720°/s</td>
<td>720°/s</td>
<td>720°/s</td>
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<tr>
<td>Weight</td>
<td>50.0 kg (110.2 lb)</td>
<td>55.0 kg (121.3 lb)</td>
<td>61.0 kg (134.5 lb)</td>
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<tr>
<td>Dimensions</td>
<td>645x x 914x x 552z mm (25x x 36x x 22&quot;)</td>
<td>745x x 914x x 652z mm (29x x 36x x 26&quot;)</td>
<td>965x x 914x x 752z mm (38x x 36x x 30&quot;)</td>
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<tr>
<td>Drive system</td>
<td>3-phase micro-stepping motor</td>
<td>3-phase micro-stepping motor</td>
<td>3-phase micro-stepping motor</td>
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<tr>
<td>Memory capacity</td>
<td>PC storage</td>
<td>PC storage</td>
<td>PC storage</td>
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<tr>
<td>General purpose I/O</td>
<td>8 inputs / 8 outputs (16 / 16 optional)</td>
<td>8 inputs / 8 outputs (16 / 16 optional)</td>
<td>8 inputs / 8 outputs (16 / 16 optional)</td>
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<tr>
<td>Input AC</td>
<td>100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 520 W</td>
<td>100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 520 W</td>
<td>100–240 VAC, ±10%, 50/60Hz, 20 Amp maximum, 320 W</td>
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<tr>
<td>Repeatability (XY / Z)*</td>
<td>±0.008 mm/axis</td>
<td>±0.008 mm/axis</td>
<td>±0.008 mm/axis</td>
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<tr>
<td>Repeatability (R°)*</td>
<td>±0.005°</td>
<td>±0.005°</td>
<td>±0.005°</td>
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<tr>
<td>Vision</td>
<td>CCD smart camera / optional Rotating-mount camera</td>
<td>CCD smart camera / optional Rotating-mount camera</td>
<td>CCD smart camera / optional Rotating-mount camera</td>
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<tr>
<td>DispenseMotion software</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
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<tr>
<td>Tip detection / alignment system</td>
<td>Optional</td>
<td>Optional</td>
<td>Optional</td>
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<td>Warranty</td>
<td>1 year, limited</td>
<td>1 year, limited</td>
<td>1 year, limited</td>
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<tr>
<td>Approvals</td>
<td>CE, RoHS, WEEE, China RoHS</td>
<td>CE, RoHS, WEEE, China RoHS</td>
<td>CE, RoHS, WEEE, China RoHS</td>
</tr>
</tbody>
</table>

*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.

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

Nordson EFD

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Vision-guided DispenseMotion software makes programming easy.