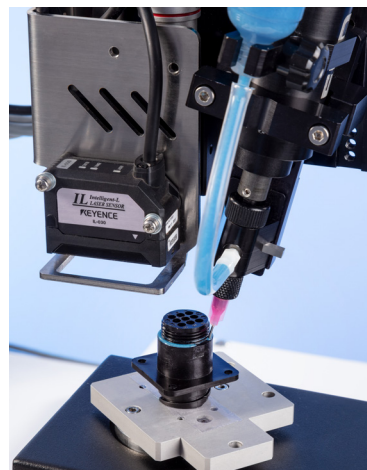# 4-Axis PROPlus Automated Dispensing Systems

Easy 4-axis automation with a rotating table for longevity and application versatility

Removable rotating table allows for both 4-axis and 3-axis applications.

Achieve R-axis repeatability of 0.005°.

Fixed head creates less wear and tear with the rotating table.

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

The modular design allows for both 4-axis and 3-axis configurations to provide users with flexibility for a wide range of dispensing applications. When used as a 4-axis, the rotating table creates less vibration and therefore less wear and tear than standard 4-axis robots with a rotating head. The fixed head also gives users the ability to mount heavier dispensing devices for added versatility.

In addition, the 4-axis PROPlus robot features the same features as our PROPlus Series including specialized DispenseMotion™ software, integrated vision and laser height detection, and best-in-class X, Y, and Z-axis repeatability of ±0.003 mm and R-axis repeatability of 0.005°.

Features

- Modular design for 3- and 4-axis applications
- Dual linear guide, advanced servomotor, and ball screw actuation
- Simplified setup and programming
- On-screen preview and confirmation of the dispense path
- Constant closed-loop feedback

Benefits

- Best-in-class X, Y, and Z-axis repeatability and speed at ±0.003 mm and R-axis repeatability of 0.005°
- Improved quality and consistency
- Rotating table creates less vibration that reduces wear and tear and improves longevity of the robot
- Easy integration into existing manufacturing operations
- Faster speed for higher product output

Part #	Description
7364961	4-axis PROPlus robot
7366457	4-axis PROPlus robot - Europe
7028278	400 mm fixture plate*

Recommended for 3-axis applications. Order separately.

more info

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Specifications

NOTE: Specifications and technical details are subject to change without prior notification.

Item	Specification
Number of axes	4
Maximum working area (X / Y / Z / R*)	350 / 400 / 100 mm / ±1080° (14 / 16 / 4" / ±1080°)
Workpiece payload (Y axis without the rotating table)	22.0 kg (48.5 lb)
Workpiece payload (R*)	2.0 kg (4.4 lb)
Tool payload (Z)	6.0 kg (13.2 lb)
Weight	75 kg (165.3 lb)
Dimensions	824.0$_W$ x 674.5$_D$ x 737.5$_H$ mm (32.4$_W$ x 26.5$_D$ x 29.0$_H$")
Maximum speed** (XY)	800 mm/s (31"/s)
Maximum speed** (Z)	250 mm/s (10"/s)
Maximum speed** (R*)	1080°/s
Drive system	Closed-loop stepper motor and driver package with absolute sensor
Drive system (R*)	5-phase micro-stepping motor
Memory capacity	PC storage
Data storage	PC storage / USB
General purpose I/O	8 inputs / 8 outputs (16 / 16 optional)
Dispensing controller	External
Input AC (to power supply)	100–240 VAC (±10%), 50/60 Hz, 20 A maximum, 380 W
Input air pressure vacuum (for rotating table)	0–1 mPa (0–145 psi)
Interpolation	4 axes (4D space)
Repeatability (XY / Z)***	±0.003 mm/axis
Repeatability (R*)**	±0.005°
Operating temperature	10–40° C (50–104° F)
Closed-loop X and Y axis encoder	Included
Tip detection	Included
Vision	CCD smart camera (included)
DispenseMotion software	Included
Laser height detection	Optional
Approvals	CE, UKCA, RoHS, WEEE, China RoHS

*R = rotating table
**Actual travel speed depends on the dispensing path and workpiece / tool payloads.
***Repeatability results may vary depending on the method of measurement.

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Laser Height Sensing

- Pinpoint accuracy with optional laser height sensing
- Better dispensing

Both Laser B and Laser C detect variations on the surface of a product and allow the robot to automatically adjust the tip dispensing height, preventing uneven deposits and tip or workpiece damage. Use laser C for higher precision, detection of reflective or translucent surfaces, or detection of small areas or ledges less than 700 μm.

Smart Vision

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

All PROPlus / PRO 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

Integrated vision and laser make the 4-axis PROPlus Series a complete automated solution.

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