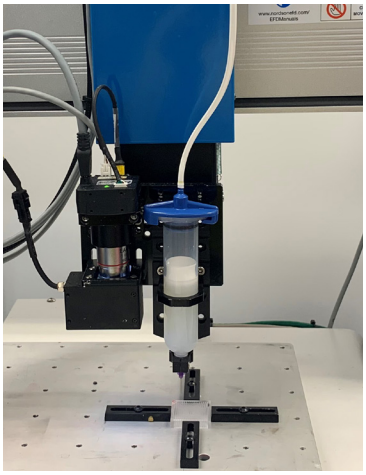
PROPlus / PRO Series Automated Dispensing Systems

A complete, vision-guided automation solution

Integrated vision and laser make the PROPlus / PRO Series a complete automated solution.



Smart vision CCD camera verifies product presence and orientation.

Verify deposit height measurements with ease with the OptiSure confocal laser.

Nordson EFD's vision-guided PROPlus / PRO Series automated systems are specifically designed and configured for precise fluid dispensing using EFD syringe barrel and valve systems.

Specialized DispenseMotion™ software and integrated vision and laser height sensing capabilities make EFD 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.

Closed-loop encoding, along with the smart vision and laser height sensing capabilities, allows the system to adjust programs automatically to compensate for both surface height changes and variations in product orientation.

The PROPlus delivers best-in-class repeatability of +/- 0.003 mm and provides higher dispensing accuracy. Specialized software is designed to optimize the performance of PICO® and Liquidyn® jet valve systems. Fiducial recognition allows for multiple image captures for higher resolution offset.

Features

- Dual linear guide, advanced servomotor, and ball screw actuation (PROPlus only)
- Simplified setup and programming with EFD's advanced vision-guided DispenseMotion software
- On-screen preview of the dispensing path facilitates programming
- Constant closed-loop feedback with encoding, smart vision camera, and precision laser non-contact sensing
- Streamlined file import and conversion

Benefits

- Best-in-class repeatability and speed (PROPlus +/- 0.003 mm; PRO +/- 0.004 mm)
- Improved product quality; more precise, accurate dispensing
- Faster startup to introduce automation, less production line downtime
- Quicker learning curve for operators; programming is easier, more visual
- Produces more parts and reduces process time
- Reduced production, material, and ownership costs
- New manufacturing opportunities

more info

Nordson EFD

PROPlus / PRO Series Specifications

Laser Part #
7361240: B Laser Upgrade Kit
7364992: C (Confocal) Laser Upgrade Kit

Item / Model	PRO3	PRO4	PROPlus3	PROPlus4
Part #	7362911	7360860	7363536	7363539
Part # Europe	7363829	7361353	7363650	7363653
Number of axes	3 axes			
Maximum working area (X / Y / Z)	250 / 250 / 100 mm (10 / 10 / 4")	350 / 350 / 100 mm (14 / 14 / 4")	250 / 250 / 100 mm (10 / 10 / 4")	350 / 350 / 100 mm (14 / 14 / 4")
Workpiece payload	10.0 kg (22.0 lb)		25.0 kg (55.1 lb)	
Tool payload	3.5 kg (7.7 lb)		6.0 kg (13.2 lb)	
Weight	45.0 kg (99.2 lb)	57.5 kg (126.8 lb)	50.5 kg (111.3 lb)	63.5 kg (140.0 lb)
Dimensions	720w x 690H x 590D mm (28w x 27H x 22D")	820w x 690H x 690D mm (32w x 27H x 27D")	720w x 690H x 590D mm (28w x 27H x 22D")	820w x 690H x 690D mm (32w x 27H x 27D")
Maximum speed (XY / Z)	500 / 250 mm/s (20 / 10"/s)		800 / 250 mm/s (31 / 10"/s)	
Drive system	5-phase micro- stepping motor		Servomotor	
Memory capacity	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, 380 W			
Repeatability*	±0.004 mm/axis		±0.003 mm/axis	
Vision	CCD smart camera			
DispenseMotion software	Included			
Tip detection	Included			
Laser height detection	Optional			
Approvals	CE, UKCA, RoHS, WEEE, China RoHS			
Warranty	1 year, limited			

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

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Laser Comparison

Item	Laser B (IL-030)	Laser C (CL P030)
Reference (measurement) distance	30 mm (1.18")	30 mm (1.18")
Measurement range	±15 mm (±0.59")	±5 mm (±0.20")
Laser class	1	1
Spot diameter	200 x 750 µm	ø38 µm
Linearity	±5 µm	±0.72 µm
Repeatability	1 µm	0.25 µm
Sampling rate	0.33 / 1 / 2 / 5 ms	0.1 / 0.2 / 0.5 / 1 ms
Surface	All except reflective, transparent, and translucent surfaces	All

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

Nordson EFD

For Nordson EFD sales and service in over 40 countries, contact Nordson EFD or go to www.nordsonefd.com.

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