

# PICO™ Jet Dispensing Systems

Nordson EFD's new PicoDot non-contact dispensing systems combine high production speed with exceptional deposit accuracy and process control. By jetting droplets of fluid onto the product, the time-consuming need to move the valve to the substrate is eliminated. Fluid can be dispensed into difficult to access areas and onto uneven or other substrates where a dispense needle cannot contact the substrate.



## Features

- Ideal for use on uneven substrates or hard-to-access areas
- Consistent shot size, with droplets starting at 0.002  $\mu\text{l}$  (2 nl) to flow rates up to 300 g/min (10 oz/min)
- Fast cycle rates up to 150 dots/second
- Dispenses a wide range of low to high viscosity fluids

## Benefits

- Eliminates Z-axis movement and need for precise height positioning, for significantly higher dispensing speeds
- Outstanding process control for highest dot-to-dot consistency and best process capability
- Reduces downtime and scrap by eliminating risk of substrate-nozzle collision
- Fast change-over without need for any process readjustments
- Integrated heater in the valves, a choice of different nozzle orifice sizes and precision needles allow optimizing the dispensing process for a wide range of fluids

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## Capabilities

- Non-contact jetting of droplets
- Non-contact dispensing of lines
- Covering areas by jet dispensing of droplet arrays
- Non-contact jetting onto three-dimensional substrates
- Optional precision needle adapter allows contact dispensing of dots and beads with excellent consistency and highest positioning precision



PicoDot Jet Valve Driver



PicoDot Jet Valve



PicoDot Valve Controller

Technical Specifications	Low Viscosity Valve	Medium Viscosity Valve	High Viscosity Valve
Dimensions	72 X 14 X 60 mm / 2.8 X 0.6 X 2.4" (without needle adapter)		
Weight Cordset	290 grams / 10 oz		
Compatible Fluids	Examples: various oils, alcohol, octane, and organic solutions	Examples: oils and greases, varnishes and colors, hydrous solutions, organic solvents, adhesives and adhesive components, liquid polymers and polymeric solutions, etc	
Viscosity Range	50-1,000 mPas / 50-1,000 cps (thixotropic)	50-200,000 mPas / 50-200,000 cps (thixotropic)	1,000-500,000 mPas / 1,000-500,000 cps (thixotropic)
Acceptable Fillers in Fluid	None	Medium quartz powder, iron oxide, and aluminum oxide	
Materials in Contact with the Fluid	Viton, Perfluoroelastomer, stainless steel 303 / 1.4305		
Min. Cycle Time (open and closed)	0.010 ms		
Min. Cycle Time at Full Stroke (open and close)	0.250 ms		0.500 ms
Max. Open Time	Indefinitely (permanently open)		
Min. Pause Time Between Cycles	0.350 ms	0.010 ms	
Max. Cycle Frequency	1000 per second (150 per second in continuous operation)		
Metering Accuracy	Approx. 2% (with constant pressure and temperature)		
Max. Operating Pressure	100 bar / 1450 psi		60 bar / 870 psi
Throughput	Depending on fluid	At least 300 g per minute with 1,000 mPas and 60 bar / 10.5 oz per minute with 1,000 cps and 870 psi	
Ambient Operating Temperature	Up to 45°C / 113°F		
Fluid Heating Range	Up to 100°C / 212°F with optional heater	Up to 100°C / 212°F	
Nozzle Orifice Diameter (standard, other diameters available upon request)	0.150 and 0.300 mm / 0.006" and 0.012"	0.300 mm / 0.012"	0.400 mm / 0.016"

For Nordson EFD sales and service in over 30 countries, contact Nordson EFD or go to [www.nordsonefd.com](http://www.nordsonefd.com)

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