

Nordson EFD Solutions:

Precision Fluid Dispensing for Machine Solutions



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Photo courtesy of Applied Automation.

Introduction

As products grow in complexity, machine builders are faced with heightened demands to create machines that increase throughput for smaller, lighter, more advanced parts. All while meeting critical time-to-market windows.

It's essential to work with a skilled and experienced vendor — especially for the fluid dispensing section of a machine build that can bottleneck a process if not executed properly.

What Nordson EFD Offers for Custom Industrial Automation Designs:

- 60+ years of fluid dispensing application knowledge
- A wide range of fluid dispensing solutions to streamline your supply chain
- Application testing with your customers' fluid and parts to validate our dispensing systems for your customer's specifications
- Forward-thinking Industry 4.0-capable automation solutions
- Reliable, worldwide technical support

Consider Nordson EFD your fluid dispensing partner in each stage of your process — from design to development to installation and global aftermarket support.





When you think of the anatomy of a machine, fluid dispensing may not be the most complex part. It may not be the costliest. But when you're dealing with fluid, few things can compromise the performance of a machine faster than unreliable dispensing equipment.

Fluid dispensing is the glue, sometimes literally, that holds everything together in a machine build. These small parts deserve attention as inaccurate dispensing can greatly affect the end product, potentially leading to rejects and making it more costly for your customer in the long run.

At Nordson EFD, we offer:

- A wide range of reliable products to meet a variety of custom automation builds and eliminate the hassle of working with multiple vendors
- 60+ years of fluid dispensing application knowledge and expertise
- Technical support to test and recommend products for the best end result

In this section we will talk about how we help you:

- Hit project milestones
- Support global projects
- Access 3D models
- Enable Industry 4.0
- Reduce your machine footprint



Factory automation projects can come from anywhere in the world. That's why it's beneficial to partner with companies like Nordson EFD who can provide global technical support.

With a global network of application testing labs, we can validate our dispensing solutions for your specific applications.

With a global network of application specialists, we can also:

- Visit end users to answer questions and demonstrate the value of our dispensing systems
- Send our technicians to Final Acceptance Trial (FAT) and Site Acceptance Trial (SAT) visits to make sure dispensing processes are set up properly
- Sign non-disclosure agreements (NDAs) so you can rest assured that we won't discuss your project with anyone outside of your team

Our Global Reach Provides

- Technical expertise across the Americas, Asia, and Europe
- Support for any technical issues along the way
- Reliable customer service to help you meet Factory Acceptance Tests (FAT), Site Acceptance Tests (SAT), and commissioning steps
- Future proofing with expert recommendations on replacement parts to reduce production downtime

Hit Your Project Milestones

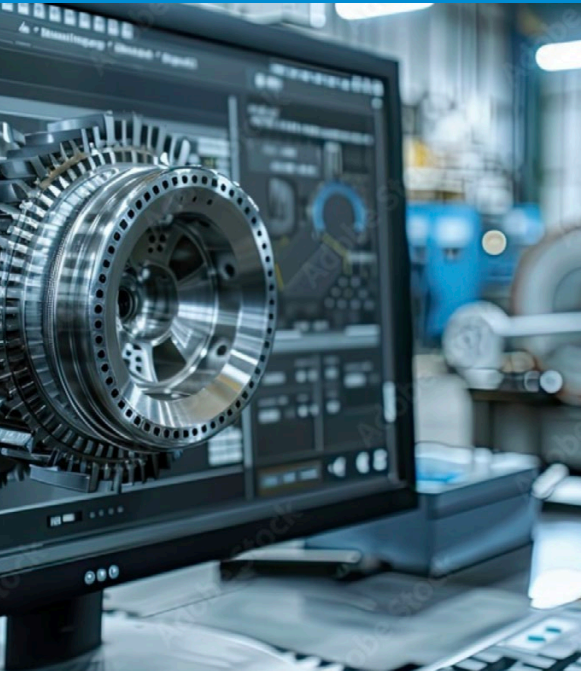
Reliable performance is a major reason people specify Nordson EFD. Often our first contact with machine builders is through your customers who request EFD equipment. Not only are our products reliable, but we also have a knowledgeable technical service team to help you hit every milestone during your machine build.



Find your Local Support Today



Contact Sales for your Next Build



When you choose EFD, you choose a partner from design concept to post-sale support. We have the knowledge and resources to make your job easier. We understand your dispensing process and we respond quickly.

We know 3D CAD models are a necessity, so we make them easy to access from our website.

Support for Key Design Considerations

We also know you need to think about the dispensing system early in your design process as there are specific considerations to make.

Key Design Considerations

- If you're using a tank reservoir, consider where the tank will be located to ensure the fluid line is the right length for the application
- If you're using a valve, consider how easily an operator will be able to access the valve to change out fluid or perform maintenance
- If you're dispensing a cyanoacrylate or other complex fluid, consider specific dispensing components that you'll need and process issues you may encounter
- If you're dispensing a very thin or very thick fluid, consider the different dispensing tips that work most effectively to generate higher throughput for your end user
- If you're working with a jetting / non-contact dispensing or volumetric dispensing application, consider our PICO Nexus jetting system or 7197PCP-DIN-NX volumetric system, both which can easily fit onto a production line with controllers that mount on a DIN rail



Industry 4.0 Enablement

Data-driven manufacturing is the future. It puts power in the hands of end users to make changes to machine settings either on site or remotely. It's also an easy way for machine builders to prove to their customers that the solution they're recommending is viable, with actual, hard data.

EFD supports a data-driven approach by providing dispense logs, which can store a history of dispensing parameters. This gives manufacturers full visibility into the entire dispensing process for full optimal control and to meet regulatory requirements in the medical industry.

We also support Industry 4.0 initiatives with products like our PICO *Nexus* jetting system.

The PICO *Nexus* jetting system is the Core of Connectivity and drives your Industry 4.0 initiatives by:

- Communicating using standard protocols such as PROFINET® and EtherNet/IP™ via Industrial Ethernet
- Providing control of your jetting systems from an HMI of your choice
- Plug-and-play integration into different machine builds with 24V compatibility

Unleash the Core of Connectivity

Reduce Your Footprint

Machine space on your client's manufacturing floor is precious real estate. At Nordson EFD, many of our products are built with a smaller footprint in mind to dispense in hard-to-reach spaces and fit into any machine build. Our PICO *Nexus* jetting controller and 7197PCP-DIN-NX volumetric controller can easily be mounted onto an existing DIN rail in a machine cabinet for easy monitoring through an HMI at the point of dispense.



Wide Range of Products



Less is not more when it comes to fluid dispensing options for your machine or system. Because there are so many types of fluids, and more being developed each year, you need options. A broad range of dispensing solutions paired with the expertise to choose the best fit per project within budget is a win-win for machine builders and your end users.

With more than 130 types of valves, specified valve controllers, dozens of fluid reservoir and valve fitting options as well as essential dispensing accessories, and high-quality dispensing tips and components – there’s a lot to choose from. Depending on the fluid, you may need a specific type of dispense tip or syringe barrel or valve fitting to ensure the success of the application.

It’s important to work with an experienced EFD application specialist to match the right equipment to each application.

“The benefits of working with EFD include product support, product reliability, and a wide range of products to handle almost anything we encounter.”

– MICRO INSTRUMENT CORP.



The Core of Connectivity for Machine Builders

Jet dispensing offers machine builders an alternative to contact dispensing, which has many benefits and use cases. For starters, jetting is nearly 14 times faster than standard contact valves since jet valves can hover over a part to dispense rather than using Z-axis movement and is especially beneficial to clients with high production volumes. Jetting can also be recommended to clients when the part they're dispensing on is fragile and even dispensing with a small tip could damage the substrate, potentially leading to rejects.

Small, powerful and easy to integrate into your machine design. That's why engineers turn to the Nordson EFD PICO *Nexus* jetting system to get behind-the-scenes control of non-contact dispensing processes using Industrial Ethernet protocols.

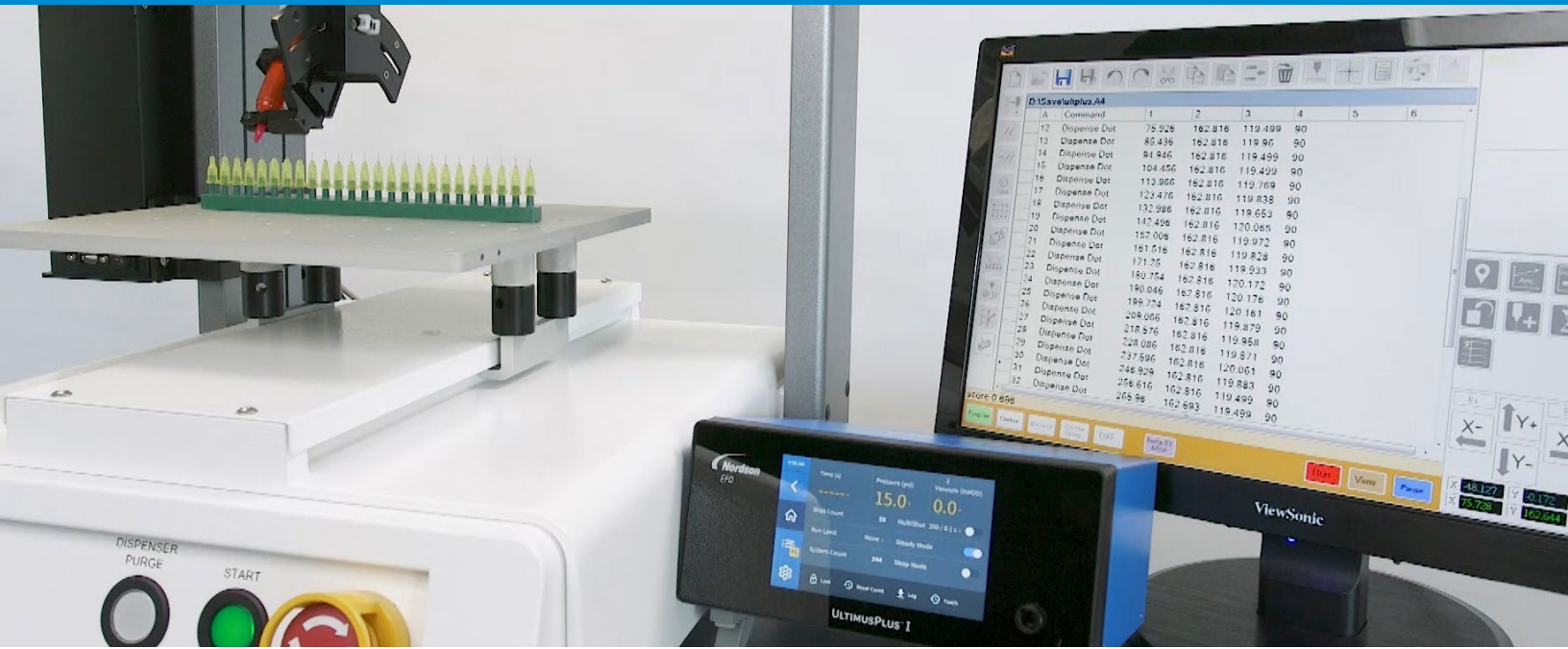
The system's 24V, DIN-rail mounted jetting controller is used to connect, control, and monitor jet valves from a human machine interface (HMI) of your choice. The significant advantage the PICO *Nexus* offers to machine builders is that you don't need to panel-mount controllers far from your dispensing operation.

Benefits of this jetting system include:

- Industrial Ethernet
- PROFINET® (Process Field Network) and EtherNet/IP™ communication protocols
- NX protocol via TCP/IP
- Intuitive web interface for easy setup, programming, and monitoring of your jet valve
- DIN rail construction that fits in existing machine cabinet
- 24V plug-and-play compatibility

Learn how PICO *Nexus* enables you to get the connectivity advantages of Industry 4.0, save valuable production floor space, and easily set up, program, and monitor fluid dispensing jet valves.

Connectivity for Contact Dispensing: UltimiusPlus I-II Dispensers



Contact dispensing refers to traditional fluid dispensing where you're making direct contact with the part you're dispensing onto. This technology requires Z-axis movement to apply a fluid deposit onto a substrate and is a great solution in most machine builds.

Our UltimiusPlus I-II dispensers are network-capable benchtop fluid dispensers designed for advanced applications and data-driven manufacturing. These dispensers can be remotely accessible for monitoring and programming of dispensing parameters from any plant controller using Ethernet compatibility with NX protocol via TCP/IP. This eliminates the need for production managers to physically walk to each dispenser to make changes, saving valuable production time.

Check out our [video](#) to learn how you can future-proof your process with NX and provide your customers with the best tools for success.





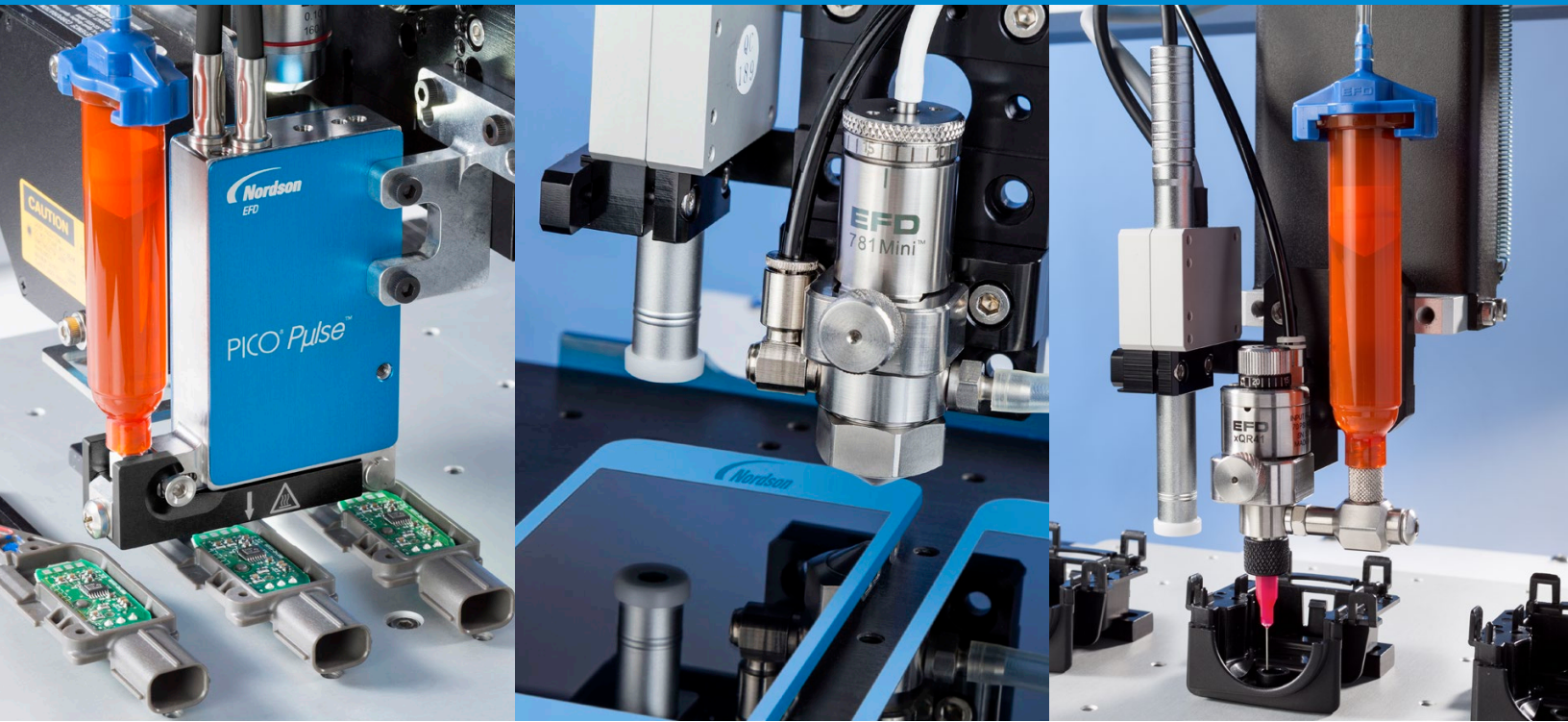
A volumetric system dispenses material according to the space it occupies (i.e. its volume). Volumetric dispensing systems are both mechanically defined and numerically controlled to precisely control the volume and rate of material dispensed. Nordson EFD manufactures some of the most advanced progressive cavity pumps available today.

Machine builders choose the network capable 7197PCP-DIN-NX controller because it enables direct communicate with a Programmable Logic Controller (PLC) or other manufacturing plant controllers using NX protocol over Transmission Control Protocol / Internet Protocol (TCP/IP) via Ethernet.

In addition to the ability to easily communicate with your 797PCP Series Progressive Cavity Pumps and the 797PCP-2K Series Progressive Cavity Pumps, the controller is designed for mounting on a DIN rail inside machine cabinets.

The benefits of the 797PCP volumetric dispensing system include:

- Integrating systems and enabling remote access
- Real time troubleshooting
- Easy-to-use web interface
- Remote monitoring of your dispensing parameters



Mini Case Study

Nordson EFD helped one machine builder design a cell that replaced multiple contact dispense valves with one non-contact jet valve.

Results

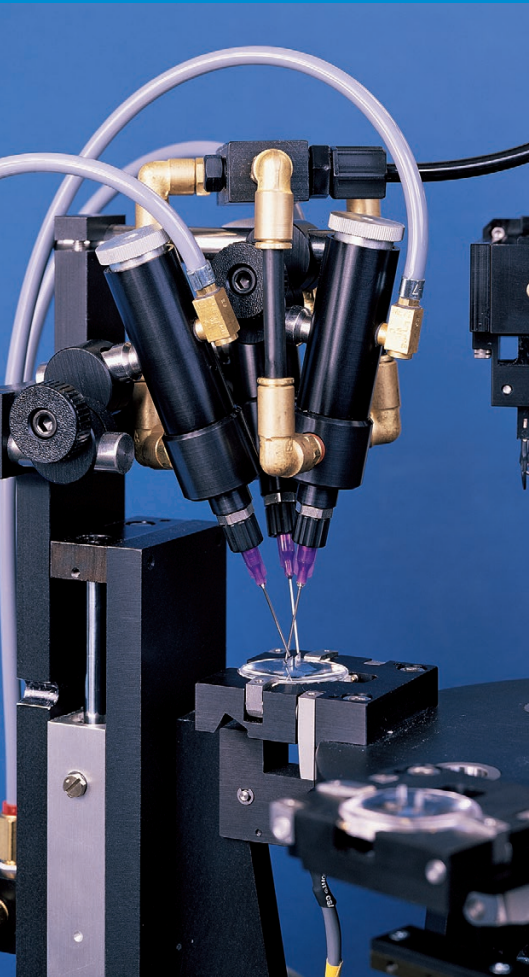
Replacing multiple dispense valves with one jet valve created a faster, cleaner, and easier-to-adjust process adaptable to different dispensing tasks. And because less dispensing equipment was needed, the size of the cell was reduced. Because of the reduced footprint, the end user purchased an additional machine to install on the plant floor, increasing production capabilities.

When you partner with EFD, you partner with innovative solutions for your most challenging dispensing projects. You partner with innovative solutions to improve end users' productivity and profitability. You partner with innovative solutions to differentiate your bid amid a competitive global landscape.

Nordson EFD is the fluid dispensing solution partner for machine builders because:

- Wide selection of robust fluid dispensing solutions
- History of successfully improving manufacturers productivity and bottom line
- Innovative fluid dispensing solutions differentiate your bid, helping you stand out in a globally competitive marketplace

[Contact us for your Next Project](#)



Expert Recommendations

Most Nordson EFD fluid application specialists have at least 10 years of experience helping customers find the right dispensing solutions for their fluid and application requirements.

Just call 800-556-3484 or email info@nordsonefd.com to get an expert recommendation today.

Find CAD Models

Easily locate all of the 3D and 2D CAD models of EFD valves, controllers, dispense tips, tanks, components, fittings, and more.

[3D Content Central »](#)

Application Videos

Visit our video gallery to access 100+ application, how-to, and promotional videos. See how EFD dispense and jetting valves actually work in real-life dispensing footage.

[Video Gallery »](#)

Valve Selection Guide

Quickly find valves by application and fluid type to get an idea of the breadth of dispensing solutions provided by Nordson EFD.

[Valves by Application »](#)

Application Testing

Request an application test with your fluid and parts to validate our dispensing systems for your customers. Fill out this simple form to get started.

[Request Application Test »](#)

Easy Part Number Search

It's easy to search our digital catalog to find products based on part numbers and keywords.

[Digital Catalog »](#)

Precision Fluid Dispensing for Machine Building

Learn why machine builders partner with Nordson EFD for precision fluid dispensing solutions for their custom industrial automation designs.

[Machine Building Solutions](#)

Nordson EFD's worldwide network of experienced product application specialists are available to discuss your dispensing project and recommend a system that meets your technical requirements and budget.

Call or email us for a consultation.

800-556-3484

info@nordsonefd.com

www.nordsonefd.com/recommendations

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EFD

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