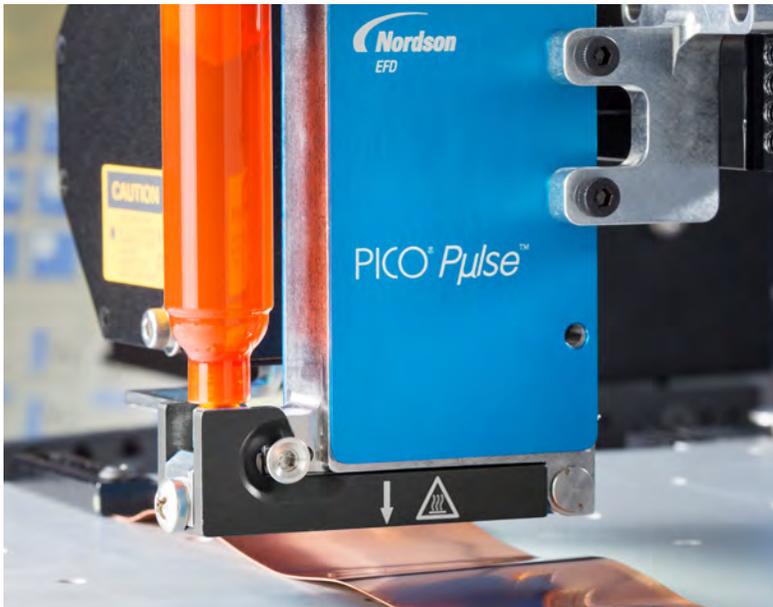


# PICO *Pulse* Jet Valve System

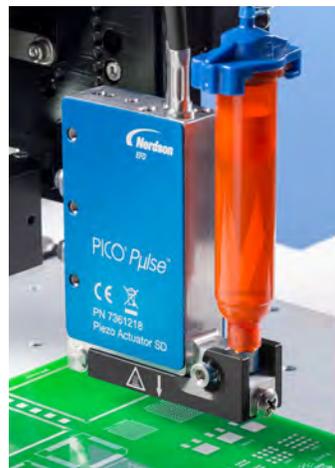
The Latest Advance in Precision Jetting Technology



Jet lines onto uneven surfaces with greater precision.



The PICO *Pulse* valve removes the barrier between speed and accuracy.



Jet UV-cure adhesives onto printed circuit boards with greater repeatability.

The PICO® *Pulse*™ non-contact jet valve delivers faster, more precise dispensing over smooth and uneven surfaces with less turbulence for greater fluid deposit consistency, placement, and process control. Dispense micro-deposits as small as 0.5 nL at up to 1000Hz continuous with up to 1500Hz maximum bursts\* — an industry best in class.

Variable stroke provides better stroke control, making it possible to set very exact, repeatable deposit quantities. Improved close time, in addition to faster full stroke open time, make *Pulse* one of the most robust jet dispensing valves on the market.

Its innovative tool-free latch mechanism allows easy removal of wetted parts for fast, simplified serviceability and maintenance. Its modular design and exchangeable parts make it possible to dispense a wider variety of fluids with low to high viscosities. This makes it suitable for a wider range of applications, so it can meet changing dispensing demands as your business grows.

## Features

- Exchangeable, modular design for greater configurability.
- Tool-free latch for easy removal of fluid body.
- Variable stroke for precise dispensing control.
- Makes micro-deposits as small as 0.5 nL.
- Dispenses at up to 1000Hz continuous, with up to 1500Hz maximum bursts.\*

\*With approved conditional settings.

## Benefits

- Capability to jet low- to high-viscosity fluids provides the flexibility to meet changing dispensing needs.
- Tool-free latch allows fast, easy serviceability and reduces downtime.
- Industry-leading accuracy in deposit consistency, repeatability, and placement.
- Eliminates Z-axis movement for significantly faster production speeds.
- Improved thermal performance for greater viscosity stabilization.



more info



# PICO *Pulse* Jet Valve Technology

Configure your modular, exchangeable PICO *Pulse* jet dispensing valve in four easy steps.



## Step 1. Select your piezo actuator

Two types of piezo actuators are available. Select standard duty (SD) for applications with cycle rates less than 250Hz. Select heavy duty (HD) for applications with cycle rates greater than 250Hz.

## Step 2. Select your fluid body assembly

A wide range of fluid body assemblies are available with flat or extended nozzles in seat orifice sizes ranging from 50–600 microns with a choice of Type D and Type E geometries to meet the exacting requirements of your applications. Fluid body assemblies with PEEK\* wetted parts are available for reactive adhesives, such as anaerobics.

Serial numbers make it easy to identify matched sets of cartridges and fluid bodies. Etched lines make it easy to align the cartridge and fluid body quickly and accurately for optimal performance.

\*Polyetheretherketone



## Step 3. Select your fluid inlet fitting

Choose from a variety of fluid inlet fittings including luer lock, barb, and compression fitting types to match the fluid reservoir type selected. Nordson EFD offers a complete selection of reservoirs from 3cc to 55cc Optimum® syringe barrels and cartridges to tank reservoir systems.



## Step 4. Select your extension cables for connection to the PICO *Touch*™ Controller

Choose either 0.6 m, 2 m, 6 m, or 9 m extension cable sets that include both power and communication cables.



# PICO *Pulse* Modular, Exchangeable System Parts

Partial listing of exchangeable components only. Consult EFD for full listing of available parts.



## PICO *Pulse* Piezo Actuators

P/N	Description
7361218	PICO <i>Pulse</i> valve SD for standard duty applications
7361283	PICO <i>Pulse</i> valve HD for heavy duty applications

## PICO *Pulse* Flat Nozzle Fluid Body Assemblies

A Nordson EFD application specialist will help select the best fluid body assembly for optimal jetting performance.



Standard fluid body assembly



PEEK fluid body assembly

Standard Nozzle P/N	PEEK Nozzle P/N	Description	Orifice	Geometry	Ball Size
7362574	7363321	Fluid body assembly	50 µm	E	3.0S
7362575	7363322	Fluid body assembly	100 µm	D	3.0S
7362576	7363323	Fluid body assembly	200 µm	D	3.0S
7362577	7363324	Fluid body assembly	50 µm	E	5.0S
7362578	7363325	Fluid body assembly	100 µm	E	5.0S
7362579	7363326	Fluid body assembly	150 µm	E	5.0S
7362580	7363327	Fluid body assembly	300 µm	E	5.0S
7362581	7363328	Fluid body assembly	100 µm	D	5.0S
7362582	7363329	Fluid body assembly	150 µm	D	5.0S
7362583	7363330	Fluid body assembly	200 µm	D	5.0S
7362584	7363331	Fluid body assembly	300 µm	D	5.0S
7362585	7363332	Fluid body assembly	400 µm	D	5.0S
7362586	7363333	Fluid body assembly	600 µm	D	5.0S

# PICO *Pulse* Modular, Exchangeable System Parts

Partial listing of exchangeable components only. Consult EFD for full listing of available parts.

## PICO *Pulse* Extended Nozzle Fluid Body Assemblies

A Nordson EFD application specialist will help select the best fluid body assembly for optimal jetting performance.



P7 fluid body assembly



P30 fluid body assembly

P7* Nozzle P/N	P30** Nozzle P/N	Description	Orifice	Geometry	Ball Size
7362703	n/a	Fluid body assembly	50 µm	E	3.0S
7362704	n/a	Fluid body assembly	100 µm	D	3.0S
7362705	n/a	Fluid body assembly	200 µm	D	3.0S
7362706	7363238	Fluid body assembly	50 µm	E	5.0S
7362707	7363239	Fluid body assembly	100 µm	E	5.0S
7362708	7363240	Fluid body assembly	150 µm	E	5.0S
7362709	7363241	Fluid body assembly	300 µm	E	5.0S
7362710	7363242	Fluid body assembly	100 µm	D	5.0S
7362711	7363243	Fluid body assembly	150 µm	D	5.0S
7362712	7363244	Fluid body assembly	200 µm	D	5.0S
7362713	7363245	Fluid body assembly	300 µm	D	5.0S
7362714	7363246	Fluid body assembly	400 µm	D	5.0S
7362715	7363247	Fluid body assembly	600 µm	D	5.0S

\*P7 nozzles extend 7 mm from the standard flat nozzle length.

\*\*P30 nozzles extend 30 mm from the standard flat nozzle length.

# PICO *Pulse* Modular, Exchangeable System Parts

Partial listing of exchangeable components only. Consult EFD for full listing of available parts.

## Fluid Inlet Fittings

	P/N	Description
	7362606	Fitting: M5 x female luer lock, straight, stainless steel (includes Viton® O-ring) 7361303: O-rings: 5 x 1 mm, Viton, brown, 10 pc 7361681: O-rings: 5 x 1 mm, perfluoroelastomer (FFKM), black, 3 pc
	7363340	Fitting: M5 x female luer lock, straight, PEEK (includes Viton O-ring) 7361303: O-rings: 5 x 1 mm, Viton, brown, 10 pc 7361681: O-rings: 5 x 1 mm, perfluoroelastomer (FFKM), black, 3 pc
	7020669	Fitting: M5 x 3/32" ID barb, stainless steel
	7021919	Fitting: 10-32 UNF x 3/32" barb
	7020671	Fitting: M5 x 1/8" ID barb, stainless steel
	7020673	Fitting: M5 x 1/8" ID barb, stainless steel, elbow
	7361498	Fitting: M5 x 35 mm male-female extension, stainless steel
	7361645	Flat washers, M5 fitting, EPDM, 10 pc (for legacy M5 fittings)
	7361959	Flat washers, M5 fitting, FFKM, 2 pc (for legacy M5 fittings)

# PICO *Pulse* Modular, Exchangeable System Parts

Partial listing of exchangeable components only. Consult EFD for full listing of available parts.

## Accessories



P/N	Description
7361295	Valve cleaning kit (includes brushes, cotton swabs, mini-reamers, and a magnifying loupe)
7361630	Latch release tool (opens the piezo actuator heater body; useful for installations with limited side access to the valve)

## Valve Extension Cables

Includes one each for power and communication.



P/N	Description
7362085	0.6 m (2.0 ft) valve extension cable set
7361298	2 m (6.6 ft) valve extension cable set
7361299	6 m (19.7 ft) valve extension cable set
7361300	9 m (29.5 ft) valve extension cable set

# PICO *Pulse* Jet Valve System

The Latest Advance in Precision Jetting Technology

## PICO *Pulse* Jet Valve Specifications

Item	Product
Size	22w x 120h x 75L mm (0.9w x 5h x 2.92L")
Weight	With cable: 524 g (18.5 oz) Without cable: 362 g (12.8 oz)
Maximum fluid pressure	49 bar (700 psi)
Fluid inlet thread	M5
Mounting	M4 x 0.7
Continuous running condition maximums (SD valve) (see Note A)	Maximum stack temperature: 55° C (131° F) Maximum continuous operating frequency: 250Hz or 4 ms Maximum burst frequency: Up to 1500Hz* Maximum opening time: 0.25 ms Maximum closing time: 0.20 ms Maximum stroke: 90% Maximum close voltage: 120V (when a Delta of 90V is applied for voltages above 100V)
Continuous running condition maximums (HD valve) (see Note A)	Maximum stack temperature: 85° C (185° F) Maximum continuous operating frequency: 1000Hz* or 1 ms Maximum burst frequency: Up to 1500Hz* Maximum opening time: 0.25 ms Maximum closing time: 0.20 ms Maximum stroke: 90% Maximum close voltage: 120V (when a Delta of 90V is applied for voltages above 100V)
Material	Fluid body: 303 stainless steel or PEEK Wetted path: Passivated stainless steel or PEEK Inner O-ring: Perfluoroelastomer Outer O-ring: Viton or perfluoroelastomer (optional) Ball and seat: Ceramic Heater body: Aluminum
Maximum fluid body temperature (see Note B)	100° C (212° F) (except PEEK) PEEK: 45° C (113° F)
Product classification	Installation Category 2 Pollution Degree 2

\*With approved conditional settings.

Note A: Continuous running condition maximums apply when the stack temperature does not exceed 55° C (131° F) for an SD valve or 85° C (185° F) for an HD valve. The valves can be subject to other operating conditions as long as the stack temperature does not exceed these temperature maximums.

Note B: The maximum fluid body temperature for valves with a PEEK fluid body assembly is 45° C (113° F).

The complete system requires a **PICO Pulse valve, PICO Touch controller, and fluid reservoir.**

## PICO Touch Controller

The *Touch* controller uses an intuitive touchscreen interface to greatly simplify setup and operation, while allowing precise adjustment of parameters such as open and close times.

- Set the valve operating temperature.
- Fine-tune the dispensing performance, select preset ramp profiles, or use custom profiles.
- View or change all controller settings.



## Automated Dispensing Systems

Nordson EFD automated dispensing systems deliver market-leading repeatability and accuracy in fluid placement and positioning. Specialized dispensing software simplifies setup and programming. Optimize dispensing results with features such as laser height sensing and smart vision CCD cameras.

## Request a Process Evaluation

Contact Nordson EFD to configure a complete PICO piezoelectric jet dispensing system that meets your specific application needs, with:

- A detailed process evaluation by experienced fluid dispensing experts at one of our full-service Global Application Labs.
- Samples processed for customer evaluation and approval prior to purchase.



For Nordson EFD sales and service in over 40 countries, contact Nordson EFD or go to [www.nordsonefd.com](http://www.nordsonefd.com).

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